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NOTICE INVITING TENDER

(Document No PS:MSX:NIT)

Bharat Heavy Electricals Limited



Ref:

Date: __/__/__

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NOTICE INVITING E-TENDER (NIT)
BIDDER TO SUBMIT OFFERS ON PORTAL
<https://bheleps.buyjunction.in>

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To

Dear Sir/Madam

Sub : NOTICE INVITING E-TENDER

Sealed offers in two part bid system are invited from reputed & experienced bidders (meeting PRE QUALIFICATION CRITERIA as mentioned in Annexure-I) for the subject job by the undersigned on the behalf of BHARAT HEAVY ELECTRICALS LIMITED as per the tender document. Following points relevant to the tender may please be noted and complied with.

1. Salient Features of NIT

| SL NO | ISSUE | DESCRIPTION |
|-------|-------------------------------------|--|
| i | TENDER NUMBER | BHEL/ NR/SCT/GADARWARA/U#1 /CHEM CLEAN/1048 |
| ii | Broad Scope of job | Pre-Boiler Flushing & Chemical cleaning of Boiler of Unit no. 1 at 2X800 MW Gadarwara STPP |
| iii | DETAILS OF TENDER DOCUMENT | |
| a | Volume-IA | <i>Technical Conditions of Contract (TCC) consisting of Scope of work, Technical Specification, Drawings, Procedures, Bill of Quantities, Terms of payment, etc</i> Applicable |
| b | Volume-IB | <i>Special Conditions of Contract (SCC)</i> Applicable |
| c | Volume-IC | <i>General Conditions of Contract (GCC)</i> Applicable |
| d | Volume-ID | <i>Forms and Procedures</i> Applicable |
| e | Volume-II | <i>Price Schedule (Absolute value).</i> Applicable |
| iv | Issue of Tender Documents | From BHEL website (www.bhel.com) and https://bheleps.buyjunction.in Tender documents will be available at website till due date of submission Applicable |
| v | DUE DATE & TIME OF OFFER SUBMISSION | Date : 05/01/2017, Time : 1500 HRS Place : on https://bheleps.buyjunction.in Applicable |
| vi | OPENING OF TENDER | At due date / time Date : 05/01/2017 , Time : 1530 HRS Notes: (1) In case the due date of opening of tender becomes a non-working day, then the due date & time of offer submission and opening of tenders get extended to the next working day. (2) Bidder may depute representative to witness the opening of tender. However it being an e-tender it Applicable |

| | | | |
|------|---|--|-----------------|
| | | shall be opened online | |
| vii | EMD AMOUNT | Rs. 44,000/-. | Applicable |
| viii | COST OF TENDER | Rs 2000/-. | Applicable |
| ix | LAST DATE FOR SEEKING CLARIFICATION | Five days before bid submission due date. Along with soft version also, addressing to undersigned & to others as per contact address given below | Applicable |
| x | SCHEDULE OF Pre Bid Discussion (PBD) | | Not applicable. |
| xi | INTEGRITY PACT & DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM) | | Not applicable |
| xii | Latest updates | Latest updates on the important dates, Amendments, Correspondences, Corrigenda, Clarifications, Changes, Errata, Modifications, Revisions, etc to Tender Specifications will be hosted in BHEL webpage (www.bhel.com -->Tender Notifications →View Corrigendums) & portal https://bheleps.buyjunction.in and not in the newspapers. Bidders to keep themselves updated with all such information | |
| xiii | Tender submission | on portal https://bheleps.buyjunction.in | |

2. The offer shall be submitted as per the instructions of tender document and as detailed in this NIT. Bidders to note specifically that all pages of tender document, including these NIT pages of this particular tender together with subsequent correspondences shall be submitted by them, **Rates/Price including discounts/rebates, if any, mentioned anywhere/in any form in the techno-commercial offer other than the Price Bid, shall not be entertained.**
3. Unless specifically stated otherwise, bidder shall remit cost of tender and courier charges if applicable, in the form of Demand Draft drawn in favour of Bharat Heavy Electricals Ltd, payable at Power Sector Regional HQ at Noida issuing the Tender, along with techno-commercial offer. Bidder may also choose to deposit the Tender document cost by cash at the Cash Office as stated above against sl no iv of 1, on any working day; and in such case copy of Cash receipt is to be enclosed with the Techno Commercial offer. Sale of tender Documents shall not take place on National Holidays, holidays declared by Central or State Governments and BHEL PS HQ at Noida, Sundays and second/ last Saturdays.

As this tender is an E-Tender and no paper bids will be accepted therefore the scanned copy of the Demand Draft or the Cash Receipt issued by BHEL PSNR should be uploaded in the E procurement portal. Hard Copy of the demand draft should reach BHEL PSNR HQ Noida before the due date and time of bid submission. BHEL shall not be responsible for postal or any other delays in this regard.
4. Unless specifically stated otherwise, bidder shall deposit EMD through Cash Deposit (as permissible under the extant Income Tax Act) (before tender opening), Electronic Fund Transfer credited in BHEL account (before Tender Opening) or Banker's Cheque/ Demand Draft/ Pay Order in favour of Bharat Heavy Electricals Ltd, payable at Noida (along with offer).

'One Time EMD' will not be considered for this tender. All the bidders who have 'One Time EMD' with BHEL and want to participate in this tender, would also submit the requisite amount of EMD as mentioned in Clause No. 1, Salient Features of NIT, Sl. No. (vii) above.

However, the One Time EMD can be adjusted against the EMD applicable against this tender on specific request of bidder.

For Electronic Fund Transfer the details are as below:-

a) **Name of the Beneficiary** -: Bharat Heavy Electricals Limited

b) **Bank Particulars**

| | | |
|--------|--|-----------------------|
| i). | Bank Name -: | STATE BANK OF INDIA |
| ii). | Bank Telephone No.(with STD code)-: | 011-23352180 |
| iii). | Branch Address-: | CAG BRANCH, NEW DELHI |
| iv). | Bank Fax No. (with STD code) -: | 011-23353101 |
| v). | Branch Code -: | SBIN0009996 |
| vi). | 9 Digit MICR Code of the Bank Branch -: | 110002201 |
| vii). | Bank Account Number -: | 10813608647 |
| viii). | Bank Account Type -: | CASH CREDIT |
| ix). | 11 Digit IFSC Code of Beneficiary Branch-: | SBIN0009996 |

(Note:- In case of E-Tenders, no paper bids shall be accepted, therefore, the scanned copy of the Banker's Cheque/ Demand Draft/ Pay Order/ Details of payment made through Electronic Fund Transfer should be uploaded in the E-Procurement Portal and hard copy of the same should reach BHEL-PSNR HQ Noida before the due date and time of bid submission. BHEL shall not be responsible for postal or any other delays in this regard.)

For other details please refer General Conditions of Contract.

5. **Procedure for Submission of Tenders**: This is an E-tender floated online through our E-Procurement Site <https://bheleps.buyjunction.in>. The bidder should respond by submitting their offer online only in our e-Procurement platform at <https://bheleps.buyjunction.in>. Offers are invited in two-parts only.

Documents Comprising the e-Tender

The tender shall be submitted online ONLY EXCEPT TENDER FEE & EMD (in physical form) as mentioned below:

a. **Technical Tender (UN priced Tender)**

All Technical details (eg. Eligibility Criteria requested (as mentioned below)) should be attached in e-tendering module, failing which the tender stands invalid & may be REJECTED. Bidders shall furnish the following information along with technical tender (preferably in pdf format):

- i. Tender Cost and Earnest money Deposit (EMD) furnished in accordance with NIT Clause 3.0 & 4.0. Alternatively, documentary evidence for claiming exemption as per clause 29 of NIT
- ii. Technical Bid (without indicating any prices).

b. **Price Bid:**

- i. Prices are to be quoted in the attached Price Bid format online on e-tender portal.
- ii. The price should be quoted for the accounting unit indicated in the e-tender document.
- iii. Note: It is the responsibility of tenderer to go through the Tender document to ensure furnishing all required documents in addition to above, if any. Any deviation would result in REJECTION of tender and would not be considered at a later stage at any cost by BHEL.
- iv. A person signing (manually or digitally) the tender form or any documents forming part of the contract on behalf of another shall be deemed to warrantee that he has authority to bind such other persons and if, on enquiry, it appears that the persons so signing had no authority to do so, the purchaser may, without prejudice to other civil and criminal remedies, cancel the contract and hold the signatory liable for all cost and damages.
- v. A tender, which does not fulfil any of the above requirements and/or gives evasive information/reply against any such requirement, shall be liable to be ignored and rejected.
- vi. In case offer is sent through hard copy/fax/telex/cable/electronically in place of e-tender, same shall not be considered.

DO NOT

Bidders are requested NOT to submit the hard copy of the Bid. In case offer is sent through hard copy/fax/telex/cable/electronically in place of e-tender, the same shall not be considered. **Also, uploading of the price bid in prequalification bid or technical bid may RESULT IN REJECTION of the tender.**

Digital Signing of e-Tender

Tenders shall be uploaded with all relevant PDF/zip format. The relevant tender documents should be uploaded by an authorized person having Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION digital signature certificate (DSC).

The Requirement:

1. A PC with Internet connectivity &
2. DSC (Digital Signature Certificate)(**Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION**)

BHEL has finalized the e-procurement service Provider:-

M/s M Junction services Limited, Kolkata

Godrej Water Side, 3rd Floor, Tower-1, Plot-V, Block - DP
Sector - V, Salt Lake, Kolkata-700091, West Bengal, INDIA

The contact details of the service provider are given below:

1. **First level:**

- o MJ Helpdesk : 033-66011717, eps.customercare@mjunction.in

2. **Second Level:**

- o Bhaskar Chakraborty: 8584008205, bhaskar.chakraborty@mjunction.in, eps.customercare@mjunction.in
- o Santosh Kumar: 9717149600, santosh.kumar@mjunction.in

3. **Third Level:**

- o Rimi Ghosh: 9650044156, rimi.ghosh@mjunction.in

1. Customer care Help Desk of M/s MJUNCTION SERVICES LIMITED, Kolkata:

Tel ~ 033 - 66011717 (From 9.30 am to 5.30 pm),
Mob - 91633 48283 - 86/ 85840 08116 (From 5.30 pm to 8.30 pm)
HELPDESK email: eps.customercare@mjunction.in,

The process of utilizing e-procurement necessitates usage of **DSC (Digital Signature Certificate)(Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION)** and you are requested to procure the same immediately, if not presently available with you. Please note that only with DSC, you will be able to login the e-procurement secured site and take part in the tendering process.

2. The contact details of the DSC Certifying Authority as given below

| | | |
|---|-------------------|--|
| 1 | GNFC | www.ncodesolutions.com |
| 2 | e-Mudhra | http://www.e-Mudhra.com |
| 3 | Safescrypt | www.safescrypt.com |

Vendors are also requested to go through seller manual available on www.bheleps.buyjunction.in

6. **Not Used**

7. Deviation with respect to tender clauses and additional clauses/suggestions in Techno-commercial bid / Price bid shall NOT be considered by BHEL. Bidders are requested to positively comply with the same.

8. BHEL reserves the right to accept or reject any or all Offers without assigning any reasons thereof. BHEL also reserves the right to cancel the Tender wholly or partly without assigning any reason thereof. Also BHEL shall not entertain any correspondence from bidders in this matter (except for the refund of EMD).
9. **Assessment of Capacity of Bidders:**
Bidders capacity for executing the job under tender shall be assessed (with category of work as “R&M” for R&M tenders and “Non R&M” for Non R & M tenders as applicable), ‘LOAD’ wise and ‘PERFORMANCE’ wise as per the following.

- I. **LOAD:** Load takes into consideration **ALL** the contracts of the Bidder under execution with BHEL Regions, irrespective of whether they are similar to the tendered scope or not. The ‘Load’ is the sum of the unit wise identified packages (refer Table-1) for contracts with BHEL Regions. The cut off month for reckoning ‘Load’ shall be the month, two (2) months preceding the month corresponding to the ‘latest date of bid submission’, in the following manner:

(Note: For example if latest bid submission is in Aug 2011, then the ‘load’ shall be calculated upto and inclusive of June 2011)

- i). **Total number of Packages**
 Total number of Packages in hand = P
 Where

- ‘P’ is the sum of all unit wise identified packages under execution with BHEL Regions as of the cut off month defined above, including packages yet to be commenced, excepting packages which are on HOLD due to reasons not attributable to Bidder..

- II. **PERFORMANCE:** Here ‘Monthly Performance’ of the bidder for all the packages (**under execution/** executed during the ‘Period of Assessment’ in all the Power Sector Regions of BHEL) **SIMILAR** to the packages covered under the tendered scope, excepting packages not commenced shall be taken into consideration. The ‘Period of Assessment’ shall be 6 months preceding the cut off month. The cut off month for reckoning ‘Period of Assessment’ shall be the month two (2) months preceding the month corresponding to the ‘latest date of bid submission’, in the following manner:

(Note: For example if ‘latest date of bid submission’ is in Aug 2011, then the ‘performance’ shall be assessed for a 6 month period upto and inclusive of June 2011, for all the unit wise identified packages (refer Table I)

- i). **Calculation of Overall ‘Performance Rating’ for ‘similar Package/Packages’ for the tendered scope under execution at Power Sector Regions for the ‘Period of Assessment’:**
 This shall be obtained by summing up the ‘Monthly Performance Evaluation’ scores obtained by the bidder in all Regions for all the similar Package/packages’, divided by the total number of Package months for which evaluation should have been done, as per procedure below:
- P₁, P₂, P₃, P₄, P₅, P_N etc be the packages (**under execution/** executed during the ‘Period of Assessment’ in all Regions) **SIMILAR** to the packages covered under the tendered scope, excepting packages not commenced. Total number of similar packages for all Regions = P_T (i.e P_T = P₁+P₂+ P₃+P₄ + .. P_N)
 - Number of Months ‘T₁’ for which ‘Monthly Performance Evaluation’ as per relevant formats, should have been done in the ‘Period of Assessment’ for the corresponding similar package P₁. Similarly T₂ for package P₂, T₃ for package P₃, etc for the tendered scope. Now calculate cumulative total months ‘T_T’ for total similar Packages ‘P_T’ for all Regions (i.e T_T = T₁+ T₂+ T₃+T₄ + .. T_N)
 - Sum ‘S₁’ of ‘Monthly Performance Evaluation’ Scores (S₁₋₁, S₁₋₂, S₁₋₃, S₁₋₄, S₁₋₅,.... S_{1-N}) for similar package P₁, for the ‘period of assessment’ ‘T₁’ (i.e S₁ = S₁₋₁+ S₁₋₂+ S₁₋₃+ S₁₋₄+ S₁₋₅+...S_{1-N}). Similarly S₂ for package P₂ for period T₂, S₃ for package P₃ for period T₃, etc for the tendered scope for all Regions. Now calculate cumulative sum ‘S_T’ of ‘Monthly Performance Evaluation’ Scores for total similar Packages ‘P_T’ for all Regions (i.e ‘S_T’ = S₁+ S₂+ S₃+ S₄+ S₅+.... S_N.)

- d) Overall Performance Rating ' R_{BEHL} ' for the similar Package/Packages (under execution/ executed during the 'Period of Assessment') in all the Power Sector Regions of BHEL):

$$= \frac{\text{Aggregate of Performance scores for all similar packages in all the Regions}}{\text{Aggregate of months for each of the similar package for which performance should have been evaluated in all the Regions}}$$

$$= \frac{S_T}{T_T}$$

- e) Bidders to note that the risk of non evaluation or non availability of the 'Monthly Performance Evaluation' reports as per relevant formats is to be borne by the Bidder

- f) Table showing methodology for calculating 'a', 'b' and 'c' above

| Sl no | Item Description | Details for all Regions | | | | | | | Total |
|-------|---|---|---|---|---|---|--------------------------------|---|--|
| (i) | (ii) | (iii) | (iv) | (v) | (vi) | (vii) | (viii) | (ix) | (x) |
| 1 | Similar Packages for all Regions → (under execution/ executed during period of assessment) | P_1 | P_2 | P_3 | P_4 | P_5 | ... | P_N | Total No of similar packages for all Regions = P_T ie Sum (Σ) of columns (iii) to (ix) |
| 2 | Number of Months for which 'Monthly Performance Evaluation' as per relevant formats should have been done in the 'period of assessment for corresponding similar Package (as in row 1) | T_1 | T_2 | T_3 | T_4 | T_5 | ... | T_N | Sum (Σ) of columns (iii) to (ix) = T_T |
| 3 | Monthly performance scores for the corresponding period (as in Row 2) | $S_{1-1},$ $S_{1-2},$ $S_{1-3},$ $S_{1-4},$... S_{1-T1} | $S_{2-1},$ $S_{2-2},$ $S_{2-3},$ $S_{2-4},$... S_{2-T2} | $S_{3-1},$ $S_{3-2},$ $S_{3-3},$ $S_{3-4},$... S_{3-T3} | $S_{4-1},$ $S_{4-2},$ $S_{4-3},$ $S_{4-4},$... S_{4-T4} | $S_{5-1},$ $S_{5-2},$ $S_{5-3},$ $S_{5-4},$... S_{5-T5} | | $S_{N-1},$ $S_{N-2},$ $S_{N-3},$ $S_{N-4},$... S_{N-TN} | ----- |
| 4 | Sum of Monthly Performance scores of the corresponding Package for the corresponding period (as in row-3) | S_1 | S_2 | S_3 | S_4 | S_5 | ... | S_N | Sum (Σ) of columns (iii) to (ix) = S_T |

- ii) Calculation of Overall 'Performance Rating' (R_{BEHL}) in case 'similar Package/Packages' for the tendered scope ARE NOT AVAILABLE, during the 'Period of Assessment':

This shall be obtained by summing up the 'Monthly Performance Evaluation' scores obtained by the bidder in all Regions for ALL the packages, divided by the total number of Package months for which evaluation should have been done. ' R_{BEHL} ' shall be calculated subject to availability of 'performance scores' for at least 6 'package months' in the order of precedence below:

- Period of Assessment.
- 12 months preceding the cut-off month
- 24 months preceding the cut-off month
- 36 months preceding the cut-off month

In case, R_{BHEL} cannot be calculated as above, then Bidder shall be treated as 'NEW VENDOR'. Further eligibility and qualification of this bidder shall be as per definition of 'NEW VENDOR' described in 'Explanatory Notes'

iii) Factor "L" assigned based on Overall Performance Rating (R_{BHEL}) at Power Sector Regions.:

| Sl no | Overall Performance Rating (R_{BHEL}) | Corresponding value of 'L' |
|-------|---|----------------------------|
| 1 | =60 | NA |
| 2 | > 60 and \leq 65 | 0.4 |
| 3 | > 65 and \leq 70 | 0.35 |
| 4 | > 70 and \leq 75 | 0.25 |
| 5 | > 75 and < 80 | 0.2 |
| 6 | \geq 80 | NA |

III. **'Assessment of Capacity of Bidder':**

'Assessment of Capacity of Bidder' is based on the Maximum number of packages for which a vendor is eligible, considering the performance scores of similar packages, as below:

Max number of packages $P_{Max} = (R_{BHEL} - 60)$ divided by corresponding value of 'L'
i.e. $(R_{BHEL} - 60)/L$

Note:

- In case the value of P_{Max} results in a fraction, the value of P_{Max} is to be rounded off to next whole number
- For $R_{BHEL} = 60$, $P_{Max} = '1'$
- For $R_{BHEL} \geq 80$, there will be no upper limit on P_{Max}

The Bidder shall be considered 'Qualified' as per 'Assessment of Capacity of Bidder' for the subject Tender if $P \leq P_{Max}$
(where P is calculated as per clause 9.1)

IV. **Explanatory note:**

- Similar package means Boiler or ESP or Piping or Turbine or Civil or Structure or Electrical or CI, etc at the individual level irrespective of rating of Plant, and irrespective of whether the subject tender is a single package or as part of combined/composite packages. Normally Boiler, ESP, Piping, Turbine, Electrical, CI, Civil, Structure, etc is considered individual level of package. For example in case the tendered scope is a Boiler Vertical Package comprising of Boiler, ESP and Power Cycle Piping (i.e the 'identified packages as per Table-1 below), the 'PERFORMANCE' part against sl no II above, needs to be evaluated considering all the identified packages (ie Boiler, ESP and Power Cycle Piping) and finally the Bidder's capacity to execute the tendered scope is assessed in line with III above
- Identified Packages (Unit wise)

Table-1

| | Civil | Electrical & CI | Mechanical |
|--|---|---|--|
| | i). Enabling works ii). Pile and Pile Caps iii). Civil Works including foundations iv). Structural Steel Fabrication & Erection v). Chimney vi). Cooling Tower vii). Others (Civil) | i). Electrical ii). CI iii). Others (Elec & CI) | i). Boiler & Aux (All types including CW Piping if applicable) ii). Power Cycle Piping/Critical Piping iii). LP Piping iv). ESP v). Steam Turbine Generator set & Aux vi). Gas Turbine Generator set & Aux vii). Hydro Turbine Generator set & Aux viii). Turbo Blower (including Steam Turbine) ix). Material Handling x). Material Management |

| | | | |
|--|--|--|---|
| | | | xi). Material Handling & Material Management xii). Others (Mechanical) |
|--|--|--|---|

- c) Bidders who have not been evaluated for at least six package months in the last 36 months in the online BHEL system for contractor performance evaluation in BHEL PS Regions, wef July'2010 shall be considered "NEW VENDOR".

A 'NEW VENDOR' shall be considered qualified subject to satisfying all other tender conditions

A 'NEW VENDOR' if awarded a job (of package/packages identified under this clause) shall be tagged as "FIRST TIMER" on the date of first LOI/ LOA from BHEL.

The "FIRST TIMER" tag shall remain till execution of work for a period of not less than 09 months, from the commencement of work of first package

A Bidder shall not be eligible for the next job as long as the Bidder is tagged as "FIRST TIMER" excepting for the Tenders which have been opened on or before the date of the bidder being tagged as 'FIRST TIMER'.

After removal of 'FIRST TIMER' tag, the Bidder shall be considered 'QUALIFIED' for the future tenders subject to satisfying all other tender conditions including 'Capacity Evaluation of Bidders'.

*In case assessment of "FIRST TIMER" cannot be done for 9 months due to **completion of work in less than 9 months**, the "FIRST TIMER" tag will be removed and the vendor shall be considered as "NEW VENDOR" for any new tender/s, provided the average score for which Performance Evaluation has been done, is not less than 60%.*

- d) In the unlikely event of all bidders shortlisted against Technical and Financial Qualification criteria not meeting the criteria on 'Assessment of Capacity of Bidders' detailed above, OR leads to a single tender response on applying the criteria of 'Assessment of Capacity of Bidders' or due to non-approval by Customer, then BHEL at its discretion reserves the right to consider the further processing of the Tender based on the **Overall Performance Rating 'R_{BHEL}'** only, starting from the upper band.

- e) 'Under execution' shall mean works in progress as per the following:

- i. up to Boiler Steam Blowing in case of Steam Generator and Auxiliaries
- ii. upto Synchronisation in case of all other works excepting sl no (i) and (iii)
- iii. Upto execution of at least 90% of anticipated contract value in case of Civil & Structures (unit wise), Enabling works and upto 90% of material unloading (in tonnage) as per the original contract in case of MM Package.

Note : BHEL at its discretion can extend (or reduce in exceptional cases in line with Contract conditions) the period defined against (i), (ii) and (iii) above, depending upon the balance scope of work to be completed.

- f) Performance evaluation in CL 9 above is applicable to Prime bidder and consortium partner (or Technical tie up partner) for their respective scope of work.

10. Since the job shall be executed at site, bidders must visit site/ work area and study the job content, facilities available, availability of materials, prevailing site conditions including law & order situation, applicable wage structure, wage rules, etc before quoting for this tender. They may also consult this office before submitting their offers, for any clarifications regarding scope of work, facilities available at sites or on terms and conditions.
11. For any clarification on the tender document, the bidder may seek the same over e-procurement portal as per specified format, within the scheduled date for seeking clarification, from the office of the undersigned. BHEL shall not be responsible for receipt of queries after due date of seeking clarification due to postal delay or any other delays. Any clarification / query received after last date for seeking clarification may not be normally entertained by BHEL and no time extension will be given.
12. BHEL may decide holding of pre-bid discussion [PBD] with all intending bidders as per date indicated in the NIT. The bidder shall ensure participation for the same at the appointed time, date and place as may be decided by BHEL. Bidders shall plan their visit accordingly. The outcome of pre-bid discussion (PBD) shall also form part of tender.
13. In the event of any conflict between requirement of any clause of this specification/ documents/drawings/data sheets etc or requirements of different codes/standards specified, the same to be brought to the knowledge of BHEL in writing for clarification before due date of seeking clarification (whichever is applicable), otherwise, interpretation by BHEL shall prevail. Any typing error/missing pages/ other clerical errors in the tender documents, noticed must be pointed out before pre-bid meeting/submission of offer, else BHEL's interpretation shall prevail.
14. Unless specifically mentioned otherwise, bidder's quoted price shall deemed to be in compliance with tender including PBD.
15. Bidders shall submit Integrity Pact Agreement (Duly signed by authorized signatory who signs in the offer), **if applicable**, along with techno-commercial bid. This pact shall be considered as a preliminary qualification for further participation. **The names and other details of Independent External Monitor (IEM) for the subject tender is as given at Clause No. 1, Salient Features of NIT, Sl. No. (xi) above.**
- 15a. **Integrity Pact (IP)**
 - i) IP is a tool to ensure that activities and transactions between the Company and its Bidders / Contractors are handled in a fair, transparent and corruption free manner. A panel of Independent External Monitors (IEMs) have been appointed to oversee implementation of IP in BHEL.

The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory who signs in the offer) along with techno-commercial bid. Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification. Details of IEM for this tender is given at point 1 (xi) above.
 - ii) Please refer Section-8 of the IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to the IEM mentioned in the tender.

No routine correspondence shall be addressed to the IEM (phone / post / email) regarding the clarifications, time extensions or any other administrative queries, etc. on the tender issued. All such clarification / issues shall be addressed directly to the tender issuing (procurement) department.
16. The Bidder has to satisfy the Pre Qualifying Requirements stipulated for this Tender in order to be qualified. The Price Bids of only those bidders will be opened who will be qualified for the subject job on the basis of satisfying the Pre Qualification Criteria specified in this NIT as per Annexure-I (as applicable), past performance etc. and date of opening of price bids shall be intimated to only such bidders. BHEL reserves the right not to consider offers of parties under HOLD.
17. In case BHEL decides on a 'Public Opening', the date & time of opening of the PRICE BID shall be intimated to the qualified bidders and in such a case, bidder may depute one authorised representative to witness the

price bid opening. BHEL reserves the right to open 'in-camera' the 'PRICE BID' of any or all Unsuccessful/Disqualified bidders under intimation to the respective bidders-

18. Validity of the offer shall be for **six months** from the latest due date of offer submission (including extension, if any) unless specified otherwise
19. (a) BHEL reserves the right to go for Reverse Auction (RA) (Guidelines as available on www.bhel.com) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno-commercial evaluation. Bidders to give their acceptance with the offer for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA.
- (b) Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit 'Process compliance form' (to the designated service provider) as well as 'Online sealed bid' in the Reverse Auction. Non-submission of 'Process compliance form' or 'Online sealed bid' by the agreed bidder(s) will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines for suspension of business dealings with suppliers/ contractors (as available on www.bhel.com).
- (c) The bidders have to necessarily submit online sealed bid less than or equal to their envelope sealed price bid already submitted to BHEL along with the offer. **The envelope sealed price bid of successful L1 bidder in RA, if conducted, shall also be opened after RA and the order will be placed on lower of the two bids (RA closing price & envelope sealed price) thus obtained. The bidder having submitted this offer specifically agrees to this condition and undertakes to execute the contract on thus awarded rates.**
- (d) If it is found that L1 bidder has quoted higher in online sealed bid in comparison to envelope sealed bid for any item(s), the bidder will be issued a warning letter to this effect. However, if the same bidder again defaults on this count in any subsequent tender in the unit, it will be considered as fraud and will invite action by BHEL as per extant guidelines for suspension of business dealings with suppliers/ contractors (as available on www.bhel.com).
- (e) If reverse auction process is unsuccessful, sealed envelope price bids of all the techno-commercially qualified bidders shall be opened and the tender shall be processed accordingly. However, the envelope sealed bid(s) of techno-commercially acceptable bidder(s) who had agreed to participate in the RA and had failed to submit the online sealed bid shall not be opened.
20. On submission of offer, further consideration will be subject to compliance to tender & qualifying requirement and customer's acceptance, as applicable.
21. In case the bidder is an "Indian Agent of Foreign Principals", 'Agency agreement has to be submitted along with Bid, detailing the role of the agent along with the terms of payment for agency commission in INR, along with supporting documents.
22. The bidders shall not enter into any undisclosed M.O.U. or any understanding amongst themselves with respect to tender.
23. Not used
24. The bidder shall upload documents in support of possession of 'Qualifying Requirements' duly self certified and stamped by the authorized signatory, indexed and properly linked in the format for PQR. In case BHEL requires any other documents/proofs, these shall be submitted immediately.
25. The bidder may have to produce original document for verification if so decided by BHEL.
26. The offers of the bidders who are on the banned/ hold list as also the offer of the bidders, who engage the services of the banned/ hold firms, shall be rejected. The list of **banned/ hold firms** is available on BHEL web site www.bhel.com.

- 27.0 It may please be noted that **guidelines/rules** in respect of Suspension of Business dealings', 'Vendor evaluation format', 'Quality, Safety & HSE guidelines', milestone/ completion certificate, etc may **undergo change** from time to time and the latest one shall be followed. The abridge version of extant 'Guidelines for suspension of business dealings with suppliers/ contractors' is available on www.bhel.com on "**supplier registration page**".

The offers of the bidders who are under suspension as also the offers of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL website (www.bhel.com).

27.1 Integrity commitment, performance of the contract and punitive action thereof:

27.1.1 Commitment by BHEL:

BHEL commits to take all measures necessary to prevent corruption in connection with the tender Process and execution of the contract. BHEL will during the tender process treat all Bidder(s) in a transparent and fair manner, and with equity.

27.1.2 Commitment by Bidder/ Supplier/ Contractor:

- (i) The bidder/ supplier/ contractor commit to take all measures to prevent corruption and will not directly or indirectly influence any decision or benefit which he is not legally entitled to nor will act or omit in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India.
- (ii) The bidder/ supplier/ contractor will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract and shall adhere to relevant guidelines issued from time to time by Govt. of India/ BHEL.
- (iii) The bidder/ supplier/ contractor will perform/ execute the contract as per the contract terms & conditions and will not default without any reasonable cause, which causes loss of business/ money/ reputation, to BHEL.

If any bidder/ supplier/ contractor during pre-tendering/ tendering/ post tendering/ award/ execution/ post-execution stage indulges in mal-practices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the prices or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India, then, action may be taken against such bidder/ supplier/ contractor as per extant guidelines of the company available on www.bhel.com and / or under applicable legal provisions.

28.0 Micro and Small Enterprises (MSE)

Any Bidder falling under MSE category, shall furnish the following details & submit documentary evidence/ Govt. Certificate etc. in support of the same along with their techno-commercial offer

| Type under MSE | SC/ST owned | Others |
|----------------|-------------|--------|
| Micro | | |
| Small | | |

Note: - If the bidder does not furnish the above, offer shall be processed construing that the bidder is not falling under MSE category.

- a) MSE suppliers can avail the intended benefits only if they submit along with the offer, attested copies of either Udyog Aadhaar or EM-II certificate having deemed validity (five years from the date of issue of acknowledgement in EM-II) or valid NSIC certificate or EM-II certificate along with attested copy of a CA certificate (format enclosed as Annexure – 3) where deemed validity of EM-II certificate of five years has expired applicable for the last audited financial year. Date to be reckoned for determining the deemed validity will be the last date of Technical Bid submission. Non submission of such documents will lead to consideration of their bids at par with other bidders. No benefits shall be applicable for this enquiry if the

above required documents are not submitted before price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal.

- b) MSEs shall be exempted from payment of tender fee.
- c) MSEs shall be exempted from payment of earnest money at the time of tender deposit. However, there is no exemption of security deposit submission.
- d) Participating MSEs quoting price within price band of L1+15 % shall be considered for award of complete scope of work by bringing down their price to L1 price in a situation where L1 price is from someone other than a MSE. In case of more than one such MSE, MSE with lowest price shall be given the first option to match the L1 price. However, MSEs owned by the Scheduled Caste or the Scheduled Tribe entrepreneurs shall be given the preference for matching the L1 price irrespective of their standing in comparative statement of MSE bidders within price band of L1+15 %.

29.0 The Bidder along with its associate/ collaborators/ sub-contractors/ sub-vendors/ consultants/ service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.

30.0 Order of Precedence

In the event of any ambiguity or conflict between the Tender Documents, the order of precedence shall be in the order below:

- a. Amendments/Clarifications/Corrigenda/Errata etc issued in respect of the tender documents by BHEL
- b. Notice Inviting Tender (NIT)
- c. Price Bid
- d. Technical Conditions of Contract (TCC)—Volume-1A
- e. Special Conditions of Contract (SCC) —Volume-1B
- f. General Conditions of Contract (GCC) —Volume-1C
- g. Forms and Procedures —Volume-1D

for BHARAT HEAVY ELECTRICALS LTD
(SCT)

Enclosure:-

- (i) Annexure-1: Pre Qualifying criteria.
- (ii) Annexure-2: Check List.
- (iii) Annexure-3: Chartered Accountant certificate for MSMED
- (iv) Annexure-4: Authorization of representative who will participate in the online Reverse Auction Process
- (v) Annexure-5: Feedback form
- (vi) Other Tender documents as per this NIT.

ANNEXURE - 1**PRE QUALIFYING REQUIREMENTS**

| | |
|-----------|---|
| JOB | Pre-Boiler Flushing & Chemical cleaning of Boiler of Unit no. 1 at 2X800 MW Gadarwara STPP |
| TENDER NO | BHEL/ NR/SCT/GADARWARA/U#1 /CHEM CLEAN/1048 |

| SL NO | NAME AND DESCRIPTION OF PRE QUALIFICATION CRITERIA | REMARK |
|-------|---|-----------------------------|
| A | Submission of Integrity Pact | Not applicable |
| B | Assessment of Capacity of bidder to execute the work as per clause 9.0 pf NIT | Applicable – by BHEL |
| C | <u>Technical</u> | Applicable |
| C-1 | Bidders who wish to participate should have: | |
| | Executed similar work for any one of the following in the last seven years from latest date of bid submission: | |
| C-1.1 | One work each of Value not less than 18 lakhs Or | |
| C-1.2 | Two work each of Value not less than 11 lakhs Or | |
| C-1.3 | Three work each of Value not less than 9 lakhs | |
| D | <u>FINANCIAL</u> | |
| D-1 | <u>TURNOVER</u> Bidder should have achieved an average annual financial turnover (Audited) of Rs 6.6 Lakhs or more over the last three Financial years (FY) i.e. (2013-14, 2014-15, 2015-16). Bidder shall submit audited annual accounts (balance sheets and profit & loss account) in support of this. In case audited financial statements have not been submitted for all the three years as indicated above, then the applicable audited statements submitted by the bidders against the requisite three years, will be averaged for three years i.e. total divided by three. If financial statements are not required to be audited statutorily, then instead of audited financial statement, financial statements are required to be certified by Chartered Accountant. | Applicable |

| | | |
|------|---|-----------------------|
| D -2 | <p><u>NET WORTH</u></p> <p>Net worth (only in case of companies) of the bidder should be positive.</p> <p>Note: Net worth shall be calculated based on the latest audited accounts, as furnished for D-1 above.</p> <p>Net worth = Paid up share capital* + Reserves. (*Share capital or partnership capital or proprietor capital as the case may be)</p> | Applicable |
| D- 3 | <p><u>PROFIT</u></p> <p>Bidder must have earned profit in any one of the three financial years as applicable in last three years defined in D-1 above.</p> <p>Note: PROFIT Shall be PBT earned during any one year of last three financial year as in D-1 above.</p> | Applicable |
| E | Approval of Customer | Not Applicable |
| F | Consortium Criteria | Not Applicable |

Explanatory Notes:-

1. Relevant documents, meeting above requirements shall be submitted by bidders.
2. For evaluation of PQR, the credentials of the Bidder alone, and not that of the group company shall be considered.
3. “Executed” means, the bidder should have completed the work of Chemical Cleaning of Boiler not less than 190 MW. Work completion certificate required in support of the executed work.
4. “Similar work” means Chemical cleaning of the Boiler, not less than 190 MW along with supply of temporary system like tanks and pumps.
5. Bidders are required to submit the detailed deployment plan for the tanks, pumps other associated material in their scope as specified in the tender specifications for the execution of the chemical cleaning work at Gadarwara.
6. For criteria ‘C’ above value of work is to be updated as per the PVC formula of GCC with Indices for “All India Avg. Consumer Price Index for Industrial Workers” with base month as date of completion as per certificate and indexed up to two months prior to the bid opening month.

BIDDER SHALL SUBMIT ABOVE PRE-QUALIFICATION CRITERIA FORMAT, DULY FILLED-IN, SPECIFYING RESPECTIVE ANNEXURE NUMBER AGAINST EACH CRITERIA AND FURNISH RELEVANT DOCUMENT INCLUSIVE OF WORK ORDER AND WORK COMPLETION CERTIFICATE ETC IN THE RESPECTIVE ANNEXURES IN THEIR OFFER.

ANNEXURE - 2**CHECK LIST****NOTE:- Tenderers are required to fill in the following details and no column should be left blank**

| | | | |
|-----|--|--|-----------------------|
| 1 | Name and Address of the Tenderer | | |
| 2 | Details about type of the Firm/Company | | |
| 3.a | Details of Contact person for this Tender | Name : Mr/Ms Designation: Telephone No: Mobile No: Email ID: Fax No: | |
| 3.b | Details of alternate Contact person for this Tender | Name : Mr/Ms Designation: Telephone No: Mobile No: Email ID: Fax No: | |
| 4 | EMD DETAILS | DD No: Date : Bank : Amount: <u>In any other form (specify):</u> | |
| 5 | Validity of Offer | TO BE VALID FOR SIX MONTHS FROM DUE DATE | |
| | | APPLICABILITY (BY BHEL) | ENCLOSED BY BIDDER |
| 6 | Whether the format for compliance with PRE QUALIFICATION CRITERIA (ANNEXURE-I) is understood and filled with proper supporting documents referenced in the specified format | Applicable | YES / NO |
| 7 | Audited profit and Loss Account for the last three years | Applicable | YES/NO |
| 8 | Copy of PAN Card | Applicable | YES/NO |
| 9 | Not used | | |
| 10 | Integrity Pact | _____ | |
| | | Not Applicable | |
| 11 | Declaration by Authorised Signatory | Applicable | YES/NO |
| 12 | No Deviation Certificate | Applicable | YES/NO |
| 13 | Declaration confirming knowledge about Site Conditions | Applicable | YES/NO |
| 14 | Declaration for relation in BHEL | Applicable | YES/NO |
| 15 | Non Disclosure Certificate | Applicable | YES/NO |
| 16 | Bank Account Details for E-Payment | Applicable | YES/NO |
| 18 | Tie Ups/Consortium Agreement are submitted as per format | _____ | |
| | | Not Applicable | |
| 19 | Not used | | |

| | | | |
|----|------------------------|------------|--|
| 20 | Analysis of Unit rates | Applicable | |
|----|------------------------|------------|--|

NOTE : STRIKE OFF 'YES' OR 'NO', AS APPLICABLE. TENDER NOT ACCOMPANIED BY THE PRESCRIBED **ABOVE APPLICABLE DOCUMENTS** ARE LIABLE TO BE SUMMARILY REJECTED.

DATE :

AUTHORISED SIGNATORY
(With Name, Designation and Company seal)

Annexure-3**Certificate by Chartered Accountant on letter head**

This is to Certify that M/S ,
 (hereinafter referred to as 'company') having its registered office at
 is registered under MSMED Act 2006, (Entrepreneur
 Memorandum No (Part—II) dtd:..... ,
 Category: (Micro/Small)). (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as per
 the latest audited financial year as per MSMED Act 2006 is as follows:

1. For Manufacturing Enterprises: Investment in plant and machinery (i.e. original cost
 excluding land and building and the items specified by the Ministry of Small Scale Industries vide
 its notification No. S.O.1722(E) dated October 5, 2006:
 Rs.....Lacs

2. For Service Enterprises: Investment in equipment (original cost excluding land and building
 and furniture, fittings and other items not directly related to the service rendered or as may be notified
 under the **MSMED** Act, 2006:
 Rs.....Lacs

(Strike off which is not applicable)

The above investment of Rs.....Lacs is within permissible limit of
 Rs.....Lacs for Micro / Small **(Strike off which is not applicable)**

Category under MSMED Act 2006.

Or

The company has been graduated from its original category (Micro/Small) (Strike off which is
 not applicable) and the date of graduation of such enterprise from its original category is
 (dd/mm/yyyy) which is within the period of 3 years from the date of graduation
 of such enterprise from its original category as notified vide S.O. No. 3322(E) dated
 01.11.2013 published in the gazette notification dated 04.11.2013 by Ministry of MSME.

Date:

(Signature)

Name -

Membership number -

Seal of Chartered Accountant

Authorization of representative who will participate in the on line Reverse Auction Process;

| | | |
|---|---|--|
| 1 | NAME & DESIGNATION OF OFFICIAL | |
| 2 | POSTAL ADDRESS (COMPLETE) | |
| 3 | TELEPHONE NOS. (LAND LINE & MOBILE BOTH) | |
| 4 | FAX NO. | |
| 5 | E-MAIL ADDRESS | |
| 6 | NAME OF PLACE/ STATE/ COUNTRY, WHEREFROM S/HE WILL PARTICIPATE IN THE REVERSE AUCTION | |

ANNEXURE – 5**Feedback Form: From where did you get information reg. this tender**

| | | |
|---|---|--|
| 1 | NEWSPAPER ADVERTISEMENT (NAME) | |
| 2 | BHEL WEBISTE (TENDER NOTIFICATION) | |
| 3 | CENTRAL PUBLIC PROCUREMENT PORTAL OF GOVERNMENT OF INDIA (CPP PORTAL) | |
| 4 | EMAIL COMMUNICATION FROM BHEL | |
| 5 | ANY OTHER SOURCE | |

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TECHINICAL CONDITIONS OF CONTRACT (TCC)

TENDER NO. BHEL/ NR/SCT/GADARWARA/U#1 /CHEM CLEAN/1048

FOR

**Pre-Boiler Flushing & Chemical cleaning of Boiler of Unit no. 1
at 2X800 MW Gadarwara STPP.**



**Bharat Heavy Electricals Limited
(A Govt. Of India Undertaking)
Power Sector – Northern Region,
Plot No. 25 , Sector - 16A ,
Distt. Gautam Budh Nagar, NOIDA – 201 301. INDIA**

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Chapter - I: Project Information

| | | |
|---------------------------|---|--|
| Name of the Owner | : | NATIONAL THERMAL POWER CORPORATION LTD.(NTPC) |
| Address | : | 2x800 MW NTPC Gadarwara STPP District– Narsinghpur, M.P-487551 |
| New Installation | : | UNIT#1 & 2, STAGE I |
| Nearest Railway station : | | Nearest BG Railway Station, Gadarwara, on Jabalpur- Itarsi Section on central railway main Line is about 9 Kms from proposed project site. |
| Nearest Road | : | 9 Km From Gadarwara Town, Narsinghpur District, M.P |
| Nearest Airport: | | Bhopal and Jabalpur are located about 240 Kms and about 155 Kms respectively from site. |

Chapter - II: SCOPE OF WORKS

2.0 SCOPE OF WORK

2.1 BHEL has been awarded the work of Design, Manufacture, supply, installation, erection commissioning & Handing over of BTG package & Mill bay structures & bunker at 2X800 MW Gadarwara STPP by M/s NTPC. The equipment consists of Boiler, Electrostatic precipitator, Fans, milling systems, steam turbines, generators, boilers feed pumps, condensate extraction pumps and piping along with the associated auxiliary supports and controls.

2.2 PLANT DETAILS

The steam Generator is a controlled circulation boiler with rifled water wall tubes.

Boiler Design Data

| | |
|-----------------------------|-------------------------------------|
| SH / RH outlet pressure | - 257.0 / 59 Kg/cm ² (g) |
| SH / RH outlet temperature | - 568 / 596 °C |
| FW temperature at Eco inlet | - 293 °C |
| Flow at SH outlet | - 2570 T/h |

Water Holding Capacity

| | |
|-----------------------------|--------------------|
| Economizer | 250 m ³ |
| Separator & Start Up System | 43 m ³ |
| Furnace | 100 m ³ |
| Super heaters | 190 m ³ |

Total 583 m³

2.3 The scope of work under this tender broadly consists of:

2.3.1 Under the scope of this work contactor has to provide T&Ps, manpower, material, pumps, tanks etc. as detailed in subsequent chapter to carry out Pre-Boiler flushing and chemical cleaning of Boiler using citric acid.

2.3.2 Contractor shall be fully responsible for following the procedures as prescribed by BHEL and provide sufficient resources so as to complete the process with satisfactory results. Pre boiler flushing consists of flushing of feed lines, condensate lines, drip lines, Deaerator and heaters etc. and Chemical cleaning (by using Citric Acid) of Boiler of Unit No.1

The objective of this procedure is to chemically clean and passivate the internal surfaces of the steam generating portion (water touched surfaces) and heating surfaces (Economizer) using specified chemicals employing a single step process. This will render the above mentioned surfaces free of mill scale, and other deposits and form uniform & smooth protective layer of magnetite.

2.3.3 The Pre-Boiler system consists of Condensate system, Drip system and Feed water system. Condensate system comprises of Condensate Extraction Pumps, Low Pressure Heaters, Gland steam condenser, Drain cooler, Deaerator Feed Storage Tank, connecting pipelines including excess condensate line up to Condensate Storage Tank.

Feed water system comprises Turbine driven & Motor driven Boiler Feed Pumps, their Booster pumps and recirculation lines, High Pressure Heaters, their connecting pipelines

up to Economizer inlet. RH & SH spray lines are also included for the purpose of flushing. Drip system comprises all LP and HP Heaters shells and Drip lines. Pre boiler flushing to be carried out as per the approved scheme.

- 2.3.4 The Bill of Temporary Material indicated in **Annexure - I (BHEL supplied)** for carrying out Pre-Boiler flushing and chemical cleaning of Boiler to be provided by BHEL as free of cost. The contractor will transport this material from stores/location of the material to the site to do erection and after completion of chemical cleaning these material to be dismantled and returned to the BHEL store. Tentative scheme is enclosed with the specifications .The actual scheme of pipelines for the chemical cleaning and flushing process will be provided by BHEL at site. Any loss /damage of the BHEL material will be recovered from the contractor at the prevailing market rates.
- 2.3.5 The Bill of Temporary Material indicated in **Annexure - II (in contractor scope)** for carrying out chemical cleaning to be arranged by successful bidder within lump sum quoted price. All required materials listed in the specifications or even any additional requirement to perform and complete the process shall be provided by the contractor within the awarded price. The bidder must take care of such variations in their offer.
- 2.3.6 Contractor has to fabricate & erect heat exchanger coil to be used in each of the mixing tank for indirect heating of chemical solution to maintain temperature of chemical solution. Heat exchanger shall be made with inlet & outlet header (made of 150 mm pipe) connected with 02nos. rows of 12 nos. tubes of dia 33.4 mm and approx. 3 meter of length for fitting inside the mixing tank. Material for fabrication shall be provided free of cost. Installation & hydro test of heat exchanger shall be in the scope of contractor within the quoted rate.
- 2.3.7 All consumables i.e. welding electrodes/cutting gases/filler wire/lubricants including reagents etc. for the successful completion of Pre-Boiler flushing and chemical cleaning of Boiler, will be supplied by the contractor within quoted rate.
- 2.3.8 Chemicals required for Pre-Boiler flushing & chemical cleaning of boilers will be supplied as a free issue item by BHEL/ owner. They are to be received, transported, preserved, used and handled by the contractor. Necessary precautions for handling of all chemicals, particularly ammonia shall be responsibility of the contractor.
- 2.3.9 During the acid cleaning process all the pressure and level instruments are isolated. The BCP DP transmitter will remain in service to provide for Control Room Indication of the Pump DP throughout the Chemical Cleaning activities. The impulse line tubing for the instruments should be flushed thoroughly with ammoniated DM water after the final draining of acid
- 2.3.10 The Boiler features numerous permanent thermocouples on the spiral evaporator tubes, on the BCP casing and at the BCP Discharge / Economizer inlet to enable close and accurate monitoring of the water circuit temperature. The temperature measurements should be available.
- 2.3.11 Provision has to be made for monitoring temperature in the control room. Instrument cables for measurement of temperature should be temperature compensated. They are to be laid from the measuring instrument to the control room.
- 2.3.12 Thermocouples to be used should be accurate in the range of 0-200°C. All the instruments pressure & temp. Gauges should be calibrated with valid calibration certificates.

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- 2.3.13 To get representative samples of the process solution, sampling points with sample coolers having adequate cooling water arrangement are provided. Samples will normally be collected from
- a. Temporary return line from boiler from side stream circuit to mixing tank at ground level, as shown in the drawing.
 - b. Recirculation line of temporary chemical injection pumps connected to temporary mixing tank.
- 2.3.14 Only the source of power will be provided by the owner at one point at project site. Cables from the source of power to power distribution boards, Motor control centers and to individual equipment are to be provided and laid by the contractor. Earthing of individual motors is to be provided by contractor.
- 2.3.15 Test coupons (Boiler water wall tube pieces) are to be placed in a proper location (in supply and return line near tank) to get a representative sample with proper fixing arrangement to assess the effectiveness of cleaning.
- 2.3.18 All temporary connections to the existing systems, all modifications in existing pipelines, valves and in civil works are to be normalized by the contractor after pre-boiler flushing and chemical cleaning of boiler. All temporary supports erected for these operations are to be removed by the contractor after completion of the operations.
- 2.3.19 Laboratory equipment for testing of chemicals along with chemical reagents for testing are to be arranged by contractor. Testing personnel (chemists) are to be arranged by the contractor.
- 2.3.20 Electrical testing equipment like tong-tester, multimeter, megger etc. are to be arranged by the contractor. Ammeter for each motor is to be provided in its MCC.
- 2.3.21 Civil works related to pumping units, supports etc are to be carried out by the contractor.
- 2.3.22 All temporary lines are to be hydraulically tested (at working pressure of fluid) as required.
- 2.3.23 The contractor has to make arrangement for disposal of effluent and further pumping out the spent/ neutralized acid after 15 days of aeration from neutralizing pit to a suitable location. Proper effluent treatment arrangement is to be made available at site.
- A neutralizing pit of approximately 1100 m³ capacity shall be made available by BHEL/ Customer.
- 2.3.24 The contractor shall fabricate pipes, special bends, etc. threading and welding as required.
- 2.3.25 The contractor shall erect & test all the piping systems, covered in the specification including sampling lines, hangers & supports, valves & accessories in accordance with the drawings furnished. This includes all necessary bolting, welding, and pre-heating, stress relieving, testing, and cleaning. System shall be demonstrated in condition to operate continuously in a manner acceptable to the Engineer. Welding shall be used throughout for joining pipes except where flanged screwed or other type joints are specified or shown on the drawings. All piping shall be erected true to the lines & elevation as indicated in the drawings.

- 2.3.26 Wherever piping erected by the contractor is connected to equipment/ piping erected by the other agencies the joint at the connecting point shall be the responsibility of the contractor under this contract.
- 2.3.27 The contractor shall be responsible for correct orientation of all valves so that seats, stems & hand wheels will be in desired location. It is the responsibility of the contractor to obtain the information regarding orientation of valves not fully located on drawings before the same are installed.
- 2.3.28 The adjustment of all supports erected for maintaining the proper slopes of piping wherever required is also included in the scope of the contractor.
- 2.3.29 No temporary supports should be welded on the piping. In case of absolute necessity prior approval should be taken from BHEL Engineer. In such cases heat treatment if required, shall be carried out by the contractor as part of subject work.
- 2.3.30 All supports and anchors shall be installed to obtain safe and reliable and complete pipe installation as per instructions of Engineer. Any additional support as called for by Engineer shall have to be fabricated and provided by the contractor. Contractor shall install piping in such a way that no excessive or destructive expansion forces exist under any condition. The contractor shall ensure that all supporting elements, anchors & restraint have been installed and adjusted in accordance with the drawings / sketches & other written instructions of the Engineer.
- 2.3.31 All the valves, including motorised valves, flap valves, etc. shall be serviced and lubricated to the satisfaction of Engineer before erecting the same and during pre-commissioning also. Welding or jointing of extension spindle for valves to suit the site conditions and operational facility shall be part of erection work within the quoted rates.
- 2.3.32 Additional platforms and ladders of permanent nature incidental to the job for approaching different equipment/ valves as per site requirement, which may not be indicated in drawings, shall be fabricated and installed by the contractor within the quoted rate.
- 2.3.33 Erection and welding of necessary instrumentation tapping points, valves to be provided on equipment, auxiliaries and pipe lines covered within the scope of this specification, will also be the responsibility of the contractor and will be done as per the instructions of BHEL Engineer within the quoted rate.
- 2.3.34 BHEL shall have lien on all T&P's, IMTEs & other equipment of the Contractor brought to the Site. BHEL shall continue to hold the lien on all such items throughout the period of Contract. No material brought to the Site shall be removed from the Site by the Contractor or his Sub-contractors without the prior written approval of the BHEL Engineer In-charge.
- 2.3.35 Chemical cleaning of the system / equipment is to be completed as per the approved scheme. Tentative scheme is attached at Annexure - III for reference.

2.4 Tentative Chemical Cleaning Process Procedure to be followed at site is as below::

2.4.1 Cold Water Rinse

1. Before starting the acid cleaning process, the Boiler is rinsed with cold DM water containing 15 ppm Ammonia to remove loose debris, rust etc.

2. SH backfilling is done with ammoniated DM water containing 15 ppm Ammonia.

2.4.2 Hot Water Rinse

1. Boiler is again filled with ammoniated DM water containing 15 ppm Ammonia at ambient temperature.
2. Boiler is lit up as per O&M instructions and Boiler water temperature is gradually raised to 90°C (SST water temperature observed).
3. Boiler is shut down and BCP is stopped.
4. Boiler is drained in hot condition to the plant water disposal system by keeping the drain valves wide open.

2.4.3 Alkali Flushing

1. The following chemicals are used:
 - a. Tri Sodium Phosphate 0.1 %
 - b. Di Sodium Hydrogen Phosphate 0.05%
2. The chemicals are added in the mixing tank along with DM water and the solution is thoroughly mixed by running the temporary pumps on recirculation. Boiler is filled with the solution up to normal working level in the separator.
3. Boiler is lit up as per O&M instructions and Boiler water temperature is gradually raised to 85- 90 deg C (SST water temperatures are observed). Samples are analyzed for phosphate and pH on hourly basis. Temperature is maintained for 6 hours and should be closely monitored. BCP is kept running during the holding period. Boiler is then shut down..
4. After the holding period is complete, the BCP is stopped. Boiler is drained to the plant water disposal system by keeping the drain valves wide open (i.e., without throttling). The drained solution is diluted with plenty of service water.

2.4.4 Hot Water Rinse

1. Once draining of boiler is complete, it is refilled with DM water. BCP is started and Boiler is lit up. Boiler water temperature is raised to 90 deg C and then Boiler is shut down.
2. BCP is stopped after 30 minutes and boiler is drained in hot condition to plant water disposal system by keeping the drain valves wide open (i.e., without throttling). pH and PO₄ are measured in the drain water.

2.4.5 Cold Water Rinse

1. Once the draining is complete the Boiler is again filled with DM water containing 15 ppm ammonia. BCP is started. BCP is stopped after 30 minutes and Boiler is drained to the plant water disposal system. pH and PO₄ are measured in the drain water.

2. Cold rinsing is continued till the phosphate content in the drained water is less than 10 ppm.
3. All sampling and drain lines are also flushed.

2.4.6 Acid cleaning & Passivation

1. Boiler is filled with DM water containing 15 ppm of ammonia up to normal drum level. BCP is started.
2. Boiler is lighted up and Boiler water temperature is raised to 90 deg C. Then Boiler is shut down, FD and ID fans are stopped and boiler boxed up. BCP is stopped. Circulation to and from the boiler is established with the help of temporary pump and mixing tank. (Alternately boiler water temperature can be raised by heating with external steam in the mixing tank after establishing circulation to and from the boiler.)
3. At water temperature of 90 – 70 deg C, the inhibitor, citric acid monohydrate and ammonia solution are added in the mixing tank so that finally the boiler water contains 3-4% citric acid, 0.3% inhibitor and pH between 3.5 – 4. Concentration of citric acid at point of injection should never cross 10%.
4. Additional ammonia, if required, may be added to adjust the pH of the cleaning solvent in the range of 3.5 to 4.0. If the pH of the solvent goes beyond 4, citric acid can be used to bring the pH to the desired level. Circulation of the solution is maintained by temporary pump. Temperature of the citric acid solution is maintained around 70~90 deg C by controlling, if required, the steam input in the temporary heat exchanger (non-contact type) installed in the temporary system.
5. Once the required concentration of citric acid, inhibitor and pH is achieved at the inlet and outlet of boiler, circulation with the temporary pump can be continued along with BCP (only one number - preferably it should be the middle BCP) for continuous circulation .be operated for 30 minutes. At the end of 30 minutes, the BCP is stopped the chemical solution is allowed to soak. The same BCP is operated for 5 minutes at an interval of 30 minutes.
6. With citric acid inside the boiler or pH of the solution in the acidic range, boiler is NOT to be fired.
7. Counting of time (i.e., T = 0) for the purpose of calculation of minimum contact period will start only after achieving the required concentration of citric acid, inhibitor and pH at the inlet and outlet of boiler.
8. Concentration of citric acid and iron in the cleaning solvent are analyzed every 30 minutes. The process is continued for 6 hours or till the iron concentration equilibrium in three consecutive samples is reached, whichever is earlier. A minimum contact period of 4 hrs. With acid solution is to be maintained.

9. ID / FD Fans are run, if required, to bring down Boiler water temperature to around 70 deg C.
10. When the temperature comes down to 70 deg C, ID / FD Fans are stopped.
11. The circulation to and from the boiler is again established with the temporary pump.
12. Adequate quantity of ammonia is added to achieve pH of about 9.5.
13. Sodium nitrite is added in the mixing tank so as to achieve 0.5% concentration of sodium nitrite in the passivation solvent. Temporary pump is stopped and circulation is continued using BCP for about four (4) hours. The temperature is maintained around 55 ~ 60 deg C.
14. BCP is stopped and the solution is drained into the effluent pit by opening all drain valves.
15. Boiler is refilled with DM water containing 15 ppm ammonia. Circulation is maintained for 30 minutes by running BCP.
16. After stopping BCP the Boiler is drained. Boiler filling, circulation with BCP and draining is continued till conductivity of the final rinse is within 50 μ S/cm of the source water (treated DM water).
17. After completion of chemical cleaning activity the next startup of the boiler should be done within a reasonable duration. If there is going to be a delay of more than 4 weeks, the water circuits and Superheater should be preserved as per approved procedure.
18. Alternately boiler water temperature can be raised by heating with external steam in the mixing tank.

2.4.7 PROCESS COMPLETION CRITERIA:

2.4.7.1 Hot / Cold water rinsing after Alkali flushing

$PO_4 < 10$ ppm & pH < 7.5

2.4.7.2 Acid cleaning & Passivation

Chemical cleaning process will be declared complete when the Iron concentration in three (03) consecutive samples stabilizes OR the citric acid contact period of six (06) hours is achieved, whichever is earlier.

2.4.7.3 Rinsing after Passivation

Conductivity of the effluent within 50 μ S/cm of treated DM water.

2.4.8 CHEMICAL CLEANING WASTE TREATMENT & DISPOSAL

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1. Treatment and disposal of the waste and effluents of the chemical cleaning process shall comply with the requirements / stipulations of State Pollution Control Board.
2. Cold and hot DM water after flushing shall be drained into plant normal drain.
3. The organic spent citric acid solution after the cleaning process is drained into the neutralizing pit. The pH of the effluent will be in the range of 8.5 to 9.0 and hence no treatment for pH adjustment is required as it would meet the pH requirement for disposal, subject to verification at site.
4. The effluent shall be disposed of only after complete degradation of citric acid, as per State Pollution Control Board norms.
5. Mixing tank, pipelines and inhibitor carboys shall be cleaned with water and the effluent shall be drained into the neutralizing pit.

NOTE:

- Drains to be provided at lowest points of temporary piping.
- Additional Check lists / Modifications in the layout, if found necessary, shall be made at site in consultation with BHEL site engineers.

2.5 SAFETY PRECAUTIONS

1. Adequate number of safety equipment like goggles, masks, aprons, gloves, gum boots etc. are to be arranged by the contractor.

Minimum requirements for a boiler shall be as under:

- | | |
|-------------------------------------|---------|
| a. Gum boots (various sizes) | 6 Pairs |
| b. Rubber gloves | 6 Pairs |
| c. Rubber or Polythene aprons | 6 Nos |
| d. Helmets | 12 Nos |
| e. Safety goggles plain glass | 6 Nos |
| f. Face mask (transparent, plastic) | 6 Nos |
2. First aid box (containing dilute ammonium hydroxide, 50% sodium bicarbonate solution, eye lotion, bandages, tincture of iodine, cotton, Burnol etc) should be available near the work area.
 3. Ample supply of water for flushing and washing should be available at all possible points of discharge, spillage or escape of chemicals.
 4. Adequate number of eye wash bottles for treatment of eye should be kept at easily approachable locations where discharge, spillage or escape of chemicals can occur.
 5. Safety shower should be provided.
 6. A suitable first aid room with outside telephone facilities shall be provided within a reasonable distance from the place where chemicals are being handled.
 7. Protective clothing and apparatus required for emergency use should be available near the chemical cleaning area.

2.6 FIRST AID TREATMENT

2.6.1 Splash of chemicals in eye

1. Affected eye should be immediately washed / irrigated with plenty of water. To make the washing effective the eyelids must be kept open. The eyelids should be pushed apart using the thumb and index finger of one hand. The affected person may not be able to open the eye himself because of painful spasms.
2. If an eye wash bottle is used, the jet should not be directed to the front of the eye. It should be directed from the side so that flow is over the surface of the eye.
3. Irrigation should be continued for 5 – 10 minutes after which the affected person should be taken to the first aid room.
4. Irrigation should be continued in the first aid room. After thorough irrigation the eye should be covered with a pad. The patient should then be referred for medical opinion.

2.6.2 Splash of chemicals on skin

1. If skin irritation occurs the persons should be referred for medical opinion.
2. In the event of splashing of chemicals on the skin, the affected area should be washed thoroughly avoiding spread of chemical on the face and eyes.

2.6 .3 First aid measures for Ammonia

1. **Inhalation:** Take precautions to ensure your own safety before attempting rescue (e.g. wear appropriate protective equipment). Move victim to fresh air. If breathing is difficult, trained personnel should administer emergency oxygen. DO NOT allow victim to move about unnecessarily. Symptoms of pulmonary edema may be delayed. Immediately call a Poison Centre or doctor. Treatment is urgently required. Transport to a hospital.
2. **Skin Contact:** Gas: flush with lukewarm, gently flowing water for 5 minutes. If irritation or pain persists, see a doctor. Liquefied gas: quickly remove victim from source of contamination. DO NOT attempt to rewarm the affected area on site. DO NOT rub area or apply direct heat. Gently remove clothing or jewelry that may restrict circulation. Carefully cut around clothing that sticks to the skin and remove the rest of the garment. Loosely cover the affected area with a sterile dressing. DO NOT allow victim to drink alcohol or smoke. Immediately call a Poison Centre or doctor. Treatment is urgently required. Transport to a Hospital.
3. **Eye Contact:** Gas: immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open. If irritation or pain persists, see a doctor. Liquefied gas: move victim to fresh air. Immediately and briefly flush with lukewarm, gently flowing water. DO NOT attempt to re warm. Cover both eyes with a sterile dressing. DO NOT allow victim to drink alcohol or smoke

2.7 EMERGENCY PROCEDURES:

1. The testing team should be aware of the operating procedures of fire extinguishers and permanent firefighting system installed in and around Boiler area to be used for quenching minor or major fires, procedure to be followed in case of accidents involving injury top personnel.

2. The testing team should be aware of the procedure to be followed in case of accidents involving personnel injury.
3. Any gland leak in valves in the system observed during hot rinsing and alkali flushing should be attended before coming to notice of putting acid into boiler.
4. At strategic locations of the cleaning circuit, hydrated lime powder will be kept in small containers with proper identification for neutralization of any acid spill during cleaning. Once the cleaning job is completed, these chemicals should be moved to neutralizing pit.
5. In case of failure of running pump the stand by pump should be started immediately without delay.
6. An operator posted at the pump area, should be instructed to stop the pumps and properly isolate the system in the event of emergency. All operators should be well conversant with the emergency operating instructions.
7. All the procedure mentioned above is tentative only and all efforts shall be put to mitigate emergency situations.

2.8 PROCEDURE FOR ESTIMATION OF CITRIC ACID DURING FILLING

Citric Acid concentration is determined by titration with a standard base, the citric acid concentration is calculated assuming a pH 4 solution.

1. Regents

- Phenolphthalein indicator solution.
- Sodium hydroxide solution standard (0.5 N).

2. Test procedure

- Pipette out 10 ml of sample in an Erlenmeyer flask.
- Add 10-20 ml of water.
- Titrate to permanent pink colour with standard base.

3. Calculation

$$\text{Citric acid \%} = \text{AN} * 12.4 / \text{BS}$$

A= ml of NaOH solution required for the titration.

N= Normality of NaOH solution.

B= ml of sample titrated.

S = specific gravity which is usually 1 for our cleaning solution.

2.9 PROCEDURE FOR DETERMINATION OF TOTAL IRON CONCENTRATION IN PROCESS SOLUTION DURING CHEMICAL CLEANING

1. APPARATUS REQUIRED

- HACH DR/890 COLORIMETER
- Volumetric flasks

- Pipettes
- Measuring cylinders

2. REAGENTS REQUIRED

- FerroVer reagent powder pouches (Supplied by HACH)

3. TEST METHOD

1. Sample is diluted with DM water so that the concentration of Iron is less than 3 ppm in the test solution.
2. 25 ml / 10 ml of the diluted solution is taken in the cuvette. This will be used as a blank.
3. Place the blank in the cell holder and cover the sample cell with cap.
4. Zero the equipment and display will be showing 0.00 mg/L Fe.
5. Fill another sample cell with 25/10 ml sample
6. Add the contents of one FerroVer Iron Reagent Powder Pillow to the sample cell (the prepared sample). Cap and invert to dissolve the reagent powder.
7. Start the timer for 3 mts period.
8. Place the prepared sample into the cell holder. Cover the sample cell with the instrument cap.
9. Press READ.
10. The concentration will be displayed.
11. Multiply with dilution factor and report the ppm / g/ lit of Fe concentration.

Note: All the procedure mentioned above is tentative and for information only. Any changes shall be intimated during execution and contractor has to carry out job as per the instruction of engineer In-charge within the quoted rate.

2.10 PRELIMINARY AND CIVIL WORKS

1. Before starting erection job contractor shall ensure that area connected to his scope of work is sufficiently enclosed against ingress of dust and water and all debris have been cleared of from the floor to a designated area as per instruction of engineer. The contractor shall arrange to get the working area and surroundings cleared daily to ensure the dust free atmosphere and free from seepage water for working and shall maintain sufficient labour and general cleaning of work areas. Delay of work on this account will not be acceptable.
2. The contractor shall cover all opening on floor and put temporary hand railing on all sides of the floor to avoid any accident to the working personnel.
3. Any civil works required for safe and efficient operation of tools and tackles like grouting/ excavation/casting of foundation/ anchor points for derricks, winches, guy ropes fastening scaffoldings etc. or any other temporary supports shall also be the contractor's responsibility. For these civil works all materials including cement/ steel and required facilities will have to be arranged by contractor at his own cost.

4. The contractor shall provide his tool stores for special tools and instruments at a convenient place near to the place of working area.

2.11 Welding requirements.

1. Contractor must ensure that the welders involved in the job are qualified as per BHEL/NTPC procedures & statutory requirement (preferably IBR welder to be used)
2. Contractor to procure and use only BHEL/NTPC approved welding electrodes.
3. Contractor to ensure storage, drying facilities of the welding electrodes as per BHEL norms.
4. Suitable edge preparation is required to make prior to carry out the welding.
5. Contractor to ensure proper cleaning of welds between the beads
6. No visible cracks, pinholes or incomplete fusion are allowed.
7. Under cuts should not exceed 1 mm.

2.12 GENERAL

2.12.1 Contractor shall ensure following:

- I. Contractor has to maintain contact with local hospital having ambulance facility, scanning & other ultra-modern medical facilities required during emergency.
- II. Contractor has to ensure pre-employment medical check for all staff & workers.
- III. Contractor has to ensure that adequate First Aid facilities with trained nurse are available at work site for emergency purpose. This emergency set-up should include, but not limited to, following:-

Male nurse (in shifts)
Oxygen set up
Breathing apparatus
Eye wash facility
Stretcher
Trauma blanket
Medicines

In addition to above, BHEL (through it's another contractor) has arranged ambulance at work site for emergency purpose, which can be utilized by contractor in case of emergency. The charges for the same will be decided mutually at site. In case, under unavoidable circumstances, if the ambulance is not available/ being used elsewhere, the contractor will have to arrange for the same in emergency situation.

2.12.2 The contractor shall comply with following towards Social Accountability;

- a) The contractor shall not employ any employee less than 15 years of age in pursuant to ILO convention. If any child labour were found to have been engaged, the Contractor shall be levied with expenses of bearing his education expenditure which will include stipend to substantiate appropriate education or employ any other member of family enabling to bear the child education expenditure.
- b) The contractor shall not engage Forced/ Bonded Labour and shall abide by abolition of Bonded Labour System (Abolition) Act, 1976.
- c) The contractor shall maintain Health & safety requirement as stipulated in the Contract and Contract Labour (Regulation & Abolition) Act, 1970.
- d) The Contractor shall abide by UN convention w.r.t. Human Rights and shall be liable for Discrimination/ Corporal Punishment for failure in meeting with relevant requirements.
- e) The Contractor shall abide the requirement of Contract Labour (Regulation & Abolition) Act, 1970 for working hours.
- f) The Contractor shall abide by the statutory requirement of Minimum Wages Act 1948, payment of Wages Act 1936.
- g) The Contractor shall arrange potable drinking water to its employees & workers.

Chapter - III: Facilities in the scope of Contractor/BHEL

3.0 FACILITIES IN THE SCOPE OF CONTRACTOR/BHEL

| S.No. | Description | Scope /to be Taken care by | | Remarks |
|---------|---|----------------------------|------------|---|
| | | BHEL | CONTRACTOR | |
| 1.1.0 | ESTABLISHMENT | | | |
| 1.1.1 | FOR CONSTRUCTION PURPOSE | | | |
| A. | Open space for office | YES | | Limited Space (free of charge) As and where made Available by customer M/s NTPC/BHEL |
| B. | Open space for storage | YES | | Limited Space (free of charge) As and where made Available by customer M/s NTPC/BHEL |
| 1.1.2 | FOR LABOUR COLONY | | | |
| A | Open space | YES | | Contractor have to make own arrangement |
| 1.2.0 | ELECTRICITY | | | |
| 1.2.1. | Electricity for construction purposes (chargeable/free) | | | |
| 1.2.1.1 | Single point source | YES | | FREE OF CHARGE |
| 1.2.1.2 | Further distribution for the work to be done Which include supply of materials & Execution | | YES | |
| 1.2.2 | Electricity for the office, stores, canteen etc of the bidder which include: | | | |
| 1.2.2.1 | Distribution from single point including supply of materials & service | | YES | |
| 1.2.2.2 | Supply, Installation & connection of material of Energy meter including operation & maintenance | | YES | |

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| | | | | |
|---------|--|--|-----|---|
| 1.2.2.3 | Duties & deposits including statutory clearances for above | | YES | |
| 1.2.2.4 | Demobilization of the facilities after completion Of works | | YES | |
| 1.2.2.5 | Electricity for living accommodation of the bidder's Staff, engineers, supervisors etc. on the above Lines | | YES | Contractor have to make own arrangement |
| 1.3.0 | WATER SUPPLY | | | |
| 1.3.1 | FOR CONSTRUCTION: | | | |
| 1.3.1.1 | Making the water available at single point | | YES | Contractor have to make the borewall itself |
| 1.3.1.2 | Further distribution as per the requirement of work including supply of materials & Execution | | YES | |
| 1.3.2 | LABOUR COLONY: | | | |
| 1.3.2.1 | Making the water available at single point | | | Contractor has to arrange on his own. |
| 1.3.2.2 | Further distribution as per the requirement Of work including supply of materials & execution | | | |
| 1.4.0 | LIGHTING | | | |
| 1.4.1 | For construction work (supply of all materials) 1. At office storage area 2. At preassembly area 3. At construction site/area | | YES | |
| 1.4.2 | For construction work (execution of lighting work/arrangements) 1. At office storage area 2. At preassembly area 3. At construction site/area | | YES | |
| | Providing the necessary consumables like bulbs, Switches, etc during the course of construction | | YES | |

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| | | | | |
|-------|---|-----|-----|---------------------------|
| 1.5.0 | Communications facilities for site operations of the bidder | | | |
| 1.5.1 | Telephone, fax, intranet, email etc. | | YES | |
| 1.6.0 | COMPRESSED AIR SUPPLY | | | |
| 1.6.1 | Supply of compressor and all other equipment Required for compressor & compressed air System including pipes, Valves, storage system etc. | | YES | |
| 1.6.2 | Installation of the above system and operation & maintenance of the same | | YES | |
| 1.6.3 | Supply of all the consumables for the above System during the contract period. | | YES | |
| | ERECTION FACILITIES | | | |
| 2.1.1 | Providing erection drawings for all the Equipment covered under this scope | YES | | |
| 2.1.2 | Drawings for construction method | YES | YES | In consultation with BHEL |
| 2.1.3 | As-built-drawings-where ever deviations Observed & executed and also based on Decisions taken at site | | YES | do |
| 2.1.4 | Shipping lists etc for reference & planning the Activities | YES | YES | do |
| 2.1.5 | Preparation of site erection schedules and Other input requirements | | YES | do |
| 2.1.6 | Review of performance & revision of site erection schedules in order to achieve the end dates & commitments | YES | YES | do |
| 2.1.7 | Weekly erection schedule based on Sl. No.2.1.5 | | YES | do |
| 2.1.8 | Daily erection/work plan based on Sl. No.2.1.7 | | YES | do |
| 2.1.9 | Periodic visit of senior official of bidder to site to review the progress so that works are completed | | YES | |

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| | | | | |
|--------|--|--|-----|--|
| | as per schedule. It is suggested this review by the senior official of the bidder should be done once in every two month | | | |
| 2.1.10 | Preparation of preassembly bay | | YES | |

- 3.1 BHEL will not be responsible for any loss or damage to the contractor's equipment as a result of variation in voltage or frequency or interruptions in power supply.
- 3.2 The Contractor shall be responsible for providing all necessary facilities like residential accommodation, transport, electricity, water, medical facilities etc. at his own cost as required under various labour laws and statutory rules and regulations framed there under to the personnel employed by him.
- 3.3 Provision of distribution lines of both electrical power and water from the central points to the required place with proper distribution boards observing the safety rules laid down by the electrical authorities of the state shall be done by the contractor, supplying all the materials like cables, distribution board, switch boards, TPN, CBS, ELCBS/ MCCBS/ Copper / Brass clamps, copper conductor, change over switches pipes etc. at his own cost. If any failure is caused in supply of the power and water, it is the responsibility of the contractor to make alternate arrangements at his cost. The contractor shall adjust his working shifts / hours accordingly and deploy additional manpower if necessary so as to achieve the targets.
- 3.4 The contractor while drawing construction power supply from Distribution Board should strictly adhere to following points.
- a) All electrical installations should be as per Indian Electricity rules.
 - b) All distribution Boards installed by the contractor should be constructed with fire proof materials viz. Steel frames, Bakelite sheets etc.
 - c) Connection for single phase should be taken from phase and neutral. Nowhere the connection should be taken with earth as neutral.
 - d) All electrical connections should be made through connectors, nuts and bolts, switches, plug and sockets. Loose connections or hooking up of wires shall not be permitted.
 - e) Contractor have to make their own earthing arrangement for their equipment / DB earthing.
 - f) All electrical equipment / tools and plants should be properly earthed. DBs to be earthed diagonally opposite at two points.
 - g) Contractor should use "MCCB" and "ELCB" either on incoming or outgoing connections to the DBs.
 - h) Contractor should ensure that all the CBs / TPNs/ Fuses/ MCCB / ELCB cables etc. should be of adequate rating/ capacity.
 - i) For permission of supply connections contractor has to submit a test report of their installations with a single line diagram of connected/ proposed loads.
- 3.5 Adequate lighting arrangement such as flood lights, hand lamps and area lighting shall be arranged by the contractor at the site of construction, storage area etc within finally accepted rates
- 3.6 In case of power cuts / load shedding no compensation for idle labour or extension of time for completion of work will be given to contractor.

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- 3.7 The contractor should provide sample testing facilities like chemical lab, chemists and required accessories within the firm price of contract.
- 3.8 Road permits / other documents required for despatching their material has to be provided/arranged by the contractor only.
- 3.9 On completion of work or as and when required by BHEL, all the temporary buildings, structures, pipe lines, cables etc. Shall be dismantled and levelled and debris shall be removed, as per instructions of BHEL, by the contractor at his cost. In the event of his failure to do so, the Engineer will get it done and expenses incurred shall be recovered from the contractor along with prevailing overheads. The decision of BHEL Engineer in this regard shall be final.

Chapter - IV: T&Ps and MMEs to be deployed by Contractor

4.0 T&P AND MMD DEPLOYED BY CONTRACTOR

- 4.1 T&Ps and IMTEs (Inspection, Measuring & Testing Equipment), which are required for successful and timely execution of the work covered within the scope of this tender, shall be arranged and provided by contractor with in the finally accepted rate. In the event of the failure of contractor to bring necessary and sufficient T&Ps/ and IMTEs, BHEL will be at liberty to arrange the same at the risk and cost of contractor and hire charges as applicable shall be deducted from contractor's bill. Decision of BHEL in this regard shall be final and binding on contractor.
- 4.2 All distribution boards, connecting cables/ welding cables, wire ropes, hoses etc. including temporary air/ water/ electrical connections etc, shall have to be arranged by the contractor at his own cost.
- 4.3 Contractor shall ensure deployment of reliable and calibrated IMTEs (Inspection, measuring and Test equipment). The IMTEs shall have test/ calibration certificates from authorised/ Govt. approved/ accredited agencies traceable to National/ International standards. Each IMTE 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.
- 4.4 Re-testing/ re-calibration shall also be arranged at regular intervals during the period of use as advised by BHEL Engineer with in the contract period. The contractor will also have alternate arrangements for such IMTE so that work does not suffer when the particular instrument is sent for calibration. Also if any IMTEs 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 i.e. repeat the readings taken by that instrument. Failing which BHEL may deploy IMTEs and re-take the readings at contractor's cost.
- 4.5 Contractor to use his own T&P for the unloading, loading & transportation of the material.

Chapter - V: T&P AND MMD DEPLOYED BY BHEL ON SHARING BASIS

5.0: T&P AND MMD DEPLOYED BY BHEL FREE OF CHARGE ON SHARING BASIS

As per the specific work requirement and decided by the BHEL Engineer, the suitable Capacity crane will be provided to the contractor on free of charge basis.

Chapter - VI: TIME SCHEDULE

| | | | | | | | | | | | | | |
|---|---|---|-------------------|--|------------------|---|-------------------|---|------------------|---|------------------|---|-----------|
| 6.0 | TIME SCHEDULE | | | | | | | | | | | | |
| 6.1 | The contractor is required to commence the work within 15 days from the date of issue of LOA unless BHEL decides to fix any other later date. However, the actual date of start of work, to fix up the zero date of the contract, will be certified by BHEL Engineer after adequate mobilisation of manpower and T&Ps by the contractor. | | | | | | | | | | | | |
| 6.2 | <p>Entire work as detailed in the tender specifications shall be completed within 03 (THREE) months for from the date of start of work as per programme/schedule certified by BHEL Engineer.</p> <p>Programme for execution of work shall be tentatively as follows::</p> <table border="1" data-bbox="316 943 1474 1395"> <tr> <td>Preparatory works for Pre-Boiler flushing</td> <td>– 20 days approx.</td> </tr> <tr> <td>Process Time for Pre-Boiler flushing, rinsing etc.</td> <td>– 5 days approx.</td> </tr> <tr> <td>Preparatory works for Chemical cleaning</td> <td>– 30 days approx.</td> </tr> <tr> <td>Process Time for Chemical cleaning, sample testing etc.</td> <td>- 5 days approx.</td> </tr> <tr> <td>Aeration of effluent and their disposal</td> <td>-20 days approx.</td> </tr> <tr> <td>Approx. time for completion for Chemical cleaning</td> <td>-3 months</td> </tr> </table> <p>NOTE: The programme of works and time period shall be decided jointly along with BHEL Engineer/ Customer at site depending upon the work fronts availability at respective site.</p> | Preparatory works for Pre-Boiler flushing | – 20 days approx. | Process Time for Pre-Boiler flushing, rinsing etc. | – 5 days approx. | Preparatory works for Chemical cleaning | – 30 days approx. | Process Time for Chemical cleaning, sample testing etc. | - 5 days approx. | Aeration of effluent and their disposal | -20 days approx. | Approx. time for completion for Chemical cleaning | -3 months |
| Preparatory works for Pre-Boiler flushing | – 20 days approx. | | | | | | | | | | | | |
| Process Time for Pre-Boiler flushing, rinsing etc. | – 5 days approx. | | | | | | | | | | | | |
| Preparatory works for Chemical cleaning | – 30 days approx. | | | | | | | | | | | | |
| Process Time for Chemical cleaning, sample testing etc. | - 5 days approx. | | | | | | | | | | | | |
| Aeration of effluent and their disposal | -20 days approx. | | | | | | | | | | | | |
| Approx. time for completion for Chemical cleaning | -3 months | | | | | | | | | | | | |
| 6.3 | The work under the scope of this contract is deemed to be complete in all respects, only when the contractor has discharged all the responsibilities laid down in the contract. The decision of BHEL Engineer In-charge on completion date shall be final and binding on the contractor. | | | | | | | | | | | | |

Chapter - VII: TERMS OF PAYMENT

| 7.0 TERMS OF PAYMENT | |
|-----------------------------|--|
| 7.1 | The 'Engineer' will certify regarding the actual work executed in the measurement books and bills, which shall be accepted by the contractor in measurement book. |
| 7.2 | Contractor shall submit bills for the work completed under the specification detailing work done. The format for billing shall be approved by BHEL before raising invoices. |
| 7.3 | Subject to any deduction which BHEL may be authorised to make under the contract, the contractor on the certificate of the Engineer at site is entitled for payment as explained hereunder: |
| 7.3.1 | FOR ITEM AT SL. NO. 1 OF RATE SCHEDULE AT CHAPTER XI |
| | <p>7.3.1.1 70% of the Lumpsum price at S. no. 1 shall be payable on successful completion of chemical cleaning of Boiler as certified by BHEL Engineer.</p> <p>7.3.1.2 25% of the Lumpsum price at S. no. 1 shall be payable on successful completion of pre boiler flushing as certified by BHEL Engineer.</p> |
| | <p>Balance 5% of the contract value shall be payable as ;</p> <p>7.3.1.3 2.5% of the Lumpsum price at S. no. 1 shall be payable on completion of all pending work, reconciliation of material wherever required, area cleaning etc.</p> <p>7.3.1.4 The balance 2.5% of the Lumpsum price at Sl. no. 1 shall be payable after 3 months on contractors discharging his responsibilities as stipulated in this contract and on passing of final bill. The SD amount, if any, deducted by the BHEL Site from the contractor's RA bills, shall be released along with this final payment.</p> <p>7.3.1.5 No separate payment shall be made for any temporary structures, lifting arrangements for testing and other NDT etc., as all these activities shall be performed as integral to erection work as per site requirement and as directed by Engineer.</p> <p>7.3.1.6 Above payment shall be released after adjustment of the contract value based on actual work carried out.</p> |

Chapter - VIII: TAXES, DUTIES, and LEVIES

| | |
|------------|---|
| 8.0 | TAXES & DUTIES |
| 8.1 | The contractor shall pay all (save the specific exclusions as enumerated in this contract) taxes, fees, license charges, deposits, duties, tools, royalty, commissions or other charges which may be levied on the input goods & services consumed and output goods & services delivered in course of his operations in executing the contract. In case BHEL is forced to pay any of such taxes, BHEL shall have the right to recover the same from his bills or otherwise as deemed fit. However, provisions regarding Service Tax on output service shall be as per following clauses. |
| 8.2 | Service Tax & Swachh Bharat Cess (SBC) & Krishi Kalyaan Cess (KKC) |
| 8.2.1 | Service Tax and Swachh Bharat Cess (SBC) & Krishi Kalyaan Cess (KKC) as applicable on output Services are excluded from contractor's scope; therefore contractor's price/rates shall be exclusive of Service Tax Service Tax , Swachh Bharat Cess & Krishi Kalyaan Cess (KKC). |
| 8.2.2 | Contractor shall obtain prior written consent of BHEL before billing the amount towards such taxes. Where the Service Tax Act permit more than one option or methodology for discharging the liability of tax/levy/duty, BHEL will have the right to adopt the appropriate one considering the amount of tax liability on BHEL/Client as well as procedural simplicity with regard to assessment of the liability. The option chosen by BHEL shall be binding on the Contractor for discharging the obligation of BHEL in respect of the tax liability to the Contractor. Contractor shall submit to BHEL documentary evidence of Service Tax registration certificate specifying name of services covered under this contract. |
| 8.2.3 | For the purpose of claiming any Service Tax, SBC & KKC from BHEL, the following procedure shall be adopted: |
| 8.2.3.1 | Contractor shall submit serially numbered Service Tax, SBC & KKC Invoices, signed by him or a person authorized by him in respect of taxable service provided, and shall contain the following, namely: |
| 8.2.3.1.1 | The name, address and registration number of the contractor |
| 8.2.3.1.2 | The name and address of the party receiving taxable service (BHEL) |
| 8.2.3.1.3 | Description, classification and value of taxable service provided and |
| 8.2.3.1.4 | The Service Tax, Swachh Bharat Cess (SBC) & Krishi Kalyaan Cess (KKC) payable thereon. |
| 8.2.3.1.5 | The service invoice for output services provided should show service tax, SBC & KKC amount separately |
| 8.2.4 | All the five conditions shall be fulfilled in the invoice for payment of Service Tax, SBC& KKC by BHEL. Where more than one nature of Service as per Service Tax act is involved in the execution of contract, the invoice mentioned above shall contain the breakup of values for each nature of Service. |
| 8.2.5 | Name and address of the Contractor should be same in the service tax invoice and monthly bill as it is in the service tax registration certificate. Any change in the name and address should be supported by documentary evidence duly certified by the authorized signatory. |
| 8.2.6 | Purpose of above requirements, inter-alia, is to enable availment of Cenvat credit by BHEL. As per recent amendments, Time restrictions for taking Cenvat credit is one year from date of invoice. Hence subcontractor must submit its invoice within 30 days from the date of completion of service. Wherever Cenvat credit could not be availed by BHEL due to delay in submission of invoices or for any other reasons attributable to contractors, Liability towards loss of such Cenvat credit shall be passed on to sub-contractors.. |

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| 8.2.7 | The documentary evidence of deposition of service tax, SBC& KKC is to be submitted at the earliest opportunity. |
| 8.2.8 | The payment of service tax, SBC& KKC as per clause no 8.2 is restricted to the direct transactions between BHEL & its sub-contractor only. |
| 8.3 | Modalities of Tax Incidence on BHEL |
| 8.3.1 | Wherever the relevant tax laws permit more than one option or methodology for discharging the liability of tax/levy/duty, BHEL will have the right to adopt the appropriate one considering the amount of tax liability on BHEL/Client as well as procedural simplicity with regard to assessment of the liability. The option chosen by BHEL shall be binding on the Contractor for discharging the obligation of BHEL in respect of the tax liability to the Contractor. |
| 8.4 | New Taxes/Levies |
| 8.4.1 | In case the Government imposes any new levy/tax on the output service/ goods/work after award of the contract, the same shall be reimbursed by BHEL at actual. The reimbursement under this clause is restricted to the direct transaction between BHEL and its subcontractor only. |
| 8.4.2 | In case any new tax/levy/duty etc. becomes applicable after the date of Bidder's offer, the Bidder/Contractor must convey its impact on his price duly substantiated by documentary evidence in support of the same before opening of Price Bid. Claim for any such impact after opening the Price Bid will not be considered by BHEL for reimbursement of tax or reassessment of offer. |
| 8.4.3 | The Vendor has to ensure compliance of all laws and taxes so that benefit of inputs are not denied to BHEL by respective authorities. |
| 8.4.4 | Payment shall be released against RAB provided proper invoices in conformity with the relevant provisions of new Act/Rules have been issued by sub contractor/vendor. Later on if it is noticed that input Tax Credit is not available to BHEL due to reasons attributable to sub-contractor /vendor, same shall be recovered from next bill. |
| 8.5 | BUILDING & OTHER CONSTRUCTION WORKERS (REGULATION OF EMPLOYMENT AND CONDITIONS OF SERVICE) ACT, 1996 (BOCW Act) AND RULES OF 1998 READ WITH BUILDING & OTHER CONSTRUCTION WORKERS CESS Act, 1996 & CESS RULES, 1998. |
| | In case any portion of work involves execution through building or construction workers, then compliance to the above titled Acts shall be ensured by the contractor and contractor shall obtain license and deposit the cess under the Act. In the circumstances it may be ensured as under:- |
| 8.5.1 | It shall be the sole responsibility of the contractor in the capacity of employer to forthwith (within a period of 15 days from the award of work) apply for a licence to the Competent Authority under the BOCW Act and obtain proper certificate thereof by specifying the scope of its work. It shall also be responsibility of the contractor to furnish a copy of such certificate of licence / permission to BHEL within a period of one month from the date of award of contract. |

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| | |
|-------|---|
| 8.5.2 | It shall be the sole responsibility of the contractor as employer to ensure compliance of all the statutory obligations under these act and rules including that of payment / deposit of 1% cess on gross payment made for value of work involving building or construction workers engaged by the contractor within a period of one month from the receipt of payment. |
| 8.5.3 | It shall be the responsibility of the sub-contractor to furnish the receipts / challans towards deposit of the cess together with the number, name and other details of beneficiaries (building workers) engaged by the sub-contractor during the preceding month. |
| 8.5.4 | It shall be the absolute responsibility of the sub-contractor to make payment of all statutory payments & compensations to its workers including that is provided under the Workmen's Compensation Act, 1923. |
| 8.5.5 | The contractor shall, however ensure before deposit of any BOCW cess, that customer is not depositing the same in order to avoid excess deposit of cess. |
| 8.5.6 | The contractor shall bear cost of BOCW cess either by way of deposit or through recovery by BHEL in case the same is deposited by the customer. |
| 8.5.7 | In case of failure in above mentioned compliances, BOCW Cess @ 1% as well as applicable penalty as specified in BOCW Act/Rules shall be deducted from the contractor. |

Chapter - IX: Others

- 9.1. Contractor has to fulfil quality requirement as per Chapter-VIII of Special Condition of Contract (SCC). In case of any gap in fulfilling these requirements by the contractor, financial penalty shall be imposed on the contractor with the rate mentioned in the “MEMO for penalty imposition against non-compliance in Quality area” enclosed as **Annexure-IV**.

Chapter - X: ANNEXURES

ANNEXURE- I**Tentative List of BHEL supplied Temporary Piping Material for Pre-boiler flushing and Chemical Cleaning of Boiler using Citric Acid of Unit no. 1 at 2X800 MW Gadawara STPP**

| SR NO. | DESCRIPTION | MATERIAL SPECN | QUANTITY | REMARKS |
|--------|---|-----------------|----------|------------------------------|
| 1 | PIPE Ø 406.4 X 12.7 | SA 106 GR B | 30 m | Material to be given by BHEL |
| 2 | PIPE Ø 323.9 X 9.57 | SA 106 GR B | 30 m | Material to be given by BHEL |
| 3 | PIPE Ø 273 X 9.1 | SA 106 GR B | 700 m | Material to be given by BHEL |
| 4 | PIPE Ø 219.1 X 8.18 | SA 106 GR B | 300 m | Material to be given by BHEL |
| 5 | PIPE Ø 168.3 X 7.11 | SA 106 GR B | 300 m | Material to be given by BHEL |
| 6 | PIPE Ø 114.3 X 6.02 | SA 106 GR B | 300 m | Material to be given by BHEL |
| 7 | PIPE Ø 88.9 X 5.49 | SA 106 GR B | 100 m | Material to be given by BHEL |
| 8 | PIPE Ø 48.3 X 5.08 | SA 106 GR B | 300 m | Material to be given by BHEL |
| 9 | PIPE Ø 33.4X 3.38 | SA 106 GR B | 400 m | Material to be given by BHEL |
| 10 | PIPE Ø 21.3 X 3.73 | SA 106 GR B | 100 m | Material to be given by BHEL |
| 11 | PIPE Ø 273.1 X 9.1 | API 5LGRB (ERW) | 1500 m | Material to be given by BHEL |
| 12 | ASME B16.9 BW LR 90DEG ELBOW Ø406.4 X 12.7 | SA 234 WPB | 03 nos. | Material to be given by BHEL |
| 13 | ASME B16.9 BW LR 90DEG ELBOW Ø 168.3 X 7.11 | SA 234 WPB | 15 nos. | Material to be given by BHEL |
| 14 | ASME B16.9 BW LR 90DEG ELBOW Ø 219.1 X 8.18 | SA 234 WPB | 15 nos. | Material to be given by BHEL |
| 15 | ASME B16.9 BW LR 90DEG ELBOW Ø 114.3 X 6.02 | SA 234 WPB | 15 nos. | Material to be given by BHEL |
| 16 | ASME B16.9 BW LR 90DEG ELBOW Ø 273 X 9.1 | SA 234 WPB | 15 nos. | Material to be given by BHEL |
| 17 | ASME B16.9 BW EQ TEE ELBOW Ø 273 X 9.1 | SA 234 WPB | 06 nos. | Material to be given by BHEL |
| 18 | ASME B16.9 BW EQ TEE ELBOW Ø 219.1 X 8.18 | SA 234 WPB | 04 nos. | Material to be given by BHEL |
| 19 | SW EQUAL TEE NB - 1.5 INCH CL-800 | SA105 | 03 nos. | Material to be given by BHEL |
| 20 | ASME B16.9 BW EQ TEE Ø 406.4 X 12.7 | SA 234 WPB | 02 nos. | Material to be given by BHEL |
| 21 | ASME B16.9 BW UN EQ TEE Ø 323.9 X 9.57 / Ø 273 X 9.1 | SA 234 WPB | 06 nos. | Material to be given by BHEL |
| 22 | ASME B16.9 BW UN EQ TEE Ø 273.9 X 9.1 / Ø 219.1 X 8.18 | SA 234 WPB | 08 nos. | Material to be given by BHEL |
| 23 | ASME B16.9 BW UN EQ TEE Ø 323.9 X 9.57 / Ø 168.3 X 7.11 | SA 234 WPB | 01 no. | Material to be given by BHEL |

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| | | | | |
|----|---|------------|---------|------------------------------|
| 24 | ASME B16.9 BW UN EQ TEE Ø 323.9 X 9.57 / Ø 219.1 X 8.18 | SA 234 WPB | 05 nos. | Material to be given by BHEL |
| 25 | ASME B16.9 BW UN EQ TEE Ø 273 X 9.1 / Ø 219.1 X 8.18 | SA 234 WPB | 01 no. | Material to be given by BHEL |
| 26 | ASME B16.9 BW UN EQ TEE Ø 273 X 9.1 / Ø 168.3 X 7.11 | SA 234 WPB | 01 no. | Material to be given by BHEL |
| 27 | SW UNEQUAL TEE NB - 1.5 INCH/0.5 INCH CL-3000 | SA105 | 06 nos. | Material to be given by BHEL |
| 28 | ASME B16.9 BW REDUCER Ø 323.9 X 9.57 / Ø 273.3 X 9.1 | SA 234 WPB | 07 nos. | Material to be given by BHEL |
| 29 | ASME B16.9 BW REDUCER Ø 273.3 X 9.2 / Ø 219.1 X 8.18 | SA 234 WPB | 10 nos. | Material to be given by BHEL |
| 30 | ASME B16.9 BW REDUCER Ø 219.1 X 8.18 / Ø 168.3 X 7.11 | SA 234 WPB | 08 nos. | Material to be given by BHEL |
| 31 | ASME B16.9 BW REDUCER Ø 168.3 X 7.11 / Ø 114.3 X 6.02 | SA 234 WPB | 08 nos. | Material to be given by BHEL |
| 32 | ASME B16.11 SW STUB NB-15 CLASS -3000 (CS) | SA 105 | 12 nos. | Material to be given by BHEL |
| 33 | ASME B16.11 SW STUB NB-40 CLASS -800 (CS) | SA 105 | 04 nos. | Material to be given by BHEL |
| 34 | TEMPERATURE STUB M33X2 (CS) | SA105 | 04 nos. | Material to be given by BHEL |
| 35 | HAND OPERATED GATE VALVE, NB 300, CLASS 150 | | 05 nos. | Material to be given by BHEL |
| 36 | HAND OPERATED GATE VALVE, NB 250, CLASS 150 | | 05 nos. | Material to be given by BHEL |
| 37 | NRV, Nb200, CLASS 150 | | 05 nos | Material to be given by BHEL |
| 38 | HAND OPERATED GATE VALVE, NB 200, CLASS 150 | | 11 nos | Material to be given by BHEL |
| 39 | HAND OPERATED GATE VALVE, NB 150, CLASS 150 | | 05 nos. | Material to be given by BHEL |
| 40 | HAND OPERATED GATE VALVE, NB 100, CLASS 150 & 300 | | 07 nos. | Material to be given by BHEL |
| 41 | HAND OPERATED GATE VALVE, NB 80, CLASS 150 | | 03 nos. | Material to be given by BHEL |
| 42 | HAND OPERATED GATE VALVE, NB 50, CLASS 800 | | 20 nos | Material to be given by BHEL |
| 43 | HAND OPERATED GATE VALVE, NB 25, CLASS 800 | | 20 nos | Material to be given by BHEL |

Note:

In addition to above list any pipe ,fittings ,valves required for the successful completion of the pre boiler flushing & chemical cleaning will be provided by the BHEL as free of cost to the bidder.

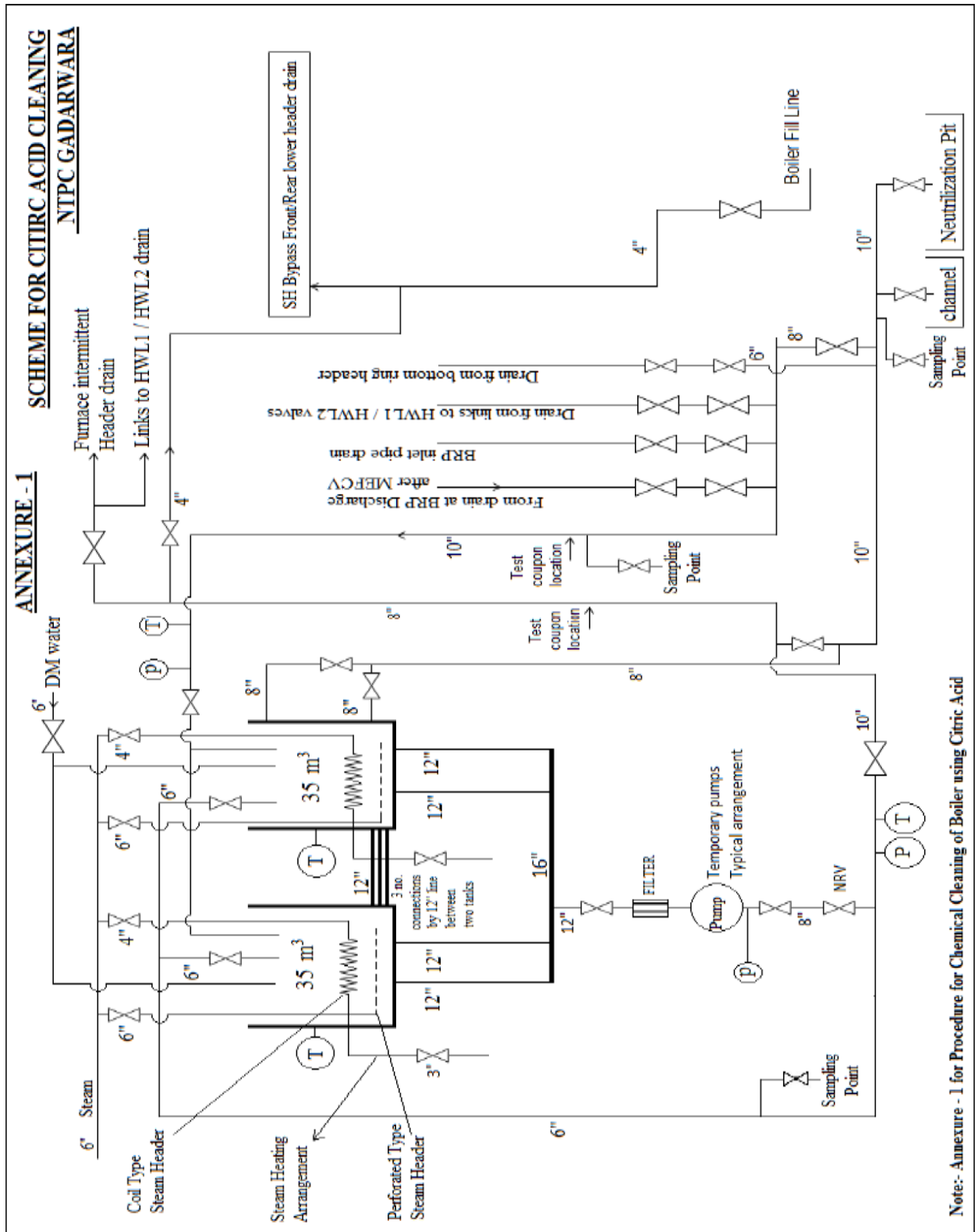
Annexure-II**Tentative List of IMTEs for Pre-boiler flushing and Chemical Cleaning of Boiler using Citric Acid at 2x800 MW: Gadawara STPP in Contractor's scope within the quoted rate**

| | |
|---|------------|
| MS Tank (covered), rectangular, 35 Cu M with Supporting structure for mixing the chemicals | 02 Nos. |
| Pump, 200 Cu M / hr, 200 M (for circulating Citric Acid at 90 deg C) with strainer, base frame and spares along with drive motor, 415 V, with starter,ammeter, cable etc. with MCC and distribution board | 04 Sets |
| Pump,20 Cu M / hr, 02 Kg/cm ² (for handling Ammonia) along with suitable drive motor with starter, ammeter, cable etc. with MCC and distribution board | 02 Sets |
| Power Cable from source to distribution board | 200 Meters |
| PVC Hose Pipe, 50 mm dia | 50 Meters |
| Sample Coolers | 05 Nos. |
| Mineral wool, 40 mm thick | 800 Nos. |
| Instruments (IMTEs) : | |
| Pressure Gauge, 0 - 25 Kg /cm ² | 07 Nos |
| Thermometer, 0 – 100 deg. C | 03 Nos |
| | 04 Nos |
| Thermocouple (K type), 1000 mm long with compensating cable up to control room | |
| Pressure transmitter, 0 – 5 Kg /cm ² | 02 Nos. |
| Safety Appliances at indicated | APR |
| Laboratory testing equipment's & reagents required for Citric Acid cleaning and pre-boiler flushing | APR |

*APR- As per requirement assessed by BHEL, Engineer In charge

*Requirement above is tentative and contractor may be required to arrange additional T&P and IMTEs as per requirement given by BHEL Site in charge to complete the process with the quoted rate

TENTATIVE SCHEME FOR CITRIC ACID CLEANING



Note:- Annexure - 1 for Procedure for Chemical Cleaning of Boiler using Citric Acid

Chapter - XI: UNPRICED RATE SCHEDULE

10.0 UNPRICED RATE SCHEDULE

| SI. No. | DESCRIPTION OF WORK | Total Amount for One Unit in INR (IN FIGURES AND WORDS) |
|---------|---|---|
| 1 | Lumpsum price for carrying out Pre-boiler flushing & Chemical cleaning for Boiler of Unit No. 1 at 2x800 MW Gadawara TPP as per tender specifications. | |

NOTES:

- 1 The contractor has to handle / erect / commission all the items indicated by BHEL for successful completion of chemical cleaning work within the quoted rate.
- 2 Evaluation of bids shall be done on total amount against this Rate Schedule / BOQ.

Rev 02
08th October
2014

SPECIAL CONDITIONS OF CONTRACT (SCC)

(Document No PS:MSX:SCC)

BHARAT HEAVY ELECTRICALS
LIMITED



SPECIAL CONDITIONS OF CONTRACT (SCC)

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SPECIAL CONDITIONS OF CONTRACT (SCC)

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. |

SPECIAL CONDITIONS OF CONTRACT (SCC)

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. |

SPECIAL CONDITIONS OF CONTRACT (SCC)
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 otherwise. |
| 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. |

SPECIAL CONDITIONS OF CONTRACT (SCC)
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. |

SPECIAL CONDITIONS OF CONTRACT (SCC)

Chapter - IV : Obligations of Contractor

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|--------------|---|
| 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. |

SPECIAL CONDITIONS OF CONTRACT (SCC)

Chapter - IV : Obligations of Contractor

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| 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 | NOT APPLICABLE |
| 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. |
| 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 |

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| 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 | <p>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.</p> <p>It is not obligatory on the part of BHEL to provide any tools and tackles or other materials other than those specifically agreed to do so by BHEL. However, depending upon the availability, BHEL/ BHEL 's Customer handling equipment and other plants may be made available to the contractor on payment of hire charges as fixed, subject to the conditions laid down by BHEL/ Customer from time to time, Unless paid in advance, such hire charges, if applicable, shall be recovered from contractor's bill /security deposit or any other due payment in one instalment.</p> |
| 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 |

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| | <p>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.</p> <p>BHEL reserves the right to permit only new slings up to 20 mm and lifting tackles up to 3 MT capacities.</p> |
| 4.2.1.12 | <p>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.</p> |
| 4.2.1.13 | <p>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.</p> |
| 4.2.1.14 | <p>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.</p> |
| 4.2.1.15 | <p>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.</p> |
| 4.2.2 | Obligations in respect of T&Ps and MMEs provided by BHEL |
| 4.2.2.1 | <p>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.</p> |
| 4.2.2.2 | <p>BHEL T&P will be issued in basic assembled condition. Additional loose components / sub-assemblies / attachments as and when necessary, will be issued</p> |

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| | 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 / 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 | <p>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.</p> <p>*: 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.</p> |
| 4.2.2.7 | void |

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| 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, 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. |

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| 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 |
| 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) | <p>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.</p> <p>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.</p> <p>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.</p> |
| 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 |

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| | 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 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 - NOT APPLICABLE |
| a) | NA |
| b) | NA |
| c) | NA |
| d) | NA |

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

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| 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.

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| 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

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| 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 may have to be adequately prepared to transport the materials under the above |

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Chapter – VI: Material Handling, Storage & preservation

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| | 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

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| 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 | NOT APPLICABLE |
| 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. |
| 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. |

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

SPECIAL CONDITIONS OF CONTRACT (SCC)
Chapter – VII: Drawings and documents

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| 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

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| 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 | <p>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.</p> <p>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.</p> <p>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.</p> <p>Record of heat treatments performed shall be maintained as prescribed by BHEL</p> |
| 8.1.4 | The performance of welders will be reviewed from time to time as per the BHEL standards. Welders' performance record shall be 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. |

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Chapter – VIII: Inspection and Quality

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| 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, |

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

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| | 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 | <p>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.</p> <p>The work related statutory inspections, though not limited to, are as under:</p> <ol style="list-style-type: none"> 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 <p>The scope includes getting the approvals from the statutory authorities, which includes arranging for inspection visits of statutory authority periodically as per</p> |

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

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| | 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 thereof. 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: <ol style="list-style-type: none"> 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 <p>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</p> |
| 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 such non-conformities, & maintain the relevant quality records. The non-conformities are to be identified through the conduct of periodical audit of implementation of |

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

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| | 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. |
| 8.6 | Contractor has to fulfil quality requirement as per this chapter. In case of any gap in fulfilling these requirements by the contractor, financial penalty shall be imposed on the contractor with the rate mentioned in the “MEMO for penalty imposition against non-compliance in Quality area” enclosed as Annexure-IV. |

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

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| 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 | HSE (Health, Safety & Environment): Contractor will comply with HSE (Health, safety & Environment) requirements of BHEL as per the "HSE Plan for Site Operations by Subcontractor" (Document no. HSEP:14 Rev 00) <u>Please see the attached document</u> |
| 9.2 | In case of any financial deduction made by Customer for lapses of safety other than what is provided above or elsewhere in the contract, the same shall be charged on back-to-back basis on the defaulting contractor without prejudice to any other right spelt anywhere in the tender /contract. |

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 | <p>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.</p> <p>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.</p> |
| 10.6 | <p>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:</p> <p>Note: BHEL may also choose to release payment by other alternative modes as applicable</p> |
| 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

| | |
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| 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

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| 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 | <p>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:</p> <ul style="list-style-type: none"> 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 | <p>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:-</p> <ul style="list-style-type: none"> 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 | <p>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:</p> <ul style="list-style-type: none"> 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

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| | <ul style="list-style-type: none">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 |



Bharat Heavy Electricals Limited
(A Govt. of India Undertaking)
Power Sector- Northern Region

BHEL/PSNR/Site.....

Dated: _____

MEMO for imposition of penalty against non-compliances in Quality area

The Lapse as tick marked below has been observed in your area and penalty is being imposed as per the details mentioned at the bottom of this memo:-

| S. No | Nature of non- compliance | Penalty (in Rs.) | Remarks |
|---------------------------------|--|------------------|----------------------------|
| 1. | Non availability of required no. of Quality Engineers/NDT certified person as per contract | 1000 | Per Person |
| Calibration:- | | | |
| 2. | Use of IMTEs without having valid calibration certificate | 1000 | Per equipment per instance |
| 3. | Use of NDT equipment, welding equipment's without having valid calibration certificate, condition not as per requirement | 1000 | Per equipment per instance |
| Welding & NDT area:- | | | |
| 4. | Un qualified Welder carrying out weld/ tack weld | 1000 | Per welder per instance |
| 5. | Not using portable oven | 500 | Per welder per instance |
| 6. | Not using electrodes pre- baked in master oven/ approved make of electrodes/correct electrodes as per EWS/ WPS | 500 | Per instance |
| 7. | Non- removal of slag and spatters after welding | 200 | Per Joint |
| 8. | Not using NDT equipment as prescribed in the manual/contract/guidelines | 1000 | Per equipment per instance |
| 9. | Welder doing welding without job card | 500 | Per instance |
| 10. | Discrepancy observed in the RT taken of weld joints vs RT offered | 2000 | Per joint |
| Material management:- | | | |
| 11. | Mismatch of location of material in store area wrt in Stock register | 200 | Per instance |
| 12. | Non- compliance of preservation of material as per storage & preservation manual | 1000 | Per equipment |
| 13. | Non verification of material within stipulated time as per contract | 500 | Per instance |
| Other Areas:- | | | |
| 14. | Painting without surface cleaning | 500 | Per instance |
| 15. | Not attending Quality meeting by the nominated member | 1000 | Per meeting |

Details of non- compliance (Name of Sub contractors, persons, description of deficiency, etc.)

Penalty imposed:-

1, Rate as per above chart _____

2. No. of Persons/ equipment/ instance/ Joint/ welder/meeting. _____

3. Total Penalty= 1. X 2. = _____

Signature

(Witnessed by Sub- Contractor representative)

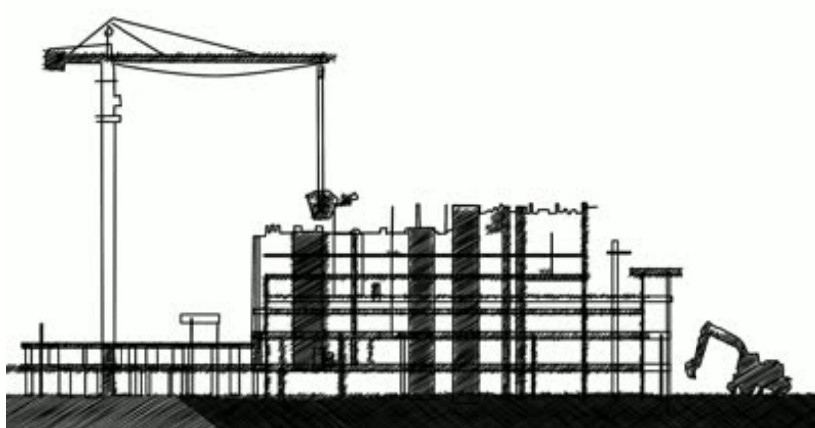
Name _____

(Witnessed by PSNR Personnel)

Name _____

Distribution: 1. Sub- contractor

2. Head (Quality & Safety)/ BHEL PSNR



**HEALTH,
SAFETY and
ENVIRONMENT
PLAN**

for

**SITE
OPERATIONS**

by

**SUB-
CONTRACTORS**

POWER SECTOR



HEALTH, SAFETY AND ENVIRONMENT
PLAN FOR
SITE OPERATION by SUBCONTRACTORS

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

POWER SECTOR

DOCUMENT ISSUE SHEET

| | Prepared | Reviewed | Approved |
|-------------|-----------------------------------|--------------------------|--------------------------|
| Name | Sanghamitra B. Jayant | A.K. Sinha | Anuj Bhatnagar |
| Designation | Dy. Manager PSHQ(FQA & Safety) | GM PSHQ(FQA & Safety) | ED PSHQ(FQA & Safety) |
| Signature | | | |
| Date | 12/8/14 | 12/8/14 | 12/8/14 |

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 <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> Site In-charge- As per clause 7.2.1 Safety officer- As per clause 7.2.2 |
| | HSE Planning for Man , Machinery/Equipment/Tools & Tackles | |
| PROVIDE | HSE INFRASTRUCTURE | |
| | <ul style="list-style-type: none"> PPEs Drinking Water Washing Facilities Latrines and Urinals Provision of shelter for rest Medical facilities | <ul style="list-style-type: none"> Canteen facilities Labour Colony Emergency Vehicle Pest Control Scrapyard Illumination |
| TRAIN | HSE TRAINING , AWARENESS & PROMOTION | |
| | Training <ul style="list-style-type: none"> Induction training Height work and other critical areas Tool Box talk & Pep Talk | Awareness & Promotion <ul style="list-style-type: none"> Signage Poster Banner Competition Awards |
| COMMUNICATE | HSE COMMUNICATION | |
| | Incident Reporting <ul style="list-style-type: none"> Accident- Fatal & Major Property damage Near Miss | Event Reporting <ul style="list-style-type: none"> 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)



**HEALTH, SAFETY AND ENVIRONMENT
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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- | Degree or diploma in any discipline with full time diploma in Industrial Safety with construction safety as one of the subjects | Minimum two years |
|---|-------------------------------|---------|---|-------------------|

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:
 - Mobile cranes.
 - Side Booms.
 - Forklifts.
 - Grinding machine.
 - Drilling machine.
 - Air compressors.
 - Welding machine.
 - Generator sets.
 - Dump Trucks.
 - Excavators.
 - Dozers
 - Grit Blasting Equipment.
 - 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 NOT APPLICABLE

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 NOT APPLICABLE □□□□

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 rough measurements etc. | 300 |
| 7. | Fine work like precision assembly, precision measurements etc. | 700 |
| 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:
 - Details of the job being intended for immediate execution.
 - The relevant hazards and risks involved in executing the job and their control and mitigating measures.
 - Specific site condition to be considered while executing the job like high temperature, humidity, unfavorable weather etc.
 - Recent non-compliances observed.
 - Appreciation of good work done by any person.
 - 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:
 - Hazards identification and risk analysis (HIRA)
 - Work Permit System
 - Incident investigation and reporting
 - Fire fighting
 - First aid
 - Fire-warden training
 - EMS and OHSMS
 - T & Ps fitness and operation



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- Electrical safety
- Welding, NDE & Radiological safety
- 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 handing 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 ¼ 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:

- A high level of stability.
- A safe means of access/egress.
- Suitable and effective service and parking brakes.
- Windscreens with wipers and external mirrors giving optimum all round visibility.
- Provision of horn, vehicle lights, reflectors, reversing lights, reversing alarms.
- Provision of seat belts.
- Guards on dangerous parts.
- Driver protection - to prevent injury from overturning and from falling objects/materials.
- Driver protection from adverse weather.
- No vehicle shall be parked below HT/LT power lines.
- 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.
 - Brakes.
 - Tires.
 - Steering.
 - Mirrors.
 - Windscreen waters.
 - Wipers.
 - Warning signals.
 - 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
 - Fall arrestor
 - Lifelines
 - Safety nets
 - Fencing and barricading
 - Warning signage
 - Covering of opening
 - Proper scaffolding with access and egress.
 - 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 requirements |
| 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 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.

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 causeand Corrective action and Preventive action.The agenda is given below:
 - Implementation of earlier MOM
 - HSE performance
 - HSE inspection
 - HSE audit and CAPA
 - HSE training
 - Health check-up camp
 - HSE planning for the erection and commissioning and installation activities in the coming month
 - 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 recoument 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 $\pm 70^{\circ}$ 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 (Reaffirmed 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 |



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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 20030) | 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 |



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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

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| | |
|---------------------------------|--|
| 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

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| 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

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| | |
|---------------------------------|--|
| 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

PAGE NO. 02 OF 02

| 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 |
|--------|------|-------------|--------------|-----------|
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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 |
|--------------|---|-------------------------------------|----------------|
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Signature of Site I/C of Subcontractor :



POWER SECTOR

PERSONAL PROTECTIVE EQUIPMENTS

FORMAT NO: HSEP:13-F06
REV NO.: 00
PAGE NO. 01 OF 01

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

| | |
|---------------------------------|--|
| 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****INSPECTION OF ELECTRICAL INSTALLATION**

FORMAT NO: HSEP:13-F12

REV NO.: 00

PAGE NO. 01 OF 02

| | |
|-------------------------------|--|
| 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.



POWER SECTOR

HSE PENALTY

FORMAT NO: HSEP:13-F14

REV NO.: 00

PAGE NO. 02 OF 02

Details (if any) related to non- compliance (Name of persons, Nature of deficiency, etc.)

Penalty imposed:

1, Rate as per above chart _____

2. No. of Persons/ machine/ event/ labour _____

3. Total Penalty= 1. X 2. = _____


Signature :

Witnessed by: (Sub- Contractor representative) (BHEL Personnel)

Name _____

Name _____

Distribution: 1 Copy: to Sub- contractor,
1 Copy to Site Construction Manager(BHEL)

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

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. | Uwanted 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 an 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**

General Conditions of Contract

(Common for Power Sector Regions)

2012

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CHAPTER -1

1. GENERAL INSTRUCTION TO TENDERERS

1.1. DESPATCH INSTRUCTION

- i) The General Conditions of Contract form part of the Tender specifications. **All pages of the tender documents shall be duly signed, stamped and submitted along with the offer in token of complete acceptance thereof.** The information furnished shall be complete by itself. The tenderer is required to furnish all the details and other documents as required in the following pages
- ii) Tenderers are advised to study all the tender documents carefully. Any submission of tender by the tenderer shall be deemed to have been done after careful study and examination of the tender documents and with the full understanding of the implications thereof. Should the tenderers have any doubt about the meaning of any portion of the Tender Specification or find discrepancies or omissions in the drawings or the tender documents issued are incomplete or shall require clarification on any of the technical aspect, the scope of work etc., he shall at once, contact the authority inviting the tender well in time (so as not to affect last date of submission) for clarification before the submission of the tender. Tenderer's request for clarifications shall be with reference to Sections and Clause numbers given in the tender documents. The specifications and terms and conditions shall be deemed to have been accepted by the tenderer in his offer. Non compliance with any of the requirements and instructions of the tender enquiry may result in the rejection of the tender.
- iii) Integrity pact (IP) shall be applicable for all tenders / contracts if indicated in NIT. This integrity pact shall be issued as part of the Tender documents and shall be returned by the bidder along with Techno-commercial bid duly filled, signed and stamped by the authorized signatory who signs the bid. Only those vendors / bidders who have entered into such an IP with BHEL shall be considered qualified to participate in the bidding. Entering into this pact shall be a preliminary qualification.

1.2. SUBMISSION OF TENDERS

- 1.2.1 The tenderers must submit their tenders to Officer inviting tender as per instructions in the NIT

Offer shall be submitted online in e procurement portal - . **<https://bheleps.buyjunction.in>**
No other mode of offer submission shall be acceptable & shall be rejected.

Note : Party can review & revise their submitted offers till due date & time of submission

- 1.2.2 The tenders received after the specified time of their submission are treated as 'Late Tenders' and shall not be considered under any circumstances.
- 1.2.3 Tenders shall be opened by authorized officer of BHEL as specified in the NIT.

- 1.2.4 Tenderers whose bids are found techno commercially qualified shall be informed the date and time of opening of the Price Bids and such Tenderers may depute their representatives to witness the opening of the price bids. BHEL's decision in this regard shall be final and binding.
- 1.2.5 Before submission of Offer, the tenderers are advised to inspect the site of work and the environments and be well acquainted with the actual working and other prevalent conditions, facilities available, position of material and labour, means of transport and access to Site, accommodation, etc. No claim will be entertained later on the grounds of lack of knowledge of any of these conditions.
- 1.3. LANGUAGE**
- 1.3.1 The tenderer shall quote the rates in English language and international numerals. These rates shall be entered in figures as well as in words. For the purpose of the tenders, the metric system of units shall be used.
- 1.3.2 All entries in the tender shall either be typed or written legibly in ink. Erasing and over-writing is not permitted and may render such tenders liable for rejection. All cancellations and insertions shall be duly attested by the tenderer.
- 1.4 PRICE DISCREPANCY:**
- 1.4.1 **Conventional Price Bid opening** : In the case of price bid opening without resorting to Reverse Auction, if there are differences between the rates given by the tenderer in words and figures or in amount worked out by him, the following procedure for evaluation and award shall be followed:
- i) When there is a difference between the rates in figures and in words, the rates which corresponds to the amounts worked out by the contractor, shall be taken as correct
 - ii) When the amount of an item is not worked out by the contractor or it does not correspond with the rate written either in figure or in words, then the rate quoted by the contractor in words shall be taken as correct.
 - iii) When the rate quoted by the contractor in figures and words tallies but the amount is not worked out correctly, the rate quoted by the contractor shall be taken as correct and not the amount.
 - iv) In case of lumpsum price, if there is any difference between the amount in figures and in words, the amount quoted by the bidder in words shall be taken as correct.
 - v) In case of omission in quoting any rate for one or more items, the evaluation shall be done considering the highest quoted rate obtained against the respective items by other tenderers for the subject tender. If the tenderer becomes L-1, the notional rates for the omission items shall be the lowest rates quoted for the respective items by the other tenderers against the respective omission items for the subject job and the 'Total quoted price (loaded for omissions)' shall be arrived at. However the overall price remaining the same as quoted originally, the rates for all the items in the 'Total quoted price (loaded for omissions)' shall be reduced item wise in proportion to the ratio of 'Original' total price and the 'Total quoted price (loaded for omissions)'.
 - vi) The 'Final Total Amount' shall be arrived at after considering the amounts worked out in line with 'i' to 'v' above.
- 1.4.2 **Reverse Auction:** In case of Reverse Auction, the successful bidder shall undertake to execute the work as per overall price offered by him during the Reverse Auction process. In case of omission of rates, the procedure shall be as per 'Guidelines for Reverse Auction' enclosed.
- 1.5. QUALIFICATION OF TENDERERS**
- i) Only tenderers who have previous experience in the work of the nature and description detailed in the Notice Inviting Tender and/or tender specification are expected to quote for this work duly

- ii) detailing their experience along with offer.
- ii) Offers from tenderers who do not have proven and established experience in the field shall not be considered
- iii) .Offers from tenderers who are under suspension (banned) by any Unit/Region/Division of BHEL shall not be considered.
- iv) Offers from tenderers who do not comply with the latest guidelines of Ministry/Commissions of Govt of India shall not be considered.

1.6. EVALUATION OF BIDS

- i) Technical Bids submitted by the tenderer will be opened first and evaluated for fulfilling the Pre Qualification criteria and other conditions in NIT/Tender documents, based on documentary evidences submitted along with the offer
- ii) In case the same qualifying experience is claimed by more than one agency, then the agency who has executed the work as per documentary evidence submitted shall only be qualified. Scope of qualifying work should be totally with the agency who has executed and in case it is only labour+consumables without T&P, then the responsibility of execution is assigned to the first agency and not to the agency who has executed only as labour supply contractor. Further, BHEL reserves the right to ask for further proofs including submission of TDS certificates for the said job
- iii) In case the qualifying experience is claimed by private organizations based on Work Order and completion certificates from another private organization, BHEL reserves the right to ask for further proofs including submission of TDS certificates for the said job
- iv) Assessing Bidder Capacity for executing the current tender shall be as per Notice Inviting Tender
- v) Price Bids of shortlisted bidders shall only be opened either through the conventional price bid opening or through electronic Reverse Auction, at the discretion of BHEL
- vi) Price Bids of unqualified bidders shall not be opened. Reasons for rejection shall be intimated in due course after issue of LOI/LOA to successful bidder and receipt of unqualified acceptance from the successful bidder
- vii) Bidders are advised to also refer to clause no 2.9.4 regarding evaluation of their performance in ongoing projects for the current tender.

1.7. DATA TO BE ENCLOSED

Full information shall be given by the tenderer in respect of the following. Non-submission of this information may lead to rejection of the offer.

i) INCOME TAX PERMANENT ACCOUNT NUMBER

Certified copies of Permanent Account Numbers as allotted by Income Tax Department for the Company/Firm/Individual Partners, etc. shall be furnished along with tender.

ii) ORGANIZATION CHART

The organization chart of the tenderer's organization, including the names, addresses and contact information of the Directors/Partners shall be furnished along with the offer.

iii) Not used

iv) IN CASE OF INDIVIDUAL TENDERER:

His / her full name, address and place & nature of business.

v) IN CASE OF PARTNERSHIP FIRM

The names of all the partners and their addresses, A copy of the partnership deed/instrument of

partnership duly certified by the Notary Public shall be enclosed.

vi) **IN CASE OF COMPANIES:**

- a. Date and place of registration including date of commencement certificate in case of Public Companies (certified copies of Memorandum and articles of Association are also to be furnished).
- b. Nature of business carried on by the Company and the provisions of the Memorandum relating thereof.

1.8 Not used

1.9 EARNEST MONEY DEPOSIT

1.9.1 Every tender must be accompanied by the prescribed amount of Earnest Money Deposit (EMD) in the manner described herein.

- i) EMD shall be furnished before tender opening / along with the offer in full as per the amount indicated in the Special Conditions of Contract / NIT.
- ii) The EMD is to be paid in the following forms:
 - (a) Cash deposit as permissible under the extant Income Tax Act (before tender opening).
 - (b) Electronic Fund Transfer credited in BHEL account (before tender opening).
 - (c) Banker's cheque / Pay order / Demand draft, in favour of 'Bharat Heavy Electricals Limited' and payable at Regional HQ issuing the tender (along with offer).In case total EMD amount is more than INR 20 Lakh, the amount in excess of INR 20 lakh may be accepted in the form of Bank Guarantee from scheduled bank. The Bank Guarantee in such cases shall be valid for at least six months.
- iii) No other form of EMD remittance shall be acceptable to BHEL.

1.9.2 EMD by the Tenderer will be forfeited as per NIT conditions, if:

- i) After opening the tender and within the offer validity period, the tenderer revokes his tender or makes any modification in his tender which is not acceptable to BHEL.
- ii) The Contractor fails to deposit the required Security deposit or commence the work within the period as per LOI/ LOA/ Contract.
EMD by the tenderer shall be withheld in case any action on the tenderer is envisaged under the provisions of extant "Guidelines on Suspension of business dealings with suppliers/ contractors" and forfeited/ released based on the action as determined under these guidelines.

1.9.3 EMD shall not carry any interest.

1.9.4 In the case of unsuccessful bidders, the Earnest Money will be refunded to them within a reasonable time after award of work.

1.9.5 EMD of successful tenderer will be retained as part of Security Deposit.

1.10 SECURITY DEPOSIT

1.10.1 Upon acceptance of Tender, the successful Tenderer should deposit the required amount of Security Deposit towards fulfilment of any obligations in terms of the provisions of the contract. The total amount of Security Deposit will be 5% of the contract value. EMD of the successful tenderer shall be converted and adjusted towards the required amount of Security Deposit.

1.10.2 The security Deposit should be furnished before start of the work by the contractor.

1.10.3 The balance amount to make up the required Security Deposit of 5% of the contract value may be accepted in the following forms:-

- i) Cash (as permissible under the extant Income Tax Act)
- ii) Local cheques of Scheduled Banks (subject to realization)/ Pay Order/ Demand Draft/ Electronic Fund Transfer in favour of BHEL.
- iii) Securities available from Indian Post offices such as National Savings Certificates, Kisan Vikas Patras etc. (held in the name of Contractor furnishing the security and duly endorsed/ hypothecated/ pledged, as applicable, in favour of BHEL).
- iv) Bank Guarantee from Scheduled Banks/ Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format for Security Deposit shall be in the prescribed formats.
- v) Fixed Deposit Receipt issued by Scheduled Banks/ Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Contractor, a/c BHEL).
- vi) Security deposit can also be recovered at the rate of 10% of the gross amount progressively from each of the running bills of the contractor till the total amount of the required security deposit is collected. However in such cases at least 50% of the required Security Deposit, including the EMD, should be deposited in any form as prescribed before start of the work and the balance 50% may be recovered from the running bills as described above.

(Note: In case of small value contracts not exceeding INR 20 lakhs, work can be started before the required Security Deposit is collected. However, payment can be released only after collection/ recovery of initial 50% Security Deposit).

Note: BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.

1.10.4 The Security Deposit shall not carry any interest.

1.10.5 In case the value of work exceeds / reduces from the awarded / accepted value, the Security Deposit shall be correspondingly enhanced / reduced as given below:

- i) The enhanced part of the Security Deposit shall be immediately deposited by the Contractor or adjusted against payments due to the Contractor.
- ii) There will be no reduction in Security Deposit value in case of variation in contract value upto the lower limit specified in Quantity variation clause. In case of reduction of contract value beyond the lower limit specified in Quantity Variation clause, then the Security Deposit shall be re adjusted in proportion.
- iii) In case of reduction, the reduced Contract value shall be certified by BHEL Construction Manager after ascertaining / freezing of BOQ / Drawings from the Design / Engineering Centre. The reduced Security Deposit value can only be considered after taking into account the adequacy of the securities held by BHEL to meet the liabilities of the contractor for the contract, and the performance of the contract in general. **In such cases, the revised value of Security Deposit shall be worked out only after execution of not less than the lower limit of the revised scope of work/contract value as per quantity variation clause, and as certified by Construction Manager. This reduction in value of Security Deposit shall not entitle the contractor to any amendment of Contract and shall be operated at the discretion of BHEL.**
- iv) Contract value for the purpose of operating the reduced/increased value of Security Deposit due to Quantity Variation, shall be exclusive of Price Variation Clause, Over Run Compensation and Extra works done on manday rates.
- v) The recoveries made from running bills (cash deduction towards balance SD amount) can be

released against submission of equivalent Bank Guarantee in acceptable form, but only once, before completion of work, with the approval of BHEL.

1.10.6 The validity of Bank Guarantees towards Security Deposit shall be initially upto the completion period as stipulated in the Letter of Intent/Award + 3 months, and the same shall be kept valid by proper renewal till the acceptance of Final Bills of the Contractor, by BHEL.

1.10.7 BHEL reserves the right of forfeiture of Security Deposit in addition to other claims and penalties in the event of the Contractor's failure to fulfill any of the contractual obligations or in the event of termination of contract as per terms and conditions of contract. BHEL reserves the right to set off the Security Deposit against any claims of other contracts with BHEL.

1.11 RETURN OF SECURITY DEPOSIT

Security Deposit shall be refunded/Bank Guarantee(s) released to the Contractor along with the 'Final Bill' after deducting all expenses / other amounts due to BHEL under the contract / other contracts entered into with them by BHEL.

1.12 BANK GUARANTEES

Where ever Bank Guarantees are to be furnished/submitted by the contractor, the following shall be complied with

- i) Bank Guarantees shall be from Scheduled Banks / Public Financial Institutions as defined in the Companies Act.
- ii) The Bank Guarantees shall be as per prescribed formats.
- iii) It is the responsibility of the bidder to get the Bank Guarantees revalidated/extended for the required period (subject to a minimum period of six months), as per the advice of BHEL Site Engineer / Construction Manager. BHEL shall not be liable for issue of any reminders regarding expiry of the Bank Guarantees.
- iv) In case extension/further extensions of any Bank Guarantees are not required, the bidders shall ensure that the same is explicitly endorsed by the Construction Manager and submitted to the Regional HQ issuing the LOI/LOA.
- v) In case the Bank Guarantees are not extended before the expiry date, BHEL reserves the right to invoke the same by informing the concerned Bank in writing, without any advance notice/communication to the concerned bidder.
- vi) Bidders to note that any corrections to Bank Guarantees shall be done by the issuing Bank, only through an amendment in an appropriate non judicial stamp paper.
- vii) The Original Bank Guarantee shall be sent directly by the Bank to BHEL under Registered Post (Acknowledgement Due), addressed to the Subcontracting Department of the respective Region.

1.13 VALIDITY OF OFFER

The rates in the Tender shall be kept open for acceptance for a minimum period of **SIX MONTHS** from latest due date of offer submission (including extension, if any). In case BHEL (Bharat Heavy Electricals Ltd) calls for negotiations, such negotiations shall not amount to cancellation or withdrawal of the original offer which shall be binding on the tenderers.

1.14 EXECUTION OF CONTRACT AGREEMENT

The successful tenderer's responsibility under this contract commences from the date of issue of the Letter of Intent/ Award by Bharat Heavy Electricals Limited. The Tenderer shall submit an unqualified acceptance to the Letter of Intent/Award within the period stipulated therein.

The successful tenderer shall be required to execute an agreement in the prescribed form, with BHEL, within a reasonable time after the acceptance of the Letter of Intent/Award, and in any case before releasing the first running bill. The contract agreement shall be signed by a person duly authorized/empowered by the tenderer.

1.15 REJECTION OF TENDER AND OTHER CONDITIONS

- 1.15.1 The acceptance of tender will rest with BHEL which does not bind itself to accept the lowest tender or any tender and reserves to itself full rights for the following without assigning any reasons whatsoever:-
- a. To reject any or all of the tenders.
 - b. To split up the work amongst two or more tenderers as per NIT
 - c. To award the work in part if specified in NIT
 - d. In case of either of the contingencies stated in (b) and (c) above, the time for completion as stipulated in the tender shall be applicable.
- 1.15.2 Conditional tenders, unsolicited tenders, tenders which are incomplete or not in the form specified or defective or have been materially altered or not in accordance with the tender conditions, specifications etc., are liable to be rejected.
- 1.15.3 Tenders are liable to be rejected in case of unsatisfactory performance of the tenderer with BHEL, or tenderer under suspension (hold/banning /delisted) by any unit / region / division of BHEL or tenderers who do not comply with the latest guidelines of Ministry/Commissions of Govt of India. BHEL reserves the right to reject a bidder in case it is observed that they are overloaded and may not be in a position to execute this job as per the required schedule in line with clause no. 9.0 of the 'NIT'. The decision of BHEL will be final in this regard.
- 1.15.4 If a tenderer who is a proprietor expires after the submission of his tender or after the acceptance of his tender, BHEL may at their discretion, cancel such tender. If a partner of a firm expires after the submission of tender or after the acceptance of the tender, BHEL may then cancel such tender at their discretion, unless the firm retains its character.
- 1.15.5 BHEL will not be bound by any Power of Attorney granted by changes in the composition of the firm made subsequent to the execution of the contract. They may, however, recognise such power of Attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the contractor concerned.
- 1.15.6 If the tenderer deliberately gives wrong information in his tender, BHEL reserves the right to reject such tender at any stage or to cancel the contract if awarded and forfeit the Earnest Money/Security Deposit/any other money due.
- 1.15.7 Canvassing in any form in connection with the tenders submitted by the Tenderer shall make his offer liable to rejection.
- 1.15.8 In case the Proprietor, Partner or Director of the Company/Firm submitting the Tender, has any

relative or relation employed in BHEL, the authority inviting the Tender shall be informed of the fact as per specified format, along with the Offer. Failing to do so, BHEL may, at its sole discretion, reject the tender or cancel the contract and forfeit the Earnest Money/Security Deposit.

- 1.15.9 The successful tenderer should not sub-contract part or complete work detailed in the tender specification undertaken by him without written permission of BHEL's Construction Manager/Site Incharge. The tenderer is solely responsible to BHEL for the work awarded to him.
- 1.15.10 The tender submitted by a techno commercially qualified tenderer shall become the property of BHEL who shall be under no obligation to return the same to the bidder.
- 1.15.11 Unsolicited discount received after the due date and time of Bid Submission shall not be considered for evaluation. However, if the party who has submitted the unsolicited discount/rebate becomes the L-1 party, then the awarded price i.e contract value shall be worked out after considering the discount so offered.
- 1.15.12 BHEL shall not be liable for any expenses incurred by the bidder in the preparation of the tender irrespective of whether the tender is accepted or not.

CHAPTER-2

2.1 **DEFINITION:** The following terms shall have the meaning hereby assigned to them except where the context otherwise requires

- i) BHEL shall mean Bharat Heavy Electricals Limited (of the respective Power Sector Region inviting the Tender), a company registered under Indian Companies Act 1956, with its Registered Office at BHEL HOUSE, SIRI FORT, NEW DELHI – 110 049, or its Power Sector Regional Offices or its Authorised Officers or its Site Engineers or other employees authorised to deal with any matters with which these persons are concerned on its behalf.
- ii) “EXECUTIVE DIRECTOR” or ‘GROUP GENERAL MANAGER’ or “GENERAL MANAGER (Incharge)” or “GENERAL MANAGER” shall mean the Officer in Administrative charge of the respective Power Sector Region.
- iii) “COMPETENT AUTHORITY” shall mean Executive Director or Group General Manager or General Manager (Incharge) or General Manager or BHEL Officers who are empowered to act on behalf of the Executive Director or General Manager (Incharge) or General Manager of BHEL.
- iv) “ENGINEER” or “ENGINEER IN CHARGE” shall mean an Officer of BHEL as may be duly appointed and authorized by BHEL to act as “Engineer” on his behalf for the purpose of the Contract, to perform the duty set forth in this General Conditions of Contract and other Contract documents. The term also includes ‘CONSTRUCTION MANAGER’ or ‘SITE INCHARGE’ as well as Officers at Site or at the Headquarters of the respective Power Sector Regions.
- v) “SITE” shall mean the places or place at which the plants/equipments are to be erected and services are to be performed as per the specification of this Tender.
- vi) “CLIENT OF BHEL” or “CUSTOMER” shall mean the project authorities with whom BHEL has entered into a contract for supply of equipments or provision of services.
- vii) “CONTRACTOR” shall mean the successful Bidder/Tenderer who is awarded the Contract and shall include the Contractor’s successors, heirs, executors, administrators and permitted assigns.
- viii) “CONTRACT” or “CONTRACT DOCUMENT” shall mean and include the Agreement of Work Order, the accepted appendices of Rates, Schedules, Quantities if any, General Conditions of Contract, Special Conditions of Contract, Instructions to the Tenderers, Drawings, Technical Specifications, the Special Specifications if any, the Tender documents, subsequent amendments mutually agreed upon and the Letter of Intent/Award/Acceptance issued by BHEL. Any conditions or terms stipulated by the contractor in the tender documents or subsequent letters shall not form part of the contract unless, specifically accepted in writing by BHEL in the Letter of Intent/Award and incorporated in the agreement.
- ix) “GENERAL CONDITIONS OF CONTRACT” shall mean the ‘Instructions to Tenderers’ and ‘General Conditions of Contract’ pertaining to the work for which above tenders have been called for.
- x) “TENDER SPECIFICATION” or “TENDER” or “TENDER DOCUMENTS” shall mean General Conditions, Common Conditions, Special Conditions, Price Bid, Rate Schedule, Technical

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| | Specifications, Appendices, Annexures, Corrigendums, Amendments, Forms, procedures, Site information, etc and drawings/documents pertaining to the work for which the tenderers are required to submit their offers. Individual specification number will be assigned to each Tender Specification. |
| xi) | “LETTER OF INTENT/ AWARD” shall mean the intimation by a Letter/Fax/email to the tenderer that the tender has been accepted in accordance with provisions contained in the letter. The responsibility of the contractor commences from the date of issue of this letter and all terms and conditions of the contract are applicable from this date. |
| xii) | “COMPLETION TIME” shall mean the period by ‘date/month’ specified in the ‘Letter of Intent/Award’ or date mutually agreed upon for handing over of the intended scope of work, the erected equipment/plant which are found acceptable by the Engineer, being of required standard and conforming to the specifications of the Contract. |
| xiii) | “PLANT” shall mean and connote the entire assembly of the plant and equipments covered by the contract. |
| xiv) | “EQUIPMENT” shall mean equipment, machineries, materials, structural, electricals and other components of the plant covered by the contract. |
| xv) | “TESTS” shall mean and include such test or tests to be carried out on the part of the contractor as are prescribed in the contract or considered necessary by BHEL, in order to ascertain the quality, workmanship, performance and efficiency of the contractor or part thereof. |
| xvi) | “APPROVED”, “DIRECTED” or “INSTRUCTED” shall mean approved, directed or instructed by BHEL. |
| xvii) | “WORK or CONTRACT WORK” shall mean and include supply of all categories of labour, specified consumables, tools and tackles and Plants required for complete and satisfactory site transportation, handling, stacking, storing, erecting, testing and commissioning of the equipments to the entire satisfaction of BHEL. |
| xviii) | “SINGULAR AND PLURALS ETC” words carrying singular number shall also include plural and vice versa, where the context so requires. Words imparting the masculine Gender shall be taken to include the feminine Gender and words imparting persons shall include any Company or Associations or Body of Individuals, whether incorporated or not. |
| xix) | “HEADING” – The heading in these General Conditions are solely for the purpose of facilitating reference and shall not be deemed to be part thereof or be taken as instructions thereof or of the contract. |
| xx) | “MONTH” shall mean calendar month unless otherwise specified in the Tender. |
| xxi) | Day’ or ‘Days’ unless herein otherwise expressly defined shall mean calendar day or days of twenty four (24) hours each. A week shall mean continuous period of seven (7) days. |
| xxii) | “COMMISSIONING” shall mean the synchronisation testing and achieving functional operation of the Equipment with associated system after all initial adjustments, trials, cleaning, re-assembly required at site if any, have been completed and Equipment with associated system is ready for |

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| | taking into service. |
| xxiii) | “WRITING” shall include any manuscript type written or hand written or printed statement or electronically transmitted messages, under the signature or seal or transmittal of BHEL. |
| xxiv) | “TEMPORARY WORK” shall mean all temporary works for every kind required in or for the execution, completion, maintenance of the work. |
| xxv) | ‘CONTRACT PRICE’ or ‘CONTRACT VALUE’ shall mean the sum mentioned in the LOI/LOA/Contract Agreement subject to such additions thereto or deductions there from as may be made under provisions hereinafter contained |
| xxvi) | “COMMENCEMENT DATE” or “START DATE” shall mean the commencement/start of work at Site as per terms defined in the Tender |
| xxvii) | “SHORT CLOSING” or “FORE CLOSING” of Contract shall mean the premature closing of Contract, for reasons not attributable to the contractor and mutually agreed between BHEL and the contractor |
| xxviii) | “TERMINATION” of Contract shall mean the premature closing of contract due to reasons as mentioned in the contract |
| xxix) | “DE MOBILISATION” shall mean the temporary winding up of Site establishment by Contractor leading to suspension of works temporarily for reasons not attributable to the contractor |
| xxx) | “RE MOBILISATION” shall mean the resumption of work with all resources required for the work after demobilization. |
| 2.2 | LAW GOVERNING THE CONTRACT AND COURT JURISDICTION The contract shall be governed by the Law for the time being in force in the Republic of India. Subject to clause 2.21.1 or 2.21.2 of this contract, the Civil Court having original Civil Jurisdiction at Delhi for PSNR, at Kolkata for PSER, at Nagpur for PSWR and at Chennai for PSSR, shall alone have exclusive jurisdiction in regard to all matters in respect of the Contract. |
| 2.3 | ISSUE OF NOTICE |
| 2.3.1 | <u>Service of notice on contractor</u> Any notice to be given to the Contractor under the terms of the contract shall be served by sending the same by Registered Post / Speed Post to or leaving the same at the Contractor’s last known address of the principal place of business (or in the event of the contractor being a company, to or at its Registered Office). In case of change of address, the notice shall be served at changed address as notified in writing by the Contractor to BHEL. Such posting or leaving of the notice shall be deemed to be good service of such notice and the time mentioned to the condition for doing any act after notice shall be reckoned from the date so mentioned in such notice. |
| 2.3.2 | <u>Service of notice on BHEL</u> Any notice to be given to BHEL in-charge/Region under the terms of the Contract shall be served by sending the same by post to or leaving the same at BHEL address or changed address as notified in writing by BHEL to the Contractor. |
| 2.4 | USE OF LAND No land belonging to BHEL or their Customer under temporary possession of BHEL shall be occupied by the contractor without written permission of BHEL. |

2.5 COMMENCEMENT OF WORK

- 2.5.1** The contractor shall commence the work as per the time indicated in the Letter of Intent/Award from BHEL and shall proceed with the same with due expedition without delay.
- 2.5.2** If the contractor fails to start the work within stipulated time as per LOI/ LOA or as intimated by BHEL, then BHEL at its sole discretion will have the right to cancel the contract. The Earnest Money and/or Security Deposit with BHEL will stand forfeited without any further reference to him without prejudice to any and all of BHEL's other rights and remedies in this regard.
- 2.5.3** All the work shall be carried out under the direction and to the satisfaction of BHEL.

2.6 MEASUREMENT OF WORK AND MODE OF PAYMENT:

- 2.6.1** All payments due to the contractors shall be made by e mode only, unless otherwise found operationally difficult for reasons to be recorded in writing.
- 2.6.2** For progress running bill payments: - The Contractor shall present detailed measurement sheets in triplicate, duly indicating all relevant details based on technical documents and connected drawings for work done during the month/period under various categories in line with terms of payment as per contract. The basis of arriving at the quantities, weights shall be relevant documents and drawings released by BHEL. These measurement sheets shall be prepared jointly with BHEL Engineers and signed by both the parties.
- 2.6.3** These measurement sheets will be checked by BHEL Engineer and quantities and percentage eligible for payment under various groups shall be decided by BHEL Engineer. The abstract of quantities and percentage so arrived at based on the terms of payment shall be entered in Measurement Book and signed by both the parties.
- 2.6.4** Based on the above quantities, contractor shall prepare the bills in prescribed format and work out the financial value. These will be entered in Measurement Book and signed by both the parties. Payment shall be made by BHEL after effecting the recoveries due from the contractor.
- 2.6.5** All recoveries due from the contractor for the month/period shall be effected in full from the corresponding running bills unless specific approval from the competent authorities is obtained to the contrary.
- 2.6.6** Measurement shall be restricted to that portion of work for which it is required to ascertain the financial liability of BHEL under this contract.
- 2.6.7** The measurement shall be taken jointly by persons duly authorized on the part of BHEL and by the Contractor.
- 2.6.8** The Contractor shall bear the expenditure involved if any, in making the measurements and testing of materials to be used/used in the work. The contractor shall, without extra charges, provide all the assistance with appliances and other things necessary for measurement.
- 2.6.9** If at any time due to any reason whatsoever, it becomes necessary to re-measure the work done in full or in part, the expenses towards such re measurements shall be borne by the contractor unless such re measurements are warranted solely for reasons not attributable to contractor.

2.6.10 Passing of bills covered by such measurements does not amount to acceptance of the completion of the work measured. Any left out work has to be completed, if pointed out at a later date by BHEL.

2.6.11 Final measurement bill shall be prepared in the final bill format prescribed for the purpose based on the certificate issued by BHEL Engineer that entire works as stipulated in tender specification has been completed in all respects to the entire satisfaction of BHEL. Contractor shall give unqualified "No Claim" Certificate. All the tools and tackles loaned to him should be returned in satisfactory condition to BHEL. The abstract of final quantities and financial values shall also be entered in the Measurement Books and signed by both parties to the contract. The Final Bill shall be prepared and paid within a reasonable time after completion of work.

2.7 RIGHTS OF BHEL

BHEL reserves the following rights in respect of this contract during the original contract period or its extensions if any, as per the provisions of the contract, without entitling the contractor for any compensation.

2.7.1 To withdraw any portion of work and/or to restrict/alter quantum of work as indicated in the contract during the progress of work and get it done through other agencies to suit BHEL's commitment to its customer or in case BHEL decides to advance the date of completion due to other emergent reasons/ BHEL's obligation to its customer.

2.7.2 To terminate the contract or get any part of the work done through other agency or deploy BHEL's own/hired/otherwise arranged resources , at the risk and cost of the contractor after due notice of a period of two weeks by BHEL, in the event of:-

- i) Contractor's continued poor progress
- ii) Withdrawal from or abandonment of the work before completion of the work
- iii) Contractor's inability to progress the work for completion as stipulated in the contract
- iv) Poor quality of work
- v) Corrupt act of Contractor
- vi) Insolvency of the Contractor
- vii) Persistent disregard to the instructions of BHEL
- viii) Assignment, transfer, sub-letting of contract without BHEL's written permission
- ix) Non fulfillment of any contractual obligations
- x) In the opinion of BHEL, the contractor is overloaded and is not in a position to execute the job as per required schedule

2.7.3 To meet the expenses including BHEL overheads on the differential cost at 5%, over and above the Liquidated damages/penalties arising out of "Risk & Cost" as explained above under sl. no. 2.7.2. BHEL shall recover the amount from any money due from Contractor, or from any money due to the Contractor including Security Deposit, or by forfeiting any T&P or material of the contractor under this contract or any other contract of BHEL or by any other means or any combination thereof

2.7.4 To terminate the contract or to restrict the quantum of work and pay for the portion of work executed in case BHEL's contract with their customer are terminated for any reason, as per mutual agreement.

2.7.5 To effect recovery from any amounts due to the contractor under this or any other contract or in any

other form, the moneys BHEL is statutorily forced to pay to anybody, due to contractor's failure to fulfill any of his obligations. BHEL shall levy overheads of 5% on all such payments along with interest as defined elsewhere in the GCC.

2.7.6 While every endeavour will be made by BHEL to this end, they cannot guarantee uninterrupted work due to conditions beyond their control. The Contractor will not be normally entitled for any compensation/extra payment on this account unless otherwise specified elsewhere in the contract.

2.7.7 In case the execution of works comes to a complete halt or reaches a stage wherein worthwhile works cannot be executed and there is no possibility of commencement of work for a period of not less than two months, due to reasons not attributable to the contractor and other than Force Majeure conditions, BHEL may consider permitting the contractor to de mobilize forthwith and re mobilize at an agreed future date. Cost of such demobilization/remobilization shall be mutually agreed. ORC in such cases shall not be applicable for the period between the period of demobilization and re mobilisation. The duration of contract/time extension shall accordingly get modified suitably. In case of any conflict, BHEL decision in this regard shall be final and binding on the contractor.

2.7.8 In the unforeseen event of inordinate delay in receipt of materials, drawings, fronts, etc, due to which inordinate discontinuity of work is anticipated, BHEL on its own or contractor's request at its discretion may consider to short close the contract in following cases:

- a) The balance works (including but not limited to Trial Operation, PG Test, etc) are minor vis a vis the scope of work envisaged as per the contract.
- b) There has been no significant work in past 6 months OR no significant work is expected in next 6 months (example in Hydro projects or in projects where work has stopped due to reasons beyond the control of BHEL)
- c) The balance works cannot be done within a reasonable period of time as they are dependent on unit shut down or on other facilities of customer or any other reasons not attributable to the contractor.
- d) Work does not start within six months of LOI/ LOA date.

At the point of requesting for short closure, contractor shall establish that he has completed all works possible of completion and he is not able to proceed with the balance works due to constraints beyond his control. In such a case, the estimated value of the unexecuted portion of work (or estimated value of services to be provided for carrying out milestone/stage payments like Trial Operation/PG Test, etc) as mutually agreed, shall however be reduced from the final contract value.

2.7.9 LIQUIDATED DAMAGES/PENALTY

If the contractor fails to maintain the required progress of work which results in delay in the completion of the work as per the contractual completion period, BHEL shall have the right to impose Liquidated Damage/Penalty at the rate of 0.5% of the contract value, per week of delay or part thereof subject to a maximum of 10% of the contract value. For this purpose, the period of delay shall be the delay attributable to the Contractor for the completion of work as per contract. Contract Value for this purpose, shall be the final executed value exclusive of ORC, Extra Works executed on Manday rate basis, Supplementary/ Additional Items and PVC.

2.8 RESPONSIBILITIES OF THE CONTRACTOR IN RESPECT OF LOCAL LAWS, EMPLOYMENT OF WORKERS ETC.

The following are the responsibilities of the contractor in respect of observance of local laws, employment of personnel, payment of taxes etc. The subcontractor shall fully indemnify BHEL against any claims of whatsoever nature arising due to the failure of the contractor in discharging any of his responsibilities hereunder:

- 2.8.1** As far as possible, Unskilled Workers shall be engaged from the local areas in which the work is being executed.
- 2.8.2** The contractor at all times during the continuance of this contract shall, in all his dealings with local labour for the time being employed on or in connection with the work, have due regard to all local festivals and religious and other customs.
- 2.8.3** The contractor shall comply with all applicable State and Central Laws, Statutory Rules, Regulations, Notifications, etc. such as Payment of Wages Act, Minimum Wages Act, Workmen Compensation Act, Employer's Liability Act, Industrial Disputes Act, Employers Provident Act, Employees State Insurance Scheme, Contract Labour (Regulation and Abolition) Act, 1970, Payment of Bonus & Gratuity Act, Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996, The Building and Other Construction Workers' Welfare Cess Act, 1996 and other Acts, Rules, and Regulations for labour/workers as applicable and as may be enacted by the State Government and Central Govt. during the tenure of the Contract and having force or jurisdiction at Site. The Contractor shall also comply with provisions of and give all such notices to the local Governing Body, Police and other relevant Authorities as may be required by the Law.
- 2.8.4** The Contractor shall obtain independent License under the Contract Labour (Regulations and Abolition) Act, 1970 for engaging contract labour as required from the concerned Authorities based on the certificate (Form- V) issued by the Principal Employer/Customer.
- 2.8.5** The contractor shall pay and bear all taxes, fees, license charges, Cess, duties, deposits, tolls, royalties, commission or other charges which may be leviable on account of his operations in executing the contract.
- 2.8.6** While BHEL would pay the inspection fees and Registration fees of Boiler/Electrical Inspectorate, all other arrangements for site visits periodically by the Inspectorate to site, Inspection certificate etc. will have to be made by contractor. However, BHEL will not make any payment to the Inspectorate in connection with contractor's Welders/Electricians qualification tests etc.
- 2.8.7** Contractor shall be responsible for provision of Health and Sanitary arrangements (more particularly described in Contract Labour Regulation & Abolition Act), Safety precautions etc. as may be required for safe and satisfactory execution of contract.
- 2.8.8** The contractor shall be responsible for proper accommodation including adequate medical facilities for personnel employed by him.
- 2.8.9** The contractor shall be responsible for the proper behavior and observance of all regulations by the staff employed by him.

- 2.8.10** The contractor shall ensure that no damage is caused to any person/property of other parties working at site. If any such damage is caused, it is responsibility of the contractor to make good the losses or compensate for the same.
- 2.8.11** All the properties/equipments/components of BHEL/their Client loaned with or without deposit to the contractor in connection with the contract shall remain properties of BHEL/their Client.
- 2.8.12** The contractor shall use such properties for the purpose of execution of this contract. All such properties/equipments/components shall be deemed to be in good condition when received by the contractor unless he notifies within 48 hours to the contrary. The contractor shall return them in good condition as and when required by BHEL/their Client. In case of non-return, loss, damage, repairs etc, the cost thereof as may be fixed by BHEL Engineer will be recovered from the contractor
- 2.8.13** In case the contractor is required to undertake any work outside the scope of this contract, the rates payable shall be those mutually agreed upon if the item rates are not mentioned in existing contract
- 2.8.14** Any delay in completion of works/or non achievement of periodical targets due to the reasons attributable to the contractor, the same may have to be compensated by the contractor either by increasing manpower and resources or by working extra hours and/or by working more than one shift. All these are to be carried out by the contractor at no extra cost.
- 2.8.15** The contractor shall arrange, coordinate his work in such a manner as to cause no hindrance to other agencies working in the same premises.
- 2.8.16** All safety rules and codes applied by the Client/BHEL at site shall be observed by the contractor without exception. The contractor shall be responsible for the safety of the equipment/material and works to be performed by him and shall maintain all light, fencing guards, slings etc. or other protection necessary for the purpose. Contractor shall also take such additional precautions as may be indicated from time to time by the Engineer with a view to prevent pilferage, accidents, fire hazards. Due precautions shall be taken against fire hazards and atmospheric conditions. Suitable number of Clerical staff, watch and ward, store keepers to take care of equipment/materials and construction tools and tackles shall be posted at site by the contractor till the completion of work under this contract.
- The contractor shall arrange for such safety devices as are necessary for such type of work and carry out the requisite site tests of handling equipment, lifting tools, tackles etc. as per prescribed standards and practices.
- Contractor has to ensure the implementation of Health, Safety and Environment (HSE) requirements as per directions given by BHEL/Customer. The contractor has to assist in HSE audit by BHEL/Customer and submit compliance Report. The contractor has to generate and submit record/reports as per HSE plan/activities as per instruction of BHEL/Customer
- 2.8.17** The contractor will be directly responsible for payment of wages to his workmen. A pay roll sheet giving all the payments given to the workers and duly signed by the contractor's representative should be furnished to BHEL site for record purpose, if so called for.
- 2.8.18** In case of any class of work for which there is no such specification as laid down in the contract,

such work shall be carried out in accordance with the instructions and requirements of the Engineer.

- 2.8.19** Also, no idle charges will be admissible in the event of any stoppage caused in the work resulting in contractor's labour and Tools & Plants being rendered idle due to any reason at any time.
- 2.8.20** The contractor shall take all reasonable care to protect the materials and work till such time the plant/equipment has been taken over by BHEL or their Client whichever is earlier.
- 2.8.21** The contractor shall not stop the work or abandon the site for whatsoever reason of dispute, excepting force majeure conditions. All such problems/disputes shall be separately discussed and settled without affecting the progress of work. Such stoppage or abandonment shall be treated as breach of contract and dealt with accordingly
- 2.8.22** The contractor shall keep the area of work clean and shall remove the debris etc. while executing day-to-day work. Upon completion of work, the contractor shall remove from the vicinity of work, all scrap, packing materials, rubbish, unused and other materials and deposit them in places specified by the Engineer. The contractor will also demolish all the hutments, sheds, offices, etc. constructed and used by him and shall clean the debris. In the event of his failure to do so, the same will be arranged to be done by the Engineer and the expenses recovered from the contractor.
- 2.8.23** The contractor shall execute the work in the most substantial and workman like manner in the stipulated time. Accuracy of work and timely execution shall be the essence of this contract. The contractor shall be responsible to ensure that the quality, assembly and workmanship conform to the dimensions and clearance given in the drawings and/ or as per the instructions of the Engineer.
- 2.8.24** The Contractor to note that some of BHEL's T&Ps/MMDs may not be insured. The Contractor will take necessary precautions and due care to protect the same while in his custody from any damage/ loss till the same is handed over back to BHEL. In case the damage / loss is due to carelessness/ negligence on the part of the contractor, the Contractor is liable to get them repair/ replaced immediately and in case of his failure to do so within a reasonable time, BHEL will reserve the right to recover the loss from the contractor.

2.9 PROGRESS MONITORING, MONTHLY REVIEW AND PERFORMANCE EVALUATION

- 2.9.1** A detailed plan/ programme for completion of the contractual scope of work as per the time schedule given in the contract shall be jointly agreed between BHEL and Contractor, before commencement of work. The above programme shall be supported by month wise deployment of resources viz Manpower, T&P, Consumables, etc. Progress will be reviewed periodically (Daily/Weekly/Monthly) vis a vis this jointly agreed programme. The Contractor shall submit periodical progress reports (Daily/Weekly/Monthly) and other reports/information including manpower, consumables, T&P mobilization etc as desired by BHEL.
- 2.9.2** Monthly progress review between BHEL and Contractor shall be based on the agreed programme as above, availability of inputs/fronts etc, and constraints if any, as per prescribed formats. Manpower, T&P and consumable reports as per prescribed formats shall be submitted by contractor every month. Release of RA Bills shall be contingent upon certification by BHEL Site Engineer of the availability of the above prescribed formats duly filled in and signed.

2.9.3 The burden of proof that the causes leading to any shortfall is not due to any reasons attributable to the contractor is on the contractor himself. The monthly progress review shall record shortfalls attributable to (i) Contractor, (ii) Force Majeure Conditions, and (iii) BHEL

2.9.4 Performance of the Contractor shall be assessed as per prescribed formats and shall form the basis for 'Annual/Overall Performance Evaluation' of the Contractor and also for 'Assessment of Capacity of Bidder' for Tenders where the Contractor is a bidder. BHEL reserves the right to revise the evaluation formats during the course of execution of the works

2.10 TIME OF COMPLETION

2.10.1 The time schedule shall be as prescribed in the Contract. The time for completion shall be reckoned from the date of commencement of work at Site as certified by BHEL Engineers

2.10.2 The entire work shall be completed by the contractor within the time schedule or within such extended periods of time as may be allowed by BHEL under clause 2.11.

2.11 EXTENSION OF TIME FOR COMPLETION

2.11.1 If the completion of work as detailed in the scope of work gets delayed beyond the contract period, the contractor shall request for an extension of the contract and BHEL at its discretion may extend the Contract.

2.11.2 Based on the monthly reviews jointly signed, the works balance at the end of original contract period less the backlog attributable to the contractor shall be quantified, and the number of months of 'Time extension' required for completion of the same shall be jointly worked out. Within this period of 'Time extension', the contractor is bound to complete the portion of backlog attributable to the contractor. Any further 'Time extension' or 'Time extensions' at the end of the previous extension shall be worked out similarly.

2.11.3 However if any 'Time extension' is granted to the contractor to facilitate continuation of work and completion of contract, due to backlog attributable to the contractor alone, then it shall be without prejudice to the rights of BHEL to impose penalty/LD for the delays attributable to the contractor, in addition to any other actions BHEL may wish to take at the risk and cost of contractor.

2.11.4 A joint programme shall be drawn for the balance amount of work to be completed during the period of 'Time Extension', along with matching resources (with weightages) to be deployed by the contractor as per specified format. Review of the programme and record of shortfall shall be done every month of the 'Time extension' period in the same manner as is done for the regular contract period.

2.11.5 During the period of 'Time extension', contractor shall maintain their resources as per mutually agreed program.

2.11.6 At the end of total work completion as certified by BHEL Engineer, and upon analysis of the total delay, the portion of time extensions attributable to (i) Contractor, (ii) Force majeure conditions, and (iii) BHEL, shall be worked out and shall be considered to be exhausted in the same order. The total period of time extensions shall be the sum of (i), (ii) and (iii) above and shall be equal to period between the scheduled date of completion and the actual date of completion of contract. LD shall be imposed/levied for the portion of time extensions attributable to contractor and recoverable from the dues payable to the contractor.

2.12 OVERRUN COMPENSATION- NOT APPLICABLE

2.13 INTEREST BEARING RECOVERABLE ADVANCES- NOT APPLICABLE

2.14 QUANTITY VARIATION

2.14.1 The quantities given in the contract are tentative and may change to any extent (both in plus side and minus side). The quoted rates for individual items shall remain firm irrespective of any variations in the individual quantities. No compensation becomes payable in case the variation of the final executed contract value is within the limits of Minus (-) 15% of awarded contract value.

2.14.2 Compensation due to variation of final executed value in excess of the limits defined in clause above, shall be as follows:

- i) In case the finally executed contract value reduces below the lower limit of awarded Contract Value due to quantity variation specified above, the contractor will be eligible for compensation @ 15% of the difference between the lower limit of the awarded contract value and the actual executed contract value.
- ii) In case the finally executed contract value increases above the awarded Contract Value due to quantity variation, there will be no upward revision in the rates for the individual items and also contractor is not eligible for any compensation.

2.15 EXTRA WORKS

2.15.1 All rectifications/modifications, revamping, and reworks required for any reasons not due to the fault of the contractor, or needed due to any change in deviation from drawings and design of equipments, operation/maintenance requirements, mismatching, or due to damages in transit, storage and erection/commissioning, and other allied works which are not very specifically indicated in the drawings, but are found essential for satisfactory completion of the work, will be considered as extra works.

2.15.2 Extra works arising on account of the contractor's fault, irrespective of time consumed in rectification of the damage/loss, will have to be carried out by the contractor free of cost. Under such circumstances, any material and consumable required for this purpose will also have to be arranged by the contractor at his cost.

2.15.3 All the extra work should be carried out by a separately identifiable gang, without affecting routine activities. Daily log sheets in the pro-forma prescribed by BHEL should be maintained and shall be signed by the contractor's representative and BHEL engineer. No claim for extra work will be considered/entertained in the absence of the said supporting documents i.e. daily log sheets. Signing of log sheets by BHEL engineer does not necessarily mean the acceptance of such works as extra works.

2.15.4 BHEL retains the right to award or not to award any of the major repair/rework/modification/rectification/fabrication works to the contractor, at their discretion without assigning any reason for the same

2.15.5 After eligibility of extra works is established and finally accepted by BHEL engineer/designer, payment will be released on competent authority's approval at the following rate.

MAN-HOUR RATE FOR ELIGIBLE EXTRA WORKS: Single composite average labour man-hour rate, including overtime if any, supervision, use of tools and tackles and other site expenses and incidentals, consumables for carrying out any major rework/ repairs/ rectification/ modification/ fabrication as certified by site as may arise during the course of erection, testing, commissioning or extra works arising out of transit, storage and erection damages, payment, if found due will be at Rs

60/- per man hour.

2.15.6 The above composite labour man hour rate towards extra works shall remain firm and not subject to any variation during execution of the work. PVC will not be applicable for extra works. Rate revision, Over Run Charges/compensation etc will not be applicable due to extra works.

2.15.7 Extra Works for Civil Packages shall be regulated as follows

- i) Rates for Extra Works arising due to (1) non availability of BOQ (Rate Schedule), OR (2) change in Specifications of materials/works (3) rectification/modification/dismantling & re erecting etc due to no fault of Contractor, shall be in the order of the following:
 - a) Item rates are to be derived from similar nature of items in the BOQ (Rate Schedule) with applicable escalation derived from All India Consumer Price Index for Whole Sale Commodities.
 - b) As per CPWD-DSR-2007 (or latest edition) with applicable escalation derived from All India Consumer price Index for Whole Sale Commodities, OR, Notification issued by the office of CPWD for 'Cost Index' in that Region where the project is being executed, whichever is less
 - c) Item rates are to be worked out on the basis of prevailing market rates mutually agreed between BHEL and Contractor, plus 15% towards Contractor's overheads and profit.
- ii) PVC and ORC will not applicable be for (i) above.

2.16 SUPPLEMENTARY ITEMS

2.16.1 For NON Civil Works

Supplementary items are items/works required for completion of entire work but not specified in the scope of work. Subject to certification of such items/works as supplementary items by BHEL Engineer, rates shall be derived on the basis of any one of the following on mutual agreement:

- i) Based on percentage breakup/rates indicated for similar/nearby items
- ii) In case (i) above does not exist, then BHEL/site may derive the percentage breakup/rates to suit the type of work

2.16.2 For Civil Works

- i) Rates for Supplementary Works/Additional Works arising out due to additions/alterations in the original scope of works as per contract subject to certification of BHEL Engineer shall be worked out as under:
 - a) Item rates which are available in existing BOQ (Rate Schedule) shall be operated with applicable escalation derived from All India Consumer Price Index for Whole Sale Commodities
 - b) Items of works which are not available in existing BOQ shall be operated as an 'Extra Works' and rate shall be derived as per clause no 2.15.7
- ii) Execution of Supplementary Works/Additional Works through the Contractor shall be at the sole discretion of BHEL, and shall be considered as part of executed contract value for the purpose of Quantity Variation as per clause 2.14
- iii) BHEL Engineer's decision regarding fixing the rate as above is final and binding on the contractor.
- iv) PVC and ORC will not be applicable for (i) above.

2.17 PRICE VARIATION COMPENSATION- NOT APPLICABLE

2.17.1 In order to take care of variation in cost of execution of work on either side, due to variation in the index of LABOUR, HIGH SPEED DIESEL OIL, WELDING ROD, CEMENT, STEEL, MATERIALS, Price Variation Formula as described herein shall be applicable (only for works executed during extended period, if any, subject to other conditions as described in this section).

2.17.2 85% component of Contract Value shall be considered for PVC calculations and remaining 15%

shall be treated as fixed component. The basis for calculation of price variation in each category, their component, Base Index, shall be as under:

| SL NO. | CATEGORY | BASE INDEX | PERCENTAGE COMPONENT ('K') | | | | |
|--------|--|---|------------------------------------|----|----|---------------------|---|
| | | | CIVIL PACKAGES (See Note A/B/C) | | | MECHANICAL PACKAGES | Electrical, C&I, Material Management/ Handling and other labour oriented packages |
| | | | A | B | C | | |
| i) | LABOUR (ALL CATEGORIES) | 'MONTHLY ALL-INDIA AVERAGE CONSUMER PRICE INDEX NUMBERS FOR INDUSTRIAL WORKERS' published by Labour Bureau, Ministry of Labour and Employment, Government of India. (Website: labourbureau.nic.in) | 40 | 25 | 30 | 65 | 80 |
| ii) | HIGH SPEED DIESEL OIL | Name of Commodity: HSD OIL. Commodity Code: 1200020005 (See Note E) | 5 | 3 | 5 | 5 | 5 |
| iii) | WELDING ROD | Name of Commodity : WELDING ROD Commodity Code: 1310030017 (See Note E) | | | | 15 | |
| iv) | CEMENT | Name of Commodity : GREY CEMENT Commodity Code: 1309030001 (See Note E) | | 20 | 30 | | |
| v) | STEEL (Structural and Reinforcement Steel) | Name of Commodity: a2. STEEL:LONG Commodity Code: 1310010200 (See Note E) | | 25 | | | |
| vi) | ALL OTHER MATERIALS (Other than Cement & Steel) | Name of Commodity: ALL COMMODITIES Commodity Code: 1000000000 (See Note E) | 40 | 12 | 20 | | |

Note: A) Cement & Steel : Free Issue (BHEL Scope)

B) Cement & Steel : In Contractor Scope

C) Cement in Contractor Scope, and Steel is Free Issue (BHEL Scope)

D) For Composite packages (i.e. Civil+Mechanical+Electrical and/or CI or Civil+Mechanical or Mechanical+Electrical and/or CI), the COMPONENT ('K') for various categories shall be as per respective packages as above.

F) As per the 'MONTHLY WHOLE SALE PRICE INDEX' for the respective Commodity and Type, published by Office of Economic Adviser, Ministry of Commerce and Industry, Government of India. (Website: www.eaindustry.nic.in/download_data_0405.asp). Revisions in the index or commodity will be re adjusted accordingly.

2.17.3 #

2.17.4 Payment/recovery due to variation in index shall be determined on the basis of the following notional formula in respect of the identified COMPONENT ('K') viz LABOUR, HIGH SPEED

DIESEL OIL, WELDING ROD, CEMENT, STEEL, MATERIALS.

$$P = K \times R \times \frac{(X_N - X_0)}{X_0}$$

Where

- P = Amount to be paid/recovered due to variation in the Index for Labour, High Speed Diesel Oil, Welding Rod, Cement, Steel and Materials.
- K = Percentage COMPONENT ('K') applicable for Labour, High Speed Diesel Oil, Welding Rod, Cement, Steel and Materials
- R = Value of work done for the billing month (Excluding Taxes and Duties if payable extra)
- X_N = Revised Index for Labour, High Speed Diesel Oil, Welding Rod, Cement, Steel and Materials for the billing month under consideration
- X₀ = Index for Labour, High Speed Diesel Oil, Welding Rod, Cement, Steel and Materials as on the Base date.

2.17.5 **Base date shall be the calendar month of the schedule completion date (i.e. Actual start date + Scheduled Contractual completion period as per Letter of Intent/award and/or work order).**

2.17.6 PVC shall not be payable for the ORC amount, Supplementary/Additional Items, Extra works. However, PVC will be payable for items executed under quantity variation of BOQ items under originally awarded contract.

2.17.7 The contractor shall furnish necessary monthly bulletins in support of the requisite indices from the relevant websites along with his Bills.

2.17.8 The contractor will be required to raise the bills for price variation payments on a monthly basis along with the running bills irrespective of the fact whether any increase/decrease in the index for relevant categories has taken place or not. In case there is delay in publication of bulletins (final figure), the provisional values as published can be considered for payments and arrears shall be paid/recovered on getting the final values.

2.17.9 PVC shall be applicable only, during the extended period of contract (if any) after the scheduled completion period and for the portion of work delayed / backlog for the reasons not attributable to the contractor.

However total quantum of Price Variation amount payable/recoverable shall be regulated as follows:

- i) For the portion of shortfall / backlog not attributable to contractor, PVC shall be worked out on the basis of indices applicable for the respective month in which work is done. Base index shall be applicable as defined in clause 2.17.5.
- ii) In case of Force majeure, PVC shall be regulated as per (a) or (b) below:
 - a) Force majeure is invoked before "base date"/"revised base date" (as explained below) OR immediately after "base date"/"revised base date" in continuation (i.e. during the period when PVC is not applicable):
 1. Base date shall be revised: Revised base date=Previous base date + duration of Force majeure. No PVC will be applicable for the work done till revised base date.
 2. PVC will be applicable for the work done after "base date"/"revised base date" as the case may be (during extended period when delay is not attributable to contractor). PVC shall be worked out on the basis of the indices applicable for the respective month in which work is

done with base index as on “base date”/“revised base date” as the case may be.

b) Force majeure is invoked after “base date”/“revised base date” as the case may be (during extended period when delay is not attributable to contractor).

1. PVC shall be applicable for the work done after revocation of force majeure.
2. PVC for the work done after revocation of force majeure shall be worked out on the basis of indices applicable for the respective month in which work is done excluding the effect of change in indices during total period of Force majeure(s) invoked after “base date”/“revised base date” as the case may be. Base index shall be taken as on “base date”/“revised base date” as the case may be.

iii) The total amount of PVC shall not exceed 15% of the cumulatively executed contract value. Executed contract value for this purpose is exclusive of PVC, ORC, Supplementary/Additional Items and Extra works except items due to quantity variation.

2.18 INSURANCE

2.18.1 BHEL/their customer shall arrange for insuring the materials/properties of BHEL/customer covering the risks during transit, storage, erection and commissioning.

2.18.2 It is the sole responsibility of the contractor to insure his materials, equipments, workmen, etc. against accidents and injury while at work and to pay compensation, if any, to workmen as per Workmen’s compensation Act. The work will be carried out in a protected area and all the rules and regulations of the client /BHEL in the area of project which are in force from time to time will have to be followed by the contractor.

2.18.3 If due to negligence and or non-observation of safety and other precautions by the contractors, any accident/injury occurs to the property / manpower belong to third party, the contractor shall have to pay necessary compensation and other expense, if so decided by the appropriate authorities.

2.18.4 The contractor will take necessary precautions and due care to protect the material, while in his custody from any damage/ loss due to theft or otherwise till the same is taken over by BHEL or customer. For lodging / processing of insurance claim the contractor will submit necessary documents. BHEL will recover the loss including the deductible franchise from the contractor, in case the damage / loss is due to carelessness / negligence on the part of the contractor. In case of any theft of material under contractor’s custody, matter shall be reported to police by the contractor immediately and copy of FIR and subsequently police investigation report shall be submitted to BHEL for taking up with insurance. However this will not relieve the contractor of his contractual obligation for the material in his custody.

2.19 STRIKES & LOCKOUT

2.19.1 The contractor will be fully responsible for all disputes and other issues connected with his labour. In the event of the contractor’s labour resorting to strike or the Contractor resorting to lockout and if the strike or lockout declared is not settled within a period of one month, BHEL shall have the right to get the work executed through any other agencies and the cost so incurred by BHEL shall be deducted from the Contractor’s bills.

2.19.2 For all purposes whatsoever, the employees of the contractor shall not be deemed to be in the employment of BHEL

2.20 FORCE MAJEURE

- 2.20.1 "Force Majeure" shall mean any event beyond the reasonable control of the parties including but not limited to fire, flood, earthquake or other acts of God, war, riots, civil war and restraints of Governing States, as the case may be, and which is unavoidable notwithstanding the reasonable care of the party affected. The following events are explicitly excluded from Force Majeure and are solely the responsibilities of the non-performing party : a) any strike, work-to-rule action, go-slow or similar labour difficulty (b) late delivery of equipment or material (unless caused by Force Majeure event) and (c) economic hardship.
- 2.20.2 If either party is prevented, hindered or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances thereof within 15 (fifteen) days after the occurrence of such event.
- 2.20.3 The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of Force Majeure continues and to the extent that such party's performance is prevented, hindered or delayed. The Time for Completion shall be extended by a period of time equal to period of delay caused due to such Force Majeure event.
- 2.20.4 Delay or non-performance by either party hereto caused by the occurrence of any event of Force Majeure shall not
- Constitute a default or breach of the Contract.
 - Give rise to any claim for damages or additional cost or expense occasioned thereby, if and to the extent that such delay or non-performance is caused by the occurrence of an event of Force Majeure.

2.21 ARBITRATION

- 2.21.1 Except as provided elsewhere in this Contract, in case amicable settlement is not reached between the Parties, in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract, then, either Party may, by a notice in writing to the other Party refer such dispute or difference to the sale arbitration of an arbitrator appointed by Head of the BHEL Power Sector Region issuing the Contract. It shall not be open to the Contractor to object to such arbitrator only on the ground that such arbitrator is an employee/ ex-employee of BHEL or has dealt with or has expressed any opinion on any issue touching upon the Contract.

The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the Parties.

Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be New Delhi/ delhi.

- 2.21.2 In case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable :

In the event of any dispute or difference relating to the interpretation and application of the

provisions of the Contract, such dispute or difference shall be referred by either Party for arbitration to the sole arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitration under this clause. The award of the arbitrator shall be binding upon the Parties to the dispute, provided, however, any Party aggrieved by such award may make further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law and Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary or Additional Secretary when so authorized by the Law Secretary, whose decision shall bind the Parties hereto finally and conclusively.

2.21.3 The cost of arbitration shall be borne equally by the Parties.

2.21.4 Notwithstanding the existence or any dispute or differences and / or reference for the arbitration, the Contractor shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner.

2.22 RETENTION AMOUNT

2.22.1 Retention Amount shall be 5% of executed contract value and shall be recovered at the rate of 5% from each Running Bill admitted, including PVC Bills.

2.22.2 Refund of Retention Amount shall be as follows:

- i) 50% of retention amount along with 'Final Bill'
- ii) Balance 50% of retention amount shall be retained towards 'Performance Guarantee for Workmanship' and shall become refundable after expiry of Guarantee period, provided all the defects noticed during the guarantee period have been rectified to the satisfaction of BHEL Site Engineer/BHEL Construction Manager, and after deducting all expenses/other amounts due to BHEL under the contract/other contracts entered into by BHEL with them. This portion of the retention amount can be released on commencement of the Guarantee period, on submission of equivalent Bank Guarantee.

2.23 PAYMENTS

Payments to Contractors are made in any one of the following forms

2.23.1 Running Account Bills (RA Bills)

- i) These are for interim payments when the contracts are in progress. The bills for such interim payments are to be prepared by Contractor in prescribed formats (RA Bill forms).
- ii) Payments shall be made according to the extent of work done as per measurements taken up to the end of the calendar month and in line with the terms of payments described in the Tender documents
- iii) Recoveries on account of electricity, water, statutory deductions, etc are made as per terms of contract
- iv) Full rates for the work done shall be allowed only if the quantum of work has been done as per the specifications stipulated in the contract. If the work is not executed as per the stipulated specifications, BHEL may ask the contractor to re do the work according to the required specifications, without any extra cost. However, where this is not considered necessary 'OR' where the part work is done due to factors like non-availability of material to be supplied by BHEL 'OR' non availability of fronts 'OR' non availability of drawings, fraction payment against full rate, as is considered reasonable, may be allowed with due regard for the work remaining to be done. BHEL decision in this regard will be final and

| | |
|---------------|--|
| | <p>binding on the contractor.</p> <p>v) In order to facilitate part payment, BHEL Site Engineer at his discretion may further split the contracted rates/percentages to suit site conditions, cash flow requirements according to the progress of work</p> |
| <p>2.23.2</p> | <p>Final Bill</p> <p>Final Bill' is used for final payment on closing of Running Account for works or for single payment after completion of works. 'Final Bill' shall be submitted as per prescribed format after completion of works as per scope and upon material reconciliation, along with the following.</p> <p>i) 'No Claim Certificate' by contractor</p> <p>ii) Clearance certificates where ever applicable viz Clearance Certificates from Customer, various Statutory Authorities like Labour department, PF Authorities, Commercial Tax Department, etc</p> <p>iii) Indemnity bond as per prescribed format</p> <p>BHEL shall settle the final bills after deducting all liabilities of Contractor to BHEL</p> |
| <p>2.24</p> | <p>PERFORMANCE GUARANTEE FOR WORKMANSHIP</p> <p>2.24.1 Guarantee Period shall be nil.</p> <p>2.24.2 BHEL shall release the guarantee money subject to the following</p> <p>i) Contractor has submitted 'Final Bill'</p> <p>ii) Guarantee period as per contract has expired</p> <p>iii) Contractor has furnished 'No Claim Certificate' in specified format</p> <p>iv) BHEL Site Engineer/Construction Manager has furnished the 'No Demand Certificate' in specified format</p> <p>v) Contractor has carried out the works required to be carried out by him during the period of Guarantee and all expenses incurred by BHEL on carrying out such works is included for adjustment from the Guarantee money refundable.</p> |
| <p>2.25</p> | <p>CLOSING OF CONTRACTS</p> <p>The Contract shall be considered completed and closed upon completion of all contractual obligations and settlement of Final Bill or completion of Guarantee period whichever is later. Upon closing of Contract, BHEL shall issue a completion certificate as per standard format, based on specific request of Contractor.</p> |
| <p>2.26</p> | <p>REVERSE AUCTION:</p> <p>BHEL reserves the right to go for Reverse Auction for Price Bid Opening by BHEL appointed service provider, instead of opening the submitted sealed price bid in the conventional way. The Business Rules for Reverse Auction shall be as per BHEL guidelines issued from time to time.</p> |
| <p>2.27</p> | <p>SUSPENSION OF BUSINESS DEALINGS</p> <p>BHEL reserves the right to take action against Contractors who either fail to perform or Tenderers/Contractor who indulge in malpractices, by suspending business dealings with them in line with BHEL guidelines issued from time to time.</p> |
| <p>2.28</p> | <p>OTHER ISSUES</p> <p>2.28.1 Value of Non judicial Stamp Paper for Bank Guarantees and for Contract Agreement shall be not less than Rs 100/- unless otherwise required under relevant statutes.</p> <p>2.28.2 In case of any conflict between the General Conditions of Contract and Special Conditions of Contract, provisions contained in the Special Conditions of Contract shall prevail.</p> |

- 2.28.3 Unless otherwise specified in NIT, offers from consortium/ JVs shall not be considered.
- 2.28.4 BHEL may not insist for signing of Contract Agreements in respect of low value and short time period contracts like providing services for Hot water flushing, Chemical Cleaning, Transportation, etc.

Rev 01

1st June
2012

FORMS & PROCEDURES

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

BHARAT HEAVY ELECTRICALS
LIMITED



FORMS & PROCEDURES

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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

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 regarding Authenticity of submitted documents.**

Ref : 1) NIT/Tender Specification No:,
2) All other pertinent issues till date

I/We, hereby certify that all the documents submitted by us in support of possession of “Qualifying Requirements” are true copies of the original and are fully compliant required for qualifying / applying in the bid and shall produce the original of same as and when required by Bharat Heavy Electricals Limited.

I / We hereby further confirm that no tampering is done with documents submitted in support of our qualification as bidder. I / We understand that at any stage (during bidding process or while executing the awarded works) if it is found that fake / false / forged bid qualifying / supporting documents / certificates were submitted, it would lead to summarily rejection of our bid / termination of contract. BHEL shall be at liberty to initiate other appropriate actions as per the terms of the Bid / Contract and other extant policies of Bharat Heavy Electricals Limited.

Yours faithfully,

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

Date:

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 | | | | | | | |
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| 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 | |
| LOI/ LOA NO. | |
| CONTRACT DURATION | |

SIGNATURE OF CONTRACTOR

(SIGNATURE OF BHEL OFFICER)

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/ Letter of Award (LOA) 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/ LOA 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 and 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.
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/ LOA 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 applicable 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 as per prevailing Income Tax Act.
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 consumables supplied by BHEL, hire charges for tools and plants issued (Where applicable) and any other dues owed by the Contractor.

CONTRACT AGREEMENT

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. The following documents

1. Invitation to Tender No.-----
and the documents specified therein with technical bid opening date as

2. Contractor's Offer Ref. No.-----
dated-----.

3. _____

4. _____

5. _____

6. Letter of Intent/ LOA 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 Northern Region, HRDI & PSNR Complex, Plot no. 25, Sector – 16 A, Noida - 201301 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 inforce 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 New Delhi/ Delhi 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 Northern Region, HRDI & PSNR Complex, Plot no. 25, Sector – 16 A, Noida - 201301, 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 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 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 New Delhi/ Delhi 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- R

MONTHLY PLAN & REVIEW WITH CONTRACTOR

Page 1 of 4

| | | | |
|-------------------------|--|---------------------|--|
| 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) | Total Planned for the month (including previous month backlog attributable to Contractor) | Achieved | Shortfall attributable to (in Qty) | | REMARKS |
|-------|---------------------|---------------------|--|---|--|----------|---------------------------------------|------------|---------|
| | | | (a) | (b) | C=(a)+(b) | | BHEL | Contractor | |
| | | UOM | Phy. | Phy | Phy | Phy. | Phy. | Phy. | |
| | | | | | | | | | |

Use separate sheets if necessary

BHEL
(Sign with name, designation and date)

CONTRACTOR
(Sign with name, designation and date)



PS- R

**MONTHLY PLAN & REVIEW WITH
CONTRACTOR**

Page 2 of 4

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- R

**MONTHLY PLAN & REVIEW WITH
CONTRACTOR**

Page 3 of 4

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- R

MONTHLY PLAN & REVIEW WITH CONTRACTOR

Page 4 of 4

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- R

MONTHLY PLAN & REVIEW WITH
CONTRACTOR

Page 5 of 4

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

| 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

| 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 | PERFORMAN CE | 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 | PERFORMAN CE | 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 | 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 |
| #2.12 | Number of days the supporting documents for the Running bills submitted for the month are delayed | 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 |
| #2.13 | Number of times updations were not carried out in maintainance of records in PC in a form approved by BHEL at site (as applicable for respective packages). | PERFORMAN CE | 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 | PERFORMAN CE | 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 | PERFORMAN CE | 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 | PERFORMAN CE | 2.67 | | | Cumulative number of days lost | Daily Log Book entry/Incident Registers/letter references |
| #2.17 | Number of times rework refused | PERFORMAN CE | 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 | PERFORMAN CE | 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

| 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 materials required by erection agency | PERFORMANCE | 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

| 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 INFRASTRUC TURE & 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 INFRASTRUC TURE & 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 INFRASTRUC TURE & 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 INFRASTRUC TURE & 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 INFRASTRUC TURE & 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 INFRASTRUC TURE & 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 INFRASTRUC TURE & 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

| 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 INFRASTRUC TURE & 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 INFRASTRUC TURE & 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

| 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

| 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 |

“NOTE:

1). It is only indicative and shall be as per the online format issued by BHEL time to time.

2). No request will be entertained after specified date of the current month w.r.t. changes requested in the scores of immediate previous month.”

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/ AWARD 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/ LOA No. :
3. Date of Contract Agreement/LOI/ LOA :
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/ LOA (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/ LOA 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 paper of minimum Rs. 100/- and Notarized)

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 | | | | | | | | | | |
| 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:

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 | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 Rs. P. | 9 Rs. P. | 10 Rs. P. | 11 Rs. P. | 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 | | | | |

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. | Excess | | savings | | |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | | | | | | |
| | | | | | | | | | | | | | |

Signature of Engineer in Charge

Date:

Signature of Senior Engineer

Date:

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|----|
| 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
 Certified 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
- 2 (vide 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 pa llant, 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) | | Credit (Deduction) | |
|-------------|-------------------------|-------|-----------------------|-------|
| | 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

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

| | | | |
|-----------|------------------------|----------------|-------------|
| | ALLOCATION | | Code No |
| | Estimate No: | | |
| | Name of the Work | | |
| | Ledger Head | Debit | Credit |
| | | (Gross Amount) | (Deduction) |
| | | Rs P | Rs |
| | | | |
| Assistant | Total | ..... | ..... |
| Date: |  | ..... | ..... |

Assistant Accountant Accounts officer

Date: Date: Date:

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 allotted by stores to the SIV | description of material issued to the contractor | Quantity issued | Quantity incorporated in the work | Whether recoverable from the contractor or supplied free | Rate at which recoverable | | Amount Recoverable | | 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 | voucher No and date allotted by stores to the SIV | description of material issued to the contractor | Quantity issued | Quantity incorporated in the work | Issue Rate | Amount Recoverable | | Amount recoverable upto previous bill | | Balance Now recovered | | Remarks |
|-------|----------------------------------|---|--|-----------------|-----------------------------------|------------|--------------------|---|---------------------------------------|----|-----------------------|---|---------|
| | | | | | | | 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 | Description of tools & plants issued | Period for which issued | Rate at which Recovery is to be made | Amount recoverabl e | | Amount recoverable upto previous bill | | Balance Now recovered | | Remarks |
|-------|--------------------------------------|-------------------------|--------------------------------------|---------------------|---|---------------------------------------|---|-----------------------|---|---------|
| | | | | Rs | P | Rs | P | Rs | P | |
| 1 | 2 | 3 | 4 | 5 | | 6 | | 7 | | 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.....
 Contract/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 returned | | | | | | | |
| | 5 | | | | | | | |
| | 6 | | | | | | | |
| | 7 | | | | | | | |
| | 8 | | | | | | | |
| | 9 | | | | | | | |
| | 10 | | | | | | | |
| Total | | | | | | | | |

Signature of Contractor
Date

Signature of Engineer Incharge
Date

Signature of Sr. Engineer
Date

ANNEXURE F

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

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 recoverable 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

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|----|
| 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

| | | | | |
|---|--|-----|-----|---|
| 1 | Total Value of work actually measured as per Account no I coloumn 10 | (A) | Rs. | P |
| | 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
 Certified 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 palant, elwater, 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) | | Credit (Deduction) | |
|-------------|-------------------------|-------|-----------------------|-------|
| | 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

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

ALLOCATION

Estimate No:

Name of the Work

Code No

Credit
(Deduction)
Rs

Ledger Head

Debit
(Gross Amount)
Rs P

Total

Assistant Accountant Accounts officer

Date: Date: Date:

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 allotted by stores to the SIV | description of material issued to the contractor | Quantity issued | Quantity incorporated in the work | Whether recoverable from the contractor or supplied free | Rate at which recoverable | | If recoverable from contractor | | | | Remarks | | |
|-------|----------------------------------|---|--|-----------------|-----------------------------------|--|---------------------------|---|--------------------------------|--------------------|--------------------|-----------------------|---------|---|----|
| | | | | | | | Rs | P | Amount Recoverable | upto previous bill | Amount recoverable | Balance Now recovered | | | |
| | | | | | | | | | 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 allotted by stores to the SIV | description of material issued to the contractor | Quantity issued | Quantity actually incorporated in the work | Issue Rate | | Amount Recoverable | | 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 | Description of tools & plants issued | Period for which issued | Rate at which Recivery is to be made | Amount recoverabl e | | Amount recoverable upto previous bill | | Balance Now recovered | | Remarks |
|-------|--------------------------------------|-------------------------|--------------------------------------|---------------------|---|---------------------------------------|---|-----------------------|---|---------|
| | | | | Rs | P | Rs | P | Rs | P | |
| 1 | 2 | 3 | 4 | 5 | | 6 | | 7 | | 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.....

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 recoverable 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 | | | | | | | | | | | |

ANNEXURE G

| 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? | |

ANNEXURE G

| 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: |

PROFORMA OF BANK GUARANTEE FOR EARNEST MONEY
(On non-Judicial paper of appropriate value)

Bank Guarantee No.....

Date.....

To

(Employer's Name and Address)

.....

Dear Sirs,

In accordance with the terms and conditions of your Invitation for Bids/Notice Inviting Tender No.....¹(Tender Conditions) M/s. having its registered office at² (hereinafter referred to as the '**Tenderer**'), is submitting its bid for the work of..... for.....³.(name of the Employer) at⁴(

The Tender Conditions provide that the **Tenderer** shall pay a sum of Rs as Earnest Money Deposit in the form therein mentioned. The form of payment of Earnest Money Deposit includes Bank Guarantee executed by a Scheduled Bank.

In lieu of the stipulations contained in the aforesaid Tender Conditions that an irrevocable and unconditional Bank Guarantee against Earnest Money Deposit for an amount of⁵ is required to be submitted by the Tenderer as a condition precedent for participation in the said Tender and the Tenderer having approached us for giving the said Guarantee,,

we, the[Name & address of the Bank] having our Head Office at(hereinafter referred to as the Bank) being the Guarantor under this Guarantee, hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer without any demur, merely on your first demand any sum or sums of Rs. ⁵(*).....without any reservation, protest, and recourse and without the beneficiary needing to prove or demonstrate reasons for its such demand. Any such demand made by the 'Employer' shall be conclusive and binding on us irrespective of any dispute or difference raised by the Tenderer.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment hereunder and the Tenderer shall have no claim against us for making such payment.

We Bank further agree that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Tender or to extend the time of submission of bids from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Tenderer and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Tendered or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Tenderer or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Tenderer and notwithstanding any security or other guarantee that the Employer may have in relation to the Tenderer's liabilities.

This Guarantee shall be irrevocable and shall remain in force upto and including.....⁶ and shall be extended from time to time for such period as may be desired by the Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Tenderer but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms hereof. However, unless a demand or claim under this Guarantee is made on us in writing on or before the⁷ we shall be discharged from all liabilities under this Guarantee.

We, Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....⁵.....
- b) This Guarantee shall be valid up to⁶

c) Unless the Bank is served a written claim or demand on or before _____⁷ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank

We, _____ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of

(Name of the Bank)

Date.....

Place of Issue.....

¹ *Details of the Invitation to Bid/Notice Inviting Tender*

² *Name and Address of the Tenderer*

³ *Details of the Work*

⁴ *Name and Address of BHEL Unit/Division/Region*

⁵ *BG Amount in words and Figures*

⁶ *Validity Date*

⁷ *Date of Expiry of Claim Period*

Note:

1. Units are advised that expiry of claim period may be kept 2/3 months after validity date. As per Works Policy, the Bank Guarantee shall be valid for at least six months.

2. In Case of Bank Guarantees submitted by Foreign Vendors-

a. From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India) can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.

b. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)

b.1 In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter- Guarantee by Foreign Bank in favour of the Indian Bank (BHEL's Consortium Bank). It is advisable that all charges for issuance of Bank Guarantee/ counter-Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.

b.2 **In case, Foreign Vendors intend to provide BG from** Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.

b.3 The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). In case, of Foreign Vendors, the BG Format provided to them should clearly specify the same.

b.4 The BG should clearly specify that the demand or other document can be presented in electronic form.