



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

Bharat Heavy Electricals Limited

(A Government of India Undertaking)

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बैंगलूरु - 560 012

Prof. C N R Rao Circle

P.B. No.1249, IISc Post

Bengaluru-560 012

(1) NOTICE INVITING TENDER

Ref : 88/11/6031/RSB

Date: 13-01-2012

Subject: Tender for Unloading and Stores Management at Yermarus TPS (2x800 MW), Raichur.

Tender Ref: 88/11/6031/RSB

Please submit your lowest quotation subject to our Terms & Conditions for the tender referred above. The following documents can be downloaded from Website www.bhelisg.com or www.bhel.com or <http://tenders.gov.in>

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**Senior Deputy General Manager
Materials Management (BG-1B)**



ISO-14001,
OHSAS 18001

पंजीकृत कार्यालय 'बीएचईएल हाउस' सिरि फोर्ट, नई दिल्ली - 110 049
Regd. Office: 'BHEL House' Siri Fort, New Delhi - 110 049





Project : Coal Handling Plant & Ash Handling Plant For Yermarus Thermal Power Station (2x800 MW)

Customer : M/s Raichur Power Corporation Ltd

Work : Unloading and Stores Management

(2) NOTICE INVITING TENDER(NIT) & DUE DATE

(2) NOTICE INVITING TENDER (NIT) & DUE DATE

1	Tender inviting officer / Authority, Designation and Address & contact no.	Sr. Deputy General Manager /MM / BG 1B BHEL-ISC, Prof.CNR Rao Circle, IISc Post, Malleswaram, Bangalore- 560 012. Contact No. -(080)22184090, E-Mail : sv@bheliscg.com
2	Work Description	Unloading and Stores Management at Yermarus TPS (2x800 MW), Raichur.
3	Tender Reference no.	88/11/6031/RSB
4	Commencement of work	Within 07(seven) days from the date of LOI / Work Order.
5	Due date, Time and place for submission of tender.	03-02-2012 up to 02.00PM at BHEL-ISC tender box placed at the Reception room near main gate of ISG & EPD complex. BHEL-ISC, Prof CNR Rao Circle, IISc Post, Malleswaram, Bangalore- 560 012
6	Place, Date and Time of Technical Bid opening.	BHEL-ISC office. Techno-commercial bids will be opened at 03.00 PM on due date i.e. on 03-02-2012 in the presence of the bidders who choose to be present. Price bids of technically & commercially accepted bidders will be opened subsequently and the date for the same shall be intimated to the bidders separately.
7	Mode of Submission of tender	<p>The tender shall be submitted duly stamped & signed in two parts as below in separate sealed envelopes super-scribed as below with tender reference and due date.</p> <p>Part-1 Techno-commercial bid :- Shall contain – (i) EMD (ii) Accepted Technical specifications & scope of work (iii) Accepted Commercial Terms & Conditions (iv) Documentary evidence relating to pre- qualification criteria (v) Deviation Format duly filled-in (vi) Un-priced price bid (without price) (vii) Accepted GCC (viii) Accepted SCC,(ix) Accepted Special Instructions to the bidders (x) Accepted Consolidated Site Safety Plan (xi) Contractor's Registration/evaluation Formats duly filled-in along with supporting documents etc.</p> <p>Part - 2 Price bid :- Shall contain the price bid with price</p> <p>The above two sealed envelopes should be put in another sealed cover. This outer cover should be super-scribed with the tender reference no., due date etc. and should reach us latest by 2-00 PM on due date.</p>

Work : Unloading and
Stores Management

(3) PRE-QUALIFICATION CRITERIA


(3) PRE-QUALIFICATION CRITERIA

The bid is open for participation for those bidders who satisfy all of the following requirements(Documentary proof must be produced alongwith the bid/offer for all criteria mentioned below):-

1. **TECHNICAL:** The Bidders should have executed/under execution material handling contract (receipt, unloading, stacking, verification, preservation and stores management) of 33% of the estimated weight of materials to be handled in this tender (Estimated weight for this tender is 23,000 MTons) in a single work order, in a power plant of minimum 2 x 210 MW capacity.
2. **FINANCIALS:**
 - i) **TURNOVER:**
Bidders must have achieved an average annual financial turnover (audited) of Rs 33 lakhs or more over the last three financial years i.e. 2008-09, 2009-10 and 2010-11.
 - ii) **NETWORTH:**
Net worth of the bidder based on the latest audited accounts as furnished for 2. i) above should be positive.
 - iii) **PROFIT:**
Bidders must have earned profit in any one of the three financial years in the last three years defined in 2. i) above.

3. **OWNERSHIP OF MATERIAL HANDLING EQUIPMENT:**

Sl. No.	Description	Qty
1.	12 Ton Mobile crane	1 No.
2.	Chain Pulley Block -2 Ton, 5 Ton, 10 Ton (complete with chain, hook etc)	1 each

 BHEL - ISG BANGALORE	(4) TECHNICAL SPECIFICATIONS & SCOPE OF WORK Name of the Work : Unloading and Stores Management at Yermarus TPS (2x800 MW), Raichur.	Technical Specification No. : IS-1- 11-2005 /011 Enquiry No.: 88/11/6031/RSB
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(4) TECHNICAL SPECIFICATIONS & SCOPE OF WORK

Customer : M/s Raichur Power Corporation Ltd


Project : Coal Handling Plant And Ash Handling Plant
for Yermarus Thermal Power Station (2X800 MW)

Work : Unloading & Storing Of Project Materials At Site

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SECTION - I
GENERAL SITE INFORMATION


1.0	Owner	Raichur Power Corporation Ltd. 22/23, Sudarshan Complex, IInd floor, Sheshadri Road, Bangalore-560009 Karnataka, India
2.0	Consultant	M/s Evonik Energy Services (I) Pvt. Ltd., A-29, Sector 16 Noida-2010301(UP), India
3.0	Project Title	2x800 MW Yermarus Thermal Power Station
4.0	Site Location	Yermarus, Raichur Dist., Karnataka State, INDIA. It is situated at about 8 Kms from Raichur on the Raichur-Hyderabad State Highway No. – 13 and 12 kms away from Bank of river Krishna and about 5 kms from Raichur Thermal Power Station
5.0	Nearest Railway	Chicksugur Railway Station which is about 2 kms from site.
6.0	Nearest Airport	Hyderabad around 200 kms
7.0	Nearest Port	Chennai around at about 470 kms from site.
8.0	Latitude and longitude	Latitude - 16 16' 55.9"N Longitude - 77 20' 38.6"E
9.0	Elevation above mean sea level	350-375 meters
10.0	<u>Climatic Conditions :-</u> (a) Ambient Temperature i. Maximum Temperature ii. Minimum Temperature iii. Design Temperature for all electrical / mechanical equipment	45°C 6°C 50°C

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	(b) Relative Humidity i. Maximum during monsoon ii. Minimum iii. Average (c) Rainfall i. Annual average rain ii. Max. For one day iii. Max. Intensity iv. Period (d) <u>Wind Speed</u> i. Prevailing wind direction ii. Maximum mean wind speed iii. Average	85% 20% 60% 720mm 115mm 38mm/hr June to September West, South-East, North-West, South-West 15.9 Kms / hr (4.42 m/s) 9.61 Km/hr (2.67 m/s)
11.0	Wind Load Calculations for wind effect shall be in accordance with IS:875- (Part-3) latest revision taking into account the following: (a) Basic wind speed of 39 m/sec as given in Fig. 1 of the code. (b) Factor K1 shall be taken as 1.06 (c) Terrain category shall be 2 and corresponding values shall be taken for K2 Factor K3 shall be taken as 1.0	
12.0	Wind Loading for Stack (a) For wind pressure as per clause 11.0 above (b) For RC stacks as per IS: 4998	
13.0	Seismic data (as per IS: 1893 latest issue) (a) Zone (b) Importance factor (I)	Zone III (as per IS: 1893- latest) 1.75

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SECTION-II SCOPE OF WORK

(I) Broad Scope of work :- Receipt, unloading from Trucks, Trailers, Carriers, Vans of all types of consignment including heavy /Over Dimensional Consignments(ODC), box/ packages/ crates at project sites, stacking and storing of unloaded materials on RCC sleepers wherever required (RCC sleepers wherever required shall be supplied by the bidder), verifying the materials as per the packing list, preservation, marking on the consignments for easy identification, preparing the Material Receipt Certificate (MRC), storage activities and stores management, maintenance of the store records like -Day Book Register, Stock Register, Issue Register, Issue pass (The proper records should be maintained as per the approved formats) issuing the materials to BHEL –ISG's various erection agencies, retrieving & shifting/relocation of the stored materials to any other location inside or outside the plant, co-ordinating the lodging of the complaints to the concerned authorities in case of theft/pilferage, co-ordinating with the insurance agencies for conducting survey of the theft cases, reconciliation of all the received materials and handing over of balance material to the customer/BHEL at the end of the contract period. The bidder has to maintain the necessary manpower to carry out the work and maintain their office with necessary equipments like computers, printers, accessories, data entry operator for maintaining the records. Materials to be handled under this contract are project materials like- structural steel, re-inforcement steel, mechanical machineries/equipments, electrical items like cable drums, panels, transformers , cable trays, instruments etc.

(II) Bill of Quantities(BOQ)

Sl. No	Description	Qty	Remarks
1.	Unloading from Trucks, Trailers, Carriers of all types of consignment including heavy /ODC consignments to project site, verification, preparation of MRC and stacking the same in assigned locations on RCC sleepers wherever required(RCC sleepers wherever required shall be supplied by the bidder), box/ package/ crate verification, storage activities, stores management and other associated activities. Charges shall be inclusive of unloading & stores management, necessary tools, tackles & plants including suitable cranes, derrick, lifting jacks, manpower, riggers, khalasi etc.,	22,000 MTons (Twenty Two Thousand MTons)	Quantity mentioned is tentative and likely to vary during execution. PI refer to CTC clause no.3
2.	Shifting/ rearrangement / restacking inside the plant. Charges shall be inclusive of loading, transporting, unloading etc, manpower, and consumables, tools & plants including suitable cranes, hydra, transport etc.	1,000 MTons	--do--
3.	Supply of manpower as shown below. The requirement/deployment of the manpower will be intermittent & need based on daily rate basis and shall be at sole discretion of site-in-charge.		
	1. Skilled Manpower (Office Assistant / Data Entry Operator / Clerk).	730 Mandays	--do--
	2. Unskilled (Office boy / Attender / Peon).	730 Mandays	--do--

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(III) Time Period & Description of materials to be handled :-

01.	Time Period of the Contract	24 Months from the date of the Work Order	Period mentioned is tentative and likely to extend.
02.	Description of the materials to be handled	Project materials like- structural steel, re-inforcement steel, mechanical machineries/ equipments, electrical items like cable drums, panels, motors, transformers , cable trays, instruments etc.	

(IV) Detailed scope of work:-


(1) Receipt & Unloading :-

- (i) Arranging gate pass/permission for the entry/exit/overstay/night halt of trucks, trailers, carriers, vans, etc along with drivers, cleaners, helpers etc inside the project premises.
- (ii) Unloading from Trucks, Trailers, Carriers, Vans of all types of consignment including heavy /Over Dimensional Consignments(ODC), box/ packages/ crates at project sites, stacking and storing of unloaded materials on RCC sleepers wherever required(RCC sleepers shall be supplied by the bidder), verifying the materials as per the packing list, preservation, marking on the consignments for easy identification, preparing the Material Receipt Certificate (MRC), storage activities and stores management, maintenance of the store records like -Day Book Register, Stock Register, Issue Register, Issue pass, issuing the materials to BHEL-ISG's various erection agencies, retrieving & shifting/relocation of the stored materials to any other location inside or outside the plant, co-ordinating the lodging of the complaints to the concerned authorities in case of theft/pilferage, co-ordinating with the insurance agencies for conducting survey of the theft cases, reconciliation of all the received materials and handing over of balance material to the customer/BHEL at the end of the contract period. The bidder has to maintain the necessary manpower to carry out the work and maintain their office with necessary equipments like computers, printers, accessories, data entry operator for maintaining the records. Materials to be handled under this contract are project materials like- structural steel, re-inforcement steel, mechanical machineries/equipments, electrical items like cable drums, panels, transformers , cable trays, instruments etc.

(2) Stores Management :-

Manning the stores, stores management and maintaining the stores records such as - Day Book Register, Material receipt Certificate, Stock Register, Issue Register, Issue pass, issuing the materials to erection agencies, reconciliation of all the received materials and

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handing over of balance material after end of the contract period. (The proper records should be maintained as per the approved formats)

- (3) **Retrieving & shifting** the stored materials to any other location inside the plant, shifting / rearrangement / restacking/realignment inside the plant. Charges shall be all inclusive of loading, transporting, unloading, manpower, and consumables, tools and plants including suitable cranes, transport etc. (The proper records should be maintained as per the approved formats)
- (4) **Supply of Skilled and Unskilled manpower for miscellaneous site office works :** The requirement/deployment of the manpower will be intermittent & need base on '**Daily-rate**' basis and shall be at sole discretion of site-in-charge. Deputation of manpower shall be arranged as per the direction of site in charge.

SI. No.	DESCRIPTION	QTY
1.	Skilled Manpower (Office Assistant / Data Entry Operator / Clerk etc)	730 Mandays
2.	Unskilled (Office boy / Peon etc)	730 Mandays


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SECTION - III
TECHNICAL SPECIFICATIONS

- 1) Coordinating with BHEL, transporters regarding arrival of materials dispatched for the Project. Bidder shall arrange for crane or other material handling equipment & manpower for unloading equipments / materials from trailer / truck. The bidder shall pay all the hire charges directly to the hiring agency whenever any material handling equipment/services is hired.
- 2) The material shall be received and stored properly on RCC sleepers(whenever required) of size 150x200x1500 mm (supply of necessary concrete sleepers wherever required, is in the bidder's scope) as and when it arrives to site. Shifting of unloaded materials to open yard store or at covered stores. Stacking the materials and keeping them in an orderly way. Equipment stacked should be kept in such a way that easy accessibility should be there for issue of materials and drawing out from the open yard store/ godown/ stores. Labelling / tagging the materials / equipment for easy identification shall be done. All the entries should be made in the daybook format issued by BHEL in the Day Book Register as well as in the computer.
- 3) It would be responsibility of the bidder to keep in contact with BHEL-ISG's authority at site to find out the arrival of the consignment. The lorry waybill/truck way bill for the consignment would be handed over to the bidder immediately on receipt.
- 4) Bidder shall arrange the weighment of each trailer/truck consignment at the nearest weigh bridge before and after unloading **at his own cost**. The weigh bridge slip shall be produced alongwith the RA bill.
- 5) The bidder shall examine the packages, consignments etc , on arrival and bring to the notice of the transport authority and BHEL-ISG authority regarding loss/damages, if any observed in the consignment proposed to be taken delivery of, before, taking delivery, particularly of consignments in "smalls" and "loose items" the weight of the packages and any other discrepancies shall be reported immediately to BHEL-ISG/transport authority. In case it becomes necessary to take open delivery from the authorities, bidder should make all arrangements for taking open delivery. All expenses connected therewith shall be to the account of the bidder. Any loss that occurs to BHEL-ISG on account of this will be recovered from his progress bills.
- 6) Preparing inspection report for the materials/equipments received. Keeping record of the materials and submit them to BHEL regularly (Weekly & Monthly). Arrange issue of materials to erection agency, handing over of spares and other materials to customer stores. Many time parts required, for more than one assembly might have been packed in one case and in such a case, the bidder should take the required part only and then re-pack the case properly. The carpenters should do the opening and closing of wooden boxes carefully. The package materials should be provided with the tag and stored carefully as directed by BHEL engineers.
- 7) Bidder have to arrange for tarpaulin / Polythene for covering the materials/equipments as suggested by BHEL. Storage place should be kept clean and provide regular maintenance.


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Adequate quantity of portable fire extinguishers as directed by customer / BHEL should be provided both at open yard and covered storage place. Bidder shall provide concrete sleepers as suggested by BHEL. Required tarpaulin / Polythene cover, Fire extinguishers, sleepers to be supplied by the bidder.


- 8) Bidder shall examine all the shipment and notify BHEL-ISG engineer immediately for the purpose of engineer's information. The bidder shall submit a report every week detailing in this regard.
- 9) Any discrepancy/shortages/damage found in the consignment after taking delivery from the carriers after giving clear receipt would be the responsibility of the bidder. The amount liable to be lost by BHEL-ISG on such account shall be recoverable from the bidder.
- 10) The contractor is required to find out from concerned authorities, regarding arrival of consignment prior to the receipt of consignment note, if any, and take delivery of the same on "Indemnity Bond". Indemnity Bonds would be executed by BHEL, when intimation regarding arrival of consignment is furnished by the contractor.
- 11) Detailed verification of materials with reference of to packing list / Loading advise slip / etc., after unpacking of boxes & crates; repacking where called for, after detailed verification; preparation of receipt inspection reports etc shall be carried out within the quoted rate within 30 days of the unloading. If the verification is not carried out within 30 days for reasons attributable to the contractor, then BHEL is having right to carryout the verification at the risk and cost of the contractor.
- 12) Consignment coming on Sundays and Holiday are also required to be handled by the contractor on the same day. Since the offices and godowns will probably remain closed on these days, it will be the responsibility of the contractor to contact the Site Engineer / his authorised representative at BHEL-ISG at their residence and obtain instruction.
- 13) Since the consignments are expected to arrive during any time of the day or night, bidders shall have his workmen round-the-clock at site as well as other places as required to unload the material. Bidder's quoted rates shall include all such contingencies.
- 14) Unloading/storing of materials at the storage yard using bidder's own lorries/trailers/cranes and other equipments with valid road permits/statutory documents for their operation, unloading and stacking handling at storage yard for verification shall be the responsibility of the bidder under this contract.
- 15) Bidder to store the materials in safe and secured way till handing over to erection agency and up to the completion of the project. If any pilferage / theft happens, bidder has to report to police and BHEL. Lodging FIR on behalf of BHEL and arrange inspection by concerned officials.

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- 16) Storekeeper should have the basic knowledge for keeping the records up to date. Reports about the receipt of materials/equipments as demanded by BHEL should be submitted. Minimum manpower should be provided as mentioned below. The proper records should be maintained as per the approved formats.
- Store Keeper cum stores supervisor – 1
 - Skilled workers – As and when required during unloading.
 - Carpenter – As and when required during unpacking and repacking.
 - Labour force as required during the unloading / loading or during issue of materials should be made available at site.
 - Office assistant / Gate liaison officer: To arrange IN/OUT gate passes for the materials / Trucks and Trolleys as well IN pass for BHEL or their authorized representatives.
 - Bidder shall give Organisation chart for this project.
 - Storekeeper, Office assistant / Stores liaison Officer should have knowledge of computer operation.
 - The payment will be made on the tonnage basis for the materials received, stored and handled after duly certified by the BHEL site Engineer.
- 17) After receipt of material by truck/trailer, the bidder shall immediately organize for unloading the materials and the same shall be shifted to storage area and properly stacked at the specified area covering the same as per the instruction of BHEL engineer. Proper identification mark is to be made on the box/equipment. Items may have to be unloaded at 2 to 3 different locations and for unloading these items men with tools and tackles have to be arranged at these locations. No separate payment shall be made for storing.
- 18) List of stores records to be maintained by the bidder:-
- Day Book Register
 - Stock Register
 - Issue Register
 - Monthly Reconciliation statement.
- 19) Bidder shall take note of the type/nature of equipment, volume, weight, to decide the methodology of unloading, type of arrangement required, precautions/care required during unloading/shifting/stacking. Approximately 22,000 MTons of materials may have to be stored and single consignment/package may be as heavy as 20 to 25 tons or more.
- 20) Bidder should take all necessary care to make safe unloading /shifting/stacking of equipment without damaging it and injury to the working persons and surrounding property. Equipment/Boxes to be lifted, slings should be put at the prescribed locations/lifting lugs.
- 21) While unloading the material, using crane, hoists bidder shall ensure usage of proper size of clamps/slugs/tools/tackles depending upon volume and weight of the item.
- 22) Bidder shall give all necessary assistance to BHEL engineer to lodge, settle insurance claim in case equipment/boxes received in damaged conditions and also as per packing list.

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- 23) Material shall be stacked/stored at covered shed or open yard by using RCC sleepers/ concrete blocks. Supply of RCC sleepers wherever required shall be in the scope of the bidder. Wherever required, the materials shall be covered properly with Polythene or tarpaulin.
- 24) Supervisor/Worker/Rigger engaged by the bidder shall be skilled and they shall have the desired experience and knowledge for such equipment handling. All the local/state/central rules/regulations for engagement of such workers are binding on bidder.
- 25) While working near/under live power line, the bidder shall take all required care for safe working. If power shut down is essential, proper procedure to be adopted / followed to obtain shut down by Proper authorities in writing and shall ensure such shut down before working. After completion of work, authority to be informed for restoration of power in writing through BHEL.
- 26) All local safety rules and regulations for carry out work inside / outside plant is to be adhered strictly and binding on the bidder.
- 27) All necessary required tools and tackles including slings, shackles, crane, trailer, trucks etc. are to be arranged by the bidder.
- 28) All the lifting tools and tackles shall be tested and should have valid certificate for prescribed load. At no circumstance under sized slings, shall be used. Damaged tools shall not be used.
- 29) Bidder shall maintain up to date proper record of the job carried in prescribed format as desired by BHEL engineer at YERAMARAS site.
- 30) Entry to project site shall be with YERAMARAS gate passes only. The bidder has to arrange and renew the gate passes for their staff, vehicles and mobile equipment. Any relevant details/information of worker to obtain such pass to be furnished in advance to BHEL before expiry of gate pass, request to be made for revalidation well in advance.
- 31) At no circumstances the material received through truck/trailer shall wait and kept pending for unloading. Soon after the receipt of material/arrival of consignment all the necessary arrangement including necessary tools and tackles, manpower, crane, if any to be made ready for unloading. If for any reason the material is not unloaded within the reasonable time which is on account of bidder's coordination delay etc. any demurrage required to be paid to the transporter shall be recovered from the bidders bills by BHEL.
- 32) Unloading during night if essential to be made with enough illumination in the surrounding area.
- 33) Workers engaged should be covered under ESI and EPF by the bidder. The bidder shall be covered as applicable as per Central and State Govt. labour laws during the execution.

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 BHEL - ISG BANGALORE	<p align="center">(4) TECHNICAL SPECIFICATIONS & SCOPE OF WORK</p> <p align="center">Name of the Work : Unloading and Stores Management at Yermarus TPS (2x800 MW), Raichur.</p>	<p>Technical Specification No. : IS-1- 11-2005 /011</p> <p>Enquiry No.: 88/11/6031/RSB</p>
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- 34) Bidder shall maintain proper attendance register of manpower employed by the bidder as instructed by BHEL. Bidder shall monitor their deployment and other duties from time to time.
- 35) Material taking out of BHEL store/office should have the proper gate pass as described by BHEL. Bidder should ensure the full control of material moving out of BHEL store/office with such authentic document only.
- 36) Bidder shall receive unused materials for other erection agencies and proper record shall be maintained. All the leftover materials after completion of the project shall be properly packed and shall be loaded in to truck/trolley as directed by BHEL. Bidder shall coordinate with authorities in arranging necessary OUT gate passes for these materials. NO separate payment shall be made against this activity.
- 37) All expenses incurred towards liaisoning for obtaining necessary IN/OUT gate passes for the materials and the persons engaged by the bidder for the above job shall be born by the bidder.
- 38) Any breakdown of cranes, trucks, trailers and any other handling/lifting equipment, T&P etc used by the bidder must be set right immediately. Bidder shall not attribute such breakdown for delay in unloading and transporting /shifting material, stacking etc.
- 39) Weight indicated in shipping list is final for purpose of progressive payment of weight. In case of weight not indicated in the shipping list, then, weigh bridge slip shall be taken as final.
- 40) For shifting purpose the bidder has to arrange the weighment at the nearest weighbridge.
- 41) Payment of demurrages/ wharfages that result due to bidder's fault would be the responsibility of the bidder and to his account. If BHEL-ISG have to make payment of demurrage/wharfage, the amount so paid as demurrage/wharfage for the reasons stated above shall be paid by the bidder forthwith or would be recovered by the bills of the bidder with BHEL-ISG's overheads as applicable.
- 42) BHEL-ISG reserves the right to recover from the bidder any loss which arises out of undue delay /discrepancy, shortage /damage or any other causes during unloading/stacking/shifting or any time in the custody of bidder.
- 43) The materials/components at stores shall be handled with care and diligence. Any loss or damage to BHEL-ISG due to contractor's lapses, will have to be made good by the bidder. Otherwise BHEL-ISG will arrange for repair/replacement and recover the expenses incurred therein from the bidder's bills.
- 44) On completion of work, all the temporary buildings, structures, pipelines, cables etc shall be dismantled and levelled and debris shall be removed as per the instruction of BHEL-ISG by


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 BHEL - ISG BANGALORE	<p align="center">(4) TECHNICAL SPECIFICATIONS & SCOPE OF WORK</p> <p align="center">Name of the Work : Unloading and Stores Management at Yermarus TPS (2x800 MW), Raichur.</p>	<p>Technical Specification No. : IS-1- 11-2005 /011</p> <p>Enquiry No.: 88/11/6031/RSB</p>
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the bidder at his cost. In the event of his failure to do so, the expenditure towards clearance of the same will be recovered from the bidder's bills. Decision of BHEL-ISG engineer shall be final in this regard..

- 45) The bidder is strictly prohibited from using BHEL's regular components like angles, channels, beams, plates , pipes/tubes, cable trays and handrails etc for any temporary work. The bidder shall arrange himself all such materials. In case of such misuse of BHEL's amterials, a sum as determined by BHEL engineer will be recovered from bidder's bills. Decision of BHEL-ISG engineer shall be final & binding in this regard.
- 46) If the bidder or his workmen or employees shall break, deface, injure or destroy any part of a building, road, kerbs ,enclosures, water pipes, fencing, cables, drains, electric or telephone posts or wires, trees the bidder shall make good the same at his own expense or in case of default, the site engineer may make good of the same by the other agency or any other means and deduct the expenses from any sums that may be then or at any time thereafter become due to the bidder or from his security deposit or any money due to him. Decision of BHEL-ISG engineer shall be final & binding in this regard..
- 47) Bidder shall maintain following equipments at site to keep the stores records.
- Latest computer systems with AMC as per the following features(minimum). – 1No.Dual Core/Core-2 Duo CPU with 22" color monitor, 3 button mouse, keyboard, 52X CD / DVD read/write, 320GB HD, 2 GB RAM, 52X Multimedia with speakers, internal modem for internet connection facility and windows XP/Windows 7, MS Office pre loaded.
 - Colour laser Printers-1 Nos.
 - Computer furniture (Table and chair) for 1 set.
- 48) Bidder to ensure proper cleaning and house maintenance of stores (both covered and open yard) and BHEL office regularly.
- 49) The tentative duration of the storage contract shall be for 24 months from the date of LOI/firm order.

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 BHEL - ISG BANGALORE	(4) TECHNICAL SPECIFICATIONS & SCOPE OF WORK Name of the Work : Unloading and Stores Management at Yermarus TPS (2x800 MW), Raichur.	Technical Specification No. : IS-1- 11-2005 /011 Enquiry No.: 88/11/6031/RSB
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SECTION - IV

List Of Machinery, Tools And Tackles To Be Deployed By The Bidder To Carry Out The Work

Note: The following list is not exhaustive but indicative only. Any other tools, plants, machinery, equipment, manpower etc required to complete the work must be arranged by the bidder at his own cost and must be made available at site.

Sl. No.	Description	Qty
1.	12 Ton Mobile crane	1 No.
2.	Chain Pulley Block -2 Ton, 5 Ton, 10 Ton (complete with chain, hook etc)	1 each
3.	Pipe Derrick with supports	1 set
4.	Lifting Slings, wire rope, nylon rope, Hooks, Clamps, D-Shackles of various sizes.	1 lot each (As per actual requirement)
5.	Trailer/tractor	1 set
6.	Winches of different capacity as required.	1 set
7.	Hydraulic jacks, wooden sleepers etc for rigging	1 set
8.	Hydraulic Trolley	1 set
9.	Any other necessary machinery required to complete the work	1 set
10.	Latest computer systems with AMC as per the following features(minimum). –1No.Dual Core/Core-2 Duo CPU with 22" color monitor, 3 button mouse, keyboard, 52X CD / DVD read/write, 320GB HD, 2 GB RAM, 52X Multimedia with speakers, internal modem for internet connection facility and windows XP/Windows 7, MS Office pre loaded.	1 set
11.	Colour laser Printers-	1 Nos
12.	UPS for above	1 set
13.	Computer furniture (Table and chair)	1 set.
14.		
15.		

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ISG BANGALORE

Project : Coal & Ash Handling Plant For Yermarus Thermal Power Station (2x800 MW)

Customer : M/s Raichur Power Corporation Ltd

Work : Unloading and Stores Management

(5) Commercial Terms and Conditions (CTC)

Enquiry No. :
88/11/6031/RSB

Note: (1) Bidder to fill all the clauses in the "Remarks" column failing which offer will be considered incomplete.

(2) Authorised signatory of the bidder has to put his signature & official seal at the bottom of each page.

NAME OF THE BIDDER	:	
ENQUIRY NO. & DATE	:	88/11/6031/RSB
PROJECT/CUSTOMER	:	Coal Handling Plant And Ash Handling Plant M/s Raichur Power Corporation Ltd. Yermarus Thermal Power Station (2x800 MW)
NAME OF THE WORK	:	Unloading and Stores Management at YERMARUS TPS (2x800 MW), Raichur.

Sl. No.	Clause	BHEL's Requirement	Remarks / Acceptance
1.	Type of bid	TWO PART BID SYSTEM. Bidder has to send his offer in two separate sealed envelops with proper marking on the cover as "Techno-commercial bid" and "Price Bid". (1) Techno-Commercial Bid :- shall contain (i) Earnest Money Deposit(EMD). (ii) Unpriced price bid without price but mentioning as "quoted" for all items. (iii) Documentary evidence relating to pre-qualification criteria (iv) Acceptance of (signature with co's seal) technical specifications & scope of work, consolidated site safety plan and general conditions of contract(GCC) and special conditions of contract(SCC), special instructions to bidders in each page. (v) Acceptance of commercial terms and conditions in each page (vi) Deviation format duly filled-in. (vii) Contractor's Registration/evaluation Formats duly filled-in with supporting documents.	



ISG BANGALORE

Project : Coal & Ash Handling Plant For Yermarus Thermal Power Station (2x800 MW)**Customer : M/s Raichur Power Corporation Ltd****Work :** Unloading and Stores Management**(5) Commercial Terms and Conditions (CTC)**Enquiry No. :
88/11/6031/RSB

Sl. No.	Clause	BHEL's Requirement	Remarks / Acceptance
		<p>(2) Price bid :- shall contain Price bid with prices & tax for all items. Mention the total price in both figures and words.</p> <p>These two separate sealed envelopes to be put in a common envelope superscribing enquiry number, name of the work etc. Send this envelope to the officer inviting the tender at the BHEL-ISG office address.</p>	
2.	Price Basis	Unit rate, Firm on FOR site basis(inclusive of all taxes and duties and freight as applicable except Service Tax). Service Tax is payable extra at actual as per government norms. However, the bidder has to clearly furnish Service Tax percentage(%) as applicable along with amount separately in the price bid.	
3.	Quantity variation	Quantities given by BHEL the quantities given are tentative are likely to be change by $\pm 25\%$ during execution.	
4.	Validity period of quoted price	Rates quoted shall be valid upto 90 days from the date of techno-commercial bid opening.	
5.	Service Tax on services	Statutory variations in the taxes shall be to BHEL's account. TDS shall be made for IT & WCT as per the act.	
6.	Earnest Money Deposit	<p>An amount of Rs. 2.00 Lakhs(Rupees Two lakhs Only) only as EMD shall be deposited in DD (as permissible under income tax act), Pay-order or bank draft (in favor of BHEL) in a separate cover enclosed in the techno-commercial bid. In case of cash deposits, the money shall be deposited with finance dept. of BHEL and the cash receipt shall be submitted with the offer. Offer shall be liable for rejection, in case no EMD as above is found in the cover marked 'EMD'.</p> <p>The 'EMD' by the bidder will be forfeited if:</p> <ul style="list-style-type: none"> - After opening the tender, the bidder revokes his tender within the validity period or increases his earlier quoted rates. - The bidder does not commence work within a period of 10 days after the award of the contract. 	



ISG BANGALORE

Project : Coal & Ash Handling Plant For Yermarus Thermal Power Station (2x800 MW)**Customer : M/s Raichur Power Corporation Ltd****Work : Unloading and Stores Management****(5) Commercial Terms and Conditions (CTC)**Enquiry No. :
88/11/6031/RSB

Sl. No.	Clause	BHEL's Requirement	Remarks / Acceptance
		EMD shall not carry any interest. EMD can be converted into "One Time EMD" of Rs.2.00 Lakhs (Rupees Two lakhs Only), if the bidder opts so that the same will be considered for his future bids. For further details regarding EMD, Please refer to GCC Chapter-III	
7.	Security Deposit	7.1) Security deposit shall be collected from the successful bidder. The rate of security deposit will be as below:- For works - upto Rs.10 lakhs: 10% - above Rs.10 lakhs and upto Rs.50 lakhs: Rs. 1 lakh + 7.5% of the amount exceeding Rs.10 lakhs - above Rs. 50 lakhs: Rs 4 lakhs + 5% of the amount exceeding rs. 50 lakhs. The security deposit shall be collected before start of the work by the bidder. 7.2) Security deposit may be furnished in any one of the following forms: i.) Cash (as permissible under the income tax act). ii.) Pay order, demand draft in favour of BHEL. iii.) Local cheques of scheduled banks, subject to realization. iv.) Securities available from post officers such as national savings certificates, kisan vikas patras etc. (certificates should be held in the name of bidder furnishing the security and duly pledged in favour of BHEL and discharged on the back). v.) Bank guarantee from scheduled banks/ public financial as defined in the companies act. The bank guarantee format should have the approval of BHEL vi.) Fixed deposit receipt issued by scheduled banks/ public financial as defined in the companies act. The FDR should be in the name	



ISG BANGALORE

Project : Coal & Ash Handling Plant For Yermarus Thermal Power Station (2x800 MW)**Customer : M/s Raichur Power Corporation Ltd****Work : Unloading and Stores Management****(5) Commercial Terms and Conditions (CTC)**Enquiry No. :
88/11/6031/RSB

Sl. No.	Clause	BHEL's Requirement	Remarks / Acceptance
		<p>of the bidder, A/C BHEL, duly discharged on the back.</p> <p>vii.) Security deposit can also recovered at the rate of 10% from the running bills. However In such cases at least 50% of the security deposit should be collected before start of the work and the balance 50% may be recovered from the running bills.</p> <p>viii.) EMD of the successful bidder shall be converted and adjusted against the security deposit.</p> <p>ix.) The security deposit shall not carry any interest.</p> <p>(Note:Acceptance of security deposit against Sl.No.(iv) and (vi) above will be subject to hypothecation or endorsement on the documents in favour of BHEL. However, BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith).</p> <p>7.3) Security deposit shall be refunded to the bidder after successful completion of contract period subject to reconciliation/returning of balance material to BHEL/customer store.</p> <p>For further details regarding SD, Please refer to GCC Chapter-III</p>	
8.	Contract completion period	Commencement of work within 07(seven) days from date of LOI/work order and completion progressively after 24 months from the date of LOI/Work Order. However, the contract may be extended for one more year.	
9.	Liquidated damages for delays	If for any reason the material is not unloaded within the 24 hours which is on account of bidder's coordination delay etc. any demurrage required to be paid to the transporter shall be recovered from the bidder's bills by BHEL	
10.	Type of contract	Unit rate contract.	



ISG BANGALORE

Project : Coal & Ash Handling Plant For Yermarus Thermal Power Station (2x800 MW)**Customer : M/s Raichur Power Corporation Ltd****Work :** Unloading and Stores Management**(5) Commercial Terms and Conditions (CTC)**Enquiry No. :
88/11/6031/RSB

Sl. No.	Clause	BHEL's Requirement		Remarks / Acceptance
11.	Overrun charges	Overrun charges are NOT applicable for this enquiry.		
12.	Price variation / escalation	Price variation / escalation is NOT be applicable for this enquiry.		
13.	Risk Purchase	In case of default / delay in work completion, purchaser reserves his right to make alternate arrangement / procurement at Bidder's risk and cost.		
14.	Terms of Payment	Any payment shall be made to the bidder based on the actual quantity of work executed, measured and entered in the measurement book as per agreed billing schedule. Payable amount subject to statutory deductions. Break-up payment terms is as under :-		
		Sl. No.	Description of stage	
				% Break-up
		1.	Progress Payment-90%	90% of RA Bill value shall be released after unloading, verification, storing and keeping the materials under bidder's custody.
		2.	Balance Payment-10%	10% of the RA Bills Value after end of the contract and reconciliation/returning of balance material to BHEL/customer store.
15.	Payment Mode Through	All the payment shall be made through electronic transfer only (EFT) from BHEL-ISG's HQ-Bangalore.		
16.	Labour license	In the scope of bidder. Bidders shall obtain labour license in their name. Bidder shall have valid license to work in the State of Karnataka. The bidder has to obtain the labour licence and produce the same to the site-in-charge before start of the work.		
17.	Labour laws	Bidder should follow all the labour laws as applicable at the place of work / Karnataka state including payment of minimum wages fixed by Government of Karnataka.		
18.	Workmen Insurance	By the bidder for all workmen employed by him.		
19.	All equipments necessary for the material handling and	By the bidder.		



ISG BANGALORE

Project : Coal & Ash Handling Plant For Yermarus Thermal Power Station (2x800 MW)**Customer : M/s Raichur Power Corporation Ltd****Work : Unloading and Stores Management****(5) Commercial Terms and Conditions (CTC)**Enquiry No. :
88/11/6031/RSB

Sl. No.	Clause	BHEL's Requirement	Remarks / Acceptance
	stores management required for the completion of work.		
20.	Obtaining statutory authorities' clearance for equipments, manpower & jobs	By the bidder	
21.	Visits to Yermarus, Raichur / BHEL Bangalore	Visits as required to BHEL Bangalore / M/s RPCL office at Raichur/Yeramarus/Bangalore and site and any other place for meetings / discussions / clarifications / specification shall be included by the bidder in their offer. All expenditure on account of the same shall be borne by the bidder.	
22.	Arbitration	Subject to Bangalore Jurisdiction only based on Indian Arbitration Act 1996.	
23.	Departmental charges	Any material or service to be issued / rendered by the BHEL (unless specifically stipulated to be free of cost / cost recoverable basis) to the bidder, the same shall be made available along with 15% departmental charges over and above the cost. BHEL shall not be responsible for any delay due to this reason and delay shall be to bidders account.	
24.	Other terms	As per the tender document enclosed.	
25.	Office / Residential accommodation, Local transport for bidder's staff.	Shall be arranged by the bidder. No separate payment shall be made by BHEL for the same.	
26.	BHEL's right to split the order.	BHEL reserves the right to split the tender quantity and itemwise while ordering.	



ISG BANGALORE

Project : Coal & Ash Handling Plant For Yermarus Thermal Power Station (2x800 MW)**Customer : M/s Raichur Power Corporation Ltd****Work : Unloading and Stores Management****(5) Commercial Terms and Conditions (CTC)**Enquiry No. :
88/11/6031/RSB

Sl. No.	Clause	BHEL's Requirement	Remarks / Acceptance
27.	Approval from Statutory Authorities	By bidder all fees and expenditure towards the same should be borne by bidder. BHEL will not reimburse fees and related expenditure.	
28	Proposed organization chart for this project	To be furnished by the bidder with offer.	
29.	Tools and Tackles, Calibrated testing instruments, Material Handling Equipment etc.	By the bidder	
30.	Coordination with local Police Authorities to lodge the FIR and insurance agencies for any theft or loss of materials	By the bidder	
31.	Bills Submission	<p>All the bills in the monthly RAB format once in a month enclosing following mentioned documents to be submitted to Resident Manager/Engineer at our site office.</p> <ol style="list-style-type: none">1. The gross weight unloaded/handles as per LR2. Truck/trailer number, number of boxes/cartons/bundles in each truck/trailer3. Shortage/damage reports.4. P.F. payment challan5. Workmen insurance policy. <p>The monthly RAB shall be verified and certified by the Resident Manager and forwarded to BHEL-ISG HQ for further processing.</p>	



ISG BANGALORE

Project : Coal & Ash Handling Plant For Yermarus Thermal Power Station (2x800 MW)**Customer : M/s Raichur Power Corporation Ltd****Work : Unloading and Stores Management****(5) Commercial Terms and Conditions (CTC)**Enquiry No. :
88/11/6031/RSB

Sl. No.	Clause	BHEL's Requirement	Remarks / Acceptance
32.	BHEL's right to cancel the awarded contract.	BHEL shall hold the decision to cancel the awarded contract at any point of time without assigning any reason and no claim from the contract shall be entertained. BHEL reserves the right to 'ACCEPT OR REJECT' the offer without assigning any reason.	
33.	Miscellaneous	<p>A) Offers received after the due date for submission of quotation will not be accepted.</p> <p>B) Bidders to accept all our commercial terms and conditions and enquiry specifications without any deviations. Offers with deviations are liable to be rejected.</p> <p>C) Price bids of technically accepted bidders will be opened in the presence of bidders who choose to be present and date of price bid opening will be intimated to the bidders.</p> <p>D) Final accepted unit rates shall be valid for the entire duration of the contract including extensions granted, if any, thereof.</p> <p>E) Monthly progress report, action plan for completion of balance work, material reconciliation statement and constraints if any to complete the work should be prepared and submitted.</p>	

I. ARBITRATION

All disputes between parties to the contract arising out of or in relation to the contract, other than those for which the decision of engineer or any other person is by the contract expressed to be final & conclusive, shall after written notice by either party to the contract to the other party, be referred to sole arbitrator of the General Manager of BHEL or his nominee. The arbitration shall be conducted in accordance with the provisions of the Indian Arbitration conciliation act 1996 and the rules there under and any statutory modifications thereof. The place of Arbitration will be at Bangalore. The parties to the contract understand and agree that there will be no objection that the General Manager or his person nominated as arbitrator had earlier in his office capacity to deal directly or indirectly with the matters to which the contract relates or that in the course of his official duties had expressed views on all or any of the matters in dispute of difference. The award of arbitrator shall be final and binding on the parties to this contract.



ISG BANGALORE

Project : Coal & Ash Handling Plant For Yermarus Thermal Power Station (2x800 MW)

Customer : M/s Raichur Power Corporation Ltd

Work : Unloading and Stores Management

(5) Commercial Terms and Conditions (CTC)

Enquiry No. :
88/11/6031/RSB

In the event of Arbitrator dying, neglecting or refusing to act or resigning or being unable to act for any reason or his award being set aside by the courts for any reason, it shall be lawful for the General Manager or his successor, as the case may be, either to act himself as the Arbitrator in place of the out going Arbitrator in the manner aforesaid.

The Arbitrator may, from time to time, with consent of both the parties to the contract, enlarge the time for making the award.

The work under the contract shall be continued during the arbitration proceedings. The venue of Arbitration shall be such place from which the contract is issued or such other place as the Arbitrator at his discretion may determine.

II. LAWS GOVERNING THE CONTRACT

This contract shall be governed by the Indian Laws for the time being in force. Any claim or disputes arising under the terms of this tender / agreement shall be enforced or filed in the Courts at Bangalore only.

Signature with Date :

Name and designation :

Company Seal / Name :



ISG BANGALORE

Project : Coal & Ash Handling Plant For Yermarus Thermal Power Station (2x800 MW)

Customer : M/s Raichur Power Corporation Ltd

Work : Unloading and Stores Management

(6) SPECIAL INSTRUCTIONS TO BIDDERS

Enquiry No. : 88/11/6031/RSB

(6) SPECIAL INSTRUCTIONS TO BIDDERS

1. Offer should conform to our Technical Specifications, Commercial Terms & Conditions (CTC), GCC, SCC & Consolidated Site Safety plan. Any deviation on Technical specification and Commercial Terms & Conditions shall be explicitly highlighted in the Deviation Format enclosed. In case of "No Deviation", the Bidder should write "No Deviation" in the Deviation Format (both in Technical and Commercial Terms & Conditions) and submit the same with Techno-Commercial Bid (Part-1).
2. Acceptance/Remarks Column of BHEL CTC should be filled against all CTC Clauses, duly Signed, Stamped and submitted with Techno-Commercial Bid (Part-1). The filled in BHEL CTC format submitted with technical bid responding to all the clauses duly signed with seal **only shall be considered**. Any other Commercial terms & conditions (CTC) of bidders entered else where in their offer shall not be considered and are liable for rejection.
3. Un-priced price bid format to be filled and submitted along with techno-commercial bid (part-1) indicating "Quoted" against the respective item/column duly signed and stamped. Un Priced bid format not complied with the above shall be liable for rejection.
4. All prices should be quoted both in figures & words as per Commercial terms & conditions of enquiry. In the event of discrepancy between the figures and words in the Price Bid, the amount entered in WORDS would be taken into consideration for evaluation and finalisation of the order.
5. The Tender shall be submitted in Two parts as follows, in separate sealed envelopes super-scribed with, Tender Reference, and Due date.

PART-1 : Superscribed as "**Techno-Commercial Bid**" this envelope as shall contain :-

- (i) EMD (ii) Accepted Technical specifications & scope of work (iii) Accepted Commercial Terms & Conditions (iv) Documentary evidence relating to pre-qualification criteria (v) Deviation Format duly filled-in (vi) Un-priced price bid format(without price) (vii) Accepted GCC (viii) Accepted SCC,(ix) Accepted Special Instructions to the bidders (x) Accepted Consolidated Site Safety Plan (xi) Contractor's Registration/evaluation Formats duly filled-in alongwith supporting documents etc.



ISG BANGALORE

Project : Coal & Ash Handling Plant For Yermarus Thermal Power Station (2x800 MW)
Customer : M/s Raichur Power Corporation Ltd

Work : Unloading and Stores Management

(6) SPECIAL INSTRUCTIONS TO BIDDERS

Enquiry No. :
88/11/6031/RSB

PART-2 : Superscribed as “**Price Bid**” this envelope as shall contain Price Bid with prices.

The above Two sealed envelopes should be put in another cover. This outer cover should be super-scribed with the Enquiry Reference, Due Date etc. and should reach us latest by 2-00 PM on the due date.

6. BHEL reserves the right to extend the due date for submission of tender without assigning any reasons.
7. Offers not complied with the enquiry requirement shall be liable for rejection.
8. All the pages of the Enquiry/Tender documents shall be duly signed, stamped and submitted along with offer as a token of Acceptance.
9. The Rates quoted should be valid for 90 days from the date of opening of Techno-Commercial Bid .
10. Tender shall be deposited in the BHEL-ISG Tender box located at the Reception of BHEL, Malleshwaram complex and tender opening will be done at the Reception of ISG entrance at 3.00 pm on due date in the presence of bidders who wish to be present.
11. Contractor's registration/evaluation formats are enclosed. Bidder has to duly fill-in and submit along with supporting documents. Registration forms(editable formats) may also be downloaded from BHEL website www.bhel.com.
12. Late tenders shall not be accepted.
13. Price bids of technically and commercially qualified bidders only shall be opened for evaluation and finalisation of tender. Due date for opening of the price bids shall be intimated separately.



ISG
BANGALORE

**Project : Coal & Ash Handling Plant For Yermarus Thermal Power
Station (2x800 MW)**

Customer : M/s Raichur Power Corporation Ltd

**Work : Unloading and Stores
Management**

(7) DEVIATION FORMAT

ENQUIRY No. :
88/11/6031/RSB

(7) DEVIATION FORMAT

1.1 TECHNICAL

Following are the DEVIATIONS from Enquiry Specifications :

TECHNICAL SPECIFICATIONS				
Sl. No.	Page No.	Clause No.	Clause	Deviation

We confirm that all other clauses of Technical Specifications are fully acceptable.

SIGNATURE OF BIDDER WITH SEAL



ISG
BANGALORE

**Project : Coal & Ash Handling Plant For Yermarus Thermal Power
Station (2x800 MW)**

Customer : M/s Raichur Power Corporation Ltd

**Work : Unloading and Stores
Management**

(7) DEVIATION FORMAT

ENQUIRY No. :
88/11/6031/RSB

1.2 COMMERCIAL TERMS & CONDITIONS

Following are the DEVIATIONS from enquiry Terms & Conditions

COMMERCIAL TERMS & CONDITIONS				
Sl. No.	Page No.	Clause No.	Clause	Deviation

We confirm that all other clauses of Commercial terms & conditions are fully acceptable.

SIGNATURE OF BIDDER WITH SEAL



ISG BANGALORE

Project : Coal & Ash Handling Plant For Yermarus Thermal Power Station (2x800 MW)**Customer : M/s Raichur Power Corporation Ltd****Work :** Unloading and Stores Management**(8) UN PRICED PRICE BID FORMAT**Enquiry No. :
88/11/6031/RSB

NOTE : - (1) Do not mention the price in this format. Please write "Quoted" against each item in the remarks column.

(2) Bidders have to Enclose this Un-Priced bid alongwith the "Techno-Commercial Bid" in a separate sealed envelope mentioning as 'UN PRICED BID' on the top of the cover.

(3) Bidders have to quote for all the items.No Deviations shall be accepted. Offers with deviation or incomplete offers shall be rejected.

Sl. No	Description	Qty	Unit rate (Rs.)	Total Amount	Remarks
1.	Unloading from Trucks, Trailers, Carriers of all types of consignment including heavy /ODC consignments to project site, verification, preparation of MRC and stacking the same in assigned locations on RCC sleepers wherever required(RCC sleepers wherever required shall be supplied by the bidder), box/ package/ crate verification, storage activities, stores management and other associated activities. Charges shall be inclusive of unloading & stores management, necessary tools, tackles & plants including suitable cranes, derrick, lifting jacks, manpower, riggers, khalasi etc.,	22,000 MTons			
2.	Shifting/ rearrangement / restacking inside the plant. Charges shall be inclusive of loading, transporting, unloading etc, manpower, and consumables, tools & plants including suitable cranes, hydra, transport etc.	1,000 MTons			
3.	Supply of manpower as shown below. The requirement/deployment of the manpower will be intermittent & need based on daily rate basis and shall be at sole discretion of site-in-charge.				
	1. Skilled Manpower (Office Assistant / Data Entry Operator / Clerk).	730 Mandays			
	2. Unskilled (Office boy / Attender / Peon).	730 Mandays			
	Total				
	Add Service Tax at Prevailing rates (.....%)				
	Grand Total			-----	

(Grand Total In Words -----.)

Signature of the Bidder with seal.



ISG BANGALORE

Project : Coal & Ash Handling Plant For Yermarus Thermal Power Station (2x800 MW)**Customer : M/s Raichur Power Corporation Ltd****Work : Unloading and Stores Management****(9) PRICE BID FORMAT**Enquiry No. :
88/11/6031/RSB

NOTE : - Bidders have to submit their price bid in the following format only in a **SEPARATE SEALED COVER**, superscribing the envelope as '**PRICE BID**' on the top of the cover. Bidders have to quote for all the items.No Deviations shall be accepted. Offers with deviation or incomplete offers shall be rejected.

Sl. No	Description	Qty	Unit rate (Rs.)	Total Amount (Rs.)
1.	Unloading from Trucks, Trailers, Carriers of all types of consignment including heavy /ODC consignments to project site, verification, preparation of MRC and stacking the same in assigned locations on RCC sleepers wherever required(RCC sleepers wherever required shall be supplied by the bidder), box/ package/ crate verification, storage activities, stores management and other associated activities. Charges shall be inclusive of unloading & stores management, necessary tools, tackles & plants including suitable cranes, derrick, lifting jacks, manpower, riggers, khalasi etc.,	22,000 MTons		
2.	Shifting/ rearrangement / restacking inside the plant. Charges shall be inclusive of loading, transporting, unloading etc, manpower, and consumables, tools & plants including suitable cranes, hydra, transport etc.	1,000 MTons		
3.	Supply of manpower as shown below. The requirement/deployment of the manpower will be intermittent & need based on daily rate basis and shall be at sole discretion of site-in-charge.			
	1. Skilled Manpower (Office Assistant / Data Entry Operator / Clerk).	730 Mandays		
	2. Unskilled (Office boy / Attender / Peon).	730 Mandays		
Total				
Add Service Tax at Prevailing rates (.....%)				
Grand Total				

(Grand Total In Words)

Signature of the Bidder with seal.

(10) GENERAL CONDITIONS OF CONTRACT(GCC)

I N D E X

- 1. GENERAL CONDITIONS FOR TENDER ENQUIRY – Page 3 of 43**

- 2. INTRODUCTION AND GENERAL INSTRUCTIONS - Page 4 to 6 of 43
FOR EXECUTION OF WORK**

- 3. GENERAL CONDITIONS OF THE CONTRACT. - Page 7 to 43 of 43**

1. GENERAL CONDITIONS FOR TENDER ENQUIRY

1. BHEL, does not bind it to accept the lowest or any tenders, but reserves the right to accept or a part of any tender at its discretion.
2. The tender shall be submitted in two parts viz., Part-I; Technical and Commercial Bid and Part-II; Price Bid in separate sealed envelope super scribed with the enquiry No. with due date and should reach us on or before 2:00 PM on the due date. The Technical and Commercial Bids will be opened in the presence of such of those tenderers, who may be present at the time of Tender Opening. The Price Bid will be opened at a later date, which will be intimated, to the Tender after scrutiny of Technical bids.
3. Each tender should be sent in a double cover. The inner cover should be sealed with Tender's distinctive seal and super scribed with our Tender No. and due date. The outer cover should only bear the address of this office and should not show any indication that a tender is within.
4. The rates quoted should be valid upto 90 days from the date of techno-commercial bid opening; however the price shall be firm for the period as asked in the tender. The completion of the job is expected around 24 months.
5. The tenders are accepted only by Registered Post or may be deposited in the Tender Box kept in our office.
6. The tenderer shall attach with his quotation a schedule showing the exact date of completion of the jobs at various stages. The schedule is given elsewhere in the enquiry.
7. All material supply, tools and tackles, machinery and it's accessories, that is required for the completion of the job and within the scope of the contract shall be supplied at site or work place.
8. No enhancement of rate for whatever cause will be allowed, once the quotation is accepted and order is placed. With drawl of the quotation, after it is accepted or failure to make good the contractual obligation within the scheduled period will entail cancellation of the order and forfeiture of Earnest Money Deposit and or the retention amount.
9. Where there is provision of Service tax additionally, it will be only paid if Registration number specifically mentioned on the bill/ invoice.
10. Our Standard Terms of payment for the job is as follows:
11. All legal suits in respect of this shall be in jurisdiction of Bangalore only.
12. Income tax shall be deducted at source as per rules.
13. The tenderer shall posses or obtain a valid contractors license for executing the contracts work in said state or place of work.
14. -VOID-
15. BHEL reserves the right to terminate the contract at any stage of the contract period without assigning any/ reasons thereof.

2. INTRODUCTION & GENERAL INSTRUCTIONS FOR EXECUTION OF WORK

1.0 INTRODUCTION :

1.2 The entire job has to be planned to be carried out and completed in all respects within the time period specified to the successful bidder.

1.4 The contractor shall be given the guidance, wherever necessary by BHEL Engineers.

2.0 GENERAL INSTRUCTIONS :

2.3 The tenderer shall quote for the complete jobs as described in the attached documents. The works, so specified is however tentative. The job may, however, be increased/ curtailed or altered depending on the final working drawings.

2.4 After the award of the contract, if it is found that the contractor's progress of work is slow, or quality of work executed is not up to the mark or the contractor is unable to post adequately trained/ experienced workmen in good number or the contractor is unable to deliver the materials in time to site etc., then, BHEL reserves the right either to curtail the quantum of work and shift this to another contractor or can totally cancel the order for the subsequent volume of work still to be executed by this contractor. BHEL have the final say in the matter.

2.5 -VOID-

2.6 All correspondence connected with the job have to be done/ taken up with the Site-in-charge only. The contractor shall not correspond directly with the customer.

2.7 The tenderer shall furnish along with the offer his organization chart of personnel working under him as well as a second chart showing the number of personnel, their designation, their educational qualification, experience etc., of the personnel both skilled and unskilled, he proposes to deploy for the above job. As the said job has to be carried out strictly according to time schedule, the tenderer shall be prepared to re-inforce his manpower and shall work "ROUND-THE-CLOCK".

2.8 The tenderer shall furnish along with the offer a list showing the description of the various job he has so far executed, job on hand, the value of each job, period taken for the execution, the full addresses of the customers for whom these jobs were executed etc.,

2.9 The contractor shall submit the list of tools and tackles and meters and instruments along with his offer for the timely execution of the job. He shall also produce the necessary certificates and proof of having tested the tackles and calibrated the meters and instruments.

2.10 The contractor shall also furnish the list showing the number of vehicles he proposes to utilize at the above site, for the transport of his personnel as well as transport of materials etc.,

3.0 RESPONSIBILITY OF THE CONTRACTOR :

- 3.1 The plant premises and equipments shall be thoroughly cleaned after dismantling and before commencement of erection work.
- 3.2 The contractor shall take due care in transporting the equipments in cases or open crates to the erection site and to keep them in good working condition shall be responsibility of the contractor. The unpacking shall be done in the presence of the BHEL engineers and also the contractor shall assist in making the inspection report. Damages/ shortages shall be reported in writing.
- 3.3 If facilities of EOT cranes, forklifts, trucks or any other handling, transport means made available to the contractor by the user or customer are chargeable and shall be directly paid to the user or customer as the case may be.
- 3.4 The tenderer shall arrange for posting his own security personnel to safe guard his equipments/ machineries etc, not only at his storage yard, but also at the erection site, TILL SUCH TIME the complete equipment is ultimately handed over to the user.
- 3.5 The user/ customer shall provide an open area within their plant for the contractor's site office/ storage requirement. The contractor shall make his own arrangements for construction of his site office cum store etc., The contractor shall take precautions while working under hazardous, unhygienic & rough weather conditions.
- 3.6 The contractor shall make his own arrangements for transport of his personnel from their residences to work spot and back, for their boarding and lodging, medical assistance etc.,
- 3.7 All safety rules and regulations prevailing in the area and as desired by the customer shall be observed by the contractor.
- 3.8 The contractor shall hold necessary license for carrying out such type of jobs as has been narrated in the volume of work and shall employ for the above job only qualified personnel holding electrical wiring permit etc., issued by the local authority.
- 3.10 Approved type of DANGER boards shall be used while working wherever required ensuring safety of the personnel working.
- 3.11 The site shall be kept clean at the end of every day's work.
- 3.13 Any loss or damage to plant or equipment due to negligence of the contractor shall be made good/ replaced by the contractor at his own cost.
- 3.14 The contractor shall take necessary insurance coverage for the life of his own personnel/ other personnel working at site for eventual accidents due to the negligence of the contractor.
- 3.15 The contractor shall take due note of the working conditions, living conditions and practices in the area, local labor recruitment regulations etc., and satisfy himself thoroughly before quoting. No claims of extra payment will be entertained after the acceptance of his quotation by BHEL.
- 3.16 If the customer (M/s RPCL) provides/arranges Electrical power to site, THE SAME may be utilized by the bidder for the official work on payment basis. The bidder shall arrange to extend the power from the point available at his own cost. If the customer does not provide the Electrical power, the bidder shall make arrangement for the same. If the user customer

levies any electrical consumption charges for the power drawn by the contractor for erection work, the same shall be borne by the contractor.

- 3.17 Provisional electrical power distribution wiring done by the contractor for erection purposes shall ensure through safety to the personnel working and other equipment in the plant failing which, the contractor shall be responsible for the resulting damage/ accidents, if any. Any material the contractor intends to bring inside the customer's premises or intends to take out from the customer's premises, he shall strictly follow the customer's factory regulations and a copy of the list to be sent to BHEL site office in advance.
- 3.18 The welding on all consoles and frames to accommodate installation units to mechanical parts of the plant, shall be done with the consent of the authorities responsible for mechanical installation.

SPECIAL NOTE :

In order to avoid damages to mechanical/ electrical equipments due to welding current, the contractor shall take two separate cables from the welding set, one cable for the electrode holder and the other to earth point of welding, that is the point of welding shall have earth connection directly from the welding set through cable and not through the plant machinery, columns, cover plates etc.,**“This instruction has to be strictly followed in order to avoid damages to electronic components, sophisticated mechanical serve valves, printed circuit cards, special cables etc. ``.**

- 3.19 Cutting of steel re-inforcement in the floor, wall beams etc., for the purposes of installation/ dismantling of the electrical equipments, shall be done after obtaining prior approval of the customer. Care shall be taken by the contractor that while drilling/ grinding/ welding etc., that mechanical equipments like open gear boxes, machine bearings, cable galleries, other packages, etc., if any, under the place of work are properly protected/ covered.

Also, while carrying out overhead installation/ dismantling etc., the area beneath shall be clearly barricaded and caution boards hung on the barricade to caution the personnel working on the floor.

- 3.20 All materials used and items supplied shall be new and best among their respective kinds and shall be ideally suited for the purpose which they are intended. Any defect/ malfunctioning in the scope of work of the tenderer shall be repaired/ rectified by the tenderer free of cost.
- 3.21 All works executed shall be suitable for the stringent working conditions of the user industry, where, continuity of operation is the first consideration and hence, they shall have easy and adequate access to facilitate connection/ disconnection, inspection, maintenance and repair and shall with stand such variations of loads, pressure and atmospheric conditions as may occur in actual working of a plant, including short circuit conditions. Corresponding parts of identical equipments shall be inter changeable wherever possible.

- 4.0 **LIST OF TOOLS, MACHINERIES & CRANES :**A detailed list of tools tackles and instrument shall be attached along with the quotation by the contractor.

3. GENERAL CONDITIONS OF CONTRACT

CHAPTER - I

DEFINITIONS:

In these General Conditions of Contract the following terms shall have the meaning hereby assigned to them except where the context otherwise requires :

- (a) The “Contract” means, the documents forming the tender and acceptance thereof together with all the documents referred to there including General and Special Conditions of Contract Schedules. General summary attached to the form of tender, the BHEL schedule of rates as amended up to the specifications and the drawings. All these documents as applicable taken together shall be deemed to form contract and shall be complementary to one another.
- (b) The “Tender Document” means the form of tender the applicable schedules ‘A’, ‘B’ ‘C’ and/ or drawings as given to contractors on payment for the purpose of preparing their tenders.
- (c) The “Work” means, the work described in the tender documents, in individual work order and/ or accompanying drawings and specifications as may be issued from time to time to the contractor by the Site Coordinator, Resident Engineer, Engineer-in-Charge with the power conferred up to them, including all modified or additional works and on litigation to be carried out either at the site or any factory workshop or other place as required for the performance of the contract.
- (d) The “Site” means the lands and/ or other places on, in, into or through which the work is to be executed under the contract or any adjacent land, path or street which may be allotted to or used for the purpose of carrying out the contract.
- (e) The “Contractor” means, the individual form or company, whether incorporated/ or not, undertaking the work and shall include the legal personnel representatives of such individuals or the persons composing the firm or company or the successors of the firm or company and the permitted assigns of such individual or firm or company.
- (f) The “User” means the end user of the equipment or system. The customer means, M/s BHEL-ISG, I.I.Sc. Post, Prof.C.N.R. Rao Circle, Bangalore 560 012.
- (g) The “Engineer-in-charge” means, the official deputed by Resident Manager to supervise the work or part of the work.
- (h) “Approved and Directed” means the approval or direction of the Site Coordinator, or person deputed by him for the particular purpose.
- (i) BHEL hereinafter referred to as BHEL, shall mean the Board of Directors, Executive Director, General Manager, administrative Officers of the said company including Resident Engineer/ Manager, authorized to invite tenders and enter in to contract for works on behalf of BHEL-ISG, I.I.Sc. Post, Prof.C.N.R.Rao Circle, Bangalore 560 012.
- (j) In the case of lump-sum contracts, ‘Contractors Percentage’ means the percentage offered by the contractors as addition to or deduction from the cost of electrical installation or other works listed in the schedule ‘A’ to provide a lump-sum quotation for performance of the contract inclusive of all extra cost, profit, establishment charges carriage insurance, etc., complete.

In case of percentage rate contracts, 'contractor' percentage shall, if the contract so permits, mean the uniform percentage tendered by the contractor and accepted by the accepting officer and the expression 'contract rate' shall likewise mean the rates in the BHEL schedule of rates as amended up to as adjusted by the said contractor's percentage, if any.

- (k) The "Contractor Sum" means the sum accepted or the sum calculated in accordance with the prices accepted in the tender and/ or the contract rates as payable to the contractor for the entire execution and full completion of the work.
- (l) The 'Final Sum' means the actual amount payable under the contract by BHEL to the entire execution and full completion of the work.
- (m) The "Date of Completion" is the date or dates for completion of the whole or any part of the work as set out in or ascertained in accordance with the individual work order or the tender documents or any subsequent agreed amendments thereto.
- (n) A 'Week' means seven days without regard to the number of hours worked or not worked in any day in that week.
- (o) A 'Day' means a day of 24 hours irrespective of the number of hours worked or not in that day.
- (p) A 'Working Day' means any day other than prescribed by negotiable instruments Act as being a holiday and consists of the number of hours of labor as commonly recognized by good employees in the trade in the District where the work is carried out or as laid down in the BHEL Regulations.
- (q) 'Deviation Order' means, an order given by the Engineer-in-charge to effect an alteration, addition or deduction which does not radically affect the scope or nature of the contract.
- (r) 'Emergency Works' means any urgent measures which, in the opinion of the Engineer-in-charge, become necessary during the progress of the work to obviate any risk of accident or failure or which become necessary for security.
- (s) 'Provisional Sum' or 'Provisional Lump-sum' means a lump-sum included by the BHEL in the tender documents and represents the estimated value of work for which details not available at the time of inviting the tender.
- (t) 'Provisional Items' means, the items for which approximate quantities have been included in the tender documents.
- (u) 'Day Work' means, an item of work requiring the employment of labor with or without materials as the same may be, which, in the opinion of the Engineer-in-charge is not capable of being evaluated by the accepted methods of measurement or assessment and is paid on the basis of the actual labor and materials utilized on the particular items of the work referred to.

CHAPTER - II

SCOPE OF CONTRACT

1. HEADING TO THE CONTRACT:

The heading to these conditions shall not affect interpretation thereof.

2. CONTRACT DOCUMENTS:

The accepting officer shall furnish to the contractor on demand 'FREE OF COST' (three copies of signed drawings and one copy of the signed agreement, comprising of preamble to agreement, general and special specifications, schedules etc., at excluding General Conditions of Contracts and drawings) and three copies of all further drawings issued during the progress of work.

However, for any additional copies of all the agreement or drawings required by the contractor, the same will be supplied on payment of the specified cost.

The contractor shall keep one copy of all the drawings and of the specifications at the site and the Engineer-in-charge or his representative shall at all reasonable times have access to them.

3. WORKS TO BE CARRIED OUT:

The contractor shall, include all labor, materials, tools, plant, equipment and transport which may be required in preparation for and in the entire execution and full completion of the work. Schedules deemed to have been prepared in accordance with good practice and recognized principles and unless otherwise stated the description given therein shall be held to include waste materials, carriage and cartage, lead, return of empties, hoisting, fitting in position and all labor necessary in and for the entire or any omissions there from shall not vitiate the contract or release the contractor from the execution from the whole or any part of the work comprised therein according to the drawings and specifications, or from any of the quantity in schedules or any omission there from shall not vitiate the contract or release the contract from the execution of the whole or any part of the work comprised therein according to the drawings and specifications, from any of his obligations under the contract. The insertion of the name of any firm or supplier in the tender documents is for the purpose of obtaining a particular class or quality of materials or workmanship but the articles of materials specified may be obtained from any other firm subject to the prior written approval of the Engineer-in-charge.

In the case of discrepancy between schedules/ specifications and/ or the drawings the accepting officer shall be sole deciding authority as to which shall prevail and his decision shall be final and conclusive. If neither drawings nor specifications contain any mention of minor details of construction, which in the opinion of the accepting officer whose decision shall be final and conclusive, are reasonable and obviously and fairly intended for the satisfactory completion of work, such details shall be provided by the contractor without any extra cost as if they were specially mentioned and shall be deemed to be included in the contract.

The contractor will be deemed to have satisfied himself as to the nature of the site, local facilities access and all matter affecting the execution and completion of the work. No extra charges consequent on any misunderstanding in these respects or otherwise will be allowed.

4. PROVISIONAL ITEMS :

The full amount of provisional lump-sum and the value annexed to each provisional item inserted in the tender documents shall be deducted from the contract sum and the value of sum ordered and executed there under shall be ascertained by measurements or valuations as for deviations.

No work under these items is to begun without instructions in writing from the Engineer-in-charge.

The extent of quantities or items described as 'PROVISIONAL' shall not be held to guarantee or limit the amount and description of the work to be executed by the contractor either in respect of the concerned or the work as a whole.

No addition or deduction shall be made by the contractor to the amount of the provisional lump-sum as included in the tender documents.

5. DEVIATION :

The contractor shall not make any alteration or addition to or omission from the work as described in the tender documents except in pursuance of the written instructions of the Engineer-in-charge. No such deviation from the work described in the tender documents shall be valid unless the same has been specifically confirmed and accepted by the accepting officer in writing and incorporated in contract.

The accepting officer may deviate, either by way of addition or deduction, from the work so described.

Any objections by the contractor to any matter concerning the order shall be notified by him in writing to the Engineer-in-charge within **seven days** from the date of such order but under no circumstances shall the work be stopped (unless so ordered by the Engineer-in-charge) owing to differences or controversy that may arise from such an objection. In the absence of such a notification of objection by the contractor he will be deemed to have accepted the order and the conditions stated therein. In the event of contractor failing to agree with the Engineer-in-charge regarding the terms of proposed deviation, the objection shall be referred to the Site Coordinator whose decision shall be final conclusive and binding on the contractor.

6. TIME :

Time is the essence of the contract and is specified in the tender document or in each individual work order.

As soon as possible after the contract is let or any substantial work order is placed and before work under it is begun, the Engineer-in-charge and the contractor shall agree to a **Time and Progress Chart**. The chart shall be prepared in direct relation to the time stated and/ or the contract or order as a whole. It shall indicate the forecast of the date for the commencement and completion of the various trade process of sequence of the work and shall be amended as may be required by agreement between the Engineer-in-charge and the contractor within the limitation of the time imposed in the tender documents or order.

In the absence of any specific time and progress chart to be agreed to between the contractor and the Engineer-in-charge, the contractor shall ensure and maintain uninterrupted progress of the work such that the entire work shall be completed within the time imposed in the tender documents or order and that the proportion of work completed up

to any time in relation to the entire work to be done under the contractor or order shall not be less than the proportion that the time elapsed bears to the total time of completion provided in the **tender documents or order**.

The contractor shall suspended the execution of the work for any part of parts thereof whenever called upon in writing by the Engineer-in-charge to do so and shall not resume work thereon until so directed in writing by the Engineer-in-charge. The contractor will be allowed an extension of time for completion not less than the period of suspension but no other claim in this respect for compensation or otherwise whatsoever will be admitted. This may also be extended to allow for alteration of work executed by the deviation order.

7. STORES & MATERIALS:

The contractor shall, at his own expense, supply all stores and materials required for the contract. All stores and materials to be supplied by the contractor shall be of the best kind of as described in the specification and the contractor shall, if required by the Engineer-in-charge, furnish him with proof to his satisfaction that the stores and materials so comply with the specifications.

The contractor shall, at his own expense and without delay, supply samples of stores and materials proposed to be used in execution of the work for the approval of the Engineer-in-charge, who may reject all stores and materials not corresponding either in quality or character to the approved samples.

8. DELAY AND EXTENSION:

If in the opinion of Site Coordinator or Resident Engineer/Manager/ Engineer-in-charge the work is delayed.

- i. by reason of abnormally bad weather or
- ii. by reason of serious loss or damage by fire or
- iii. by reason of civil commotion, local combination workmen, strike for lock out, affecting any of the trades employed on the work or
- iv. by reason of any other case which in the absolute discretion of Site Coordinator or Resident Engineer/ Manager (RE/RM) of site is (when he is accepting officer of the contract) beyond the contractor's control, then in any such case, the accepting officer, on the recommendation of RE/RM (or higher authority) may make fair and reasonable extension in the completion dates of the individual items work or the contract as a whole. Such extension which will be communicated to the contractor by the RE/RM/Engineer-in-charge in writing

shall be final and ending in the contract. No other claim in these respect for compensation or otherwise howsoever is admissible. Upon the happening of any such event causing delay, the contractor shall immediately give notice thereof in writing to the RE/RM but shall nevertheless use constantly his best endeavor to prevent or make good the delay and shall do all that may reasonably be required to the satisfaction of the RE/RM to proceed with the work.

9. PATENT RIGHTS :

The contractor shall fully indemnify BHEL or the agent, servant or employee of BHEL, against any action, claim or proceeding relating to infringement or the use of any patent or

design or any alleged patent or design rights and shall pay any royalties which may be payable in respect of any article/ or part thereof included in the contract.

In the event of any claim being made or action brought against BHEL or any agent or servant or employee of BHEL in respect of any of the matters aforesaid, the contractor shall immediately be notified thereof for taking necessary action provided that payment of indemnity shall not apply when infringement has taken place in complying with the specific directions issued by the BHEL, but the contractor shall pay any royalties payable in respect of any such use.

10. OCTROI & OTHER DUTIES :

All charges on account of Octroi, terminal or sales tax and/ or either duties on materials obtained for the work (excluding materials provided by BHEL on payment) shall be borne by the contractor.

11. ROYALTIES :

Royalties fixed from time to time as per prevalent local rules will be recovered for materials, which the contractor may be allowed to remove from queries situated on land which is in-charge of BHEL authorities.

12. PLANT AND EQUIPMENT :

The contractor, shall at his own expenses, supply all tools, plant and equipments (hereinafter referred to as T&P) required for the execution of the contract and keep them in good working condition at all times. The contractor, shall at his own expenses maintain the validity of statutory requirements for their workmen & machineries' licenses, fitness certificate, emission certificate, calibration certificates, insurance etc.

13. ASSIGNMENT OF TRANSFER OF CONTRACT :

The contract shall not, without the prior written approval of the accepting officer, assign or transfer the contract or any part thereof or any share of interest therein to any other person. No sum of money which may become payable under the contract shall be payable to any person other than the contractor unless the prior written approval of the accepting officer to the assignment or transfer of such money is given.

14. SUB-CONTRACT :

The contractor shall not sub-let any portion of contract without the prior written approval of the accepting officer.

15. COMPLIANCE TO REGULATIONS LAND BYE-LAWS :

The contract shall conform to the provisions of any statute relating to the work and regulations and laws of any local authority and of any water and lighting companies of undertakings with whose system the work is proposed to be connected. He shall, before

making any variations from the drawings or the specifications that may be necessitated for such connections give the Engineer-in-charge notice, specifying the variations proposed to be made and the reasons thereof and shall not carry out any such variation until he has received instructions from the Engineer-in-charge in respect thereof. The contractor shall be bound to give all notices required by statute regulations of Bye-Law as aforesaid and to pay all fees and taxes payable to any authority in respect thereof.

CHAPTER - III

PERFORMANCE OF THE CONTRACT

01. SECURITY DEPOSIT AND EARNEST MONEY DEPOSIT

EARNEST MONEY DEPOSIT

Works costing upto Rs. 2.0 lakh	:	- Nil -
Works costing more than 2.0 lakh & up to 5.0 lakhs	:	Rs. 10,000/-
Works costing more than 5.0 lakhs & up to 10.0 lakhs	:	Rs. 20,000/-
Works costing more than 10 lakhs & up to 20 lakhs	:	Rs. 40,000/-
Works costing more than 20 lakhs & up to 30 lakhs	:	Rs. 60,000/-
Works costing more than 30 lakhs & up to 50 lakhs	:	Rs. 1,00,000/-
Works costing more than 50 lakhs & up to 100 lakhs	:	Rs. 1,50,000/-
Works costing more than 100 lakhs	:	Rs. 2,00,000/-

One time EMD will also be Rs.2.00,000/-

SECURITY DEPOSIT

- (i) The amount of security money to be deposited for proper fulfillment of contract will be as follows :
- | | | |
|-----|-----------------------------------|---|
| (a) | Up to Rs.10.00 lakhs | 10% |
| (b) | Above 10 lakhs and up to 50 lakhs | 1.0 lakh + 6.5 % of the amount exceeding Rs.10.0 lakhs |
| (c) | Above Rs.50.0 lakhs | Rs 4.0 lakhs + 5% of the amount exceeding Rs. 50.0 lakhs. |
- (ii) Security deposit may be furnished in any one of the following forms:
- i.) Cash (as permissible under the income tax act).
 - ii.) Pay order, demand draft in favour of BHEL.
 - iii.) Local cheques of scheduled banks, subject to realization.
 - iv.) Securities available from post officers such as national savings certificates, kisan vikas patras etc. (certificates should be held in the name of bidder furnishing the security and duly pledged in favour of BHEL and discharged on the back).
 - v.) Bank guarantee from scheduled banks/ public financial as defined in the companies act. The bank guarantee format should have the approval of BHEL
 - vi.) Fixed deposit receipt issued by scheduled banks/ public financial as defined in the companies act. The FDR should be in the name of the bidder, A/C BHEL, duly discharged on the back.
 - vii.) Security deposit can also be recovered at the rate of 10% from the running bills. However In such cases at least 50% of the security deposit should be collected before start of the work and the balance 50% may be recovered from the running bills.

- viii.) EMD of the successful bidder shall be converted and adjusted against the security deposit.
- ix.) The security deposit shall not carry any interest.

(Note: Acceptance of security deposit against Sl.No.(iv) and (vi) above will be subject to hypothecation or endorsement on the documents in favour of BHEL. However, BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith).

Security deposit shall be refunded to the bidder after successful completion of contract period subject to reconciliation/returning of balance material to BHEL/customer store.

No interest shall be allowed on security deposits.

BHEL shall not be responsible for any loss or securities due to liquidation or any other reasons whatsoever or any depreciation in the value of the securities while in their charge or for any loss of interest thereon.

- (iii) All compensation or other sums of money payable by the contractor to BHEL, under the terms of this contract or under any other contract with BHEL, may be deducted from the security deposit or realized by the sale of securities or from the interest arising there from or from any sums which may be due or may become due to the contractor payable by BHEL on any account whatsoever this contract or any other contract with BHEL and in the event of his security deposit being contractor shall, within seven days thereafter make good in cash or in securities endorsed as aforesaid, any sum or sums by which the security deposit has been so reduced.
- (iv) 50% of the security deposit may be refunded on completion of the work after payment of the final bill and the balance 50% of the security deposit is refundable only after the expiry of the maintenance period of six months from the date of work or as stipulated in the contract concerned.

02. ORDER UNDER THE CONTRACT :-

All orders, notices, etc., to be given under the contract shall be in writing, type script or printed and if sent by registered post to address given in the tender of the contractor, shall be deemed to have been served on the dates when in the ordinary course they would have been delivered to him. The contractor shall carry out without delay all orders given to him.

03. ADMISSION TO SITE :-

The contractor shall not enter on (other than for inspection purpose), or take possession of the site unless permitted to do so by the RE/RM/Engineer-in-charge. The portions of the site to be occupied by the contractor will be clearly defined and marked on the site plan and the contractor will on the account be allowed to extend his operations beyond these areas.

The contractor shall provide, if necessary and if required at the site, temporary access thereto and shall alter/ modify and maintain the same as required from time to time. He shall take out land clear away the access route when no longer required restoring the area to its original conditions.

The engineer-in-charge shall have power to execute other works (whether or not connected with the work in the contract agreement) on the site contemporaneously with the execution of the original work and contractor shall give reasonable facilities for this purpose.

BHEL reserves the right to taking over, at any time, any portion of the site which they may require and the contractor shall at his own expense clear such portion forthwith. No photographs of the site or of the work or any part thereof shall be taken, published or otherwise circulated without the prior approval of the engineer-in-charge.

No such approval shall however exempt the contractor from complying with any statutory provisions in regard to the taking and publication of such photographs. BHEL officials connected with the contract shall have the right of entry to the site at all times. The engineer-in-charge shall have the power to exclude from the site any person whose admission thereto may, in his opinion, be undesirable for any reasons whatsoever.

04.. CONTRACTOR'S SUPERVISION

The contractor shall either himself supervise the execution of the contract or shall appoint a competent agent approved by the engineer-in-charge to act in his stead.

The contractor shall employ a Site-in-charge having due qualification and experience. suitable for the work.

The employment of an Engineer/ Agent as aforesaid shall not be necessary if the contractor himself is in possession of recognized technical qualification and is in opinion of the Engineer-in-charge capable of receiving instructions of the Engineer-in-charge and executing the work to the satisfaction of the Engineer-in-charge.

If the contractor fails to appoint a suitable Site-in-charge as aforesaid, the Engineer-in-charge shall have full powers to suspend the execution of work and stop payment of any advance that may have become due until such date a suitable Engineer/ Agent is appointed and the contractor shall be held responsible for the delay caused to the work and no extension of time on this account shall be given to him as stipulated in condition(9) above.

Orders given to the contractor's agent/ engineer shall be considered to the contractor himself.

The contractor or his agent shall be in attendance at the site during all working hours and shall superintend the execution of work with such additional assistance in each trade as the engineer-in-charge may consider necessary.

The contractor or his accredited agent shall attend, when required and without making any claim for doing so, either the office of the engineer-in-charge or the work site to receive instructions.

The engineer-in-charge shall have full powers and without assigning any reasons, to require the contractor immediately to cease to employ in connection with this contract, any agent, servant or employee whose continued employment is, in his opinion undesirable.

The contractor shall not be allowed any compensation in this account.

LABOUR

- 05.** The contractor shall employ labor in sufficient numbers directly or through sub-contractors to maintain required rate of progress and of quality to ensure workmanship of the degree specified in the contract and to the satisfaction of the engineer-in-charge. The contractor shall not employ in connection with the works any person who has not completed his fifteen years of age.

The Contractor shall furnish to the engineer-in-charge at the intervals specified by him a distribution of return the number and description by trades of the work people employed on the works. The contractor shall also submit on the 4th and 19th of every month to the Engineer-in-charge a true statement showing in respect of the second half of the preceding month and the first half of the current month (i) the accidents that occurred during the said fortnight showing the circumstances under which they happened and the extent of damage and injury caused by them and (ii) the number of female workers who have been allowed maternity benefits as provided in the Maternity Benefit 1961 or Rules made there under and the amount paid to them.

The contractor shall pay to labor employed by him either directly or through sub contractors wage not less than fair wages as defined in the Contractor's Labor Regulations.

The contractor shall in respect of labor employed by him either directly or through sub-contractors comply with or cause to be complied with contractor's labor regulations in regarded to all matters provided therein.

The contractor shall comply with the provisions of payment of wages Act 1936, Minimum Wages Act 1948, Employees liability Act 1938, workmen's compensation Act 1923, Industrial Disputes Act 1946, Maternity Benefit Act 1961 and Mines Act 1952 or any modifications thereof or any other law relating there to and rules made there under from time to time.

The contractor shall indemnify the BHEL against any payments to be made under and for observance of the regulations aforesaid without prejudice to his right to claim indemnity from his sub contractors.

In the event of the contractor committing a default or breach of any of the provisions of the aforesaid contractor's labor regulations, as amended from time to time or furnishing any information or submitting or filling any form/ register/ slip under the provisions of these regulations which is materially incorrect then on the report of the inspecting officers as defined in the contractor's labor regulations. The contractor shall without prejudice to any other liability pay to the BHEL a sum of not exceeding Rs.50,000.00 as liquidated damages for every default, breach or furnishing, making submitting, filling materially incorrect statement as may be fixed by engineer-in-charge and in the event of the contractor's default continuing in this respect the liquidated damages may be enhanced Rs.50.00 per day for each day of default subject to a maximum percent of the estimated cost of works out to tender.

The Engineer-in-charge shall deduct such amount from bills or security deposit of the contractor and credit the same to the welfare fund constituted under regulations. The decision of the Engineer-in-Charge in this respect shall be final and binding.

Model rules for labor welfare; the contractor shall at his own expense comply with or cause to be complied with model rules for labor welfare as appended to these conditions or rules framed by Government from time to time for the protection of health and for making sanitary arrangements for workers employed directly or indirectly on the works. In case the contractor fails to make arrangement as aforesaid the Engineer-in-charge shall be

entitled to do so and recover the cost thereof from contractor.

Safety Code; the contractor shall at his own expense arrange for the safety provisions as appended to these conditions or as required by the engineer-in-charge, in respect of all labor directly or indirectly employed for performance of the works and shall provide all facilities in connection therewith. In case the contractor fails to make arrangements and provide necessary facilities as aforesaid, the engineer-in-charge shall be entitled to do and recover the cost thereof from the contractor.

Failure to comply with model rules for labor welfare or the provisions relating to report on accidents and grant of maternity to female workers shall make the contractor liable to pay to the BHEL as liquidated damages an amount not exceeding Rs.50.00 for each default of materially incorrect statement. The decision of the engineer-in-charge in such matters based on reports from the inspecting officers as defined in the contractor's labor regulations as appended to these conditions shall be final and binding and deductions for recovery of such liquidated damages may be made from any amount payable to the contractor.

06. WATER :

The contractor shall allow in his tender and provide at his cost all water required for the work or his employees on the work, together with all pipes and fittings or other means that may be necessary or required to ensure proper and ample supply of water for all purposes connected with the work.

In the event of a provision existing in the tender documents for supply of water on payment by BHEL water will be supplied from BHEL supply system or other sources at any point fixed by the Engineer-in-charge on the site of work. The contractor shall make necessary arrangement for lifting, pumping, carrying or conveying the water as required at his own cost. The levy of water charges to be borne by the contractor in such case shall be specifically mentioned in the tender documents.

07. TEMPORARY WORKS SHOPS, STORES ETC., :

The contractor shall during the progress of the work, provide, erect and maintain at his own expenses all necessary temporary workshops, stores, officials etc., required for the proper and efficient execution of the work. The planning, siting and erection of these buildings shall have the approval of the engineer-in-charge and the contractor shall at times keeps them tidy and in a clean and sanitary condition to the entire satisfaction of the Engineer-in-charge.

On completion of the work, all such temporary building shall be cleared away and the site restored and left in a clean and tidy condition to the entire satisfaction of the Engineer-in-charge.

08. STORES AND MATERIALS ON SITE :

All stores and materials required for the work are to be deposited by the contractor only in places to be indicated by the Engineer-in-charge.

Where in accordance with the contract stipulations, certain stores and materials for incorporation in work are to be issued to the contractor by BHEL such items will be so issued only to the extent for the actual completion of the work as stipulated in the contract.

The decision of the Engineer-in-charge regarding the quantities to be issued as above shall be final and binding on the contractor. For any excess quantities consumed on the work their cost will be recovered from the contractor at punitive rates which will be 100% (hundred percent) more than the issued rates of the BHEL.

In regards to the materials and stores which may be issued to the contractor by BHEL the contractor shall give the Engineer-in-charge reasonable notice in writing of his requirement of such stores and materials and/ or the approval of his demand being notified to him, he shall make immediate arrangement for drawing the same. Such stores and materials shall be transported by contractor at his own expenses direct from the place of issue to the site of the work, unless prior written approval is obtained from the Engineer-in-charge to take them to a stores or workshop elsewhere.

BHEL officers connected with the contract shall have the power at any time to inspect and examine any stores or materials intended to be used in or on the work, whether on the site or any factory or workshop or other place where such stores or materials are being fabricated or manufactured or at any where the same are lying and the contractor shall give necessary facilities for such inspection and examination.

The Engineer-in-charge shall be entitled to have tests made of any stores or materials supplied by the contractors who shall provide at his own expense all facilities which the Engineer-in-charge may require for this purpose. If at the discretion of the Engineer-in-charge an independent expert is employed to any such tests his charges shall be borne by the contractor only if the test discloses that the said stores or materials are not in accordance with the provisions of the contract.

Should the Engineer-in-charge consider at any time during the construction or reconstruction, on prior to the expiry of the 'CONTRACT COMPLETION PERIOD' so specified and provide other proper and suitable stores or materials that the stores provided by the contractor are unsound or a quality inferior to that contracted for or otherwise not in accordance with the contract (in respect where of the decision of the engineer-in-charge shall be final and conclusive) the contractor shall, on demand, in writing from the engineer-in-charge specifying the stores or materials complained of, notwithstanding that the same may have been inadvertently passed, certified and paid for, forthwith remove the stores or expense to the entire satisfaction of the engineer in charge and in the event of his failing to do so with a period to be specified by the engineer-in-charge in his demand aforesaid the engineer-in-charge may replace with others the stores or materials complained of at the risk and expense in all respects of the contractor. The liability of the contractor under this condition shall not extend beyond the maintenance period aforesaid except as regards stores or materials which the Engineer-in-charge shall have previously given notice of the contractor to replace (* CONTRACT COMPLETION PERIOD' of

any work under this organization will be SIX MONTHS from the date of actual completion

of the particular work and handing over to customer).

All stores and materials brought to the site shall become and remain the property of BHEL and shall not be removed from the site without the prior written approval of the Engineer-in-charge. However, when the work is finally completed, the contractor shall at his own expense forthwith remove from the site all surplus stores and materials originally supplied by him and upon such removal, the same shall revert in and become the property of

contractor. All BHEL stores and materials issued to the contractor for incorporation or fixing of the work and which, making due allowance for reasonable wear and tear or waste, have not on completion of the work, been so incorporated or fixed, shall be returned by the contractor at his own expense to the place of issue.

Credit for surplus stores and/ or materials returned by the contractor BHEL will be given to him at price based on the prevailing market rate but not exceeding that at which the said stores and materials were originally issued to him but due consideration shall be given to the allowance claimed by BHEL in respect of any depreciation or damages suffered by the stores and or materials whilst in the custody of the contractor regarding which, the decision of the Engineer-in-charge shall be final and conclusive.

If, in opinion of Engineer-in-charge (which shall be final and conclusive) any stores supplied by BHEL have either during currency of the work or after completion of the work whilst under the custody of the contractor, become damaged to such an extent that they cannot be usefully utilized, either in the same work or in other works, the Engineer-in-charge shall not accept the stores and the contractor shall be charged for the said stores at a rate fixed by the Accepting Officer. The contractor shall not be entitled to any claim whatsoever on the account.

09. TOOLS AND PLANT ON SITE :

All tools, plant and equipment brought to the site shall become the property of BHEL and shall not be removed from the site without prior written approval of the Engineer-in-charge when the work is finally completed or the contract is determined for reasons other than the default of the contract, he shall forthwith remove from the site all tools, plant, equipment etc., (other than those as may have been provided by BHEL) and upon such removal, the same shall revert in and become the property of the contractor.

10. STATEMENT OF HIRE CHARGE :

A monthly detailed statement of the hire charges incurred in respect of BHEL, tools, plant equipment, etc., shall be given to the contractor by the Engineer-in-charge.

11. PRECAUTIONS AGAINST RISKS :

The contractor shall be responsible for providing at his own expense, for all precautions to prevent loss or damage from any/ all risks and to minimize the amount of any such loss or damage and for the necessary steps to be taken for the said purpose until the works have been handed over complete in all respects to the customer and user.

The contractor shall provide all watchman necessary for the protection of the site, the work, the materials tools, plant equipment and anything else lying on the site during the progress of the work. He shall solely be responsible for and shall take all reasonable and proper steps for protecting, securing, lighting and watching all places on or about the work and site which may be dangerous to any person whomsoever.

12. NOTICES AND FEES :

The contractor shall give all notices required by any statutory provision or by the regulations and/ or bye-laws of any local authority and/or of any Public Service, Company or Authority affected by the work or with whose system the same are or will be connected. The contractor shall pay and indemnify BHEL against any fees and charges, demandable by law under such acts, regulations and/ or bye-laws in respect of the work and shall make and supply all drawings and plans required in connection with any such notice.

13. SETTING OUT OF THE WORKS AND PROTECTIVE AND MAINTAINING SIGNALS AND MARKS :

The Engineer-in-charge shall supply dimension drawings, levels and other information necessary to enable the contractor to set out the work. The contractor shall at his own expense set out accurately according to the drawings and figured extras or additions there to and shall be solely responsible for their being so set out and executed.

All bench marks, pegs, signals on the surface, alignment stones, milestones and all similar marks whether put in by BHEL authorities for the purpose of checking the contractor's work or in the nature of permanent survey marks will during the tenure of the contract, be under the care of the contractor who shall, at his own expense, take all proper and reasonable precautions and care to preserve and maintain them in their true position. In the event of these marks being disturbed or obliterated by accident or due to any other cause whatsoever, the same may, if deemed necessary be replaced by Engineer-in-charge at the contractor's expenses and the cost thereof deducted from any money then or thereafter due to the contractor.

Where requested by the contractor, the level marks centerline and chain age pegs corresponding, to these shown on the drawing will be pointed out to the contractor on the ground but all bench marks or chain age pegs additional to those shown on the drawing will be set out by BHEL authorities.

14. SITE DRAINAGE :

All water that may accumulate on the site during the progress of the work, or in trenches and excavations shall be removed to the entire satisfaction of the Engineer-in-charge and at the contractor's expense.

15. EXCAVATIONS, RELICS ETC. :

Materials of any kind obtained from excavation on the site shall remain the property of the user. All gold, silver, oil and other minerals of any description and all precious stones, coins, treasures, relics, antiques and other similar items which may be found in or upon them shall be the property of purchaser and the contractor shall duly preserve the same to the satisfaction of purchaser and shall from time to time deliver the same to the persons as the purchaser may appoint to receive the same.

16. FOUNDATIONS :

The contractor shall not lay any foundations until the excavations for the same have been examined and approved in writing by the Engineer-in-charge.

17. COVERNG IN WORK :

The contractor shall give reasonable notice in writing to the Engineer-in-charge whenever any work is to be permanently covered up or concealed, whether by earth or other means so that it can finally inspected or measured if necessary. In defaults on so doing, the contractor shall, if required by the Engineer-in-charge uncover such work at his own expense.

18. APPROVAL OF WORKS BY STAGES :

All work embracing more than one process shall be subject to examination and approval at each stage thereof and the contractor shall give due notice in writing to the Engineer-in-charge when each stage is ready. In default of such notice being received, the Engineer-in-charge shall be entitled to approve the quality and extent thereof at any time he may choose in the event of any dispute, the decision of the Engineer-in-charge thereon shall be final and conclusive.

19. EXECUTION OF THE WORK :

The work shall be executed in a work man like manner and to the satisfaction in all respects of the Engineer-in-charge.

The Engineer-in-charge will communicate or confirm his instructions the contractor in respect of the execution of the work in "Work site Order Book" maintained at his office and the contractor shall visit this office daily and shall confirm receipt of such instructions by signing the relevant entries in this book. Such entries will rank as order or notices in writing the intent and meaning of these conditions.

20. DAY WORK :

No day work shall be performed without the prior written instructions of the accepting officer.

The contractor shall give to the Engineer-in-charge reasonable notice of the start of any work ordered to be executed by day work shall deliver to the Engineer-in-charge within two days of the end of each pay week a return in duplicate giving full detailed accounts of labor and materials for the pay week. One copy of each of these returns, if found correct, will be certified by the Engineer-in-charge and returned to the contractor and must be produced at the time of adjustment of account.

An invoice in duplicate signed by the contractor or his agent shall be sent with each delivery of materials for day work and the contractor will be furnished with a receipt signed by the Engineer-in-charge specifying the description, quantities, weight or measurement (as the case may be) of the articles approved reference will be made to this receipt in the return aforesaid and the receipt itself is to be produced in support of the contractors bill.

In the case lump-sum contractors, the rates to be charged and the percentage addition for profit and establishment charge, etc., will be agreed upon between the accepting officer and the contractor prior to the execution of the work.

In the case of lump-sum contractors, the rates to be charged and the percentage addition for profit and establishment charge, etc., will be agreed between the accepting officer and the contractor prior to the execution of the work.

21. INSPECTION OF THE WORK :

BHEL officers concerned with the contract shall have power at any time to inspect and examine any part of the work and contractor shall give such facilities as may be required to be given for such inspection and examination.

Should the Engineer-in-charge, consider at any time during the tendency of the maintenance period, that any work has been executed with unsound, imperfect or unskilled workmanship or of a quality inferior to that contracted for or not otherwise in accordance with the contract (in respect whereof the decision of the Engineer-in-charge shall be final and conclusive) the contractor shall, on demand in writing from the **engineer-in-charge** shall be final and flying the fault notwithstanding that the same may have been

inadvertently passed, certified and paid for, forthwith rectify or remove and reconstruct the work so specified in whole or in part as the case may require at his own expense to the entire satisfaction of the accepting officer and in the event of his falling to do so within a period to be engineer-in-charge may carry out the work by other means at the risk and expense in all respects of the contractor. However, the extend beyond the maintenance period except as regards workmanship which the Engineer-in-charge shall have previously given notice of to the contractor to rectify.

22. RESPONSIBILITY FOR BUILDING :

In the event of any building, or part of any building being handed over to the contractor for the execution of work thereto under the provisions of the contract, he shall give written receipt for all fixtures, glass etc., and he shall be required to make good at his own expenses all damages resulting from any cause whatsoever while in his charge and completion of the work to deliver up the said building or part thereof in a clear state complete in every particular to the entire satisfaction of the Engineer-in-charge.

23. -- VOID—

24. DAMAGE, LOSS TO PRIVATE PROPERTY AND INJURY TO WORKMEN :

The contractor shall at his own expense reinstate and make good to the satisfaction of the Engineer-in-charge and pay compensation for any injury, loss or damage occasioned to any property or rights whatever including property and rights of BHEL (or agents, servants or employees of BHEL) in injury, loss or damage arising out of or in any way in connection with the execution of perforated execution of the contract and further the contractor shall indemnify BHEL against all claims enforcement against BHEL (or any agent, servant or employee of BHEL or which would be so enforceable against BHEL) where BHEL a private person in respect of any such injury (including injury resulting in death, loss or damage to any person) whomsoever or property, including all claims which may arise under the Workman's Compensation Act or otherwise.

25. COMPLETION:

The work shall be completed to the entire satisfaction of the Engineer-in-charge and in accordance with the contractors forecast of time and progress where operative and all unused stores and materials, tools, plant, equipment, temporary buildings and things shall be removed and the site and works cleared of rubbish and waste materials and delivered up

clean and tidy to the satisfaction of the Engineer-in-charge at the contractor's expense on/ or before the schedule date of completion.

The BHEL shall have power to take over from the contractor from time to time such section of the work as have been completed to the satisfaction of the Engineer-in-charge.

The engineer in charge shall certify to the contractor the date on which the work is completed and state thereof.

The engineer in charge shall also certify to the contractor the state of the work at the end of maintenance period, where applicable.

26. COMPENSATION FOR DELAY:

If for any reason the material is not unloaded within the 24 hours which is on account of bidder's coordination delay etc. any demurrage required to be paid to the transporter shall be recovered from the bidder's bills by BHEL

27. LAWS GOVERNING THE CONTRACT:

This contract shall be governed by Indian Laws for the time being in force.

28. CANCELLATION OF CONTRACT OR CORRUPT ACTS :

The accepting officer, whose decision shall be final and conclusive shall, without prejudice to any right or remedy which shall have accrued or shall accrues thereafter to BHEL cancel the contract in any of the following cases and the contractor shall be liable

to make payment to BHEL for any loss or damage resulting from any such cancellation to the same extent as provided in the case of cancellation for default.

If the contractor shall :

- (a) Offer or give or agree to give to any person in BHEL service any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract for BHEL service OR
- (b) Enter in to a contract with BHEL in connection with which commission has been paid or agreed to be paid by him or with his knowledge, unless the particulars of any such commission and the terms of payment thereof have previously been disclosed in writing to the accepting officer, OR
- (c) Obtain a contract with BHEL as a result of ring rendering or by non-bonafide methods of competitive tendering without first disclosing the fact in writing to the accepting officer.

29. CANCELLATION OF CONTRACT FOR INSOLVENCY, ASSIGNMENT OR TRANSFER OR SUB-LETTING OF CONTRACT :

The accepting officer without prejudice to any other right or remedy which shall have accrued thereafter to BHEL cancel the contract in any of the following cases;

If the contractor,

- (a) being an individual, or if a firm any partner thereof shall at any time be adjusted bankrupt or have a receiving order or orders for administration of his estate made against him or shall take any proceeding, for liquidation or composition under any bankruptcy act for the time being force or make any conveyance or assignment of his effects of composition or agreement for the benefit of his creditor or purpose to do so, of any application be made under any Bankruptcy Act for the time being in force for the sequestration of his estate or if a trust deed be granted by him on behalf of his creditors, OR
- (b) being company shall pass a resolution or the Court shall make an order for the liquidation of its affair, or a receiver or Manager on behalf of the debentures/ holders shall be appointed or circumstances shall arise which the court or debenture holders to appoint a receiver or Manager OR
- (c) assigns, transfers, sub-lets or attempts to assign transfer or sub-let any portion of the work without the prior written approval of the accepting officer.

Whenever the accepting officer exercises his authority to cancel the contract under this condition, he may complete the work by any means at the contractor's risk and expense provided always that in the event of the cost of completion (as certified by the Engineer-in-charge which is final and conclusive) being less than the contract cost, the advantage shall accrue to the BHEL and that if the cost of completion exceeds the moneys due to the contractor under the contract, the contractor shall either pay the excess amount ordered by the Engineer-in-charge or the same shall be recovered from the contractor by other means.

In case BHEL, completes the work under the provision of this condition the cost of such completion to be taken in to account in determining the excess cost to be charged to the contractor under this condition shall consist of the cost of the cost of materials purchased and/ or labor provided by the BHEL with an addition of such percentage to cover superintendence and establishment charges as may be decided by the Resident Manager whose decision shall be final and conclusive.

30. CANCELLATION OF CONTRACT IN PART OR IN FULL FOR CONTRACTOR DEFAULT :

If the contractor :

- (a) Makes default in commencing the work within a reasonable time from the date of handing over the site and continues in that state after a reasonable notice from the Engineer-in-charge OR
- (b) In the opinion of the Engineer-in-charge at any time, whether before or after the date of extended date for completion, make default in proceeding with the work, with due diligence and continues in that state after a reasonable notice from the Engineer-in-charge OR
- (c) Fails to comply with any of the terms and conditions of the contract or after reasonable notice in writing with orders properly issued there under, OR

- (d) Fails to complete the work, order and items of work with individual dated for completion and clear the site on or before the date of completion, or fails to achieve the progress as set out under clause 6 of these general conditions of contract.

The accepting officer may, without prejudice to any other right or remedy which shall have accrued or shall accrues there after BHEL cancel the contract as a whole or in part thereof or only such work order or items or work in default from the contract. Whenever, the accepting officer exercises his authority to cancel the contract as a whole or in part under this condition he may complete the work at the contractor's risk and cost, provided always that in the event of the cost of completion (as certified by Engineer-in-charge which is final and conclusive) being less than the contract cost, the advantage shall accrue to the BHEL. If the cost of completion exceeds the money due to the contractor under this contract, the contractor shall either pay the excess amount ordered by Resident Manager or the same shall be recovered from the contractor by other means.

In case the BHEL completes the work or any part thereof under the provision of this condition the cost of such completion to be taken in to account in determining the excess cost to be charged to the contractor under this condition shall consist of the cost of materials purchases and/ or labor provided by the BHEL, with an addition of such percentage to cover superintendence and establishment charges as may be decided by Resident Manager, Engineer-in-charge whose decision shall be final and conclusive.

31. TERMINATION OF CONTRACT ON DEATH :

Without prejudice to any of the rights or remedies under this contracts, if the contractor dies, the accepting officer shall have the opinion of terminating the contract without compensation to the contractor.

32. SPECIAL POWERS OF DETERMINATION :

If at any time after the acceptance of the tender, BHEL shall for any reason whatsoever not require the whole or any part of the work to be carried out, the Resident Manager shall give notice in writing of the fact to the contractor who shall have no claim to any payment of compensation or otherwise howsoever on account of any profit or advantage which he might have derived from the execution of the work in full but not which he did not derive in consequences of the force closing of the work.

He shall be paid at contract rates for the full amount of the work executed including such additional works, e.g., clearing of site, etc., as may be rendered by the said force closing. He shall also be allowed a reasonable payment (as decided by the accepting officer) for any expenses sustained on account of labor and materials collected but which could not on the work, as verified by the Engineer-in-charge. Neither shall the contractor has any claim of compensation on account of any alteration having been made in the original specifications, drawings, design and instructions, involving any curtailment of the work as originally contemplated.

33. FAIR WAGE :

- (a) The contractor shall pay not less than the "FAIR WAGE" to laborer engaged by him on the work.

Fair wage means whether for time or piece work notified at the time inviting tenders for work where such wages have not been notified, the wages prescribed by the Resident Manager for the stations at which the work is due.

- (b) The contractor shall, notwithstanding the provision of any contract to the contrary cause to be paid a fair wage to laborer indirectly engaged on the work, including

any labor engaged by his sub-contractors in connection with the said work, as if the laborer had been directly employed by him.

- (c) In respect of all labors directly or indirectly employed on the work for the performance of the contractor's labor regulations (appended hereto as Annexure-A to these conditions) in regard to payment of wages, wage period, deductions from wages recovery of wages, not paid and deductions recovery of wages, deductions from wages, authorized made maintenance of wage book, wage slips, publication of scale of wages and other terms and all other matters of a like nature.
- (a) The Engineer-in-charge concerned shall have the right to deduct from the money due to the contractor any sum required or estimated to be required for making good the loss suffered by the a worker or workers by reason of non-fulfillment of the conditions of the contract for the benefit of the workers, non-payment of wages or of deductions made from his or their wages which are not justified by the terms of the contract or non-observance of regulations.
- (e) Vis-à-vis the BHEL shall be liable primarily for all payments to be made under the contract and for the observance of the regulations aforesaid without prejudice to his right to claim indemnity from his sub-contractors.
- (f) The regulations aforesaid shall be deemed to be part of this contract and any breach thereof shall be deemed to be a breach of this contract.

CHAPTER - IV

VALUATION & PAYMENT

34. RECORDS AND MEASUREMENTS :

All items having a financial value shall be entered in the **BHEL Measurement Book**, so that a complete record is obtained for all works performed under the contract.

Work carried out for agreed lump-sums will be described and similarly recorded.

Lump-sum omissions will be entered for deduction. Measurement shall be restricted to that required to ascertain the financial liability of BHEL under the contract.

Work which falls to be measured in detail shall be measured physically, without reference to any local custom that may obtain excepting where it may otherwise be directed in the tender documents. The measurements shall be taken jointly by any person duly authorized on the part of the BHEL and by the contractor.

The Engineer-in-charge shall give reasonable notice in writing to the contractor of appointment for measurement.

The contractor shall bear all the cost of measurement of his work.

Measurement shall be entered in the **BHEL Measurement Book** and signed and dated by both the parties 'Each Day' at the site on completion of measurement. If the contractor objects to any of the measurement recorded on behalf of the BHEL a note to that effect will be made in the BHEL measurement book or against the item objected to; and such note shall be signed and dated by both the parties engaged in taking the measurement.

If, as a result of such objection, it becomes to measure the work wholly or in part the expense of such re-measurement shall be borne by the contractor requiring the measurement to be re-taken provided that a net error is found of the value as recorded by this measurement to amount to less than 5% (five percent) of the value as recorded by first measurement. But where the net errors amount to 4-5% and over of the said value, then the cost is to be borne by the other party. In any case, if the net value of errors found exceeds Rs.500.00 the expenses of measurement is to be borne by the party.

If the contractor's representative fails to attend when required, the Engineer-in-charge shall have power to proceed by himself to take measurement and in that case these measurements shall be accepted by the contractor as final.

The contractor shall, once in every month, submit to the Engineer-in-charge with a copy to the Resident Manager details of his claims for the work done by him up to and including the previous month which are not covered by his contract agreement in any of the following respects :

- (a) Deviation from the items and specifications in the contract documents.
- (b) Extra items/ net items of work.
- (c) Quantities in excess of those provided in the contract schedule.
- (d) Items in respect of which rates have not been settled. He should, in addition, furnish a clear certificate to the effect that the claims submitted by him as aforesaid cover all his claim and that no further claims shall be raised by him in respect of the work done up to and including the period under report.

35. VALUATION OF DEVIATIONS:

1. For any item of work required to be carried out after the contract has been awarded and which is not covered by contractor's schedule but is covered by BHEL schedule of rates the rate of payable for such a fresh item will be derived from BHEL schedule by the methods of proportion as follows :
 - (a) In the same proportion to the rate in **BHEL Schedule of Rates** as the tendered rate for the nearest analogs item of work in Contractor's schedule bears for the particular analogs item of work in BHEL schedule of rates.
 - (b) If a single appropriate analogue item of work is not available in the both schedule contractor's and BHEL schedule then the method of proportion will be applied to the nearest analogue group of items available in both the schedules referred i.e., in the same proportion as the total tendered cost of that particular group of items (the sum of products of the tendered rates and the quantities for which orders are placed) bears to the total cost of the same items and quantities at the BHEL schedule of rates.
 - (c) If even an appropriate analogue group of items is not available in contractor's schedule and BHEL schedule, then the methods of proportion will be applied to all those items of the whole work, which are available in both the schedules and for which orders have been placed on the contractor, i.e., in the same proportion as the total cost of all those items of work (the sum of the products of the tendered rates and the quantities for which orders are placed) bears to the total cost of the same items and quantities at the BHEL, schedule of rates.
2. If any work not covered by any of the foregoing is ordered on the contractor, the basis of payment shall be decided by the accepting officer whose decision shall be final and conclusive and binding on the parties.

The selection of analogue items or analogue group of items referred to above shall be done by the Engineer-in-charge. Where the rates of deviation items or new items of work can be derived by the selection of different analogues items or analogues group of items, the lowest of all such derived rates shall be taken as the correct rates.

In the case of the contractors for which the Engineer-in-charge is the accepting officer, all disputes regarding the settlement of rates of deviated or new items of work shall be referred to the Site Coordinator and Resident Manager whose decision shall be final and conclusive.

36. REIMBURSEMENT/ REFUND ON VARIATION IN PRICE, MATERIALS:

If after submission of the tender and/ or during the progress of the work, the price of any materials (not being a material supplied from BHEL store in accordance with the conditions of the contract) is increased or decreased by an Act of Legislature (Central or State) and/ or any notification there under or on account of new duties or levies such as Octroi or an account of increase or decrease in such duties affecting the price of materials required for incorporation in the works or the price of any items to be incorporated in the works and made from materials of which the price has increased or decreased as aforesaid and the contractor has there upon to pay in respect of such materials or item a price which is higher or lower than the price of that material or item as prevailing immediately before

the passing of such Act or levying, increasing/ decreasing of such duty, the BHEL shall in case of increase in price or the duty reimburse to the contractor the increase in price or additional or increased duty paid by the contractor and in case of decrease in price, the BHEL shall be entitled to refund of the reduction in price or the reduction in duty. Provided however, no reimbursement or refund shall be made if the increase/ decrease is not more than +/- 10% of the said price, and if so, the reimbursement or refund shall be made only on the excess over +/- 10% provided always that any such increase shall not be payable if, in the opinion of the Site Head Coordinator and Resident Manager (whose decision shall be final and conclusive) the increase is attributable to the delay in the execution of the contract which is in the control of the contractor or that any such increase has been operative after the contractor/ or extended date of completion of the works or items of work in question.

The contractor shall, for the purpose of this condition, keep such books of account and other documents as are necessary to show the amount of any increase claimed or any reduction available and shall allow inspection of the same by any duly authorized representative of the BHEL and further shall at the request of the Engineer-in-charge furnish for verification such other information of the Engineer-in-charge may require.

The contractor shall, within a reasonable time of his becoming aware of any alteration in the prices of any such materials, give notice thereof in writing to the Engineer-in-charge stating that the rate is submitted in pursuance to this condition together with all information relating thereto which he may be in position to supply.

37. ADVANCE ON ACCOUNT:

No payment shall be made for work estimated to cost less than Rupees. One thousand still after the whole of the work shall have been completed and a certificate of completion given by the Competent Authority.

In the case of work estimated to cost more than Rupees one thousand the contractor may at intervals or not less than one month or as otherwise provided for in the contract documents, counting from the date on which order to commence work is given by the Engineer-in-charge submit claims on BHEL forms for payment of advances on account of work done materials delivered in connection with the contract.

The contractor shall be paid in respect of such claim to the extent approved and passed by the Engineer-in-charge subject to a maximum of 90% of the value of work actually executed on site provided the work has been executed to the satisfaction of the Engineer-in-charge. The Certificate of the Engineer-in-charge shall regarding such approval and passing of the sums so payable shall be final and conclusive against the contractor.

“After the full amount of security deposit is made up through the 10% deductions ‘on account’ bills, 100% payment of all subsequent bills may be made to the contractor”.

Any sums due from the contractor on account of tools and plant, stores or any other items provided by BHEL shall be deducted from the respective advances.

The Engineer-in-charge shall from time to time certify the sums payable to the contractor after retaining the reserves.

Any certificate relating to work done or materials delivered may be modified or corrected by any subsequent interim certificate and no certificate and of the of the Engineer-in-charge supporting an advance payment shall be itself be conclusive evidence that any work or materials to which it relates are in accordance with the contract. All such intermediate payments shall be regarded as advance against the final payment only and shall not be

considered as an admission of the due performance of the contract or any part thereof in any respect of the accruing of any claim whatsoever. Such intermediate payments shall not conclude, determine or affect in any way the power of the Engineer-in-charge as to the final settlement and adjustment of the accounts or otherwise or any way vary or affect the contract.

38. FINAL BILL :

As soon as possible after the completion of the work to the satisfaction of the Engineer-in-charge, the contractor shall forward a certified account on BHEL forms, in duplicate.

It shall be accompanied by all abstracts, vouchers etc., in support thereof and shall be prepared in the manner prescribed by the Engineer-in-charge.

No claims will be entertained after the receipt of the final bill.

The contractor shall be entitled to be paid the final sum less the value of payments already made on account subject to certification of the final bill by the Engineer-in-charge. Any sums due from the contractor or account of tools and plant, stores or any other items provided by BHEL not yet recovered from the contractor shall be deducted from the final sum aforesaid.

No charges shall be allowed to the contractor on account of preparation of the final bill.

39. PAYMENT OF BILLS :

All payments to be made to contractor under this contract shall be by “EFT” only.

40. RECOVERY FROM CONTRACTOR :

Whenever under the contract any sum of money shall be recoverable from or payable by the contractor the same may be deducted from any sum due or which at any time thereafter may become due to the contractor under the contract or under any other contract with BHEL or from his security deposit or he shall pay the claim on demand.

41. POST TECHNICAL ADUIT OF WORK AND BILLS :

BHEL reserve the right to carry out a post payment audit and technical examination of the work and final bill including all supporting vouchers, abstracts etc., and to enforce recovery of all sums becoming due as a result thereof in the manner provided in the preceding sub-paragraphs provided however that no such recovery shall be enforced after three years of passing the final bill.

42. REFUND OF SECURITY DEPOSIT :

50% (fifty percent) of the security deposit mentioned in condition 1, chapter-III above, may be refunded to the contractor in respect of all contracts on completion of work and after payment of final bill and the balance 50% on expiry of the maintenance period (described under clause 23) provided the contractor shall have rendered a “No Demand Certificate”. **In case of works where maintenance period is not involved 100% of**

security deposit may be refunded after payment of final bill provided that the contractor shall have rendered a “No Demand Certificate”.

43. ARBITRATION :

Except where otherwise provided for in the contract all questions and disputes relating to the meaning of the specifications, designs, drawings and instructions herein before mentioned and as to the quality of workmanship or material used on the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works or the execution of failure to execute the same whether arising during the progress of the work or after the completion or abandonment thereof shall be referred to the sole arbitration of the General Manager, BHEL-ISG, is unable to unwilling to act, to the sole arbitration of some other person appointed by the General Manager, BHEL-ISG, Bangalore willing to act as such arbitrator. The cases referred to arbitration shall be other than those for which the decision of the Site Coordinator or Resident Manager is expressed in the contract to be final and conclusive. There will be no objection if the arbitrator so appointed is an employee of BHEL and that he had to deal with the matters to which the contract relates and that in the course of his duties as such he had expressed view on all or any of the matters in dispute or difference. The arbitrator to whom the matter is originally referred being unable to act for any reasons, General Manager, In-Charge BHEL-ISG, Bangalore as aforesaid at the time of such transfer, vacation of office or inability to act, shall appoint another person to act as arbitrator in accordance with the terms of the contract. Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor.

Subject as aforesaid the provision of the Arbitration Act 1940 or any statutory modification or re-enactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceeding under this clause.

It is a term of the contract that the party involving arbitration shall specify the dispute or disputes to be referred to arbitration under this clause together with the amount or amounts claimed in respect of each such dispute.

The arbitrator(s) may from time to time with consent of the parties enlarge the time, for making and publishing the award.

The work under the contract shall, if reasonably possible, continue during the arbitration proceedings and no payment due or payable to the contractor shall be withheld on account of such proceedings.

The arbitrator shall be deemed to have entered on the reference on the date he issues notice to both the parties fixing the date of the first hearing.

The arbitrator shall give a separate award in respect of each dispute or difference referred to him.

The venue of arbitration shall be such place as may be fixed by the Arbitrator in his sole discretion.

The award of the arbitrator shall be final, conclusive and binding all parties to this contract.

ANNEXURE – A

BHEL CONTRACTORS LABOUR REGULATION

(See Condition 20)

1. DEFINITION :

In these regulations, unless otherwise expressed or indicated, the following words and expressions shall have the meaning here by assigned to them.

- (a) Labor means workers employed directly or indirectly through a sub-contractor or by an agent on his behalf of a payment not exceeding Rs,500.00 per month.
- (b) Fair Wage means wages, which shall include wages for weekly day of rest and other allowances, whether for time or piece work, after taking in to consideration prevailing market rates for similar employments in the neighbor-hood but shall not be less than the minimum rates of wages fixed under the Minimum Wages Act.
- (c) Contractor for the purpose of these regulations shall include an agent or sub-contractor employing labor on the work taken on contract.
- (d) Inspection Officer means any Labor Enforcement Officer, or Assistant Labor Commissioner of the Chief Commissioner's Organization
- (e) Form means a form appended to these Regulations.

2. NOTICE OF COMMENCEMENT :

The contractor shall, within seven days of the work, furnish in writing to the inspecting officer of the area concerned the following information, with copy to the Engineer-in-charge.

- (a) Name and situation of the work;
 - (b) Contractor's name and address;
 - (c) Particulars of the department for which the work is undertaken;
 - (d) Name and address of the sub-contractors as and when they are appointed;
 - (e) Commencement and probable duration of the work;
 - (f) Number of workers employed and likely to be employed;
 - (g) Fair Wages for different categories of workers.
- (3) (i) Number of hours which shall constitute a normal working day. The number of hours which shall constitute a normal working day. For an adult shall be NINE hours. Day of an adult worker shall be so arranged that inclusive of intervals, if any for rest it shall not spread over more than twelve hours on any day, when an adult worker is made to work for more than NINE hours or any day or for more than FORTY EIGHT hours in any week he shall in respect of over time work, be paid wages at double the ordinary rate of wages.
- (ii) Weekly day of rest, every worker shall be given a weekly day of rest which fixed and notified at least TEN days in advance. A worker shall not be required or allowed to work on the weekly rest day unless he will have a substituted rest day, on one of the five days immediately before or after the rest day. Provided that no substitution shall be made

which will result in the worker working for more than ten days consecutively without a rest day for a whole day.

When in accordance with the foregoing provisions a worker works on the rest day and has been given a substituted rest day, he shall be paid wages for the work done on the weekly rest day at the over time rates of wages.

NOTE : The expression 'ordinary rate of wages' means the fair wage the worker is entitled to.

4. DISPLAY OF NOTICE REGARDING WAGES, WEEKLY DAY OF REST ETC.,

The contractor shall before he commences his work on contract, display and correctly maintain and continue to display and correctly maintain a clean and legible condition in conspicuous places on the works, notice in English and in the local Indian Languages, spoken by majority of workers, giving the rate of fair wages, the hours of work for which such wages are payable, the weekly rest days workers are entitled to and some and address of the inspecting officer. The contractor shall send a copy each of such notices to the inspecting officers and Engineer-in-charge.

5. FIXATION OF WAGE PERIOD:

The contractor shall fix wage periods in respect of which wages shall be payable.

6. PAYMENT OF WAGES:

- (i) Wages due to every workers shall be paid to him direct. All wages shall be paid in current coins or currency or in both.
- (ii) Wages of every worker employed on the contract shall be paid where the wage period is not week, within THREE DAYS from the end of the wage period in any other case before the expiry of 6th day or 10th day from the end of the wages period according as the number of workers does not exceed 1000 or excess 1000.
- (iii) When employment of any worker is terminated by or on behalf of the contractor the wages earned by him shall be paid before expiry of the day succeeding the one on which is employment is terminated.
- (iv) Payment of wages shall be made at the work site on a working day except when the work is completed before expiry of the wage period, in which case, final payment shall be made at the work site within 48 hours of the last working day during normal working time.

NOTE : The term 'working day' means a day on which labor is employed is in progress.

7. REGISTER OF WORKMEN :

A register of workmen shall be maintained in the form appended to these regulations and kept at the work site or as near to it as possible and the relevant particulars of every workmen shall be entered with THREE days of his employment.

8. EMPLOYMENT CARD :

The contractor shall issue an employment card in the form appended to these regulations to each worker on the day of work or entry in to his employment. If a worker has already any such card with him issued by the previous employer, the contractor shall merely endorse

that employment card with relevant entries. On termination of employment, the employment card shall again be endorsed by the contractor and returned to the worker.

9. REGISTER OF AGES, ETC., :

- (i) A register of Wages-cum-Muster Roll in the form appended to these regulations shall be maintained and kept at the work site or as near to it as possible.
- (ii) A wage slip-in the form appended to these regulations shall be issued to every worker employed by the contractor at least a day prior to disbursement of wages.

10. FINES AND DEDUCTIONS, WHICH MAY BE MADE FROM WAGES:

- (i) Wages of worker shall be paid to him without any deduction of any kind except the following :
 - (a) Fines.
 - (b) Deductions for absence from duty, i.e., from the place where by the terms of his employment he is required to work. The amount of deduction shall be in proportion to the period for which was absent.
 - (c) Deduction for damage to or loss of goods expressly entrusted to the employed person for custody or for loss of money which he is required to account for, where such damage or loss is directly attributable to his neglect or default.
 - (d) Deductions for recovery of advance or for adjustment of employment of wages, advance granted shall be entered in a register and,
- (ii) No fines shall be imposed on any worker in respect of such acts and omissions on his part as have been approved by the Chief Labor Commissioner.

Any other deduction which the BHEL may from time to time allow.

- (iii) No fine shall be imposed on a worker and no deductions for damage or loss shall be made from his wages until the worker has been given an opportunity of showing cause against such fines or deductions.
- iv) The total amount of fines which may be imposed in any one wage period on a worker shall not exceed an amount equal to three paise in a rupee of the wages payable to him in respect of that wage period.
- (v) No fine imposed on a worker shall be recovered from him in installment, or after expiry of sixty days from the date on which it was imposed. Every fine shall be deemed to have been imposed on the day of the Act of omission in respect of which it was imposed.
- (vi) The contractor shall maintain both in English and the local Indian Language a list approved by the Chief Labor Commissioner, clearly stating the acts omissions for which penalty or fine may be imposed on a workman and display it in good condition in a conspicuous place on the work site.
- (vii) The contractor shall maintain a register of fines and the register of deduction for damage or loss in the forms appended to these regulations which should be kept at the place of work.

11. REGISTER OF ACCOUNTS :

The contractor shall maintain a register of accidents in such form as may be convenient at the work place but the same shall include the following particulars.

- (a) Full particulars of the laborers who met the accident
- (b) Rates of wages
- (c) Sex
- (d) Age
- (e) Nature of accident and cause of accident
- (f) Time and date of accident
- (g) Date and time when admitted in hospital
- (h) Date of discharge from the hospital
- (i) Period of treatment and result of treatment
- (j) Percentage of loss earning capacity and disability
- (k) Claim required to be paid under Workmen Compensation Act
- (l) Date of payment of compensation
- (m) Amount paid with details of the person to whom the same was paid
- (n) Authority by whom the compensation was assessed
- (o) Remarks.

12. PRESERVATION OF REGISTERS:

The register of workmen and the register of Wage-cum-Muster Roll required to maintain under these regulations shall be preserved for 3 years after the date on which, the entry is made therein.

13. ENFORCEMENT:

The inspecting officer shall either on his own motion or on a complaint received by him carry out investigations and send a report to the Engineer-in-charge specifying the amounts representing worker's dues and amount of penalty to be imposed on contractor for breach of these regulations that have to be recovered from the contractor, indicating full details of the recoveries proposed and the reasons thereof. It shall be obligatory on

the part of the Engineer-in-charge on receipt of such a report to deduct such amount from payment due to the contractor.

14. DISPOSAL OF AMOUNTS RECOVERED FROM THE CONTRACTOR :

The Engineer-in-charge shall arrange payment to workers concerned within FORTY FIVE days from receipt of a report from the inspecting officer except in cases where the contractor had made an appeal under regulations 16 of these regulations. In cases where there is an appeal payment of workers dues would be arranged by the Engineer-in-charge wherever such payments arise, with THIRTY DAYS from the date of receipt of the decision of the Regional Labor Commissioner (RLC).

15. WELFARE FUND :

All moneys are that are recovered by the Engineer-in-charge by way of workers dues which would not be disbursed to workers within the time limit prescribed above, due to reasons such as whereabouts of workers not being know, death of a worker, etc., and also amounts recovered as penalty shall be credited to a fund to be kept under the custody of BHEL for such benefit and welfare of workmen employed by contractors.

16. APPEAL AGAINST DECISION OF INSPECTING OFFICER :

Any person aggrieved by a decision of the inspecting office may appeal against such decision to the RLC concerned within THIRTY DAYS from the date his appeal to the Engineer-in-charge. The decision of the RLC shall be final and binding upon the contractor and the workmen.

17. REPRESENTATIVE OF PARTIES:

- (i) A workmen shall be entitled to be represented in investigation of equity under these regulations by an officer of a registered trade union of which he is member or by an officer of a federation of trade unions to which the said trade union is affiliated or where the workmen is not a member of any registered trade union, by an officer of a registered trade union, connected with, or any other workmen employed in, the industry in which the worker is employed.
- (ii) A contractor shall be entitled to be represented in any investigation or enquiry under these regulations by an officer or an association of contractor of which he is a member or by an officer of a federation of associations of contractors to which the said association is affiliated or where the contractor is not a member of any association of contractors, by an officer of association of employers, connected with, or by any other employer engaged in the industry in which the contractor is engaged.
- (iii) No party shall be entitled to be represented by a legal practitioner in any investigation or enquiry under these regulations.

18. INSPECTION OF BOOKS AND OTHER DOCUMENTS:

The contractor shall allow inspection of the registers and other documents prescribed

under these regulations by inspecting officers and the Engineer-in-charge or his authorized at any time and by the worker or his agent on receipt of due notice at convenient time.

19. INTERPRETATION ETC., :

On any question as to the application, interpretation or effect of these regulations, the decision of the Chief Labor Commissioner or Deputy Chief Labor Commissioner (Central) shall be final and binding.

20. AMENDMENTS :

Central Government may, from time to time, and to or amend the Contractor's Labor Regulations and issue such directions as it may consider necessary for the proper implementation of the contractor's Labor Regulations or for the purpose of removing any difficulty which may arise in the administration thereof, based on which the BHEL Contractor's Labor Regulations herein contained shall be subject to revision.

B.H.E.L SAFETY CODE

(See the latest “Consolidated Site Safety Plan” enclosed)

1. Suitable scaffolds shall be provided for workmen for all work that cannot safely be done from the ground or from solid construction except such short period work as can be done safely from ladders. When a ladder is used, an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for the carrying materials as well, suitable foot holds shall be provided on the ladder and the ladder shall be given an inclination not steeper than $\frac{1}{4}$ to 1 ($\frac{1}{4}$ horizontal and 1 vertical)
2. Scaffolding or staging more than 3.25 meters above the ground or floor, suspended from an over head support, shall have a guard rail properly attached, bolted, braces and otherwise secured at least meter high above the floor or platform of such scaffolding or staging and attending along the entire length of the outside and ends thereof with only such openings as may be necessary for delivery of materials. Such scaffolding or staging shall be so fastened as to prevail it from swaying the building or structure.
3. Working platform gangways and stairways shall be so constructed that they do not sag underlay or unequally and if height of a platform of gangway or stairway is more than 3.25 meters above ground level or floor level, it shall be closely boarded, have adequate width and be suitably fenced, as described “2” above.
4. Every opening in floor of a building or in a working platform shall be provided with suitable means to prevent fall of person or materials by providing suitable fencing or falling with a minimum height of 1 meter.
5. Safe means of access shall be provided to all working platform and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 meters in length. Width between side rails in a rung ladder shall in no case be less than 30 CMs for ladder up to and including 3 meters in length. For longer ladders this width shall be increased by at least 15 mm for each additional 30 CMs of length. Uniform step spacing shall not exceed 30 CMs.

Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The contractor shall provide all necessary fencing and lights to action or other proceedings at law and that may be brought any person for injury sustained owing to neglect of the above precautions and pay any damages and costs which may be awarded in any suit, action or proceedings to any such person or which may with the consent of the contractor be paid to compromise any claim by any such person.

6. **Excavation and trenching :** All trenches, 1.51 meters or more in depth, shall at all times, be supplied with at least one ladder for each meters length or fraction thereof. Ladder shall be extended from bottom of trench to at least 1 meter above surface of the ground. Sides of a trench 1.5 meters or more in depth shall be stepped back to give suitable slope or securely held by timbers bracing, so as to avoid the danger of slides collapsing. Excavated which ever is more, cutting shall be done from top to bottom. Under no circumstances shall under mining or under cutting be done.
7. **Demolition :** Before any demolition work is commenced and also during the process of the work;
 - (a) All roads and open are as adjacent to the work site shall either to be closed or suitably protected;
 - (b) No electric cable or apparatus which is liable to be a source of danger over a cable or apparatus used by operator shall remain electrically charged;

- (c) All electrical steps shall be taken to prevent danger to persons employed, from risk of fire or explosion or flooding. No floor, roof or other part of a building shall be so over loaded with debris or materials as to render it unsafe.
8. All necessary personal safety equipment as considered adequate by the Engineer-in-charge shall be available for use of persons employed on the site and maintained in a condition suitable for immediate use and the contractor shall take adequate steps to ensure proper use of equipment by those concerned.
- (a) Workers employed on making asphalted materials cement and lime mortars/ concrete shall be provided with protective foot ear and protective goggles.
 - (b) Those engaged in handling any material which is injurious to the eye shall be provided with protective goggles.
 - (c) Those engaged in welding works shall be provided with welder's protective eye shields.
 - (d) Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
 - (e) When workers are employed in sewers and man-holes which are in use, the contractor shall ensure that manhole are opened and manholes are ventilated at least for an hour before workers are allowed to get in to them. Manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to public.
 - (f) The contractor shall not employ below the age of 18 and women on the work of painting with products containing lead in any form whenever men above the age of 18 are employed on the work of lead painting, the following precautions shall be taken.
 - (i) No pain containing lead or lead products shall be used except in the form of paste or ready made paint.
 - (ii) Suitable face masks shall be supplied for use by workmen when paint is applied in the form of spray or a surface having lead paint is dry rubbed and scrapped.
 - (iii) Over all shall be supplied by the contractor to workmen and adequate facilities shall be provided to enable working painters to wash during and in cessation of work.
 - (g) Safety helmets and electric shock proof and gum boots shall be provided for all the contractors men by the contractor.
9. When work is done near any place where there is risk of drowning, all necessary equipment shall be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.
10. Use of hoisting machine and tackles including their attachments, anchorage and supports shall conform to the following :
- (a) (i) These shall be good mechanical construction, sound material and adequate strength and free from defects and shall be kept in good repair and in good working order.

- (ii) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength and free from defects.
- (b) Every crane driver or hoisting appliances operator shall be properly qualified and no person under the age of 21 years shall be in charge of any hoisting machine including any scaffold winch or give signals to operator.
- (c) In case of every hoisting machine and of every chain, ring, hook, shackle, swivel and pulley block used in hoisting or lowering or as means of suspension, safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall have the safe working load plainly marked there on.

In case of hoisting machine having a variable safe working load, each safe working load and the conditions under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.

- (d) In case of departmental machine, safe working load shall be notified by the Engineer-in-charge. As regards contractor's machines, the contractor shall notify safe working load of each machine to the Engineer-in-charge whenever he brings it to site of work and get it verified by the Engineer-in-charge.
11. Motors gearing, transmission, electric wiring and other dangerous parts of hoisting appliances shall be provided with such means as will reduce to the minimum risk of accidental descent of load. Adequate precautions shall be taken to reduce to the minimum risk or any part of a suspended load has become accidentally displaced. When workers are employed on electrical installations, which are already energized, insulating mats, working apparel such as gloves, sleeves and boots as may rings, watches, carry keys or other materials which are good conductors of electricity. Safety helmets and shock proof shoes, gum boots etc., shall be provided to his workmen by the contractor.
This is a must.
 12. All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in a safe condition and in no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities shall be provided at or near the places of work.
 13. These safety provisions shall be brought to the notice of all concerned by display on a notice board at a prominent place at the work spot. Persons responsible for ensuring compliance with the safety code shall be named there on by the contractor.
 14. To ensure effective enforcement of the rules and regulations relating to safety precautions, arrangements made by the contractor shall be open to inspection by the Engineer-in-charge or his representatives and the inspecting officers as defined in the Contractor's Labor Regulations.
 15. Notwithstanding the above conditions 1 to 14, the contractor is not exempted from the operation of any other Act/ Rule in force.

AMENDMENTS TO B.H.E.L CONTRACTOR LABOUR REGULATIONS TERMS AND CODITIONS

(Legal Provisions)

- The Contractor shall observe the provisions of the minimum Wages Act and shall pay the Wages Act and shall pay the wages to the contract labor which is not less than the wages fixed under the minimum wages act.
 - The contractor shall observe the provisions of the Factories Act 1948 and also the provisions of the contract labor (regulations and abolition) Act 1960.
 - The contractor shall obtain an independent code number under the ESIC and insure the workmen engaged by him under the ESIC Act.
 - The Contractor who has under taken construction activity and engaging more than 10 workmen shall cover the activity under the PF Act 1952 and obtain an independent code number and pay the subscription and contribution towards such of the workmen engaged for construction activity.
 - Further the contractor shall indemnify the management of BHEL for and against all payment by way of compensation, fine, penalty etc., which the authority may call up on to pay under the provisions of different labor/ ESIC/PF etc., legislations.
 - The contractors is required to provide the canteen facility for the contract labor engaged for the contract work. If the contractor fails to do so, the principle employer will do the same and recover the amount.
1. The contractor shall comply with the provisions of the payments of wage Act 1936, minimum wage Act 1948, Employees Liability Act 1938, Workmen's Act 1923, Industrial Disputes Act 1946 maternity Benefit Act 1961 and Mines Act 1952 to any modifications to any modifications thereof or any other law relating thereto, and rules framed there-under from time to time.
 2. The contractor should get himself registered with the ESI Authorities as an independent Employer, obtain a separate code number and remit the dues in respect of the labor employed by him or the work and produce the challans / receipts of remittance of the ESI contributions due under the ESI Act to our Department.
 3. The contractor shall comply with the provisions of the employees' Provident and Miscellaneous Provisions Act 1952 and rules, regulations and other orders issued there under. He, as an employer shall be liable to pay employer's contribution and the employees contribution/ deductions towards PF under the PF Act in respect of all labor employed by him for the execution of the contract in accordance with the provision of the employer's provident funds and miscellaneous provisions Act, 1960 as amended from time to time. For this purpose, he shall indicate the code number obtained from the Regional Provident Fund Commissioner and produce the Photostat copy of the challan receipt of monthly remittance of the contribution made by him to the commissioner. Final payments due to him will be release only on production of a "No due certificate" from the regional provident fund commissioner. He shall also furnish such return as are due, under the Act, to be sent to the appropriate authorities through the **principal employer**.
 4. The contractor shall indemnify BHEL against any payments made/ to be made by BHEL under and for due observance of the various labor legislations, including payment of contributions (both employees and employer's) and other amounts due as principal employer, rules and regulations framed there under. The contractor shall further indemnify BHEL against all payments by way of compensation fine penalty damages etc., under the various labor laws, which the competent authorities under these laws may require BHEL to pay under the provision of the laws in respect of the contract labor engaged for the work.



ISG BANGALORE

Project : Coal & Ash Handling Plant For Yermarus Thermal Power Station (2x800 MW)**Customer : M/s Raichur Power Corporation Ltd****Work : Unloading and Stores Management****(11) SPECIAL CONDITIONS OF CONTRACT**ENQUIRY No. :
88/11/6031/RSB

11.0	MATERIAL HANDLING, STORAGE AND PRESERVATION ETC
11.1	MATERIAL HANDLING AND STORAGE
11.1.1	All the equipments/materials furnished under this contract shall be received from road carriers i.e. trailers or trucks and must be unloaded at open stores / covered sheds / storage yards and shall be stored in the storage spaces in a manner so that they are easily traceable/retrievable with proper marking till the materials are issued to the respective erection/construction agency. While issuing the material from BHEL / customer stores, the bidder shall ensure that the balance / other materials are stacked back immediately. No claim is admissible on this account
11.1.2	While BHEL will endeavour to store / stack / identify materials properly in their open / close / semi closed / tarpaulins covered storage yard / shed, it shall be bidder's responsibility to assist BHEL in identifying materials well in time.
11.1.3	The bidder shall take delivery of components, equipment / consumables from storage area after getting the approval of BHEL Engineer on standard indent forms.
11.1.4	The bidder shall identify and deploy necessary Engineers / supervisors / workmen for the above work in sufficient number as may be needed by BHEL, for areas covering their scope.
11.1.5	All the equipment shall be handled very carefully to prevent any damage or loss. No untested wire ropes / slings etc. shall be used for unloading / handling. The equipment shall be properly protected to prevent damage either to the equipment or to the floor where they are stored. The equipment from the stores shall be moved to the actual location at the appropriate time so as to avoid damage of such equipment at site.
11.1.6	Bidder shall ensure that while lifting slings shall be put over the points indicated on the equipment or as indicated in the manufacturer's drawings. Slings / shackles of proper size shall be used for all lifting and rigging purposes. All care shall be taken to safe guard the equipment against any damage. Dragging of piping / valves should be avoided. In case of any damage the cost shall be covered from the bidder.
11.1.7	Approach road conditions from the stores / yards to the erection site may not be equipped and ideal for smooth transportation of the equipment. Bidder may have to be adequately prepared to transport the materials under the above circumstances without any extra cost. . The bidder may familiar himself with soil conditions at site.
11.1.11	Bidder shall be responsible for examining all the plant and materials issued to him and notify the Engineer immediately of any damage, shortage, discrepancy etc before they are moved out of the stores / storage area. The bidder shall be solely responsible for any shortages or damages in transit, handling, storage and erection of the equipment once received by him.
11.1.9	The bidder shall maintain an accurate and exhaustive record-detailing out the list of all equipment received by him for the purpose of erection and keep such record open for the inspection of the engineer at any time.



ISG BANGALORE

Project : Coal & Ash Handling Plant For Yermarus Thermal Power Station (2x800 MW)

Customer : M/s Raichur Power Corporation Ltd

Work : Unloading and Stores Management

(11) SPECIAL CONDITIONS OF CONTRACT

ENQUIRY No. :
88/11/6031/RSB

11.1.10	All the material in the custody of bidder and stored in the open or dusty locations must be covered with suitable weather proof / fire retardant covering material wherever applicable and shall be blocked up on raised level above ground. All covering materials including blocks and sleeper shall be arranged by the bidder at his cost.
11.1.11	If the material are stored by the bidder in area other than those earmarked for his operation the engineer will have the right to get it moved to the area earmarked for the bidder at the bidders risk and cost.
11.1.12	The bidder shall be responsible for storing all equipment (unloaded and handed over to the bidder) at indoor area designated by the BHEL engineer which require indoor storage till the time of their installation. The Engineer will direct the bidder in this regard, which item in his opinion will require indoor storage, and the bidder shall comply with Engineer's decision.
11.1.13	The bidder shall ensure that all surplus / damaged / scrap / unused material, packing wood / containers/ special transporting frames etc are returned to BHEL at a place in project area identified by the Engineer. The bidder will maintain an account for all items received and returned to BHEL. Any shortage in returning such items shall be chargeable to the bidder except allowable wastage for packing wood only.
11.1.14	The bidder shall store all parts / materials remaining extra over the normal requirement with proper identification tags in the stores as directed by the concerned BHEL engineer.
11.1.15	The bidder shall ensure that all the packing materials and protective devices installed on equipment during transit and storage remain intact.
11.1.16	It shall be the responsibility of the bidder to keep the work / storage areas in neat, tidy and working conditions. All surplus/unusable packing and other materials shall be removed and deposited at location(s) specified by BHEL within the project premises. If required weighing of the same within the project premises will have to be carried out.
11.2	PRESERVATION OF COMPONENTS
11.2.1	After taking delivery from BHEL / customer's stores, plant materials storage shall be subjected to the following protection besides other provisions indicated in these specifications elsewhere.
11.2.1.1	Items stored outdoors shall be stacked up at least six inches (6") off the ground. Items should not be stored in a low lying area where water logging is a possibility. Bidder should arrange sufficient numbers of wooden / concrete / steel sleepers for the job at his own cost.
11.2.1.2	Motors, valves, electrical equipment, control equipment and instruments, and special or precision items requiring special care, etc shall be stored indoors. Motor windings shall be kept dry by use of external heat or space heaters.
11.2.1.3	Bearings and other wearing surfaces of plant materials shall be protected against corrosion and kept clean and should be regularly monitored.



ISG BANGALORE

Project : Coal & Ash Handling Plant For Yermarus Thermal Power Station (2x800 MW)

Customer : M/s Raichur Power Corporation Ltd

Work : Unloading and Stores Management

(11) SPECIAL CONDITIONS OF CONTRACT

ENQUIRY No. :
88/11/6031/RSB

11.2.1.4	Insulation materials shall be stored indoors or otherwise protected against getting wet/ damaged, using suitable measures and should be protected from direct rain.
11.2.2	It shall be the responsibility of the bidder to apply preservatives / touch up paints (primer) on equipment handled by him till such time of final painting. It shall be bidder's responsibility to arrange for required paints (primer), thinners, labour, scaffolding materials, cleaning materials like wire brush, emery sheets, etc, cleaning of surface and provide one coat of preservatives / paints (primer) from time to time as decided by BHEL engineer. The accepted rate shall include this work also. It is to be noted that such painting may have to be done as and when required till such time the final painting is carried out.
11.2.3	The bidder shall effectively protect the finished work from action of weather and from damage or defacement and shall cover the finished parts then and there for their protection.
11.2.4	Any failure on the part of bidder to carry out works according to above clauses will entail BHEL to carry out the job from any other party and recover the cost from bidder.



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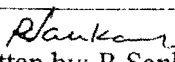
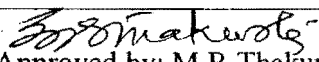
Consolidated Site Safety Plan (includes all Safety Plan documents of ISG)



Bharat Heavy Electricals Limited
Industrial Systems Group
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BANGALORE 560 012
Phone: 080 - 23365096, Fax: 080 - 23562713

Regd. Office: "BHEL House" Siri Fort, New Delhi - 110 049.

Note: All document issued from 2003 to 2006 are consolidated in this volume.

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DOCUMENT NO.	DESCRIPTION
IS/HSE/SSP/01	1. Details of Project
	2. Health, Safety and Environment Policy
	3. Roles of Site Personnel
	4. Safety Awareness & Training:
	5. Site Safety Inspection:
	6. Emergency Preparedness and Response Plan:
	7. Electrical Safety Inspection:
	8. Transportation and Material Handling Equipment:
	9. Erection of equipment:
	10. Commissioning of equipment:
	11. Use of Personal Protective Equipment (PPE):
	12. Housekeeping:
	13. Accident Investigation and Reporting:
	14. Protection against Fire
	15. Protection against Noise
	16. Welding Sets
	17. Civil / Structural Work
	18. FIRE FIGHTING PLAN
	19. NOISE STANDARDS
	20. List of Applicable Statutory / Regulatory requirements
Checklist / Formats / Guidelines	
IS-QII-4-409/010	SAFETY DECLARATION BY SUB-CONTRACTOR
IS:HSE:CL01	CHECK LIST FOR WORKING AT HEIGHT
IS:HSE:CL02	CHECK LIST FOR HOUSE KEEPING
IS:HSE:CL03	CHECK LIST FOR SCAFFOLDING
IS:HSE:CL04	CHECK LIST FOR GENERAL SAFETY INSPECTION
IS:HSE:CL05	CHECK LIST FOR HEAVY MATERIAL HANDLING EQUIPT INSPN.
IS:HSE:CL06	CHECK LIST FOR ARC WELDING TRANSFORMER
IS:HSE:CL07	CHECK LIST FOR DC ARC WELDING GENERATOR
IS:HSE:CL08	CHECKLIST FOR STAGING
IS/HSE/SSP/02	Hazards Risk & Preventive Measures at Construction Sites.
Dtd. 30.06.06	Guide lines for Resident Managers on Contract Labour, Safety & Accident Reporting System
Dtd. 30.06.06	List of Relevant Legislations applicable to Various Sites
IS:HSE:AIR:001	Accident (Personal injury / property damage) Report

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Annexures	
IS-CW-01, Rev.01	Work instructions for Civil Work at Site
IS 3043-1987	Extracts from IS for Code of Practice for earthing
Copy No 18 07.12.06	Safety Manual – Health and Safety Plan for BHEL Power Sector
PSER : HSEOM: 004:02 Datd 25.11.02	Emergency Preparedness and Response Plan of PS ER
HSE / PPE Dtd 25.08.2006	Corporate Personal Protective Equipment (PPE) Safety Manual

Note:

1. This Site Safety Plan is to be used at all Sites. Project Specific Details and Site Organization Chart are to be added in Section –1.
2. The Checklists provided are to be used and maintained as records.
3. These documents and records are verifiable for compliance under Quality & HSE systems.

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CONSOLIDATED SITE SAFETY PLAN

1. Details of Project

1.	Name of the Project & Site	
2.	Job Number	
3.	Customer	
4.	Overall Scope of work: Design / Supply / Installation	Civil Structural Mechanical Electrical & Instrumentation Others
5.	Project Schedule	Starting Date: Completion Date:
6.	Erection & Commissioning Machinery / Tools / Instruments Required:	
7.	Sub-Contractor Details	Name of the Sub-contractor Job order No.: Duration of Completion:
8.	Name of BHEL Residence Manager	Attach Site Organization Chart of BHEL
9.	Designated Safety Officer of BHEL	
10.	Name of Sub-contractor person in-charge	Attach Site Organization Chart of Sub-contractor
10.	Designated Safety Officer of Sub-contractor	

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Management Representative

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CONSOLIDATED SITE SAFETY PLAN

2. HEALTH, SAFETY & ENVIRONMENTAL POLICY

The Management is committed to be an environmentally sound company in its activities, products, services and to provide safe and healthy working environment to all employees as an integral part of business performance and strive towards zero accident through:

- Compliance with applicable Legislation and Regulations.
- Promoting the objective to minimize waste generation and to conserve/reduce/reuse resources such as raw materials, water and power.
- Enhancement of Environmental, Safety and Occupational Health awareness amongst employees, customers and suppliers by proactive communication and training.
- Continual improvement through periodical review of EMS and OHSAS to ensure its suitability, adequacy and effectiveness.
- Regular evaluation and proactive measures for prevention of accidents/ occupational diseases.
- Communication of HSE Policy to all employees and interested parties.
- Coordination with concerned agencies/regulatory bodies engaged in Occupational Health, Safety & Environmental activities.

3. Roles of Site Personnel:

Resident Manager:

- Ensuring that HSEMS requirements are implemented and maintained at sites. He shall have commensurate authority and organisational freedom in that regard.
- He shall report on the performance of the HSEMS to the MR for review.
- Identification and evaluation of Environmental Aspects & Impacts, Occupational Health & Safety Hazards and assess Risks at Site.

Duties & Responsibilities of the Designated Safety Officer at Site:

- To advise on safety aspects to all personnel at site including sub-contractors.
- To carry out Site safety inspection in order to observe the physical conditions of work and the work practices and procedures followed by Sub-contractors and to render advise on measures to be adopted for removing the unsafe physical conditions and preventing unsafe actions by sub-contractor's personnel.
- To organize / verify the availability of personal protective equipment
- To investigate select accidents
- Co-ordinate hazard and risk management
- Obtain Safety Declaration from Sub-Contractor.
- Impart Safety Training to sub-contractors and BHEL Personnel working at Site.

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CONSOLIDATED SITE SAFETY PLAN

4. Safety Awareness & Training:

Safety Awareness and consciousness among workers, supervisors and executives is imparted by the Designated Safety Officer of BHEL / Sub-contractor. This is done by way of following.

- Talk on Safety issues as per Site Safety Plan
- Posters and Notices at prominent places
- Display of warning boards
- Creating awareness and response for emergencies like Fire, Shock, accidents, dangerous occurrences and on First-aid, Emergency assistance agencies and their contact telephone numbers etc.
- Use of Personnel Protective Equipment

5. Site Safety Inspection:

Designated Safety Officer will inspect the site on Daily basis

- To identify unsafe conditions and unsafe actions by the labourers and bring to the notice of sub-contractor. The main objective of the Daily Inspection is to rectify the potentially dangerous situations and avoid occurrence of any incident.
- To suggest suitable remedial action to correct the unsafe conditions / acts.
- To use appropriate checklists IS:HSE:CL01 to CL08 to verify and record the safety observations.
- To follow the *Copy of Safety Manual – Health and Safety Plan for BHEL Power Sector (07.12.06 copy no. 18) issued on 26.12.06* and available at site.

6. Emergency Preparedness and Response Plan:

- Use the *Emergency Preparedness and Response Plan IS/HSE/EPR/01* available at site together with PS & Customer.
- First aid kits are to be kept in the site office or the locations in the vicinity of work place. The kit is to be maintained. Records of FIRST AID treatment given to be maintained in a register.
- Whoever first notices the accident occurrence shall immediately notify the same to Designated Safety Officer / Other BHEL executives.
- Determine the area of accident and organize for evacuation of the personnel.
- Organize for sending the injured person to nearby First-aid / Health Center / Hospitals depending on the emergency.
- In the event of fire organize for extinguishing the fire using the apparatus available and for major fire notify the local / nearby Fire Station.

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CONSOLIDATED SITE SAFETY PLAN

7. Electrical Safety Inspection:

- All the electrical distribution system, sub system, relevant protection unit at electrically powered machines and tools are inspected periodically including earthing at two points, to avoid electrical shocks.
- Checklist for House keeping -IS:HSE:CL02 and General safety inspection -IS:HSE:CL04, is used for periodical inspection.
- For safe operation all the Electrical portable tools and devices are connected with Earth Leakage Circuit Breaker (ELCB) protection at Distribution Board and continuity of earth connection is to be ensured.
- The ELCBs are tested periodically and records of such tests are maintained.
- After each inspection the filled up check list date wise is to be retained by Resident Manager.

8. Transportation and Material Handling Equipment:

- Checklist of Inspection of Material Handling Equipment - IS:HSE:CL05 shall be used and records are to be maintained.

9. Erection of equipment:

- The instructions given in Erection Manual IS: EM-1 to IS:EM-5 in FIVE Volumes are to be followed during erection of equipment. SAFETY MANAGEMENT AT ERECTION SITES is elaborated in Document No. IS; EM-4/1 (Erection Manual Issued on 24.01.1995).
- Wherever Checklists are provided, the same shall be used and records are to be maintained.

10. Commissioning of equipment:

- The instructions given in Commissioning Manual IS-QCM in SIX Volumes are to be followed during Commissioning of Standard equipment.
- Wherever Checklists are provided, the same shall be used and records are to be maintained.

11. Use of Personal Protective Equipment (PPE):

- The PPE in use shall conform to IS or other relevant standard and the same shall be discarded in case it is damaged or worn out.
- Wherever Checklists are provided, the same shall be used and records are to be maintained.
- *Soft copy of Corporate Personal Protective Equipment (PPE) Safety Manual Document No. HSE / PPE Dtd 25.08.2006 available at site to be followed.*

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CONSOLIDATED SITE SAFETY PLAN

12. Housekeeping:

- The Housekeeping Checklist IS:HSE:CL02 available in this document shall be followed and records are to be maintained.

13. Accident Investigation and Reporting:

- Guide lines for Resident Managers on Contract Labour, Safety & Accident Reporting System issued on 30.06.06 needs to be referred.*
- The Investigation findings shall be reported to Designated Safety Officer, Concerned Project Manager and MR at Head quarters for taking proper preventive action to avoid such accidents in future.
- The Accident / Incident Reporting format IS:HSE:AIR:001 to be followed

14. Protection against Fire

- This is elaborated in Document No. IS; EM-4/1 (Erection Manual Issued on 24.01.1995) SAFETY MANAGEMENT AT ERECTION SITES.
- The GENERAL SAFETY INSPECTION Checklist - IS:HSE:CL04 available in this document shall be followed and records are to be maintained.
- FIRE FIGHTING PLAN** Extract from: Chapter 4 – Internal Appliances of Fire Protection Manual Issued by Tariff Advisory Committee Bombay as elaborated below is to be followed for finalizing the requirement of fire extinguishers at site.

15. Protection against Noise

- The Equipment used at Construction site must follow the acceptable ambient noise level as detailed below in **NOISE STANDARDS**.

16. Welding Sets

- Whenever Welding sets are brought by the contractor to site, the healthiness of the equipment is to be checked and inspected and the record is to be maintained as per the checklist IS:HSE:CL06 and CL07.

17. Civil / Structural Work

Wherever Civil work is involved the following work instructions / checklist are to be referred and followed.

- Work Instructions for Civil Work at Site – IS:CW:01, Rev:01, Dated 04.09.1996.**

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- Checklist for Scaffolding IS:HSE:CL03
- Checklist for Working at Height IS:HSE:CL01
- *Checklist for Staging IS: HSE: CL 08*
- Formats for Field Quality Plan IS:CW:01, Rev.02, Dated 15.05.1997.

18. FIRE FIGHTING PLAN

Extract from: Chapter 4 – Internal Appliances of Fire Protection Manual Issued by Tariff Advisory Committee Bombay.

Class of Fire	Suitable type of appliances
A. Fire in ordinary combustible (wood, vegetable, fiber, paper etc.)	Chemical extinguishers of soda acid, gas / expelled water and anti-freeze types and water buckets.
B. Fires in flammable liquids, paints, grease, solvents etc.	Chemical extinguishers of Foam, Carbon Dioxide and Dry powder type and sand buckets.
C. Fire in gaseous substances under pressure	Chemical Extinguishers of Carbon Dioxide and Dry Powder Type.
D. Fire in reactive Chemicals, active metals	Special type of Dry Powder extinguishers and sand buckets.
E. Fire in electrical equipments.	Chemical Extinguishers of Carbon Dioxide and Dry Powder Type and sand buckets.
Clause 4.1.3.2	One 9 litre Water / Sand Bucket for every 100 sq.metre area
Clause 4.1.3.5.1	One no. of Not less than 2 kg, Dry Powder CO ₂ extinguisher within 15 metres of apparatus for rooms containing electrical transformers & switchgear.
Clause 4.1.3.5.2	One no. 5 kg, Dry Powder CO ₂ extinguisher within 15 metres of Motors / other Electrical equipment.

The following example will illustrate the method of determining the number of fire extinguishers required to give adequate protection for a given property:

Light engineering workshop (light hazards).

Area: 315m X 112m = 35300 sq.m

Type of fire:

1. Class A Fire due to normal combustibles
2. Class B Fire due to existence of spray painting process and storage of flammable liquids
3. Class E fire due to two electrical DB and motors

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CONSOLIDATED SITE SAFETY PLAN

Number of appliances

Basic protection

353 buckets and

59 water type extinguishers

OR

90 Water type extinguishers if buckets are dispensed with.

For Class B fires 2 Water type extinguishers are replaced by 2 Foam Extinguishers.

For Class E fires 6 Dry Powder Extinguishers are provided. Thus the total no. of fire extinguishers are

Water type: 88

Foam type: 2

Dry powder type: 6

TOTAL 96

Reference Standards for Fire Extinguishers:

Sl.No.	Standard / Year	Description
1.	IS940 : 1989	Specifications of Portable fire extinguisher, water type (gas cartridge)
2.	IS2171 : 1999	Specifications of Portable fire extinguisher, Dry powder (Cartridge type)
3.	IS2878 : 1986	Specifications for Fire extinguisher, Carbon Di-oxide Type (Portable & trolley mounted)
4.	IS10204 : 2001	Specifications of Portable fire extinguisher, mechanical foam type
5.	IS10658 : 1999	Specifications for Higher capacity Dry powder Fire extinguisher (Trolley mounted)
6.	IS13385 : 1992	Specifications for Fire extinguisher, 50 capacity wheel mounted water type (Gas Cartridge)
7.	IS13386 : 1992	Specifications for Fire extinguisher, 50 l capacity, mechanical foam type
8.	FPM / June 1995	Fire Protection Manual (Part-I) By Tariff Advisory Committee

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CONSOLIDATED SITE SAFETY PLAN

19. NOISE STANDARDS

NOISE : (Ambient standard)

Area Code	Category of Area	Limit in dB (A) Leq	
		Day time (6 AM to 9 PM)	Night time (9 PM to 6 AM)
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

Silence Zone is defined as area upto 100 metres around such premises as hospitals, educational institutions and courts.

Source: EPA Notification [G.S.R. 1063(E), DT. 26th Dec.1989

Domestic appliances & Construction equipment acceptable noise level:

Sl.No.	Type of Appliances	Standard dB(A)
1.	Window Air-conditioner to 1 Ton to 1.5 Tons	68
2.	Air Coolers	60
3.	Refrigerators	46
4.	Diesel Generators for Domestic Purpose	85-90
5.	Compactors (Rollers) Front Loaders, Mixers, Crane movable, Vibrators and Saws	75

Source: EPA Notification [G.S.R. 742(E), DT. 30th Aug.1990

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CONSOLIDATED SITE SAFETY PLAN

20. List of Applicable Statutory / Regulatory Requirements:

Sl.No.	Standard	Applicable or Not
1.	Indian Electricity Rules, 1956	Yes/ No
2.	The Motor Vehicle Act, 1988	Yes/ No
3.	The Central Motor Vehicle Rules, 1989	Yes/ No
4.	The Gas Cylinder Rules, 1981	Yes/ No
5.	The Environment (Protection) Act, 1986	Yes/ No
6.	The Noise Pollution (Regulation & Control) Rules, 2000	Yes/ No
7.	Battery (Management and Handling) Rules, 2000	Yes/ No
8.	Ozone Depleting Substances (Regulation and Control) Rules, 2000	Yes/ No
9.	The National Environment Tribunal Act, 1995	Yes/ No
10.	Pollution Control Act, Rules and Notifications, September 2001	Yes/ No
11.	Pollution Control Law – Environmental Standard for Ambient Air, Automobiles, Fuels, Industries and Noise – July 2000	Yes/ No
12.	CBIP Guidelines	Yes/ No
13.	Indian Standards as applicable	
14.	<i>List of Relevant Legislations Applicable to Various Sites ISG document issued on 30.06.06</i>	Yes / No
15.	International Standards as applicable	
16.	Project Specific Standards as applicable	

Note: Refer to register of regulations in the HSE system document IS/HSE/ROR/E1.1 to E1.6, IS/HSE/WZS/W1, W2, W3 & IS/HSE/SCH/S1

ISG BANGALORE	Written by: R.Sankaran <i>R. Sankaran</i>	Approved by: M.R. Thakurta Management Representative <i>MR Thakurta</i>
REV. NO. 00	Sheet No. 12 of 12	DATE: 14/06/2007



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CONSOLIDATED SITE SAFETY PLAN

SAFETY DECLARATION BY SUB-CONTRACTOR

1. Name of Sub-contractor
2. Work Order No.
3. Nature of work
4. Project
5. Number of workers deployed
Category:
 1. - Nos.
 2. - Nos.
 3. - Nos.
 4. - Nos.
6. Number of workers attended safety induction training.
7. Safety appliances issued to workmen
Name of the appliances:
 2. Safety Helmet
 3. Safety Boots
 4. Hand gloves
 5. Safety belts
 6. Safety goggles
 7. Dust masks
8. First Aid box provided at site
9. Safety clearance taken from concerned authority for starting the job.
10. Sand and water provided at the welding station
11. Fire extinguishers provided at site

Date:

Signature of sub-contractor with seal



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CONSOLIDATED SITE SAFETY PLAN

CHECK LIST FOR WORKING AT HEIGHT

Name of Sub-contractor

Work Order No.

Nature of work

Name of the Project site

Job. No.

Date

Sl. No.	Check Points	Observation	Measures
1.	Safety Plan is available from Sub-contractor	Yes / No	Document No. Dtd.
2.	All the workers have been explained safe work procedure	Yes / No	Verify with few
3.	Effective communication system have been established and explained to the workers.	Yes / No	Type of communication
4.	Adequate illumination is ensured	Yes / No	Good / fair / poor
5.	Work area inspected prior to starting of the job. Joint protocol signed for site clearance.	Yes / No	Verify document
6.	Area below the work place is cordoned.	Yes / No	Verify compliance
7.	Arrangement made for fastening hand tools.	Yes / No	Check
8.	Workmen provided with bag / box to carry nut, bolts and hand tools.	Yes / No	Check
9.	All work plate forms are of adequate strength and ergonomically suitable	Yes / No	Verify
10.	Work at more than one elevation at the same segment is restricted.	Yes / No	Check
11.	Availability of supervision staff at work place.	Yes / No	Check
12.	Availability of controlled copy of drawing and document at work place.	Yes / No	Verify
ACCESS / EGRESS			
1.	Walkways provided with handrails, mid rail & toe guard.	Yes / No	
2.	All chequered plates, gratings properly welded and bolted.	Yes / No	Verify
3.	Are ladders inspected and maintained in good condition.	Yes / No	Verify
4.	Are ladders spliced	Yes / No	Verify
5.	Are ladders properly secured to prevent slipping, sliding or falling	Yes / No	Verify
6.	Do side rails extended 36" above top of landing	Yes / No	Verify
7.	Are buildup ladders constructed of sound materials.	Yes / No	Verify
8.	Rungs and cleats not over 12" on center.	Yes / No	Verify



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Sl. No.	Check Points	Observation	Measures
9.	Metal ladders not used around electrical hazards.	Yes / No	Check
10.	Proper maintenance, storage.	Yes / No	Check
11.	Ladder placed at right slope	Yes / No	Check
12.	Ladders, stair cases are welded / bolted properly	Yes / No	Check
13.	Any obstruction in the stairs	Yes / No	Check
14.	Are landings provided with handrails, knee rails, toe boards etc.	Yes / No	Check
15.	Whether ramp is provided with proper slope	Yes / No	Check
16.	Proper hand rails / guards provided in ramps.	Yes / No	Check
HOUSEKEEPING			
1.	Walkways, aisles & all overhead work places cleared of loose materials.	Yes / No	Check
2.	Flammable material, if any, is cleared.	Yes / No	Check
3.	All shuttering materials are removed after de-shuttering is done.	Yes / No	Check
4.	Platforms and walkways free of oil / grease or other slippery spillage.	Yes / No	Check
5.	Collected scraps are brought down or lowered and not dropped from height.	Yes / No	Ensure
Personnel Protection Equipment & Safety Devices			
1.	Use of Safety Belts and Safety Helmets are ensured for all workers as per IS / applicable standard.	Yes / No	Verify
2.	Anchoring point provided at all places of work	Yes / No	Verify
3.	Common life-line provided wherever linear movement at height is required.	Yes / No	Verify
4.	Safety nets are in use wherever required.	Yes / No	Verify
5.	Proper fall arrest system is deployed at critical work place.	Yes / No	Verify
6.	Crawler boards / safety system for work on fragile roof are used.	Yes / No	Verify

Signature of Sub-contractor Supervisor.

Signature of BHEL Supervisor

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CONSOLIDATED SITE SAFETY PLAN

CHECK LIST FOR HOUSE KEEPING

Name of Sub-contractor

Work Order No.

Nature of work

Name of the Project site

Job. No.

Date

Sl. No.	Check Points	Observation	Measures
1.	Walkways, passages kept clear of material	Yes / No	Verify
2.	Area and roads kept clear for maneuvering of cranes and material handling equipment.	Yes / No	Verify
3.	Scrap, cut-pieces, welding electrodes stubs, hand tools kept tidy in workarea and disposed suitably.	Yes / No	Verify
4.	Scrap bin available at site.	Yes / No	Verify
5.	Welding cables, power cables routed properly to avoid run over by vehicle or tripping hazards and obstruction to personnel movement.	Yes / No	Verify
6.	Compressed gas hoses routed properly in the site.	Yes / No	Verify
7.	Compressed gas cylinders and hoses kept away from hot work and grinding work.	Yes / No	Verify
8.	Floor is kept clear of water, oil spillage / accumulation	Yes / No	Verify
CIVIL WORK AREA			
1.	All approach, aisle, ingress / egress to / from site, excavated pits, ramps, walkways kept clear of material debris tools etc.	Yes / No	Verify
2.	Scaffolding material (H-beam, H-D tower frames, bracings, clamps), shuttering boards, across pans etc. are stacked properly at site.	Yes / No	Verify
3.	Stacking of bricks, hollow blocks are done in safe manner.	Yes / No	Verify
4.	Nails removed from wooden planks / timbers and not protruding out.	Yes / No	Verify
5.	Saw dust, wood chips and scraps wood cleared from carpentry shop and disposed suitably.	Yes / No	Verify
6.	Debris from demolition and excavated earth cleared from site and accesses.	Yes / No	Verify
ELECTRICAL INSTALLATION & BOOTHS			
1.	Approach to DB, panels, Switches kept clear	Yes / No	Verify
2.	Fire extinguishers installed at an easy accessible location.	Yes / No	Verify
3.	Shock treatment chart is placed nearby place.	Yes / No	Verify



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CONSOLIDATED SITE SAFETY PLAN

Sl. No.	Check Points	Observation	Measures
4.	Welding cable and power cables are routed separately to avoid obstruction and tripping hazards.	Yes / No	Verify
5.	Welding cable and power cables are not damaged one.	Yes / No	Verify
6.	Floor of electrical booths kept dry.	Yes / No	Verify
7.	Proper grade Rubber mats are placed in front of Electrical panels	Yes / No	Verify
STORES			
1.	Walkways, entry and exits are kept clear	Yes / No	Verify
2.	Materials placed on racks are safely accessible.	Yes / No	Verify
3.	Compressed gas cylinders are segregated as full or empty and types of gas.	Yes / No	Verify
4.	Vertically stored cylinders are secured chained to avoid toppling and horizontal once guarded against rolling down.	Yes / No	Verify
5.	Flammable storage areas are isolated from store, office and work areas.	Yes / No	Verify
6.	Cement bags are stacked in proper gradient safely.	Yes / No	Verify
7.	Corrosive material (eg. Acids, alkalies) are stored away from other material and kept on collection trays to safe guard against accidental leakage.	Yes / No	Verify
8.	Storing area for lifting tools & tackles, ropes, wire ropes & Personnel Protection Equipment is dry, clean & free of corrosive material.	Yes / No	Verify
9.	Easy accessibility to installed fire extinguishers ensured in store.	Yes / No	Verify
GENERAL			
1.	Separate scrap yard is allocated for the site.	Yes / No	Verify
2.	Approaches to workstations, offices, stores are well laid and demarcated.	Yes / No	Verify
3.	Site roads are kept clear of stacked material for free & safe vehicular movement.	Yes / No	Verify
4.	Heavy materials stacking are taken care of to prevent slips, collapse and rolling.	Yes / No	Verify
5.	For house keeping at elevated work places refer to Checklist for Working at height - IS:HSE:CL01	Yes / No	Verify

Signature of Sub-contractor Supervisor.

Signature of BHEL Supervisor

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CONSOLIDATED SITE SAFETY PLAN

CHECK LIST FOR SCAFFOLDING

Name of Sub-contractor

Work Order No.

Nature of work

Name of the Project site

Job. No.

Date

Sl. No.	Check Points	Observation	Measures
1.	Is site having a practice of providing suitable and sufficient scaffolds so that the work could safely be done at a height. Refer Scaffolding Standard IS-3696.	Yes / No	Check
2.	Is site engaging suitable / properly trained / experienced workmen for constructing / dismantling / shifting scaffolding works.	Yes / No	
3.	Are scaffold platforms designed / constructed with a safety factor of minimum FOUR.	Yes / No	
4.	Is there a safe means of access to the working platform?	Yes / No	
5.	Are scaffolding structure having a solid base avoiding pavements & manhole covers.	Yes / No	
6.	Is the scaffolding structure free from excavation pit / proper distance is maintained.	Yes / No	
7.	Is verticality of the structure properly maintained?	Yes / No	
8.	Are ties for scaffolding structure properly maintained (vertical as well as horizontal position)	Yes / No	
9.	Is there a provision of toe board / guardrails and are they secured.	Yes / No	
10.	Plank used for working platforms are wooden or metallic.	Yes / No	
11.	If wooden plank, whether thickness is maintained as per standard or not, viz.; <ul style="list-style-type: none">• For 1.5 M span - 1.5" thick.• For 2.6 M span - 2" thick.	Yes / No	
12.	Is there a system of inspecting the scaffolds by a competent person atleast once a week and also after every prolonged interruption in the work / bad weather / heavy wind condition?	Yes / No	
13.	Is there a system of inspecting materials of scaffolds on each occasion before erection.	Yes / No	
14.	Is overhanging of the working platform restricted to less than 50mm / four times the thickness of the	Yes / No	



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CONSOLIDATED SITE SAFETY PLAN

Sl. No.	Check Points	Observation	Measures
	board.		
15.	Is awareness of workmen on the importance of load distribution on a given working platform palpable?	Yes / No	
16.	Is there a check for the condition and correct usage of fittings for scaffolds?	Yes / No	
17.	Is the width of a working platform properly maintained according to usage, viz. <ul style="list-style-type: none">• Minimum 600mm for footing only and not for deposit of material.• Minimum 800mm for footing and deposit of material.• Minimum 1050mm when used for heavier loads or to support higher platforms.	Yes / No	
18.	Are all the materials stored on the platforms properly secured or not.	Yes / No	
19.	Are openings in working platform kept safely covered / fenced	Yes / No	
20.	Whether planks are tied using proper binding wires.	Yes / No	
21.	Are mobile scaffolds used on a firm and level surface?	Yes / No	
22.	Does the height of mobile scaffold exceed four times the smaller base dimension?	Yes / No	
23.	Are all materials stacked on the platform properly secured while in motion?	Yes / No	
24.	Is the safety rule "not to ride on a scaffold while in motion violated"	Yes / No	
25.	Is there a system of checking for obstructions before the tower is moved?	Yes / No	
26.	Are suitable / correct lifting tackle (wire ropes, chains, shackles) selected for suspension & use.	Yes / No	
27.	Is there a system for using manila rope / coir rope for suspension at any place where such rope would be liable to damage by heat / flames/ sharp edges etc.	Yes / No	
28.	Are all precautionary measures taken to prevent contact between arc welding apparatus and suspension ropes.	Yes / No	
29.	Is hanging platform secured?	Yes / No	
30.	Is there a provision of anchoring safety belts- lanyards to be tied to guy ropes?	Yes / No	

Signature of Sub-contractor Supervisor.

Signature of BHEL Supervisor

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CONSOLIDATED SITE SAFETY PLAN

CHECK LIST FOR GENERAL SAFETY INSPECTION

Name of Sub-contractor

Work Order No.

Nature of work

Name of the Project site

Job. No.

Date

Sl. No.	Check Points	Observation	Measures
PILING WORK			
1.	Condition of tripod and its stability	OK / Not OK	
2.	Condition of wire ropes, D shackles, bulldog grips etc.	OK / Not OK	
3.	Removal of loose earth, slush etc.	OK / Not OK	
4.	Entry in register, details of periodical checking & maintenance.	OK / Not OK	
5.	Guards for rotating parts of machines.	OK / Not OK	
EXCAVATION			
1.	Verification of underground electrical cable	Yes / No	
2.	Condition of storing material	OK / Not OK	
3.	Cutting earth from top & ensuring no undercutting.	OK / Not OK	
4.	Storing of material from the edge of excavated pit 5' or half of the depth whichever is more.	OK / Not OK	
5.	Barricade / fencing / Displaying of danger sign, warning sign by way of red flag / tape/ light etc.	OK / Not OK	
6.	Provision of dewatering facilities.	OK / Not OK	
7.	Provision of ladders for deep trench	OK / Not OK	
8.	Stability of nearby structure	OK / Not OK	
9.	Avoid traffic movement, piling work in the vicinity.	OK / Not OK	
DEMOLITION			
1.	Cordoning of surrounding area	OK / Not OK	
2.	Displaying of warning sign Red Flag / Tape / Light	OK /	



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CONSOLIDATED SITE SAFETY PLAN

Sl. No.	Check Points	Observation	Measures
	etc.	Not OK	
3.	Demolition from top in a planned manner	OK / Not OK	
4.	Disconnection of electrical cable connection / water / steam / gas line etc.	OK / Not OK	
5.	Removal of debris immediately at a safe place	OK / Not OK	
6.	Emergency Transport	OK / Not OK	
7.	Fire extinguishers kept nearby for emergency.	OK / Not OK	
BLASTING			
1.	Blasting record incorporating number of holes made / type of explosive used / firing pattern & sequence with date and time of blast.	OK / Not OK	
2.	Handling of explosives by licensed blaster.	OK / Not OK	
3.	Intensity of the charge calculated before use.	OK / Not OK	
4.	Before drilling presence of unfired explosives checked.	Yes / No	
5.	Blasting is carried out only during lean period (lunch / night hours)	Yes / No	
6.	Standard warning signal / all clear signal is ensured before and after firing.	Yes / No	
7.	Competent persons equipped with red flags are posted at possible approaches to stop traffic and by passers.	Yes / No	
GROUND SURFACES			
1.	Ground level, no soft spot	OK / Not OK	
2.	Footing timber level adequately supported	Yes / No	
3.	No unauthorized entry.	Yes / No	
SCAFFOLDS			
1.	Base plate level	OK / Not OK	
2.	Spindle jack vertical	OK / Not OK	
3.	Standard plumb (vertical tubes), no damage.	OK / Not OK	
4.	Ledgers level (horizontal tubes) no damage	OK / Not OK	



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Sl. No.	Check Points	Observation	Measures
5.	Diagonal bracing, check secure and non-missing.	OK / Not OK	
6.	Lock pin in place and secure.	OK / Not OK	
7.	Support from permanent structure.	OK / Not OK	
LADDERS			
1.	Check ladder is placed on level ground	OK / Not OK	
2.	Position at an angle of 1:4	OK / Not OK	
3.	Adequately secured	Yes / No	
4.	No damage, check welds	OK / Not OK	
5.	Extent 4 rungs above stepping off point	OK / Not OK	
6.	Uniform and proper spacing of rung and no missing rung.	OK / Not OK	
WORKING PLATFORM			
1.	Should not be less than 600mm wide	OK / Not OK	
2.	Guard rails adequate check <ul style="list-style-type: none">• Top rails at least 910mm height• No gap greater than 470mm	OK / Not OK	
3.	Boards free of defects <ul style="list-style-type: none">• No gaps• Adequate support• No risk of trips• Properly secured / tied.	OK / Not OK	
PERSONNEL PROTECTIVE EQUIPMENT			
1.	Helmet & Footwear worn	Yes / No	
2.	Safety harnesses as required and secured above shoulder level	Yes / No	
3.	USE of safety belt while working at height.	Yes / No	
4.	Safety goggles during welding / gas cutting / grinding etc.	Yes / No	
5.	Condition / Maintenance of safety appliances	Yes / No	
6.	Use of body guards, gloves etc.		



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CONSOLIDATED SITE SAFETY PLAN

Sl. No.	Check Points	Observation	Measures
STRUCTURAL FABRICATION & ERECTION			
1.	All electrically operated equipment has proper earthing and connected through ELCB.	Yes / No	
2.	Safety guards for drilling & grinding machine are in position.	Yes / No	
3.	Use of Scotch block / wedge on wheels of trailers during unloading of material.	Yes / No	
4.	End stoppers fixed and maintained for rail mounted gantry cranes and limit switches are in operating condition.	Yes / No	
5.	Checking lifting tool & tackles before use.	OK / Not OK	
6.	Precaution during slinging on sharp edges.	Yes / No	
7.	Signaling to crane operators by one person at a time.	Yes / No	
8.	Withdrawal of persons beneath suspended loads.	Yes / No	
9.	Cordoning on all sides displaying Red flags, tapes / light and warning signs.	Yes / No	
10.	Ascertain center of gravity for the load to be lifted.	Yes / No	
11.	Easy access for cranes to move with suspended loads.	OK / Not OK	
12.	Proper tag line is used for guiding lifting loads.	Yes / No	
13.	Proper sequence of erection is followed.	Yes / No	
14.	Guy ropes are used and secured during and after erection if heavy lift.	Yes / No	
15.	Wire ropes are maintained and its safe working load inscribed.	Yes / No	
16.	Adequate illumination provided.	Yes / No	
GAS CUTTING AND WELDING			
1.	Storing of gas cylinders in proper manner	OK / Not OK	
2.	Proper handling of gas cylinder	OK / Not OK	
3.	Condition of regulator, hose, torch etc.	OK / Not OK	
4.	Welding generators / transformers condition and its proper earthing.	OK / Not OK	



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CONSOLIDATED SITE SAFETY PLAN

Sl. No.	Check Points	Observation	Measures
5.	Condition of welding cables and joints	OK / Not OK	
6.	Electrode holder	OK / Not OK	
7.	Area free from combustible material	Yes / No	
8.	Cordoning when welding / gas cutting is in progress at height.	Yes / No	
9.	Provision of fire extinguisher.	Yes / No	
10.	Stacking of cylinders not near live wires, battery charging rooms / oil rooms.	OK / Not OK	
MEANS OF ACCESS			
1.	Platform, toe board and railing	OK / Not OK	
2.	Scaffolding and its condition and maintenance	OK / Not OK	
3.	Stair case and railing	OK / Not OK	
4.	Ladder & fixing	OK / Not OK	
5.	Safe access to and from	OK / Not OK	
ELECTRICAL WORKS			
1.	Earthing of electrically operated equipment.	OK / Not OK	
2.	Provision of Shed / Canopy / Cover of Distribution Board and sub-distribution board.	Yes / No	
3.	Insulation of Cables and Joints	OK / Not OK	
4.	Cable laying above 7 feet from ground level	Yes / No	
5.	Fire extinguishers and Main Distribution Board Room.	OK / Not OK	
6.	Periodical checking of portable tools.	Yes / No	
7.	Use of ELCBs	Yes / No	
8.	“MEN WORKING DON'T SWITCH ON” board and other related Warning boards and Tags.	OK / Not OK	
9.	Insertion of loose wires and sockets	OK / Not OK	
10.	Use of proper plug and sockets.	Yes / No	



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Sl. No.	Check Points	Observation	Measures
11.	Job safety analysis for shut-down jobs and its proper action.	OK / Not OK	
12.	Permit to work.	Yes / No	
HOUSEKEEPING			
1.	Material stacking and storing	OK / Not OK	
2.	Working / Moving area clean	OK / Not OK	
3.	Access / Main Approach / Passages free from obstacles.	OK / Not OK	
4.	Cordoning / covering of pit, vat, machine foundation etc.	OK / Not OK	
5.	Displaying of Red Flags / Tape / Light.	Yes / No	
6.	Removal of unwanted materials like excavated earth debris etc.	Yes / No	
FIRE PREVENTION / PROTECTION			
1.	Combustible material away from source of heat / fire.	OK / Not OK	
2.	Provision of fire extinguishers and its maintenance.	OK / Not OK	
3.	“No Smoking” Board / “Caution” Board displayed.	OK / Not OK	
4.	Stacking / Storing of different type of combustible materials.	OK / Not OK	
ROAD SAFETY			
1.	Driving by unauthorized person.	Yes / No	
2.	Loading of material on truck, dumper securely.	Yes / No	
3.	Material falling from vehicle while transporting.	Yes / No	
4.	Speed Limit.	Yes / No	
5.	Transportation of persons by dumper.	Yes / No	
6.	Going up and coming down from moving vehicle.	Yes / No	
7.	Indulging in Horse Play on job.	Yes / No	
8.	Reverse Horn.	Yes / No	



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Sl. No.	Check Points	Observation	Measures
9.	Location of Overhead Lines identified and pre-cautions taken.	Yes / No	
MISCELLANEOUS			
1.	First Aid Box with proper medicine and its maintenance.	OK / Not OK	
2.	Validity Date of medicine.	OK / Not OK	
3.	Illumination.	OK / Not OK	
4.	Safety board and safety promotional materials i) Posters. ii) Stickers.	Yes / No	
5.	Accident Report form.	Yes / No	
6.	Reporting System with Head Quarters.	Yes / No	
7.	Arrangement of drinking water and sanitation.	OK / Not OK	
8.	Provision of emergency vehicle.	Yes / No	
9.	Telephone Nos. of nearby hospitals displayed at prominent place • For Burns • For Fractures • For Head Injuries • General	Yes / No	
10.	Telephone Nos. of nearby Fire Stations / Police Stations / Other establishments nearby for emergency help, displayed at prominent place	Yes / No	

Signature of Sub-contractor Supervisor.

Signature of BHEL Supervisor



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CONSOLIDATED SITE SAFETY PLAN

CHECK LIST FOR HEAVY MATERIAL HANDLING EQUIPMENT INSPECTION

Name of Sub-contractor

Work Order No.

Nature of work

Name of the Project site

Job. No.

Material Handling Equipment Type

Identification Number

Date

Sl. No.	Check Points	Observation	Measures
1.	Marking of Maximum Safe Working Load	OK / Not OK	
2.	Crane Hook and Latch for the Hook	OK / Not OK	
3.	Availability of Trained operator with Licence	Yes / No	
4.	Training of persons involved in proper signaling	Yes / No	
5.	Checking of various safety limit switches	OK / Not OK	
6.	Condition of Boom	OK / Not OK	
7.	Condition of Rope	OK / Not OK	
8.	Condition of Battery and Lamps	OK / Not OK	
9.	Safety Guards for operator and other personnel	OK / Not OK	
10.	Fire Extinguisher availability	Yes / No	
11.	Warning and Danger boards where required	Yes / No	
12.	Use of Pilot vehicle / warning by personnel during transport of heavy / oversized material	Yes / No	
13.	Vehicle condition of tyres, brake, clutch, lamps and horn.	OK / Not OK	

Signature of Sub-contractor Supervisor.

Signature of BHEL Supervisor

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CONSOLIDATED SITE SAFETY PLAN

CHECK LIST FOR ARC WELDING TRANSFORMER

(Reference Standard IS-1851 – 1975 Specification for Single operated type Arc Welding Transformer)

Test to be done before first use at site and repeated periodically once in 6 months

Name of Sub-contractor

Work Order No.

Nature of work

Name of the Project site

Job. No.

Welding Set make, model and

Capacity

Serial Number

Date of Testing

Date of Testing

Sl. No.	Check Points	Measured Value / Observations	Observation	
1.	General Condition of the Set		OK / Not OK	
2.	Earthing of Welding Set at Two Places		Yes / No	
3.	Open Circuit Voltage in Volts (Measure Output voltage with rated input voltage without loading the set)		OK / Not OK	
4.	Physical Inspection, Check Cable, termination, Insulation , cleanliness, Guard against live parts, fuse rating and healthiness		OK / Not OK	
5.	Insulation Test (IR value in Megohms) <ul style="list-style-type: none"> Primary Terminal Secondary Terminal Continuity of Coil - Primary Continuity of Coil - Secondary Use appropriate Meggar 		OK / Not OK	
6.	Load Test $U= 20 + 0.04 I$ Where U is the Load Voltage in Volts I is the Load Current in Amps. Check the results as per the above formula.		<u>Results</u> Accepted / Rejected	
Sl.No.	Welding Current	Voltage	Electrode Size	Remarks

Signature of Sub-contractor Supervisor.

Signature of BHEL Supervisor

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CONSOLIDATED SITE SAFETY PLAN

CHECK LIST FOR DC ARC WELDING GENERATOR

(Reference Standard IS-2635 – 1975 Specification for DC Electric Welding Generator)

Test to be done before first use at site and repeated periodically once in 6 months

Name of Sub-contractor

Work Order No.

Nature of work

Name of the Project site

Job. No.

Welding Set make, model and

Capacity

Serial Number

Date of Testing

Date of Testing

Sl. No.	Check Points			Measured Value / Observations	Observation
1.	General Condition of the Set				OK / Not OK
2.	Earthing of Welding Set at Two Places				Yes / No
3.	Open Circuit Voltage in Volts Speed of Machine in RPM (Measure Output voltage with DC Voltmeter without loading the set) Check value measured with Nameplate rating.				OK / Not OK
4.	Physical Inspection, Check Cable, termination, Insulation , cleanliness, Guard against live parts, fuse rating and healthiness				OK / Not OK
5.	Insulation Test (IR value in Megohms) <ul style="list-style-type: none">• Earth to Coil A• Earth to Coil B• Earth to Coil C• Continuity of Coil A• Continuity of Coil B• Continuity of Coil C (Use appropriate Meggar)				OK / Not OK
6.	Load Test (Check the results as per the formula) U= 20 + 0.04 I - Where U is the Load Voltage in Volts I is the Load Current in Amps.				Accepted / Rejected
Sl.No.	Welding Current	Voltage	Electrode Size	Remarks	

Signature of Sub-contractor Supervisor.

Signature of BHEL Supervisor

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CONSOLIDATED SITE SAFETY PLAN

CHECK LIST FOR STAGING

Name of Sub-contractor

Work Order No.

Nature of work

Name of the Project site

Job. No.

Date

Sl. No.	Check Point	Details action	Observation OK / Not OK
1	Staging material	All load bearing vertical pipe/tubes shall be minimum medium thickness as per BIS 1161(Light gauge thickness pipe shall not be used without approval of engineer in charge).	
		No warped, cracked, bend and damaged material shall be used. Staging pipe shall be checked for adequacy of thickness due to rusting.	
2	Vertical supports	Size and intervals shall be as shown in staging drg.	
		Shall be erected to true vertical and shall not be placed in slope.	
		Verticals shall not be placed over the earth / ground directly.	
		Either wooden planks of good quality or steel plate shall be placed between vertical supports and earth base.	
3	Ties & Bracings	Size and intervals shall be as shown in staging drg.	
		Shall be erected to true line and shall not be placed in slope.	
4	Clamps	Clamps shall be properly cleaned in suitable oil before put into use so that to ensure the tightness of bolt and nut to the required level.	
		Damaged clamps shall not be used. All clamps & wedges shall be periodically checked for tightness till clearance issued by engineer in charge for de-centering.	
5	Base	Base shall be strong enough to receive the load. In case of earth base it shall be well compacted to desired level and no loose pockets shall be found.	
6	Wedges	Wedges if any to be provided between staging and form work shall be of good quality of wood and shall be fixed with the form work properly by nailing etc.	
7	Joints	All joints between vertical supports and Ties / bracings shall be properly clamped to the required tightness.	
		Care shall be taken to ensure that no joints are left unclamped.	



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8.	Rigidity	Rigidity of staging as whole shall be verified thoroughly before allowing for concrete by a team of engineers concerned and a joint protocol shall be made.	
9	Removal of form work / staging	No form work or staging shall be removed before completion of allowed curing and setting time for concrete and without prior permission from the Engineer in writing.	
10	Construction Loads	Construction loads over temporary staging shall be well within DEAD LOAD + LIVE LOAD as per approved staging design assumptions.	
11	Impact Loads	Impact load over staging shall not be allowed due to movement of construction vehicles, concrete conveying equipment etc. Ready made concrete delivered from batching plant through chocked pipes shall not be tied to staging without approval of engineer in charge. Engineer in charge to verify of condition free flow of pumped concrete through the pipe without excessive pumping pressure to avoid any accidental loads over staging pipes etc.	
12	Illumination	Sufficient illumination below the centering shall ensured for verification of above check points during night hours & wherever clear visibility is absent for checking.	
13	Curing	Excessive ponding of water beyond 25 mm over cast RCC slab during rains or curing shall not be allowed to avoid overloading of staging pipes.	
14	Workforce/skilled labours	Separate required skilled work force with fitters & carpenters etc. shall be kept to attend to above points during concreting.	
15	Approach to workplace	Proper safety ladder or approach stool shall be provided for access to inspection of staging.	
16	Fire hazards	Ensure prevention of fire hazards due to welding & electrical short circuit etc. in the total staging area.	
17	Flooding of water at base of staging	Ensure required dry conditions are maintained at the base level of the staging to avoid slippages of wedges with required pumps & other facilities.	
18	Camber	Ensure that for beams above 6 m span required camber as per approved drawings are maintained by adjustment of the staging props.	

Signature of Sub-contractor Supervisor

Signature of BHEL Supervisor



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CONSOLIDATED SITE SAFETY PLAN

Hazards Risk & Preventive Measures at Construction Sites. (SITE SAFETY PLAN – 2)

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CONSOLIDATED SITE SAFETY PLAN

1. SURVEY / RECEIPT OF MATERIAL AT STORES & STORAGE

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
1	Snakes / Insects bite, inclement weather, water borne diseases etc.	<ul style="list-style-type: none">• Provide gumboots, water bag, train personnel in first Aid treatment, provide First Aid Box
2	Injuries due to fall of material on workmen during striping of packing & unloading	<ul style="list-style-type: none">• Proper instruction to workmen about work at work and Carry out work under effective supervision by skilled personnel.• Manufacturers instructions if any, to be followed during these activities.• Use of proper ramps and stoppers while unloading the material and also to ensure that the ramp used will have sufficient load bearing capacity.• Ensure that the equipment is stored on leveled firm floor / ground to prevent tilting / toppling.
3	Injuries due to fall of material on workmen due to improper stacking and tying	<ul style="list-style-type: none">• Proper tying, stacking of material and necessary support to the equipment in storage area.• Regular check up of storage area / work shop for removal of material / unwanted scrap.• Display of necessary safety precaution boards and Do's & Don't's charts at workplaces and storage areas.• Oxygen and Acetylene cylinders are to be stacked separately and label mentioning full or empty to be displayed for easy identification.• Chains, slings, cables etc. are to be stacked under the tarpaulin or asbestos / GI shed with tarpaulin covered over shed to avoid seepage of water during raining season.• Proper sequence / labeling of material stacking be followed for quick retrieval.
4	Fire	<ul style="list-style-type: none">• Ensuring that the materials stacked are classified as combustible, inflammable, explosive and stored separately.• Ensure right type & quantity of extinguishers are available and personnel trained for using the extinguishers.
5	Handling chemicals, paints etc	<ul style="list-style-type: none">• Ensure availability of Material Safety Data Sheets (MSDS).• Ensure strict adherence to the requirement of MSDS.



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2. MARCHING & PILING

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
1	Fall of material / slings cut off / fall of person from same level	<ul style="list-style-type: none">• Use of proper slings and checking adequacy before use.• Selection of proper hitch while shifting sleepers.• Path should be free from interruption.• Carrying out work by Skilled operator / Signal man under supervision of knowledgeable supervisor.• Use of PPE's like Safety shoe, helmet, hand gloves.
2	Hand injury, head injury, fall from same level, struck by, struck against etc.	<ul style="list-style-type: none">• Distance must be maintained while inserting the wooden plank.• No one shall be entertained under the rig to insert plank, pouring water, grease etc. while marching.• Marching must be done in the presence of skilled supervisor.• While shifting the sleepers by the winch following needs to be ensured:<ul style="list-style-type: none">➤ The correct hitch must be selected➤ Path should be cleared from barriers➤ No one should have direct touch with sleepers➤ Guy rope should be tied to control the swings of sleepers➤ Safety helmet, shoe, gloves and belt will be tied by the lifeline on workers shoulder level➤ Operator should not use loose shirt
3	Toppling of rig	<ul style="list-style-type: none">• Sleepers should be provided equally on both the sides and under the eye• Exact counter weight should be placed at rear end• Dumps would be compensated by placing the wooden pieces over the sleepers / filling with sand to make the surface level• Care must be taken while rolling the wire rope on Ballard for marching straight and returning to a required angle.
4	Fall of person from height	<ul style="list-style-type: none">• Safety belt must be used and lifeline be tied at shoulder level while putting the channel under the helmet for resting the hammer.



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2 MARCHING & PILING --Contd

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
5	Greasing and maintenance of rigs	<ul style="list-style-type: none">• Greasing should be done while the machine is in rest• Gloves should not be used for doing any repair in case of running machine• Greasing gun must be used• Structural frame should be cleaned from grease to avoid slippery surface.• All nuts & bolts should be tightened before it get broken off by shear.• Wire rope should be checked visually and be changed if needs.
6	Injuries while operating / piling	<ul style="list-style-type: none">• Wearing gloves is necessary before handling the wire ropes / handling bitumen• Wearing shoes• Operation must takes place under the supervision of piling in charge / front line supervisor• All workers are clearly told about their responsibility & they must understand clearly.• Do not allow any body to sit near by the rig while in operation.• Wearing of helmet with chin strap• Fly wheel and gear pulleys are properly guarded• While pouring the concrete, worker will ensure that the belts are used properly.
7	Fire	<ul style="list-style-type: none">• Fire extinguisher of Halon type be placed with each rig.• All workers are to be trained to operate the extinguishers• Water buckets be placed near by piling area to control the class A fires.
8	Slipping of tripod legs for piling / Injury	<ul style="list-style-type: none">• Tripod legs should be properly spiked in the ground. This will prevent the accident due to slip of the tripod legs when rested on a paved ground or sleepers. The shear legs and bases become fatigued with usage. Those should be replaced frequently.
9	Failure of pulley	<ul style="list-style-type: none">• The failure of a pulley due to shearing of pin is quite common. Therefore frequent check up of pulley is essential.



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2 MARCHING & PILING --Contd

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
10	Failure of wire rope	<ul style="list-style-type: none">• The wire rope linked between main piling tools should be checked frequently.
11	General	<ul style="list-style-type: none">• All workers must wear tight fitting clothes. Use helmets, hand gloves, protective foot-gears, earmuff and eye goggles.• Electrical connections must be handled with a great deal of care. Direct tapping of power should be prohibited. Each unit should have its own switchboard. All cables should be properly insulated. Earthing is to be ensured.• All movable part of the winch should be suitably guarded.• Engine must be stopped before replacing belts.
12	Damage of near by structure	<ul style="list-style-type: none">• Piling work causes vibration, that may damage near by structure, particularly old ones. It is thus essential to keep watch on the old structure while piling is in process. Condition of the structure around the piling area should be examined before starting of work.
13	Pile breaking	<ul style="list-style-type: none">• For pile breaking operation piles projected more than 2 m may be considered for groove chipping and gas cutting at a level of 5 m height above the cutoff level avoiding tilting or collapsing of the upper part.



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3. EXCAVATION

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
1	Under ground cables / HT lines / Electrocutation	<ul style="list-style-type: none">Site clearance and information on location of specific area be obtained from concerned customer's department.
2	Improper shoring / collapse of trench	<ul style="list-style-type: none">Excavate as per the angle of repose of the particular soil.Provide shoring wherever requiredThe excavated soil shall be kept at a distance of more than 5 feet or half of the depth of the trench, which ever is more from edge. Proper slope must be given.Vehicle movement should not be allowed near by the edge of the trench. Necessary protection should be taken care.Cutting should be done from top to bottom. Under cutting should not be allowed.While providing steps for access / egress, slippery surface must be avoided. Proper ramp must be provided.Work must be done under the control of skilled supervisor.
3	Ground water seepage & accumulation	<ul style="list-style-type: none">Dewatering to be done before allowing workmen in or around the pitSuitable pump must be used if heavy seepage exists.
4	Personnel falling into excavated pit	<ul style="list-style-type: none">Provide proper sign / warning boardUse proper means of access. Ladders to be provided which should be projected (extended) more than 3 feet from the ground level.3 feet height Barricade be provided near the excavated area.Proper illumination be provided.In deep excavation (more than 4 feet), persons working at slope or bench of the pit should wear safety belt.One ladder should be placed at the pit site all the times. One ladder for each 100 m length.
5.	Material falling into excavated pit	<ul style="list-style-type: none">Store material away from the edge of the pit (away from the barricade)Edge preparation be ensuredVehicle movement permitted away from the pit barricade.



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3. EXCAVATION Contd.

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
6	Occupation health hazards	<ul style="list-style-type: none">• Water spraying be ensured over the fly ash or fines for suppression of dust• Nose / dust mask must be used• Safety shoe with ankle must be used• Ensure eye protection using goggles.

4. BACK FILLING & SAND COMPACTION

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
1	Reversing of vehicle / personnel injury / toppling of vehicle	<ul style="list-style-type: none">• Reversing horn (back gear horn) of each vehicle should be working• Driving near to the edge of the excavation be avoided.• Back view mirror must be fitted and intact in proper position on each vehicle• Proper approach to be made to pit, which required to be backfilled as well as to the source of backfilling material.• Proper signaling be ensured while reversing the vehicle.• Activities are to be performed under the control of skilled supervisor.
2	Compactors	<ul style="list-style-type: none">• All the drivers should possess a valid license.• For mini hand operated compactors, all rotating parts should be guarded.• Near by persons should be alerted while reversing the compactors• Hand gloves should be used in case of mini hand operated compactors• Care must be taken while starting the hand operated compactors.
3	Excavation area / toppling of rollers & compactors	<ul style="list-style-type: none">• Area under excavation should be barricaded.• Warning sign should be displayed.• Drivers / operators should be advised suitably• Constant supervision must be provided.• Repair and maintenance of compactors or rollers should be done out of compactor area• Proper illumination be provided.• JCBs need not go nearer to edge of excavated area.• JCB operators must use helmet.



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5. CONCRETING / SHUTTERING.

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
1	Person working at height / fall from height	<ul style="list-style-type: none">• Make proper platform with handrail• Use safety belt at height• Use safety net if necessary• Use personal protective gears as required
2	Placing of loose material at top / fall of material	<ul style="list-style-type: none">• Provide toe boards throughout periphery of the platform• Avoid gap between platform planks• Do not place loose materials over or near by the edge of the platform• Keep the hand tools in a particular box and the box should be tied / fixed with the platform.• Use hand tools by tying with rope to a fixed structure, so that it does not fall off due to inadvertent slippage etc.• Use safety net having smaller mesh size.• Avoid standing just below the working area.
3	Improper approach way / fall of person from height	<ul style="list-style-type: none">• Use proper ladder with handrail placed on firm ground and lashed / fixed both ends of the ladder• Make proper landing place
4	Lifting of materials like shutters, concrete etc.	<ul style="list-style-type: none">• Check wire ropes & brakes of the machines daily• Check lifting tools and tackles daily• Proper slinging• Check the locking system of concrete bucket regularly
5	Noise pollution while operating vibrator, compressors, improper handling of material, electrocution, electrical fire etc.	<ul style="list-style-type: none">• Use of ear plug or ear muff• Use of hand gloves• Electrical connection to be taken through ELCB• Checking of electrical grounding system periodically• Overhead work to be coordinated properly to avoid injury to people working underneath.• Proper instruction to be given to the workmen by supervisor while working• Constant supervision must be provided• Greasing need not be done on running mixer machine• Carbon dioxide type extinguisher should be placed nearby DB / SDB



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5. CONCRETING / SHUTTERING. Contd.

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
6	Protruding of nails / injuries, scratch	<ul style="list-style-type: none">• Protruding nails from the shuttering planks should be removed before put into the use.• Nails should not be thrown or spread at site.• Nails must be kept in proper box.
7	Pouring of concrete using transit mixer	<ul style="list-style-type: none">• Reversing horn (back gear horn) of each vehicle should be working• Helper should be provided to operate the lever to unload the concrete and guide the vehicle while reversing.• Concrete should not be collected by bond carrying on hand for making cubes• Before making move, the helper should check that nothing is lying / nobody is sleeping under the tyres• On daily basis maintenance work shall be carried out. Maintenance work shall be taken place after shutdown of engine fully and informing driver.• No one should be permitted to sit over the tyre shield.• Speed limit permitted at work site must be followed.• Hand break and wedge should be placed under the tyre while parking at site for unloading the concrete.• Each and every rotating part of transit mixer should be guarded properly• Tyre pressure needs to be checked at regular interval.• Mixer fitness test validity to be ensured• Break efficiency, head lights, reverse horn coordination should be checked periodically.• Concreting activity must be done under the control of skilled supervisor.
8	Defects in wire rope and its clamping in mixer chain	<ul style="list-style-type: none">• Proper examination by a competent person before taking in use. Lubricant should be applied as per norms.
9	Inhaling of exhaust gases / health injury	<ul style="list-style-type: none">• Inhaling of exhaust gases coming out of Diesel mixer may cause diseases so it should be directed away from the operator.
		<ul style="list-style-type: none">•



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5. CONCRETING / SHUTTERING. Contd.

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
10	Cleaning of mixer drum / health injury	<ul style="list-style-type: none">• Accident normally occurs during cleaning mixer drum , so care should be taken to display the notice “ UNDER REPAIR” while cleaning the Drum.
11	Contact of body parts with power transmission belt / health injury	<ul style="list-style-type: none">• Each and every rotating part of transit mixer should be guarded properly using protective guard.
12	Electric Shock	<ul style="list-style-type: none">• All part of electrical installations should be so equipped so as to prevent danger of electrical shock.• Personal protective equipment such as rubber boots should be considered as providing adequate protection against risk of electric shock.



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6. HANDLING OF REINFORCEMENT

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
1	Sharp edge / scratch / injury	<ul style="list-style-type: none">Persons handling reinforcement rod should wear hand gloves and safety shoes.While shifting the lengthy rods, the group of persons involved in shifting should be of nominal heights.While shifting the rods, the passage clearance must be ensured.
2	Rod cutting machine / cutting injury / caught in rotating parts	<ul style="list-style-type: none">While bending the rod the nearby persons should be alerted.The rotating part of the machine should be guardedAvoid using loose shirts.Ensure proper earthing of machine and connection taken through ELCB.
3	Persons falling from height / Injury.	<ul style="list-style-type: none">Safety belts must be used while handling the reinforcement at a height of more than 2 meters.Safety net to be tied.People working underneath area should be alerted.
4	Tying of reinforcement bars / hand puncturing	<ul style="list-style-type: none">Hand gloves should be used.Only one person should do this job in one place.
5	Fall of reinforcement rod	<ul style="list-style-type: none">Proper stacking of rods to be done if required to store at some elevated levelRequired quantity of rod should be shifted to elevated work spot.
6	Projected edge / Eye injury	<ul style="list-style-type: none">The projected edge of the stacked rods should be covered.
7	Bending / breaking of rod	<ul style="list-style-type: none">Carbon content in reinforcement to be checked.



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7. PRECASTING

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
1	Reinforcement bar / personnel injury, scratches	<ul style="list-style-type: none">• Gloves should be used• Reinforcement bars should be stacked properly• Care should be taken while tying bars with steel wire• Good house keeping should be maintained.
2	Mixer machine	<ul style="list-style-type: none">• Rotating parts should be guarded• Greasing of gears / other maintenance should be done in switch off mode.• Ear plug should be provided if necessary• Person should carry only 50 Kg• Connection should be given through ELCB.
3	Pouring of concrete / fall of person / injury	<ul style="list-style-type: none">• Neat and strong walk way should be provided over the network of reinforcement bar• Safety shoe should be used• Load carrying helmet should be used• Hand gloves should be used.
4	Vibrator / noise, electrocution,	<ul style="list-style-type: none">• Gloves should be used• Use of ear plugs• Proper earthing of equipment and supply provision through ELCB• Keeping the vibrator unit at one side to avoid hindrance to movement



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CONSOLIDATED SITE SAFETY PLAN

8. FABRICATION

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
1	General	<ul style="list-style-type: none">• Space should be earmarked for fabrication yard at least 40 – 50 feet away from a rail track, road and overhead transmission lines.• All equipment electrically operated must have proper earthing and guards in position.• Electrical supply should be taken through ELCB.• The use of rubber gloves or leather gloves in dry condition is an absolute must, while operating hand held electric tools.• Drilling machine , grinding machine should have safety guard in position.• While unloading structural steel from trailers or wagons by cranes adequate protection should be taken to make the trailers or wagons stationary by putting scotch blocks or wedge on the wheels.• No persons should stand under hanging or swinging load area.• While fabricating heavy structures, adequate props to be given to avoid toppling of the component under fabrication.• Material should not be dumped haphazardly. It should be stacked properly in order.• All the confined space such as tanks, control equipments etc should be ventilated properly.



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CONSOLIDATED SITE SAFETY PLAN

9. ERECTION

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
1	Location of cranes / unlevelled surface of earth / toppling of crane / Overloading of cranes / Setting of cranes / Collapse of boom Physical injury of men and damage of equipment material etc.	<ul style="list-style-type: none"> • Ground surface should be leveled. • Stability of earth should be checked. Mobile crane should be parked on hard soil. • Crane should not be placed near the edges of pit or excavations. • 1" thick metallic plate or wooden sleeper to be placed on the ground to increase the stability of the crane to be positioned and distribute the load equally. • Suitable approach shall be made for crane marching. Wooden sleepers shall be used wherever necessary. • Proper boom angle and radius shall be ascertained before going to lift a load. • Boom over hoisting limit/ cut off switch should be checked before use. • Check tires condition / pressure. • Overloading shall never be allowed at site. • Tag line should be used while hoisting heavy and bulky materials. • Limit switches of cranes should be tested frequently for ensuring its proper functioning. • Operator should be able to see the hook and load throughout the hoisting period.
2	Poor signaling / operation	<ul style="list-style-type: none"> • Employ experienced signalman only • Crane operator should be familiar with those signal • Operator should possessed with valid license • Hindrance to operators cabin should be avoided.
3	Overconfidence / negligence / inexperience on the part of workmen	<ul style="list-style-type: none"> • Check for people movement underneath the lifted load. • Continuous PEP talk to create awareness • Provide constant supervision
4	Reversing the crane	<ul style="list-style-type: none"> • Healthy ness of reverse horn to be ensured. • Use of reverse horn before movement • Instruct the helper to guide crane operator while reversing • Stop people movement behind the crane area
5	Failure of lifting tackle, sling, chain pulley / fall of material	<ul style="list-style-type: none"> • Before lifting any load its actual weight should be ascertained. Center of gravity should be identified and mode of load transfer at sling point to be considered.



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9. ERECTION Contd.

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
		<ul style="list-style-type: none">• Exact determination of sling capacity, sling angle, factor of safety• Factor of Safety should be at least 2.5• Radius of swing should be identified• A visual check must be done regarding fitness of all lifting tackles, ropes, slings etc. before every use.• The common tendency of checking gear meshing, lubrication, coupling, hole matching etc. by feeling with a finger must be strictly curbed.• Selection of bars, rollers, skid etc. should be made depending the type of equipment to be handled.• No slings should be overloaded.• Proper quality of pulley block should be used. In no case pulley block suitable for fiber rope should be used for steel wire ropes.• No person shall walk, stand or work beneath suspended load.• During erection only one signaler shall give signals. However STOP signal should be obeyed whoever gives.
6	Lifting of structure / improper hitch / fall of material	<ul style="list-style-type: none">• Correct hitch to be selected respective to the structure to be lifted• Sudden jerk should be avoided.• The structural members should be kept in orderly manner on the ground so that those items do not roll down while being handled.• Clear passages should be left for easy handling and transportation of structures.• All persons shall stand clear when a crane is sorting or shifting steel girders or other structural materials.• While using spanners, reverting hammer etc. at height should be tied with rope fixed to nearby structure so that it will not drop in case of slip.• Care should be taken while lifting loads. Proper tag line must be used for guiding while lifting loads.• While positioning a beam of fabricated structure etc. it shall be so held that the workers hand does not get jammed against other objects.



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CONSOLIDATED SITE SAFETY PLAN

9. ERECTION - Contd

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
		<ul style="list-style-type: none">• Loose bolt, nuts, and tools must be kept in a box and not on structures. Box must have proper anchorage.• Care should be taken to fasten the erected members properly and secure by guys etc. wherever necessary.• Providing packing over sharp edges should protect ropes and slings.• Slings should be carefully done so as to prevent the load from slipping.• Proper sequence of erection should be followed.• All electrically operated equipments like grinding machine, drilling machine, welding machines etc. must be properly earthed.• The structural member should be able to taken out as per sequence of erection without disturbing the stack. At the same time light structure should not be stacked below heavy structural member to avoid damage.• Safety appliances like safety Helmets, gloves, belts must be used suitably at erection sites.
7	Barrication of working area / Fatal hit	<ul style="list-style-type: none">• Area should be barricaded• Appoint experienced signalman.



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CONSOLIDATED SITE SAFETY PLAN

10. ROAD MAKING

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
1	Hot mix plant / Burns	<ul style="list-style-type: none">• Ascertain the direction of wind and then locate.• Provide fire fighting equipment• Avoid open fire near fuel tank• Helmets, Gumboots, Goggles and Hand gloves should be provided for operators, mechanics and helpers• Avoid using loose clothes• Ensure that the guards on moving parts are firmly fixed and properly• The platform for operation should be strong and spacious and provided with side railing. Ladder should be provided for access.• Avoid direct contact with dryer drum / its aggregate.• Avoid leaning over the chamber mixer.• Avoid back fire
2	Heating Bitumen / Handling	<ul style="list-style-type: none">• Container should be leak proof & kept closed.• Temperature should be maintained• Avoid back fire• Ensure the buckets for carrying bitumen are intact• Hand gloves shall be used
3	Stones, crushed stones / Injuries	<ul style="list-style-type: none">• Stones should be kept at side.• Reverse horn of the truck must be healthy
4	Road rollers / injury	<ul style="list-style-type: none">• Operator should have valid license• Repair / Maintenance work should not be done while in motion / engine "ON" condition.• Roller operating area should be indicated by planting red flag on both sides.



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CONSOLIDATED SITE SAFETY PLAN

11. ROOF WORK

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
1	Standing on and moving above roof under construction / Falling and injury	<ul style="list-style-type: none">• Fabricate temporary structure / surface of adequate strength and supported at a number of points to distribute load.• If site is dusty, then dust control measure must be provided to avoid dust deposition on the roof.• Suitable platform should be furnished with width of more than 600 mm for moving along horizontally.• Cat boards, flat ladder, crawling boards should be used for moving along vertically.• A safety net or catch platform should be installed under the roof if it is necessary.• Evacuate all workers under the roof where work is in progress.• Suitable precaution board should be displayed on working spot.• Guard rails be installed around the roof edge and roof openings along with toe guard and middle rail.• Proper egress and access to be provided to reach the work spot.• All roof materials should be stored at ground level and shifted as per requirements and do not be stored at elevated work spot. At most care must be taken while transporting the fragile material from store to work spot.• Proper PPEs like suitable clothing, footwear, with non-slip soles safety belts, fall arresting system (made preferably from rope).
2	Electrocution / Injury	<ul style="list-style-type: none">• The electricity supply to adjacent overhead wires should be interrupted or the wire should be rendered harmless by some other means.• Proper illumination arrangement must be made.
3	Health	<ul style="list-style-type: none">• Medical examination would be done to detect any defects of equilibrium before being engaged at work.• Emergency vehicle should be parked at site for round the clock.• First aid hospital shall be identified and phone number would be displayed at all visible locality.



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CONSOLIDATED SITE SAFETY PLAN

12. WORKING WITH PORTABLE TOOLS

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
1	Electric shock, Burns, Electrocutation / Injury	<ul style="list-style-type: none"> • Earthing of all electrical equipment must be ensured. • Supply through ELCB should be provided. • Regular checking of ELCB operation is to be done. Register should be maintained . • Double earthing should be followed. • Electrical cable should be neatly traced along the platform and handrail. Avoid placing them on the platform or routing in haphazard way. • 3 pin plug should be used for power tapping. • Proper shed should be provided to DBs to protect the same from extreme weather condition. • Avoid number of intermediate cable joints. One joint per 25 meter is allowed with necessary insulated taping. • Appropriate PPE should be used. • "DANGER BOARD", " MEN ON THE JOB" "DO NOT SWITCH ON" boards shall be put up as required. • Insertion of loose wires in the socket shall not be allowed. • Dry chemical type fire extinguisher shall be kept in the DB / FDB location. Use of these must be known to workers & supervisors.
2	Caught in rotating parts, slip from hand / injury	<ul style="list-style-type: none"> • Ensure that the guards are firmly and correctly fixed. • Avoid doing repair / maintenance work during in motion. • Avoid stagnation of water in and around. • Avoid wearing loose shirts • Retain hold of hand tools until moving parts have stopped. • Avoid leaving the equipment as it is without " switch off". • Use hand gloves free from oil & grease. • Never carry the machine by its power cord.
3	Occupational health hazards / Noise	<ul style="list-style-type: none"> • Use ear plug if necessary. • Change portable tools if noise level is not controllable.



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CONSOLIDATED SITE SAFETY PLAN

13. HANDLING OF DIESEL

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
1	Flammable and toxic vapors on exposure to atmosphere. Being heavier than air become difficult for it to disperse.	<ul style="list-style-type: none">• Care should be taken to prevent accidental ignition and explosion of the vapors.• Electrical cables should be properly insulated to prevent spark and fire.• Incandescent lamps (if used) , shall have glass cover and protective cage.• To take out flammable liquids from 200 L drum to small containers, manually operated hand pump with funnel shall be used. Lid of containers shall be immediately replaced.• Match box or gas ignited lighters use must be avoided.• NO SMOKING / NO NAKED LIGHTS board must be displayed.• Container should be stored in upright position in an open air compound and securely fenced and surrounded by a bund sufficient to hold the content of the largest drum stored plus 10%.• In case drums are stored horizontally wedges must be used.• “ Highly Inflammable Liquid” caution board should be displayed at the entrance of the storage area.• Care must be taken to avoid spillage & leaks by maintaining screw caps and the use of funnels, spouts or a symphonic device.• Spillage can be soaked with dry sand, which could then be placed at least 4 M away from any possible vapour source or combustible stock of materials.
2	Cleanliness and disposal of rubbish / Fire	<ul style="list-style-type: none">• It is vital that all waste of highly flammable liquids or materials contaminated by them is disposed off immediately and workplace kept clean all times to remove hazards.• Within workplace, metal bins with lids are required to receive rags and waste.• All bins should be removed to store overnight. Rubbish is to be incinerated in small quantities in the open at least 8 m from any building. <p>Cleaning should be done with nonflammable solvent in well-ventilated places. Detergent, degreaser, cleanser are often satisfactory.</p>



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CONSOLIDATED SITE SAFETY PLAN

13. HANDLING OF DIESEL - Contd.

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
		<ul style="list-style-type: none">• Wooden, plastic or non-sparking alloy implements should be used to clean residues from floor or other surfaces.• Heat should never be applied to normally empty vessels as they still contain explosive mixture.• Empty containers with cap removed should be crushed and disposed off as rubbish, but not incinerated.• The cleaning or repairing of drums on site is not recommended. They should be returned to the supplier if they are not to be removed.



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CONSOLIDATED SITE SAFETY PLAN

14. SITE TRANSPORTATION

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
1	Site access or routing at site / accidents	<ul style="list-style-type: none">• Site entrance should be located in such a way so as to cause minimum inconveniences to the public or other road users.• Suitable warning notice should be displayed at the convenient locations (adjacent to overhead lines or near storage areas or excavated pits etc.)• Provision of one way system and the avoidance of vehicle reversal recommended upto a satisfactory level.• Protective embankment should be provided at the all excavated sites particularly at the areas where lorries or dumpers trip into excavations.
2	Vehicles & drivers / Accidents	<ul style="list-style-type: none">• Fitness of vehicle needs to be checked.• Driver must possess valid license.• Tiers condition / Battery condition be checked.
3	Violation of driving rules / accidents	<ul style="list-style-type: none">• Drivers must follow the traffic rules and signals.• Speed limit and sharp bends must be avoided.• Stop and proceed carefully at unmanned junction points.
4	Over loading / Accidents	<ul style="list-style-type: none">• Over loading causes more wear & tear of tires, road surfaces and decreasing efficiency of the moving components of the vehicle.• It also causes less control on steering, inadequacy of break power, overturning while negotiating sharp bends.
5	Stacked material / Accidents	<ul style="list-style-type: none">• Transport vehicle usually should go to the stacked material site for loading either manually or by machine.• In case of loading by a ladder strong canopy or cap should be provided for the safety of the driver.• The engine of the vehicle should not be kept running during the period of stacking.• In case of loading or transporting of material such as built up columns or MS rods which are projected beyond the vehicle should be provided with precautionary signs suitable (Flag or Signal man), to avoid injuries to the people.• Human being should not be transported in Truck / Dumpers / Cranes etc.• Filled Oxygen and Acetylene cylinders should not be thrown from vehicle. It must be shifted through bottom rim.



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CONSOLIDATED SITE SAFETY PLAN

15. WORKING AT HEIGHT

ACTION BY : Concerned Site Engineer / Supervisor / Site Safety Engineer

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
1	Fall of a person / injury	<ul style="list-style-type: none">• Fabricate temporary structure / surface of adequate strength and supported at a number of points to distribute load.• Suitable stable platform should be furnished with width of more than 600 mm for moving along horizontally.• Proper access / egress should be provided.• Good house keeping should be maintained at elevated work place.• PPE like safety belts, fall arresting system should be incorporated / anchored of lifeline with permanent structure at a height of person shoulder level.• Guy ropes shall be used for anchoring lifeline of safety belt to facilitate safe horizontal movement at height.• In special circumstances fall arrestor should be used where usage of safety belt is non-practical.
2	Fall of material / Injury	<ul style="list-style-type: none">• Platform should be spacious to allow placement of material and space for working person.• Barricade / handrails, toe boards should be provided if necessary.• Guard / Safety net is provided suitably for preventing falling of material from height..• Overloading on temporary platform is avoided.• Protect structures against external impact.• Build and dismantle the structures in accordance with design.
3	Improper scaffolding	<ul style="list-style-type: none">• Erected on firm and level ground• Proper approach should be provided by ladders, Ramps etc.• Gangway jalties, which are used to form platform at top, should be tied firmly.• Slippery / wet condition over the working platform should be avoided.• Safety belt & safety helmet are must for the people who are working on scaffolding platform.



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CONSOLIDATED SITE SAFETY PLAN

16. WELDING & GAS CUTTING

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
1	Fire, explosion, backfire / Injury	<ul style="list-style-type: none">• DA and Oxygen cylinders should be kept in upward position and tied firmly.• Cylinders should be shifted by wheel trolley.• DA cylinders should be covered by wet cloths or gunny bags.• Flash back arrester should be fitted in all DA cylinders.• Nozzle of cutting torch should be properly tightened and kept clean from dirt, dust, metal depositions etc.• No joints and extension of hoses are allowed for DA.• If any crack is found on the hose pipe it shall be thoroughly checked and replaced.• Provide right type of fire extinguishers near by the work spot.• Gas cylinder should be stored properly in a shed. Empty and full cylinders should be kept separately and labeled.• Oil or Paint drums (empty or with content) shall not be allowed to be kept near the vicinity of weld area.
2	Bare wire or improper insulation / Electrocutation	<ul style="list-style-type: none">• Earthing of all electrical equipment must be ensured.• Supply through ELCB should be provided.• Double earthing should be followed.• Electrical cable should be neatly traced along the platform and handrail. Avoid placing them on the platform or routing in haphazard way.• 3 pin plug should be used for power tapping.• DBs must be protected from rains.• Avoid number of intermediate cable joints. One joint per 25 meter is allowed with necessary insulated taping.• Appropriate PPE should be used.• Electrode holder shall be of good quality with proper insulation. The welder should never be allowed to weld when he is wet.• Install power generators of suitable capacity.• Provide emergency light / torches in the job site.• Provide emergency ladder for elevated work spot.



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CONSOLIDATED SITE SAFETY PLAN

16. WELDING & GAS CUTTING - Contd.

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
		<ul style="list-style-type: none"> Incase of confined area, forced ventilation shall be provided.
3	Exposure to spark hot metal and fumes	<ul style="list-style-type: none"> The welder shall use apron and Helmet with weld screen. Provide adequate ventilation in the working area.
4	Continuous working / Heat Stress	<ul style="list-style-type: none"> Provide adequate ventilation. Continuous working should be avoided. Adequate interval should be provided. Incase of confined area, forced ventilation shall be provided.
5		<ul style="list-style-type: none">

17. Grinding

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	HAZARDS / RISK	PREVENTIVE MEASURE
1	Contact with grinding wheel / electric shock	<ul style="list-style-type: none"> Wheel guard should be placed in proper position. Machine should be earthed properly. Frequent checking of power cord and use of plugs & sockets. Proper use of PPEs such as grinders goggles, face shields, safety shoes, hand gloves etc. Wheel should be mounted properly on the suitable grinding machine. Grinding machine RPM and wheel RPM should match. Use of safety belt during grinding at height more than 2 m.
2	Damage of wheel	<ul style="list-style-type: none"> Check the expiry date.
3	Cable / cord	<ul style="list-style-type: none"> Double insulated power cable should be used in grinding machine. Joints in cable should be avoided or protected properly.



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18. FIRE PREVENTION

ACTION BY : Concerned Site Engineer / Supervisor

Sl.No.	Causes of fire	PREVENTIVE MEASURE
1	Malicious ignition, careless gas cutting, welding, smoking, throwing of lighting match sticks, uncontrolled rubbish burning Incorrect storage and careless use of flammable liquids and compressed gases.	<ul style="list-style-type: none">• Portable extinguishers containing Foam, DCP or BCF should be used on fire involving flammable liquids. Such fire extinguishers shall be conspicuously located.• Nobody shall be allowed to misuse or horseplay with this emergency equipment.• Demonstration on the usage of fire extinguishers shall be arranged.• Employees shall be instructed to report all fires immediately and notify their supervisor about the discharge of the fire extinguisher and its need of servicing.• The extinguisher should be readily available for use and note more than 15 m away from the area of use.• Employees, especially those involved in actually using these liquid must be adequately trained in the proper use of fire extinguishers. These employees in case of emergency and for other measures can use extinguisher in the event of fire.• Fencing of loading area like flammable liquid stores, paint oil storage and material stores (especially timber stacks) should have prominent displaying of " NO SMOKING".



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CONSOLIDATED SITE SAFETY PLAN

GUIDELINES FOR RESIDENT MANAGERS ON CONTRACT LABOUR, SAFETY & ACCIDENT REPORTING SYSTEM

CONTRACT LABOUR

- 1) Form V under Contract Labour (Regulation and Abolition Act) may be arranged from the customer, who is the principal employer, in the name of sub-contractor directly and ensure that the sub-contractor shall obtain licence under Contract Labour (Regulation and Abolition Act) 1970.
- 2) Ensure PF coverage in respect of all the contract labour deployed by our sub-contractors.
- 3) Ensure ESI coverage, wherever applicable, in respect of all the contract labour deployed by our sub-contractors.
- 4) Ensure gate pass issued by the customer to all the contract labour deployed by our sub-contractors.
- 5) Ensure Insurance coverage in lieu of Workmen's Compensation in respect of all the contract labour deployed by our sub-contractors.
- 6) Ensure payment of minimum wages, bonus, gratuity and other statutory payments to the contract labour
- 7) Please keep the labour law books containing the labour legislations applicable to each site. For example Factories Act Rules of the state where in the site situated, etc.

SAFETY

- 8) Ensure compliance of all safety measures/aspects by sub-contractors.
- 9) Ensure usage of PPEs as per the safety norms for each work / site by BHEL employees and persons engaged by the sub-contractors.
- 10) Ensure compliance of safety aspects envisaged in HSE Management System Manual.

ACCIDENT REPORTING SYSTEM

- 11) In case of major accidents resulting in serious bodily injury or death, report the same to Business Manager, Head(HR), etc. at HQ immediately.



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- 12) If the accident happened to any contract labour, please obtain a letter from the contractor regarding the accident and forward the same to the customer after obtaining concurrence from HQ.
- 13) In case of Fatal Accident to contract labour, local Police shall be informed by the contractor under intimation to you. A copy of the FIR may be forwarded to HQ.
- 14) In case of Fatal Accident to BHEL employee, local Police shall be informed by the Resident Manager under intimation to HQ.
- 15) Obtain the concurrence and approval of Business Manager & Head(HR) before signing any Accident Notice Forms under the Factories Act or Form EE under Workmen's Compensation Act, etc. or any other documents related to the accident.
- 16) In case of Fatal Accident to contract labour, ensure contractor shall arrange for postmortem and other formalities and hand over the body to the relatives.
- 17) In case of major accidents resulting in serious bodily injury or death to contract labour, Resident Manager shall forward the prescribed Form (Notice of Accidents or Dangerous Occurrences Resulting in Death or Bodily Injury under the Factories Act Rules of the state in which site is situated) filled and submitted by the sub-contractor to the Customer for onward transmission to the Assistant Labour Commissioner and other concerned Authorities within the prescribed time limit. For example Form 22 under Chatisgarh Factories Act Rules is applicable to Korba East site and Form 18 under Punjab Factories Act Rules is applicable to Lehramohabat site.
- 18) In case of major accidents resulting in serious bodily injury or death to BHEL employee, Resident Manager shall fill and submit the prescribed Form (Notice of Accidents or Dangerous Occurrences Resulting in Death or Bodily Injury under the Factories Act Rules of the state in which site is situated) to the Customer for onward transmission to the Assistant Labour Commissioner and other concerned Authorities within the prescribed time limit. For example Form 22 under Chatisgarh Factories Act Rules is applicable to Korba East site and Form 18 under Punjab Factories Act Rules is applicable to Lehramohabat site.
- 19) Contact Resident Manager / HR executive of Power Sector Site at the same location, if available, and take their assistance, in case if they had already handled a similar accident case at the same location.
- 20) Ensure providing of details like age (date of birth), wages of the person met with an accident and injured or expired to the concerned authorities.



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- 21) Ensure depositing of Workmen's Compensation amount decided by the authority under the Workmen's Compensation Act with the Commissioner of Workmen's Compensation by the contractor or their Insurance Company.
- 22) Inform HQ regarding the payment of Workmen's Compensation through the authorities to the dependents of the person expired.
- 23) Ensure payment of other statutory payments also, if any.

HSE ACCIDENT / INCIDENT REPORTING

- 24) Strictly comply with section 17.0 of HSE Management System Manual in respect of Accident / Incident reporting system
- 25) Submit the Accident / Incident Report format to HQ immediately after occurrence of accident.
- 26) Submit the Accident / Incident Investigation Report format to HQ after completion of the investigation



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CONSOLIDATED SITE SAFETY PLAN

LIST OF RELEVANT LEGISLATIONS APPLICABLE TO VARIOUS SITES

1. Contract Labour (Regulation and Abolition) Act, 1970
2. Factories Act, 1948 with relevant state rules
3. The Buildings And Other Construction Workers (Regulation Of Employment And Conditions Of Service) Act, 1996
4. The Inter-state Migrant Workmen (Regulation Of Employment And Conditions of Service) Act, 1979
5. The Child Labour (Prohibition and Regulation) Act, 1986
6. Minimum Wages Act, 1948 with relevant state amendments
7. Payments of Wages Act, 1936
8. Payment of Bonus Act, 1965
9. Payment of Gratuity Act, 1972
10. Employees' State Insurance Act, 1948
11. The Employees' Provident Funds And Miscellaneous Provisions Act, 1952
12. Fatal Accidents Act, 1855
13. The Personal Injuries (Compensation Insurance) Act, 1963
14. Workmen's Compensation Act, 1923
15. The Industrial Disputes Act, 1947
16. The Electricity Act, 2003
17. The Indian Electricity Act, 1910
18. The Indian Electricity Rules 1956
19. Environmental Standards for TPP
20. The Indian Boilers Act, 1923
21. Tariff Advisory Committee - Insurance
22. Hazardous goods TAC
23. The Motor vehicle Act 1988
24. The national Environment Tribunal Act 1995
25. The Environment (Protection) Act, 1986
26. The Gas Cylinder Rules 2004

All the above legislations are made available in ISG web under HSE (<http://isgweb/hse.html>) Business Managers / Project Managers / Resident Managers are requested to go through the above legislations and ensure strict compliance of the relevant legislations and its specific clauses applicable to their respective sites. Resident Managers are also requested to enquire with the customer regarding applicability of any local legislation.



HSE Management System Manual

IS:HSE:AIR:001

ACCIDENT (PERSONAL INJURY / PROPERTY DAMAGE) REPORT

1.	NAME OF SITE:			
2.	SCOPE OF WORK:			
3.	ACTIVITY OF AREA:			
4.	NAME OF CONTRACTOR:			
5.	NAME & DESIGNATION OF BHEL ACTIVITY INCHARGE:			
6.	DATE & TIME OF ACCIDENT:			
7.	DATE RESUMED:			
8.	NO. OF WORKING DAYS LOST BY VICTIM (if duty not resumed give estimated figure):			
9.	NO. OF MAN HOURS LOST BY OTHERS:			
10.	PERSONAL DETAILS OF INJURED AND/OR DETAILS OF MATERIALS / EQUIPMENT / PROPERTY DAMAGED:			
NAME:		NAME OF MATERIAL/ EQUIPMENT/ PROPERTY:		
PERIOD OF EMPLOYMENT:				
AGE:	SEX:	MARRIED / SINGLE:	ESTIMATED COST	ACTUAL COST
OCCUPATION:		PART OF BODY INJURED		NATURE OF DAMAGE
NATURE OF INJURY				
11.	AGENCY (OBJECT / EQUIP / SUBSTANCE) MOST RESPONSIBLE FOR CAUSING ACCIDENT / INJURY / DAMAGE:			



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ACCIDENT (PERSONAL INJURY / PROPERTY DAMAGE) REPORT

12.	PERSON (NAME & DESIGNATION) WITH MOST CONTROL OVER AGENCY (OBJECT / EQUIP/ SUBSTANCE) CAUSING ACCIDENT / INJURY / DAMAGE:	
13.	DESCRIBE CLEARLY HOW THE ACCIDENT OCCURRED (IF SPACE INSUFFICIENT USE SEPARATE SHEET & ATTACH):	
ANALYSIS:		
14.	WHAT ACTS AND/OR CONDITIONS CONTRIBUTED MOST DIRECTLY TO THIS ACCIDENT?	
15.	WHAT ARE THE BASIC REASONS FOR THE EXISTENCE OF THESE ACTS AND / OR CONDITIONS?	
16.	WHAT CORRECTIVE ACTIONS HAVE BEEN TAKEN TO PREVENT ACCIDENT RECURRENCE?	
DATE :		SIGNATURE OF CONCERNED ENGINEER:
17.	COMMENTS OF SITE IN-CHARGE OF BHEL:	
DATE :		SIGNATURE OF SITE INCHARGE

Note:

- 1) The Report shall be prepared by the Concerned engineer and to be submitted to Head quarters through Resident Manager.

	<p style="text-align: center;">Annexure-VI</p> <p style="text-align: center;"><u>Guidelines to Contractors</u> <u>filling up the Registration Form</u></p>	Document No.	AA:MM:SR:01
		Revision No.	01
		Page No.	I of II

1. Registration Form may be obtained from BHEL website www.bhel.com.
2. Any clarification with respect to procedure for registration may be obtained from the Supplier Development Cell of respective BHEL unit/ Power sector Region.
3. The Contractor Registration Form has three sections:


Section-I: COMPANY PROFILE AND GENERAL INFORMATION

Section-II : RESOURCES OWNED BY THE COMPANY

Section-III : WORK EXPERIENCE

For each of the Work experience format filled up, the following needs to be attached:

- i) Self attested Copy of Work Order/Award letter and allied documents containing interalia (a) Brief Description of work, (b) Value of Contract (c) Time schedule
 - ii) Completion Certificates (Any one of the following):
 - a) Self attested copies of Work Completion Certificates issued by Owner or agency who has awarded the contract. BHEL reserves the right to verify the authenticity of the document from the originator. Hence kindly see that all contractual details are available in the completion certificates to lend easy verification if required.
 - b) Self attested copies of Protocol signed by Client and Owner, indicating the completion/achievement/execution of the Milestone achieved
 - c) Self attested copies of 'Final Bill' verified by Client/Customer which indicates the Quantum of work not less than that specified in Basic QR
 - d) Documentary evidence issued by Owner/Client, indicating the progress of Work achieved not less than that specified in the Basic QR even if the total contract is not completed/closed
 - iii) Relevant documents for each 'WORK EXPERIENCE' format being filled up are to be submitted.
4. All columns are to be filled up properly in the space provided for. Wherever it is not applicable, please mention "Not Applicable". The form is to be signed by the authorised signatory.
 5. A separate sheet may be attached if the space provided is insufficient or additional information is to be given. Please put proper identification tag on the separately attached sheet.
 6. Any information / clarification required by BHEL during evaluation must be given expeditiously.
 7. Please ensure that all required enclosures are attached with the filled up Supplier Registration Form and list of enclosures is given as required.
 8. Incomplete forms will be rejected.
 9. Please fill up the check- list given below and send along with the Supplier Registration Forms to BHEL.
 10. Please note that if you are registered and participate in Tender process and qualify to get order from BHEL, your performance based on Quality of your product, delivery performance and service rendered will be evaluated inline with Annexure VIII (page 4 of 4).
 11. If you are attaching a document in a language other than English, a self attested English translated document may please be also attached.

	Annexure-VI Check List for Contractor Registration Form	Document No.	AA:MM:SR:01
		Revision No.	01
		Page No.	II of II

Sl.No.	Check-Point	Yes/No
1.	Information against all points under “Organizational Information “ has been given.	
2.	All enclosures and supporting documents have been enclosed.	
3.	Technical requirements, specifications, drawings ,standards have been received from BHEL before filling up Technical Competence.	
4.	All the parts of the form & enclosures have been signed by Authorised Signatory.	

Signature & seal

Date :

(Authorised Signatory)

Note: This check list is to be attached with the filled up Contractor Registration Form.

BHARAT HEAVY ELECTRICALS LIMITED CONTRACTOR REGISTRATION FORM

SECTION-I: Company Profile & Organisational Information

1.1 GENERAL INFORMATION

Sl No	Detail/Particulars	Remarks by BHEL, if any
1.1.1	<u>Name of Company seeking Registration:-</u>	
1.1.1a	Work description/package for which registration is sought.	Package code to be given by BHEL
1.1.2	Date of Incorporation/Establishment :- (Please attach Certificate of Incorporation)	
1.1.3	<u>Registered Office Address:-</u> ➤ Tel No : ➤ Fax No : ➤ Email ID: ➤ Web site :	
1.1.4	<u>Head Office Address:-</u> ➤ Tel No : ➤ Fax No : ➤ Email ID: ➤ Web site :	
1.1.5	<u>Mailing Address:-</u> ➤ Tel No : ➤ Fax No : ➤ Email ID: ➤ Web site :	
1.1.6	<u>Officer to be contacted for clarification on CONTRACTOR Empanelment:-</u> Name & Address ➤ Tel No : ➤ Fax No : ➤ Email ID:	

BHARAT HEAVY ELECTRICALS LIMITED CONTRACTOR REGISTRATION FORM

SECTION-I: Company Profile & Organisational Information

		Remarks by BHEL, if any
1.1.7 i	<u>Branches:-</u> Address:- ➤ Contact Person: ➤ Tel No : ➤ Fax No : ➤ Email ID :	
ii	Address:- ➤ Contact Person: ➤ Tel No : ➤ Fax No : ➤ Email ID :	
iii	Address:- ➤ Contact Person: ➤ Tel No : ➤ Fax No : ➤ Email ID :	
1.1.8 i	<u>Sister Concerns if any:-</u> Address:- ➤ Contact Person: ➤ Tel No : ➤ Fax No : ➤ Email ID : ➤ Web site :	
ii	Address:- ➤ Contact Person: ➤ Tel No : ➤ Fax No : ➤ Email ID : ➤ Web site :	

BHARAT HEAVY ELECTRICALS LIMITED CONTRACTOR REGISTRATION FORM

SECTION-I: Company Profile & Organisational Information

1.2 OWNERSHIP INFORMATION

1.2.1	TYPE OF COMPANY (please tick “√” <u>any one</u> applicable)	Documents to be submitted	Remarks by BHEL, if any
i	Govt of India Undertaking <input type="checkbox"/>		
ii	State Govt Undertaking <input type="checkbox"/>		
iii	Public Limited Company <input type="checkbox"/>	Memorandum and Articles of Association	
iv	Private Limited Company <input type="checkbox"/>	Memorandum and Articles of Association	
v	Co-operative Society <input type="checkbox"/>	Society Rules and Byelaws	
vi	Partnership Firm <input type="checkbox"/>	Partnership deed	
vii	Proprietorship <input type="checkbox"/>	Professional Tax Registration & Municipal Registration	
viii	Any Other (specify) <input type="checkbox"/>	Supporting docuemnts	

1.2.2	DIRECTOR/PARTNER/OWNER/PROPRIETOR INFORMATION	Position Held In Company	Remarks by BHEL, if any
i			
ii			
iii			
iv			

BHARAT HEAVY ELECTRICALS LIMITED CONTRACTOR REGISTRATION FORM

SECTION-I: Company Profile & Organisational Information

1.3 REGISTRATION PARTICULARS

Sl No	Description (PLEASE INDICATE PARTICULARS IN THE SPACE PROVIDED FOR EACH)	Required for	Documents to be submitted	Remarks by BHEL, if any
a	INCOME TAX (PERMANENT AC NO):-	All categories	Copy of Certificate	
b	SERVICE TAX REGISTRATION	All Categories	Copy of Certificate	
c	Sales Tax VAT Registration Number and Date :			
	1	As applicable	Copy of Certificate	
	2.	As applicable	Copy of Certificate	
	3.	All categories	Copy of Certificate	
	4.	As applicable	Copy of Certificate	
	5.	As applicable	Copy of Certificate	
d	PF Registration	All categories	Copy of Certificate	
e	CPWD/Government Organisation	As applicable	Copy of Certificate	
f	Geological Survey Of India/Equivalent	For Geo Tech Investigationsetc	Copy of Certificate	
g	IBR	For Boiler and IBR Piping	Copy of Certificate	
h	Contractorship License for Electrical Works (from any State/Union Territory of India)	For Electrical Works	Copy of Certificate	

1.4	MANPOWER	Remarks by BHEL, if any
A	Organisation Strength (In number): (please submit Organisation Chart)	

B	List of Key Persons on rolls of the Company				
	Category	No of persons in the Company	Qualification	Total work experience	Remarks by BHEL, if any
i	Resident Managers/Resident Engineers				
ii	Site Engineers (Erection & Commissioning)				
iii	Site Engineers (Quality)				
iv	Site Safety Co-ordinators				
v	Site Supervisors				
vi	Skilled Workmen				
vii	Others				

BHARAT HEAVY ELECTRICALS LIMITED CONTRACTOR REGISTRATION FORM

SECTION-I: Company Profile & Organisational Information

1.5 OTHER PARTICULARS

A	Registration with BHEL and Other Firms	Registration/ Empanelment Number	Registration/ Empanelment valid upto	Document to be submitted	Remarks by BHEL, if any
i	BHEL/Northern Region			Documentary evidence	
ii	BHEL/Eastern Region			Documentary evidence	
iii	BHEL Southern Region			Documentary evidence	
iv	BHEL Western Region			Documentary evidence	
v	Electricity Boards			Documentary evidence	
vi	NTPC/other Public Sector/Private Sector			Documentary evidence	
vii	PWD/Railways			Documentary evidence	

B	BANKING DETAILS OF COMPANY		
	Information of Bank Account of Company	Document to be submitted	Remarks by BHEL, if any
	<p>The following information of Bank Account of the Company, duly endorsed by the Bank (required for Electronic Fund Transfer – EFT/RTGS) is to be submitted</p> <ol style="list-style-type: none"> 1. Name of the Company 2. Name of Bank 3. Name of Bank Branch 4. City/Place 5. Account Number 6. Account type 7. IFSC code of the Bank Branch 8. MICR Code of the Bank Branch 9. Details of other Bankers (for reference purpose only) <p>NOTE : (i) CONTRACTORS who have already submitted the above information are requested to submit a copy of the same</p>	Information of Bank Account of the Company, duly endorsed by the Bank	

BHARAT HEAVY ELECTRICALS LIMITED

CONTRACTOR REGISTRATION FORM

SECTION-I: Company Profile & Organisational Information

1.6	QUALITY SYSTEMS	Certificate Number and Valid upto	Document to be submitted	Remarks by BHEL, if any
A	Accreditation to ISO 9001		Copy of accreditation certificate OR Copy of 'Table of Contents' of 'Quality Manual'	
B	Accreditation to ISO 14000		Copy of accreditation certificate OR Copy of 'Table of Contents' of 'Quality Manual'	
C	Accreditation to OHSAS 18000		Copy of accreditation certificate OR Copy of 'Table of Contents' of 'Quality Manual'	
D	In House Quality Systems		Copy of quality manual .	

1.7 FINANCIAL INFORMATION FOR THE PREVIOUS THREE YEARS

Sl No	Financial Information	Financial Value in Rupees in Lakhs (Audited)		Remarks by BHEL, if any
		Year	Value in Rupees in lakhs	
i	<u>NET WORTH (Latest)</u> Paid up Share Capital# + Reserves			
ii	SALES/TURN OVER (Last three Financial Years)			
		Average		
iii	CASH PROFIT (PAT + Non Cash Expenditure viz Depreciation) (Last three Financial Years)			
iv	Whether CONTRACTOR has been referred to BIFR/NCLT/ any other similar Govt. Agency (If 'YES' enclose details)		YES/NO	
v	Whether CONTRACTOR is a potential sick Company (If 'YES' enclose details)		YES/NO	
vi	Copies of Audited Annual Accounts (Balance Sheet, P&L Account, Cash flow statement) for the last three (3) years to be submitted.			
vii	Status of Tax assessments done under various laws (Income Tax, VAT/Sales Tax, Excise & Service Tax, Custom) and details of disputes pending, if any, with these authorities to be submitted.			

Legend:

: Share Capital OR Partnership Capital OR Proprietor Capital as the case may be

BHARAT HEAVY ELECTRICALS LIMITED
CONTRACTOR REGISTRATION FORM

SECTION-II: Resources owned by the company

RESOURCES

A) TOOLS & PLANTS, MACHINERY OWNED BY COMPANY

SL NO	Description of T&P, Machinery	Make	Capacity	Year	Quantity	Remarks

1. Please indicate all important T&Ps, Machinery owned by Company
2. Please use additional sheets if required

BHARAT HEAVY ELECTRICALS LIMITED

CONTRACTOR REGISTRATION FORM

SECTION-II: Resources owned by the company

B) INSPECTION, MEASURING AND TESTING EQUIPMENTS OWNED BY COMPANY

SL NO	Description of T&P, Machinery	Make	Capacity	Year of make	Quantity	Next Calibration due	Remarks

1. Please indicate all important Inspection, Measuring and Testing Equipments owned by Company
2. Please use additional sheets if required

BHARAT HEAVY ELECTRICALS LIMITED
CONTRACTOR REGISTRATION FORM

SECTION-II: Resources owned by the company

- C) TIEUPS or RATE CONTRACTS ENTERED INTO BY THE COMPANY FOR PROVIDING VARIOUS SERVICES WHICH THE COMPANY PROPOSES TO INDICATE

SL NO	SERVICES FOR WHICH TIEUPS / RATE CONTRACTS ENTERED FOR PROVIDING SERVICES	PLEASE INDICATE WHETHER SHORT TERM (1 YEAR) OR LONG TERM (ABOVE 1 YEAR)	Remarks

1. Please indicate all important Tie Ups entered by Company for providing various services
2. Please use additional sheets if required

(use separate sheet for each CATEGORY/CODE)

(use additional sheets if required)

[illegible]