

# भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

#### BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

# **Tender Change Notice-01**

Ref: BHEL: MSTPP:SWM:24:01:05 Date: 15-02-2024

Sub	Tende	r Change Notice (TCN) - 01.	
Job	PREC/	AST PILE, PILECAP, CIVIL, STRUCTURAL & ARCHITECTURAL WORKS FOR SOLID	
	WAST	E MANAGEMENT PACKAGE FOR 2 x 660 MW MAITREE STPP, AT RAMPAL,	
	BAGE	BAGERAHT, BANGLADESH	
Ref	1.0	Tender No: - Ref: BHEL: MSTPP: SWM: 24:01:02, Dated 11.02.24	
	2.0	Other References, if any.	

With reference to above, following points/ documents, relevant to tender, may please be noted and complied with while submitting offer.

- 1) Following changes are to be incorporated/deleted in the approved TCC, of the above-mentioned tender, (revised TCC attached)
  - Clause no 5.3.7: "If required, BHEL shall intimate the bidder for procurement of steel at least one month in advance. The vendor must comply the required quality of the materials to meet the standard of the job and provide relevant MTCs, documents for acceptance. The manufacturer must be BHEL/BIFPCL approve agency" (to be deleted)
  - Clause no 31.7: "The bidder has to plan and work for 24 hours 7 days a week on shift basis operation" (to be added)
  - Clause no 31.8: "If any work of similar nature is required to be executed within the project premises, the same shall be executed in existing rates, terms and conditions." (to be added)
  - Clause no 31.9: "As the plant is in operation, necessary work permits, movement restrictions, safety clearance, is required to be adhered to as per the norms and practices of MSTPP plan including working in vulnerable areas." (to be added)
  - Clause no 31.10:" As this work is the concluding work in the project, it requires integration with the existing facilities. The bidder shall execute the same and shall be paid under relevant item of the BOQ or under the purview of extra item/works of the contract." (to be added)
  - To be added at the end of 2nd paragraph of Clause no 34.5 "However, adequate shift operators, supervisors, etc. must be available for round the clock works."
- 2) BHEL's reply to the queries raised by bidders. (attached as Annexure-A)
- 3) Extension of due date of offer submission from 17.02.24 to 19-02-2024 (12.00 hrs BST)
- 4) All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully, for BHARAT HEAVY ELECTRICALS LTD

Rikash Jyoti Dutta
Dy. General Manager
Bharat Heavy Electricals Limited
2x000 MW MSTP Project
Rampal, Bagerhat, Bangladesh

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 1 OF 41
CML-REV-0	(TCC)	

TENDER NO:Ref: BHEL: MSTPP:SWM: 24:01:02

## **VOLUME-IF**

#### TECHNICAL CONDITIONS OF CONTRACT

#### **FOR**

Precast Pile, Pile cap, Civil, Structural & Architectural Works for Solid Waste Management Package For 2x660 MW Maitree STPP, at Rampal, Bagerhat, Bangladesh



# BHARAT HEAVY ELECTRICALS LIMITED

( A GOVT. OF INDIA UNDERTAKING )
POWER SECTOR – EASTERN REGION
PLOT NO. – 9 / 1, DJ – BLOCK,
SECTOR – II, KARUNAMOYEE,
SALT LAKE CITY,
KOLKATA – 700091.

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 2 OF 41
CML-REV-0	(TCC)	

## **CONTENTS**

CLAUSE NO	DESCRIPTION
1.0	PROJECT SYNOPSIS AND GENERAL INFORMATION
2.0	SCOPE OF THE CONTRACT
3.0	SITE VISIT
4.0	TOOLS & PLANTS
5.0	MATERIAL HANDLING-ISSUE OF STEEL RECONCILIATION
6.0	INSPECTION, TESTING AND INSPECTION CERTIFICATES
7.0	INSURANCE
8.0	DEVIATIONS/ CLARIFICATIONS
9.0	DEWATERING
10.0	TIME SCHEDULE/ COMPLETION PERIOD
11.0	PRICE BID, CONTRACT PRICE &EVALUATION OF PRE-QUALIFICATION
	CRITERIA
12.0	TERMS OF PAYMENT
13.0	DELETED
14.0	TAXES AND DUTIES
15.0	PROJECT MANAGEMENT/ CONSTRUCTION MANAGEMENT
16.0	QUALITY CONTROL & QUALITY ASSURANCE
17.0	QUALITY ASSURANCE PROGRAMME
18.0	GENERAL REQUIREMENTS - QUALITY ASSURANCE
19.0	HEALTH, SAFETY & ENVIRONMENT
20.0	SPECIFIC REQUIREMENTS FOR ISO 9002
21.0	INTEREST BEARING RECOVERABLE ADVANCE/ MOBILIZATION ADVANCE
22.0	OVER RUN CHARGES
23.0	REVISION ON ACCEPTED CONTRACT RATE
24.0	PRICE VARIATION CLAUSE/ ESCALATION
25.0	LIQUIDATED DAMAGE
26.0	GUARANTEE / WARRANTY
27.0	EXTENSION OF TIME FOR COMPLETION
28.0	EARNEST MONEY DEPOSIT (EMD), SECURITY DEPOSIT(SD) AND PERFORMANCE BOND (PB)
29.0	CERTIFICATE TOWARDS COMPLETION
30.0	CIVIL LABORATORY
31.0	CONSTRUCTION SCHEDULE
32.0	PAYMENT FOR ADDITIONAL/EXTRA ITEMS FOR CIVIL FOUNDATION WORKS
33.0	Deleted
34.0	TOOLS & PLANTS (TO BE PROVIDED BY CONTRACTOR)
35.0	TOOLS & PLANTS (TO BE PROVIDED BY BHEL)
36.0	OTHER TERMS
	-

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 3 OF 41
CML-REV-0	(TCC)	

1.0	PROJECT SYNOPSIS AND GENERAL INFORMATION
1.1	INTRODUCTION

The Joint Venture of Bangladesh-India Friendship Power Corporation (pvt) Ltd (BIFPCL) intends to construct a 2x 660 MWe, gross coal fired power plant (the Plant, the Maitree-STPP Project or the Project) in the district of Khulna for which BIFPCL firms as Employer, utilizing high availability, high efficiency steam cycle technology. The Bidder shall acquaint himself by a visit to the site, if felt necessary, with the conditions prevailing at site before submission of the bid. The information given here in under is for general guidance and shall not be contractually binding on BHEL/Owner. All relevant site data /information as may be necessary shall have to be obtained /collected by the Bidder.

#### A. Project Information & Location:

**Project Title:** Maitree 2 x 660 MW coal fired STPP **Plant capacity:** 1320 MW (2 units of 660 MW each)

Type of project: Green field

Owner: Bangladesh-India Friendship Power Corporation (pvt) Ltd (BIFPCL) Location co-ordinates: Maitree-STPP Project is geographically located between

22° 370"0"" N to 22°34"30""N and 89°32"0""E to 89°34"5""E

**Town & City:** Politically, the site is located in Rampal Upazila of the Bagherat District in the Rajnagar Union

## **B.** Meteorological Condition:

- i. Site Elevation: NGL of plant is approximately +5.00 meters.
- ii. **Seismic zone:** Site specific studies shall be carried out by BHEL to determine the design acceleration response spectrum. Peak spectral acceleration shall be determined, but shall be not less than 0.12g.
- iii. Site climatic conditions:

## **Average Site Condition ASC**

- a) Ambient Temperature: 27.3 °C
- b) Ambient Humidity 87 %
- c) Ambient Pressure 1007.6 mbar
- d) River Water Temperature: 29.8 °C

#### **Summer Site Condition SSC**

- a) Ambient Temperature 36.9 °C
- b) Ambient Humidity 60 %
- c) Ambient Pressure 1007.9 mbar
- d) River Water Temperature: 33 °C

#### Winter Site Conditions WSC

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 4 OF 41
CML-REV-0	(TCC)	

- a) Ambient Temperature 12.2 °C
- b) Ambient Humidity 100 %
- c) Ambient Pressure 1017.2 mbar
- d) River Water Temperature: 20°C

#### **Reference Site Conditions RSC**

- a) Ambient Temperature 31 °C
- b) Ambient Humidity 88 %
- c) Ambient Pressure 1007 mbar
- d) River Water Temperature: 32°C
- iv. Rainfall: The maximum rainfall occurs during the Monsoon Season by varying between 300 mm and 350 mm with almost no rainfall during the Winter Season.
- v. **Evaporation**: Average evaporation in the project area 3 5 mm/day Peak evaporation 16 mm/day during July.
- vi. Marine conditions: The tidal range varies between 1.2 and 3.1 meters. The mean water level (CD) is about 0.87 meters (PWD=CD –1.17 meters). The mean high water level varies due to spring-neap tide conditions between +1.60 m and +2.6m PWD. The Highest High Water Level (HHW) is about +3.1m PWD and the Lowest Low Water Level (LLW) is about 1.4m PWD.

The surface water temperature ranges between 22.9°C and 33.0°C.

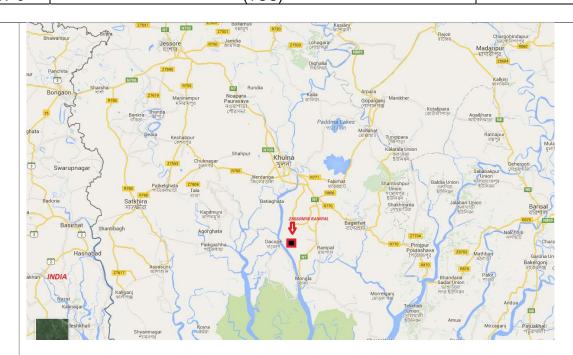
#### vii. Wind data:

Basic wind Speed - 73 m/s Exposure C

The 2 x 660 MW MAITREE SUPER THERMAL POWER PROJECT is located in Moidhara Village, Rampal Upazila, Bagerhat District, Bangladesh.

The Bidder shall acquaint himself by a visit to the site, with the conditions prevailing at site before submission of the bid. The information given here in under is for general guidance and shall not be contractually binding on the Owner. All relevant site data/information as may be necessary shall have to be obtained / collected by the Bidder.

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 5 OF 41
CML-REV-0	(TCC)	



LOCATION MAP: 2X660MW MAITREE RAMPAL PROJECT



LOCATION MAP:2X660MW MAITREE RAMPAL PROJECT

### 1.2 APPROACH TO SITE

The nearest town Khulna is at a distance of 23 km from project site. The site is Connected by road from Mongla- Khulna Highway.

Nearest Domestic airport is Jessore, Bangladesh at a distance of about 93 KM and international airport is Dhaka at a distance of 263 KM, Bangladesh

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 6 OF 41
CML-REV-0	(TCC)	

1.3	Owner: BIFPCL (BANGLADESH-INDIA FRIENDSHIP POWER COMPANY (PVT.) LIMITED)
2.0	SCOPE OF THE CONTRACT
2.1	SCOPE OF WORK:_Precast Pile, Pile cap, Civil, Structural & Architectural Works for Solid Waste Management Package For 2x660 MW Maitree STPP, at Rampal, Bagerhat, Bangladesh
2.2	BUILDINGS / STRUCTURES:  The scope of works covers Precast Pile, Pile cap, Civil, Structural and Architectural works for Solid Waste Management for Maitree STPP Unit-1 & 2, including supply of all materials, labour, tools and plants. The scope of work mainly comprises of Landfill including associated civil structures including control room, roads, drains, misc works for successful operation of the solid waste management system.
0.0	GENERAL
2.3	All necessary parts, and works necessary for transport, storage and erection purposes.
2.4	Deleted
2.5	The Work shall include everything required and necessary to finish the Work properly, notwithstanding that every item of labour or materials or accessories required to make the installation complete may not be specifically mentioned.
2.6	Deleted
2.7	Deleted
2.8	The works to be performed under this contract consist of providing all labour, supervision, material, scaffolding, construction equipment, tools and plants, temporary works, supplies including POL, 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 drawings.
2.9	The area of work shall be cleared of all vegetation, rubbish and other objectionable matter and materials remove shall be burnt or otherwise disposed of as directed by the Engineer-in-Charge excluding stripping.  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 unless specifically provided in the BOQ.
2.10	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.
2.11	The unit rates shall include all material equipment, fixtures, labour colony, temporary works and everything whether of permanent or temporary nature necessary for the completion of job in all respects.
2.12	The unit rates for various items of B.O.Q shall include all the stipulations mentioned in Section C and technical specifications under Section D and nothing extra over B.O.Q rates shall be payable.
2.13	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.
2.14	The bidder should fully apprise himself of the prevailing conditions at the proposed site, climatic conditions including monsoon pattern, local conditions, soil strata and site specific parameters and shall include for all such conditions and contingent measures in the bid, including those which may have not been specifically brought out in the

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 7 OF 41
CML-REV-0	(TCC)	

	specifications.
3.0	SITE VISIT
3.1	Contractor should visit site and acquire full knowledge & information about site conditions prevailing at site and in and around the plant premises together with all the statutory, obligatory, mandatory requirements of various authorities before submission of the bid.
	Bidder may please note that the contractor will be responsible for the quality of workmanship, quality of materials/ items and design for which the contractor is responsible for construction of the solid waste management system.
3.1	OPEN SPACE FOR OFFICE &STORAGE
3.1.1	Open spaces for material storage yard & construction of temporary site office may be allocated as made available by the customer / BHEL free / hire charges.  Contractor has to make his own arrangements for labour colony including Electricity and water. If electricity is made available for the colony, actual metered charges with 5% BHEL overhead shall be chargeable to the contractor and recovered from RA bills.
3.1.2	Construction of necessary stores and storage of materials shall be in contractor's scope. BHEL shall provide available space as received from customer on mutually agreed basis. Security of stores & work place shall be in Contractor's scope.
3.1.3	REMOVAL OF TEMPORARY FACILITIES  When the Work is completed all such temporary structures and facilities shall be removed from the Site and the area shall be restored to its original condition.
3.2	WATER
3.2.1	BHEL will provide construction water at one point or at mutually agreed points within approximately 500 m from work premises, <b>free of cost to the contractor</b> . Any breakdown at the water source provided by BHEL, disruption shall be contained maximum for one day. For such period, bidder has to arrange necessary preservation as per 3.2.6.  Bidder to note that no ground water is allowed for construction purpose by the project
3.2.2	authority.  Further necessary network for construction water system shall be done by the bidder at his own cost.
3.2.3	
3.2.4	Contractor should arrange on their own drinking water in their labour colony.  BHEL shall not be responsible for any inconvenience or delay caused due to any interruption of water supply and the contractor shall claim no compensation for delay in work for such interruption. Contractor may make standby arrangement for water for which no separate payment shall be made by BHEL.
3.2.5	Contractor will have to arrange for storage of water to meet the day-to-day requirement.
3.2.6	The availability of water (construction as well as drinking) in Maitree project may be limited. Contractor shall ensure that no water is wasted. In this regard the contractor shall take all necessary measure towards preservation of water.
3.3	ELECTRICITY
3.3.1	CONSTRUCTION POWER & GENERAL ILLUMINATION NETWORK: -  BHEL Shall Provide Construction Power <b>free of charge</b> at 415V level at one/two point (within 250 M from his workplace), bidder has to make his own distribution arrangement
	to draw electricity.  The bidder will have to procure & install adequate area illumination system during construction right from start of his work. This system will include temporary pole

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02			
VOLUME-IF-	VOLUME-IF- TECHNICAL CONDITIONS OF CONTRACT PAGE 8 OF 4°			
CML-REV-0	(TCC)			

	lighting/portable lighting towers with sufficient DG back-up for area lighting at different working areas for execution of the work & safety of workmen within the quoted rate.	
	The illumination should be such that minimum illumination requirement as specified in specification or any-where for general illumination is maintained.	
3.3.2	The bidder shall have to provide earth leakage circuit breaker at each point wherever human operated electrical drives / T&Ps are deployed.	
3.3.3	The power supply will be from the available source of customer. BHEL shall not be responsible for any inconvenience or delay caused due to any interruption of power supply / variation in voltage level and no compensation for delay in work can be claimed by the contractor due to such non-supply on the grounds of idle labour, machinery or any other grounds.	
3.3.4	Bidder will have to arrange sufficient illumination at their own work areas.	
3.3.5	Deleted	
3.3.6	The contractor shall have to make arrangement at their own cost for illumination that will be required in the working area for execution of the work & safety of workmen.	
3.3.7	The contractor shall have to make arrangement at their own cost for illumination etc. in labor colony. However there may be provision of Chargeable Power for labor colony for which contractor has to install meters and necessary accessories	
4.0	TOOLS & PLANTS	
4.1	All the tools and plants required for execution of the above work are in contractor's scope.	
5.0	MATERIAL HANDLING (BHEL ISSUED MATERIAL)	
5.1.1	Reinforcement (TMT bar) earthing Strip/Bar, structural steel (MS plate/ ISMB/ channel/ angle/ chequered plate/ stainless steel plate/liner excluding embedment) only will be issued free of cost by BHEL for use in the work covered in this contract. All other materials required for proper completion of job shall be provided by the contractor and quoted rates shall be inclusive of this. Please note that BHEL will only issue the above free materials if has written in the description of the BOQ.	
5.1.2	Vendor has to arrange lifting, shifting & transportation of TMT bar or other free issued material from BHEL store without any additional cost.	
5.1.3	BHEL reserve the right to recover from the contractor any loss arising out of damage/ theft or any other causes of the materials issued to him at any point.	
5.1.4	The plant is under operation and open land (very limited space) for storage shall be provided by BHEL on free of cost basis as per availability. You shall maintain one centralized fenced store cum bar bending yard. You shall make complete arrangement of necessary security personnel, to safeguard all such materials in your custody. Materials issued will be used only for construction of permanent work. You shall take care of material issued by BHEL and shall protect the same from theft, damage and weathering.	
5.4.5	Fencing of the steel storage yard, reinforcement bending yard area etc. are to be done by the contractor at his own cost. Contractor shall also remove grass, bushes, trees etc. wherever required off the land provided to him and shall make proper continuous up-keepment of the open yard/ land by removing grass, bushes trees etc. and same is included under the scope of his work & no extra payment shall be made to the contractor in this regard.	
5.1.5	The contractor shall in no case be entitled for any compensation or damages on account of any delay in supply or non-supply thereof for all or any such material.	

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02		
VOLUME-IF- TECHNICAL CONDITIONS OF CONTRACT PAGE 9 OF 4			
CML-REV-0	(TCC)		

	However, any considerable delay in providing materials by BHEL, the events must be
	properly recorded for Delay Analysis at the advent of PVC claims (if any) under the
	scope of the contract.
5.1.6	Excessive rusting of steel must be avoided. In case, due to any cause attributable to
	the contractor, such clotting of and/ or rusting of steel occur rendering the same
	unusable, then such quantity of steel shall be recovered from the interim payment at
	the penal rate specified in the tender.
5.1.7	No material shall be issued to the contractor except as those indicated above, i.e. steel
	unless otherwise expressly provided for in the contract. Contractor will have to make
	his own arrangement at his own cost for procurement of any other material as required
	for the works and of such quality as acceptable to BHEL.
5.1.8	The contractor shall maintain proper store account for all the BHEL issued materials
	and shall give three copies of monthly computerized reconciliation statement of such
	account to the BHEL.
5.1.9	Contractor shall carry out in complete association with BHEL, material management
	functions and execution like day to day update of materials, issued to contractor,
	accounting for surplus/ scrap material returned etc. These functions shall also be
	carried out through computerized system utilizing suitable software. Contractor shall
	provide experienced software personnel to associate on dedicated basis for efficient
	discharge of the same.
5.1.10	The contractor shall solely be responsible for the safety & quality of material after it is
	handed over and issued to contractor by BHEL.
5.1.11	BHEL issued materials shall not under any circumstances be taken out of the project
	site unless otherwise permitted by BHEL.
5.1.12	Deleted
5.1.13	No separate rate will be applicable for the above job. The contractor will quote the rate
	for the items inclusive of all charges for the above job.
5.1.14	Bidder's scope of handling of steel under the scope of this tender includes stacking/
	storing of materials over concrete sleepers. Bidder scope shall include provision of
	concrete sleepers for this purpose and no separate payment against the same will be
	made by BHEL. After completion of the job bidder shall take back the sleepers Bidder's
	quoted rate/ price shall be in consideration to this.
5.2	DELETED
5.3	ISSUE OF STEEL
	Steel shall be provided only against those items of the BOQ where it is specifically
	mentioned that Steel shall be supplied by BHEL as free of cost
5.3.1	The steel shall be issued to the contractor free of cost on the following basis.
5.3.1.1	Structural steel (MS plate, angle, channel, ISMB, Stainless steel plate/Liner, chequered
	plate and EOT crane rails) – Weighment basis (unit – MT).
5.3.1.2	Reinforcement steel(TMT) and earthing rod (MS round) – Weighment basis (unit – MT).
5.3.2	All the steel (structural steel, reinforcement, earthing strip/bar) issued by BHEL shall be
	properly accounted for. The total quantity of steel required for the work will be
	calculated from the approved Bar Bending schedule, fabrication drawings, approved
	laps, chairs and lugs. The measurement for payment as well as for accounting shall be
	based on the sectional weights.
5.3.3	In case any such sectional weights are not available in the above documents, the
	manufacturer recommendation shall be binding.
5.3.4	The steel issued to the contractor shall be mainly in standard length and sections as
	received from the supplier. However, the contractor shall be bound to accept the steel
	in length as available in the project stores and no claim for extra payment because of
	issue of non-standard length will be entertained.

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF- TECHNICAL CONDITIONS OF CONTRACT		PAGE 10 OF 41
CML-REV-0	(TCC)	

	BHEL Site / Store have stock of structural steel packing boxes / crates. Structural steel	
	members from these crates / boxes may be used for miscellaneous structural steel	
	works. These materials shall also be issued to the bidder on as is where is basis	
	available at project site / store yard.	
5.3.5	In case MS flats as required in the fabrication of structures are not available, you shall	
5.5.5	·	
	cut such width out of the available MS plates to make flats at no extra cost till such	
	material is available and procured by BHEL.	
5.3.6	The contractor shall satisfy himself of the quality and quantity of the materials at the	
	time of taking delivery from BHEL stores. No claims whatsoever will be entertained by	
	BHEL because of quality or quantity after the materials are taken by contractor from	
	BHEL stores.	
5.4	ISSUE OF READY-MIX DESIGN(RMC):	
5.4.1	The RMC shall be issued to the contractor free of cost as per item of the Price	
0.4.1	Schedule. The vendor has to plan and intimate BHEL through RFI in advance.	
F F		
5.5	Quarterly requirement of steel must be positively submitted by the contractor at the	
	last month of the previous quarter. In addition, the contractor shall also furnish the	
	estimated requirement of steel during a month by the third week of the previous month	
	indicating his requirement.	
5.6	Bidders to ensure that no lamination materials are taken over by them from BHEL.	
	Fabrication wastage, if any due to above, shall not be compensated by BHEL	
5.7	Bidder to note that steel required for his enabling job like store/ site office etc. shall be	
	arranged at his own cost.	
5.8	RETURN OF MATERIALS	
5.8.1	RETURN OF STEEL INCLUDING SCRAP	
5.8.1.1		
	All surplus steel and all wastage materials will be taken back on weighment basis.	
5.8.1.2	Surplus, unused and un-tampered steel shall be sorted section-wise and returned	
	separately at a place directed by BHEL/ engineer within the project area. Return of	
	such materials will not be entitled to any handling and incidental charges.	
5.8.1.3	Scrap generated after reconciliation shall be the property of BHEL. All wastage/ scrap	
	(including wastage, unusable scrap) shall be returned to the stores on weighment basis	
	and a receipt obtained for material accounting purposes. Return of such material will	
	not be entitled to any additional cost due to handling and transportation and incidental	
	charge.	
5.8.1.4	Scrap for reinforcement steel and structural steel shall be returned separately	
5.9	RMC & STEEL CONSUMPTION AND WASTAGE	
5.9.1	READY MIX CONCRETE (RMC) WASTAGE	
5.9.1.1	Allowable wastage – One and quarter (+1.25%) of theoretical consumption of RMC	
0.0.1.1	unless specified otherwise in the technical specification.	
5012		
5.9.1.2	For any material issued by BHEL to the contractor free of cost, and which is not	
	accounted for by the contractor to BHEL, then recovery for such material shall be	
	affected at penal rates.	
	SL RMC consumption Basis of issue & penal	
	recovery	
	C-1 Theoretical consumption (without considering Free	
	any wastage or loss).	
	C-2 Actual consumption being Limited to plus one Free	
	and half percent (+1.25%) of aforesaid	
	theoretical consumption towards allowable	
	wastage.	
	C-3 Actual consumption beyond one and half Penal rate	
	percent (+1.25%) of above (C-1).	

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF- TECHNICAL CONDITIONS OF CONTRACT PAGE 11 (		PAGE 11 OF 41
CML-REV-0	(TCC)	

	Reconciliation shall be done on total concrete consume		
5.15.1	The contractor shall submit a reconciliation statement of once in every two months. The same may be submitted		
5.15	RECONCILIATION OF BHEL ISSUED MATERIALS  The contractor shall submit a reconciliation statement of	of DMC and atacl issued to biss	
	including excess wastage shall be returned to BHEL.		
5.14.2	considered.  All wastage reinforcement, MS round/Copper Strip/Copper bar, structural steel		
5.14.1	Allowable wastage - 0.5% (Half percent) of the the	eoretical consumption shall be	
5.14	COPPER STRIP/BAR/GI STRIP/CONDUCTOR - WAS		
5.13.4	BHEL store.  Wastage = Actual consumption – Theoretical consumpti	on.	
5.13.3	Surplus = Un-tempered, unused, uncut quantity of stee	el returned by the contractor to	
5.13.2	Actual consumption = Issue – Surplus.		
	of the theoretical consumption including rolling tolerance	•	
	mentioned in relevant clause. No extra shall be payable to the contractor for any deviation in weights for the two different procedures adopted for issue and calculation		
	Weights shall be calculated considering the sectional weights as per Indian standard as		
5.13.1	The theoretical consumption of various sections shall be		
5.13	COPPER STRIP/BAR/GI STRIP/CONDUCTOR CONSU	JMPTION	
5.12	Deleted		
5.11.1	Deleted		
5.11	STRUCTURAL STEEL CONSUMPTION	I	
	R-3 Wastage beyond one and half percent (+1.5%) of the theoretical consumption above (R-1).	Penal rate	
	R-2 Wastage limited to plus one and half percent (+1.5%) of aforesaid theoretical consumption (R-1) towards allowable wastage.	Free	
	wastage and scrap or loss)		
	R-1 Theoretical consumption (without considering	Free	
	Tellifordiffert steel	recovery	
J. 1U.Z	SL Reinforcement steel	Basis of issue & penal	
5.10.2	shall be considered as allowable wastage.  Wastage and scrap shall be as per actual weighment ba	neie	
5.10.1	Allowable wastage – One and Half Percent (+1.5%)	of the theoretical consumption	
5.10	REINFORCEMENT STEEL WASTAGE		
5.9.5.4	Wastage = Actual consumption – Theoretical consumpti	on.	
	quantity to BHEL as specified in clause No. 5.10.1 & 5.12.1 then same quantity will be considered for penal recoveries.		
	as surplus steel. If contractor deposits/returns steel mo		
	or equal to 5.0 m in good condition as per judgement	of the engineer shall be treated	
5.9.5.3	Surplus = Un-tampered and unused quantity of steel BHEL store along-with relevant documents. However, c		
5.9.5.2	Actual consumption = Issue – Surplus		
	including rolling tolerances.		
	different procedures adopted for issue and calculation		
	No extra cost shall be payable to the contractor for a		
	Weight shall be calculated considering the sectional weights as per Indian standards		
5.9.5.1	round shall be based on approved construction drawing and bar bending schedule.		
h () h 1	REINFORCEMENT STEEL CONSUMPTION  The theoretical consumption of various diameters of reinforcement and earthing MS		

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF- TECHNICAL CONDITIONS OF CONTRACT		PAGE 12 OF 41
CML-REV-0	(TCC)	

	•	e at prevailing highest rate amongst the grade	
E 4 E 0	of concrete consumed.		
5.15.2	At the time of submission of bills, the contractor shall properly account for the material issued to him as specified herein to the satisfaction of BHEL certifying that the balance		
	materials are available with contractor's custody at site.		
5.15.3	If it is noticed by BHEL that the wastage is high and calls recovery at the penal rate, then BHEL will proceed for recovery for the excess wastage as per penal recovery		
F 4 F 4	rates as specified.	adulas and to be appoided of familia muma as a f	
5.15.4	reconciliation of materials.	edules are to be considered for the purpose of	
5.16.0	RECOVERY OF MATERIAL		
5.16.1	from monthly RA bill at the penal rate stip	e recovery of excess wastage shall be made ulated below.	
5.16.2	PENAL RATE OF MATERIALS		
	Item	Penal rate (BDT)	
	Reinforcement steel etc.	BDT 125000 /- per MT.	
	Structural steel/GI Flat	BDT 170040 /- per MT.	
	Tined Copper Strip/Bar/Conductor/SS Plate	BDT 981000 /- per MT.	
	Ready Mix Concrete (RMC)	105% of BHEL purchase cost of Grade Of Concrete.	
5.16.3	The contractor shall ensure that all wastage material (reinforcement & structural steel, GI Flats, Copper strips & bars, SS plates, conductors) shall be deposited to BHEL store with proper weighment certification as per instruction of BHEL. The total wastage quantity is the property of BHEL and non-return of such quantity shall attract penal recovery as per above. BHEL shall inspect contractors work area & storage yard to ensure that no scraps are lying unreturned to BHEL.		
6.0	INSPECTION, TESTING AND INSPECTI		
6.1	The engineer, his duly authorized represe acting on behalf of BHEL / owner shall ha examine the materials & workmanship of of the works is being manufactured or vendor shall obtain for the engineer a permission to inspect as if the works wown premises or works. Necessary arrai supply of labour, IMTEs, area illuminatio responsibility and same has to be carried	entative and / or an outside inspection agency ve access at all reasonable times to inspect & the works during its manufacture and if part assembled on other premises or works, the and for their duly authorized representative ere manufactured or assembled on vendor's name out inspection including in and scaffolding, if required will be vendor's out within the quoted price.	
6.2	To facilitate advance planning of inspection in addition to giving inspection notice the vendor shall furnish quarterly inspection program indicating schedule dates of inspection at customer hold point and final inspection stages. Updated quarterly inspection plans will be made for each 3 consecutive months and shall be furnished before beginning of each calendar month.		
6.3	option of witnessing inspections & tests standards. The vendor shall give the eng material being ready for testing. Such test the expenses of the inspector. The engine will attend such tests within 15 days of the being ready for test / inspection, failing with tests within 15 days of the being ready for test / inspection, failing with tests within 15 days of the being ready for test / inspection, failing with tests within 15 days of the being ready for test / inspection, failing with tests within 15 days of the being ready for test / inspections.	place of manufacture, BHEL shall be given the for compliance with specifications & related lineer/ inspector 15 days written notice of any st shall be to the vendor's account except for ear / inspector, unless the inspection is waived the date on which the equipment is notified as which the vendor may proceed with test which the inspector's presence and he shall forthwith ites of test reports.	

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02		
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 13 OF 41	
CML-REV-0 (TCC)			

1=-
The engineer or inspector shall within 15 days from the date of inspection as defined herein give notice to the vendor of any objection w.r.t. drawing / equipment / workmanship which in his opinion not in accordance with the specification / contract. The vendor shall either make modification as may be necessary to meet the said objection or explain to the engineer/ inspector giving reasons that no modifications are necessary to comply with the contract.
When the factory tests have been completed at the vendor's or sub-vendor's works, the engineer or inspector shall issue a certificate to this effect within reasonable time after completion of tests but if the tests are not witnessed by the engineer or Inspector the certificate shall be issued within 15 days of the receipt of vendor's test certificate by the engineer inspector. Completion of these tests or the issue of the certificates shall not bind BHEL to accept the equipment should it on further tests after erection be found not to comply with the contract.
In all cases where the vendor provides the tests at the premises of the vendor or any sub-vendor, the vendor except where otherwise specified shall provide free of charge such items as labour, materials, electricity, fuel, water, stores, apparatus and instruments as may be reasonably demanded by the engineer/ inspector to carry out effectively such tests on the equipment in accordance with the contract and shall give facilities to the engineer/ inspector to accomplish testing.
Insurance cover(s) taken by him, against his T&P, assets and workmen compensation and any other cover as may be pertinent to his works and obligatory in terms of law, to BHEL for necessary verification in regard to their adequacy, before commencement of work. However, irrespective of such verification/ acceptance, the responsibility to maintain adequate insurance coverage at all times during the period of the contract shall be of the contractor alone. Such insurance covers to be taken shall be in the joint names of the owner and the contractor. The contractor shall however be authorized to deal directly with the Insurance company(s) and shall be responsible in regard to maintenance of such insurance covers. Insurance covers to be taken by BHEL / Customer shall be as stipulated under relevant clause of Volume-IB.
DEVIATIONS/ CLARIFICATIONS
Normally no deviation with respect to tender is acceptable to BHEL. However, in case of unavoidable circumstances, the bidder may submit their query for seeking clarifications of BHEL as per modality stipulated in NIT or may submit the same along with his offer as per prescribed schedule/ format without any ambiguity. Any assumptions, presumptions, deviations etc. indicated or implied anywhere by the bidder except those indicated in the deviation schedule/ format will not be recognized and will not form a part of consideration/ offer. In the absence of such filled-up schedule/ format it will be understood and agreed that the bidder's offer is based on strict conformance to the specification and no negotiation would be allowed in this regard. BHEL reserve the right not to recognize any/ all deviations submitted after opening of the bid.
DEWATERING Contractor shall ensure at all times that his work area 8 approach / access reads are
Contractor shall ensure at all times that his work area & approach / access roads are free from accumulation of water, so that the materials are safe and the erection / progress schedule are not affected. No separate claim in this regard shall be admitted by BHEL. No separate payments for dewatering of subsoil, surface water or catchments water, if required, at any time during execution of the work including monsoon period shall be considered by BHEL. All dewatering pumps including high capacity pumps and diesel engine driven pumps are to be provided by successful bidder within finally accepted rates.

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 14 OF 41
CML-REV-0	(TCC)	

#### 10.0 TIME SCHEDULE/ COMPLETION PERIOD The entire work under the scope of work shall be successfully completed in all respect 10.1 within 7 (Seven) months from date of start of work, as certified by Construction Manager, BHEL. Mobilization at site shall be done within 15 days from date of written intimation from BHEL. The exact date of start of work shall be reckoned based on certificate of Construction Manager, BHEL. SI Broad completion Schedule (from Structure / Area No Date of start of work) 1st Cell within 3 Months ready to 1 LANDFILL POND use All balance cells within 7 months All other associated works including Control Room, roads, drains, misc 2 Within 7 Months pedestals, and balance works of Solid Waste Management NOTE:(1) The above broad schedule has been prepared in line with L2 schedule of BHEL BIFPCL. also responsible Contractor shall complete to foundations/structures in their scope of contract within schedule time frame as prescribed/finalized by BHEL/BIFPCL. The purpose of the schedule is timely commencement of work in identified critical areas and completion of the is as per time duration specified in the contract document as above. If for any reasons, the successful vendor fails to progress satisfactorily or the priorities of the structures changes or BHEL feels that a particular structure cannot be completed in line with the project requirement/schedule, in such cases BHEL reserves the right to exclude part or full scope of those critical/priorities structures from the vendor's scope of work and decision of BHEL shall be final and binding to the Vendor. However, BHEL shall ensure minimum 50% of the contract value to be executed within the provision of the contract. (2) Minimum 50 Nos Civil workmen at site is to be mobilized at site initially which shall be progressively increased to 150 Nos within two months and subsequently increased based on monthly L-3 / L-4 schedule of programme. (3) Minimum labour as mentioned is to be deployed to start work in multiple work front as required by BHEL. (4) Procurement of BOIs/imported items to be ensured on time for timely completion. (5) To meet project requirement, it is envisaged that night shift working has to be done for which manpower deployment along with Engineers/Supervisors /Safety personnel with matching T&P's has to be arranged. 11.0 PRICE BID 11.1 Bidders should quote prices in BDT as per format, Volume-III-Price Schedule provided in the tender. Bids shall be evaluated based on total price quoted. 11.2 Quantities of BOQ items may vary to any extent or may be deleted all together.

However, the overall variation in contract value shall be limited to (+/-)30% of the

awarded price

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 15 OF 41
CML-REV-0	(TCC)	

11.3	The main layout drawing is under preparation and the final drawings are expected
	within a reasonable time. However, before the start of work, the actual quantities shall
	be known. In case of any substantial reduction in quantities which may lead to a
	deviation of more than (+/-)30%, the deployment of T&Ps/men and materials shall be
	revised based on mutual agreement between the bidder and BHEL. There will be no
	change in the unit rate of the items.
12.0	TERMS OF PAYMENT
12.1	The contractor shall submit his running bill (RA bill) once in a month at the end of each
	month in line with payment terms/ billing schedule indicated below. The RA bill
	complete in all respects accompanied by BHEL engineers certified/ measurement
	sheet, jointly signed, will be paid after passing of the bill subject to completeness &
	correctness. The measurement will be taken as specified in terms & conditions of
	contract and certified by the BHEL engineer of actual work. However, no extra payment
	shall be made in the event of delay in release of payment.
	OED/ pro rate monthly DA neumant shall be considered for neumant based on monthly
	95% pro-rata monthly RA payment shall be considered for payment based on monthly work completion certificate to be issued by BHEL engineer as per approved BBU/Price
	Schedule.
	Scriedule.
	The payment shall be released within 30 days from the date of receipt of complete
	invoice along with all necessary documents including Engineering Certificate.
12.2	DELETED
12.2.1	DELETED
12.2.2	DELETED
12.2.3	DELETED
12.2.4	DELETED
12.3	Balance 5% of contract value shall be paid against FAC (Final Acceptance Certificate) to be
	issued by BHEL / BIFPCL after completion of Guarantee/Warranty period. However, if desired
	by vendor, this 5% may be released by BHEL against submission of equivalent amount bank guarantee as per Performance Bank Guarantee format, to be kept valid till warranty period,
	subject to the followings:
	Subject to the followings.
12.3.1	(i) Receipt of certificate that all works are completed in all respects;
12.3.2	(ii) Reconciliation of materials / T&P / MMD;
12.3.3	(iii) Completion of final bill formalities and
12.3.4	(iv) Handing over to BHEL.
12.3.4.1	For release against BG of 5% balance CV amount, BG should be submitted from any
	Scheduled Bank in India.
	In case of any Non-Indian Bank BG of local Bangladesh Bank, the same is to be
	countered guaranteed from any scheduled Bank from India.
	However, in case BG of local Bangladesh Bank cannot be submitted with counter
	guarantee from any scheduled Bank in India, BG from State Bank of India, Dhaka
10.4	Branch can be submitted.
12.4	Contractor shall make their own arrangement for making payment of impending labour
10.5	wages and other dues in the meanwhile.
12.5	Deleted Subject to any deduction which BHEL may be outhorized to make under the contract
12.6	Subject to any deduction which BHEL may be authorized to make under the contract,
	the contractor shall on the certification of the BHEL engineer at site, be entitled to
10.7	payment explained hereunder.  The bills will be sent to BHEL execution Engineer, for scrutiny and certification, for
12.7	The bills will be sent to BHEL execution Engineer, for scrutiny and certification, for further processing by Site Finance for payment
	further processing by Site Finance for payment

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 16 OF 41
CML-REV-0	(TCC)	

12.8	The measurement will be taken by BHEL engineer as per relevant clause of GCC and certify
	regarding actual work executed in measurement book and bills for work. However no additional
	payment shall be made in the event of delay in release of payment beyond the stated period for reasons beyond the control of the Client.
12.9	All admissible recovery / adjustment, etc. shall be made from interim payable amount.
12.10	BHEL site at its discretion upon receipt of request from Vendor may split up percentage
0	break up and effect payment to suit the site condition, cash flow requirement, according
	to the progress of work.
12.11	DELETED
13.0	DELETED
14.0	TAXES, DUTIES ETC
14.1.0	IMPORT DUTIES: Exemption of Duties/Taxes imposed on imported goods/equipment for
	implementing Rampal 1320 MW (Coal-based) Friendship super Thermal power project under
	Bagerhat district of Khulna Division operated by Bangladesh-India Friendship Power Company (
	Pvt) Limited ( BIFPCL)
14.1	As per Special Regulatory Order # 126 of 2021 dtd 24.05.2021 it is to be noted that
	all imported goods/ equipment for implementation of the 1320 MW Rampal project
	shall be exempted from imposable import duties, VAT and supplementary customs duty. (For clear understanding of exemption available, bidder may refer to SRO 126
	dated 24th May 2021).
	During importing temporarily imported erection materials, equipment and spare parts and
	permanently imported plant and equipment exempted under this order will not be sold or
	otherwise transferred without payment of duties and taxes imposable on those.
	Exemption shall not be extended to such goods which the bidder might import for support of
	their operational activities but not directly attributable for execution of the project such as air
	conditioner, refrigerators, vehicles, household materials etc.
	Any documentation needed for availing of Duty-Free Imports will be submitted by the bidder in reasonable time having regard to the time for delivery of the work and the time for completion.
14.1.2	DELETED
14.1.3	Temporarily imported erection materials, machineries and spare parts during construction
14.1.0	period of Project are exempted from payment of Customs Duty and VAT. Such items shall be
	exported within six months from the commercial operation date. Documentation for the same to
	be submitted / maintained by the bidder.
14.1.4	Any Taxes for exporting material from source country & as applicable in the source
	country shall be on bidder's account. However, bidder to take into consideration Duty
	Free Export Provisions in source country, as applicable, including that in GST in case
	of exports from India. As such, while offering the rates, the bidder may take into
	account the benefit of above provisions, as the cost of input to the bidder will be net of
	such taxes and adjust their offer price accordingly to make it more competitive.
14.1.5	Bidder may import the material required for permanent works for which exemption of
	Custom Duty as per local law shall be applicable provided necessary documents are
	submitted.
14.1.6	Supplier may please note that import for the project shall be in the name of our
	Employer/ Owner of the Plant/Project and such import other than Office and House
	hold Equipment shall be exempted from payment of Customs Duty, VAT &
	Supplementary Duty as per S.R.O-126 dtd.24-05-2021. Also Regulatory Duty (RD),
	Advance Trade VAT (ATV) & AIT are exempted /not applicable.
	However, if any of the taxes as mentioned above are paid by the supplier as per the
	extant law in force in Bangladesh, the same shall be reimbursed at actuals subject to
	production of documentary evidence in support of such payment. However, the supplier
	shall obtain prior approval of BHEL before deposition of such taxes.
	Any tax(es) paid without prior approval of BHEL Site Office shall not be reimbursed at a
	later stage. Further, any documentation needed for facilitating the Imports like Bill of

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 17 OF 41
CML-REV-0	(TCC)	

	Entry, Bill of Lading, Packing List, Certificate of Origin etc. will be submitted by the
	supplier in reasonable time having regard to the time for delivery of the work and the
	time for completion. Documents required for import clearance at Bangladesh
	Customs shall be provided / arranged by BHEL from Customer based on supplier's
4400	documents as above
14.2.0	BANGLADESH VAT
14.2.1	The Bidder shall submit copy of VAT registration Certificate Musak-2.3, TIN Certificate,
	Trade License to the BHEL site office immediately after receiving the Order but before
4400	raising the first Tax Invoice against this tender.
14.2.2	As per the provisions laid down U/S49(5) of Bangladesh VAT Act 2012, Output
	Services of the Bidder shall attract ZERO ( 0 ) VAT. Thus BHEL shall not do any
4400	VDS. Hence Bidder shall not load any VAT on Output Services.
14.2.3	Adequate documents for not charging/ claiming VAT from BHEL shall be made
4404	available to the Bidder.
14.2.4	The bidder shall raise Tax Invoice (Challan Patra) as per Rule 40(d)(v) (Musak-6.3) of
	the Bangladesh VAT and supplementary Duty Rule,2016 mentioning Name, Address
4405	and VAT Registration Number of BHEL site office.
14.2.5	Bidder shall note that the Tax Invoice complying with Rule 40(d)(v) of the Bangladesh
	VAT and supplementary Duty Rule,2016 must contain the 'Bill to' and 'Ship to' details
	as
	below:
	BHEL Bangladesh VAT Regn. No. 000761853-0208
	Bharat Heavy Electricals Limited
	Power Sector Eastern Region,
	2x660 MW Maitree Super Thermal Power Project, Moidara Village,
4400	Rampal Upazila, Bagerhat District, Bangladesh
14.2.6	Bidders shall quote price excluding Bangladesh VAT envisaging VAT exemption on the
	same. In this connection please note that VAT, if and as applicable, on Bidders Quoted
	Price and in case BHEL is unable to provide exemption documents shall be payable extra.
14.2.7	Value Added Tax Deduction at Source:
14.2.7.1	BHEL will not deduct any VAT from Bidder's Gross Bill and such bidder need not to
14.2.7.1	load
	any Output VAT in Bidder's quoted price
14.3.0	INCOME TAX DEDUCTION AT SOURCE:
14.3.1	Bidder should have valid 12-digit TIN number in Bangladesh prior to start of work.
14.5.1	Advance Income Tax (AIT) under the Income Tax Act 2023 (and rules made
	thereunder) shall be deducted at prevailing rates on Gross Invoice value from the bills
	unless Exemption Certificate from the appropriate authority/ authorities is/ are furnished
	under Income Tax Laws of Bangladesh
14.3.2	Since payment shall be made in Bangladesh. Bangladesh Income Tax (AIT) shall be
14.0.2	deducted, if applicable.
14.4.0	The Bidder shall carry out their own tax diligence to get acquainted with the relevant
'	rules and regulations of Bangladesh pertaining to the subject job.
14.5.0	Except otherwise mentioned above bidder shall quote their rates/ price inclusive of all taxes,
1 1.0.0	duties, cess, any State or Central Levy, social security contribution and other Taxes in or
	outside
	Bangladesh (but excluding Bangladesh VAT & Import Duties) in line with provisions as
	mentioned above etc. together with variation thereto during contract period including extension,
	if any. BHEL shall not release any additional payment in this regard.
14.6.0	The bidder is responsible for compliance of all relevant Tax Laws of Bangladesh and all other
	related places outside Bangladesh in connection with this contract and BHEL will not bear any

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 18 OF 41
CML-REV-0	(TCC)	

	such liability.
	Non-Bangladeshi Bidder shall have to obtain Registration under BIDA and shall have to
14.7.0	mandatorily comply the norms, as may be prescribed.  New tax & duties, if imposed subsequent to latest due date of offer submission, as per NIT &
14.7.0	TCN, as applicable, by statutory authority after due date of submission of latest price offer and
	within the contract period including extension, if any (provided reason for extension is not
	attributable to vendor), shall be reimbursed by BHEL at actual on production of relevant
	supporting document to the satisfaction of BHEL. However, the vendor shall obtain prior
	approval from BHEL before depositing new taxes & duties.
	Benefits and/or abolition of all existing taxes must be passed on to BHEL against new Taxes, if any, proposed to be introduced at a later date.
15.0	PROJECT MANAGEMENT/ CONSTRUCTION MANAGEMENT
	To meet the need of construction management at site, contractor shall provide the
	following services within quoted/ accepted rates.
15.1	CUSTOMS CLEARANCE
	The Contractor shall be responsible for Bangladesh customs clearance of all materials,
	supplies, equipment, tools and other articles shipped into Bangladesh by him for the
	implementation of his works, including the food and the personal effects of the Contractor's
	personnel.
	All payment for clearance charge, storage charge, etc. which are imposed by the relevant
	agencies of the Government of Bangladesh, relating to the clearance of equipment, materials
	and Plant that will be incorporated in the Permanent Works or relating to the Temporary Works
	shall be borne by the Contractor. Further, if the Contractor is delayed in submitting necessary
	shipping documents to the Employer, the demurrage charges by the Port Authority will be borne by the Contractor.
	Tools and equipment and other equipment of the Contractor for use during construction but
	which are to remain the property of the Contractor and which are to be exported by the
	Contractor from Bangladesh at the completion of the Work shall be carefully documented and
	specially listed to facilitate both import and export. The Contractor shall determine prior to
	shipment the customs regulations applicable to this special case
	as well as normal import rules and regulations applicable. The Contractor shall also be
	responsible for inland transport by barge/ truck/train to the Site.
45.0	DECENTING TRANSPORTING HANDLING AND CTORAGE
15.2	RECEIVING, TRANSPORTING, HANDLING AND STORAGE  The Contractor shall receive transport handle store and install all materials and
	The Contractor shall receive, transport, handle, store and install all materials and equipment furnished under these specifications, or otherwise involved in the
	implementation of this Contract. It shall be the responsibility of the Contractor to
	determine the availability and capacity of transportation and unloading facilities
	(including for the transportation, delivery and receipt of all equipment, materials, Plant
	to the Site) and to make the required arrangements to secure the necessary facilities
	for the same.
	The Contractor shall be responsible for the prompt unloading of all equipment or
	materials. The Contractor shall pay any demurrage incurred due to delay in unloading
	and for any other reasons.
	The Contractor shall handle materials and equipment carefully to prevent damage or
	loss. The use of bare rope slings for handling will not be permitted unless specifically
	approved by the Engineer. Special handling devices shall be used when necessary to
	avoid damage.

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 19 OF 41
CML-REV-0	(TCC)	

In addition, the Contractor shall also comply with the requirements of Technical Specification with respect to the receipt, transportation, handling and storage. If BHEL has to unload of RS, SS, Copper or any other free issue materials before mobilization of the contractor for the interest of the project or If contractor fails to unload the BHEL free issue materials at site for any reason then BHEL shall be unloading the same and the cost of unloading with following rates shall be deducted from contractor RA Bill. i) For RS, SS, Copper or any other materials:- BDT 436/- per MT or actual cost, whichever is higher. 15.3 **PLATFORMS** Open platforms shall be constructed by the Contractor at least 50cm above grade and shall have adequate flooring and base structure to support the stored materials and equipment. 15.4 **INDOOR STORAGE** Indoor storage sheds shall be constructed by the Contractor by suitable means for keeping materials and equipment from contact with the ground and to protect it from theenvironmentandoutsideatmosphere. Sensitive equipment (including inter-alia, electrical ,I&C and other equipment) must be kept in dustproof and ventilated rooms and means have to be provided to maintain the moisture content at required levels, in accordance with Good Industry Practices. 15.5 SHORING Shoring shall be provided by the Contractor to safely support materials and equipment not less than 30cm above the ground. The ground shall be compacted and concreted or asphalted. 15.6 **WEATHERPROOF COVERINGS** Weatherproof and flame resistant sheeting of sufficient size for outdoor storage shall be provided by the Contractor. The sheeting shall be carefully placed and tied down to prevent moisture and wind from entering underneath the sheeting and to otherwise protect the equipment, materials and other Plant.

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 20 OF 41
CML-REV-0	(TCC)	

### 15.7 IDENTIFICATION OF CONTRACTOR'S EMPLOYEES, VEHICLES & BUILDINGS

The Contractor shall provide each of his employees and his Subcontractor's employees with a name tag bearing the picture, the name or initials of the employee, a serial number and the name of the Contractor. Each employee shall wear his badge visibly to the security personnel at any time.

Subcontractor's employees with a name tag bearing the picture, the name or initials of the employee, a serial number and the name of the Contractor. Each employee shall wear his badge visibly to the security personnel at any time.

All vehicles and large equipment furnished and used by the Contractor or his Subcontractors on the Work shall be clearly marked with the Contractor's or Subcontractor's business name. The Contractor's offices, stores, depots and other facilities shall also be clearly identified. The detailed requirements are defined in the Health, Safety and Environment (HSE) Plan of BHEL.

Around-the-clock security presence and operational routine shall be maintained throughout the year. Passes and temporary identification permits shall be issued and examined and access to any part of the Site, the site offices and living accommodation shall be controlled and limited to those who have an authorization.

#### 15.8 EXPATRIATE PERSONNEL

The Contractor shall submit to Employer data of all personnel he intends to bring into Bangladesh for the performance of the Work. This data shall include the name and present address of each person, his intended assignment and responsibility in connection with the Work and a concise resume of his experience in the type of work to which he will be assigned. This data shall be submitted to the Employer at least thirty (30) days prior to their expected arrival in Bangladesh.

Any expense associated with illness of the Contractor's personnel, including replacement thereof, shall be to the Contractor's account.

Costs of passports, visas, travel documents, inoculations and other incidental expenses incurred by the Contractor's non-Bangladesh employees and their dependents occasioned by travel to and from Bangladesh shall be borne by the Contractor

All accommodations and amenities for the Contractor's personnel and families (including all staff and labour) must be provided by the Contractor, and the Employer shall not have any liability for the same.

#### 15.9 SAFETY

The Contractor shall comply with all ordinances and regulations including, but not limited to, National, State, Municipal laws and Department of Labour, Transmigration and Co-operation Regulations, and other Applicable Laws that are in force in the locality of the Works and shall comply with any instructions that may be from time to time issued by Employer. The safety rules and regulations laid down in the Health, Safety and Environment (HSE) Plan are to be strictly adhered to.

#### 15.10 CONTRACT PLANNING AND CONTROL

Before starting the Work at the Site, the Contractor shall submit the detail site

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 21 OF 41
CML-REV-0	(TCC)	

management organization for approval by the Employer. Such proposals shall show clearly the Contractor's key personnel, classification and qualification with the detailed information and curriculum vitae for above key personnel.

The Contractor's Representative, site manager and senior key personnel who will be responsible for working closely with the Employers staff to achieve efficient execution of the Contract shall be competent to conduct meetings and communications in the English language.

The management organization shall include a planning and programming tools covering the Work, and shall apply the latest techniques in communication and analysis. The Contractor shall nominate a planning engineer to co-ordinate all planning activities.

#### 15.11 RELEASE OF INFORMATION

The Contractor shall not communicate or use in advertising, publicity, or sales release, photographs or other reproductions of the Work under this Contract, or descriptions of the size, dimensions, quantity, quality, or other information concerning the Work unless prior written permission has been obtained from the Employer.

#### 15.12 SAFETY AND ACCIDENT PREVENTION

It shall be the Contractor's responsibility to maintain throughout the construction period, a safety and accident prevention program satisfactory to the Employer which meets the requirements of Applicable Laws and of all other Governmental Authorities authority having jurisdiction over the Works. The rules and regulations laid down in the Health, Safety and Environment (HSE) Plan must be adhered to at all times.

#### 15.13 SECURITY

The Contractor shall be solely responsible for the security of all equipment and materials incorporated or to be incorporated in the Work by him and all equipment, materials, tools, supplies, structures, facilities and others properly used in the execution of the Work while in his care and custody.

The Contractor shall conform also to any specific security requirements of Employer but such compliance shall not relieve the Contractor from the total responsibility for security.

#### 15.14 HOUSING &TRANSPORT

The Contractor shall arrange for suitable housing units together with furnishing and utilities in the close proximity of the construction Site for accommodation of all his expatriate personnel. If the services of any expatriate personnel of the Contractor or its Subcontractors

If the Contractor decides in consultation with the Employer that the health or safety of any of his personnel is or might be jeopardized by political or health hazards in Bangladesh, the Contractor may, after forty-eight (48) hours' notice, order its employees and the employees of its Subcontractors and suppliers to return to their headquarters or other safe location, in which case the Work will be deemed to be suspended for the duration.

The Contractor shall provide to the extent agreed transport vehicles for use during construction period by the expatriate as well as local personnel.

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 22 OF 41
CML-REV-0	(TCC)	

## 15.15 PROPRIETARY NAMES

Whenever a material or article is specified or described on the plants by using the name of a proprietary product or by using the name of a particular manufacturer or vendor, the specific item mentioned shall be understood as establishing the type, function and quantity desired. Unless otherwise specified, other manufacturers' products which in the opinion of the Employer are equivalent of those specified will be accepted. Such items shall be submitted for approval prior to their incorporation in the Works.

#### 15.16 PERFORMANCE OF THE WORK

The Contractor shall conduct all Works in such a manner as to cause the least possible disturbance or damage to the environment. In cases where some temporary disturbance or damage is unavoidably caused due to the nature of the work, the Contractor shall, as soon as possible, remove the cause of such temporary disturbance, repair the damage and, in general, restore the affected areas to their original condition to the extent possible, and in a manner satisfactory to the Employer, the landowner and any authorities.

Prior to commencement of the Work, the Contractor shall provide details of its EMP specifically addressing the following:

• Environmental management system and manual – policies, standards and procedures, and programs; organization / responsibilities;

**Training** 

Incident and accident investigation;

Management support;

Environmental protection, mitigation and restoration;

Emergency preparedness and response;

Socio-economic plans, including historical and cultural resources;

audit, monitoring and corrective action;

information and records management; and,

Integration of safety & health requirements with the EMP.

All aspects of the EMP and the environment work requirements are the Contractor's accountability and the Contractor, its management and its Site supervisory staff will be held responsible for its implementation.

All relevant Health, Safety and Environment (HSE) issues, results of audit and monitoring plans and programs, and HSE performance indicators will be communicated to the Contractor's management and the Employer through daily inspection meetings and reports, weekly construction meetings, monthly meetings, and in terms of the monthly project report.

The Contractor shall ensure that he has complete knowledge of all the laws, statutes, statutory instruments, regulations, rules, treaties and conventions (by whatever name or title), environmental protection regimes and other Applicable Laws, in each of the jurisdictions where he shall perform the Work. The Contractor shall also take all

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 23 OF 41
CML-REV-0	(TCC)	

necessary measures to protect the atmosphere, ocean, rivers, groundwater, seaports and land from pollution. In any event the Contractor shall promptly use its best efforts to eliminate and clean up any pollution caused, directly or indirectly, by the Contractor or which occurs at the Site, or other sites associated with this Work.

The Contractor shall cooperate in all respects with any participant environmental representatives and with governmental persons, and allow them to inspect any and all equipment or operations that they wish to observe. The Contractor shall, at all times, be ready to discuss the implementation of the Contractor's safety, health and environmental protection program.

#### 15.17 INSTRUCTION TO WORKERS (ORIENTATION/ INDUCTION)

The Contractor shall ensure that all employees, subcontractors, servants and agents (and employees, servants and agents of all Subcontractors) participating in the Work, are advised about the strategy and plan for managing the environmental-social issues related to the work, and on their role and responsibility; instructed on the requirements of environmental laws, rules, regulations and specific permit conditions applicable to the area and the Work; instructed on the application and use of the required personal protective equipment (PPE) for their job duties and functions; and, have received the appropriate training in the use, application and maintenance of PPE.

#### 15.18 RISK MANAGEMENT

The Contractor shall clearly state the management methods and techniques to be used to identify potential hazards and risks at any stage prior to the execution of a particular activity. If required, specific procedures shall be developed by the Contractor to eliminate or mitigate the hazard to a safe level prior to the work being authorized. All requirements of the project's environmental impact assessments ("EIA") and other relevant assessments and conditions of approvals accorded by the relevant Governmental Authorities must be considered by the Contractor in the development of the Contractor's Health, Safety and Environment (HSE) Plan, EMP and other related/relevant plans. The Contractor is required to implement a system whereby all risks associated with hazardous substances, whether chemicals, byproducts, effluents or waste materials, are minimized and/or eliminated. In conjunction with its emergency plans and procedures, the Contractor shall develop and submit to the Employer's Representative a "Safety Philosophy Document" that details the strategy to be adopted for control and shutdown systems, including alarms and programmable electronic control systems.

### 15.19 EMERGENCY PREPAREDNESS, RESPONSE & CONTINGENCY PLAN

The Contractor shall prepare an Emergency Preparedness, Response and Contingency Plan (a detailed program of action to minimize the effects of an abnormal event requiring prompt actions beyond normal procedures to protect human life, minimize injury and safeguard the environment) for environmental and personal safety emergencies or incidents. This plan shall be found within the Contractor's Safety & Health and/or Environmental Programs. The purpose of the plan shall be to limit insurance and damage to people, property and the environment respectively. The plans, procedures, and trained personnel shall be in place for the duration of the

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 24 OF 41
CML-REV-0	(TCC)	

Contract to manage and control emergency situations and incidents in a proper and expeditious manner.

#### 15.20 SERVICING AND FUELING

To ensure adequate response capability in the event of a fuel, ground spill or other spill, all fuel transport vehicles and the Contractor's foreman vehicles shall carry a suitable amount of commercial absorbent material. In addition, floating absorbent pads and booms for spill clean- up on open water shall be kept accessible on the construction Site.

All service vehicles and/or equipment utilized for re-fuelling must be equipped with automatic shut-off valves. All equipment or servicing activities with the potential for accidental spills (e.g., oil changes, hydraulic repair, coolants) will require appropriate containment methods to be in place (i.e., storage containers, impervious liners, absorbent materials, etc.) prior to the start of the activity.

### 15.21 SOIL AND GROUND WATER PROTECTION

The Contractor shall develop and implement soil and groundwater protection measures. Protection measures shall include building and impervious floors, where appropriate. The Contractor shall make an assessment of groundwater quality prior to the start of construction and prior to commissioning to demonstrate to Employer's Representative that construction activities have not adversely affected the environment. Groundwater quality shall be monitored throughout the construction phase.

#### 15.22 HEALTH HAZARDS

Worker and public health is a critical part of any HSE management program. The Contractor shall control substances and materials that may be a hazard to worker's health. These controls shall be a combination of hazard communication, safe work systems and the controlled handling and disposal of hazardous materials The Contractor's controls shall commence at contract preparations and procurement stages, where all vendors and subcontractors shall be required to submit Material Safety Data Sheets ("MSDS") for all hazardous materials that will be supplied, provided or brought onto the Site. These MSDSs shall be forwarded to Contractor's HSE Manager for review and records management.

In the event hazardous materials are to be used, the Contractor shall carry out assessments according to recognized international standards, to determine if there are any more suitable or less hazardous materials that could be substituted for the original materials. Only when the Project Manager, Employer and his Engineer and the Contractor are satisfied that assessments have been completed, and control measures are adequate to protect worker health, the materials shall be allowed on the project worksite. The Contractor's control measures shall include:

Material transport, storage, labelling, packaging, and disposal
Personnel protective equipment (PPE),
Health surveillance and monitoring, and

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 25 OF 41
CML-REV-0	(TCC)	

☐ Emergency procedures and training.

All explosive materials to be used for blasting during Site preparation shall only be handled by approved and qualified personnel. All explosive materials shall be stored in a secure, limited access sites, protected from workers and the public, and removed from the site every day and immediately after use.

All radioactive equipment and materials shall only be used by qualified, approved and permitted personnel. Radioactive materials must be stored in approved and protected container. Radioactive materials and waste products shall not be disposed of on-site but removed in protective containers and disposed at government approved storage and disposal sites

#### 15.23 WASTE MATERIAL MANAGEMENT

The Contractor shall ensure that waste management identification, handling, transport and disposal are addressed in the development of their HSE management plans.

The Contractor's employees responsible for handling hazardous materials (including wastes) shall receive training and certification in the handling, transport, storage and disposal of chemicals and regulated or hazardous materials. Where applicable, Workplace Hazardous Materials Information System ("WHMIS") certification and training, or its equivalent, shall be made available to employees. Regular written updates shall be included for continued employee awareness.

The Contractor shall ensure proper segregation and isolation for wastes that could react together in the event of a leak or other incident. These facilities shall include lockable, fire proof cabinets or storage in shelving units separated by fireproof barriers or walls.

The Contractor shall dedicate a space for waste and drum storage. The storage area must be easily accessible for spill containment and emergency response and not be susceptible to flooding.

For any waste storage area which could accumulate hazardous gases, vapors, or dust due to the nature of the wastes stored, the Contractor must supply suitable ventilation or other controls to ensure exposure by employees is kept below required minimum standards. Storage areas for hazardous wastes shall be designated as restricted areas and shall be suitably equipped to control an incident involving a leak or spill.

The Contractor shall make available suitable fire extinguishing equipment and proper electrical bonding equipment in all areas involving the handling and storage of flammable and reactive wastes.

Disposal of wastes by burning will not be allowed on the construction site.

Sumps and waste pits shall not be used for waste storage at the work site. Sumps should only be used for temporary control and containment of spills, equipment leaks, etc. If the Contractor encounters former sump sites or waste pits during ground surveys, the Contractor shall identify and investigate the same. If any contamination is suspected, the Contractor shall excavate, remove and where required replace with an approved sump container system.

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 26 OF 41
CML-REV-0	(TCC)	

The Contractor shall develop and implement a waste disposal control system. This system shall control every load of waste leaving the worksite, detailing the type of waste disposal, waste origin and destination, approximate weight, date and transport details on a waste manifest/document. These documents shall be audited.

#### 15.24 SPILL RESPONSE AND CONTROL

All spills shall be stopped and cleaned up immediately to avoid potential impact to water and soil quality. All spills shall be reported using the Incident Management Process. Under no circumstance contaminated material may be "stored" on the work site.

All spills shall be rapidly stopped and appropriately eliminated as defined in the Contractor's Emergency Preparedness, Response and Contingency Plan. Spills shall be contained in a way that will prevent their redistribution. All ground spills shall be contained as quickly as possible through diking, suction methods, excavation and the use of absorbents or other appropriate recovery techniques.

A list including the type, quantity and location of the storage of retaining and clean up equipment to be used during construction shall be prepared. The list shall include the procedures and mitigation measures to be used in case of a spill. A written inventory will also be prepared, before starting construction works, including lubricants, fuels, solvents, chemicals and other materials that might be accidentally discharged during construction.

All on-site fuel storage tanks shall be located in an impermeable secondary containment area with a holding capacity equal to 110% of the largest tank within the berm. For above ground tanks, the tanks shall be surrounded by a berm, the entire area covered with a suitable commercial absorbent material and with a sealed plastic liner to form an area that can be pumped out in the event of a leak in the tank. A waste handling plan shall be made with the purpose of identifying the procedures necessary for cleaning and disposing of residues from a major spill. In the event of a spill, the Contractor shall make all resources available to contain and clean up the spill. Traffic shall be minimized in and around the spill site.

#### 15.25 NOISE CONTROL

Noise level specifications to be followed by the Contractor in design, assessment and monitoring activities are based upon the maximum (acceptable) levels which plant personnel may be exposed during their normal working duties. The Contractor shall be familiar with and comply with the environmental guidelines as issued by the relevant Governmental Authorities in Bangladesh, including the Department of Environment, Government of Bangladesh and other relevant Applicable Laws.

All internal combustion motors of vehicles, machinery and equipment used during the construction phase, shall have adequate noise silencers, and shall be kept in good operating conditions, during the entire construction period. Where temporary noise pollution of greater than 85 dB will occur, temporary silencers shall be used. Equipment noise should not exceed the specified limits at accessible locations.

#### 15.26 CONSTRUCTION TRAFFIC PLANNING

The Contractor shall ensure that the construction Site is organized in such a way that

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 27 OF 41
CML-REV-0	(TCC)	

pedestrians can move safely and without risk. The Contractor shall firstly select the lowest period of traffic flow for equipment crossings; and secondly, ensure that traffic patterns and entrances to private and public roads for access are not obstructed during construction activities. All site entry will be controlled by vehicular passes. Road closures, on-site and off-site, shall be with the approval of the Contractor's site manager and/or road closure permit. Site traffic shall be minimized and speed limits posted and enforced.

#### 15.27 HOUSEKEEPING

All construction debris and other garbage shall be continuously collected and disposed at an approved facility. At the end of each day, all waste material shall be removed from the construction Site and deposited at the approved allocated area. The approved procedures to manage waste shall be specified in the Contractor's waste management plan. All empty hazardous material containers shall be removed from the work area as soon as is practicable. All empty gas containers and bottles shall be returned to their storage area and secured properly.

The Contractor's shall prepare a pest and vector control program to address specific site conditions, including a mosquito control program.

#### 15.28 CONSTRUCTION CAMPS

The location of work places, camps, areas of storage and installation of works, compression, regulation and communication stations shall be located on levelled land, avoiding areas with non-cohesive soils to avoid erosive processes.

Health conditions in the camp shall be controlled in order to prevent contamination of adjacent groundwater or surface water resources. Domestic sewage generated at the construction sites shall be eliminated by two systems of septic/absorption tanks or chemical toilets located on the sites.

Solid combustible garbage shall be collected and secured daily, until disposal, to prevent the attraction of livestock, vermins and wild animals. Residue shall be disposed of, along with non-combustible garbage, in a disposal location approved by the Authorities.

Upon abandonment, the camp site area shall be cleared of all trailers, piping, cable, insulation, lumber, blockage, metal wastes, etc., and re-graded according to the landscaping concept. These guidelines and procedures for the management of domestic and other waste shall be specified in a plan.

#### 15.29 SITE REGULATION MANUAL

The Contractor shall thirty (30) days prior starting any Work at the Site furnish a detailed and comprehensive site regulation manual for its proposed operation and works on the Site, which shall be based on the site related regulations and requirements in the Contract and which shall be subject to Employer's approval. All work on the Site, shall be carried out in compliance with the so approved site regulation manual.

#### 15.30 PLANNING & MONITORING

15.30.1.1 Within 7 days of placement of order/ LOI by BHEL, successful bidder shall interact with BHEL site for kick-off meeting to discuss & firm up item-wise/ activity-wise schedule of construction so as to complete the entire job within the stipulated completion period, matching with project schedule.

The bidder shall prepare detail construction schedule (L-3) as per completion dates

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 28 OF 41
CML-REV-0	(TCC)	

45.00.40	given in this document. This schedule must include all milestone and key activities for each sub-system / components in the areas of engineering (wherever applicable), procurement, manufacture (wherever applicable), excavation / construction / erection. This network must conform to the overall project schedule. The bidder should also ensure monitoring of these activities at least weekly basis to start with and on daily basis whenever required by BHEL.
15.30.1.2	The bidder shall also prepare progress report indicating progress on key activities, management summary for critical activities and list of actions requiring attention of BHEL. This schedule is to be preferably made in MS EXCEL/PRIMAVERA / MS PROJECTS, so that the same is compatible with BHEL's project management software.
15.30.1.3	You shall also provide 2 (Two) number service staff for miscellaneous service for BHEL's use at site/for reconciliation, progress review & day-to-day planning purpose, documentation, supervision, etc. These facilities are to be provided within 30 days from LOI date or from the date of requirement communicated in writing by BHEL whichever is later till completion of scheduled contract period or up to extended period for the completion of the contract whichever is later.
	If BHEL do not availed the service of the personnel as per requirement, BHEL shall have the right to deduct the amount as per following rates on prorate basis, from your RA bill or any other dues.
15.30.1.4	Deleted
15.30.1.5	@ BDT 30000/-per month for each service staff.
15.30.1.6	Deleted
15.30.1.7	DELETED
15.30.1.8	The contractor's site office must have facilities of communications like Fax, E-mail, and telephone with STD facility within a month from LOI.
15.30.2	PROGRESS REPORTING
15.30.2.1	DELETED
15.30.2.2	The progress report shall indicate the progress achieved against planned with reasons indicating delays, if any, and shall give the remedial actions which the contractor intends to take to make good the slippage or lost time, so that further works again proceed as per the original program and the slippages do not accumulate and effect the overall program.
15.30.2.3	The daily work force reports shall clearly indicate the work force deployed, categorywise specifying also the activities in which they are engaged.
15.30.2.4	Weekly progress review meetings will be held at site during which actual progress during the week vis-à-vis scheduled program shall be discussed or actions to be taken for achieving targets. For discussions, the contractor shall present program of subsequent week. The contractor shall constantly update/revise his work program to meet the overall requirement.
15.30.2.5	Periodic progress reviews on the entire activities of execution in respect of supply and works in scope of bidder will be held once in a month at Kolkata / site. These meetings will be attended by reasonably higher officials of the contractor and will be used as a forum for discussing all areas where progress needs to be speeded up. The contractor shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings.
15.30.2.6	Deleted
15.30.2.7	Successful bidder has to provide for electronic/ computerized storing and re-production / printing / plotting of various data, log sheets, protocols, measurements etc. These may
	be stored in CD (as per requirement) and handed over to BHEL as per requirement.

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 29 OF 41
CML-REV-0	(TCC)	

15.30.2.8	PHOTOGRAPHS		
	DELETED		
15.30.3	SITE ORGANIZATION		
15.30.3.1	The contractor shall maintain a site organization manpower, construction machinery and other execution of the contract headed by a componerations with sufficient level of authority to tak organization chart (showing the name of SITE indicating various levels of experts to be posupervision and execution, quality, material many) from the schedule without any commercial chart is to be submitted within 10 days from the construction.	r implements at all time for smooth petent construction manager for site e site decisions. The vendor will submit E-IN-CHARGE) with individual bio-data ested for supervision in the fields of anagement, planning, safety, etc. The ne, as required to make up slippage (if implication to BHEL. The organization	
15.30.3.2	Following (minimum) engineering manpower wit to be deployed at site by the successful vendor for		
15.30.3.2.1	Qualified safety officers with assistants (exclusive for safety supervision for project jobs).	Officer/Assistant – Minimum One No. Manpower and Infrastructure details available in Annexure B. Contractor shall implement / deploy Manpower at site as mentioned in Annexure B.	
15.30.3.2.2	Engineer & Supervisors for quality inspection.	Engineer-One Number Two supervisor	
15.30.3.2.3	Site supervising engineer and supervisors for civil works	Every work area to have minimum one qualified supervisor.	
15.30.3.2.4	Quality engineer for Civil Supervision	One no.	
15.30.3.2.5	Planning Engineer (exclusively for planning)	One no. Engineer	
15.30.3.3	Deputation of above man-power shall be jointly decided at site in line with construction schedule.		
15.30.3.4	Engineer / supervisor for other functions like store & purchase, material management, fin, administration etc. are to be provided as per site requirement and <b>not considered above.</b>		
15.30.3.5	In the event of non-deputation of engineer/ supervisor by the bidder as per above agreed schedule, BHEL shall reserve the right to deduct BDT 114450/- per man-month for engineer, BDT 70850/- per man-month for the supervisor / safety officer / chemist and BDT 70850/-per man-month for safety supervisor from RA bills. Further induction of manpower regarding site supervisor & site engineer will be decided at site as per requirement without any financial implication.		
15.30.3.6	BHEL reserves the right to reject or approve the list of personnel proposed by the contractor. The persons whose bio-data have been approved by BHEL will have to be posted at site and deviation in this regard will not be permitted unless specific & reasonable justification is made.		
15.30.3.7	In addition to above, a well experienced qualified engineer to be designated, as 'Project Co-coordinator', shall be deployed by the contractor. Such engineer shall have adequate exposure on the job and shall remain fully involved in all planning activities, guidance etc. to contractor's own team during the complete execution period of contract.		
15.30.3.8	The contractor should also submit to BHEL for approval a list of T&Ps along with their fitness certificates. The tools & tackles shall not be removed from site without written permission of BHEL.		

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 30 OF 41
CML-REV-0	(TCC)	

15.30.3.9 16.0	The contractor should also submit network programs for the erection of various items. These networks shall show the BIFCL/ BHEL hold points, which have to be cleared by BIFCL/ BHEL, or their authorized representatives before further erection can take place. These programs for the erection would clearly identify responsibilities of the contractor and BIFCL/ BHEL. It is the responsibility of the contractor to get the Networks approved by BHEL within four weeks of the date of finalization of award of work/ placement from start of work.  QUALITY CONTROL & QUALITY ASSURANCE
16.1	Contractor's engineers & supervisors shall be adequately qualified and also inclined to do a quality job. The quality assurance engineer shall co-ordinate all aspects of quality control, inspection, implementation of quality assurance procedures laid down in Quality Plan and technical specification by BHEL. He shall fill up quality assurance log sheets / formats and submit to BHEL for joint inspection and acceptance. The contractor shall fill up, maintain & preserve the quality records in computerized media. BHEL's authorized representative shall be given free access at all time to such quality related records etc. for inspection, review etc.
17.0	QUALITY ASSURANCE PROGRAMME
17.1	The contractor shall arrange for suitable quality assurance programme to control all activities pertaining to the scope of work, as necessary. Such programs shall be outlined by the contractor & shall be finally accepted by BHEL. A quality assurance programme of the contractor shall generally cover the following
17.2	Organization structure and qualification data for key personnel of the contractor for the management and implementation of proposed quality assurance programme
17.3	The procedure for source inspection, incoming raw material inspection, verification of material purchased etc.
17.4	System for maintenance of records.
18.0	GENERAL REQUIREMENTS – QUALITY ASSURANCE
18.1	All materials, components and equipment covered under the specification shall be procured, manufactured, erected, commissioned and tested, as applicable, at all stages as per comprehensive quality assurance program. An indicative program for inspection / test, to be carried out by the contractor, for some of the major items is given in the respective technical specification.
18.2	Field quality plan will detail out the quality practices and procedures etc. to be followed by the contractor's site quality control organization, during various stages of site activities from receipt of material / equipment at site.
18.3	BHEL reserves the right to carry out quality audit and quality surveillance of the systems and procedures of contractor's quality management. Contractor shall provide all necessary assistance to enable BHEL to carry out such audit.
18.4	Quality audit / approval of the results of test & inspection will not prejudice the right of BHEL to reject an equipment service not giving desired performance and shall not in any way limit the liabilities and responsibilities of the contractor in earning satisfactory performances of equipment/ service as per specification.
18.5	Repair / rectification procedure to be adopted to make any job acceptable shall be subject to the approval of BHEL.
18.6	All the latest relevant codes as per technical specification should be available with the contractor at site within 15 days from the date of placement from start of work or otherwise specified by Construction Manager/ Project Manager, BHEL.
19.0	HEALTH, SAFETY & ENVIRONMENT
19.1	REFER DOCUMENT NUMBER : HSEP:14-MAITREE:VENDOR: DATE: 05.05.16
	DOCUMENT TITLE:-HEALTH, SAFETY AND ENVIRONMENT PLAN FOR 2X660MW MAITREE SUPER THERMAL POWER PROJECT

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 31 OF 41
CML-REV-0	(TCC)	

20.0	SPECIFIC REQUIREMENTS FOR ISO 9002							
20.1			nsure that all their staff /					
			nducted by qualified agenci					
20.2	Contractor shall ensure that the quality is maintained in all the works connected with							
00.0	this contract at all stages of the requirement of BHEL.							
20.3	Contractor shall ensure that all MMDs that are used, whether owned by the contractors or used on loan, are calibrated by the authorized agencies and the valid calibration							
certificate will be available with them for verification by BHEL. A list of such possessed by the contractor at site with its calibration status is to be submit								
	Engineer for control.							
20.4			sure that fitness certificate					
			contractor or issued on loar				authorized	agency and
20.5			ficate is available for verification of the					
20.5			range for the inspection of t ntractors shall take imme					
	-		, observed and pointed out			Clive	action ic	n the non-
21.0			G RECOVERABLE ADVA			LIZA	TION ADV	ANCE
21.1		plicable for thi						
22.0			SES NOT APPLICABLE	1				
23.0	REVIS	ION ON ACC	EPTED CONTRACT RATE					
23.1		plicable in this						
24.0			CLAUSE / ESCALATION					
24.1			of variation in cost of execution				•	
			UR, HIGH SPEED DIESEL C					I, SIEEL,
			iation Formula as described he					
			ontract Value shall be permitte					
			g execution of work. The re	namn	g 15%	sna	n be treated	as lixed
	compor		ion of price verietion in each		aaru 1	-hair	component	Dasa Inday
			ion of price variation in eacl	i cate	gory, i	uieii	component	, base muex,
	shall be	e as under:		ı				
	SL	CATEGORY	BASE			COM	IPONENT ('K')	
	NO.		INDEX	CIVIL	PACKAG	GES	MECHANICAL	LABOUR
					Note A/E		PACKAGES	ORIENTED
				Α	B**	С		PACKAGES
								(See Note D)
	i)	LABOUR	"Monthly wage rate index by	40	25	30	65	80
		(ALL CATEGORIES)	sector: Khulna Division, Sector:	.•				
			Industry (i) Construction"					
			Published by Price & Wage					
			Statistics Section, National					
			Accounting Wing,					
			Bangladesh Bureau of					
			Statistics (BBS), Government of					
			Bangladesh. (Website:					
			www.gov.bbs.bd)					
T. Control of the Con	1 11		** ** ** .go * .bb3.ba /			1		1 1

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 32 OF 41
CML-REV-0	(TCC)	

i	i)	HIGH SPEED DIESEL OIL	Name of Commodity: HSD OIL. Type: INDIVIDUAL COMMODITY (As per rate published by Govt. of Bangladesh)	5	3	5	5	5
ii	ii)	WELDING ROD	Name of Commodity: WELDING RODType: INDIVIDUAL COMMODITY				1 5	
i	v)	CEMENT	Name of Commodity: GREY CEMENTType: INDIVIDUAL COMMODITY (		20	30		
V	v)	STEEL (Structura and I Reinforce ment Steel)	Name of Commodity: a1. IRON & SEMISType: GROUP ITEM (		25			
	vi)	MATERIALS (Other than Cement & Steel)	Name of Commodity: Miscellaneous Goods and Services (See Note F)	40	12	20		

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

B) Cement & Steel: In Contractor Scope {\*\*: unless otherwise specified in Special Conditions of Contract (SCC)}

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

- p) Predominantly 'Labour Oriented' packages including Material Handling & Management, Insulation, Painting, Electrical and CI or a combination thereof, which are separately tendered and awarded
- E) For Composite packages (i.e. Civil+Mechanical+Electrical/CI or Civil+Mechanical or Mechanical+Electrical/CI), the components for various categories shall be as per respective packages
- F) As per the 'Consumer Price Index: National Division Wise (COICOP): CPI Classification 12. Miscellaneous Goods and Services category, published by Price & Wage Statistics Section, National Accounting Wing, Bangladesh Bureau of Statistics (BBS), Government of Bangladesh. (Website: www.gov.bbs.bd). Revisions in the index or commodity will be re adjusted accordingly.

24.2

Payment/recovery due to variation in index shall be determined on the basis of the following notional formula without any initial absorption, in respect of the identified components viz LABOUR, HIGH SPEED DIESEL OIL, WELDING ROD, CEMENT, STEEL, **MATERIALS** 

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

Where

P = Amount to be paid/recovered due to variation in the Index for Labour, High Speed

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF- CML-REV-0	TECHNICAL CONDITIONS OF CONTRACT (TCC)	PAGE 33 OF 41
	(100)	

	Diesel Oil, Welding Rod, Cement, Steel and Materials
	K = Percentage component applicable for Labour, High Speed Diesel Oil,
	Welding Rod,Cement, Steel and Materials
	R = Value of work done for the billing month (Excluding Taxes and Duties if payable
	extra)
	XN = Revised Index No for Labour, High Speed Diesel Oil, Welding Rod,
	Cement, Steel andMaterials for the billing month under consideration
	Xo = Index no for Labour, High Speed Diesel Oil, Welding Rod, Cement, Steel and
	Materials as on the Base date i.e the bid submission date or the last
	date of offer submission.
25.0	LIQUIDATED DAMAGE
25.1	Intermediate Milestones Not Applicable
25.2	Overall Completion
25.2.1	If the contractor fails to maintain the required progress of work which results in delay in
25.2.1	the completion of the works as per the contractual completion period, BHEL shall have
	the right to impose Liquidated Damage / Penalty at the rate of 0.5% of the contract
	value, per week of delay or part thereof subject to a maximum of ceiling specified
	below. For this purpose, the period of delay shall be the delay attributable to the
	Contractor for the completion of work as per contract. Contract Value for this purpose,
	shall be the final executable value exclusive of ORC, Extra Works executed,
	Supplementary / Additional Items and PVC.
25.2.2	If Completion of work goes beyond specified contract period of 7 (seven) months from
20:2:2	date of start of work for reasons attributable to contractor, as certified by Construction
	Manager, BHEL, LD will be imposed with maximum LD amount shall be 10 % of total
	contract value.
25.2.3	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 he has incurred such amount as
	actual damage.
25.2.4	BHEL reserve the right to cancel the order/ contract or a portion thereof at the risk &
	cost of the contractor and the contractor shall be liable to BHEL for any excess costs
	thereof.
Note:-	*Executable Contract value-Value of work for which inputs/fronts were made
	available to contractor and were scheduled for execution till the date of achievement of
	that milestone.
26.0	GUARANTEE / WARRANTY
26.1	The contractor will be responsible for the quality of workmanship, quality of materials/
	items and design for which the contractor is responsible.
	Even though the work will be carried out under supervision of BHEL, the successful
00.0	bidder will be responsible for the above.
26.2	Guarantee / warranty period shall be 12 (twelve) months from the date of issue of work
27.0	completion certificate by BHEL.  EXTENSION OF TIME FOR COMPLETION
27.0	If the completion of work as detailed in the scope of work gets delayed beyond the
21.1	contract/ completion period due to reasons not attributable to contractor, the contractor
	shall make request for an extension of the contract and BHEL at its discretion may
	extend the contract. However, such extension shall not entitle the vendor for price
	revision or price compensation as this being FIRM price contract.
27.2	Based on review of agreed & jointly signed L-2 / construction schedule (as enumerated

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 34 OF 41
CML-REV-0	(TCC)	

07.0	in the tender), the balance work at the end of original contract period less the backlog attributable to the contractor shall be quantified, and the number of months of 'Time extension' required for completion of the same shall be jointly worked out. Within this period of 'Time extension', the contractor is bound to complete the portion of backlog attributable to contractor. Further 'Time extension' or 'Time extensions' at the end of previous extension shall be worked out similarly.
27.3	However, if any 'Time extension' is granted to the contractor to facilitate continuation of work and completion of contract, due to backlog attributable to the contractor alone, then it shall be without prejudice to the rights of BHEL to impose penalty / LD for the delays attributable to the contractor, in addition to any other actions BHEL may wish to take at the risk and cost of contractor.
27.4	A joint program shall be drawn for the balance amount of work to be completed during the period of 'Time Extension', along with matching resources to be deployed by the contractor as per specified format. Review of the programme and record of shortfall shall be done.
27.5	During the period of 'Time extension', contractor shall maintain their resources as per mutually agreed program
27.6	At the end of total work completion as certified by BHEL engineer, and upon analysis of the total delay, the portion of time extensions attributable to (i) Contractor, (ii) Force majeure conditions, and (iii) BHEL, shall be worked out and shall be considered to be exhausted in the same order. The total period of time extensions shall be the sum of (i), (ii) and (iii) above and shall be equal to period between the scheduled date of completion and the actual date of completion of contract. LD shall be imposed/ levied for the portion of time extensions attributable solely to contractor after adjusting delay attributable to BHEL & Force majeure and shall be recoverable from the dues payable to the contractor.
00.0	
28.0	EARNEST MONEY DEPOSIT (EMD / SECURITY DEPOSIT (SD) / PERFORMANCE BOND (PB)
28.1	PERFORMANCE BOND (PB)  EARNEST MONEY DEPOSIT (EMD)
	PERFORMANCE BOND (PB)
28.1	PERFORMANCE BOND (PB)  EARNEST MONEY DEPOSIT (EMD)  EMD is to be paid by tenderers for securing fulfilment of any obligations in terms of the NIT.  EMD & Tender cost amount can be submitted Bidders to the followings Bharat Heavy Electricals Limited bank account in Bangladesh-  1. SBI (Branch Address: -Khulna, Bangladesh), A/C No. 05620257520201, BDT
28.1 28.1.1	PERFORMANCE BOND (PB)  EARNEST MONEY DEPOSIT (EMD)  EMD is to be paid by tenderers for securing fulfilment of any obligations in terms of the NIT.  EMD & Tender cost amount can be submitted Bidders to the followings Bharat Heavy Electricals Limited bank account in Bangladesh-
28.1 28.1.1	PERFORMANCE BOND (PB)  EARNEST MONEY DEPOSIT (EMD)  EMD is to be paid by tenderers for securing fulfilment of any obligations in terms of the NIT.  EMD & Tender cost amount can be submitted Bidders to the followings Bharat Heavy Electricals Limited bank account in Bangladesh-  1. SBI (Branch Address: -Khulna, Bangladesh), A/C No. 05620257520201, BDT
28.1 28.1.1 28.1.2	PERFORMANCE BOND (PB)  EARNEST MONEY DEPOSIT (EMD)  EMD is to be paid by tenderers for securing fulfilment of any obligations in terms of the NIT.  EMD & Tender cost amount can be submitted Bidders to the followings Bharat Heavy Electricals Limited bank account in Bangladesh-  1. SBI (Branch Address: -Khulna, Bangladesh), A/C No. 05620257520201, BDT Account., SWIFT: SBINBDDH056, Routing number: 220471543  EMD & Tender cost amount can also be submitted directly by Indian Bidders to the
28.1 28.1.1 28.1.2	PERFORMANCE BOND (PB)  EARNEST MONEY DEPOSIT (EMD)  EMD is to be paid by tenderers for securing fulfilment of any obligations in terms of the NIT.  EMD & Tender cost amount can be submitted Bidders to the followings Bharat Heavy Electricals Limited bank account in Bangladesh-  1. SBI (Branch Address: -Khulna, Bangladesh), A/C No. 05620257520201, BDT Account., SWIFT: SBINBDDH056, Routing number: 220471543  EMD & Tender cost amount can also be submitted directly by Indian Bidders to the followings Bharat Heavy Electricals Limited bank account in India-  1. SBI(Branch Address:-Commercial Branch, Saltlake, Sector V, Kolkata ,Branch Code
28.1 28.1.1 28.1.2 28.1.3	PERFORMANCE BOND (PB)  EARNEST MONEY DEPOSIT (EMD)  EMD is to be paid by tenderers for securing fulfilment of any obligations in terms of the NIT.  EMD & Tender cost amount can be submitted Bidders to the followings Bharat Heavy Electricals Limited bank account in Bangladesh-  1. SBI (Branch Address: -Khulna, Bangladesh), A/C No. 05620257520201, BDT Account., SWIFT: SBINBDDH056, Routing number: 220471543  EMD & Tender cost amount can also be submitted directly by Indian Bidders to the followings Bharat Heavy Electricals Limited bank account in India-  1. SBI(Branch Address:-Commercial Branch, Saltlake, Sector V, Kolkata ,Branch Code SBIN0004289),A/C No. 11107800029,INR Account.  Amount of EMD exceeding INR 20 Lakh may be submitted in the form of Bank Guarantee (INR or eqv. USD/ BDT).In case of any Non-Indian Bank BG of local Bangladesh Bank, the same is to be countered guaranteed from any scheduled Bank

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 35 OF 41
CML-REV-0	(TCC)	

	(a)AB Bank Limited (b)Citibank N.A. (c) Sonali Bank Limited (d)Standard Chartered Bank (e)The Hong Kong Shanghai Banking Corporation Ltd (f)Woori Bank (g) State Bank of India.
28.1.6	All other terms & conditions shall be as per GCC.
28.2	SECURITY DEPOSIT(SD)
28.2.1	The total amount of Security Deposit will be 5% of the contract value. EMD of the
20.2.1	successful tenderer shall be converted and adjusted towards the required amount of Security Deposit.
28.2.2	At least 50% of the required Security Deposit, including the EMD, shall be collected before start of the work. Balance of the Security Deposit shall be collected by deducting 10% of the gross amount in BDT progressively from each of the running bills of the Contractor till the total amount of the required Security Deposit is collected.
	If the value of work done at any time exceeds the contract value, the amount of Security Deposit shall be correspondingly enhanced and the additional Security Deposit shall be immediately deposited by the Contractor or recovered from payment/s due to the Contractor.
	The recoveries made from running bills (cash deduction towards balance SD amount) can be released against submission of equivalent Bank Guarantee in acceptable form, but only once, before completion of work, with the approval of the authority competent to award the work.
28.2.3	RETURN OF SECURITY DEPOSIT  Security Deposit shall be released to the contractor along with the final bill after deducting all expenses / other amounts due to BHEL under the contract / other contracts entered into with them by BHEL.
28.2.4	Where ever Bank Guarantees are to be furnished/submitted by the contractor, the following shall be complied with  i) Bank Guarantees shall be from Scheduled Banks in India / Public Financial Institutions as defined in the Indian Companies Act. In case of any Non-Indian Bank BG of local Bangladesh Bank, the same is to be countered guaranteed from any scheduled Bank from India. However, in case BG of local Bangladesh Bank cannot be submitted with counter guarantee from any scheduled Bank in India, BG from State Bank of India, Dhaka Branch can be submitted.  ii) The Bank Guarantees shall be as per prescribed formats.  iii) It is the responsibility of the bidder to get the Bank Guarantees revalidated/extended for the required period as per the advice of BHEL Site Engineer / Construction Manager. BHEL shall not be liable for issue of any reminders regarding expiry of the Bank Guarantees  iv) The Original Bank Guarantee shall be submitted to Subcontracting Department.
28.2.5	All other terms & conditions shall be as per GCC.
28.3	PERFORMANCE BOND
28.3.1	Not Applicable
29.0	CERTIFICATE TOWARDS COMPLETION
29.1	The work under the scope of the contractor shall be deemed to have been completed in all respects only when so certified by BHEL / owner. The decision of BHEL in this regard shall be final and binding on the contractor.

	TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02	
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 36 OF 41
CML-REV-0	(TCC)	

30.0	CIVIL LABORATORY
30.1	Deleted
31.0	CONSTRUCTION SCHEDULE
31.1	Entire work shall be carried out in accordance with the broad construction schedule given in CL No.10.1 above. Within 7 days from start of work, the contractor shall discuss with BHEL site engineer & furnish detail construction schedule (L-3/ L-4) indicating all milestones on the basis of major activities and get it approved from BHEL engineer. This schedule will undergo review and based on progress vis-à-vis project requirement, contractor shall have to submit revised schedule for approval of BHEL.
31.2	Deleted
31.3	The contractor shall plan his work in such a manner so as to meet the overall project schedule, in consultation with BHEL/ BIFCL engineer.
31.4	Contractor shall submit daily work program based on above construction schedule. Deferment of above schedule is not acceptable. Contractor will adhere to schedule and resource planning to be augmented to ensure completion as per schedule.
31.5	Periodic progress reviews on the entire activities of execution in respect of supply & works in scope of contractor will be held once in a month at Kolkata / site. These meetings will be attended by reasonably higher officials of the contractor and will be used as a forum for discussing all areas where progress needs to be speeded up. The contractor shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings.
31.6	Above schedule is indicative. The contractor shall plan his work in such a manner so as to meet the overall project schedule, in consultation with BHEL/BIFPCL Engineer.
31.7	The bidder has to plan and work for 24 hours 7 days a week on shift basis operation.
31.8	If any work of similar nature is required to be executed within the project premises, the same shall be executed in existing rates, terms and conditions.
31.9	As the plant is in operation, necessary work permits, movement restrictions, safety clearance, is required to be adhered to as per the norms and practices of MSTPP plant including working in vulnerable areas.
31.10	As this work is the concluding work in the project, it requires integration with the existing facilities. The bidder shall execute the same and shall be paid under relevant item of the BOQ or under the purview of extra item/works of the contract.
32.0	PAYMENT FOR ADDITIONAL/EXTRA ITEMS FOR CIVIL FOUNDATION WORKS
32.1	It shall be as per relevant clause of the GCC. However, "BPWD Schedule of Rates 2022"/ latest revision/ published amendment as mentioned in the price schedule will be considered.
33.0	DELETED
34.0	TOOLS & PLANTS (TO BE PROVIDED BY CONTRACTOR)
34.1	Tentative list of T&P to be deployed by contractor for successful completion of work is detailed below.
34.2	It may be noted that the list is not exhaustive and is only for general guidance. The contractor is required to provide all necessary T&P (other than those specified to be provided by BHEL, if any) measuring (calibrated) instruments & handing equipment to maintain work progress for timely completion of total work as per contract. In case of project requirement, some activities may have to be pre-ponded. In such cases the contractor may have to deploy additional T&P. Quoted rate shall be inclusive of such emerging requirements. However, contractor shall submit deployment plan of all T&P along with tender bid.
34.3	In the event of any failure on the part of the contractor to deploy T & P to sustain desired work progress, BHEL may at his discretion also terminate the contract on this ground

TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02			
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 37 OF 41	
CML-REV-0	(TCC)		

34.4	and take out any or whole amount of the contract from the scope of the contractor. In the event of failure of contractor to deploy necessary and sufficient T&P/ IMTEs to maintain work progress, BHEL will be at liberty to arrange the same at the risk & cost of contractor including transportation cost of same from any of BHEL site/ other agency & charges as applicable shall be deducted from contractor's RA bill. Decision of BHEL in this regard will be final & binding on contractor.  Following Major T&Ps to be arranged by contractor within the indicated time			
34.4				
	Major T&P items	Broad Mobilizing time from date of		
	4 TDVII I 40/40 T	start of work		
34.4.1	1 no. TRX Hydra10/12 T capacity	Min 1 no as per requirement		
34.4.2	4 No. hydraulic excavator / Poclain With Long Boom arrangement	1 <sup>st</sup> – Within 20 days 2 <sup>nd</sup> – Within 30 Days 3 <sup>rd</sup> and 4 <sup>th</sup> – As per requirement		
34.4.3	2 No. JCB / Pay Loader	1 no within 20 Days		
0	2 116. 002 / 1 dy 20ddoi	2 <sup>nd</sup> -As per site requirement		
34.4.4	2 nos. transit mixer (4.5/5/6 M3 capacity)	1st – Within 20 days		
J-11T	2 nos. transit mixer (4.0/0/0 wo capacity)	2nd – As per requirement		
34.4.5	1 non congrete numn (20/20 cum/ hr min congoity 9			
34.4.5	1 nos. concrete pump (20/30 cum/ hr min capacity & lift 30 M)	Willin 20 days		
34.4.6	me co my			
34.4.7	2 nos. self-priming dewatering pump 5 HP (diesel/	1 <sup>st</sup> – within 15 days		
	electric)	2 <sup>nd</sup> -As per requirement		
34.4.8	2(Two) Nos.10 HP submersible mono-block electric pump (KOS-1040+ of Kirloskar or equivalent),	As per requirement.		
34.4.9	1 nos. self priming dewatering pump 2 HP (diesel/ electric)			
34.4.10	2 nos. curing pump – 1.5 /2 HP (pump for curing at	1 <sup>st</sup> –within 30 days		
	heights)	2 <sup>nd</sup> – as per requirement		
34.4.11	Dozer.	As per requirement		
34.4.12	3 nos Dumper	1 <sup>st</sup> –within 15 days		
	'	2 <sup>nd &amp; 3rd</sup> -as per requirement		
34.4.13	2 nos. reinforcement bending machine	As per requirement		
34.4.14	2 nos. reinforcement cutting machine	As per requirement		
34.4.15	2 nos. power driven earth rammer	As per requirement		
34.4.16	1 no. vibromax (earth compacter)	As per requirement		
34.4.17	2 nos. Vibro compactor/ plate compactor – drum	<u> </u>		
	width 750mm	2 <sup>nd</sup> -As per requirement		
34.4.18	1 no total station with adequate arrangement for			
	Surveyors			
34.4.19	1 no. auto level & staff + 2 nos as required	Within 15 days.		
34.4.20	20 nos concrete cube moulds	Within 15 days.		
34.4.21	Adequate no. of small trucks 2T/5T for movement	,		
	within site			
34.4.22	Adequate no of drinking water/construction water tank – 500 / 1000 lit.	As per requirement.		
34.4.23	1 no trailer / tractor trailer for carrying of RS material within plant premises	As per requirement		
34.4.24	Adequate no of Concrete vibrator with adequate needle (diesel driven + electric driven)	5 Nos within 30 Days. Balance diesel/electric as per		

TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02			
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 38 OF 41	
CML-REV-0	(TCC)		

	requirement		
34.4.25	deleted		
34.4.26	1 no Grader	As per requirement	
34.4.27	deleted		
34.4.28	deleted		
34.4.29	Portable fire extinguishers as below:	As per requirement	
	Soda acid– 5 sets.		
	Dry chemical powder – 01 set		
	CO2 – 1 set.		
	Water & sand bucket (4 buckets in one s	and) – 5	
	sets.		
0.4.5	Fire hose with nozzle (50 M length) – 1 set		
34.5		are tentative based on planned progress	
	requirement.	front quallability drawings construction	
		n front availability, drawings, construction is to be reviewed and mutually agreed with	
		or moblisiation of major T&Ps, and the same	
		be permitted without written approval of	
		r, adequate shift operators, supervisors, etc	
	must be available for round the clock works		
	Further requirement will be reviewed time	e to time at site and contractor will provide	
		pletion of entire work within schedule time	
		. All other T&Ps shall be provided by the	
		EL. Vendor will give advance intimation &	
	certification regarding capacity etc prior to		
34.6	All T&P and all IMTEs, which are required for successful and timely execution of the		
	work covered within the scope of this tender, shall be arranged and provided by the		
0.4.7	contractor at his own cost in working condition.		
34.7		RP by the successful bidder and as a result	
	dues of the bidder, with assigning reasons	the right to deduct suitable amount from the	
		Recovery rates	
34.7.1	Deleted	Deleted	
34.7.2	TRX of Escorts group or equivalent (10/		
04.7.2	12 T cap	BBT 6 1667 per week of part thereof	
34.7.3	12 1 33.5		
34.7.4			
34.7.5			
34.7.6	Hydraulic excavator / Poclain	BDT 87200/- per week or part thereof	
34.7.7	JCB / Pay Loader	BDT 87200/- per week or part thereof	
34.7.8	Transit mixer (4.5/5/6 M3 capacity	BDT 10900/- per week or part thereof	
34.7.9	concrete pump (20 cum/ hr min capacity & BDT 32700/- per week or part thereof		
	lift 70M)		
34.7.10			
34.7.11	self-priming dewatering pump 5 HP BDT2725/- per week or part thereof		
		BDT2725/- per week or part thereof	
	(diesel/ electric)		
34.7.12	(diesel/ electric)  10 HP submersible mono-block electric		
34.7.12	(diesel/ electric)  10 HP submersible mono-block electric pump (KOS-1040+ of Kirloskar or		
34.7.12	(diesel/ electric)  10 HP submersible mono-block electric pump (KOS-1040+ of Kirloskar or equivalent),	·	

TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02			
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 39 OF 41	
CML-REV-0	(TCC)		

	(diesel/ electric)		
34.7.14	curing pump – 1.5 /2 HP (pump for curing	BDT 2725/- per week or part thereof	
	at heights)		
34.7.15	dozer	BDT 68125/- per week or part thereof	
34.7.16	dumper	BDT 7630/- per week or part thereof	
34.7.17	reinforcement bending machine	BDT 7630/- per week or part thereof	
34.7.18	reinforcement cutting machine	BDT 7630/- per week or part thereof	
34.7.19	power driven earth rammer	BDT 109/- per week or part thereof	
34.7.20	vibromax (earth compacter)	BDT 68125/- per week or part thereof	
34.7.21	Vibro compactor/ plate compactor – drum	BDT 32700/- per week or part thereof	
	width 750mm		
34.7.22	Total station with adequate arrangement	BDT 7630/- per week or part thereof	
	for Surveyor		
34.7.23	Auto level & staff + 1 nos if required	BDT 7630/- per week or part thereof	
34.7.24	drinking water tank – 5000 lit.	BDT 7630/- per week or part thereof	
34.7.25	Concrete vibrator with adequate needle (3	BDT 5450/- per week or part thereof	
	Nos. diesel driven + 6 Nos. electric driven)		
34.7.26	Any other instrument	As per discretion of the BHEL engineer	
35.0	T&P TO BE PROVIDED BY BHEL		
35.1	BHEL shall not provide any T&P to contractor. Contractor shall arrange the required		
	T&P for construction of the structures.		
36.0	OTHER TERMS		
39.1	All other term & conditions of this specification shall be governed by the pertinent		
	provisions of GCC and other volumes of this tender, as applicable.		

TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02			
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 40 OF 41	
CML-REV-0	(TCC)		

## **ANNEXURE B**

## **HSE REQUIREMENTS-MAITREE PROJECT**

## **MANPOWER AND INFRASTRUCTURE**

SL	<u>ITEM</u>	REQUIREMENTS	<u>REMARKS</u>
NO.			
2	Shift HSE Officer	Min 1 for every 500 workers or part thereof. Any sub-contractors with more than 20 workers must have a HSE officer. Each major work area must have a dedicated shift HSE officer as advised by BHEL HSE manager/officer.	Candidate should have  • Degree/ diploma in Engg/Technology • Degree/ Diploma in H&S, min 2 years' experience in field of safety for Degree holder in Engg or Min 3 years with Diploma holder in Engg
3	Shift HSE stewards	Min 1 Steward for every 100 workers or part thereof. Deployment to be approved by BHEL HSE manager.	Candidate should have passed HSC(12 <sup>th</sup> standard) and attended a certificate course on construction safety or allied subjects
4	First aid box	1 in each office and major work area/floor	Items as per clause 76(2) of Bangladesh labour Rules and clause7.4.5.3 of HSE plan for sub- contractors
5	Shift First aider	1 for each 150 worker Minor contractors may have tie up with major contractor with permission of BHEL HSE manager in this regard.	The candidate must have passed HSC and have a certificate from Bangladesh Red-cross society or as recognized by Govt. (PI refer 7.4.5.2 of HSE Plan for sub-contractors)
6	Ambulance	Deleted	Deleted
7	Sick room	Shall be available at site, being provided by other agency.	PI refer 7.4.5.1 of HSE Plan for sub- contractors for details. Running cost & construction cost to be shared among all sub-contractor Modalities to be worked out by site team
8	Emergency vehicle	To be available in all shifts of work	Must be a 4-wheeler.
9	Walky-talky	Deleted	
10	Binoculars	Deleted	
11	Height Rescue- kit	Deleted	
12	HSE related instruments	<ol> <li>Lux meter- 1no,</li> <li>ELCB Tester-1 no</li> <li>Earth Megger- 1 No.</li> <li>Anemometer-1 no-</li> <li>Alcohol Breath Analyser-1</li> </ol>	To be made available to BHEL as and when demanded or to be shared with other sub-contractors as instructed by BHEL

TENDER NO – Ref: BHEL: MSTPP:SWM: 24:01:02			
VOLUME-IF-	TECHNICAL CONDITIONS OF CONTRACT	PAGE 41 OF 41	
CML-REV-0	(TCC)		

#### **Special Notes:**

- 1. The following welfare measures, in addition to those covered above, are to be taken at the site:
  - a. Adequate Drinking Water
  - b. Adequate no of toilets and washing area
  - c. Rest Shed
  - d. Hygienic Accommodation (Labour Colony) and allied facilities
- 2. It must be ensured that no contaminated water including those discharged from Toilets, Canteen, Office and Labour Colony shall be discharged to under-ground water table and river water
- 3. AS THIS SITE IS LOCATED IN A CYCLONE-PRONE AREA, ALL BUILDINGS AND SHED MUST BE CONSTRUCTED STRONG ENOUGH TO WITHSTAND ADVERSE WEATHER CONDITION
- 4. FURTHER TO POINT# 5, MASS EVACUATION OF PEOPLE FROM SITE MAY BE CALLED FOR, IF ADVISED SO, BY GOVT AGENCIES. AS IT WILL BE EXTREMELY DIFFICULT TO FIND A REST SHELTER FOR A FEW THOUSAND PEOPLE, IT IS FURTHER EMPHASIZED THAT ACCOMMODATION MUST BE STRONG ENOUGH TO SURVIVE SUCH EXTREME WEATHER CONDITION.
- 5. BHEL shall provide drawing for labour accommodation and contractor shall construct the same in line to BHEL drawing with contractor's own contribution/expenses.
- 6. It is assumed that First aider will be sitting in a porta-cabin.
- 7. The initial shelter in labour colony for one month till Vendor is able to construct their own labour accommodation may be available in the existing colony on rental basis, based on availability in the existing labour colony.
- 8. Adequate Quarantine Facility for isolation of workmen of 14 days during induction is to be arranged by the Bidder due to Pandemic COVID-19. All sort of sanitization, hand gloves, nose mask social distancing at labour colony is to be maintained and ensure due to pandemic of COVID-19 as per SOP attached with this Tender. It shall be in practice till such time as demanded by Project Authorities.

### ANNEXURE-A

	<u>FORMAT FOR SEEKING CLARIFICATION</u>					
JOB	Precast Pile, Pile cap, Civil, Structura	al & Architectural Works for Solid Waste Management Package For 2x660 MW Maitr	ee STPP, at Rampal, Bagerhat, Bangl	adesh.		
TENDER NO	Ref: BHEL: MSTPP: SWM:24-01-02	DATE: 11-02-2024				
SL No	Reference clause of tender document	Existing Provision	Bidder's Query	BHEL's clarification		
1	VOLUME-III PRICE SCHEDULE, REV-0 PREAMBLE : <b>Clause No: 7</b>	The quantities of the various items mentioned in this schedule of items are approximate, based on very preliminary information and may vary to any extent or be deleted altogether. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of work executed under any part of this contract including extra items, if any but excluding any price variation remains, within plus minus thirty percent (± 30%) of the awarded price as per LOI.	If Contract Value becomes less than 70% (-30%), there should be a compensation provision; BHEL Should keep additional 10% price increment as compensation on executed work done Please Confirm?	No change in specifications. Contract clause persists.		
2	TCC: Clause No: 3.1	Site Visit: Contractor should visit site and acquire full knowledge & information about site conditions prevailing at site and in and around the plant premises together with all the statutory, obligatory, mandatory requirements of various authorities before submission of the bid.  Bidder may please note that the contractor will be responsible for the quality of workmanship, quality of materials/ items and design for which the contractor is responsible for construction of the solid waste management system.	During site visit with Client personnel we found huge quantity of Sheet pile materials and Concrete Block within the SWM area. Bidder expecting to clear the site before issuing of Start of work Letter. Please ensure.	The site shall be progressively cleared before start of work. Site clearance is already in progress		
3	TCC: Clause No: 5.9.11	Allowable wastage – One and quarter (+1.25%) of theoretical consumption of RMC unless specified otherwise in the technical specification.	Like as before for different components of Concrete work in BHEL, please extend the allowable wastage from 1.25% to 1.5%. Please confirm	RMC is very costly and free issue item. Bidder has to work meticulously and control wastage. There is no Change in specifications.		
4	TCC: Clause No: 5.10.1	Allowable wastage – One and Half Percent (+1.5%) of the theoretical consumption shall be considered as allowable wastage	Like as before for different components of rebar work in BHEL, please extend the allowable wastage from 1.5% to 3.0%. Please Confirm	Reinf steel is very costly and free issue item. Bidder has to work out BBS meticulously and control wastage. There is no Change in specifications		
5	TCC: Clause No: 5.16.2	PENAL RATE OF MATERIALS Reinforcement steel etc. BDT 125000 /- per MT.	Present Market rate is appox. BDT. 96000. Requesting to adjust the Penal Rebar rate with the above. Please confirm	Reinf steel price is high and the penal rates are considered accordingly considering the penalty percentage over the cost & OH of BHEL. Bidder has to control the wastage. There is no Change in specifications.		
6	TCC: Clause No: 10.1	TIME SCHEDULE/ COMPLETION PERIOD NOTE:(1) The above broad schedule has been prepared in line with L2 schedule of BHEL & BIFPCL. Contractor shall also responsible to complete the foundations/structures in their scope of contract within schedule time frame as prescribed/finalized by BHEL/BIFPCL.	BHEL to be confirmed that, the work front and drawings should be issued atleast 3 months before from scheduled of the completion time.  If the time extension is required for this reason not attributual to the vendor BHEL has to componsate 15% to the unit rate of the balance works. Kindly Confirm?	The issuance of drawings in time shall be ensured. No separate compensation for any delay shall be considered other than time extension/PVC clause.		
7	TCC: Clause No: 27.1	EXTENSION OF TIME FOR COMPLETION  If the completion of work as detailed in the scope of work gets delayed beyond the contract/ completion period due to reasons not attributable to contractor, the contractor shall make request for an extension of the contract and BHEL at its discretion may extend contract. However, such extension shall not entitle the vendor for price		The issuance of drawings in time shall be ensured. No separate compensation for any delay shall be considered other than time extension/PVC clause.		

revision or price compensation as this being FIRM price contract.

### ANNEXURE-A

	FORMAT FOR SEEKING CLARIFICATION				
JOB	Precast Pile, Pile cap, Civil, Structural & Architectural Works for Solid Waste Management Package For 2x660 MW Maitree STPP, at Rampal, Bagerhat, Bangladesh.				
TENDER NO	Ref: BHEL: MSTPP: SWM:24-01-02	DATE: 11-02-2024			
SL No	Reference clause of tender document	Existing Provision	Bidder's Query	BHEL's clarification	
8	TCC: Clause No: 26.2	GUARANTEE / WARRANTY Guarantee / warranty period shall be 12 months from the date of issue of work completion certificate by BHEL.	For Such Tiny Work bidder request to reduce the warranty periond to 6 months. Please consider.	Guarantee/Warranty Period shall be 12 months from date of issue of work completion certificate by BHEL.	
9	TCC: Clause No: 14.1.6	Supplier may please note that import for the project shall be in the name of our Employer/ Owner of the Plant/Project and such import other than Office and House hold Equipment shall be exempted from payment of Customs Duty, VAT & Supplementary Duty as per S.R.O-126 dtd.24-05-2021. Also Regulatory Duty (RD), Advance Trade VAT (ATV) & AIT are exempted /not applicable.  However, if any of the taxes as mentioned above are paid by the supplier as per the extant law in force in Bangladesh, the same shall be reimbursed at actuals subject to production of documentary evidence in support of such payment. However, the supplier shall obtain prior approval of BHEL before deposition of such taxes.  Any tax(es) paid without prior approval of BHEL Site Office shall not be reimbursed at a later stage. Further, any documentation needed for facilitating the Imports like Bill of Entry, Bill of Lading, Packing List, Certificate of Origin etc. will be submitted by the supplier in reasonable time having regard to the time for delivery of the work and the time for completion. Documents required for import clearance at Bangladesh Customs shall be provided / arranged by BHEL from Customer based on supplier's documents as above	We undeerstand from the Clause no TCC 14.1.6 that, .If the laws changed/removed CDST facility by the Bangladesh Govt, BHEL will pay the Tax amount adiitionlay as per the rules by NBR/Customs Bangladesh.  However, the supplier shall obtain prior approval of BHEL before deposition of such taxes as mentioned in the clause 14.1.6, for taking approval when BHEL will give such consent within 03 working days .is . Please Confirm?		
	Price Schedule - VOLUME-III -SCH-3 : SERVICE PART BOQ Item No: SWM-001	Laying HDPE feeder pipe with overlapping and jointing as per manufacturer's specifications and drawings inluding receipt, transportation from stores to site, storage of materials, testing of joints as per specifications including labour, consumables, T&Ps, etc. all complete in all respect as per drawings and as directed by Engineer incharge.  [200 MM and 250 mm diameter HDPE feeder pipe material shll be issued free of cost]  a) 200 mm daimeter HPDE feeder pipe b) 250 mm daimeter HPDE header pipe	As per the item we understand that BHEL will provide/ supply the materials at free of cost, BHEL should confirm the supply within 15 days of start of work written confirmation by BHEL. If any delay for non suply of the above items, Is BHEL will keep any compensation for executive agencies?	There is no separate compensation for such free issue items.	
10	Price Schedule - VOLUME-III -SCH-3 : SERVICE PART BOQ Item No: SWM-002	Laying HDPE (High density polyethyelene) geomembrane liner with overlapping and jointing as per manufacturer's specifications inluding receipt, transportation from stores to site, storage of materials, testing of joints as per specifications including labour, consumables, T&Ps, etc. all complete in all respect as per darwings and as directed by Engineer incharge. [1.5 MM thick HDPE liner material shll be issued free of cost]  a) 1.50 MM thickness		There is no separate compensation for such free issue items.	
	Price Schedule - VOLUME-III -SCH-3 : SERVICE PART BOQ Item No: SWM-003	Laying Geotextile membrane as manufacturer's specifications inluding receipt, transportation from stores to site, storage of materials, all labour, machineries, consumables, T&Ps, etc. all complete in all respect as per darwings and as directed by Engineer incharge.  [285 GSM Geotextile material shill be issued free of cost]  a) 285 GSM		There is no separate compensation for such free issue items.	