Rev 02 17thSept 2020

NOTICE INVITING TENDER

(Document No PS:MSX:NIT)

TENDER NO.: BHEL/NR/SCT/DADRI FGD/UNIT#5&6 /O&M/1239

NAME OF WORK: OPERATION AND MAINTENANCE OF THE FLUE GAS DESULPHURZATION SYSTEM (FGD) OF UNIT -5&6 OF 2X490 MW, STAGE-II AT NTPC DADRI, UTTAR PRADESH.

Bharat Heavy Electricals Limited



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

Date: 13/10/2021

Tο

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 NO	ISSUE	DESCRIPTION				
i	TENDER NUMBER	BHEL/NR/SCT/DADRI FGD/UNIT#5&6 /O&M/1239				
ii	BROAD SCOPE OF JOB		THE FLUE GAS			
"	BROAD COOL E OF COD	DESULPHURZATION SYSTEM (FGD) OF UNIT -				
		STAGE-II AT NTPC DADRI, UTTAR PRADESH.	27(100 11111)			
iii	DETAILS OF TENDER DO					
а	Volume-IA	Technical Conditions of Contract (TCC) consisting of				
		Scope of work, Technical Specification, Drawings,	Applicable			
		Procedures, Bill of Quantities, Terms of payment, etc.				
b	Volume-IB	Special Conditions of Contract (SCC)	Applicable			
С	Volume-IC	General Conditions of Contract (GCC)	Applicable			
d	Volume-ID	Forms and Procedures	Applicable			
е	Volume-II	Price Schedule (Absolute value).	Applicable			
iv	ISSUE OF TENDER	Tender documents will be available for				
	DOCUMENTS	downloading from BHEL eProcurement portal	Applicable			
		(<u>https://eprocurebhel.co.in)</u> till due date of				
		submission:				
		Brief information of the tenders shall also be available				
		at BHEL website (<u>www.bhel.com</u>)				
٧	DUE DATE & TIME OF	Date : 25/10/2021, Time : 10:00 hrs	Applicable			
	OFFER SUBMISSION	Place : on https://eprocurebhel.co.in				
		<u> </u>				
vi	OPENING OF TENDER	Date : 25/10/2021, Time : 15:30 hrs	Applicable			
		Notes:				
		(1) In case the due date of opening of tender becomes				
		a non-working day, then the due date & time of offer				

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

Website: www.bhel.com

vii	EMD AMOUNT	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. 20,80,000/-	Applicable
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: DESHRAJ YADAV Designation: Sr. ENGINEER Deptt: SCT Address: BHEL-PSNR, PLOT NO. 25, SECTOR – 16A, NOIDA - 201301 Phone: (Landline) 0120 - 2416261 Email: deshraj@bhel.in	Applicable
X	SCHEDULE OF PRE BID DISCUSSION (PBD)		Not applicable.
хi	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.	
xiii	Evaluation of currency for the	his tender shall be INR.	

- 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.)

Procedure for Submission of Tenders: 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:

LOAD: 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

(Note: 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) P_1 , P_2 , P_3 , P_4 , P_5 , P_N etc. be the packages (under execution/ executed during the 'Period of Assessment' in all Regions of BHEL) **SIMILAR** to the packages covered under the tendered scope, excepting packages not commenced. Total number of similar packages for all Regions = P_T (i.e. $P_T = P_1 + P_2 + P_3 + P_4 + ... P_N$)
- 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 performanc should have been evaluated in all the Regions
	S _T
=	••••
	T _T

- e) Bidders to note that the risk of non-evaluation or non-availability of the 'Monthly Performance Evaluation' reports as per relevant formats is to be borne by the Bidder.
- f) Table showing methodology for calculating 'a', 'b' and 'c' above

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 <u>Package/Packages'</u> 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

III. 'Assessment of Capacity of Bidder':

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

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

- 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
- ii). For $R_{BHEL} = 60$, $P_{Max} = '1'$
- iii). For $R_{BHEL} \ge 80$, 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 $P \leq P_{Max}$

(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. Il 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)

lable-1				
Civil	Electrical and C&I	Mechanical		
i). Enabling works	i). Electrical	i). Boiler & Aux (All types including		
ii). Pile and Pile Caps	ii). C&I	CW Piping if applicable)		
iii). Civil Works including	iii). Others (Elect. and C&I)	ii). Power Cycle Piping/Critical		
foundations		Piping		
iv). Structural Steel Fabrication		iii). ESP		
& Erection		iv). LP Piping		
v). Chimney		v). Steam Turbine Generator set &		
vi). Cooling Tower		Aux		
vii). Others (Civil)		vi). Gas Turbine Generator set & Aux		
		vii). Hydro Turbine Generator set &		
		Aux		
		viii). Turbo Blower (including Steam		
		Turbine)		
		ix). Material Management		
		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 Bidders'.
 - 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.
- 13.0 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</u> <u>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</u> tender is as given at Clause no. 1, Salient Features of NIT, SI. no. (xi) above.

"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-1 (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/Disqualified 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:

Commitment by BHEL: 28.1.1

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:

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

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

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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-(i)
- 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
- 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: Reverse Auction Process Compliance Form
- (iv) Annexure-4: Authorization of representative who will participate in the online Reverse Auction Process
- (v) Annexure-5: RA Price Confirmation and Breakup
- (vi) Annexure-6: Integrity Pact
- (vii) Annexure-7: Undertaking as per C4 of Annexure-1 i.e. PQR
- (viii) Annexure-8: Declaration reg. Related Firms & their areas of Activities
- (ix) Annexure-9: Declaration reg. minimum local content in line with revised public procurement
- (x) Annexure-10: Declaration by the Contractor
- (xi) Other Tender documents as per this NIT.

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ANNEXURE - 1

PRE QUALIFYING REQUIREMENTS

JOB	OPERATION AND MAINTENANCE OF THE FLUE GAS DESULPHURZATION SYSTEM (FGD) OF UNIT -5&6 OF 2X490 MW, STAGE-II AT NTPC DADRI, UTTAR PRADESH.
TENDER NO	BHEL/NR/SCT/DADRI FGD/UNIT#5&6 /O&M/1239

SL. NO.	NAME AND DESCRIPTION OF PRE-QUALIFICATION CRITERIA	APPLICABILITY
Α	Submission of Integrity Pact duly signed	Applicable
B B-1.1	Technical Bidder who wish to participate should have experience of executing/executed as follows:	Applicable
	a. Operation and Maintenance Works of Flue Gas Desulphurization (FGD) System in Power plant of rating not less than 190 MW. OR b. Operation and Maintenance Works of Power Plant of rating not less than 190	
	MW.	
	OR	
	c. "Assistance in Operation by providing Desk Operators or Field Operators and	
	 i. Maintenance of Rotary equipment's i.e. Centrifugal Pumps, Ball Mill /Coal Mill, Fans etc. in power plant of rating not less than 190 MW or ii. Maintenance of Centrifugal pumps and compressors in Chemical Plant / Process plant. 	
	Above works can be executed in single or separate contracts."	
B-1.2	Completion certificate shall be required in support of executed works.	
B-1.3	Provisional certificate from Customer in support of work under Execution shall be required.	
	Note: "Executed" means, the Bidder should have executed for at least 06 months	
	during last 07 years from latest date of bid submission or "Executing" means	
	Bidder executing for not less than 06 months ending on the latest date of bid	
С	submission. FINANCIAL:	Applicable
C-1	TURNOVER: Bidders must have achieved an average annual financial turnover	
0-1	(Audited) of Rs. 1.08 Crore or more over last three Financial Years (FY) i.e. (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.	Applicable
	Note: Net worth shall be calculated based on the latest Audited Accounts, as furnished for 'C-1' above.	
	Net worth = Paid up share capital* + Reserves.	
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.	
	Note: 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-7) to this effect.	Applicable
D	Assessment of Capacity of bidder to execute the work as per clause 9.0 of NIT	Applicable – by BHEL
Е	Approval of Customer	Not Applicable
F	Price Bid Opening	By BHEL
	Note: Price Bids of only those bidders shall be opened who stand qualified after compliance of criteria A to E	

Explanatory Notes for QR 'B-1.1':

1. "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 and Address of the Tenderer					
2	Details about type of the Firm/Company					
(i)	In case of Individual Tenderer	His / her full name, address at furnished along with the offer.	nd place & nature o	f business shall be		
(ii)	In case of Partnership Firm	partnership deed/instrument	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 furnished along with the offer			
(iii)	In case of Companies	certificate in case of Pub Memorandum and articles of A	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			
3.a	Details of Contact person for this Tender	Name: Mr/Ms Designation: Telephone No: Mobile No: Email ID: Fax No:				
3.b	Details of alternate Contact person for this Tender	Name: Mr/Ms Designation: Telephone No: Mobile No: Email ID: Fax No:				
4	EMD DETAILS	Not Applicable				
5	Validity of Offer	TO BE VALID FOR SIX MONT	THS FROM DUE DA	ATE		
			APPLICABILITY (BY BHEL)	ENCLOSED BY BIDDER		
6	Whether the format for compliance with PRE (ANNEXURE-1) is understood and filled with preferenced in the specified format		Applicable	YES / NO		
7	Audited profit and Loss Account for the last three year	ars	Applicable	YES/NO		
8	Copy of PAN Card		Applicable	YES/NO		
9	Copy of GSTIN		Applicable	YES/NO		
10	Whether all pages of the Tender documents including annexures, appendices etc are read understood and signed		Applicable	YES/NO		
11	Integrity Pact		Applicable	YES/NO		
12	Organization Chart of the tenderer's organization, ir and contact information of the Directors/Partners sh offer.		Applicable	YES/NO		

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13	Offer forwarding letter / tender submission letter [Form No. F-01 (Rev 00)]	Applicable	YES/NO
14	Declaration by Authorised Signatory [Form No: F-02 (Rev 00)]	Applicable	YES/NO
15	Declaration by Authorised Signatory regarding Authenticity of submitted	Applicable	YES/NO
	documents [Form No: F-02A (Rev 00)]		
16	No Deviation Certificate [Form No: F-03 (Rev 00)]	Applicable	YES/NO
17	Declaration confirming knowledge about Site Conditions [Form No: F-04 (Rev 00)]	Applicable	YES/NO
18	Declaration for relation in BHEL [Form No: F-05 (Rev 00)]	Applicable	YES/NO
19	Non-Disclosure Certificate [Form No: F-06 (Rev 00)]	Applicable	YES/NO
20	Bank Account Details for E-Payment [Form No: F-07 (Rev 00)]	Applicable	YES/NO
21	Format for seeking clarification [Form No: F-08 (Rev 00)]	Applicable	YES/NO
22	Capacity Evaluation of Bidder for current Tender [Form No: F-09 (Rev 00)]	Applicable	YES/NO
23	Power of Attorney for Submission of Tender/Signing Contract Agreement	Applicable	YES/NO
24	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:	Sign. of the AUTHORISED SIGNATORY
	(With Name, Designation and Company seal)

ANNEXURE - 3

Reverse Auction Process Compliance Form

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

Τo

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

Sub: Agreement to the Process related Terms and Conditions

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 <u>Annexure 5</u> 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.

ANNEXURE – 4

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 - 5

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 A	Auction and price breakup
Dear Sir,	
We confirm that we have quoted.	
Rs.{in value & in words}}	for item(s) covered under tender enquiry No. {} dt.{}
	re cited enquiries is inclusive of {Packing & forwarding, GST, E.D., {} District,{} State and Type }, other as per NIT}
as our final landed prices as quoted during a period of { in nos. & in words} date =	the Reverse Auction conducted today $\{date\}$ which will be valid for ays.
The price break-up is as given below.	
	======
Total	- Rs. in value & in words
	======
Yours sincerely,	
For	
Name:	
Company:	
Date:	
Seal:	

ANNEXURE - 7

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/DADRI FGD/UNIT#5&6 /O&M/1239
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.
Cinn of the AUTHORISED CIONATORY
Sign. of the AUTHORISED SIGNATORY (With Name, Designation and Company seal)
Place:
Date:

ANNEXURE-8

DECLARATION

_						Date:	
To:		BUEL					
Addres	SS:	BHEL,					
Email:							
Liliali.							
Sub:	Details of relate	d firms and their area o	f activities				
Dear S	ir/ Madam,						
		of firms owned by our fa (NA, if not applicable)	mily members	that are doing busir	ness/ re	egistered for sam	e item with
1	Material Catego	ory/ Work Description					
'	Name of Firm	ory/ Work Booonplion					
	Address of Firm	1					
	Nature of Busin						
	Name of Family	/ Member					
	Relationship						
2		ory/ Work Description					
	Name of Firm	,					
	Address of Firm	1					
	Nature of Busin	ess					
	Name of Family	/ Member					
	Relationship						
Note: inform		above information is tru found to be false.	ue and I agree	for penal action fro	om BHL	EL in case any o	f the above
							Regards,
					()
				From: Supplier Code: Address:	-	M/s	
					-		

Annexure-9

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,																		
(Writ	te N	Nam	e &	Add	lress	s of O	fficer of	BHE	EL invitir	ng the	Tende	r)						
Dea	r Si	r,																
					•				itent in li 020 and				ırement (P).	refe	rence to	Make	e in Ir	ndia),
Ref							ation No sues till			SCT/D	ADRI F	GD/UNIT	Γ#5&6 /O&	M/12	39			
the o	rga al:	niza sup	tion plie	here r' / ') ha Clas	s a lo ss II I	cal cont ocal su	tent (p pli	of er ' ** as	% defir	and th	is meets Public Pr	s the local rocuremenuent order(cont it (Pi	ent requ	uireme	ent fo	r 'Class-
The	d	etail	S	of	the	loca	ntion(s)	at	which	the	local	value	addition	is	made	are	as	follows:
1									2			_						
3									4			_						
Thar Your		0,																
													Autho		. •	-		& Seal of Bidder)

** - Strike out whichever is not applicable.

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.

ANNEXURE-10

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/DADRI FGD/UNIT#5&6 /O&M/1239 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 with India 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 Industry and Internal Trade (DPIIT); and will not sub-contract any work to a contractor from such countries unless such contractor is 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 of **Authorized Signatory of the Bidder)**

Note: Bidders to note that in case above certification given by a bidder, whose bid is accepted, is found to be false, then this would be a ground for immediate termination and for taking further action in accordance with law and as per BHEL guidelines.

INTEGRITY PACT

Between

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi - 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

The Principal intends to award, under laid-down organizational procedures, contract/s for

In order to achieve these goals, the Principal will appoint Independent External Monitor(s), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1- Commitments of the Principal

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-
- 1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
- 1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
- 1.1.3 The Principal will exclude from the process all known prejudiced persons.
- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions:

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Section 2 - Commitments of the Bidder(s)/ Contractor(s)

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
- 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he/ she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
- 2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. 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.
- 2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant Indian Penal Code (IPC) and Prevention of Corruption Act; further the Bidder(s)/ Contracter(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- 2.1.4 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. The Bidder(s)/ Contractor(s) 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.
- 2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and will await their decision in the matter.

Section 3 - Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

Section 4 - Compensation for Damages

- 4.1 If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent Earnest Money Deposit/ Bid Security.
- 4.2 If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to

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demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee, whichever is higher.

Section 5 - Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 - Equal treatment of all Bidders/ Contractors / Sub-contractors

- 6.1 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors. In case of sub-contracting, the Principal contractor shall be responsible for the adoption of IP by his sub-contractors and shall continue to remain responsible for any default by his sub-contractors.
- 6.2 The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

Section 7 - Criminal Charges against violating Bidders/ Contractors /Subcontractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 - Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- 8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Sub-contractor(s) with confidentiality in line with Non-disclosure agreement.
- 8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

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Page 3 of 5

- 8.5 The role of IEMs is advisory, would not be legally binding and it is restricted to resolving issues raised by an intending bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.
- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process, the matter should be examined by the full panel of IEMs jointly as far as possible, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.
- 8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to CMD, BHEL, at the earliest. They may also send their report directly to the CVO and the Commission, in case of suspicion of serious irregularities requiring legal/ administrative action. IEMs will tender their advice on the complaints within 10 days as far as possible.
- 8.8 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- 8.9 IEM should examine the process integrity they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the organization should be looked into by the CVO of the concerned organisation.
- 8.10 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code/ Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.11 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.
- 8.12 The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration

- 9.1 This Pact shall be operative from the date IP is signed by both the parties till the final completion of contract for successful bidder and for all other bidders 6 months after the contract has been awarded. Issues like warranty / guarantee etc. should be outside the purview of IEMs.
- 9.2 If any claim is made/ lodged during currency of IP, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 - Other Provisions

10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.

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- 10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- 10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- 10.4 Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 10.5 Only those bidders / contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

For & On behalf of the Principal	For & On behalf of the Bidder/
(Office Seal)	(Office Seal)
Place	
Date	
Witness:	Witness:
(Name & Address)	(Name & Address)

वी. के. गुप्ता / K. GUPTA
अपर महाप्रबंधक (उप संविदा एवं क्रय)
अपर महाप्रबंधक Manager (SCP)
अपर महाप्रबंधक Manager (SCP)
अपर महाप्रबंधक (उप संविदा एवं क्रय)
अपर महाप्रबंधक (उप संविदा एवं क्रय)
अपर महाप्रवंधक (अ. Power Sector-Northern Region
अपरा हेवी इंदोव्हिक्कल्स लिमिटेड, पावर सेव्हर-जर्मरी
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Rev 01 1st June 2012

TECHNICAL CONDITIONS OF CONTRACT (TCC)

(Document No PS:MSX:TCC)

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TECHNICAL CONDITIONS OF CONTRACT (TCC) Chapter-I:

TECHINICAL CONDITIONS OF CONTRACT

of

OPERATION AND MAINTENANCE OF THE FLUE GAS DESULPHURZATION SYSTEM(FGD) OF UNIT -5&6 OF 2X490 MW, NTPC DADRI, STAGE-II

Part-I OF TCC



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

TECHNICAL CONDITIONS OF CONTRACT (TCC) Chapter-I:

SI No	DESCRIPTION	Chapter	PAGE NO.
	Contract specific details		
1	Project Information	Chapter-I	4
2	Scope of Works	Chapter-II	5-24
3	Facilities in the Scope of BHEL/Contractor	Chapter-	25-28
4	T&Ps and MMEs to be deployed by Contractor	Chapter-	29-31
5	T&Ps and MMEs to be deployed by BHEL on sharing basis	Chapter- V	32
6	Time Schedule	Chapter- VI	33-34
7	Terms of Payment	Chapter- VII	35-38
8	Taxes and other Duties	Chapter- VIII	39-40
9	Other Requirements	Chapter- IX	41
10	Annexures	Chapter-	42-53
11	Rate Schedule	Chapter- XI	54-56

TECHNICAL CONDITIONS OF CONTRACT (TCC) Chapter-I: Project Information

S.No.	Title	Description
1	Name of the Project	NATIONAL CAPITAL THERMAL POWER PROJECT(NCTPP) STAGE-II
2	Owner	M/s NTPC
3.	Address	Dadri, District- Gautam Buddh Nagar,Uttar Pradesh
4.	Installed Capacity	2 x 490 MW
5.	Nearest Railway station	Dadri (Approx. 8.5 KM)
6.	Nearest Road	National Highway- 3 & 24
7.	Nearest City	Dadri (Approx. 7 KM)
8.	Nearest Airport	Delhi (Approx. 70 KM)

TECHNICAL CONDITIONS OF CONTRACT (TCC) Chapter-II: SCOPE OF WORKS

2.0	SCOPE OF WORK
	BHEL has been awarded the work of Design, Engineering, Supply, Erection, Testing,
	Commissioning, Trial run and Handing over of complete Mechanical, Electrical, C&I
	and associated Civil and Structural works and O&M Works of Flue Gas
	Desulphurization(FGD) system and its auxiliaries for NCTPP Dadri Stage II(2x490
	MW) of M/s NTPC Ltd.
	Scope of Work under this Tender Specification Broadly Consists of following:
i	Ensuring Successful Operation of FGD Plant in three shifts round the clock with
	required SO2 reduction efficiency, Optimum Energy and Limestone Consumption and
	producing good quality of Gypsum.
ii	Maintenance of the FGD plant as per scope by appointing experienced service
	Engineers, Supervisors, Operators and Technicians round the clock is covered in the
	scope of contractor.
iii	Contractor has to ensure that FGD plant is operated and maintained as per "Operation
	and Maintenance instruction manuals" and in accordance with Engineer-in charge for
	coordination with operation/maintenance of main plant. Daily work of the operators
	involves logging the all the important parameters as required and running of the FGD plant in most efficient manner. Contractor has to prepare and maintain all documents
	as per the requirements standards ISO 9001/ 18000/ 14001 and 5S.
iv	Carrying out necessary Daily, Preventive and Breakdown maintenance. Based on
1,4	O&M manuals/specifications/drawings provided by BHEL, contractor to prepare
	standard maintenance procedure/schedule (SMP) and standard operating procedure
	(SOP) in consultation with BHEL Engineer. BHEL decision regarding the SMP and
	SOP shall be final and binding on the contractor.
V	Contractor has to perform (100%) routine/ periodic and preventative maintenance as
	per finalized SMP/ maintenance schedule without fail to avoid any downtime of
	equipment. In case of breakdown of any equipment, all efforts shall be made to restore
	the equipment with minimum time loss.
vi	Submission of periodical reports to the owner on the operating conditions and
	maintenance activities of the FGD plant.
vii	Ensuring Safety and protection of the personnel deployed by the agency. High order of
	safety practices and standard engineering methods shall be adopted during O&M. All
	safety tools and personal protection equipment are in the scope of contractor
viii	Supply of all type of consumables and application of the same. However maintenance
	spares or consumables (BHEL scope) shall be provided free of cost basis by BHEL. Contractor has to maintain the minimum inventory of spares including critical one for
	breakdown and raise the requirement atleast 03 month in advance for same.
ix	Cleaning of the plant on regular basis and as and when required.
X	Cleaning of the plant of regular basis and as and when required: Cleaning of drains, cable trenches etc.
xi	Washing of all area as per as per approved schedule.
xii	Herbicide spray and grass cutting on a periodic basis.
xiii	All actions to be taken to prevent pollution due to flue gas from duct/slurry leakage
	from pipeline during operation of the FGD plant. It shall be the responsibility of
	Contractor to ensure minimum wastage of water and Contractor to analyse the cause
	of extra requirement and attend the same immediately.
xiv	Preparation and submission on daily, weekly, monthly basis report related to
	operation, maintenance, spares (in stock/issue/utilization) etc. as per format approved
	by BHEL/NTPC.
XV	Contractor to follow Work permits system for attending jobs like work at height, hot
	work, pipe line work, light maintenance, work at confined space ,Electrical
	maintenance etc.

TECHNICAL CONDITIONS OF CONTRACT (TCC) Chapter-II: SCOPE OF WORKS

xvi	Contractor shall at his own expense provide all amenities to his workmen as per
	applicable laws and rules.
xviii	All interlocks/protections shall always be in place and no bypassing shall be done.
xix	Contractor shall ensure that all safety measures are taken at the site to avoid
	accidents to his employees or his Co-contractor's employees.
XX	Operation and maintenance of entire FGD plant to be managed in such a way that no
	power generation loss occurs.
xxi	At the end of the contract period, the contractor shall hand over the plant and
	equipment back to the BHEL/NTPC in completely safe and healthy condition and
	without any pending defect.
Notes	
1.	BHEL shall operate the plant with their Desk operators in shifts till Trial Operation
	Completion and taking over plant by NTPC or NTPC Clearance for O&M works. After
	that O&M works shall be handed over to contractor. During that period, contractor to
	mobilize as defined under Chapter VI (Time schedule) for familiarization with operation
	· · · · · · · · · · · · · · · · · · ·
2	
	Contractor to chesic availability of Book operators associated during above period.
3	All the manpower mobilized till zero date shall be paid as per Unit rate mentioned in
0.	
2.	and maintenance works of FGD plant. Contractor to deploy optimum staff (Desk/Fig operators etc.) as finalized with BHEL O&M in-charge/Engineer during that periodic (mobilization to zero date). Contractor to ensure availability of Desk Operators associated during above period. All the manpower mobilized till zero date shall be paid as per Unit rate mentioned Annexure II of Rate Schedule.

2.1	BRIEF DESCRIPTION OF THE FGD SYSTEM			
i.	FGD system shall be based on Wet Limestone Forced Oxidation process. Each unit shall be provided with an independent absorber.			
ii.	Gas from terminal point on ID fan discharge duct shall be taken directly to the absorber through Booster Fans. In the absorber, SO ₂ in flue gas shall be removed by a spray of recirculating slurry, pumped by slurry recirculation pumps.			
iii.	Compressed oxidation air shall be blown through oxidize the Calcium sulphite to gypsum.	h the slurr	y in the ox	idation tank, to
iv.	Clean gas from the absorber shall be taken to the mist eliminators.	e Wet Chi	mney throu	igh three stage
V.	Limestone to the absorbers of the units shall be system, common for the units. Limestone shall be in turn will feed the Limestone to wet ball mill through	fed to the	Limestone	day silos which
vi.	Gypsum from the absorber(s) shall be pumped by dedicated gypsum bleed pumps to a common Gypsum Dewatering system consisting of two streams (2x100%) of primary and secondary hydrocyclone and vaccum belt filters for gypsum dewatering. The water removed from the absorber shall be recycled to the absorbers. The waste water from the system shall be collected and neutralized using lime and neutralized effluent shall be pumped at required pressure to waste water terminal point.			
vii.	FGD system at Dadri divided in two parts Field I: consists of Absorber#5&6, AAT, Booster Fans, RC Pumps, Gypsum bleed pumps, Chimney and Flue Ducts, Control room Field II: Consist of Day silo, Ball Mill Building, Gypsum Dewatering building, Tanks and ISG area equipment (not in the scope). Both field divided through existing railway tracks.			
•	ranway tracks.			o o
2.2	List of the major equipment installed in FGD			0 0
2.2	•	Unit-5	Unit-6	Common
2.2 a.	List of the major equipment installed in FGD	Unit-5	Unit-6	
	List of the major equipment installed in FGD Description	Unit-5	Unit-6	
a.	List of the major equipment installed in FGD Description Absorber system: Absorber System along with supporting structures slurry spray header(s) and nozzles, three stage mist eliminators, wash water nozzles, oxidation tank integral to tower, oxidation headers and nozzles, and agitators and all internal systems integral to the working			
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a. 1 2 3	List of the major equipment installed in FGD Description Absorber system: Absorber System along with supporting structures slurry spray header(s) and nozzles, three stage mist eliminators, wash water nozzles, oxidation tank integral to tower, oxidation headers and nozzles, and agitators and all internal systems integral to the working of the absorber. Jet Air Sparger (JAS) Absorber Tank Agitators	1 8 2W+1S	1 8 2W+1S	
2 3 4	List of the major equipment installed in FGD Description Absorber system: Absorber System along with supporting structures slurry spray header(s) and nozzles, three stage mist eliminators, wash water nozzles, oxidation tank integral to tower, oxidation headers and nozzles, and agitators and all internal systems integral to the working of the absorber. Jet Air Sparger (JAS) Absorber Tank Agitators Absorber Mist Eliminator	8 2W+1S 1 Set	1 8 2W+1S 1 set	
2 3 4 5	List of the major equipment installed in FGD Description Absorber system: Absorber System along with supporting structures slurry spray header(s) and nozzles, three stage mist eliminators, wash water nozzles, oxidation tank integral to tower, oxidation headers and nozzles, and agitators and all internal systems integral to the working of the absorber. Jet Air Sparger (JAS) Absorber Tank Agitators Absorber Recirculation Pumps	8 2W+1S 1 Set 3W+1S	8 2W+1S 1 set 3W+1S	

9	Absorber Elevator	1	1	
b.	Gypsum Dewatering System:			
1	Primary Hydro cyclone Feed tank			1
2	Primary hydro cyclone Feed tank pump			1W+1S
3	Primary hydro cyclone Feed tank Agitator			1
4	Primary hydro cyclone cake wash pump	1W+1S	1W+1S	
5	Belt Filter washing tank	1	1	
6	Belt Filter Washing Pump	1W+1S	1W+1S	
7	Vacuum Belt Filter	1	1	
8	Vacuum Receiver	1	1	
9	Vacuum Pump	1	1	
10	Belt support fan	1	1	
11	Filtrate Water Tank			1
12	Waste Water Hydrocyclone Feed Tank			1
13	Waste Water Hydrocyclone			1
14	Waste Water Hydrocyclone Feed Tank Agitator			1
15	Waste Water Hydrocyclone Feed Tank Pump			1W+1S
16	Waste Water Storage Tank			1
17	Waste Water Storage Tank Agitator			1
18	Waste Water Tank Pump			1W+1S
19	Lime Silo & Hoist Motor for lifting lime bags			1W+1S
20	Neutralization Tank			1W+1S
21	Neutralization Tank Agitator			1W+1S
22	Screw Feeder			1W+1S
23	Day Silo			2
C.	Lime Stone preparation system			
1	Limestone storage Silo			1W+1S
2	Limestone Storage Silo bag Filter			1W+1S
3	Limestone Storage Silo Shutoff Gate			1W+1S
4	Gravimetric Feeder			1W+1S
5	Wet Limestone Grinding Mill			1W+1S
6	H.P Trunnion Lube Oil Pump	1W+1S	1W+1S	
7	L.P Trunnion Lube Oil Pump	1W+1S	1W+1S	
8	Oil Reservoir	1	1	

9	Mill Separator Tank			1W+1S
10	Mill Separator Tank Agitator			1W+1S
11	Mill Circuit Pump	1W+1S	1W+1S	1 4 4 + 1 0
12	Mill Hydrocyclone	144410	100710	1W+1S
13	Distribution Box			1W+1S
14	Limestone Slurry Storage Tank			1W+1S
15	Limestone Slurry Feed Pump	1W+1S	1W+1S	177713
16	Limestone Slurry Storage Tank Agitator	177710	177710	1W+1S
d.	Sump System			177110
1	Absorber Area Drain Sump Agitator	1	1	
2	Absorber Area Drain Sump pump	1W+1S	1W+1S	
3		100+13	100+13	1
4	Auxiliary Absorbent tank Auxiliary Absorbent tank agitator			1
5	, ,			1
6	Auxiliary Absorbent tank pump Gypsum Area Drain Sump Agitator			1
7				
	Gypsum Area Drain Sump pump			1
8	Limestone Area Drain Sump Agitator			
9	Limestone Area Drain Sump Pump			1
е.	Utility System:			
1	Process Water Tank	1	1	
2	Process Water Pump	1W+1S	1W+1S	
3	Clarified water Tank	1	1	
4	ME Wash water Pump	1W+1S	1W+1S	
5	Instrument Air Receiver			2
6	Emergency Quenching Tank	1	1	
f.	Flue gas system			
1	FGD By pass Gate	1	1	
2	By pass gate Damper	1	1	
3	Booster Fans & isolation gates	2	2	
4	FG duct from Bypass to Booster Fan	1 set	1 set	
5	Booster Fan O/L to Absorber inlet	1 set	1 set	
6	Absorber Outlet to Wet Stack chimney with glass flake lining	1 set	1 set	
g.	Equipment Cooling water system			
1	ECW Pumps			2W+1S
	· ·			

2	ACW Pumps			2W+2S
h.	HVAC system including AHU, Ducts, Fans, UAF etc.			1 Set
i.	CAS system (Compressor, Air Drier and Air receiver and associated piping etc.)			1 Set
j.	Chimney (150 mtr height) with borosilicate lining			1 No.
k.	Piping			
1	Slurry Piping (Rubber lined)	1 set	1 set	
2	SS piping	1 set	1 set	
3	Fire water piping	1 set	1 set	
I.	Electrical And C&I			
1	DCS Panels			48 No.
2	12.54 MVA Oil filled Transformer			2 No.
3	Dry Type Transformer -11/0.433 KV ,2500KVA			4 No.
4	Dry Type Transformer -11/0.433 KV ,1600KVA			3 No.
5	11 KV Switch gear-26 Panel			1 Set
6	3.3 KV Switchgear-36 Panel			1 Set
7	415 V LT Panel			7 No.
8	Battery and Battery Charger-220 V			2 Set
9	Battery and Battery Charger-24 V			4 Set
10	DG Set -750 KV			1 No.
11	Segregated Bus duct- 3.3 Kv			1 Set
12	Station Lighting System			1 Set
13	Fire Detection and Alarm System			1 Set
Notes				
1.	The above is list is indicative in nature and provided to understand equipment's installed in the FGD Plant and there may be variation in actual installed equipment.			
2.	O&M of LHP (Lime stone handling plant) and excluded from scope of this tender.	d GHP (C	Gypsum ha	ndling system)
2.3	SITE VISIT			
	Contractor should visit site and acquire full known conditions/equipment installed for O&M purpose. the conditions prevailing at site and in a equipment/system installed together with all requirements of various authorities before submissions.	Contracto and arou statutor	r acquaint the pl y, obligator	nemselves with ant premises,

2.4	Guarantee and Penalties
2.4.1	BHEL have to prove the performance of plant at various parameter briefly mentioned below as per contract with NTPC. Though BHEL is responsible for performance of equipment supplied and installed at FGD plant. Contractor scope under this tender to operate and maintain the plant as per O&M instruction /manual/guidelines of BHEL/NTPC to maintain quarantees.
2.4.2	BHEL/NTPC to maintain guarantees. Indicative Guarantee Parameters as below though actual value may differ and
	necessary detail in this regard shall be shared on commencement of O&M
	period) : Category-I
	Sulphur removal efficiency greater than 95%,
	 Auxiliary power consumption not greater than 15 MW ,
	Lime stone consumption not greater than 9T/Hr, 500 A 11 Little 11 2554
	 FGD Availability not less than 95% Category-II
	Wet ball mill capacity at rated fineness, Wet ball mill wear parts guarantee, Wet ball mill consumption
	 Vacuum belt filter capacity: Capacity of Vacuum Belt Filters to dewater the quantity of gypsum with the specified purity and moisture content
	 Gypsum: Gypsum quality shall not be less than 90%, chloride content shall not be more than 100 ppm and the moisture content shall not be more than 10%.
	 Waste water the maximum purge flow rate to waste water treatment system shall be not more than 10m3/hr for a 490/500 MW unit averaged over a 24 hour period.
	Performance of Fans
	 Passenger cum goods elevator (OEM scope)
	Air conditioning (OEM scope) Compressed Air custom (OEM scope)
	 Compressed Air system (OEM scope) Noise level All the plant, equipment and systems covered under this
	specification shall perform continuously without exceeding the noise level over the entire range of output and operating frequency. Sound pressure shall be
	measured all around the equipment at a distance of 1.0 m horizontally from the
	nearest surface of any equipment/ machine and at a height of 1.5 m above the floor level in elevation.
	 Mist Outlet droplet count shall be guaranteed to be < 20 mg/Nm3 at absorber outlet measured over a period of 24 hrs continuous operation.
2.4.3	For category –II: Contractor shall maintain 98 % availability of FGD plant for a continuous period of 120 days. An availability guarantee test shall be conducted to assure this level of availability for a period of 240 days as per the procedure indicated
2.4.4	in clause no. 2.6 If any guaranteed parameters (Sulphur removal efficiency, Limestone consumption,
2.4.4	Auxiliary power consumption, FGD availability etc.) not achieved due to faulty
	operation and maintenance then contractor shall carry out necessary
	repair/rectification to comply with the guaranteed requirements at no extra cost to BHEL.
	If contractor fails to do repair/rectifications works to comply with the guaranteed
	requirements, BHEL shall rectify the same at risk and cost of contractor and recover actual cost incurred with 5% overheads.

	After PG Test /Final Accepted Guaranteed I	Parameters by Customer	
	After PG Test /Final Accepted Guaranteed Parameters by Customer		
2.4.5	After completion of PG test and acceptance of parameters, If any deduction made by customer on account of deviation from final accepted guaranteed parameters i.e Sulphur removal efficiency, auxiliary power consumption, lime stone consumption due to faulty operation and maintenance by contractor same shall be deducted in		
	proportion from O&M fees.		
2.5	KPI for O&M Duration (applicable from Zero date as defined in Chapter VI Time Schedule)		
1.	Availability of FGD per Unit	95%	
2.6	METHOD OF COMPUTING AVAILABILITY PE	R UNIT	
2.6.1	An availability guarantee test of FGD plant s plant O&M upto three years as per the procedure.		
2.6.2	Availability 'A' in %:	200/	
	A <u>=Tc x 10</u> Tk	JU 76	
	Tc - recorded time of FGD operation, expressed		
	Tk – recorded time of Boiler operation, expresse	d in hours,	
2.6.3	In order to calculate the FGD availability, oper start-ups when the operation hours counting all oil burners,		
2.6.4	FGD will be regarded as a FGD in operation, when by-pass damper is closed and total flow of flue gas from boiler goes via FGD, and sulphur content is below 200 mg/Nm3 (dry basis at 6% O2) in cleaned flue gas for the range of specified coals and loads.		
2.6.5	FGD may be required to be taken out of serv or due to non-availability of items to be process water, Power etc.)	rice as a result customer NTPC decision	
	Or due to non-availability of BHEL scope it supervision /BHEL MU expert, consumables for dosing, Lube Oils etc.		
	In such instances, this duration will be considered as FGD operation time. Contractor required to maintain records of such instances and submit to BHEL during calculation of FGD availability.		
2.6.6	Boiler operation hours will be counted based and the recorded data will be made available t	• • • • • • • • • • • • • • • • • • •	
2.6.7	Any Unscheduled FGD Tripping on a GIS/Instrumentation will be in account of FGD	account of Mechanical / Electrical/	
Notes			
1.	Contractor has to list down the list of critical seconsultation and proper justification with BHE equipment where redundancy is not available.	EL for all the equipment with priority on	
	If the Contractor has not raised any requirement breakdown, duration of the breakdown will not however if spares not available in consent with as deemed availability where redundancy is not available.	ot be considered in deemed availability. ith the BHEL/NTPC it will be considered	
2.	 OEM/BHEL Expert requirement s Engineer/O&M Incharge and BHEL 		

	the case may be video consultation/con-call shall be arranged. However, Contractor required to report the requirement in advance. Failure to do so deemed availability shall be reduced in proportion to delay in reporting the requirement to BHEL Engineer.
	 For consumables(BHEL scope) contractor to raise the requirement atleast 03 months in advance and if FGD availability affected due to non-availability of consumables(BHEL scope) then deemed availability shall be reduced in proportion to delay in raising the request
	If FGD availability affected
3.	Due to reasons attributable to contractor (delay in maintenance work due to non-availability of consumables/T&P /IMTEs /non-deployment of manpower or due to faulty operation or due to faulty maintenance by contractor) such period shall be on account of contractor.
4.	Due to failure/breakdown to FGD equipment attributable to contractor then time taken to restoration of the same such period shall be on account of contractor for calculating FGD availability otherwise same shall be considered as FGD operation time.
2.7	Penalties
2.7.1	In case of non-performance of the contractor in respect of KPI for the reasons not attributable to BHEL/NTPC and subject to the conditions as defined under clause 2.6, the BHEL shall levy the penalty as follows:
2.7.2	For every 1% shortfall in the FGD availability on annual basis, 1% deduction shall be made from yearly O&M Fees paid to contractor.
2.7.3	Maximum liability on account of non-fulfilment of the above-mentioned KPI under clause 2.5 shall be limited to 10% of the relevant yearly O&M Fees.
2.7.4	All LD/Penalties wherever mentioned under this contract shall be levied concurrently as applicable though aggregate liabilities to pay LD/Penalties except (Safety/ Accident /HSE penalties) shall be limited to 10% of contract value of each year.

2.8	SITE ORGANISATION
2.8.1	On award of contract, the contractor shall immediately report to BHEL O&M in-charge for further instructions. Contractor required to prepare the Standard Maintenance Procedure (SMP) and Standard Operation Plan (SOP) in consultation with BHEL Engineer. Submission of O&M man power and T&P Deployment plan for approval to BHEL O&M in-charge. BHEL decision in this regarding shall be final and binding on the contractor.
2.8.2	Site In Charge (Engineer/Diploma): Should have worked in power/industrial/chemical plants for minimum 3 to 5 years respectively. Should be able to effectively maintain his man power and plant maintenance works. Comply with all applicable laws. Should maintain all legal documents required for his man power, tools and tackles and having sufficient authority to take decisions at site.
2.8.3	Site in-charge shall attend a daily review meeting with BHEL at mutually convenient time and venue. He shall come prepared with day and cumulative progress of various activities, constraints and zone wise plans for next 24hrs for the meeting.
2.8.4	Supervisor/Engineer: Should have experience in supervising power/industrial/chemical plant maintenance activities of their respective areas i.e mechanical/electrical/c&i. Should be able to effectively supervise the works and able to handle the technicians effectively. Should give exact feedback of the works to the respective BHEL Engineer and should be familiar with maintenance spares and consumables. Should fill check list on day to day basis and same to be made verified by BHEL Engineer. Should have sound knowledge of their respective areas: For Mech: mills, Axial fans, pumps, valves, alignment with dial gauges, piping maintenance etc. For electrical equipment like HT/LT motors, transformers, lighting equipment, PLCs & DCS, switch boards, cables etc. C&I: repair/ maintenance calibration of C&I equipment like measuring instruments transmitters, actuators, cables etc Should be able to come in shifts and responsible for shift maintenance activities.
2.8.5	Desk Operator: Should have experience of control room operation in power plant /industrial unit/ processing plant etc.
2.8.6	Field Operator: Should have experience of field operation in power plant /industrial unit/ processing plant etc.
2.8.7	General Fitter: Hands-on experience in maintenance of pumps, mills, Fans, blowers. Should be able to do trouble shooting, assembly/ de-assembly works of pumps, valves, blowers. etc. Should have knowledge on base levelling with master level, water levelling, alignment with dial gauges, hand drilling, filing etc.
2.8.8	Rigger: Hands-on Experience in erection of temporary/ permanent platforms, scaffoldings, lifting of weights with industrial safety norms. Should be able to erect scaffolding up to 30 meter during maintenance. Experience in temporary scaffolding fabrication in a safe manner. Operation of hoist cranes and safe lifting of equipment parts are desirable. Safe transportation of spares from stores to work place, site to workshop and vice versa.
2.8.9	Mill Wright Fitter: Hands-on experience on maintenance/ dismantling/ assembling and routine checking of ball mills, centrifugal pumps, pumps, fans, blowers, gearboxes and their alignment with dial gauges. Experience of replacement of ball mill parts, Bull ring segment, Gear box replacement works etc. Repairing of valves & water line valves. slurry and water pipe line, knowledge of water levelling, marking, sawing, chipping, filing, scraping, drilling etc. Makes and understands sketches of parts; fabricates fits and assemble machinery parts as required and does necessary repairs either in Workshop or at site under the guidance of Engineer. Understands assembly-drawing, functions of individual parts of industrial equipment. Hands on Experience in

	overhauling of Axial fans, Blade pitch control mechanism repair and alignme fans is desirable.	ent of axial
2.8.10	Welder/ Cutter: Hands-on experience in welding and cutting in water, air Fabrication skills of platforms, ladders, handrails etc. are desirable.	pipe lines
2.8.11	Chemist: Hands on experience in sampling, testing in power plant, dosing system etc. lime stone, Gypsum testing knowledge is desirable.	
2.8.12	Store keeper: Should have experience in stores keeping in power plant/ind	ustrial unit. aintain all
2.8.13	Grinder: Should have experience in handling of various grinding machine, AG7 grinding cum cutting machines. Buffing wheels etc.	AG4, AG5,
2.8.14	Electrician: Should have hands on experience in repair/ maintenance o equipment like HT/LT motors, transformers, lighting equipment, PLCs & D boards etc. Experience in power plant /industrial unit.	
2.8.15	Technician: Should have hands on experience in repair/ maintenance ca C&I equipment like measuring instruments, transmitters, pneumatic actu Experience in power plant/industrial unit	
2.8.16	Helper: Should be able to work in coordination with Fitters /Riggers/super follow their instructions. Hands on experience in equipment cleaning with cl waste, housekeeping, tools/material shifting and safe handling skills is desired.	oth, cotton able.
2.8.17	Hydra Operator: should have experience of operating hydra and have requir	ed license.
2.8.18	Contractor has to submit qualification certificates from recognised institutes manpower (working labour, welders, and Supervisor, Engineer, safety office In Charge etc.) and calibration/ Test certificates of their tools and tackles as demanded by BHEL.	er and Site of all types
2.8.19	BHEL reserves the right to reject or approve the list of personnel propose Contractor. Persons, whose bio-data have been approved by BHEL, will I posted at site.	
2.8.20	Contractor shall maintain a site organization of adequate strength in manpower, required T&P and other implements at all times for smooth function the O&M works of FGD plant. Operation of the plant shall not be suffered or of inadequate deployment manpower, T&P other resources.	tioning of
2.8.21	Tentative manpower required for Operation and Maintenance of FGD L below:	Jnit5&6 as
S.No	Description	Qty (in
1	O&M in-charge/O&M Head	no.)
2	HR/Admin/Finance	2
3	Store Keeper	1
4	Safety Officer	1
5	Engineer: Planning /Mechanical/Electrical/C&I/CBM etc.	4
6	Supervisors: Mech./Electrical/C&I/Housekeeping/Horticulture	3
7	Operation in-charge	1
8	Desk Operator	3
9	Field Operator	6
10	Mill Wright Fitter(MWF)	1
	<u>. </u>	

11	General Fitter	4
12	Welder/Grinder/Fabricator	4
13	Electrician/Technician	4
14	Rigger	2
15	Chemist	1
16	Tractor Driver	1
17	Hydra Operator	1
18	Helper	20
	Total	60
Notes	:	
1.	Above is indicative manpower required for round the clock (24x7) O&M works of FGD plant. Contractor to finalize the area vise shift/general shift schedule in consultation with BHEL Engineer and to deploy the manpower as per the schedule finalized with BHEL. There may be deletion/addition in any category and BHEL decision shall be final and binding on the contractor.	
2.	For round the clock operation and as decided by BHEL, if additional manp to be deployed same shall be deployed by contractor. These manpower utilized in O&M shifts/General shifts work. Any additional manpower deployer paid as per unit manpower rate on pro rata basis as per item no. 3.1.1 of Ar (Rate schedule).	er shall be ed shall be
3.	Shift in-charge shall be from BHEL and contractor to cooperate and coord BHEL shift in-charge for round the clock operation. Instruction of shift in-charge also responsible for issuing the work permits work requirement.	narge to be
4.	Contractor personnel dedicated for working in shift can be shifted to work shifts or vice versa to handle the immediate emergency/quantum of job proefficiently.	omptly and
5.	Manpower may have to work after normal hours or may be called to attend a hours to attend emergency job. Overtime if any shall be in contractor scope.	
6.	In case manpower deployment by contractor delayed or not deployed as per agreed monthly deployment plan: i. Recovery shall be @ 1.5 times of monthly rate as per item no. 3.1.1 of Annexure-II (Rate schedule) for the subject manpower shall be made from monthly O&M fees for that month. or ii. If BHEL have to deploy manpower at market rate for O&M works for that month then recovery shall be difference between BHEL deployed manpower rate and contractual manpower rate plus 5% Overheads made from monthly O&M Fees for that month.	
7.	Contractor to take prior permission for O&M staffs leave from BHEL Engineer/Shift incharge/O&M In-charge by arranging the suitable replacement before proceeding on leave. Unauthorised leave shall be treated as absence. Contractor to ensure that as far as possible no designated post is left vacant in any shift otherwise recovery as mentioned in clause.6 is applicable. If any category of manpower not covered but required for O&M works as certified by	
	BHEL Engineer same shall be deployed by contractor and paid as per the rate under Annexure-II of rate schedule in mutual agreement with contractor	

	same shall be regularized as per clause no. 2.16 of GCC.
9.	All statutory compliances (like PF,ESI etc.) shall be in the contractor scope. Overtime, if any shall be in contractor scope. Contractor to ensure payment of minimum wages prevailing at NTPC Dadri.
10.	All expense related to accommodation, transportation of their staff shall be in contractor scope. Accommodation for the manpower should be within four (4) km radius of the plant Site.
11	Contractor shall follow prevailing Covid protocols/SOPs as well as requirement of quarantine as applicable on their cost.
12	Contractor to ensure payment of wages by 7 th of every month and submission of HR/IR documents in BHEL office.
13	In case, the personnel employed by contractor commits any act of Omission/Commission that amounts to misconduct/indiscipline/incompetence/security risks, contractor shall take appropriate disciplinary action against such personnel immediately when such instances are brought to the notice of the contractor, failing which it would amount to breach of contract and may lead to termination of contract if required replace the same. Failing to do so penalty shall be imposed in line with clause no. 6.
14	BHEL has right to direct the contractor to remove from the premises such of his personnel who may be physically, hygienically, clinically or medically unfit
15	Contractor to issue necessary PPEs (Safety shoes, safety helmets, gloves etc.) to their staff and workers at their own cost.

2.9	Other Requirement for O&M works
2.9.1	Daily walk-through inspection of FGD area in Field I and II consists of Absorber, Booster Fans, Ball mill Building, Silo area, Gypsum Dewatering Building, RC pumps and Oxidation Blower area, transformer area, slurry pumps and piping, control room building etc. to identify problems, observe any abnormality and report observations in standard format and rectify troubles through appropriate work permit system.
2.9.2	Operation of FGD Plant as per approved manuals/ specifications/ instructions of BHEL/NTPC.
2.9.3	In case of unscheduled breakdowns of equipment/ emergencies at any given point of the day, the Contractor shall mobilize the required manpower with tools, consumables within short notice period of BHEL and restore the equipment with minimum time loss. Failure to do so BHEL shall deploy manpower at risk and cost of contractor and recover the same with 5% overheads from monthly O&M Bills. Also BHEL shall levy penalty as per terms and conditions of contract.
2.9.4	Time for completion of each maintenance related activity/ job shall be mutually decided between BHEL Engineer and Contractor. Contractor shall have to complete all the jobs within the stipulated time schedule provided by the BHEL/NTPC.
2.9.5	Checking of the noise level of FGP Plant /Equipment as per schedule. If any abnormal sound and rectify the same.
2.9.6	All maintenance activities which are carried out by the Contractor should confirm to best engineering practices fulfilling all quality parameters and shall be carried out in minimum possible time
2.9.7	Break Down failure and Root Cause Analysis Report: For any type of breakdown contractor must be submit a failure analysis report with proper justification and implementation of CAPA (Corrective and preventative action) for the same.
2.9.8	Safety & 5S: Contractor Participation must be 100% in 5S, Quality circles & plant safety related activities like throughout the year. Regular Safety and technical trainings for all contractors' employees. All employees must be wearing proper PPE as per requirement.
2.9.9	Preparation of Maintenance History for all types of Maintenance in Hard as well as in Soft copy and Monthly submission to BHEL/NTPC.
2.9.10	Co-ordination with OEM for specialized activities as per BHEL instruction.
2.9.11	Provide reconciliation status of spares issued by BHEL on monthly basis.
2.9.12	Monthly up-date of spare and consumables consumption and requirement if any.
2.9.13	Preparation and submission of Daily and Monthly MIR, Maintenance reports as per format approved by BHEL/NTPC.
2.9.14	If any dress code is finalized by BHEL/NTPC for O&M staff, same have to follow by contractor at their own cost.
2.9.15	Transportation of material/spares for maintenance from BHEL stores/ yard to work Site and vice-versa shall be in the scope of Contractor. On requirement basis for O&M purpose there may be material/equipment/spares to be dispatch outside plant and also received at site. Contractor scope shifting of material to designated location, loading of material in truck/trailer placed by BHEL or unloading of material received at FGD Dadri, shifting in Stores / at designated location decided by BHEL. Material handling equipment like trailer, hydra, trolley etc. to be arranged by the contractor as per requirement.
2.9.16	In case wastages observed in consumables issued by BHEL from over and above the specified limit if any or as decided by BHEL Engineer due to reasons attributable to Contractor, then Contractor shall pay to the Owner in such cases 1.5 times the landed

	market price of that particular item at Site (1.5 times the rate which is being paid by the BHEL including cost of taxes, duties and freights). The decision of the BHEL shall be final in this regard.
2.9.17	If any facilities of FGD plant damaged by contractor then contractor shall carry out necessary repair/rectification of the same at no extra cost to BHEL. If contractor fails to do repair/rectification works then BHEL shall repair/rectify the same at risk and cost of contractor and recover the actual cost incurred with 5% overheads.
	Defect Liability Period
2.9.18	Defect liability period shall be one (1) months from the operation or before the next preventive maintenance cycle of repaired/ serviced equipment, whichever is earlier.

A. SCOPE OF MAINTENANCE MECHANICAL

2.10	Scope of Maintenance (Mechanical) equipment's are listed as below. Contractor to carry out the routine, periodic, preventative and breakdown maintenance as per				
	frequency of schedule finalized with BHEL Engineer/BHEL O&M in-charge.				
2.10.1	Absorber System				
2.10.1	 Identified slurry leakages to be attended immediately. In case of major uncontrollable leakage immediate information to be given to control room and concerned EIC. Inspection through manhole for deposit formation inside walls of absorber / duction and washed intermittently with water pumped from the process water tank removal manually as per requirement. Inspection of Mist Eliminator for any clogging or slurry deposits, if found defected removal of defected mist eliminator module, cleaning, refitting etc Inspection of Slurry spray header for any leakages /damages and rectify the same. Inspection of rubber lining inside absorber as per schedule defined and report the defect if any ,minor repair as instruction Checking of nozzles, JAS nozzles in absorber, W/D duct and inlet duct and in 				
	 any damage /leakages/clogging and rectification Checking the Emergency Quenching tank and rectify if any damage found Fixing of Scaffolding inside absorber for any defect attending etc. Assistance to expert service by MHI, Munters, Jasmino etc. General Cleaning and House Keeping in Absorber 				
2.10.2	Maintenance of Pipe lines (Water lines/ Slurry/Air lines etc.)				
	 Checking for leakages(water/air/ slurry) from flanges/ fittings, arresting the leakages Replacement of damaged pipe line during periodic maintenance /breakdown on requirement basis Maintenance of valves installed in these piping systems 				
	Piping supports should be checked and maintained by contractor				
2.10.3	Maintenance of Valves				
	 Attending leakages either by tightening bolts or by replacing the gasket Greasing of valves of all sizes as per requirement Attending flange / Bonnet leakages either by tightening or by replacing the gasket / seal ring. Removal / re-fixing of damaged cladding / insulation Repair/Replacement of damaged valves as per requirement 				
	Attending the problem valve mechanical jamming				
	Welding of handles / putting new handles to the valve.				
	Repair and revival of damaged valves/ parts of valves such as discs, spindles, bonnets etc.				
	 Spill over slurry/oil / water / grease / cotton waste / etc in surrounding area and floor to be cleaned as per the instructions of BHEL Engineer Cleaning of valves as per schedule 				
2.10.4	Maintenance Monorail Trolleys / Chain Pulley Blocks				

	•	Lubricate the bearing with grease
	•	Check the condition of coupling bushes
	•	Check the break adjustment / liner condition
	•	Lubricate the wire rope with cardium compound
	•	Check the foundation/structural bolt tightness
	•	Checking of coupling spiders, replacement if required
	•	Check the oil level if level is low top-up.
	•	Assisting in carrying out load test (Agency arranged by BHEL) of the above as
		per the Load testing schedule.
	•	Assisting the OEM in service/repair/replacement as per requirement
	•	Spill over oil / water / grease / cotton waste / etc. in surrounding area and floor to
		be cleaned as per the instructions of EIC
	•	Cleaning of equipment and associated systems to be carried out in every
		periodic maintenance.
2.10.5	Maint	enance of Vacuum Pumps
	•	Carry out External Cleaning of pumps
	•	Check all valves for gland leakage if leakage is to be observed, same to be
		attended either by replacing the glands or by tightening it
	•	Check the foundation bolt tightness and take corrective action if required.
	•	Check for mechanical seal leakage, if it is beyond permissible limit, take
		equipment isolation and attend the leakage, if possible by lapping of seal
		components.
	•	Inspection of Bearings of pump and replace the same if damaged
	•	Bearing greasing to be done
	•	Attend all leakages either by welding/replacement of seal/gaskets.
	•	Checking of coupling and replacement/repair if damage
	•	Checking of gearbox and replacement/repair if damage
	•	Checking of Alignment of Pump with Motor and do the necessary correction if
		required.
	•	Spill over Oil / Water / Grease / Cotton waste / etc. in surrounding area and floor
		to be cleaned as per the instructions of EIC.
	•	Cleaning of equipment and associated systems to be carried out in every PM.
2.10.6		enance of Slurry Pumps ,Slurry Recirculation pumps, Mill circuit pumps,
	Gyps	um Bleed pumps etc.
	•	Carry out External Cleaning of Equipment
	•	Check all valves for gland leakage if leakage is to be observed, same to be
		attended either by replacing the glands or by tightening it
	•	Check the foundation bolt tightness and take corrective action if required.
	•	Check for mechanical seal leakage, if it is beyond permissible limit, take
		equipment isolation and attend the leakage, if possible by lapping of seal
		components
	•	Carry out Mechanical Seal replacement in case damage
	•	Repair /Replacement of Expansion Joints if any
	•	Dismantling and assembly of the pumps as per requirement
	•	Inspection of bearings (Journal & Thrust) of Pump, checking of oil level for RC
		pumps bearing
	•	Bearing greasing to be done (if applicable)
	•	Attend all leakages either by welding/replacement of seal/gaskets
	•	Checking of seal water pipe line for any leakages and attending the same if any

	·
	 the coupling if damaged Check all foundation bolts for tightness and take corrective action if required
	Repair /replacement of expansion joint if damaged Parairing /Parair agreement of damage and the diagraph to the diagraph. Parairing /Parairing /Par
	Repairing/Replacement of damage components by dismantling and reassembly Spill over water / grange / getten waste / etc in gurrounding area and floor to be
	 Spill over water / grease / cotton waste / etc in surrounding area and floor to be cleaned as per the instructions of BHEL Engineer.
	 Cleaning of equipment and associated systems to be carried out in every PM
2.10.8	Maintenance of Sump Pits
	Removal of mud/sludge/slurry from the Sump pits
2.10.9	Maintenance Of Hydrant Valves / Monitors / Alarm Valves / Deluge Valves /Gate Valves Etc. For Fire Water System
	Carry out the External Cleaning of Valves.
	Attending Gland leakages either by tightening or by replacing the gland / rubber
	seat / hand hole cover gasket
	 Attending flange / Bonnet leakages either by tightening or by replacing the
	 Attending flange / Bonnet leakages either by tightening or by replacing the gasket / seal ring.
	 Attending flange / Bonnet leakages either by tightening or by replacing the gasket / seal ring. Attending the problem of valve mechanical jamming
	 Attending flange / Bonnet leakages either by tightening or by replacing the gasket / seal ring. Attending the problem of valve mechanical jamming Welding of handles / putting new handles to the valve
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2.10.10	 Attending flange / Bonnet leakages either by tightening or by replacing the gasket / seal ring. Attending the problem of valve mechanical jamming Welding of handles / putting new handles to the valve Attending line and valve leakages by welding or replacing glands. All types of replacement of valve against passing and body leakages Repair and revival of damaged valves/ parts of valves such as discs, spindles, bonnets etc. Check periodically for functioning of spray water system and repair/replace nozzle if required. Spill over oil / water / grease / cotton waste / etc in surrounding area and floor to be cleaned as per the instructions of BHEL Engineer. Maintenance of Agitators Carry out external cleaning of equipment Check the tightness of coupling bolt & take corrective action if required
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	Greasing of the bearing every 15 days or as decided.		
	Repairing/Replacement of damage components by dismantling and reassembly		
2.10.11	Maintenance of Tanks		
	Internal and External Cleaning of Tanks as per schedule		
	 Identification of leakage at connections and correction of the same 		
	 Inspection, repair and replacement of damaged supports /railings/platforms etc. 		
	Inspection of rubber lining of the tanks as per finalized schedule. if found		
	damage ,minor repair to be done in consultation with BHEL/OEM/Expert		
	service. Assistance to expert service for repair/replacement of rubber lining of tanks		
	 Inspection of tank body for any damage and minor repair if any 		
	 Inspection, repair /replacement of associated valves and piping's if damaged 		
2.10.12	Maintenance of Vacuum Belt Filter, Vacuum Receiver tanks		
	Complete maintenance routine, preventative of Vacuum Belt filter consists of		
	Belt roller, rubber belt, filter cloth, belt tension, vacuum receiver tanks and		
2.10.13	accessories. Vacuum pump covered under cl no.2.10.5 Maintenance of Bucket Elevator(inside GDW Building)		
2.10.13	Inspection of Bucket Elevator Chain, Bearings, Bucket and repair/replacement if		
	found Bucket Elevator Chacking removal if nay etc. Routine and		
	preventativemaintenance as per schedule.		
2.10.14	Maintenance of Day Silo		
	 Checking Bag filter, Cleaning of Bag filter and repair /replacement of filter media 		
	if found damaged, attend any leakages, routine, periodic and preventative Belt		
	feeder system maintenance. Chapting of Contribugal for its booring temporature on doily basis, lubrication of		
	 Checking of Centrifugal fan ,its bearing temperature on daily basis ,lubrication of bearing ,vibration and noise level of fan, overhauling of fan annually 		
	Repair /Replacement of solenoid operated pulse valves if found damage		
	 Identification of leakage points and correction of the same 		
	Maintenance of platforms, stair case ,railings		
2.10.15	Maintenance of Primary & Secondary Hydro cyclones		
	Inspection of Hydro Cyclones and defect attending, chocking removal etc and Pouting Proventative Maintenance Output Description of Hydro Cyclones and defect attending, chocking removal etc and proventative Maintenance Output Description of Hydro Cyclones and defect attending, chocking removal etc and proventative Maintenance Output Description of Hydro Cyclones and defect attending, chocking removal etc and proventative Maintenance Output Description of Hydro Cyclones and defect attending to the Hydro Cyclones attending to the Hydro		
	Routine, Preventative Maintenance. Inspection of associated pipe to and from Hydro cyclones to mill etc. Attending		
	leakages from pipe, valves etc.		
	 Inspection of rubber lining of pipe lines connecting the Hydro cyclones and 		
	report any damage		
2.10.16	Maintenance of Aux Cooling water System(ACW/ECW pumps), associated piping		
	and valves		
	Carry out External Cleaning of Equipment		
	 Inspection of the bearings, greasing of the bearing, repair /replacement of 		
	bearing if damaged		
	Check the tightness of foundation bolt and take corrective action if required.		
	Check the tightness of coupling bolt and take corrective action if required Check the gland madine if averaging water (ACM gurena) if found arrest it.		
	Check the gland packing if excessive water(ACW pumps), if found arrest it either by tightening or by replacing the glands.		
	either by tightening or by replacing the glands		

	 Check for mechanical seal leakage (ECW pumps), if it is beyond permissible limit, take equipment isolation and attend the leakage, if possible by lapping of seal components. Replacement of mechanical seal. Check the alignment of pump and motor and take corrective action Check for any oil / water leakages from valves, flanges of the system etc. if noticed take corrective action for arresting the leakages Inspection of PHEs, Self cleaning strainers, attending leakages from joints, if found damaged, replace / repair the same, complete cleaning once in year. Inspection ,Cleaning of ECW Overhead tank as per schedule, attending the leakages from joints /flanges/fittings of pipe line, Checking of NaOH breather ,seal pot and repair/replacement if found damage. Inspection of Gratings, if any defect fixing the same Motor decoupling and coupling to be carried out as per requirement. Repair /Replacement of coupling if damaged. Dismantling ,reassembly of the pump as per requirement Take trial run for smooth operation. Spill over oil / water / grease / cotton waste / etc in surrounding area and floor to be cleaned as per the instructions of BHEL Engineer 		
2.10.17	Maintenance of Fire Water Piping		
	Maintenance of fire water piping system is in contractor's scope		
	In case of underground leakages, contract shall arrange all necessary acceptation such as executer / manual executating etc.		
	 accessories such as excavator / manual excavating etc. Maintenance of valves installed in these piping systems 		
	Piping supports should be checked and maintained by contractor		
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2.10.18	Booster Air Fans		
1			
	Cleaning of Equipment Cleaning of Suction Chamber		
	Cleaning of Suction Chamber.		
	 Cleaning of Suction Chamber. Top up of lubrication oil in case low level and replacement as per OEM recommendation/schedule Repair of Cooling water line and Oil line. 		
	 Cleaning of Suction Chamber. Top up of lubrication oil in case low level and replacement as per OEM recommendation/schedule Repair of Cooling water line and Oil line. Routine maintenance of Gates at inlet and outlet of fans ,sealing replacement on 		
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	 Cleaning of Suction Chamber. Top up of lubrication oil in case low level and replacement as per OEM recommendation/schedule Repair of Cooling water line and Oil line. Routine maintenance of Gates at inlet and outlet of fans ,sealing replacement on requirement basis Removal/Repair/installation of actuators and assist OEM for repair on requirement basis PM of fans including alignment check and minor repair of insulation. Preventive Maintenance as per schedule Oil leakage arresting if any Inspection of Bearing ,Bearing replacement of fans if damaged Checking of vibration and noise level and rectify the same 		
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	 Cleaning of Suction Chamber. Top up of lubrication oil in case low level and replacement as per OEM recommendation/schedule Repair of Cooling water line and Oil line. Routine maintenance of Gates at inlet and outlet of fans ,sealing replacement on requirement basis Removal/Repair/installation of actuators and assist OEM for repair on requirement basis PM of fans including alignment check and minor repair of insulation. Preventive Maintenance as per schedule Oil leakage arresting if any Inspection of Bearing ,Bearing replacement of fans if damaged Checking of vibration and noise level and rectify the same Regular inspection through fan manhole door Dismantling of housing, inspection of blades, if blades damaged ,welding of the blades for rectification, welding of balancing weights and box up after rectification on requirement basis Inspection of expansion bellow and repair/replace if found damaged 		

	Inspection and maintenance of seal air fans	
	 After every job on a particular equipment cleaning of surrounding area by air an 	nd
	cotton waste	
2.10.19	Maintenance of Ball Mills and Gravimetric Feeders (Lime stone)	
	Cleaning/Replacement of the lube oil filters.	
	Top up of lube oil as per requirement and replacement of lube oil as per	
	schedule	
	 Maintenance of the lube oil station (Jet spray time with high and low presum pumps). Inspection of Lube oil piping, Lube oil pump repair/replacement to be done inspection, arrest any leakages, repair /replacement of lube oil piping Lube oil pipe MOC SS 304. 	g.
	Inspection of bearings and cooling water line to bearing, repair/replacement of bearing (defective companyons of bearing) (cooling system at a system).	of
	 bearing/defective components of bearing /cooling system etc. Routine maintenance of the mill gearbox. Periodic visual inspection the gearbox 	
	 Routine maintenance of the mill gearbox. Periodic visual inspection the gearbo and adjustment. Taking out of defective gearbox from position and repair of gear and adjustment. 	
	box/installation of repaired / new gearbox in position. Top up of gear box.	a i
	De-coupling & re-coupling of Gearbox from mill motor, inch motor with gear box.	X
	for maintenance work	
	Checking and correcting of alignment of mill-motor	
	Inspection through mill manhole any wear and tear etc	
	 Inspection and checking Rubber lining at every available opportunity and 	
	observe abnormal wear /tear report immediately to BHEL Engineer, assistant to expert services for repair /replacement of the rubber lining as per requirement Minor repair in consultation with BHEL/Expert services is in scope.	
	 Tracking of Ball consumption as per approved manual /data sheet an maintaining proper sheet of the same, duly signed by BHEL Engineer of monthly basis. 	
	 Replacement of Balls after specific wear /consumption as per approved manufoldata sheet in consultation with OEM. 	al
	Maintenance of Gravimetric feeder system	
	Arresting leakages of lime from silo to feeder body and feeder to mill through	ıh
	pipe, elbow etc. ,Maintenance of Belt Weighing Feeder System,	,
	Complete Maintenance(routine, preventative, breakdown) of Gate valve	(
	manual & motor operated) from day silo side to feeder line system, chutes an	nd
	shut off gate valve in feed line from feeder to mill	
	 Inspection, repair/replacement of damaged platforms, supports and railings etc. 	
	Maintenance of Mill separator tanks and mill circuit pumps	
2.10.20	Maintenance of Oxidation Blower	
	Carry out External Cleaning of Equipment	
	Checking of foundation bolts ,vibration pads for any loose ness and rectify the	
	same	
	Checking the vibration and noise level and rectify the same Chapting and Chapting of Systims of filter Chapting of Fungacing in integers.	اء،
	Checking and Cleaning of Suction air filter, Checking of Expansion joints and repair (replacement of it demanded).	ıd
	repair /replacement of if damaged. • De-coupling and re-coupling of Gearbox from motor and fan for maintenance.	
	work Repair/ Replacement of coupling if damaged. Alignment of pump an	
	motor as required.	
	Inspection of gear box ,repair /replacement if damaged	

	Rotor replacement on requirement basis		
	Checking and Maintenance of Silencer and repair/replacement of damaged		
	parts		
	 Inspection of Bearing and repair/replacement if damaged 		
	 Blow off piping inspection and repair if any 		
	Inspection of inlet modulating valve , Outlet NRV and manual BFV and		
	repair/replace if damage		
	Oil leakage arresting if any.		
	Maintenance of lube oil system, top up of lubrication oil and replace the oil as		
	per OEM recommendation		
0.40.04	Dismantling and assembly of the blower as per requirement CODE OF WORK FOR FILE CAS DUCTS (BY DASS DUCT)		
2.10.21			
	Duct Cleaning as per schedule decided		
	Duct plate replacement on requirement basis		
	Inspection of Duct supports and repairing/replacement for any damage Checking of Class flake lining duct partial during first available apportunity.		
	 Checking of Glass flake lining duct portion during first available opportunity, report for abnormal wear/tear to BHEL Engineer, assistance to expert services 		
	for replace the same on need basis. Minor repair in consultation with expert		
	service is in scope		
	Inspection of Expansion bellow repairing/replacement.		
	Inspection and Repair/Replacement of duct manhole doors and provision of		
	sealing rope as per requirement.		
	 Checking of Bypass gate and damper and actuator in bypass duct as per 		
	schedule or on first available opportunity. For safe use of the equipment, the		
	FGD plant bypass damper should be subjected periodically to the open/close		
	operation.		
2.10.22			
2.10.22	operation. Maintenance of Pipe Rack Structure • General inspection for support, platforms, railings, etc. Replace/ Repair of the		
	operation. Maintenance of Pipe Rack Structure • General inspection for support, platforms, railings, etc. Replace/ Repair of the damaged components of the pipe rack.		
2.10.22	operation. Maintenance of Pipe Rack Structure • General inspection for support, platforms, railings, etc. Replace/ Repair of the damaged components of the pipe rack. Maintenance of Absorber Elevators (Beacon) / Chimney Elevator (Alikraft) / Day		
	operation. Maintenance of Pipe Rack Structure • General inspection for support, platforms, railings, etc. Replace/ Repair of the damaged components of the pipe rack. Maintenance of Absorber Elevators(Beacon) / Chimney Elevator(Alikraft) /Day Silo Elevator		
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	operation. Maintenance of Pipe Rack Structure • General inspection for support, platforms, railings, etc. Replace/ Repair of the damaged components of the pipe rack. Maintenance of Absorber Elevators(Beacon) / Chimney Elevator(Alikraft) /Day Silo Elevator • Carry out External Cleaning of Equipment. • General maintenance of elevator i.e Greasing of Bearings, Lubrication of rope		
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	operation. Maintenance of Pipe Rack Structure • General inspection for support, platforms, railings, etc. Replace/ Repair of the damaged components of the pipe rack. Maintenance of Absorber Elevators(Beacon) / Chimney Elevator(Alikraft) /Day Silo Elevator • Carry out External Cleaning of Equipment. • General maintenance of elevator i.e Greasing of Bearings, Lubrication of rope (in case not self-lubricated) etc. • Assistance to OEM for carrying out inspection and maintenance /load testing.		
	 operation. Maintenance of Pipe Rack Structure General inspection for support, platforms, railings, etc. Replace/ Repair of the damaged components of the pipe rack. Maintenance of Absorber Elevators (Beacon) / Chimney Elevator (Alikraft) /Day Silo Elevator Carry out External Cleaning of Equipment. General maintenance of elevator i.e Greasing of Bearings, Lubrication of rope (in case not self-lubricated) etc. Assistance to OEM for carrying out inspection and maintenance /load testing. Maintain separate records of maintenance and update testing dates and next 		
	 operation. Maintenance of Pipe Rack Structure General inspection for support, platforms, railings, etc. Replace/ Repair of the damaged components of the pipe rack. Maintenance of Absorber Elevators (Beacon) / Chimney Elevator (Alikraft) /Day Silo Elevator Carry out External Cleaning of Equipment. General maintenance of elevator i.e Greasing of Bearings, Lubrication of rope (in case not self-lubricated) etc. Assistance to OEM for carrying out inspection and maintenance /load testing. Maintain separate records of maintenance and update testing dates and next testing dates on the elevator and inform BHEL timely for arranging the OEM visit. 		
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2.10.23	Maintenance of Pipe Rack Structure General inspection for support, platforms, railings, etc. Replace/ Repair of the damaged components of the pipe rack. Maintenance of Absorber Elevators (Beacon) / Chimney Elevator (Alikraft) /Day Silo Elevator Carry out External Cleaning of Equipment. General maintenance of elevator i.e Greasing of Bearings, Lubrication of rope (in case not self-lubricated) etc. Assistance to OEM for carrying out inspection and maintenance /load testing. Maintain separate records of maintenance and update testing dates and next testing dates on the elevator and inform BHEL timely for arranging the OEM visit. Maintenance of Chimney Flue can /Expansion joints/ Borosilicate Lining General Checking inside Chimney flue can with Jhoola arrangement by contractor during first available opportunity or as decided Immediate report to BHEL Engineer for any abnormal wear/ tear in borosilicate lining, minor repair in consultation with BHEL /OEM Assistance to Expert service/OEM for borosilicate lining replacement Arrangement of Scaffolding and Maintenance Platforms		
2.10.23	 Maintenance of Pipe Rack Structure General inspection for support, platforms, railings, etc. Replace/ Repair of the damaged components of the pipe rack. Maintenance of Absorber Elevators (Beacon) / Chimney Elevator (Alikraft) /Day Silo Elevator Carry out External Cleaning of Equipment. General maintenance of elevator i.e Greasing of Bearings, Lubrication of rope (in case not self-lubricated) etc. Assistance to OEM for carrying out inspection and maintenance /load testing. Maintain separate records of maintenance and update testing dates and next testing dates on the elevator and inform BHEL timely for arranging the OEM visit. Maintenance of Chimney Flue can /Expansion joints/ Borosilicate Lining General Checking inside Chimney flue can with Jhoola arrangement by contractor during first available opportunity or as decided Immediate report to BHEL Engineer for any abnormal wear/ tear in borosilicate lining, minor repair in consultation with BHEL /OEM Assistance to Expert service/OEM for borosilicate lining replacement Arrangement of Scaffolding and Maintenance Platforms Necessary Scaffolding at work site with material should be arranged by 		
2.10.23	Maintenance of Pipe Rack Structure General inspection for support, platforms, railings, etc. Replace/ Repair of the damaged components of the pipe rack. Maintenance of Absorber Elevators (Beacon) / Chimney Elevator (Alikraft) /Day Silo Elevator Carry out External Cleaning of Equipment. General maintenance of elevator i.e Greasing of Bearings, Lubrication of rope (in case not self-lubricated) etc. Assistance to OEM for carrying out inspection and maintenance /load testing. Maintain separate records of maintenance and update testing dates and next testing dates on the elevator and inform BHEL timely for arranging the OEM visit. Maintenance of Chimney Flue can /Expansion joints/ Borosilicate Lining General Checking inside Chimney flue can with Jhoola arrangement by contractor during first available opportunity or as decided Immediate report to BHEL Engineer for any abnormal wear/ tear in borosilicate lining, minor repair in consultation with BHEL /OEM Assistance to Expert service/OEM for borosilicate lining replacement Arrangement of Scaffolding and Maintenance Platforms		

	BHEL		
	Scaffolding and maintenance platforms should be certified by BHEL Engineer		
	and suggested changes needs to be done by contractor	-	
2.10.26	Insulation and Cladding work		
	Scope limited to removal and fixing of insulation and cladding	for specific	
	maintenance related activities as per requirement.		
	Insulation material shall be provided by BHEL		
2.10.27	Maintenance of Compressed Air System		
	Carry out External Cleaning of equipment and General Maintenance		
	 Assisting in inspection / repair / servicing during OEM (M/s ELGI) visit as per AMC. 		
	 Contract scope limited checking the Oil level in the gear case if low 	top-up with	
	oil, Change and Clean the lube oil and lube oil filter element.	Check the	
	tightness of foundation bolt and take corrective action if required.	Check and	
	Clean the inlet air filter element and replacement on need basis.		
	 Contractor has to maintain the records of periodic maintenance. Re 	ports needs	
	to be circulated every month.		
	 Spill over oil / water / grease / cotton waste / etc in surrounding area 	and floor to	
	be cleaned as per the instructions of BHEL Engineer.		
2.10.28	Maintenance of Air Drier and Air receiver		
	Carry out External Cleaning		
	 Clean the Suction filter/ moisture strainer. 		
	Check the tightness of foundation bolts and take corrective action if required.		
	 Assisting in for inspection / repair / servicing during OEM (M/s ELGI) AMC.) visit as per	
	 Spill over oil / water / grease / cotton waste / etc in surrounding area be cleaned as per the instructions of BHEL Engineer. 	and floor to	
2.10.29	Maintenance of Heating, Ventilation and Air conditioning Units and Ass	ociated	
	systems		
	 Maintenance of all AC Equipment, associated pipelines, valves and of HVAC system consists of air cooled condensing unit (M/s Blue sta 		
	Carry out External Cleaning		
	 Check the Tightness of foundation bolts/vibration rubber isolation pa 	ds and take	
	corrective action if required.		
	Check for any Oil leaks and arrest the same.		
	Checking of Crank case heater temperature check once in week for	or abnormal	
	heating		
	 Assistance in inspection / repair / servicing during OEM/supplier visit 	t	
	 Inspection and rectification of refrigerant leakage in the system. 		
	Identifying and repair leakages in condensing unit		
	 Drying of Condensing unit internal parts through inert gas filling (N2 requirement 	Gas) as per	
	 Vacuum test and filling of refrigerant gas as per requirement 		
	 Periodic Maintenance to be carried out as per given equipment /sup 	nlier's O&M	
	- i enouic maintenance to be carried out as per given equipment /sup	Plici 3 UXIVI	

	manual /checklist.		
	Take trial run for smooth operation		
	 Spill over oil / water / grease / cotton waste / etc in surrounding area and floor to be cleaned 		
2.10.30			
2.10.30	Maintenance of Air Handling Unit Carry out External and Internal cleaning		
	Periodic maintenance to be carried out as per given SMP and checklist /OEM		
	Instructions		
	Removal, Shifting and Cleaning of suction air pre and fine filters elements		
	Removal, Shifting and Cleaning of suction air pre and fine filters elements through compressed air as per schedule		
	Cleaning and replacement of fills		
	Maintenance of associated valves and pipelines of the system		
	Inspection /rectification of refrigerant leakage in the cooling coil system.		
	Inspection of fan and repair/replacement of damaged parts		
	Motor decoupling and coupling to be carried out as per requirement , change the		
	coupling if damaged		
	Checking of Fan, V belts, Pulley, Nozzle, Clamp, filters and replacement of the		
	same if damaged.		
	Spill over oil / water / grease / cotton waste / etc in surrounding area and floor to		
	be cleaned as per the instructions of BHEL Engineer.		
2.10.31	Maintenance of Unitary Air Filter (UAF)		
2.10.51	Carry out External and internal cleaning of equipment.		
	Cleaning of Suction filter elements through compressed air		
	Cleaning and replacement of air louvers for any dust/debris		
	Maintenance of associated valves and pipelines of the system		
	Replacement of damage parts of pump, fan as per requirement		
	Motor decoupling and coupling to be carried out as per requirement.		
	repair/replacement of coupling if damaged		
	 Monthly Check-up of Contactors, Relay ,MCB ,LEDs for any loose /hanging wire 		
	Checking of Pump, Centrifugal fan, V belts, Pulley, Nozzle, Clamp, pumps, filters		
	and replacement of the same if required.		
	Spill over oil / water / grease / cotton waste / etc in surrounding area and floor to		
0.40.00	be cleaned as per the instructions of BHEL Engineer.		
2.10.32	Maintenance of Axial Fans (Ventilation) as per schedule finalized.		
2.10.33	Maintenance Of HVAC System Ducting		
	Internal and external Cleaning of Ducts as decided Identification of lookage points and correction of the same on requirement basis.		
	Identification of leakage points and correction of the same on requirement basis Inspection, repair and replacement of support and bangars on requirement basis.		
	Inspection, repair and replacement of support and hangers on requirement basis Inspection, repair and replacement of insulation and cladding, on requirement		
	 Inspection, repair and replacement of insulation and cladding on requirement basis 		
2.11	Specialized OEM/ Expert Services provided by BHEL		

2.11.1	Contractor to raise the request in prescribed format as finalized by BHEL for requirement of OEM/Expert services.			
2.11.2	Contractor to prepare Schedule of Expert Services where AMC is available in			
	consultation with BHEL Engineer. If AMC is not available then deputation of Expert			
	Services shall be decided by BHEL based on mutually assessment of work, criticality			
0.44.0	of requirement during maintenance activities.			
2.11.3		Having AMC/Expert services with OEM for below mentioned equipment doesn't relieve contractor from its day to day maintenance responsibility of the		
	equipment/system. Final decision shall be with BHEL and same shall be with BHEL and same shall be with a same shal			
2.11.4	As per list below the following equipment/system are covered under AMC or expert			
	service provider for that equipment. This is not exhaustive list there may other			
	equipment for which expert service support shall be provided on requirement basis.			
2.11.5	Contractor to prepare and main			
	Description	OEM/Expert Service	Routine/Frequency	
		E1 01	1110 (00 (11)	
1	Compressed Air System	ELGI	AMC for 03 years (Min	
0	Dubbar Lining of Abaarbar	CDT/ learning	one visit per Quarter)	
2	Rubber Lining of Absorber (Minimum uninterrupted life	GBT/Jasmino	Annual inspection for first	
	50,000 hrs)		three year	
3	HVAC	Advance Ventilation	On requirement basis	
4	Glass flake lining	M/s Demach	On requirement basis	
5	Rubber lining (Tanks)	M/s Cori	On requirement basis	
6	Borosilicate lining in Chimney	Hadek,	10 year guarantee from	
		Netherlands	trial operation or on	
			requirement basis	
7	Agitator	Zhejiang Greatwell	AMC for 10 year	
	-	Mixers ,China	/requirement basis	
8	Recirculation Slurry Pump	Xianyang Wuerwu	AMC for 10 year	
		Pump Industry, China	/requirement basis	
9	Slurry Pumps	Xianyang Wuerwu	AMC for 10 year	
10		Pump Industry, China	/requirement basis	
10	Mist Eliminator	Munters India	AMC for 10 years after	
		Humidity Control Pvt	completion of 2 years	
		Ltd, Mumbai	guarantee period/requirement basis	
11	Gypsum Dewatering System	Yantaisunny Hexing	AMC for 10 year	
''	(Vaccum Belt filter, Vaccum	Environment, China	/requirement basis	
	pumps etc.)	Liviloiiiiont, oilina	Trequirement basis	
12	Limestone Grinding System(Zhejiang Tuna	AMC for 10 year	
	Ball Mill, lime stone feeder)	Environmental, China	/requirement basis	
13	Oxidation Blower	Garden Denver ,India	AMC for 10 Years	
			(one visit/Quarter i.e 4	
			visit/ year)	
14	Chimney Elevator	Alikraft	On requirement basis	
15	Absorber /Day silo Elevator	Beacon	On requirement basis	
16	By Pass Damper Actuator	Rotex	On requirement basis	
17	Booster Fans	BHEL Ranipet	On requirement basis	

B. Electrical Maintenance

2.12	SCOPE OF WORK IN GENERAL
i.	Scope includes Routine, Periodic and Preventive Maintenance of all Electrical equipment's as per schedule finalized with BHEL. Break down maintenance.
ii.	Inspection , repairing works of Oil filled Transformer (above 4MVA), LV Dry type Power transformer 6.6KV/433, Oil Cooled transformer – MV voltage level, 3.3 KV Motors etc.
iii	Preparation of Maintenance History for all types of maintenance in Hard as well as Soft copy and monthly submission to BHEL/NTPC and maintaining equipment History cards for all equipment's.
iv.	Periodic updating of spare and consumables requirement, provide reconciliation status of spares on monthly basis.
٧.	Responsible for Security and Up-keep of Spares.
vi.	11 kV Cable and 3.3 kV Cable – End termination and straight through termination work (Material shall be provided by BHEL on FOC basis). Required expertise manpower and tools is under contractor scope.
vii.	All kind of spare materials, equipment's inside the plant which includes, receiving materials from central stores or directly from vendor and store the same in local stores or site as per instruction from BHEL, and material shifting from site to central stores as required.
viii	Arranging Liasoning with electrical inspector/CEA during the yearly electrical inspection and as and when required. Any required Fee will be paid by BHEL/NTPC.
ix.	Implementing and sustenance of Quality activities like 5S, Quality circles etc.
Х	Preparation and maintenance of all ISO documents as per BHEL/NTPC Requirements.
xi	Regular Safety and Technical trainings for all Contractors' Employees.
xii	Maintaining Testing certifications of all Elevators in the plant as per standards.
xiii	Housekeeping (Weekly cleaning of panel room floor with soft broom, wet mop and cleaning of spider webs from wall) in all Electrical Panel Room.
xiv.	Arranging Periodic calibration (NABL accredited lab)of all Electrical meters, testing kits, measuring equipment's etc., as per standard of contractor scope.

2.12.1	12.54 MV FGD Oil Transformer -2 No. ,Segregated Bus Duct (3.3 KV) :				
i.	 Maintenance of 12.54 FGD Oil Transformers, 11 kV cables from Switchboard (NTPC end) to 11 KV Switchgear (BHEL end) to Transformer and related auxiliaries, Segregated Bus duct. 				
	 Routine, Preventive, Breakdown Maintenance and Testing of Power transformers: Cleaning, Checking, Repair and Replacement if damaged of GasketsOilseals/Fasteners//Bushings/Insulators/Radiators/Valve/OFFLTC/Oil level in conservator, Oil top up, Oil filtration / Silica Gel and Breather/Temperature Controller/Pressure relief diaphragm/Testing of control and power connections /Safety requirements, earth pits/NGR/Temperature measurements/mongering of earth pits/ Checking and maintenance of Firefighting system. Arresting oil leakages. 				
	IS1866 -from sampling valve or bott	esting done for Transformer Oil as per com valve at least - once in a year from ited laboratory) will be carried by the			
ii.	Following Diagnostic tests as indicative belower/as and when required as per the conditional test or any from the list shall as per decision.	tion of the transformer. Conductance of on of the BHEL Engineer.			
a.	C and Tan Delta test	To detect insulation condition			
b.	Sweep Frequency Response analysis	To detect any winding movement.			
C.	Winding resistance measurement	To check winding condition.			
d.	Magnetic balance test:	To check core condition			
e.	Magnetizing current test:	To check core condition.			
f.	Turns ratio measurement:	To check inter turn fault			
2.12.2	11 KV / 0.433 kV TRANSFORMERS				
	 Routine ,Periodic, Preventative and Breakdown maintenance of all Dry transformers up to 2.5 MVA .Shifting of Transformer, Bus-duct and Structure etc. 				
2.12.3	HT and LT MOTORS:				
	 Routine, Periodic, Preventative Maintenance as per schedule finalized with BHEL for LT and HT Motors. All Repairing Works In LT Motors If any Defect/Damage re-Winding of Stator, repairing of Rotor, Repairing of Stator End Covers, Balancing Of Rotor. 				
	Other Items Like Terminal Blocks, Terminal Lugs, Oil Seal/Ring, NDE Side Cooling Fan, Studs Of Motor Stator Body, Slip Ring, Carbon Brushes, Various Bolts, Nuts, Keyway Repairing, Locking Key, Check Nuts Etc., and any Other Items Required For Repairing/Maintenance of LT Motors Of Various Voltage Levels shall Be arranged by Contractor.				
	 General Cleaning of motor , checki 	ng of lubricating oil/bearings/ terminal			

	•	connection/control and power circuits/tightness of power cable terminations/insulation/fasteners/winding resistance and inductance/interlock and trip contacts/cooling system/abnormal sound/ and bearing temperature/circuit Breaker operations/earth connections/ control and power cable checking /RTD/ Cleaning of water cooler/ air cooler as per pre-decided frequency. Bearing replacement if damaged. Repairing and fabrication of all LT motor coupling hub in case of any damage or missing of them during maintenance/running will be done by service provider. Checking of wedge tightness of all HT motors has to be done by contractor. Cleaning of filter, periodic lubrication of bearings as per the schedule /manual
	•	Rewinding of Stator/rotor of HT motors, repairing of motor rotor, repairing of HT motor end covers will be done by BHEL.
2.12.4	11kV,	3.3 kV and 415 V Switchgear Panels And Local Control Panels
	•	Routine, Periodic, Preventative, Breakdown maintenance of all switch gear
		panels and Low control panels.
	•	Cleaning, Checking, Repair/Replacement (of faulty parts) of control and
		power fuses/fixing and moving contacts/arching chutes/control and power
		circuits/insulation values of switch gear and bus/operation (close and open) of Circuit breaker, MCCB and contractor related interlocks/tightness of power
		and control circuits/ /transducers/ammeters/energy meters/relays/CT/PT/
		control transformer/earthing connections/control and power cable laying and
		jointing/safety requirements/bus duct, Laying/Removing of Power and control
		cables etc.
	•	Routine testing of protection relays in HT, LT boards and DG AMF panel will
2.12.5	HDC	be done by contractor. DCDB, BATTERY (220 V DC)
2.12.5	•	Routine, Periodic, Preventative, Breakdown maintenance of Battery, Charger,
		UPS, Cleaning, Checking of specific gravity/electrolyte level of distilled
		water/applying jelly/measurement of individual battery voltages/Battery Load
		test/tightness of battery leads and terminations in UPS, and Battery panels/
		Checking control and power circuits/measuring insulation values/fuses of
		control and power circuits/voltmeters/ammeters/control system of UPS, float and float cum boost chargers/ checking earthing.
		Battery Discharging and Charging test to done for all Battery Bank sets once
		in a year
2.12.6	CHIM	NEY , STATION , OFFICE AND STREET LIGHTING
	•	Periodical replacement of fused bulbs, chokes, ballasts, starters, battery of
		entire lighting system includes Chimney Aviation Lighting system (Material
		shall be provided by BHEL FOC basis). Cleaning and checking of
		fixtures/tightness of control circuits/photo lighting system/sockets, LDB/SLDB/Testing of ELCB regularly. Structure and Chimney lightening
		arrester checking and testing. All type of ladders and approach to work at
		heights/street lights to be arranged by O&M contractor. If same is supplied in
		spares shall be provided by BHEL free of cost basis.
2.12.7	DG S	
	•	Preventive, routine and Breakdown maintenance of DG and Diesel engine,
		Excitation, Battery, Battery Charger, Synchronizer, Control circuit, Power
		circuit and panels including troubleshooting, cleaning, checking, repair and

	bearings/ Winding and Bearing temperatures/testing/mongering/exciter connections/Earthing.
2.12.8	EARTHING, LIGHTING PROTECTION, CABLE TRAY & CABLE GALLERY
	 Maintenance of Plant Earthing system, lightening protection equipment, inspection and repairing/replacement of cable tray if damaged. Checking, inspection of actuators as per schedule and rectify the same if found damage not workable or assist the OEM in rectification of the same.
2.12.9	Electrical maintenance of Axial Fans (Ventilation)

2.13	OEM/Expert Services provided by BHEL				
2.13.1	Contractor to raise the request in prescribed format as finalized by BHEL for requirement of OEM/Expert services.				
2.13.2	Deputation of Expert Services s assessment of work, criticality of re				
2.13.3	Having AMC/Expert services for contractor from its day to day mai Final decision of deputation of Expending on the contractor.	ntenance responsibility	of the equipment/system.		
2.13.4	Detail of expert service provider for that equipment as mentioned below. This is not exhaustive list there may other equipment for which expert service to support shall be provided on requirement basis.				
2.13.5	Contractor to prepare and maintain	n the service report of E	xpert service/OEM visit		
	Description	OEM/Expert Service	Routine/Frequency		
1	Transformer (Oil filled and Dry type transformer)	BHEL Jhansi	On requirement basis		
2	Switchgear 11kV & 3.3 kV BHEL Bhopal On requirement basis				
3	HT Motors BHEL Bhopal On requirement basis				
4	Battery Charger(220 V DC)	Statcon	On requirement basis		
5	Battery (220 V DC)	HBL	On requirement basis		

C. C&I Maintenance

2.14	Brief Description
	FGD Dadri 2 x490 MW having microprocessor based Distributed Digital control,
	monitoring & information system (DDCMICS) based control panels, Remote Input
	output panels (RIO). DCS shall cover the entire Control / Monitoring of the plant
	such as FGD controls
2.14.1	Scope includes Routine, Periodic, Preventive Maintenance of all C&I equipment's
	as per schedule finalized with BHEL and Break down maintenance.
	Scope Broadly consists of following:
2.14.2	 Maintenance of Control room panels (DCS), Operator stations, Racks.
	Maintenance of all field instruments i.e.Temperature, Pressure, level and
	Flow instruments (local and remote) and special instruments like analyzers
	etc. replacing the damaged items with the spares.
	Maintenance of Main , Control and Signal Cables and Cable trays
	Maintenance of Battery and Battery charger 24 V DC
	Maintenance of impulse lines
	Maintenance of Electronic earthing, Earth grid etc.
	Maintenance of Fire Detection and Alarm system
	Maintenance of Control/ Pneumatic/Motorized Valves and actuators,
	Integrated valves etc.
	Set up of calibration lab for instruments is recommended otherwise
	calibration of instruments to be done through NABL approved labs
	Maintenance, Software handling of DCS, Minor Logic modification, Minor
	Logic Development as and when required and incorporates in DCS for the
	existing I/O's.
	Spares like washers, small screws, bolts and nuts etc. will be in Contractor's
	scope and should be replaced as and when required.
2.14.3	Scope detailed in following clause but not exhaustive:
2.14.3	Calibration, Dismantling, Mounting, Repair, Routine, Periodic maintenance, Preventive maintenance, Cleaning, replacement and checking the operating
	condition while on site and in the lab for all the field instruments viz. – Pressure
	Gauges, Pressure Switches, Differential Pressure Gauges, Differential Pressure
	Switches, Level Switches, Pressure Transmitters, Differential Pressure
	Transmitters, Level Transmitters, Flow Transmitters, Ultrasonic Type Transmitters,
	Electronic Transmitter, Non-Contact Radar Type Transmitter, Temperature
	Gauges, Temperature Switches, Temperature Elements. RTDs', Thermocouples,
	Limit Switches, Solenoid Valves, On-Line Analysers, SO2/NOX/CO/CO2 Analyser,
	Opacity Monitor, Mercury Analyser, Low Temperature Oxygen Analyser ,Analytical
	Instruments, Etc.
2.14.4	Routine Checking of Control Power Supply, Main Power Supply, Connection
	Tightness, etc. for all the Electrical Actuators, Impulse Line Tightness
	Checking/Leakage detection and arresting for all the Pneumatic Actuators and
	tightness associated with Hydraulic Lines.

	Contractor has to arrange for temporary power supply from the point provided in
	plant by BHEL/NTPC for site calibration, maintenance, and repair works execution. Contractor shall provide all the hardware required for making these arrangements.
2.14.5	 Contractor has to arrange for temporary instrument air supply line, from the point provided at site for calibration, maintenance, and repair works execution. Contractor shall provide all the hardware required for making these arrangements.
	 Any maintenance/repair jobs in DCS shall be in Contractor scope.
	 Contractor has to daily/periodically check/inspect the field instruments, panels, actuators, transmitters, impulse lines etc. In case of any damage/misalignment/mal-operation/abnormal conditions, shall have to immediately rectify and inform the same to BHEL Engineers.
	 All maintenance/repair etc. for the pneumatic/motorized actuators.
	 Interlock; loop (starting from field end till the field termination assembly/panel). Continuity-checking, cable, impulse line-tracing, sequence of operation checking, trip setting are to be carried out by Contractor at the discretion/guidance/assistance of BHEL/NTPC
	 Routine/Daily cleaning/Removal of oil stains, Dust, Rust from panels, actuators, junction boxes, field transmission assemblies, field instruments/mounting/supports, other equipment etc. will be in Contractor scope. Whenever possible mechanical means will be used.
	 Maintenance, minor repair works, cleaning of computers, printers, mouse etc. involved in plant automation.
	 Applying lubricant, Cleaning filters, removing chokes in the impulse line, filters, plugging leaks etc.
	Attending Trouble shooting and other emergency time/jobs. Paragraphics the significance recognitions to the providers and attentions.
	 Removing the indicators, recorders, transmitters, valves and other instruments and vice versa or outside the plant for servicing, repair and re- fixing them in their appropriate places.
	 Checking of cables and terminations, Laying and connecting of cables as and when required
	 Fabrication of items like canopies, junction boxes, Panel cutouts for installing any instruments, mounting brackets for any field mounted instruments, siphons for instruments, thermo wells for temperature gauges and impulse lines fabrications. Material shall be provided by BHEL on free cost basis.
	 Checking instruments like multimeters, meggers, clamp meter, loop calibrator, pneumatic receiver gauges, soldering station, pneumatic/instrument line tools like cutter bender etc. shall be Contractor's scope.
	 Removing, replacement, shifting of field and panel instruments and motorized valves actuator, control valves actuator as per advice of
	 BHEL/NTPC shall be in Contractor's scope. Calibration of Master calibrating instrument by recognized and authorized
	 external agency/NABL approved agency. Passivation and preservation of removed instrument in A/C storage place to
	 keep Electronic Cards shall be provided by BHEL/NTPC Replacement of fire sealant of material on requirement basis in the scope.
	Material shall be provided by BHEL on free cost basis.

	 Co-ordination with OEM for specialized activities as per BHEL instruction. Tagging of instruments and cables for faulty and damaged one 				
	 Instrument network maintenance including fiber optic splicing on requirement basis 				
	 Forcing and protection bypass, logic and graphic changes are not allowed without BHEL/NTPC written permission. 				
2.14.6	 Material movement from store to site and site to store and managing local store. 				
	 Site cleaning after maintenance activity. 				
	 Co-ordination for AMC activities with OEM/Expert agencies for DCS and other critical equipment where criticality of equipment is more and it needs expertise. 				
	 Maintaining the local store with the history of spare issued and used; proper tagging and health card/testing date to be fixed. Testing of spare parts before use. Maintaining the defective parts, damaged batteries, used grease. Monthly reconciliation status of spares, lubricants, motors, bearings etc issued on FOC basis shall be provided to BHEL. Defective parts only be declared as scrap with the approval of owner. 				
	 Safety at workplace, Work permit system, proper check sheets, placing of danger board, men on work board, hazard identification and elimination, cleaning of workplace, proper tagging, LOTO(Lock out Tag Out), cleaning of panel rubber mats. 24V lamp with transformer while working in confined area. 				
	 Earth Pit maintenance will be in contractor scope including the consumables and painting will be in its scope. 				

2.15	OEM/Expert Services provided by BHEL					
2.15.1	Contractor to raise the request in prescribed format as finalized by BHEL for requirement of OEM/Expert services.					
2.15.2	Contractor to prepare Schedule of Expert Services where AMC is available in consultation with BHEL Engineer. If AMC is not available, Deputation of Expert Services shall be decided by BHEL based on mutually assessment of work, criticality of requirement during maintenance activities.					
2.15.3	Having AMC/Expert services contractor from its day to day Final decision of deputation of be binding on the contractor.	maintenance responsibil	ity of the equipment/system.			
2.15.4	Detail of expert service provide exhaustive list there may othe be provided as per requirement	r equipment for which ex it.	spert service to support shall			
2.15.5	Contractor to prepare and mai	intain the service report o	of Expert service/OEM visit			
S.NO.	Description	OEM/Expert Service	Routine/Frequency			
1.	DCS	BHEL EDN	On requirement basis			
2.	Dust Analyzer	Sick India Pvt.Ltd.	One visit/quarter or requirement basis			
3.	SO2/NOx/CO/CO2/Mercury Analyser & Ultrasonic Flue gas Flowmeter	r & Ultrasonic Flue Pvt. Ltd.				
4.	Low Temp Oxygen Analyzer	Emerson Process Management	One visit/quarter or requirement basis			
5.	UPS					
6.	24 V DC Charger Vertiv Energy Pvt Ltd One visit/year or on requirement basis					
7.	24 V DC Battery HBL Two visit/year or on requirement basis					
8.	UPS Battery	HBL	One visit /year or on requirement basis			

3.0	O&M RESPONSIBILITY MATRIX/Facilities				
S. No.	Description of Work / Activity	Responsibility Matrix /Scope		REMARKS	
		BHEL	Cont.		
1	Total O&M of 2x490 MW relevant facilities Regular, Periodic, Preventive, Breakdown maintenance		Yes	Entire O&M Elect/Mech/C&l/and relevant facilities except Lime stone and Gypsum Handling plant equipment's	
2	Housekeeping, Cleaning and Horticulture of the Entire plant and its associated roads, pathways & adjoining area covered under the factory boundary.		Yes	Development of new area under Horticulture/ Road is in BHEL/NTPC scope. Cleaning/Housekeeping and maintaining Horticulture/ Plantation including all drains/surrounding of the FGD plant is in O&M contractor scope on schedule basis.	
3	Plant Upkeep Services		Yes	Complete Housekeeping of BHEL Offices/ stores /rooms/common area (floor /roof/stairs) in scope of Contractor including equipment cleaning and area cleaning after maintenance shall be in scope of O&M contractor (including the pipe lines and Cable trays).	
4	Cleaning and Shifting of Lime stone /slurry accumulated due to leakage/Maintenance/Breakdown etc.		Yes	Cleaning and Shifting of limestone/slurry with mechanical/ manual mean spilled due to any reason in the entire plant is in O&M contractor scope within 3 days maximum of the same.	
5	Lime stone required for Operation of Plant	Yes		Supply of lime stone is in NTPC scope.	
6	All type of lubricants which go into the System / equipment	Yes		Lubricants is in scope of BHEL, but O&M contractor to prepare the list, generate requirements in time and its handling, proper disposal at designated place.	
7	All type of Consumables which goes in to the System / equipment.	Yes		Hydrated lime and NaOH for dosing purpose.	
8	Lime stone Handling & Gypsum Handling	Yes		Handling of lime stone and gypsum handling at designated place and shifting of same by another agency of BHEL.	
9	All type of chemicals required for FGD system.	Yes		All type of chemicals required is in BHEL Though their handling and shifting shall be in the contract scope.	

10	Spares Parts which goes in to the system / equipment	Yes		All spares to be supplied by BHEL. But the adequacy of spare shall be reviewed both by BHEL and Contractor. Tendency of new spare requirement to be reduced and more focus to be given on
11	Inventory of Spare Part /Spares report and raising request		Yes	refurbishment/repairing. Consumption pattern of spare shall be jointly finalized.
12	Lighting of the FGD Plant and BHEL Office /Store shed / common area etc. mast/weighbridges etc.		Yes	Maintenance of FGD Plant lighting including street pole (approx. 22 no) office/store sheds/common area in contractor scope. All material (light, fixtures, cable etc) required in maintenance to be given by BHEL except consumables. Ladder if in BHEL stores same shall be provided free of chargeable basis.
13	<u>Laboratories:</u>			
A	Electrical/Instrumentation Laboratory along with Calibrated Test Instruments & equipment		Yes	Contractor to establish and upkeep lab for calibration, certification and maintenance purpose or contractor to arrange calibration of instruments from NABL accredited lab duly accepted by BHEL/NTPC.
14	Motor Rewinding	Yes	Yes	HT motor by BHEL and LT motor (including small actuators/DC motors by Contractor including TB, Boxes & Cooling fan.)
15	Condition Based Monitoring (CBM)		Yes	CBM as per BHEL instructions to be carried out by O&M contractor include Oil, Vibration, thermography etc. and timely corrective action to be taken based on the findings.
16	Plant Security			BHEL/NTPC is already having Plant security. O&M contractor shall have his own security for their stores/offices
17	Stores Management / Material / Scrap Management services.		Yes	On proper authorization from engineer in charge Contractor will draw Material / spare parts from BHEL stores using handling and transportation to work place for temporary storage / usage shall be in Contractor's scope. Segregated scrap and its Disposal/shifting inside NTPC premises are in the scope of the contractor at designated place given by BHEL/NTPC.

18	Special Tools and Tackles	Yes		Special T&P's provided by OEM shall be handed over to contractor. All other T&P
				as per clause IV are in the scope of Contractor. Operation and maintenance
				of the same is in the scope of the contractor. All scaffoldings are in the
19	Manpower for Maintenance		Yes	scope of the contractor including repair, Contractor shall deploy manpower as
				indicated category wise. Qualification and experience shall also be given to BHEL Site incharge.
20	Telephone facilities		Yes	Contractor has to provide area wise mobile phone connection round the clock.
21	Medical Facilities		Yes	Contractor has to maintain contact with local hospital having ambulance facility, scanning and other ultramodern medical facilities required during emergency. However the required First aid Kit facility to be maintained by contractor at workplace.
22	Statutory Compliances /Electrical Inspectorate Factory inspectorate / Licensing and Permits from local and central authorities	Yes	Yes	Statutory fees shall be paid by BHEL/NTPC any liaisoning with authority and all other formalities/documentation required for getting various statutory clearances will be in scope of contractor.
23	KPI/ Guarantee of Plant Operational Availability		Yes	Shall be as per the Contract
24	Material shifting arrangement as and when required. Unloading of material received from other BHEL unit/suppliers		Yes	Unloading of material as received at site and shifting to store area with required T&P shall be in the scope of contractor.
25	Loading of material from FGD Dadri to other location in vehicle placed by BHEL		Yes	Contractor scope
	Daily/Weekly/Monthly Report and MIS and Efficiency for the O&M activities.			Contractor has to daily generate the MIS/Maintenance report for the daily work carried out by them on a Mutually agreed Format and Monthly report in hard copy to the management highlighting Monthly Breakdown/Achievement/spare consumption and next month Job planning.
27	O&M of Firefighting and Detection system of the FGD plant.		Yes	by O&M Contractor
28	Flue Gas/ Lime stone /Gypsum / Lime stone slurry chemical sample collection and Maintenance of sampling & analysis equipment of all the lab	Yes		Contractor scope limited to assistance in sampling

29	Online Leak Sealing		Yes	by O&M Contractor
30	O&M Manuals/specifications/drawings	Yes	Yes	O&M manuals/specifications/drawings as provided by BHEL, Contractor to prepare standard maintenance procedure/schedule (SMP) and standard operating procedure (SOP) for submission to BHEL for approval
31	Shop Repairs / Workshop		Yes	Workshop facility of NTPC may be extend for minor repair works as per EIC decision. However, contractor to do tie up with the workshops available in the vicinity or NCR region of the plant for general repair as per requirement. Transportation of material to and fro shall be in scope of contractor. BHEL scope limited to any major repair which to be done at BHEL plant workshop.
32	ISO Certification		Yes	O&M contractor shall involve themselves with the consultant engaged by the BHEL/NTPC for ISO. All the work required for this will be carried out by O&M contractor under the guidance and direction of the BHEL/NTPC.O&M contractor must be involved there teams in QC, Kaizen, 5S and other activities and support them for the skill development scheme.
33	Open space for office	Yes		Limited space (Free of charge). As and where made available by customer M/s NTPC
34	Open space for storage	Yes		Limited space (Free of charge). As and where made available by customer M/s NTPC
35	FOR LABOUR COLONY			
a.	Open space		Yes	Contractor have to make their own arrangement
36	ELECTRICITY			
	Electricity for Maintenance purposes (Chargeable/Free)			On chargeable basis as prevailing rate of DISCOM
b.	Single point source	Yes		
	Further distribution for the work to be done which include supply of materials & execution		Yes	
d.	Electricity for the office, stores, canteen etc of the bidder which include:			
e.	Distribution from single point including supply of materials & service		Yes	

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t t	Supply, Installation & connection of material of energy meter	Yes	
1.	including operation & maintenance		
		Vaa	
g.	Duties & deposits including	Yes	
	statutory clearances for above		
h.	Demobilization of the facilities	Yes	
	after completion of works		
	Electricity for living	Yes	Chargeable
	accommodation of the bidder's		
'-	Staff, engineers, supervisors etc.		
	on the above lines		
37	WATER SUPPLY		
37 1	For O&M		
07.11			
a	Making the water available at	Yes	
a.	single point	163	
h		Vaa	
D.	Further distribution as per the	Yes	
	requirement of work including		
	supply of materials & execution		
37.2	FOR LABOUR COLONY		
a.	Making the water available at	Yes	Contractor has to arrange on his own.
	single point		
b.	Further distribution as per the	Yes	
	requirement of work including		
	supply of materials & execution		
38	LIGHTING		
38.1	For Maintenance purpose	Yes	Necessary Hand lamps, Halogen lamps with accessories shall be arranged by
			contractor.
38.2	For material handling work	Yes	
	(execution of lighting		
	work/arrangements)		
	1. At office /storage area		
	/ it chiec / storage area		
	2. At Yard or any other places		
	where material is unloaded/stored		
38.3	Providing the necessary	Yes	
55.5	consumables like bulbs, tube	. 00	
	lights, Switches, etc. for		
	maintaining the lighting system		
39	Communications facilities for		
35	site operations of the bidder		
20.1	-	Vaa	
J39.1	Telephone/mobile, fax, internet,	Yes	
	email etc.		

- 40 BHEL will not be responsible for any loss or damage to the contractor's equipment as a result of variation in voltage or frequency or interruptions in power supply.
- Contractor shall be responsible for providing all necessary facilities like residential accommodation (preferably with 4 km radius), transport, electricity, water, medical facilities etc. at his own cost as required under various labour laws and statutory rules and regulations framed there under to the personnel employed by him.
- Provision of distribution lines of both electrical power and water from the central points to the required place with proper distribution boards observing the safety rules laid down by the electrical authorities of the state shall be done by the contractor, supplying all the materials like cables, distribution board, switch boards, TPN, CBS, ELCBS/ MCCBS/ Copper / Brass clamps, copper conductor, change over switches pipes etc. at his own cost. If any failure is caused in supply of the power and water, it is the responsibility of the contractor to make alternate arrangements at his cost. The contractor shall adjust his working shifts / hours accordingly and deploy additional manpower if necessary so as to achieve the targets. The energy meter to be installed by the contractor and shall be tested and certified by State Electricity Board or any other agency approved by the NTPC at his cost.
- The contractor while drawing construction power supply from Distribution Board should strictly adhere to following points.
- 44 All electrical installations should be as per Indian Electricity rules.
- 45 All distribution Boards installed by the contractor should be constructed with fireproof materials viz. Steel frames, Bakelite sheets etc.
- 46 Connection for single phase should be taken from phase and neutral. Nowhere the connection should be taken with earth as neutral.
- 47 All electrical connections should be made through connectors, nuts and bolts, switches, plug and sockets. Loose connections or hooking up of wires shall not be permitted.
- 48 Contractor has to make their own earthing arrangement for their equipment / DB earthing.
- 49 All electrical equipment / tools and plants should be properly earthed. DBs to be earthed diagonally opposite at two points.
- Contractor should use "MCCB" and "ELCB" either on incoming or outgoing connections to the DBs.
- 51 Contractor should ensure that all the CBs / TPNs/ Fuses/ MCCB / ELCB cables etc. should be of adequate rating/ capacity.
- For permission of supply connections contractor has to submit a test report of their installations with a single line diagram of connected/ proposed loads.
- 53 ELCB will be tested once in a week or as directed by BHEL by actually simulating the earth leakage for all installations and the same shall be recorded in the logbook to be maintained by the contractor.
- In case of power cuts / load shedding no compensation for idle labour or extension of time for completion of work will be given to contractor.
- On completion of work or as and when required by BHEL, all the temporary buildings, structures, pipe lines, cables etc. shall be dismantled and leveled and debris shall be removed, as per instructions of BHEL, by the contractor at his cost. In the event of his failure to do so, the Engineer will get it done and expenses incurred shall be recovered from the contractor along with prevailing overheads. The decision of BHEL Engineer in this regard shall be final.

4.0	T&P and IMTEs DEPLOYED BY CONTRACTOR FOR O&M WORKS			
S.No.	Description	Capacity/ Range	Quantity	
1	Trailer along with pulling unit (required only at time for shifting of material)	APR	APR	
2	Fork lifts	APR	APR	
3	Tractor trolley	APR	APR	
4	Hydra Cranes-18/20 T	APR	APR	
5	Hydraulic jacks	APR	APR	
6	Welding sets with accessories and ovens for welding electrodes backing and holding	APR	APR	
7	Heat treatment and Stress relieving sets	APR	APR	
8	Hydraulic Pipe Bending Machine (Manual and Motorized) of various sizes	APR	APR	
9	Workshop Equipment's	APR	APR	
10	Pipe Chamfering machine	APR	APR	
11	Pipe Cutting and Beveling machines	APR	APR	
12	Chain Pulley blocks of various and suitable capacities	APR	APR	
13	Grinding machines various type	APR	APR	
14	Outside and insider Micrometers	APR	APR	
15	Vernier Calipers- Digital/Analogue	APR	APR	
16	Dial bore gauges	APR	APR	
17	Pulling Lifting Machines	APR	APR	
18	Drilling machines /Potable drilling machine /hand drilling machines	APR	APR	
19	Dial Gauge with magnetic stand	APR	APR	
20	Allen Keys various size	APR	APR	
21	Gas Cutting Sets	APR	APR	
22	Welding Cables	APR	APR	
23	Argon Sets	APR	APR	

24	Master level/Spirit levels	APR	APR
	·		
25	Bearing Pullers	APR	APR
26	Vibration measurement /Accelerometer	APR	APR
27	Thread Die/Tap sets	APR	APR
28	Pneumatic Torque Wrench	APR	APR
29	Spanners of all type (Ring ,D,E, Box, Double end ,ratchet etc.)	APR	APR
30	Pipe Wrench's	APR	APR
31	Pliers of all type Nose/Cutting /Circlip etc.	APR	APR
32	Sledge Hammer	APR	APR
33	Wooden Sleepers of suitable sizes	APR	APR
34	Various sizes of clamps/ fixtures for assembling	APR	APR
35	Dewatering pumps	APR	APR
36	Scaffolding pipes along with clamps (swivel and fixed type)	APR	APR
37	Scaffolding planks (metallic)	APR	APR
38	Wire Rope slings	APR	APR
39	DC lamps	APR	APR
40	Eye bolts	APR	APR
41	D-shackles	APR	APR
42	Feeler gauges	APR	APR
43	Greasing guns	APR	APR
44	Industrial switch boards with cables (minimum 50 m)	APR	APR
45	Magnetic particle testing equipment-DRY & WET Type and NDT kit	APR	APR
46	Temperature gun	APR	APR
47	Spectrometer for metal testing	APR	APR
48	Elco meter	APR	APR

49	Holiday Detector and Spark tester	APR	APR
50	Hand Operated Megger /Motor operated Megger	APR	APR
51	Screw drivers various type	APR	APR
52	Digital and Analogue multimeter's	APR	APR
53	Digital Earth resistance meter	APR	APR
54	Tongue testers AC and DC with milliamps and amps range	APR	APR
55	Standard milliamps / millivolts	APR	APR
56	Power Cable fault tester	APR	APR
57	Dead Weight Tester rated 400 Kg/cm2 with weights & test gauge facility	APR	APR
58	Oil temperature bath suitable to calibrate the instruments range 0-300 deg. C with standard temp. gauges & thermostatic control	APR	APR
59	Portable pressure calibrator	APR	APR
60	Decade resistance box	APR	APR
61	Manometers (+/-) 1000 mm water column With hand bulb for lab and small manometers for field purpose.	APR	APR
62	Manometer (+/-) 500mm mercury column with hand bulb for lab and small manometer for field purpose.	APR	APR
63	Inclined manometer (+/-) 300 mm water column	APR	APR
64	Tachometer	APR	APR
65	Motor checker	APR	APR
66	Ferrule and tag printing	APR	APR
67	Tube cutter and bending machine	APR	APR
68	Vacuum cleaner	APR	APR
69	U Tube Manometer 0-2000 mm Water Column	APR	APR
70	Inclined Manometer 0-50 mm Water Column	APR	APR
71	Ladders for maintenance at height	APR	APR
72	Phase sequence meter	APR	APR

73	Cable crimping tools	APR	APR
74	Bolt Tension Calibrator	APR	APR
75	High voltage detector	APR	APR
76	Portable Analyzer (O2, Sox, Nox , CO etc.)	APR	APR
77	Hygrometer	APR	APR
78	Single phase /Three phase variac	APR	APR
79	ELCB tester	APR	APR
80	Technician tools with bag	APR	APR
81	Master pressure gauges	APR	APR
82	Safety Nets	APR	APR
83	Oil filtration machine and tank required only oil changing of transformer as per schedule/requirement	APR	APR
84	Transformer oil testing kit	APR	APR
85	Electric blower	APR	APR
86	Relay testing kit	APR	APR
Notes			
1	The above list is only indicative and these T&Ps/IMTEs may not be required for entire contract period but contractor shall ensure the availability of the T&Ps/IMTEs as per maintenance schedule and T&P/IMTEs Deployment schedule. T&P/IMTE Deployment schedule shall be finalized at site in consultation with BHEL Engineer based on the maintenance schedule. BHEL decision shall be final and binding regarding the T&P/IMTEs deployment schedule. Contractor shall mobilize / maintain the T&P'/IMTEs as per the deployment schedule notified time to time by BHEL Engineer.		
2	APR- Contractor has to deploy T&P, MMD, IMTE as per requirement of site and as decided by BHEL Engineer.		
3	If any one of T&P/IMTEs 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.		
4	In case any work is delayed due to non-availability of T&P/IMTEs in scope of the Contractor, penalty@ Rs.5000/- (Rupees Five Thousand Only) per instance shall be applicable and shall be recovered from monthly O&M fees.		
5	In case T&P/IMTEs in contractor scope have to deploy by BHEL: a. If BHEL had to deploy its own T&P/IMTEs, 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. If BHEL had to deploy the T&P from outside agency, actual hiring cost plus applicable overheads i.e 5% shall be recovered		

	These recoveries shall be every and above the LD/s and block recentled and in the construct
	These recoveries shall be over and above the LD/penalties mentioned in the contract.
6.	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.
7.	If the work related to T&P/IMTEs mentioned above is completed then, BHEL can release
	that T & P during contract period / extended period if any. However, written permission
	shall be taken by contractor from BHEL construction Manager for releasing the
	T&P/IMTEs.
4.1	List of Consumables to be Maintained During O&M Period
4.1.1	This list is only indicative and not exhaustive one. If any other consumables not in the list
	but required for timely completion of the job shall be arranged by Contractor within
	quoted rate.
4.1.2	Mechanical
a.	Kerosene,
-	Diesel,
	Petrol and rust remover/Rustolene,
	CTC, Benzene etc.,
	Hacksaw blades,
	Cotton waste .
	Marking cloth and old cloth
	,Asbestos cloth ,
	Prussian blue,
	Lead wire (1.0 mm, 1.5 mm, 0.5 mm),
	Liquid soap/soap powder. ,
	Carborundum grinding paste (fine, medium and coarse),
	Cut off wheels,
	Grinding wheels.
	Sealing agents like M seal etc. Adhesive agents like Loctite etc,
	Cleaning agents like WD-40, Turpentine oil etc,
	Oil stones,
	Mounted wheels and rotary cutters,
	Oxygen and D/A cylinders.
	DP test kit and coir rope,
	Chalks, marking pens, and thermal chalks up to 200 deg c
	Insulation and medical tapes,
	Polythene sheets ,
	Hand gloves (asbestos and rubber),
	manila rope,
	Needle file set.
	Air blower (electric),
	Electric drills of various sizes,
	·
	Ball pen hammer of various sizes,
	Magnifying glasses,
	Gas cutting and welding goggles,
	Argon gas welding equipment
	Hand gloves Cotton & Leather.
	Shims of various thickness
	Sealant putty

Gland Ropes of different sizes Oil/water/paper/rubber gaskets LT bolts, Nuts and washers of sizes up to 36 mm,	
i i e	
I T holts. Nuts and washers of sizes up to 26 mm	
Li boits, Nuts and washers of sizes up to 30 min,	
HT bolts, Nuts and washers of sizes up to 24 mm,	
Oil seals of all sizes O-ring cords of all sizes,	
Silastic sealant, Anabond gasket sealant,	
Nitrogen cylinders	
Fire suit	
Graphite tape	
Graphite tape	
Thejo solution for belt joint Holding liquid sealant	
Jointing sheets	
Insulation screw Insulation Tape Lead wire PVC solution Paintbrush Pendent holder	
Petroleum jelly	
Precision blue paste	
Raval plugs	
Sand paper	
All kind of washers ,Shellac, shims, soldering paste Soldering rod ,Spark lighter, Teflo	
tape, Welding holders, Drill Bits, Emery sheet(Coarse & fine), F.G tap varnished ro	
Fevicol, Fevifold Fibre glass sheet Gouch screws ,bond for rubber lining, Grindir	
paste(coarse & Fine) Holdite Graphite compound ,Wood screws , Thejo Hardner ,Nipp	е
grease gun	
4.1.3 Electrical and C&I	
a. Cleaners & consumables related to motor overhauling and Bearing replacements i.).
Bearing retainers, Diesel, Red insulation varnish, Loctite.	
b. Emery roll, sand paper, Drill bits, Hack saw blades, Emery paper necessary tap	
(PVC/Para/Empire/Fiber-glass/Glass_mica/Cotton, Teflon), cotton waste, cotton clot	
Petrol, Kerosene, Diesel, CRC-226, Rustolene, CTC, Panel cutter, HT and LT insulation	
tapes, soldering iron, de-soldering pump, test board, 24V hand lamp with transformer ar	d
all cleaning elements etc., shall be in the Contractor scope.	
c. Electrical Contact Cleaners, Acetone, Pen Oil, CRC, Electronic component cleane	,
Polythene, Tarpaulin, Petrol, Petroleum jelly etc will be in Contractor's scope.d. Welding & gas cutting consumables like electrodes, Gas cylinders etc	
d. Welding & gas cutting consumables like electrodes, das cylinders etc	
e. All general type of seals, Rings, Anna bond, Loctite and related consumables will be	n
Contractor's scope.	
f. All consumables including small spares like washer, small screws, bolts and nuts	
different type/sizes and all HT/LT Cu/Al. lugs up to 25 sq mm and cable ties, printed	d
ferrule etc.	
g. Cooling fans of different sizes for all LT motors inside the plant to be supplied by	У
contactor.	
 h. Terminal Blocks of all LT motors has to be supplied and maintained by contractor i. Silicon sealant, putty, lugs up to 25sqmm cu & al, ,nut bolts, 1.5v-9v battery, 100w bull 	
	•
bulb holder, hand lamp frame holder, extension board with cable, petroleum jelly, batte clamp, distilled water, capacitors for AC/Fan, tarpaulins, cotton waste, Petrol, Kerosen	
Diesel, CRC-226, Rustolene, CTC, soldering iron, test board, 24 V hand lamps with	
transformer and all cleaning elements will be under Contractor's scope, Yellow/black str	
for 5s, Hydraulic Oil for dead weight tester, Calibration gases for analyzers, Buffe	
solution for PH calibration, Glass fuses,	•

Notes	
1.	Contractor shall ensure the quality of consumables used for maintenance shall be according to OEM recommendations or as per BHEL approval. If OEM recommendation does not exist, repair work shall be carried out as per standard codes and practices of industry and after approval by the BHEL Engineer.
2.	If any consumables in contractor scope have to arrange by BHEL, then BHEL shall made recovery@ 1.5 times market rate of that consumables.

TECHNICAL CONDITIONS OF CONTRACT (TCC) Chapter V: T&P DEPLOYED BY BHEL

5.0	LIST OF T&P BEING PROVIDED BY BHEL ON FREE OF HIRE CHARGES
5.1	Higher capacity crane other than specified in contractor scope shall be required for maintenance job/material handling works shall be provided by the BHEL on free of charge basis. However, contractor to raise the requirement in advance with BHEL. BHEL decision regarding the requirement of the crane shall be final and binding on the contractor. Delay in raising the requirement by contractor shall be attributable to contractor for calculation of FGD availability if affected.
5.2	Crane shall be provided with Operator with fuel on free of cost basis.
5.3	In case of Idling of crane due to reasons attributable to contractor then BHEL Engineer shall impose penalty 1.5 times of hire charges per day and same shall be recovered from the monthly O&M fees paid to contractor.
5.4	Contractor shall make necessary arrangement like laying of special sleeper beds, assembly & dismantling of heavy lift attachment, boom, jib etc. for movement and operation of crane.
5.5	Any other special T&Ps for O&M purpose shall be provided on free of hire charges.

TECHNICAL CONDITIONS OF CONTRACT (TCC) Chapter VI: TIME SCHEDULE

6.0	TIME SCHEDULE
6.1	On award of work/LOI, contractor to immediately contact the BHEL O&M in-charge for further instructions for mobilization. On mobilization contractor shall familiarize with Operation and maintenance activities of FGD plant and deploy optimum staff (Desk/Field operators etc.) as per the instructions of BHEL O&M in-charge /Engineer.
6.2	Contractor is required to mobilize within 15 days from the date of issue of instruction by BHEL O&M in-charge as per clause 6.1.
6.3	Zero Date: BHEL shall operate the plant with their Desk operators in shifts till Trial Operation Completion and taking over plant by NTPC or NTPC Clearance for O&M works. Accordingly, O&M works shall be handed over to contractor. Zero date shall start from date of NTPC clearance for start of O&M works or Trial Operation completion and taking over plant by NTPC.
6.4	After completion of schedule period and based on performance of contractor, BHEL may extend the contract in mutual agreement with contractor for another year. O&M price shall be escalated by 3% during the extension period
6.4	Contract duration under subject tender for O&M services shall be 03 years from Zero date.
6.5	Work under the scope of this contract shall be deemed to have been completed in all respects only when so certified by BHEL. Decision of BHEL shall be final and binding on the contractor.
6.6	Performance guarantee shall be as per clause no.2.24 (Performance Guarantee for Workmanship) of General Conditions of Contract. The commencement of guarantee period for the quality of the workmanship shall start from the date of handing over of defect free plant to BHEL/NTPC.
6.7	Zero date shall be treated as start of work date for submission of SD as per GCC cl 1.10.2

TECHNICAL CONDITIONS OF CONTRACT (TCC) Chapter VII: Terms of Payment

7.0	TERMS OF PAYMENT
7.1	'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 for detailing the work done during the month. Format for O&M report and billing shall be approved by BHEL before raising invoices and payment shall be released within 30 days of receipt of Bill complete in all respect.
7.3	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 as explained hereunder
7.5	PROGRESSIVE PAYMENT ON PRORATA BASIS (After Zero date)
7.5.1	100% Monthly Payment of O&M Charges as per Item no.1 of Rate Schedule(Annexure-I) for that year shall be payable on submission of Monthly invoice along with all O&M reports and manpower deployment sheet as certified by BHEL Engineer. Payment shall be regulated as per Annexure II of rate schedule and subject to deductions if any that BHEL may authorized to make under the contract.
7.6	Monthly Payment of Manpower
7.6.1	100% Unit Manpower rate on pro rata basis shall be payable as per item no. 3.1.1 of Annexure II (Rate schedule) on submission of deployment sheet duly certified by BHEL Engineer for manpower mobilized till zero date.
7.6.2	100% Unit Manpower rate on pro rata basis shall be payable as per item no. 3.1.1 of Annexure II(Rate schedule) on submission of deployment sheet duly certified by BHEL Engineer for manpower deployment over and above mentioned under cl.2.8.21.

8.0	TAXES, DUTIES, LEVIES
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 and 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: -
	 a. Supply of goods and/or services have been received by BHEL. b. Original Tax Invoice has been submitted to BHEL. c. Contractor/ Vendor has submitted all the documents required for processing of bill as per contract/ purchase order/ work order. d. 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. e. 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.
	 f. 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. g. Contractor has to submit an undertaking confirming the payment of all due GST in respect of invoices pertaining to BHEL.
8.2.9	Any financial loss arises to BHEL on account of failure or delay in submission of any document as per contract/purchase order/work order at the time of submission of Tax invoice to BHEL, shall be 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.
8.2.11	Contractor shall comply with the provisions of e-way bill wherever applicable. Further wherever provisions of GST Act permits, all the e-way bills, road permits etc. required for transportation of goods needs to be arranged by the contractor.
8.2.12	Contractor shall be solely responsible for discharging his GST liability according to the provisions of GST Law and BHEL will not entertain any claim of GST/interest/penalty or any other liability on account of failure of contractor in complying the provisions of GST Law or discharging the GST liability in a manner laid down thereunder.
8.2.13	In case declaration of any invoice is delayed by the vendor in his GST return or any invoice is subsequently amended/altered/deleted on GSTN portal which results in

	any adverse financial implication on BHEL, the financial impact thereof including interest/penalty shall be recovered from the Contactor's due payment.
	Any denial of input credit to BHEL or arising of any tax liability on BHEL due to non-compliance of GST Law by the Contractor in any manner, will be recovered along with liability on account of interest 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 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.
8.2.17	Income Tax:
	TDS/TCS as applicable under Income Tax Act, 1961 or rules made thereunder shall be deducted/collected from contractor's bill.
8.2	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.
8.2.1	Not applicable
8.2.2	If BOCW cess become applicable at any stage during O&M period, same shall be reimbursed to contractor on production of deposit challan.
8.2.3	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

8.2.4 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.

TECHNICAL CONDITIONS OF CONTRACT (TCC) Chapter IX: Others

Exclusions:

- 1. Capital Overhauling/ Annual overhauling shall be excluded from the scope of this tender but contractor to maintain the records such maintenance
- 2. All type of modification works in existing plant
- 3. Painting of the FGD plant
- 4. All type of Chemicals (Hydrated lime, NaOH etc.) Lube Oils, Grease for use in operation
- 5. Insulation works except as mentioned in the contract for specific maintenance work

TECHNICAL CONDITIONS OF CONTRACT (TCC) Chapter X: Rate Schedule

UNPRICED RATE SCHEDULE

Annexure-I

NO.	DESCRIPTION OF WORK	UOM	No. (A)	Monthly O&M Price in Rs. (B)	Total O&M Price in Rs.
1.0	TOTAL Lumpsump price for Operation and Maintenance of FGD plant Unit 5&6 at 2x490 MW NTPC Dadri at as per scope covered under				
	tender specifications :				
1.1	O&M price First Year	Month	12	Х	AXB
1.2	O&M Price Second Year– Escalation @ 3%	Month	12	Y=X*1.03	AXB
1.3	O&M Price Third Year- Escalation @ 3%	Month	12	Z=Y*1.03	AXB
2.0	TOTAL O&M PRICE FOR THREE YEARS (in Rs.)				
Notes					
1.	Quoted price shall be exclusive of GST.				
2.	Unit Price quoted shall includes supply of manpower with all statutory compliance (PF, WC policy, bonus, Retrenchment benefits, leave wages, ESI/ General insurance, Workmen Compensation, Canteen facility), PPEs, Uniform, lodging, travel expenses T&P, IMTEs, consumables etc. for operation and maintenance (Routine/Periodic/Preventative/Break down maintenance), updation of spares list, loading and unloading of material all other works etc. as covered in tender specifications.				
3.	Payment of Monthly O&M price shall be r	regulated as p	er the A	Annexure-II.	

TECHNICAL CONDITIONS OF CONTRACT (TCC) Chapter X: Rate Schedule

Annexure-II

3.	Payment of Monthly O&M Price as be below):	low (Calculation	n for Fir	rst yea	r in Detailed as
3.1	Manpower Expenses for O&M- Monthly		C=70%	6 of X	
3.1.1	Description	Allocation Factor (AF)	UOM	Qty (Q)	Monthly Unit Price (to be rounded off)
1	O&M Incharge	0.034004069	No.	1	C* AF
2	HR/Admin/finance	0.036681944	No.	2	<u>C* AF</u> 2
3	Store keeper	0.017229787	No.	1	C* AF
4	Safety Officer	0.026156830	No.	1	C* AF
5	Engineer: Planning/Mechanical/Electrical/C&I/CBM etc.	0.104627319	No.	4	<u>C* AF</u> 4
6	Supervisor: Mech./Elect/C&I/Housekeeping etc.	0.064611344	No.	3	<u>C* AF</u> 3
7	Operation in charge	0.026052701	No.	1	C* AF
8	Desk Operator	0.071053079	No.	3	<u>C* AF</u> 3
9	Field Operator	0.120664139	No.	6	<u>C* AF</u> 6
10	Electrician/Technician	0.076365086	No.	4	<u>C* AF</u> 4
11	Welder/Grinder	0.073810834	No.	4	<u>C* AF</u> 4
12	General Fitter	0.076853874	No.	4	<u>C* AF</u> 4
13	Mill Wright Fitter (MWF)	0.027501473	No.	1	C* AF
14	Rigger	0.026591414	No.	2	<u>C* AF</u> <u>2</u>
15	Helper	0.178141457	No.	20	<u>C* AF</u> 20
16	Tractor Driver	0.009509500	No.	1	C* AF
17	Hydra/Fork lift Operator etc.	0.011886875	No.	1	C* AF
18	Chemist	0.018258239	No.	1	C* AF

TECHNICAL CONDITIONS OF CONTRACT (TCC) Chapter X: Rate Schedule

3.2	Fixed Expenses/Overheads etc.		30%	of X	
Notes	:				
1.	Derived Unit manpower rate shall rema rate derived as per rate schedule item no third year and derived rate remain firm fo	o. 2 i.e O&M price for			
2.	Based on work requirement and as manpower over and above mentioned a deployed by contractor. These manpower per item no. 3.1.1 of Annexure-II on proving the management of the second se	under clause 2.8.21 er shall be paid as	1 requi	red the	en same shall be
3.	Quoted monthly price and correspondin deployment of manpower over and a payment on account of deployment of respective yearly contract value of O&M.	bove mentioned ι additional manpov	under	clause	2.8.21. Though
4.	All statutory compliances (like PF,ESI e any shall be in contractor scope. All exp their staff shall be in contractor scope. I prevailing at NTPC Dadri.	ense related to acc	commo	dation	transportation of

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	NOT APPLICABLE
2	General Services to be rendered by the Bidder	Chapter-II	NOT APPLICABLE
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	NOT APPLICABLE
7	Drawings and Documents	Chapter-VII	
8	Inspection and Quality	Chapter-VIII	NOT APPLICABLE
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SPECIAL CONDITIONS OF CONTRACT (SCC) Chapter - I : General Intent of Specifications

NOT APPLICABLE.

SPECIAL CONDITIONS OF CONTRACT (SCC) Chapter - II : General Services to be rendered by the Bidder

NOT APPLICABLE.

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 O & M works shall not be accepted except with the specific approval of the Engineer.

4.0	OBLIGATIONS OF CONTRACTOR
4.1	NOT APPLICABLE.
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 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.

	BHEL shall have lien on all T&P, MMEs and other equipment of the contractor brought to the site for the purpose of erection, testing and commissioning. BHEL shall continue to hold the lien on all such items throughout the period of contract / extended period. The contractor and/ or his sub-contractors, without the prior written approval of the Engineer, shall remove no material brought to the site.
4.2.1.15	The month wise T&P deployment plan to execute the work is to be submitted as per relevant format as per the instruction of BHEL. It shall be the contractor's responsibility to deploy the required T&P, for timely and successful completion of the job, to any extent.
4.2.2	Obligations in respect of T&Ps and MMEs provided by BHEL
4.2.2.1	T&P / MMEs being provided by BHEL to sub-contractor free of hire charges shall be shared by other subcontractors working for BHEL at site and the allotment done by BHEL Engineer shall be final and binding.
4.2.2.2	BHEL T&P will be issued in basic assembled condition. Additional loose components / sub-assemblies / attachments as and when necessary, will be issued by BHEL. Assembly of such additional loose components/sub-assemblies/ attachments is in contractor's scope.
4.2.2.3	In case of non-availability of the T&Ps to be provided by BHEL due to breakdown, major overhauls, distribution pattern or any other reason, the contractor shall plan / 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)	Where the services of the cranes provided by BHEL are to be shared by other agencies/ contractors of BHEL, the contractor's responsibilities defined above will also be apportioned accordingly to the beneficiary agency. Working arrangements in this regard will be done at site by BHEL engineer and in any case his decision shall be final and binding.
h)	Major breakdowns will be attended to by BHEL. However, in case of breakdowns or damages due to negligence of the contractor, the complete service/repair charges including cost of spares shall be to the account of the contractor, along with BHEL overheads.
4.2.2.17	NOT APPLICABLE.

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 O & M Schedule by BHEL. 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 as per extant clause in contract.
5.15	Contractor shall not deploy women labour at night.

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

NOT APPLICABLE.

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 O&M works 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	NOT APPLICABLE.
7.5	Should any error or ambiguity be discovered in the specification or information the contractor shall forthwith bring the same to the notice of BHEL before commencement of work. BHEL's interpretation in such cases shall be final and binding on the contractor.
7.6	Deviation from design dimensions should not exceed permissible limit. The contractor shall not correct or alter any dimension / details, without specific approval of BHEL.

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

NOT APPLICABLE.

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

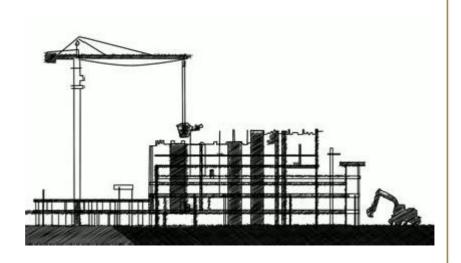
12.0	Suspension of Business dealings		
12.1	BHEL reserves the right to take action against contractors who fail to perform or indulge in malpractices, by suspending business dealings with them.		
12.2	Suspension could be in the form of 'Hold', 'De-listing' or 'Banning' a contractor.		
12.3	A bidder may be put on HOLD for a period of 6 months, for future tenders 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:-		
	Bidder tampers with tendering procedure affecting ordering process or commits any misconduct which is contrary to business ethics.		
	 b) Bidder has substituted, damaged, failed to return, short returned or unauthorizedly disposed off materials/ documents/ drawings/ tools etc of BHEL. 		
	c) Bidder no longer has the technical staff, equipment, financial resources etc. required to execute the orders/ contracts.		
12.5	A Bidder can be banned from doing any business with all Units of BHEL for a period of 3 years on the basis of one or more of the following reasons:		
	a) Bidder is found to be responsible for submitting fake/ false/ forged documents, certificates, or information prejudicial to BHEL's interest.b) In spite of warnings, the Bidder persistently violates or circumvents the		
	provisions of labour laws/ regulations/ rules and other statutory requirements.		
	c) Bidder is found to be involved in cartel formation		

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

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







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 				
HOUSE KEEPING					
WASTE MANGEMENT					
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.



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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)



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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
- Effectively control, co-ordinate and monitor the activities of all personnel on the Project sites including subcontractors in respects of HSE.
- Establish effective communication on HSE matters with all relevant parties involved in the Project works.
- Ensure that all work planning takes into account all persons that may be affected by the work.
- Ensure fitness testing of all T&Ps/Lifting appliances like cranes, chain pulley blocks etc. are to be certified by competent person.
- Ensure timely provision of resources to facilitate effective implementation of HSE requirements.
- Ensure continual improvements in HSE performance
- Ensure conservation of resources and reduction of wastage.
- Capture the data of all incidents including near misses, process deviation etc. Investigate and analyze the same to find out the root cause.
- Ensure timely implementation of correction, corrective action and preventive action.



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HSE TARGETS

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

4.0 BHEL POWER SECTOR HEALTH, SAFETY & ENVIRONMENT POLICY

Power Sector HSE Policy

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

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

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

Sd/-

Date: 01.05.2013 Director (Power)



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5.0 MEMORANDUM OF UNDERSTANDING:

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

This award of work, subsolitizations are required to critici into a memorahadin of andorstanding 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:				



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6.0 TERMS AND DEFINITIONS

6.1 DEFINITIONS

6.1.1 INCIDENT

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

6.1.2 NEAR MISS

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

6.1.3 MAN-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.



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Reportable Cases:

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

Injury Cases:

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

6.1.8 TOTAL REPORTABLE FREQUENCY RATE

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

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



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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.



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Shall ensure submission of look-ahead plan for procurement of HSE equipment's and PPEs as per work schedule.

- Shall ensure good housekeeping.
- Shall ensure adequate valid fire extinguishers are provided at the work site.
- Shall ensure availability of sufficient number of toilets /restrooms and adequate drinking water at work site and labour colony.
- Shall ensure adequate emergency preparedness.
- · Shall be member of site HSE committee and attend all meetings of the committee
- Power source for hand lamps shall be maximum of 24 v.
- □ Temporary fencing should be done for open edges if Hand railings and Toe-guards are not available.

7.2.2 HEALTH, SAFETY AND ENVIRONMENT OFFICER OF SUBCONTRACTOR

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



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8.0 PLANNING BY SUBCONTRACTOR

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.



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8.3 **PROVISION OF PPEs**

Personnel Protective Equipment (PPEs), in adequate numbers, will be made available at site & their regular use by all concerned will be ensured

The following matrix recommends usage of minimum PPEs against the respective job.

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.



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

Colour scheme for Helmets:

1. Workmen: Yellow

2. Safety staff: Green or white with green band

3. Electrician: Red

4. Others including visitors: White

- All the PPEs shall be checked for its quality before issue and the same shall be periodically checked. The users shall be advised to check the PPEs themselves for any defect before putting on. The defective ones shall be repaired/ replaced.
- The issuing agency shall maintain register for issue and receipt of PPEs.
- The Helmets shall have logo or name (abbreviation of agency name permitted) affixed or printed on the front.
- The body harnesses shall be serial numbered.

8.4 ARRANGEMENT OF INFRASTRUCTURE

8.4.1 DRINKING WATER

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

8.4.2 WASHING FACILITIES

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

8.4.3 LATRINES AND URINALS

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



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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



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- 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:



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	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)



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- Proper safety wear & gear must be issued to all the workers being registered for the induction (i.e., Shoes/Helmets/Goggles/Leg guard/Apron etc.)
- They must arrive fully dressed in safety wear & gear to attend the induction.
- Any one failing to conform to this safety wear& gear requirement shall not qualify to attend.
- On completing attending subcontractor's in-house HSE induction, each employee shall sign an induction training form (format no. HSEP: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



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

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



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11.0 **OPERATIONAL CONTROL**

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



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

11.2 WORK PERMIT SYSTEM

- □ The following activities shall come under Work Permit System
 - a. Height working above 2 metres
 - b. Hot working at height
 - c. Confined space
 - d. Radiography
 - e. Excavation more than 4 meter depth
 - f. Heavy lifting above 50 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.



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

11.3.4 DEMOLITION WORK

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

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

11.3.5 T&Ps

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

11.3.6 CHEMICAL HANDLING

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

11.3.7 ELECTRICAL SAFETY

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



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BHEL reserves the right to replace any unsafe electrical installations, wiring, cabling etc. at the cost of the subcontractor.

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

11.3.8 FIRE SAFETY

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

11.3.9 SCAFFOLDING

- Suitable scaffolds shall be provided for workman for all works that cannot safely be done from the ground, or from solid construction except in the case of short duration of work which can be done safely from ladders.
- When a ladder is used, it shall be of rigid construction made of steel. The steps shall have a minimum width of 45 cm and a maximum rise of 30 cm. Suitable handholds of good quality wood or steel shall be provided and the ladder shall be given an inclination not steeper 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.



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



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All requisite tests and inspection of handling equipment, tools & tackle shall be periodically done by the subcontractor by engaging only the Competent Persons as per law.

- Defective equipment or uncertified shall be removed from service.
- Any equipment shall not be loaded in excess of its recommended safe working load.

11.3.15 HOISTING APPLIANCE

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

11.4 **ENVIRONMENTAL CONTROL**

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

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

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

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

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

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

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

11.5 **HOUSEKEEPING**

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



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

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

11.6 WASTE MANAGEMENT

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

11.6.1 BINS AT WORK PLACE

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

11.6.2 STORAGE AND COLLECTION

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



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11.6.3 SEGREGATION

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

11.6.4 DISPOSAL

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

11.6.5 WARNING AND SIGNS

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

11.7 TRAFFIC MANAGEMENT SYSTEM

11.7.1 SAFE WORKPLACE TRANSPORT SYSTEM

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



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

11.7.2 TRAFFIC ROUTE FOR PEDESTRIANS

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

11.7.3 WORK VEHICLE

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

- o A high level of stability.
- o A safe means of access/egress.
- o Suitable and effective service and parking brakes.
- o Windscreens with wipers and external mirrors giving optimum all round visibility.
- o Provision of horn, vehicle lights, reflectors, reversing lights, reversing alarms.
- 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.
- o Valid Pollution Under Control certification for all vehicles



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11.7.4 **DAILY CHECK BY DRIVER**

There should also be daily safety checks containing below mentioned points by the driver before the vehicle is

- 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.



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- Appropriate type and number of fire extinguisher shall be deployed as per Fire extinguisher deployment plan and validity shall be ensured periodically through inspection
- Adequate number of first aid boxes shall be strategically placed at different work places to cater emergency need. Holder of the first aid box shall be identified on the box itself who will have the responsibility to maintain the
- 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.



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12.3 **INSPECTION OF T&Ps**

- A master list of T&Ps shall be maintained by each subcontractor.
- All T&Ps being used at site shall be inspected by HSE officer once in a month as per format no. HSEP: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.



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

12.7 INSPECTION ON ELECTRICAL INSTALLATION / APPLIANCES

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

12.8 **INSPECTION OF ELEVATOR**

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

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.



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14.0 HSE PENALTIES

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

15.0 OTHER REQUIREMENTS

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



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

16. NON COMPLIANCE

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

SN	Violation of Safety Norms	Fine (in Rs)
01	Not Wearing Safety Helmet	200/- *
02.	Not wearing Safety Belt or not anchoring life line	500/-*
03	Not wearing safety shoe	200/-*
04	Not keeping gas cylinders vertically	200/-
05	Not using flash back arrestors	100/-
06	Not wearing gloves	50/- *
07.	Grinding Without Goggles	50/- *
08.	Not using 24 V Supply For Internal Work	500/-
09.	Electrical Plugs Not used for hand Machine	100/-
10.	Not 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.



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17.0 **HSE AUDIT/INSPECTION**

- Regular HSE Audit/inspection shall be carried out by Subcontractor as per Site HSE audit calendar.
- HSE checklist (Annexure 02) shall be used for carrying out audit/inspection and report shall be submitted to BHEL 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



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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
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20.0 **ANNEXURES**

ANNEXURE 01

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

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

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

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

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

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



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(vii)	12 roller bandages 10 cm wide.
(viii)	12 roller bandages 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.
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(2) Adequate arrangement shall be made for immediate recoupment of the equipment when necessary.



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ANNEXURE 02

HSE AUDIT/INSPECTION CHECKLIST CUM COMPLIANCE REPORT					
PROJECT:	DJECT: 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				



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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 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 ELCD's provided Fire yiring ELCD's provided Fire yiring Fire yiring ELCD's yiring Fire yiring ELCD's yiring Fire yiring ELCD's yiring Fire yiring	A	-		
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FLAMMABLE GASES AND LIQUIDS Containers clearly identified Proper storage				
Proper storage				
Proper storage	Containers clearly identified			
	=			
Fire extinguisher nearby	Fire extinguisher nearby			



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



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ANNEXURE 03

REFERENCES

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

SL	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



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(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			



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ANNEXURE 04 : SAFETY FORMATS

& ANNEXURE 05 : WORK PERMIT FORMATS



INSPECTION OF FIRST AID BOX

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

Number of employees on the site: -_____

Sl.No.	Item	No.	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

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

Signature of Subcontractor's Site I/C:



HEALTH CHECK UP

FORMAT NO: HSEP:14-F02

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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

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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

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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:

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<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		
Inspected 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	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/ No	ot Done	
8.0	Acceptance Norms			
9.0	Committee Observations			
	Date of next review (if accepted)			

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y.		"	-		

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		4	NAME OF CONTRACTOR						
				5	NAME & DESIGNATION OF BHEL ACTIVITY I/C					
6	DATE & TIME OF ACCIDENT			7	7 DATE RESUMED					
8	NO. OF WORK-DAYS		=							
9	NO. OF MANHOURS	LOST BY O	THERS							
10	PERSONAL DETAILS	OF INJURE	D AND / OR DETAILS O	DF MATERIALS / EQUIPMENT / PROPERTY DAMAGED						
NAME	=			NAME 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									
	ICY (OBJECT / EQUIF ONSIBLE FOR CAUSI		SSTANCE) MOST NT/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 ACTIONS HAVE BEEN TAKEN TO PREVENT ACCIDENT RECURRENCE ?									
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:	
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 Installations 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:	
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)	

<u>PLAN</u>			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	Approved By (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
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
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
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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



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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



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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 I good condition.	nolder and weld return clamp (Holder) are in	nsulated and in		
8.	Welder & Fitter trained to connect ground/work welding machine.	return clamps (Holder) to work place prior t	o energization of		
9.	Gas cylinders are stacked vertically and not be with cylinder.	low the welding / cutting area. Regulator ke	y is available		
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

Area		Date	!!	inie
	e of Site Engineer (Permit Requesting Authority):			Name of Work
	orming Contractor:			
	e of Package In charge:			Jate:
Desc	cription of Work:			
Work	x Execution Date:Tin	ne Valid from:	to	
	above signing person(s) will be responsible to ensure the autions mentioned on the permit to work.	nat the above described work	will be done under	all the safety
The f	following precautions are to be taken:			
No.	Item		Yes	s Not required
1.	Crane used for lifting activity tested, certified and approved	for rated lifting		
2.	All lifting tackles, gears/appliances are tested and certified for	or lifting works.		
3.	Crane operator is trained and competent for lifting operation			
4.	Lifting sling/ belt is protected against sharp edge of the jobs	to be lifted.		
5.	Access and exit marked and without obstruction.			
6.	Lifting arrangement adequate.			
7.	Unwanted rubbish material removed from work platform.			
8.	Minimum 2 guidelines have been provided for balancing and	d guiding jobs to be lifted.		
9.	Periphery area of crane booms as well as lifting job is barric posted.	aded and unauthorized/no-entry	sign board	
10.	Rigger and signal man is trained and competent for lifting we	ork.		
11.	No lifting activity to be carried out during lightening, heavy w	rind/rain.		
12.	If scaffolding to be used during lift, scaffolding with valid tag	available for use.		
13.	Double lanyards safety harness/belt checked an in working	condition.		
14.	Safety shoes (non-slip), helmet with chin strap available with	n employees.		
15.	Others.			
Nam	e of Contractor Safety Officer:	Sign:	Date:	Time:
	ewed and approved by BHEL Site Engineer (Permit			
Nam	e:	Sign:	Date:	Time:
	e of BHEL Safety Representative:Sign:			
I una	derstand the precaution to be taken as described above suted under my supervision by following all precaution a	and as per project requireme		
Nam	e of Work Performing Authority:	Sign:	Date:	Time:
Pern	nit Cancellation:			
I hero	eby declare that the work is complete, all workers under lition.	r my control have been withd	rawn and the site re	estored to safe tidy
	e of Work performing Authority:			
Nam	e of Site Engr. (Permit Requesting Authority):	Sign:	Date:	Time:
Nam	e of BHEL Site Engr. (Permit Issuing Authority):	Sign:	Date:	Time:

(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			
	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 e	macram m	o salety
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	5 ft. below working area & extending	ng 8 ft beyond.		
6.	Horizontal life lines are provided to cater to design spec	cification 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 check	ed 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	out 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	ato:	Timo:
	ewed and approved by BHEL Site Engineer (Per			<u> </u>	111116
			Date:		Time:
Name:Date:Time Name of BHEL Safety Representative:Sign:					
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	thdrawn 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

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CHAPTER -1

1. GENERAL INSTRUCTION TO TENDERERS

1.1. <u>DESPATCH INSTRUCTION</u>

- 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

- i) Only tenderers who have previous experience in the work of the nature and description detailed in the Notice Inviting Tender and/or tender specification are expected to quote for this work duly 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 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 balance works 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

LD for delay in completion of works: In case of delays in completion of the maintenance works beyond the stipulated time schedule finalized with BHEL solely attributable to contractor, then LD applicable shall be @ 0.5% of the proportionate daily contract price subject to maximum of 1% of the monthly contract price for the subject month. The LD amount shall be recovered from the Contractor's monthly RA bill.

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** Not Applicable.
- **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 NOT APPLICABLE

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 NOT APPLICABLE

2.15 NOT APPLICABLE

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 NOT APPLICABLE

2.17 NOT APPLICABLE

2.18 INSURANCE

- 2.18.1 BHEL/customer NTPC shall arrange for insuring the materials/ FGD Plant / properties of BHEL/NTPC covering the risks during transit, storage, O&M works.
- 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 New Delhi/Noida. 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 NOT APPLICABLE

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
- 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 under this contract for a period of three months from handing over of plant free from any defects to BHEL/NTPC and shall rectify free of cost all defects due to faulty O&M works 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

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: 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	
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-1049 (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	Whereas in response to an Invitation to Tender No issued by BHEL for cution of issued by BHEL for cution ofdated
1.	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		
a 2. C d	nvitation to Tender No and the documents specified therein. Contractor's Offer Nolated		
4			
5			
6. L	etter of Award No	dated_	·································
7			
s	hall also form part of and govern this Agreeme	nt.	
IN W	VITNESS HEREOF, the parties hereto have res	spectively set their signa	tures in the presence of
WIT	NESS	(CONTRACTO	
1.		(to be signed by a person a valid Power of Atte	C
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).

2 (-).		
We, Bank lastly undertake not to revoke with the previous consent of the Employer in writing.	this gu	narantee during its currency except
Notwithstanding anything to the contrary contained her	einabo	ve:
a) The liability of the Bank under this Guarantee shall r	ot exc	eed ⁴
b) This Guarantee shall be valid up to ⁵		
c) Unless the Bank is served a written claim or demand under this guarantee shall be forfeited and the Bank liabilities under this guarantee irrespective of wheth returned to the Bank.	shall be	e relieved and discharged from all
We, Bank, have power to issue this G 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

===	======================================
SE.	AL
DA	TED:
	(Designation of the Authorized Person Signing the Guarantee) (Signatory No)
	Signed for and on behalf of the Bank
	(Name of the Bank)
	IN WITNESS whereof the(Bank) has hereunto set and subscribed its hand the 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

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PS-

MONTHLY PLAN & REVIEW WITH CONTRACTOR

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

(Sign with name, designation and date)

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MONTHLY PLAN & REVIEW WITH CONTRACTOR

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)

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MONTHLY PLAN & REVIEW WITH CONTRACTOR

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				DEPLOYMENT 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)

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(Sign with name, designation and date)

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MONTHLY PLAN & REVIEW WITH CONTRACTOR

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

(Sign with name, designation and date)

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MONTHLY PLAN & REVIEW WITH CONTRACTOR

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	Quantity	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

(Sign with name, designation and date)

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MONTHLY PLAN & REVIEW WITH CONTRACTOR

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

(Sign with name, designation and date)

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		
This certificate is issued as per your request vide letter no					
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 above named have signed this agreement on the day month and year first above written at(Place) .						
WITNESS	For					
1. NAME 2. OFFICIAL ADDRESS	(FIRST PARTY)					
	_					
WITNESS	For					
1. NAME 2. OFFICIAL ADDRESS	(SECOND PARTY)					

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

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	Since last	Total upto			agreement	upto date			date		running account bill	
per last	running	date										
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.	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 of measurements by the concerned superior authorities has been carried out.								
5	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	Rs	(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	nent showing details of materials issued to the contractor Shri / M/S in respect of Contract Agreement / Work Order No														
Sl.No.	Stores Issue Voucher No. and date	Issue voucher No. and date allotted by stores to the SIV	Description of material issued issued to the contractor	Quantit	ty issued	Quantity actually incorporated in the work	Balance with cor	quantity ntractor		lfı	ecoverable from the c	ontractor			
				Free	Chargeable		Free	Chargeabl	Rate at which recoverable	Amount recoverable	Amount recovered upto previous bill	Balance recover		Remarks	
1	2	3	4	5	6	7	8	9	10	11	12	13		14	
Certified th	at	(balance quantity of free i	issue material as per Col. 8 abo	ve) is physicall	ly available with	the Contractor.	То	tal							
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 respect of Contract Agreeme					greement NoDated					
SI. No.	Description	of Tools and Plant Issued	Period for which iss	ued	Rate at whi	ch recovery is to be made	Amour	nt recover		nt recovered upto previous bill	Balance Recovere	ed now	Rem	arks	
1		2	3			4		5		6	7		8	3	
						TOTAL									
Signature of Contractor Date :					Signature of Engineer in Charge Date:			harge Signature of Senior Engineer Date:							

ANNEXURE C

	AINEAUREC															
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	nit	Qua	ntity	Rai	te	Amoun	nt recoverable	Amount recover		Amount now re	covered	Remarks
						1							1			T =
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 :	of Contractor						Signature of E Date :	ingineer in C ANNEXU EVIATION S	JRE D				Contr	Signature o Date: ract Agreement	f Senior Engi No	neer
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 agreen		Amount as executed	Amount further anticipated	Total Amour anticipated o completion	n Diffe	rence	Reason for deviation with authority, if any
	I .	<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

	Adhoc payment for work not previously measured **		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	2	4		6	7	0	0	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	(A)		
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	
	eby certify that I/We have performed the work as per the terms and conditions of Contract Agreement/Wo t/work order.	ork Order No	Datedfor whic	h payment is claimed as above and that I/We have no further claim under this
				Signature of the Contractor
				Date:
	III CERTIFICATE OF	THE ENGINEER	R 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	nce 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 t	• .				
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 h - : 11 h 11		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, William Wages, filsu	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				e:	- :
*Here specify the net amount payable				Signature of Senio	or Engineer
				Date	
	IV ENTRIES TO	BE MADE IN THE FINA	NCF DEPARTMENT		
	IV ENTRIES TO	DE INIADE III THE THA	INCE DEI ARTIVIERT		
]
		Account code head	Debit	Credit	
		•	(Gross Amount)	(Deductions)	
					•
Passed forRs					
Less DeductionsRsRs					
Net Amount PayableRs					
(Rupeesonly)					
			ı		1
		TOTAL			
					•
Assistant	Accountant			Finance Exec	utive
Date:	Date:			Date:	
Date.	Dute.			Date.	

ANNEXURE A Part I

Statement sh	owing details o	of materials	issued to the co	ontractor Shri /	M/S		in res	pect of Contrac	t Agreeme	nt / Work O	rder No	Dated			and co	overed by	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 reco	verable fro	om t he C	ontractor		
											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	Contractor						Signature	of Engineer in C	narge			Signatur	e of Senio	r 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																	
									Departm	ental Charge erever applic								
								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	owing tools and plant issued to the contractor	or Shri /M/S			in res	pect of contract Agre	ement / Work Or	der No	Dated	t			
SI.No.	Description of Tools and Plant Issued	Perio	d for which is	sued	Rate at wh	ich recovery is to be made	Amount recov	erable	Amount recovered previous bit		Balance now rec	overed	Remarks
	2		3		1	4	5		6		7		8
1	Z		3			4	5		ь				8
	T T									-			1
-											+		
-											+		
											+		
											+		
L					I .				<u> </u>				l .
						TOTAL							1
													l
Signature of C	Contractor					Cinneture of Contine	i- Ch					Cianatur	e of Senior Engineer
Signature or C	CONTRACTOR					Signature of Engine	er-in-Charge					Signature	e of Seriior Engineer
Date						Date						Date	
						ANNEXURE C							
C+-+	owing details of other recoveries to be made	£		/h a /-			f C+	/ ١٨٠	and Onder No		Datad		
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													
	•			•		•							
				TOT	AL								
										•	<u> </u>	•	
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	Work:											
					ON RECOVERY BAS	IS						
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	(difference		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.