



BHARAT HEAVY ELECTRICALS LIMITED
PROJECT ENGINEERING MANAGEMENT, NOIDA

Date: 16 March 2021

CORRIGENDUM- 04

PROJECT	:	5X800 MW YADADRI TPS
PACKAGE	:	CONDENSATE POLISHING UNIT
ENQUIRY NO	:	PE/PG/YAD/E-6613/2020 Dated 03.03.2021
SUBJECT	:	OTHERS

Type of Corrigendum			
Technical Corrigendum -	☐	Commercial Corrigendum -	☒

Please note the following:

- 1. Reply to Pre-Bid Queries attached with this corrigendum shall be treated as part of NIT.*

All the other terms and conditions of the tender enquiry shall remain unchanged. All the bidders are requested to quote accordingly.

Yours faithfully,

For and on behalf of BHEL

Sharad Chandra
Manager/BOP

Sr. No.	Volume	Section	Clause No.	Page No.	Specification Requirement	Clarification Reasons For	Clarification	BHEL Reply
1	2. Tech Spec 1 of 4	SECTION : I	1.0 GENERAL	12 Of 150	Layout drawings in 2D & 3D (As applicable)	For Clarification	Bidder requested to confirm the software to be used for layout drawings in 2D & 3D. Also requirements like editable, licensed software etc...	Bidder to refer the technical specification section-I, sub section-IA, Annexure IV for drawings/documents submission procedure and follow the same.
2	2. Tech Spec 1 of 4	SECTION : I	A. SERVICE VESSEL FACILITY	13 Of 150	3) One no. External resin traps at the condensate & rinse outlet of each of the condensate polisher mixed bed each designed for in-place manual back flushing facility. Total 15 nos. of external resin traps for all 5 TG units.	For Clarification	Resin Trap at rinse outlet is not required, Hence bidder requested to exclude the same.	Bidder to follow the technical specification requirement.
3	2. Tech Spec 1 of 4	SECTION : I	A. SERVICE VESSEL FACILITY	16 Of 150	20) One no. multichannel (Five channel) sodium analyser to measure process value of each service vessel outlet & common condensate outlet header for each TG unit. Hence total number of multichannel (Five Channel) sodium analysers shall be five (5) nos. for all 5 TG units (service vessel area).	For Clarification	We confirm to supply 1 no. multichannel Sodium Analyser (For Each TG Unit) with sequencing arrangement wherein at any given time one sample shall be analysed. Please confirm us about our understanding.	Bidder understanding is correct. However, Technical specification requirement to be met in totality.
4	2. Tech Spec 1 of 4	SECTION : I	A. SERVICE VESSEL FACILITY	16 Of 150	21) One no. multichannel (Five channel) Silica analyser to measure process value of each service vessel outlet & common condensate outlet header for each TG unit. Hence total number of multichannel (Five Channel) silica analysers shall be five (5) nos. for all 5 TG units (service vessel area).	For Clarification	We confirm to supply 1 no. multichannel Silica analyser (For Each TG Unit) with sequencing arrangement wherein at any given time one sample shall be analysed. Please confirm us about our understanding.	Bidder understanding is correct. However, Technical specification requirement to be met in totality.
5	2. Tech Spec 1 of 4	SECTION : I	B. REGENERATION SYSTEM	17 Of 150 & 20 Of 150	6) One (1) no. common waste effluent header with resin trap in each waste effluent header designed for in place manual backwashing.	For Clarification	Common Effluent Waste Water Header is not applicable in External Regeneration System since regeneration / backwash waste from individual tank / vessel shall be drain nearest to drain trench.	The requirement of regeneration vessels shall be done as per system requirement. However, the effluent shall be collected to a waste water header as indicated in the tender specification before discharge into drain trench.
6	2. Tech Spec 1 of 4	SECTION : I	B. REGENERATION SYSTEM	20 Of 150 & 23 Of 150	31) One (1) no. Neutralization Pit of RCC construction (civil work not in bidder's scope) with two (2) compartments with PVC lining along with...	For Clarification	Bidder understands that entire Civil including PVC lining is in BHEL Scope.	Bidder understanding is correct.
7	2. Tech Spec 1 of 4	SECTION : I	IV. Effluent Neutralization System:	24 of 150	Neutralization pit of RCC construction with inside lined with PVC sheet (3 mm thick) shall be provided	For Clarification	Bidder understands that entire Civil including PVC sheet (2 mm thick) is in BHEL Scope.	Bidder understanding is correct.
8	2. Tech Spec 1 of 4	SECTION : I	C. PIPING	25 of 150	Hangers and supports, embedment plates with lugs etc. required for the below given piping shall also be provided by the bidder.	For Clarification	Bidder understands that any piperack, Primary Support, Road crossing required will be by BHEL	Hangers and supports, embedment plates with lugs etc. required as per technical specification shall be in bidder's scope. The requirement of pipe racks, support and road crossing shall be as per technical specification. Wherever pipe racks are available same shall be in BHEL scope.
9	2. Tech Spec 1 of 4	SECTION : I	C. PIPING	25 of 150	13) N-Pit effluent common discharge piping	For Clarification	Bidder requested to kindly confirm the laying of piping above ground, below ground or on Pipe Rack.	Bidder to note that the same shall be detailed during the detail engineering.
10	2. Tech Spec 1 of 4	SECTION : I	D. ADDITIONAL REQUIREMENT	27 of 150	6) Wherever pipe racks are not available,	For Clarification	Bidder Understands that wherever Pipe Rack are available, are in BHEL scope	Bidder understanding is correct.
11	2. Tech Spec 1 of 4	SECTION : I	D. ADDITIONAL REQUIREMENT	27 of 150	8) The Bidder's scope includes all the first fill and one year's topping, requirements of consumables such as greases, oils, lubricants, servo fluids/control fluids, gases, reagents, standard reference chemical solutions etc..... OR PG test of bidder's supplied equipment (whichever is later) shall also be included in the scope of the Bidder. Bidder shall also supply a quantity not less than 10% of the full charge of each variety of lubricants, servo fluids, gases, chemicals etc	For Clarification	Chemicals required for regeneration of CPU are excluded from the Bidder's scope of supply	Bidder understanding is correct. Please refer technical specification section-I sub section-IA Exclusion clause no. 13.4.
12	2. Tech Spec 1 of 4	SECTION : I	D. ADDITIONAL REQUIREMENT	28 of 150	12) In case vendor submits revised drawing after approval of the corresponding drawing, any delay in approval of revised drawing shall be to vendor's account and shall not be used as a reason for extension in contract completion.	For Clarification	Bidder requested to approve the approved drawing as per contract condition. In case delay from BHEL, vendor will be entitle for extension in contract completion.	Please note that delay due to BHEL account will not be attributable to Bidder.
13	2. Tech Spec 1 of 4	SECTION : I	D. ADDITIONAL REQUIREMENT	28 of 150	16) Wherever CIVIL works is excluded from the bidder's scope, successful bidder shall furnish civil assignment / scope drawings. The corresponding CIVIL drawing prepared by BHEL / CIVIL agency, based on civil assignment drawing of bidder will be furnished to the successful bidder for concurrence. In case any modification is required in the civil work already carried out based on final civil inputs given by vendor, BHEL reserves the right to debit cost of such rework to vendor".	For Clarification	Bidder will furnish civil assignment / scope drawings. In case construction is not done as per bidder's Civil input drawing, any modification is required in the civil work already carried out based on final civil inputs given by vendor, Bidder reserves the right to aske for additional charges for engineering man-hours".	Technical specification to be followed by Bidder. Bidder scope shall be governed by the technical specification only.
14	2. Tech Spec 1 of 4	SECTION : I	D. ADDITIONAL REQUIREMENT	30 of 150	37) Any statutory requirement / clearance required for the packages from government / local body shall be in bidder's scope.	For Clarification	Bidder requested to exclude All Statutory approvals & Clearances from local / Govt. authorities, However any support required for documents related to bidder's supplied equipmnet will be provided.	Technical Specification is clear in this respect. Bidder to follow the same.
15	2. Tech Spec 1 of 4	SECTION : I	3.00.00 SALIENT DESIGN DATA	54 of 150	Silica (as SiO2)	For Clarification	Bidder has considered silica in reactive form under normal conition, startup condition & condenser leak condition.	Bidder understanding is correct.
16	2. Tech Spec 1 of 4	SECTION : I	5.04.07 CHEMICAL PROPERTIES:	57 of 150	Anion in hydroxide form: 0.8	For Clarification	Bidder confirm to consider Anion resin in hydroxide form with total wet volume ion exchange capacity as 0.8 eq/L. However due to its unstable form, Anion Resin will be supply in Sulphate form.	Technical Specification is clear in this respect. Bidder to follow the same.
17	2. Tech Spec 1 of 4	SECTION : I	5.04.07 CHEMICAL PROPERTIES:	57 of 150	However, the anion resin shall be suitable for a minimum temperature of 60 deg.C.	For Clarification	As Per Resin mfg guideline, Maximum operating temperature of Anion Resin will be 60 Deg. C	Technical Specification is clear in this respect. Bidder to follow the same.

18	2. Tech Spec 1 of 4	SECTION : I	5.05.13 VALVES	61 of 150	3) Emergency bypass control valve shall be of double flanged butterfly type for Each TG units. Lugged wafer type Butterfly motorized Isolation valves	For Clarification	Bidder can consider all Butterfly valves in wafer construction except emergency bypass pneumatic control valve. Bidder requested to confirm about our understanding.	For all Butterfly valves other than Emergency bypass control valves bidder to follow the technical specification section-I sub section-IA Datasheet SL No. 6.0
19	2. Tech Spec 1 of 4	SECTION : I	5.05.14 PRESSURE VESSELS, ATMOSPHERIC TANKS & MISCELLANEOUS ITEMS	62 of 150	Sr. No. 1 To 13	For Clarification	The clauses are not applicable for the equipment supplied by BHEL as per "ANNEXURE-XIII SCOPE MATRIX OF PRESSURE VESSELS & ATMOSPHERIC TANKS"	This clause indicates the technical details of PRESSURE VESSELS, ATMOSPHERIC TANKS & MISCELLANEOUS ITEMS. Same shall be read along with the technical specification section I sub section IA, Annexure-XIII.

20	2. Tech Spec 1 of 4	SECTION : I	5.05.15 MATERIAL	62 & 63 of 150	Sr. No. 1 To 3	For Clarification	The clauses are not applicable for the equipment supplied by BHEL as per "ANNEXURE-XIII SCOPE MATRIX OF PRESSURE VESSELS & ATMOSPHERIC TANKS"	This clause indicates the technical details of MATERIALS of PRESSURE VESSELS. Same shall be read along with the technical specification section I sub section IA, Annexure-XIII.
21	2. Tech Spec 1 of 4	SECTION : I	ANNEXURE II	135 of 150	LIST OF MAKES OF SUB-VENDOR ITEMS	For Clarification	We confirm to supply material / item as per name specified in referred clause. However place of manufacturing / sourcing (country of origin) could be anywhere in the world including India.	Please refer the note mentioned in technical specification section I sub section IA Annexure-II as specified "THE SUB VENDOR LIST IS INDICATIVE ONLY AND IS SUBJECT TO BHEL AND CUSTOMER APPROVAL DURING DETAILED ENGINEERING STAGE WITHOUT ANY COMMERCIAL & DELIVERY IMPLICATION TO BHEL." Bidder to follow the same.
22	3. Tech Spec 2 of 4	SECTION : I	2.08.00	166	Performance Tests	For Clarification	We shall conduct performance guarantee test of our system separately & handover the system to our customer i.e. BHEL	The overall requirement for PG Tests to be followed by the bidder.
23	3. Tech Spec 2 of 4	SECTION : I	ANNEXURE VII	204	DRAWING / DOCUMENTS SUBMISSION SCHEDULE	For Clarification	MDL submission dates will be as per mutually agreed date after award of contract	Technical Specification is clear in this respect. Bidder to follow the same.
24	3. Tech Spec 2 of 4	SECTION : I	ANNEXURE VIII WATER ANALYSIS	210	CLARIFIED WATER ANALYSIS	For Clarification	Not Applicable For CPU design. The CPU design is based on "Clause 3.00.00 SALIENT DESIGN DATA 2., Tech Spec 1 of 4 Page No. 53	Please refer technical specification section-I sub section-IA, Technical details of CPU, Clause no. 2.11.00.2.12.00 for the applicability of clarified wate analysis.
25	3. Tech Spec 2 of 4	SECTION : I	ANNEXURE-XIII SCOPE MATRIX OF PRESSURE VESSELS & ATMOSPHERIC TANKS	256	Sr. No. 1 Pressure Vessel All internals like (Inlet header, lateral distributor, top strainer plate of Service vessel, etc.) - By Bidder Sight glass-By Bidder Bottom strainer bed plate, nozzle/ strainer along with its accessories - By Bidder	For Clarification	As Vessel/tank material supply and fabrication by BHEL & - All Internals like (Inlet header, lateral distributor, top strainer plate of Service vessel, etc.) , Sight glass, Bottom strainer bed plate, nozzle/ strainer along with its accessories are integral part of Spherical Vessel & it needs to be fabricated a the time of Vessel/tank fabrication. Practically it is not possible to integrate above mentioned equipments at BHEL. Hence based on same bidder has requested to exclude the same from the scope of Bidder.	Bidder to follow the technical specification.
26	3. Tech Spec 2 of 4	SECTION : I	ANNEXURE-XIII SCOPE MATRIX OF PRESSURE VESSELS & ATMOSPHERIC TANKS	258	N) Bidder to note that BHEL reserve the right to change the fabrication place/ Fabricator. Hence, all the scope as defined in the technical specification will be applicable for new fabrication place/ fabricator.	For Clarification	Noted the same, However the fabrication place/ Fabricator will be in India only	fabrication place/ fabricator shall be in India only.
27	3. Tech Spec 2 of 4	SECTION : I	ANNEXURE-XIII SCOPE MATRIX OF PRESSURE VESSELS & ATMOSPHERIC TANKS	258	Q) Final touch-up paint at project site for all tanks and pressure vessels shall be in bidder's scope.	For Clarification	As the Rubber Lining & Painting of Vessel/tank material supply and fabrication by BHEL is in BHEL scope, Hence Bidder requested to exclude Final touch-up paint at project site as, - It will be easy for BHEL to do the same. - There will be a possibility of mis-match in painting shade.	Bidder to follow the technical specification.
28	3. Tech Spec 2 of 4	SECTION : I	ANNEXURE-XIII SCOPE MATRIX OF PRESSURE VESSELS & ATMOSPHERIC TANKS	258	Sr. No. 1 to 13	For Clarification	Bidder understands that as per Scope matrix all Valves, Instruments & piping has to be supplied by Bidder. Please Confirm	Bidder understanding is correct.
29	GCC Revision No. 7		9.11	11 of 28	No interest shall be payable by the Purchaser on any money or balances including but not limited to the security amount, bank guarantee amount, EMD, retention money, any bills or any amount withheld which may become due owing to difference or misunderstanding or any dispute between the Purchaser and the Contractor, or any delay on the part of Purchaser in making periodical or final payment or any other aspects incidental thereto.	For Deviations	Red highlighted part has been deleted from existing clause. Delay in regular/periodical payment shall attract the interest.	Bidder to refer GCC Rev-07
30	GCC Revision No. 7		11.5	12 of 28	Purchaser reserves.....Or any other reasons not attributable to BHEL. Provided that, the said encashment shall be initiated after failure of the contractor to justify its defaults on opportunity given to him vide as per the procedure.	For Deviations	Red highlighted part inserted.	Bidder to refer GCC Rev-07
31	GCC Revision No. 7		16.2 (a) Delayed Delivery	15 of 28	Maximum capping of Liquidated damages should be 5% of the total main supply contract price	For Deviations	The maximum limit in case of levying of LD should be 5%	Bidder to refer GCC Rev-07 (Annexure-VII-Loading Criteria)
32	GCC Revision No. 7		16.2 (b) Delayed Delivery	15 of 28	Maximum capping of Liquidated damages should be 5% of the total contract value	For Deviations	As the LD levied on service portion is on the total contract value and not the service portion of the contract, the capping should be 5%	Bidder to refer GCC Rev-07 (Annexure-VII-Loading Criteria)
33	GCC Revision No. 7		16.2 (c) Delayed Delivery	16 of 28	Maximum capping of Liquidated damages should be 5% of the total contract value	For Deviations	The maximum limit in case of levying of LD in case of spares should be 5% of contract value	Bidder to refer GCC Rev-07 (Annexure-VII-Loading Criteria)
34	GCC Revision No. 7		16.2.3	17 of 28	The excess cost shall in no case exceed 5% over the old PO value of that particular item	For Deviations	The capping for risk purchase needs to be included	Bidder to refer GCC Rev-07
35	GCC Revision No. 7		22.1	19 of 28	Consignee's right of rejection	For Deviations	If the Consignee on behalf of Purchaser can reject the material even after approval from the Purchaser then what is the use of Inspection Agency and their clearance. Furthermore, rejection after 60 days of receipt of material will leave Seller to huge damages.	Bidder to refer GCC Rev-07
36	GCC Revision No. 7		28.1	21 of 28	The Seller may terminate the contract/LOA with 30 days prior notice in case of any contractual breach/default by Purchaser	For Deviations	Termination right for Seller should also be safeguarded	Bidder to refer GCC Rev-07
37	GCC Revision No. 7		29.1	22 of 28	In order to sub-contract any portion of the work specified in the tender herein, intimation shall be given to the Purchaser.	For Deviations	The process of obtaining consent for sub-contracting the portion of work would unnecessarily delay the execution of project.	Bidder to refer GCC Rev-07