

**TENDER SPECIFICATION  
NO.BHE/PW/PUR/SAT-CVL/667**

FOR

**CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS FOR (MAIN POWER BLOCK)  
TG, BOILER, ESP AND ESP CONTROL ROOM WITH OTHER AUXILIARY PLANT &  
NON - PLANT BUILDING, ROADS, DRAINS AND CULVERTS ETC. COMPLETE**

**AT  
2 X 250 MW TPS  
MADHYA PRADESH POWER GENERATION CORPORATION LTD.  
(MPPGCL)**

**DIST- BETUL  
MADHYA PRADESH**

**PART-I**

**COMMECIAL BID ( VOL-I )**

**SPECIAL & GENERAL CONDITIONS OF  
CONTRACT,QR,NIT**

BOOK NO.



**BHARAT HEAVY ELECTRICALS LIMITED**  
(A GOVERNMENT OF INDIA UNDERTAKING)  
POWER SECTOR - WESTERN REGION  
SHREEMOHINI COMPLEX  
345, KINGS WAY - NAGPUR 440 001

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#### LEGEND:

\$: PLACED BEFORE 'GENERAL CONDITIONS OF CONTRACT' IN BOTH HARD AND SOFT COPY DOCUMENTS.

#: ATTACHED AT THE END OF HARD COPY OF TENDER SPECS. PART-I (TECHNICAL BID) AND AS A SEPARATE FILE TITLED 'WEB\_NIT\_GCC' AS SOFT COPY HOSTED IN WEB PAGE.

@: ISSUED AS SEPARATE BOOKLET IN HARD COPY AS 'PRICE-BID'. SOFT COPY HOSTED IN WEB PAGE.

**NOTE: Bidders must Visit BHEL web site [www.bhel.com](http://www.bhel.com) for NIT, Qualifying Requirement of this work( QR ), GCC etc. Further all corrigenda, addenda, amendments and clarifications to Tender Specifications will be hosted in this web page. Bidders shall keep themselves updated with all such amendments.**

**BHARAT HEAVY ELECTRICALS LIMITED**

(A Government of India Undertaking)  
POWER SECTOR - WESTERN REGION  
SHREEMOHINI COMPLEX  
345, KINGS WAY - NAGPUR 440 001  
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**TENDER SPECIFICATION NO.BHE/PW/PUR/SAT-CVL/667**

NAME OF THE WORK: **CIVIL, STRUCTURAL AND ARCHITECTURAL WORKS FOR  
(MAIN POWER BLOCK) TG, BOILER, ESP AND ESP  
CONTROL ROOM WITH OTHER AUXILIARY PLANT & NON  
PLANT BUILDING ETC. COMPLETE AT 2 X 250MW TPS  
MPPGCL ,DISTRICT : BETUL, M.P**

***EARNEST MONEY DEPOSIT : RS.2,00,000/- (Rupees Two lakh only) .FOR DETAIL PL REFER  
SECTION-15 OF THIS TENDER.***

DUE DATE & TIME FOR RECEIPT OF OFFERS: ON OR BEFORE----- 1700 **HOURS**

THIS TENDER CONTAINS THE FOLLOQWING DOCUMENTS.

**PART (I) - COMMERCIAL BID**

VOLUME-I : (GENERAL & SPECIAL CONDITIONS OF CONTRACT)

**(IN DUPLICATE)**

VOLUME-II : STANDARD TECHNICAL SPECIFICATIONS

**PART (II)** VOLUME-III : PRICE BID

These Tender Documents containing Part-I Technical Bid and Part-II Price Bid are issued to

M/s .....

.....

.....

(THESE TENDER DOCUMENTS ARE NOT TRANSFERABLE)

For Bharat Heavy Electricals Limited

**SENIOR MANAGER (PUR )**

**BHARAT HEAVY ELECTRICALS LIMITED**  
(A GOVERNMENT OF INDIA UNDERTAKING)  
POWER SECTOR - WESTERN REGION  
SHREEMOHINI COMPLEX  
345, KINGS WAY - NAGPUR 440 001

**PROCEDURE FOR SUBMISSION OF SEALED TENDERS**

---

THE TENDERERS MUST SUBMIT THEIR TENDERS AS REQUIRED IN TWO PARTS IN SEPARATE SEALED COVERS PROMINENTLY SUPERSCRIBED AS PART-I COMMERCIAL - BID AND PART-II PRICE BID AND ALSO INDICATING ON EACH OF THE COVERS THE TENDER SPECIFICATION NUMBER AND DUE DATE AND TIME AS MENTIONED ELSEWHERE. ( **Part-I - Vol-I to be submitted by bidder in Duplicate duly filled & signed . Also bidder must submit all credentials and documents as asked in this tender (as per OR & Check list of tender specification ) along with offer of bidder in Duplicate**)

**PART – I COMMERCIAL BID**

COMMERCIAL BID IS ISSUED IN TWO VOLUMES AS UNDER:

- |           |   |  |
|-----------|---|--|
| VOLUME-I  | : | SPECIAL AND GENERAL CONDITIONS OF CONTRACT<br><b>(TO BE SUBMITTED IN DUPLICATE )</b> |
| VOLUME-II | : | STANDARD TECHNICAL SPECIFICATIONS ( <b>One Copy only</b> )                           |

**PART - II VOLUME-III PRICE BID ( One Copy only)**

THESE TWO SEPARATE COVERS-I AND II SHALL TOGETHER BE ENCLOSED IN A THIRD ENVELOPE (COVER-III) ALONG WITH REQUISITE EMD AS INDICATED EARLIER AND THIS SEALED COVER SHALL BE SUPERSCRIBED AND SUBMITTED TO ADDL. GEN MANAGER (PURCHASE) AT THE ABOVE-MENTIONED ADDRESS BEFORE THE DUE DATE AS INDICATED.

The qualified bidder will be intimated separately about the status of their offer.

Bidder are requested to make specific note of the following conditions:

Contractor should have adequate resources including major T&P at his disposal for this job.

Contractor should have sound financial stability.

Bidder should meet quality requirement regarding workmanship, deployment of personnel, erection tools and necessary inspection, measurement & testing instruments.

All information as called for in various appendices and clauses of tender specification, should be furnished in completeness. Please refer the checklist.

The bidder, if any, shall obtain clarification on Tender Specifications, before submitting their offer.

**Offers must be submitted without any deviation.**

Offers received with any deviation or without relevant information as described above are liable to be rejected. **Price bids received in the form other than specified in Part-II (Price Bid) are liable to be rejected.**

**Bidder must sign & stamp all pages of this tender specification as an acceptance of tender conditions and must enclose this tender specification with their offer.**

**Bidder shall note that their offer will be considered subject to the approval of BHEL's customer.**

**Tender received after due date shall NOT be considered under any circumstances.**

## PROJECT INFORMATION

1. **Project:** 2 x 250 MW Extention Units 10 & 11 of Satpura Thermal Power Station
  2. **Location:** Sarni . Distt. –Betul (MP)
- DETAILS**

1.0	Location	P.O. Sarni, Betul Distt.- Madhya Pradesh
2.0	Nearest railway station	Ghoradongri 18 kms . from site (on Itarasi Nagpur line )
3.0 4.0	Name of the railway Proximity to and and landmark	Central railway 90 kms . Southeast of the Itarsi
5.0	Ambient air temperature a) Maximum Deg: b) Minimum Deg c) Reference temperature (for design of Electrical equipment/Device Deg.) d) Design Wet Bulb: e) Design Dry Bulb	48.5 °C 6.5 °C 50 °C  28 °C 42 °C
6.0	Relative Humidity a). Maximum % during monsoon b). Minimum % c). Design % (W/O affecting performance at maximum at max % humidity	96% 12%(April) 34%
7.0	Rainfall: a). Annual average mm b). Monthly average mm c). Period: d). Design maximum rainfall intensity mm/hr: e). Isckeraunic level	About (47.7") 1210mm Max .Sept. 381 mm June- October (July) 74 mm in 24 hours.  Thunder heard 11 days in June
8.0	Wind Velocity: a) Maximum Km/hr b) Wind Direction	10 km/hr Average 23° SSW
9.0	Seismic Data: a) Zone b) Design coefficient	III 0.06 g
10.0	Transport: Road situated on National/District Highway  Gauge:	Sarni is connected to Ghoradongri by 18Kms. long all weather District Road. Ghoradongri is 71 Kms. From Itarasi on Itarasi - Betul State Highway.  Broad Gauge (5'6")
11.0	Climatic Conditions:	Tropical

<p align="center"><b>Check List</b></p> <p align="center">(Vide Para 1.3 Of Section-I of General Conditions Of Contract)</p>	
--	--

1	Name of the Bidder with	
---	-------------------------	--

BHEL: PS WR		
BHE/PW/PUR/SAT-CVL/667	8	SIGN OF BIDDER WITH SEAL



<b>Check List</b> (Vide Para 1.3 Of Section-I of General Conditions Of Contract)			
15	<b>Month-wise deployment plan for major T&amp;P (Appendix-II)</b> is furnished	Yes	No
16	Whether all the pages of the Tender Specification documents are read, understood and signed	Yes	No
17	<b>Power of Attorney</b> enclosed in favour of person making offer	Yes	No
18	Bidder has familiarized himself with all Relevant Local Laws & Local Conditions	Yes	No
19	Safety Requirement of this work in a Running plant Premises has been understood.	Yes	No
20	Erection and Commissioning programme furnished	Yes	No
21	Whether contractor has left any job unfinished? If so, give reasons.	Yes	No
22	Whether any client has terminated the contractor's work before completion? If so, furnish reasons for the same	Yes	No
23	<b>BIDDER MUST FURNISH HERE THE FOLLOWING DETAIL FOR RELEASING EMD AND OTHER PAYMENTS DULY ENDORSED BY BANK ( IE SIGN &amp; STAMP BY BANK ).</b>  1 Name of the Company----- 2 Name of Bank----- 3 Name of Bank Branch----- 4 City/Place----- 5 Account Number----- 6 Account type----- 7 IFSC code of the Bank Branch----- 8 MICR code of the Bank Branch-----	Yes	No

Note: strike off or tick '**yes**' or '**no**', as applicable

Date:

Signature of Bidder

**BIDDERS MUST SUBMIT ALL NECESSARY DOCUMENTS AS BEING ASKED IN ABOVE CHECK LIST.**

## **DECLARATION STATEMENT**

I/WE, \_\_\_\_\_ HEREBY CERTIFY THAT ALL THE INFORMATION AND DATA FURNISHED BY ME WITH REGARD TO THIS TENDER SPECIFICATION NO.BHE/PW/PUR/SAT-CVL/667 ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE. I HAVE RECIVED ALL THE DOCUMENTS VIDE VOLUME-I, VOLUME-II & VOLUME-III (PRICE BID) COMPRISING THIS TENDER SPECIFICATION AND GONE THROUGH THE SPECIFICATION, CONDITIONS AND STIPULATIONS IN DETAIL AND AGREE TO COMPLY WITH THE REQUIREMENTS AND INTENT OF THE SPECIFICATION. I FURTHER CERTIFY THAT I AM DULY AUTHORISED REPRESENTATIVE OF THE UNDERMENTIONED TENDERER AND A VALID POWER OF ATTORNEY TO THIS EFFECT IS ALSO ENCLOSED.

TENDERER'S NAME AND ADDRESS

AUTHORISED REPRESENTATIVE'S SIGNATURE WITH  
NAME AND ADDRESS

**CERTIFICATE OF DECLARATION FOR CONFIRMING  
KNOWLEDGE ON SITE CONDITIONS**

We, M/s -----  
hereby declare and confirm that we have visited the project site at **Madhya Pradesh Power Generation Co. Ltd. (MPPGCL) 2x250 mw Satpura TPS, unit 10 # 11** referred in BHEL's **Tender specification No. BHE/PW/PUR//SAT-CVL/667** and require full knowledge and information about the site conditions. We further confirm that the above information is true and correct and we shall not be eligible for any-additional payment of any nature due to lack of knowledge or non – familiarization of site conditions.

BIDDERS'NAME AND ADDRESS

SIGNATURE & OFFICIAL SEAL OF  
AUTHORISED SIGNATORY

PLACE:

DATE:

**TENDER SPECIFICATION: BHE/PW/PUR/SAT-CVL/667**

**CERTIFICATE OF NO DEVIATION**

We, M/s -----  
Hereby certify and confirm that there are no deviations, either technical or commercial, sought by us in respect of the terms and conditions as in BHEL' **Tender Specification No. BHE/PW/PUR/SAT-CVL/667** and I am agreeing to all the terms and conditions mentioned in Tender Specification.

SIGNATUTRE OF THE TENDERER AND OFFICIAL SEAL

## SECTION-3

### OFFER OF CONTRACTOR

**SENIOR MANAGER (PURCHASE)**

BHARAT HEAVY ELECTRICALS LIMITED  
POWER SECTOR - WESTERN REGION  
SHREEMOHINI COMPLEX  
345, KINGS WAY  
NAGPUR 440 001

DEAR SIR,

I/WE HEREBY OFFER TO CARRY OUT THE WORK DETAILED IN TENDER SPECIFICATION NO.BHE/PW/PUR/SAT-CVL/667 ISSUED BY BHARAT HEAVY ELECTRICALS LIMITED, POWER SECTOR-WESTERN REGION, NAGPUR, IN ACCORDANCE WITH THE TERMS AND CONDITIONS THEREOF.

I/WE HAVE CAREFULLY PERUSED THE FOLLOWING DOCUMENTS CONNECTED WITH THE ABOVE WORK AND AGREE TO ABIDE BY THE SAME.

1. INSTRUCTIONS TO TENDERERS
2. GENERAL CONDITIONS OF CONTRACT
3. SPECIAL CONDITIONS OF CONTRACT
4. OTHER SECTIONS, APPENDICES, SCHEDULES AND DRAWINGS.

I/WE HAVE DEPOSITED/FORWARDED HERewith A SUM OF RS.2,00,000/- (RUPEES TWO LACS ONLY) TOWARDS EARNEST MONEY DEPOSIT (DETAILS IN CHECKLIST) WHICH SHALL BE REFUNDED SHOULD OUR OFFER NOT BE ACCEPTED. SHOULD OUR OFFER BE ACCEPTED, I/WE FURTHER AGREE TO DEPOSIT SUCH ADDITIONAL SUM WHICH ALONGWITH THE SUM OF EMD SHALL MAKE UP SECURITY DEPOSIT FOR THE WORK AS PROVIDED FOR IN THE TENDER SPECIFICATION WITHIN THE STIPULATED TIME AS MAY BE INDICATED BY BHEL, POWER SECTOR-WESTERN REGION, NAGPUR.

I/WE FURTHER AGREE TO EXECUTE ALL THE WORKS REFERRED TO IN THE SAID DOCUMENTS UPON THE TERMS AND CONDITIONS CONTAINED OR REFERRED TO THEREIN AND AS DETAILED IN THE APPENDICES ANNEXED THERETO.

PLACE:

SIGNATURE OF TENDERER:

DATE:

ADDRESS:

WITNESSES WITH THEIR ADDRESS

SIGNATURE

NAME

ADDRESS

1.

2.

# **SPECIAL CONDITION OF CONTRACT (SCC)**

**(FROM SECTION 4 TO 17 )**

**In case of any contradiction between GCC & SCC then stipulation under  
SCC will prevail**

## **SECTION-4**

### **SCOPE OF WORK**

#### **4.1 THE SCOPE OF WORK UNDER THESE SPECIFICATIONS IS CATEGORISED SPECIFIED AS UNDER.**

##### **A) CIVIL, STRUCTURAL AND ARCHITECTURAL WORK FOR:**

- 1 Power House Building.
2. Mill & Bunker Bay including raw coal bunkers, Transfer points, inter-connecting galleries including trestles
3. ESP/VFD control Room.
4. Paving in Main Power Block area (Transformer yard and up-to chimney)
5. Foundation for TG, BFP, Mill, Boiler, ID/FD/PA/Seal Air Fan & ESP including super structure & Deck
6. DG Building.
7. Compressor Building.
8. Civil and structural works related to Fuel Oil system (Pumping and heating unit building, pipe rack). F.O. Tank foundation and Dyke wall is excluded from Scope.
9. Air conditioning plant - civil works.
10. Service/Technical Building (It is one building only) - 1 No. of size 30m x 15m with floors at various levels viz. EL. 0.00, (+) 4.5m, (+) 8.5m, (+)13.5m and roof at (+)18.0m.
11. Transformer Yard - civil works (Rail track in transformer yard area along with TG Hall included), Chain link/ Barbed wire fencing in transformer yard & other area as required
12. CW pipe line civil works (Approx. 2.00m from A row including thrust block)
13. Pipes & Cable racks in Main Power Block area
14. Cables trenches, Pipe trenches, Duct banks, Sumps in main power block area (From transformer yard & up to chimney)
15. Rails for EOT cranes
16. Plant Roads & Drains
17. Under Ground Earthing systems, Earthing pits in Main Power block area

18. Sanitary lines, Septic Tank & soak pit for all the building under the scope (Sewer line to be extended up-to battery limit of Main Power Block).
19. Civil & structural work for Elevator Shaft (Passenger lift) in Power House including pit.
20. **Develop Fabrication drawings** of structural steel work based on the engineering drawings supplied by BHEL. For this, contractor has to appoint an agency approved by BHEL PEM New Delhi /Noida for design (joint design) & preparation of fabrication Drawings.

Any other civil work/building/structure required to complete system but not specifically included in the above list, shall be deemed to be included in the scope and shall be paid under relevant BOQ items at agreed rates and as per provision of contract.

- 21 **\*Arrangement of Construction water:** Contractor shall arrange construction water from nearest location of raw water reservoir of existing Power Plant by installing suitable Pump & lockable Pump room with all accessories and laying suitable diameter of pipeline from pumping station to the work site approx. 1.5M to 2.0KM . Contractor has to make necessary watch & ward arrangement & periodical maintenance for their water construction water supply systems). Drinking water tapping point shall be provided by Customer/MPPGCL from their nearest existing point free of charge & Contractor has to draw the line up to their office at their own cost.

**\*(No items has been provided in BOQ for construction water arrangement & Contractor has to arrange for adequate construction water supply including storage for min. 2 days in case of breakdown of pump etc. within their quoted rates.)**

**22. \*Arrangement of Construction Power:**

**a. Installation :** It is the responsibility of civil contractor to get suitable power connections from Madhya Pradesh Madhya Kshetra Vidut Vitran company Ltd (**MPMKVVC LTD**) for desired load according to their work requirement and the equipments to be operated for total Civil and structural works of 2 x 250 MW Main Power Block within the scope. It is further clarified that successful bidder shall work out the total power requirement and approach to **MPMKVVC LTD** for getting power connection from 11KV/33KV overhead line. The work shall include supply and installation of suitable transformer, getting the extension line of overhead 11KV/33KV line up-to the transformer to be installed at suitable location and further distribution to the work site with all accessories, cabling, DBs, safety devices, capacitors etc. as per the requirement of Electricity Regulations. etc. The work shall conform to standard practice of Electrical engineering including approval of statutory authority as per Electricity Regulations.

**b. Billing:** Contractor shall pay to MPMKVVC LTD. for the installation as well as for actual Power consumed on the job as per the energy meter installed on HT side @ of per unit prevailing tariff applicable from time to time. Contractor should note that it is mandatory for all major electrical instruments including



the welding machine to be fitted with suitable capacitors for improvement of Power factor.

**\*(No items has been provided in BOQ for construction Power arrangement & Contractor has to arrange for adequate construction Power supply within their quoted rates.)**

## **PROCUREMENT AND SUPPLY OF ALL CONSTRUCTION MATERIALS:**

Contractor shall procure and supply all the construction materials like **Cement, Reinforcement (TMT bars Fe-500), Structural steel, Decking & cladding sheets(all from approved Manufacturers), HSFG Bolt, MS Bolts, MS/GI/HCI/LDPE/HDPE/ UPVC/RCCHume pipes, Gratings, Rails, Inserts & Embedments, Earthing , Shuttering material, fine & coarse aggregates, Fly ash Bricks & all other materials** required for successful execution of job. Contractor shall obtain prior approval for all major materials from BHEL/MPPGCL before placing the order for procurement & shall submit all the relevant test reports from approved Lab. Besides the Manufacturer's test Certificate within their quoted rates.

### **APPROVED MANUFACTURERS FOR PROCUREMENT OF REINFORCEMENT & STRUCTURAL STEEL ARE**

#### **(i) M/s SAIL**

In case of non-availability of desired section of steel from the above manufacturers, Contractor has to obtain specific approval of Customer for other manufacturers. However in any case steel from re-rolling mills shall not be accepted.

### **APPROVED BRAND & MANUFACTURERS FOR PROCUREMENT OF CEMENT AND ITS USAGE:**

Both OPC Grade 43 or 53 may be used for concrete works except that OPC Grade 43 shall necessarily be used for the following structures:

- a) TG foundation top deck and sub – structures excluding foundation raft.
- b) Spring supported decks for all machine foundation.
- c) Chimney.
- d) Structures requiring Grade of concrete M30 and above.

### **APPROVED MANUFACTURERS ARE**

- (i) ULTRATECH**
- (ii) PRISM CEMENT SATNA**
- (iii) JAYPEE CEMENT**
- (iv) ACC**

- (ii) **BIRLA GOLD**
- (vi) **SHREE CEMENT (RAJASTHAN)**

**C) ARRANGEMENT OF TOOLS & PLANTS AND MACHINARIES:**

Contractor shall arrange all T&Ps, Machineries & equipments (ref. indicative list of T&Ps under Annexure) including **High Reach Crane of 250MT capacity** for erection of high structures like Main Power House, Bunker & Deaerator Structures including raw coal bunkers/silo, DG sets 2 nos. of min capacity **160 KVA** for power back-up should be made available at site during execution of work and maintain throughout the contract period. Contractor has to take consent of BHEL/MPPGCL before demobilization of any T&Ps from site.

**D) INSURANCE POLICY & LABOUR LICENSE:**

**(i) CAR (Civil All Risk) POLICY INCLUDING RISK DURING TRANSIT**

Contractor has to arrange on his own, an Insurance 'CAR' Policy including transit within his quoted rate. The Policy shall cover all risk of his materials like cement, reinforcement & structural steel and all other valuable bought out items during transit as well as storage and thereafter any damage/risk to the structure including cover to third party/surrounding properties, all T & P and other fixed assets which they may have to acquire and deploy at site.

**(ii) Accident Risk Policy/Workmen Compensation Policy (WCP)**

It is also the responsibility of the contractor to arrange for Accident Risk Policy/Workmen Compensation Policy for their workers from recognized Insurance company & submit the copy to BHEL along with labour License. The contractor has to arrange on his own insurance for their supplied materials like cement, steel and other valuable building materials during its transport, storage, till it goes to the permanent work.

**LABOUR LICENSE**

Contractor has to arrange Labour license from labour commissioner office as per procedure/ prevailing Act on the basis of Form-V issued by the Principle Employer (MPPGCL) & shall submit to BHEL before commencement of work.

**E) SERVICE TAX, SALES & WORKS CONTRACT TAX:**

AS PER THE PROVISIONS OF **SECTION-5**

**F) EPF REMITTENCES AND DAILY WAGES SHEET OF WORKERS:**

Contractor will deduct the necessary amount from his employees/workers towards provident fund and contribute the equal amount as per Government of India Labour Laws. This amount will be deposited regularly to the Provident

Fund Commissioner and get the account code. Contractor shall submit the above account code duly certified by PF Commissioner to BHEL site office along with the verified wages sheet periodically.

**G) CONTRACTOR HAS TO SUBMIT PERIODICALLY PROOF OF PAYMENT OF ROYALTY CHARGES FOR MATERIALS USED AT WORKS.**

**H) OTHER STATUTORY OBLIGATION:** SHALL BE IN CONTRACTOR SCOPE. BHEL/MPPGCL SHALL ONLY PROVIDE NECESSARY DATA/DRAWINGS REQUIRED FOR THIS JOB.

#### **4.2 OTHER IMPORTANT POINTS WHICH ARE IN-BUILT IN SCOPE OF WORK:**

THE SCOPE OF WORK UNDER THIS CONTRACT IS DEEMED TO BE COMPLETE ONLY WHEN SO CERTIFIED BY THE ENGINEER INCHARGE OF BHEL.

##### **4.2.1**

The works to be performed under this contract consist of providing all labour, supervision, scaffolding construction equipments, tools and plants, temporary works, other supplies, transportation and all incidental items not shown or specified but reasonably implied or necessary for the proper completion of work in all respects. Testing of all materials, concrete, earthwork other allied works, preparation of bar bending schedules on the basis of construction drawings, preparation of fabrication drawings etc. are included on the rates of items of work. Works shall only be carried out with approved Construction drawings.

##### **4.2.2**

Supply, Fabrication and erection of structural steel work involving rolled section, sections fabricated out of plates chequered/ electroforged grating hand rails, primer and final painting for all steel structural works including supply of HSFG Bolts if any, low hydrogen quality electrodes for welding, non destructive testing etc. Complete as per Quality Plan/Customer requirements.

##### **4.2.3**

The area of work shall be cleared of all vegetation, rubbish and other objectionable matter and materials removed shall be burnt or otherwise disposed of as directed by the Engineer-in-Charge.

No separate payment for these operations shall be made. The cost of all these operations shall be deemed to have been included in the unit rates rendered for the different items under bill of quantities.

##### **4.2.4**

All the works areas shall be adequately flood lighted to the satisfaction of the Engineer-in-Charge when the work is in progress during the night shifts.

##### **4.2.5**

The unit rates shall include all material equipment, fixtures, labour construction plant, temporary works and everything whether of permanent or temporary nature necessary for the completion of job in all respects.

##### **4.2.6**

**The unit rates quoted for various items of B.O.Q shall include all the stipulations mentioned in technical specifications under Section C and Section D, all expenditure towards arrangement of construction Power & Water etc. and nothing extra over B.O.Q rates shall be payable. In case of any conflict between Section – C and Section – D then stipulation in Section –C will prevail.**

- 4.2.7 Design drawings showing enough details for the construction as per the specification shall be furnished to the contractor in a phased manner as far as possible during execution.
- 4.2.8 CUSTOMER SHALL PROVIDE LAND OUTSIDE PLANT PREMISES FOR REGULAR DISPOSAL AND ASSOCIATED ACTIVITIES IN RESPECT OF EXCAVATED SURPLUS EARTH, DISMANTLED MATERIALS GENERATED FROM THIS WORK. REFER SECTION-5 FOR FURTHER DETAILS IN THIS REGARD. RATES QUOTED SHALL BE INCLUSIVE OF ABOVE CONDITION.
- 4.2.9 **CNS** SOIL FOR BACKFILLING SHOULD BE AS PER SPECIFICATIONS AND FROM APPROVED SOURCE. CONTRACTOR SHALL ARRANGE HIS OWN BORROWPITS FOR CNS SOIL ETC., REQUIRED FOR BACKFILLING. RATES QUOTED SHOULD BE INCLUSIVE OF THIS FACTOR AS WELL AS APPLICABLE ROYALTY CHARGES. ONLY BORROW PIT MEASUREMENT OR THE EXCAVATED PIT QUANTITY WILL BE CONSIDERED FOR MEASUREMENT AND NO TRUCK MEASUREMENT SHALL ENTERTAINED.

4.3.0

#### **USE OF READYMIX/ PREMIX CONCRETE:**

**CONTRACTORS ARE SUPPOSED TO USE READY MIX/PREMIX CONCRETE, PRODUCED FROM THEIR OWN BATCHING PLANT FOR EACH AND EVERY GRADE OF CONCRETE WITH MINIMUM CEMENT CONTENT AS PER IS 456 (LATEST EDITION) WITH THE APPROVAL OF BHEL/MPPGCL. HOWEVER CONTRACTOR SHALL BE PERMITTED TO GO FOR THE USE OF CONVENTIONAL METHOD OF PRODUCING CONCRETE FOR SMALL QTY OF PCC.**

THE CONTRACTOR SHALL INSTALL HIS CONCRETE MIXTURE MACHINE, BATCHING PLANT, ARRANGE ALL T&P LIKE CONCRETE PUMP, TRANSIT MIXERS ETC., AT THE LOCATION PROVIDED BY CUSTOMER/BHEL AND THE LAND REQUIRED FOR THIS SHALL BE PROVIDED BY CUSTOMER FREE OF CHARGE. RATE QUOTED SHALL BE INCLUSIVE OF THIS FACTOR.

4.3.1

IT WILL BE THE RESPONSIBILITY OF CONTRACTOR TO ARRANGE FOR UN-INTERRUPTED MOVEMENT OF THE CONCRETE TRANSIT MIXTURE THROUGH THE PASSAGE GATE DURING THE CONCRETING THROUGH BATCHING PLANT TO AVOID ANY DETERIORATION OF QUALITY OF CONCRETE. THE CONTRACTOR SHALL OBTAIN ADVANCE PERMIT/ GATE PASSES, PERMISSION FROM THE CUSTOMER IN THIS REGARD. ANY LOSS OF MATERIAL OR CONCRETE MIX ETC., DUE TO ANY PROBLEM DURING TRANSIT OF SUCH PRE-MIX CONCRETE SHALL ENTIRELY BE ON CONTRACTOR'S ACCOUNT AND BHEL SHALL NOT BE RESPONSIBLE FOR SUCH LOSS IN ANY MANNER.

4.4.0

ALL ARCHITECTURAL ITEMS SHALL BE PURCHASED FROM ONLY THE VENDORS APPROVED BY BHEL/MPPGCL. LIST OF SUCH APPROVED VENDORS IS APPENDED WITH THESE SPECIFICATIONS. THE LIST MAY UNDERGO REVISIONS FROM TIME TO TIME. THEREFORE, THE CONTRACTOR SHALL ASCERTAIN CURRENCY OF APPROVAL IN RESPECT OF ANY VENDOR FROM WHOM HE IS LIKELY TO SOURCE ANY ITEM.

4.4.1

CONTRACTOR SHALL TAKE DELIVERY OF CERTAIN STEEL MATERIALS LIKE FOUNDATION BOLTS FOR BOILER, ESP, AND OTHER INSERTS FOR TG DECK ETC. SUPPLIED BY BHEL UNITS FROM BHEL SITE STORES IN THE PRESCRIBED PROFORMA. FIXING OF FOUNDATION BOLTS IN IMPORTANT EQUIPMENT FOUNDATIONS LIKE BOILER, ESP, ID FANS, INSERTS IN TG DECK SHALL BE DONE BY USING STEEL TEMPLATES EXCLUSIVELY MADE FOR THIS

PURPOSE WITHIN THE QUOTED RATE. WOODEN TEMPLATES SHALL NOT BE PERMITTED. BOLT AND INSERTS AFTER FIXING IN POSITION SHALL BE PROPERLY WELDED WITH ADJACENT STEEL/REINFORCEMENT MEMBER TO RETAIN IN CORRECT POSITION AND TO ENSURE ALIGNMENT/VERTICALITY DURING CONCRETING.

#### **4.5 WELDING**

WELDING SHALL BE DONE BY THE QUALIFIED WELDERS. WELDER'S TEST TO BE CONDUCTED AT SITE IN PRESENCE OF BHEL/BHEL'S CUSTOMER. PROCESS QUALIFICATION IF REQUIRED SHALL BE ARRANGED BY CONTRACTOR. ALL SAMPLES FOR THE WELDER'S QUALIFICATION TEST SHALL BE ARRANGED BY CONTRACTOR. QUOTED RATE SHALL BE INCLUSIVE OF ALL THE EXPENDITURE TOWARDS TESTING OF WELDERS FOR DESTRUCTIVE AND NON-DESTRUCTIVE TEST, TESTING AND APPROVAL OF WELDERS ETC., COMPLETE. ALL WELDED JOINTS SHALL BE SUBJECT TO THE ACCEPTANCE OF BHEL ENGINEER. ALL THE WELDED JOINTS SHALL BE CLEANED OF SLAG ETC., AND PAINTED WITH PRIMER TO PREVENT CORROSION.

#### **4.6**

CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENT INSIDE/OUTSIDE THE PLANT PREMISES FOR STORAGE OF THE STEEL, CEMENT AND OTHER MATERIALS INCLUDING THE BUILDING MATERIALS. SPACE FOR DEVELOPMENT OF SUCH INFRASTRUCTURE FACILITIES SHALL BE PROVIDED BY CUSTOMER/MPPGCL AT FREE OF COST. ALSO FOR FABRICATION OF STEEL STRUCTURALS AND REINFORCEMENTS THE NECESSARY AREA OUTSIDE THE PLANT PREMISES WITH ALL NECESSARY INFRASTRUCTURES HAS TO BE ARRANGED BY THE CONTRACTOR. ALL COSTS, DUTIES, LAVIES, TAXES AND INCIDENTAL, CHARGES ETC., HAVE TO BE BORN BY THE CONTRACTOR. REQUISITE FENCING AND OTHER SUITABLE SECURITY ARRANGEMENTS ETC., SHALL BE THE CONTRACTOR'S RESPONSIBILITY. TRANSPORT OF THE WORKED AND FABRICATED ITEMS, ARRANGING GATEPASSES AND OTHER PERMITS ETC., IS ALSO PART OF CONTRACTOR'S RESPONSIBILITY. THE RATES QUOTED SHALL BE INCLUSIVE OF ALL THE ABOVE AND RELATED FACTORS. NO CLAIM WHATSOEVER WILL BE ENTERTAINED BY BHEL IN THIS REGARD. REFER SECTION-5 IN THIS REGARD.

#### **4.7 GENERAL**

##### **4.7.1**

THE DETAILED SCOPE OF WORK COVERED IN THESE SPECIFICATIONS IS NOT A COMPREHENSIVE LIST OF THE ITEMS OF WORK INVOLVED. THE DETAILED SCOPE OF WORK MAY VARY CONSIDERABLY DEPENDING ON THE ACTUAL CONSTRUCTION REQUIREMENTS AND AS PER DRAWINGS RELEASED.

##### **4.7.2**

THE SCOPE OF WORK WILL ALSO INCLUDE SUCH OTHER RELATED WORKS, IN AND OUTSIDE OF BATTERY LIMIT, ALTHOUGH THEY MAY NOT BE SPECIFICALLY MENTIONED IN THESE PARAGRAPHS AND ALL SUCH INCIDENTAL ITEMS NOT SPECIFIED, BUT REASONABLY IMPLIED AND NECESSARY FOR COMPLETION OF THE JOB AS A WHOLE, AS DESIRED AND AS DIRECTED BY THE ENGINEER.

##### **4.7.3**

THE DRAWINGS ENCLOSED WITH THIS TENDER ARE INTEND TO GIVE THE TENDERER A GENERAL IDEA OF THE TYPE AND EXTENT OF WORK INVOLVED. THE DRAWINGS ARE AS SUCH ONLY INDICATIVE AND NOT TO BE CONSTRUED AS THE EXACT CONSTRUCTION DRAWINGS. THE WORK SHALL BE EXECUTED AS PER THE "AFC" DRAWING (APPROVED FOR CONSTRUCTION) SUPPLIED BY BHEL FROM TIME TO TIME (2 SETS) IN PHASED MANNER.

##### **4.7.4**

ALL EQUIPMENTS SHALL BE HANDLED VERY CAREFULLY TO PREVENT ANY DAMAGE OR LOSS. THE MATERIAL FROM THE CONTRACTOR'S STORAGE YARD SHALL BE MOVED TO THE ACTUAL SITE OF ERECTION/ LOCATION AT THE APPROPRIATE TIME AS PER THE

DIRECTION OF BHEL ENGINEER SO AS TO AVOID DAMAGE/LOSS OF SUCH MATERIAL, CONGESTION AT SITE.

4.7.5

MATERIALS SHALL BE STACKED NEATLY, PRESERVED AND STORED IN THE CONTRACTOR'S SHED AND WORK AREAS IN AN ORDERLY MANNER.

4.7.6

SHOULD THE CONTRACTOR OR HIS WORKMEN OR SERVANTS BREAK, DEFACE, INJURE OR DESTROY ANY PART OF A BUILDING, ROAD, KERBS, FENCE, ENCLOSURES, WATER PIPES, CABLES, DRAINS, ELECTRIC OR TELEPHONE POSTS OR WIRES, TREES OR ANY OTHER PROPERTY, OR TO ANY PART OF ERECTED EQUIPMENTS AND STORED COMPONENTS ETC., THE CONTRACTOR SHALL MAKE THE SAME GOOD AT HIS OWN EXPENSE OR IN DEFAULT, THE BHEL SITE ENGINEER MAY CAUSE THE SAME TO BE MADE GOOD BY OTHER AGENCY OR BY OTHER MEANS AND DEDUCT THE EXPENSE WITH BHEL OVERHEAD (OF WHICH THE SITE ENGINEER'S DECISION IS FINAL) FROM ANY SUMS THAT MAY BE THEN OR AT ANY TIME THEREAFTER BECOME DUE TO THE CONTRACTOR OR FROM HIS SECURITY DEPOSIT OR ANY OTHER MONEY DUE.

4.7.7

THE WORK HAS TO BE EXECUTED WITH THE CONSTRAINTS LIKE RAIN, INSUFFICIENT SPACE, IMPROPER APPROACH ROADS ETC., AND IN CONJUNCTION WITH NUMEROUS OTHER OPERATIONS AT SITE. THE CONTRACTOR AND HIS PERSONNEL SHALL COOPERATE WITH OTHER PERSONNEL/CONTRACTOR, COORDINATING HIS WORK WITH OTHERS AND PROCEED IN A MANNER THAT SHALL NOT DELAY OR HINDER THE PROGRESS OF WORK AS A WHOLE.

4.7.8

RECOVERIES WILL BE MADE FROM CONTRACTOR'S BILLS FOR ANY LIABILITY ACCRUED TO BHEL/MPPGCL FOR THE ACCIDENTS AND REFUND OF THE SAME SHALL BE CONSIDERED LATER, AFTER THE CLAIM IS FULLY SETTLED BY INSURANCE AUTHORITIES.

4.7.9

THE CONTRACTOR SHALL SUBMIT SURVEY REPORT/PERFORMANCE REPORT OF THE TOOLS AND PLANTS DEPLOYED BY HIM AND BEING UTILISED ON THE WORK UNDER THE SCOPE. THESE SURVEY REPORTS/PERFORMANCE REPORTS ARE TO BE OBTAINED BY CONTRACTOR FROM THE CUSTOMER OF BHEL/INSURANCE AUTHORITIES AND SUBMITTED TO BHEL AT NO EXTRA COST.

4.7.10

IN CASE, ANY ADDITIONAL EXPENDITURE IS/TO BE INCURRED IN WORK DURING EXECUTION ARISING OUT OF THE FAULTY EXECUTION OF SUCH WORK BY THE CONTRACTOR, THE SAME SHALL BE BORNE BY THE CONTRACTOR.

**4.8 ALSO INCLUDED IN THE SCOPE**

UNLESS OTHERWISE SPECIFIED, THE WORK TO BE PROVIDED FOR BY THE CONTRACTOR FOR THE ITEMS AS MENTIONED IN THE "SCHEDULE OF ITEMS"/ RATE SCHEDULE SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

4.8.1

FURNISHING MANUFACTURER'S TEST CERTIFICATES AND LABORATORY REPORT IN RESPECT OF THE PRODUCTS USED OR INTENDED TO BE USED, IF CALLED FOR IN THE SPECIFICATIONS OR IF SO DESIRED BY THE ENGINEER. APPROVAL OF THESE MANUFACTURER'S TEST CERTIFICATES SHALL BE OBTAINED MANDATORILY FROM BHEL PRIOR TO USE OF RESPECTIVE MATERIALS WHICH OTHERWISE MAY RENDER THESE MATERIALS LIABLE FOR REJECTION.

4.8.2

BHEL: PS WR

BHE/PW/PUR/SAT-CVL/667

FURNISHING SAMPLES OF ALL MATERIALS REQUIRED BY THE ENGINEER FOR TESTING/INSPECTION AND APPROVAL FOR USE IN THE WORKS. THE SAMPLES MAY BE RETAINED BY THE ENGINEER FOR FINAL INCORPORATION IN THE WORKS.

4.8.3

GIVING ALL NOTICES, PAYING ALL FEES, TAXES ETC. IN ACCORDANCE WITH THE GENERAL & SPECIAL CONDITIONS OF CONTRACT, THOSE ARE REQUIRED FOR ALL WORK .

4.8.4

ARRANGING MANUFACTURER'S SUPERVISION FOR ITEMS OF WORK DONE AS PER MANUFACTURERS' SPECIFICATION WHEN SO SPECIFIED.

4.8.5

CARRYING OUT TOPOGRAPHIC SURVEY OF THE ENTIRE PLOT AND ESTABLISH LEVELS AND CO-ORDINATES AT SUITABLE INTERVALS FROM EXISTING GRID LEVELS AND CO-ORDINATES FURNISHED BY THE OWNER ESTABLISH BENCH MARKS, SETTING OUT THE LOCATION AND LEVELS OF PROPOSED STRUCTURES, CONSTRUCTION AND MARKING OF REFERENCE PILLARS AND OTHER IDENTIFICATION WORKS ETC. THE CONTRACTOR SHALL PROVIDE THE OWNER/BHEL SUCH ASSISTANCE, INSTRUMENTS, MACHINES, LABOUR AND MATERIALS AS ARE NORMALLY REQUIRED FOR EXAMINING, MEASURING AND TESTING ANY WORK AND THE QUALITY, WEIGHT OR QUANTITY OF ANY MATERIAL USED.

4.8.6

PROVIDING ALL INCIDENTAL ITEMS NOT SHOWN OR SPECIFIED BUT REASONABLY IMPLIED OR NECESSARY FOR THE SUCCESSFUL COMPLETION OF THE WORK IN ACCORDANCE WITH CONTRACT.

4.8.7

***LIASIONING WITH AND OBTAINING ALL APPLICABLE CLEARANCE FROM CONCERNED AUTHORITY (IN ANY) FOR THE PORTION OF WORK EXECUTED UNDER THESE SPECIFICATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. BHEL WILL PROVIDE ONLY THE TECHNICAL ASSISTANCE LIKE FURNISHING TECHNICAL INFORMATIONS ETC. IN THIS REGARD. ALL STATUTORY FEES PAID IN THIS REGARD SHALL BE RE-IMBURSED ON ACTUALS BY BHEL ON PRODUCTION OF PROOF OF PAYMENT THEREOF. ALL OTHER ARRANGEMENTS AND EXPENSES SHALL BE BORNE BY THE CONTRACTOR.***

4.9.0 **WORK BY OTHERS:**

NO WORK UNDER THIS SPECIFICATION WILL BE PROVIDED BY ANY AGENCY OTHER THAN THE CONTRACTOR UNLESS SPECIFICALLY MENTIONED ELSEWHERE IN THE CONTRACT.

4.10

CONTRACTOR SHALL DISPLAY 'DANGER BOARDS' AS PER INSTRUCTION OF BHEL/CUSTOMER AS PER REQUIREMENT.

4.11

CONTRACTOR SHALL NOT BE ALLOWED TO BRING ANY INFLAMMABLE MATERIAL INSIDE THE PLANT. HOWEVER, FOR ABSOLUTE REQUIREMENT OF THESE MATERIALS, CONTRACTOR SHALL HAVE TO TAKE ADVANCE PERMISSION/APPROVAL FROM BHEL/CUSTOMER AND SHALL STORE IN PROPER PLACE FOLLOWING ADEQUATE SAFETY MEASURES AND SHALL PUT BANNER/BOARD DANGER/ INFLAMMABLE /HIGHLY INFLAMMABLE/NO SMOKING' AS PER THE REQUIREMENT OF BHEL/CUSTOMER.

4.12

CONTRACTOR SHALL PROVIDE SUFFICIENT QUANTITIES OF FIRE HYDRANT (WATER, SAND) AND FIRE EXTINGUISHERS AT SAFE/ACCESSIBLE DISTANCE WHILE CARRYING OUT HOT WORK. CONTRACTOR SHALL DEPLOY HIS TRAINED PERSONS FOR OPERATION OF SUCH SAFETY EQUIPMENT.

#### **4.13 FIELD QUALITY LAB.**

THE CONTRACTOR HAS TO ESTABLISH A SEPARATE FIELD QUALITY LAB AT SITE WITH ALL REQUISITE INSTRUMENTS AND QUALIFIED ENGINEERS/SUPERVISOR FOR DAY-TO-DAY QUALITY CHECKS OF CONCRETE AND OTHER BUILDING MATERIALS DURING THE PROGRESS OF WORK. ALL QUALITY RECORDS AND LOGSHEETS SHALL BE MAINTAINED AS PER THE REQUIREMENT OF BHEL/BHEL'S CUSTOMER AND AS PER FIELD QUALITY PLAN APPROVED BY BHEL/MPPGCL

#### **4.14 JOINT CHECKING OF WORK AND MEASUREMENT OF WORK DONE FOR BILLING ;**

SINCE THIS BEING COST PLUS CONTRACT OF BHEL WITH MPPGCL, IT IS MANDATORY FOR CONTRACTOR TO INVITE BHEL AS WELL AS MPPGCL BOTH FOR DAY TO DAY CHECKING OF FOUNDATION & OTHER WORKS BEFORE CASTING OR COMMENCEMENT OF WORK & OBTAIN CLEARANCE IN POUR CARD/PROTOCOLS FORMATS AS PER FQP (FIELD QUALITY PLAN) DULY SIGNED BY ALL THE THREE AGENCIES. THE POUR CARD/PROTOCOLS SHALL BE THE BASIS OF MEASUREMENT OF WORK DONE FOR PREPARATION OF MONTHLY RA BILLS.

#### **4.15 SUBMISSION OF MONTHLY RA BILLS**

CONTRACTOR SHALL SUBMIT HIS MONTHLY RA BILLS TO BHEL ON EVERY 26<sup>TH</sup> DAY OF THE MONTHS FOR THE PAYMENT OF WORK DONE FROM 24<sup>TH</sup> OF PREVIOUS MONTH TO 25<sup>TH</sup> OF NEXT MONTH. BILL SHALL ACCOMPANY WITH ALL POUR CARDS/PROTOCOL SIGNED BY BHEL/MPPGCL ON DAY TO DAY BASIS. AFTER VERIFICATION & SCRUTINY OF THE BILL THE SAME SHALL BE FORWARDED TO MPPGCL FOR THEIR VETTING. HOWEVER PAYMENT SHALL BE RELEASED AS PER THE TERMS OF PAYMENT MENTIONED UNDER CLAUSE NO. 12.



## SECTION-5

### **OBLIGATIONS OF THE CONTRACTOR (TOOLS, TACKLES, MATERIALS, CONSUMABLES ETC.)**

#### 5.1

**MPPGCL/BHEL** SHALL PROVIDE LAND OUTSIDE THE PROJECT FOR CONSTRUCTION OF TEMPORARY LABOUR COLONY AT FREE OF COST. CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENT FOR CONSTRUCTION OF LABOUR COLONY INCLUDING POWER SUPPLY & POTABLE/DOMESTIC USE WATER SUPPLY AT THEIR OWN COST.

#### 5.2 **TOOLS AND TACKLES**

##### 5.2.1

ALL TOOLS AND TACKLES LIKE CONCRETE BATCHING MIXING PLANT OF REQUIRED CAPACITY, TRANSIT MIXER MACHINES, CONCRETE PUMPS, POCLAINS, TIPPERS, ROAD ROLLERS, WELL POINT DEWATERING SYSTEM, DEWATERING SYSTEM, VIBRATORS, PLATE VIBRATORS, CRANES OF ADEQUATE CAPACITY (INCLUDING HIGH REACH) FOR UNLOADING, LOADING OF RAW & FABRICATED MATERIALS, PRE-ASSEMBLY, ETC TO BE DONE AT CONTRACTOR'S STORAGE CUM FABRICATION YARD OUTSIDE/INSIDE PLANT PREMISES INCLUDING OPERATOR/DRIVER, FUEL, LUBRICANTS, ALL OTHER CONSUMABLES AND REQUIREMENTS HAVE TO BE ARRANGED BY THE CONTRACTOR. **BHEL WILL NOT PROVIDE ANY TOOLS AND PLANTS INSIDE/OUTSIDE PLANT PREMISES.**

##### 5.2.2

ALL TOOLS AND TACKLES TO BE USED BY THE CONTRACTOR FOR THE WORK SHALL HAVE THE PRIOR APPROVAL OF BHEL ENGINEER IN REGARD TO BRAND, QUALITY AND SPECIFICATION.

##### 5.2.3

CONTRACTOR SHALL PROVIDE ALL THE NECESSARY SCAFFOLDING MATERIALS, TEMPORARY STRUCTURES AND NECESSARY SAFETY DEVICES ETC.

##### 5.2.4

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 ALTERNATE ARRANGEMENTS EXPEDITIOUSLY SO THAT THE PROGRESS OF WORK IS NOT HAMPERED.

##### 5.2.5

IN THE EVENT OF CONTRACTOR FAILING TO ARRANGE THE REQUIRED TOOLS, PLANTS, MACHINERY, EQUIPMENT, MATERIAL AND NONAVAILABILITY OF THE SAME OWING TO BREAKDOWN, BHEL WILL RESORT TO HIRING OUT THE SAME FROM OUTSIDE AGENCIES OR MAY PROVIDE THEIR EQUIPMENT IF AVAILABLE OR MAY RESORT TO BUYING OF EQUIPMENT/MATERIAL AT THE COST OF CONTRACTOR. FULL COST OF EQUIPMENT/HIRE CHARGES/RENTAL CHARGES ALONGWITH DEPARTMENTAL OVERHEADS @ 30% WILL BE CHARGED TO THE CONTRACTOR.

##### 5.2.6

THE T&P TO BE ARRANGED BY THE CONTRACTOR SHALL BE IN PROPER WORKING CONDITION. THE OPERATION SHALL NOT LEAD TO UNSAFE CONDITIONS. THE MOVEMENTS OF CRANES AND OTHER EQUIPMENT SHOULD BE SUCH THAT NO DAMAGE/ BREAKAGE OCCURS TO THE FOUNDATIONS, EQUIPMENTS, MATERIAL AND MEN. ALL ARRANGEMENTS FOR MOVEMENT OF ALL HIS T&Ps ETC., SHALL BE CONTRACTOR'S RESPONSIBILITY.

##### 5.2.7

FOR FULL WELDING OF STRUCTURES, ONLY WELDING GENERATORS/ WELDING RECTIFORMERS MAY BE ALLOWED FOR USE. THE USE OF WELDING TRANSFORMERS WILL BE SUBJECT TO THE APPROVAL OF BHEL ENGINEER.

5.2.8

**SINCE THE MAJORITY OF THEIR EQUIPMENTS, T&P HAVE TO BE STATIONED IN THEIR FABRICATION YARD, BATCHING PALNT AREA OUTSIDE THE PLANT, CONTRACTOR SHALL TAKE INTO ACCOUNT ALL FACTORS, IN THE PRICE QUOTED, INCLUDING FREQUENT MOVEMENT OF TOOLS AND PLANTS INSIDE AND OUTSIDE THE PLANT PREMISES.**

5.2.9

CONTRACTOR SHALL FURNISH THE PROOF OF OWNING THE MAJOR TOOLS AND PLANTS.

### **5.3 CONSUMABLES**

5.3.1

THE CONTRACTOR SHALL PROVIDE ALL CONSUMABLES REQUIRED FOR CARRYING OUT THE WORK COVERED UNDER THIS SCOPE OF WORK.

5.3.2

ALL CONSUMABLES TO BE PROCURED AND USED FOR THE WORK MAY HAVE TO HAVE PRIOR APPROVAL OF BHEL ENGINEER IN REGARD TO BRAND AND QUALITY SPECIFICATION.

### **5.4 WELDING ELECTRODES AND GASES**

5.4.1

ALL THE REQUIRED WELDING ELECTRODES AS APPROVED BY BHEL SHALL BE ARRANGED BY CONTRACTOR AT HIS COST. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN APPROVAL OF BHEL, BEFORE PROCUREMENT REGARDING SUPPLIER, TYPE OF ELECTRODES ETC. ON RECEIPT OF THE ELECTRODES AT SITE, IT SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY BHEL REGARDING TYPE OF ELECTRODES, BATCH NUMBER AND DATE OF EXPIRY ETC.

BHEL RESERVES THE RIGHT TO REJECT THE USE OF ANY ELECTRODES AT ANY STAGE, IF FOUND DEFECTIVE BECAUSE OF BAD QUALITY, IMPROPER STORAGE, EXPIRY DATE, UNAPPROVED TYPE OF ELECTRODES ETC. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPLACE THE SAME AT HIS COST WITHOUT LOSS OF TIME.

5.4.2

WELDING ELECTRODE STORAGE FACILITY (ROOM) HAVING EXTERNAL HEATING ARRANGEMENT TO CONTROL TEMPERATURE AND HUMIDITY AS PER THE SPECIFICATIONS OF BHEL SHALL BE PROVIDED.

5.4.3

ALL THE REQUIRED GASES LIKE OXYGEN, ACETYLENE, ETC. SHALL BE PROVIDED BY THE CONTRACTOR AT HIS COST.

5.4.4

IF AT ANY TIME DURING THE EXECUTION OF WORK, IT IS NOTICED THAT THE WORK IS SUFFERING ON ACCOUNT OF NONAVAILABILITY OF INPUTS FROM THE CONTRACTOR'S SIDE LIKE ELECTRODES, GASES AND OTHER MATERIALS, TOOLS & PLANTS, THEN, BHEL WILL MAKE ALTERNATE ARRANGEMENTS AND THE NECESSARY COSTS WITH OVERHEADS @ 30% SHALL BE RECOVERED.

5.4.5

MONTHLY CONSUMPTION DETAILS IN RESPECT OF ALL MAJOR CONSUMABLES SHALL BE SUBMITTED TO BHEL.

### **5.5 FIELD OFFICE, STORES, FABRICATION YARD FOR STRUCTURALS, DISPOSAL AREA FOR EXCAVATED SURPLUS EARTH ETC.**

### **5.5.1 SITE OFFICE & STORES:**

THE CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENTS FOR FIELD OFFICE, STORE SHED FOR STORING CEMENT & OTHER PROJECT MATERIALS AND SITE STORES FOR STORING SMALL T&Ps, HANDTOOLS, ETC. ONLY THE OPEN SPACE FOR THIS PURPOSE WILL BE PROVIDED BY BHEL/MPPGCLFREE OF CHARGE.

### **MAJOR STORES AND FABRICATION YARD FOR STRUCTURALS**

#### **(A)**

SPACE WILL BE MADE AVAILABLE IN/OUTSIDE PLANT PREMISES AS PER THE AVAILABILITY FOR STORAGE OF CONTRACTOR'S MATERIALS LIKE CEMENT, STEEL, T&Ps, CONSUMABLES INCLUDING WELDING ELECTRODES ETC., AND FOR FABRICATION OF STRUCTURALS. CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENT FOR STORAGE OF CEMENT, STEEL, CONSUMABLES AND MAJOR TOOLS AND PLANTS INCLUDING BATCHING PLANTS, OTHER VALUABLE MATERIAL BROUGHT FOR THE WORK. SIMILARLY SPACE FOR STORAGE, FABRICATION, PRE-ASSEMBLY OF STRUCTURALS SHALL BE PROVIDED BY THE CUSTOMER IN/OUTSIDE THE PLANT PREMISES.

- (B) CLOSE STORAGE SHED TO BE USED FOR STORAGE OF CEMENT SHOULD HAVE ADEQUATE CAPACITY (MIN. 10,000 BAGS AT A TIME) AND PROTECTED ENOUGH AGAINST LEAKAGE DURING MONSOON AND DAMPNESS. STORING OF CEMENT AND STEEL SHALL BE DONE FOR THE STANDARD PRACTICE OF CIVIL ENGINEERING AND AS PER THE INSTRUCTION OF BHEL.

- (C) CONTRACTOR SHALL PROVIDE TARPAULINS, SLEEPERS AND ANY OTHER MATERIALS / AID REQUIRED FOR STORAGE OF ALL THEIR MATERIALS IN THEIR STORAGE CUM FABRICATION YARD AS WELL AS AT SITE.

### **5.5.3 AREA FOR DISPOSAL OF EXCAVATED SURPLUS EARTH**

AREA FOR DISPOSAL OF EXCAVATED SURPLUS EARTH SHALL BE PROVIDED BY THE CUSTOMER AT FREE OF COST OUTSIDE THE BATTERY LIMIT/PROJECT PREMISES. CONTRACTOR SHALL ARRANGE PROGRESSIVE DISPOSAL OF EXCAVATED SURPLUS EARTH AS ACCUMULATION OF EXCAVATED EARTH SHALL NOT BE PERMITTED. HENCE CONTRACTOR SHALL DISPOSE OFF THE EXCAVATED EARTH GENERATED DURING EXECUTION OF WORK WHILE, IF PERMITTED, KEEPING THE SUFFICIENT QUANTITY OF GOOD EXCAVATED EARTH FOR BACKFILLING. ALSO, LEVELLING, CONSOLIDATION ETC., REQUIRED TO BE DONE ON THE DISPOSED EARTH IN THE SAID AREA SHALL BE PERFORMED BY THE CONTRACTOR. RATES QUOTED SHALL BE INCLUSIVE OF ALL COST FACTORS. BHEL WILL NOT ENTERTAIN ANY CLAIM WHATSOEVER FOR COMPENSATION/ RE-IMBURSEMENT OF SUCH EXPENSES EXCEPT FOR THOSE SPECIFICALLY STATED. THE CONTRACTOR HAS TO PLAN CONCRETE WORK IN SUCH MANNER THAT GOOD EARTH AVAILABLE DURING EXCAVATION CAN BE EFFECTIVELY USED IN BACK FILLING DIRECTLY TO SAVE TIME AND TRANSPORT OUTSIDE.

#### **5.5.4**

ON COMPLETION OF WORK, ALL THE TEMPORARY BUILDINGS, STRUCTURES, PIPELINES, CABLES, ETC. SHALL BE DISMANTLED AND LEVELLED AND DEBRIS SHALL BE REMOVED AS PER INSTRUCTIONS OF BHEL BY THE CONTRACTOR AT HIS COST. IN THE EVENT OF HIS FAILURE TO DO SO, THE SAME WILL BE ARRANGED BY BHEL AND EXPENDITURE THEREOF WITH OVERHEADS WILL BE RECOVERED FROM THE CONTRACTOR. THE DECISION OF BHEL ENGINEER IN THIS REGARD IS FINAL.

### **5.6 AREA LIGHTING**

#### **5.6.1**

CONTRACTOR SHALL ARRANGE ADEQUATE FLOODLIGHTS, HAND LAMPS AND AREA LIGHTING. PROVISION OF DISTRIBUTION LINES FOR LIGHTING FROM THE SINGLE POINT 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 INCLUDING ALL THE MATERIALS LIKE CABLES, FUSES, SWITCH BOARDS ETC.

#### **5.7.0 CONSTRUCTION POWER & WATER**

AS PER POINT NO. 24 AND 25 SECTION – 4, SCOPE OF WORK

##### **5.7.1**

CONTRACTOR HAS TO FORM TEMPORARY APPROACH ROAD FROM MAIN ROAD NEAR WORK SITE FOR TRANSPORTATION OF MATERIALS, CONCRETE ETC. NO SEPARATE PAYMENT SHALL BE MADE FOR THE SAME.

#### **5.8.0 MATERIAL**

##### **5.8.1(A) PROCUREMENT OF MATERIAL AND TESTING:**

MATERIAL REQUIRED FOR THE ENTIRE JOB LIKE CEMENT, STEEL (BOTH REINFORCEMENT AND STRUCTURAL), SAND, AGGREGATES, WINDOWS, DOORS, DECKING/CLADDING SHEETS, VENTILATORS, ROLLING SHUTTER, SANITARY FIXTURES, PAINTING MATERIAL, ELECTRICAL FITTINGS AND WIRING MATERIAL AND ALL OTHER MATERIAL REQUIRED FOR THE COMPLETION OF ENTIRE SCOPE, HAVE TO BE ARRANGED BY THE CONTRACTOR. BHEL RESERVES THE RIGHT TO REJECT ANY MATERIAL NOT FOUND SATISFACTORY. CONTRACTOR SHALL PRODUCE MANUFACTURER'S TEST CERTIFICATE FOR STEEL (BOTH REINFORCEMENT AND STRUCTURAL) AND CEMENT FOR EVERY BATCH OF MANUFACTURING ALONGWITH EACH CONSIGNMENT BROUGHT TO THE SITE. CEMENT SHALL BE PROCURED FROM FRESH STOCK ONLY. APART FROM THE ABOVE, IT SHALL BE THE RESPONSIBILITY OF CONTRACTOR TO GET THE TESTING OF CEMENT, STEEL OR ANY OTHER MATERIALS DONE FROM **OUTSIDE LABORATORY APPROVED BY MPPGCL/BHEL TO ASCERTAIN THE QUALITY IF INSISTED BY BHEL/BHEL'S CUSTOMER. RATE QUOTED SHALL BE INCLUSIVE OF ALL SUCH CONTINGENCIES AND NO ADDITIONAL PAYMENT SHALL BE MADE ON THIS ACCOUNT. FOR THIS PURPOSE, SAMPLE SHALL BE COLLECTED AT SITE IN PRESENCE OF BHEL/BHEL CUSTOMER'S REPRESENTATIVE. THE VARIATION IN PRICE OF ALL THE PLANT MATERIALS SUPPLIED BY THE CONTRACTOR SHALL BE SUBJECT TO THE RELEVANT PRICE VARIATION CLAUSE.**

##### **5.8.1(B) PURCHASE PREFERENCE**

**REGARDING PURCHASE PREFERENCE TO BE GIVEN TO THE PUBLIC SECTOR/ ANY OTHER GOVERNMENT FOR AWARD OF WORK, THIS SHALL BE APPLICABLE AS PER GOVERNMENT DIRECTIVE IN FORCE AT THE TIME OF SUBMISSION OF OFFER.**

##### **5.8.2 FIELD TESTING EQUIPMENTS**

APART FROM MAINTAINING QUALITY REQUIREMENT AS ALREADY SPECIFIED IN TENDER, CONTRACTOR SHALL ARRANGE HIS OWN TESTING LABORATORY ALONGWITH CALIBRATED TEST EQUIPMENTS FOR DAY TODAY WORK AT SITE. SPECIAL TESTING REQUIREMENTS OF TRIAL MIX FOR MIX DESIGN CAN BE TIED UP WITH REPUTED LOCAL TESTING LABORATORY/INSTITUTION. THE ARRANGEMENT TO BE CLEARLY INDICATED PRIOR TO START OF WORK.

#### **5.9 TAXES, DUTIES, LEVIES**

##### **5.9.0 TAXES, DUTIES, LEVIES**

Refer to Clause 2.8.4 of General Conditions of Contract. Notwithstanding anything contained therein, the following provisions shall be applicable for this contract.

#### 5.9.1

The contractor shall pay all (save the specific exclusions as enumerated in this contract) taxes, fees, license charges, deposits, duties, tools, royalty, commissions or other charges which may be levied on the input goods & services consumed and output goods & services delivered in course of his operations in executing the contract. In case BHEL is forced to pay any of such taxes, BHEL shall have the right to recover the same from his bills or otherwise as deemed fit.

However, provisions regarding Service Tax and Value Added Tax (VAT) on output services and goods shall be as per following clauses.

#### 5.9.2 Service Tax & Cess on Service Tax

Service Tax and Cess on Service Tax as applicable on output Services are excluded from contractor's scope; therefore contractor's price/rates shall be **exclusive** of Service Tax and Cess on Output Services. In case, it becomes mandatory for the contractor under provisions of relevant act/law to collect the Service Tax & Cess from BHEL and deposit the same with the concerned tax authorities, such applicable amount will be paid by BHEL.

**Contractor shall submit to BHEL documentary evidence of Service Tax registration certificate specifying name of services covered under this contract. Contractor shall submit serially numbered Service Tax and Cess Invoice, signed by him or a person authorized by him in respect of taxable service provided, and shall contain the following, namely,**

- The name, address and the registration number of the contractor,**
- The name and address of the party receiving taxable service,**
- Description, classification and value of taxable service provided and,**
- The service tax payable thereon.**

**All the four conditions shall be fulfilled in the invoice before release of service tax payment.**

Contractor shall obtain prior written consent from BHEL before billing the amount towards such taxes.

With introduction of Cenvat Credit Rules 2004, which came into force w.e.f. 10.09.2004, Excise Duty paid on Input Goods including Capital Goods and Service Tax paid on Input Services that are used for providing the output services can be taken credit of against the Service Tax payable on output services. However BHEL may opt for availing the abatement provision in which case cenvat credit may not be available on input duty.

#### 5.9.3 VAT (Sales Tax /WCT)

As regards Value Added Tax (VAT) on transfer of property in goods involved in Works Contract (previously known as Works Contract Tax) applicable as per local laws, the price quoted by the contractor shall be **exclusive** of the same. Where such taxes are required to be paid by the contractor, this will be reimbursed on production of proof of payment made to the authorities by the Contractor. In any case the Contractor shall register himself with the respective Sales Tax authorities of the state and submit proof of such registration to BHEL along with the first RA bill. The contractor has to take all necessary steps to **minimize tax on input goods** by purchasing the materials from any registered dealer of the concerned state only. In case contractor opts for composition, it will be with the prior express consent of BHEL. Deduction of tax at source shall be made as per the provisions of law unless otherwise found exempted. In case tax is deducted at source as per the provisions of law, this is to be construed as an advance tax paid by the contractor and no reimbursement thereof will be made unless specifically agreed to.

#### **5.9.4 Modalities of Tax Incidence on BHEL**

Wherever the relevant tax laws permit more than one option or methodology for discharging the liability of tax/levy/duty, BHEL will have the right to adopt the appropriate one considering the amount of tax liability on BHEL/Client as well as procedural simplicity with regard to assessment of the liability. The option chosen by BHEL shall be binding on the Contractor for discharging the obligation of BHEL in respect of the tax liability to the Contractor.

#### **5.9.5 New Taxes/Levies**

In case the Government imposes any new levy/tax on the output service/ goods/work after award of the contract, the same shall be reimbursed by BHEL at actual.

In case any new tax/levy/duty etc. becomes applicable after the date of Bidder's offer, the Bidder/Contractor must convey its impact on his price duly substantiated by documentary evidence in support of the same **before opening of Price Bid**. Claim for any such impact after opening the Price Bid will not be considered by BHEL for reimbursement of tax or reassessment of offer.

No reimbursement/recovery on account of increase/reduction in the rate of taxes, levies, duties etc. on input goods/services/work shall be made. Such impact shall be taken care of by the Price Variation/Adjustment Clause (PVC) if any. In case PVC is not applicable for the contract, Bidder has to make his own assessment of the impact of future variation if any, in rates of taxes/duties/ levies etc. in his price bid.

### **5.9 OTHER RESPONSIBILITIES IN GENERAL**

#### **5.10.1**

CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER USAGE OF THEIR MATERIALS LIKE CEMENT, STEEL, AND AGGREGATES ETC. AS PER STANDARD REQUIREMENT OF IS CODES AND CONTROL THE WASTAGE WITHIN LIMIT. NO COMPENSATION SHALL BE MADE FOR ANY EXCESS CONSUMPTION UNDER ANY CIRCUMSTANCES.

#### **5.10.2**

CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY DELAY IN PROGRESS OF WORK DUE TO DELAY/SHORT SUPPLY OF MATERIAL TO BE PROCURED BY THEM FOR THIS JOB.

#### **5.10.3**

RUSTING OF STEEL SHOULD BE AVOIDED TO THE MAXIMUM EXTENT POSSIBLE WITHOUT HAMPERING THE CONTINUITY OF CONSTRUCTION/ERECTION. IN CASE RUSTING OF STEEL OCCURS RENDERING THE SAME UNUSABLE, THE CONTRACTOR SHALL REMAIN RESPONSIBLE TO MAKE GOOD THE LOSS AT HIS OWN COST.

#### **5.10.4**

AS-BUILT DRAWING: CONTRACTOR SHALL ARRANGE TO INCORPORATE ALL CHANGES, IN AFC DRAWINGS, MADE AS PER THE SITE REQUIREMENT ON COMPLETION OF WORK AND SUBMIT THE SAME TO BHEL FOR PREPARING FINAL AS-BUILT DRAWING. THIS SHALL FORM PART OF WORK AND RATES QUOTED SHALL BE INCLUSIVE OF THIS.

#### **5.10.5**

THE CONTRACTOR IN THE EVENT OF ENGAGING 10 OR MORE WORKMEN WILL OBTAIN INDEPENDENT LICENCE UNDER THE CONTRACT LABOUR (REGULATION AND ABOLITION) ACT 1970 FROM THE CONCERNED AUTHORITIES BASED ON THE CERTIFICATE (FORM-V) ISSUED BY THE PRINCIPAL EMPLOYER/CUSTOMER.

#### **5.10.6**

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ARRANGE GATE PASS FOR ALL HIS EMPLOYEES, T&P ETC. NECESSARY COORDINATION WITH MPPGCL OFFICIALS IS THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR TO FOLLOW ALL THE PROCEDURES LAID DOWN BY MPPGCL FOR MAKING GATE PASSES.

5.10.7

**BHEL/MPPGCL MAY INSIST UPON 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 /MPPGCL**

5.10.8

CONTRACTOR SHALL ALSO COMPLY WITH THE PROVISIONS OF ESI ACT IN VOGUE AND SUBMIT EVIDENCE THEREOF TO BHEL SITE INCHARGE. ALSO ALL OTHER EMPLOYEES BENEFITS TO BE BORNE BY THE CONTRACTOR AS PER THE LABOUR LAWS. CONTRACTOR SHALL PRODUCE NECESSARY CERTIFICATES TOWARDS THEIR COMPLIANCE WITH SUCH STATUTES AND PAYMENT OF ALL STATUTORY DUES.

5.10.9

CONTRACTOR SHALL ALSO COMPLY WITH THE REQUIREMENTS OF LOCAL AUTHORITIES/ PROJECT AUTHORITIES CALLING FOR POLICE VERIFICATION OF ANTECEDENTS OF THE WORKMEN, STAFF ETC.

5.10.10

WHERE PERMITTED, BY MPPGCL/BHEL, TO WORK BEYOND NORMAL WORKING HOURS, THE CONTRACTOR SHALL ARRANGE NECESSARY GATE PASSES.

## **SECTION-6**

### **CONTRACTOR'S OBLIGATION IN REGARD TO EMPLOYMENT OF SUPERVISORY STAFF AND WORKMEN**

#### **6.1 SUPERVISORY STAFF AND LABOUR**

##### **6.1.1**

The contractor shall supply all the skilled/unskilled labour, gas cutters, riggers, sarongs, erectors, carpenters, fitters and electricians, masons, plumbers etc. BHEL reserves the right to decide on the suitability of the workers and other personnel who will be employed by the contractor. 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.

##### **6.1.2**

It is the responsibility of the contractor to engage his workmen in shifts and or on overtime basis for achieving the target 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 targets will be final and binding on the contractor.

##### **6.1.3**

Contractor shall employ only qualified and experienced engineers/supervisors for this job. They shall have professional approach in executing the work having adequate knowledge and experience in the fields. Contractor shall give an organisation chart indicating the staffing pattern.

##### **6.1.4**

The contractor shall engage all the unskilled, skilled and specially skilled labourer including brick masons, carpenters, plumbers, electricians, fabricators and fitters etc. and supervisory staff. Only trained and competent personnel with previous experience in the job shall be employed. However, BHEL reserves the right to decide on the suitability of the workers and other personnel who will be employed by the contractor. BHEL reserves the right to insist on removal of any employee of the contractor at any time, if they found him unsuitable. The contractor shall be bound to follow the instruction of BHEL.

#### **6.2 INDUSTRIAL RELATIONS AND LABOUR LAWS**

##### **6.2.1**

An industrial relations supervisor shall coordinate for the implementation of local labour laws, maintenance of records as required by contract labour (regulation and abolition act) and also coordinate with the local labour authorities. Contractor has to ensure minimum wages payment to their labours as per the rule of the state and they have to produce documentary evidence to that effect to BHEL.

##### **6.2.2**

Contractor shall provide the names and details of Engineer/ Supervisors at the time of mobilisation to BHEL as per the proposed organisation chart.

##### **6.2.3**

In case at any time the contractor is not in a position to deploy the required Engineers/Supervisors due to any reason, BHEL shall have the option to deploy their Engineers/supervisors. The expenditure incurred with overheads on this account will be recovered from the contractor's bills.

##### **6.2.4**

The contractor's supervisory staff shall execute the work in the most substantial and workmanlike 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.

#### 6.2.5

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 and in general, 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.

#### 6.2.6

Contractor will deduct the necessary amount from his employees towards provident fund and contribute the equal amount as per Government of India rules. This amount will be deposited regularly to the Provident Fund Commissioner and an account code obtained. Contractor shall submit the above account code duly certified by PF Commissioner to BHEL project in-charge. Also all other employees' benefits are to be borne by the contractor as per statutory laws.

#### 6.2.7

The contractor shall obtain independent Labour License under the Contract Labour (regulation and abolition) Act from the concerned authorities based on the certificate (form-V) issued by the principal employer/customer.

#### 6.2.8

The contractor shall pay for all taxes, fees, license charges, local body clearance, duties, tools, royalty, commissions and other charges, Gate passes which may be leviable on account of his operation in executing the contract. In case BHEL is forced to make any such payments, BHEL shall have the right to recover the same from Contractor's bills.

## **SECTION – 7**

### **OBLIGATIONS OF BHEL**

#### **7.1 FACILITIES TO BE PROVIDED BY BHEL**

##### **7.1.1 SPACE**

BHEL SHALL ASSIST FOR GETTING ADEQUATE SPACE FROM CUSTOMER WITHIN/OUTSIDE MAIN PLANT PREMISES FOR CONSTRUCTION OF CONTRACTOR'S SITE OFFICE, BULK STORAGE SHED FOR CEMENT, STEEL & ALL OTHER PROJECT MATERIALS, OPEN STORAGE YARD, FABRICATION YARD, BATCHING PLANT ETC., FREE OF CHARGE ON A TEMPORARY BASIS AS PER AVAILABILITY. CONTRACTOR HAS TO ARRANGE AT HIS OWN COST FOR ALL TEMPORARY FACILITY REQUIRED FOR EXECUTION OF JOB.

##### **7.1.2 CONSTRUCTION POWER & WATER**

AS PER SECTION - 4

**CRANES:** NO CRANES OF ANY SIZE & CAPACITY SHALL BE PROVIDED BY BHEL WITH RESPECT TO THIS CONTRACT.

7.1.4 BHEL WILL PROGRESSIVELY ISSUE TWO COPIES OF ALL THE APPROVED DRAWINGS REQUIRED FOR CONSTRUCTION. CONTRACTOR SHALL PRESERVE THESE DRAWINGS AND RETURN THE SAME AFTER COMPLETION OF WORK. CONTRACTOR SHALL ALSO RETURN SUPERSEDED DRAWINGS, IF ANY, ON RECEIPT OF THE LATEST REVISED DRAWING.

## **SECTION-8**

### **Inspection / Quality Assurance / Quality Control / Statutory Inspection**

- 8.1** Various inspection/quality control/quality assurance procedures /methods at various stages of erection and commissioning will be as per BHEL quality control procedure/codes and other statutory provisions and as per BHEL engineer's instructions.
- 8.2** Preparation of quality assurance log sheets and protocols with's engineers, welding logs and other quality control and quality assurance documentation as per BHEL engineer's instructions, is within the scope of work/specification.

The protocols between contractor and BHEL shall be made prior to installation for correctness of foundations, materials, procedures, at each stage of installation, generally as per the requirement of BHEL. This is necessary to ensure elimination of errors or keeping them within tolerable limits and to avoid accumulation and multiplication of errors.

- 8.3** A daily logbook should be maintained by every supervisor/ engineer of contractor on the job in duplicate (one for BHEL and one for contractor) for detailing and incorporating alignment/ clearance/ centering/leveling readings and inspection details of various equipments, structures, piping, and others.

All the important measurements like pre-assembly records, foundation levels, equipment alignment, etc shall be recorded in the daily logbook with sketches based on BHEL drawings indicating readings/ measurements taken and signed by BHEL contractor's representatives.

Welding details like serial number of weld joints, welders name, date of welding, details of repair, heat treatment etc shall be documented in welding log as per BHEL engineer's instructions.

- 8.4** All the electrical/mechanical measuring and monitoring devices/ gauges, feeler gauges, height gauges, dial gauges, micrometers, precision levels, spirit levels, water level micrometers surface plates, straight edges, vernier calipers and all other measuring instruments shall be provided by the contractor for checking, leveling, alignment, centering etc Of the erected equipments at various stages.

The instruments/gauges/tools etc provided should be of brand, quality and accuracy, specified by BHEL engineer and should have necessary calibration and other certificates as per the requirements of BHEL engineer.

- 8.5** In the course of erection, it may be necessary to re-check or counter check or finally check the work with instruments recently calibrated, recalibrated or of inspection grade gauge/tools or special measuring instruments. Such

instruments whenever necessary will be provided by BHEL on specific authorization by BHEL engineer.

**8.6** The instruments mentioned in clause 8.5 shall be drawn by the contractor from BHEL stores on the specific authorization and use the same on the specific job for the purpose of inspection/ rechecking/counter checking/ finally checking of the work and shall be returned to BHEL stores immediately on completion of the inspection.

**8.7** Total quality is the watchword of the work and contractor shall strive to achieve the quality standards, procedures laid down by BHEL. He shall follow all the instructions as per BHEL drawings and quality standards. Contractor shall provide for the services of quality assurance engineer.

**8.8** The welder's performance will be reviewed from time to time as per the BHEL standards and any welder not performing to the standards set by BHEL will be removed from working. Contractor shall arrange for the alternate welders immediately.

**8.9** All the welders shall carry identity cards as per the pro forma prescribed by BHEL only welders duly authorized by BHEL shall be engaged on the work.

**8.10** Contractor shall ensure speedy alignment and welding of all equipments erected by him soon after placement. Also all alignments, welding, NDT tests required for stage inspection shall be completed as per the quality assurance procedures.

**8.11 Stage Inspection By FES/QA Engineers**

Apart from day-to-day inspection by BHEL engineers and KPCL engineers, stage inspection of equipments at various stages of erection and commissioning by teams of engineers from field engineering services /field quality assurance groups of BHEL's manufacturing units and commissioning engineers from technical services of BHEL may also be conducted. Contractor shall arrange all labour, tools and tackles etc, for such stage inspections within their quoted rate.

**8.11.1** Any modifications suggested by FES / FQA engineers team shall be carried out. Claims of contractor, if any, shall be dealt as per clause 13.1 to 13.8.

**8.11.2** Any minor rectification or minor repairs of defective work found at during stage inspection shall be rectified free of cost, by the contractor.

**8.11.3** Any major rectification or major repair/major rework of defective work, found out during stage inspection as per clause 8.11, but not attributable to contractor shall also be carried out. Claims of contractor, if any, shall be governed as per clause 13.1 to 13.8.

**8.12 Statutory Inspection**

**8.12.1** During the statutory inspection, contractor shall provide all the manpower assistance as per the requirement within their quoted rate. However, all other arrangements for visiting of statutory authorities at site including fee etc shall be borne by BHEL also refer section 5 in this regard.

**8.13.0** BHEL, power sector- western region (PSWR) has already been accredited with ISO 9001 certification and as such this work is subject to various audits to meet ISO 9001 requirements. One particular aspect, which needs special mention, is

about arrangement of calibration of instruments by the contractor. Contractor shall ensure deployment of reliable and calibrated MMD (measuring and monitoring devices). The MMD shall have test/calibration certificates from authorized/government approved/ accredited agencies traceable to national/international standards. Retesting/recalibration 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 MMD so that work does not suffer when the particular equipment/ instrument is sent for re-calibration. Also if any MMD is not found fit for use, BHEL shall have the right to stop the use of such item and instruct the contractor to deploy proper item and recall i.e. Repeat the readings taken by that instrument, failing which BHEL may deploy MMD s and retake the readings at contractor's cost.

## **Section-9**

### **Safety, Occupational Health and Environmental Management**

#### **Introduction:-**

BHEL PSWR has been certified for Environmental Management under ISO 14001:1996 standard and Occupational Health & Safety under OHSAS 18001 by DNV. In order to comply with the above standards, it shall be the endeavour of BHEL and all its subcontractors to meet and implement the requirements by following the guidelines issued under Environmental, Occupational Health and Safety Management (EHS) manual a copy of which will be available with the BHEL Site-in-charge.

Contractor shall also enter into a "Memorandum of Understanding" as given in clause 9.9 in case of award of contract.

### **9.0 Responsibility of The Contractor In Respect Of Safety Of Men, Equipment, Material And Environment.**

#### **9.1 The Contractor Shall**

- 9.1.1 Abide by the Safety Regulations applicable for the Site/Project and in particular as mentioned in the booklet "Safe Work Practices" issued by BHEL. Contractors are also to ensure that their employees and workmen use safety equipments as stipulated in the Factories Act (Latest Revision) during the execution of the work. Failure to use safety equipment as required by BHEL Engineer will be a sufficient reason for issuance of memo, which shall become part of Safety evaluation of the contractor at the end of the Project. Also all site work may be suspended if it is found that the workmen are employing unsafe working practice and all the costs/losses incurred due to suspension of work shall be borne by contractor. A comprehensive list of National Standards from which the contractor can draw references for complying with various requirements under this section is given under 9.10
- 9.1.2 Hold BHEL harmless and indemnified from and against all claims, cost and charges under Workmen's Compensation Act 1923 and 1933 and any amendment thereof and the contractor shall be solely responsible for the same.
- 9.1.3 Abide by the Procedure governing entry/exit of the contractor's personnel within the Customer/Client premises. All the contractors employees shall be permitted to enter only on displaying of authorized Photo passes or any other documents as authorised by the Customer/Client
- 9.1.4 Be fully responsible for the identity, conduct and integrity of the personnel/workers engaged by them for carrying out the contract work and ensure that none of them are ever engaged in any anti national activity
- 9.1.5 Prepare a sign board giving the following information and display it near the work site:

- a) Name of Contractor

- b) Name of Contractor Site-in-charge & Telephone number
- c) Job Description in short
- d) Date of start of job
- e) Date of expected completion
- f) Name of BHEL Site-in-charge.

9.1.6 Abide by the rules and regulations existing during the contract period as applicable for the contractors at the Project premises.

9.1.7 Observe the timings of work as advised by BHEL Engineer-in-charge for carrying out the contract work.

## 9.2 **SPECIAL CONDITIONS**

### 9.2.1 **Safety**

#### 9.2.1.1 **Safety Plan**

Before commencing the work, contractor shall submit a “safety plan” to the authorised BHEL official. The safety plan shall indicate in detail the measures that would be taken by the contractor to ensure safety to men, equipment, material and environment during execution of the work. The plan shall take care to satisfy all requirements specified hereunder.

The contractor shall submit “safety plan” before start of work. During negotiations, before placing of work order and during execution of the contract, BHEL shall have right to review and suggest modifications in the safety plan. Contractor shall abide by BHEL’s decision in this respect.

9.2.1.2 The contractor shall take all necessary safety precautions and arrange for appropriate appliances and/or as per direction of BHEL or it’s authorised person to prevent loss of human lives, injuries to men engaged and damage to property and environment.

9.2.1.3 The contractor shall provide to his work force and also ensure the use of Personnel Protection Equipment (PPE) as found necessary and/or as directed and advised by BHEL officials without which permission is liable to be denied.

- Safety helmets conforming to IS 2925/1984 (1990)
- Safety belts conforming to IS 3521/1989
- Safety shoes conforming to IS 1989 part-II /1986(1992)
- Eye and face protection devices conforming to IS 2573/1986(1991), IS 6994 (1973), part-I (1991), IS 8807/1978 (1991), IS 8519/1977(1991).
- Other job specific PPEs of standard ISI make as may be prescribed

9.2.1.4 All tools, tackles, lifting appliances, material handling equipment, scaffolds, cradles, cages, safety nets, ladders, equipment, etc used by the contractor shall be of safe design and construction. These shall be tested and certificate of fitness obtained before putting them to use and from time to time as instructed by authorised BHEL official who shall have the right to ban the use of any item found to be unsafe

9.2.1.5 All electrical equipment, connections and wiring for construction power, its distribution and use shall conform to the requirements of Indian Electricity Act and Rules.

Only electricians licensed by the appropriate statutory authority shall be employed by the contractor to carryout all types of electrical works. All electrical appliances including portable electric tools used by the contractor shall have safe plugging system to source of power and be appropriately earthed.

9.2.1.6 The contractor shall not use any hand lamp energized by electric power with supply voltage of more than 24 volts. For work in confined spaces, lighting shall be arranged with power source of not more than 24 volts.

9.2.1.7

The contractor shall adopt all fire safety measures as per relevant Indian Standards

9.2.1.8

Where it becomes necessary to provide and/or store petroleum products, explosives, chemicals and liquid or gaseous fuel or any other substance that may cause fire or explosion, the contractor shall be responsible for carrying out such provisions and/or storage in accordance with the rules and regulations laid down by the relevant government acts, such as petroleum act, explosives act, petroleum and carbides of calcium manual of the chief controller of explosives, Government of India etc. The contractor in all such matters shall also take prior approval of the authorised BHEL official at the site.

9.2.1.9

Proper means of access must be used e.g. ladders, scaffolds, platforms etc. No makeshift access such as oil drums or pallets shall be used. Design of these will be in accordance with relevant standards and certified by competent persons before use.

9.2.1.10

Temporary arrangements made at Site for lifting , platforms, approach, access etc should be properly designed and approved before being put to use.

9.2.1.11

All excavations and openings must be securely and adequately fenced/barricaded and warning signs erected when consider necessary as per relevant code of practice.

9.2.1.12

No persons shall remove guard rails, covers or protective devices unless authorised by a responsible supervisor and alternative precautions have been taken

9.2.1.13

Access ways, means of escape and fire exits shall be clearly marked, kept clear and unobstructed at all times

9.2.1.14

Only authorised persons holding relevant license will drive and operate site plant and equipments e.g. cranes, dumpers, excavators, transport vehicles etc

9.2.1.15

Only authorised personnel are allowed to repair, commission electrical equipments.

9.2.1.16

Gas cylinders shall be handled and stored as per Gas Cylinder Rules and relevant safe working practices



#### 9.2.1.17

All wastes generated at Site shall be segregated and collected in a designated place so as to prevent spillage/contamination/scattering at Site, until the waste is lifted for disposal to designated disposal area as advised by BHEL official.

#### 9.2.1.18

The contractor shall arrange at his cost (wherever not specified) appropriate illumination at all work spots for safe working when natural day light is not adequate for clear visibility.

#### 9.2.1.19

The contractor shall train adequate number of workers/ supervisors for administering "FIRST AID". List of competent first aid administrators should be prominently displayed.

#### 9.2.1.20

The contractor shall display at strategic places and in adequate numbers the following in fluorescent markings

- Emergency telephone numbers
- Exit, Walkways
- Safe working load charts for wire ropes, slings, D shackles etc
- Warning signs

#### 9.2.1.21

The contractor shall be held responsible for any violation of statutory regulations (local, state or central) and BHEL instructions that may endanger safety of men, equipment, material and environment in his scope of work or other contractors or agencies. Cost of damage, if any, to life and property arising out of such violation of statutory regulations and BHEL instructions shall be borne by the contractor.

#### 9.2.1.22

In case of a fatal or disabling injury/accident to any person at construction sites due to lapses by the contractor, the victim and/or his/her dependents shall be compensated by the contractor as per statutory requirements. However, if considered necessary, BHEL shall have the right to impose appropriate financial penalty on the contractor and recover the same from payments due to the contractor for suitably compensating the victim and/or his/her dependents. Before imposing any such penalty, appropriate enquiry shall be held by BHEL giving opportunity to the contractor to present his case.

#### 9.2.1.23

In case of any damage to property due to lapses by the contractor, BHEL shall have the right to recover cost of such damages from payments due to the contractor after holding an appropriate enquiry.

#### 9.2.1.24

In case of any delay in the completion of a job due to mishaps attributable to lapses by the contractor, BHEL shall have the right to recover cost of such delay from payments due to the contractor after notifying the contractor suitably and giving him opportunity to present his case.

#### 9.2.1.25

If the contractor fails to improve the standards of safety in its operation to the satisfaction of BHEL after being given a reasonable opportunity to do so, and/or if the contractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instructions regarding safety issued by the authorised BHEL official, BHEL shall have the right to take corrective steps at the risk and cost of the contractor after giving a notice of not less than seven days indicating the steps that would be taken by BHEL.

#### 9.2.1.26

### **Emergency Response**

#### 9.2.1.26.1

BHEL will have an Emergency Response Plan for each Project Site in consultation with the Owner as the case may be, detailing the procedure for mobilisation of personnel and equipment, and defining the responsibilities of the personnel indicated, in order to prepare for any emergency that may arise in order to ensure the priorities of

- Safeguard of life
- Protect assets under construction or neighboring
- Protect environment
- Resumption of normal operations as soon as the emergency condition is called off

All Contractors shall also be part of the Emergency response Plan and the personnel so nominated shall be aware of their duties and responsibilities in an emergency response situation.

#### 9.2.1.26.2

At least 5% Contractors supervisors and workmen shall undergo training in administering 'First Aid'. The trained persons should represent for all categories of work and for all areas of work. Adequate number of trained persons should be available for each shift. These first aiders shall be included in the emergency response team. Contractor employees and workmen are encouraged to participate in first aid training programmes whenever organised by BHEL.

## **9.2.2 OCCUPATIONAL HEALTH**

9.2.2.1 Specific occupational health hazards will be identified through the hazard evaluation processes in consultation with BHEL engineers and the necessary prevention/reduction/elimination methods implemented.

9.2.2.2 All personnel working in an activity with a potential risk to health shall be made aware of all those risks and the actions they must take to reduce/control/eliminate the risk

9.2.2.3 Safety coordinator shall conduct periodic checks to ensure that every group of workers engaged in similar activities are aware of potential risks to health and the actions required to be taken to mitigate the risk

- 9.2.2.4 In order to protect personnel from associated health hazards, the following main areas will be focussed
- Issue of approved Personnel Protective Equipment
  - Verification that the PPEs are adequate/maintained and worn by all staff involved in operations that are potentially hazardous to their health
  - Ensure that the personnel deployed are physically fit for the operation/work concerned
  - Provide hygienic and sanitary working conditions
- 9.2.2.5 Contractor workers employees engaged in noise risk areas shall be issued with hearing protection aids and the use of the same will be enforced. Further, these workers will be educated on the hazards of noise
- 9.2.2.6 Contractor workers engaged in dust environment shall be issued with necessary dust protection aids and the use of the same shall be enforced
- 9.2.2.7 Workers engaged in exposure to bright light/rays as in welding or radiation shall be issued with eye protection devices and the use of the same shall be enforced
- 9.2.2.8 Adequate arrangements shall be made to provide safe drinking water
- 9.2.2.9 Health monitoring records on at least sample basis for contractor employees & workmen shall be maintained for persons engaged in specified categories of work. These shall include
- Noise induced hearing loss
  - Lung Function test
  - Ergonomic Test
  - Eye Test for Welders, Grinders, Drivers etc

#### **9.2.3.0 HYGIENE and HOUSEKEEPING**

9.2.3.1 Good house keeping and proper hygiene is one of the key requirements of Occupational Health Safety and Environment management. Towards this the contractor shall encourage his workers and supervisors to maintain cleanliness in their area of work.

9.2.3.2 The Contractor shall arrange to place waste bins/chutes at convenient locations for the collection of scrap and other wastes. The bins shall be clearly marked and segregated for metal, non-metal, hazardous and non hazardous wastes.

9.2.3.3 BHEL may take up appropriate remedial measures at the cost of the contractors if the contractors fail good house keeping and if there is an imminent risk of pollution

#### **9.2.4 ENVIRONMENT MANAGEMENT**

9.2.4.1 BHEL has a sound environmental management system, which is to be maintained and implemented by all the contractors. The system allows for

project specific objectives to be set and developed sensitive to Client requirements, applicable environmental legislation and BHEL's own objectives and policy. BHEL engineers will assess and monitor the environmental impact of their work and lay out objectives for their minimisation. The contractors shall implement the objectives for continual improvement of environmental performance. BHEL shall regularly audit environmental impacts and their improvements.

#### **9.2.4.2 WASTE MANAGEMENT**

##### **9.2.4.2.1**

The objective of waste management is to ensure the safe and responsible disposal of waste, ensuring that it is correctly disposed of and being able to audit the process to ensure compliance.

##### **9.2.4.2.2**

Chemical wastes if any shall be collected separately and disposed of to BHEL designated refuse yard as per BHEL advise

9.2.4.3.1 No dangerous chemicals, noxious waste products or materials will be disposed off on or off site without approval obtained through BHEL.

9.2.4.3.2 All disposal of wastes generated during construction shall be in accordance with all relevant legislation.

9.2.4.3.3 Acid and alkali cleaning wastes shall be neutralised to acceptable norms before disposal to the designated area.

9.2.4.3.4 All necessary measures shall be taken to ensure safe collection and disposal of waste oils. In particular to ensure the prevention of their discharge into surface waters, ground waters, coastal waters or drainages

#### **9.3 SUPERVISION**

9.3.1 Contractor must provide at least one full time on site safety coordinator when the manpower engaged is in excess of 50 for the contract activities in the premises. If the manpower is less than 50, the on site safety coordination responsibilities shall be assumed by any one of the contractor's other supervisory staff; however in both the cases, the contractor must specify in writing the name of such persons to the BHEL Engineer in Charge .

9.3.2 Contractor's safety coordinator or his supervisor responsible for safety as the case may be shall conduct at his work site, and document formal safety inspection and audits at least once in a week. Such documents are to be submitted to BHEL Engineer in Charge for his review and record. Contractor, supervisor must attend all schedule safety meetings as would be intimated to him by the BHEL Engineer in Charge.

9.3.3 Before starting work under any contract, the contractor must ensure that a job specific safety procedures/field practices as required over and above the safety permit conditions are prepared and followed .He should also ensure that all supervisors and workers involved understand and follow this procedures /field practices.

9.3.4 Contractor must ensure that in his work site appropriate display boards are put displaying signs for site safety , potential hazards and precautions required

#### 9.4.0 **TRAINING & AWARENESS**

9.4.1 Contractor shall deploy experienced supervisors and other manpower who are well conversant with the safety and environment regulations of the Project. The electricians to be deployed on the job should have wireman license.

9.4.2 All Supervisors & Workmen of the Contractor shall undergo Fire safety training/demonstration whenever arranged by BHEL with the help of either Customer's Fire and Safety department or outside faculty so as to acquire knowledge of fire prevention and also to be able to make use of appropriate fire extinguishers.

9.4.3 Contractor must familiarize himself from BHEL Engineer in Charge about all known potential fire, explosion or toxic release hazards related to the contract. He in turn will ensure that same information has been passed to the supervisors and workmen

9.4.4 Contractor must ensure that all his supervisors are properly trained and each employee has received and understood from his supervisor necessary training and briefing about the safety requirement. Necessary document as a means to verify that employees have understood the training is to be maintained.

9.4.5 The contractor supervisors shall also give a small safety briefing to all the workmen under his charge before undertaking any new work and specially understand the safety requirements that are mandatory

#### 9.5.0 **REPORTING**

9.5.1 The contractor shall submit report of all accidents, fires and property damage, dangerous occurrences to the authorised BHEL official immediately after such occurrence but in any case not later than twelve hours of the occurrence. Such report shall be furnished in the manner prescribed by BHEL and also to meet statutory requirement.

9.5.2 Any injury sustained by any of the contractor's employees within the Project premises must be reported to BHEL supervisor and FIRST AID should be immediately administered. The Contractor shall be responsible for keeping and maintaining proper records of Accidents to his personnel.

9.5.3 Contractor must arrange to immediately investigate, properly document and report any injury, accident or near miss involving any of his employees and take appropriate follow up action. He must furnish within 12 hours of the incident a written report to BHEL Engineer in charge and the Safety Section.

9.5.4 According to the Factory Act and the Employees state Insurance Act & regulation, any person sustaining any injury within the project premises and absenting himself from work for more than 46 hours, his accident report has to be sent to the respective Government Authorities. Therefore contractor shall inform the owner's representative such matter immediately for their needful action.

9.5.5 In addition, contractor shall submit periodic reports on safety to the authorised BHEL official from time to time as prescribed.

9.5.6 Before commencing the work, the contractor shall appoint/nominate a responsible officer to supervise implementation of all safety measures and liaison with his counterpart of BHEL.

## 9.6 **AUDIT REVIEW AND INSPECTION**

9.6.1 BHEL shall conduct audit on the contractor performance and compliance with the project specific requirements of the Environment and Occupational Health & Safety Management systems. The programme of audit shall cover all activities under the contract but will focus particularly on high-risk activities. The Construction Manager shall decide the schedule of audit. The audit findings shall be communicated to the contractors and necessary remedial action as advised by BHEL Engineers shall be under taken within the stipulated time.

9.6.2 Inspections shall be carried out regularly by the contractors and by BHEL Engineers on activities, facilities, equipment, documentation, to cover the following aspects.

- Compliance with procedures and systems
- Availability, condition and use of PPEs
- Condition of maintenance tools, equipments, facilities
- Availability of fire fighting equipments and its condition
- Use of fire fighting equipments and first aid kit
- Awareness of occupational health hazard
- Awareness of safe working practices
- Presence of quality supervision
- Housekeeping

The Safety Co-ordinator shall visit and inspect work sites daily. All unsafe acts, unsafe conditions that have imminent potential for causing harm/injury/damage will be immediately corrected. He shall maintain a daily logbook giving details of unsafe acts or conditions observed and the corrective action taken and recommendations for preventing recurrence. Adequacy of corrective actions will be verified

The contractor shall take remedial measures as per the findings of each inspection

Besides the above, the contractor shall be required to carry out the following inspections

SI No	Equipment	Scope of inspection	Inspection by	Schedule
1	Hand tools	To identify unsafe/defective tool	User	Daily
2	Power tools	To identify unsafe/defective tool	User	Daily

3	Fire Extinguishers	To check pressure and any defect	User / Safety Coordinator	Daily Every month
4	Lifting equipment/tackles	To check for defects and efficacy of brakes	User Third party	Daily Every Year
5	PPE	To check for defects	User	Daily

## 9.7 **NON COMPLIANCE:-**

9.7.1 NONCONFORMITY OF SAFETY RULES AND SAFETY APPLIANCES WILL BE VIEWED SERIOUSLY AND THE BHEL HAS RIGHT TO IMPOSE FINES ON THE CONTRACTOR AS UNDER **for every instance of violation noticed:**

Sl. No.	Safety	Fine (in Rs)
01	Not Wearing Safety Helmet	50/-
02.	Not wearing Safety Belt	100/-
03.	Grinding Without Goggles	50/-
04.	Not using 24 V Supply For Internal Work	500/-
05.	Electrical Plugs Not used for hand Machine	100/-
06.	Not Slings property	200/-
07.	Using Damaged Sling	200/-
08.	Lifting Cylinders Without Cage	500/-
09.	Not Using Proper Welding Cable With Lot of Joints And Not Insulated Property.	200/-
10.	Not Removing Small Scrap From Platforms	200/-
11.	Gas Cutting Without Taking Proper Precaution or Not Using Sheet Below Gas Cutting	200/-
12.	Not Maintaining Electric Winches Which are Operated Dangerously	500/-
13.	Improper Earthing Of Electrical T&Ps	500/-

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 contractor. The amount collected above will be utilised for giving award to the employees who could avoid accident by following safety rules. Also the amount will be spent for purchasing the safety appliances and supporting the safety activity at site.

**9.8 CITATION:-** If safety record of the contractor in execution of the awarded job is to the satisfaction of safety department of BHEL, issue of an appropriate certificate to recognise the safety performance of the contractor may be considered by BHEL after completion of the job

## 9.9 Memorandum of Understanding

### After Award Of Work, Contractors Are Required To Enter Into A Memorandum Of Understanding As Given Below:

#### Memorandum of Understanding

BHEL, PSWR is committed to Health, Safety and Environment Policy (EHS Policy) as given in the booklet titled “ Safe Working Practices” issued to all contractors.

M/s \_\_\_\_\_ do hereby also commit to the same EHS Policy while executing the Contract Number \_\_\_\_\_

M/s \_\_\_\_\_ shall ensure that safe work practices not limited to the above booklet are followed by all construction workers and supervisors. Spirit and content therein shall be reached to all workers and supervisors for compliance.

BHEL will be carrying out EHS audits twice a year and M/s \_\_\_\_\_ shall ensure to close any non-conformity observed/reported within fifteen days.

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

Name :

Place & Date:

**9.10** Comprehensive list of National Standards for reference and use wherever applicable in the execution of Civil, Erection and Commissioning Contracts

IS No	YEAR	Amd upto	DESCRIPTION
IS 10204	1982		PORTABLE FIRE EXTINGUISHERS MECHANICAL FOAM TYPE
IS 10245	1994		SPECIFICATION FOR BREATHING APPARATUS
IS 10291	1982		SAFETY CODE FOR DRESS DRIVERS IN CIVIL ENGINEERING WORKS
IS 10658	1983		HIGHER CAPACITY DRY POWDER FIRE EXTINGUISHERS (TROLLEY MOUNTED)
IS 10662	1992		COLOUR TELEVISION
IS 10667	1983		GUIDE FOR SELECTION OF INDUSTRIAL SAFETY EQUIPMENT FOR PROTECTION OF FOOT AND LEG
IS 11037	1984		ELECTRONIC FAN REGULATORS
IS 11057	1984		INDUSTRIAL SAFETY NETS
IS 11451	1998		RECOMMENDATION FOR SAFETY AND HEALTH REQUIREMENT RELATING TO OCCUPATION EXPOSURE TO ASBESTOS
IS 1169	1967		PEDESTAL FANS
IS 1179	1967		SPECIFICATION FOR EQUIPMENT FOR EYE AND FACE PROTECTION DURING WELDING
IS 11833	1986		DRY POWDER FIRE EXTINGUISHERS FOR METAL FIRES



IS 11972	1987		CODE OF PRACTICE FOR SAFETY PRECAUTION TO BE TAKEN WHEN ENTERING A SEWAGE SYSTEM
IS 1287	1986		ELECTRIC TOASTER
IS 13063	1991		STRUCTURAL SAFETY OF BUILDINGS ON SHALLOW FOUNDATIONS ON ROCKS
IS 13385	1992		SPECIFICATIONS FOR FIRE EXTINGUISHERS 50 LITRE WHEEL MOUNTED WATER TYPE ( GAS CARTRIDGES)
IS 13386	1992		SPECIFICATIONS FOR FIRE EXTINGUISHERS 50 LITRE MECHANICAL FOAM TYPE
IS 13415	1992		CODE OF SAFETY FOR PROTECTIVE BARRIERS IN AND AROUND BUILDINGS
IS 13416	1992		RECOMMENDATIONS FOR PREVENTIVE MEASURES AGAINST HAZARDS AT WORKING PLACE PART 1 TO PART 5
IS 13430	1992		CODE OF PRACTICE FOR SAFETY DURING ADDITIONAL CONSTRUCTION AND ALTERATION TO EXISTING BUILDINGS
IS 13849	1993		PORTABLE FIRE EXTINGUISHERS DRY POWDER TYPE ( CONSTANT PRESSURE)
IS 1446	1985		CLASSIFICATION OF DANGEROUS GOODS (FIRST REVISION)
IS 1476	1979		REFRIGERATORS
IS 1641	1988		CODE OF PRACTICE FOR FIRE SAFETY OF BUILDINGS (GENERAL): GENERAL PRINCIPLES OF FIRE GRADING AND CLASSIFICATION
IS 1642	1989		CODE OF PRACTICE FOR FIRE SAFETY OF BUILDINGS- DETAILS OF CONSTRUCTION
IS 1643	1988		CODE OF PRACTICE FOR FIRE SAFETY OF BUILDINGS (GENERAL): EXPOSURE HAZARD
IS 1646	1997		CODE OF PRACTICE FOR FIRE SAFETY OF BUILDINGS (GENERAL): ELECTRICAL INSTALLATIONS
IS 1904	1986		CODE OF PRACTICE FOR DESIGN AND CONSTRUCTION OF FOUNDATIONS IN SOIL
IS 1905	1987		STRUCTURAL SAFETY OF BUILDINGS MASONARY WALLS
IS 2082	1985		ELECTRICAL GEYSERS
IS 2171	1985		PORTABLE FIRE EXTINGUISHERS DRY POWDER TYPE (CARTRIDGE)
IS 2309	1989		PRACTICE FOR THE PROTECTION OF BUILDINGS AND ALLIED BUILDINGS AGAINST LIGHTENING
IS 2312	1967		EXHAUST FANS
IS 2361	1994		SPECIFICATION FOR BUILDING GRIPS – FIRST REVISION
IS 2418	1977		TUBULAR FLUORSCENT LAMPS IS 2418

			(FT-1)
IS 2750	1964		STEEL SCAFFOLDINGS
IS 2762	1964		SAFE WORKING LOADS IN KGS FOR WIRE ROPE SLINGS
IS 2878	1986		FIRE EXTINGUISHERS CARBON DIOXIDE TYPE (PORTABLE AND TROLLEY MOUNTED)
IS 2925	1984		SPECIFICATION FOR INDUSTRIAL SAFETY HELMETS
IS 3016	1982		CODE OF PRACTICE FOR FIRE PRECAUTIONS IN WELDING AND CUTTING OPERATIONS- FIRST REVISION
IS 3315	1974		DESERT COOLERS
IS 3521	1989		INDUSTRIAL SAFETY BELTS AND HARNESS
IS 368	1983		IMMERSION WATER HEATERS
IS 3696	1991		SAFETY CODE OF SCAFFOLDS AND LADDERS PART 1 TO 2
IS 3737	1996		LEATHER SAFETY BOOTS FOR WORKERS IN HEAVY METAL INDUSTRIES
IS 374	1979		CEILING FANS INCLUDING REGULATORS
IS 3764	1992		EXCAVATION WORK – CODE OF SAFETY
IS 3786	1983		METHOD FOR COMPUTATION OF FREQUENCY AND SEVERITY RATES FOR INDUSTRIAL INJURIES AND CLASSIFICATION OF INDUSTRIAL ACCIDENTS
IS 3935	1966		CODE OF PRACTICE FOR COMPOSITE CONSTRUCTION
IS 4014	1967		CODE OF PRACTICE FOR STEEL TUBULAR SCAFFOLDING
IS 4081	1986		SAFETY CODE FOR BLASTING AND RELATED DRILLING OPERATIONS
IS 4082	1977	1996	STACKING AND STORAGE OF CONSTRUCTION MATERIALS AND COMPONENTS AT SITE
IS 4130	1991		DEMOLITION OF BUILDINGS – CODE OF SAFETY PART 1 TO 2
IS 4138	1977		SAFETY CODE FOR WORKING IN COMPRESSED AIR (FIRST REVISION)
IS 4155	1966		GLOSSARY OF TERMS RELATING TO CHEMICAL AND RADIATION HAZARDS AND HAZARDOUS CHEMICALS
IS 4209	1967		CODE OF SAFETY FOR CHEMICAL LABORATORY
IS 4250	1980		FOOD MIXERS
IS 4262	1967		CODE OF SAFETY FOR SULFURIC ACID
IS 4756	1978		SAFETY CODE FOR TUNNELING WORK
IS 4912	1978		SAFETY REQUIREMENTS FOR FLOOR AND WALL OPENINGS, RAILINGS AND TOE BOARDS
IS 5121	1969		SAFETY CODE FOR PILING AND OTHER

			DEEP FOUNDATIONS
IS 5182	1969	1982	METHODS FOR MEASUREMENT OF AIR POLLUTION
IS 5184	1969		CODE OF SAFETY FOR HYDROFLUORIC ACID
IS 5216	1982	2000	RECOMMENDATIONS ON SAFETY PROCEDURES AND PRACTICE IN ELECTRICAL WORK PART I AND II
IS 555	1979		TABLE FANS
IS 5557	1995		INDUSTRIAL AND SAFETY LINED RUBBER BOOTS ( SECOND REVISION)
IS 5916	1970		SAFETY CODE FOR CONSTRUCTION INVOLVING USE OF HOR BITUMINOUS MATERIALS
IS 5983	1980		SPECIFICATION FOR EYE PROTECTORS – FIRST REVISION
IS 6234	1986		PORTABLE FIRE EXTINGUISHERS WATER TYPE ( STORED PRESSURE)
IS 692	1994		CRITERIA FOR SAFETY AND DESIGN OF STRUCTURES SUBJECTED TO UNDERGROUND BLASTS
IS 6994	1973		SPECIFICATION FOR SAFETY GLOVES
IS 7155	1986		CODE OF RECOMMENDED PRACTICE FOR CONVEYOR SAFETY (PART 1 TO 8)
IS 7205	1974		SAFETY CODE FOR ERECTION OF STRUCTURAL STEEL WORK
IS 7293	1974		SAFETY CODE FOR WORKING WITH CONSTRUCTION MACHINERY
IS 7323	1994		GUIDELINES FOR OPERATIONS OF RESERVOIRS
IS 7812	1975		CODE OF SAFETY FOR MERCURY
IS 7969	1975		SAFETY CODE FOR HANDLING AND STORAGE OF BUILDING MATERIALS
IS 8089	1976		CODE OF SAFE PRACTICE FOR LAYOUT OF OUTSIDE FACILITIES IN AN INDUSTRIAL PLANT
IS 8091	1976		CODE OF PRACTICE FOR INDUSTRIAL PLANT LAYOUT
IS 8095	1976		ACCIDENTS PREVENTION TAGS
IS 818	1968	1997	CODE OF PRACTICE FOR SAFETY AND HEALTH REQUIREMENTS IN ELECTRIC AND GAS WELDING, AND CUTTING OPERATIONS
IS 8448	1989		AUTOMATIC LINE VOLTAGE CORRECTOR (STABILISER)
IS 8519	1977		GUIDE FOR SELECTION OF INDUSTRIAL SAFETY EQUIPMENT FOR BODY PROTECTION
IS 8520	1977		GUIDE FOR SELECTION OF INDUSTRIAL SAFETY EQUIPMENT FOR EYE, FACE AND EAR PROTECTION
IS 875	1987		STRUCTURAL SAFETY OF BUILDING: LOADING STANDARD PART 1 TO 5
IS 8807	1978		GUIDE FOR SELECTION OF INDUSTRIAL SAFETY EQUIPMENT FOR PROTECTION OF ARMS AND HANDS

IS 8978	1985		INSTANTANEOUS WATER HEATERS
IS 8989	1978		SAFETY CODE FOR ERECTION OF CONCRETE FRAMED STRUCTURES
IS 940	1989		PORTABLE FIRE EXTINGUISHERS WATER TYPE ( GAS CARTRIDGE)
IS 9457	1980		SAFETY COLOURS AND SIGNS
IS 9679	1980		CODE OF SAFETY FOR WORK ENVIRONMENTAL MONITORING
IS 9706	1997		CODE OF PRACTICE FOR THE CONSTRUCTION OF AERIAL RPEWAYS FOR THE TRANSPORTATION OF MATERIAL
IS 9759	1981		GUIDELINES FOR DEWATERING DURING CONSTRUCTION
IS 9815	1989		SERVO MOTOR OPERATED LINE VOLTAGE CORRECTOR (SERVO STABILISER)
IS 9944	1992		RECOMMENDATIONS ON SAFE WORKING LOAD FOR NATURAL AND MAN-MADE FIBRE ROPE SLINGS
IS 996	1979		SINGLE PHASE ELECTRIC MOTORS
ISO 3873	1977		SAFETY HELMET

## SECTION-10 DRAWINGS AND DOCUMENTS

10.1

THE DETAILED DRAWINGS, WILL BE ISSUED TO THE CONTRACTOR DURING THE EXECUTION AT SITE. WORK SHALL BE CARRIED OUT AS PER THE “**RFC**” RELEASED FOR CONSTRUCTION DRAWINGS

10.2

TWO SETS OF NECESSARY DRAWINGS/DOCUMENTS TO CARRY OUT THE WORK WILL BE FURNISHED TO THE CONTRACTOR BY BHEL ON LOAN, WHICH SHALL BE RETURNED TO BHEL AFTER COMPLETION OF THE WORK. CONTRACTOR'S PERSONNEL SHALL TAKE CARE OF THESE DOCUMENTS GIVEN TO THEM.

10.3

The data furnished in various sections and appendices and the drawings enclosed with this tender specification describe the equipment to be installed, tested and commissioned under this specification, briefly. However, the changes in the design and in the quantity may be expected to occur as is usual in any such large scale of works.

10.4

If any error or ambiguity is discovered in the specification/information contained in the documents/drawings and tender, the contractor shall forthwith bring the same to the notice of BHEL before submission of offer.

10.5

In case an ambiguity is detected after award of work, the same must be brought to the notice of BHEL before commencement of the work/activity. BHEL's interpretation in such cases will be final and binding on the contractor.

10.6

In case of any conflict between general instructions to tenderness, general conditions of contract contained in sections 1 & 2 respectively and special conditions of contract contained in sections 4 to 15 and appendices, provisions contained in special conditions of contract in sections 4 to 15 and appendices shall prevail.

10.7

In case of discrepancy between quoted item rate and corresponding amount in the rate schedule, the **quoted item rates shall be reckoned as correct and amount recalculated**. Quoted item rates shall also prevail for arriving at the total price quoted for offer evaluation. Offers will be evaluated on the total amount for the entire Rate Schedule and the work will be awarded without splitting the scope.

10.8

Bank Guarantees to be furnished by the contractor towards Security Deposit and Performance Guarantee (last 5% payment against workmanship warranty/defect liability) shall have a claim period of six months over and above the validity period required for the respective cases. BG for advance payment shall be kept valid for a period of two more months beyond the recovery period of the advance with interest thereof.

10.9

Following Tender drawings attached here as hard copy ( NOT HOSTED IN WEB ). These drawings are only for tendering purpose. Drawing for execution of work shall be provided after award of work..

- a) Main Equipment Plant layout- PE-DG-311-100-M001
- b) TG Hall Equipment Layout Plan At ( + ) 0.0M- PE-DG-311-100-M002
- c) TG Hall Equipment Layout Plan At ( + ) 8.5M- PE-DG-311-100-M003
- d) TG Hall Equipment Layout Plan At ( + ) 13.5M- PE-DG-311-100-M004
- e) Equipment Plan at 19.0M & 25.5M Floor ( B-C Bay )- PE-DG-311-100-M005
- f) Main Plant Cross Section- PE-DG-311-100-M006
- g) Plot Plan- 3039-111-29-0200
- h) Plant Boundary Coordinate- 3039-111-29-0200-Rev-01

## SECTION-11

**TIME SCHEDULE - MOBILISATION - PROGRESS AND MONITORING, COMPLETION, ADVANCE, PRICE VARIATION, SALES TAX, WCT ETC.**

11.1

CONTRACTOR HAS TO MOBILISE THEIR MATERIALS, RESOURCES AND WORK FORCE SO AS TO START THE WORK WITHIN 20 DAYS OF FAX/TELEGRAPHIC INTIMATION OF AWARD OF WORK. FURTHER MOBILIZATION OF FRESH RESOURCES AND AUGMENTATION OF EXISTING RESOURCES SHALL BE DONE IN CONSULTATION WITH BHEL IN ALL THE AREAS IN SUCH A MANNER THAT THE ENTIRE WORK IS COMPLETED WITHIN A NORMAL COMPLETION SCHEDULE OF **30 MONTHS (THIRTY) MONTHS**, WHICH IS FURTHER REPRODUCED AS BELOW:

AREA	ACTIVITY	RELEASE FOR ERECTION PROGRESSIVELY (ASSUMED DATE OF START OF CIVIL WORKS - 01/09/2009)	
<b>MAIN POWER BLOCK</b>		<b>Unit # 1</b>	<b>Unit # 2</b>
1	BOILER FOUNDATION	31 <sup>ST</sup> DECEMBER 2009 INCLUDING CURING AND BACKFILLING	AFTER A GAP OF 3 MONTHS
2	ESP FOUNDATION	31 <sup>ST</sup> JANUARY 2010	AFTER A GAP OF 3 MONTHS
3	POWER HOUSE FOUNDATIONS	31 <sup>ST</sup> MAY 2010	AFTER A GAP OF 2 MONTHS
4	TG RAFT, TG COLUMNS & TG DECK	31 <sup>ST</sup> OCTOBER 2010 INCLUDING REMOVAL OF FORMWORKS, DEBRIS, CURING ETC.	AFTER A GAP OF 3 MONTHS
5	START OF FABRICATION OF POWER HOUSE, MILL & BUNKER STRUCTURES.	01 <sup>ST</sup> JANUARY 2010	SIMULTANIOUSLY
6	START OF ERECTION OF POWER HOUSE, STRUCTURES.	01 <sup>ST</sup> APRIL 2010 TO 31 <sup>ST</sup> OCTOBER 2010 PROGRESSIVELY FROM DATE OF ISSUE OF LOI	AFTER A GAP OF 3 MONTHS
7	COMPLETION OF STRUCTURAL TRUSS AND DECKING SHEETS	28 <sup>TH</sup> FEB. 2011	AFTER A GAP OF 3 MONTHS
8	BUNKER & MILL FOUNDATION	31 <sup>ST</sup> DECEMBER 2010	AFTER A GAP OF 3 MONTHS
9	START OF ERECTION OF BUNKERS & TPs STRUCTURES.	FROM 1 <sup>ST</sup> SEPTEMBER 2010 TO 31 <sup>ST</sup> MARCH 2011 PROGRESSIVELY FROM DATE OF ISSUE OF LOI	AFTER A GAP OF 3 MONTHS
11	ALL FANS FOUNDATION, TRANSFORMER FOUNDATIONS, TRANSFORMER YARD & OTHER AUXILIARIES BUILDINGS	31 <sup>ST</sup> MAY 2011	
12	FINISHING/ARCHITECTURAL WORKS IN POWER HOUSE/ESP CONTROL ROOMS, CLADDING SHEETS & OTHER BUILDING.	30 <sup>TH</sup> SEPTEMBER 2011	AFTER A GAP OF 3 MONTHS
<b>PLANT ROADS, DRAINS, FENCING, PAVING &amp; OTHER MISC. WORKS IN ALL RESPECT</b>		<b>FEB. 2012</b>	

THE DATE OF COMMENCEMENT FOR THE PURPOSE OF START OF NORMAL COMPLETION SCHEDULE WILL BE THE DATE ON WHICH THE EXCAVATION WORK FOR THE BOILER FOUNDATION/MAIN POWER HOUSE PLANT WORK IS STARTED AND LAYOUT IS MADE. **FOR THE PURPOSE OF OVERALL COMPLETION, DATE OF START OF FIRST EXCAVATION IN MAIN POWER BLOCK AREA SHALL BE CONSIDERED.**

## **11.2.0 PROGRESS AND MONITORING OF WORK, CONTRACT EXTENSION**

### **11.2.1**

**CONSTRUCTION SCHEDULE:** - THE CONTRACTOR SHALL FURNISH THE L2/L3 CONSTRUCTION SCHEDULE AREA WISE BASED ON THE ABOVE MILESTONES WITHIN 30 DAYS OF ISSUE OF LOI. CONTRACTOR SHALL DRAW MONTHLY COMPLETION PROGRAMME ALONGWITH THE BHEL ENGINEER FOR VARIOUS ACTIVITIES. CONTRACTOR TO ARRANGE ALL THE INPUTS LIKE CEMENT AND ALL OTHER MATERIALS IN THEIR SCOPE FOR COMPLETION OF THE PROJECT UNDER THIS CONTRACT IN TOTALITY.

### **11.2.2**

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL THE RELEVANT INFORMATION ON A REGULAR BASIS REGARDING PROGRESS ACHIEVED.

### **11.2.3**

CONTRACTOR SHALL DRAW MONTHLY COMPLETION PROGRAMME IN CONSULTATION WITH BHEL FOR VARIOUS ACTIVITIES. THE CONTRACTOR SHALL SUBMIT DAILY, WEEKLY AND MONTHLY PROGRESS REPORTS, MANPOWER REPORTS, MATERIAL CONSUMPTION AND STOCK REPORTS, STEEL MATERIALS REQUIREMENT (UNDER BHEL SCOPE OF SUPPLY) EQUIPMENT STATUS REPORTS ETC. THE PROGRESS REPORTS SHALL INDICATE THE PROGRESS ACHIEVED AGAINST PLANNED WITH REASONS INDICATING THE DELAYS, IF ANY. THE REPORT SHALL ALSO GIVE THE

REMEDIAL ACTIONS WHICH THE CONTRACTOR INTENDS TO MAKE GOOD THE SLIPPAGE OR LOST TIME SO THAT FURTHER WORK PROCEED AGAIN AS PER THE ORIGINAL PROGRAMME AND THE SLIPPAGE DO NOT ACCUMULATE AND AFFECT THE OVERALL PROGRAMME.

### **11.2.4**

ANY OTHER INFORMATION THAT IS REQUIRED FOR DECISION MAKING, PLANNING AND ACTION TAKING, THE CONTRACTOR SHOULD FURNISH THE SAME. THE TENTATIVE FORMAT FOR VARIOUS REPORTS WILL BE PRESCRIBED AT SITE BY BHEL.

### **11.2.5**

THE WORK UNDER THE SCOPE OF CONTRACTOR WILL BE DEEMED TO BE COMPLETE IN ALL RESPECTS ONLY WHEN SO CERTIFIED BY BHEL ENGINEER. THE DECISION OF BHEL IN THIS REGARD SHALL BE FINAL AND BINDING ON THE CONTRACTOR.

## **11.3 ASCERTAINING AND ESTABLISHING THE REASONS FOR SHORTFALL**

IN ORDER TO ESTABLISH THE REASONS LEADING TO EXTENSION OF THE CONTRACT PERIOD A REGULAR REVIEW OF THE PERFORMANCE AS STATED VIDE CL. 11.2 ABOVE WILL BE MADE CONSIDERING THE AVAILABILITY OF COMPONENTS FOR CIVIL WORK COMPLETION AND OTHER INPUTS / CONSTRAINTS OVER WHICH THE CONTRACTOR HAS NO CONTROL. THE PROGRAMME WILL BE REVIEWED AREA-WISE AND THE FOLLOWING FACTS WILL BE RECORDED IN CASE OF SHORTFALL AT THE END OF EVERY MONTH IN THE PRESCRIBED **FORMAT PUR - F06:**

- A) CIVIL WORK COMPLETION SCHEDULE NOT ACHIEVED OWING TO NON-AVAILABILITY OF FRONTS.

CIVIL WORK COMPLETION SCHEDULE NOT ACHIEVED OWING TO NON-AVAILABILITY OF MATERIALS BY CONTRACTOR.

- C) CIVIL WORK COMPLETION SCHEDULE NOT ACHIEVED OWING TO NON-AVAILABILITY OF TOOLS AND PLANTS, MANPOWER AND CONSUMABLES BY THE CONTRACTOR OR ANY OTHER REASON ATTRIBUTABLE TO THE CONTRACTOR.
- D) CIVIL WORK COMPLETION SCHEDULE NOT ACHIEVED DUE TO ANY OTHER REASONS NOT ATTRIBUTABLE TO THE CONTRACTOR.

## 11.4 CONTRACT EXTENSION

### 11.4.1

IF THE COMPLETION OF WORK AS DETAILED IN THESE SPECIFICATION GETS DELAYED BEYOND THE END OF CONTRACT PERIOD THEN DEPENDING ON THE BALANCE WORK LEFT OUT, BHEL AT ITS DISCRETION MAY EXTEND THE CONTRACT.

### 11.4.2

A JOINT PROGRAMME SHALL BE DRAWN FOR THE WORK TO BE COMPLETED DURING THE EXTENDED CONTRACT PERIOD. REVIEW OF THE PROGRAM AND RECORD OF SHORTFALL AS DESCRIBE VIDE CLAUSE 11.3 SHALL BE DONE DURING THE EXTENDED PERIOD. THE OVERRUN CHARGES WILL BE PAID IN PROPORTION TO THE ACHIEVEMENT OF THE RESPECTIVE MONTH VIS-À-VIS THE PLAN FOR THE MONTH (FOR ASSESSING THE PERFORMANCE, THE AGREED PLAN SHALL BE REDUCED BY SHORTFALL ATTRIBUTABLE TO THE BHEL). BHEL MAY DISALLOW CONTRACTOR'S CLAIM FOR OVER RUN CHARGES, IF THE MONTHLY PROGRAMME AS MENTIONED HERE NOT MADE BY HIM.

### 11.4.3

THE PART OF EXTENSION ATTRIBUTABLE TO THE CONTRACTOR, IF ANY, IN TOTAL CONTRACT EXTENSION SHALL BE EXHAUSTED FIRST I.E. IMMEDIATELY AFTER END OF GRACE PERIOD. THIS SHALL BE FOLLOWED BY THE EXTENSION ON ACCOUNT OF FORCE MAJEURE CONDITIONS, IF ANY, AND LASTLY ON ACCOUNT OF BHEL.

## 11.5 COMPENSATION FOR DELAY: -

### 11.5.1

IF THE CONTRACTOR FAILS TO COMPLETE THE WORK UNDER THE SCOPE OF WORK IN THIS CONTRACT/AS PER TENDER SCHEDULES, WITHIN THE TIME SPECIFIED IN THE SPECIFICATION OR WITHIN ANY EXTENSION (FOR REASONS NOT ATTRIBUTABLE TO BHEL), HE SHALL, WITHOUT PREJUDICE TO ANY OTHER RIGHT OR REMEDY OF BHEL ON ACCOUNT OF SUCH BREACH, **PAY COMPENSATION (PENALTY) TO BHEL**. THE ABOVE AGREED COMPENSATION SHALL BE A PENALTY EQUIVALENT TO 1/2 % (Half PERCENT) OF THE TOTAL CONTRACT PRICE, EXCLUDING ELEMENTS OF TAXES, DUTIES ETC. IF ANY, PER WEEK OR PART THEREOF OF THE DELAY SUBJECT TO A MAXIMUM OF 10% (TEN PERCENTAGE) OF THE TOTAL EXECUTED PRICE EXCLUDING ELEMENTS OF TAXES, DUTIES ETC. ( Also pl refer cl no 2.7.5 of G C C )

11.5.2 BHEL SHALL DEDUCT THE AMOUNT OF SUCH COMPENSATION FROM ANY MONEY DUE OR WHICH MAY BECOME DUE TO THE CONTRACTOR AND/OR RECOVER SUCH COMPENSATION FROM THE BANK GUARANTEES / SECURITY DEPOSIT OF THE CONTRACTOR. TO BE ENTITLED TO IMPOSE SUCH COMPENSATION, BHEL WILL NOT BE REQUIRED TO PROVE THAT BHEL HAS INCURRED SUCH AMOUNT AS ACTUAL DAMAGE.

11.5.3 BHEL RESERVES THE RIGHT TO PURCHASE FROM ELSEWHERE ON ACCOUNT OF AND AT THE RISK & COST OF THE CONTRACTOR WITHOUT NOTICE TO THE CONTRACTOR OF THE EQUIPMENT/MATERIALS NOT SO DELIVERED, WITHOUT CANCELLING THE ORDER/CONTRACT IN RESPECT OF THE EQUIPMENT/MATERIALS NOT YET DUE FOR DELIVERY.

11.5.4 BHEL RESERVES THE RIGHT TO CANCEL THE ORDER/CONTRACT OR A PORTION THEREOF FOR THE STORES NOT SO DELIVERED AT THE RISK & COST OF THE CONTRACTOR AND THE CONTRACTOR SHALL BE LIABLE TO BHEL FOR ANY EXCESS COSTS THEREOF.

11.5.5 THE CONTRACTOR SHALL CONTINUE THE PERFORMANCE OF THE ORDER/CONTRACT UNDER ALL CIRCUMSTANCES, TO THE EXTENT NOT CANCELLED.



11.5.6 WHERE ACTION IS TAKEN AS PER ABOVE, THE CONTRACTOR SHALL BE LIABLE FOR ANY LOSS, WHICH BHEL MAY SUSTAIN ON THAT ACCOUNT. THE CONTRACTOR SHALL NOT BE ENTITLED TO ANY GAIN ON SUCH PURCHASE AND THE MANNER AND THE METHOD OF SUCH PURCHASE SHALL BE AT THE DISCRETION OF BHEL. IT SHALL NOT BE OBLIGATORY ON ANY PART OF BHEL TO SERVE A NOTICE OF SUCH PURCHASE ON CONTRACTOR

11.6 **PRICE VARIATION:** IN ORDER TO TAKE CARE OF VARIATION IN THE COST OF EXECUTION OF WORK, ON EITHER SIDE, DUE TO VARIATION IN THE INDEX OF MATERIALS, LABOUR, DIESEL, CEMENT & STEEL USED IN THE WORK, THE FOLLOWING PRICE VARIATION FORMULA SHALL BE APPLICABLE. **(AS SUCH PVC GIVEN IN GCC CL NO: 2.16 SHALL NOT BE APPLICABLE)**

11.6.1

THE BASIS FOR CALCULATION OF PRICE VARIATION UNDER EACH CATEGORY, THEIR COMPONENT, BASE INDEX/PRICE AND BASE DATE OF ACCOUNTING OF INDEX/PRICE SHALL BE AS UNDER:-

SL.NO.	CATEGORY	COMPONENT (K)	BASE INDEX/PRICE	BASE DATE
A)	LABOUR OF ALL CATEGORIES	25%	CONSUMER PRICE INDEX FOR INDUSTRIAL WORKERS (GENERAL), APPLICABLE TO "ALL INDIA" AS PUBLISHED BY LABOUR BUREAU, SHIMLA	<b>BASE DATE SHALL BE LAST DATE OF SUBMISSION OF TENDER (WITH EXTENDED DATE OF TENDER, IF ANY).</b> (It is clarified that in case BHEL issues any clarification/ amendment after tender submission, then date of issue of such clarification/ amendment shall not be considered as base date.)
B)	DIESEL OIL	5%	PRICE OF HS DIESEL AT PUMP OF INDIAN OIL CORPORATION/BPCL/HPCL NEAREST TO THE PROJECT SITE.	-DO-
C)	CEMENT	25%	WHOLE SALE PRICE INDEX FOR CEMENT PUBLISHED BY MINISTRY OF COMMERCE AND INDUSTRY (WWW.EAINDUSTRY.NIC.IN)	-DO-
D)	STEEL MATERIALS	30%	The wholesale price index published by RBI	-DO-

11.6.2

PAYMENT/RECOVERY DUE TO VARIATION IN INDEX/PRICES SHALL BE DETERMINED ON THE BASIS OF THE FOLLOWING NOTIONAL FORMULA WITHOUT ANY INITIAL ABSORPTION, IN RESPECT OF THE IDENTIFIED COMPONENTS VIZ. LABOUR,CEMENT, STEEL AND DIESEL.

$$A = K \times R \times \frac{(XN - XO)}{XO}$$

**WHERE**

**A** = AMOUNT TO BE PAID/RECOVERED DUE TO VARIATION IN THE INDEX FOR LABOUR,CEMENT AND DIESEL PRICES .

**K** = PERCENTAGE COMPONENT OF LABOUR, MATERIALS AND DIESEL AS INDICATED IN COLUMN NO.3 ABOVE.

**R** = VALUE OF WORK DONE FOR THE BILLING MONTH

**XN** = REVISED INDEX NUMBER FOR LABOUR, CEMENT, STEEL AND PRICE FOR DIESEL ON THE DATE SUBSEQUENT TO THE BASE DATE AS INDICATED IN THE COLUMN NO.5 OF THE ABOVE TABLE (I.E. FOR THE WORK BILL MONTH UNDER CONSIDERATION)

**XO** = INDEX NO. FOR LABOUR, CEMENT, STEEL AND PRICE FOR DIESEL AS ON THE BASE DATE INDICATED IN THE COLUMN NO.5 OF THE ABOVE TABLE.

11.6.3

THE CONTRACTOR SHALL PRODUCE NECESSARY "PRICE LIST" FOR DIESEL FROM NEAREST DIESEL OIL DEALER AND "MONTHLY BULLETINS" ISSUED BY LABOUR BUREAU, SHIMLA AND RBI BULLETINS FOR ALL COMMODITIES FOR APPLICATION OF PRICE VARIATION AS REQUIRED IN THE NOTIONAL FORMULA MENTIONED ABOVE.

11.6.4

THE CONTRACTOR WILL BE REQUIRED TO RAISE THE BILLS FOR PRICE VARIATION ON A MONTHLY BASIS ALONGWITH THE RUNNING BILLS IRRESPECTIVE OF THE FACT WHETHER ANY INCREASE/DECREASE IN THE CONSUMER PRICE INDEX FOR LABOUR, MATERIAL (OTHER THAN ISSUED BY BHEL) AND PRICE OF DIESEL OIL HAS TAKEN PLACE OR NOT. IN CASE IF THERE IS DELAY IN PUBLICATION OF BULLETINS (FINAL FIGURE), THE PROVISIONAL VALUE AS PUBLISHED CAN BE CONSIDERED FOR PAYMENT/RECOVERY ON ACCOUNT OF VARIATION AND THE ARREARS SHALL BE PAID / RECOVERED ON GETTING THE FINAL VALUES.

11.6.5

PRICE VARIATION SHALL BE APPLICABLE ON THE **REVISED/ENHANCED** RATES (IF ANY), BUT SHALL NOT BE APPLICABLE FOR ANY **EXTRA WORK**.

11.6.6 **VALIDITY PERIOD FOR PVC**

THE ABOVE PVC SHALL BE APPLICABLE FOR TOTAL CONTRACT PERIOD OF **30 MONTHS** PLUS ACCEPTED EXTENDED PERIOD, IF ANY, DUE TO NO FAULT OF CONTRACTOR WITHOUT FREEZING THE INDEX. PRICE VARIATION DURING THE ENTIRE EXTENDED PERIOD ON CONTRACTOR'S ACCOUNT, IF ANY, WILL BE APPLIED ON THE INDEX FROZEN FOR THE MONTH PRECEDING START OF SUCH EXTENDED PERIOD ATTRIBUTABLE TO THE CONTRACTOR.

11.6.7

THE TOTAL QUANTUM OF PRICE VARIATION SHALL NOT EXCEED FIFTEEN PERCENTAGES (**15%**) OF THE CONTRACT PRICE/AWARDED VALUE OF CONTRACT EXCLUDING EXTRA ITEM OF WORKS (IF ANY)

**11.7 REVISION OF ACCEPTED CONTRACT RATE**

**11.7.1**

THERE WILL NOT BE ANY RATE REVISION ON ACCEPTED CONTRACT RATE BEYOND THE CONTRACT PERIOD.

**11.8 VARIATION IN CONTRACT PRICE**

Bill of Quantities given in the tender document is only to give an idea to the bidders about its nature and quantum of work to be executed. It shall however be understood that this is liable to alterations by omissions, deductions or additions at the discretion of the BHEL during the course of the contract. Consequently, the quantities of individual items of work may vary or certain items may not be required to be executed at all. In such cases for upward variations up to and including 25% as well as all downward variations in the quantity of any individual item, the accepted item rates shall remain firm. **For upward variation beyond 25% in individual item quantity, the lowest quoted rate for that item of work amongst all the technically acceptable bidders shall be applicable for payment of the excess quantity executed over and above +25%.** BHEL will furnish the lowest quoted item rates in the rate schedule of the work order that will be issued to the bidder in whose favour the tender will be accepted.

11.9

THE CONDITIONS STIPULATED VIDE CLAUSES 2.8.3 AND 2.8.4 OF GENERAL CONDITIONS OF CONTRACT INCLUDE WITHIN THEIR PURVIEW ALL TAXES AND DUTIES AND VARIATION IN WAGES/SALARIES /BENEFITS FOR ANY REASON WHATSOEVER WHICH ARE ALL TO BE BORNE BY THE CONTRACTOR.

#### 11.10 TAXES,DUTIED & LEVICS

**REFER SECTION 5 AND CONDITION OF CONTRACT CL. 5.29 IN THIS REGARD**

#### 11.11 INTEREST BEARING RECOVERABLE ADVANCE

INTEREST BEARING RECOVERABLE ADVANCE WILL BE PAID EQUAL TO 5% OF THE CONTRACT VALUE IN TWO INSTALLMENTS AGAINST A MATCHING BANK GUARANTEE VALID FOR 12 MONTHS.

- a) 2 % AFTER RECEIPT OF INITIAL SECURITY DEPOSIT AND APPROVAL OF BAR CHART FOR EXECUTION ALONG WITH UNQUALIFIED ACCEPTANCE OF LOI.
- b) 3 % AGAINST ESTABLISHMENT OF SITE OFFICE, MOBILIZATION OF MACHINERY, T & P SUCH AS EXCAVATORS, CONCRETE MIXERS ,TIPPERS ETC. AS CERTIFIED BY SITE IN CHARGE.
- c) Interest bearing (rate of interest shall be prime leading rate of SBI plus 2% per annum, on monthly reducing balance basis) recoverable advance limited to 5% of the contract value may be paid by BHEL at its discretion depending on the merit of the case against receipt & acceptance of bank guarantee from the contractor for the amount sought. This bank guarantee (BG) shall be valid at least for one year or the recovery duration. In case recovery of dues does not get completed within the aforesaid BG validity period, the contractor must renew the validity of BG or submit fresh BG for the outstanding amount and remaining recovery period. BHEL is entitled to make recovery of the entire outstanding amount in case the contractor fails to comply with the BG requirement as above.
- d) Recovery of dues will be made minimum @ 10% of the admitted gross running bill amount from the first applicable running bill onwards till entire due (principal plus interest) is recovered. In the event sufficient time duration is not left for recovery @10%, the rate of recovery shall be suitably enhanced so that entire due is recovered by the time contractor reaches 90% billing of total value of work executed & within the contract period (including extensions granted or foreclosure if any).

#### 11.12 SECURED ADVANCE:

INTEREST FREE SECURED ADVANCE UP TO A MAXIMUM 75% OF THE VALUE (INVOICE VALUE) OF THE FOLLOWING MATERIALS REQUIRED FOR INCORPORATION IN THE PERMANENT WORKS AND BROUGHT AT SITE DULY CERTIFIED BY ENGINEER SHALL BE PAYABLE TO CONTRACTOR.

- a) ALL STEEL MATERIALS INCLUDING SS LINER FOR BUNKERS
- b) HUME PIPES, PVC PIPES, GI/CI/MS DOWN COMER PIPES
- c) WATER PROOFING ITEMS INCLUDING TAR/TARFELT/POLYURETHENE ELASTOMERIC MEMBRANE MATERIALS
- d) STEEL/ ALLUMINUM/PVC DOORS & WINDOWS WITH GLAZING & MDF/PARTICAL BOARD
- e) FIRE DOORS
- f) SANITARY WARES
- g) TILES OF DIFFERENT VARIETIES
- h) Luxalon & GRG False ceiling material
- i) Metal deck sheeting and side cladding materials including insulation.
- j) Under deck insulation materials
- k) HT/HSFG Bolts, Nuts, Washers etc. and electro forged gratings.
- l) Anchor fasteners.
- m) Cavity Floor materials (False flooring)

THE CLAIM FOR SECURED ADVANCE IS TO BE GIVEN IN THE PRESCRIBED FORM. A FORMAL DEED OF HYPOTHECATION IS TO BE DRAWN UP ON NON-JUDICIAL STAMP PAPER UNDER WHICH BHEL SECURED A LIEN ON THE MATERIALS AND SAFEGUARDED AGAINST LOSSES DUE TO CONTRACTOR POSTPONING THE EXECUTION OF THE WORK DUE TO STORAGE OR MISUSE OF MATERIALS AND AGAINST EXPENSES INCURRED ON THEIR WATCH AND SAFE CUSTODY. **SECURE ADVANCE SHALL BE ADJUSTED IN THE RA BILLS PRORATED TO WORK BILLED.**

NO SECURED ADVANCE WILL BE PAID BY BHEL AGAINST VALUE OF ANY ERECTION EQUIPMENT BROUGHT TO SITE BY THE CONTRACTOR.

### **11.13 Foreclosing of Contract**

#### **11.13.1**

BHEL, at its discretion may foreclose the contract at any time after the completion of contract period from the date of starting the work at site.

#### **11.13.2**

In case it is decided to withdraw any portion of work or foreclose the contract, the percentage value of the work withdrawn / left over shall be determined mutually. BHEL engineer's decision in regard to status of an item shall be final and binding on the contractor.

#### **11.13.3**

The date of completion of work for the purpose of guarantee vide clause 2.13 of general conditions will be the date on which the contract is foreclosed.

#### **11.13.4**

Clause 2.12 of GCC regarding force majeure shall, inter-alia, include stoppage of work due to 'local bandhs' arising out of external factors.

### **11.14 DEFINITION OF WORK COMPLETION**

The contractor's scope of work under these specifications will be deemed to have been completed in all respect, only when all the activities are completed satisfactory and so certified by BHEL site in charge. The decision of BHEL in this regard shall be final and binding on the contractor.

## SECTION-12

### TERMS OF PAYMENT

#### 12.0 TERMS OF PAYMENT

##### 12.0.1

The contractor shall submit his monthly RA account 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. However, first RA Bill shall be released only after signing of Contract Agreement.

##### 12.0.2

Clause 2.6 of general conditions of contract shall be referred to as regards mode of payment, and measurement of the work completed.

##### 12.0.3

Release of payment in each running bill will be restricted to 95% of the value of work admitted, as per the percentage break-up for the stage of work completion stipulated vide clauses hereinafter.

The 5% thus remaining shall be on account of workmanship guarantee of work executed. The same will be released after completion of the guarantee period of **12 months** from the date of completion of entire work as certified by BHEL.

BALANCE (5%) AMOUNT OF THE VALUE OF THE WORK EXECUTED AND MEASURED (GROSS VALUE REDUCED BY THE INTERIM PAYMENTS PAID) SHALL BE RELEASED AFTER COMPLETION OF THE GUARANTEE PERIOD OF 12 MONTHS FROM THE DATE OF COMPLETION OF ENTIRE WORK AS CERTIFIED BY BHEL ENGINEER. CONTRACTOR SHALL SUBMIT THE FINAL BILL AFTER COMPLETION OF THE ENTIRE WORKS AND REQUIRED RECONCILIATION DULY CERTIFIED BY ENGINEER - IN - CHARGE. HOWEVER THIS 5% CAN BE RELEASED ALONGWITH THE FINAL BILL ON SUBMISSION OF **BG** OF EQUIVALENT AMOUNT AND TENURE UP TO THE WORKMANSHIP GUARANTEE PLUS SIX MONTH IN PRESCRIBED FORMAT.

##### 12.0.4

The payment for running bills will normally be released within around 30 days of submission of running bill with measurement sheets. Contractor shall make his own arrangement for making payment of impending labour wages and other dues in the meanwhile.

##### 12.0.5

BHEL will release payment through Electronic Fund Transfer (EFT)/RTGS. In order to implement this system, the following details are to be furnished by the Contractor pertaining to his Bank Accounts where proceeds will be transferred through BHEL's banker:

1. Name of the Company
2. Name of Bank
3. Name of Bank Branch
4. City/Place
5. Account Number
6. Account type
7. IFSC code of the Bank Branch
8. MICR Code of the Bank Branch

BHEL may also choose to release payment by other alternative modes as suitable.

#### **12.0.6 INTERIM PAYMENT:**

INTERIM BILLS IN THE FORM OF MONTHLY RUNNING BILLS PREPARED BY THE CONTRACTOR SHALL BE BASED ON THE QUANTITIES EXECUTED AND MEASURED. ALL INTERIM PAYMENTS SHALL BE LIMITED TO 95% OF THE ITEM RATE. ALL ADMISSIBLE DEDUCTION SHALL BE MADE FROM THE ABOVE 95% VALUE. BHEL SITE ENGINEER AT DISCRETION MAY FURTHER SPLIT UP THE PERCENTAGES WITH APPROVAL OF COMPETENT AUTHORITY AND EFFECT PAYMENT TO SUIT THE SITE CONDITION, CASH FLOW REQUIREMENT ACCORDING TO THE PROGRESS OF WORK.

#### **12.0.7 PAYMENT OF PRICE VARIATION**

PRICE VARIATION WILL BE APPLIED AS PROVIDED ELSEWHERE IN THESE SPECIFICATIONS. PAYMENT OF THE SAME SHALL BE RESTRICTED TO **95%** OF SUCH PVC BILLS AND BALANCE 5% SHALL BE WITHHELD AND PAID ALONGWITH THE LAST 5% OF ERECTION BILLS AS PROVIDED ABOVE in CI 12.0.3

#### **12.1.8**

SUBJECT TO ANY DEDUCTION WHICH BHEL MAY BE AUTHORISED TO MAKE UNDER THE CONTRACT, THE CONTRACTOR SHALL ON THE CERTIFICATE OF THE ENGINEER AT SITE BE ENTITLED FOR PAYMENT AS PER THE CLAUSE

#### **12.2 PROGRESSIVE PAYMENT FOR CIVIL, STRUCTURAL AND ARCHITECTURAL.**

THE PERCENTAGE OF PAYMENT FOR PROGRESSIVE COMPLETION OF WORK IN VARIOUS CATEGORIES OF WORK SHALL BE AS UNDER:

##### **12.2.1 CIVIL AND ARCHITECTURAL WORK**

100% OF ITEM RATE ON PRORATA BASIS AGAINST MONTHLY RA BILLS.

##### **12.2.2 STRUCTURAL WORK INCLUDING SS LINER FOR BUNKERS**

100% OF ITEM RATE ON PRORATA BASIS IN FOLLOWING STAGES:

- A) 80% ON SUPPLY & FABRICATION
- B) 5% ON COMPLETION OF WELD TEST
- C) 10% ON ERECTION
- D) 5% ON ALIGNMENT, BOLTING, SITE WELDING & FINAL FIXING

SECURED ADVANCE PAID AS PER **CLAUSE NO. 11.11.8** FOR THE QUANTITY OF WORK INCORPORATED ON THE PERMANENT JOB SHALL BE RECOVERED WHILE RELEASING THE PAYMENT AGAINST **STAGE – A** ABOVE.

#### **12.3 EXTRA WORKS**

IF ANY EXTRA OR ADDITIONAL ITEMS, WHICH ARE NOT INCORPORATED IN THE BOQ SCHEDULE, HAVE TO BE EXECUTED BY THE CONTRACTOR, THE RATE OF SUCH EXTRA OR ADDITIONAL WORK SHALL BE AS PER THE FOLLOWING:

THE RATE OF SUCH ITEMS SHALL BE DERIVED, IF POSSIBLE, FROM THE AVAILABLE RATES, AGREED UPON IN THE RATE SCHEDULE OF THIS CONTRACT.

IF THE ITEMS ARE COVERED UNDER CPWD- DSR 2009 SCHEDULE, THE RATE SHALL BE WORKED OUT ON THAT BASIS ADDING LEGITIMATE ESCALATIONS.

IF THE ITEMS ARE NOT COVERED UNDER ABOVE SCHEDULE, THE RATES HAVE TO BE MUTUALLY AGREED UPON ON THE BASIS OF EFFORTS AND PREVAILING MARKET RATES FOR WHICH ALL DOCUMENTARY EVIDENCES, AS REQUIRED BY BHEL SHALL HAVE TO BE PRODUCED BY THE CONTRACTOR. DECISION OF BHEL IN SUCH CASES SHALL BE FINAL AND BINDING ON THE CONTRACTOR.

## **SECTION-13**

### **DETAILS TO BE FURNISHED BY THE BIDDERS**

Apart from other details called for in the tender document under the various other provisions, the following details shall be submitted by the tenderers along with their offers (Technical Bid). Please also refer the checklist furnished in the beginning of the Tender Specification.

#### **13.1**

Contractor shall submit his HQ and Site organization charts.

#### **13.2**

Contractor shall submit tentative month-wise plan to match the Completion Schedule as in Section-11 of Special Conditions of Contract.

#### **13.3**

Contractor shall furnish the list of major tools and plants owned by them as well as T&P deployment plan for this work.

#### **13.4**

Contractor shall furnish the names of engineers, supervisors, and other specialized staff working with him for more than two years.

#### **13.5**

Contractor shall furnish month-wise deployment plan of manpower.

## **SECTION-14**

### **INSURANCE**

**Refer Section-4 for Insurance**



## SECTION-15 SPECIAL CONDITION OF CONTRACT

### 15.0 EARNEST MONEY DEPOSIT, SECURITY DEPOSIT & BANK GUARANTEE

#### 14.1 Earnest Money Deposit:

**EMD for this tender is Rs. 2,00,000/- (Rupees Two lakhs only).**

Bidders who have already deposited One Time EMD of Rs. 2.00 lakh are exempted from submission of EMD for this tender. However a copy of 'One Time EMD' certificate issued by BHEL/PSWR, Nagpur shall be enclosed along with the Offer.

**EMD is to be paid in cash (as permissible under Income Tax Act), Pay order or Demand Draft in favour of Bharat Heavy Electricals Limited and payable at Nagpur. No other form of EMD remittance shall be acceptable to BHEL.**

**15.1.1** EMD by the bidder will be forfeited as per Tender Documents if

- i) After opening the tender, the bidder revokes his tender within the validity period or increases his earlier quoted rates.
- ii) The bidder does not commence the work within the period as per LOI/Contract. In case the LOI / contract is silent in this regard then within 15 days after award of contract.

**15.1.2** EMD shall not carry any interest.

**15.1.3** In the case of unsuccessful bidders, the Earnest Money will be refunded to them after acceptance of tender by successful bidder

#### 14.2 Security Deposit

**15.2.1** Security Deposit shall be furnished by the successful bidder. The rate of Security Deposit will be as below:

SN	Contract Value	Security Deposit Amount
1	Up to Rs. 10 lakhs	10% of Contract Value
2	Above Rs. 10 lakhs upto Rs.50 lakhs	1 lakh + 7.5% of the Contract Value exceeding Rs. 10 lakhs.
3	Above Rs. 50 lakhs	Rs 4 lakhs + 5% of the Contract Value exceeding Rs. 50 lakhs.

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

**15.2.2** Security Deposit may be furnished in any one of the following forms

- i. Cash (as permissible under the Income Tax Act)
- ii. Pay Order, Demand Draft in favour of BHEL.
- iii. Local cheques of scheduled banks, subject to realization.
- iv. Securities available from Post Offices such as National Savings Certificates, Kisan Vikas Patras etc. (Certificates should be held in the name of Contractor furnishing the security and duly pledged in favour of BHEL and discharged on the back).

- v. Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL.
- vi. Fixed Deposit Receipt issued by Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The FDR should be in the name of the contractor, A/C BHEL, duly discharged on the back.
- vii. Security deposit can also be recovered at the rate of 10% from the running bills. However in such cases at least 50% of the Security Deposit should be remitted (either by cash/DD or **BG for maximum 50%** of total SD) before start of the work and the balance 50% may be recovered from the running bills.
- viii. EMD of the successful bidder shall be converted and adjusted against the cash Security Deposit excepting for such bidder who has remitted One Time EMD.
- ix. The Security Deposit shall not carry any interest.

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

#### **15.2.3 SECURITY DEPOSIT SHALL NOT BE REFUNDED TO THE CONTRACTOR EXCEPT IN ACCORDANCE WITH THE TERMS OF THE CONTRACT**

### **14.3 BANK GUARANTEE**

- i. 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 held liable for issue of any reminders regarding expiry of the Bank Guarantees.
- ii. In case extension/further extensions of any Bank Guarantees are not required, the bidders shall ensure that the same is explicitly conveyed through the Construction Manager to BHEL PSWR/HQ, Nagpur
- iii. 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.
- iv. **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.**
- v. Bidders to ensure that the Bank Guarantees submitted are exactly as per format given in the Tender documents.
- vi. The Original Bank Guarantee shall be sent directly by the Bank to BHEL under Registered Post (Acknowledgement Due). However, in exceptional cases, where guarantee is directly received by Vendor, the Vendor shall instruct the Bank to send an unstamped duplicate copy of the guarantee directly to BHEL under Registered Post (Acknowledgement Due).

15.3.1 Guidelines for acceptance of Bank Guarantees are as follows :

- Vendors are advised to obtain BG from any of the following BHEL consortium banks

State Bank of India	The Hongkong and Shanghai banking Corporation Ltd.
ICICI Bank Ltd	ABN Amro Bank N.V
Bank of Baroda	IDBI Ltd
Canara Bank	Punjab National Bank
Citi bank N.A	Standard Chartered Bank
Corporation Bank	State Bank of Travancore
Detshe Bank	State Bank of Hyderabad
HDFC Bank Ltd	Syndicate Bank

- The Bank Guarantees of all Public sector banks shall be accepted (Other than consortium banks also).
- The Bank Guarantees of Co-operative banks shall not be accepted.
- Bank Guarantees of other banks (banks other than consortium bank, public sector bank, & Co-operative banks) can be accepted subject to an overall exposure limit (at BHEL, PSWR, Nagpur) of RS. 10 crores for banks with net worth of more than Rs. 500 crores as on last balance sheet date and Rs 5 crores for banks with net worth between Rs. 350 to Rs 500 crores (A certificate and copy of latest Balance Sheet to be given at the time of submission of bank guarantees .
- In case Bank Guarantees given by non consortium banks (Private sector or Public sector), the bank Guarantees shall be enforceable at Nagpur, Maharastra.

## **SECTION 16**

### **SUSPENSION OF BUSINESS DEALING WITH CONTRACTORS**

16.1 A bidder may be put on HOLD for a period of 6 months, for future tenders for specific works on the basis of one or more of the following reasons:

- I. Bidder does not honour his own offer or any of its conditions within the validity period.
- II. Bidder fails to respond against **three consecutive** enquires of BHEL.
- III. After placement of order, Bidder fails to execute a contract.
- IV. Bidder fails to settle sundry debt account, for which he is legitimately liable, within one year of its occurrence.
- V. Bidder's performance rating falls below 60% in specific category.
- VI. Bidder works are under strike/ lockout for a long period.

16.2 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:-

- I. Bidder tampers with tendering procedure affecting ordering process or commits any misconduct which is contrary to business ethics.
- II. Bidder has substituted, damaged, failed to return, short returned or unauthorizedly disposed off materials/ documents/ drawings/ tools etc of BHEL.
- III. Bidder no longer has the technical staff, equipment, financial resources etc. required to execute the orders/ contracts.

16.3 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:

- I. Bidder is found to be responsible for submitting fake/ false/ forged documents, certificates, or information prejudicial to BHEL's interest.
- II. In spite of warnings, the Bidder persistently violates or circumvents the provisions of labour laws/ regulations/ rules and other statutory requirements.
- III. Bidder is found to be involved in cartel formation.
- IV. The Bidder has indulged in malpractices or misconduct such as bribery, corruption and fraud, pilferage etc which are contrary to business ethics.
- V. The Bidder is found guilty by any court of law for criminal activity/ offences involving moral turpitude in relation to business dealings.
- VI. The Bidder is declared bankrupt, insolvent, has wound up or been dissolved; i.e ceases to exist for all practical purposes.
- VII. Bidder is found to have obtained Official Company information/ documentation by questionable means.
- VIII. Communication is received from the administrative Ministry of BHEL to ban the Bidder from business dealings.

**SECTION-17**  
**IMPLEMENTATION OF INTEGETY PACT IN BHEL**

**INTEGRITY PACT ( I P )**

- 1.0** The IP shall be a part of tender document and shall be returned by bidder along with techno-commercial bid duly signed by the authorized signatory who signs the bid. The IP duly signed by bidder and authorized official of BHEL will form a part of purchase order/contract.
- 2.0** Only those bidders who have entered into such IP would be competent to participate in the bidding. In other words, entering into this pact would be preliminary qualification.
- 3.0** Independent External Monitor ( IEM )- BHEL has appointed IEM as detailed below to oversees the compliance of obligations under IP.

**Sh Kanwarjit Singh ( IRS ) Retd**  
**kanwarfeb@gmail.com**

**Between**

Bharat Heavy Electricals Ltd. (BHEL). A company registered under the Companies Act 1956 and having its registered office at “BHEL house” Sir Fort, New Delhi – 110049 (India) hereinafter referred to as “The Principal” which expression unless repugnant to the context of meaning hereof shall include its successors or assigns of the ONE PARE

**And**

\_\_\_\_\_ (description of the party along with address) hereinafter referred to as “The Bidder/ Contractor” which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

**Preamble**

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

\_\_\_\_\_  
\_\_\_\_\_ 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).

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 17.1 - Commitment 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 itself 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 enquiry 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.

## **Section 17.2 – Commitment 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)/ Contractors(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, specification, 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 IPC/PC Act: further the Bidder(s)/ Contractor(s) will not use improperly, for purpose 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, transmitted electrically.
- 2.1.4 The Bidders (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 person to commit offences outlined above or be an accessory to such offences.

### **Section 17.3 – Disqualification from tender process and execution 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 separate “Guidelines for Suspension of Business Dealing with Suppliers/ Contractors” framed by the Principal.

### **Section 17.4 Compensation for Damages**

—

- 4.1 If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to 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 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 17.5 – Previous Transgression**

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country confirming 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 his subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.



## **Section 17.6 – Equal treatment of all Bidders/ Contractors/ Sub-Contractors**

- 6.1 The Bidder(s)/ Contractor(s) undertake(s) to demand from his sub-contractors a commitment consistent with this Integrity Pact. This commitment shall be taken only from those sub-contractors whose contract value is more than 20% of Bidder's/ Contractor's contract value with the Principal.
- 6.2 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.
- 6.3 The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

## **Section -17.7 Criminal Charges against violating Bidders/ Contractors/ Sub-contractors**

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 regards, the Principal will inform the Vigilance Office.

## **Section – 17.8 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)/ Contractors(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) 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)/ Sib-contractor(s) with confidentiality.
- 8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meeting 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.
- 8.5 As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or heal the situation, or to take other relevant action. The Monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right demand from the parties that they act in a specific manner, refrain from action or tolerate action.\
- 8.6 The Monitor will submit a written report to the CMD, BHEL within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposal for correcting problematic situations.
- 8.7 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- 8.8 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant IPC/PC 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.
- 8.9 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.
- 8.10 The word 'Monitor' would include both singular and plural.

## **Section 17.9 – Pact Duration**

- 9.1 This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the respective contract and for all other Bidders 6 months after the contract has been awarded.
- 9.2 If any claim is made/ lodged during this time, the same shall be binding and continue to be valid despite the lapse of this Pact as specified as above, unless it is discharged/ determined by the CMD, BHEL

## Section 17.10 – Other Provisions

- 10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.
- 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 reminder 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  
(Office Seal)

\_\_\_\_\_  
For & On Behalf of the Bidder/ Contractor  
(Office Seal)

Place: \_\_\_\_\_

Date: \_\_\_\_\_

Witness: \_\_\_\_\_  
(Name & Address) \_\_\_\_\_

\_\_\_\_\_

Witness: \_\_\_\_\_  
(Name & Address) \_\_\_\_\_

\_\_\_\_\_

APPENDIX-I

**LIST OF TOOL AND PLANTS TO BE PROVIDED BHEL**

NO TOOLS & TACKLES SHALL BE PROVIDED BY BHEL.

## APPENDIX- II

### MONTHWISE MANPOWER DEPLOYMENT PLAN ( BIDDER MUST SUBMIT ) (CATEGORYWISE NUMBERS TO BE INDICATED FOR EACH MONTH)

SL. NO.	CATEGORY							30 M O N T H S			
	1	2	3	4	5	6	7	8	9	10-----30TH	
01	RESIDENT ENGINEER										
02	ENGINEER										
03	SUPERVISORS										
04	MATERIALS MANAGEMENT SUPERVISORS										
05	WELDERS										
06	PLUMBERS										
07	CARPENTERS										
08	BAR BENDERS										
09	TRUCK/TRAILER DRIVERS/ CONCRETE MIXER OPERATORS										
10	STORE KEEPERS										
11	ELECTRICIANS										
12	HELPERS/SEMISKILLED WORKERS										
13	MASONS										
MONTHWISE TOTAL											

**BIDDER MAY PL USE SEPARATE SHEET AND FILL UP THE DETAILS AS ABOVE**

SIGNATURE OF THE TENDERER

DATE:

### APPENDIX–III

#### ANALYSIS OF UNIT RATE QUOTED

SL. NO.	DESCRIPTION	% OF UNIT RATE QUOTED	REMARKS (IF ANY)
01	SITE FACILITIES VIZ., ELECTRICITY, WATER, WORKSHOP AND OTHER INFRASTRUCTURE		
02	CEMENT, STEEL, STRUCTURES, AND ALL MATERIALS		
03	SALARY & WAGES		
04	CONSUMABLES		
05	DEPRECIATION & MAINTENANCE FOR T&P AND OTHER ITEMS		
06	ESTABLISHMENT & ADMINISTRATION EXPENSES OF SITE		
07	RETRENCHMENT BENEFIT		
08	OVERHEADS		
09	PROFIT		
10	TOTAL	<b>100%</b>	

DATE:

SIGNATURE OF THE TENDERER

## Appendix – IV

SUCCESSFUL BIDDER IS REQUIRED TO MOBILIZE THE FOLLOWING T&PS FOR SUCCESSFUL & SIMULTANIOUS WORKING IN ALL THE FRONTS. HOWEVER THIS LIST IS NOT EXHAUSTIVE & MAY REQUIRE SOME MORE DEPENDING UPON JOB REQUIREMENTS.

### A) T &Ps FOR STRUCTURAL WORKS

SL	Major T&P items	Qty
1	<b>High reach crane of capacity 250MT for erection of Power house, Bunker, Transfer points and connecting conveyor galleries structures</b>	<b>01 No.</b>
2	75 Ton 955/280TFC Crawler crane-	02Nos.
3	40/45 T Crawler crane	01Nos.
4	18 T Crawler crane	01Nos..
5	Hydra (8 / 10 T Cap.)	03Nos.
6	Radial drill machine	02Nos..
7	Pillar drill m/c	02Nos.
8	Drill M/C NW 10	20Nos.
9	Submerged Arch Welding machine (1st lot)	06nos.
10	MIG welding machine	40Nos.
11	Welding Rectifier	30Nos.
12	Welding m/c	80Nos.
13	GRINDING MACHINE	50Nos.
14	Portable diesel welding M/C	04Nos.
15	Pug cutting m/c	40Nos.
16	Power Driven HSFG bolt tightening m/c	06Nos.
17	HAND CUTTING SET	40Nos
18	PLASAMA CUTTING M/C	02Nos.
19	HYDRAULIC JACK OF DIFFERENT CAPACITY	30Nos.
20	STATIONERY OVEN	20Nos.
21	PORTABLE OVEN	50Nos.
22	Chain pulley of different capacity	20Nos.
23	Max puller	20Nos.
24	ELECTRIC WINCH OF DIFFERENT CAPACITY	04Nos.
25	DG SET OF 250KVA	02Nos.
26	HAND WINCH 5T CAP.	04Nos.
27	SCREW JACK	06Nos.
28	15T/20T TRACTOR & TRAILOR	04Nos.
29	AIR COMPRESSOR OF REQD CAPACITY FOR SAND BLASTING/JACK HAMMER	04Nos.
30	Ultrasonography testing M/c for str. Steel	01Nos.
31	Radiography sources	01Nos.

<b>B</b>	<b>T &amp; Ps FOR CIVIL WORKS</b>	
01	Automatic Batching Plant (30 Cum/Hr)	02Nos..
02	Mini batching plant immediate required for piling RCC works	02Nos.
03	Transit mixer	06Nos.
04	Concrete Pump (30 Cum/Hr min capacity & lift 70M)	02Nos.
05	Air Compressor	02Nos.
06	Wagon drill machine	01Nos.
07	Self priming Dewatering pump 5 HP (Diesel/Electric)	04Nos.
08	Submersible Dewatering pump 5 HP	02Nos..
09	Submersible Dewatering pump 10HP	02Nos.
10	Self priming Dewatering pump 10 HP	02Nos..
11	Self priming Dewatering pump 2 HP	04Nos.
12	Sludge Pump – Submersible	02Nos..
13	Dewatering pump – 25 HP – with delivery pipes.	02Nos.
14	Curing / dewatering pump – 1.5 / 2 HP	03Nos.
15	Hydraulic Excavator /Poclain with rock breaker attachment (mule/rock breaker as per requirements)	01Nos
16	Hydraulic Excavator /Poclain	02Nos..
17	Small dozer	As per requirement
18	Ply Shuttering board with adequate supporting structure – 10000 Sqm. (Old steel shuttering plates will not be allowed).	As per requirement.
19	Ply shuttering board with adequate supporting arrangement – another 20000 Sqm. (Old steel shuttering plates will not be allowed).	As per requirement
20	Dumper /Tippers	12Nos.
21	Reinforcement bending machine	02Nos.
22	Reinforcement cutting machine	02Nos.
23	MS scaffolding pipe with matching nos. of couplers	20000RM
24	Power driven earth rammer	06Nos.
25	Vibromax (earth compacter)	01Nos.
26	Power driven rollers of different capacity	03 nos.
27	a) Compression testing machine (200 T cap.)	01Nos.
28	b) Other civil lab equipment	Within 30 days.
29	a) 03 Nos. Electric Winch with hoist	Within 60 days.
30	b) Balance winches as per requirement	
31	Total Station (Survey Instruments)	01Nos.
32	Auto level & staff	02Nos.
33	DG set ( 250KVA) & 160 KVA	01Nos. each
34	Concrete Cube Moulds	72Nos.
35	JCB	02Nos.
36	Hydra Crane 8 -10 T	03Nos.
37	02 Nos. Trailors/tractor	02Nos.
38	Road Roller	01Nos.
39	Jack hammer	10 nos.
40	Conventional mixer machine	04 nos.



Contd.....

	<b>T &amp; Ps FOR CIVIL WORKS</b>	
41	Water tanker	02 nos.
42	Poles, cables, halogen, bulbs etc. for area illumination	As per requirement
43	Computer (Window Xp), with printer & CD writers	2 sets
44	Communication facilities, Land line, WLL, Mobile, Fax. Etc	As per requirement
45	Well point dewatering system	As per site requirement (Water table is observed from 1.8m to 6.0m from Existing Ground level.)

The above list of T&Ps is indicative only. Any more T&P required for successful completion of the contract shall be in the scope of contractor & has to be arranged within their quoted rates.

## Appendix -V

### Civil Laboratory

The Contractor should establish their own civil laboratory and the lab. Should be equipped with following equipments.

Sr.no.	Description of equipment	QTY	Remarks
01	Cube Testing Machine	02Nos.	
02	Cube moulds (15cm)	30Nos.	
03	Sieve sets for Coarse & fine aggregates		As required per relevant IS code.
04	Electrical oven	01Set	
05	Measuring jars for various capacity		As required
06	Weights		As required
07	Physical balance	01Nos.	
08	Slump Testing Cone	02Nos.	

<b>09</b>	<b>Welding bend test machine</b>	<b>01Nos.</b>	
<b>10</b>	<b>Cement testing equipment</b>	<b>01 set</b>	
<b>11</b>	<b>Ultrasonic machine</b>	<b>01Nos.</b>	
<b>12</b>	<b>Proctor Density test equipment</b>	<b>01Nos.</b>	
<b>13</b>	<b>Impact test, Crushing strength &amp; Absorption test machine, flaky index testing equipment for coarse aggregate.</b>	<b>Each 01 nos.</b>	
<b>14</b>	<b>Other misc. items/equipments.</b>		

**Bidder must submit T&P deployment plan inclusive of above T&Ps as per format Annex – V**

## APPENDIX-VI

### DETAILS OF CURRENT COMMITMENTS

Sr. No	Description of work	W.O. No. & date	Contract Value	Schedule date of Completion	Act. Date of completion	Status	Remark

**Please attach separate sheet if required.**

**APPENDIX-VII**

**DETAILS OF SIMILAR WORK DONE DURING THE LAST SEVEN YEARS ( BIDDER MUST FILL UP THE DETAILS )**

<b>SL. NO.</b>	<b>FULL POSTAL ADDRESS OF CLIENT &amp; NAME OF OFFICER IN CHARGE</b>	<b>DESCRIPTION OF WORK</b>	<b>VALUE OF CONTRACT</b>	<b>DATE OF AWARD OF WORK</b>	<b>DATE OF COMMENCEMENT OF WORK</b>	<b>ACTUAL COMPLETION TIME (MONTHS)</b>	<b>DATE OF ACTUAL COMPLETION OF WORK</b>	<b>REMARKS</b>
1								
2								
3								
4								
5								
6								
7								
8								
9								

**BIDDERS SHALL ENCLOSE COPIES OF DETAILED WORK ORDER (GIVING BILL OF QUANTITIES AND SCOPE OF WORK) AND COMPLETION CERTIFICATE IN SUPPORT OF THIS STATEMENT.**

DATE

SIGNATURE OF TENDERER WITH SEAL

## APPENDIX-VI I I

**FORMAT FOR DEPLOYMENT PLAN FOR MAJOR TOOLS AND PLANTS FOR CIVIL & STRUCTURAL EQUIPMENTS AS GIVEN IN APPENDIX-IV (a, b)**

**\* USE ADDITIONAL SHEETS TO COVER THE TOTAL CONTRACT PERIOD OF 30 MONTHS ( BIDDER MUST FILL UP THE DETAILS IN SEPARATE SHEET )**

SN	DESCRIPTION T&P (Ref. Appendix) -IV	QUANTITY OF DEPLOYMENT IN THE MONTH .....					
		1	2	3	4	5	6 & so on
01							
02							
03							
04							
05							
06							
07							
08							
09							
10							

## APPENDIX- IX

**FORMAT FOR ESTABLISHMENT OF CIVIL LABORATORY AS GIVEN IN APPENDIX-V**

**USE ADDITIONAL SHEETS TO COVER THE TOTAL CONTRACT PERIOD 30 MONTHS ( BIDDER MUST FILL UP THE DETAILS IN SEPARATE SHEET )**

	LSIT OF EQUIPMENT (Ref. Appendix) -V	QUANTITY OF DEPLOYMENT IN THE MONTH					
01		1	2	3	4	5	6..... and so on
02							
03							
04							
05							
06							
07							
08							
09							
10							

