



BHARAT HEAVY ELECTRICALS LIMITED
PROJECT ENGINEERING MANAGEMENT, NOIDA

Date-25-Sep-19

CORRIGENDUM- 02

PROJECT	:	1X660 MW BHUSAWAL TPS UNIT-6
PACKAGE	:	D.M. PLANT
ENQUIRY NO	:	E-6298/2019 Dated. 02.09.2019
SUBJECT	:	PRE- BID CLARIFICATION

Type of Corrigendum			
Technical Corrigendum -	<input checked="" type="checkbox"/>	Commercial Corrigendum -	<input type="checkbox"/>

Please note the following:

- 1. Reply to Pre Bid Query (of 04 Pages) 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
Dy. Manager

Project: DM Plant For 1X660 MW BHUSHAWAL TPS UNIT 6
Tender No.: PE/PG/BHU/E-6298/2019 dated September 02, 2019
Doc. Title: **Pre-Bid Queries (Technical)**

Sr. No.	Section	Clause No.	Page No.	Specification Requirement	Clarification	Reason for Bidder's Clarification	BHEL REPLY.
1.	C	2.0	14/485	73) Wherever pipe racks are not available, pipes shall run on pedestals or below ground.....Wrapping, coating and protection of the entire buried pipe is also in bidder's scope.	Please provide the proposed pipe routing.	Tender Plot plan does not shows details like available pipe trestle/pedestal, location of CMB, filtered water storage tank, DM water storage tank and overhead tank.	Please note that the routing of the piping shall be decided during detail engineering. However, the length of the pipe to be routed has already been specified in tender Technical Specification, refer sl no 87, page number 15 of 485.
2.	C	Data sheet-A	140/485	4. Overhead backwash water storage tank	Please confirm the location of overhead backwash water storage tank.	Location of overhead tank is not shown in Tender Plot plan.	At roof top of DM plant building.
3.	C	Data sheet-A	143/485	1. DM plant supply pump 1.2.5 Type of pump-Vertical	For the selection of pump shaft length, we request to provide invert level, minimum water level and FGL of Filtered water reservoir.	Filtered water storage tank is in M/s BHEL scope.	Please consider the depth of the filter water storage tank as around 5.8 meter. However, the exact depth shall be provided during detailed engineering.
4.	D1	1.2-i	250/485	Uniformity co efficient <1.2	We understand that this uniformity coefficient range is applicable to Strong acid Cation exchanger resin & strong base anion exchanger resin. Please confirm.	As per the mentioned suppliers in vendor list (DOW & Lanxess), both do not meet this Uniformity coefficient for Weak acid cation resin & Weak base anion resin.	Bidder to follow tender Technical Specification.

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5.	C	Table-3	112 to 128/485	Mandatory spare list	For Mandatory Spares, only applicable spares for equipment being supplied for DM Package shall be supplied. All duplicate descriptions, if any in the list shall be deleted from scope of supply.	M/s BHEL to accord acceptance.	Bidder to follow tender Technical Specification. The mandatory spares list provided in Technical Specification is very clear.
6.	D1	2.5	251/485	Degasser Blowers	As per the mentioned clause, quantities of DG blowers are specified total 4 nos. (2 Nos. for each DG tower). However, tender P&ID shows total 3 nos. Please confirm the quantity of DG blowers.		Two DG blowers for each DG tower shall be provided, i.e, total number of DG Blowers shall be four (4) numbers.
7.	C	10	17/485	Total Silica < 0.01 ppm as SiO ₂ at UF Outlet	Guarantee from UF plant outlet shall be minimum Total Silica as SiO ₂ - 0.02 ppm.		Bidder to follow tender Technical Specification. In case, no UF membrane suppliers is able to meet the guarantee the relevant supporting documents shall be submitted by the vendor subject to customer approval during detail engineering without commercial & delivery implication to BHEL & end customer.

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8.	C	11.0 & 27.0	175/485 206/485	Regeneration Water Transfer Pumps	Please confirm the quantity of Regeneration pumps.	As per Datasheets, at two places, Regeneration Water Transfer pumps are mentioned.	Sl no 27.00 and its sub clause upto 27.2.20 shall be considered as deleted as the same scope is covered in Data Sheet under sl no 11.00, page number 175 of 485 of tender Technical Specification.
9.	C	Data sheet-A	204/485	Resin transfer vessel	Please confirm whether regeneration of vessels is in situ or external regeneration.		Resin transfer vessel shall be used only for cleaning of resin. The regeneration is considered to be in situ.
10.	C	Annexure -I	135/485	Analysis of Raw water 11. Organic matter as KMnO ₄ - 50 ppm	As per tender scheme, no treatment has been envisaged for the removal of TOC. Please advise.		Bidder to follow technical specification. Refer page number 136 of 485 it is indicated that 2 ppm ozone dosing has been envisaged.
12.	C	3.3.14 & 8.2.13 of Data sheet-A	151, 166/485	c) Injection- By hard ebonite lined Ejector. One (I)Density Indicator is to be provided atoutlet of the Ejector	Tender P &ID and Data sheet of Cation Exchanger Unit (Clause 3.3.14) & Anion Exchanger Unit (Clause no. 8.2.13) asked for "DI" density Indicator. However, in mandatory spare of C & I and Instrument data sheet shows requirement of "Density Transmitter". Please confirm the requirement of Density indicator or Density Transmitter.		Density Transmitter shall be used in place of Density Indicator and accordingly the spares to be provided by bidder.

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13.	D3	-	229 to 232/485	Tender P&IDs	We request you to provide revised P&IDs for clarity on scope.	<p>Following equipment and its associated instrumentation are not shown in tender P&IDs:</p> <ol style="list-style-type: none"> 1. DM plant supply pumps 2. Dual media filter 3. UF feed water storage tank 4. UF feed pumps 5. Basket strainer 6. Two streams of UF system 7. Regeneration water transfer Pump 8. UF backwash pump 9. DMF-ACF-UF backwash pit 10. Backwash waste transfer pump 	Please note that all the details for these already addressed in Data Sheet (refer page number 137 of 485) and P&ID under note (refer page number 228 of 485).