Rev 02 17thSept 2020

NOTICE INVITING TENDER

(Document No PS:MSX:NIT)

<u>TENDER NO.:</u> BHEL/NR/SCT/UHL Stage III/RESTORATION & COMMISSIONING/1251

NAME OF WORK: RESTORATION OF E&M EQUIPMENT'S UP TO PRE RUPTURE LEVEL & COMMISSIONING, TESTING, SYNCHRONIZATION & HANDING OVER OF 3X33.33 MW UHL STAGE III HYDRO ELECTRIC PROJECT, HIMACHAL PRADESH.

Bharat Heavy Electricals Limited



Date: 07/01/2022

NOTICE INVITING E-TENDER (NIT) NOTE: BIDDER MAY DOWNLOAD FROM WEB SITES

To

Dear Sir/Madam

Sub: NOTICE INVITING E-TENDER

Sealed offers in two part bid system (National competitive bidding (NCB)) are invited from reputed & experienced bidders (meeting PRE QUALIFICATION CRITERIA as mentioned in Annexure-1) 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.

1.0 SALIENT FEATURES OF NIT:

SL.	ISSUE	DESCRIPTION				
NO.	TENDED MUMBED	DUEL INDICATION OF THE PROPERTY OF THE PROPERT				
i	TENDER NUMBER	BHEL/NR/SCT/UHL Stage III/RESTORATION & COMMISSIONING/1251				
ii	BROAD SCOPE OF JOB	RESTORATION OF E&M EQUIPMENT'S UP TO PRE RUPTURE LEVEL & COMMISSIONING, TESTING, SYNCHRONIZATION & HANDING OVER OF 3X33.33 MW UHL STAGE III HYDRO ELECTRIC PROJECT, HIMACHAL PRADESH.				
iii	DETAILS OF TENDER	DOCUMENT				
а	Volume-IA	<u>Technical</u> Conditions of Contract (TCC) consisting of Scope of work, Technical Specification, Drawings, Procedures, Bill of Quantities, Terms of payment, etc	Technical Conditions of Contract (TCC) consisting of Scope of work, Technical Specification, Drawings, Applicable			
b	Volume-IB	Special Conditions of Contract (SCC)	Applicable			
С	Volume-IC	General Conditions of Contract (GCC)	Applicable			
d	Volume-ID	Forms and Procedures				
е	Volume-II	Price Schedule (Absolute value).	Applicable			
iv	ISSUE OF TENDER DOCUMENTS	Tender documents will be available for downloading from BHEL eProcurement portal (https://eprocurebhel.co.in) till due date of submission: Brief information of the tenders shall also be available at BHEL website (www.bhel.com)	Applicable			
V	DUE DATE & TIME OF OFFER SUBMISSION	Date: 18/01/2022, Time: 10:00 hrs Place: on https://eprocurebhel.co.in	Applicable			
vi	OPENING OF TENDER	Date: 18/01/2022, Time: 15:30 hrs Notes: (1) In case the due date of opening of tender becomes a non-working day, then the due date &	Applicable			

Registered Office: BHEL House, Siri Fort, New Delhi – 110 049, India

Website: www.bhel.com

	T		
vii	EMD AMOUNT	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. For e-Tender, Bidder may witness the opening of tender through e-Procurement portal only. Rs. 9,14,000/-	Applicable
			Арріїсавіс
viii	COST OF TENDER	Free	
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; 1) Name: G.V. RAJA SEKHAR Designation: Sr. MANAGER Deptt: SCT Address: BHEL-PSNR, PLOT NO. 25, SECTOR – 16A, NOIDA - 201301 Phone: (Landline) 0120-2416232 Email: gvr@bhel.in 2) Name: CHITTARANJAN SWAIN Designation: MANAGER Deptt: SCT Address: BHEL-PSNR, PLOT NO. 25, SECTOR – 16A, NOIDA - 201301 Phone: (Landline) 0120 - 2416500 Email: cs@bhel.in	Applicable
X	SCHEDULE OF Pre Bid Discussion (PBD)		Not applicable.
xi	INTEGRITY PACT & DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM)	Please refer clause no. 15.	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), BHEL eProcurement portal (https://eprocurebhel.co.in) and not in the newspapers. Bidders to keep themselves updated with all such information.	

2.0 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, duly signed digitally using Class III DSC & uploaded in E-Procurement Portal, as part of offer. 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.

3.0 Not Used.

4.0 Unless specifically stated otherwise, bidder shall deposit EMD as per clause 1.9 of General Conditions of Contract.

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)-: 011-23475566

iii). Branch Address-: CAG II BRANCH, NEW DELHI

4th & 5th FLOOR, REDFORT CAPITAL,

PARASNATH TOWERS, BHAI VEER SINGH MARG, GOLE MARKET, NEW DELHI-110001

iv). Bank Fax No. (with STD code) -: 011-23475566

v). Branch Code -: 17313
vi). 9 Digit MICR Code of the Bank Branch -: 110002562
vii). Bank Account Number -: 10813608647
viii). Bank Account Type -: CASH CREDIT
ix). 11 Digit IFSC Code of Beneficiary Branch-: SBIN0017313

(Note -: In case of E-Tenders, proof of remittance of EMD should be uploaded in the E-Procurement Portal and originals, as applicable, shall be sent to the officer inviting tender within a reasonable time, failing which the offer is liable to be rejected.)

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

Documents Comprising the e-Tender

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

a. Technical Tender (UN priced Tender)

All Technical details (e.g. 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. Earnest Money Deposit (EMD) furnished in accordance with NIT Clause 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.

DO NOT'S

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)

The contact details of the service provider are given below:

For any technical related queries please call at 24 x 7 Help Desk Number

0120-4001 002, 0120-4001 005 & 0120-6277 787

International bidders are requested to prefix 91 as country code

Email Support - Technical - support-eproc@nic.in

Note: For any Issues or Clarifications relating to the published tenders, bidders are requested to contact the respective Tender Inviting Authority

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.

The contact details of the DSC Certifying Authority as given below:

SI. No.	Name	Website Link
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 https://eprocurebhel.co.in.

- 6.0 Not used.
- **7.0** 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.
- 8.0 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).

9.0 Assessment of Capacity of Bidders:

Bidder's capacity for executing the job under tender shall be assessed 'LOAD' wise and 'PERFORMANCE' wise as per the following:

I. <u>LOAD</u>: Load takes into consideration <u>ALL</u> the contracts of the Bidder under execution with BHEL Regions, irrespective of whether they are similar to the tendered scope or not. The cut off month for reckoning 'Load' shall be the 3rd Month preceding the month corresponding to the 'latest date of bid submission', in the following manner

(<u>Note:</u> For example, if latest bid submission is in Jan 2017, then the 'load' shall be calculated up to and inclusive of Oct 2016)

Total number of Packages in hand = Load (P)

Where 'P' is the sum of all unit wise identified packages (refer table-1) under execution with BHEL Regions as on the cut off month defined above, including packages yet to be commenced, excepting packages which are on Long Hold.

II. <u>PERFORMANCE</u>: Here 'Monthly Performance' of the bidder for all the packages (under execution/ executed during the 'Period of Assessment' in all Power Sector Regions of BHEL) <u>SIMILAR</u> 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 and including the cut off month. The cut off month for reckoning 'Period of Assessment' shall be the 3rd Month preceding the month corresponding to 'latest date of bid submission', in the following manner:

(<u>Note</u>: For example, if 'latest date of bid submission' is in Jan 2017, then the 'performance' shall be assessed for a 6 months' period up to and inclusive of Oct 2016 (i.e. from May 2016 to Oct 2016), for all the unit wise identified packages (refer Table I))

i). <u>Calculation of Overall 'Performance Rating' for 'Similar Package/Packages' for the tendered scope under execution at Power Sector Regions for the 'Period of Assessment':</u>

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:

- a) P₁, P₂, P₃, P₄, P₅, P_N etc. be the packages (under execution/ executed during the 'Period of Assessment' in all Regions of BHEL) <u>SIMILAR</u> 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)
- b) 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)
- c) Sum 'S₁ 'of 'Monthly Performance Evaluation' Scores (S₁₋₁, S₁₋₂, S₁₋₃, S₁₋₄, S₁₋₅.... S_{1-T1}) 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-T1}). 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_{BHEL}' for the Similar Package/Packages (under execution/ executed during the 'Period of Assessment') in all the Power Sector Regions of BHEL

Aggregate of Performance scores for all similar packages in all the Regions

Aggregate of months for each of the similar packages for which performance

should have been evaluated in all the Regions

- 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

SI. No.	Item Description		Details for all Regions			Total			
(i) 1	(ii) Similar Packages for all Regions → (under execution/ executed during period of assessment)	(iii) P ₁	(iv) P ₂	(v) P ₃	(vi) P ₄	(vii) P ₅	(viii)	(ix) P _N	
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 Packages (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} , 	
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) = \mathbf{S}_T

ii). <u>Calculation of Overall 'Performance Rating'</u> (**R**_{BHEL}) in case at least 6 evaluation scores for '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_{BHEL}' shall be calculated subject to availability of 'performance scores' for at least 6 'package months' in the order of precedence below:

- a) 'Period of Assessment' i.e. 6 months preceding and including the cut-off month
- b) 12 months preceding and including the cut-off month
- c) 24 months preceding and including 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 (RBHEL) at Power Sector Regions:

SI. no.	Overall Performance Rating (R _{BHEL})	Corresponding value of 'L'
1	=60	NA
2	> 60 and ≤ 65	0.4
3	> 65 and ≤ 70	0.35
4	> 70 and ≤ 75	0.25
5	> 75 and < 80	0.2
6	≥ 80	NA

'Assessment of Capacity of Bidder': III.

'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:

- i). 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
- ii). For $R_{BHFI} = 60$, $P_{Max} = '1$ '
- iii). For $R_{BHFL} \ge 80$, 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 $P \le P_{Max}$

(Where P is calculated as per clause 'I' above)

IV. **Explanatory note:**

i). Similar package means Boiler or ESP or Piping or Turbine or Civil or Structure or Electrical or C&I 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, C&I, 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 (i.e. Boiler, ESP and Power Cycle Piping) and finally the Bidder's capacity to execute the tendered scope is assessed in line with III above.

ii). Identified Packages (Unit wise)

<u>l able-1</u>		
Civil	Electrical and C&I	Mechanical
	i). Electrical ii). C&I iii). Others (Elect. and C&I)	i). Boiler & Aux (All types including CW Piping if applicable) ii). Power Cycle Piping/Critical Piping iii). ESP iv). LP Piping 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 Management x). FGD
		x). FGD xi). ACC xii). Others (Mechanical)

iii). Bidders who have not been evaluated for at least six package months in the last 24 months preceding and including the Cut-off month in the online BHEL system for contractor performance evaluation in BHEL PS Regions, 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 from BHEL.

The "FIRST TIMER" tag shall remain till completion of all the contracts against which vendor has been tagged as First Timer or availability of 6 evaluation scores within last 24 months preceding and including the Cut-off month in the online BHEL system for contractor performance evaluation in BHEL PS Regions.

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 'Assessment of Capacity of Bidders'.

- iv). Consequent upon applying the criteria of 'Assessment of Capacity of Bidders' detailed above on all the bidders qualified against Technical and Financial Qualification criteria, if the number of qualified bidders reduces to less than minimum no. of bidders required for conducting RA as per extant RA Guidelines, then for further processing of the Tender, BHEL at its discretion reserves the right to also consider the bidders who are "not qualified" as per criteria of 'Assessment of Capacity of Bidders' and for this, procedure described in following three options shall be followed:
 - All the bidders having Overall Performance Rating ('R_{BHEL}') ≥60 shall be considered qualified against criteria of 'Assessment of Capacity of Bidders'.
 - b) If even after using option "a", the number of qualified bidders remains less than minimum no. of bidders required for conducting RA as per extant RA Guidelines, then in addition to bidders considered as per option "a", "First timer" bidders having average of available performance scores ≥60 upto and including the Cut Off month shall also be considered qualified against criteria of 'Assessment of Capacity of Ridders'
 - c) If even after using option "a" and "b", the number of qualified bidders remains less than minimum no. of bidders required for conducting RA as per extant RA Guidelines, then in addition to bidders considered as per option "a" and "b", "First timer" bidders for whom no performance score is available in the system upto and including the Cut Off month, shall also be considered qualified against criteria of 'Assessment of Capacity of Bidders'.

Note:- In case, the number of bidders qualified against Technical and Financial Qualification criteria itself is less than minimum no. of bidders required for conducting RA as per extant RA Guidelines, then all bidders (a)- having Overall Performance Rating ('R_{BHEL}') ≥60, (b)- First timer" bidders having average of available performance scores ≥60 upto and including the Cut Off month, (c)- "First timer" bidders for whom no performance score is available in the system upto and including the Cut Off month, shall be considered qualified against criteria of 'Assessment of Capacity of Bidders' for further processing of tender.

- v). 'Under execution' shall mean works in progress as per the following:
 - a. Up to execution of 90% of anticipated Contract Value in case of Civil, MM, Structural and Turbo Blower Packages
 - b. Up to Steam Blowing in case of Boiler/ESP/Piping Packages
 - c. Up to Synchronization in all Balance Packages

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

- vi). Contractor shall provide the latest contact details i.e. mail-ID and Correspondence Address to SCT Department, so that same can be entered in the Contractor Performance Evaluation System, and in case of any change/discrepancy same shall be informed immediately. Login Details for viewing scores in Contractor Performance Evaluation System shall be provided to the Contractor by SCT Department.
- vii). Performance Evaluation for Activity Month shall be completed in Evaluation Month (i.e. month next to Activity Month) or in rare cases in Post Evaluation Month (i.e. month next to Evaluation Month) after approval from Competent Authority. In case scores are not acceptable, Contractor can submit Review Request to GM Site/ GM Project latest by 27th of Evaluation Month or 5 days after approval of score, whichever is later. However, acceptance/rejection of 'Review Request' solely depends on the discretion of GM Site/GM Project. After acceptance of Review Request, evaluation score shall be reviewed at site and the score after completion of review process shall be acceptable and binding on the contractor.
- viii). Project on Hold due to reasons not attributable to bidder
 - a. Short hold: Evaluation shall not be applicable for this period, however Loading will be considered.
 - b. Long hold: Short hold for continuous six months and beyond or hold on account of Force Majeure shall be considered as Long Hold. Evaluation as well as Loading shall not be considered for this period.
- ix). Performance evaluation as specified above in this clause is applicable to Prime bidder and Consortium partner (or Technical tie up partner) for their respective scope of work.
- 10.0 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.
- 11.0 For any clarification on the tender document, the bidder may seek the same in writing or through e-mail and/or through 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.
- 12.0 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.
- 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.
- **14.0** Unless specifically mentioned otherwise, bidder's quoted price shall deemed to be in compliance with tender including PBD.
- 15.0 Bidders shall submit Integrity Pact Agreement (Duly signed by authorized signatory who signs in the offer), <u>if applicable</u>, along with techno-commercial bid. This pact shall be considered as a preliminary qualification for further participation. <u>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, SI. no. (xi) above.</u>

"Integrity Pact (IP)"

(a) 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. Following Independent External Monitors (IEMs)

on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.

SI. No.	IEM	Email
1.	Shri Arun Chandra Verma, IPS (Retd.)	acverma1@gmail.com
2.	Shri Virendra Bahadur Singh, IPS (Retd.)	vbsinghips@gmail.com

- (b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with technocommercial bid (Part-I, in case of two/ three part 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.
- (c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only.

Note:

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's officials whose contact details are as per Clause no. 1, Salient Features of NIT, Sl. No. (ix) above.

- 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.
- In case BHEL decides on a `Public Opening', the date & time of opening of the sealed PRICE BID shall be intimated to the qualified bidders and in such a case, bidder may depute one authorized representative to witness the price bid opening. BHEL reserves the right to open 'in-camera' the 'PRICE BID' of any or all Unsuccessful/Disgualified bidders under intimation to the respective bidders.
- 18.0 Validity of the offer shall be for **Six months** from the latest due date of offer submission (including extension, if any) unless specified otherwise.
- 19.0 BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com on "supplier registration page") for this tender. RA shall be conducted among all the techno-commercially qualified bidders. Price Bids of all the techno-commercially qualified bidders shall be opened and same shall be considered as initial bids of bidders in RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking.
- 20.0 On submission of offer, further consideration will be subject to compliance to tender & qualifying requirement and customer's acceptance, as applicable.
- 21.0 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.
- **22.0** The bidders shall not enter into any undisclosed M.O.U. or any understanding amongst themselves with respect to tender.
- 23.0 Consortium Bidding (or Technical Tie up): Not Applicable

- 24.0 The bidder shall submit 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.
- **25.0** The bidder may have to produce original document for verification if so decided by BHEL.
- 26.0 The consultant / firm (and any of its affiliates) shall not be eligible to participate in tender(s) for the related works or services for the same project, if they were engaged for the consultancy services.
- **27.0** Guidelines/rules in respect of Suspension of Business dealings, Vendor evaluation format, Quality, Safety & HSE guidelines, Experience Certificate, etc. may undergo change from time to time and the latest one shall be followed. The abridged version of extant 'Guidelines for suspension of business dealings with suppliers/ contractors' is available on www.bhel.com on "supplier registration page".
- 28.0 The offers of the bidders who are on the banned/ hold list and 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.
 - 28.1 Integrity commitment, performance of the contract and punitive action thereof:

28.1.1 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.

28.1.2 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/ BHFI
- (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 extent guidelines of the company available on www.bhel.com and / or under applicable legal provisions.

29.0 Not Applicable

30.0 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.

31.0 PREFERENCE TO MAKE IN INDIA:

For this procurement, the local content to categorize a supplier as a Class I local supplier/ Class II local Supplier/Non-Local Supplier and purchase preferences to Class I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 04.06.2020 issued by DPIIT. In case of subsequent

orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT.

31.1 Compliance to Restrictions under Rule 144 (xi) of GFR 2017

- I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. The Competent Authority for the purpose of this Clause shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT).
- II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- III. "Bidder from a country which shares a land border with India" for the purpose of this Clause means:
 - a. An entity incorporated established or registered in such a country; or
 - b. A subsidiary of an entity incorporated established or registered in such a country; or
 - c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - d. An entity whose beneficial owner is situated in such a country; or
 - e. An Indian (or other) agent of such an entity; or
 - f. A natural person who is a citizen of such a country; or
 - g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.
- IV. The beneficial owner for the purpose of (III) above will be as under:
 - In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.
 - Explanation
 - a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent of shares or capital or profits of the company.
 - b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements.
 - 2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership.
 - 3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person has ownership of or entitlement to more than fifteen percent of the property or capital or profits of the such association or body of individuals.
 - 4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
 - 5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
- V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.
- VI. The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.

Note:

- The bidder shall provide undertaking for their compliance to this Clause, in the format provided in Annexure-11.
- (ii) Registration of the bidder with Competent Authority should be valid at the time of submission of bids and at the time of acceptance of the bids.

32.0 Not used

- 33.0 In the course of evaluation, if more than one bidder happens to occupy L-1 status, effective L-1 will be decided by soliciting discounts from the respective L-1 bidders.
 - In case more than one bidder happens to occupy the L-1 status even after soliciting discounts, the L-1 bidder shall be decided by a toss/ draw of lots, in the presence of the respective L-1 bidder(s) or their representative(s).
 - Ranking will be done accordingly. BHEL's decision in such situations shall be final and binding.
- 34.0 The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

In case, the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/ guidelines.

35.0 Not used

36.0 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

It may please be noted that guidelines/ circulars/ amendments/ govt. directives issued from time to time shall also be applicable.

for BHARAT HEAVY ELECTRICALS LTD (SCT)

Enclosure:

- (i) Annexure-1: Pre Qualifying Requirements.
- (ii) Annexure-2: Check List.
- (iii) Annexure-3: Not Applicable
- (iv) Annexure-4: Reverse Auction Process Compliance Form
- (v) Annexure-5: Authorization of representative who will participate in the online Reverse Auction Process
- (vi) Annexure-6: RA Price Confirmation and Breakup
- (vii) Annexure-7: Integrity Pact
- (viii) Annexure-8: Undertaking as per C4 of Annexure-1 i.e. PQR
- (ix) Annexure-9: Declaration reg. Related Firms & their areas of Activities
- (x) Annexure-10: Declaration reg. minimum local content in line with revised public procurement
- (xi) Annexure-11: Declaration by the Contractor
- (xii) Other Tender documents as per this NIT.

ANNEXURE - 1

PRE QUALIFYING REQUIREMENTS

JOB	RESTORATION OF E&M EQUIPMENT'S UP TO PRE RUPTURE LEVEL & COMMISSIONING, TESTING, SYNCHRONIZATION & HANDING OVER OF 3X33.33 MW UHL STAGE III HYDRO ELECTRIC PROJECT, HIMACHAL PRADESH.
TENDER NO	BHEL/NR/SCT/UHL Stage III/RESTORATION & COMMISSIONING/1251

SL. NO.	NAME AND DESCRIPTION OF PRE-QUALIFICATION CRITERIA	BIDDER'S CLAIM IN RESPECT OF FULFILLING THE PQR CRITERIA
Α	Submission of Integrity Pact duly signed	Applicable
В	 Technical Bidder should have executed at least two units of any one type or from any of the combinations below; 1) Vertical Hydro Turbine generator with Pelton Turbine of ≥30 MW	Applicable
С	FINANCIAL:	Applicable
C-1	TURNOVER: Bidders must have achieved an average annual financial turnover (Audited) of Rs. 137.10 Lakh or more over three consecutive Financial Years (FY) from immediate four previous Financial Years i.e. (2017-18, 2018-19 & 2019-20 OR 2018-19, 2019-20 & 2020-21). Bidder shall submit the Audited Balance Sheet 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.	
	If financial statements are not required to be audited statutorily, then instead of audited financial statements, financial statements are required to be certified by Chartered Accountant.	
C-2	NET WORTH: Net worth (only in case of companies) of the bidder should be positive. Net worth shall be calculated based on the latest Audited Accounts, as furnished for 'C-1' above. Net worth = Paid up share capital + Reserves.	Applicable

C-3	PROFIT:	Applicable
	Bidder must have earned profit in any one of the three financial years as applicable in the last three financial years as furnished for 'C-1' above.	
	<u>Note:</u> PROFIT shall be PBT earned during any one year of last three financial years as in 'C-1' above.	
C-4	Bidder must not be under Insolvency Resolution Process or Liquidation or Bankruptcy Code Proceedings (IBC) as on date, by NCLT or any adjudicating authority/authorities, which will render him ineligible for participation in this tender, and shall submit undertaking (Annexure-8) to this effect.	Applicable
D	Assessment of Capacity of bidder to execute the work as per clause 9.0 of NIT	Applicable – by BHEL
E	Approval of Customer Note: Names of bidders who stand qualified after compliance of criteria A to D shall be forwarded to customer for their approval.	Applicable – by BHEL
F	Price Bid Opening Note: Price Bids of only those bidders shall be opened who stand qualified after compliance of criteria A to E	By BHEL

Explanatory Notes for QR 'B':

- 1. "Executed" means achievement of milestone as defined below; "SPINNING" in respect of HTG.
- 2. Completion date for achievement of the technical criteria should be in the last 7 years ending on the 'latest date of Bid Submission' of Tender irrespective of date of the start of work. Completion date shall be reckoned from the "FY quarter of bid submission".
- 3. 'Executed' means the bidder should have achieved the technical criteria even if the contract has not been completed or closed.

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.

Credentials submitted by the bidder against "PRE QUALIFYING CRITERIAS" shall be verified for its authenticity. In case, any credential (s) is/are found unauthentic, offer of the bidder is liable to the rejection. BHEL reserves the right to initiate any further action as per extant guidelines for Suspension of Business Dealings.

ANNEXURE - 2

CHECK LIST

NOTE: - Tenderers are required to fill in the following details and no column should be left blank

1	Name of the Tenderer					
2	Address of the Tenderer					
3	Type of the Firm/ Company					
(i)	In case of Individual Tenderer	His / her full name, address furnished along with the offer.	His / her full name, address and place & nature of business shall be furnished along with the offer.			
(ii)	In case of Partnership Firm	The names of all the partners a deed/instrument of partnership furnished along with the offer	dully certified by the Not			
(iii)	In case of Companies	in case of Public Companies (of Association are also to be fu	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			
4.a	Details of Contact person for this Tender	Name : Mr/ Ms				
		Designation:				
		Telephone No:				
		Mobile No:				
		Email ID:				
4.b	Details of alternate Contact person for	Name : Mr/ Ms				
	this Tender	Designation:				
		Telephone No:				
		Mobile No:				
		Email ID:				
5	EMD DETAILS					
6	Validity of Offer	TO BE VALID FOR SIX MONT	THS FROM DUE DATE			
	DESCRIPTION		APPLICABILITY (BY BHEL)	ENCLOSED BY BIDDER		
7	Whether all pages of the Tender documents incetc are read and understood	cluding annexures, appendices	Applicable	YES / NO		
8	Whether the format for compliance with PRE (ANNEXURE – 1) is understood and filled with referenced in the specified format		Applicable	YES / NO		
9	Audited Balance Sheet and profit & Loss Acco	ount for the last three years	Applicable	YES / NO		
10	Copy of PAN Card		Applicable	YES / NO		
11	Copy of GST registration		Applicable	YES / NO		

SL. NO.	DESCRIPTION	APPLICABILITY (BY BHEL)	ENCLOSED BY BIDDER
12	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.	Applicable	YES / NO
13	Integrity Pact (Annexure – 7 of NIT)	Applicable	YES / NO
14	Annexures – 5, 8, 9, 10 & 11 of NIT	Applicable	YES / NO
15	Offer forwarding letter / tender submission letter [Form No. F-01 (Rev 00)]	Applicable	YES / NO
16	Declaration by Authorised Signatory [Form No: F-02 (Rev 00)]	Applicable	YES / NO
17	Declaration by Authorised Signatory regarding Authenticity of submitted documents [Form No: F-02A (Rev 00)]	Applicable	YES / NO
18	No Deviation Certificate [Form No: F-03 (Rev 00)]	Applicable	YES / NO
19	Declaration confirming knowledge about Site Conditions [Form No: F-04 (Rev 00)]	Applicable	YES / NO
20	Declaration for relation in BHEL [Form No: F-05 (Rev 00)]	Applicable	YES / NO
21	Non-Disclosure Certificate [Form No: F-06 (Rev 00)]	Applicable	YES / NO
22	Bank Account Details for E-Payment [Form No: F-07 (Rev 00)]	Applicable	YES / NO
23	Format for seeking clarification [Form No: F-08 (Rev 00)]	Applicable	YES / NO
24	Capacity Evaluation of Bidder for current Tender [Form No: F-09 (Rev 00)]	Applicable	YES / NO
25	Power of Attorney for Submission of Tender/Signing Contract Agreement [Form No: F-25 (Rev 00)]	Applicable	YES / NO
26	Analysis of Unit rates [Form No: F-26 (Rev 00)]	Applicable	YES / NO

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

NOT USED

ANNEXURE - 4

Reverse Auction Process Compliance Form

(The bidders are required to print this on their company's letterhead and sign, stamp before RA)

Tο

- M/s. {Service provider
- Postal address}

Agreement to the Process related Terms and Conditions Sub:

Dear Sir.

This has reference to the Terms & Conditions for the Reverse Auction mentioned in the RFQ document for {Items} against BHEL enquiry/ RFQ no.{......} dt. {......} This letter is to confirm that:

- 1) The undersigned is authorized official/ representative of the company to participate in RA and to sign the related documents.
- 2) We have studied the Reverse Auction guidelines (as available on www.bhel.com), and the Business rules governing the Reverse Auction as mentioned in your letter and confirm our agreement to them.
- 3) We also confirm that we have taken the training on the auction tool and have understood the functionality of the same thoroughly.
- 4) We also confirm that, in case we become L1 bidder, we will FAX/ email the price confirmation & break up of our quoted price as per Annexure - 6 within two working days (of BHEL) after completion of RA event, besides sending the same by registered post/ courier both to M/s. BHEL and M/s. {Service provider.}

We, hereby confirm that we will honor the Bids placed by us during the auction process.

With regards

Signature with company seal

Name:

Company / Organization:

Designation within Company / Organization:

Address of Company / Organization:

Sign this document and FAX/ email it to M/s {Service provider} at {.......} prior to start of the Event.

Registered Office: BHEL House, Siri Fort, New Delhi – 110 049, India

Website: www.bhel.com

ANNEXURE - 5

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

1	NAME OF THE BIDDER	
2	NAME & DESIGNATION OF OFFICIAL	
3	POSTAL ADDRESS (COMPLETE)	
4	TELEPHONE NOS. (LAND LINE & MOBILE BOTH)	
5	E-MAIL ADDRESS	
6	NAME OF PLACE/ STATE/ COUNTRY, WHEREFROM S/HE WILL PARTICIPATE IN THE REVERSE AUCTION	

ANNEXURE – 6

RA price confirmation and breakup (To be submitted by L1 bidder after completion of RA)

То	
- M/s. Service provider	
- Postal address	
CC: M/s BHEL	
{Unit-	
Address-}	
Sub: Final price quoted during Reverse Auctio	n and price breakup
Dear Sir,	
We confirm that we have quoted.	
Rs.{in value & in words}} for ite	m(s) covered under tender enquiry No. {} dt.{}
	d enquiries is inclusive of {Packing & forwarding, GST, E.D.,} District,{} State and Type r as per NIT}
as our final landed prices as quoted during the Re a period of { in nos. & in words} days.	everse Auction conducted today {date} which will be valid for
The price break-up is as given below.	
Tatal	
Total	- Rs. in value & in words ======
Yours sincerely,	
For	
Name:	
Company:	
Date:	
Seal:	

ANNEXURE – 7

INTEGRITY PACT

Integrity Pact format attached separately

ANNEXURE - 8

UNDERTAKING

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

То,
(Write Name & Address of Officer of BHEL inviting the Tender)
Dear Sir/Madam,
Sub: DECLARATION REGARDING INSOLVENCY/ LIQUIDATION/ BANKRUPTCY PROCEEDINGS
Ref: NIT/Tender Specification No: BHEL/NR/SCT/UHL Stage III/RESTORATION & COMMISSIONING/1251
I/We,
declare that, I/We am/are not under insolvency resolution process or liquidation or Bankruptcy Code Proceedings (IBC)
as on date, by NCLT or any adjudicating authority/authorities, which will render us ineligible for participation in this tender.
Sign. of the AUTHORISED SIGNATORY (With Name, Designation and Company seal)
Place: Date:

ANNEXURE-9

DECLARATION

_		Date:
To:		_
Address	BHEL,	_
		_
		_
Email:		_
Sub:	Details of related firms and their a	tivities
Dear Sir	/ Madam,	
	find below details of firms owned by o	members that are doing business/ registered for same item with
	Material Outers and West December	
1	Material Category/ Work Descriptio	
	Name of Firm	
	Address of Firm	
	Nature of Business	
	Name of Family Member	
	Relationship	
2	Material Category/ Work Description	
	Name of Firm	
	Address of Firm	
	Nature of Business	
	Name of Family Member	
	Relationship	
Note: informa	I certify that the above information tion furnished is found to be false.	nd I agree for penal action from BHEL in case any of the above
		Regards
		()
		From: M/s Supplier Code:

Annexure-10

DECLARATION REGARDING MINIMUM LOCAL CONTENT IN LINE WITH REVISED PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017 DATED 04TH JUNE, 2020 AND SUBSEQUENT ORDER(S)

(To be typed and submitted in the Letter Head of the Entity/Firm providing certificate as applicable)
-----To,

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

Dear Sir.

Sub: Declaration reg. minimum local content in line with Public Procurement (Preference to Make in India), Order 2017-Revision, dated 04th June, 2020 and subsequent order(s).

Ref: 1) NIT/Tender Specification No: BHEL/NR/SCT/UHL Stage III/RESTORATION & COMMISSIONING/1251 2) All other pertinent issues till date

The details of the location(s) at which the local value addition is made are as follows:

1. ______

2. _____

3. _____ 4. ____

Thanking you, Yours faithfully,

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

Note:

- 1. Bidders to note that above format Duly filled & signed by authorized signatory, shall be submitted along with the techno-commercial offer.
- 2. In case the bidder's quoted value is in excess of Rs. 10 crores, the authorized signatory for this declaration shall necessarily be the statutory auditor or cost auditor of the company (in the case of companies) or a practising cost accountant or practicing chartered accountant (in respect of suppliers other than companies).
- 3. In the event of false declaration, actions as per the above order and as per BHEL Guidelines shall be initiated against the bidder.

^{** -} Strike out whichever is not applicable.

ANNEXURE-11

DECLARATION REGARDING COMPLIANCE TO RESTRICTIONS UNDER RULE 144 (xi) OF GFR 2017

(To be typed and submitted in the Letter Head of the Entity/ Firm providing certificate as applicable)

To, (Write Name & Address of Officer of BHEL inviting the Tender)
Dear Sir,
Sub: Declaration regarding compliance to Restrictions under Rule 144 (xi) of GFR 2017
Ref: 1) NIT/Tender Specification No: BHEL/NR/SCT/UHL Stage III/RESTORATION & COMMISSIONING/1251 2) All other pertinent issues till date
I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border will limit and on sub-contracting to contractors from such countries. I certify that (SPECIFY THE NAME OF THE ORGANIZATION HERE), is not from such a country/ has been registered with the Competent Authority (attach valid registration by the Competent Authority, i.e., the Registration Committee constituted by the Dept. for Promotion of Indust and Internal Trade (DPIIT); and will not sub-contract any work to a contractor from such countries unless such contractor registered with the Competent Authority. (attach relevant valid registration, if applicable)
I hereby certify that we fulfil all requirements in this regard and is eligible to be considered.
Thanking you, Yours faithfully,
(Signature, Date & Seal Authorized Signatory of the Bidde Note: Bidders to note that in case above certification given by a bidder, whose bid is accepted, is found to be false, the this would be a ground for immediate termination and for taking further action in accordance with law and as p BHEL guidelines.

Technical Condition of Contract

For

Name of Work: Restoration of E&M Equipment's up to Pre Rupture Level & Commissioning, Testing, Synchronization & handing Over" of 3x33.33 MW UHL Stage III Hydro Electric Project, Himachal Pradesh

SI. no.	DESCRIPTION	CHAPTER	PAGE No.
1	Project Information	Chapter-I	2-2
2	Scope of works	Chapter-II	3-15
3	Facilities in the Scope of Subcontractor	Chapter-III	16-16
4	T & Ps and MMEs to be deployed by contractor	Chapter-IV	17-20
5	T&P BEING PROVIDED BY BHEL/HPSEBL FOR USE OF CONTRACTOR FREE OF HIRE CHARGES ON SHARING BASIS	Chapter-V	21-21
6	Time Schedule	Chapter-VI	22-24
7	Terms of Payment- Annexure-A (BILLING BREAKUP)	Chapter-VII	25-29
8	TAXES & OTHER DUTIES	Chapter-VIII	30-33
9	PMKVY IMPLEMENTATION	Chapter-IX	34-34
10	WEIGHT SCHEDULE	Chapter-X	35-35
11	GENERAL TERMS OF WORK EXECUTION	Chapter-XI	36-38
12	ERECTION	Chapter-XII	39-41
13	WELDING, HEAT-TREATMENT, RADIOGRAPHY & NDT	Chapter-XIII	42-46
14	Rate Schedule / BOQ	Chapter-XIV	47-47
15	Annexure-B (Indicative List of Electrical Testing)	Chapter-XV	48-49
16	Annexure-C (Terms & Condition for Providing Site Establishment & Vehicle for exclusive use of BHEL)	Chapter-XVI	50-52

1. Project Information

UHL-III Hydroelectric Power Project (3 X 33.3 MW) is located in village Chullah, Jogindernagar, Distt. Mandi (H.P.) The project is located 49 km from Palampur. It has one power house (3 Francis type vertical axis generating units of 33.3 MW each).

The Power House was flooded due to penstock rupture while one of Unit was at partial load during commissioning stage while Rest of two Units were completed its Bearing Run. Intent of the work is to restore & commission & Handover of the all Three Units.

Name of Customer : Himachal Pradesh State Electricity Board (HPSEB)

Address : 3 X 33.33 MW, Uhl Power House Stage III, Village Chulla DISTT.

Joginder Nagar, Himachal Pradesh, INDIA.

Installation : 3 X 33.33 MW

Nearest Railway Station : Palampur Railway Station- 50 Kms from Project Site.

Nearest City / Town : Palampur- 50 Kms.

Joginder nagar- 44 Kms.

Maximum Temperature: 35 deg. C.

Minimum Temperature : 0 deg. C.

<u>Note: -</u> The bidder is advised to visit and examine the site of WORKS and its surroundings and obtain for himself on his own responsibility all information that may be necessary for preparing the bid and entering into the CONTRACT. All costs for and associated with site visits shall be borne by the bidder.

Contact Person for site visit-

- 1.) Shri Jaswinder Singh (RSM / BHEL RSC Chandigarh)-07617832900
- 2.) Shri Mukesh Joya (Manager) -09988511329

2. SCOPE OF WORK (Mandatory Works)

The Broad scope of work for restoration of U#1, U#2 & U#3 UHL HEP (3x33.3 MW) include Material Handling, Dismantling, storing, Local handling, Refurbishment, Assembly, Testing and commissioning and handing over of project. All three units are ready for dismantlement. Physical assessment / Testing's shall be carried out to identify damaged components during / after dismantling works. Damage material to be rectified / replaced as the case may be to restore the all three Hydro Units. Post restoration, commissioning to be done to achieve full load for Hydro Machines. Broad activities are listed below along with major terms & conditions.

2.1 **DISMANTLING OF MACHINE** (Per Unit)

Complete dismantling of the Turbine & Generator assemblies in all respect.

1	Dismantling of pipeline of Runner, Guide Apparatus, Regulating Mechanism, Servomotor, DT Cone, Turbine Pit Drainage System.
2	Dismantling of Turbine Shaft, Shaft Seal, TGB, Turbine pit Hoist, Platform, Turbine Instrumentation.
3	Removal of Generator floor cover sheets, Brush Gear Arrangement.
4	Dismantling of Upper bracket after joint recording of levels & centre reference / beacon points with BVPCL/ HPSEBL site representatives.
5	Dismantling of slip ring, brush gear assembly. Drain the oil from the turbine and generator bearing reservoirs. Removal of RTD's, thermocouple etc.
	REMOVAL OF TOP BRACKET & ROTOR ASSEMBLY FROM PIT
1	Removal of top bracket radial jacks and removal of Top bracket
2	Remove the top and bottom air guide ring, end winding plates/winding covers, oil retaining sleeve and top bracket.
3	Disconnect the rotor shaft leads between the spider and shaft.
4	Remove drive bolts and dowels between the spider and thrust block.
5	Removal of top bracket & upper radial & thrust bearing assembly. Dismantling of Bearing RTD, DTTs, coolers, CW system & HS pipelines to thrust pads.
6	Decoupling of Thrust collar from Generator shaft.
7	Decouple the turbine and generator shaft after arresting the sliding down movement of turbine shaft & runner and GA parts.
8	Lift the generator rotor and shifting in the service bay.
	LOWER BRACKET & BRAKE JACK ASSEMBLY
1	Disconnect all pipe work, brake jacks, tubing/hoses and auxiliary wiring from bracket.
2	Remove dowels and holding down bolts.
3	Dismantling of LGB. Removal of pads, RTTs, DTTs & coolers including CW pipelines.
4	Lift the lower bracket out of the pit, after ensuring the turbine shaft and runner are to be suitably supported to arrest down ward movement of turbine rotating parts. Decouple the generator shaft from the turbine shaft and removal of over speed device and pit air seal etc.
5	Removal of damaged items, pit seal cover sheets, oil, air & water pipelines.
6	Removal of lower bracket from barrel & Inspection.

7	Lower bracket foundation plates levelling checking, measurement of each plate from unit center
	are to be measured/recorded and reported to BHEL. Grouting of foundation plate or civil
	foundation is not included in this scope of work.
	ROTOR DISMANTLING AT SERVICE BAY
1	Removal of rotor fans, Pole keys, Poles, pole's interconnection etc for dislodging of poles from
_	rotor rim.
2	During Assessment / Joint inspection, if Rotor core required to be dismantled, same shall be covered as in optional work.
3	Cleaning bearing journal & inspection of generator main shaft & rotor spider.
4	Shifting /loading assistance of generator main shaft & spider at Power House to BHEL plant for
	shaft run out checking and machining. Transportation shall be arranged by customer.
5	Removal of pole windings from pole core. Cleaning of pole core by wire brush for removal of rust and foreign matters.
	STATOR
1	Dry out of stator by DC current injection. Rectiformer to be arranged by Sub-contractor for stator
	dry out for max period of 1 month.
2	Resistance check at 5000 kV and its HV test. HV Test kit alongwith Operator to be arranged by Sub
	Contractor.
3	Stator winding bars failed during HV test shall be replaced from spare ones. Spare winding bars
	will be provided by BVPCL/ HPSEBL. Replacement of damaged winding bars, if any. (Replacement
	of damaged stator winding bars limited to 10 nos. within the quoted price. Any additional
	replacement of winding bar beyond 10 nos. shall be considered as Additional Work
	GUIDE APPRATUS, TOP COVER, RUNNER, RUNNER SHAFT, PIVOT RING
1	Dismantling and removal of Guide vane servomotor from top cover.
1	·
2	Dismantling and removal of damaged part of Turbine Guide bearing & shaft seal from turbine shaft.
3	Dismantling of centralized grease lubrication system
4	Dismantle and taking out of the breaking links, Levers, Bearing housing cover, fork ends of guide
	vane servomotors, regulating ring, air, water & oil pipelines.
5	Dismantle and taking out of the guide vane levers, bush housing and top cover.
6	Removal of Top cover, turbine shaft and runner. Shifting of assembly to service bay. Removal of
	the guide vanes.
7	Dismantling of Runner from turbine shaft, turbine shaft & runner hub assembly from shaft.
	Runner Blade & Hub assembly shall be properly secure by C-channels for protection against any
	damage during transportation. TGB Housing, Turbine Shaft to be handed over to M/s BVPCL for
	transportation to MU for its servicing and repair at workshop.
8	Dismantle and taking out of the pivot ring, Upper DT Cone & Lower DT Cone.
9	Runner assembly dismantling from turbine shaft.

Removal of Generator and Turbine rotating parts from pit and shifted to Service bay for further dismantling of major assemblies for servicing, over hauling & replacement of worn out / damaged items as per activities mentioned separately in Annexures appended with Scope of work.

General Guidelines to be followed during Dismantling:

- 1. The **storage** of various dismantled parts/equipment's with proper marking with centre punch /paint shall be done by sub-contractor.
- 2. During dismantling various necessary reading shall be taken by sub-contractor in order to facilitate erection activities during assembly of machine.
- 3. All dismantled parts shall be thoroughly cleaned and surface dried with the help of clean cloth and will be stored safely having proper tagging. All machined parts are to be applied with rust preservation paints such as RUSTOLINE or grease of Indian Oil or HPCL and other heating appliances/HALOGEN lamps for electrical components. These items/consumables shall be arranged by sub-contractor at his own cost.
- 4. All **preserved parts** shall be double wrapped in paraffin paper.
- 5. All pipes shall be cleaned from inside & ends shall be blanked with cardboards etc.
- 6. All nuts & bolts, studs, dowels, fasteners hardware's etc. shall be cleaned applied grease and kept in polybags with proper tagging. Rubberised items such as toroidal seals, cup seals, chevron packing etc shall be properly preserved for re-use, if found suitable or dimensional reference purposes.
- 7. All small components shall be stored in covered boxes and shall be properly tag / marked with the name of item on box. Responsibility of proper keeping and watch & ward of the dismantled items for re-use shall be done by sub-contractor.
- 8. All **consumables like DA gas, O2 gas, LPG gas cylinder**, cotton cloth, fine linen, kerosene, petrol, diesel, white spirit, jute, grease, preservatives or any other site consumable items required for executing the dismantling / erection / servicing activities shall be arranged by sub-contractor with in the quoted price.
- 9. All measurement level and clearances shall be record at each stage of dismantling of machines as per directions of BHEL.

Post Dismantling, Assessment / testing shall be done. A Joint committee comprise of BHEL & HPSEBL shall identify the material to be replaced or refurbished as per site conditions.

2.2 ASSEMBLY OF MACHINE (TURBINE & GENERATOR): (Per Unit)

Complete re-assembly of Turbine & Generator assemblies in all respect up to Boxing up of Unit after over hauling or receipt of renovated items at site.

	TURBINE
1	Lowering of repaired Pivot ring after replacing bearings bushes.
2	Lowering of Guide vanes in pivot ring pot.
3	Lowering of Top cover after assembly with Runner hub & turbine shaft at Service bay.
4	Replacement of shaft seal assembly and its alignment w.r.t unit shaft axis
5	In situ trial assembly of guide vanes, GV bushes, its housings, links, lever & other GA items for smooth operation of the same as per requirement.
6	Final assembly of runner, top cover, bush housing, guide vane apparatus, base plate of shaft gland, servomotor fork ends, breaking links, levers etc. and painting of guide vane apparatus.

7	Installation of regulating ring, GV servomotor & tie rod. Checking for GA mechanism
8	smooth operation. Installation of turbine guide bearing assembly and centring/alignment with respect to unit shaft axis.
9	Lowering of Generator Lower bracket, rotor in generator pit and couple both turbine and generator shafts.
10	Levelling and alignment of coupled turbine-generator shaft and correction of the same by putting the shims in between the turbine and generator coupling flanges as per requirements.
11	centring of the unit, record centering readings at Runner chamber w.r.t shaft seal, TGB, UGB, Air gap etc. Keep the machine at best suitable center position.
12	Assembly of generator guide bearing pads, turbine shaft seal and turbine bearing. Hydraulic test of bearing coolers.
13	Calibration and assembly of temperature gauges of TGB.
14	Installation of GA CGL system
15	Carry out the bedding of guide vanes to match there sealing surfaces.
16	Carry out the dry stroking of guide vanes.
17	Installation of turbine pit platform. Removal of temporary/inspection platform from draft
	tube and close the draft tube door and spiral casing manhole.
18	Oil filling in bearing housing, assembly of coupling guards.
19	Dry stroking, pre-commissioning checks of HMC and handing over of the unit to BVPCL/
	HPSEBL operating staff for unit water path water filling.
	GENERATOR.
1	STATOR ACTIVITIES
1.1	Replacement of damaged winding bars, if any. (Replacement of damaged stator winding bars limited to 10 nos. within the quoted price. Any additional replacement of winding bar beyond 10 nos. shall be considered as Additional Work. Payment for additional replacement shall be as per OPTIONAL WORK Rate per bar as mentioned in Un-Priced Schedule)
1.2	Thorough cleaning of stator winding, its overhang portion & lamination core from front as well as from back after removal of stator coolers.
1.3	Tightening and checking of all nuts & studs by bolt tensioners at the recommended design pressure. Fill up of the gap lamination with proper insulating varnish. Tightening of stator winding slot wedges, lashing & packing of the overhang portion of winding, if required.
1.4	Assembled stator shall be subjected to HV & tan delta test. Testing equipment required for carrying out the mentioned electrical tests shall be arranged by the sub-contractor at his own cost.
1.5	After performing the entire test insulation painting of complete stator inner core with two
	coats of Dr Backs Make Epoxy coat red Gel insulating paint.
2	

Centring, levelling & alignment of rotor rim stools.
Assembly of spider arms end plates & checking for verticality of wedge band.
Mounting of rotor poles, fixing of pole keys, preparation of interpole connections and painting
Installation of CCL lead, connection with master poles & IR checking.
HV test of assembled rotor.
Re-assembly / Mounting of newly supplied pole's field coil on cleaned pole cores shall be covered in Optional Work.
Lowering of assembled rotor in pit.
LOWER BRACKET ASSEMBLY
Assembly of lower bracket central part with its arms at service bay.
Installation of brake jack assembly on lower bracket and its air/oil piping.
Checking of LGB coolers assembly & their hydraulic testing
Checking of Lower bracket sole/foundation plates level & centre distance before lowering of Lower Bracket.
UPPER BARCKET/THRUST BEARING/UGB/BEARING SUMP/OIL & WATER PIPELINES
Lowering of upper bracket on stator frame. Installation & fixing of radial jacks. Top bracket centring & levelling.
Mounting of thrust bearing collar on generator shaft.
Carryout UT & DPT test of thrust bearing, top and bottom guide bearing pads. Clean and polish all the thrust bearing/guide bearing pads after blue matching. If any of the guide bearing pads is found damaged, it may be replaced and its clearance be re-set without changing the other pads. The radial clearance between shaft journal and guide pads should be as per requirement. Inspection of runner discs joint & rectification.
INSTALLATION OF SLIP RING, BRUSH GEAR ASSEMBLY
Replacement of slip ring & its carbon brushes.
UPPER & THRUST BEARING OIL COOLERS
Dismantle & clean the water boxes of coolers. Clean the cooler tubes with brush and a jet of water. Replace neoprene `O` ring.
BOXING UP OF GENERATOR
Assembly of UGB/slip ring, brush gear assembly. Fix the lock plates of both guide bearing & thrust bearing. Fit the vapour seals and allied piping's. Check tension on brushes as per BHEL norms. Fit the top & bottom air guide rings, Turbine pit air seal covering sheets. Air guide baffle/ plates and flooring plates. Check that no foreign material is trapped between stator core and rotor poles. Final inspection of machine and box up.
ASSEMBLY OF GENERATOR FLOORING SHEET/COVER PLATES, HOOD, PMG & OIL PIPELINES

9.1	Synthetic enamel paint shall be done by spray painting only upto the maximum possible
	extent.
9.2	Before applying synthetic enamel paint old paint will be removed by emery
	paper/sander/wire brush etc and surface should be cleaned perfectly. One coat of red
	oxide primer of approved make shall be applied before doing two coats of synthetic paint.
9.3	Chequered plates, baffle plate machine frame and all other parts used in assembly of
	machine shall be painted by synthetic enamel paint.

MAJOR ACTIVITIES FOR UNIT BOXING UP, ALIGNMENT, CENTERING, LEVELLING, LOAD SHARING, FINAL BOXING UP, TESTING & COMMISSIONING:

The major re-assembly/boxing up activities of machine as listed below shall be immediately started after completion of dismantling / assessment activities and on receipt of repaired/renovated items at site. The work shall be carried out under the supervision of BHEL.

- 1. Guide apparatus Trial assembly: Lowering of all 24 nos guide vanes in pivot ring ensure their free movement in pivot ring bushes. Lower only top cover & bearing bushes to ensure checking of free movement of GV and rectification to be done, if required.
- 2. Final lowering of top cover after tightening of pivot ring, GV lower bushes, cup seals, S S ring etc. Cup seals & S S ring shall be replaced if required. Supply will be provided free of cost.
- 3. Lowering of runner with shaft & top cover after proper cleaning of top cover & stay ring mating flanges and its holes. O-ring of proper size shall be place in mating flange staying groove. O-ring shall be provided by BHEL.
- 4. Lowering of guide vane bearing housing after fixing proper O-ring, cup seals and their tightening keeping free movement of GVs.
- 5. Tightening of Top cover with Stay ring by uniformly applied torque with hydraulic torque wrench.
- 6. Lowering of regulating ring, servomotor, guide vane lever link and their tightening.
- 7. Fixing of GV levers & connecting links with shear pins, covers etc.
- 8. Lowering of lower bracket with plate from and its fixing with foundation sole plates.
- 9. Lowering of upper bracket and its fixing after proper centering.
- 10. Placement of thrust disc and mirror disc on pads after proper cleaning.
- 11. Lowering thrust collar after proper heating & fixing with proper match neck ring and key.
- 12. Assembly of thrust collar with mirror disc.
- 13. De-jacking of rotor on thrust pads.
- 14. Assembly of HS lub system pipeline & connection with pump motor assembly.
- 15. Fixing of rotor turning device (to be provided by BHEL/HPSEBL)
- 16. Level of rotor & alignment of generator shaft as per procedure decided by Engineer In charge. Dial gauge of 1Div = 0.01 mm accuracy. Master Level gauge shall be arrange by sub-contractor at his own cost.
- 17. Improvement of level of rotor and alignment of generator shaft as per instruction of Engineer in Charge. The shims required for unit shaft alignment shall be arrange by sub-contractor at its own cost.
- 18. Coupling of rotor & generator shaft to the specified coupling bolts elongation values and checking / correction of unit shaft alignment shall be perform as per BHEL instructions.
- 19. Load sharing of thrust pads.

- 20. Checking of stator & rotor air gap, and magnetic axis. Necessary correction to be done, if required.
- 21. After completion of alignment, bearings LGB, UGB & TGB pads clearance setting, boxing up of TGB, LGB & UGB including thrust bearing with its all instrumentation & clamping's.
- 22. Fixing of baffle plates, chequered plates of rotor after providing MS angle of required size and after matching with assembly holes fasteners insertion.
- 23. Assembly of shaft seal.
- 24. Assembly of air seal, gland seal & vapour ejector system pipelines.
- 25. Installation of stator air coolers, generator barrel CW system pipelines.
- 26. Oil filling in bearings
- 27. Manpower assistance during commissioning & correction required in bearing clearance readjustments in case of abnormalities observed during bearing run or 72 hrs trial run commissioning test.

Any other work not mentioned above but necessary for completion of erection and commissioning of machine shall have to be done by the sub-contractor as per instruction of BHEL engineer.

2.3 <u>Testing / Operational Checks for System Healthiness Assessment.</u>

Testing / Operational checks of following systems, BOP items shall be carried out to assess the healthiness of systems.

- 1. **Transformer** 41 MVA GT, UET (Unit Excitation Transformer), UAT (Unit Auxiliary Transformer), LAVT, NGT, Testing (Refer Annexure –B), dismantling, Restoration of Firefighting System
- 2. Bus duct- Cleaning, Testing (Refer Annexure -B) & Painting
- 3. **OPU, MIV** Cleaning, Operation checks, dismantling & assembly / modification in Pipeline as per site requirement.
- 4. Panels (Control / Electrical / Protection) Cleaning, Testing (Annexure –B) & Replacement of faulty Equipment's.
- 5. **Governing System**: Cleaning & Operational Checks.
- Equipment already handed over by BHEL to HPSEB: Following complete system has been handed over to customer. <u>Assistance (Manpower and T&P) for physical assessment and testing</u> shall be in scope of subcontractor.

SI. No	Description
1	Drainage and dewatering system
2	Low pressure (LP) compressed air systems for Turbine & MIV
3	High pressure (HP) compressed air systems
4	Cooling Water System equipment
5	Line Protection Panel.
6	Control Room equipment.
7	6.3 MVA Station Service transformer.
8	132 KV CT & PT
9	1000KVA Station Auxiliary Transformer 2 No.
10	24 V DC System.
11	OPU System for MIV & Governor

- 7. Replacement / Modification of Piping's for MIV, OPU, if required shall be in the scope of work.
- 8. Restoration of FET (Field efficiency test Pipeline-1").

2.4 Testing, Pre-Commissioning, Commissioning & Post-Commissioning

- a. On completion of erection of equipment, the contractor shall get the equipment checked up by the BVPCL/HPSEB, BHEL and their deputed supervisors, specialists concerned with the particular item of work. The testing of various equipment will be carried under the supervision of BHEL/ BVPCL/HPSEB with the assistance of the Contractor in the manner decided by and in the presence of the owner and other authorised supervisors concerned, and to their entire satisfaction. On completion of these preliminary checks by the equipment supplier, the contractor shall make the equipment ready for conducting the test. The contractor shall rectify all defects found during the checking / testing as directed by the BHEL/ Consortium partner /Owner to ensure satisfactory operation of the equipment.
- b. The contractor shall carry out the required tests as instructed by BHEL using contractor's own consumables, labour and scaffoldings.
- c. All the tests shall be repeated till all the equipment satisfy the requirement / obligation of BHEL at various stages. Contractor shall also carry out repair of all the welded joints (site and suppliers) failed during testing.
- d. The scope of testing activities cover installation of all necessary temporary piping, supports, valves, blanking, pumps, tanks etc. and other accessories—with access platforms valves, pressure gauges, electric cables, switches, cutting of some of existing valve, placing of rubber wedges in the valves etc., required for hydro test, chemical cleaning, or for any other tests as the case may be and will carry out above activities under this scope of work as per instructions of BHEL. The scope also covers the offsite disposal of effluents.
- e. For testing of distributor piping's, the necessary test pump and bulk heads shall be supplied by BHEL. Any other item which may be required additionally shall be arranged by contractor. The necessary blanks, pressure gauge, valve etc for testing of piping system including hardware shall be arranged by the contractor within his scope of work.
- f. It shall be the responsibility of the contractor to provide various categories of workers in sufficient numbers along with Supervisors including necessary consumables, T&Ps, IMTEs etc., and any other assistance required during testing of equipment and attending any problem in the equipment erected by the contractor till handing over. Association of BHEL's/Client's staff during above period will not absolve contractor from above responsibilities.
- g. It shall be specifically noted that the above employees of the contractor may have to work round the clock along with BHEL Engineers and hence overtime payment by the contractor to his employees may be involved. The contractor's finally accepted rates/ price shall be inclusive of all these factors also.
- h. In case, any rework is required because of contractor's faulty erection which is noticed during testing, the same has to be rectified by the contractor at his cost. If any equipment/part is required to be inspected during testing, the contractor will dismantle /open up the equipment / part and reassemble / redo the work without any extra claim.

- During testing, opening/ closing of valves, changing of gaskets, realignment of rotating and other equipment, attending to leakage and adjustments of erected equipment may arise. The finally accepted price shall also include all such work.
- j. The contractor shall make all necessary arrangements including making of temporary closures on piping/ equipment for carrying out the hydro test on all piping equipment covered in the specification at no additional cost.
- k. In case any defect is noticed during tests such as loose components, undue noise or vibration, strain on connected equipment etc., the contractor shall immediately attend to these defects and take necessary corrective measures. If any readjustment and realignment are necessary, the same shall be done as per Engineer's instructions including repair, rectification and replacement work by the contractor at his cost. The parts to be replaced shall be provided by BHEL.
- I. The contractor shall carry out cleaning and servicing of valves prior to testing of the equipment under his scope. A system for recording of such servicing operations shall be developed and maintained in a manner acceptable to BHEL Engineer to ensure that no valves are left un-serviced. Wherever necessary as required by BHEL Engineer, the contractor shall arrange to lap / grind valve seats.
- m. Cleaning & servicing of all the filters/ strainers, toppings of oils coming in the system shall be done by the contractor within the accepted price.
- n. At the time of each inspection, the contractor shall take note of the decisions / changes proposed by the Engineer and incorporate the same at no extra cost.

2.5 Finish Painting

- i. Primer painting wherever peeled off or damaged or if required is to be carried out after thoroughly cleaning of all dirt, rust, scales, grease, oils and other foreign materials by wire brushing, scrapping, any other method as per requirement of BHEL and the same being inspected and approved by the engineer before painting. Bare surfaces / unpainted surfaces shall be provided with two coats of suitable primer. The gas cut stubs / weld seams would require be cleaning / grinding before painting. After applying the primer paints all the equipment's / items shall be finished with two coats of enamel paint or any other paint as issued by BHEL. The exterior surface may have to be cement / coal tar painted as directed by BHEL.
- ii. As the equipment/ items are to be spray painted, the **contractor shall make arrangements of the required equipment for spray painting**. Spray painting at the job/ site shall be permitted only items approved by the owner / Engineer.
- iii. Supply of Paints & Primers will be in subcontractor scope, all tools and other consumables including scaffolding materials required for finish painting shall be supplied by contractor within their quoted rate.

2.6 Special Terms & Condition for executing the Works:

- 1. **Local transportation & Material handling** from PH to Customer stores or vice versa in in Subcontractor scope.
- 2. Shifting of **dismantled scrap** from Power House to Customer store shall be in subcontractor scope. Sub-contractor have to assist Customer in material loading & unloading.
- 3. EOT crane will be provided by BHEL/ HPSEBL, **Cost of EOT crane operator** shall be in subcontractor scope.
- 4. Special T&P for dismantling and re-erection work shall be provided by customer and same shall be returned to BVPCL in existing condition.
- 5. **Electricity** for Plant components dismantling & assembly work in power house shall be in subcontractor scope. It will be provided by BVPCL on chargeable Basis. Power required to carryout of scope of work under this contract shall be provided on chargeable basis by M/s BVPCL/ HPSEBL.
- 6. Extension boards, cables, bulbs, hand lamps, **100/63A 440V switches, MCCB** etc shall be arrange by the sub-contractor at his own cost.
- 7. **Compressed Air Supply**: Separate **compressor arrangement** for this work shall be in sub-contractor scope. After restoration of existing compressor system sub- contractor may use it for required purpose free of charges but subcontractor has to ensure its preventive and periodic maintenance without any cost to BHEL/ HPSEBL.
- 8. M/s BVPCL/HPSEBL shall provide Form-V and obtaining Labour licence shall be in the scope of subcontractor.
- 9. Illumination system as available in the power house shall be provided by BVPCL/HPSEBL. Additional welding & lighting points as required shall be provided by BVPCL/HPSEB.
- 10. Residential accommodation for subcontractor staff & workers shall be arranged by subcontractor at own cost.
- 11. Hydraulic jacks & other T&P shall be arranged by Contractor.
- 12. Servicing / repairing of Unit Auxiliaries/Governor/OPU/CWS is included in scope of work.
- 13. Any additional items/services not covered in the scope of work but required for successful accomplishment of work shall be included in the scope of work of sub-contractor.
- 14. Any statutory permission / clearance required to complete the above job shall be in subcontractor scope.
- 15. Welding generator for MS/SS welding, grinders, cutters, champion sheets, rubber sheet upto 5mm Thk shall be arrange by Sub-contractor at his own cost.
- 16. Chain pulley blocks, Jacks, D-Shackles and general Tools shall be arrange by sub-contractor at his own cost.
- 17. High capacity chain pulley blocks 25 MT, steel ropes, Pulleys & Mechanical/Electrical winches shall be arrange by Sub-contractor at his own cost as per requirement for dismantling purpose.
- 18. Due care shall be taken while using the preservatives or flammables and all safety rule shall be followed while lifting/lowering the heavy equipment/components/assemblies. All safety rule in respect of equipment or material is also to be followed by the sub-contractor.
- 19. Necessary packaging & loading of consignment by EOT crane on Trailor/Truck shall be carry out by Sub-contractor within the quoted price. Proper transportation stays shall be install for secure movement & protection against any damage during transportation of Turbine & Generator shafts, Rotor pole, Top cover, Pivot ring, Guide vanes and Runner Blade & Hub assembly. Hiring of transporter

services for material movement from site to a place of repairing of above mentioned consignment or any other dismantled equipment is not in this scope of work.

Optional Scope of Work

BOQ 2.1 Mounting/assembly of newly supplied rotor poles.

- i. Re-assembly / Mounting of **newly supplied** pole's field coil on cleaned pole cores shall be covered in Optional Work.
- ii. Blue Matching of new keys. Electrical Testing (IR, PI, HV Test, Impedance, DC resistance, Voltage Drop Tests).

BOQ 2.2 Rotor Core building.

- i. Dismantling of Rotor Core. Heating of rotor rim for removal of spider rotor rim keys & untightening of Rotor rim punching rotor studs. Removal of rotor studs, rim end plates, rim punching & proper stacking of them for reuse.
- ii. Levelling, Assembly of Core punching, Rim building. Pressing of Core, Rim Stud /nuts tightening
- iii. Height & Dia measurement, Elongation measurement
- iv. Rim Key tightening & Assembly as per BHEL procedure.

BOQ 2.3 & 2.4 Stator Bar Replacement (TOP & Bottom)

- i. Replacement of damaged winding bars beyond 10 Nos shall be considered as Additional Work.
- ii. Physical inspection of new bars & dimensional measurement.
- iii. Dry out of New Bars. IR /PI Measurement. HV Test of individual new bars.
- iv. Assembly of bar in slots. Wedging, lacing.
- v. Dry Out of complete stator. Rectiformer required for dry out shall be in subcontractor scope.
- vi. Final HV Test of Complete Stator.
- vii. Varnishing of Stator including core winding & frame.

3. Facilities in the Scope of Subcontractor

- 1. Material handling -Local Site transportation of Material. Material handling from Power House to Customer / BHEL stores or vice versa in in Sub-contractor scope. Arrangement of Truck, Trailer, Lorry, Hydra & Consumables is in subcontractor scope.
- 2. **Cost of EOT crane operator** shall be in subcontractor scope.
- Construction Power / Electricity for Plant components dismantling & assembly work in power house shall be in subcontractor scope. It will be provided by BVPCL on chargeable Basis. Power required to carryout of scope of work under this contract shall be provided on chargeable basis by M/s BVPCL/ HPSEBL.
- 4. **100/63A 440V switches, MCCB,** Extension boards, cables, bulbs, hand lamps, etc shall be arrange by the sub-contractor at his own cost.
- 5. **Compressed Air Supply**: Separate **compressor arrangement** for this work shall be in sub-contractor scope. After restoration of existing compressor system sub- contractor may use it for required purpose free of charges but subcontractor has to ensure its preventive and periodic maintenance without any cost to BHEL/ HPSEBL.
- 6. **First Fill of Consumables (**Turbine Oil & Transformer Oil) during commissioning is in subcontractor scope.
- 7. **Vehicle:** Two full time vehicles (Mahindra Xylo/ Scorpio/ Innova) for **exclusive** use of BHEL Staff residing at site/Palampur as per Annexure-C. Vehicle will also be required for movement of BHEL Staff to Nearest Rail heads & customer HPSEBL offices at Joginder Nagar, Sundar Nagar, Shimla & BHEL Regional offices. **Cost of hiring shall be in subcontractor scope**. Terms & Conditions shall be as per **Annexure-C.**
- 8. Site Establishment: Bachelor (Furnished) accommodation for BHEL Personals (FIVE) at Palampur as per BHEL Standards / requirement (Refer Annexure-C). Cost of accommodation in Palampur is in scope of subcontractor for complete period of contract including extended period. To meet stay during late hours working & mess at site, Premises will be provided by BVPCL/HPSEBL. Repair & Maintenance (Flooring / tiling & Painting) cost will be in subcontractor scope. Premise to be made ready before start of the work.
- 9. Cost of hiring Two Skilled persons as PC Operator & Cook, Two Semi Skilled person as office Boys for complete period of contract is in subcontractor scope. Under this contract, contractor is to be provided 72 Man Months for exclusively use of BHEL. In case bidder fails to provide given Man Month as per BHEL requirement, recovery shall be done as per Govt. wages rules applicable in Himachal Pradesh.
- 10. **Illumination system** as available in the power house shall be provided by BVPCL/HPSEBL. Additional welding & lighting points as required shall be provided by BVPCL/HPSEB.
- 11. **Residential accommodation** for subcontractor staff & workers shall be arranged by subcontractor at own cost.
- 12. Any Statutory permission / clearance required to complete the above job shall be in subcontractor scope.

4.	4(A) - T&P and MME's TO BE DEPLOYED BY CONTRACTOR					
	The following indicative major Tools & Plants (T&P) shall be arranged by the Contractor for execution work, within the quoted rate.					
Sl. No.	EQUIPM	1ENT				
1	General purpose Hand tools	As per requirement				
2	Drilling Machines1/4", 1/2", 3/4" & 1"	As per requirement				
3	Welding Machines-	As per requirement				
4	Gas cutting set	As per requirement				
5	Trucks 20 T	01 No				
6	Lorries /Trailer of adequate capacity	01 No				
7	Hydra -14 T / 18T	As per requirement				
8	Torque Wrenches up to 2000 NM.	1				
10	Impact Wrench (Pneumatic) up to 2400 NM-	1				
11	Chain pulley block of various capacities (2T, 5T, 10T,20T), Pull lift	As per requirement				
12	Turn Buckle (2 T, 5 T, 10T etc.)	As per requirement				
13	Hydraulic / Mechanical Jacks of various capacities (5-10-20-100T)-	As per requirement				
14	Air Arc Gouging Arrangement	As per requirement				
15	Hydraulic pump (hand operated).	1				
16	MIG Welding machine set	As per requirement				
17	RECTIFORMER	AS Per Requirement				
18	AC HV Test Kit AS Per Requirement					
19	Precision tools (IMT) TENTATIVE QUANTITY-	As per requirement.				
	 0.02 accuracy block level Dumpy level with accessories Theodolite work station Inside micrometres Outside micrometer-0-25, 25/50, 50-75, 75-100, 100-150 					

6) Vernier calippers 150, 300 7) Telescopic gauge 8) Slip gauge 9) Feeler gauges 10) Dial gauge with magnetic stand NOTES: 1. The above list – (4A) is only indicative and these T&Ps may not be required for entire contract period but contractor will ensure that these T & Ps are provided as per the work requirement. T&P Deployment schedule will be finalized at site based on the work fronts and in consultation with BHEL Engineer. Contractor have to mobilize / maintain the T& P as per the schedule notified time to time by BHEL Engineer. 2. If any one of T&P mentioned above is not needed for proper execution of scope of work, provided contractor has not utilized BHEL free issued T&P for completing such work, no recovery from contractor shall be applicable 3. Any additional item required in addition to above mentioned T&P for proper execution of scope of work, contractor has to arrange such T&P within quoted rate on the instruction of BHEL in writing in a reasonable period within two weeks from the written instruction from BHEL 4. In case deployment of T&P w.r.t requirement, is delayed or deployed for a shorter period or abnormal down time of T&P or in case T&P w.r.t requirement was not deployed by the contractor as per instruction of BHEL and BHEL had to deploy either its own T&P or from outside, the recovery shall be done from the contractor as under: a. In case BHEL had to deploy its own T&P, hire charges of T&P applicable for outside agencies as per extant guidelines for "Hire Charges on issue of Capital Tools & Plants" shall be recovered. b. In case BHEL had to deploy the T&P from outside, actual hiring cost plus applicable overheads shall be recovered. In case the contractor does not deploy or delays deployment or major T&P with reference to schedule specified or T&P deployed is out of service for continuous more than 5 days, BHEL will recover nonrefundable penalty per day in the following manner- (This recovery shall also be applicable in case BHEL does not deploy its own T&Ps or not deployed hired T&Ps) In respect of hydra/crane 14T/18MT- @ Rs 3000/- per day In respect of each trailer / Truck 20MT- @ Rs 2000/- per day per trailer / truck. For the daily recovery rate for other T&P/IMTEs BHEL Engineer decision shall be final and binding on the contractor. 5. All the tools and tackles/measuring instruments shall be duly tested/calibrated and valid certificate to that effect should be submitted to BHEL site in-charge before the start of work.

	 Depending upon the nature of work and availability of facilities locally, contractor may have to arrange for a temporary workshop for facilitating uninterrupted progress of work. Necessary electrical / water / air connection required for operation of any of the tools & tackles shall be to Contractor 's account. The contractor shall arrange crane operator, diesel, petrol and other consumables required for the tools and plants, equipment's etc. Preventive and routine maintenance of T & P are also to be arranged by the contractor at his cost without any delay. Required number of experienced mechanics and helpers for routine maintenance of the above cranes shall be provided by the contractor within his quoted rate. All the tools and plants required for this scope of work, except the Tools & Plants provided by BHEL are to be arranged by the contractor within the quoted rates. The list is suggestive in nature. Any additional T & P required to meet BHEL commitments/schedule shall be arranged without any extra cost by the contractor. If the work related to T & Ps mentioned above list - (A) is completed then, Engineer I / C can release the T & P during contract period / extended period if any. However, written permission shall be taken by contractor from BHEL construction Manager before releasing T&P.
4 B	MONITORING AND MEASURING EQUIPMENTS (MMEs)- INDICATIVE LIST OF MMES
	TO BE PROVIDED BY CONTRACTOR AS PER REQUIRMENT AT SITE
SL NO	EQUIPMENT
1	Rectiformer
2	Digital/Analog Multi-meter AC & DC-
3	Digital Megger 0-1000-2000-5000V
4	Primary current / Voltage injection kit
5	Tong Testers DC 30/60/300 A
6	Impedance Measurement Kit
7	Phase sequence indicator 110-450V
8	Frequency meter 0-100 HZ (0-110-230-415 V)
9	Single phase variac 0-220 V, 8A
9	Single phase variac 0-220 V, 8A Three phase variac 0-415,15A

13	ELCID Test Kit
14	Precision Thermometer
15	Sound level meter 150 db.
16	Digital Handhold Temperature meter,
17	Tan Delta Test Kit
18	BDV Test Kit & PPM Meter
19	SFRA (Sweep Frequency Response Analysis) Test Kit.
NOTES:	 The above list is only indicative and these MMEs may not be required for entire contract period but contractor will ensure that these T & Ps are provided as per need. Contractor will assess actual quantity and period of requirement based on his experience Other terms and conditions regarding T&Ps / MMEs please also refer clause for T&P& MMEs in SCC. All the MMEs required for this scope of work are to be arranged by the contractor within the quoted rates. The list is suggestive in nature. Any additional MMEs required to be arranged by the contractor. If work gets delayed due to non-availability of MMEs, BHEL reserves the right to get the work done at the risk and cost of contractor without prejudice to rights of BHEL as in GCC.

5 LIST OF T&P BEING PROVIDED BY BHEL/ HPSEBL FOR USE OF CONTRACTOR FREE OF HIRE CHARGES ON SHARING BASIS

S.NO.	EQUIPMENT	CAPACITY	QTY
1.	EOT CRANE (Power House)	125 MT / 20 MT	01

NOTE: The above mentioned suitable capacity crane without slings & lifting tackles will be provided by BHEL on sharing basis. Operator cost for EOT crane shall be arrange by subcontractor

6 TIME SCHEDULE:

- 6.1 **INITIAL MOBILIZATION**: After receipt of LOA/LOI, Contractor shall discuss with Regional Service Manager (RSM) Chandigarh / Project Manager regarding initial mobilization. Contractor shall mobilize necessary resources within 5 Days of issue of letter of intent or as per the directive of RSM Chandigarh.
- 6.2 **Contract Period**: Total Duration for each Unit shall be (6 Months for Single Unit, One Month for Dismantling, 5 Months for Erection/ testing & Commissioning works). Given Space constraint on service bay, one unit at time shall be taken for restoration work. Thus, **total contract period shall be 18 Months** to complete all three Units. However, efforts & modalities will be exercised to reduce the time period by optimising space / work activities.

Post Dismantling of Machine, Physical assessment of all parts shall be carried out jointly by BHEL / HPSEBL/. BVPCL team to assess the quantum of damage & subsequently parts shall be dispatched to BHEL workshops/ vendors for refurbishment / replacement.

The contractor has to subsequently augment his resources in such a manner that following major milestones of dismantling, erection, testing & commissioning shall be achieved on specified schedule below:

	SN	Major Milestones	Start / Completion
	1	Site Mobilization	Within 5 Days from Award of LOI /
			LOA or as decided by BHEL.
	2	Start of Contract Period (Zero Date)	Start of Dismantling/ Erection work
			as decided by BHEL.
M1	3	Complete Dismantling of U#1.*	End of 1 st Month from Zero Date.
M2	4	Spinning & Bearing Run of U#1 *	End of 5 th Month
	5	Synchronization of U#1	End of 6 th Month.
M3	6	Complete Dismantling of U#2.	End of 7 th Month
M4	7	Spinning & Bearing Run of U#2	End of 11 th Month
	8	Synchronization of U#2	End of 12 th Month
M5	9	Complete Dismantling of U#3.	End of 13 th Month
M6	10	Spinning & Bearing Run of U#3	End of 17 th Month
	11	Synchronization of U#3	End of 17.5 th Month
	12	Completion of all facilities at site	End of 18 th Month
		including completion of punch point	
		and site closing.	

Note - * Whichever Unit is taken first for work execution shall be termed as U#1 & so on.

There is provision of penalty in case of slippage of intermediate milestones as following: -

- i. Activity mentioned above at Sr No 3 is termed as M1 and at Sr No 4 is termed at M2. for making provisions of penalty in case of slippage of these milestones for U#1.
- ii. Activity mentioned above at Sr No 6 is termed as M3 and at Sr No 7 is termed at M4 for making provisions of penalty in case of slippage of these milestones for unit 2.

- iii. Activity mentioned above at Sr No 9 is termed as M5 and at Sr No 10 is termed at M6 for making provisions of penalty in case of slippage of these milestones for unit 3.
- iv. In case of slippage of these intermediate millstones (M1, M2 for Unit 1, M3, M4 for Unit 2 & M5, M6 for Unit 3) delay analysis shall be carried out on achievement of each of above milestones for Unit 1,2 & 3.
- v. In case delay in achieving M1 milestone is solely attributable to the contractor, 0.5% per week of **executable contract value***, limited to maximum 2% of executable contract value, will be withheld.
- vi. In case delay in achieving M3 milestone is solely attributable to the contractor, 0.5% per week of **executable contract value***, limited to maximum 2% of executable contract value, will be withheld.
- vii. In case delay in achieving M5 milestone is solely attributable to the contractor, 0.5% per week of **executable contract value***, limited to maximum 2% of executable contract value, will be withheld.
- viii. In case delay in achieving M2 milestone is solely attributable to the contractor, 0.5% per week of **executable contract value***, limited to maximum 3% of executable contract value, will be withheld
- ix. In case delay in achieving M4 milestone is solely attributable to the contractor, 0.5% per week of **executable contract value***, limited to maximum 3% of executable contract value, will be withheld.
- x. In case delay in achieving M6 milestone is solely attributable to the contractor, 0.5% per week of **executable contract value***, limited to maximum 3% of executable contract value, will be withheld.
- xi. Amount already withheld, if any against slippage of M1, M3, M5 milestone, shall be released only if there is no delay attributable to contractor in achievement of M2, M4, M6 milestone of respective Unit.
- xii. Amount required to be withheld on account of slippage of milestone M1, M3, M5 / M2, M4, M6 shall be withheld out of respective milestone payment and balance amount (if any) shall be withheld @ 10% of RA bill amount form subsequent RA Bills.
- xiii. Final deduction towards LD (if applicable), on account of delay attributable to contractor shall be based on final delay analysis on completion/closure of contract. Withheld amount, if any due to slippage of milestone M1, M3, M5 / M2, M4, M6 shall be adjusted against LD or released as the case may be.
- xiv. In case of termination of contract due to any reason attributable to contractor before completion of work, the amount already withheld against slippage of milestone M1, M3, M5 / M2, M4, M6 shall not be released and be converted into recovery.

Executable Contract Value* means- Value of work for which inputs/fronts were made available to contractor and were scheduled for execution till the date of achievement of that milestone.

6.3 Completion of Works

Once the pre-commissioning and commissioning is performed, test service period of 72 hours' continuous operation at rated condition will be conducted on last unit and also all pending/punch points to be attended, then contract shall be considered as "completed".

6.4 CONSEQUENCE OF DELAY

It may be noted that in the event, delay in completion is attributable to the contractor; BHEL will impose LD on the contractor as per clause no. 2.7.9 of GCC.

6.5 Guarantee Period

Guarantee period (Performance Guarantee for Workmanship) will commence from the date of issue of Completion Certificate of the respective generating unit or date of issue of Taking-Over Certificate of the respective generating unit be as per GCC 2.24.

7 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, once in a month detailing work done during the month. The format for billing shall be approved by BHEL before raising invoices.
- 7.3 **PRICE VARIATION COMPENSATION** In reference to clause no.2.17 of GCC.
- 7.4 **Over Run Charges**: Shall be as per clause 2.12 of GCC.
- 7.5 **RETENTION AMOUNT AND PAYMENTS**: Retention amount shall be withheld from each RA bill as per provision of clause 2.22 and 2.23 of GCC regarding retention amount and payments.
- 7.6 Subject to any deduction which BHEL may be authorized to make under the contract, the contractor on the certificate of the Engineer at site be entitled for payment.

7.7 PROGRESSIVE PAYMENT SHALL BE RELEASED ON PRORATA BASIS.

100 % of contract rate of item No. 1 of rate schedule shall be payable as detailed below **in Annexure –A.** Further break-up and/or minor changes in the Annexure A referred below, if required depending upon the site conditions, can be done at site entirely at the discretion of BHEL site.

Annexure -A

BILLING BREAK UP

Restoration of Electro- Mechanical Equipment up to pre-rupture level, Testing, commissioning, Synchronization of 3X33.3 MW Uhl Stage-III HEP							
SL.NO	ACTIVITY	Total	1	II	II	Common	Total
1	TURBINE	%					%
1.1	Dismantling, Instruments, pipeline of Runner, Guide Apparatus, Regulating Mechanism, Servomotor, DT Cone, Turbine Pit Drainage System. Installation of Bulk head gates.	1.50	0.50	0.50	0.50		1.50
1.2	Dismantling of Turbine Shaft, Shaft Seal, TGB, Turbine pit Hoist, Platform, Turbine Instrumentation.	4.50	1.50	1.50	1.50		4.50

			1	1	1	1
1.3	Assessment of damage to turbine & its Auxiliaries. Handover of damaged components to Customer.	0.15	0.05	0.05	0.05	0.15
1.4	Assay of Runner & Shaft in service bay, Lowering levelling 4.5 & centring of shaft.		0.50	0.50	0.50	1.50
1.5	Assembly of guide apparatus up to assembly of top cover, guide vanes and bushing cheek plates.	2.40	0.80	0.80	0.80	2.40
1.6	Erection of regulating Ring & Servomotor	1.80	0.60	0.60	0.60	1.80
1.7	Assy. Of link Mechanism	1.20	0.40	0.40	0.40	1.20
1.8	Painting of pipelines of turbine portion	0.30	0.10	0.10	0.10	0.30
2.1	Dismantling of MIV seal operation piping, its filters, Instruments.	0.36	0.12	0.12	0.12	0.36
2.2	Cleaning, Oil Flushing in MIV OPU, Dry Stroking & assessment of MIV.	0.36	0.12	0.12	0.12	0.36
2.3	Installation of OPU, pressure accumulator & pipelines	0.48	0.16	0.16	0.16	0.48
2.4	Dry Operational check of MIV	0.60	0.20	0.20	0.20	0.60
3.1	Flushing of Governor OPU and pressure accumulator, associated pipping's.	0.33	0.11	0.11	0.11	0.33
3.2	Assessment of of HMC & EHGC.	0.33	0.11	0.11	0.11	0.33
3.3	Refurbishment / Replacement of Governor	0.45	0.15	0.15	0.15	0.45
3.4	Filing of oil in the system and setting of OPU and governor.	0.03	0.01	0.01	0.01	0.03
3.5	CGLS dismantling, cleaning & assembly.	0.18	0.06	0.06	0.06	0.18
3.6	SCH Pipe lines dismantling, cleaning & assembly.	1.50	0.50	0.50	0.50	1.50
3.3	Turbine Instrumentation	2.10	0.70	0.70	0.70	2.10
3.4	Box up for readiness for spinning	0.90	0.30	0.30	0.30	0.90
3.5	Pre commissioning checks Turbine	1.20	0.40	0.40	0.40	1.20
3.6	Pre commissioning checks Governor Auxiliaries	1.50	0.50	0.50	0.50	1.50
3.7	Pre commissioning checks MIV & its Auxiliaries	1.20	0.40	0.40	0.40	1.20

4	GENERATOR					
4.1	Removal of Generator floor cover sheets, Brush Gear Arrangement. Drain the oil from the HS lube system and generator bearing reservoirs. Removal of RTD's, thermocouple etc.	0.90	0.30	0.30	0.30	0.90
4.2	Dismantling of Upper bracket after joint recording of levels & centre reference / beacon points with BVPCL/ HPSEBL site representatives. Rotor lifting to service Bay. 1.00 1.00 1.00		3.00			
4.3	Assessment of damage to generator & its Auxiliaries. Handover of damaged components to Customer.	1.50	0.50	0.50	0.50	1.50
4.4	Cleaning of Stator & Rotor.	0.30	0.10	0.10	0.10	0.30
4.5	HV test of rotor in S/B and Stator in Generator Pit.	0.90	0.30	0.30	0.30	0.90
4.6	Assessment & Rectification of defect observed.	5.46	1.82	1.82	1.82	5.46
4.7	HV test of rotor in S/B and Stator in Generator Pit.	0.69	0.23	0.23	0.23	0.69
4.8	Rotor lowering in Pit	0.45	0.15	0.15	0.15	0.45
4.9	Lower Bracket assembly in service bay	0.18	0.06	0.06	0.06	0.18
4.1	Instt. Of lower bracket in pit, alignment etc.	0.45	0.15	0.15	0.15	0.45
4.11	Assembly of brake, jack system, HS lube system.	0.60	0.20	0.20	0.20	0.60
4.12	Upper bracket assembly including flooring sheets in service bay.	0.90	0.30	0.30	0.30	0.90
4.13	Installation of upper bracket in pit, alignment etc.	0.45	0.15	0.15	0.15	0.45
4.14	Blue matching of bearing pads & thrust bearing components.	0.75	0.25	0.25	0.25	0.75
4.15	Shaft & thrust bearing assembly in service bay.	0.90	0.30	0.30	0.30	0.90
4.16	Shifting thrust bearing, shaft assembly in pit including final positioning.	0.18	0.06	0.06	0.06	0.18
4.17	Installation of stator air coolers.	0.90	0.30	0.30	0.30	0.90
4.18	Firefighting system of generator Installation	0.30	0.10	0.10	0.10	0.30
4.19	Firefighting system of generator testing	0.30	0.10	0.10	0.10	0.30

	T		<u> </u>		1	
4.2	Generator instrumentation including calibration.	0.42	0.14	0.14	0.14	0.42
4.21	Panel Instrumentation.	0.45	0.15	0.15	0.15	0.45
4.22	Rotor/ Turbine/ generator shaft coupling including any correction for alignment.	1.20	0.40	0.40	0.40	1.20
4.23	Extension shaft, slip ring, bush gear, CCL etc. 2.25 0.75 0.75 0.75		2.25			
4.24	Unit axis alignment	1.20	0.40	0.40	0.40	1.20
4.25	Box up of bearings, air baffles, generator	3.00	1.00	1.00	1.00	3.00
4.26	Pre commissioning Generator	3.00	1.00	1.00	1.00	3.00
5	Pre commissioning checks Generator Auxiliaries	3.00	1.00	1.00	1.00	3.00
6	Pre commissioning checks Bus duct & its Auxiliaries	1.50	0.50	0.50	0.50	1.50
7	Assessment of Digital Exc sys with DVR, accessories etc.	1.80	0.60	0.60	0.60	1.80
7.1	Assessment of of ducts after GCB to GT (alignment and conductor welding for Main-run & Delta-run ducts) cleaning & instrumentation	1.80	0.60	0.60	0.60	1.80
7.2	Assessment of ducts before GCB i.e. from Generator barrel to GCB (alignment and conductor welding) cleaning & Instruments.	1.20	0.40	0.40	0.40	1.20
8.1	Assessment of Tap-off ducts (AT, ET, VT)	0.60	0.20	0.20	0.20	0.60
8.2	Final HV Test with all connection	0.60	0.20	0.20	0.20	0.60
9.1	41 MVA GT Assessment	1.20	0.40	0.40	0.40	1.20
9.2	41 MVA GT assembly, Restoration & touch painting	0.90	0.30	0.30	0.30	0.90
9.3	41 MVA GT Dehydration, oil filling, HOC	1.20	0.40	0.40	0.40	1.20
9.4	41 MVA GT Pre commissioning check & Charging	1.20	0.40	0.40	0.40	1.20
10	Assessment of Control and monitoring system incl Alarm & annunciation panel, sync panel, instruments, relays, automatic energy metering system etc.	1.50	0.50	0.50	0.50	1.50
11	Assessment of Control and monitoring system incl. computers & control desk, VDU's, printers, optical fibre cables.	1.50	0.50	0.50	0.50	1.50

	Accessed of Duration		1				
	Assessment of Protection				0.50		
	system for generator and	1.50	0.50	0.50			1.50
12	transformer with wiring and						
12	cubical.	2.40	0.70	0.70	0.70		2.40
13	Final Installation of Instruments	2.10	0.70	0.70	0.70	0.50	2.10
14	Assessment of SST.	0.50				0.50	0.50
	Assessment of Unit station						
	service, other transformer with	0.50				0.50	0.50
15	415 V Switchgear.						
4.6	Assessment of Open Loop CW	2.25	0.75	0.75	0.75		2.25
16	system						
17	Assessment of Closed Loop CW	2.75	0.75	0.75	0.75	0.50	2.75
17	system						
	Assessment of LP compressor	0.00	0.40	0.40	0.40	0.50	0.00
10	air system with compressor	0.80	0.10	0.10	0.10	0.50	0.80
18	accessories						
	Assessment of HP compressor	0.00	0.10	0.10	0.10	0.60	0.00
10	air system with compressor	0.90	0.10	0.10	0.10	0.60	0.90
19	accessories						
20	Painting of equipment of Bus	0.60	0.20	0.20	0.20		0.60
20	duct						
24	Final touch up painting during	0.60	0.20	0.20	0.20		0.60
21	hand over.						
22	Spinning and bearing run of	3.00	1.00	1.00	1.00		3.00
22	unit.						
	Synchronising including	4.50	0.50	0.50	0.50		4.50
22	commission tests prior to	1.50	0.50	0.50	0.50		1.50
23	synchronising.						
2.4	Load throw off test and unit	1.50	0.50	0.50	0.50		1.50
24	inspection.	3.00				2.00	2.00
25	Maintaining Cleanness at site.	3.00				3.00	3.00
	On completion of trial run and						
	handing over the unit to BVPCL						
	or 3 months after the	2.50				2.50	2.50
	contractor has discharge his						
26	responsibilities as per contract						
26	whichever is earlier. 2.5 % of contract value shall be						
	payable on completion of all						
	pending works, which include settlement of all outstanding						
	issues, reconciliation of						
	material wherever required,	2.50				2.50	2.50
	area cleaning and handing over						
	surplus material and spares to						
	BVPCL/BHEL and submission of						
27	final bills.						
۷,	mar bins.	100%	29.80%	29.80%	29.80%	10.60%	100%
		100/0	23.00/0	29.00/0	29.00/0	10.00/0	100/0

8.0 TAXES & DUTIES

8.1	The contractor shall pay all (save the specific exclusions as enumerated in this clause) taxes, fees, license, charges, deposits, duties, tools, royalty, commissions, other charges, etc. 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/duties, BHEL shall have the right to recover the same from his bills or otherwise as deemed fit. However, provisions regarding GST on output supply (goods/service) and TDS/TCS as per Income Tax Act shall be as per following clauses.
8.2	GST (Goods and Services Tax)
8.2.1	GST as applicable on output supply (goods/services) are excluded from contractor's scope; therefore, contractor's price/rates shall be exclusive of GST. Reimbursement of GST is subject to compliance of following terms and conditions. BHEL shall have the right to deny payment of GST and to recover any loss to BHEL on account of tax, interest, penalty etc. for non-compliance of any of the following condition.
8.2.2	The admissibility of GST, taxes and duties referred in this chapter or elsewhere in the contract shall be limited to direct transactions between BHEL & its Contractor. BHEL shall not consider GST on any transaction other than the direct transaction between BHEL & its Contractor.
8.2.3	Contractor shall obtain prior written consent of BHEL before billing the amount towards such taxes. Where the GST laws permit more than one option or methodology for discharging the liability of tax/levy/duty, BHEL shall 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.
8.2.4	Contractor has to submit GST registration certificate of the concerned state. Contractor also needs to ensure that the submitted GST registration certificate should be in active status during the entire contract period.
8.2.5	Contractor/Vendor has to issue invoice indicating HSN/SAC code, Description, Value, Rate, applicable tax and other particulars in compliance with the provisions of relevant GST Act and Rules made thereunder.
8.2.6	Vendor has to submit GST compliant invoice within seven days from the due date of invoice as per GST Law. In case of delay, BHEL reserves the right of denial of GST payment if there occurs any hardship to BHEL in claiming the input thereof. In case of goods, vendor has to provide scan copy of invoice & GR/LR/RR to BHEL before movement of goods starts. Special care should be taken in case of month end transactions.
8.2.7	Vendor has to ensure that invoice in respect of such services which have been provided/completed on or before end of the month should not bear the date later than last working day of the month in which services are performed.
8.2.8	Subject to other provisions of the contract, GST amount claimed in the invoice shall be released on fulfilment of all the following conditions by the Contractor: -

		<u> </u>				
	I.	Supply of goods and/or services have been received by BHEL.				
	II.	Original Tax Invoice has been submitted to BHEL.				
	III.	Contractor/ Vendor has submitted all the documents required for processing of bill as				
		per contract/ purchase order/ work order.				
	IV.	In cases where e-invoicing provision is applicable, vendor/contractor is required to				
		submit invoice in compliance with e-invoicing provisions of GST Act and Rules made				
		thereunder.				
	V.	Contractor has filed all the relevant GST return (e.g. GSTR-1, GSTR-3B, etc.) pertaining				
		to the invoice submitted and submit the proof of such return along with immediate				
		subsequent invoice. In case of final invoice/ bill, contractor has to submit proof of such				
		return within fifteen days from the due date of relevant return.				
	VI.	Respective invoice has appeared in BHEL's GSTR - 2A for the month corresponding to				
		the month of invoice. Alternatively, BG of appropriate value may be furnished which				
		shall be valid at least one month beyond the due date of confirmation of relevant				
		payment of GST on GSTN portal or sufficient security is available to adjust the financial				
		impact in case of any default by the contractor.				
	VII.	Contractor has to submit an undertaking confirming the payment of all due GST in				
		respect of invoices pertaining to BHEL.				
	Any fir	nancial loss arises to BHEL on account of failure or delay in submission of any document				
8.2.9	-	contract/purchase order/work order at the time of submission of Tax invoice to BHEL,				
0.2.3	•	e deducted from contractor's bill or otherwise as deemed fit.				
8.2.10	TDS as	applicable under GST law shall be deducted from contractor's bill.				
	Contra	actor shall comply with the provisions of e-way bill wherever applicable. Further				
8.2.11		ver provisions of GST Act permits, all the e-way bills , road permits etc. required for				
0.2.11		ortation of goods needs to be arranged by the contractor.				
	-					
		ctor shall be solely responsible for discharging his GST liability according to the				
8.2.12	•	ons of GST Law and BHEL will not entertain any claim of GST/interest/penalty or any				
		liability on account of failure of contractor in complying the provisions of GST Law or rging the GST liability in a manner laid down thereunder.				
	uisciia	ignig the GST hability in a manner laid down thereunder.				
		e declaration of any invoice is delayed by the vendor in his GST return or any invoice is				
8.2.13		quently amended/altered/deleted on GSTN portal which results in any adverse financial				
0.2.13	•	ation on BHEL, the financial impact thereof including interest/penalty shall be recovered				
	from the Contactor's due payment.					
	Any de	enial of input credit to BHEL or arising of any tax liability on BHEL due to non-compliance				
8.2.14		Law by the Contractor in any manner, will be recovered along with liability on account				
	of inte	rest and penalty (if any) from the payments due to the Contactor.				

8.2.15	In the event of any ambiguity in GST law with respect to availability of input credit of GST charged on the invoice raised by the contractor or with respect to any other matter having impact on BHEL, BHEL's decision shall be final and binding on the contractor.
8.2.16	Variation in Taxes & Duties: Any unward variation in CST shall be considered for reimbursement provided supply of goods.
	Any upward variation in GST shall be considered for reimbursement provided supply of goods and services are made within schedule date stipulated in the contract or approved extended schedule for the reason solely attributable to BHEL. However downward variation shall be subject to adjustment as per actual GST applicability.
	In case the Government imposes any new levy/tax on the output service/goods after price bid opening, the same shall be reimbursed by BHEL at actual. The reimbursement under this clause is restricted to the direct transaction between BHEL and its contactor only and within the contractual delivery period only.
	In case any new tax/levy/duty etc. becomes applicable after the date of Bidder's offer but before opening of the price Bid, 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.
8.3	Income Tax:
	TDS/TCS as applicable under Income Tax Act, 1961 or rules made thereunder shall be deducted/collected from contractor's bill.

8.4 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:-

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 license to the Competent Authority under the BOCW Act and obtain proper certificate thereof by specifying the

- 8.4.1 scope of its work. It shall also be responsibility of the contractor to furnish a copy of such certificate of license / permission to BHEL within a period of one month from the date of award of contract.
- 8.4.2 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.
- 8.4.3 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.
- 8.4.4 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.
- 8.4.5 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.
- 8.4.6 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.
- 8.4.7 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.

Notes:

- 1) The Gross amount is to be construed as cost of construction in line with the provisions of the BOCW of the BOCW Cess act and in case of compliance by customer by way of deduction at source in line with clause No 3(2) of the act an equitable adjustment to the relatable cost of construction attributable to the bidder shall be made in terms of clause no 8.2 of TCC.
- 2) In case compliance by customer by way of deduction at source in line with clause no 3(2) is not resorted to, the compliance of BOCW Cess act shall be ensured by the bidder in line with the provisions of BOCW Cess act in terms of clause no 8.2.2 of TCC.
- 3) The bidder may consider the cost of construction for levy of BOCW Cess inclusive of GST, however, due to whatsoever reason if the GST does not form the cost of construction for levy of aforesaid Cess an equitable adjustment thereof shall be made to the contract price.

9 In order to give Phillip to Pradhan Mantri Kaushal Vikas Yojana:

"The contractor shall, at all stages of work deploy skilled/semi-skilled tradesmen who are qualified and possess certificate in particular trade from CPWD Training Institute/ Industrial Training Institute/National Institute of Construction Management and Research (NICMAR), National Academy of Construction, CIDC or any similar reputed and recognized Institute managed/ certified by State/ Central Government. The number of such qualified tradesmen shall not be less than 20% of total skilled/semi-skilled workers required in each trade at any stage of work. The contractor shall submit number of man days required in respect of each trade, its scheduling and the list of qualified tradesmen along with requisite certificate from recognized Institute to Engineer-in-Charge for approval. Notwithstanding such approval, if the tradesmen are found to have inadequate skill to execute the work of respective trade, the contractor shall substitute such tradesmen within two days of written notice from Engineer-in-Charge. Failure on the part of contractor to obtain approval of Engineer-in-Charge or failure to deploy qualified tradesmen will attract a compensation to be paid by contractor at the rate of Rs. 100 per such tradesman per day. Decision of Engineer-in-Charge as to whether particular tradesman possesses requisite skill and amount of compensation in case of default shall be final and binding.

10. WEIGHT SCEDULE

GENERATOR WEIGHTS

Weight of complete wound stator	88 Tonnes
Weight of Thrust collar assembly	3.6 Tonnes
Weight of rotor (spider, rim , shaft, pole & fan) assembly	106 Tonnes
Weight of bottom bracket assemblies	4.9 Tonnes
Weight of top bracket centre and arm assembly	23.6 Tonnes
Balance items (CW piping, sole plates, misc. items etc.)	23.9 Tonnes
Weight of complete generator	250 Tonnes

11. GENERAL TERMS OF WORK EXECUTION

THE SCOPE OF THE WORK WILL COMPRISE OF BUT NOT LIMITED TO THE FOLLOWING:

(All the works mentioned hereunder shall be carried out within the accepted rate unless otherwise specified.)

11.0 GENERAL

- 11.1 The intent of this specification is to provide services for execution of 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/ lump sum price shall deem to be inclusive of all such contingencies.
- 11.2 It is not the intent to specify herein all details of all material. Any item related this work not covered by this but necessary to complete the system will be deemed to have been included in the scope of the work.
- 11.3 All the necessary certificates and licenses required to carry out this scope of work are to be arranged by the contractor then and there at no extra cost
- 11.4 The contractor shall carry out the work in accordance with standard practices / codes / instructions / drawings / documents / specification/ manuals supplied by BHEL from time to time.
- 11.5 The work shall conform to dimensions and tolerances given in various drawings and documents that will be provided during execution. If any portion of work is found to be defective in workmanship, not conforming to drawings or other stipulations, the contractor shall dismantle and redo the work duly replacing the defective materials at his cost failing which the job will be carried out by BHEL by engaging other agencies / departmentally and recoveries will be affected from contractor's bills towards expenditure incurred including BHEL's usual overhead charges.
- 11.6 Following shall be the responsibility of contractor and have to be provided within finally accepted rates/ prices:
 - Provision as required of all types of labour, supervisors, engineers, watch and ward, tool & tackles, calibrated inspection, measuring and test equipment as specified and otherwise required for the work, consumables for erection, testing and commission including material handling.
 - Proper out-turn as per BHEL's plan and commitment

- Completion of work as per BHEL schedule
- Good quality and accurate workmanship for proper performances of equipment
- Repair and Rectification
- Preservation/ Re-conservation of all components during storage/ reaction till handing over
- 11.7 The quantities indicated in the tender specification are approximate and are liable for variation and alteration at the discretion of BHEL. The quoted unit rate shall be applicable for any additional product group also, if included at a later date integral to the main scope of work/ package envisaged. The work executed shall be measured and price as per the unit rate arrived at for each work area as mentioned in the relevant clauses.
- 11.8 Site testing wherever required shall be carried out for all items / materials installed by the contractor to ensure proper installation and functioning in accordance with drawings, specifications and manufacturer's recommendations.
- 11.9 The contractor shall carryout additional tests if any, which the Engineer feels necessary because of site conditions and also to meet system specification.
- 11.10 The work shall be executed under the usual conditions without affecting power plant construction / operation and in conjunction with other operations and contracting agencies at site. The contractor and his personnel shall co-operate with the personnel of other agencies, co-ordinate his work with others and proceed in a manner that shall not delay or hinder the progress of work as a whole.
- 11.11 Wherever Construction sequences are furnished by BHEL, the contractor shall follow the same sequence.
- 11.12 Contractor shall execute the supply and works as per sequence prescribed by BHEL at site engineer. No claims for extra payment from the contractor will be entertained on the grounds of deviation from the methods of execution of similar job in any other site or for any reasons whatsoever.
- 11.13 If required by BHEL, the contractor shall change the sequence of his operation so that work on priority sectors can be completed within the projects schedule. The contractor shall afford maximum assistance to BHEL in this connection without causing delay to agreed completion date.
- 11.14 Contractor shall, transport all materials to site and unload at site / working area for inspection and checking. All material handling equipment required shall be arranged by the contractor.
- 11.15 The contractor is strictly prohibited from using BHEL's regular components like angles, channels, beams, plates, pipe / tubes, and handrails etc. for any temporary supporting or

- scaffolding works. Contractor shall arrange himself all such materials. In case of such misuse of BHEL materials, a sum as determined by BHEL engineer will be recovered from the contractor's bill. The decision of BHEL engineer is final and binding on the contractor.
- 11.16 After completing all the works, contractor shall hand over all remaining extra materials with proper identification tags in a packed condition to BHEL stores. In case of any use over actual design requirements, BHEL reserves the right to recover the cost of material used in excess or misused. Decision of BHEL engineer in this regard will be final and binding on the contractor.
- 11.17 The terminal points as decided by BHEL shall be final and binding on the contractor.
- 11.18 Contractor has to work in close co-ordination with other erection agencies at site. BHEL engineer will co-ordinate area clearance. In a project of such magnitude, it is possible that the area clearance may be less / more at a particular given time. Activities and erection program have to be planned in such a way that the milestones are achieved as per schedule / plans. Contractor shall arrange & augment the resources accordingly.
- 11.19 **HOUSE KEEPING:** The contractor is supposed to carryout housekeeping of the work area on regular basis to keep the work place neat and tidy and available for the SAFE working. The scrap, generated daily during the Execution activities, is to be dumped at designated area as decided by BHEL/ customer on daily basis. The erection materials issued to the contractor and kept near the work are should also be staged properly at site. Compliance report on above shall be submitted by the contractor to BHEL on Daily basis. In case the contractor fails to do so, BHEL have rights to carry out the same from the other party at Risk & Cost of the contractor. The cost applicable with BHEL overheads shall also be recovered from the monthly running bills of contractor.

12. ERECTION

- All works such as cleaning, checking, levelling, blue matching, aligning, assembling, temporary erection for alignment / dismantling of certain equipment for checking, cleaning, surface preparation, fabrication at site, cutting, grinding, straightening, chamfering, filing, chipping, drilling, reaming, dowelling, scrapping, machining, surface grinding, shaping, fitting up welding, tube expansion etc. as may be applicable in such erection works are to be treated as incidental to erection and necessary to complete the work satisfactorily & shall be carried out by the contractor as part of the work.
- II. Any fixtures, scaffolding materials, approach ladder, concrete block supports, steel structures required for temporary supporting, pre-assembly or checking, welding, lifting and handling during pre-assembly and erection shall be arranged by contractor at his cost within the finally accepted rates.
- III. No members of the ladder/ structure/ platform should be cut without specific approval of BHEL. In case it is necessary to cut, the contractor shall rectify/ repair in a manner acceptable to BHEL/ customer without any additional cost.
- IV. The contractor shall erect scaffolding/ temporary platforms for erection. These should be of adequate capacity and shall never be over loaded. These should be replaced when not found suitable during erection work and dismantled on work completion & removed from work site.
- V. Corrections like straightening of ladders, tube support plates adjustment/ removal of ovulates in pipes and opening or closing the fabricated bends of piping to suit the layout shall be considered part of the work and the contractor is required to carry out such work within finally accepted price/ rate as per instructions of Engineer.
- VI. The contractor shall fabricate pipes, special bends, etc. threading and welding as required and carry out the chemical cleaning of fabricated piping.
- VII. The servicing and realignment of skid-mounted equipment if required or if directed by BHEL shall be carried out by the contractor at no extra cost to BHEL.
- VIII. The contractor shall completely erect & test all the piping systems, covered in the specification including sampling lines up to and including sample coolers, hangers & supports, valves & accessories in accordance with the drawings furnished. This includes all necessary bolting, welding, pre-heating, stress relieving, testing, cleaning & painting. 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.
 - **IX.** Pipes sent in standard length shall be cut to suit the site conditions and the layouts. Tubes or pipes wherever deemed to be convenient will be sent in running lengths. Bends shall be prepared and/or fabricated at site.
 - **X.** The contractor shall ensure lowering of pipes in position with adequate precautions as to avoid any damage to either material or men. Only the anchoring points earmarked for the purpose of lowering the pipes are to be used.

- XI. Certain adjustments in length may be necessary while erecting pipelines. The contractor should remove the extra lengths/ add extra lengths to suit the final layout after preparing edges a fresh by adopting specified heat treatment procedures, at no extra cost.
- XII. It is possible that a few flanges may not be matching. The contractor shall be required to cut and re-weld the same as and when required without any additional cost.
- XIII. The contractor shall be responsible for any modifications of shop fabricated pipes prior to installation to accommodate minor site alteration in pipe which may include cutting/re welding of flanges/pipes for change of angles of bend or length adjustment at no extra cost.
- XIV. All vents and drains for piping equipment covered in the scope whether shown in the drawings or not shall terminate in atmosphere and to pit as directed by BHEL.
- XV. 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 of this specification.
- XVI. Normally the valves will have prepared edges for welding. But, if it becomes necessary, the contractor will prepare new edges or recondition the edges by grinding or chamfering to match the corresponding tubes and pipes. All fittings like `T' pieces, weld neck flanges, reducers etc., shall be suitably matched with pipes for welding. The valves will have to be checked, cleaned or overhauled in full or in part before erection after chemical cleaning and during commissioning.
- XVII. 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.
- XVIII. Suspension for piping, etc., will be supplied in running lengths, which shall be cut to suitable sizes and adjusted as required.
 - XIX. The adjustment of all supports erected for maintaining the proper slopes of piping wherever required is also included in the scope of the contractor.
 - XX. 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.
- XXI. All supports and anchors shall be installed as per drawing 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. The raw materials required for fabricating such supports shall be arranged by BHEL.
- XXII. Contractor shall install piping in such a way that no excessive or destructive expansion forces exist under any condition.
- XXIII. The contractor shall carry out the tightening of the field bolts on the equipment and piping covered under this specification by using either the calibrated torque wrench method or the turn of part method. The methods used, the tools and the equipment deployed shall be subject to the approval of Engineer. All the torque wrenches shall be

- calibrated at the start of each days work and at least once during the day. The bolting work shall be carried out by the competent technicians.
- XXIV. 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.
- XXV. Layout of small bore piping as required shall be done as per site requirement. Necessary sketch for routing these lines should be got approved from BHEL by the contractor. There is a possibility of slight change in routing the above pipe lines even after completion of erection or from aesthetic point of view which should be carried out at no extra cost.
- XXVI. 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.
- XXVII. 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. The materials required will be supplied by BHEL free of cost.
- XXVIII. 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 at no extra cost.
- XXIX. All the items will be supplied in pieces/ loose and are to be assembled bolted and welded at site. Contractor has to work as per the drawings and instruction issued at site for erection and testing purposes. Weights for handling and erection are indicative only. No claim will be entertained on account of variations in weights or change from conventional design e.g from bolted to welded connections and vice versa, increase in number of pieces etc. The bidders should take care of this point while quoting lump sum price for subject works for handling and erection works.
- XXX. It may be possible that during routing /laying of pipelines, cable trays ,HVAC ducts etc may foul with each other ,the contractor has to re-route (Minor) the above as per the decision of BHEL
- XXXI. In view of the tight erection schedule, limited area in both the service bay and rotor assembly being in critical path, whatever pre-erection preparatory works can be carried out in BHEL store area shall have to be planned accordingly. In particular, the cleaning, de-burring, de-greasing and segregation of rim punching by weight shall definitely be planned and carried out in store area.

Since the subsequent units shall have to be erected/ commissioned in schedule time—the contractor shall have to complete the rotor assembly in the service bay by working round the clock in this area. Moreover, two-shift working shall have to be adopted by the contractor to meet the erection schedule

13.0 WELDING, HEAT TREATMENT, RADIOGRAPHY AND OTHER NON-DESTRUCTIVE TESTING.

- 1. The equipment and piping shall be erected in conformity with the provisions of standard/ specification and as may be directed by BHEL The method of welding (arc, gas, TIG, MIG or other method) may be indicated in the detailed drawings/ schedules. BHEL Engineer will have the option of changing the method of welding as per site requirements.
- Welding being a special process, all-welding shall be carried out by skilled and experienced welders holding valid certificates as per requirements of ISO 9002. The certificate shall be checked by BHEL before allowing the welders to be engaged on welding. BHEL at its own discretion may ask any or all welders to under go welder Qualification Test as per Standard Procedure in accordance with requirements of ISO 9002 and as per welding manual of BHEL. The deployment of qualified welder and subsequent site testing of requisite numbers of welders shall be one of the prerequisite of contractor's site mobilisation completion.
- 3. All welders including tack welder, structural and pipe welder shall be tested as per ASME section IX and approved by BHEL Engineer before they are actually engaged on work though they may possess the certificate. BHEL reserves the right to reject any welder if the welder's performance is not found to be satisfactory. The contractor in Performa given by BHEL Engineer shall maintain the records of qualification of welders. All the welders qualified for the work will be issued an identity card by BHEL Engineer and welder will keep the same with him at work place.
- **4.** BHEL Engineer may stop any welder from the work if his performance is unsatisfactory for any technical reason or if there is a high percentage of rejection of joints welded by a particular welder which, in the opinion of the Engineer will adversely affect the quality of the welding though the welder has earlier passed the tests prescribed by Engineer. The welder's having passed qualification tests does not absolve contractor of contractual obligation to continuously check the welder's performance.
- 5. Faulty welds caused by the poor workmanship shall be cut and re-welded at the contractor's expenses including cost of materials. The Engineer prior to any repair being made shall approve the procedure for the repair of defective welds. Radiography or any other NDT on completed field welds shall be conducted as per drawings or instructions of BHEL engineer.
- 6. The contractor shall carry out the root run welding of all piping, valves, instrumentation, tapping points etc. by TIG/SMAW / MIG welding process. The contractor shall have to carry out full TIG welding of butt weld joints of tubes /pipes of lesser thickness if required. During the root runs of stainless steel joints, the contractor shall before and during welding have to purge the pipes with inert gas in case of stainless steel. All arrangements required for the above shall be the responsibility of the contractor at no additional cost.
- All charges for testing of contractor's welders including consumables for welding / destructive and non destructive tests conducted by BHEL at site or at

- laboratory shall have to be borne by the contractor only. The test coupons raw material will be supplied by BHEL free of cost.
- 8. The regulators used on welding machines shall be calibrated before putting these into use for work. Periodic calibration for the same shall also be arranged by the Contractor at his cost.
- 9. Only BHEL approved electrodes and filler wire will be used. All electrodes shall be baked and dried in the electric electrode-drying oven to the required temperature for the period specified by the Engineer before these are used in erection work. All welders shall have electrodes drying portable oven at the work spot. The electrodes brought to the site will have valid manufacturing test certificate. The test certificate will have co-relation with the lot No. /batch No given on electrode packets. No electrodes will be allowed to be used in the absence of above requirement. The thermostat and thermometer of electrode drying oven will be also calibrated and test certificate from Govt. approved / accredited test house traceable to National / International standards will be submitted to BHEL before putting the oven in use. Periodical calibration for the same shall also be arranged by the contractor within the finally accepted rates.
- 10. All butt / fillet welds shall be subject to dye penetration test as per drawing and document requirement and have to be carried out as per the instructions of the engineer within the quoted / finally accepted rates for this contract.
- 11. The contractor shall maintain a record in the form as prescribed by BHEL of all operations carried out on each weld and maintain a record indicating the number of welds, the names of welders who welded the same, date and time of start and completion, preheat temperature, radiographic results, rejection if any, percentage of rejection etc. and submit copies of the same to the BHEL Engineer as required. Interpretation of the BHEL Engineer regarding acceptability or other wise of the welds shall be final. All site welding joints shall be subject to acceptance by BHEL Engineer.
- 12. All welds shall be painted with anticorrosive red oxide paint once radiography and stress reliving works are over. Necessary consumables and scaffolding etc. including paints shall be provided by contractor at his own cost.
- 13. The contractor shall carry out the edge preparation of weld joints at site in accordance with the details acceptable to BHEL. Wherever possible machining or automatic flame cutting will be allowed only wherever edge preparation otherwise is impractical. All slag's / burrs shall be removed from cuts and all the hand cuts shall be ground smooth to the satisfaction of engineer.
- 14. Pre-heating, radiography and other NDT tests, post heating and stress relieving after welding of tubes, pipes, including attachment welding wherever necessary, are part of erection work and shall be carried out by the contractor in accordance with the instructions of Engineer. All equipment and consumables essential for carrying out the above process shall be arranged by contractor at his cost.
- 15. Contractor shall arrange all necessary stress relieving equipment with automatic recording devices. Also the contractor shall have to arrange for labour, heating elements, thermocouples, etc. insulating materials like asbestos cloth, ceramic beads, asbestos ropes etc. required for heat treatment/ stress relieving operations. Temperature shall be measured by

thermocouple and recorded on a continuous printing type recorder. All the recorded graphs for heat treatment works shall be the property of BHEL. The contractor has to provide thermal chalks, temperature recorders, thermocouple attachment units, graphs sheets, etc. for checking within the finally accepted rates. All stress relieving equipment will be used after due calibration and submission of test certificate to BHEL. Periodic calibration from Govt. approved / accredited Test Houses traceable to National / International standards will also be arranged by the contractor for such equipment at his cost. The contractor shall obtain the signature of BHEL Engineer or his representative on the chart of the recorder after setting up the weld joints for heat treatment operation prior to the starting.

- 16. The contractor shall also be equipped for carrying out other NDT like Radiography, DP, MPI, UT etc. as required as per welding schedule/ drawings within the finally accepted price/ rates.on all equipment welding in Stay ring, Spiral, spiral inlet pipe, MIV(BFV), MIV inlet pipe, and also in piping and other areas as applicable Necessary help including surface preparation and scaffolding required for conducting all the shall be rendered by contractor at his own cost.
- 17. The technical particulars, specification and other general details for NDT work shall be in accordance with ASME, ISO or as specified by Drawings and Manuals of BHEL / CUSTOMER.
- 18. Low speed high contrast, fine grain films (D-7 or equivalent) in 10cm. width only be used for weld joint radiography. Film density shall be between 2.0 to 4.0.
- 19. Iridium 192 / any other approved shall be used by contractor for radiography work. The geometric un-sharpness shall not exceed 0.05 mm. Taking adequate safety precautions shall be the responsibility of the contractor while carrying out radiography. Necessary safe guards required for radiography (including personnel from BARC) shall be arranged by contractor at his own cost.
- 20. All radiographs shall be free from mechanical, chemical or process marks, to the extent they should not confuse the radiographic image and defect finding. Penetrameter as per ASME or ISO must be used for each exposure.
- 21. Lead numbers and letters are to be used (generally 6mm size) for identification of radiographs. Contract no., joint identification, source used, welder's identification and SFD are to be noted down on paper cover of radiograph.
- 22. Lead intensifying screens for front and back of the film should be used as per the above referred ASME specification.
- 23. The joint is to be marked with permanent mark A, B, C, etc. to identify the segments. For this a low stress stamp shall be used to stamp the pipe on the down stream side of the weld.
- 24. For multiple exposure, an overlap of about 25 mm of film should be provided.
- 25. Radiography personnel with sufficient experience and certified by M/s BARC as Radiographer for conducting radiographic tests in accordance with safety rules laid down by Division of Radiological protection only have to be deployed . These personnel should also be registered with BARC for film badge service.
- 26. All arrangements for carrying out radiography work including dark room with air conditioner/ blower and other accessories shall be provided by contractor

- within the space allotted for office at his cost. As an alternative the contractor may deploy an agency having all above facilities and who are duly approved / accredited by BARC and/or other Regulatory authorities. Detailed particulars of such agencies will be submitted and got approved by BHEL Engineer before the actual deployment of agency for radiography work.
- 27. The contractor shall have a dark room fully equipped with radiography equipment, film (unexposed), chemicals and any other dark room accessories such as Airconditioner/ Blower etc. There should be adequate number of radiography personnel with sufficient experience and certified by M/s BARC as Radiographer for conducting radiographic tests in accordance with safety rules laid down by Division of Radiological protection. These personnel should also be registered with BARC for film badge service.
- 28. Contractor shall note that 100% radiography will be done at the initial stages on all the welding joints as specified in the drawings. Subsequently radiographic inspection will be done on the basis of quality of welding. However minimum percentage of joints to be radiographed shall not be less than the requirement of BHEL welding schedule. The percentage may be increased depending upon the quality of joints and at the discretion of BHEL. Radiography on LP piping joints is not envisaged. However other NDT test as called for in the FQP including LPI, MPI and HT will have to be carried out.
- 29. All the Radiographs shall be properly preserved and shall become the property of BHEL.
- 30. Since radioisotopes are being used, all precautions and safety rules as prescribed by BHEL/BARC/ Customer shall be strictly followed. BARC certificate/permission letter to be provided before taking up the work.
- 31. Radiography of joints shall be so planned that it does not interfere with the ongoing erection works keeping in mind the safety of the persons due to radiation exposure. The testing of the welding joints shall also be planned in a way that it is carried out at the earliest possible so as to assess the soundness of the weld joints and performance of HP welders. If the performance of welder is unsatisfactory, he shall be replaced immediately.
- 32. Wherever radiographs are not accepted, on account of bad shot, joints shall be re-radio graphed and re-shots submitted for evaluation. Radiographs shall be taken on joints after carrying out repairs. However, if the defect persists after first repair, as per radiograph, carrying out radiography shall be repeated till the joint is made acceptable. In case the joint is not repairable, the same shall be cut, re-welded and re-radio graphed at contractor's cost.
- 33. If the contractor does not carry out radiography work due to non-availability of source / film / chemical / operator etc., BHEL will get the work done departmentally or through some other agency at the risk and cost of the contractor.
- 34. Heat treatment and radiography may be required to be carried out at any time (day and night) to ensure the continuity of the progress. The contractor shall make all necessary arrangements including labour, supervisors/ Engineer required for the work as per directions of BHEL.
- 35. The contractor shall assist BHEL Engineer in preparing complete field welding schedule/procedure for all the field welding activities to be carried out in

- respect of piping and equipment erected by him involving high pressure welding at least 30 days prior to the scheduled start of erection work at site. Such schedules shall be strictly adhered to by the contractor.
- 36. The contractor shall assist BHEL Engineer in preparing complete field welding schedule/procedure for all the field welding activities to be carried out in respect of piping and equipment erected by him involving high pressure welding at least 30 days prior to the scheduled start of erection work at site. Such schedules shall be strictly adhered to by the contractor.

14 Rate Schedule & BOQ.

Contractor shall fully understand equipment description and scope of work before quoting. The scope of work and responsibility of the contractor as mentioned under these specifications shall be covered within the quoted rates.

The bidder has to quote his price keeping in mind the facilities and T&Ps to be provided as given in Chapter 3 & 4.

Bidder Shall Quote Price in INR. Evaluation of Bids shall be done on total price "A" against given rate schedule.

Name of Work: Restoration of E&M Equipment's up to Pre Rupture Level & Commissioning, Testing, Synchronization" of 3x33.33 MW UHL Stage III Hydro Electric Project, Himachal Pradesh.

Rate Schedule & BOQ

	Trate Schedule & BOQ				
SI. No.	Item Description	Quantity	Units	TOTAL AMOUNT	
1	Mandatory Works				
1.1	LUMPSUM Price for Dismantling, Assessment, Material handling, erection, testing & commissioning of U#1,2,3 UHL Stage -III Power House, Vill- Chullah, Dist - Joginder Nagar, (HP) as per attached Scope of Work and Terms & Conditions.	1 SET	LS	" A "	
2	Optional Works				
SI. No.	Item Description	Total Quantity for Three Machines	Units	Amount (Percentage of amount quoted at Sr 1.1.)	
2.1	Mounting/assembly of newly supplied rotor poles.	36.00	Number	1.31%	
2.2	Rotor Core building.	3.00	Number	2.62%	
2.3	Stator Bar Replacement (TOP)	378.00	Number	1.86%	
2.4	Stator Bar Replacement (Bottom)	378.00	Number	1.86%	

Annexure -B

Sub-contractor has to perform all the necessary test, arrangement of all testing kits, operator, manpower and other resources to make all the Electrical system and panels healthy. Cabling, lugging and tagging etc is also be covered in sub-contractor scope. Experienced manpower to carry out test and work will be arranged by Sub contractor.

Α	STATOR
1	IR,PI measurement.
2	Wedge tightness test.
3	CORE Flux test.
4	Core flux/hot spot detection ELCID test on unwound stator frame.
5	H.V test of individual bottom/top bars.
6	Dry out of complete Stator.
7	Final H.V test on stator after complete dry out and IR/PI measurement.
8	DC Winding resistance measurement of stator windings.
9	Tan delta and capacitance measurement test.
10	Testing of RTD,s and thermostats.
11	Phase sequence test.
12	NDT of all welded joints of windings and Stator frame joints.
13	Open and short circuit test.
В	ROTOR
1	IR,PI measurement.
2	Impedance Test of individual pole and complete rotor.
3	Voltage drop test of individual pole.
4	DC Winding resistance measurement of rotor.
5	Dry out of complete rotor.
6	HV test of rotor.
7	NDT of all welded joints of spider/rotor frame joints.
С	TRANSFORMER
1	Ratio/turn test
2	IR,PI measurement of all windings at 5KV DC.
3	Vector Group test.
4	Tan delta and capacitance measurement test of bushings.
5	Centrifuging of oil and measurement of BDV of oil.
6	Checking of all protection associated with transformer.
7	CT/PT Polarity test, DC Resistance measurement.
8	Magnetizing current measurement
9	Magnetic balance test.
10	SFRA (Sweep Frequency Response Analysis Test)
D	Generator PROTECTION & EXCITATION systems.
1	Cleaning of all panels & associated systems.
2	CT/PT testing. & its control cables.
3	Primary & secondary injection of protection relays & testing for protection checking.

4	Assistance for complete readiness & testing of excitation system
5	Testing & checking of interfacing control cables between electrical systems to panels.
E	Bus Duct Testing.
E 1	Bus Duct Testing. Cleaning of all bus ducts ,measurement of IR/PI of bus duct.

Annexure C

Terms & Condition for BHEL accommodation at Palampur (Himachal Pradesh)

- Bachelor accommodation (Furnished) for FIVE BHEL Personals at Palampur on single occupancy per room basis as per BHEL Standards/ Entitlement for complete contract period including extended period for exclusive use of BHEL.
- 2. Each room shall have basic standard amenities as provided in Guest house / Hotels rooms like Bed, Clean mattress, Clean Blankets, Clean Quilts, Table/ chairs, TV with cable connection, Heater or Air Conditioners as per climatic condition. Hygienic RO water, Room Attached Clean washrooms with hot /cold water options, Geysers, Buckets etc.
- 3. Proper cleaning & housekeeping of the rooms, toilets /washrooms, kitchen etc on daily basis.
- 4. The bidder/ facility provider shall pay taxes; rates license fees, ground rent, electricity & water charges and charges of whatever character, assessed, levied, charged and imposed by or payable to any lawful authority in respect of the demised premises. BHEL or its employee is not liable to pay such charges.
- 5. The hotel /guest house owner shall provide whitewashed, painted, polished premises before occupation by BHEL employees.
- 6. That BHEL shall peacefully and quietly hold and enjoy the demised premises during the occupying period (s) without any interruption /disturbances by the tenderer or any other person rightfully claiming under or in trust for him/her.
- 7. Accident & Compensation: The hotel / Guest house owner shall be solely responsible for any accident of third party or any mishap with the hotel properties, any other belonging and indemnify to BHEL against any loss occasioned by such mishap. BHEL shall not be responsible for any type of mishap and shall have full right to recover loss from owner.
- 8. The hotel /guest house owner shall attend all major complains / repairs at his/her own costs immediately upon such defects being notified to him/her by BHEL employee and if the bidder/owner fails or neglects to resolute the complaint, BHEL employees shall arrange Hotel / Guest House accommodation as per his entitlement in BHEL rules at Palampur and deduct the expense of such stays till the problem resolves from the rent or otherwise recover it from tenderer. For all Such cases, where bidder fails to provide accommodation in line to above mentioned requirement Amount Rs 1000/- (One thousand Only) Per day Per personnel shall be recovered from bidders RABs / Security Amount.

BHEL shall not be responsible for any other payments either towards running expenses, repairs or salaries of hotel.

9. In case of any dispute BHEL decision will be final and abiding by the tenderer.

GENERAL TERMS AND CONDITIONS FOR HIRING VEHICLE FOR EXCLUSIVE USE OF BHEL.

- 1. Bidder is to provide Two Full Time vehicle (<u>Mahindra Xylo / Mahindra Scorpio/ Innova (2016</u>
 <u>AC Diesel Model or above) in excellent working conditions for exclusive use of BHEL.</u>
- 2. Vehicle will be required for 18 Months and same will be extended as per actual contract period.
- 3. The vehicle shall be required at Uhl Site / Palampur (BHEL accommodation/GH), Vehicle will also be required for movement of BHEL Staff to Nearest Rail heads & customer HPSEBL offices at Joginder Nagar, Sundar Nagar, Shimla & BHEL Regional offices but occasionally vehicle can be used for outstation duties as per site requirements. The Daily Avg Km requirement shall be 150 Kms. Same may be increased / decreased as per requirement. Fuel / Driver/Maintenance cost shall be in contractor scope.
- 4. The vehicle should be provided with all papers as per Motor Vehicle Act, as applicable for LMV e.g. road fitness, vehicle registration, road tax, insurance, driving license, pollution tax report, ownership etc.
- 5. Driver must carry sufficient cash to meet day to day incidental expenses and not ask BHEL staff to make any payments for toll tax/parking charges etc.
- 6. Log book duly signed is to be maintained for the journeys performed by the BHEL staff members. On the basis of the log book, bill is to be raised by the vehicle owner at the end of every month and after verification payment shall be released by bidder in the form of account payee cheque/NEFT/D. D within a reasonable time in the name of owner/supplier of vehicle.
- 7. Punctuality is the essence of the contract; driver must report for the duty in time failing which recovery against the late reporting will be effected.
- 8. In case of breakdown of original vehicle, substitute vehicle shall be provided within reasonable time for the total period of breakdown at the same rates. In case vehicle is not provided within reasonable time, BHEL shall arrange the vehicle & deduct the hiring charges (Rs. 1500 /Day Per Vehicle or part thereof) from bidders running invoices/ security deposits.
- 9. The vehicle driver must have a mobile phone in working condition and frequent changes of driver and mobile no. is not permitted.

- 10. Well-experienced, sincere and well-mannered driver with valid driving license should be engaged for driving. The meter reading shall be cross checked at intervals to ensure its correctness.
- 11. The driver shall be paid by the owner of the vehicle on or before 7th day of succeeding month. The wages of driver shall be as per minimum Wages Act as applicable at the time.
- 12. Parking of vehicle, residential accommodation, medical facility, overtime, food/incidentals to driver, monthly salary and insurance of the driver shall be the sole responsibility of the bidder/vehicle owner/supplier.
- 13. <u>ACCIDENT AND COMPENSATION:</u> The vehicle owner / bidder / vehicle supplier shall be solely responsible for any accident of third party or any mishap with the vehicle and passengers and shall indemnify BHEL against any loss occasioned by such mishap. BHEL shall not be responsible for any mishap and shall have full right to recover loss from the bidder / vehicle owner.
- 14. The BHEL is at liberty to terminate the contract prematurely in case of unsatisfactory service at any time.
- 15. All terms and conditions as listed here are binding on bidder / supplier/owner.

.

Rev 02 08th October 2014

SPECIAL CONDITIONS OF CONTRACT (SCC)

(Document No PS:MSX:SCC)

BHARAT HEAVY ELECTRICALS LIMITED



SPECIAL CONDITIONS OF CONTRACT (SCC) Contents

SN	DESCRIPTION	Chapter	No. OF PAGES
1	General Intent of the Specifications	Chapter-I	
2	General Services to be rendered by the Bidder	Chapter-II	
3	General Technical Requirements (Codes and Standards)	Chapter-III	
4	Obligations of Contractor (In respect of Tools, Tackles, Consumables, etc employment of supervisory staff and workmen)	Chapter-IV	
5	Responsibilities of Contractor (In respect of employment of Labour, Supervisory staff, etc)	Chapter-V	
6	Material Handling, Storage, Preservation, etc	Chapter-VI	
7	Drawings and Documents	Chapter-VII	
8	Inspection and Quality	Chapter-VIII	
9	HSE & OHSAS Obligations	Chapter-IX	
10	RA Bill Payment	Chapter-X	
11	Performance Monitoring	Chapter-XI	
12	Suspension of Business Dealings	Chapter-XII	

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 the 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.

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	Not Applicable
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.
4.1.6	BHEL reserves the right to reject the use of any consumable including electrodes, gases, lubricants / special consumables if it is not found to be of the required standard / make / purity or when shelf life has expired. Contractor shall ensure display of shelf life on consumable wherever required and records maintained.
4.1.7	Storage of all consumables including welding electrodes shall be done as per requirement / instruction of the Engineer by the contractor at his cost.

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

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

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

	by PHEL Assembly of such additional loose components/sub-assemblies/
	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	The day to day operation and maintenance of BHEL's T&Ps (Other than cranes) shall be carried out by contractor as per manufacturer's / BHEL's maintenance schedule at his cost. The contractor shall arrange, at his own cost, trained operators, fuel and other consumables for their operation. BHEL shall arrange all spares needed for upkeep of major T&Ps provided like Huck Bolting Machine*, DG Set, Induction Machine and Hydraulic Test pumps. The contractor has to arrange for fixing of the spares; supervision in specialized cases will be provided by BHEL. For upkeep of all other T&Ps supplied by BHEL, spares shall be arranged by the Contractor. BHEL supplied T&Ps shall be maintained in good working condition during the entire period of use. T&Ps in defective / damaged condition shall be rectified promptly to the full satisfaction of BHEL engineer. Contractor shall maintain records for maintenance of major T&Ps. These shall be made available for Inspection whenever required. In case of any lapses on the part of the contractor, BHEL at its own discretion shall get the servicing/ repair of equipment done at the risk and cost of the contractor along with BHEL overheads. Further, if there are breakdowns / damages due to negligence of the contractor, the complete service / repair charges and cost of all the spares damaged with BHEL overheads shall be recovered from contractor's RA bills. *: for operation and maintenance of ESP Huck bolting machine, BHEL shall provide the basic power rig and hose. Balance toolings ie Guns, chuck jaws etc are to be arranged by contractor.
4.2.2.7	void

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

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

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

SPECIAL CONDITIONS OF CONTRACT (SCC)

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

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

SPECIAL CONDITIONS OF CONTRACT (SCC)

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

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

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

	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.

6.1.15	The contractor shall ensure that all the packing materials and protective devices installed on equipment during transit and storage are removed before installation.
6.1.16	It shall be the responsibility of the contractor to keep the work / storage areas in neat, tidy and working conditions. All surplus/unusable packing and other materials shall be removed and deposited at location(s) specified by BHEL within the project premises. If required weighing of the same within the project premises will have to be carried out.
6.2	PRESERVATION OF COMPONENTS
6.2.1	After taking delivery from BHEL / customer's stores, plant materials storage shall be subjected to the following protection besides other provisions indicated in these specifications elsewhere.
6.2.1.1	Items stored outdoors shall be stacked up at least six inches (6") off the ground. Items should not be stored in a low lying area where water logging is a possibility. Contractor should have sufficient numbers of wooden / concrete / steel sleepers for the job.
6.2.1.2	Motors, valves, electrical equipment, control equipment and instruments, and special or precision items requiring special care, etc shall be stored indoors. Motor windings shall be kept dry by use of external heat or space heaters.
6.2.1.3	Bearings and other wearing surfaces of plant materials shall be protected against corrosion and kept clean and should be regularly monitored.
6.2.1.4	Insulation materials shall be stored indoors or otherwise protected against getting wet/ damaged, using suitable measures and should be protected from direct rain.
6.2.2	It shall be the responsibility of the contractor to apply preservatives / touch up paints (primer) on equipment handled and erected by him till such time of final painting. It shall be contractor's responsibility to arrange for required paints (primer), thinners, labour, scaffolding materials, cleaning materials like wire brush, emery sheets, etc, cleaning of surface and provide one coat of preservatives / paints (primer) from time to time as decided by BHEL engineer. The accepted rate shall include this work also. It is to be noted that such painting may have to be done as and when required till such time the final painting is carried out.
6.2.3	The contractor shall effectively protect the finished work from action of weather and from damage or defacement and shall cover the finished parts then and there for their protection.

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 – VII: Drawings and documents

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

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

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,

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

	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	Not Applicable
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	Not Applicable
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 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 systemas 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

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 01) Please see the attached document
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	The payment for running bills will normally be released within 30 days of submission of running bill complete in all respects with all documents. It is the responsibility of the contractor to make his own arrangements for making timely payments towards labour wages, statutory payments, outstanding dues etc and other dues in the meanwhile.
	In case of Civil works, 60% of RA Bills complete and correct in all respects and certified by BHEL Engineer, shall be paid within 15 days of receipt. Balance payment shall be within 30 days.
10.6	BHEL shall release payment through Electronic Fund Transfer (EFT)/RTGS. In order to implement this system, Contractor to furnish details pertaining to his Bank Accounts where proceeds will be transferred through BHEL's banker, as per prescribed formats:
	Note: BHEL may also choose to release payment by other alternative modes as applicable
10.7	Paying Authority shall be the Construction Manager of the Site. Any change in the paying Authority shall be intimated to the Contactor accordingly.

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

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

SPECIAL CONDITIONS OF CONTRACT (SCC) Chapter-XII: Suspension of Business Dealings

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

SPECIAL CONDITIONS OF CONTRACT (SCC) Chapter-XII: Suspension of Business Dealings

	d) The Bidder has indulged in malpractices or misconduct such as bribery, corruption and fraud, pilferage etc which are contrary to business ethics.
	 e) The Bidder is found guilty by any court of law for criminal activity/ offences involving moral turpitude in relation to business dealings.
	f) The Bidder is declared bankrupt, insolvent, has wound up or been dissolved; i.e ceases to exist for all practical purposes.
	g) Bidder is found to have obtained Official Company information/documentation by questionable means.
	h) Communication 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 Rev. 01

BHEL/PSNR/Site	Dated:
2000 (1) 1 March 19 1	

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	
Calibratio	on:-		40 7 0 1	
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		Per joint	
Material	management:-		1	
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 500 Per instance contract		Per instance	
Other Are	eas:-		1	
14.	Painting without surface cleaning	500	Per instance	
15.	Not attending Quality meeting by the nominated member	1000	Per meeting	

betails of fion- compliance (Name of Sub contract	itors, persons, description of deficien	icy, etc.,	

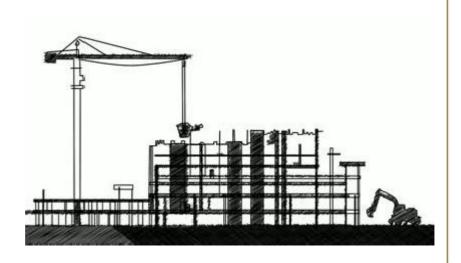
Penalty imposed:-		
1, Rate as per above chart		
2. No. of Persons/ equipment/ instance/ Joint/ welder/meeting		
3. Total Penalty= 1. X 2. =		
Signature		
(Witnessed by Sub- Contractor representative) Name	(Witnessed by F	PSNR Personnel)

Distribution: 1. Sub-contractor

2. Head (Quality & Safety)/ BHEL PSNR







HEALTH,
SAFETY and
ENVIRONMENT
PLAN

for

SITE OPERATIONS

by

SUB-CONTRACTORS

HSE PLAN FOR SITE OPRATIONS BY BHEL'S SUBCONTRACTORS

AT A GLANCE

BEFORE START

SIGNING OF MOU

Agree to comply to HSE requirement- Statutory and BHEL's

HSE ORGANISATION

Manpower

- 1 (one) safety officer for every 500 workers or part thereof
- 1(one) safety-steward/ supervisor for every 100 workers

Qualification

As per Cl. 7.1

HSE Roles and responsibilities

- Site In-charge- As per clause 7.2.1
- Safety officer- As per clause 7.2.2

HSE Planning

for Man, Machinery/Equipment/Tools & Tackles

HSE INFRASTUCTURE

- **PPEs**
- **Drinking Water**
- **Washing Facilities**
- **Latrines and Urinals**
- Provision of shelter for rest
- Medical facilities

- Canteen facilities
- **Labour Colony**
- **Emergency Vehicle**
- Pest Control
- Scrapyard
- Illumination

HSE TRAINING, AWARENESS & PROMOTION

Training

- Induction training
- Height work and other critical areas
- Tool Box talk & Pep Talk

Awareness & Promotion

- Signage
- Poster
- Banner
- Competition
- Awards

Incident Reporting

- Accident- Fatal & Major
- Property damage
- **Near Miss**

HSE COMMUNICATION

Event Reporting

- Celebrations
- **Training**
- Medical camp

EXECUTE SAFELY

CHECKS

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						
 Welding Rigging Cylinder- storage & Movement Demolition work T&Ps Chemical Handling Electrical works 	 Fire Scaffolding Height work Working Platform Excavation Ladder Lifting Hoisting appliance 					
HOU	SE KEEPING					
WASTE	WASTE MANGEMENT					
TRAFFIC	TRAFFIC MANAGEMENT					
ENVIRONMENTAL CONTROL						

HSE AUDITS & INSPECTION

EMERGENCY PREPAREDNESS AND RESPONSE PLAN

- Daily Checks
- Inspection of PPEs
- Inspection of T& Ps
- Inspection of Cranes & Winches
- Inspection of Height work
- Inspection of Welding and Gas cutting
- Inspection of elevators etc.

HSE PERFORMANCE EVALUATION PARAMETERS

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.



Doc no.: HSEP: 14

REV: 01

Date: 20.01.2020

POWER SECTOR

REVISION HISTORY SHEET

Date	Revision No.	Details of Changes	Reason	Prepared	Reviewed	Approved
12.08.2014	00	First Issue	First Issue	S. B. Jayant, Dy Manager- FQA & Safety	A. K. Sinha, GM-FQA & Safety	Anuj Bhatnagar, ED-FQA & Safety
20.01.2020	01	Formats added: HSEP:14-F30 – Monthly HSE Planning & Review (Page 11, Clause 8.0 - updated) HSEP:14-F13E-Excavation Inspection Format (part of F30)) HSEP:14-F32B – Job Safety Analysis Format (part of F30) HSEP:14-F31A – Daily HSE Reporting (Page 18, Clause 10.3 – added) HSEP:14-F33 – HSE Performance Evaluation (Page 31, Clause 13 – revised)	IOM No. PSHQHSE/M ONREP/02 Dated 08-Jan- 2020	Rohit Kumar		sh Nair, K & HSE)



REV: 01

Date: 20.01.2020

Doc no.: HSEP: 14

Page: 1 of 43

POWER SECTOR

Sr. No.	Description	Page No.
1.0	PURPOSE	4
2.0	SCOPE	4
3.0	OBJECTIVES AND TARGETS	4
4.0	HEALTH, SAFETY & ENVIRONMENT POLICY	5
5.0	MEMORANDUM OF UNDERSTANDING	6
6.0	TERMS & DEFINITIONS	7
7.0	HSE ORGANIZATION	8
7.1	QUALIFICATION FOR HSE PERSONNEL	8
7.2	RESPONSIBILITIES	9
8.0	PLANNING BY SUBCONTRACTOR	11
8.1	MOBILISATION OF MACHINERY/EQUIPMENT/TOOLS	11
8.2	MOBILISATION OF MANPOWER BY SUBCONTRACTOR	11
8.3	PROVISION OF PPEs	12
8.4	ARRANGEMENT OF INFRASTRUCTURE	13
9.0	HSE TRAINING & AWARENESS	16
9.1	HSE INDUCTION TRAINING	16
9.2	HSE TOOLBOX TALK	17
9.3	TRAINING ON HEIGHT WORK	17
9.4	HSE TRAINING DURING PROJECT EXECUTION	17



REV:

01

20.01.2020 Date:

Doc no.: HSEP: 14

Page: 2 of 43

POWER SECTOR

9.5	HSE PROMOTION-SIGNAGE, POSTERS, COMPETITION, AWARDS ETC	18
10.0	HSE COMMUNICATION	18
10.1	INCIDENT REPORTING	18
10.2	HSE EVENT REPORTING	18
11.0	OPERATIONAL CONTROL	19
11.1	HSE ACTIVITIES	19
11.2	WORK PERMIT SYSTEM	20
11.3	SAFETY DURING WORK EXECUTION	20
11.4	ENVIRONMENTAL CONTROL	24
11.5	HOUSEKEEPING	24
11.6	WASTE MANAGEMENT	25
11.7	TRAFFIC MANAGEMENT SYSTEM	26
11.8	EMERGENCY PREPAREDNESS AND RESPONSE	28
12.0	HSE INSPECTION	29
12.1	DAILY HSE CHECKS	29
12.2	INSPECTION OF PPE	29
12.3	INSPECTION OF T&Ps	30
12.4	INSPECTION OF CRANES AND WINCHES	30
12.5	INSPECTION ON HEIGHT WORKING	30
12.6	INSPECTION ON WELDING AND GAS CUTTING OPERATION	30



REV:

POWER SECTOR

01

20.01.2020 Date:

Doc no.: HSEP: 14

Page: **3** of **43**

12.7	INSPECTION ON ELECTRICAL INSTALLATION / APPLIANCES	31
12.8	INSPECTION OF ELEVATOR	31
12.9	INSPECTION OF EXCAVATION ACTIVITIES	31
13.0	HSE PERFORMANCE	31
14.0	HSE PENALTIES	32
15.0	OTHER REQUIREMENTS	32
16.0	NON COMPLIANCE	33
17.0	HSE AUDIT/INSPECTION	34
18.0	MONTHLY HSE REVIEW MEETING	34
19.0	FORMATS USED	34
20.0	Annexures	36



REV: 01

1L V. 01

Date: 20.01.2020

Doc no.: HSEP: 14

Page: 4 of 43

POWER SECTOR

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.



REV: 01

Date: 20.01.2020

Doc no.: HSEP: 14

Page: **5** of **43**

POWER SECTOR

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)



DE\/: 01

REV: 01

Date: 20.01.2020

Doc no.: HSEP: 14

Page: **6** of **43**

POWER SECTOR

5.0 MEMORANDUM OF UNDERSTANDING:

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

The award of work, subsortinusters are required to office into a memoralidatin of anaerstanding 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 w	vorkers 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 proje	ect and any special requirement specified in the contract document of the			
principal customer.				
M/ss	hall 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	l/s			
Name :				
Place & Date:				



REV: 01

Date: 20.01.2020

Doc no.: HSEP: 14

Page: **7** of **43**

POWER SECTOR

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-HOURS 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.



SITE OPERATION by SUBCONTRACTORS REV:

20.01.2020 Date:

01

Doc no.: HSEP: 14

Page: 8 of 43

POWER SECTOR

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:

Number of Reportable LTI x 1,000,000

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:

Days lost due to LTI __x 1,000,000

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:

Number of LTIx1000

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



SITE OPERATION by SUBCONTRACTORS REV:

Date:

20.01.2020

Doc no.: HSEP: 14

01

Page:

9 of 43

POWER SECTOR

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

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.



REV: 01

Date: 20.01.2020

Page: **10** of **43**

Doc no.: HSEP: 14

POWER SECTOR

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



SITE OPERATION by SUBCONTRACTORS REV:

01

Date: 20.01.2020

Doc no.: HSEP: 14

Page: **11** of **43**

POWER SECTOR

8.0 PLANNING BY SUBCONTRACTOR

Monthly planning and review of HSE activities shall be carried out by subcontractor as per format No. HSEP:14-F30 jointly along with BHEL.

MOBILISATION OF MACHINERY/EQUIPMENT/TOOLS BY SUBCONTRACTOR 8.1

- 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. 0
 - Side Booms.
 - Forklifts.
 - Grinding machine.
 - Drilling machine.
 - Air compressors.
 - 0 Welding machine.
 - Generator sets. 0
 - Dump Trucks.
 - Excavators.
 - Dozers Grit Blasting Equipment. 0
 - 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
- 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.



SITE OPERATION by SUBCONTRACTORS REV:

> Date: 20.01.2020

> > Page: **12** of **43**

Doc no.: HSEP: 14

01

POWER SECTOR

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.

SI.	Type of work	PPEs	
No			
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.



REV: 01

nev. Ui

Date: 20.01.2020

Doc no.: HSEP: 14

Page: **13** of **43**

POWER SECTOR

- 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.



REV:

01

Date: 20.01.2020

Doc no.: HSEP: 14

Page: **14** of **43**

POWER SECTOR

PROVISION OF SHELTER DURING REST 8.4.4

Proper Shed & Shelter shall be provided for rest during break

8.4.5 **MEDICAL FACILITIES**

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

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

8.4.5.2 FIRST AIDER

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

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

- The subcontractor shall provide necessary first aid facilities as per schedule III of BOCW. At every work place first aid facilities shall be provided and maintained.
- The first aid box shall be kept by first aider who shall always be readily available during the working hours of the work place. His name and contact no to be displayed on the box.
- The first aid boxes should be placed at various elevations so as to make them available within the reach and at the quickest possible time.
- The first aid box shall be distinctly marked with a Green Cross on white background.
- Details of contents of first aid box is given in Annexure No. 01
- Monthly inspection of First Aid Box shall be carried out by the owner as per format no. HSEP:14-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:14-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



REV:

01

Date: 20.01.2020

Doc no.: HSEP: 14

Page: **15** of **43**

POWER SECTOR

- 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.

PROVISION OF ACCOMODATION/LABOUR COLONY 8.4.7

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

8.4.8 PROVISION OF EMERGENCY VEHICLE

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

8.4.9 **PEST CONTROL**

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

8.4.10 SCRAPYARD

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

8.4.11 ILLUMINATION

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



REV: 01

20.01.2020 Date:

Doc no.: HSEP: 14

Page: **16** of **43**

POWER SECTOR

	S. No.	Location	Illumination (Lux)
A.	Construction Are	ea	
1.		Outdoor areas like store yards, entrance and exit roads	20
2.		Platforms	50
3.		Entrances, corridors and stairs	100
4.		General illumination of work area	150
5.		Rough work like fabrication, assembly of major items	150
6.		Medium work like assembly of small machined parts	300
7.		rough measurements etc. Fine work like precision assembly, precision measurements etc.	700
8.		Sheet metal works	200
9.		Electrical and instrument labs	450
В.	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)



SITE OPERATION by SUBCONTRACTORS REV:

01

Date: 20.01.2020

Doc no.: HSEP: 14

Page: **17** of **43**

POWER SECTOR

- 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:14-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:14-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
 - o Fire-warden training
 - EMS and OHSMS
 - T & Ps fitness and operation



SITE OPERATION by SUBCONTRACTORS REV:

01

20.01.2020 Date:

Doc no.: HSEP: 14

Page: **18** of **43**

POWER SECTOR

- 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.

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

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.

HSE EVENT REPORTING 10.2

- 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.

10.3 **DAILY HSE ACTIVITY REPORTING**

Daily HSE activities shall be reported by subcontractor to BHEL as per Format No. HSEP:14-F31A



REV:

01

20.01.2020 Date:

Doc no.: HSEP: 14

Page: **19** of **43**

POWER SECTOR

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 refereed by subcontractor, if they so desire.

LIST OF OCPs

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

HSE ACTIVITIES 11.1

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

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



REV: 01

nev. Ui

Date: 20.01.2020

Doc no.: HSEP: 14

Page: **20** of **43**

POWER SECTOR

- 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 ton

Refer 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.



SITE OPERATION by SUBCONTRACTORS REV:

> 20.01.2020 Date: POWER SECTOR

Doc no.: HSEP: 14

01

Page: **21** of **43**

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 ad 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.



SITE OPERATION by SUBCONTRACTORS REV: 01

> Date: 20.01.2020 POWER SECTOR

Doc no.: HSEP: 14

Page: **22** of **43**

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 then 1/4 horizontal and 1 vertical.
- Scaffolding or staging more than 3.6 m above the ground floor, swung or suspended from an overhead support or erected with stationery support shall have a guard rail properly bolted, braced or otherwise secured, at least 90 cm above the floor or platform of such scaffolding or staging and extending along the entire length of the outside 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 saver, 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.



REV: 01

Date: 20.01.2020

Doc no.: HSEP: 14

Page: **23** of **43**

POWER SECTOR

- 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 along with 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.



SITE OPERATION by SUBCONTRACTORS REV:

> 20.01.2020 Date: POWER SECTOR

Doc no.: HSEP: 14

01

Page: 24 of 43

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



REV: 01

12.

Date: 20.01.2020

Doc no.: HSEP: 14

Page: **25** of **43**

POWER SECTOR

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
 lide.
- Rubbish should not be left or allowed to accumulate on construction and other work places.
- Do not burn construction rubbish near working site.



SITE OPERATION by SUBCONTRACTORS REV:

> Date: 20.01.2020

> > Page: **26** of **43**

Doc no.: HSEP: 14

01

POWER SECTOR

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



REV: 01

Date: 20.01.2020

Doc no.: HSEP: 14

Page: **27** of **43**

POWER SECTOR

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

11.7.2 TRAFFIC ROUTE FOR PEDESTRIANS

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

11.7.3 WORK VEHICLE

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

- o A high level of stability.
- o A safe means of access/egress.
- o Suitable and effective service and parking brakes.
- o Windscreens with wipers and external mirrors giving optimum all round visibility.
- o Provision of horn, vehicle lights, reflectors, reversing lights, reversing alarms.
- Provision of seat belts.
- Guards on dangerous parts.
- o 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



SITE OPERATION by SUBCONTRACTORS REV:

> Date: 20.01.2020 POWER SECTOR

Doc no.: HSEP: 14

01

Page: 28 of 43

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

- 0 Brakes.
- Tires. 0
- Steering. 0
- Mirrors.
- Windscreen waters.
- 0 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.

EMERGENCY PREPAREDNESS AND RESPONSE 11.8

- 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.



Doc no.: HSEP: 14

REV: 01

Date: 20.01.2020

Page: **29** of **43**

POWER SECTOR

- 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:14-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.



HEALTH, SAFETY AND ENVIRONMENT PLAN FOR

SITE OPERATION by SUBCONTRACTORS REV:

> Date: 20.01.2020

> > Page: **30** of **43**

Doc no.: HSEP: 14

01

POWER SECTOR

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:14-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:14-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:14-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.

INSPECTION ON HEIGHT WORKING 12.5

- 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.

INSPECTION ON WELDING AND GAS CUTTING OPERATION 12.6

- 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.



REV: 01

> Date: 20.01.2020

> > Page: **31** of **43**

Doc no.: HSEP: 14

POWER SECTOR

- 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.

12.9 **INSPECTION OF EXCAVATION**

Excavation activities shall be inspected as per Format HSEP:14-F13A

13.0 **HSE PERFORMANCE**

- Contractor shall be assessed on monthly basis for HSE Compliance by BHEL Safety In-charge at site. The HSE compliance shall be based on Online HSE Evaluation System of BHEL as per Format No. HSEP:14-
- BHEL shall reserve the right to use this assessment for evaluating bidder's capacity for future tenders
- Suitable HSE reward system shall be developed at site level to promote HSE compliance amongst workmen by the subcontractor.
 - 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.



REV:

Date: 20.01.2020

Page: **32** of **43**

Doc no.: HSEP: 14

01

POWER SECTOR

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.



REV: 01

20.01.2020 Date:

Doc no.: HSEP: 14

Page: **33** of **43**

POWER SECTOR

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 Slinging 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	200/-
	Insulated Property.	
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 #

#: 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.

^{*:} 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.



HEALTH, SAFETY AND ENVIRONMENT PLAN FOR

SITE OPERATION by SUBCONTRACTORS REV:

> 20.01.2020 Date:

> > Page: **34** of **43**

Doc no.: HSEP: 14

01

POWER SECTOR

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 site management
- All non-conformities and observations on HSE identified during internal or external HSE audit shall be disposed off by site in a time bound manner and reported back the implementation status
- Corrective action and Preventive action on HSE issues raised by certification body issued by Regional HQs shall be implemented by site and reported to Site management.

18.0 MONTHLY HSE REVIEW MEETING

- Site shall hold HSE review meeting every month to discuss and resolve HSE issues of site and improve HSE performance. It will also discuss the incidents occurred since previous meeting, its root cause and Corrective action and Preventive action. The agenda is given below:
 - Implementation of earlier MOM
 - **HSE** performance
 - **HSE** inspection 0
 - HSE audit and CAPA 0
 - **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.

FORMATS USED (Details available in Annexure-04)

SL. No.	Format Name	Format No.	Rev No.
01	Inspection of First Aid Box	HSEP:14-F01	00
02	Health Check Up	HSEP:14-F02	00
03	HSE Induction Training	HSEP:14-F03	00
04	Tool Box Talk	HSEP:14-F04	00
05	Monthly Site HSE Report	As specified by BHEL	00
06	Inspection of PPE	HSEP:14-F06	00



Doc no.: HSEP: 14

REV: 01

Date: 20.01.2020

Page: **35** of **43**

POWER SECTOR

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



HEALTH, SAFETY AND ENVIRONMENT PLAN FOR

SITE OPERATION by SUBCONTRACTORS

POWER SECTOR

Doc no.: HSEP: 14

REV: 01

20.01.2020 Date:

Page: **36** of **43**

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.



REV:

01

20.01.2020 Date:

Doc no.: HSEP: 14

Page: **37** of **43**

POWER SECTOR

(vii)	12 roller bandages 10 cm wide.			
(viii)	12 roller bandages 10 cm wide.			
\ /	One tourniquet.			
(ix)				
(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.			
` /	, i			

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



POWER SECTOR

Doc no.: HSEP: 14

REV: 01

20.01.2020 Date:

Page: **38** of **43**

ANNEXURE 02

HSE AUDIT/INSPECTION CHECKLIST CUM COMPLIANCE REPORT				
PROJECT:	JECT:SUBCONTRACTOR:			
DATE :	OW	NER	:	
INSPECTION BY:				
Note: write 'NA' wherever the items is not applicable				
Item	Υ	N	Remarks	Action
	е	0		
HOUSEKEEPING	S			
Waste containers provided and used				
Passageways and walkways clear				
General neatness of working area				
Other				
PERSONNELPROTECTIVEEQUIPTMENTS				
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		ļ		
LADDER		ļ		
Extension side rails 1 m above				
Top of landing				
Properly secured	I			



Doc no.: HSEP: 14

REV: 01

Date: 20.01.2020

Page: **39** of **43**

Angle + 70" from horizontal Other HOISTS, CRANES AND DERRICKS Condition of cables and sheat OK Condition of cables and sheat OK Condition of cables and sheat OK Condition of silngs, chains, hooks OK Inspection & maintenance log maintained Outriggers used Signals observed and understood Qualified operators Others Others MACHINERY, TOOLS & EQUIPMENT Proper instruction Safety devices Proper cords Inspection and maintenance Other Other WEHICLE AND TRAFFIC Rules and regulations observed Inspection and maintenance Licensed drivers Other TEMPORARY FACILITIES Emergency instruction sposted Fire extinguishers provided Fire extinguishers provided Fire extinguishers provided Fire actinguipment available General neatness Others FIRE PREVENTION Personnel Instructed No smoking in prohibited areas. Proper viring ELCD's provided ELCD's provided ELCD's provided ELCD's provided Fire extinguishers checked No smoking in prohibited areas. Proper wiring ELCD's provided ELCD's provided Fire extinguishers checked Proper viring ELCD's provided Fire extinguishers checked Proper yiring ELCD's provided Fire yiring Fire yiring ELCD's provided Fire yiring ELCD's provided Fire yiring ELCD's provided Fire yiring Fire yiring ELCD's provided Fire yiring ELCD's provided Fire yiring Fire yiring Fire yiring ELCD's provided Fire yiring Fire yiring ELCD's yiring ELCD's yiring Fire yirin	A	-		
HOISTS, CRANES AND DERRICKS Condition of cables and sheaf OK Condition of slings, chains, hooks OK Inspection & manthenance log maintained Outriggers used Signals observed and understood Qualified operators Others MACHINERY, TOOLS & EQUIPMENT Proper instruction Safety devices Proper cords Inspection and maintenance Other WEHICLE AND TRAFFIC Rules and regulations observed Inspection and maintenance Unispection and maint				
Condition of cables and sheaf OK Condition of lalings, chains, hooks OK Inspection & maintenance log maintained Ourliggers used Signals observed and understood Qualified operators Others MACHINERY, TOOLS & EQUIPMENT Proper instruction Safety devices Proper circuit control of the control of				
Condition of slings, chains, hooks OK Inspection & maintenance log maintained Outriggers used Signals observed and understood Qualified operators Others Safety devices Safety Safet				
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 Ilicensed drivers Other TEMPORARY FACILITIES Emergency instructions posted Fire extinguishers provided Fire and equipment available General neathess Others FIRE PREVENTION Personnel instructed No smoking in prohibited areas. Hydrants Clearance Others Clearance Others FICE Sprovided Fire ada and special sprovided Fire extinguishers checked No smoking in prohibited areas. Hydrants Clearance Others FICE PREVENTION Proper wiring Clearance Others Fire extinguishers checked Fire ada and special sprovided Fire extinguishers checked Fire provided Fire prov				
Outingers used Signats observed and understood Qualified operators Others Others ROCKINGERY, TOOLS & EQUIPMENT Proper instruction Safety devices Proper cords Inspection and maintenance Other VEHICLE AND TRAFFIC Rules and regulations observed Inspection and maintenance Ucensed drivers Other TEMPORARY FACILITIES Emergency instructions posted Fire extinguishers provided Fire extinguishers provided Fire extinguishers checked No smoking in prohibited areas. Hydrants Clearance Others ELECTRICAL Proper wiring ELCB's provided Ground fault circuit interrupters Prevention datified Ground fault circuit interrupters Prevention of tripping hazards Other HANDLING & STORAGE OF MATERIALS FLAMMABLE GASES AND LIQUIDS Containers clearly identified Proper wirings Containers clearing identified Proper storage Containers clearly identified Proper storage				
Signals observed and understood Outlefted 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 Ucensed drivers Other TEMPORARY FACILITIES Emergency instructions posted Fire extinguishers provided Fire actinguishers provided Fire extinguishers provided Fire add equipment available General neatness Others PIER PREVENTION Personnel instructed No smoking in prohibited areas. Hydrants Clearance Others Clearance Other Clearance Other Clearance Clearance Other Clearance Clear				
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 extinguishers provided Fire extinguishers provided Fire extinguishers exceed Other FIREPREVENTION Personnel instructed Fire extinguishers checked No smoking in prohibited areas. Hydrants Clearance Others ELECTRICAL Proper wiring ELCB's provided Ground fault circuit interrupters Prevention of tripping hazards Other HANDING & STORAGE OF MATERIALS Properly stored or stacked Prassageways clear Other FLAMMABLE GASES AND LIQUIDS Containers clearly identified Proper storage				
Others Proper instruction Safety devices Proper cords Inspection and maintenance Other VEHICLE AND TRAFFIC Rules and regulations observed Inspection and maintenance Ucensed drivers Ucher TEMPORARY FACILITIES Emergency instructions posted Fire extinguishers provided Fire-aid equipment available General neatness Others FIRE PREVENTION Personnel instructed Fire stringuishers 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 Prassageways clear Others PLAMMABLE GASES AND LIQUIDS Containers clearly identified Proper storage				
Proper instruction Safety devices Proper cords Inspection and maintenance Other VEHICLE AND TRAFFIC Rules and regulations observed Inspection and maintenance Inspection and maintenance Univers User of the state of				
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 TEMPORARY FACIL				
Safety devices Proper cords Inspection and maintenance Other WEHICLE AND TRAFFIC Rules and regulations observed Inspection and maintenance Ucensed 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 Fround fault circuit interrupters Protection against damage Prevention of tripping hazards Other HANDLING & STORAGE OF MATERIALS FLAMMABLE GASES AND LIQUIDS Containers clearly identified Proper storage Proper lightliffied Proper storage Containers clearly identified Proper storage				
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 attinguishers provided Fire-aid equipment available General neatness Other FIEP REVENTION Personnel instructed Fire extinguishers checked No smoking in prohibited areas. Hydrants Clearance Others ELECTRICAL Proper wiring ELCB's provided Fround fault circuit interrupters Protection against damage Prevention of tripping hazards Other HANDLING & STORAGE OF MATERIALS FLAMMABLE GASES AND LIQUIDS Containers clearly identified Proper storage Proper storage				
Other VEHICLE AND TRAFFIC Rules and regulations observed Inspection and maintenance Licensed drivers Other TEMPORARY FACILITIES Emergency instructions posted Fire atili equipment available General neatness Others FIFE-AID EVENTION Personnel instructed Fire stringuishers 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				
VEHICLE AND TRAFFIC Rules and regulations observed Inspection and maintenance Inspection and ma				
Rules and regulations observed Inspection and maintenance Licensed drivers Other TEMPORARY FACILITIES Emergency instructions posted Fire extinguishers provided 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				
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 Prasageways clear Other FLAMMABLE GASES AND LIQUIDS Containers clearly identified Proper storage				
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				
Other TEMPORARY FACILITIES Emergency instructions posted				
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				
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 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-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 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				
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 extinguishers provided			
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-aid equipment available			
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				
Personnel instructed Fire extinguishers checked No smoking in prohibited areas. Hydrants Clearance Others ELECTRICAL Proper wiring ELCB's provided Ground fault circuit interrupters 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 extinguishers checked No smoking in prohibited areas. Hydrants Clearance Others ELECTRICAL Proper wiring ELCB's provided Ground fault circuit interrupters 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 PREVENTION			
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				
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				
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				
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				
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	Clearance			
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	Others			
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	ELECTRICAL			
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	Proper wiring			
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	ELCB's provided			
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	Ground fault circuit interrupters			
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				
Other HANDLING & STORAGE OF MATERIALS Properly stored or stacked Passageways clear Other FLAMMABLE GASES AND LIQUIDS Containers clearly identified Proper storage	5			
Properly stored or stacked Passageways clear Other FLAMMABLE GASES AND LIQUIDS Containers clearly identified Proper storage	· · -			
Properly stored or stacked Passageways clear Other FLAMMABLE GASES AND LIQUIDS Containers clearly identified Proper storage				
Passageways clear Other FLAMMABLE GASES AND LIQUIDS Containers clearly identified Proper storage	HANDLING & STORAGE OF MATERIALS			
Passageways clear Other FLAMMABLE GASES AND LIQUIDS Containers clearly identified Proper storage	Properly stored or stacked			
Other FLAMMABLE GASES AND LIQUIDS Containers clearly identified Proper storage				
FLAMMABLE GASES AND LIQUIDS Containers clearly identified Proper storage				
Proper storage				
Proper storage	Containers clearly identified			
	=			
Fire extinguisher nearby	Fire extinguisher nearby			



REV: 01

Date: 20.01.2020

Page: **40** of **43**

Doc no.: HSEP: 14

POWER SECTOR

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.		



REV: 01

Date: 20.01.2020

Doc no.: HSEP: 14

Page: **41** of **43**

POWER SECTOR

ANNEXURE 03

REFERENCES

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

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



REV: 01

20.01.2020 Date:

Doc no.: HSEP: 14

Page: **42** of **43**

POWER SECTOR

(18)	IS:8520 – 1977	Guide for Selection of Industrial Safety Equipment for Eye,		
	(Reaffirmed 2002)	Face and Ear Protection.		
(19)	IS:9473:2002	Respiratory Protective Devices-Filtering Half Masks to protect		
		against Particles-Specification.		
(20)	IS:9944:1992	Natural and Man-made Fiber Rope Slings-Recommendations		
	(Reaffirmed 2003)	on Safe working loads.		
(21)	IS:11057 – 1884	Specification for Industrial Safety Nets		
	(Reaffirmed 2001)			
(22)	IS:12254:1993	Polyvinyl Chloride (PVC) Industrial Boots-Specification		
	(Reaffirmed 2002)			
(23)	IS:13367(Part 1):1992	Safe Use of Cranes-Code of Practice		
	(Reaffirmed 20030			
(24)	IS:14166:1994	Respiratory Protective Devices-Full Face Masks Specification		
	(Reaffirmed 2002)			
(25)	IS:14746 : 1999	Respiratory Protective Devices-Half Masks and Quarter		
	(Reaffirmed 2003)	Masks - Specification		
(26)	IS: 15397:2003	Portable Extinguisher Mechanical Foam Type(Stored		
	(Reaffirmed 2008)	Pressure)-Specification		
(27)	IS: 19011:2002	Guidelines for Quality and/or Environmental Management		
		Systems Auditing		



POWER SECTOR

Doc no.: HSEP: 14

REV: 01

Date: 20.01.2020

Page: **43** of **43**

ANNEXURE 04 : SAFETY FORMATS

& ANNEXURE 05 : WORK PERMIT FORMATS



INSPECTION OF FIRST AID BOX

FORMAT NO: HSEP:14-F01

REV NO.: 00 PAGE NO. 01 OF 02

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

Number of employees on the site: -_____

Sl.No.	Item	No.	Remarks
		Available	
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.		



INSPECTION OF FIRST AID BOX

FORMAT NO: HSEP:14-F01

REV NO.: 00 PAGE NO. 02 OF 02

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

Signature of Subcontractor's Site I/C:



HEALTH CHECK UP

FORMAT NO: HSEP:14-F02

REV NO.: 00 PAGE NO. 1 OF 02

Name of Site :				
Name of Sub-Contractor :				
Name of Employee :				
NAME:	<u> </u>			
History Of Past Illness	H/O Epilep	osy		
	H/O Drug			
		tics/ Hypertension		
	H/O Uncor	nsciousness		
Personal History				
EXAMINAT	ION		OBSERVATION	
General Physical Examination				
Height	:			
Weight	:			
ВМІ	:			
Built And nourishment	:			
Pallor	:			
Temperature	:			
Chest Expansion	:	Inspiration	Expansion	
Lymph Node Enlargement	:			
Ear, Nose, Throat	:			
Ear	:			
Nose	:			
Throat	:			



HEALTH CHECK UP

FORMAT NO: HSEP:14-F02

REV NO.: 00 PAGE NO. 2 OF 02

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

Signature of the examining doctor



HSE INDUCTION TRAINING

FORMAT NO: HSEP:14-F03

REV NO.: 00 PAGE NO. 01 OF 01

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

SI	Name	Designation	Organisation	Signature
No.				

Signature of Training co-ordinator:



Name of Site:

POWER SECTOR

TOOL-BOX TALK

FORMAT NO: HSEP:14-F04

REV NO.: 00

PAGE NO. 01 OF 01

Sub-Contractors Na	ame :		
Date :			
Topic	Name of person	No. of Participants	Remarks
	delivered Tool Box	attended	
	Talk		

Signature of Site I/C of Subcontractor:



PERSONAL PROTECTIVE EQUIPMENTS

FORMAT NO: HSEP:14-F06

REV NO.: 00

PAGE NO. 01 OF 01

Name of Site:			
Name of Sub-Contractor:	r		
Inspected by :			
Date of Inspection :			
Item	Issued this Month	Nos. Issued up to	Percentage of usage
		the Month	at site
Safety Helmet			
Safety Shoes			
Full Body Harness			
Fall Arrestor			
Safety Nets			
Other PPEs.			

Signature of Site I/C of Subcontractor:



INSPECTION OF T&Ps

FORMAT NO: HSEP:14-F07

REV NO.: 00 PAGE NO. 01 OF 01

Signature-Subcontractor/ Subcontractor's

Safety Officer

Name of	f Site :		
Name of	f 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 wor	k 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
	Acceptance Norms		
8.0	/ toceptance rearms		
9.0	Committee Observations		

Signature-Site Safety Officer (BHEL)



STATUS OF T&Ps

FORMAT NO: HSEP:14-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	Validity of Test Certificate
			person	
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:

बीएच ईएल
<i>-77</i>

INSPECTION OF CRANES AND WINCHES

FORMAT NO: HSEP:14-F09

REV NO.: 00 PAGE NO. 01 OF 03

HIJIEE	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 filly extendable		
20	Tyre pressure		
21	Condition of Battery And Lamps		



INSPECTION OF CRANES AND WINCHES

FORMAT NO: HSEP:14-F09

REV NO.: 00 PAGE NO. 2 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

SI.	Description	YES	NO	NA	Remarks
No.	Description				
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?				



INSPECTION OF CRANES AND WINCHES

FORMAT NO: HSEP:14-F09

REV NO.: 00 PAGE NO. 3 OF 03

SI.	Description	YES	NO	NA	Remarks
No.	Description				
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:



INSPECTION OF HEIGHT WORKING

FORMAT NO: HSEP:14-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	Remarks
		(Yes/No)	
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?		



INSPECTION OF HEIGHT WORKING

FORMAT NO: HSEP:14-F10

REV NO.: 00

PAGE NO. 02 OF 02

SI. 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 :



INSPECTION OF WELDING AND GAS CUTTING

FORMAT NO: HSEP:14-F11 REV NO.: 00 PAGE NO. 1 OF 02

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

Weldin	g			
Sl.no.	Description	Υ	N	Remarks
		е	0	
		S		
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			



INSPECTION OF WELDING AND GAS CUTTING

FORMAT NO: HSEP:14-F11

REV NO.: 00 PAGE NO. 2 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:



INSPECTION OF ELECTRICAL INSTALLATION

FORMAT NO: HSEP:14-F12

REV NO.: 00

PAGE NO. 01 OF 02

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

Sr.	Contents	Yes/No	Remarks
No.			
Α	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?		
В	DBs/SDBs		
1.	Is earth conductor continued up to 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?		
С	ELCB		
1.	Whether the connections are routed through ELCB?		
2.	Is ELCB sensitivity maintained at 30 mA?		



INSPECTION OF ELECTRICAL INSTALLATION

FORMAT NO: HSEP:14-F12

REV NO.: 00 PAGE NO. 02 OF 02

Sr.	Contents	Yes/No	Remarks
No.			
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:



INSPECTION OF ELEVATOR

FORMAT NO: HSEP:14-F13

REV NO.: 00

PAGE NO. 01 OF 01

Name o	of Site		
Name o	of Sub-Contractor		
Inspecto	ed by		
Date of	Inspection		
Sr.	Description	Remarks	

	Description	Remarks	
No.			
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 v	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		/ Not available
7.0	Performance test	Done/ No	ot Done
8.0	Acceptance Norms		
9.0	Committee Observations		
	Date of next review (if accepted)		

	वी ।	एय	5	गा	
	!	1	4	5/	
y.		77	-		

Inspection of Excavation

FORMAT NO: HSEP:14-F13E REV NO.: 00 PAGE NO. 01 OF 01

Name of S	ite :	
Name of S	ub-Contractor :	
Inspected	by:	
Date of Ins	spection :	

Sl.no.	Description	Yes	No	Remarks
1	Precautions taken for Underground Electrical Cable			
2	Precautions taken for Under / Above ground sewer/ Drinking Water Line			
3	Precautions taken for Underground Telecommunication Line			
4	Precautions taken for Underground Product/Utility Line			
5	Precautions taken for Underground Fire Water Line			
6	Shoring / Shuttering / Sheet piling done to prevent collapse of excavation walls. Strength of Excavation wall ensured at all times			
7	Slope Cutting / Angle Maintained			
8	Hard Barricading & Edge Protection provided			
9	Separate Safe Access for Man and Vehicle			
10	Lighting arrangement			
11	Banksman Provided			
12	Required basic PPEs provided			
13	Excavated soil / Construction Material / equipment kept away from the edge.			
14	First aid in attendance.			
15	Other:			
	Total No of YES			



HSE PENALTY

FORMAT NO: HSEP:14-F14

REV NO.: 00 PAGE NO. 1 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 Slinging 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: -

#: 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.

^{*:} 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.



HSE PENALTY

FORMAT NO: HSEP:14-F14

REV NO.: 00 PAGE NO. 2 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)



Incident Report

(To be submitted within 24 hours of time of incident)

FORMAT NO: HSEP:14-F15

REV NO.: 00

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	ı		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 O	THERS								
10	PERSONAL DETAILS	OF INJURE	D AND / OR DETAILS O	DF MATERIALS / EQUIPMENT / PROPERTY DAMAGED							
NAME	=			N.	AME OF MATERIAL / EQUIPMENT	/ PROPERTY					
PERIO	OD OF EMPLOYMENT										
AGE	YRS	SEX	MALE/ FEMALE		ESTIMATED COST	ACTUAL COST					
MARI	TAL STATUS	SIN	GLE / MARRIED								
occi	JPATION				NATURE OF DAM	IAGE					
PART	OF BODY INJURED										
NATU	IRE OF INJURY										
AGENCY (OBJECT / EQUIPMENT / SUBSTANCE) MOST RESPONSIBLE FOR CAUSING ACCIDENT / INJURY / DAMAGE											
PERSON (NAME & DESIGNATION) WITH MOST CONTROL OVER AGENCY (OBJECT / EQUIPMENT / SUBSTANCE) CAUSING ACCIDENT INJURY / DAMAGE											
13	DESCRIBE CLEARLY	Y HOW THE	ACCIDENT OCCURRED	(USI	E ADDITIONAL SHEET, IF REQUI	RED					
	voie.										
ANAL	.YSIS										
14	WHAT ACTS AND / C										
15	WHAT ARE THE BAS OF THESE ACTS AN		FOR THE EXISTENCE DITION ?								
16	WHAT CORRECTIVE TO PREVENT ACCID										
	DATE :				SIGNATURE OF SIT	E HSE COORDINATOR					
17 COMMENTS OF HEAD / SOX											
	DATE:				s	IGNATURE OF HEAD/SOX					



Format for Monthly HSE Planning & Review

FORMAT NO: HSEP:14-F30

REV NO.: 00 PAGE NO. 01 OF 3

Name	of the Site		Name of the Subcontractor	
Scope	of Work		Date	
PART	- A: PLAN OF HSE ACTIVITIES	FOR THE MONTH OF		PART-B: REVIEW ON
SN.	Description of HSE Activity 8		Plan & Targets for the month	Review
1	•	Required Places and Inspection thereof as	Areas 1	
2	Health check-up as per Forma	t: F02	Health check-up for Nos 1. New inductees 2. Drivers & Operators 3. Workers in following high risk areas: a	
3	Induction training of newly join	ned workers as per Format: Fo3	Minimum No. of workers:	
4	Toolbox talks (TBT) conducted before start of work as per Format: Fo4		Locations of TBTs & No. of workers 1	
5	PPE usage and issue as per Foi	rmat: Fo6		
5	Inspection of T&Ps as per Forn	nat: Fo7	List of T&Ps to be inspected 1.	
7	Identification & Inspection Sta	tus of T&Ps as per Format: Fo8		
3	Inspection of Cranes & Winche	s as per Format: Fog	List of Cranes & Winches & Nos. 1	
)	Inspection of Height Working	as per Format: F10	Areas: 1	
LO	Inspection of Welding & Gas C	utting operations as per Format: F11	Areas: 1	
1	Inspection of Electrical Installa	tions as per Format: F12	Locations: 1	
L2	Inspection of Elevators (as app	licable) as per Format: F13	Locations: 1	
13	Inspection of Excavation as pe	r Format: F13E	Locations: 1	



Format for Monthly HSE Planning & Review

FORMAT NO: HSEP:14-F30

REV NO.: 00 PAGE NO. 02 OF 3

SN.	Description of HSE Activity & Formats	Plan & Targets for the month	Review
14	Job Safety Analysis as per Format F32B	Activities: 1	
15	Regular Job Specific Training (Re-training) for workers involved in hazardous activities	Topics/ Hazards & No. of workers 1	
16	Mass housekeeping (HK) drive in work areas	Areas 1.	
17	Vertigo Test of Height workers	Minimum No. of workers:	
18	Deployment of qualified HSE Officers as per contract	Location(s) & Nos. 1	
19	Deployment of qualified HSE Stewards as per contract	Location(s) & Nos. 1	
20	Deployment of Safety tools & Equipment (Safety Nets, Lifelines, Fall arrestors, Man-cages, flashback arrestors, scaffolding etc.)	Tool/ Equipment & Location 1	
21	Safety Walks by site in charge of agency (4 -Weekly once)	Dates:	
22	Safety walks by departmental head (8-Weekly twice)	Dates:	
23	Availability/ deployment of Safety posters/ placards/ signage at strategic locations	Locations: Nos.	
24	Provision of clean drinking water sources for workers	Locations: Nos.	
25	Provision of toilets for workers (separate for male & female workers)	Locations: Nos.	
26	Rest sheds for workers during lunchtime, rain, dust storm etc.	Locations: Nos.	
27	Availability of following in Labor colony	 Clean drinking water Toilets Cleanliness & Hygiene Grass cutting, Fogging Electrical Inspection 	



Format for Monthly HSE Planning & Review

FORMAT NO: HSEP:14-F30

REV NO.: 00 PAGE NO. 03 OF 3

SN.	Description of HSE Activity & Formats	Plan & Targets for the month	Review
28	Availability of dust/ waste bins at various locations	Locations:	
29	Availability of Ambulance (individual/ joint) in each shift	Ambulance No.	
30	Availability of emergency vehicle in each shift	Emergency vehicle	
31	Deployment/ Availability of tested Fire Extinguishers	Locations & Nos. 1	
32	Tree plantation	Locations & Nos. 1	
33	Waste disposal & Scrap Bins	Locations 1	
34	Illumination checks	Locations 1	
35	Safety award function: 1. Display of good practices Award presentation	Minimum 1 per month	
36	Submission of Daily Reports as per Format No.F31A	Daily Reports (Night & Day Shifts)	

PLAN			REVIEW				
<u>Agency</u>	<u>BHEL</u>	Agency	BHEL				
Name:	Name:	Name:	Name:				
Sign:	Sign:	Sign:	Sign:				
Date:	Date:	Date:	Date:				



Format for Daily HSE Reporting

FORMAT NO: **HSEP:14-F31** A REV NO.: 00

PAGE NO. 01 OF 1

Note: Following format to be submitted (preferably) in excel/ soft copy by subcontractor daily at the end of each shift. Any photographs/ records to be attached

Site													Subo	ontra	ctor												
Year			1					Mon	th										Day								
SHIFT Submitted By	Work Area(s)	Staff	Man-Power	Safety Officers	Safety Stewards	Tool Box (Topics and No. of Participants)	Induction Training (No. of Participants)	Vertigo Test (Numbers Tested)	On-the-Job Training (Topic & participants)	Work Permits	Job Safety Analyses conducted	Height Work Inspection	Other Hazardous Activities Inspection	T&P Inspection (Names & Nos. Inspected)	Safety Walk (Designation, Areas)	HSE Meeting	Safety Reward (Details)	Housekeeping/ Dust Suppression/ Tree Plantation Activities (Locations/ Details)	Lost time Accident	Restricted Work Case	Medical Treatment Case	First Aid Case	Near miss	Property Damage/ Fire	Non-Compliances Submitted by BHEL	Complied by Agency	Any other Remarks/Inputs
Day																											
Night														NA		NA	NA	NA									



Job Safety Analysis Format

FORMAT NO: HSEP:14-F32B

REV NO.: 00 PAGE NO. 01 OF 1

Name of the Site)			
Name of the Sul	ocontractor			
Activity, Area				
		HAZARDS		PRECAUTIONS
	r			
(Name)	mitted By	Reviewed By	Approved By	
(Age	ency HSE)	(BHEL	(BHEL HSE)	
(Date)	' '	Execution)	, , , , ,	



FORMAT NO: HSEP:14-F33

REV NO.: 00

PAGE NO. 01 OF 3

Checklist for Evaluation of HSE Performance

SL	Parameter for Measurement	M/ O	Wt	Supporting Documents
1a	Induction training for new workers conducted through audio-visual medium & documented ?	М	1	Induction Training Records
1b	Tool box talk conducted regularly as per plan, and documented?	М	1	Toolbox Talk Records
10	Contractor in charge and safety in charge attended safety meetings?	М	2	Minutes of Meeting
1 d	Whether observations in safety meetings are complied before next meeting?	М	2	-do-
1e	Preparation and submission of Monthly HSE report within stipulated time	М	1	Report submission date
ıf	Preparation and submission of Incident/near-miss report and RCA Report (as applicable) within stipulated time	М	1	Incident/ Near Miss Records
1 g	Carrying out Inspections and submission of Inspection reports within stipulated time	М	1	Inspection Records
1h	Regular Job Specific Training ensured for High Risk Workers (through audio-visual medium) as per plan	М	1	Training & Attendance Records
2a	Whether the contractor is registered under BOCW	М	2	BOCW Registration Certificate
2b	Availability of Qualified safety officer (1 for every 500 labour)	М	2	Safety Officer qualification & experience records
20	Availability of Qualified safety supervisor (1 for every 100 labour)	М	2	Safety Officer qualification & experience records
2d	All the workers are provided and using safety helmets and safety shoes/gum boots	М	2	PPE Issue Records, Inspection/ non-conformity records
26	Housekeeping done on regular basis and scrap removal at site	М	1	Housekeeping records, Inspection/ non-conformity records
2f	Usage of Goggles/Face shields and Hand gloves for gas cutter and grinders		1	PPE Issue Records, Inspection/ non-conformity records
2 g	Wall openings & floor openings are guarded?		1	Inspection/ non-conformity records
2h	Adequate illumination provided in all working area?		1	Inspection/ non-conformity records
2i	Safety posters, sign boards and emergency contact numbers in all prominent location are displayed?		1	Inspection/ non-conformity records
2j	Availability of automatic reverse horns, Main horn, hook latches for Vehicles, mobile cranes, Hydras		1	Inspection/ non-conformity records
2k	Ban of carrying mobile phones to work place is implemented for workers		1	Inspection/ non-conformity records
2	Availability of Tags & Inspection Certificates for Cranes of all capacities		1	Master T&P List with internal & external test details
21.2	Availability of Tags & Inspection Certificates for Winches of all capacities		1	Master T&P List with internal & external test details
21.3	Availability of Tags & Inspection Certificates, color coding for Chain pulley blocks		1	Master T&P List with internal & external test details
21.4	Availability of Tags & Inspection Certificates for Vehicles - Trailers, Dozers, Dumpers, Excavators. Mixers etc.		1	Master T&P List with internal & external test details
21.5	Availability of Tags & Inspection Certificates for Welding machines, grinders, Drilling machines, etc.		1	Master T&P List with internal & external test details
21.6	Availability of Tags & Inspection Certificates, colour coding for Wire rope slings etc.		1	Master T&P List with internal & external test details
21.7	Availability of Tags & Inspection Certificates for Batching plants		1	Master T&P List with internal & external test details



FORMAT NO: HSEP:14-F33

REV NO.: 00 PAGE NO. 02 OF 3

Checklist for Evaluation of HSE Performance

SL	Parameter for Measurement	M/ O	Wt	Supporting Documents
2m.1	Use of Lifting Permit as per requirement		1	Permit Records
2m.2	Use of Height Permit as per requirement		1	Permit Records
2m.3	Use of Hot Work Permit as per requirement		1	Permit Records
2m.4	Use of Excavation permit as per requirement		1	Permit Records
2m.5	Use of Confined space work permit as per requirement		1	Permit Records
2m.6	Use of Grating removal and safety net removal permit as per requirement		1	Permit Records
2m.7	Use of Lockout-Tag out permit as per requirement		1	Permit Records
2m.8	Use of Radiography permit as per requirement		1	Permit Records
2m.9	Use of Night/ Holiday Work Permit as per requirement		1	Permit Records
2m.10	Use of Any other Applicable Permit as per requirement		1	Permit Records
3a	Material safety data sheet(MSDS) available for all chemicals and displayed in usage and storage area?		1	Inspection/ non-conformity records
3p	Spillages of oil/concrete and other chemical is controlled and cleaned by proper method in case of spill?		1	Inspection/ non-conformity records
3c	Availability of adequate number of urinals in workplace and in elevations and maintained	М	1	
3d	Availability of rest rooms for workers at site	М	1	
3е	Availability of Drinking water facility at work spot		1	
3f	Hygienic Labour colony is provided for workers.		1	
4a	Is heavy/complex critical lifting permit obtained for heavy, complex materials before handling/erection activity?		1	Work Permit records
4b	Whether area below lifting activities barricaded		1	Inspection/ non-conformity records
4C	Availability of experienced rigging foreman		1	Experience details of rigging foreman
4d	Is agency is following proper storage and handling procedure as per manufacturer standard for all hazardous material?		1	Procedure for storage & handling
4e	Are oxygen and acetylene cylinders are transported to work place from storage area in trolleys		1	
5a	Whether all deep excavation has been protected by barrier		1	Inspection/ non-conformity records
5b	Sloping/benching & shoring provided for excavation as per requirement?		1	-do-
5C	Proper access and egress provided for excavations?		1	-do-
5d	Blasting is done in controlled manner?		2	-do-
6a	Whether Electrical booth is equipped with Co ₂ fire extinguishers and fire buckets filled with sand?		2	Inspection/ non-conformity records
6b	Availability of Illumination lamp in electric booth?		1	-do-
6c	whether Caution Boards have been displayed?		1	-do-
6d	Usage of Metal Plug top for all hand power tools?		1	-do-
6e	Usage of Insulated welding cables.		1	-do-
6f	Electrical Booth/Distribution Board to be covered by proper Canopy.		1	-do-
6g	Availability of functional & individual 30ma ELCB / RCCB and MCB for protection and conducting periodical check-up?		1	-do-
6h	Double earthing for panel boards and all machinery & proper earth pit with regular inspection available?		1	-do-
6i	Whether Electrician is qualified and experienced		1	Qualification & Experience records of electrician
6 <u>j</u>	Availability and usage of Rubber hand gloves by electrician?		1	Inspection/ non-conformity records



FORMAT NO: HSEP:14-F33

REV NO.: 00 PAGE NO. 03 OF 3

Checklist for Evaluation of HSE Performance

SL	Parameter for Measurement	M/ O	Wt	Supporting Documents
7a	Whether Scaffolding pipes made with steel or aluminum, are being used and checked periodically by experienced/ certified scaffolder?		2	Inspection/ non-conformity records
7b	8mm Stainless Steel wire rope with plastic cladding is provided for life line (Vertical / Horizontal) during height work?		2	-do-
7¢	Availability of emergency lighting in case of power failure		1	-do-
7d	Whether all the openings are covered with Safety Nets made of fire proof Nylon?		1	-do-
7e	Whether MS pipe rails around staircases & platforms in usage are provided with top, middle rails and toe guard?		1	-do-
7f	Whether Ladder with vertical life line /Fall arrestor is available to climb?		1	-do-
79	Whether all workers deployed for working at height have been issued height pass after undergoing vertigo test?		1	Height Pass records
7h	Whether all workers deployed for height work / climbing ladder are provided and using Double lanyard safety belt?		1	PPE Issue records, inspection/ non- conformity reports
7i	Is all hand tools/Small material used by height workers is tied firmly to prevent fall?		1	-do-
8a	Flash back arrestors for all gas cutting sets is available on Torch side and cylinder side		1	Inspection/ non-conformity records
8b	Oxygen/Acetylene/LPG cylinders not in use have caps in place and stored separately?		1	-do-
8c	Availability of Face screen, Hand gloves, and Apron, for welders		1	-do-
8d	Protection from falling hot molten metal during metal cutting / welding at height by providing GI sheet below the cutting area especially in fire prone areas		1	-do-
9a	Pre-employment medical check-up done for all workers and submitted?		1	Medical check records
9b	Availability of first aid center, with MBBS doctor(Own or Sharing basis)	М	2	Attendance records
9c	Availability of Ambulance facility 24 hours (Own or sharing basis)	М	2	-do-
9d	Is First aid trained personnel's are available and their names are displayed at site?	М	1	-do-
9e	Availability of Emergency vehicle at site		1	
9f	Periodical medical check-up is conducted for all the workers and submitted?		1	Medical check records
99	Availability of sufficient number of first aid box as per standard list and maintaining record		1	Inspection records
10a	Availability of Fire extinguishers, buckets at all vulnerable points		2	Fire extinguisher records
10b	Periodic fire mock drill conducted?		1	Fire, Mock drill records
100	Are all flammable materials are stored separately?		1	
10d	Periodic grass cutting is done in material storage area?		1	
10e	Availability of 24V DC lighting in confined space work area		1	
10f	Availability of exhaust fan in confined space work area		1	

Note:

- M: Mandatory; O: Optional. Points other than mandatory can be excluded with appropriate justification (scope etc.) by BHEL
- Additionally: 30 Marks for each Fatal Accident and 10 mark for each major accident shall be deducted.



SAFETY WORK CLEARANCE	Permit no.
Project:	Emergency Contact Nos:
Subcontractor:	

BURNING/WELDING /HOT WORK PERMIT

Area	:	Date:		Time:					
Name	e of Site Engineer (Permit Requesting Authority):_		Sign:						
Name	e of Work Performing Contractor:								
Name	e of Package In charge:	Sign:		Date:					
Desc	ription of Work:								
	Execution Date:above signing person(s) will be responsible to ens								
on the	e permit to work.	ure that the above described work will be di	one under all the s	атету ргесацион	ns memonea				
The f	ollowing 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 pr	rovided.							
4.	Welding machine located in a clean and dry are	ea.							
5.	Welding machine grounded at the equipment a provided for welding machine.	nd proper leakage current protection device	e (ELCB)						
6.	Emergency STOP buttons are in working condi	tion. 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 applic shoes, leather gloves, long sleeve and nose ma	able: safety helmet, safety goggles, welding ask -provided	g helmet, safety						
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 extir	nguisher provided.							
15.	Nearby combustible material removed. Housek	eeping done.							
16.	Other								
Name	of Continents Colors Officers	Cima	De	.	T:				
	e of Contractor Safety Officer:ewed and approved by BHEL Site Engineer (Pe		Da	fe:	_rime:				
	e:		Date:	Tim	ie:				
	e of BHEL Safety Representative:								
I und	erstand the precaution to be taken as described a upervision by following all precaution and Safety I	above and as per project requirement and he							
Name	e of Work Performing Authority:	Sign:	Date:	Time:					
Perm	it Cancellation:								
I here	eby declare that the work is complete, all workers	under my control have been withdrawn and	I the site restored t	o safe tidy cond	dition.				
	e of Work performing Authority:								
	e of Site Engr. (Permit Requesting Authority):	-							
Name	e of BHEL Site Engr. (Permit Issuing Authority):	Sign:	Date:	Time:					
	(This	permit is valid only for the date it is issued)							
Origi	nal at BHEL site Seco	ond Copy - BHEL SAFETY	Third Copy : Co	ntractor					



SAFETY WORK CLEARANCE	Permit no.
Project:	Emergency Contact Nos:
Subcontractor:	

LIFTING ACTIVITY PERMIT

wea		Dale	"''	e.	
	of Site Engineer (Permit Requesting Authority):			Name of Work	
	ming Contractor:				
	of Package In charge: ption of Work:			Jate:	
Jesch	phon of work.				
Vork E	Execution Date:Tim	ne Valid from:	to		
	pove signing person(s) will be responsible to ensure th utions mentioned on the permit to work.	aat the above described work	k will be done under	all the safety	
he fo	llowing precautions are to be taken:				
lo.	Item		Yes	s Not required	
	Crane used for lifting activity tested, certified and approved for	or rated lifting			
	All lifting tackles, gears/appliances are tested and certified fo	or lifting works.			
	Crane operator is trained and competent for lifting operation.				
	Lifting sling/ belt is protected against sharp edge of the jobs t	to be lifted.			
	Access and exit marked and without obstruction.				
	Lifting arrangement adequate.				
	Unwanted rubbish material removed from work platform.				
	Minimum 2 guidelines have been provided for balancing and	guiding jobs to be lifted.			
	Periphery area of crane booms as well as lifting job is barrica posted.	aded and unauthorized/no-entry	sign board		
0.	Rigger and signal man is trained and competent for lifting wo	ork.			
1.	No lifting activity to be carried out during lightening, heavy wi	ind/rain.			
2.	If scaffolding to be used during lift, scaffolding with valid tag a	available for use.			
3.	Double lanyards safety harness/belt checked an in working of	condition.			
4.	Safety shoes (non-slip), helmet with chin strap available with	employees.			
5.	Others.				
lame	of Contractor Safety Officer:	Sign:	Date:	Time:	
	wed and approved by BHEL Site Engineer (Permit I		Buto	111110.	
	<u> </u>	• • • • • • • • • • • • • • • • • • • •	Date:	Time:	
Name of BHEL Safety Representative:					
unde	rstand the precaution to be taken as described above ted under my supervision by following all precaution ar	and as per project requireme			
lame	of Work Performing Authority:	Sign:	Date:	Time:	
Permi	t Cancellation:				
herek onditi	by declare that the work is complete, all workers under ion.	my control have been witho	drawn and the site re	estored to safe tidy	
	of Work performing Authority:				
lame	of Site Engr. (Permit Requesting Authority):	Sign:	Date:	Time:	
lame	of BHEL Site Engr. (Permit Issuing Authority):	Sign:	Date:	Time:	
lame lame	of Work performing Authority:of Site Engr. (Permit Requesting Authority):	Sign:	Date:		

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



SAFETY WORK CLEARANCE	Permit no.
Project:	Emergency Contact Nos:
Subcontractor:	

WORKING AT HEIGHT PERMIT

Area	: <u> </u>	Date:		Time:		
Name of Site Engineer (Permit Requesting Authority):			s	ign: Name	of Work	
Perf	orming Contractor:					
Nam	e of Package In charge:	Sign:		Date:_		
Desc	cription of Work:					
	/ Evacution Data	Time Valid from	+0			
	Execution Date: above signing person(s) will be responsible to ensu					
	autions mentioned on the permit to work.	ne that the above described we	on will be done a	macran me	Jaioty	
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 ch	ecked and in working condition				
4.	Safety shoes (non-slip), Helmet with chin strip available	e 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 BHE	EL 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 pro	operly secured and lay down witho	ut obstruction.			
13.	Signboards provided on working platforms					
14.	Hazards in the vicinity are identified and communicated	I to the worker.				
15.	Other					
Nom	e of Contractor Safety Officer:	Sign	Do	ıto:	Timo	
	ewed and approved by BHEL Site Engineer (Per		Da		111116.	
	e:		Date:		Time:	
Name of BHEL Safety Representative:						
l und	derstand the precaution to be taken as described ab outed under my supervision by following all precaution	oove and as per project require on and Safety Rules.	ment and hereby	confirm th	at work will be	
Nam	e of Work Performing Authority:	Sign:	Date:	Ti	me:	
Pern	nit Cancellation:					
	eby declare that the work is complete, all workers u lition.	ınder my control have been wit	hdrawn and the s	site restore	d to safe tidy	
	e of Work performing Authority:					
	e of Site Engr. (Permit Requesting Authority):					
Nam	e of BHEL Site Engr. (Permit Issuing Authority):	Sign:	Date	e:	Time:	

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



Regd Office: BHEL House, Siri Fort, New Delhi-110049

DOCUMENT NO: PS:MSX:GCC, REV 02, 16TH JUNE 2021

General Conditions of Contract

(Common for Power Sector Regions)

2021

BHARAT HEAVY ELECTRICALS LIMITED

TABLE OF CONTENTS

- 1. Chapter-1: General Instructions to Tenderers
 - 1.1. Despatch Instructions
 - 1.2. Submission of Tenders
 - 1.3. Language
 - 1.4. Price Discrepancy
 - 1.5. Qualification of Tenderers
 - 1.6. Evaluation of Bids
 - 1.7. Data to be enclosed
 - 1.8. Authorization and Attestation
 - 1.9. Earnest Money Deposit
 - 1.10. Security Deposit
 - 1.11. Return of Security Deposit
 - 1.12. Bank Guarantee
 - 1.13. Validity of offer
 - 1.14. Execution of Contract Agreement
 - 1.15. Rejection of Tender and other Conditions
 - 1.16. Intimation of change of name/re-constitution of the Organization

2. Chapter-2

- 2.1. Definitions
- 2.2. Law Governing Contract and Court Jurisdiction
- 2.3. Issue of Notice
- 2.4. Use of Land
- 2.5. Commencement of Work
- 2.6. Measurement of Work and Mode of Payment
- 2.7. Rights of BHEL

2.8.	Responsibilities of Contractor in respect of Local
	Laws, Employment of Workers etc
2.9.	Progress Monitoring, Monthly Review and
	Performance Evaluation
2.10.	Time of Completion
2.11.	Extension of Time for Completion
2.12.	Over Run Compensation
2.13.	Interest Bearing Recoverable Advances
2.14.	Quantity Variation
2.15.	Extra Works
2.16.	Supplementary Items
2.17.	Price Variation Clause
2.18.	Insurance
2.19.	Strikes & Lockout
2.20.	Force Majeure
2.21.	Arbitration and Conciliation
2.22.	Retention Amount
2.23.	Payments
2.24.	Performance Guarantee for Workmanship
2.25.	Closing of Contracts
2.26.	Suspension of Business Dealings
2.27.	Limitation on Liability
2.28.	Other Issues

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. (For E-Tender, bidders shall use electronic Signature viz Digital Signature Certificate while uploading on the e-procurement portal. 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 submitted 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.
- 1.2.2 Tenders submitted by post (i.e. by 'REGISTERED POST / by COURIER') shall be sent with due allowance for any postal/courier delays. BHEL takes no responsibility for delay, loss or non-receipt of tenders sent by post/courier. The tenders received after the specified time of their submission are treated as 'Late Tenders' and shall not be considered under any circumstances. Offers received by Email shall be considered as per terms of NIT. E-Tenders shall be submitted through E-Procurement portal as per instruction in NIT. Tenderers to upload offers well in advance in order to avoid last minute congestion in e-procurement website. However, after submission of the tender, the tenderer can re-submit revised tender but before due date and time of submission of tender as notified.
- 1.2.3 Tenders shall be opened by Officer of BHEL at the time and date as specified in the NIT, in the presence of such of those tenderers or their authorized representatives who would like to be present (In case of Manual Tenders). BHEL reserves the right to go ahead with opening of the

Tender even in case of no representative is present on the specified date and time. For e-tenders, bidders may mark their presence online through provisions available in e-procurement portal.

- 1.2.4 Tenderers whose bids are found techno commercially qualified shall be informed about 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 (In case of Manual Tenders). 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.

The tenderer may get aware about weather conditions, contingencies & other circumstances which may influence or affect their tender prices. Invariable of inspection by the tenderer, the tenderer shall be considered deemed acquainted with all site conditions such as rain patterns, hazardous conditions, soil patterns, local factors etc. Tenderer to have satisfied himself in all respect before quoting his rates and 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. Tenderers are requested to refer the clauses of NIT/Vol-II "Price Bid" for more details. 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 **Price Bid opening**: During opening of price bids (submitted through conventional method or through E-Procurement system), 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.
- 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. (Guidelines as available on www.bhel.com on "supplier registration page".).

1.5 QUALIFICATION OF TENDERERS

- 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 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) The offers of the bidders who are on the banned/ hold list and 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. (Refer clause 28.0 of NIT)
- 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 and 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 like TDS certificates, labour license, etc. for the said job.
- iv) Assessing Bidder's 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/electronic price bid opening with/without Reverse Auction, at the discretion of BHEL. Unless specified otherwise in the tender, the L1 bidder amongst all the shortlisted bidders shall be considered for award. However, the L1 bidder shall have no claim on the award & BHEL reserves the right to award the tender at its sole discretion.
- 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 either through system generated e-mail or through letter/e-mail.
- 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) An attested copy of the Power of Attorney, in case the tender is signed by an individual other than the sole proprietor.

iv) IN CASE OF INDIVIDUAL TENDERER:

His / her full name, address, PAN 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 dully 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 AUTHORIZATION AND ATTESTATION

Tenders shall be signed by a person duly authorized/empowered to do so, for which a Power of Attorney is to be submitted along with the tender offer. For company, a Power of Attorney (as per

format in Volume-I D) shall be submitted.

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 NIT.
 - ii) The EMD is to be paid only 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).
 - d) Fixed Deposit Receipt (FDR) 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) (along with offer). The Fixed Deposit in such cases shall be valid for at least six months from the due date of tender submission.

In case EMD amount is more than Rs. Two Lakhs, Tenderer has the option to submit Rs. Two lakhs in the forms described above in clause no. 1.9.1. (a) to (d) and the remaining amount over and above Rs. Two Lakhs in the form of Bank Guarantee from Scheduled Bank (along with the Offer). The Bank Guarantee in such cases shall be valid for at least six months from the due date of tender submission. The Bank Guarantee format for EMD shall be in the prescribed formats.

- 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 EMD given by all unsuccessful tenderers shall be refunded normally within fifteen days of award of work.
- 1.9.5 Cash portion of EMD of successful tenderer will be retained as part of Security Deposit. EMD submitted in the form of Bank Guarantee/ FDR shall be retained by BHEL until the receipt of at least 50% of the Security Deposit.

1.10 SECURITY DEPOSIT

- 1.10.1 (i) Upon acceptance of Tender, the successful Tenderer should deposit the 5% of the contract value as Security Deposit towards fulfilment of any obligations in terms of the provisions of the contract.
- 1.10.1 (ii) Bidder agrees to submit performance security required for execution of the contract within the time period mentioned in clause 1.10.2. In case of delay in submission of Security Deposit, interest

(SBI rate + 6%) for the delayed period on the amount of SD due for submission, shall be submitted by the bidder. Further, if performance security is not submitted till such time the first bill becomes due, the amount of performance security due shall be recovered as per terms defined in NIT / contract, from the bills along with due interest as mentioned herein above.

- 1.10.1 (iii) Bidder agrees to submit the Security Deposit as above for execution of the contract within the time period.
- 1.10.2 (i) For contracts exceeding Rs 20 lakhs, the security Deposit should be furnished before start of the work by the contractor. If requested by the contractor, cash recovery of initial 50% of the specified Security Deposit, including the retained EMD can be made from bills submitted by contractor. For such delay in submission of initial 50% of the required Security Deposit for execution of the contract, interest shall be levied for the delayed period of submission at (SBI rate + 6%) on the security required to be submitted. Balance 50% Security deposit shall 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.
- 1.10.2 (ii) In case of small value contracts not exceeding Rs. 20 lakhs, work can be started before the required Security Deposit is collected.
- 1.10.2 (iii) Payment can be released only after collection/ recovery of initial 50% Security Deposit.
- 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: 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 the awarded / accepted value, the Security Deposit shall be correspondingly enhanced 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) Contract value for the purpose of operating the 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.
- iii) 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 competent authority of BHEL.
- 1.10.6 The validity of Bank Guarantees towards Security Deposit shall be initially up to the completion period as stipulated in the Letter of Intent/ Award + Guarantee Period + 3 months, and the same shall be kept valid by proper renewal by the contractor 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 released to the contractor upon fulfillment of contractual obligations as per terms of the contract including completion of Guarantee Period 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

- Bank Guarantees shall be from Scheduled Banks / Public Financial Institutions as defined in the Companies Act. Bank Guarantees issued by Co-Operative Banks/ Financial Institutions shall not be accepted.
- 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 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 submitted to Subcontracting Department of the respective Region of BHEL.

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 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. The expenses for preparation of agreement document shall be borne by BHEL.

1.15 REJECTION OF TENDER AND OTHER CONDITIONS

- 1.15.3 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.
- 1.15.4 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.
- 1.15.5 Tenders are liable to be rejected in case of unsatisfactory performance of the tenderer with BHEL or tenderer under suspension (hold/banning) 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 not consider a bidder for further processing of tender 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.
- 1.15.6 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.
- 1.15.7 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. BHEL may, however, recognize such power of Attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the contractor concerned.
- 1.15.8 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.
- 1.15.9 Canvassing in any form in connection with the tenders submitted by the Tenderer shall make his offer liable to rejection.
- 1.15.10 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.

- 1.15.11 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 in charge. The tenderer is solely responsible to BHEL for the work awarded to him.
- 1.15.12 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. However unopened price bids and late tenders shall be returned to the bidders, in case of Conventional/ Paper bid.
- 1.15.13 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.
- 1.15.14 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.

1.16 INTIMATION OF CHANGE OF NAME/RE-CONSTITUTION OF THE ORGANIZATION

In the event of the organization (Proprietorship/Partnership/Company) undergoing any change of name or reconstitution, prior intimation of the same shall be given to BHEL. Upon such changes coming into effect, the same is to be intimated to BHEL immediately with supporting documents as applicable. Further, the new entity has to intimate BHEL in writing that they will honor all the earlier commitments in respect of the subject contract.

CHAPTER-2

- 2.1 **<u>DEFINITION</u>**: 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 Authorized Officers or its Site Engineers or other employees authorized to deal with any matters with which these persons are concerned on its behalf.
- ii) "EXECUTIVE DIRECTOR" or "GENERAL MANAGER (In- charge)" or "GENERAL MANAGER" shall mean the Officer in Administrative charge of the respective Power Sector Region.
- iii) "COMPETENT AUTHORITY" shall mean BHEL Officers who are empowered to act on behalf 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, Offer submitted by contractor including acceptance to 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 /corrigendum to Tender 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 or amendment thereof.
- 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 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 synchronization 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 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) 'EXECUTED CONTRACT VALUE' shall mean actual value of works executed by the contractor and certified by BHEL. This value shall not include PVC, ORC, Extra Works and Taxes.
- xxvii) "COMMENCEMENT DATE" or "START DATE" shall mean the commencement/start of work at Site as per terms defined in the Tender.
- xxviii) "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.
- xxix) "TERMINATION" of Contract shall mean the pre mature closing of contract due to reasons as mentioned in the contract.
- xxx) "DE MOBILIZATION" shall mean the temporary winding up of Site establishment by Contractor leading to suspension of works temporarily for reasons not attributable to the contractor.
- xxxi) "RE MOBILIZATION" 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 2.21.1.1 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 Service of notice on Contractor

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 Service of notice on BHEL

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, along with statutory documents, 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.
 - In case of inadequate manpower deployed by the contractor, BHEL reserves the right to deploy additional manpower through any other agency for expediting activities in the interest of the project. Supplied manpower shall be put on job by the contractor and payments and other statutory compliances related to manpower shall be the contractor's responsibility. In case of contractor's failure to fulfill his obligations in respect of such manpower, BHEL reserves the right to take necessary action as per contract conditions.
- **2.7.2.1** To terminate the contract or withdraw portion of work and get it done through other agency, at the risk and cost of the contractor after due notice of a period of 14 days' (this period can be reduced in case of urgency or increased otherwise) by BHEL in any of the following cases:
 - i). Contractor's poor progress of the work vis-à-vis execution timeline as stipulated in the Contract, backlog attributable to contractor including unexecuted portion of work does not appear to be executable within balance available period considering its performance of execution.
 - ii). Withdrawal from or abandonment of the work by contractor before completion of the work as per contract.
 - iii). Non-completion of work by the Contractor within scheduled completion period as per Contract or as extended from time to time, for the reasons attributable to the contractor.

- iv). Termination of Contract on account of any other reason (s) attributable to Contractor.
- v). Assignment, transfer, subletting of Contract without BHEL's written permission.
- vi). Non-compliance to any contractual condition or any other default attributable to Contractor.

Risk & Cost Amount against Balance Work:

Risk & Cost amount against balance work shall be calculated as follows:

Risk & Cost Amount= $[(A-B) + (A \times H/100)]$

Where,

A= Value of Balance scope of Work (*) as per rates of new contract

B= Value of Balance scope of Work (*) as per rates of old contract being paid to the contractor at the time of termination of contract i.e. inclusive of PVC & ORC, if any.

H = Overhead Factor to be taken as 5

In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).

* Balance scope of work (in case of termination of contract):

Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work for calculating risk & cost amount.

Contract quantities are the quantities as per original contract. If, Contract has been amended, quantities as per amended Contract shall be considered as Contract Quantities.

Items for which total quantities to be executed have exceeded the Contract Quantities based on drawings issued to contractor from time to time till issue of Termination letter, then for these items total Quantities as per issued drawings would be deemed to be contract quantities.

Substitute/ extra items whose rates have already been approved would form part of contract quantities for this purpose. Substitute/ extra items which have been executed but rates have not been approved, would also form part of contract quantities for this purpose and rates of such items shall be determined in line with contractual provisions.

However, increase in quantities on account of additional scope in new tender shall not be considered for this purpose.

NOTE: Incase portion of work is being withdrawn at risk & cost of contractor instead of termination of contract, contract quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work' for calculating Risk & Cost amount.

LD against delay in executed work in case of Termination of Contract:

LD against delay in executed work shall be calculated in line with LD clause no. 2.7.9 of GCC, for the delay attributable to contractor. For limiting the maximum value of LD, contract value shall be taken as Executed Value of work till termination of contract.

Method for calculation of "LD against delay in executed work in case of termination of contract" is given below.

- i). Let the time period from scheduled date of start of work till termination of contract excluding the period of Hold (if any) not attributable to contractor = T1
- ii).Let the value of executed work till the time of termination of contract= X
- iii).Let the Total Executable Value of work for which inputs/fronts were made available to contractor and were planned for execution till termination of contract = Y
- iv). Delay in executed work attributable to contractor i.e. T2=[1-(X/Y)] x T1
- v).LD shall be calculated in line with LD clause (clause 2.7.9) of the Contract for the delay attributable to contractor taking "X" as Contract Value and "T2" as period of delay attributable to contractor.

- **2.7.2.2** In case Contractor fails to deploy the resources as per requirement, BHEL can deploy own/hired/otherwise arranged resources at the risk and cost of the contractor and recover the expenses incurred from the dues payable to contractor. Recoveries shall be actual expenses incurred plus 5% overheads or as defined in TCC.
- **2.7.3** Recoveries arising out of Risk & Cost and LD or any other recoveries due from Contractor Following sequence shall be applicable for recoveries from contractor:
 - a) Dues available in the form of Bills payable to contractor, SD, BGs against the same contract.
 - b) Demand notice for deposit of balance recovery amount shall be sent to contractor, if funds are insufficient to effect complete recovery against dues indicated in (a) above.
 - c) If contractor fails to deposit the balance amount to be recovered within the period as prescribed in demand notice, following action shall be taken for balance recovery:
 - i) Dues payable to contractor against other contracts in the same Region shall be considered for recovery.
 - ii) If recovery cannot be made out of dues payable to the contractor as above, balance amount to be recovered, shall be informed to other Regions/Units for making recovery from the Unpaid Bills/Running Bills/SD/BGs/Final Bills of contractor.
 - iii) In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against contractor.
- 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 endeavor will be made by BHEL to this end, they (BHEL) 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 BHEL may permit or direct contractor to demobilize and remobilize at a future date as intimated by BHEL in case of following situations for reasons other than Force majeure conditions and not attributable to contractor:
 - i) suspension of work(s) at a Project either by BHEL or Customer, or
 - ii) where work 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 three months

In such cases, charges towards demobilization and remobilization shall be as decided by BHEL after successful remobilization by contractor at site, and decision of BHEL shall be final and binding on the contractor. After remobilization, all conditions as per contract shall become applicable. In case Contractor does not remobilize with adequate resources or does not start the work within the period as intimated, then BHEL reserves the right to get the balance works done at the Risk & Cost of the Contractor. Duration of the contract/time extension shall be revised 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 any of the 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 such reasons not attributable to the contractor.

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 decided by BHEL, shall however be reduced from the final contract value.

Note: The Contractor shall not be eligible for any compensation on account of Quantity Variation arising out of short-closure of contract as per clause no. 2.7.8 (b) above.

2.7.9 LIQUIDATED DAMAGES/PENALTY

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 alone, (ii) Force majeure conditions, and (iii) BHEL, shall be worked out. 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 solely attributable to contractor and recoverable from the dues payable to the contractor.

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 for which LD is applicable shall be worked out based on portion of time extension granted solely attributable to contractor at the end of the 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.

In case of LD recovery, the applicable GST shall also be recovered from contractor.

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 or as applicable) 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.
 Contractor shall create awareness amongst their workforce by helping & encouraging in opening bank accounts and to encourage them to adopt digital mode of transactions. While releasing wages/ salary to their workers/ supervisors/ staff, Contractor shall comply with the GOI's guidelines for maximizing such transactions through Non-Cash / digital means.
- 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.
- **2.8.25** For all works having contract value of Rs. 5,00,000/- or above, BHEL shall recover the amount of compensation paid to victim(s) by BHEL towards loss of life/ permanent disability due to an accident which is attributable to the negligence of contractor, agency or firm or any of its employees as detailed below.
 - a) Victim: Any person who suffers permanent disablement or dies in an accident as defined below.
 - b) Accident: Any death or permanent disability resulting solely and directly from any unintended and unforeseen injurious occurrence caused during the manufacturing/ operation and works incidental thereto at BHEL factories/ offices and precincts thereof, project execution, erection and commissioning, services, repairs and maintenance, trouble shooting, serving, overhaul, renovation and retrofitting, trial operation, performance guarantee testing undertaken by the company or during any works/ during working at BHEL Units/ Offices/ townships and premises/ Project Sites.

- c) Compensation in respect of each of the victims:
- i. In the event of death or permanent disability resulting from Loss of both limbs: Rs. 10,00,000/- (Rs. Ten Lakh).
- ii. In the event of other permanent disability: Rs.7,00,000/- (Rs. Seven Lakh)
- d) Permanent Disablement: A disablement that is classified as a permanent total disablement under the proviso to section 2 (I) of the Employee's Compensation Act, 1923.
- **2.8.26** Contractor shall be fully responsible for their T&Ps and other material mobilized at site. In any case, BHEL shall not be liable for any damage/loss/misuse of any item(s) belong to 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 (i.e. Form F-14). 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 '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 Time being the essence of the contract, 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 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.

2.12 OVERRUN COMPENSATION

- **2.12.1 ORC during original contract period:** No ORC shall be applicable during the original contract period.
- **2.12.2 ORC during extended period for the reasons solely attributable to contractor:** No ORC shall be applicable during the extended period granted for the reasons solely attributable to contractor and work executed during this period shall be paid as per original contract rates.
- **2.12.3 ORC during extended period for the reasons not attributable to contractor:** ORC shall be payable as per following procedure:
- **2.12.3.1** For initial period of twelve months of extended period, ORC rate applicable over executed value shall be 5%. For every subsequent period of twelve months, ORC rate shall be further increased by 5% over the previous rate. For example, ORC rates applicable for initial period of 12 months and subsequent period of 12 months are given below.

SI. No.	Extended Period for the reasons attributable to BHEL	ORC rate applicable over executed value	
1	First 12 months	5%	
2	13th-24th month and so on	10.25% {[(1.05 x 1.05)-1] x 100}	

This process of increasing ORC rate for each subsequent period of 12 months shall continue till applicability of ORC.

- **2.12.3.2** On completion of original contract period as well as on completion of each subsequent period of twelve months i.e. at the time of change in applicable ORC rate, Delay Analysis shall be carried out and percentage shortfall attributable to both BHEL & Contractor shall be calculated.
- **2.12.3.3** For the purpose of calculation of ORC, executed value of work in the month shall be divided in Part-1 and Part-2 in proportion of percentage shortfall attributable to BHEL and contractor respectively, based on the last delay analysis as worked out in 2.12.3.2.

ORC shall be payable only on Part-1 and no ORC shall be payable on Part-2.

Value of Part-1 shall be further limited to the value of actual inputs provided by BHEL i.e. "Plan - Shortfall attributable to BHEL" for the month, as per Form-14 for calculation of ORC.

2.12.3.4 Payment of ORC amount shall be further regulated as follows:

- (i) 50% of the ORC is allocated for deployment of matching resources (with weightages) agreed as per the joint programme drawn vide 2.11.4. ORC Payment against resources shall be calculated in proportion to percentage of resources actually deployed w.r.t. planned resources, as per Form-14.
- (ii) 50% of ORC is allocated for achieving of planned progress agreed as per the joint programme drawn vide 2.11.4. ORC Payment shall be reduced in proportion to percentage shortfall attributable to contractor w.r.t.-"Plan Shortfall attributable to BHEL" for the month, as per Form-14.
- **2.12.3.5** The maximum amount of ORC payable for the month shall be limited to Rs. 5,00,000/-.
- **2.12.3.6** In case, there is no shortfall attributable to contractor for the month and also contractor has deployed the resources as agreed in Form-14 but ORC amount payable for the month worked out as per procedure mentioned in clause 2.12.3.3, 2.12.3.4 and 2.12.3.5, is less than Rs.1,00,000/-, then ORC amount payable for the month shall be Rs.1,00,000/- otherwise ORC amount payable for the month shall remain same.
- **2.12.3.7** In case execution is on **HOLD** (Other than Force Majeure), ORC shall be payable as per following:
 - i). Contractor has not been permitted by BHEL to de-mobilize
 - a) ORC amount of Rs. 1,00,000/- per month shall be applicable during the period of HOLD provided resources as planned are deployed (not demobilised) during the period of hold.
 - b) Subsequent to lifting of HOLD, Period of HOLD shall not be excluded in calculation of period for deciding applicable ORC rate as per clause 2.12.3.1.
 - ii). Contractor has been permitted to demobilize and to remobilize after lifting of HOLD
 - a) No ORC shall be payable to contractor for the period of HOLD.
 - b) Subsequent to lifting of HOLD, Period of HOLD shall not be excluded in calculation of period for deciding applicable ORC rate as per clause 2.12.3.1.

2.12.3.8 In case Force Majeure is invoked:

- i). No ORC shall be applicable during the period of Force Majeure.
- ii). Subsequent to revocation of Force Majeure, period of Force Majeure shall be excluded in calculation of period for deciding applicable ORC rate as per clause 2.12.3.1.
- **2.12.4** Applicability of ORC: ORC shall not be applicable for following activities.
 - i). Area cleaning, removal of temporary structures and return of scrap.
 - ii). Punch list points / pending points liquidation pending due to reasons attributable to contractor
 - iii). Submission of "As built Drawing"
 - iv). Material Reconciliation
 - v). Completion of Contract Closure formalities like HR Clearance/ No dues from various dept./ Statutory Authorities etc.
- **2.12.5** Total Over Run Compensation shall be limited to 10% of the cumulatively executed contract value till the month (excluding Taxes and Duties if payable extra). For this purpose, executed contract value excludes PVC, ORC and Extra/Supplementary Works.

2.13 INTEREST BEARING RECOVERABLE ADVANCES

2.13.1 MOBILIZATION ADVANCE: Normally no advance is payable to the contractor. However, mobilization advance payment in exceptional circumstances shall be interest bearing and secured

through a Bank Guarantee and shall be limited to a maximum of 5% of contract value. This 'Interest Bearing Recoverable Advance' shall be payable in not less than two installments with any of the installment not exceeding 60% of the total eligible advance.

- **2.13.2** ADDITIONAL INTERIM ADVANCE: In exceptional circumstances, with due justification, Competent Authority of BHEL is empowered to approve proposals for payment of additional interim interest bearing advance against Bank Guarantee, for resource augmentation towards expediting work for project implementation.
- **2.13.3** Bank Guarantee towards 'Interest Bearing Recoverable Advance' shall be at least 110% of the advance so as to enable recovery of not only principle amount but also the interest portion, if so required.
- **2.13.4** Contractor shall establish the utilization of advance drawn before the release of next installment.
- **2.13.5** Payment and recovery of Interest Bearing Recoverable advance shall be at the sole discretion of BHEL and shall not be a subject matter of arbitration.
- **2.13.6** The rate of interest applicable for the above advances shall be the base rate of State Bank of India prevailing on the date of release of advance plus 6%, and such rate will remain fixed till the total advance amount is recovered.
- **2.13.7** Unadjusted amount of advances paid shall not exceed 5% of the total contract value at any point of time. Recovery of advances shall be made from the Running Bills progressively such that the advance amounts paid along with the interest is fully recovered by the time the contractor's billing reaches 90% of contract value.
- **2.13.8** Recovery rate per month shall be the sum of:
 - i) Not less than 10% of Running Bill amount
 - ii) Simple interest up to the date of RA Bill on the outstanding Principle amount/amounts
- 2.13.9 Contractor to submit Bank Guarantee as per prescribed formats for each of the advance and shall be valid for at least one year or the recovery duration whichever is earlier. In case the recovery of dues does not get completed within the aforesaid BG period, the contractor shall renew the BG or submit fresh BG for the outstanding amount, valid for at least one year or the remaining recovery duration whichever is earlier.
- **2.13.10** BHEL is entitled to make recovery of the entire outstanding amount in case the contractor fails to comply with the BG requirement.

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 108/- 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 on 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 latest edition of CPWD-DSR 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 with applicable escalation derived from All India Consumer Price Index for Whole Sale Commodities, whichever is less.
- Item rates are to be worked out on the basis of market rates prevailing on the date of execution mutually agreed between BHEL and Contractor.
- ii) PVC and ORC will not be applicable 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

- 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:

				PERCENTAGE COMP			DNENT ('K') Electrical ,
SL NO.	SL CATEGORY BASE INDEX		A	Note A/B	(C) C	MECHANICAL PACKAGES	C&I Material Management/ Handling and other labour oriented packages
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.		30	65	80	
ii)	HIGH SPEED DIESEL OIL	(Website: labourbureau.nic.in) Name of Commodity: HSD Commodity Code: 1202000005 (See Note E)		3	5	5	5
iii)	WELDING ROD	Name of Commodity: MANUFACTURE OF BASIC METALS				15	
iv)	CEMENT	Commodity Code: 1314000000 (See Note E) Name of Commodity: ORDINARY PORTLAND CEMENT Commodity Code: 1313050003 (See Note E)		20	30		
v)	STEEL (Structural and Reinforcement Steel)	Name of Commodity: MILD STEEL: LONG PRODUCTS Commodity Code: 1314040000 (See Note E)		25			
vi)	All OTHER MATERIALS (Other than Cement & Steel)	Name of Commodity: ALL COMMODITIES Commodity Code:1000000000 (See Note E)		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 C&I or Civil+Mechanical or Mechanical+Electrical and/or C&I), the COMPONENT ('K') for various categories shall be as per respective packages as above.
- E) 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: eaindustry.nic.in). 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.

$$P = K \times R \times (X_N - X_0)$$
Xo

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
- Xo = 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 calendar month of the bid submission date + bid validity period + 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, equipment, 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 at risk and cost of contractor under Clause 2.7.
- 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 circumstance which is: a) beyond a party's control, b) The party could not reasonably have provided against before entering into the contract, c) Having arisen, such party could not reasonably have avoided or overcome, and d) Is not substantially attributable to the other party. Such circumstances include but not limited to
 - i) Exceptionally adverse climatic conditions at the site which are unforeseeable having regard to climate data available or published in the country for the geographical location of the site.
 - ii) War, hostilities (whether war be declared or not), invasion, act of foreign enemies.
 - iii) Rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war.

- iv) Riot, commotion or disorder by persons other than the contractor's personnel and other employees of the contractor and sub-contractors.
- v) Strike or lockout not solely involving the contractor's personnel and other employees of the contractor and sub-contractors.
- vi) Encountering munitions of war, explosive materials, ionizing radiation or contamination by radioactivity, except as may be attributable to the contractor's use of such munitions, explosives, radiation or radio- activity.
- vii) Natural catastrophes such as earthquake, tsunami, volcanic activity, hurricane or typhoon, flood, fire, cyclones etc.
- 2.20.2 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.
- 2.20.3 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
- 2.20.4 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.
- 2.20.5 Delay or non-performance by either party hereto caused by the occurrence of any event of Force Majeure shall not
 - i) Constitute a default or breach of the Contract.
 - ii) Give rise to any claim for damages or additional cost 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.
- 2.20.6 BHEL at its discretion may consider short closure of contract after 1 year of imposition of Force Majeure in line with extant guidelines. In any case, Contractor cannot consider deemed short-closure after 1 year of imposition of Force Majeure.

2.21 ARBITRATION & CONCILIATION

2.21.1 ARBITRATION:

2.21.1.1 Except as provided elsewhere in this Contract, in case Parties are unable to reach amicable settlement (whether by Conciliation to be conducted as provided in Clause 2.21.2 herein below or otherwise) 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 (hereinafter referred to as the 'Dispute'), then, either Party may, commence arbitration in respect of such Dispute by issuance of a notice in terms of section 21 of the Arbitration & Conciliation Act, 1996 (hereinafter referred to as the 'Notice'). The Notice shall be addressed to the Head of the Power Sector Region issuing the Contract and shall contain the particulars of all claims to be referred to arbitration in sufficient detail and shall also indicate the monetary amount of such claim. Within 60 days of receipt of the complete Notice, the Head of the BHEL Power Sector Region issuing the Contract shall offer names of three proposed Arbitrators to the invoking Party advising to choose any one of the three names to be appointed as Sole Arbitrator. On getting

confirmation from the invoking Party regarding the Arbitrator chosen from among the names so offered, the Head of the BHEL Power Sector Region issuing the Contract, shall appoint such chosen person as the Sole Arbitrator for conducting the arbitration. The language of arbitration shall be English.

The Arbitrator shall pass a reasoned award.

Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder as in force from time to time shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be _____ (the place from where the contract is Issued). The Contract shall be governed by and be construed as per provisions of the laws of India. Subject to this provision 2.21.1.1 regarding ARBITRATION, the principal civil court exercising ordinary civil jurisdiction over the area where the seat of arbitration is located shall have exclusive jurisdiction over any DISPUTE to the exclusion of any other court.

2.21.1.2 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 commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD (Administrative Mechanism for Resolution of CPSEs Disputes) as mentioned in DPE OM No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22-05-2018 as amended from time to time.

- 2.21.1.3 The cost of arbitration shall initially be borne equally by the Parties subject to the final allocation thereof as per the award/order passed by the Arbitrator.
- 2.21.1.4 Notwithstanding the existence of 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 unless the dispute inter-alia relates to cancellation, termination or short-closure of the Contract by BHEL.

2.21.2 **CONCILIATION**:

If at any time (whether before, during or after the arbitral or judicial proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation, effect, interpretation or breach of the agreement, contract), which the Parties are unable to settle mutually, arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee (IEC) to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators.

Notes:

- 1. No serving or a retired employee of BHEL/Administrative Ministry of BHEL shall be included in the BHEL Panel of Conciliators.
- 2. Any other person(s) can be appointed as Conciliator(s) who is/are mutually agreeable to both the parties from outside the BHEL Panel of Conciliators.

The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in Procedure 2.3 to this GCC. The Procedure 2.3 together with its Formats will be treated as if the same is part and parcel hereof and shall be as effectual as if set out herein in this GCC.

The Contractor hereby agrees that BHEL may make any amendments or modifications to the provisions stipulated in the Procedure 2.3 to this GCC from time to time and confirms that it shall be bound by such amended or modified provisions of the Procedure 2.3 with effect from the date as intimated by BHEL to it.

2.21.3 No Interest payable to Contractor

Notwithstanding anything to the contrary contained in any other document comprising in the Contract, no interest shall be payable by BHEL to Contractor on any moneys or balances including but not limited to the Security Deposit, EMD, Retention Money, RA Bills or the Final Bill, or any amount withheld and/or appropriated by BHEL etc., which becomes or as the case may be, is adjudged to be due from BHEL to Contractor whether under the Contract or otherwise.

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) 100% of Retention Amount shall be released along with Final Bill after deducting all expenses/ other amounts due to BHEL under the contract/ other contracts entered into with them (contractor) by BHEL.

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 redo 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 binding on the contractor.
- v) In order to facilitate part payment, BHEL at its discretion may further split the contracted rates/percentages to suit site conditions, cash flow requirements according to the progress of work, subject to following:

- a) Provided no 'part' payment is recommended till 25% of work in the item rate is executed.
- b) Payment of item rate to be made in not more than three instalments, last stage payment to be not lower than 20% of the item rate.

2.23.2 Final Bill

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:

- i) 'No Claim Certificate' by Contractor
- ii) Clearance certificates where ever applicable viz. Clearance Certificates from Customer, various Statutory Authorities like Labour department, PF Authorities, Commercial Tax Department etc.
- iii) Indemnity Bond as per prescribed format.

BHEL shall settle the final bills after deducting all liabilities of Contractor to BHEL.

2.24 PERFORMANCE GUARANTEE FOR WORKMANSHIP

2.24.1 Even though the work will be carried out under the supervision of BHEL Engineers the Contractor will be responsible for the quality of the workmanship and shall guarantee the work done for a period of Twelve months from the date of commencement of guarantee period as defined in Technical Conditions of Contract, for good workmanship and shall rectify free of cost all defects due to faulty erection detected during the guarantee period. In the event of the Contractor failing to repair the defective works within the time specified by the Engineer, BHEL may proceed to undertake the repairs of such defective works at the Contractor's risk and cost, without prejudice to any other rights and recover the same from the Security Deposit.

2.24.2 BHEL shall release the Security Deposit subject to the following

- i) Contractor has submitted 'Final Bill'
- ii) Guarantee period as per contract has expired
- iii) Contractor has furnished 'No Claim Certificate' in specified format
- iv) BHEL Site Engineer/Construction Manager has furnished the 'No Demand Certificate' in specified format
- 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 Security Deposit refundable.

2.25 CLOSING OF CONTRACTS

The Contract shall be considered completed and closed upon completion of contractual obligations and settlement of Final Bill or completion of Guarantee period whichever is later. Upon closing of Contract, BHEL shall issue a performance/ experience certificate as per standard format, based on specific request of Contractor as per extant BHEL guidelines.

2.26 SUSPENSION OF BUSINESS DEALINGS

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.

2.27 LIMITATION ON LIABILITY:

Notwithstanding anything to the contrary in this Agreement or the Work Order or any other mutually

agreed document between the parties, the maximum liability, for damages, of the contractor, its servants or agents, shall under no circumstances exceed an amount equal to the Price of the Agreement or the Work Order. The Supplier shall not in any case be liable for loss of profit or special, punitive, exemplary, indirect or consequential losses whatsoever. This shall not be applicable on the recoveries arising out of Risk and Cost, recoveries made by Customer from BHEL on account of Contractor, any other type of recoveries for workmanship, material, T&P etc. due from the contractor.

2.28 OTHER ISSUES

- 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.
- 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.
- 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, Geo-Technical works, Hiring of T&Ps/ Vehicles/ Equipments etc. and work shall be executed as per the terms of LOI/LOA/Work Order. BHEL may not insist for signing of Contract Agreements in respect of works costing upto Rs. 2 lakhs (upto Rs. 5 lakhs in case scheduled completion period is not more than 3 months).

Rev 01 1st June

2012

FORMS & PROCEDURES

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

BHARAT HEAVY ELECTRICALS LIMITED



FORMS & PROCEDURES

INDEX

SN	Description	Form No	Remarks
1.0	Forms		
1.1	Offer forwarding Letter/Submission of Tender	F-1 (Rev 00)	
1.2	Declaration by Authorised Signatory	F-2 (Rev 00)	
1.3	No Deviation Certificate	F-3 (Rev 00)	
1.4	Declaration confirming knowledge about Site Conditions	F-4 (Rev 00)	
1.5	Declaration for relation in BHEL	F-5 (Rev 00)	
1.6	Non Disclosure Certificate	F-6 (Rev 00)	
1.7	Bank Account Details for E-Payment	F-7 (Rev 00)	
1.8	Form for seeking clarifications	F-8 (Rev 00)	
1.9	Capacity Evaluation of Bidder for current Tender	F-9 (Rev 00)	
1.10	Contract Agreement	F-10 (Rev 00)	
1.11	Bank Guarantee for Security Deposit	F-11 (Rev 00)	
1.12	Bank Guarantee for Interest Bearing Refundable Advance	F-12 (Rev 00)	
1.13	Extension of Validity of Bank Guarantee	F-13 (Rev 00)	
1.14	Monthly Plan & Review with Contractors	F-14 (Rev 00)	
1.15	Monthly Performance Evaluation of Contractor	F-15 (Rev 03)	Revised
1.16	Evaluation of Contractor Performance (Quarterly)	F-16 (Rev 00)	Deleted
1.17	Evaluation of Contractor Performance (Annual)	F-17 (Rev 01)	Under revision ##
1.18	Evaluation of Contractor Performance for the Contract (Overall)	F-18 (Rev 01)	Under revision ##

FORMS & PROCEDURES

SN	Description	Form No	Remarks
1.19	Milestone Completion Certificate	F-19 (Rev 00)	
1.20	Completion Certificate	F-20 (Rev 01)	Revised
1.21	Indemnity Bond	F-21 (Rev 00)	
1.22	Consortium Agreement	F-22 (Rev 00)	
1.23	Refund of Security Deposit	F-23 (Rev 00)	
1.24	Refund of Guarantee Money	F-24 (WAM-11)	
1.25	Power of Attorney for Submission of Tender/Signing Contract Agreement	F-25 (Rev 00)	
1.26	Analysis of Unit Rates Quoted	F-26 (Rev 00)	
1.27	RA Bill Format	WAM-6	
1.28	Final Bill Submission format with No Claim Certificate and No Demand Certificate	WAM-7	
1.29			
1.30			
2.0	Procedures		
2.1	Procedure and Business Rules for Reverse Auction	As per Company P	olicy
2.2	Integrity Pact	As per Company Policy	
3.0	Customer specific procedures		
3.1			

: will be released later

Form No: F-01 (Rev 00)

OFFER FORWARDING LETTER / TENDER SUBMISSION LETTER

Offer Reference No:	Date:
To,	
(Write Name & Address of Officer of BHEL inviting the Tend	ler)
Dear Sir,	
Sub : Submission of Offer against Tender Specification No:	:
I/We hereby offer to carry out the work detailed in the Electricals Limited, Power Sectorconditions thereof.	
I/We have carefully perused the following listed documents abide by the same.	s connected with the above work and agree to
 Amendments/Clarifications/Corrigenda/Errata/etc is BHEL Notice Inviting Tender (NIT) Price Bid Technical Conditions of Contract Special Conditions of Contract General Conditions of Contract Forms and Procedures 	ssued in respect of the Tender documents by
Should our Offer be accepted by BHEL for Award, I/we fu work as provided for in the Tender Conditions within the stip	·
I/We further agree to execute all the works referred to in the conditions contained or referred to therein and as detailed in	•
I/We have deposited/depositing herewith the requisite E furnished in the Check List.	Earnest Money Deposit (EMD) as per details
Diago:	Authorised Representative of Bidder Signature: Name: Address:
Place: Date:	

Form No: F-02 (Rev 00)

DECLARATION BY AUTHORISED SIGNATORY 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

Form No: F-02A (Rev 00)

DECLARATION BY AUTHORISED SIGNATORY 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 o "Qualifying Requirements" are true copies of the original and are fully compliant required fo 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 of 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:

Form No: F-03 (Rev 00)

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)

Form No: F-04 (Rev 00)

DECLARATION CONFIRMING KNOWLEDGE ABOUT SITE CONDITIONS

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:		
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:		

Form No: F-05 (Rev 00)

DECLARATION FOR RELATION IN BHEL

(To	be typed and submitted in the Letter Head of the Company/Firm of Bidder failing wh	iich
	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($\sqrt{\ }$) 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
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:

Form No: F-07 (Rev 00)

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

Form No: F-08 (Rev 00)

FORMAT FOR SEEKING CLARIFICATION

(10 be typed and submitted in the Letter Head of the Company/Film 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

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

Yours faithfully,

Form No: F-09 (Rev 00)

CAPACITY EVALUATION OF BIDDERS FOR CURRENT TENDER

	DESCRIPTION OF WORK (Similar to Tendered Scope)	WORK ORDER REF &	CONTRACT VALUE (Rs. LACS)	CUSTOMER NAME & ADDRESS	JOB ALONG WITH LATEST	%AGE OF WORK COMPLETE D	VALUE OF BALANCE WORK (Rs. Lacs)
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

NOTES:

- 1. BIDDERS ARE REQUIRED TO FURNISH ALL THE JOBS OF SIMILAR NATURE WHICH THEY ARE EXECUTING (IN PROGRESS) AT THE TIME OF SUBMISSION OF TENDER, AS PER ABOVE FORMAT.
- 2. BIDDERS HEREBY UNDERTAKE THAT THEY HAVE FURNISHED THE DETAILS SOUGHT AS PER POINT NO. 1 IN TOTALITY AND THAT THE DETAILS FURNISHED IS COMPLETE IN ALL RESPECT.
- 3. BHEL WILL TAKE APPROPRIATE ACTION AS DEEMED FIT , IN CASE, IT IS FOUND AT A LATER DATE THAT THE CONTRACTOR HAD SUPPRESSED THE FACTS AND HAVE NOT FURNISHED THE CORRECT & COMPLETE INFORMATIONS.

Signature

DATE : PLACE:

BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)	
Power Sector – Region	
· ·	

AGREEMENT NO	TRACT AGREEMENT
NAME OF WORK	
NAME OF THE CONTRACTOR WITH FULL ADDRESS	
VALUE OF WORK AWARDED	
THE OF WORLD AND THE SECOND	
LETTER OF AWARD NO.	
TIME ALLOTTED FOR COMPLETING THE WORK (DATE OF COMPLETION)	

SIGNATURE OF CONTRACTOR

(SIGNATURE OF BHEL OFFICER)

CONTRACT AGREEMENT

ELE the	S AGREEMENT MADE THISDAY OF between BHARAT HEAVY ECTRICALS LIMITED (A Government of India Enterprise) a Company incorporated under Companies Act, 1956, having its Registered Office at BHEL House, Siri Fort New Delhi-049 (herein after called BHEL) of the ONE PART.
M/S	AND
	COND PART. (hereinafter called the `Contractor') of the
hav	EREAS M/sstate that they e acquired and possess extensive experience in the field of
And exe No. offe	I Whereas in response to an Invitation to Tender No issued by BHEL for cution of datedAnd whereas BHEL has accepted the of the Contractor on terms and conditions specified in the Letter of Award Nodatedread with the references cited therein.
1 HI	S AGREEMENT WITNESSES AND it is hereby agreed by and between the parties as follows: That the contractor shall execute the work of
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 Rstowards satisfactory performance and completion of the Contract.
3.	The Contractor has furnished a Bank Guarantee bearing nodatedior a sum of Rsexecuted byin favour of BHEL towards Security Deposit valid upto
	OR
	The Contractor has furnished to BHEL an initial Security Deposit of Rsin 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(Rsvide Bank draft Nodatedand by adjusting EMD of Rssubmitted vide Bank draft No dt) and has agreed for recovery of balance Security Deposit by BHEL @ 10% of the value of work done from each running bill till the entire security deposit is recovered.

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

OR

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

- 5. That in consideration of the payments to be made to the Contractor by BHEL in accordance with this Agreement the Contractor hereby covenants and undertakes with BHEL that they shall execute, construct, complete the works in conformity, in all respects, with the terms and conditions specified in this Agreement and the documents governing the same.
- 6. That the Contractor shall be deemed to have carefully examined this Agreement and the documents governing the same and also to have satisfied himself as to the nature and character of the Works to be executed by him.
- 7. That the Contractor shall carry out and complete the execution of the said works to the entire satisfaction of the Engineer or such other officer authorised by BHEL, within the agreed time schedule.
- 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 Award has been issued to the Contractor.
- 10. That whenever under this contract or otherwise, any sum of money shall be recoverable from or payable by the Contractor, the same may be deducted in the manner as set out in the General Conditions of Contract or other conditions governing this Agreement.
- 11. That all charges on account of Octroi, Terminal and other taxes including sales tax or other duties on material obtained for execution of the said works shall be borne and paid by the Contractor.
- 12. That BHEL shall be entitled to deduct from the Contractor's running bills or otherwise Income Tax 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.

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

16.	The following documents		
2. C	nvitation to Tender No and the documents specified therein. contractor's Offer No		
4			
5			
6. L	etter of Award No	dated_	·································
7			
s	hall also form part of and govern this Agreeme	nt.	
IN WITNESS HEREOF, the parties hereto have respectively set their signatures in the presence of			
WIT	NESS	(CONTRACTOR	
1.		(to be signed by a person holding a valid Power of Attorney)	
2.			
WIT	NESS	(For and on behalf of B	HEL)
1.			
2.			

PROFORMA OF BANK GUARANTEE (in lieu of SECURITY DEPOSIT)

In consideration of Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and 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 having agreed to exempt (Name of the Vendor / Contractor / Supplier)
with its registered office at1(hereinafter called the said "Contractor" which term
includes supplier), from demand under the terms and conditions of the Contract reference
Nodated² valued at Rs Rupees
) ³ (hereinafter called the said Contract), of Security Deposit for the due fulfilment by the said Contractor of the terms and conditions contained in the said Contract, on production of a Bank Guarantee for Rs4(Rupeesonly),
We(indicate the name and address of the Bank) having its Head Office at(address of the head Office) (hereinafter referred to as the Bank), at the request of[Contractor(s)], being the Guarantor under this Guarantee, do hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer, an amount not exceeding Rs without any demur, immediately on demand from the Employer and without any reservation, protest, and recourse and without the Employer needing to prove or demonstrate reasons for its such demand.
Any such demand made on the bank, shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs
We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) in any suit or proceeding pending before any Court or Tribunal or Arbitrator or any other authority, our liability under this present being absolute and unequivocal.
The payment so made by us under this guarantee shall be a valid discharge of our liability for payment hereunder and the Contractor(s) shall have no claim against us for making such payment.
We, further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied & the Employer certifies that the terms and conditions of the said Contract have been fully and properly carried out by the said contractor(s) or acceptance of the final bill or discharge of this guarantee by the Employer, whichever is earlier. This guarantee shall initially remain in force upto and including5 and shall be extended from time to time for such period as may be desired by the Employer. Unless a demand or claim under this guarantee is made on us in writing on or before the6, we shall be
discharged from all the liability under this guarantee thereafter.
We,(indicate the name of the Bank) further agree with the Employer 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 Contract or to extend

PROFORMA OF BANK GUARANTEE (in lieu of SECURITY DEPOSIT)

from time to time any of the powers exercisable by the Employer against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by any reason of any such variation or extension being granted to the said contractor(s) or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said contractor(s) 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 Contractor and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor's liabilities.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Contractor but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).

We, Bank lastly undertake not to revok with the previous consent of the Employer in writing.	te this gu	arantee during its currency except
Notwithstanding anything to the contrary contained he	ereinabo	ve:
a) The liability of the Bank under this Guarantee shall	not exc	eed ⁴
b) This Guarantee shall be valid up to	5	
c) Unless the Bank is served a written claim or demanded under this guarantee shall be forfeited and the Bank liabilities under this guarantee irrespective of whe returned to the Bank.	k shall be	e relieved and discharged from all
We, Bank, have power to issue this as a duly authorized person has full powers to sign this		_
	Date _	Day of
	for	(indicate the name of the Bank)
		(Signature of Authorised signatory)

- 1 ADDRESS OF THE VENDOR/ CONTRACTOR/ SUPPLIER.
- ² DETAILS ABOUT THE NOTICE OF AWARD/ CONTRACT REFERENCE
- 3 CONTRACT VALUE
- ⁴ BG AMOUNT IN FIGURES AND WORDS
- 5 VALIDITY DATE
- 6 DATE OF EXPIRY OF CLAIM PERIOD

PROFORMA OF BANK GUARANTEE (in lieu of SECURITY DEPOSIT)

Note:

- 1. Bidders are advised that expiry of claim period may be kept 3-6 months after validity date..
- 2. The BG should be on Non-Judicial Stamp paper/ e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the BG is submitted or is to be acted upon or the rate prevailing in the State where the BG was executed, whichever is higher. The Stamp Paper/ e-stamp paper shall be purchased in the name of Vendor/ Contractor/ Supplier/ Bank issuing the guarantee.
- 3. 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, 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's (BHEL's Consortium Bank) branch in India. All charges for issuance of Bank Guarantee/ counter-Guarantee should be borne by the Foreign Vendor.
- **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).

BANK GUARANTEE FOR INTEREST BEARING REFUNDABLE ADVANCE

B.G. No. Date This deed of Guarantee made day of two this 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) entered into Contract arising out of Letter of Intent have a (hereinafter referred to as "the Contract") for the < Name dtd of_work > with the Company. AND WHEREAS the Contract inter-alia provides that the Company will pay to the Contractor interest bearing advance certain terms and conditions (Rupees only) on 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 of sum (Rupees only) the Contractor, to 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 If the said Contractor fails to utilise the said advance for the purpose of the the said advance together with interest as aforesaid is not fully Contract and /or recovered by the Company the Guarantor do hereby unconditionally and irrevocably undertake to pay to the Company without demur and merely on a demand, to the extent of the said sum of Rs._____ (Rupees___ only) any claim made by the Company on them for the loss or damage caused to or suffered by the Company by reasons of the Company not being able to recover in full the advance with interest as aforesaid.

BANK GUARANTEE FOR INTEREST BEARING REFUNDABLE ADVANCE

.....

- (2) The decision of the Company whether the Contractor has failed to utilise the said advance or any part thereof for the purpose of the Contract and / or as to the extent of loss or damage caused to or suffered by the Company by reason of the Company not being able to recover in full the said sum of Rs._____ with interest if any shall be final and binding on the Guarantor, irrespective of the fact whether the Contractor admits or denies the default or questions the correctness of any demand made by the Company in any Court Tribunal or Arbitration proceedings or before any other Authority.
- (3) The Company shall have the fullest liberty without affecting in any way the liability of the Guarantor under this Guarantee, from time to time to vary any of the terms and conditions of the Contract or extend time of performance by the Contractor or to postpone for any time and from time to time any of the powers exercisable by it against the Contractor and either enforce or forebear from enforcing any of the terms and conditions governing the Contract or securities available to the Company and the Guarantor shall not be released from its liability under these presents by any exercise by the Company of the liberty with reference to the matters aforesaid or by reasons of time being given to the Contractor or any other forbearance, act or commission on the part of the Company or any indulgence by the Company to the Contractor or of any other matter or thing whatsoever which under the law relating to sureties would, but for this provision have the effect of so releasing the Guarantor from its liability under this guarantee.
- (4) The Guarantor further agrees that the Guarantee herein contained shall remain in full force and effect during the period till the Company discharges this Guarantee, subject to however, that the Company shall have no claim under this Guarantee after_____ i.e. (the present date of validity of Bank Guarantee unless the date of validity of this Bank Guarantee is further extended from time to time, as the case may be) unless a notice of the claim under this Guarantee has been served on the Guarantor before the expiry of the said period in which case the same shall be enforceable against the Guarantor not withstanding 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

=== Not	es :
SEA	AL
DA	TED:
	Signed for and on behalf of the Bank (Designation of the Authorized Person Signing the Guarantee) (Signatory No)
	(Name of the Bank)
	N WITNESS whereof the(Bank) has hereunto set and subscribed its hand he day, month and year first, above written.
]	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.
	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.

- 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:
То
(Write Designation and Address of Officer of BHEL inviting the Tender)
Dear Sir
Sub: Validity of Bank Guarantee No:
At the request of M/s, we
Except as provided above, all other terms and conditions of the Original Bank Guarantee No
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

बीण्यईराम मिद्रीस
PS-

Page 1 of 6

Name of Project	Contract No.	
Name of Work	Name of Contractor	

PART- A: PLAN/ REVIEW OF WORK FOR THE MONTH OF

Date of Plan/ Review.....

SN.	Description of Work (b)	Unit of Measur- ement	Unit Rate	(QTY Pla month as of last	nned for the per Part –C t month)	Sh attrib contra last	nulative ortfall outable to actor upto month r Note 1)		ieved C	to BHEL (as per Co I	attributable w.r.t Plan l. 3 of Part- D)	attributable t upto & inc mo		REMARKS (Reasons for Shortfall attributable to Contractor. Supporting documents to be
				Phy.	Financial	Phy	Financial	Phy.	Financial	Phy.	Financial	Phy.	Financial	kept as record.)
	Value of Other Items not mentioned above but planned to be executed in this month													
	Total			_	ΣΑ	_	ΣΒ		ΣC	_	ΣD		ΣΕ	

BHEL (Sign with name, designation and date)

CONTRACTOR

बीएचई एल मिस्सा	
PS-	

Page 2 of 6

Name of Project	Contract No.	
Name of Work	Name of Contractor	

PART- A: Contd......

Note 1: In addition to the work planned as per Col. 'A', Contractor shall also make full efforts to minimize the 'Cumulative shortfall attributable to contractor upto the month' as mentioned in Col. 'B' by enhancing its resources, so as to achieve the completion of activities as per agreed schedule. In case contractor is not able to execute the entire shortfall, then BHEL 'Engineer in-charge', shall decide the priority of work to be executed and it shall be binding on the contractor.

Note 2: Percentage Shortfall attributable to contractor w.r.t. "Plan - Shortfall attributable to BHEL" for the month = $[(\Sigma E - \Sigma B)/(\Sigma A - \Sigma D)]x100$ In case, $(\Sigma E - \Sigma B)$ is negative, then it shall be treated as zero percent."

Note 3: Form 14 should include all items being planned in the current month, and all items against which shortfall was attributable to contractor till previous month. However, for practical reason, if it is not possible to mention some of the items in Form-14 being planned to be executed in this month, then also value of such items shall necessarily be included in calculation of Total Value.

Note 4: In case reason for shortfall attributable to contractor is w.r.t. T&P and Manpower, it should be in conformity with Part B1 and B2.

BHEL (Sign with name, designation and date)

CONTRACTOR (Sign with name, designation and date)

बीएच ई राम
BHEL
PS-

Page 3 of 6

Name of Project	Contract No.	
Name of Work	Name of Contractor	

PART – B-1: PLAN/REVIEW OF DEPLOYMENT OF MAJOR T&Ps FOR THE MONTH OF CONTRACTOR'S SCOPE: -

Date of Plan/ Review.....

			PLAN			DE	EPLOYMENT STATUS	
SN.	Major T&P to be deployed as per work planned for the month	QTY	Deployment Period (in days)	Weightage assigned to planned T&P (in fraction such that $\Sigma C = 1$)	Actual Deployed Quantity	Actual Deployment Period (in days)	Weighted T&P Deployed	REMARKS (Works affected due to non-deployment of T&Ps)
		A	В	C	D	Е	$F=(C \times D \times E) / (A \times B)$	

Note: In case, E>B, it shall be considered as E=B. Similarly, in case D>A, it shall be considered as D=A.

Percentage of T&P Deployed = $\Sigma F \times 100$

BHEL SCOPE: -

	PLAN			DEPLOYMENT STATUS			
SN.	Major T&P to be deployed as per work planned for the month	QTY	Deployment Period (in days)	Actual Deployed Quantity	Actual Deployment Period (in days)	REMARKS (Works affected due to non-deployment of T&Ps)	

BHEL (Sign with name, designation and date)

CONTRACTOR

बीण्यईल्स मिद्रीस
PS-

Page 4 of 6

Name of Project	Contract No.	
Name of Work	Name of Contractor	

PART – B-2: PLAN/ REVIEW OF DEPLOYMENT OF MANPOWER FOR THE MONTH OF

Data of Dlag	Danian
Date of Plan/	Review

CONTRACTOR'S SCOPE: -

SN.	Area of Work	Category of Labour	No. of Labour required as per category	Deployment Period (in days)	No. of Labour actually deployed	Actual Deployment Period (in days)	REMARKS (Works affected due to non-availability of labour)
			A	В	C	D	

Percentage of Manpower Deployed= $100 \times \Sigma(CxD)/\Sigma(AxB)$

BHEL (Sign with name, designation and date)

CONTRACTOR

बीएच ई एख
HHEL
PS-

Page 5 of 6

Name of Project	Contract No.	
Name of Work	Name of Contractor	

PART – C: PLAN(PHYSICAL) FOR THE NEXT MONTH i.e.

Date of Plan

			Planned			T&Ps	Required		Manpower	r Required	
		0	Quantity	TT 1: C	Contractor S	cope	BHEL Scop	e		No. of	REMARKS
SN.	Description of work	Original Planned Quantity	(excluding shortfalls attributable to contractor till date)	Unit of Measu- rement	Major T&P to be deployed as per work planned for the month	T&P to be deployed as per work planned for the Major T&P to be deployed as per work planned for the month		Quantity	Category of Labour	Labour required as per Category	(Reasons for difference in Original Planned Quantity w.r.t. Planned quantity to be given)

Note 1: Planned quantity should be based on available/ expected fronts/ inputs in the next month

Note 2: "Original Planned Quantity" shall be as per latest jointly agreed programme between BHEL and Contractor before commencement of work or at the time of latest Time Extension, as the case may be.

BHEL (Sign with name, designation and date)

CONTRACTOR

बीण्यई एस मिद्रीस
PS-

Page 6 of 6

Name of Project	Contract No.	
Name of Work	Name of Contractor	

PART – D: REASONS FOR SHORTFALL ATTRIBUTABLE TO BHEL IN RESPECT OF PLAN FOR THE MONTH......

		Quantities	s Affected				
SN.	Description of Work (from Part-A)	(Physical Quantity)	Unit of Measu- rement	Reasons for Shortfall attributable to BHEL	Agency responsible for reasons for Shortfall	Remarks (Supporting Documents in respect of agency responsible)	
1	2	3	4	5	6	7	

Note1: Reasons for shortfall shall include non-availability of fronts/ drawings/ materials/ T&P (BHEL Scope)/ clearances etc. and other hindrances for which contractor is not responsible.

Note2: Agency responsible may be BHEL Site/ MUs/ Design Centre/ BHEL Customer/ other Contractors etc.

BHEL

Form No.: F-15 (Rev 03)

Project		Vendor			Package/Unit	
SI. No.	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	1.5		Quality Officer or his authorised nominee should be available for all the days of working at site	Daily Log Book entry/Incident Registers/letter references
#1.02	Number of instances of non- compliance wrt FQP, Standard Drawings, Specifications, E&C Manuals etc.	QUALITY	1.5		No deviation from FQP, Standard Drawings, Specifications, E&C Manuals etc. is allowed without BHEL Engineer's approval.	Daily Log Book entry/Incident Registers/letter references
#1.03	Percentage submission of test certificates for batches of welding electrodes, cement, sand, aggregate, consumable, Paints etc. as applicable for this month OR In case of MM & MH package, monthly checks for Storage/Preservation of material.	QUALITY	1		Submission of 100% Test certificates for materials as per FQP is mandatory. MM & MH package: Storage/Preservation as per manual/procedure.	Daily Log Book entry/Incident Registers/letter references
#1.04	Number of incidences of improper storage & preservation (not in accordance to the guidelines of BHEL MUs or approved FQP) of materials, consumables (viz. gases, welding electrodes & fluxes, fuel etc.) & bought-out items (paints, fasteners etc.) under the custody of the contractor	QUALITY	1		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references
#1.05	Rework/ Rejection instances in a month necessitated due to deviation from Standard Drawings /Specifications /Manuals /E&C procedures /FQPs or due to Poor Workmanship by contractor	QUALITY	2		Reworks/ Rejection should be as minimum as possible. Total number of reworks/ rejections due to reasons attributable to contractor.	Daily Log Book entry/Incident Registers/letter references
#1.06	Delay in preparation & submission of signed protocols / log sheets / site register / NDT test reports as per approved FQP/ Qualified Welder List along with photocopies of Welder ID cards / Welder Performance Evaluation records etc. in the month OR in case of MM / MH package reconciliation statement / verification report.	QUALITY	1		Within 2 days of measurements taken or within first 3 working days of next month, as advised by BHEL Engineer	Daily Log Book entry/Incident Registers/letter references
#1.07	Number of instances for Major equipment/product failure due to negligence/improper work/poor workmanship by contractor	QUALITY	1		No such event should happen	Daily Log Book entry/Incident Registers/letter references
#1.08	Total number of complaints received in the month on the quality of finish / aesthetics	QUALITY	1		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references

Form No.: F-15 (Rev 03)

Project		Vendor			Package/Unit	
SI. No.	Parameter for Measurement	Classification	Max Score	Score Obtained	Measurement Key/Scheduled date	Supporting Documents
#2.01	Cumulative number of days of delay in submission of Plan FOR THE MONTH supported by deployment plan of Major T&Ps and Manpower (as per Form F-14) and 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.	PERFORMANCE	5		Number of days delayed from second working day of the month	Daily Log Book entry/Incident Registers/letter references
#2.02	Percentage of timely submission of Daily Reports for Progress of work, Resources, Consumables etc.	PERFORMANCE	1.5		Percentage of timely submission of daily reports/ Scheduled date is successive next day for each day	Daily Log Book entry/Incident Registers/letter references
#2.03	Number of days delayed for submission of FQP log sheets / protocols / Monthly Progress Reports for the work executed during the month under measurement	PERFORMANCE	1.5		Number of days delayed/Scheduled date is first 2 working days of next month	Daily Log Book entry/Incident Registers/letter references
#2.04	Percentage Shortfall attributable to contractor w.r.t. "Plan - Shortfall attributable to BHEL" for the month as per Form-14	PERFORMANCE	35		As per Part-A of Form-14	Progress review formats
#2.05	Number of days delayed in submission of Running bills with complete supporting documents (including updated reconciliation statement of BHEL issued material) for the month	PERFORMANCE	2		Number of days delayed / Scheduled date is 7th day of next month	Daily Log Book entry/Incident Registers/letter references
#2.06	Number of times the Top Management of contractor did not respond to critical issues of site, for the month	PERFORMANCE	1		Total number of instances	Daily Log Book entry/Incident Registers/letter references
#2.07	Cumulative number of days in the month the works were stopped / refused on interpretation of contract clauses/scope due to tendency of taking undue advantage by interpreting contract clauses in their favour	PERFORMANCE	2		Cumulative number of days lost	Daily Log Book entry/Incident Registers/letter references
#2.08	Number of times rework was refused by contractor	PERFORMANCE	1		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references

Form No.: F-15 (Rev 03)

Project		Vendor			Package/Unit	
SI. No.	Parameter for Measurement	Classification	Max Score	Score Obtained	Measurement Key/Scheduled date	Supporting Documents
#2.09	Cumulative number of days in the month recording / logging was not done in daily log / history register / hindrance register / soft form in a PC maintained at BHEL Site Office	PERFORMANCE	1		Cumulative number of days recording or logging was not done / all days of the month	Daily Log Book entry/Incident Registers/letter references
#3.01	Percentage of Manpower Deployed w.r.t. Plan for the month as per Form-14.	RESOURCES	7		As per Part-B2 of Form-14	Daily Log Book entry/Incident Registers/letter references
#3.02	Percentage of T&P Deployed w.r.t. Plan for the month as per Form-14.	RESOURCES	7		As per Part-B1 of Form-14	Daily Log Book entry/Incident Registers/letter references
#3.03	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, under the scope of Contractor	RESOURCES	3		Cumulative number of instances	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 Consumables/ use of improper consumables under the scope of contractor	RESOURCES	3		Cumulative number of instances	Daily Log Book entry/Incident Registers/letter references
#4.01	Number of non-compliances during the month for Statutory requirements like validity of Labour Licence, Insurance Policy, Labour Insurance, PF, BOCW Compliance etc. and any other applicable laws/ Regulation, Electrical Licence, T&P fitness certificate, Contractors' All Risk Policy etc. as applicable	SITE INFRASTRUCTURE & SERVICE	1		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references
#4.02	Cumulative number of days in a month poor illumination is reported at storage area, erection area, pre-assembly area and other designated areas by BHEL site.	SITE INFRASTRUCTURE & SERVICE	0.5		Total number of non-compliances/random checks	Daily Log Book entry/Incident Registers/letter references
#4.03	Cumulative number of days of non-availability of well-maintained toilets facilities for workers (separate for men and women) and non-availability of potable drinking water stations for workers in specified areas.	SITE INFRASTRUCTURE & SERVICE	1		Total number of non-compliances/random checks	Daily Log Book entry/Incident Registers/letter references

Project		Vendor			Package/Unit	
SI. No.	Parameter for Measurement	Classification	Max Score	Score Obtained	Measurement Key/Scheduled date	Supporting Documents
#4.04	Total number of instances in the month, Housekeeping NOT attended to in spite of instructions by BHEL -i.e. 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	SITE INFRASTRUCTURE & SERVICE	2		Total number of non-compliances/random checks	Daily Log Book entry/Incident Registers/letter references
#4.05	Total number of instances in a month, Site Office with reasonably good facilities including enough nos. of computers and printers etc. for use by office and supporting staff was not made available/maintained.	SITE INFRASTRUCTURE & SERVICE	0.5		No discrepancy during regular or surprise visits	Photograph and report of the Engineer
#5.01	Number of days delayed in making labour payments for the last month	SITE FINANCE	2		Number of days delayed / Scheduled date is 7th day of next month	Daily Log Book entry/Incident Registers/letter references
#5.02	Number of complaints from labour/ sub supplier/ sub-contractor for non-receipt of payments from contractor	SITE FINANCE	1.5		Total number of complaints or reporting	Daily Log Book entry/Incident Registers/letter references
#5.03	Number of times the site operations were hampered for want of funds at the disposal of site-in-charge.	SITE FINANCE	1.5		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references
#6.0	Performance against HSE Parameters (as per Annexure-AA)	HSE	10		Score as per Safety Performance Evaluation System, scaled down to 10	Safety Performance Evaluation System
		Total	100			

Less Deduction in Score Due to Fatal Accidents attributable to the Contractor @ 20 points/ accident	
Less Deduction in Score Due to Major Accidents (Permanent Disability or bodily injury by which person injured is prevented to resume to work within 48 hours or more after accident,, Major Damage to Equipment etc.) attributable to the contractor @ 15 points/ accident	
Less Deduction in Score Due to Minor Accidents attributable to the contractor @ 2 points/ accident	
Less Deduction in Score Due to not Maintaining of Labour Colony (if applicable) as per BHEL HSE policy @3 points in a month on verification any day	
Final Score	

Project		Vendor			Package/Unit	
SI. No.	Parameter for Measurement	Classification	Max Score	Score Obtained	Measurement Key/Scheduled date	Supporting Documents
	Performance Score Summary for the Month	Total Score	Score Obtained			
	QUALITY	10				
	PERFORMANCE	50				
	RESOURCES	20				
	SITE INFRASTRUCTURE & SERVICE	5				
	SITE FINANCE	5				
	HSE	10				
	OTHERS (deductions if any)	0	-			
	TOTAL	100				

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 current month w.r.t. changes requested in the scores of immediate previous month.

Monthly Safety Performance Evaluation of Contractor

SL	Parameter for Measurement	M/O	Wt	Supporting Documents
1 a	Induction training for new workers conducted through audiovisual medium & documented ?	М	1	Induction Training Records
1 b	Tool box talk conducted regularly as per plan, and documented?	М	1	Toolbox Talk Records
10	Contractor in charge and safety in charge attended safety meetings?	М	2	Minutes of Meeting
1d	Whether observations in safety meetings are complied before next meeting?	М	2	-do-
1e	Preparation and submission of Monthly HSE report within stipulated time	М	1	Report submission date
1f	Preparation and submission of Incident/near-miss report and RCA Report (as applicable) within stipulated time	М	1	Incident/ Near Miss Records
1 g	Carrying out Inspections and submission of Inspection reports within stipulated time	М	1	Inspection Records
1h	Regular Job Specific Training ensured for High Risk Workers (through audio-visual medium) as per plan	М	1	Training & Attendance Records
2a	Whether the contractor is registered under BOCW	М	2	BOCW Registration Certificate
2b	Availability of Qualified safety officer (1 for every 500 labour)	М	2	Safety Officer qualification & experience records
20	Availability of Qualified safety supervisor (1 for every 100 labour)	М	2	Safety Officer qualification & experience records
2d	All the workers are provided and using safety helmets and safety shoes/gum boots	М	2	PPE Issue Records, Inspection/ non-conformity records
2e	Housekeeping done on regular basis and scrap removal at site	М	1	Housekeeping records, Inspection/ non-conformity records
2f	Usage of Goggles/Face shields and Hand gloves for gas cutter and grinders		1	PPE Issue Records, Inspection/ non-conformity records
2g	Wall openings & floor openings are guarded?		1	Inspection/ non-conformity records
2h	Adequate illumination provided in all working area?		1	Inspection/ non-conformity records
2i	Safety posters, sign boards and emergency contact numbers in all prominent location are displayed?		1	Inspection/ non-conformity records
2 j	Availability of automatic reverse horns, Main horn, hook latches for Vehicles, mobile cranes, Hydras		1	Inspection/ non-conformity records
2k	Ban of carrying mobile phones to work place is implemented for workers		1	Inspection/ non-conformity records
2	Availability of Tags & Inspection Certificates for Cranes of all capacities		1	Master T&P List with internal & external test details
21.2	Availability of Tags & Inspection Certificates for Winches of all capacities		1	Master T&P List with internal & external test details
21.3	Availability of Tags & Inspection Certificates, colour coding for Chain pulley blocks		1	Master T&P List with internal & external test details
21.4	Availability of Tags & Inspection Certificates for Vehicles - Trailers, Dozers, Dumpers, Excavators, Mixers etc.		1	Master T&P List with internal & external test details
21.5	Availability of Tags & Inspection Certificates for Welding machines, grinders, Drilling machines, etc.		1	Master T&P List with internal & external test details

2l.6	Availability of Tags & Inspection Certificates, colour coding for		1	Master T&P List with internal &
21.0	Wire rope slings etc.		1	external test details
21.7	Availability of Tags & Inspection Certificates for Batching plants		1	Master T&P List with internal & external test details
2m.1	Use of Lifting Permit as per requirement		1	Permit Records
2m.2	Use of Height Permit as per requirement		1	Permit Records
2m.3	Use of Hot Work Permit as per requirement		1	Permit Records
2m.4	Use of Excavation permit as per requirement		1	Permit Records
2m.5	Use of Confined space work permit as per requirement		1	Permit Records
	Use of Grating removal and safety net removal permit as per			
2m.6	requirement		1	Permit Records
2m.7	Use of Lockout-Tag out permit as per requirement		1	Permit Records
2m.8	Use of Radiography permit as per requirement		1	Permit Records
2m.9	Use of Night/ Holiday Work Permit as per requirement		1	Permit Records
2m.10	Use of Any other Applicable Permit as per requirement		1	Permit Records
3a	Material safety data sheet(MSDS) available for all chemicals and displayed in usage and storage area?		1	Inspection/ non-conformity records
3b	Spillages of oil/concrete and other chemical is controlled and		1	Inspection/ non-conformity
٥~	cleaned by proper method in case of spill?	<u> </u>		records
3с	Availability of adequate number of urinals in workplace and in elevations and maintained	М	1	
3d	Availability of rest rooms for workers at site	М	1	
3e	Availability of Drinking water facility at work spot		1	
3f	Hygienic Labour colony is provided for workers.		1	
4 a	Is heavy/complex critical lifting permit obtained for heavy, complex materials before handling/erection activity?		1	Work Permit records
4b	Whether area below lifting activities barricaded		1	Inspection/ non-conformity records
4C	Availability of experienced rigging foreman		1	Experience details of rigging foreman
4d	Is agency is following proper storage and handling procedure as per manufacturer standard for all hazardous material?		1	Procedure for storage & handling
4e	Are oxygen and acetylene cylinders are transported to work place from storage area in trolleys		1	Handing
5a	Whether all deep excavation has been protected by barrier		1	Inspection/ non-conformity records
5b	Sloping/benching & shoring provided for excavation as per requirement?		1	-do-
5C	Proper access and egress provided for excavations?		1	-do-
_				
5d	Blasting is done in controlled manner?		2	-do-
6a	Whether Electrical booth is equipped with Co ₂ fire extinguishers and fire buckets filled with sand?		2	Inspection/ non-conformity records
6b	Availability of Illumination lamp in electric booth?		1	-do-
6c	whether Caution Boards have been displayed?		1	-do-
6d	Usage of Metal Plug top for all hand power tools?		1	-do-
6e	Usage of Insulated welding cables.		1	-do-
6f	Electrical Booth/Distribution Board to be covered by proper Canopy.		1	-do-
6g	Availability of functional & individual 30ma ELCB / RCCB and MCB for protection and conducting periodical check-up?		1	-do-
6h	Double earthing for panel boards and all machinery & proper earth pit with regular inspection available?		1	-do-
6i	Whether Electrician is qualified and experienced		1	Qualification & Experience records of electrician
6 <u>j</u>	Availability and usage of Rubber hand gloves by electrician?		1	Inspection/ non-conformity records

7a	Whether Scaffolding pipes made with steel or aluminium, are being used and checked periodically by experienced/ certified scaffolder?		2	Inspection/ non-conformity records
7b	8mm Stainless Steel wire rope with plastic cladding is provided for life line (Vertical / Horizontal) during height work?		2	-do-
7¢	Availability of emergency lighting in case of power failure		1	-do-
7d	Whether all the openings are covered with Safety Nets made of fire proof Nylon?		1	-do-
7e	Whether MS pipe rails around staircases & platforms in usage are provided with top, middle rails and toe guard?		1	-do-
7f	Whether Ladder with vertical life line /Fall arrestor is available to climb?		1	-do-
79	Whether all workers deployed for working at height have been issued height pass after undergoing vertigo test?		1	Height Pass records
7h	Whether all workers deployed for height work / climbing ladder are provided and using Double lanyard safety belt?		1	PPE Issue records, inspection/ non-conformity reports
7i	Is all hand tools/Small material used by height workers is tied firmly to prevent fall?		1	-do-
8a	Flash back arrestors for all gas cutting sets is available on Torch side and cylinder side		1	Inspection/ non-conformity records
8b	Oxygen/Acetylene/LPG cylinders not in use have caps in place and stored separately?		1	-do-
8c	Availability of Face screen, Hand gloves, and Apron, for welders		1	-do-
8d	Protection from falling hot molten metal during metal cutting / welding at height by providing GI sheet below the cutting area especially in fire prone areas		1	-do-
9a	Pre-employment medical check-up done for all workers and submitted?		1	Medical check records
9b	Availability of first aid centre, with MBBS doctor(Own or Sharing basis)	М	2	Attendance records
9c	Availability of Ambulance facility 24 hours (Own or sharing basis)	М	2	-do-
9d	Is First aid trained personnel's are available and their names are displayed at site?	М	1	-do-
9e	Availability of Emergency vehicle at site		1	
9f	Periodical medical check-up is conducted for all the workers and submitted?		1	Medical check records
99	Availability of sufficient number of first aid box as per standard list and maintaining record		1	Inspection records
10a	Availability of Fire extinguishers, buckets at all vulnerable points		2	Fire extinguisher records
10b	Periodic fire mock drill conducted?		1	Fire, Mock drill records
100	Are all flammable materials are stored separately?		1	
10d	Periodic grass cutting is done in material storage area?		1	
10e	Availability of 24V DC lighting in confined space work area		1	
10f	Availability of exhaust fan in confined space work area		1	

Note:

- M: Mandatory; O: Optional. Points other than mandatory can be excluded with appropriate justification (scope etc.) by BHEL. Score obtained in selected parameters divided by maximum possible score of selected parameters shall be multiplied by 10 for use in as per point SI. no. # 6.0 as detailed at page 4 of Form F-15.
- > There shall be deduction of marks from overall score for Fatal/ Major/ Minor Accidents and for not maintaining labour colony, as detailed at page 4 of Form F-15.

Form No: F-19 (Rev 00)

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

Ref Date	:		
To,			
(Nai	me & addr	ess of Contractor)	
Dea	r Sir,		
DCa	i Oii,		
•	erences 1. Contrad 2. Job De		
		by confirm that the following Milestone t /Job under reference	e Activity has been achieved in respect
	SI No	Milestone Activity	Remarks
with		e is issued as per your request vide let ejudice to the rights of BHEL in line w d Contract	
You	rs faithfully	/,	
For	and on be	half of Bharat Heavy Electricals Limite	ed
Con	struction N	Manager/Head (Subcontracts)	

Form No: F-20 (Rev 01)

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

Ref : Date:		
	<u>To Whom so ever i</u>	t 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
	cate is issued as per your request vide letter no y prejudice to the rights of BHEL to use this certi	
Yours fai	thfully,	
or and	on behalf of Bharat Heavy Electricals Limi	ted
Head (Sเ	ubcontracts)	

INDEMNITY BOND

prevalent in the respective State)
This Indemnity Bond executed by <name company="" of=""> having their Registered Office</name>
at <xxxxxxxxxxxx> in favour of M/s Bharat Heavy Electricals Limited, a Company</xxxxxxxxxxxx>
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 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 xxxxxxxxxxxx these presents on the day, month and year first, above written at xxxxxxxxx by the hand of its signatory Mr. xxxxxxxxxxx.

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 "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 having Company's Act 1956. registered office its (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 (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. _____(The First Party, i.e, AND WHEREAS M/s 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 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 part fully of the said meet the balance 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

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

completion of the works in all respects.

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 abo on the day month and year first above v	ove named have signed this agreement 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].

BHARAT HEAVY ELECTRICALS LIMITED DIVISION.....

Claim for Refund of Security Deposit (Para 4.7.4 of Works Accounts Manual)

Ref No.:	Date:

- 1 Name and address of the contractor
- 2 Contract Agreement/Work Order No.
- 3 Date of contract agreement/work order
- 4 Name of the work undertaken
- 5 Date of commencement of the work
- 6 Date of completion of the work
- 7 Period of Maintenance
- 8 Date on which the final bill was paid
- 9 Last date of making good the defect, if any, during maintenance
- Expenditure incurred by BHEL during maintenance period, if any,
- 11 Date on which security deposit refund falls due as per contract
- 12 Amount deposited/recovered

Details	Mode	Amount

- 13 LESS amounts recoverable (with details)
 - (i) Amount spent by BHEL on maintenance
 - (ii) Payments made on behalf of contractor
 - (iii) Court dues / penalties / compensation
 - (iv) Other recoveries for services etc.
 - (v) Security deposit released with final bill (%)
- 14 Net amount recommended for release (12-13)

Details	Mode	Amount

Date: Signature of Engineer in Charge

Form WAM 10 (Contd.)

CERTIFICATE TO BE FURNISHED BY THE CONTRACTOR

-		one or for labor or material supplied or any other account arising ou he payment of this bill shall be in full and final
Date:		Signature of Cont
	CERTIFICATE TO BE FURNIS	IISHED BY SENIOR ENGINEER
Certified that		
– The payment recommended for	r release is in order and there are no deman	ands other than those included in the claim outstanding from the conf
	· ·	ontractor has carried out the works required to be carried out by him by the company on carrying out such works have been included for
– All the objections raised so far h	have been settled;	
– A note of refund of security dep	posit has been made in the measurement bo	oook and contract agreement/work order.
Date:		Signature of Senior Engin
	FOR USE IN FINAN	ANCE DEPARTMENT
Passed for		
	/D	

Accountant

Accounts Officer

Form No: F-24 (Rev 00)

REFUND OF GUARANTEE MONEY

BHARAT HEAVY ELECTRICALS LIMITED POWER SECTOR, _____ REGION

	·		
Ref No:			Date:
1. N	lame and Address of Contractor	:	
2. C	contract Agreement/LOI/ LOA No.	:	
3. D	ate of Contract Agreement/LOI/ LOA	:	
4. N	ame of the Work undertaken	:	
5. D	ate of commencement of the Work	:	
6. D	ate of Completion of the Work	:	
	eriod of Maintenance Guarantee Period)	:	
8. D	ate on which the Final Bill was paid :		
	ast date of making good the defect: uring Maintenance Period		
	xpenditure incurred by BHEL during : Maintenance Period, if any, recoverable		
	ate on which Guarantee Money refund: alls due as per Contract		
12. A	mount of Guarantee Money to be refunded	l :	
	ess Amounts recoverable (with details) a. Amount spent by BHEL on mainten b. Payments made by BHEL on behalt c. Court dues/penalties/compensation d. Other recoveries for Services, etc e. Total of 'a' to 'd' let Amount recommended for release (12-1)	f of Contractor: : :	
		Sign	nature of BHFL Engineer

Signature of BHEL Engineer

Date: _____

[Type text] Page 1

Form No: F-24 (Rev 00)

REFUND OF GUARANTEE MONEY

BHARAT HEAVY ELECTRICALS LIMITED POWER SECTOR, _____ REGION

	CERTIFICATE TO BE FURNISHED BY THE CONTRACTOR
or for labour of Agreement/LO and the payme	claim or demand outstanding against BHEL, for the work done or material supplied or any other account arising out of or connected with the Contract LOA (No dated dated but of this bill shall be in full and final settlement of all my/our claims and demands including the Contract Agreement/LOI/ LOA referred to.
Date:	Signature of Contracto
CERTIF	FICATE TO BE FURNISHED BY SENIOR ENGINEER/CONSTRUCTION MANAGER
b. c.	The payment recommended for release is in order and there are no demands other that those included in the claim outstanding from the Contractor 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 work have been included for adjustment All objections raised so far have been settled A note for refund of Guarantee Amount has been made in the Measurement Book an Contract Agreement/Work Order
Signature of Bl	
Date:	Construction Manage
	FOR USE IN ACCOUNTS DEPARTMENT
Passed for Rs_	(Rupees only)
Accountant	Accounts Officer
	ACKNOWLEDGE BY THE CONTRACTOR in full and final settlement of my/our claim
Date:	Signature of Contracto

[Type text] Page 2

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 I and appoint Mrtrue and lawful Attorney of M 'Company', for submitting Tender and to do necessary lawful acts Power Sector	M/ser/entering in some behalf of Region,	, whose sigr nto Contract and of Company with	nature giver d inter alia, n M/s Bhara	n belo sign, at Hea in	ow herewith to hereinafter ca execute all par avy Electricals connection	be be alled pers Ltd, with
vide dated						
And the Company do hereby ag as may be lawfully done by the name of the company, by virtue on the company and shall have	said attorn of the power	ey and by or or ers conferred he	n behalf of t	he co	ompany and in	the
IN WITNESS WHEREOF the comanner hereinafter appearing o		•	y has been	here	eunto affixed in	the
Dated at, th	nis	day of				
Director/CMD/Partner/Proprieto	r					
		S	ignature of	Mr	(Attorne	;y)
		Attested by:	Director/C	CMD/I	Partner/Proprie	etor
Witness						
			Notary P	ublic		

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 detail	led			

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,

BHARAT HEAVY ELECTRICALS LIMITED

DIVISION...... Bunning Assourt Bill

Running Account Bill (Para 4.3.1 of Works Accounts Manual)

Departmental Bill No.
Date:

Division:
Sub-Division:
Date of written order to Period of work covered in this commence the Work:
Date of commencement

of work: Due date of completion as per

(copy to be enclosed).

agreement

Date of approval of Competent Authority for time extension as applicable

I. ACCOUNT OF WORK EXECUTED

Adhoc pay	ment for work n	ot previously	Item No. of	Description of	Quantity as	Quantity	Rate	Unit	Payment on the basis of	Quantity executed	Payment on the basis of	Remarks
measured **			work	work	per	executed			actual measurement upto	since last RA bill	actual measurement since last	
Total as	Total as Since last Total upto				agreement	upto date			date		running account bill	
per last	· ·											
running	running account bill											
account bill												
DIII												
1	2	3	Δ	5	6	7	8	9	10	11	12	13

** 1. Whenever payment is made on adhoc 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 upto date in column 3 may become nil.

Total value of work done upto date

Deduct value of work shown on the last Running Account Bill

Net value of work done since last Running Account Bill

(C)

(C)

Rupees (in words) Only

Note:

Name of the Contractor

Name of the Work:

Sanctioned Estimate:

Contract Agreement No.:

Code No.:

Wherever adhoc payments to contractors against running bills are made in accordance with the extant Works Policy, the amount so paid shall be adjusted.

Dated:

Form WAM 6 (Contd).

Signature of Engineer in Charge

Designation:

Date:

	II. MEMORANDUM OF PAYMENTS												
		_	I	II									
1.	Total value of work actually measured as per Account No. I, Column 10	(A)											
2.	Total upto date adhoc payment for work covered by approximate or plan measurements as per Account I, Col. 3	(B)											
4.	Total upto date payments [(A)+(B)]	(C)											
5.	Total amount of payments already made as per entry (D) of last Running Account Bill No	(D)											
6.	6. Balance [(C) - (D)]												
7.	Payments now to be made: a) by cash / cheque b) by deduction for value of materials supplied by BHEL vide Annexure A attached												
	c) by deduction for hire of tools and plant vide Annexure B attached												
	d) by deduction for other charges vide Annexure C attached												
	e) by deduction on account of security deposit												
Note :	f) by deduction on account of Income Tax Amounts relating to items 4 to 6 above should be entered in solumn II.	and those reli	ating to itom 7 in col	umn I. The amount shown against item 6 and the total of item 7 should a	ograp with each other								
Note .	Amounts relating to rems 4 to 0 above should be effected in column in	and those rea	ating to item 7 in con	unini. The amount shown against item o and the total of item 7 should be	agree with each other.								
			TE OF THE ENGINEE										
1	The measurements on which the entries in column 7 to 12 of Part I of this Bill (Account of wo of Measurement Book No (Name and			e by	and are reorded at page								
2	Certified that the methods of measurement are correct and the work has been carried out in included in the deviation statement (Annexure D)		,	onditions, schedules, specifications and drawings etc. forming part of the	e contract agreement, subject to deviations								
3	Certified that in addition to and quite apart from the quantities of work actually executed as than the adhoc payments as per column 3 of Part I, made or proposed to be made, for the co												
4	Certified that measurements by Engineer-incharge and test check of prescribed percentage o	f measureme	nts by the concerned	superior authorities has been carried out.									
5	Certified that there are no pending recoveries from the contractor on account of chargeable items (e.g T&P, consumables, material, etc.) issued either by BHEL or by the customer and other recoveries like power, water, quarter, tax liability towards declaration forms etc.												
6	Certified that with regard to the free issues, regular reconciliation is being done, completed upto and there are no recoveries pending from the contractor on account of such issues in excess of requirement for execution of work as per contract.												
7	Certified that there is no pending recovery for damaged material issued free of cost.												
8	Certified that the contractor has fulfilled all the requirements as per contract with reference	to statutory o	bligations (PF, ESI, N	linimum Wages, BOCW, Insurance etc.), support services such as service	manpower, computer system , T&P etc								
				•									

Signature of Contractor

Date:

Form WAM 6 (Contd).

Date:

IV. CERTIFICATE OF THE SENIOR ENGINEER

1	entries have been initialed in the Measurement Book. (vide pages)	(Name and Designation)	at site and also by the undersigned and the relevant
2	Certified that all the measurements recorded in the measurement book have been correctly billed	d for	
3	Certified that all recoverable amounts in respect of materials tools and plant etc. and other charg	es have been correctly made vide annexures A to C attached	
Certified for	or payment * of Rs (Rupees only)		
* Here spe	ecify the net amount payable.		
Date:			Signature of Senior Engineer
	V. ENTRIE	ES TO BE MADE IN THE FINANCE DEPARTMENT	
			Code No.:
Accounts 6	3ill No dated		ALLOCATION
Entered in	Journal Book vide entry No dated	Estimate No :	Debit Credit
Passed for		(Gr	oss amount) (Deductions)
Less Dedu	ctions Rs	Name of Work :	
Net amou	nt payable Rs	Account code head	
(Rupees	only)		
Payable to	Shri / M/s by cheque / cash		
Entered in	Contractors ledger No Page	Total	
	Assistant	Accountant	Finance Executive

Date:

Date:

ANNEXURE A

Statement	tatement showing details of materials issued to the contractor Shri / M/S													
Sl.No.	SI.No. Stores Issue Voucher No. and date Voucher No. and date Issue voucher No. and date Issued Voucher No. and date Issued Voucher No. and date Issued to the contractor Quantities			Quantity actually incorporated in the work		Balance quantity with contractor		If recoverable from the contractor						
				Free	Chargeable		Free	Chargeabl	Rate at which Amount recoverable recoverable		Amount recovered upto previous bill	Balance recover		Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13		14
Total Certified that(balance quantity of free issue material as per Col. 8 above) is physically available with the Contractor.														
Signature of Date:	of Contractor				Signature of Engineer in Charge Date:				Signature of Senior Engineer Date:					
						ANNEXURE B								
Statement	showing tools a	nd plant issued to the contrac	ctor Shri/M/s			in respec	t of Contra	act Agreer	ment No	Dated				
SI. No.	Description	of Tools and Plant Issued	Period for which iss	ued	Rate at whi	ch recovery is to be made	Amount recoverable		Amount recovered upto previous bill		Balance Recovered now		Remarks	
1		2	3			4		5		6	7		8	3
						TOTAL								
Signature of Contractor Date :						Signature of Engineer in Charge Date:				Signature of Senior Engineer Date:				

ANNEXURE C

	ANNEAURE															
Statemen	t showing details	of other reco	overies to be ma	de from the con	tractor Shri/M,	/s			in respect	of contr	act Agreement	No	Dated			
S. No.		Particulars		Uı	Unit Quantity		Rai	te	e Amount recoverable		Amount recovered up to previous bill		Amount now recovered		Remarks	
						1							1			1 -
1		2			3	4	1	5			6	7		8		9
1	Water charges															
2	Electricity charg	ges														
3	Seignorage char															
4	Medical charges															
5	Cost of empty g containers not r		id empty													
6																
7																
8																
Date :	Signature of Contractor Signature of Engineer in Charge Date: Date: Date: ANNEXURE D DEVIATION STATEMENT Name of the Contractor: Contract Agreement No															
Name of \	Nork:												Date	:		
S. No.	Description of Item	Unit	Quantity as per agreement	Quantity as executed	Quantity further anticipated	Total quantity anticipated on completion	Rate as per agreement	Rate as executed		Amount as per agreement Amount as executed Amount further anticipated anticipated anticipated on completion		n Diffe	rence	Reason for deviation with authority, if any		
	1	<u> </u>	I	l		l		<u> </u>	l				l	Excess	Savings	l
1	2	3	4	5	6	7	8	9	10)	11	12	13	14	15	16
									10			1 12	1 13	1 17		1 10

Signature of Engineer in Charge

Date:
Date:
Date:

Form WAM 7

BHARAT HEAVY ELECTRICALS LIMITED

DIVISION....

DIVISION.....And Final Bill
ra 4.3.2 of Works Accounts Manual)

	(Para 4.3.2 of Works Accounts Mai
ental Bill No:	

Departme Date:

Name of the Contractor:

Division: Name of the Work:

Date of Written order to commence the work:

Sanctioned Estimate: Contract Agreement/ Work Order No: Date of commencement of the Work: Dated:

Date of actual completion of the work:

Due date of completion as per Agreement:

Sub-Division:

I. ACCOUNT OF WORK EXECUTED

	ayment for wo		Item no. of the	Description of work	Quantity as per	Quantity executed	Rate	Unit	Payment on the basis of actual measurement	Quantity since last running account bill	Payment on t he basis of actual measurement since	Remarks
Total as per last running account bill	running	date	agreement / work order		agreement	upto date			upto date	-	last running account bill	
1 2 3 4 5 6 7 8 9 10 11 12 13												

** 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 upto date in column 3 may become nil.

Total value of work done upto 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

Form WAM 7 (Contd.)

1 Total value of work actually measured as per Account No. I column 10										
2	Deduct amount of payments already made as per last running account bill No dated	(B)								
3 4	Payment now to be made [(A) - (B)] Deduct amounts recoverable from the contractor on account of: a) Materials supplied by BHEL vide Annexure A attached b) Hire of tools and plant vide Annexure B attached c) Other charges vide Annexure C attached d) Income Tax Total Deductions	(C)								
5 6 7	Balance Refunds of Security Deposit Net amount to be paid to the contractor Net value Rupees (in words)		 Only							
	I/ We hereby certify that I/We have performed the work as per the terms and conditions of Contract Agreement/Work Order NoDatedfor which payment is claimed as above and that I/We have no further claim under this agreement/work order.									
				Signature of the Contractor						
				Date:						
III CERTIFICATE OF THE ENGINEER IN CHARGE										
	asurements on which the entries in columns 7 to 11 of Part I of this bill (Account of work executed) are bas are recorded at pagesof measurement book No		,							
Date:				Signature of Engineer incharge Designation:						

II. MEMORANDUM OF PAYMENTS

IV CERTIFICATE OF THE SENIOR ENGINEER

1. Certified that I have personally inspected the work and that the work has been p	hysically completed on t	he due date in accorda	ance with the terms and co	onditions, schedules, specif	ications and drawings etc., forming part of the contract				
agreement, subject to the deviations noted in Deviation Statement (Annexure D).									
2. Certified that the measurements have been check measured to the prescribed ex									
undersigned at site and the relevant entries have been initiated in the measurement	nt book (vide pages		.)	(Name and Designa	tion)				
Certified that the methods of measurement are correct.									
4. Certified that the measurements have been technically checked with reference to	• .								
5. Certified that the measurements recorded in the measurement book have been	,								
6. Certified that all recoverable amounts in respect of stores, tools and plant, water	r, electricity charges etc.	have been correctly m	ade vide Annexures A to	C and that there are no oth	er demands outstanding against the contractor on this				
contract.	d & - &b & di		h + h i i i i i i		and the factor of the factor of the factor of the				
Certified that the issues of all stores as per statement attached (whether charge Annexure E.	d to the contractor or di	rect to the work) have	been technically checked	and represent fair and reas	conable issues for the items of work executed vide				
8. Certified that all statutory requirements including PF, ESI, Minimum wages, Insu	rance CCT BOCW etc	are complied with but	the Contractor This shoul	d ba dulu backad bu tha ral	ovent decuments				
8. Certified that all statutory requirements including PF, ESI, Millimuli Wages, Ilisu	rance, doi, bocw, etc.	are complied with by	the Contractor. This shoul	u be duly backed by the rei	evant documents.				
Certified for payment of * Rs(Rupees(Rupees		only).							
the state of the s				e:	- :				
*Here specify the net amount payable				Signature of Senio	or Engineer				
				Date					
	IV ENTRIES TO	RE MADE IN THE FINA	NCF DEPARTMENT						
	IV ENTRIES TO BE MADE IN THE FINANCE DEPARTMENT								
			- 1]				
		Account code head	Debit	Credit					
		•	(Gross Amount)	(Deductions)					
					•				
Passed forRs									
Less DeductionsRsRs.									
Net Amount PayableRs									
(Rupeesonly)									
					1				
		TOTAL							
					•				
Assistant	Accountant			Finance Exec	utive				
Date:	Date:			Date:					
Date.	Dute.			Date.					

ANNEXURE A Part I

Statement sh	ement showing details of materials issued to the contractor Shri / M/Sin respect of Contract Agreement / Work Order No										and co	the agree	ment.					
SI.No.	Stores Issue Voucher No. and date	date allotte	cher No. and ed by stores to se SIV	Description issued issu contr	ed to the	Quantity	issued	Quantity actu incorporated in work	ally re the f	Whether coverable rom the stractor or oplied free	If recoverable from t he Contractor							
											Rate at which recoverable		ount erable	Amo recovere previou	d upto	Balanc recov		Remarks
1	2		3		ļ	5		6		7	8		9	10)	1	1	12
	1										1							
	1		ı					I		Total				1				
	Total																	
Signature of 0	gnature of Contractor Signature of Engineer in Charge Signature of Senior Engineer																	
Date:							Date:					Date:						
								ANNEXUR	A									
Statement sh	owing details (of materials	issued to the co	ontractor Shri /	M/S			Part II	ntract Agre	ement / W/	ork Order No	Da	ted	and	not cove	red by the	agreeme	ant
Statement 311	owing actails t	71 III decirais	issued to the ce	meraccor sinry	141/ 3			ii respect or cor	itract Agre	cincitty we	ork Order 140			and	not cove	rea by the	dgreeme	
SI.No	Stores Issue No.and		Issue Voucher allotted by sto		Description issued to the		Quantit	y issued inc	Quantity actually orporated the work	in Issue	Rate	nount verable	recover	ount red upto ous bill	Balanc recov			Remarks
1	2		3	i	4			5	6		7	8	!	9	10	0		11
	1																	
	TOTAL Add Departmental Charges Add GST (Wherever applicable)																	
								GRA	AND TOTA	L								
Signature of 0	Contractor					Signature of E	Engineer-in	-Charge						9	Signature	of Senior	Engineer	
Date:						Date:									Date:			
Note: Cost of	materials reco	vered in thi	s bill should be	shown against	item 4 (a) of th	e memorand	um of payn	nents. The amo	unts of ta	es and dep	artmental charge	s recovere	d in this b	ill should l	oe incorp	orated in	Annexure	C.

ANNEXURE B

Statement she	Statement showing tools and plant issued to the contractor Shri /M/Sin respect of contract Agreement / Work Order NoDatedDated													
SI.No.	Sl.No. Description of Tools and Plant Issued Period for which issued			Rate at wh	ich recovery is to be made	Amount recov	erable	Amount recovered upto previous bill		Balance now recovered		Remarks		
	2		3		1	4	5		6		7		8	
1	Z		3			4	5		ь				8	
										-			1	
-														
-														
L					I .				<u> </u>				l .	
						TOTAL							1	
													l	
Cianatura of C	ignature of Contractor Signature of Engineer-in-Charge Signature of Senior Engineer													
Signature or C	CONTRACTOR					Signature of Engine	er-in-Charge					Signature	e of Seriior Engineer	
Date						Date						Date		
						ANNEXURE C								
C+-+	Statement showing details of other recoveries to be made from the contractor Shri/M/s													
Statement sn	owing details of other recoveries to be made	from the co	ontractor Snri	/ IVI / S		in respect o	r Contract Agreer	ment / w	ork Order No		Dated		•••••	
							Amount	Amour	nt recovered upto				- I	
Sl.No.	Particulars		Unit	Quar	itity	Rate	recoverable		revious bill	Amoun	t now recovered		Remarks	
-		•		-										
1	2		3	4		5	6		7		8		9	
1	Water charges													
2	Electricity charges													
3	Medical charges													
	Cost of empty gunny bags and empty contain	iners not												
4	returned													
5														
6														
7														
	•			•		•								
TOTAL														
Signature of C	Contractor					Signature of Engine	or in Chargo							

Signature of Contractor

Signature of Engineer in Charge

Date

Date

Signature of Engineer in Charge

Signature of Senior 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	Rate as executed	Amount as per agreement	Amount as executed	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: Date:

ANNEXURE E

Name of the Work:

name of the v	vame 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	Variati consum (differ between & 8	ption ence colum 5	Rate chargeable for excess/short consumption, if any	Amount Recoverable for excess/short consumption, including materials not returned, if any	Remarks
								More	Less			
1	Cement											
2	Bricks											
3	Wood											
4	Asbestos Sheet											
5	Iron Material											
6												
7												

Signature of Contractor Signature of Engineer in Charge Signature of Engineer

Date: Date: Date:

Note

1. The quantities shown in columns 4 and 5 above should tally with those shown in columns 5 & 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 details of materials issued to the contractor Shri/M/s

Name of the Work:

FREE OF COST

SI.No	Stores Issue Voucher No.	Description of material	Unit	Quantity issued	Quantity required as per data	Quantity consumed in the work	Balance (if any)		Rate chargeable for material not returned	Amount recoverable for material not returned	Remarks
1	2	3	4	5	6	7	8	9	10	11	12
-	•		•	•				•			
		·									
		·									

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

ANNEXURE G

QUESTIONNAIRE TO BE ANSWERED BY THE ENGINEER IN CHARGE AND SENIOR ENGINEER (Correct particulars and answers to be recorded)

- 1. Name of the Work:
- 2. Name of the Contractor:
- 3. Date of commencement of the Work:
- 4. Contract agreement /Work Order No. and date:
- 5. Reference to the supplementary Agreement No. if any:
- 6. Whether administrative approval and technical sanction has been accorded by the competent authority? If so, cite reference?
- 7. Whether sanction of the competent authority and financial concurrence of the Finance Department for award of the work has been accorded? If so, cite reference.
- 8. 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 Finance 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).
- 9. (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 Finance Department together with rate analysis? If so, cite reference
- 10. Whether deviations have been approved by the competent authority? If yes, give reference to the approval; if not, give reasons.
- 11. 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?
- 12. Whether discrepancies pointed out by the Finance department in the stores statement have been reconciled and accepted by the Finance Department?
- 13. 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 materials has been recovered at the prescribed rate? Whether consumption statements in respect of materials chargeable to the work have been attached to the bill?
- 14. Whether consumption of materials shown has been technically checked by Senior Engineer?
- 15. Whether materials issued and used in the work is not less than that required for consumption in work according to our specifications? If consumption is less, whether necessary recovery has been made in the bill?
- 16. Whether measurements have been checked by the Engineer and Senior Engineer to the extent required and certificates of check recorded in the measurement books?
- 17. Whether contractor has signed the bill and the measurement books without reservations? If not, whether reasons have been intimated to the Finance Department?
- 18. Whether arithmetical calculations have been checked and certificate recorded in the measurement books by a person other than the one who calculated initially?
- 19. Whether any work was done at the risk and cost of the contractor and whether such cost has been recovered from him? Give particulars.
- 20. Whether all advance payments on running accounts have been recovered?
- 21. Whether all the recoveries due for services given to the contractor like rent of accommodation, water charges, electricity charges have been recovered and whether payments made by the company on behalf of the contractor have been adjusted?
- 22. Whether the files containing abstracts from measurement books/standard measurement books have been completed/updated?
- 23. Whether hire charges for tools & plant have been recovered and the statement of hire charges with full details attached?
- 24. Whether the certificate of workmanship and completion of work according to specifications, drawings etc. is recorded by Engineer Incharge/Senior Engineer and whether recoveries have been made for defective works, if any?
- 25. Whether all corrections in the bill/measurement books etc. have been neatly made and attested and there are no overwriting?
- 26. Whether final measurements have been taken as soon as possible after completion of the work and the certificate of completion issued? If not, whether reasons for delay have been recorded and communicated to finance department?
- 27. In respect of quantities reduced in the final bill as compared to the running payment, whether adequate reasons have been recorded and communicated to finance department?
- 28. Whether the expenditure has been classified correctly according to heads of account recorded in the sanctioned estimate?
- 29. 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 the Senior Engineer, what action has been taken for obtaining the approval of the authority competent to sanction the excess?
- 30. (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?
- 31. Whether all the previous audit objections raised on running account bills have been settled? If so, cite references.

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

Form WAM 7 (Contd.)

Bank Guarantee No.....

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

Date
То
BHARAT HEAVY ELECTRICALS LIMITED POWER SECTOR NORTHERN REGION, HRDI & PSNR COMPLEX, PLOT NO. 25, SECTOR – 16 A, NOIDA – 201301, U.P.
Dear Sirs,
In accordance with the terms and conditions of Invitation for Bids/ Notice Inviting Tender No ¹ (Tender Conditions),M/s
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 of
we, the
Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs

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

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Vendor/ Contractor/ Supplier in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

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 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 Tenderer 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 ⁵ 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 the
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 exceed4
b) This Guarantee shall be valid up to ⁵
c) Unless the Bank is served a written claim or demand on or before6 all rights under this guarantee shall be forfeited and the Bank shall be relieved and

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

	discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.
•	Bank, have power to issue this Guarantee under law and the undersigned 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

- Details of the Invitation to Bid/ Notice Inviting Tender
- ² Name and Address of the Tenderer
- 3 Details of the Work
- ⁴ BG Amount in words and Figures
- Validity Date
- 6 Date of Expiry of Claim Period

Note:

- 1. Bidders are advised that expiry of claim period may be kept 3-6 months after validity date...
- 2. The BG should be on Non-Judicial Stamp paper/ e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the BG is submitted or is to be acted upon or the rate prevailing in the State where the BG was executed, whichever is higher. The Stamp Paper/ e-stamp paper shall be purchased in the name of Vendor/ Contractor/ Supplier/ Bank issuing the guarantee.
- 3. 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, 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's (BHEL's Consortium Bank) branch in India. All charges for issuance of Bank Guarantee/ counter-Guarantee should be borne by the Foreign Vendor.

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

- **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).

STATEMENT OF CLAIMS/COUNTER CLAIMS TO BE SUBMITTED TO THE IEC BY BOTH THE PARTIES

1.	Chronol	logv	of th	ne Dis	putes
	OTTE OTTO		O = C =		Parco

- 2. Brief of the Contract/MoU/Agreement/LOI/LOA
- 3. Brief history of the Disputes:
- 4. Issues:
- 5. Details of Clam(s)/Counter Claim(s):

SI. No.	Description of claim(s)/Counter Claim	Amount (in INR)Or currency applicable in the contract	Relevant contract clause

6. Basis/Ground of claim(s)/counter claim(s) (along with relevant clause of contract)

Note— The Statement of Claims/Counter Claims may ideally be restricted to maximum limit of 20 pages. Relevant documents may be compiled and submitted along with the statement of Claims/Counter Claims. The statement of Claims/Counter Claims is to be submitted to all IEC members and to the other party by post as well as by email.

FORMAT FOR NOTICE INVOKING CONCILIATION CLAUSE BY BHEL FOR REFERRING THE DISPUTES TO CONCILIATION THROUGH IEC

To,

M/s. (Stakeholder's name)

Subject: NOTICE FOR INVOCATION OF THE CONCILIATION CLAUSE OF THE CONTRACT BY BHEL

Ref: Conti	ract No/MoU	/Agreement/	LOI/LOA& date	·	
Dear Sir/	/Madam,				

As you are aware, with reference to above referred Contract/MoU/Agreement/LOI/LOA, certain disputes have arisen, which, in-spite of several rounds of mutual discussions and various correspondences have remained unresolved. The brief particulars of our claims which arise out of the above-referred Contract/MoU/Agreement/LOI/LOA are reproduced hereunder:

Sl. No.	Claim description	Amount involved

As you are aware, there is a provision in the captioned Contract/MoU/Agreement/LOI/ LOA for referring disputes to conciliation.

In terms of Clause ---------of Procedure i.e., Annexure ------ to the Contract/MoU /Agreement / LOI / LOA, we hereby seek your consent to refer the matter to Conciliation by Independent Experts Committee to be appointed by BHEL. You are invited to provide your consent in writing to proceed with conciliation into the above mentioned disputes within a period of 30 days from the date of this letter along with details of counter-claims, if any, which you might have with regard to the subject Contract/ MoU/ Agreement/ LOI/ LOA.

Please note that upon receipt of your consent in writing within 30 days of the date of receipt of this letter by you, BHEL shall appoint suitable person(s) from the BHEL Panel of Conciliators.

This letter is being issued without prejudice to our rights and contentions available under the contract and law.

Thanking you Yours faithfully

Representative of BHEL

Note: The Format may be suitably modified, as required, based on facts and circumstances of the case.

FORMAT FOR NOTICE INVOKING CONCILIATION CLAUSE BY A STAKEHOLDER FOR REFERRING THE DISPUTES TO CONCILIATION THROUGH IEC

To,

BHEL (Head of the Unit/Division/Region/Business Group)

Subject: NOTICE FOR INVOCATION OF THE CONCILIATION CLAUSE OF THE CONTRACT BY A STAKEHOLDER

Ref: Contract No/MoU/Agreement/LOI/LOA& date	
Dear Sir/Madam,	

As you are aware, with reference to above referred Contract/MoU/Agreement/LOI/LOA, certain disputes have arisen, which, in-spite of several rounds of mutual discussions and various correspondences have remained unresolved. The brief particulars of our claims which have arisen out of the above-referred Contract/MoU/Agreement/LOI/LOA are enumerated hereunder:

Sl. No.	Claim description	Amount involved

As you are aware, there is a provision in the captioned Contract/MoU/Agreement/LOI/ LOA for referring inter-se disputes of the Parties to conciliation.

We wish to refer the above-said disputes to Conciliation as per the said Clause of the captioned Contract/MoU/Agreement/LOI/ LOA. In terms of Clause -------of Procedure i.e., Annexure ----- to the Contract/MoU /Agreement / LOI / LOA, we hereby invite BHEL to provide its consent in writing to proceed with conciliation into the above mentioned disputes within a period of 30 days from the date of this letter along with details of counter-claims, if any, which it might have with regard to the subject Contract/ MoU/ Agreement/ LOI/ LOA and to appoint suitable person(s) as Conciliator(s) from the BHEL Panel of Conciliators.

This letter is being issued without prejudice to our rights and contentions available under the contract and law.

Thanking you Yours faithfully

Representative of the Stakeholder

Note: The Format may be suitably modified, as required, based on facts and circumstances of the case.

FORMAT FOR INTIMATION TO THE STAKEHOLDER ABOUT APPOINTMENT OF CONCILIATOR/IEC

To,	
	M/s. (Stakeholder's name)

Subject: INTIMATION BY BHEL TO THE STAKEHOLDER AND CONCILIATOR(S) ABOUT APPOINTMENT OF CONCILIATOR/IEC

Ref: Contract No/MoU/Agreement/LOI/LOA& date
Sir,
This is with reference to letter dated regarding reference of the disputes arising in connection with the subject Contract No /MoU/Agreement/LOI/LOA to conciliation and appointment of Conciliator(s).
In pursuance of the said letter, the said disputes are assigned to conciliation and the following persons are nominated as Conciliator(s) for conciliating and assisting the Parties to amicably resolve the disputes in terms of the Arbitration & Conciliation Act, 1996 and the Procedure to the subject Contract/MoU/Agreement/LOI/LOA, if possible.
Name and contact details of Conciliator(s)
a)
b)
c)
You are requested to submit the Statement of Claims or Counter-Claims (strike off whichever is inapplicable) before the Conciliator(s) in Format 29 (enclosed herewith) as per the time limit as prescribed by the Conciliator(s).
Yours faithfully,

Representative of BHEL

CC: To Conciliator(s)... for Kind Information please.

Encl: As above

Note: The Format may be suitably modified, as required, based on facts and circumstances of the case.

PROCEDURE FOR CONDUCT OF CONCILIATION PROCEEDINGS

- **1.** The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided herein:
- 2. The party desirous of resorting to Conciliation shall send an invitation/notice in writing to the other party to conciliate specifying all points of Disputes with details of the amount claimed. The party concerned shall not raise any new issue thereafter. Parties shall also not claim any interest on claims/counterclaims from the date of notice invoking Conciliation till the conclusion of the Conciliation proceedings. If BHEL is to initiate Conciliation, then, the invitation to Conciliate shall be extended to the concerned Stakeholder in Format-30 hereto. Where the stakeholder is to initiate the Conciliation, the notice for initiation of Conciliation shall be sent in Format-31 hereto.
- **3.** The party receiving the invitation/notice for Conciliation shall within 30 days of receipt of the notice of Conciliation intimate its consent for Conciliation along with its counter-claims, if any.
- 4. The Conciliation in a matter involving claim or counter-claim (whichever is higher) up to Rs 5 crores shall be carried out by sole Conciliator nominated by BHEL while in a matter involving claim or counter-claim (whichever is higher) of more than Rs 5 crores Conciliation shall be carried out by 3 Conciliators nominated by BHEL. The appointment of Conciliator(s) shall be completed and communicated by the concerned Department/Group of BHEL Unit/Division/Region/Business Group to the other party and the Conciliator(s) within 30 days from the date of acceptance of the invitation to conciliate by the concerned party in the **Format-32**. The details of the Claim, and counter-claim, if any, shall be intimated to the Conciliator(s) simultaneously in **Format-29**.
- **5.** The Parties shall be represented by only their duly authorized in-house executives/officers and neither Party shall be represented by a Lawyer.
- appropriate communication/notice to both the parties as soon as possible but not later than 30 days from the date of his/their appointment. The hearings in the Conciliation proceeding shall ordinarily be concluded within two (2) months and, in exceptional cases where parties have expressed willingness to settle the matter or there exists possibility of settlement in the matter, the proceedings may be extended by the IEC by a maximum of further 2 months with the consent of the Parties subject to cogent reasons being recorded in writing.

- 7. The IEC shall thereafter formulate recommendations for settlement of the Disputes supported by reasons at the earliest but in any case within 15 days from the date of conclusion of the last hearing. The recommendations so formulated along with the reasons shall be furnished by the IEC to both the Parties at the earliest but in any case within 1 month from the date of conclusion of the last hearing.
- **8.** Response/modifications/suggestions of the Parties on the recommendations of the IEC are to be submitted to the IEC within time limit stipulated by the IEC but not more than 15 days from the date of receipt of the recommendations from the IEC.
- **9.** In the event, upon consideration, further review of the recommendations is considered necessary, whether by BHEL or by the other Party, then, the matter can be remitted back to the IEC with request to reconsider the same in light of the issues projected by either/both the Parties and to submit its recommendations thereon within the following 15 days from the date of remitting of the case by either of the Parties.
- **10.** Upon the recommendations by the Parties, with or without modifications, as considered necessary, the IEC shall be called upon to draw up the Draft Settlement Agreement in terms of the recommendations.
- 11. When a consensus can be arrived at between the parties only in regard to any one or some of the issues referred for Conciliation the draft Settlement Agreement shall be accordingly formulated in regard to the said Issue(s), and the said Settlement Agreement, if signed, by the parties, shall be valid only for the said issues. As regards the balance issues not settled, the parties may seek to resolve them further as per terms and conditions provided in the contract.
- **12.** In case no settlement can be reached between the parties, the IEC shall by a written declaration, pronounce that the Conciliation between the parties has failed and is accordingly terminated.
- **13.** Unless the Conciliation proceedings are terminated in terms of para 22 (b), (c) & (d) herein below, the IEC shall forward his/its recommendations as to possible terms of settlement within one (1) month from the date of last hearing. The date of first hearing of Conciliation shall be the starting date for calculating the period of 2 months.
- **14.** In case of 3 members IEC, 2 members of IEC present will constitute a valid quorum for IEC and meeting can take place to proceed in the matter after

seeking consent from the member who is not available. If necessary, videoconferencing may be arranged for facilitating participation of the members. However, the IEC recommendations will be signed by all members. Where there is more than one (1) Conciliator, as a general rule they shall act jointly. In the event of differences between the Members of IEC, the decision/recommendations of the majority of the Members of IEC shall prevail and be construed as the recommendation of the IEC.

- **15.** The Draft Settlement Agreement prepared by the IEC in terms of the consensus arrived at during the Conciliation proceedings between the Parties shall be given by the IEC to both the parties for putting up for approval of their respective Competent Authority.
- 16. Before submitting the draft settlement agreement to BHEL's Competent Authority viz. the Board Level Committee on Alternative Dispute Resolution (BLCADR) for approval, concurrence of the other party's Competent Authority to the draft settlement agreement shall be obtained by the other party and informed to BHEL within 15 days of receipt of the final draft settlement agreement by it. Upon approval by the Competent Authority, the Settlement Agreement would thereafter be signed by the authorized representatives of both the Parties and authenticated by the members of the IEC.
- **17.** In case the Draft Settlement Agreement is rejected by the Competent Authority of BHEL or the other Party, the Conciliation proceedings would stand terminated.
- **18.** A Settlement Agreement shall contain a statement to the effect that each of the person(s) signing thereto (i) is fully authorized by the respective Party(ies) he/she represents, (ii) has fully understood the contents of the same and (iii) is signing on the same out of complete freewill and consent, without any pressure, undue influence.
- **19.** The Settlement Agreement shall thereafter have the same legal status and effect as an arbitration award on agreed terms on the substance of the dispute rendered by an arbitral tribunal passed under section 30 of the Arbitration and Conciliation Act, 1996.
- **20.** Acceptance of the Draft Settlement Agreement/recommendations of the Conciliator and/or signing of the Settlement Agreement by BHEL shall however, be subject to withdrawal/closure of any arbitral and/or judicial proceedings initiated by the concerned Party in regard to such settled issues.
- **21.** Unless otherwise provided for in the agreement, contract or the Memorandum of Understanding, as the case may be, in the event of likelihood of prolonged

absence of the Conciliator or any member of IEC, for any reason/incapacity, the Competent Authority/Head of Unit/Division/Region/Business Group of BHEL may substitute the Conciliator or such member at any stage of the proceedings. Upon appointment of the substitute Conciliator(s), such reconstituted IEC may, with the consent of the Parties, proceed with further Conciliation into the matter either de-novo or from the stage already reached by the previous IEC before the substitution.

- **22.** The proceedings of Conciliation under this Scheme may be terminated as follows:
 - **a.** On the date of signing of the Settlement agreement by the Parties; or,
 - **b.** By a written declaration of the IEC, after consultation with the parties, to the effect that further efforts at conciliation are no longer justified, on the date of the declaration; or,
 - **c.** By a written declaration of the Parties addressed to the IEC to the effect that the Conciliation proceedings are terminated, on the date of the declaration; or,
 - **d.** By a written declaration of a Party to the other Party and the IEC, if appointed, to the effect that the Conciliation proceedings are terminated, on the date of the declaration; or,
 - **e.** On rejection of the Draft Settlement Agreement by the Competent Authority of BHEL or the other Party.
- **23.** The Conciliator(s) shall be entitled to following fees and facilities:

S1 No	Particulars	Amount
1	Sitting fees	Each Member shall be paid a Lump
		Sum fee of Rs 75,000/- for the whole
		case payable in terms of paragraph No.
		27 herein below.
2	Towards drafting of	In cases involving claim and/or
	settlement	counter-claim of up to Rs 5crores.
	agreement	Rs 50,000/- (Sole Conciliator)
		In cases involving claim and/or
		counter-claim of exceeding Rs 5 crores
		but less than Rs 10 crores.
		Rs 75,000 (per Conciliator)

S1 No	Particulars	Amount
		In cases involving claim and/or counter-claim of more than Rs 10 crores. Rs 1,00,000/- (per Conciliator) Note: The aforesaid fees for the drafting of the Settlement Agreement shall be paid on the, Signing of the Settlement Agreement after approval of the Competent Authority or Rejection of the proposed Settlement Agreement by the Competent Authority of BHEL.
3	Secretarial expenses	Rs 10,000/- (one time) for the whole case for Conciliation by a Sole Member IEC. Where Conciliation is by multi member Conciliators –Rs 30,000/- (one time)- to be paid to the IEC
4	Travel and transportation and stay at outstation Retired Senior Officials of other Public Sector Undertakings (pay scale wise equivalent to or more than E-8 level of BHEL)	As per entitlement of the equivalent officer (pay scale wise) in BHEL.
	Others	As per the extant entitlement of whole time Functional Directors in BHEL. Ordinarily, the IEC Member(s) would be entitled to travel by air Economy Class.
5	Venue for meeting	Unless otherwise agreed in the agreement, contract or the Memorandum of Understanding, as the case may be, the venue/seat of proceedings shall be the location of the concerned Unit / Division / Region /

S1 No	Particulars	Amount
		Business Group of BHEL. Without
		prejudice to the seat/venue of the
		Conciliation being at the location of
		concerned BHEL Unit / Division /
		Region / Business Group, the IEC after
		consulting the Parties may decide to
		hold the proceedings at any other
		place/venue to facilitate the
		proceedings. Unless, Parties agree to
		conduct Conciliation at BHEL premises,
		the venue is to be arranged by either
		Party alternately.

- **24.** The parties will bear their own costs including cost of presenting their cases/evidence/witness(es)/expert(s) on their behalf. The parties agree to rely upon documentary evidence in support of their claims and not to bring any oral evidence in IEC proceedings.
- **25.** If any witness(es) or expert(s) is/are, with the consent of the parties, called upon to appear at the instance of the IEC in connection with the matter, then, the costs towards such witness(es)/expert(s) shall be determined by the IEC with the consent of the Parties and the cost so determined shall be borne equally by the Parties.
- **26.** The other expenditures/costs in connection with the Conciliation proceedings as well as the IEC's fees and expenses shall be shared by the Parties equally.
- **27.** Out of the lump sum fees of Rs 75,000/- for Sitting Fees, 50% shall be payable after the first meeting of the IEC and the remaining 50% of the Sitting Fees shall be payable only after termination of the conciliation proceedings in terms of para 22 hereinabove.
- 28. The travelling, transportation and stay at outstation shall be arranged by concerned Unit as per entitlements as per Serial No. 4 of the Table at para 23 above, and in case such arrangements are not made by the BHEL Unit, the same shall be reimbursed to the IEC on actuals limited to their entitlement as per Serial No. 4 of the Table at Para 23 above against supporting documents. The IEC Member(s) shall submit necessary invoice for claiming the fees/reimbursements.
- **29.** The Parties shall keep confidential all matters relating to the conciliation proceedings. Confidentiality shall extend also to the settlement agreement,

- except where its disclosure is necessary for purposes of its implementation and enforcement or as required by or under a law or as per directions of a Court/Governmental authority/ regulatory body, as the case may be.
- **30.** The Parties shall not rely upon or introduce as evidence in any further arbitral or judicial proceedings, whether or not such proceedings relate to the Disputes that is the subject of the Conciliation proceedings:
 - **a.** Views expressed or suggestions made by the other party in respect of a possible settlement of the Disputes;
 - **b.** admissions made by the other party in the course of the Conciliator proceedings;
 - **c.** proposals made by the Conciliator;
 - **d.** The fact that the other Party had indicated his willingness to accept a proposal for settlement made by the Conciliator.
- **31.** The Parties shall not present the Conciliator(s) as witness in any Alternative Dispute Resolution or Judicial proceedings in respect of a Disputes that is/was the subject of that particular Conciliation proceeding.
- **32.** None of the Conciliators shall act as an arbitrator or as a representative or counsel of a Party in any arbitral or judicial proceeding in respect of a Disputes that is/was the subject of that particular Conciliation proceeding.
- or judicial proceedings in respect of a Disputes that is the subject matter of the Conciliation proceedings except that a Party may initiate arbitral or judicial proceedings where, in his opinion, such proceedings are necessary for preserving his rights including for preventing expiry of period of limitation. Unless terminated as per the provisions of this Scheme, the Conciliation proceedings shall continue notwithstanding the commencement of the arbitral or judicial proceedings and the arbitral or judicial proceedings shall be primarily for the purpose of preserving rights including preventing expiry of period of limitation.
- **34.** The official language of Conciliation proceedings under this Scheme shall be English unless the Parties agree to some other language.