



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

( भारत सरकार का उपक्रम )

**BHARAT HEAVY ELECTRICALS LIMITED**

(A Govt. of India Undertaking)

TCN - 02

Ref: PSER:SCT:KLN-C1902:TCN-02

Date: 23-06-2018

Sub	Tender Change Notice (TCN) - 02	
Job	Package # 4: Ground Improvement Of Ash Pond & Coal Stock Yard Areas And Construction Of Ash Pond For 2x660 MW Maitree Rampal Project, Bangladesh.	
Ref	1.0	Tender no PSER:SCT:KLN-C1902:18.
	2.0	BHEL's NIT, vide reference no PSER:SCT:KLN-C1902:6815 Date: 29-05-2018.
	3.0	BHEL's TCN-01 ref PSER:SCT:KLN-C1902:TCN-01 dated 18/06/2018
	4.0	All other pertinent issues till date.

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

- 1) Reply to bidder's queries vide Annexure-A to TCN-02 .
- 2) Revised 'No deviation certificate' as per enclosed Annexure-2. Bidder shall submit no deviation certificate as per enclosed format only.
- 3) All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,  
for BHARAT HEAVY ELECTRICALS LTD

Dy Mgr. (SCT)

Encl: As Above.

पावर सेक्टर पूर्वी क्षेत्र ( मुख्यालय )

POWER SECTOR EASTERN REGION, DJ-9/1, SECTOR-II, SALT LAKE CITY, KOLKATA - 700 091

फैक्स/Fax : (033) 23211960

फोन/Phone : बोर्ड/EPABX : (033) 2339-8000/ 2339 8236

**FORMAT FOR NO DEVIATION CERTIFICATE**  
**(To be submitted in the bidder's letter head)**

BHARAT HEAVY ELECTRICALS LIMITED,  
Power Sector - Eastern Region,  
Plot no 9/1, DJ Block, Sector – II, Salt Lake City,  
Kolkata – 700 091

Sub	No Deviation Certificate.	
Job	Package # 4: Ground Improvement Of Ash Pond & Coal Stock Yard Areas And Construction Of Ash Pond For 2x660 MW Maitree Rampal Project, Bangladesh.	
Ref	1.0	Tender no PSER:SCT:KLN-C1902:18.
	2.0	BHEL's NIT, vide reference no PSER:SCT:KLN-C1902:6815 Date: 29-05-2018.
	3.0	BHEL's TCN-01, vide reference no PSER:SCT:KLN-C1902:TCN-01, Dated 18-06-2018
	4.0	BHEL's TCN-02, vide reference no PSER:SCT:KLN-C1902:TCN-02, Dated 23-06-2018
	5.0	All other pertinent issues till date.

Dear Sirs,

With reference to above, this is to confirm that as per tender conditions, we have visited site before submission of our offer and noted the job content & site conditions etc. We also confirm that we have not changed/ modified the tender documents as appeared in the website/ issued by you and in case of such observance at any stage, it shall be treated as null and void.

We hereby confirm that we have not taken any deviation from tender clauses together with other references as enumerated in the above referred NIT. We hereby confirm our unqualified acceptance to all terms & conditions, unqualified compliance to technical specification, integrity pact (if applicable) and acceptance to reverse auctioning process.

In the event of observance of any deviation in any part of our offer at a later date whether implicit or explicit, the deviations shall stand null & void.

We confirm to have submitted/uploaded offer/documents in accordance with tender instructions with acceptance of the terms & conditions of the tender by us and as per aforesaid references.

Thanking you,

Yours faithfully,

(Signature, date & seal of authorized  
representative of the bidder)

ANNEXURE – A to TCN-02

Job	<b>PACKAGE # 4:</b> GROUND IMPROVEMENT OF ASH POND & COAL STOCK YARD AREAS AND CONSTRUCTION OF ASH POND FOR 2X660 MW MAITREE RAMPAL PROJECT, BANGLADESH.
TENDER no.	PSER:SCT:KLN-C1902:18

Sl no	Reference clause of tender document	Existing provision	Bidder's query	BHEL's clarification
1.	Vol III- PRICE SCHEDULE,R0	<p>Item A113: Providing and filling the cut off trench with impervious soil selected soil from designated borrowed area - SM/SC/CL as per Unified Soil Classification System) or with prepared soil, mixed with bentonite or approved equivalent (not less than 2 per cent by volume) to achieve a permeability less than <math>1 \times 10^{-6}</math> cm / sec, in layers of 250 to 300 mm loose thickness including cost of all materials, machinery and labour all operations, such as excavation, sorting, transportation, loading, unloading, dozing to the required depth, breaking the clods, sectioning, watering and compaction is done to achieve 95% dry density as per ASTM D-1557 by mechanical means with all leads within plant area, all lifts, dewatering, desilting etc., complete ..</p> <p>Item A114: Providing and laying earthen dam by using selected soil from plant area( homogeneous soil conforming to soil classification SM/SC/CL as per Unified Soil Classification System) or with prepared soil mixed with bentonite or approved equivalent (not less than 2 per cent by volume) to achieve a permeability less than <math>1 \times 10^{-6}</math> cm / sec, in layers of 250 to 300 mm loose thickness including cost of all materials, machinery and labour all operations, such as excavation, sorting, transportation, loading, unloading, dozing to the required depth, breaking the clods, sectioning, watering and compaction is done to achieve 95% maximum dry density as per ASTM D-1557 standard proctor density by mechanical means with all leads within plant area, all lifts, dewatering, desilting etc., complete ..</p>	As per item no. A 113 & A 114 we need to provide Bentonite. Is there any specification for Bentonite for these items?	Contractor has to provide Sodium Bentonite clay .Bentonite shall be blended with soil and its percentage should be such that $1 \times 10^{-6}$ cm/sec. shall be achieved as specified in BOQ.

ANNEXURE – A to TCN-02

Job	<b>PACKAGE # 4:</b> GROUND IMPROVEMENT OF ASH POND & COAL STOCK YARD AREAS AND CONSTRUCTION OF ASH POND FOR 2X660 MW MAITREE RAMPAL PROJECT, BANGLADESH.
TENDER no.	PSER:SCT:KLN-C1902:18

2	Vol III- PRICE SCHEDULE,R0	Item SI No A119 : Providing & laying 300 mm thk earth cushion on top of HDPE liner for pond floor using selected soil from plant area available from excavation as per drawings, including cost of all materials, machinery and labour all operations such as quarrying, loading, transportation, unloading, screening, placing with all leads and lifts etc., complete as per specifications.	As per item SI No. A 119, HDPE pond liner is to be provided by us. The range of HDPE liner is vast, we are not sure as to which to use. What is the specification of HDPE liner that will be accepted for the ash pond by BHEL?	Technical specification of the HDPE liner is attached as Annexure –I along with this clarification
3	NIT-PQ	ANNEXURE A FORM	BHEL evaluation Report for Sub-vendor form provided in Annexure A seems to be a draft version Please do your best to send us the finalized version as soon as possible	May please note that the final version of Annexure A form has been floated with the NIT. Please fill up the above form and submit the same along with Technical Bid.

## ANNEXURE-I

## SPECIFICATION OF HDPE BOTH SIDE SMOOTH GEO MEMBRANE

S.NO.	Property(Units)	Value	As per standard
1	<b>Min. avg. Thickness</b>	1mm	ASTM D5199
2	<b>Mass per unit weightKg/sqmt</b>	≥940	ASTM D5261
3	<b>Min.Density</b>	≥94g/cc	ASTM D 1505
4	<b>Stress Crack Resistance Hour</b>	≥1400Hr.	ASTM D5397
	<b>Oxidation Induction Time</b>		
5	Standard -OIT(min.)	≥100	ASTM D3895
	High pressure -OIT(min.)	≥400	ASTM D5885
6	<b>UV Resistance</b>		
	High pressure -OIT(min.)	50%	ASTM D5885
	<b>Tensile Properties</b>		
7	Tensile strength at yield (N/mm)	≥15	ASTM D6693 Type IV (Both machine and cross machine direction)
	Elongation at yield (%)	≥12	
	Tensil strength at break(N/mm)	≥27	
	Elongation at Break(%)	≥700%	
8	<b>Puncture Resistance(N)</b>	≥320	ASTM D4833
9	<b>Carbon Black Content</b>	2to3%	ASTM D1603
10	<b>Carbon Dispersion</b>	Category 1 or 2	ASTM D5596
11	<b>Tear Resistance(N)</b>	≥125	ASTM D1004

**NOTE:-**

- 1 The lining material shall be highest quality high density polyethylene (HDPE Sheeting) manufactured using virgin high density polyethylene resin entirely free of plasticizers or othe filler material.The material shall not contain more than 3% of carbon black , antioxidants and thermal stabilizers.
- 2 The overlapping and welding area shall be marked with a white line to assure an optimum welding.
- 3 The welding area on the outside edge of the HDPE liner shall be smooth.  
The thickness of HDPE geo membrane shall not very across the roll by more than 5%.