

Ref: BHE/PW/PUR/UKH-GEN U#4/1326/Corrigendum 01

Date 07/10/2014

To

ALL BIDDERS

Sub: Corrigendum-01: Issue of Vol-IB and Vol-ID.

JOB: TRANSPORTATION OF MATERIALS, DISMANTLING OF EXISTING GENERATOR STATOR ASSEMBLY, ERECTION, MAGNETIC CENTRE CORRECTION OF ROTOR W.R.T STATOR, COMMISSIONING AND TESTING OF NEW WOUND STATOR OF UKAI HYDRO UNIT #4.

Tender Specification Number: BHE/PW/PUR/UKH-GEN U#4/1326

Bidders to kindly take note of the following:

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AA) Corrigendum for issue of Volume B & D:

Volume-IB: Special Conditions of Contract (Rev 01) & Volume-ID: Forms & Procedures (Rev 01) forming part of Volume-I Tender Specification is issued herewith

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All other Terms and conditions of the Tender Specification shall remain unaltered unless expressly amended by BHEL in writing.

Bidders are requested to submit as a part of Technical Bid, a copy of this corrigendum duly countersigned by the authorized signatory and stamped with the Official seal as a token of Bidder's unqualified acceptance of this corrigendum.

This letter is hosted as file titled "Corrigendum-01 (Clarification-1326)" against NIT-19769 in BHEL web page (www.bhel.com→Tender Notifications → View Corrigendum).

Thanking you,
Yours faithfully,

AGM (Purchase)

Encl: Vol-IB and Vol-ID

REV 01, W.E.F 01 JUNE 2012

TENDER SPECIFICATION

CONSISTING OF:

- o Volume-IB : Special Conditions of Contract (Rev 01),
- o ~~Volume IC : General Conditions of Contract(Rev 01),~~
- o Volume-ID : Forms & Procedures (Rev 01).



Bharat Heavy Electricals Limited
(A Government of India Undertaking)
Power Sector - Western Region
345-Kingsway, Nagpur-440001

Rev 01
1st June
2012

Volume - IB SPECIAL CONDITIONS OF CONTRACT (SCC)

(Document No PS:MSX:SCC)

BHARAT HEAVY ELECTRICALS
LIMITED



SPECIAL CONDITIONS OF CONTRACT (SCC)

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Chapter - I : General Intent of Specifications

1.0	INTENT OF THE SPECIFICATION
1.1	The intent of this erection specification is to provide services for execution of the project according to most modern and proven techniques and codes. The omission of specific reference to any method, equipment or material necessary for the proper and efficient services towards installation of the plant shall not relieve the contractor of the responsibility of providing such services / facilities to complete the work or portion of work awarded to him. The quoted / accepted rates / price shall deem to be inclusive of all such contingencies.
1.2	The work shall conform to dimensions and tolerances given in various drawings and documents that will be provided during erection. If any portion of works is found to be defective in workmanship and not conforming to drawings / documents or other stipulations, the contractor shall dismantle and re-do the work duly replacing the defective materials at their own cost, failing which recoveries, as determined by BHEL, shall be effected from contractor's bills.
1.3	It is not the intent of this specification to specify herein all the details of erection and commissioning. However, the system shall conform in all respects to high standards of quality and workmanship for performing the required duties in a manner acceptable to purchaser who will interpret the meaning of drawings and specifications and shall be entitled to reject any work or material, which in his judgments is not in full accordance herewith.
1.4	The omission of specific reference to any fabrication / erection or other method, equipment or material necessary for proper and efficient working of the plant shall not relieve the tenderer of the responsibility of providing such facilities to complete the work at quoted rates. Any mismatch/ defect found due to mistake in fabrication / erection shall have to be rectified by the vendor free of cost. Inspection by BHEL/Customer does not relieve vendor of his responsibility of executing quality erection.
1.5	The work covered under this specification is of highly sophisticated nature, requiring the best quality workmanship, supervision, engineering and construction management. The contractor should ensure proper planning and successful and timely completion of the work to meet the overall project schedule. The contractor must deploy adequate quantity of tools & plants, modern / latest construction aids etc. He must also deploy adequate trained, qualified and experienced supervisory staff and skilled personnel.

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Chapter - I : General Intent of Specifications

1.6	Contractor shall erect and commission all the equipments and auxiliaries as per the sequence & methodology prescribed by BHEL depending upon the technical requirements. Availability of materials and fronts will decide this. BHEL Engineer's decision regarding correctness of the work and method of working shall be final and binding on the contractor. No claims for extra payment from the contractor will be entertained on the ground of deviation from the methods / sequence adopted in erection of similar sets elsewhere.
1.7	Following shall be the minimum responsibility of contractor and have to be provided within finally accepted rates / prices:
1.7.1	Provision as required of all types of labour, supervisors, engineers, watch and ward, tools & tackles, calibrated MMEs (Monitoring and Measuring Equipment) as specified and otherwise required for the work, consumables for erection, testing and commissioning including material handling
1.7.2	Achieving Proper out-turn / Turn-over as per BHEL plan and commitment.
1.7.3	Completion of work as per BHEL Schedule
1.7.4	Good quality and accurate workmanship for proper performance of the equipment
1.7.5	Repair and rectification
1.7.6	Preservation / Re-conservation of all components during storage / erection / commissioning till handing over.

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Chapter - II : General Services to be rendered by the Bidder

2.0	GENERAL SERVICES TO BE RENDERED BY THE BIDDER
2.1	Services for construction, fabrication, equipment erection testing as well as trial run & commissioning of various equipment and accessories under the contract shall include but not be limited to the following:
2.2	Issuing materials from store/open yard from time to time for erection as per the construction programme. The Contractor shall be the custodian of all the materials issued till the plant/equipment is officially taken over by the owner / BHEL after complete erection any successful trial run & commissioning.
2.3	Transport of material to their respective places of erection and erection of the complete plant & equipment as supplied under this specification.
2.4	Trial run and commissioning of individual equipment / sub-systems to the satisfaction of Owner/BHEL.
2.5	Deployment of all skilled and unskilled manpower required for erection, supervision of erection, watch & ward, commissioning and other services to be rendered under this specification.
2.6	Deployment of all erection tools & tackle, construction machinery, transportation vehicles and all other implements in adequate number and size, appropriate for the erection work to be handled under scope of this specification except otherwise specified.
2.7	Supply of all consumables, eg welding electrodes, cleaning agents, diesel oil, lubricant etc as well as materials required for temporary supports, scaffolding etc as necessary for such erection work, unless specified other wise.
2.8	Providing support services for the contractor's erection staff eg construction of site offices, temporary stores, residential accommodation and transport to work site for erection personnel, watch and ward for security and safety of the materials under the Contractor's custody etc. as required.
2.9	Maintaining proper documentation of all the site activities undertaken by the Contractor as per the proforma mutually agreed with BHEL, Submission of monthly progress reports and any such document as and when desired by BHEL/owner, taking approval of all statutory authorities i.e Boiler Inspector, Factory Inspector, Inspector of Explosives etc , as applicable for respective portions of work fall under the jurisdiction of such statutes of laws.
2.10	Any other service, although not specifically called for but required for a contract of the size and nature indicated in the specification.

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Chapter - III : General Technical Requirements (Codes and Standards)

3.0	GENERAL TECHNICAL REQUIREMENTS (CODES AND STANDARDS)
3.1	Except where otherwise specified, the plant/equipment shall comply with the appropriate Indian Standard or an agreed internationally accepted Standard Specification as mentioned elsewhere in contract specifications, each incorporating the latest revisions at the time of tendering. Where no internationally accepted standard is applicable, the Bidder shall give all particulars and details as necessary, to enable BHEL to identify all of the plant/equipment in the same detail as would be possible had there been a Standard Specification.
3.2	Where the Bidder proposes alternative codes or standards he shall include in his tender one copy (in English) of each Standard Specification to which materials offered shall comply. In such case, the adopted alternative standard shall be equivalent or superior to the standards mentioned in the specification.
3.3	In the event of any conflict between the codes and standards referred above, and the requirements of this specification, the requirements which are more stringent shall govern.
3.4	Tools used during erection and commissioning shall not be accepted except with the specific approval of the Engineer.

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Chapter - IV : Obligations of Contractor

4.0	OBLIGATIONS OF CONTRACTOR
4.1	CONSUMABLES & OTHER ITEMS
4.1.1	The contractor shall provide within finally accepted price / rates, all consumables (excepting those indicated in BHEL scope) like welding electrodes (including alloy steel and stainless steel), filler wires, TIG filler wires (over & above as supplied by the unit along with the plant materials, which will be given free of cost to bidder), gases (inert, welding, cutting), soldering material, dye penetrants, radiography films, etc. Other erection consumables such as tapes, jointing compound, grease, mobile oil, M-seal, Araldite, petrol, CTC / other cleaning agents, grinding and cutting wheels are to be provided by the contractor. Steel, packers, shims, wooden planks, scaffolding materials hardware items etc required for temporary works such as supports, scaffoldings are to be arranged by the contractor. Sealing compounds, gaskets, gland packing, wooden/concrete sleepers, for temporary work, required for completion of work except those which are specifically supplied by manufacturing unit are also to be arranged by the contractor.
4.1.2	All the shims, gaskets and packing, which go finally as part of plant equipment, shall be supplied by BHEL free of cost.
4.1.3	It shall be the responsibility of the contractor to plan the activities and store sufficient quantity of consumables. Non-availability of any consumable materials or equivalent suggested by BHEL cannot be considered as reason for not attaining the required progress or for additional claim.
4.1.4	<u>TIG Filler wire for Boiler and Filler wires for Electrodes for P91/T91 piping:</u> These shall be supplied by BHEL free of cost as supplied by BHEL Manufacturing Units as part of regular supply. Required quantity as arrived at by calculation / standards will only be supplied. It would be the contractors' responsibility to account for the consumption of these filler wires. Additional consumption beyond standard / calculated quantity will be at cost recovery basis only unless and otherwise accounted for. Surplus quantity of TIG filler wire, if any, shall be properly stored and returned to BHEL stores.
4.1.5	It shall be the responsibility of the contractor to obtain prior approval of BHEL, regarding suppliers, type of electrodes etc before procurement of welding electrodes. On receipt of electrodes at site these shall be subjected to inspection and approval by BHEL. The contractor shall inform BHEL details regarding type of electrodes, batch number, date of expiry etc and produce test certificate for each lot / batch with correlation of batch / lot number with respective test certificate. No electrode without a valid test certificate will to be used.

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Chapter - IV : Obligations of Contractor

4.1.6	BHEL reserves the right to reject the use of any consumable including electrodes, gases, lubricants / special consumables if it is not found to be of the required standard / make / purity or when shelf life has expired. Contractor shall ensure display of shelf life on consumable wherever required and records maintained.
4.1.7	Storage of all consumables including welding electrodes shall be done as per requirement / instruction of the Engineer by the contractor at his cost.
4.1.8	In case of improper arrangement for procurement of any consumable, BHEL reserves the right to procure the same from any source and recover the cost from the Contractor's first subsequent bill at market value plus the departmental charges of BHEL from time to time. Postponement of such recovery is normally not permitted. The decision of Engineer in this regard shall be final and binding on the Contractor.
4.1.9	All lubricants and chemicals required for pre-commissioning, commissioning, testing, preservation and lubricants for trial runs of the equipment shall be supplied by BHEL / BHEL's client. All services including labour and T&P will be provided by the contractor for handling, filling, emptying, refilling etc. The consumption of lubricants / chemicals shall be properly accounted for. Surplus material if any shall be properly stacked/tagged and returned to BHEL/ CUSTOMER stores at no extra cost to BHEL. BHEL reserves the right to recover costs for wastage by the contractor.
4.1.10	Transportation of oil drums, from stores, filling of oil for flushing, first filling, subsequent changeover if any, topping/making up till the unit is fully commissioned and handed over to customer is included in scope of this contract. The contractor shall have to return all the empty drums to BHEL / BHEL's client store at no extra cost. Any loss / damage to above drums shall be to contractor's account.
4.1.11	All charges on account of Octroi, terminal or sales tax and other duties on materials obtained from any source for carrying out the works in the scope of the contractor shall be borne by the contractor.
4.2	TOOLS AND PLANTS / MONITORING AND MEASURING EQUIPMENT (MMEs)
4.2.1	T&Ps and MMEs to be provided by Contractor
4.2.1.1	All T&Ps and MMEs excepting those specifically indicated in BHEL scope are to be provided by the Contractor. Contractor has to make his own arrangement at his cost for completing the formalities (including arrangement of Road permits, if any) if required with Sales Tax/VAT authorities, for bringing their materials, plants and equipments at site for the execution of work under this contract.

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Chapter - IV : Obligations of Contractor

4.2.1.2	All suitable cranes, lifting and transport equipments for material handling at stores/yard/siding of BHEL/Customer are included in scope. BHEL's cranes will not be available for this purpose unless otherwise specifically permitted as per contract conditions
4.2.1.3	All T&Ps to be deployed by the contractor shall have the approval of BHEL Engineer with regard to brand, quality and specification.
4.2.1.4	Indicative list of Major T&Ps in the scope of Contractor are given in the Technical Conditions of Contract. Bidders to note that these are only indicative and as such all other T&P necessary for timely and satisfactory completion of work in scope shall be mobilized by Contractor
4.2.1.5	Timely deployment of adequate T&Ps is the responsibility of the contractor. The contractor shall be prepared to augment the T&P at short notice to match the planned programme and to achieve the milestones.
4.2.1.6	Contractor shall maintain and operate his tools and plants in such a way that major breakdowns are avoided. In the event of major breakdown, contractor shall make alternative arrangements expeditiously so that the progress of work is not hampered.
4.2.1.7	In the event of contractor failing to arrange the required tools, plants, machinery, equipment, material or non-availability of the same owing to breakdown, BHEL will make alternative arrangement at the risk and cost of the contractor. Decision of BHEL shall be final and binding on the contractor
4.2.1.8	The T&P to be arranged by the contractor shall be in proper working condition and their operation shall not lead to unsafe condition. The movements of cranes, and other equipment should be such that no damage / breakage occurs to foundations, other equipments, material, property and men. All arrangements for the movement of the T&P etc shall be the contractor's responsibility.
4.2.1.9	Use of welding generators/ rectifiers only shall be permitted for welding. Use of welding transformers will be subject to specific approval of BHEL engineer.
4.2.1.10	The contractor at his cost shall carry out periodical testing of his construction equipments. Test certificates shall be furnished to BHEL.
4.2.1.11	Contractor shall ensure deployment of serviced and healthy T&Ps including cranes, lifting tackles, wire ropes, manila ropes, winches and slings etc. History card and maintenance records for major T&Ps will be maintained by the contractor and will be made available to BHEL Engineer for inspection as and when required. Fitness certificate / Test Certificates of T&P shall have to be submitted before it is put in use. Identification for such T&Ps will be done as per BHEL Engineer's advice.

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Chapter - IV : Obligations of Contractor

	BHEL reserves the right to permit only new slings up to 20 mm and lifting tackles up to 3 MT capacities.
4.2.1.12	Contractor shall ensure deployment of reliable and calibrated MMEs (Inspection measuring and Monitoring equipment). The MMEs shall have test / calibration certificates from authorized / Government approved / accredited agencies traceable to National / International standards. Each MME shall have a label indicating calibration status i.e. date of calibration, calibration agency and due date for calibration. A list of such instruments deployed by contractor at site with its calibration status is to be submitted to BHEL Engineer for control.
4.2.1.13	Re-testing / re-calibration shall also be arranged at regular intervals during the period of use as advised by BHEL Engineer within the contract price. The contractor will also have alternate arrangements for such MME so that work does not suffer when the particular instrument is sent for calibration. If any MMEs not found fit for use, BHEL shall have the right to stop the use of such item. It will be necessary for the contractor to deploy proper item. Any readings taken by the defective instrument will be recalled and repeat the readings taken by that instrument with a proper one. In case he fails to do so, BHEL may deploy MMEs and retake the readings at contractor's cost.
4.2.1.14	BHEL shall have lien on all T&P, MMEs and other equipment of the contractor brought to the site for the purpose of erection, testing and commissioning. BHEL shall continue to hold the lien on all such items throughout the period of contract / extended period. The contractor and / or his sub-contractors, without the prior written approval of the Engineer, shall remove no material brought to the site.
4.2.1.15	The month wise T&P deployment plan to execute the work is to be submitted as per relevant format as per the instruction of BHEL. It shall be the contractor's responsibility to deploy the required T&P, for timely and successful completion of the job, to any extent.
4.2.2	Obligations in respect of T&Ps and MMEs provided by BHEL
4.2.2.1	T&P / MMEs being provided by BHEL to sub-contractor free of hire charges shall be shared by other subcontractors working for BHEL at site and the allotment done by BHEL Engineer shall be final and binding.
4.2.2.2	BHEL T&P will be issued in basic assembled condition. Additional loose components / sub-assemblies / attachments as and when necessary, will be issued by BHEL. Assembly of such additional loose components/sub-assemblies/ attachments is in contractor's scope.
4.2.2.3	In case of non-availability of the T&Ps to be provided by BHEL due to breakdown, major overhauls, distribution pattern or any other reason, the contractor shall plan /

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Chapter - IV : Obligations of Contractor

	amend / alter his activities to meet erection / commissioning targets in consultation with BHEL.
4.2.2.4	void
4.2.2.5	The contractor shall engage trained and experienced operators for the operation of BHEL's T&Ps. Their skill / performance will be checked by BHEL Engineer before they are allowed to operate the same. However checking of skills by BHEL does not absolve the contractor of his responsibilities for proper and safe handling of equipment, consistent good performance of operators and regular performance evaluation of operators.
4.2.2.6	The day to day operation and maintenance of BHEL's T&Ps (Other than cranes) shall be carried out by contractor as per manufacturer's / BHEL's maintenance schedule at his cost. The contractor shall arrange, at his own cost, trained operators, fuel and other consumables for their operation. BHEL shall arrange all spares needed for upkeep of major T&Ps provided like Huck Bolting Machine*, DG Set, Induction Machine and Hydraulic Test pumps. The contractor has to arrange for fixing of the spares; supervision in specialized cases will be provided by BHEL. For upkeep of all other T&Ps supplied by BHEL, spares shall be arranged by the Contractor. BHEL supplied T&Ps shall be maintained in good working condition during the entire period of use. T&Ps in defective / damaged condition shall be rectified promptly to the full satisfaction of BHEL engineer. Contractor shall maintain records for maintenance of major T&Ps. These shall be made available for Inspection whenever required. In case of any lapses on the part of the contractor, BHEL at its own discretion shall get the servicing / repair of equipment done at the risk and cost of the contractor along with BHEL overheads. Further, if there are breakdowns / damages due to negligence of the contractor, the complete service / repair charges and cost of all the spares damaged with BHEL overheads shall be recovered from contractor's RA bills. *: for operation and maintenance of ESP Huck bolting machine, BHEL shall provide the basic power rig and hose. Balance toolings ie Guns, chuck jaws etc are to be arranged by contractor.
4.2.2.7	void
4.2.2.8	Increasing / shortening of the crane boom to suit work requirements shall have to be arranged by the indenting contractor at his cost including restoration to a state as directed by BHEL. All necessary manpower tools, support, consumables, illumination etc. will have to be arranged by contractor at his cost. If required,

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Chapter - IV : Obligations of Contractor

	contractor has to return the crane with original boom.
4.2.2.9	The area and infrastructure development of the area to be carried out by the customer. However in construction projects of this magnitude it is possible that all the areas / approaches may not be ready. In such cases backfilling of approaches where ever necessary, consolidation of ground and arrangement of sleepers / sand bag filling etc for safe operation / movement of equipment including cranes / trailers etc shall be the responsibility of the contractor at his cost. No compensation on this account shall be payable.
4.2.2.10	In the event of contractor not using and maintaining BHEL T&Ps according to BHEL's instructions. BHEL will have the right to withdraw such item without any notice and no claim in this regard shall be entertained and contractor shall be responsible for delay in execution on this account.
4.2.2.11	The contractor shall furnish regular utilization report of the BHEL T&Ps, as per requirement of BHEL.
4.2.2.12	Any loss / damage to any part of BHEL T&Ps and MMEs shall be to the contractor's account and any expenditure on these accounts by BHEL will be recovered from the contractor's bill in case the contractor fails to make good the loss.
4.2.2.13	It shall be responsibility of the contractor to take delivery of T&Ps and MMEs from stores or place of use by other contractor at project site, transport the same to site and return the same to BHEL store / place as intimated by Engineer in project site in good working conditions after use.
4.2.2.14	The contractor shall return BHEL T&Ps and MMEs issued to him in good working condition as and when desired by BHEL (on completion or reduction of workload). If contractor delays return of T&P and MME, hire charges as applicable shall be levied by BHEL from time, it was requisitioned till the time of actual return. T&Ps and MMEs returned in damaged / unserviceable condition shall be got repaired by BHEL at its own discretion and entire cost of repair with BHEL overheads shall be recovered from the contractor.
4.2.2.15	Replacement cost including BHEL overheads in respect of irreparable / completely damaged / non return of T&Ps and MMEs shall be recovered from the contractor's running / final bills

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Chapter - IV : Obligations of Contractor

4.2.2.16	Obligations in respect of Cranes provided by BHEL
a)	BHEL will make available the cranes (as per Technical Conditions of Contract) free of charge to the contractor on sharing basis mainly for the purposes enumerated/ indicated therein. BHEL cranes have to be shared with other agencies / contractors of BHEL. The allocation of cranes shall be the discretion of BHEL engineer, which shall be binding on the contractor.
b)	BHEL Cranes may be initially issued in basic assembled condition. Any alteration/addition like boom reduction / extension, assembly of components/sub-assemblies needed for modulating the capacity/reach/other features of cranes and restoration to the state as directed by BHEL shall be the contractor's responsibility.
c)	In case the BHEL cranes are not covered under AMC of BHEL, then the day-to-day upkeep and running maintenance like filling / topping up of lubricants, changing filters, etc including repair of self starter and dynamo of these cranes shall be the responsibility of the contractor. If on checking it is found that the same is not followed, BHEL will exercise its right to get the job/works done at the risk and cost of contractor. In case BHEL cranes are covered under AMC awarded by BHEL, then the day-to-day upkeep and running maintenance as described above are excluded from scope. However any additional helpers if any required during Preventive/Breakdown Maintenance, Assembly/disassembly shall be provided by contractor at no extra cost. BHEL may also provide cranes through crane hiring agencies in which case the day-to-day upkeep and running maintenance shall be excluded from scope of contractor.
d)	Minor consumables like cotton cloth, cotton waste, etc is to be supplied by Contractor. All spares and lubricants/grease is excluded from scope. Contractor to give the requirements of these items well in advance in case the cranes provided by BHEL are BHEL owned cranes.
e)	Unless otherwise specified, trained operators for BHEL owned cranes shall be provided by the contractor. These operators should possess valid license for heavy vehicle.
f)	BHEL cranes will be withdrawn for regular and capital maintenance as per the respective schedule of maintenance. As far as possible such schedules will be intimated to the contractor in advance and may be adjusted depending on the work requirements at site. However no claim whatsoever will be entertained on account

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Chapter - IV : Obligations of Contractor

	of non-availability of cranes.
g)	Where the services of the cranes provided by BHEL are to be shared by other agencies/ contractors of BHEL, the contractor's responsibilities defined above will also be apportioned accordingly to the beneficiary agency. Working arrangements in this regard will be done at site by BHEL engineer and in any case his decision shall be final and binding.
h)	Major breakdowns will be attended to by BHEL. However, in case of breakdowns or damages due to negligence of the contractor, the complete service/repair charges including cost of spares shall be to the account of the contractor, along with BHEL overheads.
4.2.2.17	Obligations in respect of Construction Lift/Elevators provided by BHEL
a)	The total erection including commissioning, maintenance, statutory clearances shall be included in scope of work. Supervision by the original equipment supplier or their authorized agency shall be arranged for by BHEL, in case found necessary.
b)	All day to day and routine maintenance and checking is to be carried out by the contractor as per the recommendations of the supplier. He should periodically check the brakes and carry out the all works to ensure the safety of all those using the lift/elevator. BHEL shall arrange spares required for upkeep of Construction lift/elevator
c)	The construction lift/elevator should never be overloaded as this can lead to serious accidents. Ensuring all safety aspects in operation of the lift shall be the responsibility of the contractor. Erection of all the required number of landing platforms is included in scope. Landing platforms are to be provided with proper barricades and hand railings.
d)	After completion of contractual scope of work or as per BHEL advice, the temporary elevator/lift shall be dismantled and handed over to BHEL neatly identified/tagged. Temporary structures/platforms etc erected for the elevators/lifts are also to be dismantled and materials to be returned to stores as applicable. The construction and dismantling of the foundations required for the construction/elevator lifts is included in the scope of the contractor.

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Chapter – V : Responsibilities of Contractor in respect of Labour, Supervisory Staff, etc.

5.0	RESPONSIBILITIES OF CONTRACTOR IN RESPECT OF LABOUR, SUPERVISORY STAFF, ETC.
5.1	Refer relevant clauses of General Conditions of Contract (GCC) also in this regard
5.2	The contractor shall deploy all the necessary skilled/semiskilled/ unskilled labour including highly skilled workmen etc. These workmen should have previous experience on similar job. They shall hold valid certificates wherever necessary. BHEL reserves the right to insist on removal of any employee of the contractor at any time if he is found to be unsuitable and the contractor shall forthwith remove him.
5.3	Contractor shall also comply with the requirements of local authorities/ project authorities calling for police verification of antecedents of the workmen, staff etc.
5.4	It is the responsibility of the contractor to engage his workmen in shifts and or on overtime basis for achieving the targets set by BHEL. This target may be set to suit BHEL's commitments to its customer or to advance date of completion of events or due to other reasons. The decision of BHEL in regard to setting the erection and commissioning targets will be final and binding on the contractor.
5.5	Contractor shall provide at different elevation suitable arrangement for urinal and drinking water facility with necessary plumbing & disposal arrangement including construction of septic tank. These installations shall be maintained in hygienic condition at all times.
5.6	The Contractor in the event of engaging 20 or more workmen, shall obtain Independent license under the Contract labour (Regulation and Abolition) Act 1970 from the concerned authorities based on Form-V issued by the Principal Employer/Customer. In order to issue Form-V by Customer, Contractor shall fulfill all Statutory requirements like Insurance Policy, PF Code/PF Account number etc as per the requirement of BHEL/Customer
5.7	Contractor shall deduct the necessary amount towards Provident Fund and contribute equal amount as per Government of India laws. This amount will be deposited regularly to the provident Fund Commissioner. BHEL/Customer may insist for submission of the account code duly certified by PF Commissioner
5.8	Contractor may also be required to comply with provisions of ESI Act in vogue if applicable and submit evidence to BHEL.
5.9	BHEL / customer may insist for witnessing the regular payment to the labour. They may also like to verify the relevant records for compliance with statutory requirements. Contractor shall enable such facilities to BHEL / Customer.

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Chapter – V : Responsibilities of Contractor in respect of Labour,
Supervisory Staff, etc.

5.10	Contractor shall deploy only qualified and experienced engineers/ supervisors. They shall have professional approach in executing the work.
5.11	The contractor's supervisory staff shall execute the work in the most professional manner in the stipulated time. Accuracy of work and aesthetic finish are essential part of this contract. They shall be responsible to ensure that the assembly and workmanship conform to dimensions and tolerances given in the drawings/instructions given by BHEL engineer from time to time.
5.12	The supervisory staff employed by the contractor shall ensure proper outturn of work and discipline on the part of the labour put on the job by the contractor. Also in general they should see that the works are carried out in a safe and proper manner and in coordination with other labour and staff employed directly by BHEL or other contractors of BHEL or BHEL's client.
5.13	It is the responsibility of the contractor to arrange gate pass for all his employees, T&P etc for entering the project premises. Necessary coordination with customer officials is the responsibility of the contractor. Contractor to follow all the procedures laid down by the customer for making gate passes. Where permitted, by customer / BHEL, to work beyond normal working hours, the contractor shall arrange necessary work permits for working beyond normal working hours.
5.14	The actual deployment will of Labour and Engineer/supervision staff shall be so as to satisfy the erection and commissioning targets set by BHEL. If at any time, it is found that the contractor is not in a position to deploy the required engineers/supervisors/workmen due to any reason, BHEL shall have the option to make alternate arrangements at the contractor's risk and cost. The expenditure incurred along with BHEL overheads thereon shall be recovered from the contractor
5.15	Contractor shall not deploy women labour at night.

SPECIAL CONDITIONS OF CONTRACT (SCC)

Chapter – VI: Material Handling, Storage & preservation

6.0	MATERIAL HANDLING, STORAGE AND PRESERVATION ETC
6.1	MATERIAL HANDLING AND STORAGE
6.1.1	All the equipments/materials furnished under this contract shall be received from the project stores, sheds / storage yards and transported to pre assembly area / erection site and stored in the storage spaces in a manner so that they are easily retrievable till the contractor erects them. While drawing/lifting material from BHEL / customer stores, the contractor shall ensure that the balance / other materials are stacked back immediately. No claim is admissible on this account
6.1.2	While BHEL will endeavor to store / stack / identify materials properly in their open / close / semi closed / tarpaulins covered storage yard / shed, it shall be contractor's responsibility to assist BHEL in identifying materials well in time for erection. They should take the delivery of the same, following the procedure indicated by BHEL, and transport the material safely to pre-assembly yard / erection site in time, according to program.
6.1.3	The contractor shall take delivery of components, equipment / consumables from storage area after getting the approval of BHEL Engineer on standard indent forms.
6.1.4	The contractor 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.
6.1.5	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.
6.1.6	Contractor 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 contractor.
6.1.7	Approach road conditions from the stores / yards to the erection site may not be equipped and ideal for smooth transportation of the equipment. Contractor

SPECIAL CONDITIONS OF CONTRACT (SCC)

Chapter – VI: Material Handling, Storage & preservation

	may have to be adequately prepared to transport the materials under the above circumstances without any extra cost. . The contractor may familiar himself with soil conditions at site.
6.1.8	Contractor 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 contractor shall be solely responsible for any shortages or damages in transit, handling, storage and erection of the equipment once received by him. As the erection work will be spread in different areas / locations of the project, contractor has to arrange sufficient number of watch / ward personal to avoid any pilferage of material
6.1.9	The contractor 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.
6.1.10	All the material in the custody of contractor 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 contractor at his cost.
6.1.11	If the material belonging to the contractor are stored 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 contractor at the contractors risk and cost.
6.1.12	The contractor shall be responsible for making suitable indoor storage facilities to store all equipment (drawn by the contractor from BHEL / customer stores), which require indoor storage till the time of their installation. The Engineer will direct the contractor in this regard, which item in his opinion will require indoor storage, and the contractor shall comply with Engineer's decision.
6.1.13	The contractor 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 contractor will maintain an account for all items received and returned to BHEL. Any shortage in returning such items shall be chargeable to the contractor except allowable wastage for packing wood only.
6.1.14	The contractor shall hand over all parts / materials remaining extra over the normal requirement with proper identification tags to the stores as directed by the concerned BHEL engineer.

SPECIAL CONDITIONS OF CONTRACT (SCC)

Chapter – VI: Material Handling, Storage & preservation

6.1.15	The contractor shall ensure that all the packing materials and protective devices installed on equipment during transit and storage are removed before installation.
6.1.16	It shall be the responsibility of the contractor 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.
6.2	PRESERVATION OF COMPONENTS
6.2.1	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.
6.2.1.1	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. Contractor should have sufficient numbers of wooden / concrete / steel sleepers for the job.
6.2.1.2	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.
6.2.1.3	Bearings and other wearing surfaces of plant materials shall be protected against corrosion and kept clean and should be regularly monitored.
6.2.1.4	Insulation materials shall be stored indoors or otherwise protected against getting wet/ damaged, using suitable measures and should be protected from direct rain.
6.2.2	It shall be the responsibility of the contractor to apply preservatives / touch up paints (primer) on equipment handled and erected by him till such time of final painting. It shall be contractor'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.
6.2.3	The contractor 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.

SPECIAL CONDITIONS OF CONTRACT (SCC)
Chapter – VI: Material Handling, Storage & preservation

6.2.4	Any failure on the part of contractor 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 contractor.
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SPECIAL CONDITIONS OF CONTRACT (SCC)

Chapter – VII: Drawings and documents

7.0	DRAWINGS AND DOCUMENTS
7.1	The detailed drawings, specifications available with BHEL engineers will be made available to the contractor during execution of work at site. The contractor will also ensure availability of all drawings / documents at work place.
7.2	Necessary drawings to carry out the erection work will be furnished to the contractor by BHEL on loan, which shall be returned to BHEL Engineer at site after completion of work. Contractor shall ensure safe storage and quick retrieval of these documents.
7.3	The contractor shall maintain a record of all drawings and documents available with him in a register as per format given by BHEL Engineer. Contractor shall ensure use of pertinent drawings / data / documents and removal of obsolete ones from work place and returning to BHEL.
7.4	The data furnished in various annexure enclosed with this tender specification are only approximate and for guidance. However, the change in the design and in the quantity may occur as is usual in any such large scale of work. The contractors quoted rates shall be inclusive of the above factor
7.5	Should any error or ambiguity be discovered in the specification or information the contractor shall forthwith bring the same to the notice of BHEL before commencement of work. BHEL's interpretation in such cases shall be final and binding on the contractor.
7.6	Deviation from design dimensions should not exceed permissible limit. The contractor shall not correct or alter any dimension / details, without specific approval of BHEL.

SPECIAL CONDITIONS OF CONTRACT (SCC)

Chapter – VIII: Inspection and Quality

8.0	INSPECTION AND QUALITY
8.1	Inspection, Quality Assurance, Quality Control
8.1.1	Preparation of quality assurance log sheets and protocols with customer/ consultants/statutory authority, welding logs, NDE records, testing & calibration records and other quality control and quality assurance documentation as per BHEL engineer's instructions, is within the scope of work/specification. These records shall be submitted to BHEL/customer for approval from time to time.
8.1.2	The protocols between contractor and customer/ BHEL shall be made prior to installation for correctness of foundations, materials, procedures, at each stage of installation, generally as per the requirement of customer/ BHEL. This is necessary to ensure elimination of errors or keeping them within tolerable limits and to avoid accumulation and multiplication of errors.
8.1.3	A daily log book should be maintained by every supervisor/engineer of contractor on the job in duplicate (one for BHEL and one for contractor) for detailing and incorporating alignment/clearance / centering / leveling readings and inspection details of various equipments etc. High pressure welding details like serial number of weld joints, welders name, date of welding, details of repair, heat treatment etc. will be documented in welding log as per BHEL Engineer's instructions. Record of radiography containing details like serial number of weld joints, date of radiography, repairs, if any, re-shots etc shall also be maintained as per BHEL Engineer's instructions. Record of heat treatments performed shall be maintained as prescribed by BHEL
8.1.4	The performance of welders will be reviewed from time to time as per the BHEL standards. Welders' performance record shall be furnished periodically furnished for scrutiny of BHEL's Engineer. Corrective action as informed by BHEL shall be taken in respect of those welders not conforming to these standards. This may include removal/ discontinuance of concerned welder(s). Contractor shall arrange for the alternate welders immediately
8.1.5	All the welders shall carry identity cards as per the proforma prescribed by BHEL/Customer/Consultant. Only welders duly authorized by BHEL/customer/consultant shall be engaged on the work.

SPECIAL CONDITIONS OF CONTRACT (SCC)
Chapter – VIII: Inspection and Quality

8.1.6	Contractor shall provide all the Measuring Monitoring Equipments (MMEs) required for completion of the work satisfactorily. These MMEs shall be of brand, quality and accuracy specified by BHEL Engineer and should have necessary calibration and other certificates as per the requirement of BHEL Engineer. Decision of BHEL Engineer regarding acceptance or otherwise of the measuring instruments/gauges/tools for the work under this specification, is final and binding on the contractor. BHEL may give an indicative list of MMEs required for this work and to be made available by the contractor. The list will be reviewed by BHEL and the contractor shall meet any augmentation needed wherever required.
8.1.7	It is the responsibility of the contractor to prove the accuracy of the testing/measuring/calibrating equipments brought by him based on the periodicity of calibration as called for in the BHEL's quality assurance standards/BHEL Engineer's instructions.
8.1.8	Any re-laying or re-termination of cables/re-erection of instruments/recalibration of instruments etc. required due to contractor's mistake or design requirement and found at any stage inspection, shall be carried out by the contractor at no extra cost.
8.1.9	BHEL, Power Sector Regions (PSNR/PSER/PSWR/PSSR) have already been accredited with ISO 9001 certification and as such this work is subject to various audits to meet ISO 9001 requirements. One particular aspect which needs special mention is about arrangement of calibration of instruments by the contractor. Contractor shall ensure deployment of reliable and calibrated MMEs (Measuring and Monitoring Equipments). The MMEs shall have test / calibration certificates from authorised / Government approved / Accredited agencies traceable to National / International Standards. Re-testing / re-calibration shall also be arranged at regular intervals during the period of use as advised by BHEL Engineer within the contract price. The contractor will also have alternate arrangements for such MMEs so that work does not suffer when the particular equipment / instrument is sent for calibration. Also if any MMEs not found fit for use, BHEL shall have the right to stop the use of such item and instruct the contractor to deploy proper item and recall ie repeat the readings taken by that instrument, failing which BHEL may deploy MME and retake the readings at Contractor's cost.
8.1.10	Re-work necessitated on account of use of invalid MMEs shall be entirely to the contractor's account. He shall be responsible to take all corrective actions,

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Chapter – VIII: Inspection and Quality

	including resource augmentation if any, as specified by BHEL to make-up for the loss of time.
8.1.11	In the courses of erection, it may become necessary to carry repeated checks of the work with instruments recently calibrated, re-calibrated. BHEL may counter/ finally check the measurements with their own MMEs. Contractor shall render all assistance in conduct of such counter/final measurements.
8.1.12	Total Quality is the watchword of the work and Contractor shall strive to achieve the Quality Standards, procedures laid down by BHEL. He shall follow all the instructions as per BHEL drawings and Quality Standards.
8.2	Stage Inspection By FES/QA Engineers
8.2.1	Apart from day-to-day inspection by BHEL Engineers stationed at Site and Customer's Engineers, stage inspection of equipments under erection and commissioning at various stages shall also be conducted by teams of Engineers from Field Engineering Services of BHEL's Manufacturing Units, Quality Assurance teams from Field Quality Assurance, Unit/Factory Quality Assurance and Commissioning Engineers from Technical Services etc. Contractor shall arrange all labour, tools and tackles etc along with proper access for such stage inspections free of cost.
8.2.2	Any modifications suggested by BHEL FES and QA Engineers' team shall be carried out. Claims of contractor, if any, shall be dealt as per Section 13, and provided such modifications have not arisen for reasons attributable to the contractor.
8.3	Statutory Inspection of Work
8.3.1	The work to be executed under these specifications has to be offered for inspection, at appropriate stages of work completion, to various statutory authorities for compliance with applicable regulations. The work related statutory inspections, though not limited to, are as under: 1) Inspectorate of Steam Boilers and Smoke Nuisance 2) Electrical Inspector 3) Factory Inspector, Labour Commissioner, PF Commissioner and other authority connected to this project work The scope includes getting the approvals from the statutory authorities, which includes arranging for inspection visits of statutory authority periodically as per

SPECIAL CONDITIONS OF CONTRACT (SCC)

Chapter – VIII: Inspection and Quality

	BHEL Engineer's instructions, arranging materials for ground inspection, taking rub outs for the pressure parts to be offered for inspection, submitting co-related inspection reports, documents, radiographs etc and following up the matter with them. Contractor shall also make all arrangements for offering the Products / Systems for inspection at location, as applicable, to the concerned authority.
8.3.2	Contractor should be qualified to execute pressure parts & piping work coming under the purview of IBR, for which he should register himself with CIB of state concerned. contractor also should be aware of the latest IBR regulations and Electricity Act, including the amendments thereof.
8.3.3	Contractor shall comply with 'Qualification Tests for welders engaged in welding of Boilers and Steam Pipes under Construction, Erection and Fabrication at Site in India and in repairing Boilers and steam pipes by welding' in line with Chapter XIII of Indian Boiler Regulations-1950, for testing his welders / men / workers, including all associated fees, procedures, required instruments and equipments and their calibration there of. It shall be contractor's responsibility to obtain approval of Statutory Authorities, wherever applicable, for the conducting of any work which comes under the purview of these authorities, at his cost.
8.3.4	The following fees shall be excluded from scope of Contractor: 1. Registration Fee as per Regulation 385 of Chapter IX of Indian Boiler Regulations-1950 2. Fees for inspection of Boiler at the site of Construction as per Regulation 395 A, sl no 4 of Chapter IX of Indian Boiler Regulations-1950 However all other fees like visit fees charged by the Boiler Inspector and other arrangements for his visit or visits till satisfactory completion of work, shall be included in scope of Contractor
8.4	The Quality Management System of BHEL, Power Sector Regions (PSNR/PSER/PSWR/PSSR) have already been certified and accredited under ISO 9002 standards in this regard. The basic philosophy of the Quality Management System is to define the organizational responsibility, work as per documented procedures, verify the output with respect to acceptance norms, identify the non-conforming product/ procedure and take corrective action for removal of non-conformance specifying the steps for avoiding recurrence of

SPECIAL CONDITIONS OF CONTRACT (SCC)

Chapter – VIII: Inspection and Quality

	such non-conformities, & maintain the relevant quality records. The non conformities are to be identified through the conduct of periodical audit of implementation of quality systems at various locations/stages of work. Suppliers/vendors of various products/services contributing in the work are also considered as part of the quality management system. .as such the contractor is expected not only to conform to the quality management system of BHEL but also it is desirable that they themselves are accredited under any quality management system standard.
8.5	Field Quality Assurance
8.5.1	Contractor shall carry out all activities conforming to the approved Field Quality Plan (FQP) as revised from time to time. Total quality shall be the watchword of the work and contractor shall strive to achieve the quality standards, procedures laid down by BHEL. He shall follow all the instructions as per BHEL drawings and quality standards. Contractor shall provide the services of quality assurance engineer as per the relevant clauses.

SPECIAL CONDITIONS OF CONTRACT (SCC)
Chapter-IX:HSE & OHSAS

9.0	OCCUPATIONAL HEALTH, SAFETY & ENVIRONMENT MANAGEMENT/ QUALITY ASSURANCE PROGRAMME : BHEL, Power Sector Regions (PSNR/ER/WR/SR) are each certified for ISO 9001. Quality of work to customer's satisfaction and fulfillment of system requirements are the essence of ISO 9001 certification. BHEL, PS Regions have HSE certification (ISO 14001 & OHSAS 18001) and therefore Contractor also shall organise/ plan/ perform all their activities to meet with the applicable requirements of these standards.
9.1	Contractor shall comply with HSE (Health, Safety & Environment) requirement of BHEL as per the “HSE Plan for Site Operations by Sub-Contractors” (Document No HSEP:14:Rev 00) Document No HSEP:14:Rev 00 has been uploaded/issued/attached separately as file titled ‘HSE Plan for site Operations by Sub-Contractors’

SPECIAL CONDITIONS OF CONTRACT (SCC)

Chapter-X: RA Bill Payments

10.0	RA Bill Payments
10.1	The contractor shall submit his monthly RA bills with all the details required by BHEL on specified date every month covering progress of work in all respects and areas for the previous calendar month.
10.2	Mode of payment and measurement of work completed shall be as per relevant clauses of General Conditions of Contract
10.3	Release of payment in each running bill including PVC Bills where ever applicable will be restricted to 95% of the value of work admitted as per stages of progressive pro rata payments.
10.4	The 5% thus remaining shall be treated as 'Retention Amount' and shall be released as per terms specified in the General Conditions of Contract.
10.5	The payment for running bills will normally be released within 30 days of submission of running bill complete in all respects with all documents. It is the responsibility of the contractor to make his own arrangements for making timely payments towards labour wages, statutory payments, outstanding dues etc and other dues in the meanwhile. In case of Civil works, 60% of RA Bills complete and correct in all respects and certified by BHEL Engineer, shall be paid within 15 days of receipt. Balance payment shall be within 30 days.
10.6	BHEL shall release payment through Electronic Fund Transfer (EFT)/RTGS. In order to implement this system, Contractor to furnish details pertaining to his Bank Accounts where proceeds will be transferred through BHEL's banker, as per prescribed formats: Note: BHEL may also choose to release payment by other alternative modes as applicable
10.7	Paying Authority shall be the Construction Manager of the Site. Any change in the paying Authority shall be intimated to the Contactor accordingly.

SPECIAL CONDITIONS OF CONTRACT (SCC)
Chapter-XI : Performance Monitoring

11.0	Performance Monitoring
11.1	Performance of the contractor is monitored through various reports/reviews and shall be jointly evaluated every month for unit wise identified packages as per prescribed formats. Based on the net weighted scores obtained, Contractors shall be rated 'Good' or 'Satisfactory' or 'Unsatisfactory'
11.2	In case of any dispute on performance rating and the contractor refuses to sign on the performance rating given by BHEL package Incharge, the same shall be reviewed by BHEL site Incharge/Construction Manager and his decision shall be final.
11.3	Release of RA Bills will be contingent upon joint evaluation of performance
11.4	Performance of the contractor will be taken into consideration for assessing the capacity of the bidder to execute future jobs under tender, as detailed in the Notice Inviting Tender. Risk of non evaluation or non availability of the Monthly performance evaluation reports is to be borne by the Bidder.
11.5	In case of 'Unsatisfactory performance' for a continuous period of three or more months for a package or packages, BHEL has the right to get the balance works executed at the risk and cost of the contractor.
11.6	In case of 'Unsatisfactory performance' in a financial year, BHEL reserves the right to put on hold such Contractors for a period of six months for similar package or similar packages

SPECIAL CONDITIONS OF CONTRACT (SCC)

Chapter-XII: Suspension of Business Dealings

12.0	Suspension of Business dealings
12.1	BHEL reserves the right to take action against contractors who fail to perform or indulge in malpractices, by suspending business dealings with them.
12.2	Suspension could be in the form of 'Hold', 'De-listing' or 'Banning' a contractor.
12.3	A bidder may be put on HOLD for a period of 6 months, for future tenders for specific works on the basis of one or more of the following reasons: a) Bidder does not honour his own offer or any of its conditions within the validity period. b) Bidder fails to respond against three consecutive enquires of BHEL. c) After placement of order, Bidder fails to execute a contract. d) Bidder fails to settle sundry debt account, for which he is legitimately liable, within one year of its occurrence. e) Bidder's performance rating falls below 60% in specific category (more fully described in chapter 'Performance Monitoring') f) Bidder works are under strike/ lockout for a long period.
12.4	A Bidder may be de-listed from the list of registered Bidders of the region for a period of 1 year on the basis of one or more of the following reasons:- a) Bidder tampers with tendering procedure affecting ordering process or commits any misconduct which is contrary to business ethics. b) Bidder has substituted, damaged, failed to return, short returned or unauthorizedly disposed off materials/ documents/ drawings/ tools etc of BHEL. c) Bidder no longer has the technical staff, equipment, financial resources etc. required to execute the orders/ contracts.
12.5	A Bidder can be banned from doing any business with all Units of BHEL for a period of 3 years on the basis of one or more of the following reasons: a) Bidder is found to be responsible for submitting fake/ false/ forged documents, certificates, or information prejudicial to BHEL's interest. b) In spite of warnings, the Bidder persistently violates or circumvents the provisions of labour laws/ regulations/ rules and other statutory requirements. c) Bidder is found to be involved in cartel formation

SPECIAL CONDITIONS OF CONTRACT (SCC)

Chapter-XII: Suspension of Business Dealings

	d) The Bidder has indulged in malpractices or misconduct such as bribery, corruption and fraud, pilferage etc which are contrary to business ethics. e) The Bidder is found guilty by any court of law for criminal activity/ offences involving moral turpitude in relation to business dealings. f) The Bidder is declared bankrupt, insolvent, has wound up or been dissolved; i.e ceases to exist for all practical purposes. g) Bidder is found to have obtained Official Company information/ documentation by questionable means. h) Communication is received from the administrative Ministry of BHEL to ban the Bidder from business dealings.
12.6	Contracts already entered with a contractor before the date of issue of order of 'HOLD' or 'DE-LISTING' shall not be affected.
12.7	All existing contracts with a 'BANNED' contractor shall normally be short closed
12.8	Once the order for suspension is passed, existing offers/new offers of the contractor shall not be entertained
12.9	The above guidelines are not exhaustive but enunciate broad principles governing action against contractors

Rev 01

1st June
2012

VOLUME ID FORMS & PROCEDURES

(Document No. PS:MSX:F&P)

BHARAT HEAVY ELECTRICALS
LIMITED



FORMS & PROCEDURES

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: will be released later

OFFER FORWARDING LETTER / TENDER SUBMISSION LETTER
(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

Offer Reference No:.....

Date:.....

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub : Submission of Offer against Tender Specification No:

I/We hereby offer to carry out the work detailed in the Tender Specification issued by Bharat Heavy Electricals Limited, Power Sector-....., in accordance with the terms and conditions thereof.

I/We have carefully perused the following listed documents connected with the above work and agree to abide by the same.

1. Amendments/Clarifications/Corrigenda/Errata/etc issued in respect of the Tender documents by BHEL
2. Notice Inviting Tender (NIT)
3. Price Bid
4. Technical Conditions of Contract
5. Special Conditions of Contract
6. General Conditions of Contract
7. Forms and Procedures

Should our Offer be accepted by BHEL for Award, I/we further agree to furnish 'Security Deposit' for the work as provided for in the Tender Conditions within the stipulated time as may be indicated by BHEL.

I/We further agree to execute all the works referred to in the said Tender documents upon the terms and conditions contained or referred to therein and as detailed in the appendices annexed thereto.

I/We have deposited/depositing herewith the requisite Earnest Money Deposit (EMD) as per details furnished in the Check List.

Authorised Representative of Bidder

Signature :

Name :

Address :

Place:

Date:

DECLARATION BY AUTHORISED SIGNATORY OF BIDDER

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub : **Declaration by Authorised Signatory**

Ref : 1) NIT/Tender Specification No:,

2) All other pertinent issues till date

I/We, hereby certify that all the information and data furnished by me with regard to the above Tender Specification are true and complete to the best of my knowledge. I have gone through the specifications, conditions, stipulations and all other pertinent issues till date, and agree to comply with the requirements and Intent of the specification.

I further certify that I am authorised to represent on behalf of my Company/Firm for the above mentioned tender and a valid Power of Attorney to this effect is also enclosed.

Yours faithfully,

(Signature, Date & Seal of Authorized
Signatory of the Bidder)

Date:

Enclosed : Power of Attorney

NO DEVIATION CERTIFICATE

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub : **No Deviation Certificate**

Ref : 1) NIT/Tender Specification No:,

2) All other pertinent issues till date

We hereby confirm that we have not changed/ modified/materially altered any of the tender documents as downloaded from the website/ issued by BHEL and in case of such observance at any stage, it shall be treated as null and void.

We also hereby confirm that we have neither set any Terms and Conditions and nor have we taken any deviation from the Tender conditions together with other references applicable for the above referred NIT/Tender Specification.

We further confirm our unqualified acceptance to all Terms and Conditions, unqualified compliance to Tender Conditions, Integrity Pact (if applicable) and acceptance to Reverse Auctioning process.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

(Signature, date & seal of authorized
representative of the bidder)

DECLARATION CONFIRMING KNOWLEDGE ABOUT SITE CONDITIONS
(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub : **Declaration confirming knowledge about Site conditions**

Ref : 1) NIT/Tender Specification No:,

2) All other pertinent issues till date

I/We, _____ hereby declare and confirm that we have visited the Project Site as referred in BHEL Tender Specifications and acquired full knowledge and information about the Site conditions including Wage structure, Industrial Climate, the Law & Order and other conditions prevalent at and around the Site. We further confirm that the above information is true and correct and we shall not raise any claim of any nature due to lack of knowledge of Site conditions.

I/We, hereby offer to carry out work as detailed in above mentioned Tender Specification, in accordance with Terms & Conditions thereof.

Yours faithfully,

(Signature, Date & Seal of Authorized
Representative of the Bidder)

Date :

Place:

DECLARATION FOR RELATION IN BHEL

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder failing which the offer of Bidder is liable to be summarily rejected)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub : **Declaration for relation in BHEL**

Ref : 1) NIT/Tender Specification No:,

I/We hereby submit the following information pertaining to relation/relatives of Proprieter/Partner(s)/Director(s) employed in BHEL

Tick(✓) any one as applicable:

1. The Proprieter, Partner(s), Director(s) of our Company/Firm DO NOT have any relation or relatives employed in BHEL

OR

2. The Proprieter, Partner(s), or Director(s) of our Company/Firm HAVE relation/relatives employed in BHEL and their particulars are as below:

(i)

(ii)

Signature of the Authorised Signatory

Note:

1. Attach separate sheet, if necessary.
2. If BHEL Management comes to know at a later date that the information furnished by the Bidder is false, BHEL reserves the right to take suitable against the Bidder/Contractor.

NON DISCLOSURE CERTIFICATE

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

NON DISCLOSURE CERTIFICATE

I/We understand that BHEL PS __ is committed to Information Security Management System as per their Information Security Policy.

Hence, I/We M/s.....
who are submitting offer for providing services to BHEL PS __ against
Tender Specification No: _____,
hereby undertake to comply with the following in line with Information
Security Policy of BHEL PS __, _____

- To maintain confidentiality of documents & information which shall be used during the execution of the Contract.
- The documents & information shall not be revealed to or shared with third party which shall not be in the business interest of BHEL PS__.

(Signature, date & seal of Authorized
Signatory of the bidder)

Date:

BANK ACCOUNT DETAILS FOR E-PAYMENT

(To be given on Letter head of the Company /Firm of Bidder, and **ENDORSED (SIGNED & STAMPED) BY THE BANK** to enable BHEL release payments through Electronic Fund Transfer (EFT/RTGS))

1. Beneficiary Name :
2. Beneficiary Account No. :
3. Bank Name & Branch :
4. City/Place :
5. 9 digit M ICR Code of Bank Branch :
6. IFSC Code of Bank Branch :
7. Beneficiary E-mail ID :
(for payment confirmation)

NOTE: In case Bank endorsed certificate regarding above has already been submitted earlier, Kindly submit photocopy of the same

FORMAT FOR SEEKING CLARIFICATION

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub : **Request for Clarification**

Ref : 1) NIT/Tender Specification No:,

2) All other pertinent issues till date

Sl no	Reference clause of Tender Document	Existing provision	Bidder's query	BHEL's clarification
1				
2				
3				
4				
5				
6				

Yours faithfully,

(Signature, date & seal of Authorized Representative of the Bidder)

CAPACITY EVALUATION OF BIDDERS FOR CURRENT TENDER

SL NO.	DESCRIPTION OF WORK (Similar to Tendered Scope)	WORK ORDER REF & DATE	CONTRACT VALUE (Rs. LACS)	CUSTOMER NAME & ADDRESS	CURRENT STATUS OF THE JOB ALONG WITH LATEST MILE STONE COMPLETED	%AGE OF WORK COMPLETE D	VALUE OF BALANCE WORK (Rs. Lacs)
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

NOTES:

1. BIDDERS ARE REQUIRED TO FURNISH ALL THE JOBS OF SIMILAR NATURE WHICH THEY ARE EXECUTING (IN PROGRESS) AT THE TIME OF SUBMISSION OF TENDER, AS PER ABOVE FORMAT.

2. BIDDERS HEREBY UNDERTAKE THAT THEY HAVE FURNISHED THE DETAILS SOUGHT AS PER POINT NO. 1 IN TOTALITY AND THAT THE DETAILS FURNISHED IS COMPLETE IN ALL RESPECT.

3. BHEL WILL TAKE APPROPRIATE ACTION AS DEEMED FIT , IN CASE, IT IS FOUND AT A LATER DATE THAT THE CONTRACTOR HAD SUPPRESSED THE FACTS AND HAVE NOT FURNISHED THE CORRECT & COMPLETE INFORMATIONS.

DATE :
PLACE:

Signature

Name, Designation & Seal of Bidder

CONTRACT AGREEMENT

Form No: F-10 (Rev 00)

BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)

Power Sector – Region

.....

.....

CONTRACT AGREEMENT

AGREEMENT NO. _____

NAME OF WORK	
NAME OF THE CONTRACTOR WITH FULL ADDRESS	
VALUE OF WORK AWARDED	
LETTER OF INTENT NO.	
TIME ALLOTTED FOR COMPLETING THE WORK (DATE OF COMPLETION)	

SIGNATURE OF CONTRACTOR

(SIGNATURE OF BHEL OFFICER)

CONTRACT AGREEMENT

Form No: F-10 (Rev 00)

CONTRACT AGREEMENT

THIS AGREEMENT MADE THIS _____ DAY OF _____ between BHARAT HEAVY ELECTRICALS LIMITED (A Government of India Enterprise) a Company incorporated under the Companies Act, 1956, having its Registered Office at BHEL House, Siri Fort New Delhi-110049 (herein after called BHEL) of the ONE PART.

AND

M/S _____
_____ (hereinafter called the 'Contractor') of the
SECOND PART.

WHEREAS M/s _____state that they
have acquired and possess extensive experience in the field of _____

And Whereas in response to an Invitation to Tender No. _____ issued by BHEL for execution of _____ the contractor submitted their offer No. _____dated _____And whereas BHEL has accepted the offer of the Contractor on terms and conditions specified in the Letter of Intent No. _____dated _____read with the references cited therein.

THIS AGREEMENT WITNESSES AND it is hereby agreed by and between the parties as follows:

1. That the contractor shall execute the work of _____and more particularly described in Tender Specification No _____including Drawings and Specifications (hereinafter called the said works) in accordance with and subject to terms and conditions contained in these presents, instructions to Tenderers, General Conditions of Contract, Special Conditions, Annexures, Letter of Intent dated _____and such other instructions, Drawings, Specifications given to him from time to time by BHEL.
2. The Contractor is required to furnish to BHEL Security deposit in the form of cash/ approved securities/ Bank Guarantee valid upto _____ for a sum of Rs. _____ towards satisfactory performance and completion of the Contract.
3. The Contractor has furnished a Bank Guarantee bearing no. _____dated _____for a sum of Rs. _____executed by _____ in favour of BHEL towards Security Deposit valid upto _____

OR

The Contractor has furnished to BHEL an initial Security Deposit of Rs. _____in the form of cash / approved Securities/ B.G No. _____ dated _____ for Rs. _____executed by _____ in favour of BHEL valid upto _____ and has agreed for recovery of the balance security deposit by BHEL @ 10% of the value of work done from each running bill till the entire Security Deposit is recovered.

OR

The contractor has furnished to BHEL an initial Security Deposit of Rs. _____(Rs. _____vide Bank draft No. _____dated _____and by adjusting EMD of Rs. _____submitted vide Bank draft No. _____ dt. _____) and has agreed for recovery of balance Security Deposit by BHEL @ 10% of the value of work done from each running bill till the entire security deposit is recovered.

4. The Contractor hereby agrees to extend the validity of the Bank Guarantee for such further period or periods as may be required by BHEL and if the Contractor fails to obtain such extension(s) from the Bank, the Contractor, shall pay forthwith or accept recovery of Rs.----- from the bills in one installment and the contractor further agrees that failure to extend the validity of the Bank Guarantee or failure to pay the aforesaid amount in the manner specified above shall constitute breach of contract. In addition to above, BHEL shall be entitled to take such action as deemed fit and proper for recovering the said sum of Rs.-----

OR

In case the contractor furnishes the bank guarantee at a later date the contractor hereby agrees to extend the validity of bank guarantee for such further period or periods as may be required by BHEL and if the contractor fails to obtain such extension(s) from the bank, the contractor shall pay forthwith or accept recovery of the amount of bank guarantee given in lieu of security deposit from the bills in one installment and the contractor further agrees that failure to extend the validity of bank guarantee or failure to pay the aforesaid amount in the manner specified above shall constitute breach of contract. In addition to above, BHEL shall be entitled to take such action as deemed fit and proper for recovering the said sum.

5. That in consideration of the payments to be made to the Contractor by BHEL in accordance with this Agreement the Contractor hereby covenants and undertakes with BHEL that they shall execute, construct, complete the works in conformity, in all respects, with the terms and conditions specified in this Agreement and the documents governing the same.
6. That the Contractor shall be deemed to have carefully examined this Agreement and the documents governing the same and also to have satisfied himself as to the nature and character of the Works to be executed by him.
7. That the Contractor shall carry out and complete the execution of the said works to the entire satisfaction of the Engineer or such other officer authorised by BHEL, within the agreed time schedule, the time of completion being the essence of the Contract.
8. That BHEL shall, after proper scrutiny of the bills submitted by the Contractor, pay to him during the progress of the said works such sum as determined by BHEL in accordance with this Agreement.
9. That this Agreement shall be deemed to have come into force from ----- the date on which the letter of intent has been issued to the Contractor.
10. That whenever under this contract or otherwise, any sum of money shall be recoverable from or payable by the Contractor, the same may be deducted in the manner as set out in the General Conditions of Contract or other conditions governing this Agreement.
11. That all charges on account of Octroi, Terminal and other taxes including sales tax or other duties on material obtained for execution of the said works shall be borne and paid by the Contractor.
12. That BHEL shall be entitled to deduct from the Contractor's running bills or otherwise Income Tax under Section 194 (C) of the Income Tax Act, 1961.
13. That BHEL shall be further entitled to recover from the running bills of the Contractor or otherwise such sum as may be determined by BHEL from time to time in respect of

CONTRACT AGREEMENT

Form No: F-10 (Rev 00)

consumables supplied by BHEL, hire charges for tools and plants issued (Where applicable) and any other dues owed by the Contractor.

14. That it is hereby agreed by and between the parties that non-exercise, forbearance or omission of any of the powers conferred on BHEL and /or any of its authorities will not in any manner constitute waiver of the conditions hereto contained in these presents and the liability of the Contractor with respect to compensation payable to BHEL or Contractor's obligations shall remain unaffected.
15. It is clearly understood by and between the parties that in the event of any conflict between the Letter of Intent and other documents governing this Agreement, the provisions in the Letter of Intent shall prevail.

16. The following documents

1. Invitation to Tender No-----
and the documents specified therein.
2. Contractor's Offer No-----
dated-----.
3. _____
4. _____
5. _____
6. Letter of Intent No_____ dated_____.
7. _____

shall also form part of and govern this Agreement.

IN WITNESS HEREOF, the parties hereto have respectively set their signatures in the presence of

WITNESS

- 1.
- 2.

(CONTRACTOR)
(to be signed by a person holding
a valid Power of Attorney)

WITNESS

- 1.
- 2.

(For and on behalf of BHEL)

BANK GUARANTEE FOR SECURITY DEPOSIT

B.G. NO.

Date

This deed of Guarantee made this ----- day of -----two thousand ---- by <Name and Address of Bank> hereinafter called the "The Guarantor" (which expression shall unless repugnant to the context or meaning thereof be deemed to include its successors and assigns) in favour of M/s Bharat Heavy Electrical Limited (A Govt. of India Undertaking) a company incorporated under the Companies Act, 1956, having its registered office at BHEL House, Siri Fort, Asiad, New Delhi – 110049 through its unit at Bharat Heavy Electricals Limited, Power Sector Western Region, Shree Mohini Complex, 345 Kingsway, Nagpur 440 001 hereinafter called "The Company" (which expression shall unless repugnant to the context or meaning thereof be deemed to include its successors and assigns)

WHEREAS < Contractor's Name and Address> (hereinafter referred to as the Contractor) have entered into a contract arising out of Letter of Intent no. < LOI REF & Date > (hereinafter referred to as "the contract") for < Name of Work > with the company.

AND WHEREAS the contract inter-alia provides that the contractor shall furnish to the company a sum of Rs.----- (Rupees-----) towards security deposit for due and faithful performance of the contract in the form and manner specified therein.

AND WHEREAS the contractor has approached the Guarantor and in consideration of the arrangement arrived at between the contractor and the Guarantor, the Guarantor has agreed to give the Guarantee as hereinafter mentioned in favour of the company.

The Guarantor do hereby guarantee to the company the due and faithful performance, observance or discharge of the Contract by the contractor and further unconditionally and irrevocably undertake to pay to the Company without demur and merely on a demand, to the extent of Rs.----- (Rupees-----) against any claim by the company on them for any loss, damage, costs, charges and expenses caused to or suffered by the company by reasons of the contractor making any default in the performance, observance or discharge of the terms, conditions, stipulations or undertakings or any of them as contained in the contract.

The decision of the company whether any default has occurred or has been committed by the contractor in the performance, observance or discharge of any of the terms, conditions, stipulations or undertakings or any one of them as contained in the contract and / or as to the extent of loss, damage, costs, charges and expenses caused to or suffered by the company by reason of the contractor making any default in the performance, observance or discharge of any of the terms, conditions, stipulations or undertakings or any one of them shall be conclusive and binding on the Guarantor irrespective of the fact whether the contractor admits or denies the default or questions the correctness of any demand made by the company in any Court, Tribunal or Arbitration proceedings or before any other Authority.

The company shall have the fullest liberty without affecting in any way the liability of the Guarantor under this Guarantee, from time to time to vary any of the terms and conditions of the contract or extend time of performance by the contractor or to postpone for any time and from time to time any of the powers exercisable by it against the contractor and either enforce or forbear from enforcing any of the terms and conditions governing the contract or securities available to the company and the Guarantor shall not be released from its liability under these presents by any exercise by the company of the liberty with reference to the matters aforesaid or by reasons of time being given to the contractor or any other forbearance, act or commission on the part of the company or any indulgence by the company to the contractor or any other matter or thing whatsoever which under the law relating to sureties would, but for this provision have the effect of so releasing the Guarantor from its liability under this guarantee.

The Guarantor further agrees that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the contract and its claim satisfied or discharged and till the company certifies that the terms and conditions of the contract have been fully and properly carried out by the contractor and accordingly discharges this Guarantee, subject however, that the company shall have no claim under this Guarantee after -- ----- i.e. (the present date of validity of Bank Guarantee unless the date of validity of this Bank Guarantee is further extended from time to time, as the case may be) unless a notice of the claim under this Guarantee has been served on the Guarantor before the expiry of the said period in which case the same shall be enforceable against the Guarantor notwithstanding the fact that the same is enforced after the expiry of the said period.

BANK GUARANTEE FOR SECURITY DEPOSIT

The Guarantor undertakes not to revoke this Guarantee during the period it is in force except with the previous consent of the Company in writing and agrees that any liquidation or winding up or insolvency or dissolution or any change in the constitution of the contractor or the Guarantor shall not discharge the Guarantor's liability hereunder.

It shall not be necessary for the company to proceed against the contractor before proceeding against the Guarantor and the Guarantee herein contained shall be enforceable against them notwithstanding any security which the Company may have obtained or obtain from the Contractor shall at the time when proceedings are taken against the Guarantor hereunder be outstanding or unrealized.

Notwithstanding anything contained herein before, our liability under the Guarantee is restricted to Rs.-----
- (Rupees-----). Our guarantee shall remain in force until -----, i.e. (the present date of validity of Bank Guarantee unless the date of validity of this Bank Guarantee is further extended from time to time) unless a claim or demand under this guarantee is made against us on or before ----- we shall be discharged from our liabilities under this Guarantee thereafter.

Any claim or dispute arising under the terms of this documents shall only be enforced or settled in the courts of at Nagpur only.

The Guarantor hereby declares that it has power to execute this guarantee and the executant has full powers to do so on behalf of the Guarantor.

IN WITNESS whereof the ----- (Bank) has hereunto set and subscribed its hand the day, month and year first, above written.

(Name of the Bank)

Signed for and on behalf of the Bank
(Designation of the Authorized Person Signing the Guarantee)

(Signatory No.-----)

DATED:

SEAL

=====

Notes :

1. The BG shall be executed on non-judicial stamp papers of adequate value procured in the name of the Bank in the State where the Bank is located.
2. The BG is required to be sent by the executing Bank directly to BHEL at the address where tender is submitted / accepted under sealed cover.

BANK GUARANTEE FOR INTEREST BEARING REFUNDABLE ADVANCE

B.G. No.

Date

This deed of Guarantee made this _____ day of _____ two thousand _____ by < **Name and Address of Bank**> hereinafter called the "The Guarantor" (which expression shall unless repugnant to the context or meaning thereof be deemed to include its successors and assigns) in favour of M/S Bharat Heavy Electricals Limited a Company incorporated under the Companies Act, 1956, having its registered office at BHEL House, Siri Fort, New Delhi - 110049 through its unit at Bharat Heavy Electricals Limited, Power Sector Western Region, Shree Mohini Complex, 345 Kingsway, Nagpur 440 001, hereinafter called "The Company" (which expression shall unless repugnant to the context or meaning thereof be deemed to include its successors and assigns).

WHEREAS M/s. _____ (hereinafter referred to as the Contractor) have entered into a Contract arising out of Letter of Intent no. _____ dtd _____ (hereinafter referred to as "the Contract") for the < **Name of work**> with the Company.

AND WHEREAS the Contract inter-alia provides that the Company will pay to the Contractor interest bearing advance of Rs. _____ (Rupees _____ only) on certain terms and conditions specified in the Contract subject to the Contractor furnishing a Bank Guarantee for Rs. _____ (Rupees _____ only) in favour of the Company.

AND WHEREAS the Company has agreed to accept a Bank Guarantee from a Bank to cover the said advance.

AND WHEREAS the Contractor has approached the Guarantor and in consideration of the arrangement arrived at between the Contractor and the Guarantor, the Guarantor has agreed to give the Guarantee as hereinafter mentioned in favour of the Company.

NOW THIS DEED WITNESSES AS FOLLOWS:-

- (1) In consideration of the Company having agreed to advance a sum of Rs. _____ (Rupees _____ only) to the Contractor, the Guarantor do hereby guarantee the due recovery by the Company of the said advance with interest thereon as provided according to the terms and conditions of the Contract. If the said Contractor fails to utilise the said advance for the purpose of the Contract and /or the said advance together with interest as aforesaid is not fully recovered by the Company the Guarantor do hereby unconditionally and irrevocably undertake to pay to the Company without demur and merely on a demand, to the extent of the said sum of Rs. _____ (Rupees _____ only) any claim made by the Company on them for the loss or damage caused to or suffered by the Company by reasons of the Company not being able to recover in full the advance with interest as aforesaid.

BANK GUARANTEE FOR INTEREST BEARING REFUNDABLE ADVANCE

- (2) The decision of the Company whether the Contractor has failed to utilise the said advance or any part thereof for the purpose of the Contract and / or as to the extent of loss or damage caused to or suffered by the Company by reason of the Company not being able to recover in full the said sum of Rs. _____ with interest if any shall be final and binding on the Guarantor, irrespective of the fact whether the Contractor admits or denies the default or questions the correctness of any demand made by the Company in any Court Tribunal or Arbitration proceedings or before any other Authority.
- (3) The Company shall have the fullest liberty without affecting in any way the liability of the Guarantor under this Guarantee, from time to time to vary any of the terms and conditions of the Contract or extend time of performance by the Contractor or to postpone for any time and from time to time any of the powers exercisable by it against the Contractor and either enforce or forebear from enforcing any of the terms and conditions governing the Contract or securities available to the Company and the Guarantor shall not be released from its liability under these presents by any exercise by the Company of the liberty with reference to the matters aforesaid or by reasons of time being given to the Contractor or any other forbearance, act or commission on the part of the Company or any indulgence by the Company to the Contractor or of any other matter or thing whatsoever which under the law relating to sureties would, but for this provision have the effect of so releasing the Guarantor from its liability under this guarantee.
- (4) The Guarantor further agrees that the Guarantee herein contained shall remain in full force and effect during the period till the Company discharges this Guarantee, subject to however, that the Company shall have no claim under this Guarantee after _____ i.e. (the present date of validity of Bank Guarantee unless the date of validity of this Bank Guarantee is further extended from time to time, as the case may be) unless a notice of the claim under this Guarantee has been served on the Guarantor before the expiry of the said period in which case the same shall be enforceable against the Guarantor notwithstanding the fact that the same is enforced after the expiry of the said period.
- (5) The Guarantor undertakes not to revoke this Guarantee during the period it is in force except with the previous consent of the Company in writing and agrees that any liquidation or winding up or insolvency or dissolution or any change in the constitution of the Contractor or the Guarantor shall not discharge the Guarantor's liability hereunder.
- (6) It shall not be necessary for the Company to proceed against the Contractor before proceeding against the Guarantor and the Guarantee herein contained shall be enforceable against them notwithstanding any security which the Company may have obtained or obtain from the Contractor shall at the time when proceedings are taken against the Guarantor hereunder be outstanding or unrealised.
- (7) Notwithstanding anything contained herein before, our liability under the Guarantee is restricted to Rs. _____ (Rupees _____). Our guarantee shall remain in force until _____, i.e. the present date of validity of Bank Guarantee unless the date of validity of this Bank Guarantee is further extended from time to time. Unless a claim or demand under this guarantee is made against us on or before-----, we shall be discharged from our liabilities under this Guarantee thereafter.

BANK GUARANTEE FOR INTEREST BEARING REFUNDABLE ADVANCE

- (8) Any claim or dispute arising under the terms of this document shall only be enforced or settled in the courts at Nagpur only.
- (9) The Guarantor hereby declares that it has power to execute this Guarantee under its Memorandum and Articles of Association and the executant has full powers to do so on its behalf under the Power of Attorney dated _____ (To be incorporated by the Bank) granted to him by the proper authorities of the Guarantor.

IN WITNESS whereof the _____ (Bank) has hereunto set and subscribed its hand the day, month and year first, above written.

(Name of the Bank)

Signed for and on behalf of the Bank
(Designation of the Authorized Person Signing the Guarantee)

(Signatory No.-----)

DATED:

SEAL

=====

Notes :

1. The BG shall be executed on non-judicial stamp papers of adequate value procured in the name of the Bank in the State where the Bank is located.
2. The BG is required to be sent by the executing Bank directly to BHEL at the address where tender is submitted / accepted, under sealed cover.

FORM for EXTENSION OF VALIDITY OF BANK GUARANTEE

1. To be typed on non judicial Stamp Papers of value as applicable in the State of India from where the BG has been issued or the State of India where the BG shall be operated
2. The non judicial stamp papers shall be purchased in the name of the Party on whose behalf the BG is being issued or the BG issuing Bank

BANK GUARANTEE No:

Date:.....

To

(Write Designation and Address of Officer of BHEL inviting the Tender)

Dear Sir

Sub : Validity of Bank Guarantee No:..... Dated for
 Rs in favour of yourself, expiry date
, on account of M/s in respect of
 Contract Number....., (herein after called the Original bank Guarantee)

At the request of M/s....., we Bank,
 having its branch Office at and having Head office
 at, do hereby extend our liability under the above mentioned Bank Guarantee
 number..... dated for a further period ofMonths/years
 from to expire on

Except as provided above, all other terms and conditions of the Original Bank Guarantee No
 Dated..... shall remain unaltered and binding on us.

Kindly treat this extension as an integral part of the original Bank Guarantee to which it
 would be attached.

Yours faithfully

Signature.....

Name & Designation.....

Power of Attorney/Signing Power No

Seal of Bank

 PS- WR		MONTHLY PLAN & REVIEW WITH CONTRACTOR							Page 1 of 5		
Name of Site							Contract No.				
							Name of Contractor				
Review for the month of							Brief Scope of work				
Date of Review											
PART- A PHYSICAL REVIEW											
Sl. No	Description of work	Unit of Measurement	Original Plan (QTY Planned for the month as per joint review of previous month)	Last months shortfall (attributable to Contractor)	Last month's shortfall (BHEL) The BHEL delays are also to be included in the month's plan depending upon the availability of inputs.	Total Planned for the month (including previous month backlog attributable to Contractor)	Achieved	Shortfall attributable to (in Qty)			REMARKS
			(a)	(b)	(c)			D=(a)+(b) + (c)	BHEL	Force majeure		Contractor
		UOM	Phy.	Phy	Phy	Phy	Phy.	Phy.	Phy.	Phy.	

BHEL
(Sign with name, designation and date)

CONTRACTOR
(Sign with name, designation and date)



PS- WR

MONTHLY PLAN & REVIEW WITH CONTRACTOR

Page 2 of 5

Use separate sheets if necessary

CONTRACT NO:

CONTRACTOR:

PART – B-1 REVIEW OF DEPLOYMENT OF MAJOR T&Ps

SUPPLIER SCOPE:-

SN.	MAJOR T&P TO BE DEPLOYED AS PER WORK PLANNED FOR THE MONTH	QTY.	DEPLOYMENT STATUS (ACTUAL DEPLOYED)	REMARKS (WORKS EFFECTED DUE TO NON-DEPLOYMENT OF T&Ps

BHEL SCOPE:-

BHEL
(Sign with name, designation and date)

CONTRACTOR
(Sign with name, designation and date)



PS- WR

MONTHLY PLAN & REVIEW WITH CONTRACTOR

Page 3 of 5

CONTRACT NO:

CONTRACTOR:

PART – B-2 REVIEW OF DEPLOYMENT OF MANPOWER

SUPPLIER SCOPE:-

SNO.	AREA OF WORK	CATEGORY OF LABOUR	NO. OF LABOUR REQUIRED AS PER CATEGORY	DEPLOYED FOR THE PERIOD	REMARKS (WORKS AFFECTED DUE TO NON-AVAILABILITY OF LABOUR)

BHEL
(Sign with name, designation and date)

CONTRACTOR
(Sign with name, designation and date)



PS- WR

MONTHLY PLAN & REVIEW WITH CONTRACTOR

Page 4 of 5

CONTRACT No.:**Date of Report:****PART C1 : PLAN FOR THE NEXT MONTH (PHYSICAL)**

SL NO.	DESCRIPTION OF WORK (Area Wise)	PLANNED MT/ % / QTY (EXCLUDING SHORTFALLS ATTRIBUTABLE TO CONTRACTOR TILL DATE)	T&Ps REQUIRED	MANPOWER REQUIRED	REMARKS

NOTE: USE SEPARATE SHEETS, IF REQUIRED

**PART C2: PLAN FOR THE NEXT MONTH
(OTHERS)**

SL NO.	DESCRIPTION OF WORK (Area Wise)	PLANNED MT/ % / QTY	T&Ps REQUIRED	MANPOWER REQUIRED	REMARKS

NOTE: USE SEPARATE SHEETS, IF REQUIRED

BHEL
(Sign with name, designation and date)

CONTRACTOR
(Sign with name, designation and date)



PS- WR

MONTHLY PLAN & REVIEW WITH
CONTRACTOR

Page 5 of 5

BHEL
(Sign with name, designation and date)

CONTRACTOR
(Sign with name, designation and date)

MONTHLY PERFORMANCE EVALUATION OF CONTRACTOR

Form No: F-15 (Rev 01)

Page 1 of 8

Project		Vendor				Package & Unit	
SL	Parameter for Measurement	Classification	Max Score	Score Obtained		Measurement Key/Scheduled date	Supporting Documents`
#1.01	Cumulative number of days in the month, the nominated Quality Officer or his authorised nominee was not available	QUALITY	0.35			Quality Officer or his authorised nominee should be available for all the days	Daily Log Book entry/Incident Registers/letter references
#1.02	Shortfall in number of weekly Quality meetings in the month, not conducted or not attended by Quality officer or his authorised nominee	QUALITY	0.7			Quality meetings to be held every week	Daily Log Book entry/Incident Registers/letter references
#1.03	Level of compliance wrt decisions taken in previous Quality meetings	QUALITY	0.35			Number of consolidated issues discussed in Quality meetings	Daily Log Book entry/Incident Registers/letter references
#1.04	Number of batches of welding electrodes, cement, sand , aggregate, consumable, Paints etc as applicable for which test certificates not submitted OR MM & MH pkg:) In case of MM & MH package, monthly checks	QUALITY	0.375			Total number of non compliances	Daily Log Book entry/Incident Registers/letter references
#1.05	Number of incidences of improper storage of inflammable gases and liquids, fuel etc	QUALITY	0.35			Total number of non compliances	Daily Log Book entry/Incident Registers/letter references
#1.06	Total number of complaints in the month on non-preservation of materials under the custody of the contractor / erected in his scope.	QUALITY	0.35			Total number of non compliances	Daily Log Book entry/Incident Registers/letter references
#1.07	Cumulative number of days in the month delayed due to poor organisation/planning of works at site.	QUALITY	0.625			Cumulative number of days delayed	Daily Log Book entry/Incident Registers/letter references
#1.08	Total number of rework instances in a month necessitated due to improper works/procedures by contractor	QUALITY	0.625			Total number of non compliances	Daily Log Book entry/Incident Registers/letter references
#1.09	Total number of complaints received in the month on the quality of finish / aesthetics	QUALITY	0.65			Total number of non compliances	Daily Log Book entry/Incident Registers/letter references
#1.10	Total number of instances in the month, House keeping NOT attended to inspite of instructions by BHEL -ie removal / disposal of surplus earth / debris / scrap / unused / surplus cable drums / other electrical items / surplus steel items / packing materials, thrown out scrap like weld butts, cotton waste etc from the working area to identified locations	QUALITY	0.625			Total number of non compliances	Daily Log Book entry/Incident Registers/letter references

Name and Signature of BHEL Package Incharge

Name and Signature of Contractor

MONTHLY PERFORMANCE EVALUATION OF CONTRACTOR

Form No: F-15 (Rev 01)

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Project		Vendor				Package & Unit	
SL	Parameter for Measurement	Classification	Max Score	Score Obtained		Measurement Key/Scheduled date	Supporting Documents`
#2.01	Number of times the workplan submitted FOR THE NEXT MONTH is REJECTED for not being supported with proper T&P (major) and Manpower.	PERFORMAN CE	3.47			Number of rejections	Daily Log Book entry/Incident Registers/letter references
#2.02	Number of times the Work plan (unloading and storage plans in case of MM & MH packages) is not supported by relevant construction/layout drawings - like A4 plan / elevation views of plan status for structures / pressure parts/Civil Works, Piping isometrics for piping, Layout / PID / System reference sketch, Unloading/storage plans etc as applicable for the works planned	PERFORMAN CE	3.47			Total number of non compliances	Daily Log Book entry/Incident Registers/letter references
#2.03	Cumulative number of days of delay in submission of plan FOR THE NEXT MONTH supported by deployment plan of Major T&Ps and Manpower (as per C-1 & C-2 of Format F-14)	PERFORMAN CE	1.73			Number of days delayed/Scheduled date is first working day of next month	Daily Log Book entry/Incident Registers/letter references
#2.04	Percentage of delayed submission of Daily Reports for Progress, Labour etc	PERFORMAN CE	1.87			Percentage of daily reports delayed/Scheduled date is each day for the previous day	Daily Log Book entry/Incident Registers/letter references
#2.05	Number of days delayed for submission of log sheets / protocols / Monthly Progress reports for the work executed during the month under measurement	PERFORMAN CE	0.93			Number of days delayed/Scheduled date is first working day of next month	Daily Log Book entry/Incident Registers/letter references
#2.06	Shortfall attributable to contractor as a percentage of what is clearly executable (In line with Terms of payment) by contractor as per the plan (part-A of F-14) for the subject month	PERFORMAN CE	20.67			Percentage calculated as per part-A of F-14	Progress review formats
#2.07	Cumulative number of days in the month for which feedback/briefing on plans for the day and the progress of previous day was not given to BHEL	PERFORMAN CE	2.67			Cumulative number of days for which briefing or feedback not given/each day for the previous day	Daily Log Book entry/Incident Registers/letter references
#2.08	Cumulative number of major instances in the month hampering/affecting progress of work due to improper management of labour and T&P at site leading to slowed progress of work or extended the completion of works	PERFORMAN CE	3.47			Cumulative number of days lost	Daily Log Book entry/Incident Registers/letter references

Name and Signature of BHEL Package Incharge

Name and Signature of Contractor

MONTHLY PERFORMANCE EVALUATION OF CONTRACTOR

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Project		Vendor				Package & Unit	
SL	Parameter for Measurement	Classification	Max Score	Score Obtained		Measurement Key/Scheduled date	Supporting Documents`
#2.09	Cumulative number of days of work lost due to interface issues with fellow contractors/ customers leading to stoppage / delay in works, attributable to the contractor	PERFORMANCE	1.73			Cumulative number of days lost	Daily Log Book entry/Incident Registers/letter references
#2.10	Number of times the commitments on augmentation of resources as per plan for the month have slipped	PERFORMANCE	3.47			Total number of non compliances	Daily Log Book entry/Incident Registers/letter references
#2.11	Number of days the submission of Running bills for the month are delayed	PERFORMANCE	0.93			Number of days delayed/Scheduled date is first working day of next month	Daily Log Book entry/Incident Registers/letter references
#2.12	Number of days the supporting documents for the Running bills submitted for the month are delayed	PERFORMANCE	0.93			Number of days delayed/Scheduled date is first working day of next month	Daily Log Book entry/Incident Registers/letter references
#2.13	Number of times updations were not carried out in maintenance of records in PC in a form approved by BHEL at site (as applicable for respective packages).	PERFORMANCE	1.33			Cumulative number of days updation not carried out/	Daily Log Book entry/Incident Registers/letter references
#2.14	Number of times the Top Management of contractor did not respond to critical issues of site, for the month	PERFORMANCE	3.47			Total number of non compliances	Daily Log Book entry/Incident Registers/letter references
#2.15	Number of refusals for improvement/remedial measures suggested by BHEL	PERFORMANCE	0.67			Total number of non compliances	Daily Log Book entry/Incident Registers/letter references
#2.16	Cumulative number of days in the month the works were stopped / refused on interpretation of contract clauses/scope due to tendency of taking undue advantage by interpreting contract clauses in their favour	PERFORMANCE	2.67			Cumulative number of days lost	Daily Log Book entry/Incident Registers/letter references
#2.17	Number of times rework refused	PERFORMANCE	1.73			Total number of non compliances	Daily Log Book entry/Incident Registers/letter references
#2.18	Cumulative number of days in the month recording/logging was not done in daily log/ history register / hindrance register maintained at BHEL Site Office	PERFORMANCE	1.33			Cumulative number of days recording or logging was not done/all days of the month	Daily Log Book entry/Incident Registers/letter references

Name and Signature of BHEL Package Incharge

Name and Signature of Contractor

MONTHLY PERFORMANCE EVALUATION OF CONTRACTOR

Form No: F-15 (Rev 01)

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Project		Vendor				Package & Unit	
SL	Parameter for Measurement	Classification	Max Score	Score Obtained		Measurement Key/Scheduled date	Supporting Documents`
#2.19	Erection Agency: Cumulative number of major instances in the month hampering/affecting progress of work due to delayed or non-deployment of separate gang for material handling works OR MM Agency: Cumulative number of major instances in the month hampering/affecting erection work due to not identifying or not locating or not retrieving of materails required by erection agency	PERFORMAN CE	3.47			Cumulative number of days lost	Daily Log Book entry/Incident Registers/letter references
#3.01	Number of days of delay in submission of PLAN vis a vis ACTUAL deployment of Manpower for the month under review (as per part B-2 of F-014)	RESOURCES	1.5			Number of days delayed/ Scheduled date is first working day of next month	Daily Log Book entry/Incident Registers/letter references
#3.02	Number of days of non-availability of supporting staff at office for submission of required reports/documentation as required for the contract	RESOURCES	1.5			Cumulative number of days supporting staff not available	Daily Log Book entry/Incident Registers/letter references
#3.03	Number of days of delay in submission of PLAN vs ACTUAL deployment of major T&P for the month under review (as per B-1 of F-14)	RESOURCES	2.5			Number of days delayed/Scheduled date is first working day of next month	Daily Log Book entry/Incident Registers/letter references
#3.04	Cumulative number of major instances in the month hampering/affecting progress of work due to non availability of operator / fuel in contractor's scope for Major T&P and MME	RESOURCES	2.5			Cumulative number of days lost	Daily Log Book entry/Incident Registers/letter references
#3.05	Cumulative number of major instances in the month hampering/affecting progress of work due to breakdown or non availability of major T&P and MME for the work	RESOURCES	2.5			Cumulative number of days lost	Daily Log Book entry/Incident Registers/letter references
#3.06	Cumulative number of major instances in the month hampering/affecting progress of work due to non-availability of proper T&P/MME (number, capacity adequacy, and working condition) under the scope of contractor	RESOURCES	2.5			Cumulative number of days lost	Daily Log Book entry/Incident Registers/letter references
#3.07	Number of times Contractor's T&P (items common to BHEL and Contractor) was NOT made available before requesting for the same T&P from BHEL	RESOURCES	2.5			Total number of requests from contractor	Daily Log Book entry/Incident Registers/letter references
#3.08	Cumulative number of major instances in the month hampering/affecting progress of work due to non-availability of Consumables under the scope of contractor	RESOURCES	2.5			Cumulative number of days lost	Daily Log Book entry/Incident Registers/letter references

Name and Signature of BHEL Package Incharge

Name and Signature of Contractor

MONTHLY PERFORMANCE EVALUATION OF CONTRACTOR

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Project		Vendor				Package & Unit	
SL	Parameter for Measurement	Classification	Max Score	Score Obtained		Measurement Key/Scheduled date	Supporting Documents`
#3.09	Cumulative number of days in the month lost due to use of improper consumables like electrodes, gases, Cement, sand, etc as applicable	RESOURCES	2			Cumulative number of days lost	Daily Log Book entry/Incident Registers/letter references
#4.01	Number of deviations from the site organisation report submitted initially wrt deployment for the current month affecting work progress.	SITE INFRASTRUCTURE & SERVICE	0.94			Total number of non compliances	Daily Log Book entry/Incident Registers/letter references
#4.02	Cumulative number of days in the month lost due to delayed renewal in respect of Labour license, Insurance, electrical licence, factory inspector etc as applicable	SITE INFRASTRUCTURE & SERVICE	0.94			Cumulative number of days lost	Daily Log Book entry/Incident Registers/letter references
#4.03	Number of non-compliances of Statutory requirements like validity of Labour Licence, Labour Insurance, PF, etc and any other applicable Regulation	SITE INFRASTRUCTURE & SERVICE	0.5			Total number of non compliances	Daily Log Book entry/Incident Registers/letter references
#4.04	Cumulative number of days in a month poor illumination is reported at storage area, erection area, pre-assy area and other designated areas by BHEL site.	SITE INFRASTRUCTURE & SERVICE	0.44			Total number of non compliances/random checks	Daily Log Book entry/Incident Registers/letter references
#4.05	Number of days of non-availability of well maintained toilets facilities for workers (separate for men and women)	SITE INFRASTRUCTURE & SERVICE	0.44			Total number of non compliances/random checks	Daily Log Book entry/Incident Registers/letter references
#4.06	Number of days of non-availability of potable drinking water stations for workers in specified areas.	SITE INFRASTRUCTURE & SERVICE	0.44			Total number of non compliances/random checks	Daily Log Book entry/Incident Registers/letter references
#4.07	If applicable as per contract, Provision of Water meter for each point of distribution and cumulative number of days of non-submission of water consumption / non-working of water meter	SITE INFRASTRUCTURE & SERVICE	0.44			Total number of non compliances/random checks	Daily Log Book entry/Incident Registers/letter references

Name and Signature of BHEL Package Incharge

Name and Signature of Contractor

MONTHLY PERFORMANCE EVALUATION OF CONTRACTOR

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Project		Vendor				Package & Unit	
SL	Parameter for Measurement	Classification	Max Score	Score Obtained		Measurement Key/Scheduled date	Supporting Documents`
#4.08	Provision of Energy meter for each point of distribution and cumulative number of days of non-submission of energy consumption / non-working of energy meter	SITE INFRASTRUCTURE & SERVICE	0.44			Total number of non compliances/random checks	Daily Log Book entry/Incident Registers/letter references
#4.09	Commitment of Top Management of Contractor for welfare of labour	SITE INFRASTRUCTURE & SERVICE	0.44			Percentage of welfare activities done	Daily Log Book entry/Incident Registers/letter references
#5.01	Number of days delayed in making labour payments of the last month	SITE FINANCE	2.14			Number of days delayed/Scheduled date is 10th day of the month succeeding the month under reference	Daily Log Book entry/Incident Registers/letter references
#5.02	Number of complaints from sub supplier for non receipt of payments	SITE FINANCE	1.43			Total number of non compliances	Daily Log Book entry/Incident Registers/letter references
#5.03	Number of times the site operations are hampered for want of funds at the disposal of site-in-charge.	SITE FINANCE	1.43			Total number of non compliances	Daily Log Book entry/Incident Registers/letter references
#6.01	Cumulative number of days in a month the nominated Safety Officer or his authorised nominee is not available	HSE & SA	0.5			Safety Officer or his authorised nominee should be available for all the days	Daily Log Book entry/Incident Registers/letter references
#6.02	Shortfall in number of weekly safety meetings in the month conducted or attended by the Safety Officer or his authorised nominee	HSE & SA	0.25			Safety meetings to be held every week	Copy of Minutes of meeting
#6.03	Level of compliance wrt decisions taken in previous Safety meetings	HSE & SA	0.25			Number of consolidated issues discussed in Safety meetings	Daily Log Book entry/Incident Registers/letter references
#6.04	Delay in submission of monthly report on safety in the prescribed form	HSE & SA	0.25			Number of days delayed/Scheduled date is first working day of next month	Daily Log Book entry/Incident Registers/letter references
#6.05	Number of days taken for lodging FIRs from date of occurrence/notice of incident of theft / accident etc	HSE & SA	0.25			Number of days delayed/Scheduled date is the next date of occurrence/notice of incidence	Copy of FIR lodged by Contractor

Name and Signature of BHEL Package Incharge

Name and Signature of Contractor

MONTHLY PERFORMANCE EVALUATION OF CONTRACTOR

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Project		Vendor				Package & Unit	
SL	Parameter for Measurement	Classification	Max Score	Score Obtained		Measurement Key/Scheduled date	Supporting Documents`
#6.06	Number of times warnings issued for using scaffoldings other than steel	HSE & SA	0.25			Total number of non compliances	Daily Log Book entry/Incident Registers/letter references
#6.07	Number of times punitive fines imposed for not complying with use of PPE	HSE & SA	0.375			Total number of non compliances	Non-compliance intimation documents from BHEL site
#6.08	Number of times punitive fines imposed for unsafe practices	HSE & SA	0.345			Total number of non compliances	Copy of fine intimation documents from BHEL site
#6.09	Delay in number of days in submission of monthly report on provisions, maintainance and validity of fire extinguishers	HSE & SA	0.25			Number of days delayed/Scheduled date is first working day of next month	Daily Log Book entry/Incident Registers/letter references
#6.10	Delay in number of days in submission of monthly report on provisions and maintenance of Electrical Safety for Equipments	HSE & SA	0.25			Number of days delayed/Scheduled date is first working day of next month	copy of report
#6.11	Delay in number of days in submission of monthly report on provisions and maintainance of proper ELCBs for Electrical Safety of Personnel.	HSE & SA	0.25			Number of days delayed/Scheduled date is first working day of next month	copy of report
#6.12	Number of times the agency has defaulted on display of safety posters / safety slogans / safety barriers/emergency numbers etc in identified areas	HSE & SA	0.25			Total number of non compliances	Non-compliance intimation documents from BHEL site
#6.13	Non compliances observed during HSE and Safety Audit	HSE & SA	0.25			Total number of non compliances	Daily Log Book entry/Incident Registers/letter references
#6.14	Cumulative number of days in the month, First Aid Kits were not maintained at designated places at site	HSE & SA	0.25			Cumulative number of days	Non-compliance intimation documents from BHEL site
#6.15	Cumulative number of days in the month, there was non-availability of Ambulance or Emergency vehicle (whichever applicable) at Site.	HSE & SA	0.25			Cumulative number of days Ambulance or Emergency vehicle not available	Daily Log Book entry/Incident Registers/letter references
#6.16	Number of days taken for submission of Root Cause analysis (RCA) for the accident /theft/ incidence from the cut off date intimated by BHEL for submission of RCA NOTE: Occurrences of last month to be accounted for in the evaluating month)	HSE & SA	0.25			Number of days delayed/Scheduled date is 7th day of occurrence or notice of incidence NOTE: Occurrences of last month to be accounted for in the evaluating month)	Daily Log Book entry/Incident Registers/letter references

Name and Signature of BHEL Package Incharge

Name and Signature of Contractor

MONTHLY PERFORMANCE EVALUATION OF CONTRACTOR

Form No: F-15 (Rev 01)

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Project		Vendor				Package & Unit	
SL	Parameter for Measurement	Classification	Max Score	Score Obtained		Measurement Key/Scheduled date	Supporting Documents`
#6.17	Cumulative number of days in the month Women labour were deployed for office or site works during night hours (anytime between 18.00 hrs to 08.00 hrs)	HSE & SA	0.25			Cumulative number of days	Daily Log Book entry/Incident Registers/letter references
#6.18	Cumulative number of days in the month children under the age of 18 years were deployed for office or site works	HSE & SA	0.25			Cumulative number of days	Daily Log Book entry/Incident Registers/letter references

A

Performance Score Summary for the Month	Total score	Score Obtained
QUALITY	5	
PERFORMANCE	60	
RESOURCES	20	
SITE INFRASTRUCTURE & SERVICE	5	
SITE FINANCE	5	
HSE & SA	5	
OTHERS	0	
TOTAL	100	0

Name and Signature of BHEL Package Incharge

Name and Signature of Contractor

MILESTONE COMPLETION CERTIFICATE
(issued by BHEL on the specific request of Contractor)

Ref :

Date:

To,

(Name & address of Contractor)

Dear Sir,

References

1. Contract No:
2. Job Description:

This is to hereby confirm that the following Milestone Activity has been achieved in respect of the Contract /Job under reference

Sl No	Milestone Activity	Remarks

This certificate is issued as per your request vide letter no
without any prejudice to the rights of BHEL in line with the terms and conditions of the
above referred Contract

Yours faithfully,

For and on behalf of Bharat Heavy Electricals Limited

Construction Manager/Head (Subcontracts)

CONTRACT COMPLETION CERTIFICATE
(Issued by BHEL/HQ on the specific request of Contractor)

Ref :

Date:

To Whom so ever it may concern

1	DESCRIPTION OF WORK	
2	NAME AND ADDRESS OF THE CONTRACTOR	
3	CONTRACT NO	
4	CONTRACT VALUE	
5	LETTER OF INTENT NO & DATE	
6	CONTRACT PERIOD//CONTRACT DURATION	
7	DATE OF START/COMPLETION	
8	FINAL EXECUTED VALUE	
9	PERFORMANCE	GOOD SATISFACTORY UNSATISFACTORY

This certificate is issued as per your request vide letter no
without any prejudice to the rights of BHEL to use this certificate for evaluation of your offers for future tenders

Yours faithfully,

For and on behalf of Bharat Heavy Electricals Limited

Head (Subcontracts)

INDEMNITY BOND

(To be executed on a Non Judicial Stamp Paper of the requisite value as per Stamp Duty prevalent in the respective State)

 This Indemnity Bond executed by <name of company> having their Registered Office at <xxxxxxxxxxx> in favour of M/s Bharat Heavy Electricals Limited, a Company incorporated under the Companies Act, 1956, having its Registered Office at BHEL House, Siri Fort, Asiad, New Delhi - 110049 through its Unit at Power Sector-_____ Region, _____, _____ State. (Hereinafter referred to as the Company)

And whereas the Company has entered into a Contract with M/s xxxxxxxxx, the executants of this Deed (hereinafter referred to as the Contractor) as its contractor in respect of the work of "xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx".

AND WHEREAS under the provisions of GCC further stipulates that the Contractor shall indemnify the Company against all claims of whatever nature arising during the course of execution of Contract including defects liability period of <xx Months > i.e till <xx xx xxxx>

Now this deed witness that in case the Company is made liable by any Authority including Court to pay any claim or compensation etc. in respect of all labourers or other matters at any stage under or relating to the Contract with the Contractor, the Contractor hereby covenants and agrees with the Company that they shall indemnify and reimburse the Company to the extent of such payments and for any fee, including litigation charges, lawyers' fees, etc, penalty or damages claimed against the Company by reason of the Contractor falling to comply with Central/States Laws, Rules etc, or his failure to comply with Contract (including all expenses and charges incurred by the Company).

The Contractor further indemnifies the Company for the amount which the Company may be liable to pay by way of penalty for not making deductions from the Bills of the Contractor towards such amount and depositing the same in the Government Treasury.

INDEMNITY BOND

(To be executed on a Non Judicial Stamp Paper of the requisite value as per Stamp Duty prevalent in the respective State)

The Contractor further agree that the Company shall be entitled to with hold and adjust the Security Deposit and/or with hold and adjust payment of Bills of Contractor pertaining to this Contract against any payment which the Company has made or is required to make for which the Contractor is liable under the Contract and that such amount can be withheld, adjusted by the Company till satisfactory and final settlement of all pending matters and the Contractor hereby gives his consent for the same.

The Contractor further agrees that the terms of indemnity shall survive the termination or completion of this contract.

The contractor further agrees that the liability of the contractor shall be extended on actual basis notwithstanding the limitations of liability clause, in respect of :

1. breach of terms of contract by the contractor
2. breach of laws by the contractor
3. breach of Intellectual property rights by the contractor
4. breach of confidentiality by the contractor

Nothing contained in this deed, shall be construed as absolving or limiting the liability of the Contractor under said Contract between the Company and the Contractor. That this Indemnity Bond is irrevocable and the condition of the bond is that the Contractor shall duly and punctually comply with the terms and the conditions of this deed and contractual provisions to the satisfaction of the Company.

In witness where of M/s xxxxxxxxxxxxxx these presents on the day, month and year first, above written at xxxxxxxx by the hand of its signatory Mr. xxxxxxxxxxxx.

Signed for and on behalf of
M/s xxxxxxxxxxxxxxxx

Witness:

1
2

CONSORTIUM AGREEMENT

(To be executed on Rs. 50/- Non – Judicial Stamp Paper)

THIS AGREEMENT is made and executed on this _____ day of _____, by and between (1) M/s _____, (The First Party, i.e, the Bidder) a company incorporated under the Company's Act 1956, having its registered office at _____(herein after called the "Bidder", which expression shall include its' successors, administrators, executors and permitted assigns) and (2) M/s _____, (The Second Party, i.e, the associates), a company incorporated under the Company's Act 1956, having its registered office at _____ (herein after called the " Associates", which expression shall include its' successors, administrators, executors and permitted assigns).

WHEAEAS the Owner, Bharat Heavy Electricals Ltd, a Government of India Undertaking, proposes to issue / issued an NIT (herein after referred to as the said NIT) inviting bids from the individual Bidders for undertaking the work of _____, at _____ (herein after referred to as the said works).

WHEREAS the said NIT enables submission of a bid by a Consortium subject to fulfillment of the stipulations specified in the said NIT.

AND WHEREAS M/s _____ (The First Party, i.e, the Bidder) will submit its proposal in response to the aforesaid invitation to bid by the Owner for _____ as detailed in the Bid doc. no. < TENDER REF----->

AND WHEREAS M/s _____ (The First Party, i.e the Bidder) itself is meeting all the qualifying requirements except the qualifying requirements of _____ (as detailed in the NIT) and in order to fully meet the qualifying requirements of NIT, this tie-up agreement is being entered into with M/s _____ (The Second Party, the Associates) , who fully meet the balance part of the said works (_____).

WHEREAS the First Party and the Second Party are contractors engaged in the business of carrying out various items of works. WHEREAS the two parties have agreed to constitute themselves into a consortium for the purpose of carrying out the said works, and that the consortium will be continued till the completion of the works in all respects.

WHEREAS the parties have agreed to certain terms and conditions in this regard:

CONSORTIUM AGREEMENT

NOW THEREFORE THIS AGREEMENT WITNESSETH AS FOLLOWS :

1. First and Second parties hereby constitute themselves into a Consortium for the purpose of bidding and undertaking the said works pursuant to the said NIT as hereinafter stated.
2. The First Party will be the leader (Lead Partner) and will be responsible for the entire works.

CONSORTIUM AGREEMENT

3. The First Party shall undertake the following part(s) of work detailed in the NIT namely _____

4. The Second Party shall undertake the following part(s) of work detailed in the said NIT namely _____

5. The parties hereby declare and confirm that each of them will fulfill the required minimum qualifying requirements as prescribed in the said NIT for the works agreed to be undertaken by them as stated here-in-above.
6. It is also agreed between the parties hereto that all of them shall be individually and severally responsible for the completion of the said works as per the schedule. Further, if the Employer/Owner sustains any loss or damage on account of any breach of the Contracts, we the, Consortium partners individually and severally undertake to promptly indemnify and pay such losses / damages caused to the Employer/Owner on its written demand without any demur, reservation, contest or protest in any manner whatsoever.
7. The parties hereby agree and undertake that they shall provide adequate finances, suitable Tools, Plants, Tractors, Trailers, other transportation equipment, other Tools & Plants, Measuring & Monitoring Equipments (MMEs), Men and Machinery etc. for the proper and effective execution of the works to be undertaken by them as specified here-in-above.
8. It is agreed interse between the parties hereto that all the consequences liabilities etc., arising out of any default in the due execution of the said works shall be borne by the party in default, that is by party in whose area of works default has occurred, provided however, so far as M/s Bharat Heavy Electricals Limited is concerned, all the parties shall be liable jointly and severally.

CONSORTIUM AGREEMENT

IN WITNESS HEREOF the parties above named have signed this agreement on the day month and year first above written at _____(Place) .

WITNESS

For

- 1. NAME
- 2. OFFICIAL ADDRESS

(FIRST PARTY)

WITNESS

For

- 1. NAME
- 2. OFFICIAL ADDRESS

(SECOND PARTY)

[The successful bidder shall have to execute the " JOINT DEED OF UNDERTAKING " in the format to be made available by BHEL at the time of awarding].

REFUND OF SECURITY DEPOSIT

To,

The Construction Manager
BHEL Site Office

Dear Sir,

Sub : **Refund of Security Deposit**

Ref : Contract No:

Work:.....

I/We have submitted Final Bill in respect of the above Contract/Work vide our letter no:.....
dated In line with Tender conditions (GCC clause no 1.11), kindly arrange to
release/refund the Security Deposit along with Final Bill payments.

The details of Security Deposit are as below:

1. Cash Portion :
2. BG Portion :

Thanking You

Date: _____

Authorised representative of Contractor

To be filled up by BHEL

1. Security Deposit to be refunded:
 - a. Cash Portion:
 - b. BG Portion :
2. Less
 - a. Amount spent by BHEL on behalf of Contractor:
 - b. Payments made by BHEL on behalf of Contractor:
 - c. Other recoveries for Services etc
 - d. Any other recoveries
 - e. Total of 'a' to 'd':
3. Net Amount to be released (1-2) :
4. Certified that
 - a. The payment recommended for release is in order and there are no demands other than those included in the claim outstanding from the Contractor
 - b. Contract Guarantee period of Months commenced wef : _____
 - c. All objections raised so far have been settled
 - d. A note for refund of Security Deposit has been made in the Measurement Book

Signature of BHEL Engineer

Construction Manager

Date:-----

REFUND OF GUARANTEE MONEY

BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR, _____ REGION

Ref No:

Date:

1. Name and Address of Contractor :
2. Contract Agreement/LOI No :
3. Date of Contract Agreement/LOI :
4. Name of the Work undertaken :
5. Date of commencement of the Work :
6. Date of Completion of the Work :
7. Period of Maintenance :
(Guarantee Period)
8. Date on which the Final Bill was paid :
9. Last date of making good the defect :
during Maintenance Period
10. Expenditure incurred by BHEL during :
Maintenance Period, if any, recoverable
11. Date on which Guarantee Money refund:
falls due as per Contract
12. Amount of Guarantee Money to be refunded:
13. Less Amounts recoverable (with details)
 - a. Amount spent by BHEL on maintenance :
 - b. Payments made by BHEL on behalf of Contractor:
 - c. Court dues/penalties/compensation :
 - d. Other recoveries for Services, etc :
 - e. Total of 'a' to 'd' :
14. Net Amount recommended for release (12-13) :

Signature of BHEL Engineer

Date: _____

REFUND OF GUARANTEE MONEY

BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR, _____ REGION

CERTIFICATE TO BE FURNISHED BY THE CONTRACTOR

I/We have no claim or demand outstanding against BHEL _____, for the work done or for labour or material supplied or any other account arising out of or connected with the Contract Agreement/LOI (No _____ dated _____) and the payment of this bill shall be in full and final settlement of all my/our claims and demands including the 'Deposits' of the Contract Agreement/LOI referred to.

Signature of Contractor

Date:

CERTIFICATE TO BE FURNISHED BY SENIOR ENGINEER/CONSTRUCTION MANAGER

1. Certified that
 - a. The payment recommended for release is in order and there are no demands other than those included in the claim outstanding from the Contractor
 - b. Maintenance period (Contract Guarantee period) is over and the Contractor has carried out the works required to be carried out by him during the period of maintenance (Guarantee) to our satisfaction, and all expenses incurred by the Company on carrying out such works have been included for adjustment
 - c. All objections raised so far have been settled
 - d. A note for refund of Guarantee Amount has been made in the Measurement Book and Contract Agreement/Work Order

Signature of BHEL Engineer

Construction Manager

Date:-----

FOR USE IN ACCOUNTS DEPARTMENT

Passed for Rs _____ (Rupees _____ only)

Accountant

Accounts Officer

ACKNOWLEDGE BY THE CONTRACTOR

Received Rs _____ in full and final settlement of my/our claim

Signature of Contractor

Date:

POWER OF ATTORNEY for SUBMISSION OF TENDER/SIGNING CONTRACT AGREEMENT

(To be typed on non judicial Stamp Papers of appropriate value as applicable and Notarised)

KNOW ALL MEN BY THESE PRESENTS, that I/We do hereby make, nominate, constitute and appoint Mr , whose signature given below herewith to be true and lawful Attorney of M/s..... hereinafter called 'Company', for submitting Tender/entering into Contract and inter alia, sign, execute all papers and to do necessary lawful acts on behalf of Company with M/s Bharat Heavy Electricals Ltd, Power Sector _____ Region, _____, in connection with
.....
..... vide Tender Specification No : _____, dated _____.

And the Company do hereby agree to ratify and confirm all acts, deeds, things or proceedings as may be lawfully done by the said attorney and by or on behalf of the company and in the name of the company, by virtue of the powers conferred herein and the same shall be binding on the company and shall have full force and effect.

IN WITNESS WHEREOF the common seal of the company has been hereunto affixed in the manner hereinafter appearing on the document.

Dated at _____, this _____ day of _____

Director/CMD/Partner/Proprietor

Signature of Mr.....(Attorney)

Attested by: Director/CMD/Partner/Proprietor

Witness

Notary Public

ANALYSIS OF UNIT RATES QUOTED

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

Offer Reference No:.....

Date:.....

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub : Analysis of Unit Rates Quoted

Ref : Tender Specification No:

Analysis of Unit Rates quoted by us in respect of above Tender is as detailed

SN	DESCRIPTION	% OF QUOTED RATE	REMARKS
01	SITE FACILITIES VIZ., ELECTRICITY, WATER OTHER INFRASTRUCTURE.		
02	SALARY AND WAGES + RETRENCHMENT BENEFITS		
03	CONSUMABLES		
04	T&P DEPRECIATION & MAINTENANCE		
05	ESTABLISHMENT & ADMINISTRATIVE EXPENSES		
06	OVERHEADS		
07	PROFIT		
	TOTAL	100%	

Yours faithfully,

(Signature, Date & Seal of Authorized Representative of the Bidder)

BHARAT HEAVY ELECTRICALS LIMITED**DIVISION.....****Running Account Bill**

(Para 4.31.1 of Works Accounts Manual)

Name of the Contractor:

Name of the Work:

Sanctioned Estimate:

Code No:

Contract Agreement No :

Dated:

Departmental Bill no:

Division:

Date of written order to commence the work :

Date of commencement of the Work:

Due date of completion as per Agreement:

Date:

Sub-Division:

1. ACCOUNT OF WORK EXECUTED

On account payment for work not previously previously measured**			Item No of	Description of Work	Quantity as per agree- ment	Quantity executed up to date	Rate	Unit	Payment on the basis of actual measure- ment up to date	Quantity since last running account bill	Payment on the basis of actual measurement since last running account bill		Remarks
Total	since last	Total									Rs.	P.	
As per	running	up to											
Running	account	date											
Account	bill												
bill													
Rs.	Rs.	Rs.					Rs.	P.	Rs.	P.	Rs.	P.	
1	2	3	4	5	6	7	8	9	10	11	12	13	

* *1. Whenever payment is made on 'on account' basis without actual measurements the amount in whole rupees should be entered in columns 1 to 3 only and not in columns 7 to 12.

2. whenever there is an entry in column 12 on the basis of actual measurement, the whole of the amount previously paid without detailed measurement should be adjusted by a minus entry in column 2 equivalent to the amount shown in column 1, so that the total up to date in column 4 may become nil.

1	2	3	4	5	6	7	8	9	10	11	12	13
---	---	---	---	---	---	---	---	---	----	----	----	----

Total value of work done up to date (A) ...

Deduct value of work shown on the last Running Account Bill (B) ...

Net value of work done since last (C) ...

Rupees (in words)only.

II.MEMORANDUM OF PAYMENTS

		I		II	
		Rs.	P.	Rs.	P.
1.Total value of work actually measured as per Account No. I. Column 10	(A)	.....			.....
2.Total up to date 'on account' payment for work covered by approximate Or plan measurements as per Account No. I, Column 3	(B)	.....			.....
3.Total up to date secured advances on security of materials as per column 8 Of the enclosed Account (Form WAM 10)	(C)	.....			.....
4.Total up to date payments [(A) + (B) + (C)]	(D)	.....			.....
5.Total amount of payments already made as per Entry (D) of last Running Account Bill No..... Dated.....forwarde to the Accounts Office on	(E)				
6.Balance [(D)-(E)]			.....		
7.Payments now to be made:					
a) by cash/cheque				.....	
b) by deduction for value of materials supplied				.....	
c) by BHEL vide Annexure A attached				.....	
d) by deduction for hire of tools and plant vide Annexure B attached				.....	
e) by deduction for other charges vide Annexure C Attached				.....	
f)by deduction on account of security deposit				.....	
h) by deduction on account of Income Tax				.....	.....

Note: Amounts relating to items 4 to 6 above should be entered in column II and those relating to item 7 in column I. The amount shown against item 6 and the total of item 7 should agree with each other.

III. CERTIFICATE OF THE ENGINEER IN CHARGE

Form WAM 6 (contd...)

1. The measurements on which the entries in column 7 to 12 of Part I of this Bill (Account of work executed) are based were made by.....and are recorded at pages.....of

(Name and Designation)

Measurement Book No

2. Certified that the methods of measurement are correct and the work has been carried out in accordance with the terms and conditions, schedules, specifications and drawings etc, forming part of the contract agreement, subject to deviations included in the deviation statement (Annexure D).
3. Certified that in addition to and quite apart from the quantities of work actually executed as shown in column 10 of Part I, some work has actually been done in connection with several items and the value of the such work is, in no case, less than 'on account' payments as per column 3 of Part I, made or proposed to be made, for the convenience of the contractor in anticipation of, and subject to the results of, detailed measurement which will be made as soon as possible.

Signature of Contractor

Date:

Signature of Engineer in charge

Designation:

Date:

IV. CERTIFICATE OF THE SENIOR ENGINEER

1. Certified that measurements have been check measured to the prescribed extent byat site and also by the undersigned and the relevant entries have been intialled in the Measurement book. (vide pages.....)
- (Name and Designation)

2. Certified that all the measurements recorded in the measurement book have been correctly billed for
3. Certified that all recoberable amounts in respect of materials tools and plant etc, and other charges have been correctly made vide

Annexures A to C attached.

Certified for payment * of Rs.....(Rupees.....only)

To be paid in cash/by cheque in the presence of

ALLOCATION

The expenditure is chargeable as under and to be included in the accounts for.....20.....

Ledger Head

Debit (Gross amount)

Credit (Deductions)

Rs. P.

Rs. P.

Total

* Here specify the net amount payable.

Signature of Senior Engineer

Date:

V.ENTRIES TO BE MADE IN THE ACCOUNTS OFFICE

Accounts Bill NoDated.....
 Entered in Journal Book vide entry No.....Dated.....
 Passed for.....Rs.....
 Less Deductions.....Rs.....
 Net Amount Payable.....Rs.....
 (Rupees.....only)
 Payable to Shri/M/s.....by cheque/cash
 Entered in Contractor's Ledger No.....Page.....

ALLOCATION					Code no:	
Estimate No:		Name of the Work:				
Ledger Head	Debit		Credit			
	(Gross amount)		(Deductions)			
	Rs.	P.	Rs.	P.		
-----	-----	-----	-----	-----		
	-----	-----	-----	-----		
Total	-----	-----	-----	-----		

Assistant Accountant Account Officer
 Date: Date: Date:

VI. Received Rs.....(Rupees.....only) as per
 Memorandum of Payments on account of this work.

Signature of witness
 Address :
 Date:

Revenue
 Stamp
 Signature of Contractor
 Date:

VII. ENTRIES TO BE MADE BY TREASURY SECTION

Cash Book entry No. and date:

Amount paid Rs.....
 Amount unpaid Rs.....
 Total Rs.....

Signature of Cashier
 Date:

ANNEXURE A

Statement showing details of materials issued to the contractor Shri/M/s.....

In respect of Contract Agreement NoDated.....

Sl. No.	Stores issue Voucher No. and date	Issue voucher No. and date allotted by stores to the SIV	Description of material issued to the contractor	Quantity issued	Quantity actually incorporated in the work	Whether recoverable from the contractor or supplied free	If recoverable from the contractor				R E M A R K S
							Rate at which recoverable	Amount recoverable	Amount recovered up to previous bill	Balance now recovered	
							Rs. P.	Rs. P.	Rs. P.	Rs. P.	
1	2	3	4	5	6	7	8	9	10	11	12

Total

Signature of contractor
Date:Signature of Engineer in Charge
Date:Signature of Senior Engineer
Date:

ANNEXURE B

Statement showing tools and plant issued to the contractor Shri/M/s.....

In respect of Contract Agreement NoDated.....

Sl. No	Description of tools and plant issued	Period for which Issued	Rate at which recovery Is to be Made		Amount recover- able		Amount recovered upto previous bill		Balance now recovered		Remarks
			Rs.	P.	Rs.	P.	Rs.	P.	Rs.	P.	
1	2	3	4	5	6	7	8	9	10	11	12

Total

Signature of contractor
Date:Signature of Engineer in Charge
Date:Signature of Senior Engineer
Date:

ANNEXURE C

Statement showing details of other recoveries to be made from the contractor Shri/M/s.....

In respect of Contract Agreement NoDated.....

Sl. No	Particulars	Unit	Quantity	Rate		Amount recoverable		Amount recovered upto previous bill		Amount now recovered		Remarks
				Rs.	P.	Rs.	P.	Rs.	P.	Rs.	P.	
1	2	3	4	5		6		7		8		9
1.			Water Charges									
2.			Electricity charges									
3.			Seignorage charges									
4.			Medical charges									
5.			Cost of empty gunny bags and									
	Empty containers not returned											
6.												
7.												
8.												
9.												
10.												
Total						-----						

Signature of contractor
Date:Signature of Engineer in Charge
Date:Signature of Senior Engineer
Date:

ANNEXURE D

Name of the Contractor:

Contract Agreement No:

Name of the Work:

Date:

Sl. No.	Description of item	Unit	Quantity as per Agreement	Quantity as executed	Quantity further anticipated	Total quantity anticipated on completion	Rate as per agreement Rs. P.
1	2	3	4	5	6	7	8

Rate as executed	Amount as per agreement	Amount as executed	Amount further anticipated	Total amount anticipated on completion	Difference				Reason for the deviation with authority, if any
Rs. P.	Rs. P.	Rs. P.	Rs. P.	Rs. P.	Excess Rs. P.	savings Rs. P.			
9	10	11	12	13	14	15			16

Signature of Engineer in Charge
Date:

Signature of Senior Engineer
Date:

BHARAT HEAVY ELECTRICALS LIMITED

DIVISION.....

.....And Final bill

(Para 4.3.2 Of Works Accounts Manual)

Name of Contractor		Departmental Bill no		Date	
Name of the Work		Division		Division	
Sanctioned Estimate		Date of written order to commence the work			
Contract Agreement/work Order No		Date of commencement of work			
		Due date of completion as per agreement			
		Date of actual completion of the work			

I. ACCOUNT OF WORK EXECUTED

On Account payment for the work not previously measured **												
Total as per last running account bill Rs.	Since last running account bill Rs	Total up to date Rs	Item No of the agreement/work order	Description of work	Quantity as per agreement	Quantity executed up to date	Rate Rs. P	Unit	Payment on the basis of actual measurement up to date Rs P	Quantity since last running account bill	Payment on the basis of actual measurement since last running account bill Rs P	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13

1	2	3	4	5	6	7	8	9	10	11	12	13
---	---	---	---	---	---	---	---	---	----	----	----	----

Total Value of Work Done up to date	(A)	
Deduct Value of work shown on the last running account bill	(B)	
Net value of work done since last running account bill	(C)	
Rupees (In Words).....Only		

II MEMORANDUM OF PAYMENT

		Rs.	P
1	Total Value of work actually measured as per Account no I coloumn 10	(A)	
	Deduct amount of paym,ents already made as per last running account bill No Dated.....		
2	Forwarded to the Accounts Office on	(B)	
3	Payments now to be made { (A) - (B)}	(C)	
4	Deduct ammounts recoverable from the contractor on account of :	Rs	P
	a Material suplied by BHEL vide annexure A attached		
	b Hire of Tools & Plants vide Annexure B attached		
	c Other charges vide Annexure C attached		
	d Income Tax		
	Total deduction		
5	Balance		
6	Refund of 50% of security deposite on completion of work		
7	Net amount to be paid to the Contractor		

III. CERTIFICATE OF THE ENGINEER IN CHARGE

The measurement on which the entries in coulms 7 to 12 of Part I of this bill (Account of work executed) are based were made by

- 1 (Name and designation)
- 2 A statement showing the quantities of stores issued to the contractor (whether free or on recovery basis) and their disposal is attached.

Date:

Signature of Engineer in charge
Designation

IV CERTIFICATE OF THE SENIOR ENGINEER

1 Certified that I have personally inspected the work and that the work has been physically completed on the due date in accordance with the terms and
Cretified that the measurements have been check measured to the prescribed extent by
..... (Name & designation). And by the the undersigned at site and relevent entries have been initiated in the measurement book (vide
2 pages.....)

3 Certified that the methods of measurement are correct

4 Certified that the measurements have been technically checked with reference to contract drawings, deviations etc

5 Certified that all the measurements recorded in the measurement book have been correctly billed for at the contract rates or approved rates.

6 Certified that all the recoverable amounts in respect of stores, tools and pallant, e\water, electricity charges etc, have been correctly made vide Annexures A

7 Certified that the issues of all stores as per statement atyatched (whether charged to the contractor or direct to the work) have been technically checked and

Certified for payment of * Rs (Rupees.....) (Only). To be paid in
cash/by cheque in the presence of

ALLOCATION

The expenditure as under and to be included in the accounts for19

Ledger Head	Debit (Gross Amount) Rs. P	Credit (Deduction) Rs. P
.....		
Total		

* Here specify the net amount payable

Signature of Senior Engineer
Date

V. ENTRIES TO BE MADE IN THE ACCOUNTS OFFICE

Account Bill no..... Dated
 Entered in Journal book vide entry No.....Dated.....
 Passed for.....Rs.....
 Less Deductions.....Rs.....
 (Rupees.....Only)
 Payable to Shri/M/s..... by cheque/cash
 Entered in contractors' Ledger no..... Page

Assistant Accountant Accounts officer
 Date: Date: Date:

ALLOCATION
 Estimate No: Code No
 Name of the Work

Ledger Head	Debit (Gross Amount) Rs P	Credit (Deduction) Rs
.....		
Total		

VI. Received Rs.....(Rupees.....Only) in full and final settlement of all moneys due under this contract and I / we have no further claims of this contract.

Signature of Witness
 Address

Revenue Stamp
 Signature of Contractor
 Date:

VII . ENTRIES TO BE MADE BY TREASURY SECTION

Cash book entry no and date :

Amount Paid Rs.....
 Amount unpaid Rs.....
 Total Rs.....

Signature of Cashier
 Date:

ANNEXURE A

Part I

Statement showing details of material issued to the contractor Shri/M/s..... In respect of Contract Agreement/Work Order No..... Dated

SI No	Stores Issue voucher No and date	Issue voucher No and date alloted by stores to the SIV	description of material issued to the contractor	Quantity issued	Quantity actually incorporated in the work	Whether recoverabl e from the contractor or supplied free	Rate at which recoverable		Amount Recoverabl e		Amount recoverable upto previous bill		Balance Now recovered		Remarks
							Rs	P	Rs	P	Rs	P	Rs	P	
1	2	3	4	5	6	7	8		9		10		11		12

Total

Signature of Contractor
Date

Signature of Engineer in charge
Date

Signature of Senior Engineer
Date

ANNEXURE A

Part II

Statement showing details of material issued to the contractor Shri/M/s..... in respect of Contract Agreement/Work Order No..... Datedand not covered by the agreement

SI No	Stores Issue voucher No and date	Issue voucher No and date alloted by stores to the SIV	description of material issued to the contractor	Quantity issued	Quantity actually incorporated in the work	Issue Rate		Amount Recoverabl e		Amount recoverable upto previous bill		Balance Now recovered		Remarks
						Rs	P	Rs	P	Rs	P	Rs	P	
1	2	3	4	5	6	7		8		9		10		11

Total

Add Departmental Charges

Add Sales Tax (wherever applicable)

Total

Signature of Contractor
Date

Signature of Engineer in charge
Date

Signature of Senior Engineer
Date

ANNEXURE B

Statement showing TOOLS & PLANTS issued to the contractor Shri/M/s..... in respect of Contract Agreement/Work Order No..... Datedand not covered by the agreement

SI No 1	Description of tools & plants issued 2	Period for which issued 3	Rate at which Recivry is to be made 4	Amount recoverabl e Rs P 5		Amount recoverable upto previous bill Rs P 6		Balance Now recovered Rs P 7		Remarks 8

Total

Signature of Contractor
Date

Signature of Engineer in charge
Date

Signature of Senior Engineer
Date

ANNEXURE C

showing detail of other recoveries to be made from the contractor Shri/M/s.....
 nent/Work Order No.....Dated.....

Sr.No	Particulars	Unit	Quantity	Rate Rs. P.	Amount recoverable Rs. P	Amount recovered upto previous bill Rs. P.	Amount now recovered Rs. P.	Remarks
1	2	3	4	5	6	7	8	9
	1 Water Charges							
	2 Electricity Charges							
	3 Seignorage Charges							
	4 Medical Charges							
	Cost of empty gunny bags and empty containers not 5 returned							
	6							
	7							
	8							
	9							
	10							
Total								

Signature of Contractor
Date

Signature of Engineer Incharge
Date

Signature of Sr. Engineer
Date

ANNEXURE D -
DEVIATION STATEMENT :

Name of the Contractor :

Contract Agreement/Work Order No. :

Name of the Work :

Date :

Sl. No.	Description of item	Unit	Quantity as per agreement	Quantity as executed	Rate as per agreement Rs. P.	Rate as executed Rs. P.	Amount as per agreement Rs. P.	Amount as executed Rs. P.	Difference		Reason for the deviation with authority, if any
									Excess	Savings	
1	2	3	4	5	6	7	8	9	10	11	12

Signature of Engineer in Charge

Date :

Signature of Senior Engineer

Date :

ANNEXURE E

Statement showing the consumption of materials issued to the contractor Shri/M/s.....
in respect of Contract Agreement/Work Order No..... Dated.....

Name of the Work :

ON RECOVERY BASIS

Sl. No.	Description of material	Unit	Quantity actually issued	Quantity actually incorporated in the work	Balance	Particulars of disposal of balance	Quantity to be issued as per approved data for work actually done	Variation in consumption (Difference between column 5 and 8)		Rate chargeable for excess/short consumption, if any	Amount recoverable for excess/short consumption, including materials not returned	
								More	Less	Rs. P.	Rs. P.	
1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Cement											
2.	Bricks											
3.	Wood.....											
4.	Asbestos Sheet											
5.	Iron Materials											
6.												
7.												
8.												
9.												
10.												

Signature of Contractor

Date :

Signature of Engineer in Charge

Date :

Signature of Senior Engineer

Date :

Note : 1. The quantities shown in columns 4 and 5 above should tally with those shown in columns 5 and 6 respectively of Annexure A (Part I and II).

2. Data statement of theoretical consumption should be attached in support of quantity specified in column 8.

ANNEXURE F

Statement showing detail of materials issued to the contractor Shri/M/s.....

Subject of Contract Agreement/Work Order No.....Dated.....

Name of work;

FREE OF COST

Sr.No	Stores issue voucher No.	Description of material	Unit	Quantity issued	Quantity required as per data	Quantity consumed in the work	Balance(If any)	Nature of disposal for the balance	Rate chargeable for material not returned Rs.P.	Amount recovera ble for material not returned Rs. P	Remarks
1	2	3	4	5	6	7	8	9	10	11	12

Total

Signature of Contractor
Date

Signature of Engineer Incharge
Date

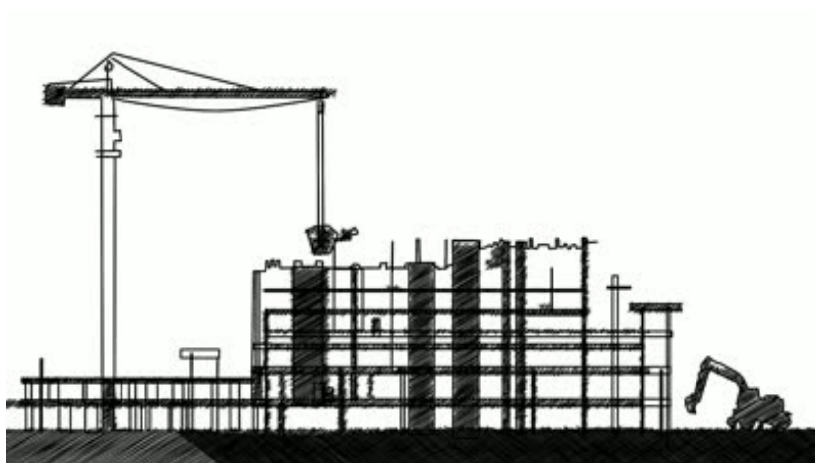
Signature of Sr. Engineer
Date

Note: Data statement of theoretical consumption should be attached in support of the quantity specified in column 6

QUESTIONNAIRE TO BE ANSWERED BY ENGINEER IN CHARGE AND SENIOR ENGINEER	
(Correct particulars and answers to be recorded)	
Name of the work :	
Name of the Contractor :	
Date of commencement of the work:	
Contract agreement/work ordered no. and date:	
Reference to supplementary agreement no,if any :	
Whether administrative approval and technical sanction has been accorded by the competent authority ? If so ,cite reference	
Whether sanction of the competent authority and financial concurrence of the Accounts Department for award of the work has been accorded ? If so,cite reference.	
Whether the work has been completed in time ? If not ,whether penalty has been levied or sanction of the competent authority for extension of time granted and communicated to the Accounts Department with reasons for grant of extension? (Due and actual date of completion of the work and reference to letter no. and date granting the extension of time should be given)	
(a) Whether the rates allowed in the bill have been checked with the contract agreement ? (b) Whether the rates for extra/supplemental items have been approved by the competent authority and the sanction communicated to the accounts Department together with rate analysis? If so,cite reference.	
Whether deviations have been approved by the competent authority? If yes, give reference to the approval; if not, give reasons.	
Whether the rates of recovery of stores issued to the contractor which are not provided for in the Contract Agreement have been settled in consultation with Finance?	
Whether discrepancies pointed out by the Accounts Department in the store statement have been reconciled and accepted by the Accounts Department?	

QUESTIONNAIRE TO BE ANSWERED BY ENGINEER IN CHARGE AND SENIOR ENGINEER	
(Correct particulars and answers to be recorded)	
Whether materials issued to the contractor in excess of the theoretical requirements have been returned to the Stores Department and the no. and date of such returned stores vouchers have been shown in stores statement? If not, whether the cost of such excess material has been recovered at the prescribed rate? Whether consumption statements in respect of materials chargeable to the work have been attached to the bill?	
Whether consumption of materials shown has been technically checked by Senior Engineer?	
Whether materials issued and used in the work is not less than that required for consumption in work according to our specification? If consumption is less, whether necessary recovery has been made in the bill?	
Whether measurements have been checked by the Engineer and Sr. Engineer to the extent required and certificates of check recorded in the measurement books?	
Whether contractor has signed the bill and the measurement books without reservations? If not, whether reasons have been intimated to the Accounts Department?	
Whether arithmetical calculations have been checked and certificate recorded in the measurement books by a person other than the one who calculated initially	
Whether any work was done at the risk and cost of the contractor and whether such cost has been recovered from him? Give particulars.	
Whether all advance payments on running Accounts have been recovered?	
Whether all the recoveries due to services given to the contractor like rent of accommodation, water charges, electricity charges etc. have been recovered and whether payments made by the company on behalf of the contractor have been adjusted?	
Whether the files containing abstracts from measurement books/ standard measurement books have been completed/ updated?	
Whether hire charges of tools and plant have been recovered and the statement of hire charges with full details attached?	

QUESTIONNAIRE TO BE ANSWERED BY ENGINEER IN CHARGE AND SENIOR ENGINEER	
(Correct particulars and answers to be recorded)	
Whether the certificate of workmanship and completion of work according to specifications, drawings etc. is recorded by Engineer/ Sr. Engineer and whether recoveries have been made for defective works, if any?	
Whether all corrections in the bill/measurement books etc. have been neatly made and attested and there are no overwriting?	
Whether final measurements have been taken as soon as possible after completion of work and the certificate of completion issued? If not, whether reasons for delay have been recorded and communicated to Accounts?	
In respect of quantities reduced in the final bill as compared to the running payment, whether adequate reasons have been recorded and communicated to Accounts	
Whether the expenditure has been classified correctly according to heads of Account recorded in the sanctioned estimate?	
Whether the work has been completed within the estimated cost? If not, what is the percentage of excess over the sanctioned estimate/ administrative approval? In case the excess is beyond the competency of Sr. Engineer, what action has been taken for the obtaining the approval of the authority competent to sanction the excess?	
(a) If the contractor has furnished bank guarantee in lieu of cash security deposit towards proper execution of works and guarantee against defects during the maintenance period, whether the period of currency of the bank guarantee covers the entire maintenance period? (b) If not, whether security deposit has been proposed to be recovered from the final bill?	
Whether all the previous audit objections raised on running Account bills have been settled? If so, cite reference.	
Signature of Engineer in Charge	Signature of Engineer in Charge
Date:	Date:



HEALTH, SAFETY and ENVIRONMENT PLAN

for

**SITE
OPERATIONS**

by

**SUB-
CONTRACTORS**

POWER SECTOR

HSE PLAN FOR SITE OPERATIONS BY BHEL'S SUBCONTRACTORS

AT A GLANCE

BEFORE START	SIGNING OF MOU	
	Agree to comply to HSE requirement- Statutory and BHEL's	
PLAN	HSE ORGANISATION	
	Manpower 1 (one) safety officer for every 500 workers or part thereof 1(one) safety-steward/ supervisor for every 100 workers Qualification As per Cl. 7.1	HSE Roles and responsibilities - Site In-charge- As per clause 7.2.1 - Safety officer- As per clause 7.2.2
PROVIDE	HSE Planning	
	for Man , Machinery/Equipment/Tools & Tackles	
TRAIN	HSE INFRASTRUCTURE	
	- PPEs - Drinking Water - Washing Facilities - Latrines and Urinals - Provision of shelter for rest - Medical facilities	- Canteen facilities - Labour Colony - Emergency Vehicle - Pest Control - Scrapyard - Illumination
COMMUNICATE	HSE TRAINING , AWARENESS & PROMOTION	
	Training - Induction training - Height work and other critical areas - Tool Box talk & Pep Talk	Awareness & Promotion - Signage - Poster - Banner - Competition - Awards
	HSE COMMUNICATION	
	Incident Reporting - Accident- Fatal & Major - Property damage - Near Miss	Event Reporting - Celebrations - Training - Medical camp

EXECUTE SAFELY

OPERATIONAL CONTROL PROCEDURES

PERMIT TO WORK

Height work (above 2 metres), Hot Work, Heavy Lifting, Confined Space, Radiography, excavation(More than 4 metres)

SAFETY DURING WORK EXECUTION

- | | |
|--|---|
| <ul style="list-style-type: none"> • Welding • Rigging • Cylinder- storage & Movement • Demolition work • T&Ps • Chemical Handling • Electrical works | <ul style="list-style-type: none"> • Fire • Scaffolding • Height work • Working Platform • Excavation • Ladder • Lifting • Hoisting appliance |
|--|---|

HOUSE KEEPING

WASTE MANGEMENT

TRAFFIC MANAGEMENT

ENVIRONMENTAL CONTROL

EMERGENCY PREPAREDNESS AND RESPONSE PLAN

CHECKS

HSE AUDITS & INSPECTION

- | | |
|---|---|
| <ul style="list-style-type: none"> • Daily Checks • Inspection of PPEs • Inspection of T& Ps • Inspection of Cranes & Winches | <ul style="list-style-type: none"> • Inspection of Height work • Inspection of Welding and Gas cutting • Inspection of elevators etc |
|---|---|

HSE PERFORMANCE EVALUATION PARAMETERS

NON CONFORMANCE

PENALTY for NON CONFORMANCE

Refer Clause 16

Incremental penalty

For repeated violation by the same person, the penalty would be double of the previous penalty

For repeated fatal incident in the same Unit incremental penalty to be imposed. The subcontractor will pay 2 times the penalty compared to previously paid in case there are repeated cases of fatal incidents under the same subcontractor for the same package in the same unit.



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1.0 PURPOSE

- 1.1 The purpose of this HSE Plan is to provide for the systematic identification, evaluation, prevention and control of general workplace hazards, specific job hazards, potential hazards and environmental impacts that may arise from foreseeable conditions during installation and servicing of industrial projects and power plants.
- 1.2 This document shall be followed by BHEL's subcontractors at all installation and servicing sites. In case customer specific documents are to be implemented, this document will be followed in conjunction with customer specific documents.
- 1.3 Although every effort has been made to make the procedures and guidelines in line with statutory requirements, in case of any discrepancy relevant statutory guidelines must be followed.
- 1.4 In case the customer has any specific requirement, the same is to be fulfilled.

2.0 SCOPE

The document is applicable for BHEL's Subcontractors at all installation / servicing activities of BHEL Power Sector as per the relevant contractual obligations.

3.0 OBJECTIVES AND TARGETS

The HSE Plan reflects that BHEL places high priority upon the Occupational Health, Safety and Environment at workplaces.

- Ensure the Health and Safety of all persons at work site is not adversely affected by the work.
- Ensure protection of environment of the work site.
- Comply at all times with the relevant statutory and contractual HSE requirements.
- Provide trained, experienced and competent personnel. Ensure medically fit personnel only are engaged at work.
- Provide and maintain plant, places and systems of work that are safe and without risk to health and the environment.
- Provide all personnel with adequate information, instruction, training and supervision on the safety aspect of their work.
- Effectively control, co-ordinate and monitor the activities of all personnel on the Project sites including subcontractors in respects of HSE.
- Establish effective communication on HSE matters with all relevant parties involved in the Project works.
- Ensure that all work planning takes into account all persons that may be affected by the work.
- Ensure fitness testing of all T&Ps/Lifting appliances like cranes, chain pulley blocks etc. are to be certified by competent person.
- Ensure timely provision of resources to facilitate effective implementation of HSE requirements.
- Ensure continual improvements in HSE performance
- Ensure conservation of resources and reduction of wastage.
- Capture the data of all incidents including near misses, process deviation etc. Investigate and analyze the same to find out the root cause.
- Ensure timely implementation of correction, corrective action and preventive action.



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HSE TARGETS

EXPLOSION	ZERO
FATALITY	ZERO
LOST TIME INJURY	ZERO
FIRE	ZERO
VEHICLE INCIDENTS	ZERO
ENVIRONMENTAL INCIDENTS	ZERO

4.0 BHEL POWER SECTOR HEALTH, SAFETY & ENVIRONMENT POLICY

Power Sector HSE Policy

We, at BHEL Power Sector, reaffirm our belief that the Health and Safety of our stakeholders and conservation of Environment is of utmost importance and takes precedence in all our business decisions. In pursuit of this belief and commitment, we strive to:

- ✓ Ensure total compliance with applicable legislation, regulations and other requirements concerning Occupational Health, Safety and Environment.
- ✓ Ensure continual improvement in the Occupational Health, Safety and Environment Management System performance.
- ✓ Enhance Occupational Health, Safety and Environment awareness amongst employees, customers and suppliers by proactive communication and training.
- ✓ Review periodically and improve Occupational Health, Safety and Environment Management System to ensure its continuing suitability, adequacy and effectiveness in a continuously changing business environment.
- ✓ Develop a culture of safety through active leadership and provide appropriate training at all levels to enable employees to fulfill their Health, Safety and Environmental obligations.
- ✓ Incorporate appropriate Occupational Health, Safety and Environmental criteria into business decisions for selection of plant, technology and services as well as appointment of key personnel.
- ✓ Ensure availability at all times of appropriate resources to fully implement the Occupational Health, Safety and Environmental policy of the company.

This policy will be communicated to all employees and made available to interested parties.

Sd/-

Date: 01.05.2013

Director (Power)

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5.0 MEMORANDUM OF UNDERSTANDING:

After award of work, subcontractors are required to enter into a memorandum of understanding as given below:

Memorandum of Understanding

BHEL, Power Sector _____ Region is committed to Health, Safety and Environment Policy (HSE Policy).

M/s _____ do hereby also commit to comply with the same HSE Policy while executing the Contract Number _____

M/s _____ shall ensure that safe work practices as per the HSE plan. Spirit and content therein shall be reached to all workers and supervisors for compliance.

In addition to this, M/S _____ shall comply to all applicable statutory and regulatory requirements which are in force in the place of project and any special requirement specified in the contract document of the principal customer.

M/s _____ shall co-operate in HSE audits/inspections conducted by BHEL /customer/ third party and ensure to close any non-conformity observed/reported within prescribed time limit.

Signed by authorized representative of M/s -----

Name :

Place & Date:



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6.0 TERMS AND DEFINITIONS

6.1 DEFINITIONS

6.1.1 INCIDENT

Work- related or natural event(s) in which an injury , or ill health (regardless of severity), damage to property or fatality occurred, or could have occurred.

6.1.2 NEAR MISS

An incident where no ill health, injury, damage or other loss occurs, but it had a potential to cause, is referred to as "Near-Miss".

6.1.3 MAN-HOUR WORKED

The total number of man hours worked by all employees including subcontractors working in the premises. It includes managerial, supervisory, professional, technical, clerical and other workers including contract labours. Man-hours worked shall be calculated from the payroll or time clock recorded including overtime. When this is not feasible, the same shall be estimated by multiplying the total man-days worked for the period covered by the number of hours worked per day. The total number of workdays for a period is the sum of the number of men at work on each day of period. If the daily hours vary from department to department separate estimate shall be made for each department and the result added together.

6.1.4 FIRST AID CASES

First aids are not essentially all reportable cases, where the injured person is given medical treatment and discharged immediately for reporting on duty, without counting any lost time.

6.1.5 LOST TIME INJURY

Any work injury which renders the injured person unable to perform his regular job or an alternative restricted work assignment on the next scheduled work day after the day on which the injury occurred.

6.1.6 MEDICAL CASES

Medical cases come under non-reportable cases, where owing to illness or other reason the employee was absent from work and seeks Medical treatment.

6.1.7 TYPE OF INCIDENTS & THEIR REPORTING:

The three categories of Incident are as follows:

Non-Reportable Cases:

An incident, where the injured person is given medical help and discharged for work without counting any lost time.



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Reportable Cases:

In this case the injured person is disable for 48 hours or more and is not able to perform his duty.

Injury Cases:

These are covered under the heading of non-reportable cases. In these cases the incident caused injury to the person, but he still continues his duty.

6.1.8 TOTAL REPORTABLE FREQUENCY RATE

Frequency rate is the number of Reportable Lost Time Injury (LTI) per one Million Man hours worked. Mathematically, the formula read as:

$$\frac{\text{Number of Reportable LTI} \times 1,000,000}{\text{Total Man Hours Worked}}$$

6.1.9 SEVERITY RATE

Severity rate is the Number of days lost due to Lost Time Injury (LTI) per one Million Man hours worked. Mathematically, the formula reads as:

$$\frac{\text{Days lost due to LTI} \times 1,000,000}{\text{Total Man Hours Worked}}$$

6.1.10 INCIDENCE RATE

Incidence Rate is the Number of LTI per one thousand manpower deployed. Mathematically, the formula reads as:

$$\frac{\text{Number of LTI} \times 1000}{\text{Average number of manpower deployed}}$$

7.0 HSE ORGANISATION

Number of safety officers:

The subcontractor must deploy one safety officer for every 500 workers or part thereof in each package. In addition, there must be one safety-steward/safety-supervisor for every 100 workers.

Deployment: The subcontractor should deploy sufficient safety officers and safety-steward/Safety-supervisor, as per requirement given above, since initial stage and add more in proportion to the added strength in work force. Any delay in deployment will attract a penalty of Rs.30,000/- per man month for the delayed period.

7.1 QUALIFICATION FOR HSE PERSONNEL

Sl.no	Designation	Qualification	Experience
1	Safety officer (Construction Agency)	Degree or Diploma in Engineering with full time diploma in Industrial Safety with construction safety as one of the subjects	Minimum two years for degree holder and five years for diploma holder in the field of Construction of power plant/ major industries

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2	Safety-Steward/ Supervisor	Safety- Supervisor	Degree or diploma in any discipline with full time diploma in Industrial Safety with construction safety as one of the subjects	Minimum two years
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7.2 RESPONSIBILITIES

7.2.1 SITE IN -CHARGE OF SUBCONTRACTOR

- Shall sign Memorandum of Understanding (MoU) for compliance to BHEL's HSE Plan for Site Operations as per clause 5.0
- Shall engage qualified safety officer(s) and steward (s) as per clause 7.0
- Shall adhere to the rules and regulations mentioned in this code, practice very strictly in his area of work in consultation with his concerned engineer and the safety coordinator.
- Shall screen all workmen for health and competence requirement before engaging for the job and periodically thereafter as required.
- Shall not engage any employee below 18 years.
- Shall arrange for all necessary PPEs like safety helmets, belts, full body harness, shoes, face shield, hand gloves etc. before starting the job. Shall ensure that no working men/women carry excessive weight more than stipulated in Factory Rule Regulation R57.
- Shall ensure that all T&Ps engaged are tested for fitness and have valid certificates from competent person.
- Shall ensure that provisions stipulated in contract Labour Regulation Act 1970, Chapter V C.9, canteen, rest rooms/washing facilities to contracted employees at site.
- Shall adhere to the instructions laid down in Operation Control Procedures (OCPs) available with the site management.
- Shall ensure that person working above 2.0 meter should use Safety Harness tied to a life line/stable structure.
- Shall ensure that materials are not thrown from height. Cautions to be exercised to prevent fall of material from height.
- Shall report all incidents(Fatal/Major/Minor/Near Miss)to the Site engineer /HSE officer of BHEL.
- Shall ensure that Horseplay is strictly forbidden.
- Shall ensure that adequate illumination is arranged during night work.
- Shall ensure that all personnel working under subcontractor are working safely and do not create any Hazard to self and to others.
- Shall ensure display of adequate signage/posters on HSE.
- Shall ensure that mobile phone is not used by workers while working.
- Shall ensure conductance of HSE audit, mockdrill, medical camps, induction training and training on HSE at site.
- Shall ensure full co-operation during HQ/External /Customer HSE audits.

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- Shall ensure submission of look-ahead plan for procurement of HSE equipment's and PPEs as per work schedule.
- Shall ensure good housekeeping.
- Shall ensure adequate valid fire extinguishers are provided at the work site.
- Shall ensure availability of sufficient number of toilets /restrooms and adequate drinking water at work site and labour colony.
- Shall ensure adequate emergency preparedness.
- Shall be member of site HSE committee and attend all meetings of the committee
- Power source for hand lamps shall be maximum of 24 v.
- Temporary fencing should be done for open edges if Hand – railings and Toe-guards are not available.

7.2.2 HEALTH, SAFETY AND ENVIRONMENT OFFICER OF SUBCONTRACTOR

- Carry out safety inspection of Work Area, Work Method, Men, Machine & Material, P&M and other tools and tackles.
- Facilitate inclusion of safety elements into Work Method Statement.
- Highlight the requirements of safety through Tool-box / other meetings.
- Help concerned HOS to prepare Job Specific instructions for critical jobs.
- Conduct investigation of all incident/dangerous occurrences & recommend appropriate safety measures.
- Advice & co-ordinate for implementation of HSE permit systems, OCPs & MPs.
- Convene HSE meeting & minute the proceeding for circulation & follow-up action.
- Plan procurement of PPE & Safety devices and inspect their healthiness.
- Report to PS Region/HQ on all matters pertaining to status of safety and promotional program at site level.
- Facilitate administration of First Aid
- Facilitate screening of workmen and safety induction.
- Conduct fire Drill and facilitate emergency preparedness
- Design campaigns, competitions & other special emphasis programs to promote safety in the workplace.
- Apprise PS– Region on safety related problems.
- Notify site personnel non-conformance to safety norms observed during site visits / site inspections.
- Recommend to Site In charge, immediate discontinuance of work until rectification, of such situations warranting immediate action in view of imminent danger to life or property or environment.
- To decline acceptance of such PPE / safety equipment that do not conform to specified requirements.
- Encourage raising Near Miss Report on safety along with, improvement initiatives on safety.
- Shall work as interface between various agencies such customer, package-in-charges, subcontractors on HSE matters

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8.0 PLANNING BY SUBCONTRACTOR

8.1 MOBILISATION OF MACHINERY/EQUIPMENT/TOOLS BY SUBCONTRACTOR

- As a measure to ensure that machinery, equipment and tools being mobilized to the construction site are fit for purpose and are maintained in safe operating condition and complies with legislative and owner requirement, inspection shall be arranged by in-house competent authority for acceptance as applicable.
- The machinery and equipment to be embraced for this purpose shall include but not limited to the following:
 - o Mobile cranes.
 - o Side Booms.
 - o Forklifts.
 - o Grinding machine.
 - o Drilling machine.
 - o Air compressors.
 - o Welding machine.
 - o Generator sets.
 - o Dump Trucks.
 - o Excavators.
 - o Dozers
 - o Grit Blasting Equipment.
 - o Hand tools.
- Subcontractor shall notify the engineer, of his intention to bring on to site any equipment or any container, with liquid or gaseous fuel or other substance which may create a hazard. The Engineer shall have the right to prescribe the condition under which such equipment or container may be handled and used during the performance of the works and the subcontractor shall strictly adhere to such instructions. The Engineer shall have the right to inspect any construction tool and to forbid its use, if in his opinion it is unsafe. No claim due to such prohibition will be entertained.

8.2 MOBILISATION OF MANPOWER BY SUBCONTRACTOR

- The subcontractor shall arrange induction and regular health check of their employees as per schedule VII of BOCW rules by a registered medical practitioner.
- The subcontractor shall take special care of the employees affected with occupational diseases under rule 230 and schedule II of BOCW Rules. The employees not meeting the fitness requirement should not be engaged for such job.
- Ensure that the regulatory requirements of excessive weight limit (to carry/lift/ move weights beyond prescribed limits) for male and female workers are complied with.
- Appropriate accommodation to be arranged for all workmen in hygienic condition.



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8.3 PROVISION OF PPEs

- Personnel Protective Equipment (PPEs), in adequate numbers, will be made available at site & their regular use by all concerned will be ensured
- The following matrix recommends usage of minimum PPEs against the respective job.

Sl. No	Type of work	PPEs
1	Concrete and asphalt mixing	Nose mask, hand glove, apron and gum boot
2	Welders/Grinders/ Gas cutters	Welding/face screen, apron, hand gloves, nose mask and ear muffs if noise level exceeds 90dB. Helmet fitted with welding shield is preferred for welders
3	Stone/ concrete breakers	Ear muffs, safety goggles, hand gloves
4	Electrical Work	Rubber hand glove, Electrical Resistance shoes
5	Insulation Work	Respiratory mask, Hand gloves, safety goggles
6	Work at height	Double lanyard full body harness, Fall arrestor (specific cases)
7	Grit/Sand blasting	Blast suit, blast helmet, respirator, leather gloves
8	Painting	Plastic gloves, Respirators (particularly for spray painting)
9	Radiography	As per BARC guidelines

- The PPEs shall conform to the relevant standards as below and bear ISI mark.

Relevant is-codes for personal protection

IS: 2925 – 1984	Industrial Safety Helmets.
IS: 4770 – 1968	Rubber gloves for electrical purposes.
IS: 6994 – 1973 (Part-I)	Industrial Safety Gloves (Leather & Cotton Gloves).
IS: 1989 – 1986 (Part-I-II)	Leather safety boots and shoes.
IS: 5557 – 1969	Industrial and Safety rubber knee boots.
IS: 6519 – 1971	Code of practice for selections care and repair of Safety footwear.
IS: 11226 – 1985	Leather Safety footwear having direct molding sole.
IS: 5983 – 1978	Eye protectors.
IS: 9167 – 1979	Ear protectors.
IS: 1179-1967	Eye & Face protection during welding
IS: 3521 – 1983	Industrial Safety Belts and Harness
IS: 8519 -1977	Guide for selection of industrial Safety equipment for body protection
IS: 9473-2002, 14166-1994, 14746-1999	Respiratory Protective Devices

The list is not exhaustive. The safety officer may demand additional PPEs based on specific requirement.



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- Where workers are employed in sewers and manholes, which are in use, the subcontractor shall ensure that the manhole covers are opened and ventilated at least for an hour before the workers are allowed to get into manhole, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent incident to the public
- Besides the PPEs mentioned above, the persons shall use helmet and safety shoe. The visitors shall use Helmet and any other PPEs as deemed appropriate for the area of work.

Colour scheme for Helmets:

1. Workmen: Yellow
 2. Safety staff: Green or white with green band
 3. Electrician: Red
 4. Others including visitors: White
- All the PPEs shall be checked for its quality before issue and the same shall be periodically checked. The users shall be advised to check the PPEs themselves for any defect before putting on. The defective ones shall be repaired/ replaced.
 - The issuing agency shall maintain register for issue and receipt of PPEs.
 - The Helmets shall have logo or name (abbreviation of agency name permitted) affixed or printed on the front.
 - The body harnesses shall be serial numbered.

8.4 ARRANGEMENT OF INFRASTRUCTURE

8.4.1 DRINKING WATER

- Drinking water shall be provided and maintained at suitable places at different elevations.
- Container should be labeled as " Drinking Water"
- Cleaning of the storage tank shall be ensured atleast once in 3 months indicating date of cleaning and next due date.
- Potability of water should be tested as per IS10500 at least once in a year.

8.4.2 WASHING FACILITIES

- In every workplace, adequate and suitable facilities for washing shall be provided and maintained.
- Separate and adequate cleaning facilities shall be provided for the use of male and female workers. Such facilities shall be conveniently accessible and shall be kept in clean and hygienic condition and dully illuminated for night use.
- Overalls shall be supplied by the subcontractor to the workmen and adequate facilities shall be provided to enable the painters and other workers to wash during the cessation of work.

8.4.3 LATRINES AND URINALS

- Latrines and urinals shall be provided in every work place.
- Urinals shall also be provided at different elevations.
- They shall be adequately lighted and shall be maintained in a clean and sanitary condition at all times, by appointing designated person.
- Separate facilities shall be provided for the use of male and female worker if any.

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8.4.4 PROVISION OF SHELTER DURING REST

Proper Shed & Shelter shall be provided for rest during break

8.4.5 MEDICAL FACILITIES

8.4.5.1 MEDICAL CENTRE (As per Schedule V, X and XI of BOCW central Rules, 1998)

- A medical centre shall be ensured/identified at site with basic facilities for handling medical emergencies. The medical center can be jointly developed on proportionate sharing basis with permission from BHEL
- A qualified medical professional, not less than MBBS, shall be deployed at the medical centre
- The medical centre shall be equipped with one ambulance, with trained driver and oxygen cylinder.
- Medical waste shall be disposed as per prevailing legislation (Bio-Medical Waste –Management and Handling Rules, 1998)

8.4.5.2 FIRST AIDER

- Ensure availability of Qualified First-aider throughout the working hours.
- Every injury shall be treated, recorded and reported.
- Refresher course on first aid shall be conducted as necessary.
- List of Qualified first aiders and their contact numbers should be displayed at conspicuous places.

8.4.5.3 FIRST AID BOX (as per schedule III of BOCW)

- The subcontractor shall provide necessary first aid facilities as per schedule III of BOCW. At every work place first aid facilities shall be provided and maintained.
- The first aid box shall be kept by first aider who shall always be readily available during the working hours of the work place. His name and contact no to be displayed on the box.
- The first aid boxes should be placed at various elevations so as to make them available within the reach and at the quickest possible time.
- The first aid box shall be distinctly marked with a Green Cross on white background.
- Details of contents of first aid box is given in Annexure No. 01
- Monthly inspection of First Aid Box shall be carried out by the owner as per format no. HSEP:13-F01
- The subcontractor should conduct periodical first –aid classes to keep his supervisor and Engineers properly trained for attending to any emergency.

8.4.5.4 HEALTH CHECK UP (As per schedule VII and Form XI)

The persons engaged at the site shall undergo health checkup as per the format no. HSEP:13-F02 before induction. The persons engaged in the following works shall undergo health checkup at least once in a year:

- a. Height workers
- b. Drivers/crane operators/riggers



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- c. Confined space workers
- d. Shot/sand blaster
- e. Welding and NDE personnel

8.4.6 PROVISION OF CANTEEN FACILITY

- Canteen facilities shall be provided for the workmen of the project inside the project site.
- Proper cleaning and hygienic condition shall be maintained.
- Proper care should be taken to prevent biological contamination.
- Adequate drinking water should be available at canteen.
- Fire extinguisher shall be provided inside canteen.
- Regular health check-up and medication to the canteen workers shall be ensured.

8.4.7 PROVISION OF ACCOMODATION/LABOUR COLONY

- The subcontractor shall arrange for the accommodation of workmen at nearby localities or by making a labour colony.
- Regular housekeeping of the labour colony shall be ensured.
- Proper sanitation and hygienic conditions to be maintained.
- Drinking water and electricity to be provided at the labour colony.
- Bathing/ washing bay
- Room ventilation and electrification.

8.4.8 PROVISION OF EMERGENCY VEHICLE

- Dedicated emergency vehicle shall be made available at workplace by each subcontractor to handle any emergency

8.4.9 PEST CONTROL

Regular pest control should be carried out at all offices, mainly laboratories, canteen, labour colony and stores.

8.4.10 SCRAPYARD

- In consultation with customer, scrapyard shall be developed to store metal scrap, wooden scrap, waste, hazardous waste.
- Scrap/Waste shall be segregated as Bio-degradable and non-bio-degradable and stored separately.

8.4.11 ILLUMINATION

- The subcontractor shall arrange at his cost adequate lighting facilities e.g. flood lighting, hand lamps, area lighting etc. at various levels for safe and proper working operations at dark places and during night hours at the work spot as well as at the pre-assembly area.
- Adequate and suitable light shall be provided at all work places & their approaches including passage ways as per IS: 3646 (Part-II). Some recommended values are given below:



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S. No.	Location	Illumination (Lux)
A. Construction Area		
1.	Outdoor areas like store yards, entrance and exit roads	20
2.	Platforms	50
3.	Entrances, corridors and stairs	100
4.	General illumination of work area	150
5.	Rough work like fabrication, assembly of major items	150
6.	Medium work like assembly of small machined parts	300
	rough measurements etc.	
7.	Fine work like precision assembly, precision	700
	measurements etc.	
8.	Sheet metal works	200
9.	Electrical and instrument labs	450
B. Office		
1.	Outdoor area like entrance and exit roads	20
2.	Entrance halls	150
3.	Corridors and lift cars	70
4.	Lift landing	150
5.	Stairs	100
6.	Office rooms, conference rooms, library reading tables	300
7.	Drawing table	450
8.	Manual telephone exchange	200

- Lamp (hand held) shall not be powered by mains supply but either by 24V or dry cells.
- Lamps shall be protected by suitable guards where necessary to prevent danger, in case of breakage of lamp.
- Emergency lighting provision for night work shall be made to minimise danger in case of main supply failure.

If the subcontractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instructions issued by the authorized BHEL official, BHEL shall have the right to take corrective steps at the risk and cost of the subcontractor

9.0 HSE TRAINING& AWARENESS

9.1 HSE INDUCTION TRAINING

All persons entering into project site shall be given HSE induction training by the HSE officer of BHEL /subcontractor before being assigned to work.

In-house induction training subjects shall include but not limited to:

- Briefing of the Project details.
- Safety objectives and targets.
- Site HSE rules.
- Site HSE hazards and aspects.
- First aid facility.
- Emergency Contact No.
- Incident reporting.
- Fire prevention and emergency response.
- Rules to be followed in the labour colony (if applicable)

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- Proper safety wear & gear must be issued to all the workers being registered for the induction (i.e., Shoes/Helmets/Goggles/Leg guard/Apron etc.)
- They must arrive fully dressed in safety wear & gear to attend the induction.
- Any one failing to conform to this safety wear& gear requirement shall not qualify to attend.
- On completing attending subcontractor's in-house HSE induction, each employee shall sign an induction training form (format no. HSEP:13-F03) to declare that he had understood the content and shall abide to follow and comply with safe work practices. They may only then be qualified to be issued with a personal I.D. card, for access to the work site.

9.2 HSE TOOLBOX TALK

- HSE tool Box talk shall be conducted by frontline foreman/supervisor of subcontractor to specific work groups prior to the start of work. The agenda shall consist of the followings:
 - o Details of the job being intended for immediate execution.
 - o The relevant hazards and risks involved in executing the job and their control and mitigating measures.
 - o Specific site condition to be considered while executing the job like high temperature, humidity, unfavorable weather etc.
 - o Recent non-compliances observed.
 - o Appreciation of good work done by any person.
 - o Any doubt clearing session at the end.
- Record of Tool box talk shall be maintained as per format no. HSEP:13-F04
- Tool box talk to be conducted at least once a week for the specific work.

9.3 TRAINING ON HEIGHT WORK

Training on height work shall be imparted to all workers working at height by in-house/external faculty at least twice in a year. The training shall include following topics:

- Use of PPEs
- Use of fall arrester, retractable fall arrester, life line, safety nets etc.
- Safe climbing through monkey ladders.
- Inspection of PPEs.
- Medical fitness requirements.
- Mock drill on rescue at height.
- Dos & Don'ts during height work.

9.4 HSE TRAINING DURING PROJECT EXECUTION

- Other HSE training shall be arranged by BHEL/ subcontractor as per the need of the project execution and recommendation of HSE committee of site.
- The topics of the HSE training shall be as follows but not limited to:
 - o Hazards identification and risk analysis (HIRA)
 - o Work Permit System
 - o Incident investigation and reporting
 - o Fire fighting
 - o First aid
 - o Fire-warden training
 - o EMS and OHSMS
 - o T & Ps fitness and operation



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- o Electrical safety
- o Welding, NDE & Radiological safety
- o Storage, preservation & material handling.
- A matrix shall be maintained to keep an up-to-date record of attendance of training sessions carried out.

9.5 HSE PROMOTION-SIGNAGE, POSTERS, COMPETITION, AWARDS ETC

9.5.1 Display of HSE posters and banners

- Site shall arrange appropriate posters, banners, slogans in local/Hindi/English languages at work place

9.5.2 Display of HSE signage

- Appropriate HSE signage shall be displayed at the work area to aware workmen and passersby about the work going on and do's and don'ts to be followed

9.5.3 Competition on HSE and award

- Site will arrange different competition (slogan, poster, essay etc.) on HSE time to time (Safety day, BHEL day, World Environment Day etc.) and winners will be suitably awarded.

9.5.4 HSE awareness programme

- Subcontractor shall arrange HSE awareness programme periodically on different topics including medical awareness for all personnel working at site

10.0 HSE COMMUNICATION

10.1 INCIDENT REPORTING

- The subcontractor shall submit report of all incidents, fires and property damage etc to the Engineer immediately after such occurrence, but in any case not later than 24 hours of the occurrence. Such reports shall be furnished in the manner prescribed by BHEL. (Refer HSE procedure for incident investigation, analysis and reporting for details)
- In addition, periodic reports on safety shall also be submitted by the subcontractor to BHEL from time to time as prescribed by the Engineer. Compiled monthly reports of all kinds of incidents, fire and property damage to be submitted to BHEL safety officer as per prescribed formats.
- HSE incidents of site shall be reported to BHEL site Management as per Procedure for Incident Investigation and Reporting in format no. HSEP:14-F15. Corrective action shall be immediately implemented at the work place and compliance shall be verified by BHEL HSE officer and until then, work shall be put on hold by Construction Manager.

10.2 HSE EVENT REPORTING

- Important HSE events like HSE training, Medical camp etc. organized at site shall be reported to BHEL site management in detail with photographs for publication in different in-house magazines
- Celebration of important days like National Safety Day, World Environment Day etc. shall also be reported as mentioned above.



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11.0 OPERATIONAL CONTROL

All applicable OCPs (Operational control procedures) will be followed by subcontractor as per BHEL instructions. This will be done as part of normal scope of work. List of such OCPs is given below. In case any other OCP is found to be applicable during the execution of work at site, then subcontractor will follow this as well, within quoted rate. These OCPs (applicable ones) will be made available to subcontractor during work execution at site. However for reference purpose, these are kept with Safety Officer of BHEL at the Power Sector Regional HQ, or available in downloadable format in the website, which may be referred by subcontractor, if they so desire.

LIST OF OCPs

Safe handling of chemicals	Safety in use of cranes	Hydraulic test
Electrical safety	Storage and handling of gas cylinders	Spray insulation
Energy conservation	Manual arc welding	Trial run of rotary equipment
Safe welding and gas cutting operation	Safe use of helmets	Stress relieving
Fire safety	Good house keeping	Material preservation
Safety in use of hand tools	Working at height	Cable laying/tray work
First aid	Safe excavation	Transformer charging
Food safety at canteen	Safe filling of hydrogen in cylinder	Electrical maintenance
Illumination	Vehicle maintenance	Safe handling of battery system
Handling and erection of heavy metals	Safe radiography	Computer operation
Safe acid cleaning	Waste disposal	Storage in open yard
Safe alkali boil out	Working at night	For sanitary maintenance
Safe oil flushing	Blasting	Batching
Steam blowing	DG set	Piling rig operation
Safe working in confined area	Handling & storage of mineral wool	Gas distribution test
Safe operation of passenger lift, material hoists & cages	Drilling, reaming and grinding(machining)	Cleaning of hotwell / deaerator
Electro-resistance heating	Compressor operation	O&M of control of AC plant & system
Air compressor	Passivation	Safe Loading of Unit
Safe EDTA Cleaning	Safe Chemical cleaning of Pre boiler system	Safe Boiler Light up
Safe Rolling and Synchronisation		

11.1 HSE ACTIVITIES

HSE activities shall be conducted at site based on the HSEMSM developed by Power Sector and issued to site by Regions.

While planning for any activity the following documents shall be referred for infrastructural requirements to establish control measures:

- 1) HSE Procedure for Register of OHS Hazards and Risks
- 2) HSE Procedure for Register of Environmental Aspects and Impacts
- 3) HSE Procedure for Register of Regulations



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- 4) Operational Control Procedures
- 5) HSE Procedure for Emergency Preparedness and Response Plan
- 6) Contract documents

11.2 WORK PERMIT SYSTEM

- The following activities shall come under Work Permit System
 - a. Height working above 2 metres
 - b. Hot working at height
 - c. Confined space
 - d. Radiography
 - e. Excavation more than 4 meter depth
 - f. Heavy lifting above 50 tonRefer Annexure 05 for Work permit formats.
- "HSE Procedure for Work Permit System" shall be followed while implementing permit system. Where customer is having separate Work Permit System the same shall be followed.
- Permit applicant shall apply for work permit of particular work activity at particular location before starting of the work with Job Hazard Analysis.
- Permit signatory shall check that all the control measures necessary for the activity are in place and issue the permit to the permit holder.
- Permit holder shall implement and maintain all control measures during the period of permit .He will close the permit after completion of the work. The closed permit shall be archived in HSE Department of site.

11.3 SAFETY DURING WORK EXECUTION

Respective OCPS are to be followed and adherence to the same would be contractually binding

11.3.1 WELDING SAFETY

All safety precautions shall be taken for welding and cutting operations as per IS-818. All safety precautions shall be taken for foundation and other excavation marks as per IS-3764.

11.3.2 RIGGING

Rigging equipment shall not be loaded in excess of its recommended safe working load. Rigging equipment, when not in use, shall be removed from the original work area so as not to present a hazard to employees.

11.3.3 CYLINDERS STORAGE AND MOVEMENT

All gas cylinders shall be stored in upright position. Suitable trolley shall be used. There shall be flash-back arrestors conforming to IS-11006 at both cylinder and burner ends. Damaged tube and regulators must be immediately replaced. No of cylinders shall not exceed the specified quantity as per OCP

Cylinders shall be moved by tilting and rolling them on their bottom edges. They shall not be intentionally dragged, struck or permitted to strike each other violently.

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When cylinders are transported by powered vehicle they shall be secured in a vertical position.

11.3.4 DEMOLITION WORK

Before any demolition work is commenced and also during the process of the work the following shall be ensured:

- All roads and open areas adjacent to the work site shall either be closed or suitably protected.
- No electric cable or apparatus which is liable to be a source of danger nor a cable or an apparatus used by the operator shall remain electrically charged.
- All practical steps shall be taken to prevent danger to persons employed from the risks of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render them unsafe.

11.3.5 T&Ps

All T&Ps/ MMEs should be of reputed brand/appropriate quality & must have valid test/calibration certificates bearing endorsement from competent authority of BHEL..Subcontractor to also submit monthly reports of T&Ps deployed and validity test certificates to BHEL safety Officer as per the format/procedure of BHEL.

11.3.6 CHEMICAL HANDLING

Displaying safe handling procedures for all chemicals such as lube oil, acid, alkali, sealing compounds etc , at work place.Where it is necessary to provide and/or store petroleum products or petroleum mixture & explosives, the subcontractor shall be responsible for carrying out such provision / storage in accordance with the rules & regulations laid down in the relevant petroleum act, explosive act and petroleum and carbide of calcium manual, published by the chief inspector of explosives of India. All such storage shall have prior approval if necessary from the chief inspector of explosives or any other statutory authority. The subcontractor shall be responsible for obtaining the same.

11.3.7 ELECTRICAL SAFETY

- Providing adequate no. of 24 V sources and ensure that no hand lamps are operating at voltage level above 24 Volts.
- Fulfilling safety requirements at all power tapping points.
- High/ Low pressure welders to be identified with separate colour clothings. No welders will be deployed without passing appropriate tests and holding valid welding certificates. Approved welding procedure should be displayed at work place.
- The subcontractor shall not use any hand lamp energized by Electric power with supply voltage of more than 24 volts in confined spaces like inside water boxes, turbine casings, condensers etc.
- All portable electric tools used by the subcontractor shall have safe plugging system to source of power and be appropriately earthed. Only electricians licensed by appropriate statutory authority shall be employed by the subcontractor to carry out all types of electrical works. Details of earth resource and their test date to be given to BHEL safety officer as per the prescribed formats of BHEL
- The subcontractor shall use only properly insulated and armored cables which conform to the requirement of Indian Electricity Act and Rules for all wiring, electrical applications at site.



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- BHEL reserves the right to replace any unsafe electrical installations, wiring, cabling etc. at the cost of the subcontractor.
- All electrical appliances used in the work shall be in good working condition and shall be properly earthed.
- No maintenance work shall be carried out on live equipment.
- The subcontractor shall maintain adequate number of qualified electricians to maintain his temporary electrical installations.
- Area wise Electrical safety inspection is to be carried out on monthly basis as per "Electrical Safety Inspection checklist" and the report is to be submitted to BHEL safety officer
- Adequate precautions shall be taken to prevent danger for electrical equipment. No materials on any of the sites of work shall be so stacked or placed as to cause danger or inconvenience to any person or the public
- The subcontractor shall carefully follow the safety requirement of BHEL/ the purchaser with the regard to voltages used in critical areas.

11.3.8 FIRE SAFETY

- Providing appropriate fire fighting equipment at designated work place and nominate a fire officer/warden adequately trained for his job.
- Subcontractor shall provide enough fire protecting equipment of the types and numbers at his office, stores, temporary structure in labor colony etc. Such fire protection equipment shall be easy and kept open at all times.
- The fire extinguishers shall be properly refilled and kept ready which should be certified at periodic intervals. The date of changing should be marked on the Cylinders.
- All other fire safety measures as laid down in the "codes for fire safety at construction site" issued by safety coordinator of BHEL shall be followed.
- Non-compliance of the above requirement under fire protection shall in no way relieve the subcontractor of any of his responsibility and liabilities to fire incident occurring either to his materials or equipment or those of others.
- Emergency contacts nos must be displayed at prominent locations
- Tarpaulin being inflammable should not be used (instead, only non infusible covering materials shall be used) as protective cover while preheating, welding, stress relieving etc. at site.

11.3.9 SCAFFOLDING

- Suitable scaffolds shall be provided for workman for all works that cannot safely be done from the ground, or from solid construction except in the case of short duration of work which can be done safely from ladders.
- When a ladder is used, it shall be of rigid construction made of steel. The steps shall have a minimum width of 45 cm and a maximum rise of 30 cm. Suitable handholds of good quality wood or steel shall be provided and the ladder shall be given an inclination not steeper than $\frac{1}{4}$ horizontal and 1 vertical.
- Scaffolding or staging more than 3.6 m above the ground floor, swung or suspended from an overhead support or erected with stationery support shall have a guard rail properly bolted, braced or otherwise secured, at least 90 cm above the floor or platform of such scaffolding or staging and extending along the entire length of the out side and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from savor, from swaying, from the building or structure.

11.3.10 WORK AT HEIGHT:

- Guardrails and toe-board/barricades and sound platform conforming to IS:4912-1978 should be provided.



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- Wherever necessary, life-line(pp or metallic) and fall arrestor along with Polyamide rope or Retractable lifeline should be provided.
- Safety Net as per IS:11057:1984 should be used extensively for prevention/ arrest of men and materials falling from height. The safety nets shall be fire resistant, duly tested and shall be of ISI marked and the nets shall be located as per site requirements to arrest or to reduce the consequences of a possible fall of persons working at different heights.
- Reaching beyond barricaded area without lifeline support, moving with support of bracings, walking on beams without support, jumping from one level to another, throwing objects and taking shortcut must be discouraged.
- Use of Rebar steel for making Jhoola and monkey-ladder (Rods welded to vertical or inclined structural members), temporary platform etc. must be avoided.
- Monkey Ladder should be properly made and fitted with cages.
- Jhoola should be made with angles and flats and tested like any lifting tools before use.
- Lanyard must be anchored always and in case of double lanyard, each should be anchored separately.
- In case of pipe-rack, persons should not walk on pipes and walk on platforms only.
- In case of roof work, walking ladder/ platform should be provided along with lifeline and/ or fall arrestor.
- Empty drums must not be used.
- For chimney or structure painting, both hanging platform and men should be anchored separately to a firm structure alongwith separate fall arrestor. Rope ladder should be discouraged.

11.3.11 WORKING PLATFORM

Working platforms, gangways and stairways shall be so constructed that they do not sag unduly or unequally and if the height of the platform gangways provided is more than 3.6 m above ground level or floor level, they shall be closely boarded and shall have adequate width which shall not be less than 750 mm and be suitably fenced as described above. Every opening in the floor or a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be 90 cm.

11.3.12 EXCAVATION

Wherever there are open excavation in ground, they shall be fenced off by suitable railing and danger signals installed at night so as to prevent persons slipping into the excavations.

11.3.13 LADDER SAFETY

Safe means of access shall be provided to all working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 m in the length while the width between side rails in rung ladder shall in no case be less than app. 29.2 cm for ladder upto and including 3 m in length. For longer ladders this width shall be increased at least ¼" for each additional foot of length.

A sketch of the ladders and scaffolds proposed to be used shall be prepared and approval of the Engineer obtained prior to Construction.

11.3.14 LIFTING SAFETY

- It will be the responsibility of the subcontractor to ensure safe lifting of the equipment, taking due precaution to avoid any incident and damage to other equipment and personnel.



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- All requisite tests and inspection of handling equipment, tools & tackle shall be periodically done by the subcontractor by engaging only the Competent Persons as per law.
- Defective equipment or uncertified shall be removed from service.
- Any equipment shall not be loaded in excess of its recommended safe working load.

11.3.15 HOISTING APPLIANCE

- Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safe guards.
- Hoisting appliance should be provided with such means as will reduce to the minimum the risk of any part of a suspended load becoming incidentally displaced.
- When workers employed on electrical installations which are already energized, insulating mats, wearing apparel, such as gloves, sleeves and boots as may be necessary should be provided.
- The worker should not wear any rings, watches and carry keys or other materials which are good conductor of electricity.

11.4 ENVIRONMENTAL CONTROL

Environment protection has always been given prime importance by BHEL. Environmental damage is a major concern of the principal subcontractor and every effort shall be made, to have effective control measures in place to avoid pollution of Air, Water and Land and associated life. Chlorofluorocarbons such as carbon tetrachloride and trichloroethylene shall not be used. Waste disposal shall be done in accordance with the guidelines laid down in the project specification.

Any chemical including solvents and paints, required for construction shall be stored in designated bonded areas around the site as per Material Safety Data Sheet (MSDS).

In the event of any spillage, the principle is to recover as much material as possible before it enters drainage system and to take all possible action to prevent spilled materials from running off the site. The subcontractor shall use appropriate MSDS for clean-up technique

All subcontractors shall be responsible for the cleanliness of their own areas.

The subcontractors shall ensure that noise levels generated by plant or machinery are as low as reasonably practicable. Where the subcontractor anticipates the generation of excessive noise levels from his operations the subcontractor shall inform to Construction Manager of BHEL accordingly so that reasonable & practicable precautions can be taken to protect other persons who may be affected.

It is imperative on the part of the subcontractor to join and effectively contribute in joint measures such as tree plantation, environment protection, contributing towards social upliftment, conversion of packing woods to school furniture, keeping good relation with local populace etc.

The subcontractor shall carry out periodic air and water quality check and illumination level checking in his area of work place and take suitable control measure.

11.5 HOUSEKEEPING

- Keeping the work area clean/ free from debris, removed scaffoldings, scraps, insulation/sheeting wastage /cut pieces, temporary structures, packing woods etc. will be in the scope of the subcontractor. Such cleanings has to be done by



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subcontractor within quoted rate, on daily basis by an identified group. If such activity is not carried out by subcontractor / BHEL is not satisfied, then BHEL may get it done by other agency and actual cost along with BHEL overheads will be deducted from contractor's bill. Such decisions of BHEL shall be binding on the subcontractor

- Proper housekeeping to be maintained at work place and the following are to be taken care of on daily basis.
- All surplus earth and debris are removed/disposed off from the working areas to identified locations.
- Unused/Surplus cables, steel items and steel scrap lying scattered at different places/elevation within the working areas are removed to identified locations.
- All wooden scrap, empty wooden cable drums and other combustible packing materials, shall be removed from workplace to identified locations. Sufficient waste bins shall be provided at
- Different work places for easy collection of scrap/waste. Scrap chute shall be installed to remove scrap from high location.
- Access and egress (stair case, gangways, ladders etc.) path should be free from all scrap and other hindrances.
- Workmen shall be educated through tool box talk about the importance of housekeeping and encourage not to litter.
- Labour camp area shall be kept clear and materials like pipes, steel, sand, concrete, chips and bricks, etc. shall not be allowed in the camp to obstruct free movement of men and machineries.
- Fabricated steel structures, pipes & piping materials shall be stacked properly.
- No parking of trucks/trolleys, cranes and trailers etc. shall be allowed in the camp, which may obstruct the traffic movement as well as below LT/HT power line.
- Utmost care shall be taken to ensure over all cleanliness and proper upkeep of the working areas

11.6 WASTE MANAGEMENT

Take suitable measures for waste management and environment related laws/legislation as a part of normal construction activities. Compliance with the legal requirements on storage/ disposal of paint drums (including the empty ones), Lubricant containers, Chemical Containers, and transportation and storage of hazardous chemicals will be strictly maintained.

11.6.1 BINS AT WORK PLACE

- Sufficient rubbish bins shall be provided close to workplaces.
- Bins should be painted yellow and numbered.
- Sufficient nos. of drip trays shall be provided to collect oil and grease.
- Sufficient qty. of broomsticks with handle shall be provided.
- Adequate strength of employees should be deployed to ensure daily monitoring and service for waste management.

11.6.2 STORAGE AND COLLECTION

- Different types of rubbish/waste should be collected and stored separately.
- Paper, oily rags, smoking material, flammable, metal pieces should be collected in separate bins with close fitting lids.
- Rubbish should not be left or allowed to accumulate on construction and other work places.
- Do not burn construction rubbish near working site.

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11.6.3 SEGREGATION

- Earmark the scrap area for different types of waste.
- Store wastes away from building.
- Oil spill absorbed by non-combustible absorbent should be kept in separate bin.
- Clinical and first aid waste stored and incinerated separately.

11.6.4 DISPOSAL

- Sufficient containers and scrap disposal area should be allocated.
- All scrap bin and containers should be conveniently located.
- Provide self-closing containers for flammable/spontaneously combustible material.
- Keep drainage channels free from choking.
- Make schedule for collection and disposal of waste.

11.6.5 WARNING AND SIGNS

- Appropriate sign to be displayed at scrap storage area
- No toxic, corrosive or flammable substance to be discarded into public sewage system.
- Waste disposal shall be in accordance with best practice.
- Comply with all the requirements of Pollution Control Board (PCB) for storage and disposal of hazardous waste.

11.7 TRAFFIC MANAGEMENT SYSTEM

11.7.1 SAFE WORKPLACE TRANSPORT SYSTEM

- Traffic routes in a work place shall be suitable for the persons or vehicles using them. This shall be sufficient in number and of sufficient size. This shall reflect the suitability of traffic routes for vehicles and pedestrians.
- Where vehicles and pedestrians use the same traffic routes there shall be sufficient space between them. Where necessary all traffic routes must be suitably indicated. Pedestrians or vehicles must be able to use traffic routes without endangering those at work. There must be sufficient separation of traffic routes from doors, gates and pedestrian traffic routes.
- For internal traffic, lines marked on roads / access routes and between buildings shall clearly indicate where vehicles are to pass.
- Temporary obstacles shall be brought to the attention of drivers by warning signs or hazard cones.
- Speed limits shall be clearly displayed. Speed ramps preceded by a warning signs or marker are necessary.
- The traffic route should be wide enough to allow vehicles to pass and re-pass oncoming or parked traffic and it may be advisable to introduce on-way system or parking restrictions.
- Safest route shall be provided between places where vehicles have to call or deliver.
- Avoid vulnerable areas/items such as fuel or chemicals tanks or pipes, open or unprotected edges and structures likely to collapse



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- Safe areas shall be provided for loading and unloading.
- Avoid sharp or blind bends. If this is not possible hazards should be indicated e.g. blind corner.
- Ensure road crossings are minimum and clearly signed.
- Entrance and gateways shall be wide enough to accommodate a second vehicle without causing obstruction.
- Set sensible speed limits which are clearly sign posted.
- Where necessary ramps should be used to retard speed. This shall be preceded by a warning sign or mark on the road.
- Forklift trucks shall not pass over road hump unless of a type capable of doing so.
- Overhead electric cable, pipes containing flammable hazardous chemical shall be shielded by using goal posts height gauge posts or barriers.
- Road traffic signs shall be provided on prominent locations for prevention of incidents and hazards and for quick guidance and warning to employees and public. Safety signs shall be displayed as per the project working requirement and guideline of the state in which project is done. Vehicles hired or used shall not be parked within the 15m radius of any working area. Any vehicle, that is required to be at the immediate/near the vicinity, shall be approved by the person in-charge of the site.

11.7.2 TRAFFIC ROUTE FOR PEDESTRIANS

- Where traffic routes are used by both pedestrians and vehicles road shall be wide enough to allow vehicles and pedestrians safely.
- Separate routes shall be provided for pedestrians to keep them away from vehicles. Provide suitable barriers/guard at entrances/exit and the corners or buildings.
- Where pedestrian and vehicle routes cross, appropriate crossing shall be provided.
- Where crowd is likely to use roadway e.g. at the end of shift, stop vehicles from using them at such times.
- Provide high visibility clothing for people permitted in delivery area.

11.7.3 WORK VEHICLE

Work vehicle shall be as safe stable efficient and roadworthy as private vehicles on public roads. Site management shall ensure that drivers are suitably trained. All vehicle e.g. heavy motor vehicle forklift trucks dump trucks mobile cranes shall ensure that the work equipment conforms to the following:

- o A high level of stability.
- o A safe means of access/egress.
- o Suitable and effective service and parking brakes.
- o Windscreens with wipers and external mirrors giving optimum all round visibility.
- o Provision of horn, vehicle lights, reflectors, reversing lights, reversing alarms.
- o Provision of seat belts.
- o Guards on dangerous parts.
- o Driver protection - to prevent injury from overturning and from falling objects/materials.
- o Driver protection from adverse weather.
- o No vehicle shall be parked below HT/LT power lines.
- o Valid Pollution Under Control certification for all vehicles

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11.7.4 DAILY CHECK BY DRIVER

- There should also be daily safety checks containing below mentioned points by the driver before the vehicle is used.
 - o Brakes.
 - o Tires.
 - o Steering.
 - o Mirrors.
 - o Windscreen waters.
 - o Wipers.
 - o Warning signals.
 - o Specific safety system i.e. control interlocks
- Management should ensure that drivers carry out these checks.

11.7.5 TRANSPORTATION OF PERSONNEL AND MATERIALS BY VEHICLES

- All drivers shall hold a valid driving License for the class of vehicle to be driven and be registered as an authorized BHEL driver with the Administration Department.
 - Securing of the load shall be by established and approved methods, i.e. chains with patented tightening equipment for steel/heavy loads. Sharp corners on loads shall be avoided when employing ropes for securing.
 - All overhangs shall be made clearly visible and restricted to acceptable limits
 - Load shall be checked before moving off and after traveling a suitable distance.
 - On no account is construction site to be blocked by parked vehicles Drivers of vehicles shall only stop or park in the areas designate by the stringing foreman.
 - Warning signs shall be displayed during transportation of material.
- All vehicles used by BHEL shall be in worthy condition and in conformance to the Land Transport requirement.

11.7.6 MAINTENANCE

All Vehicles used for transportation of man and material shall undergo scheduled inspections on frequent intervals to secure safe operation. Such inspections shall be conducted in particular for steering, brakes, lights, horn, doors etc. Site management shall ensure that work equipment is maintained in an efficient, working order and in good repair. Inspections and services carried out at regular intervals of time and or mileage. No maintenance shall be carried below HT/LT power lines.

11.8 EMERGENCY PREPAREDNESS AND RESPONSE

- Emergency preparedness and response capability of site shall be developed as per Emergency Preparedness and Response plan issued by Regional HQ
- Availability of adequate number of first aiders and fire warden shall be ensured with BHEL and its subcontractors
- All the subcontractor's supervisory personnel and sufficient number of workers shall be trained for fire protection systems. Enough number of such trained personnel must be available during the tenure of contract. Subcontractor should nominate his supervisor to coordinate and implement the safety measures.
- Assembly point shall be earmarked and access to the same from different location shall be shown
- Fire exit shall be identified and pathway shall be clear for emergency escape.



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- Appropriate type and number of fire extinguisher shall be deployed as per Fire extinguisher deployment plan and validity shall be ensured periodically through inspection
- Adequate number of first aid boxes shall be strategically placed at different work places to cater emergency need. Holder of the first aid box shall be identified on the box itself who will have the responsibility to maintain the same.
- First aid center shall be developed at site with trained medical personnel and ambulance
- Emergency contact numbers (format given in EPRP) of the site shall be displayed at prominent locations.
- Tie up with fire brigade shall be done in case customer is not having fire station.
- Tie up with hospital shall be done in case customer is not having hospital.
- Disaster Management group shall be formed at site
- Mock drill shall be arranged at regular intervals. Monthly report of the above to be given to BHEL safety Officer as per prescribed BHEL formats
- Mock drill shall be conducted on different emergencies periodically to find out gaps in emergency preparedness and taking necessary corrective action

12.0 HSE INSPECTION

Inspection on HSE for different activities being carried out at site shall be done to ensure compliance to HSEMS requirements. The subcontractor shall maintain and ensure necessary safety measures as required for inspection and tests HV test, Pneumatic test, Hydraulic test, Spring test, Bend test etc as applicable, to enable inspection agency for performing Inspection. If any test equipment is found not complying with proper safety requirements then the Inspection Agency may withhold inspection, till such time the desired safety requirements are met.

12.1 DAILY HSE CHECKS

Both the Site Supervisors and safety officer of Subcontractor are to conduct daily site Safety inspection around work activities and premises to ensure that work methods and the sites are maintained to an acceptable standard. The following are to form the common subjects of a daily safety inspection:

- Personal Safety wears & gear compliance.
- Complying with site safety rules and permit-to-work (PTW).
- Positions and postures of workers.
- Use of tools and equipment etc. by the workers.

The inspection should be carried out just when work starts in beginning of the day, during peak activities period of the day and just before the day's work ends.

12.2 INSPECTION OF PPE

- PPEs shall be inspected by HSE officer at random once in a week as per format no. HSEP:13-F06 for its compliance to standard and compliance to use and any adverse observation shall be recorded in the PPE register.
- The applicable PPEs for carrying out particular activities are listed below.

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12.3 INSPECTION OF T&Ps

- A master list of T&Ps shall be maintained by each subcontractor.
- All T&Ps being used at site shall be inspected by HSE officer once in a month as per format no. HSEP:13-F07 for its healthiness and maintenance.
- The T&Ps which require third party inspection shall be checked for its validity during inspection. The third party test certificate should be accompanied with a copy of the concerned competent person's valid qualification record.
- The validity of T&P shall be monitored as per "Status of T&Ps" format no. HSEP:13-F08

12.4 INSPECTION OF CRANES AND WINCHES

- Cranes and winches shall be inspected by the operator through a daily checklist for its safe condition (as provided by the equipment manufacturer) before first use of the day.
- Cranes and Winches shall be inspected by HSE officer once in a month as per format no. HSEP:13-F09 for healthiness, maintenance and validity of third party inspection.
- The date of third party inspection and next due date shall be painted on cranes and winches.
- The operators/drivers shall be authorized by sub-contractor based on their competency and experience and shall carry the I-card.
- The operator should be above 18 years of age and should be in possession of driving license of HMV man & goods), vision test certificate and should have minimum qualification so that he can read the instructions and check list.

12.5 INSPECTION ON HEIGHT WORKING

- Inspection on height working shall be conducted daily by supervisors before start of work to ensure safe working condition including provision of
 - o Fall arrestor
 - o Lifelines
 - o Safety nets
 - o Fencing and barricading
 - o Warning signage
 - o Covering of opening
 - o Proper scaffolding with access and egress.
 - o Illumination
- Inspection on height working shall be conducted once in a week by HSE officer as per format no. HSEP:14-F10.
- Medical fitness of height worker shall be ensured.
- Height working shall not be allowed during adverse weather.

12.6 INSPECTION ON WELDING AND GAS CUTTING OPERATION

- Supervisor shall ensure that no flammable items are available in near vicinity during welding and gas cutting activity.
- Gas cylinders shall be kept upright.
- Use of Flash back arrestor shall be ensured at both ends.



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- Inspection during welding and gas cutting operations shall be carried out by HSE officer once a month as per format no. HSEP:14-F11.
- Use of fire blanket to be ensured to avoid falling of splatters during welding or gas cutting operation at height.
- Availability of fire extinguisher at vicinity shall be ensured.

12.7 INSPECTION ON ELECTRICAL INSTALLATION / APPLIANCES

- Ensure proper earthing in electrical installation
- Use ELCB at electrical booth
- Electrical installation shall be properly covered at top where required
- Use appropriate PPEs while working
- Use portable electrical light < 24 V in confined space and potentially wet area.
- Monthly inspection shall be carried out as per format no. HSEP:14-F12.

12.8 INSPECTION OF ELEVATOR

- Elevators shall be inspected by concerned supervisors once in a week as per format no. HSEP:14-F13.
- All elevators shall be inspected by competent person and validity shall be ensured.
- The date of third party inspection and next due date shall be painted on elevator.

13.0 HSE PERFORMANCE

HSE performance of the subcontractor shall be monitored as per the following parameters:

Sl. No.	Parameters of measurement
1	Timely deployment of qualified safety officer and cumulative number of days in a month the required no. of qualified safety officer is available
2	Shortfall in number of meetings in the month conducted or attended by the safety officer
3	Level of compliance wrt decisions taken in previous meetings/audit/inspection/as reported.
4	Delay in submission of monthly report on safety in the prescribed format
5	Delay in reporting any incident including near-miss to BHEL /Customer/statutory authority(if required)
6	Degree of PPE non-compliance
7	Non- conducting of health check-up as per BOCW equirements
8	Non availability of proper first-aid facility , ambulance, adequate labour welfare initiatives
9	Non conductance of induction training and tool box meeting
10	Total number of instances in the month, House keeping NOT attended inspite of instructions by BHEL i.e. removal/disposal of surplus earth/ debris/scrap/unused/surplus cable drums/other electrical items/surplus steel items/packing material

- Suitable HSE reward system shall be developed at site level to promote HSE compliance amongst workmen.
- To decide HSE reward performance towards HSE shall be evaluated for workmen and it shall be awarded regularly in public gathering.
- If safety record of the subcontractor in execution of the awarded job is to the satisfaction of safety department of BHEL, issue of an appropriate certificate to recognize the safety performance of the subcontractor may be considered by BHEL after completion of the job.

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14.0 HSE PENALTIES

- As per contractual provision HSE penalties shall be imposed on subcontractors for non- compliance on HSE requirement as per format no. HSEP:14-F14. The list in the format is only indicative. For any other violation, not listed in the format, the minimum penalty amount is to be decided as per BOCW act.
- If principal customer/statutory and regulatory bodies impose some penalty on HSE due to the non-compliance of the subcontractor the same shall be passed on to them.
- The penalty amount shall be recovered by Site Finance department from subcontractors from the RA/Final bill.

15.0 OTHER REQUIREMENTS

- In case of any delay in completion of a job due to mishaps attributable to lapses by the subcontractor, BHEL shall have the right to recover cost of such delay from the payments due to the subcontractor, after notifying the subcontractor suitably.
- If the subcontractor fails to improve the standards of safety in its operation to the satisfaction of BHEL after being given reasonable opportunity to do so and/or if the subcontractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instruction regarding safety issued by BHEL, BHEL shall have the right to take corrective steps at the risk and cost of the subcontractor after giving a notice of not less than 7 days indicating the steps that would be taken by BHEL.
- If the subcontractor succeeds in carrying out its job in time without any fatal or disabling injury incident and without any damage to property BHEL may, at its sole discretion, favorably consider to reward the subcontractor suitably for the performance.
- In case of any damage to property due to lapses by the subcontractor, BHEL shall have the right to recover the cost of such damages from the subcontractor after holding an appropriate enquiry.
- The subcontractor shall take all measures at the sites of the work to protect all persons from incidents and shall be bound to bear the expenses of defense of every suit, action or other proceeding of law that may be brought by any persons for injury sustained or death owing to neglect of the above precautions and to pay any such persons such compensation or which may with the consent of the subcontractor be paid to compromise any claim by any such person, should such claim proceeding be filed against BHEL, the subcontractor hereby agrees to indemnify BHEL against the same.
- The subcontractor shall not employ men below the age of 18 years and women on the work of painting with products containing lead in any form. Wherever men above the age of 18 are employed on the work of lead painting, overalls shall be supplied by the subcontractor to the workmen and adequate facilities shall be provided to enable the working painters to wash during the cessation of work.
- The subcontractor shall notify BHEL of his intention to bring to site any equipment or material which may create hazard.
- BHEL shall have the right to prescribe the conditions under which such equipment or materials may be handled and the subcontractor shall adhere to such instructions.



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- BHEL may prohibit the use of any construction machinery, which according to the organization is unsafe. No claim for compensation due to such prohibition will be entertained by BHEL.

16. NON COMPLIANCE

NONCONFORMITY OF SAFETY RULES AND SAFETY APPLIANCES WILL BE VIEWED SERIOUSLY AND BHEL HAS RIGHT TO IMPOSE FINES ON THE SUBCONTRACTOR AS UNDER FOR EVERY INSTANCE OF VIOLATION NOTICED:

SN	Violation of Safety Norms	Fine (in Rs)
01.	Not Wearing Safety Helmet	200/- *
02.	Not wearing Safety Belt or not anchoring life line	500/-*
03.	Not wearing safety shoe	200/-*
04.	Not keeping gas cylinders vertically	200/-
05.	Not using flash back arrestors	100/-
06.	Not wearing gloves	50/- *
07.	Grinding Without Goggles	50/- *
08.	Not using 24 V Supply For Internal Work	500/-
09.	Electrical Plugs Not used for hand Machine	100/-
10.	Not Sliding properly	200/-
11.	Using Damaged Sling	200/-
12.	Lifting Cylinders Without Cage	500/-
13.	Not Using Proper Welding Cable With Lot of Joints And Not Insulated Property.	200/-
14.	Not Removing Small Scrap From Platforms	500/-
15.	Gas Cutting Without Taking Proper Precaution or Not Using Sheet Below Gas Cutting	500/-
16.	Not Maintaining Electric Winches Which are Operated Dangerously	500/-
17.	Improper Earthing Of Electrical T&P	500/-
18.	No or improper barricading	500/-
19.	Activity carried out without Safety work permit (Height work, Lifting activity, Hot work-each person/case)	1000/-
20.	Incident Resulting in Partial Loss in Earning Capacity	25,000/- per victim
21.	Fatal Incident Resulting in total loss in Earning Capacity	1,00,000/- per victim for first instance #

- Legend:-

*: per head. For repeated violation by the same person, the penalty would be double of the previous penalty. Date of "Repeated violation" will be counted from subsequent days.

#: or as deducted by customer, whichever is higher. For repeated fatal incident in the same Unit incremental penalty to be imposed. The subcontractor will pay 2 times the penalty compared to previously paid in case there are repeated cases of fatal incidents under the same subcontractor for the same package in the same unit.

Any other non-conformity noticed not listed above will also be fined as deemed fit by BHEL. The decision of BHEL engineer is final on the above. The amount will be deducted from running bills of the subcontractor. The amount collected above will be utilized for giving award to the employees who could avoid incident by following safety rules. Also the amount will be spent for purchasing the safety appliances and supporting the safety activity at site.



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17.0 HSE AUDIT/INSPECTION

- Regular HSE Audit/inspection shall be carried out by Subcontractor as per Site HSE audit calendar.
- HSE checklist(**Annexure 02**) shall be used for carrying out audit/inspection and report shall be submitted to BHEL sitemangement
- All non-conformities and observations on HSE identified during internal or external HSE audit shall be disposed off by site in a time bound manner and reported back the implementation status
- Corrective action and Preventive action on HSE issues raised by certification body issued by Regional HQs shall be implemented by site and reported to Site management.

18.0 MONTHLY HSE REVIEW MEETING

- Site shall hold HSE review meeting every month to discuss and resolve HSE issues of site and improve HSE performance. It will also discuss the incidents occurred since previous meeting, its root cause and Corrective action and Preventive action. The agenda is given below:
 - o Implementation of earlier MOM
 - o HSE performance
 - o HSE inspection
 - o HSE audit and CAPA
 - o HSE training
 - o Health check-up camp
 - o HSE planning for the erection and commissioning and installation activities in the coming month
 - o HSE reward and promotional activities
- The meeting shall be chaired by Construction Manager, convened by HSE coordinator and attended by all HOS, Site Incharge of Subcontractors and HSE officer of Subcontractors.
- MOM on the discussion will be circulated to the concerned for implementation.

19.0 FORMATS USED (Details available in Annexure-04)

SL. No.	Format Name	Format No.	Rev No.
01	Inspection of First Aid Box	HSEP:13-F01	00
02	Health Check Up	HSEP:13-F02	00
03	HSE Induction Training	HSEP:13-F03	00
04	Tool Box Talk	HSEP:13-F04	00
05	Monthly Site HSE Report	HSEP:13-F05	00
06	Inspection of PPE	HSEP:13-F06	00



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07	Inspection of T&Ps	HSEP:13-F07	00
08	Status of T&Ps	HSEP:13-F08	00
09	Inspection of Cranes and Winches	HSEP:13-F09	00
10	Inspection on Height Working	HSEP:13-F10	00
11	Inspection on Welding & Gas Cutting	HSEP:13-F11	00
12	Inspection on Electrical Installation	HSEP:13-F12	00
13	Inspection on Elevator	HSEP:13-F13	00
14	HSE Penalty	HSEP:13-F14	00
15	Accident /incident / property damage /fire incident report	HSEP:13-F15	00



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20.0 ANNEXURES

ANNEXURE 01

As per Contract Labour (Regulation & Abolition Act), Central Rules, 1971,

- (1) The first-aid box shall be distinctively marked with a Red Cross on a white background and shall contain the following items, namely:

(a) For establishments in which the number of contract labour employed does not exceed fifty, each first aid box shall contain the following equipment:

(i)	6 small sterilized dressings
(ii)	3 medium size sterilized dressings
(iii)	3 large size sterilized dressings
(iv)	6 pieces of sterilized eye pads in separate sealed packets.
(v)	6 roller bandages 10 cm wide.
(vi)	6 roller bandages 5 cm wide.
(vii)	One tourniquet
(viii)	A supply of suitable splints
(ix)	Three packets of safety pins.
(x)	Kidney tray.
(xi)	3 large sterilized burn dressings.
(xii)	1 (30ml) bottle containing a two percent alcoholic solution of iodine
(xiii)	1 (30 ml) bottle containing Sal volatile having the dose and mode of administration indicated on the label
(xiv)	1 snake bite lancet
(xv)	1 (30gms) bottle of potassium permanganate crystals.
(xvi)	1 pair scissors
(xvii)	1 copy of the First-Aid leaflet issued by the Director General, Factory Advice Service and Labour Institutes, Government of India.
(xviii)	A bottle containing 100 tablets (each of 5 grains) of aspirin
(xix)	Ointment for burns
(xx)	A bottle of suitable surgical anti-septic solution

(b) For establishment in which the number of contract labour exceeds fifty each first-aid box shall contain the following equipment:

(i)	12 small sterilized dressings
(ii)	6 medium size sterilized dressings
(iii)	6 large size sterilized dressings.
(iv)	6 large size sterilized burn dressings
(v)	6 (15 grams) packets sterilized cotton wool
(vi)	12 pieces of sterilized eye pads in separate sealed packets.



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(vii)	12 roller bandages 10 cm wide.
(viii)	12 roller bandages 5 cm wide.
(ix)	One tourniquet.
(x)	A supply of suitable splints.
(xi)	Three packets of safety pins.
(xii)	Kidney tray.
(xiii)	Sufficient number of eye washes bottles filled with distilled water or suitable liquid clearly indicated by a distinctive sign which shall be visible at all times.
(xiv)	4 per cent Xylocaine eye drops, and boric acid eye drops and soda by carbonate eye drops.
(xv)	1 (60ml) bottle containing a two percent alcoholic solution of iodine
(xvi)	One (two hundred ml) bottle of mercurochrome (2 per cent) solution in water.
(xvii)	1 (120ml) bottle containing Sal volatile having the dose and mode of administration indicated on the label.
(xviii)	1 roll of adhesive plaster (6 cmX1 meter)
(xix)	2 rolls of adhesive plaster (2 cmX1 meter)
(xx)	A snake bite lancet.
(xxi)	1 (30 grams) bottle of potassium permanganate crystals.
(xxii)	1 pair scissors
(xxiii)	1 copy of the First-Aid leaflet issued by the Director-General, Factory Advice service and labour Institutes, Government of India.
(xxiv)	a bottle containing 100 tablets (each of 5 grains) of aspirin
(xxv)	Ointment for burns
(xxvi)	A bottle of a suitable surgical anti septic solution.

(2) Adequate arrangement shall be made for immediate recoupment of the equipment when necessary.



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ANNEXURE 02

HSE AUDIT/INSPECTION CHECKLIST CUM COMPLIANCE REPORT

PROJECT: _____

SUBCONTRACTOR: _____

DATE : _____

OWNER : _____

INSPECTION BY: _____

Note : write 'NA' wherever the items is not applicable

Item	Y e s	N o	Remarks	Action
HOUSEKEEPING				
Waste containers provided and used				
Passageways and walkways clear				
General neatness of working area				
Other				
PERSONNEL PROTECTIVE EQUIPMENTS				
Goggles; shields				
Face protection				
Hearing protection				
Respiratory masks etc.				
Safety belts				
Other				
EXCAVATIONS / OPENINGS				
Openings properly covered or barricaded				
Excavations shored				
Excavations barricaded				
Overnight lighting provided				
Other				
WELDING, CUTTING				
Gas cylinders chained upright				
Cable and hoses not obstructing				
Fire extinguisher (s) accessible				
Others				
SCAFFOLDING				
Fully decked platforms				
Guard and intermediate rails in place				
Toe boards in place				
Adequate shoring				
Adequate access				
Others				
LADDER				
Extension side rails 1 m above				
Top of landing				
Properly secured				



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Angle + 70° from horizontal				
Other				
HOISTS, CRANES AND DERRICKS				
Condition of cables and sheaf OK				
Condition of slings, chains, hooks OK				
Inspection & maintenance log maintained				
Outriggers used				
Signals observed and understood				
Qualified operators				
Others				
MACHINERY, TOOLS & EQUIPMENT				
Proper instruction				
Safety devices				
Proper cords				
Inspection and maintenance				
Other				
VEHICLE AND TRAFFIC				
Rules and regulations observed				
Inspection and maintenance				
Licensed drivers				
Other				
TEMPORARY FACILITIES				
Emergency instructions posted				
Fire extinguishers provided				
Fire-aid equipment available				
General neatness				
Others				
FIRE PREVENTION				
Personnel instructed				
Fire extinguishers checked				
No smoking in prohibited areas.				
Hydrants				
Clearance				
Others				
ELECTRICAL				
Proper wiring				
ELCB's provided				
Ground fault circuit interrupters				
Protection against damage				
Prevention of tripping hazards				
Other				
HANDLING & STORAGE OF MATERIALS				
Properly stored or stacked				
Passageways clear				
Other				
FLAMMABLE GASES AND LIQUIDS				
Containers clearly identified				
Proper storage				
Fire extinguisher nearby				



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Other				
WORKING AT HEIGHT				
Safety nets				
Safety belts				
Safety helmets				
Anchoring of safety belt to the life line rope				
ENVIRONMENT				
Lubricant waste/engine oils properly dispose.				
Waste from Canteen, offices, sanitation etc. disposed properly.				
Disposal of surplus earth, stripping materials, expired batteries, oily rags and combustible materials done properly.				
HEALTH CHECKS				
Hygienic conditions at labor camps O.K.				
Availability of first-aid facilities				
Proper sanitation at site, office & labor camps.				
Arrangement of medical facilities.				
Measures for dealing with illness.				
Availability of potable drinking water for workmen & staff.				
Provision of crèches for children.				



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ANNEXURE 03

REFERENCES

- Contract documents
- Relevant legislations
- HSEMSM
- Relevant Indian standards as listed below (illustrative only):

SL NO	CODE NAME	TITLE
(1)	IS : 818-1888 (Reaffirmed 2003)	Code of Practice for safety and health requirements in Electric and Gas Welding and Cutting operations.
(2)	IS: 1179-1967 (Reaffirmed 2003)	Specification for Equipment for Eye & Face protection during welding.
(3)	IS : 1989 (Part 2):1986 (Reaffirmed 1997)	Specification for Leather Safety Boots & Shoes
(4)	IS:2925 – 1984 (Reaffirmed 2010)	Specification for Industrial Safety Helmets
(5)	IS:3521 : 1999 (Reaffirmed 2002)	Industrial Safety Belts & Harnesses-Specification
(6)	IS:3646(Part II) – 1966 (Reaffirmed 2003)	Code of Practice for Interior Illumination
(7)	IS:3696 (Part I) – 1987 (Reaffirmed 2002)	Safety Code for Scaffolds and Ladders
(8)	IS: 3696(Part 2) : 1991 (Reaffirmed 2002)	Scaffolds and Ladders-Code of Safety
(9)	IS:3786 – 1983 (Reaffirmed 2002)	Method for Computation of Frequency and Severity Rates for Industrial Injuries and Classification of Industrial Incidents
(10)	IS:4770 : 1991 (Reaffirmed 2006)	Rubber Gloves – Electricals purposes-Specification
(11)	IS:4912 : 1978 (Reaffirmed 2002)	Safety Requirements for Floor and Wall Openings, Railings and Toe Boards
(12)	IS: 5983 – 1980 (Reaffirmed 2002)	Specification for Eye-Protectors
(13)	IS:6519 – 1971 (Reaffirmed 1997)	Code of Practice for Selection, Care and Repair of Safety Footwear
(14)	IS:9167:1979	Specification for Ear-Protectors
(15)	IS:6994(Part I)-1973 (Re affirmed 1996)	Specification for Industrial Safety Gloves Leather and Cotton Gloves
(16)	IS:8519 – 1977 (Reaffirmed 1983)	Guide for Selection of Industrial Safety Equipment for Body Protection.
(17)	IS 11006 : 2011	Flash Back(Flame Arrestor) Specification



**HEALTH, SAFETY AND ENVIRONMENT
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(18)	IS:8520 – 1977 (Reaffirmed 2002)	Guide for Selection of Industrial Safety Equipment for Eye, Face and Ear Protection.
(19)	IS:9473:2002	Respiratory Protective Devices-Filtering Half Masks to protect against Particles-Specification.
(20)	IS:9944:1992 (Reaffirmed 2003)	Natural and Man-made Fiber Rope Slings-Recommendations on Safe working loads.
(21)	IS:11057 – 1884 (Reaffirmed 2001)	Specification for Industrial Safety Nets
(22)	IS:12254:1993 (Reaffirmed 2002)	Polyvinyl Chloride (PVC) Industrial Boots-Specification
(23)	IS:13367(Part 1):1992 (Reaffirmed 2003)	Safe Use of Cranes-Code of Practice
(24)	IS:14166:1994 (Reaffirmed 2002)	Respiratory Protective Devices-Full Face Masks Specification
(25)	IS:14746 : 1999 (Reaffirmed 2003)	Respiratory Protective Devices-Half Masks and Quarter Masks - Specification
(26)	IS : 15397 :2003 (Reaffirmed 2008)	Portable Extinguisher Mechanical Foam Type(Stored Pressure)-Specification
(27)	IS: 19011:2002	Guidelines for Quality and/or Environmental Management Systems Auditing



**HEALTH, SAFETY AND ENVIRONMENT
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**ANNEXURE 04 : SAFETY FORMATS
&
ANNEXURE 05 : WORK PERMIT FORMATS**

**POWER SECTOR****INSPECTION OF FIRST AID BOX**

FORMAT NO: HSEP:13-F01

REV NO.: 00

PAGE NO. 01 OF 02

Name of Site :	
Name of Sub-Contractor :	
Inspected by :	
Date of Inspection :	

Number of employees on the site:- _____

Sl.No.	Item	No. Available	Remarks
1	No. of small sterilized dressings		
2	No of medium sized sterilized dressings		
3	No of large sized sterilized dressings.		
4	No of large sized sterilized burn dressings		
5	No of (15 grams) packets sterilized cotton wool		
6	No of pieces of sterilized eye pads in separate sealed packets.		
7	No of roller bandages 10 cm wide.		
8	No of roller bandages 5 cm wide.		
9	Whether tourniquet available		
10	Whether supply of suitable splints available.		
11	No of packets of safety pins.		
12	Whether kidney tray available		
13	Whether sufficient number of eye wash bottles, filled with distilled water or suitable liquid, clearly indicated by a distinctive sign which shall be visible at all times, available.		
14	Whether 4%-xylocaine eye drops, and boric acid eye drops and soda by carbonate eye drops available.		
15	Whether (60ml) bottle containing a two percent alcoholic solution of iodine available		
16	Whether (two hundred ml) bottle of mercurochrome (2 per cent) solution in water available.		

**POWER SECTOR****INSPECTION OF FIRST AID BOX**

FORMAT NO: HSEP:13-F01

REV NO.: 00

PAGE NO. 02 OF 02

Sl.No.	Item	No. Available	Remarks
17	Whether 120ml bottle containing Sal volatile having the dose and mode of administration indicated on the label, available.		
18	Whether roll of adhesive plaster (6 cmX1 meter) available		
19	No of rolls of adhesive plaster (2 cmX1 meter)		
20	Whether snake bite lancet available.		
21	Whether (30 grams) bottle of potassium permanganate crystals available.		
22	Whether a pair scissors available		
23	Whether copy of the First-Aid leaflet issued by the Director-General, Factory Advice service and labour Institutes, Government of India available.		
24	Whether bottle containing 100 tablets (each of 5 grains) of aspirin available		
25	Whether Ointment for burns available		
26	Whether bottle of a suitable surgical anti septic solution available		

Signature of Subcontractor's Site I/C::

**POWER SECTOR****HEALTH CHECK UP**

FORMAT NO: HSEP:13-F02

REV NO.: 00

PAGE NO. 01 OF 02

Name of Site :	
Name of Sub-Contractor :	
Name of Employee :	

NAME:

History Of Past Illness	H/O Epilepsy
	H/O Drug Allergy
	H/O Diabetics/ Hypertension
	H/O Unconsciousness

Personal History

EXAMINATION	OBSERVATION
<u>General Physical Examination</u>	
Height	:
Weight	:
BMI	:
Built And nourishment	:
Pallor	:
Temperature	:
Chest Expansion	: Inspiration Expansion
Lymph Node Enlargement	:
<u>Ear, Nose, Throat</u>	:
Ear	:
Nose	:
Throat	:

**POWER SECTOR****HEALTH CHECK UP**

FORMAT NO: HSEP:13-F02

REV NO.: 00

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EXAMINATION	OBSERVATION
<u>Cardiovascular System Examination :</u>	
Inspection :	
Palpation :	Pulse BP
Auscultation (Heart Sounds) :	
<u>Respiratory System :</u>	
Inspection :	Respiratory Rate
Palpation:	
Percussion :	
Auscultation (Breath Sounds) :	
<u>Examination of Abdomen :</u>	
Inspection :	
Palpation :	
Auscultation (Bowel Sounds) :	
Any Other :	
Clinical Impression	

Signature of the examining doctor

**POWER SECTOR****HSE INDUCTION TRAINING**

FORMAT NO: HSEP:13-F03

REV NO.: 00

PAGE NO. 01 OF 01

Name of Site :	
Name of Sub-Contractor :	
Date :	
Name of Training Co-ordinator	

Sl No.	Name	Designation	Organisation	Signature

Signature of Training co-ordinator :

**POWER SECTOR****TOOL-BOX TALK**

FORMAT NO: HSEP:13-F04

REV NO.: 00

PAGE NO. 01 OF 01

Name of Site :	
Sub-Contractors Name :	
Date :	

Topic	Name of person delivered Tool Box Talk	No. of Participants attended	Remarks

Signature of Site I/C of Subcontractor :

	POWER SECTOR	FORMAT NO: HSEP:13-F06 REV NO.: 00 PAGE NO. 01 OF 01
	PERSONAL PROTECTIVE EQUIPMENTS	

Name of Site :	
Name of Sub-Contractor :	
Inspected by :	
Date of Inspection :	

Item	Issued this Month	Nos. Issued up to the Month	Percentage of usage at site
Safety Helmet			
Safety Shoes			
Full Body Harness			
Fall Arrestor			
Safety Nets			
Other PPEs.			

Signature of Site I/C of Subcontractor :

**POWER SECTOR****INSPECTION OF T&Ps**

FORMAT NO: HSEP:13-F07

REV NO.: 00

PAGE NO. 01 OF 01

Name of Site :	
Name of Sub-Contractor :	
Date of Inspection :	

Sl.No.	Description	Remarks
1.0	Name of equipment	
2.0	Basic Information of equipment	
2.1	Specification	
2.2	Sr. No. of equipment	
2.3	Make	
2.4	Year of manufacture	
3.0	Major repairs / overhauls(Furnish details of work carried out)	Date(s) of major repair/overhaul
3.1		
3.2		
3.3	Repairs carried out at site	
4.0	Any performance test conducted	Yes/No
5.0	Document Submitted	Yes/No
6.0	Manufacturer's test / guarantee certificate	Available/ Not available
7.0	Performance test	Done/ Not Done
8.0	Acceptance Norms	
9.0	Committee Observations	
10.0	Date of next review (if accepted)	

Signature-Site Safety Officer (BHEL)

Signature-Subcontractor/ Subcontractor's
Safety Officer

**POWER SECTOR****STATUS OF T&Ps**

FORMAT NO: HSEP:13-F08

REV NO.: 00

PAGE NO. 01 OF 01

Name of Site	
Name of Sub-Contractor	
Date of Inspection	

Item	Nos. Deployed	Identification No.	Nos. Tested by competent person	Validity of Test Certificate
Winches				
Chain Blocks				
Wire Rope Slings				
Man Cages				
D-Shackles				
Air Compressors				
Crawler Cranes				
Mobile Cranes				
Hydra Cranes				
Others				

Signature of Site I/C of subcontractor :

**POWER SECTOR****INSPECTION OF CRANES AND WINCHES**

FORMAT NO: HSEP:13-F09

REV NO.: 00

PAGE NO. 01 OF 03

Name of Site :	
Name of Sub-Contractor :	
Inspected by :	
Date of Inspection:	

Crane Reg. No (Make/Model)

Name of Driver/Operator

Sl.no.	Description	Observation	Measures
1	Valid Driving license		
2	Hook & Hook Latch		
3	Over Hoist limit switch		
4	Boom limit switch		
5	Boom Angle Indicator		
6	Boom limit cutoff switch		
7	Condition of Boom		
8	Condition of ropes		
9	Number of load lines		
10	Size and condition of the slings		
11	Stability of the cranes		
12	Soil Condition		
13	Swing Break And Lock		
14	Proper Break And Lock		
15	Hoist Break And Lock		
16	Boom Break And Lock		
17	Main Clutch		
18	Leakage in Hydraulic Cylinders		
19	Out riggers fully extendable		
20	Tyre pressure		
21	Condition of Battery And Lamps		

**POWER SECTOR****INSPECTION OF CRANES AND WINCHES**

FORMAT NO: HSEP:13-F09

REV NO.: 00

PAGE NO. 02 OF 03

Sl.no.	Description	Observation	Measures
22	Guards of moving and rotating parts		
23	Load chart provided		
24	Number and position of pedant ropes		
25	Reverse Horn		
26	Load Test Details		
27	Operator's fitness		
28	Pollution under control certificate		
29	Fire extinguisher of appropriate type.		
30	Training of the operator		

WINCH

Sl. No.	Description	YES	NO	NA	Remarks
1	Has the copy of Third Party Inspection certificate been provided in winch machine shed?				
2	Is winch machine operator experienced enough to operate the winch machine?				
3	Is the winch machine operated by someone other than the winch machine operator?				
4	Is there guard provided in all moving parts like wheel and motor's shaft?				
5	Will it protect against unforeseen operational contingencies?				
6	Are brakes, clutch and locking arrangement working properly?				
7	Has it been ensured that the guard does not constitute a hazard by itself?				
8	Are the cranks and the connecting rods protected by guardrails?				
9	Is there provision for fully covered shed with wooden plank roof?				

**POWER SECTOR****INSPECTION OF CRANES AND WINCHES**

FORMAT NO: HSEP:13-F09

REV NO.: 00

PAGE NO. 03 OF 03

Sl. No.	Description	YES	NO	NA	Remarks
10	Is wire rope free from any kind of damage or wear and tear?				
11	Is split pin provided for the protection of clutch and brake locking arrangement?				
12	Is pulley inspected by competent person and certified before use?				
13	Is pulley free from any wear and tear visually?				
14	Is winch rope barricaded with clipsheet for the protection of rope and person?				
15	Is the wire rope lubricated by cardium oil?				
16	Is there any friction in wire rope which may damage the wire rope rather than the rolling parts?				
17	Is there any oil leakage in the hydraulic system of the winch machine?				
18	Has it been ensured that the guard will not cause discomfort or inconvenience to operator?				
	Total Number of NO:				
	Total Number of NA:				
	% Compliance :				

Signature of Site I/C of subcontractor :

	POWER SECTOR	FORMAT NO: HSEP:13-F10 REV NO.: 00 PAGE NO. 01 OF 02
	INSPECTION OF HEIGHT WORKING	

Name of Site :	
Name of Sub-Contractor :	
Inspected by :	
Date of Inspection:	

Sl. No.	Descriptions	Observation (Yes/No)	Remarks
1	All the workers have been explained safe work method?		
2	An established communication system has been established and explained to the workers.		
3	Adequate illumination has been ensured.		
4	Work area inspected prior to the start of the work.		
5	Area below the work place barricaded, particularly below hot work.		
6	Workers provided with bags /box to carry bolts, nuts and hand tools		
7	Arrangement for fastening hand tools made.		
8	All work platforms ensured to be of adequate strength and ergonomically suitable.		
9	Fabricated makeshift arrangements are checked for quality and type of material welding, anchoring etc.		
10.	Work at more than one elevation at the same segment is restricted.		
	ACCESS/EGRESS		
1	Walkways provided with handrail, mid-rail and toe guard?		
2	All checkered plates, gratings properly welded/ bolted?		
3	Are ladders inspected and they are in good condition?		
4	Are ladders spliced?		
5	Are ladders properly secured to prevent slipping, sliding or falling?		
6	Do side rails extend 36" above top landing?		
7	Are built up ladders constructed of sound materials?		

**POWER SECTOR****INSPECTION OF HEIGHT WORKING**

FORMAT NO: HSEP:13-F10

REV NO.: 00

PAGE NO. 02 OF 02

Sl. No.	Descriptions	Observation (Yes/No)	Remarks
8	Are rugs and cleats not over 12" on center?		
9	Metal ladders not used around electrical hazards.		
10	Proper maintenance and storage.		
11	Ladders placed at right slope.		
12	Ladders / staircases welded/ bolted properly.		
13	Any obstruction in the stairs.		
14	Are landing provided with handrails, knee rails, toe boards etc.?		
15	Whether ramp is provided with proper slope.		
16	Proper hand rails / guards provided in ramps.		
	Housekeeping		
1	Walkways, aisles & all overhead workplaces cleared of loose material.		
2	Flammable materials, if any, are cleared.		
3	All the de shuttering materials are removed after de shuttering is done.		
4	Platforms and walkways free from oil/grease or other slippery material.		
5	Collected scrap are brought down or lowered down and not dropped from height.		
	PPE And Safety Devices		
1	Use of safety helmet, safety belts ensured for all workers		
2	Anchoring points provided at all places of work.		
3	Common lifeline provided wherever linear movement at height is required.		
4	Safety nets are use wherever required.		
5	Proper fall arrest system is deployed at critical workplaces.		
6	Crawler boards/Safety system or works on fragile roof are used.		

Signature of Site I/C of subcontractor :

**POWER SECTOR****INSPECTION OF WELDING AND GAS
CUTTING**

FORMAT NO: HSEP:13-F11

REV NO.: 00

PAGE NO. 01 OF 02

Name of Site	
Name of Sub-Contractor	
Inspected by	
Date of Inspection	

Welding				
Sl.no.	Description	Y e s	N o	Remarks
1	Is electric connection given through 30 mA ELCB/RCCB to welding m/c?			
2	Is electric cable fitted properly in junction box on m/c?			
3	Is electrical cable free from joints?			
4	Are the joints attached firmly & insulated with tape?			
5	Is double earthing given to body of m/c?			
6	Is the physical condition of the m/c good?			
7	Is ON/OFF switch connected to the m/c is working and in good condition?			
8	Are indication lamps on m/c working?			
9	Is the electrode holder in good condition?			
10	Are the cables of the welding m/c lugged & tight properly?			
11	Are return lead connected properly (Rod, Angle, Channels shall not be used)			
	Total No of NO			
	Total No of YES			

**POWER SECTOR****INSPECTION OF WELDING AND GAS
CUTTING**FORMAT NO: HSEP:13-F11
REV NO.: 00
PAGE NO. 02 OF 02

Gas Cutting				
Sl. no	Description	Yes	No	Remarks
1	Are Cylinders kept on trolleys?			
2	Physical condition of Gas cylinders Good?			
3	Is there Oil/Grease on valve of the cylinder?			
4	Are pressure regulators in good condition?			
5	Condition of hose pipe OK?			
6	Are hose pipe clamped with hose clip?			
7	Is flash back arrestor & NRV fitted on torch both for O2 and LPG cylinder?			
8	Is nozzle of the torch cleaned?			
	Total Number of NO			
	Total No of YES			
	% Compliance			

Signature of Site I/C of subcontractor :

	POWER SECTOR	FORMAT NO: HSEP:13-F12 REV NO.: 00 PAGE NO. 01 OF 02
	INSPECTION OF ELECTRICAL INSTALLATION	

Name of Site	
Name of Sub-Contractor	
Inspected by	
Date of Inspection:	

Sr. No.	Contents	Yes/No	Remarks
A	Cable		
1.	Whether the condition of cable is checked?		
2.	Are cables received from other sites checked for insulation resistance before putting them into use?		
3.	Are all main cables taken either underground / overhead?		
4.	Are welding cables routed properly above the ground?		
5.	Are welding and electrical cables overlapping?		
6.	Is any improper joining of cables/wires prevailing at site?		
B	DBs/SDBs		
1.	Is earth conductor continued upto DB / SDB?		
2.	Whether DBs and extension boards are protected from rain / water?		
3.	Is there any overloading of DBs / SDBs?		
4.	Are correct / proper fuses & CBs provided at main boards and sub-boards?		
5.	Is energized wiring in junction boxes, CB panels & similar places covered all times?		
C	ELCB		
1.	Whether the connections are routed through ELCB?		
2.	Is ELCB sensitivity maintained at 30 mA?		

**POWER SECTOR****INSPECTION OF ELECTRICAL INSTALLATION**

FORMAT NO: HSEP:13-F12

REV NO.: 00

PAGE NO. 02 OF 02

Sr. No.	Contents	Yes/No	Remarks
3.	Are the ELCB numbered and tested periodically & test results recorded in a logbook countersigned by a competent person?		
D	Grounding		
1.	Is natural earthing ensured at the source of power (main DB at Generator or Transformer)?		
2.	Whether the continuity and tightness of the earth conductor are checked?		
3.	Mention the gauge of the earth conductor used at the site.		
4.	Mention the value of Earth Resistance.		
E	Electrically operated Machines or Accessories.		
1.	Whether the plug top is provided everywhere.		
2.	Are all metal parts of electrical equipment and light fittings / accessories grounded?		
3.	Is there any shed or cover for welding machines?		
4.	Are halogen lamps fixed at proper places?		
5.	Are portable power tools maintained as per norms?		
6.	Any other information:		

Signature of Site I/C of subcontractor :

**POWER SECTOR****INSPECTION OF ELEVATOR**

FORMAT NO: HSEP:13-F13

REV NO.: 00

PAGE NO. 01 OF 01

Name of Site	
Name of Sub-Contractor	
Inspected by	
Date of Inspection	

Sr. No.	Description	Remarks
1.0	Name of equipment	
2.0	Basic Information of equipment	
2.1	Specification	
2.2	Sr. No. of equipment	
2.3	Make	
2.4	Year of manufacture	
3.0	Major repairs/overhauls(Furnish details of work carried out)	Date(s) of major repair/overhaul
3.1		
3.2		
3.3	Repairs carried out at site	
4.0	Any performance test conducted	Yes/No
5.0	Document Submitted	Yes/No
6.0	Manufacturer's test / guarantee certificate	Available/ Not available
7.0	Performance test	Done/ Not Done
8.0	Acceptance Norms	
9.0	Committee Observations	
10.0	Date of next review (if accepted)	

Signature-Subcontractor/ Subcontractor's
Safety Officer

Signature-Site Safety Officer (BHEL)

**POWER SECTOR****HSE PENALTY**

FORMAT NO: HSEP:13-F14

REV NO.: 00

PAGE NO. 01 OF 02

Sub: MEMO for Penalty for non compliances in Safety

Following lapse (tick marked) was observed and penalty is imposed as stated at the bottom of this memo. It is requested that such occurrences be please avoided in future.

Safety Area

SN	Violation of Safety Norms	Fine (in Rs)
01.	Not Wearing Safety Helmet	200/- *
02.	Not wearing Safety Belt or not anchoring life line	500/-*
03.	Not wearing safety shoe	200/-*
04.	Not keeping gas cylinders vertically	200/-
05.	Not using flash back arrestors	100/-
06.	Not wearing gloves	50/- *
07.	Grinding Without Goggles	50/- *
08.	Not using 24 V Supply For Internal Work	500/-
09.	Electrical Plugs Not used for hand Machine	100/-
10.	Not Slings properly	200/-
11.	Using Damaged Sling	200/-
12.	Lifting Cylinders Without Cage	500/-
13.	Not Using Proper Welding Cable With Lot of Joints And Not Insulated Property.	200/-
14.	Not Removing Small Scrap From Platforms	500/-
15.	Gas Cutting Without Taking Proper Precaution or Not Using Sheet Below Gas Cutting	500/-
16.	Not Maintaining Electric Winches Which are Operated Dangerously	500/-
17.	Improper Earthing Of Electrical T&P	500/-
18.	No or improper barricading	500/-
19.	Activity carried out without Safety work permit (Height work, Lifting activity, Hot work-each person/case)	1000/-
20.	Incident Resulting in Partial Loss in Earning Capacity	25,000/- per victim
21.	Fatal Incident Resulting in total loss in Earning Capacity	1,00,000/- per victim for first instance #

Legend:-

*: per head. For repeated violation by the same person, the penalty would be double of the previous penalty. Date of "Repeated violation" will be counted from subsequent days.

#: or as deducted by customer, whichever is higher. For repeated fatal incident in the same Unit incremental penalty to be imposed. The subcontractor will pay 2 times the penalty compared to previously paid in case there are repeated cases of fatal incidents under the same subcontractor for the same package in the same unit.

1 Copy to Site Construction Manager(BHEL)

	POWER SECTOR- HQ	FORMAT NO: HSEP:13-F15 REV NO.: 00 PAGE NO. 01 OF 01
	Incident Report (To be submitted within 24 hours of time of incident)	

Type of incident: Fatal/Major/ Minor/Fire/Property Damage/Near-miss

1	NAME OF SITE		3	ACTIVITY AREA	
2	SCOPE OF WORK		4	NAME OF CONTRACTOR	
			5	NAME & DESIGNATION OF BHEL ACTIVITY I/C	
6	DATE & TIME OF ACCIDENT		7	DATE RESUMED	
8	NO. OF WORK-DAYS LOST BY VICTIM (If duty not resumed, give estimated figure)				
9	NO. OF MANHOURS 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	YRS	SEX	MALE/ FEMALE	ESTIMATED COST	ACTUAL COST
MARITAL STATUS		SINGLE / MARRIED			
OCCUPATION		NATURE OF DAMAGE			
PART OF BODY INJURED					
NATURE OF INJURY					
AGENCY (OBJECT / EQUIPMENT / SUBSTANCE) MOST RESPONSIBLE FOR CAUSING ACCIDENT / INJURY / DAMAGE					
12	PERSON (NAME & DESIGNATION) WITH MOST CONTROL OVER AGENCY (OBJECT / EQUIPMENT / SUBSTANCE) CAUSING ACCIDENT INJURY / DAMAGE				
13	DESCRIBE CLEARLY HOW THE ACCIDENT OCCURRED (USE ADDITIONAL SHEET, IF REQUIRED)				
ANALYSIS					
14	WHAT ACTS AND / OR CONDITIONS CONTRIBUTED MOST DIRECTLY TO THIS ACCIDENT				
15	WHAT ARE THE BASIC REASON FOR THE EXISTENCE OF THESE ACTS AND / OR CONDITION ?				
16	WHAT CORRECTIVE ACTIONS HAVE BEEN TAKEN TO PREVENT ACCIDENT RECURRENCE ?				
	DATE :		SIGNATURE OF SITE HSE COORDINATOR		
17	COMMENTS OF HEAD / SOX				
	DATE:		SIGNATURE OF HEAD/SOX		



SAFETY WORK CLEARANCE

Permit no. _____

Project: _____

Emergency Contact Nos: _____

Subcontractor: _____

BURNING/WELDING /HOT WORK PERMIT

Area : _____ Date: _____ Time: _____

Name of Site Engineer (Permit Requesting Authority): _____ Sign: _____

Name of Work Performing Contractor: _____

Name of Package In charge: _____ Sign: _____ Date: _____

Description of Work: _____

Work Execution Date: _____ Time Valid from: _____ to _____

The above signing person(s) will be responsible to ensure that the above described work will be done under all the safety precautions mentioned on the permit to work.

The following precautions are to be taken:

No.	Item	Yes	Not required
1.	Proper Access/Exit available		
2.	Proper ventilation and /or lighting provided.		
3.	Proper and safe scaffolding, platform, ladder provided.		
4.	Welding machine located in a clean and dry area.		
5.	Welding machine grounded at the equipment and proper leakage current protection device (ELCB) provided for welding machine.		
6.	Emergency STOP buttons are in working condition. Welder /Helper knows how to operate it.		
7.	Welding machine input/output cables, welding holder and weld return clamp (Holder) are insulated and in good condition.		
8.	Welder & Fitter trained to connect ground/work return clamps (Holder) to work place prior to energization of welding machine.		
9.	Gas cylinders are stacked vertically and not below the welding / cutting area. Regulator key is available with cylinder.		
10.	Pressure gauges/Flash back arrestor provided and in working condition.		
11.	Personal Protective equipment Minimum applicable: safety helmet, safety goggles, welding helmet, safety shoes, leather gloves, long sleeve and nose mask -provided		
12.	In case of pits, water removed from the pit and wood/rubber insulation provided.		
13.	Safety signboards are in place.		
14.	Adequate and Suitable nos. of fire fighting extinguisher provided.		
15.	Nearby combustible material removed. Housekeeping done.		
16.	Other		

Name of Contractor Safety Officer: _____ Sign: _____ Date: _____ Time: _____

Reviewed and approved by BHEL Site Engineer (Permit Issuing Authority):

Name: _____ Sign: _____ Date: _____ Time: _____

Name of BHEL Safety Representative: _____ Sign: _____

I understand the precaution to be taken as described above and as per project requirement and hereby confirm that work will be executed under my supervision by following all precaution and Safety Rules.

Name of Work Performing Authority: _____ **Sign:** _____ **Date:** _____ **Time:** _____**Permit Cancellation:**

I hereby declare that the work is complete, all workers under my control have been withdrawn and the site restored to safe tidy condition.

Name of Work performing Authority: _____ Sign: _____ Date: _____ Time: _____

Name of Site Engr. (Permit Requesting Authority): _____ Sign: _____ Date: _____ Time: _____

Name of BHEL Site Engr. (Permit Issuing Authority): _____ Sign: _____ Date: _____ Time: _____

(This permit is valid only for the date it is issued)

Original at BHEL site

Second Copy – BHEL SAFETY

Third Copy : Contractor



SAFETY WORK CLEARANCE

Permit no. _____

Project: _____

Emergency Contact Nos: _____

Subcontractor: _____

LIFTING ACTIVITY PERMIT

Area : _____ Date: _____ Time: _____

Name of Site Engineer (Permit Requesting Authority): _____ Sign: _____

Name of Work Performing Contractor: _____

Name of Package In charge: _____ Sign: _____ Date: _____

Description of Work: _____

Work Execution Date: _____ Time Valid from: _____ to _____

The above signing person(s) will be responsible to ensure that the above described work will be done under all the safety precautions mentioned on the permit to work.

The following precautions are to be taken:

No.	Item	Yes	Not required
1.	Crane used for lifting activity tested, certified and approved for rated lifting		
2.	All lifting tackles, gears/appliances are tested and certified for lifting works.		
3.	Crane operator is trained and competent for lifting operation.		
4.	Lifting sling/ belt is protected against sharp edge of the jobs to be lifted.		
5.	Access and exit marked and without obstruction.		
6.	Lifting arrangement adequate.		
7.	Unwanted rubbish material removed from work platform.		
8.	Minimum 2 guidelines have been provided for balancing and guiding jobs to be lifted.		
9.	Periphery area of crane booms as well as lifting job is barricaded and unauthorised/no-entry sign board posted.		
10.	Rigger and signal man is trained and competent for lifting work.		
11.	No lifting activity to be carried out during lightening, heavy wind/rain.		
12.	If scaffolding to be used during lift, scaffolding with valid tag available for use.		
13.	Double lanyards safety harness/belt checked and in working condition.		
14.	Safety shoes (non-slip), helmet with chin strap available with employees.		
15.	Others.		

Name of Contractor Safety Officer: _____ Sign: _____ Date: _____ Time: _____

Reviewed and approved by BHEL Site Engineer (Permit Issuing Authority):

Name: _____ Sign: _____ Date: _____ Time: _____

Name of BHEL Safety Representative: _____ Sign: _____

I understand the precaution to be taken as described above and as per project requirement and hereby confirm that work will be executed under my supervision by following all precaution and Safety Rules.

Name of Work Performing Authority: _____ **Sign:** _____ **Date:** _____ **Time:** _____**Permit Cancellation:**

I hereby declare that the work is complete, all workers under my control have been withdrawn and the site restored to safe tidy condition.

Name of Work performing Authority: _____ Sign: _____ Date: _____ Time: _____

Name of Site Engr. (Permit Requesting Authority): _____ Sign: _____ Date: _____ Time: _____

Name of BHEL Site Engr. (Permit Issuing Authority): _____ Sign: _____ Date: _____ Time: _____

(This permit is valid only for the date it is issued)

Original at BHEL site**Second Copy – BHEL SAFETY****Third Copy : Contractor**



SAFETY WORK CLEARANCE

Permit no. _____

Project: _____

Emergency Contact Nos: _____

Subcontractor: _____

WORKING AT HEIGHT PERMIT

Area : _____ Date: _____ Time: _____

Name of Site Engineer (Permit Requesting Authority): _____ Sign: _____

Name of Work Performing Contractor: _____

Name of Package In charge: _____ Sign: _____ Date: _____

Description of Work: _____

Work Execution Date: _____ Time Valid from: _____ to _____

The above signing person(s) will be responsible to ensure that the above described work will be done under all the safety precautions mentioned on the permit to work.

The following precautions are to be taken:

No.	Item	Yes	Not required
1.	All workers on job are medically fit for working at height (Person should not have vertigo)		
2.	Scaffolding with valid tag available for use		
3.	Safety harness with life line support/ fall arrester are checked and in working condition		
4.	Safety shoes (non-slip), Helmet with chin strip available with employees		
5.	Safety nets are provided as per design and provided 25 ft. below working area & extending 8 ft beyond.		
6.	Horizontal life lines are provided to cater to design specification of 2300kg per person.		
7.	Ladders have been inspected and provided as per BHEL standard/contract.		
8.	All lifting / tightening tools, hand tools/equipment checked and in good condition		
9.	Access and exit marked and without obstruction.		
10.	Lighting arrangement adequate.		
11.	Unwanted and rubbish material removed from working platform.		
12.	Electrical cable, welding Hose/Compressed air hose properly secured and lay down without obstruction.		
13.	Signboards provided on working platforms		
14.	Hazards in the vicinity are identified and communicated to the worker.		
15.	Other		

Name of Contractor Safety Officer: _____ Sign: _____ Date: _____ Time: _____

Reviewed and approved by BHEL Site Engineer (Permit Issuing Authority):

Name: _____ Sign: _____ Date: _____ Time: _____

Name of BHEL Safety Representative: _____ Sign: _____

I understand the precaution to be taken as described above and as per project requirement and hereby confirm that work will be executed under my supervision by following all precaution and Safety Rules.

Name of Work Performing Authority: _____ **Sign:** _____ **Date:** _____ **Time:** _____**Permit Cancellation:**

I hereby declare that the work is complete, all workers under my control have been withdrawn and the site restored to safe tidy condition.

Name of Work performing Authority: _____ Sign: _____ Date: _____ Time: _____

Name of Site Engr. (Permit Requesting Authority): _____ Sign: _____ Date: _____ Time: _____

Name of BHEL Site Engr. (Permit Issuing Authority): _____ Sign: _____ Date: _____ Time: _____

(This permit is valid only for the date it is issued)

Original at BHEL site**Second Copy – BHEL SAFETY****Third Copy : Contractor**