



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

( भारत सरकार का उपक्रम )

**BHARAT HEAVY ELECTRICALS LIMITED**

(A Govt. of India Undertaking)

**TCN – 04**

Ref: PSER:SCT:SDG-C2137:TCN-04

Date: 01-03-2022

Sub	<b>Tender Change Notice (TCN) – 04.</b>	
Job	Construction of 01 no. 275 M height RCC wet chimney with one(1) internal steel flue, having minimum 38 mm thick Borosilicate lining on internal surface of steel flue (excluding pile & pile cap) at 1x660 MW, Unit no. 5, WBPDCS Sagardighi TPP Extension Project, West Bengal.	
Ref	1.0	Tender no PSER:SCT:SDG-C2137:22.
	2.0	BHEL's NIT, vide reference no PSER:SCT:SDG-C2137:8974, Date: 10-02-2022.
	3.0	BHEL's TCN-01, vide reference no PSER:SCT:SDG-C2137:TCN-01, Date: 15-02-2022.
	4.0	BHEL's TCN-02, vide reference no PSER:SCT:SDG-C2137:TCN-02, Date: 17-02-2022.
	5.0	BHEL's TCN-03, vide reference no PSER:SCT:SDG-C2137:TCN-03, Date: 19-02-2022.
	6.0	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 the offer.

1. Bidders are requested to note that EMD is not applicable for this tender. All relevant clauses shall be read accordingly.
2. Pre –Bid Clarification is attached vide Annexure-A to TCN-04.
3. Revision/ Modification to TCC clauses is attached vide Annexure-B to TCN-04.
4. Chimney GA Drawing (Dwg no. PE-DG-489-620-C001, Rev. 0) is attached herewith for tender purpose only.
5. Bore Log Data is attached vide Annexure-I for tender purpose only.
6. Revised 'No deviation certificate' as per enclosed Annexure-2. Bidder shall submit no deviation certificate as per enclosed format only.
7. 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

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ANNEXURE-A TO TCN-04				
JOB: Construction of 01 no. 275 M height RCC wet chimney with one(1) internal steel flue, having minimum 38 mm thick Borosilicate lining on internal surface of steel flue (excluding pile & pile cap) at 1x660 MW, Unit no. 5, WBPDCS Sagardighi TPP Extension Project, West Bengal.				
TENDER NO - PSER:SCT:SDG-C2137:22				
CLARIFICATION OF BIDDER'S PRE-BID QUERIES				
Sl. No	Reference clause of tender document	Existing Provision	Bidder's Query	BHEL's Clarification
1	Clause No. 1 NOTICE INVITING TENDER	EMD AMOUNT: Rs. 49,07,962/-.	We request you to please waive off the EMD amount.  Clear the EMD point can we submitted the MSME Certificate. (We are registered in MSME and according to Rule 170 of GFR , there is an EMD EXEMPTION ON TENDER FOR MSME business. According to the rule, there is no Earnest Money Deposit which is a kind of security deposit. In other words, the EMD is free cost for MSME in the tender. Hence condition of waiver of EMD).	EMD shall not be applicable for this tender.
2	Clause No. 18 NOTICE INVITING TENDER	BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) for this tender. RA shall be conducted among all the techno-commercially qualified bidders.....	Reverse Auction (RA) should not be applicable	Tender condition shall prevail
3	Clause No. 27 NOTICE INVITING TENDER	MSME: NOT APPLICABLE FOR THIS TENDER	MSME Should be applicable.  Please note that we are covered under MSME and our MSME registration number is .....	Shall be as per tender
4	Clause No. 1.10.1 ANNEXURE-A - AMENDMENT TO GCC/ SCC	Upon acceptance of Tender, the successful Tenderer should deposit the 5% of the contract value as Security Deposit towards fulfilment of any obligations in terms of the provisions of the contract .....	As per announcement of finance minister on 30/12/2021. The maximum amount of performance security should be 3% including retention & as such no retention should be deducted for performance of contract  Interest Should be [ @ (SBI Base rate + 2%) at monthly rest plus GST] for the delayed period	Shall be as per tender
5	Clause No. 4.1 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	Scope of Work: The scope broadly covers providing labour, supervision, materials (except those which will be supplied by BHEL free of cost), scaffolding, power, fuel, construction equipment, T&Ps, consumables, measuring & testing instruments, supplies, transportation, storage etc. all incidental items not herein specifically mentioned but reasonably implied or found required for the successful completion of work as per technical specification and terms & conditions of tender taking into account all clarifications, confirmations and agreements for construction of 275 m high RCC wet chimney with one (1) Internal steel flue, having minimum 38 mm thick Borosilicate lining on internal surface of steel flue. Scope of work is excluding work of Chimney pile and pile cap.....	Scope of bidder should be as per BOQ items	Tender condition shall prevail
6	Clause No. 10.12 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	After identification of erection materials by BHEL at BHEL's store/ storage yard, it shall be the responsibility of the contractor to take delivery of materials from BHEL's store/ storage yard by contractor's own manpower, T&P & vehicle and re-stack the leftover materials as per erection sequence at BHEL store at their own cost.....	BHEL's Store/Storage yard to be within the plant only.	Tender condition shall prevail
7	Clause No. 11.12.5 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	All site execution approaches required for movement of cranes, trailers, trucks, dumpers, etc. shall be arranged by the contractor at his own cost.	Approach road to be provided by BHEL.  Specify the distance of Fabrication yard and Batching Plant location from Chimney Site.  It should be 100-200m from chimney and we will be allowed to Set up Batching Plant near by Chimney.	Tender condition shall prevail. Bidder to visit site for assessment
8	Clause No. 12.5 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	CONFORMANCE TO THE STATUTORY REQUIREMENTS (AS APPLICABLE UNDER THE SCOPE OF THE CONTRACT) <u>Cl. No. 12.5.1:</u> The work to be executed under these specifications has to be offered for inspection, at appropriate stages of work completion, to various statutory authorities for compliance with applicable regulations. The work related statutory inspections, though not limited to, are as under: 1) Inspectorate of Steam Boilers and Smoke Nuisance 2) Electrical Inspector 3) Factory Inspector, Labour Commissioner, PF Commissioner and other authorities connected to this project work. The scope includes getting the approvals from the statutory authorities, which includes arranging for inspection visits of statutory authority periodically as per BHEL Engineer's instructions, arranging materials for ground inspection, taking rub outs for stamping of the pressure parts / pipes to be offered for inspection, submitting co-related inspection reports, documents, radiographs etc and following up the matter with them. Contractor shall also make all arrangements for offering the Products / Systems for inspection at location, as applicable, to the concerned authority.	STATUTORY REQUIREMENTS SHOULD BE TAKE CARE BY BHEL	Tender condition shall prevail
9	Clause No. 12.7 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	PENALTIES ON VENDORS / SUB-CONTRACTORS AGAINST NON-COMPLIANCE OF QUALITY NORMS .....	These penalties are on higher side, we request BHEL to delete this clause. Particularly, penalty mentioned in clause no. 12.7.21 & 12.7.22, penalty equivalent to 1% value of the item per day delay is not acceptable to us.	Tender condition shall prevail
10	Clause No. 15.3 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	The contractor shall provide minimum 1 no overhead water tank with minimum 20 nos. tap in their labour colony for drinking/washing etc purpose.....	Please provide the dimension of overhead tank	Dimension of overhead tank to be finalised by successful bidder based on requirement of water for drinking/washing etc at labour colony during peak working period.
11	Clause No. 16.1 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	Construction and drinking water required at site, if available, will be provided to the contractor free of cost at two locations mutually agreed upon within 500mtr. of work area and successful bidder has to make his own arrangement for further necessary network for construction and drinking water system within the quoted price.....	Uninterrupted supply of Water for construction at three points to be provided within 100m of Chimney Site, 100m of fabrication yard and 50m of Labour Colony (Free of cost). Connections should be provided with handing over of work front to us.	Tender condition shall prevail

ANNEXURE-A TO TCN-04				
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12	Clause No. 17.1 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	BHEL Shall Provide Construction Power free of charges at 415V level at two points within 500 Mtr.....	Uninterrupted supply of Electricity (Free of cost) at Three point to be provided within 100 m of Chimney Site, 100m of fabrication yard and 50m of Labour Colony. Connections should be provided with handing over of work front to us. As power for labour colony is not mention is tender.	Tender condition shall prevail. Power for labour colony to be arranged by vendor.
13	Clause No. 21.2.6 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	During construction contractor shall provide soft copies of average forty colour digital photograph / slides (indicating date) each month (not less than five per week) of the works during progress	We will send photograph by email only.	Tender condition shall prevail
14	Clause No. 21.3.2 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	Following (minimum) engineering manpower with power plant construction background to be deployed at site by the successful vendor for their day to day supervision etc.....	The deployment of personnel will be as per agreed schedule and/or as per site requirement.	Tender condition shall prevail
15	Clause No. 22.3 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	Following Major T&Ps to be arranged by contractor within the time as indicated:  22.4A.1: 1 no – minimum 30 Cum/Hr capacity of Automatic Batching Plant with Printing facility with required Silo for storing of Cement to be commissioned at Site. - Within 20 Days (from the date of written intimation by BHEL to start the work)  22.4A.3: 2 nos Transit Mixer (5 / 6 Cum capacity) - 1 No. within 45 Days & another in 60 days (from the date of written intimation by BHEL to start the work)	After award of order, the T&Ps schedule will be prepared by us for BHEL approval. The T&Ps will be deployed as per approved schedule.  The batching plant will be commissioned within 60 days.  The transit mixer will be deployed as per requirement.	Clause no. 22.4A.1 modified. Please refer attached Annexure-B to TCN-04.  22.4A.3: Transit Mixer – Shall be as per tender
16	Clause No. 27.1 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	Allowable wastage: Three percent (+3%) of theoretical consumption unless specified otherwise in the technical specification. Consumption beyond 3% shall be recovered at penal rate. Basis of recovery shall be as follows:	Allowable wastage will be 5%.	Tender condition shall prevail
17	Clause No. 27.4 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	Allowable wastage: Four percent (+4%) of theoretical consumption unless specified otherwise in the technical specification. Consumption beyond 4% shall be recovered at penal rate. Basis of recovery shall be as follows:	Allowable wastage will be 5%.	Tender condition shall prevail
18	Clause No. 27.6, 27.7 & 27.8 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	Wastage shall be controlled by Supplier of Borosilicate Glass Lining materials under the supervision of whom the lining work shall be carried out. Bidder to follow the instruction of Supplier.	No Price implication on us for wastage of Borosilicate Glass Block, Adhesive/Membrance and Primer Paint.	Tender condition shall prevail
19	Clause No. 29.0 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	RECOVERY OF MATERIAL 1. Reinforcement steel and MS earthing rod/GI flat - Rs 65,300 per MT 2. MS Flats, beams, channel, angels etc. (Rolled Sections) - Rs 65,600 per MT 3. Chequered Plates and MS plates - Rs 70,000/- per MT 4. Foundation bolts if supplied by BHEL - Rs 90,000/- per MT 5. Corten B steel& SS plate - Rs 90,000/- per MT	Penalties should be as per market rate	Tender condition shall prevail
20	Clause No. 33.1 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	Cl. No. 33.1: The entire work under this scope shall be successfully completed in all respect within 13 (Thirteen) months from the date of start of work as certified by Construction Manager, BHEL  32.2 Schedule for major construction activities covered under the scope of work is as below. Major activity description Completion schedule from the date of start of work as certified by BHEL engineer at site (IN Month) 32.2.1 Commencement of Windshield (M1) 2.5 (Two and half) Month 32.2.2 Completion of Windshield (M2) 08th (Eighth) Month 32.2.3 Completion of Chimney and ready to put into Operation (M3) 13th (Thirteenth) Month	The entire work under this scope shall be successfully completed in all respect within 18 (Eighteen) months from the date of start of work as certified by Construction Manager, BHEL  Mile stone should be as follows:  32.2.1 Commencement of Windshield (M1) 3.5 (Three and half) Month  32.2.2 Completion of Windshield (M2) 11th (Eleventh) Month  32.2.3 Completion of Chimney and ready to put into Operation (M3) 18th (Eighteenth) Month	Tender condition shall prevail
21	Clause No. 33.3 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	However, actual date of start of work shall be reckoned based on certification of Construction manager.	The Actual Date of Start of Contract Period (Zero Date) shall be date of handing over of site agreed in writing by BHEL & BIL Engineer after completion of following: - 1. Handing over of hindrance free area for site, fabrication yard & Batching Plant 2. Issue of Form – V 3. Issue of Approved for Construction Drawings for Chimney shell.	Tender condition shall prevail
22	Clause No. 34.1 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	LIQUIDATED DAMAGE/ PENALTY: Cl. No. 34.1: <u>Overall Completion</u> -----the contractor shall be liable to pay liquidated damage to BHEL for the delay at the rate of one fourth percent (1/4%) of the total Contract Price plus applicable GST for per week of delay upto the date of completion of entire facilities----- ----- The total amount of liquidated damages on account of delay in execution and non-fulfilment of performance shall not in any case exceed ten percent (10%) of the total Contract Price (without tax) plus applicable GST shall be paid.	An amount equal to 0.25% of contract value per week with maximum limit of 5% of executed contract value will be imposed as liquidated damages if delay is attributable to us.  The maximum amount of liability of the contractor for LD & other penalties will be maximum of 5% of contract value.  Grace Period of 3 months will be allowed for imposition of LD.	Tender condition shall prevail

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23	Clause No. 34.2 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	<u>Intermediate Milestones</u> i.e. M1, M2 & M3  Additional, Liquidated Damage shall also be imposed for non-achievement of the intermediate Milestone as mentioned in Clause 32.2.1, 32.2.2 and 32.2.3 above at the rate of 1/10% from the payable amount for activities involved in achieving the respective intermediate milestone per week of delay plus applicable GST from the schedule date (s) as stipulated in the contract or any extension thereof. For such calculation of intermediate milestone LD, work involved in previous intermediate milestone will not be considered. Liquidated Damages on account of non-achievement of intermediate milestones shall be limited to 5% of contract price (without tax) plus applicable GST.	Please delete this clause as this will create negative cash flow.	Tender condition shall prevail
24	Clause No. 34.3 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	In all, bidder's liabilities on account of LD (for non-performance, non-completion of overall facilities and non-achievement of intermediate milestone) shall be restricted to 15% of contract price plus applicable GST	Please delete this clause as this will create negative cash flow.  In all, bidder's liabilities on account of LD (for non-performance, non-completion of overall facilities and non-achievement of intermediate milestone) shall be restricted to 5% of contract price plus applicable GST	Tender condition shall prevail
25	Clause No. 34.7 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	In case of termination of contract due to any reason attributable to contractor before completion of work, the amount already withheld against slippage of intermediate milestones shall not be released and be converted into recovery	Please delete this clause as this will create negative cash flow.	Tender condition shall prevail
26	Clause No. 35.0 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	CERTIFICATE TOWARDS COMPLETION:  The work under the scope of the contractor shall be deemed to have been completed in all respects only when so certified by BHEL/ customer. Decision of BHEL in this regard shall be final and binding on the contractor.	The protocol for inviting BHEL / WBPDCS officials is not defined in the tender. It may be considered to allow contractor to issue a RFI (Request for Inspection), as soon as any stage of Milestone is completed and the Client shall promptly inspect the completed works of that stage within 07 days of the receipt of such RFI NOTICE of completion of a mile stone and thereafter the Client shall issue a list of deficiencies, if any, in the contracted specifications of the executed work along with the time period as may be mutually agreed by both the parties, to remedy such deficiencies.	Tender condition shall prevail
27	Clause No. 36.2 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	The contractor shall guarantee the work executed under the scope of the contract for a period of:  18 (Eighteen) months from the date of completion of contract scope of work and handing over to BHEL/WBPDCS OR 12 (Twelve) months from date of operation acceptance of Power Plant (1x660 MW unit) whichever is earlier.	Upon receipt of Notice of Virtual Completion from the contractor, within 15 days, BHEL shall intimate to the contractor details of any defects / damages / defective workmanship if noticed in any of the materials / services as per "Scope of Work" (Called Punch List) and the contractor shall rectify the punch list free of cost to the full satisfaction of BHEL. Within 15 days of intimation by the contractor of completion of the punch list, BHEL will take over chimney and BHEL shall issue a completion certificate within 30 days of the above intimation. Warranty period for Workmanship / Defect liability shall be 12 months from the date of intimation of completion of Punch List by contractor or when the Principal Employer cum the Owner starts the use of Chimney whichever is earlier.	Tender condition shall prevail
28	Clause No. 2.11 of GCC	EXTENSION OF TIME FOR COMPLETION:  If the completion of work as detailed in the scope of work gets delayed beyond the contract / completion period, the contractor shall request for an extension of the contract and BHEL at its discretion may extend the contract.....	EOT/Time extension shall be decided by BHEL within 1 Months of receipt of EOT application submitted by the contractor.	Tender condition shall prevail
29	Clause No. 37.0 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	INTEREST BEARING RECOVERABLE ADVANCE/ MOBILISATION ADVANCE:  Not applicable for this tender.	To avoid the negative cash flow, please provide Interest Free Advance as follows: -  1. 5% advance (Interest Free) excluding GST with LOI/LOA & against submission of Advance Bank Guarantee for equivalent amount 2. 5% advance (Interest Free) excluding GST against mobilisation of following: 2.1. Setting of site office, store. 2.2. Labour camp for initial work. 2.3. Electrical installations and water pipeline & water storage. 2.4. Mobilisation of workers and staff for initial work. 2.5. Completion of formalities for Labour License.	Tender condition shall prevail
30	Clause No. 38.0 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	OVER RUN CHARGES: Not applicable for this tender.	Should be applicable	Tender condition shall prevail
31	Clause No. 39.0 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	REVISION ON ACCEPTED CONTRACT RATE Not applicable in this tender.	Should be applicable	Tender condition shall prevail
32	Clause No. 40.0 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	PRICE VARIATION CLAUSE: Applicable as per the relevant clause of GCC.	Price Variation will be applicable from 7 days before submission of our offer submitted	Tender condition shall prevail

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CLARIFICATION OF BIDDER'S PRE-BID QUERIES				
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33	Clause No. 44.1 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	RETENTION- The balance 5 % shall be payable on completion of guarantee period. However, this 5 %, retained from each RA bill, may be released against submission of a separate bank guarantee as per Performance Bank Guarantee format, to be kept valid till final bill & guarantee period, subject to (i) Receipt of certificate that all works are completed in all respects; (ii) Reconciliation of materials / T&P / IMTE; (iii) Completion of final bill formalities (iv) handing over to BHEL / customer and (v) confirmation of receipt of TCS certificates from vendor, as applicable and confirmation of full GST Credit to BHEL. Any Interest if levied thereon for reasons elaborated in Tax & duties clause of the contract and attributable to you shall be recovered for the Final Payment/ Retention amount.	We will submit retention money BG for 5% of contract value before payment of first RA Bill. M/s BHEL will not deduct any amount against retention money. Please also delete "(i) Receipt of certificate that all works are completed in all respects; (ii) Reconciliation of materials / T&P / IMTE; (iii) Completion of final bill formalities (iv) handing over to BHEL / customer and (v) subject to confirmation of full GST and (vi) confirmation of receipt of all TCS certificates if applicable. Any Interest if levied thereon for reasons elaborated in Tax & duties clause of the contract and attributable to you shall be recovered for the Final Payment/ Retention amount"	Shall be as per tender provision. Bidder to refer revised Volume-IF-TCC-CML-Rev-01 issued with TCN-02.
34	Clause No. 44.3 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	..... 1.5 % of gross bill amount shall be paid in the following manner on certification by BHEL engineer after compliance of each of following activity in each month. In case of nonfulfillment of respective activity by vendor in each month, no payment shall be made by BHEL against corresponding activity and no claim of bidder at a later date, whatsoever, in this regard shall be entertained by BHEL.	Please delete this clause as this will create negative cash flow.	Tender condition shall prevail
35	Clause No. 44.5 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	The RA bill complete in all respect, accompanied by BHEL engineers certified measurement sheets, jointly signed, will be paid within 45 days of submission of bill, subject to completeness and correctness.....	Contractor's RA bill, complete & correct in all respects, certified by BHEL engineer, shall be paid within 30 days of receipt of bill with all supporting documents.  70% Payment should be released within 7 days & balance 30% payment should be released within 30 days.  We will be allowed to do bill discounting through TReDS/RXIL	Tender condition shall prevail.
36	Clause No. 45.0 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	CONTRACT PRICE: Cl. no. 45.2: ..... 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 the work executed under any part of this contract including extra items, if any, but excluding any price variation, remains within +/- 15 % (plus/minus fifteen percent) of the awarded price as per LOI / WO	The quoted rates of each item will remain firm throughout the period of execution for reasons whatsoever, as long as variation in the total value of the work executed under any part of this contract including extra items, if any, but excluding any price variation, remains within +/- 5 % (plus/minus ten percent) of the awarded price.  The quantity variation of individual items shall remain within +/- 10 %  In case the finally executed contract value reduces below the lower limit of awarded Contract Value due to quantity variation specified above, the Contractor will be eligible for compensation @ 20% of the difference between the lower limit of the awarded contract value and the actual executed contract value.	Shall be as per tender provision. Bidder to refer revised Volume-IF-TCC-CML-Rev-01 issued with TCN-02.
37	ANNEXURE - A LIST OF EQUIPMENTS FOR CIVIL SITE LABORATORY (VOL-IF-TCC)	ANNEXURE - A LIST OF EQUIPMENTS FOR CIVIL SITE LABORATORY	As per mutually agreed approved list	Tender condition shall prevail.
38	Sl. No. 16 of Special Condition of Contract - HSE PLAN	NON COMPLIANCE:- Nonconformity of safety rules and safety appliances will be viewed seriously and BHEL has right to impose fines on the contractor as under for every instance of violation noticed	To be as per govt rules.	Tender condition shall prevail.
39		FABRICATION: Fabrication of structural steel items (except work done at qualified shop(s) outside the project premises as per BOQ cum Price schedule) shall be done in fabrication yard inside project premises.	We request you to allow fabricated structure steel along with Flue Can in fabrication yard at site of bidder.	Tender condition shall prevail.
40	Clause No. 2.7.2.1 General Conditions of Contract	Risk & Cost Amount against Balance Work: Risk & Cost amount against balance work shall be calculated as follows: Risk & Cost Amount= [(A-B) + (A x H/100)] Where, A= Value of Balance scope of Work (*) as per rates of new contract B= Value of Balance scope of Work (*) as per rates of old contract being paid to the contractor at the time of termination of contract i.e. inclusive of PVC & ORC, if any. H = Overhead Factor to be taken as 5 In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).	Please delete. Same rate will apply. That is given to us	Tender condition shall prevail.
41	Clause No. 2.7.2.2 General Conditions of Contract	In case Contractor fails to deploy the resources as per requirement, BHEL can deploy own/hired/otherwise arranged resources at the risk and cost of the contractor and recover the expenses incurred from the dues payable to contractor. Recoveries shall be actual expenses incurred plus 5% overheads or as defined in TCC.	-----Recoveries shall be actual expenses incurred plus Nil overheads or as defined in TCC.	Tender condition shall prevail.
42	Clause No. 2.8.3 General Conditions of Contract	The contractor shall comply with all applicable State and Central Laws, Statutory Rules, Regulations, Notifications, etc. such as Payment of Wages Act, Minimum Wages Act, Workmen Compensation Act, Employer's Liability Act, Industrial Disputes Act, Employers Provident Act, Employees State Insurance Scheme, Contract Labour (Regulation and Abolition) Act, 1970----	Rates quoted in the tender are on the basis of State Minimum wages where the work is being executed.	Tender condition shall prevail. Minimum wages as applicable for Unit 5, Sagardighi TPP Extension Project will prevail.

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CLARIFICATION OF BIDDER'S PRE-BID QUERIES				
Sl. No	Reference clause of tender document	Existing Provision	Bidder's Query	BHEL's Clarification
43	Clause No. 2.20 General Conditions of Contract	FORCE MAJEURE:  "Force Majeure" shall mean circumstance which is: a) beyond a party's control, b) The party could not reasonably have provided against before entering into the contract, c) Having arisen, such.....	Rates quoted in the tender are on the basis considering no implied costs owing to any force majeure, govt imposition, lock-down situation owing to any act of God or a pandemic or endemic or Covid or a war or any other cause like local strikes that is or may be beyond the control of the contractor. If the work is stopped or site is unavailable to work or any kind of restriction is imposed or labour is idle due to gate pass issues owing to pandemic, or due to delay in approval of design & drawings or delay in issuance of free issue material and for any of the reasons cited herein, contractor will be compensated for idle of labour, staff, equipment, facilities, slipform Equipment & Financial charges of Bank Guarantee etc., and contractual completion time will be extended. Such compensation will not be linked to compensation from Principal Owner to BHEL.	Tender condition shall prevail.
44	Clause No. 2.21 General Conditions of Contract	2.21 ARBITRATION & CONCILIATION 2.21.1 ARBITRATION: Except as provided elsewhere in this Contract, in case Parties are unable to reach amicable settlement (whether by Conciliation to be conducted as provided in Clause 2.21.2 herein below or otherwise) in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract (hereinafter referred to as the 'Dispute'), then, either Party may, commence arbitration in respect of such Dispute by issuance of a notice in terms of section 21 of the Arbitration & Conciliation Act, 1996 (hereinafter referred to as the 'Notice'). The Notice shall contain the particulars of all claims to be referred to arbitration in sufficient detail and shall also indicate the monetary amount of such claim. The arbitration shall be conducted by a sole arbitrator to be appointed by the Head of the BHEL Power Sector Region issuing the Contract within 60 days of receipt of the complete Notice. The language of arbitration shall be English.....	As per the latest honorable Supreme Court Judgement  <u>QUOTE:</u> "A Party interested in the outcome of the award loses the right to appoint the Arbitrator"  In view of the above it is suggested that we may select a neutral Arbitrator through IITArb (Indian Institute of Technical Arbitrators) or ICA (Indian Council of Arbitration) or through court.	Tender condition shall prevail.
45	Clause No. 2.23.2 General Conditions of Contract	2.23.2 Final Bill Final Bill' is used for final payment on closing of Running Account for works or for single payment after completion of works. 'Final Bill' shall be submitted as per prescribed format after completion of works as per scope and upon material reconciliation, along with the following:  i) 'No Claim Certificate' by Contractor ii) Clearance certificates where ever applicable viz. Clearance Certificates from Customer, various Statutory Authorities like Labour department, PF Authorities, Commercial Tax Department etc. iii) Indemnity Bond as per prescribed format.  BHEL shall settle the final bills after deducting all liabilities of Contractor to BHEL.	Final bill to be release within 45 days	Tender condition shall prevail.
46	Clause No. 2.27 General Conditions of Contract	LIMITATION ON LIABILITY: Notwithstanding anything to the contrary in this Agreement or the Work Order or any other mutually agreed document between the parties, the maximum liability, for damages, of the contractor, its servants or agents, shall under no circumstances exceed an amount equal to the Price of the Agreement or the Work Order. The Supplier shall not in any case be liable for loss of profit or special, punitive, exemplary, indirect or consequential losses whatsoever. This shall not be applicable on the recoveries arising out of Risk and Cost, recoveries made by Customer from BHEL on account of Contractor, any other type of recoveries for workmanship, material, T&P etc. due from the contractor.	It should be 10% of contract value.	Tender condition shall prevail.
47	Technical Specification	SECTION-I LEAD SPECIFICATION  1.0.0 INTENT OF SPECIFICATION 1.1.0 GENERAL This specification is intended to cover generally all the civil and structural work including all accessories, piling and foundation raft, painting etc. as necessary for the construction of a 275 M High RCC Chimney for discharging hot flue gas from the Boilers to the atmosphere.....	We will be carryout the construction work based on BOQ given by BHEL. Responsibility of adhering to specification of WBPDCS for design etc. lies with BHEL.	Tender condition shall prevail.
48	Technical Specification	VOLUME: II-B SECTION: II PART: B SUB SECTION: IB GENERAL SPECIFICATION AND DESIGN CRITERIA OF RCC WET CHIMNEY WITH STEEL FLUE – CIVIL & STRUCTURAL WORKS (OPTION-2)	We will be carryout the construction work based on BOQ given by BHEL. Responsibility of adhering to specification of WBPDCS for design etc. lies with BHEL.	Tender condition shall prevail.
49	Preamble Sl No. 9 VOLUME-III PRICE SCHEDULE, REV-00	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing, clearing of old structures and leveling etc. including fixing of grid pillars, benchmarks etc. required for commencement of site activities. No separate payment will be made towards the same. However, if separate rate for such item is available in the rate schedule, the same shall be considered.	Cleaning & demolition of old structure will be excluded from bidder scope of work.	Tender condition shall prevail.

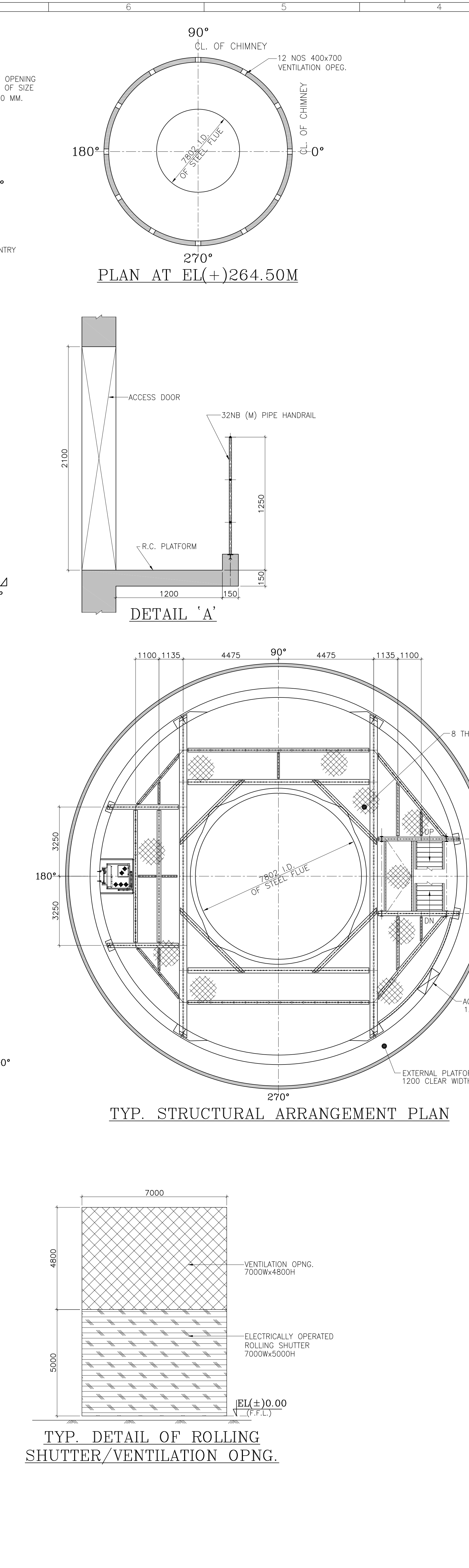
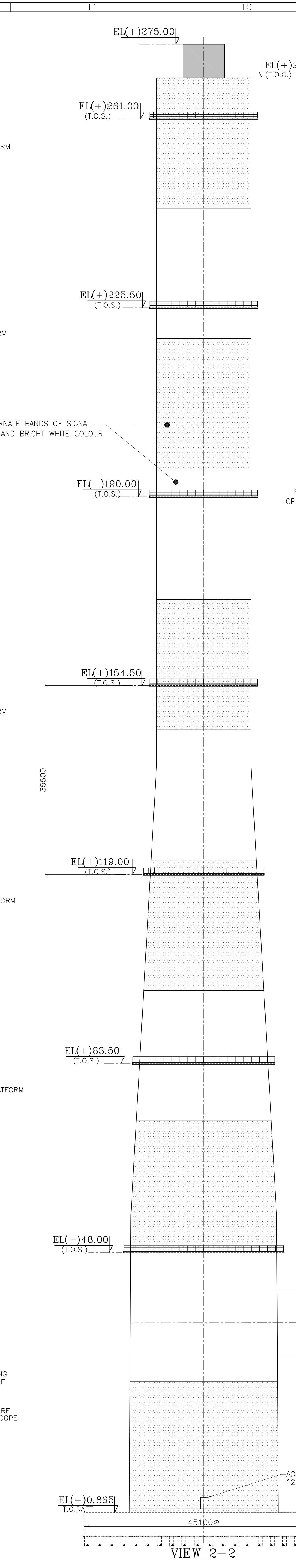
ANNEXURE-A TO TCN-04				
JOB: Construction of 01 no. 275 M height RCC wet chimney with one(1) internal steel flue, having minimum 38 mm thick Borosilicate lining on internal surface of steel flue (excluding pile & pile cap) at 1x660 MW, Unit no. 5, WBPDCS Sagardighi TPP Extension Project, West Bengal.				
TENDER NO - PSER:SCT:SDG-C2137:22				
CLARIFICATION OF BIDDER'S PRE-BID QUERIES				
Sl. No	Reference clause of tender document	Existing Provision	Bidder's Query	BHEL's Clarification
50	Clause No. 7a VOLUME-III PRICE SCHEDULE, REV-00	Aviation obstruction lights (mounted on door panel openable from interior): a. LED Type High intensity (Type-A) flashing white light as per ICAO standard having intensity of 4000 to 2,00,000 candles depending up on background illuminance & flashing frequency 40-60/min with all accessories.	We will supply high intensity flashing light from Make-Avoids Technovators, Instapower /Binoy or equivalent.	Tender condition shall prevail.
51		Flue can shifting inside shell	Please clarify that Flue can rotation should be required or Not	Please refer GA Drawing no. PE-DG-489-620-C001, Rev. 0 (Drg for tender purpose only) attached with this TCN
52		Contractor All risk (CAR) Policy	CAR Policy will be taken by BHEL	Refer clause no. 23.0 of TCC which is self-explanatory
53	Drawings	GA drawings of Chimneys	Please provide GA drawing of Chimney. This will help us to load cost due to quantity reduction in our costing so that we do not incur losses due to quantity reduction.	GA Drawing no. PE-DG-489-620-C001, Rev. 0 (Drg for tender purpose only) attached with this TCN
54	Bank Guarantee	Formats of Bank Guarantee's	Format will be duly vetted by our bankers & thereafter BG, SDBG & PBG will be submitted	Shall be as per tender
55	Bank Guarantees	Bank Guarantee extension & other action by BHEL	BHEL will give advance notice of 60 days to BIL for any action to be taken by BHEL	Shall be as per tender
56	Clause No. 16.1 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	Construction and drinking water required at site, if available, will be provided to the contractor free of cost at two locations mutually agreed upon within 500mtr. of work area and successful bidder has to make his own arrangement for further necessary network for construction and drinking water system within the quoted price. Also, additional water source if required may have to be arranged by Bidder as per requirement of work at site with necessary permission from BHEL/WBPDCS within the quoted price.	Water point: you have written " if available then only will provided" but what is other option can you give the permission for bore or we have to arrange from out side.	Bidder to visit site for assesment
57	Clause No. 25.1.1  Sl no A24 of SCH-3-Chimney Shell & Flue Can of Volume-III-Price Schedule, Rev-00	Cl. No. 25.1.1: The steel shall be issued to you free of cost on the following basis. Cl. No. 25.1.1.1: Structural steel (MS plate, ISMB, angle, channel, chequered plate, stainless steel plate) – Weighment basis (unit – MT).  Supplying, fabrication, erection and alignment of factory made chequered plate conforming to IS 3502 (minimum 8 mm o/p) in platforms, staircases with edge binding strips and anti-skid nosing in treads etc. including fixing clamps, fittings, fixtures, grinding, drilling, welding, edge preparation, primer, finish paint etc. all complete as per drawing and specification. (Payment Breakup - a) Supply of Material - 70%, b) Erection, Alignment, all complete-30% )	Please, clear the all free issue materials with scope matrix. (In your Technical Condition of contract (TCC) page no 20-21, clause no 25.1.1 chequered plate free issue material but in Price schedule Rev-00, SCH-3-Chimney shell & Flue can. Sl.no. A24 supply of chequered plate. Hence clear the point.)	Clause no. 25.1.1.1 & 25.1.2 modified. Please refer attached Annexure-B to TCN-04.
58	Clause No. 33.1 TECHNICAL CONDITIONS OF CONTRACT, SCOPE ETC (VOL-IF-TCC)	The entire work under this scope shall be successfully completed in all respect within 13 (Thirteen) months from the date of start of work.	We would request you to kindly consider completion time as thirty (30) months from the date of start of work. As you have earlier stipulated 25 months & 22 months completion time for other Chimney tenders. You are well aware that, this chimney 275 m high chimney consisting of various specialised items like steel flu, borosilicate work etc.work for which minimum 30 months will be required to complete the job.	Tender condition shall prevail.
59	FILE-5.3-SCT-SDG-C2137-VOL-IF-TS-TECH SPECH- MECH PORTION CHIMNEY - STACK ELEVATORS & BOQ Item no. 72 (SCH-3-CHIMNEY SHELL & FLUE CAN)		Kindly provide the Contact number of M/s Universal Construction Machinery- Pune for Elevator.	Bidder to note that supplier of rack and pinion type Elevator (Item no. 72) will be based on approval of BHEL/WBPDCS
60	Sl. No. 14B of Chimney BOQ (SCH-3-CHIMNEY SHELL & FLUE CAN)	Transportation from Batching Plant and placing concrete work .....	Kindly intimate the distance of transportation of Concrete from Batching plant area.	Bidder to visit site for assessment
61	Sl. No. B17a) of Chimney BOQ (SCH-3-CHIMNEY SHELL & FLUE CAN)	Design, Engineering, Approval of Drawings, Supply & Installation of Slipform system .....	Kindly provide the chimney drawing mentioning the following: a) Bottom diameter & top diameter of chimney. b) Shell thickness of chimney.	Please refer GA Drawing no. PE-DG-489-620-C001, Rev. 0 (Drg for tender purpose only) attached with this TCN
62	Sl. No. C17 of Chimney BOQ (SCH-3-CHIMNEY SHELL & FLUE CAN)	Formwork .....	Kindly intimate the quantity of circular shuttering.	Please refer GA Drawing no. PE-DG-489-620-C001, Rev. 0 (Drg for tender purpose only) attached with this TCN
63	Sl. No. A26ii) of Chimney BOQ (SCH-3-CHIMNEY SHELL & FLUE CAN)	Components made of CORTEN-B steel .....	We understand that, CORTEN B steel will be supplied by BHEL free issue basis..	Bidder understanding is correct
64	Sl. No. AA32 & 33 of Chimney BOQ (SCH-3-CHIMNEY SHELL & FLUE CAN)	Sl. No. AA32 : Design, Providing, fabricating and installing expansion compensator joints .....  Sl. No. 33: ..... Spare expansion compensators.....	Kindly provide the following: 1. Value of axial & lateral thermal movement. 2. Temperature of flow medium. 3. Design pressure of flow medium. 4. GA drawing of Chimney shell & duct. 5. Gap between flange to flange.	Informations/details as required for execution of work under this tender will be communicated to successful bidder
65	Sl. No. 68 of Chimney BOQ (SCH-3-CHIMNEY SHELL & FLUE CAN)	Conducting load testing on girders for 1.25 times the full load, on ground .....	Kindly provide the Value of safe load on which test shall be done.	Details required in line with provision of this tender will be provided to successful bidder
66	BOQ (VOLUME-III, PRICE SCHEDULE, REV-00)	Electrical works	Please share make list of electrical item for floating enquiry to vendor.	Make list of electrical item provided in tender document. Bidder to note that additional vendor list may also be proposed by successful bidder during contract execution stage subject to approval by BHEL/WBPDCS
67		General	Please furnish the plant layout showing the location of the chimney.	Will be issued to successful bidder. However, bidder to visit site for assessment

ANNEXURE-A TO TCN-04				
JOB: Construction of 01 no. 275 M height RCC wet chimney with one(1) internal steel flue, having minimum 38 mm thick Borosilicate lining on internal surface of steel flue (excluding pile & pile cap) at 1x660 MW, Unit no. 5, WBPDCCL Sagardighi TPP Extension Project, West Bengal.				
TENDER NO - PSER:SCT:SDG-C2137:22				
CLARIFICATION OF BIDDER'S PRE-BID QUERIES				
Sl. No	Reference clause of tender document	Existing Provision	Bidder's Query	BHEL's Clarification
68		General	Kindly provide soil investigation report including bore log data & indicating level of water table.	Bore log data enclosed with this TCN wherein level of ground water table is mentioned. Please note that sub-surface water table depth at the respective bore hole locations are those as were recorded during bore hole works from October 27, 2021 to October 31, 2021



ANNEXURE-B TO TCN-04																							
JOB: Construction of 01 no. 275 M height RCC wet chimney with one(1) internal steel flue, having minimum 38 mm thick Borosilicate lining on internal surface of steel flue (excluding pile & pile cap) at 1x660 MW, Unit no. 5, WBPDCS Sagardighi TPP Extension Project, West Bengal.																							
TENDER NO - PSER:SCT:SDG-C2137:22																							
Revision/ Modification Of Clauses Of Volume-IF-TCC																							
Sl. no.	Clause No. of TCC-VOL-IF	Existing clause	Revised clause																				
1.0	22.4A.1	Major T&P items - 1 no – minimum 30 Cum/Hr capacity of Automatic Batching Plant with Printing facility with required Silo for storing of Cement to be commissioned at Site.  Mobilisation time (from the date of written intimation by BHEL to start the work) - Within 20 Days	<b>Major T&amp;P items -</b> 1 no – minimum 30 Cum/Hr capacity of Automatic Batching Plant with Printing facility  <b>Mobilisation time (from the date of written intimation by BHEL to start the work)-</b> As per site requirement																				
2.0	Clause No. 25.1.1.1	Structural steel (MS plate, ISMB, angle, channel, chequered plate, stainless steel plate) – Weighment basis (unit – MT).	Structural steel (MS plate, ISMB, angle, channel, stainless steel plate) – Weighment basis (unit – MT).																				
	Clause No. 25.1.2	All the steel (MS plate, ISMB, angle, channel, chequered plate, stainless steel plate), reinforcement (TMT), MS earthing rod issued by the 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. The measurement for payment as well as .....  Reinforcements Fe-500 confirming to IS:1786 and MS earthing rod Grade-1 of IS:432 (part-I) & IS:1732, Corten-B steel	All the steel (MS plate, ISMB, angle, channel, stainless steel plate), reinforcement (TMT), MS earthing rod issued by the 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. The measurement for payment as well as for accounting shall be based on the sectional weights as indicated in the following/ applicable latest IS specifications. <table><tr><th>Sr No</th><th>Name of Standard</th><th>Name of Section</th></tr><tr><td>1</td><td>IS: 808-1964</td><td>Beams, Channels and Angles</td></tr><tr><td>2</td><td>IS: 1730-1961</td><td>Plates, Sheets and Strips/Flats</td></tr><tr><td>3</td><td>BS4-1: 1993</td><td>UB/UC sections</td></tr><tr><td>4</td><td>IS: 12778/equivalence with EN-19-57</td><td>For NPB sections</td></tr><tr><td>5</td><td>IS: 12778/equivalence with EN-53-62</td><td>For HE/WPB sections</td></tr><tr><td>6</td><td>IS: 1786 or grade -1 of IS432 (Part-I)</td><td>Rounds including deformed hig</td></tr></table> Reinforcements Fe-500 confirming to IS:1786 and MS earthing rod Grade-1 of IS:432 (part-I) & IS:1732, Corten-B steel	Sr No	Name of Standard	Name of Section	1	IS: 808-1964	Beams, Channels and Angles	2	IS: 1730-1961	Plates, Sheets and Strips/Flats	3	BS4-1: 1993	UB/UC sections	4	IS: 12778/equivalence with EN-19-57	For NPB sections	5	IS: 12778/equivalence with EN-53-62	For HE/WPB sections	6	IS: 1786 or grade -1 of IS432 (Part-I)
Sr No	Name of Standard	Name of Section																					
1	IS: 808-1964	Beams, Channels and Angles																					
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6	IS: 1786 or grade -1 of IS432 (Part-I)	Rounds including deformed hig																					

OUTSIDE PROFILE OF SHELL (mm)	UNIFORM LINEAR TAPER (°)	UNIFORM LINEAR TAPER (°)	CYLINDRICAL
300 4850	3.0 48.50	3.0 48.50	
55865	55.865	83.000	



- Before proceeding with construction, please make sure it is the latest revision by scanning the QR code imprinted in the block.

JOB NO. 489

STATUS CONTRACT

DISTRIBUTION

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BORE HOLE LOG				
FOUNDATION CONSULTANTS				
91/33, TOLLYGUNGE ROAD, KOLKATA – 700 033				
CLIENT :	BHARAT HEAVY ELECTRICALS LIMITED POWER SECTOR---EASTERN REGION PLOT NO. 9/1, DJ BLOCK, SECTOR -II, SALT LAKE CITY KOLKATA- 700 091			
PROJECT	PROPOSED CHIMNEY AT 1x660MW, UNIT NO.5, WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED SAGARDIGHI THERMAL POWER EXTENSION PROJECT, WEST BENGAL			
BORE HOLE No. : 1 ( GROUND LEVEL ) : R.L.(+) :35.128m	CO-ORDINATE : N1508, E966	Power driven Shell & Auger	STARTED : 27.10.2021	
GROUND WATER TABLE : 2.8m below GL ( R.L. : 32.328m)	BORE HOLE TERMINATION DEPTH : 50.00m ( R.L. : (-)14.872m)		COMPLETED : 29.10.2021	

STRATUM DESCRIPTION	DEPTH, metre		SPT BLOW COUNT				N-VALUE	SAMPLE	
	FROM	TO	0 - 15cm	15 - 30cm	30 - 45cm	45 - 60cm		TYPE	DEPTH, m
Stiff light brownish grey Clayey silt/silty clay	0.00								
								DS1	0.50
			4	7	8		15	SPT1	1.50 – 1.95
								UDS1	2.50 – 2.95
								DS2	2.95
		3.00							
Very stiff light brownish/ yellowish grey Clayey silt/silty clay.	3.00								
			8	10	11		21	SPT2	3.50 – 3.95
								UDS2	4.50 – 4.95
								DS3	4.95
			9	10	14		24	SPT3	5.50 – 5.95
								UDS3	6.50 – 6.95
								DS4	6.95
Hard light brownish/yellowish grey Clayey silt/silty clay.	7.00								
			10	13	20		33	SPT4	7.50 – 7.95
		8.00							
Hard light brownish grey Clayey silt/silty clay with concretion in trace.	8.00								
			16	19	24		43	SPT5	8.50 – 8.95

Abbreviations Used : UDS - Undisturbed Soil Sample, 100mm Dia.; DS – Disturbed Soil Sample;  
SPT – Standard Penetration Test

Field Engineer :

BORE HOLE LOG				
FOUNDATION CONSULTANTS				
91/33, TOLLYGUNGE ROAD, KOLKATA – 700 033				
CLIENT :	BHARAT HEAVY ELECTRICALS LIMITED POWER SECTOR---EASTERN REGION PLOT NO. 9/1, DJ BLOCK, SECTOR -II, SALT LAKE CITY KOLKATA- 700 091			
PROJECT	PROPOSED CHIMNEY AT 1x660MW, UNIT NO.5, WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED SAGARDIGHI THERMAL POWER EXTENSION PROJECT, WEST BENGAL			
BORE HOLE No. : 1 ( GROUND LEVEL ) : R.L.(+) :35.128m		CO-ORDINATE : N1508, E966	Power driven Shell & Auger	STARTED : 27.10.2021
GROUND WATER TABLE : 2.8m below GL ( R.L. : 32.328m)		BORE HOLE TERMINATION DEPTH : 50.00m ( R.L. : (-)14.872m)		COMPLETED : 29.10.2021

STRATUM DESCRIPTION	DEPTH, metre		SPT BLOW COUNT				N-VALUE	SAMPLE	
	FROM	TO	0 - 15cm	15 - 30cm	30 - 45cm	45 - 60cm		TYPE	DEPTH, m
		9.50							
Very hard light brownish grey Clayey silt/silty clay with concretion.	9.50								
			20	34	41		75	SPT6	9.50 – 9.95
			20	32	39		71	SPT7	11.00 – 11.45
		12.00							
Hard light brownish/yellowish grey Clayey silt/silty clay.	12.00								
			15	17	18		35	SPT8	12.50 – 12.95
			16	18	21		39	SPT9	14.00 – 14.45
		15.00							
Very hard light yellowish grey Clayey silt/silty clay.	15.00								
			6	9	12		21	SPT10	15.50 – 15.95
			9	12	12		24	SPT11	17.00 – 17.45
								UDS4	18.50 – 18.95
								DS5	18.95
			8	10	14		25	SPT12	20.00 – 20.45
		21.00							
Hard light yellowish grey Clayey silt/silty clay.	21.00								
			16	17	24		41	SPT13	21.50 – 21.95
			16	18	26		44	SPT14	23.00 – 23.45

Abbreviations Used : UDS - Undisturbed Soil Sample, 100mm Dia.; DS – Disturbed Soil Sample;  
SPT – Standard Penetration Test

Field Engineer :

BORE HOLE LOG				
FOUNDATION CONSULTANTS				
91/33, TOLLYGUNGE ROAD, KOLKATA – 700 033				
<b>CLIENT :</b> BHARAT HEAVY ELECTRICALS LIMITED POWER SECTOR---EASTERN REGION PLOT NO. 9/1, DJ BLOCK, SECTOR -II, SALT LAKE CITY KOLKATA- 700 091				
<b>PROJECT</b> PROPOSED CHIMNEY AT 1x660MW, UNIT NO.5, WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED SAGARDIGHI THERMAL POWER EXTENSION PROJECT, WEST BENGAL				
<b>BORE HOLE No.</b> : 1 <b>( GROUND LEVEL )</b> : R.L.(+)35.128m		<b>CO-ORDINATE</b> : N1508, E966		<b>STARTED</b> : 27.10.2021
<b>GROUND WATER TABLE</b> : 2.8m below GL ( R.L. : 32.328m)		<b>BORE HOLE TERMINATION DEPTH</b> : 50.00m ( R.L. : (-)14.872m)		<b>COMPLETED</b> : 29.10.2021

STRATUM DESCRIPTION	DEPTH, metre		SPT BLOW COUNT				N-VALUE	SAMPLE	
	FROM	TO	0 - 15cm	15 - 30cm	30 - 45cm	45 - 60cm		TYPE	DEPTH, m
Hard light yellowish grey Clayey silt/silty clay.			12	16	19		35	SPT15	24.50 – 24.95
			13	18	19		37	SPT16	26.00 – 26.45
		27.00							
Hard light yellowish grey Clayey silt/silty clay.	27.00								
			16	17	24		41	SPT17	27.50 – 27.95
			17	19	25		44	SPT18	29.00 – 29.45
			21	24	25		49	SPT19	30.50 – 30.95
			22	25	25		50	SPT20	32.00 – 32.45
Very hard light brownish grey Clayey silt/silty clay.		32.50							
			23	25	27		52	SPT21	33.50 – 33.95
			35	38	40		78	SPT22	35.00 – 35.45
Very dense light brownish grey silty sand. Sand grains are fine to medium		36.00							
			45	78			>100	SPT23	36.50 – 36.95
			47	82			>100	SPT24	38.00 – 38.45
			49	76			>100	SPT25	39.50 – 39.95
			46	80			>100	SPT26	41.00 – 41.45

Abbreviations Used : UDS - Undisturbed Soil Sample, 100mm Dia.; DS – Disturbed Soil Sample;  
 SPT – Standard Penetration Test

Field Engineer :

BORE HOLE LOG			
FOUNDATION CONSULTANTS			
91/33, TOLLYGUNGE ROAD, KOLKATA – 700 033			
CLIENT :	BHARAT HEAVY ELECTRICALS LIMITED POWER SECTOR---EASTERN REGION PLOT NO. 9/1, DJ BLOCK, SECTOR -II, SALT LAKE CITY KOLKATA- 700 091		
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BORE HOLE No. : 1 ( GROUND LEVEL ) : R.L.(+ )35.128m	CO-ORDINATE : N1508, E966	Power driven Shell & Auger	STARTED : 27.10.2021
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STRATUM DESCRIPTION	DEPTH, metre		SPT BLOW COUNT				N-VALUE	SAMPLE	
	FROM	TO	0 - 15cm	15 - 30cm	30 - 45cm	45 - 60cm		TYPE	DEPTH, m
Very hard light brownish grey Clayey silt/silty clay.		41.00							
	41.00								
			28	32	34		66	SPT27	42.50 – 42.95
			34	35	37		72	SPT28	44.00 – 44.45
			35	39	40		79	SPT29	45.50 – 45.95
			38	40	41		81	SPT30	47.00 – 47.45
			39	41	41		82	SPT31	48.50 – 48.95
			40	42	43		85	SPT31	50.00 – 50.45
		50.00							

Abbreviations Used : UDS - Undisturbed Soil Sample, 100mm Dia.; DS – Disturbed Soil Sample;  
SPT – Standard Penetration Test

Field Engineer :

BORE HOLE LOG			
FOUNDATION CONSULTANTS			
91/33, TOLLYGUNGE ROAD, KOLKATA – 700 033			
CLIENT : BHARAT HEAVY ELECTRICALS LIMITED POWER SECTOR---EASTERN REGION PLOT NO. 9/1, DJ BLOCK, SECTOR -II, SALT LAKE CITY KOLKATA- 700 091			
PROJECT PROPOSED CHIMNEY AT 1x660MW, UNIT NO.5, WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED SAGARDIGHI THERMAL POWER EXTENSION PROJECT, WEST BENGAL			
BORE HOLE No. : 2 ( GROUND LEVEL ) : R.L. (+)35.127m	CO-ORDINATE : N1533, E994	Power driven Shell & Auger	STARTED : 29.10.2021
GROUND WATER TABLE : 2.8m below GL ( R.L. : 32.327m)	BORE HOLE TERMINATION DEPTH : 50.00m ( R.L. : (-)14.873m)		COMPLETED : 31.10.2021

STRATUM DESCRIPTION	DEPTH, metre		SPT BLOW COUNT				N-VALUE	SAMPLE	
	FROM	TO	0 - 15cm	15 - 30cm	30 - 45cm	45 - 60cm		TYPE	DEPTH, m
Stiff light brownish grey Clayey silt/silty clay	0.00								
								DS1	0.50
			3	5	7		12	SPT1	1.50 – 1.95
								UDS1	2.50 – 2.95
								DS2	2.95
		3.00							
Very stiff light brownish/ yellowish grey Clayey silt/silty clay.	3.00								
			6	8	10		18	SPT2	3.50 – 3.95
								UDS2	4.50 – 4.95
								DS3	4.95
			6	10	13		23	SPT3	5.50 – 5.95
								UDS3	6.50 – 6.95
								DS4	6.95
Hard light brownish grey Clayey silt/silty clay with concretion in trace.	8.00								
			14	18	24		42	SPT5	8.50 – 8.95

Abbreviations Used : UDS - Undisturbed Soil Sample, 100mm Dia.; DS – Disturbed Soil Sample;  
SPT – Standard Penetration Test

Field Engineer :

BORE HOLE LOG				
FOUNDATION CONSULTANTS				
91/33, TOLLYGUNGE ROAD, KOLKATA – 700 033				
CLIENT : BHARAT HEAVY ELECTRICALS LIMITED POWER SECTOR---EASTERN REGION PLOT NO. 9/1, DJ BLOCK, SECTOR -II, SALT LAKE CITY KOLKATA- 700 091				
PROJECT PROPOSED CHIMNEY AT 1x660MW, UNIT NO.5, WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED SAGARDIGHI THERMAL POWER EXTENSION PROJECT, WEST BENGAL				
BORE HOLE No. : 2 ( GROUND LEVEL ) : R.L. (+)35.127m		CO-ORDINATE : N1533, E994		STARTED : 29.10.2021
GROUND WATER TABLE : 2.8m below GL ( R.L. : 32.327m)		BORE HOLE TERMINATION DEPTH : 50.00m ( R.L. : (-)14.873m)		COMPLETED : 31.10.2021

STRATUM DESCRIPTION	DEPTH, metre		SPT BLOW COUNT				N-VALUE	SAMPLE	
	FROM	TO	0 - 15cm	15 - 30cm	30 - 45cm	45 - 60cm		TYPE	DEPTH, m
Very hard light brownish grey Clayey silt/silty clay with concretion.		9.50							
	9.50								
			21	33	36		69	SPT6	9.50 – 9.95
			18	26	37		63	SPT7	11.00 – 11.45
			20	28	39		67	SPT8	12.50 – 12.95
			18	24	39		59	SPT9	14.00 – 14.45
			16	26	33		59	SPT10	15.50 – 15.95
		16.00							
Very hard light yellowish grey Clayey silt/silty clay.	16.00								
			9	14	16		30	SPT11	17.00 – 17.45
								UDS4	18.50 – 18.95
								DS5	18.95
			11	16	16		32	SPT12	20.00 – 20.45
		20.50							
Hard light yellowish grey Clayey silt/silty clay.	20.50								
			12	16	19		35	SPT13	21.50 – 21.95
			13	17	19		36	SPT14	23.00 – 23.45
Hard light brownish grey Clayey silt/silty clay.		24.00							
	24.00								

Abbreviations Used : UDS - Undisturbed Soil Sample, 100mm Dia.; DS – Disturbed Soil Sample;  
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Field Engineer :



BORE HOLE LOG			
FOUNDATION CONSULTANTS			
91/33, TOLLYGUNGE ROAD, KOLKATA – 700 033			
CLIENT : BHARAT HEAVY ELECTRICALS LIMITED POWER SECTOR---EASTERN REGION PLOT NO. 9/1, DJ BLOCK, SECTOR -II, SALT LAKE CITY KOLKATA- 700 091			
PROJECT PROPOSED CHIMNEY AT 1x660MW, UNIT NO.5, WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED SAGARDIGHI THERMAL POWER EXTENSION PROJECT, WEST BENGAL			
BORE HOLE No. : 2 ( GROUND LEVEL ) : R.L. (+) 35.127m	CO-ORDINATE : N1533, E994	Power driven Shell & Auger	STARTED : 29.10.2021
GROUND WATER TABLE : 2.8m below GL ( R.L. : 32.327m)	BORE HOLE TERMINATION DEPTH : 50.00m ( R.L. : (-)14.873m)		COMPLETED : 31.10.2021

STRATUM DESCRIPTION	DEPTH, metre		SPT BLOW COUNT				N-VALUE	SAMPLE	
	FROM	TO	0 - 15cm	15 - 30cm	30 - 45cm	45 - 60cm		TYPE	DEPTH, m
Hard light brownish grey Clayey silt/silty clay.			16	17	24		41	SPT15	24.50 – 24.95
			17	20	28		50	SPT16	26.00 – 26.45
		26.50							
Very hard light brownish grey Clayey silt/silty clay.	26.50								
			16	24	28		52	SPT17	27.50 – 27.95
			20	25	33		58	SPT18	29.00 – 29.45
			24	33	36		69	SPT19	30.50 – 30.95
			28	39	44		82	SPT20	32.00 – 32.45
Very hard light brownish grey silty sand. Sand grains are fine to medium.		33.00							
			20	25	32		57	SPT21	33.50 – 33.95
			23	28	40		68	SPT22	35.00 – 35.45
			30	38	48		86	SPT23	36.50 – 36.95
Very dense light brownish grey sandy silt with clay fraction		37.00							
			25	33	38		71	SPT24	38.00 – 38.45
			26	29	36		65	SPT25	39.50 – 39.95
			26	29	35		64	SPT26	41.00 – 41.45

Abbreviations Used : UDS - Undisturbed Soil Sample, 100mm Dia.; DS – Disturbed Soil Sample;  
SPT – Standard Penetration Test

Field Engineer :

BORE HOLE LOG			
FOUNDATION CONSULTANTS			
91/33, TOLLYGUNGE ROAD, KOLKATA – 700 033			
<b>CLIENT :</b> BHARAT HEAVY ELECTRICALS LIMITED POWER SECTOR---EASTERN REGION PLOT NO. 9/1, DJ BLOCK, SECTOR -II, SALT LAKE CITY KOLKATA- 700 091			
<b>PROJECT</b> PROPOSED CHIMNEY AT 1x660MW, UNIT NO.5, WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED SAGARDIGHI THERMAL POWER EXTENSION PROJECT, WEST BENGAL			
<b>BORE HOLE No.</b> : 2 <b>( GROUND LEVEL )</b> : R.L.(+) 35.127m	<b>CO-ORDINATE</b> : N1533, E994	<b>Power driven Shell &amp; Auger</b>	<b>STARTED</b> : 29.10.2021
<b>GROUND WATER TABLE</b> : 2.8m below GL ( R.L. : 32.327m)	<b>BORE HOLE TERMINATION DEPTH</b> : 50.00m ( R.L. : (-)14.873m)		<b>COMPLETED</b> : 31.10.2021

STRATUM DESCRIPTION	DEPTH, metre		SPT BLOW COUNT				N-VALUE	SAMPLE	
	FROM	TO	0 - 15cm	15 - 30cm	30 - 45cm	45 - 60cm		TYPE	DEPTH, m
Very dense light brownish grey sandy silt with clay fraction.									
			28	32	42		74	SPT27	42.50 – 42.95
			28	33	42		75	SPT28	44.00 – 44.45
			29	34	42		76	SPT29	45.50 – 45.95
			32	42	56		>100	SPT30	47.00 – 47.45
			26	36	46		>100	SPT31	48.50 – 48.95
			29	35	50		>100	SPT31	50.00 – 50.45
		50.00							

Abbreviations Used : UDS - Undisturbed Soil Sample, 100mm Dia.; DS – Disturbed Soil Sample;  
 SPT – Standard Penetration Test

Field Engineer :

**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	Construction of 01 no. 275 M height RCC wet chimney with one(1) internal steel flue, having minimum 38 mm thick Borosilicate lining on internal surface of steel flue (excluding pile & pile cap) at 1x660 MW, Unit no. 5, WBPDCS Sagardighi TPP Extension Project, West Bengal.	
Ref	1.0	Tender no PSER:SCT:SDG-C2137:22.
	2.0	BHEL's NIT, vide reference no PSER:SCT:SDG-C2137:8974, Date: 10-02-2022.
	3.0	BHEL's TCN-01, vide reference no PSER:SCT:SDG-C2137:TCN-01, Date: 15-02-2022.
	4.0	BHEL's TCN-02, vide reference no PSER:SCT:SDG-C2137:TCN-02, Date: 17-02-2022.
	5.0	BHEL's TCN-03, vide reference no PSER:SCT:SDG-C2137:TCN-03, Date: 19-02-2022.
	6.0	BHEL's TCN-04, vide reference no PSER:SCT:SDG-C2137:TCN-04, Date: 01-03-2022.
	7.0	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)