

PRE BID QUERIES REPLY

SL NO.	VOLUME/SECTION	CLAUSE NO.	PAGE NO.	SPECIFICATION REQUIREMENT	CLARIFICATIONS	REASON FOR CLARIFICATIONS	BHEL REPLIES/Additional clarification
1)	SECTION I	2.0 79)	Page 10 of 441	79) Electric hoist and chain pulley block.	Please provide the number, tonnage, location of EOT and monorail to be considered in bidder's scope.	Tender is not clear about specifications (quantity/tonnage) of material handling system	Design and selection criterion for Electric hoist and chain pulley block is given in tender specification. Bidder to follow the same.
2)	SECTION I	6.0 (vii)	Page 11 of 441	6.0 SCOPE OF SERVICES (v) Monitoring gadgets, instruments and equipments required for maintenance. (vii) All personnel required during maintenance, Commissioning, trial run and PG test.	Monitoring gadgets, instruments, equipments and Personnel required during Operation and maintenance shall be excluded from bidder scope.	O&M is not in the scope of bidder	Arrangement of all instruments, lab facilities, reagents, monitoring gadgets for monitoring, pre-commissioning, carrying out trial run, commissioning, PG test & plant hand over shall be in bidder scope. Further All personnel required during maintenance, Commissioning, trial run and PG test shall be in bidder's scope. O&M after PG test and handover of DM plant shall not be in bidder's scope.

3)	SECTION II, SUB- SECTION IIA	1.	Page 235 of 441	Technical Specifications for DM Plant/ Technical Guarantees-DM Plant Activated Carbon Filter (ACF) The quality of treated water at the outlet of each ACF at design flow rate shall be guaranteed as below: Residual Chlorine, Colour and Organics, Turbidity: Nil	Please note that the same residual chlorine, colour & organics will be BDL after ACF. Please confirm.	The activated carbon filters are used for removal of organic matter & free residual chlorine. And not for turbidity.	For Activated Carbon Filter (ACF) guarantees bidder to refer annexure –III of section I-A of tender specification.
4)	SECTION II, SUB- SECTION IIA	1.	Page 235 of 441	Technical Specifications for DM Plant/ Technical Guarantees-DM Plant Activated Carbon Filter (ACF) The quality of treated water at the outlet of each ACF at design flow rate shall be guaranteed as below: Residual Chlorine, Colour and Organics, Turbidity: Nil	Please note that the same residual chlorine, colour & organics will be BDL after ACF. Please confirm	Please note that Nil guarantee at the outlet of the ACF is not possible.	For Activated Carbon Filter (ACF) guarantees bidder to refer annexure –III of section I-A of tender specification.
5)	SECTION I, DATASHE ET A	28.1 & 28 Notes	PAGE 178 of 441	Technical Specifications for DM Plant Material of Construction of piping Demineralized water: Stainless steel to ASTM A 312, Gr. 304 sch-10.for all sizes. Note: 2. All UPVC pipes used for DM plant & UF system shall be of minimum schedule 40.	We understand that the UF system piping shall be of UPVC Schedule 40. The UF outlet piping to DM water storage tank shall be SS304. Please confirm our understanding	As there is contradiction in the MOC.	Bidder's understanding is correct.

6)	SECTION I DATASHEET A	30 B 4.14.02	Page 182 of 441 OR Page 296 of 441	VALVES Raw water/filter water: Butterfly valves shall be of lugged wafer or wafer type of low leakage rate confirming to AWWA-C-504 class 150 (min.) or BS: 5155 PN 10 (min.) or equivalent OR Butterfly valves shall be of double flanged or lugged wafer type of low leakage rate conforming to AWWA-C 504 class 150 (min.) or BS-5155 PN 10 / class 150 (minimum)	We understand that the same shall be wafer type of butterfly valves.	There is contradiction in the tender documents for lugged wafer or wafer type.	Bidder to follow the butterfly valve specification as per section II-A, clause 4.14.02 page 296 of 441 of tender specification.
7)	SECTION II SUB-SECTION IIA	4.1	Page 238 of 441	ACTIVATED CARBON FILTER & PRESSURE SAND FILTER The filtering medium shall be activated carbon (DE chlorination grade) in granular form of size between 0.7 to 1.2 mm and of good quality, which last for at least five (5) years.	Please note that the life of the same will be 3 years. Please confirm.	Please note that the carbon manufacturers provide guarantees for 2 – 3 years only.	Bidder to follow the tender specification.
8)	Vol-11B/Section 1C	14	215/441	Supplied System Shall Provide Critical Group Alarm to be Hard wired to plant DCS	We understand that this Critical Group Alarm shall be Hard wired to plant DCS through OFC Cable, provided by BHEL-EDN. Kindly Conform the same.	As Per PLC System Configuration drawing, OFC Cabling between PLC and DCS Shall is in BHEL-EDN Scope.	OFC cabling between PLC & DCS is in BHEL scope as per Configuration diagram. Critical group alarm to DCS cabling shall be as per Electrical scope sheet.
9)	Vol-11B/Section 1C		217 of 441	Remote I/O Remote I/O panels shall be provided by bidder with pushbuttons, indicating lamps and hardwired annunciation system for local control/ operations.	We understand that the Remote I/O panel is backup panel as mentioned in the PLC system configuration drawing.	DM Plant is operated through the DM plant PLC with Backup panel as indicated in system configuration drawing.	Noted. Backup panel shall be provided as per specification.

						This is for better Clarity	
10)	Vol-11B/Section 1C		221/441	PLC Configuration DM Plant Back up panel	Please provide detail control philosophy and Specification for designing Back Up Panel. In Absence of Above Details we cannot design /estimate the same.	Tender is Silent About Backup panel details. This is for better Clarity	Back up Panel shall comprise a window annunciator, MIMIC and Start /Stop push buttons for the drives for which local operation is required (Quantity shall be finalized during detailed engineering stage). Further for Indication /alarm bidder to refer the tender specification pages 236 to 238 of 441. For back up panel specification bidder to refer section II C clause 2.03.00 page 400&401 of 441 of tender technical specification.
11)	Vol-11B/Section 1C	1 & 2	219 of 441	SENSOR REDUNDANCY 1. Two out of three measurements philosophy shall be adopted for all CLCS (Closed Loop Control System) and Protection for reliability of operation. 3. For OLCS (Open Loop Control System) all sensors used for the protection shall be triple redundant All sensors for permissive and interlock shall be dual redundant.	Please provide list of instruments which require redundancy sensor. Otherwise the same shall be as per tender P&ID. Redundancy Measurement scheme shall have price implication which leads to add on cost after award of contract.	There is no redundant measurement shown in the P&ID.	Bidder to refer the notes regarding the redundancy of instruments/ analysers/ sensors as mentioned in P&ID & Section IC of the tender specification. Bidder to consider the instruments, analysers & sensors redundancy as mentioned in tender specification for DM plant.
12)	Vol-11B /Sub Section IIA	3.0	236 of 441	Soft link communication shall be provided from the DM Plant PLC to DDCMIS for monitoring of DM Plant at CCR-1 & CCR-2. Total length of Fibre optic cable to meet above requirement shall be considered as 1800 meter by bidder in his scope.	Bidder will supply 1800 meter OFC Cables Only. Other Systems like Trays, Supports, Installation Between PLC to DDCMIS Shall	As the tender is silent about the trays, supports and installation scope, we exclude the same. And we	Kindly refer Electrical scope sheet for scope clarity.

					be in BHEL Scope Kindly Confirm the same	do not know the cable routing between PLC to DDCMIS, Hence We Exclude Trays& Supports for same.	
13)	Vol-11B / Section D	3.9.1	322 of 441 356 of 441	PLC Panel and I/O Cabinets: PLC system shall be provided with 2x100% UPS fed from Two Nos. redundant 415V, 3-ph feeders, as per the scheme PE-SD-999-145-001, sh-08 of 08. Each UPS shall have 30 minutes back up. Input feeder failure shall be monitored in the PLC system UPS scheme 1x100% capacity Lead Acid Plante Back up 60 Min	There Is contradiction between Two Statements regarding Back up Time. Hence we have considered 30 Min Back up Time. Kindly Conform the same.	We are unable to Locate Drawing with the scheme PE-SD-999-145-001, sh-08 of 08. This is for better clarity.	60 minutes Backup time shall be provided.

ADDITIONAL CLARIFICATION POINTS BY BHEL TO BE CONSIDERED BY ALL BIDDERS OF DM PLANT

14)							Bidder to note that Valve indicated in the DM plant P&ID, at the inlet line of degasser tower shall be Motorized butterfly type control valve in place of pneumatic on/ off type diaphragm valve. The same shall be provided with manual butterfly isolation valves in upstream and downstream. In addition, one number on-off type pneumatic diaphragm /butterfly type by pass valve shall also be provided by bidder. The same shall be applicable for all three
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							streams of DM plant and shall be in bidder's scope of supply.
15)							Bidder to provide 5 m capillary type PG and DPG with remote diaphragm seal for all PG & DPG provided for chemical application of DM plant. The same shall be in bidder's scope of supply.
16)							Bidder to provide 1 no. conductivity analyser at individual Mixed bed rinse outlet line for measurement of conductivity. Hence total 3 nos. of conductivity analysers shall be provided by bidder. The same shall be in bidder's scope of supply.
17)							Bidder to provide 1 no. cation conductivity analyser at individual Mixed bed outlet line for measurement of cation conductivity. Hence total 3 nos. of cation conductivity analysers shall be provided by bidder. The same shall be in bidder's scope of supply.
18)							Bidder to refer ANNEXURE -I for different analysers specification as enclosed here with the pre -bid reply for their adherence. Bidder to follow the same.
19)							Bidder to refer ANNEXURE -II, sub-

							vendor list applicable C&I items as enclosed here with the pre -bid reply for their adherence. Bidder to follow the same.
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