CORRIGENDUM -2

रामागुण्डम फर्टिलाइज़र्स एण्ड केमिकल्स लिमिटेड

E-Tender No – RFCL- 2025-195

REVISED TENDER SCHEDULE AND CLARIFICATIONS

"ENGAGING AGENCY FOR Implementation of Zero Liquid Discharge (ZLD) AT RFCL PLANT, RAMAGUNDAM (TELANGANA). [E-Tender No-RFCL- 2025-195]"

Tender Ref: **PNMM/PC211/E/002/81 Dated: 15.10.2025]**

Sr. No.	*Tender Stage*	*Date & Time*
1	Start Tender Document Download	**15.10.2025 at 11:00 hrs.**
2	End Tender Document Download	**21.11.2025 at 16:00 hrs.**
3	Due/ last date of submission Bids	**21.11.2025 at 16:30 hrs.**
4	Techno-commercial Bids Opening	**21.11.2025 at 17:00 hrs.**
5	Price Bid Opening	To be intimated

All other terms & conditions of tender document remain unaltered. For further details, visit website: https://rfcl.co.in./opentender.php and https://www.tenderwizard.in/RFCL. Any Corrigendum / Addendum (s) to this Notice shall be published on RFCL's website / e-tender portal only. The tenders will be submitted online on the web site https://www.tenderwizard.in/RFCL only.

For & behalf of RFCL

SHASHI PRAKASH (Shashi Prakash)
Digitally signed by SHASHI PRAKASH
Date: 2025.11.13 17:28:21 +05'30'

Chief. Manager (Contracts & Procurement)

PRE-BID QUERIES RESOLUTION (SET-2)	
Tender No.:	**PNMM/PC211/E/002**
Tender Title:	IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT
Client:	M/S RAMAGUNDAM FERTILIZERS AND CHEMICALS LIMITED (RFCL), TELANGANA
Consultant:	M/s PDIL
Bid Closing Date:	14.11.2025 at 15:00 (IST)

PRE-BID QUERIES RESOLUTION (SET-2)							
Sr. No.	**Volume No. / Section No. of bid document**	**Page No.**	**Clause No.**	**Subject**	**Tender Content**	**Query**	**RFCL/PDIL Reply**
1.	Part-I: Commercial-Section 1.1	47	Sr No 1: Note- 1	**BIDDER QUALIFICATION CRITERIA (BQC)** 1. Bidder should have experience of Design, Engineering, Procurement/Supply, Erection/ Installation and Commissioning in last 7 years and in addition successful operation of 1 year of the following: i. At least one, RO based RWTP / WWTP / Effluent Treatment Plant (ETP) Plant with minimum capacity of **200 m3/hr**. **AND** ii. MVR Technology based Evaporator system preferably with ZLD plant having minimum capacity of **10 m3/hr**. In case Bidder does not have experience of MVR technology mentioned above: a. Bidder shall have experience of at least one MEE / TVR based Evaporator system. In such case, bidder to executean MoU with sub-vendor(s) / contractor(s)who has successfully completed the installation and commissioning of MVR Technology based Evaporator preferably in ZLD plant system of minimum capacity of 10m 3/hr. b. Bidder to submit the Work Order and completion certificate in respect of a) above for compliance of	We request you to consider following change with respect to original clause: The required 1-year period for successful O&M shall be counted from Bid Submission date instead of last date preceding month in which tender has been issued.	Shall be as per NIT

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				BQC. c. Bidder should also give an undertaking that in case bidder emerges as successful bidder, they will execute the MVR Type Evaporator System through the subvendor(s) / contractor(s) as per submitted MoU only and single point responsibility for successful implementation would be with bidder only for RFCL Project. **Note:** 1. The above period (including O&M Period) shall be counted from last date of preceding month in which tender has been issued.		
2.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGU	Page 610 of 2315	1.0 DESIGN CRITERIA	FRP Ladder may be used with a redundant ladder for chemical storage tanks to avoid damage due to corrosion issues	For larger chemical storage tanks, we can consider FRP ladder While for smaller chemical dosing tanks, we will provide MS ladder (as applicable). However, in any case, redundant ladder will not be required which will increase the space requirement unnecessary.	NIT to be followed.

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	NDAM PLANT						
3.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 1661 to 1674 of 2315	PART II: TECHNICAL SECTION – 11.0 VENDOR LIST (MASTER VENDOR LIST)	PRESSURE VESSEL BTL EPC LIMITEDPRECISION EQUIPMENTS (CHENNAI) PVT LTD CHEM PROCESS SYSTEMS PVT. LTD. CHEM PROCESS SYSTEMS PVT. LTD. ENPRO INDUSTRIES PVT. LTD FABTECH PROJECTS & ENGINEERS LTD.	The given vendor names for pressure filter are EPCC contractor for water and waste water treatment plant and our competitor too. The process and mechanical design of pressure vessel (i.e. Dual media filter) are in the bidder scope. Hence It is requested to approve ''Arvind envisol ltd approved fabricators'' for fabricating the Dual media filters along with considering the design basis, technical spec and QAP as per tender document.	Bidder to follow Vendor List enclosed with the NIT. However, for cases where vendor of the approved vendor list are not able to submit quotations because of capacity, delivery and other operational limitations, LSTK contractor can propose additional vendors with proven track record of supplying similar types of equipment associated with vendor's regret/ no response. Such vendors can be considered subject to owner's/consultant's approval during details engineering as per NIT.
4.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT	Page 1645 of 2315	PART II: TECHNICAL SECTION – 11.0 VENDOR LIST (MASTER VENDO	VARIOUS STORAGE TANKS	The process and mechanical design of various tanks are in the bidder scope. Hence It is requested to approve ''Arvind envisolltd approved fabricators'' for fabricating the various tanks along with considering the design basis, technical spec and QAP as per	Bidder to follow Vendor List enclosed with the NIT. However, for cases where vendor of the approved vendor list are not able to submit quotations because of capacity, delivery and other operational limitations, LSTK contractor can propose additional vendors with proven track record of supplying similar types of equipment associated with vendor's

PRE-BID QUERIES RESOLUTION (SET-2)							
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	RFCL, RAMAGUNDAM PLANT		R LIST)			tender document.	regret/ no response. Such vendors can be considered subject to owner's/consultant's approval during details engineering as per NIT.
5.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 1721 of 2315	PART II: TECHNICAL SECTION – 11.0 VENDOR LIST (MASTER VENDOR LIST)	FRP / PVC TANKS & VESSELS 1 GANDHI AND ASSOCIATES INDIA 2 SONAL ENGG. PLASTIC FABRICATOR INDIA 3 EPP COMPOSITERS PVT LTD. INDIA 4 APPARATEBAU SCHWEISSTECHNIK GMBH (acid storage tanks upto 3.8 in dia.) AUSTRIA		Please approve Arvind Envisol ownFRP/PVC Tanks & Vessel Make.	Bidder to follow Vendor List enclosed with the NIT. However, for cases where vendor of the approved vendor list are not able to submit quotations because of capacity, delivery and other operational limitations, LSTK contractor can propose additional vendors with proven track record of supplying similar types of equipment associated with vendor's regret/ no response. Such vendors can be considered subject to owner's/consultant's approval during details engineering as per NIT.
6.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHA	Page 848/Sec-5.3/Cl.1.9/scope				As per Tender “2 nos. power feeder at 415V for normal power supply, 1 nos. power feeder at 415 for emergency power supply from their existing switchboards installed at electrical Substation-5. Further distribution	Refer Plot Plan. The CONTRACTOR shall visit the site and collect the existing data etc.

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	RGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT					including supply & installation of new PMCC & EPMCC, supply & laying of cables, cable termination at both end, owner's feeder modification to meet the system / NIT requirement, relay setting & its co-ordination with the existing system and all associated works shall be in LSTK Contractor's scope for the completeness of the project" Contractor request To confirm distance Between Sub station 5 to ZLD plant for Cable Length ,as same is not clear from Plot Plan. Pl also Note	
7.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL,	Page 854/Sec-5.3/Cl.5.1.9/Power supply distribution				"Bidder shall consider Marshalling I/O panel for DI, DO & AI signals from switch boardto DCS/PLC and vice versa". Bidder Understand switch board(In Substation-5) &PLC (Water Block Control Room) system are in Separate Location & All DI, DO & AI signals from switch board(In Substation-5) will be connected to DCS/PLC (Water Block Control	All Interfacing cable from switch board to common marshalling I/O Panel and further connection to DCS/PLC (located in Central control room) shall be in the bidder's scope.

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	RAMAGUNDAM PLANT					Room)through Hardwire Multi Core cable .We also Understand all Instrument /Auto Valve Signal shall be directly connected to PLC (Water Block Control Room) system through JB.NO any RIO Panel at Substation -5 Is acceptable . Pl confirm.	
8.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 849/Sec-5.3/Cl.1.15/scope				The scope shall also include obtaining all required statutory approval from all statutory bodies. Bidder shall carry out all modifications/alterations required by local statutory bodies. LSTK contractor shall also get the approval from CEIG, Hyderabad/Dy. CEIG, Nizamabad for addition of new electrical equipment of ZLD Plant in RFCL existing Electrical License before extending supply from RFCL. Bidder Request to Consider statutory approval in customer scope .Bidder Will Provide all the necessary Technical support .	NIT prevails.
9.	NIT FOR	General				Please share the length (km) form	All available document/ data have

PRE-BID QUERIES RESOLUTION (SET-2)							
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	IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT					Substation-5 to water Block Control Room for calculation of Cable length.	been shared with NIT. For more clarity, The CONTRACTOR shall visit the site and collect the existing data etc.
10.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 862/Sec 5.3/Cl.8.2.1.1/Switch Board				As per Tender document “Design and manufacturing of LT Switchboard by channel partner, franchise or sub-vendor of the OEM shall not be acceptable in any case” As per New Make List M/s BCH, M/s Rashmi/M/s Venus/M/s Vidhyut are approved For PMCC/MCC panel. Pl confirm.	LT Switchboards shall be designed and manufactured by OEM only. Design and manufacturing of LT Switchboard by channel partner, franchise or subvendor of the OEM shall not be acceptable in any case.

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11.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 881/Sec 5.3/Cl.8.8.1				LSTK Contractor has to provide IO Panels with 20% spares. Supply of Multi-modeFO cable, Data Concentrator, Ethernet Switch and all associated accessories shallbe in LSTK Contractor Scope."WeUnderstand Bidder Has To consider 20% spare I/O In ZLD plc system & Necessary Multi-mode FO cable, Data Concentrator, Ethernet Switch to connect with Customer ECS system will be in Bidder Scope Pl Confirm.	Scope as per NIT. Bidder is further advised to visit the site for better understanding of the scope.
12.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM	Page 892/5.3/13.1.3				As per Tender "Complete earthing grid & Earth Pit/Lightning Earth Pit for the package plant area and its connection at two points to Owner's earthing grid shall be in bidder's scope." Earthing Within Package Battery limit shall be in Bidder scope However Any Short Of Connection with Owen's Grid Shall be excluded From Bidder Scope. We also Request to Confirm Distance of Owner 's Earthing grid from ZLD plant area.	NIT prevails. The CONTRACTOR shall visit the site and collect the existing data etc.

PRE-BID QUERIES RESOLUTION (SET-2)							
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	PLANT						
13.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 872/5.3/8.4.21				As Per Tender “Minimum 12-pulse rectification configuration scheme is required to limit the harmonics as specified in IEEE 519.”Bidder Request To Approve 6-Pulse Drive .Pl Confirm.	NIT prevails.
14.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGU	Page 848/5.3/1.9/SCOPE				Further distribution including supply & installation of new PMCC & EPMCC, supply & laying of cables, cable termination at both end, owner’s feeder modification to meet the system / NIT requirement, relay setting & its coordination with the existing system and all associated works shall be in LSTK Contractor’s scope for the completeness of the project.	NIT prevails. Owner’s feeder modification to meet the system / NIT requirement shall be in LSTK Contractor’s scope for the completeness of the project.

PRE-BID QUERIES RESOLUTION (SET-2)							
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	NDAM PLANT					Contractor will share Feeder Requirement However has excluded any sort of Modification in Owner's System. Pl confirm.	
15.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 890/5.3/12.1.1				"In general, the lighting shall be provided by fixtures using LED High Mast, LED flood light, LED high bay light, LED tube-light, LED bulkhead, LED well glass etc." Bidder has Considered all Lighting Items as per Tender However High Mast Shall not be applicable to Our System. Pl confirm.	NIT prevails. Requirement of High mast shall be finalized during detailed engineering.
16.		Bidder Qualification Criteria on Page No 47 Of 2315 para 1 i.-				We have perused the same. We humble request your goodselves to add / include '**Sea Water Desalination RO Plant'** in addition to RWTP/WWTP/ETP. Here raw feed water / sea water is	NIT prevails.

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						processed at inlet to produce treated / potable water at outlet. As such RO plants in ZLD are subject to higher feed TDS values, hence, Sea water desalination experience using RO is more desirable. Moreover, as briefed above, Sea water is also a 'Raw water' for plants depending on Sea water for their process needs.	
17.		Bidder Qualification Criteria on Page No 47 Of 2315 para 1 ii (a)-				We request you to add WHE (Waste heat evaporator) experience also in addition to MEE/TVR. Hence phrase MEE/TVR may be read as MEE/TVR/WHE in the aforesaid clause.	NIT prevails.
18.		Power consumption -				Since this requirement is substantial for ZLD, to achieve justified comparison of different ZLD technologies proposed by various bidders, Power consumption and other chemical consumptions as asked in SP-3 of Price SOR, for a period of at least 10 years should be loaded in the overall evaluated price in the	NIT prevails.

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						clause 28.0 of page 35/2315 of bid documents. MAD during PG test alone POST-AWARD stage, as per clause 29.1 and 29.2 of page 35/2315 may not provide a fair opportunity to various bidders whilst evaluation of Prices at PRE-AWARD stage.	
19.				Extend Operation and Maintenance Period –		We request you to consider extending O&M period from 1 year to 5 years to help user / plant achieve better support and stabilization.	NIT prevails.
20.				Reverse Auction -		You may please reconsider RA option since serious bidders get completely upstaged during this process by frivolous / fringe bidders and backing out later during actual execution till end of contract guarantee test and till end of operation and maintenance period. Moreover, RA option is not feasible with respect to the point No. 3 as stated above.	NIT prevails.
21.				Makes List		Shall we have freedom in choosing makes other than stated with justification and proven track	NIT prevails.

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						records?	
22.				Area classification for the plant area		We assume Safe area for the plant site. Please advise whether our understanding is correct.	NIT prevails.
23.				EMD		Request allow for submission of Insurance Surety bond instead of Demand Draft (DD) or Bank Guarantee from a Scheduled Indian Bank OR RTGS/NEFT, since the ISB are considered equivalent instruments fas per Rule 170 and Rule 171 of GFR 2017.(Copy Enclosed)	NIT prevails.
24.				Sludge disposal trolley in client scope		Request Confirm whether we shall deliver the solids / sludge post generation on the disposal trolleys provided by your goodselves.	NIT prevails.
25.				Process design as per latest practices		We understand the scope of supply is indicative. We add or delete some of the stages based on the better reverse osmosis based membrane technology equipment for meeting the stated performance on the stated feed water quality and meeting the ZLD	NIT prevails.
26.				Soil investigation Report.		We request to provide the Soil	NIT prevails.

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						Investigation report if already available to enable us provide correct estimates. During the course of the project execution it shall be our responsibility being a Contractor to conduct soil survey and ascertain the soil data before designing and finalizing the foundations/ structures for the plant.	
27.	PC211/E-002/P-II/Sec-5.3	848 of 2315	1.12.	No new substation is required. Owner will provide the space to install PMCC, EPMCC, Normal & Emergency Lighting DB and DCDB in the existing electricalSubstation-5 and ACDB in existing Water Block Control Room. Owner will also provide space for installation of VFD in AC room of Substation-5.		Bidder Shall consider a RIO panel & Remote ECS Rack for MCC drives, motor hardware control, and feedback signals in Substation-5. Please Confirm.	NIT prevails. Refer relevant clause of NIT. For Instrumentation RIO shall not be used anywhere in the package because of risk of single point failure
28.	Site Visit -General					Bidder requesting client to share details of control System architecture and Communication spare port availability for ECS ,SAS & DCS (Existing).	The CONTRACTOR shall visit the site and collect the existing data etc.
29.	Site Visit -General			115 V AC power point for Local Control Panel within proposed Treatment Unit will be Supply by the client from Substation 05.		Bidder requests client on confirmation about the provision of a 115 V AC power point for the Local Control Panel, which is considered a separate power supply point dedicated solely to	Owner will provide only 2 nos. feeder for AC UPS Supply from their existing ACDB installed at Water Block Control Room. Further distribution including supply & installation of ACDB,

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						the Local Control Panels. Please confirm.	supply & laying of cables, cable termination at both end and all associated works shall be in LSTK Contractor's scope for the completeness of the project.
30.	14 831 - 900 Pages RFCL ZLD NEW TENDER 14.10.2025.	Page 853 of 2315	5.POWER SUPPLY DISTRIBUTION	Owner will provide 2 nos. power feeder at 415V.		The Guard pond ETP pump flow has increased to 300 m^3/hr. The pump's incoming power supply we considered at 6.6 kV. As per the tender, motors rated above 150 kW shall be connected to the 6.6 kV system. The Bidder assumes that the Owner will provide separate 6.6 kV power supplies for motors rated above 150 kW.	Presently 6.6. kV Motors are not envisaged. In case, rating of motors comes out to be more than 150 kW, 6.6. kV power supply (Maximum 2 Nos. Motors) shall be provided by Owner. In case, there are more than 2 Nos. 6.6 kV Motors, 6.6 kV Switchboard with 2 Nos. Incomers, Bus coupler, Bus PT, Motor Outgoing Feeders and Spare Feeders as per NIT shall be in Bidder's scope. Any Feeder Modification as required and all cabling works shall be in Bidder's scope
31.	14 831 - 900 Pages RFCL ZLD NEW TENDER 14.10.202	Page 863 of 2315 33 of 70 & 40 of 70	8.2 Switch Boards	Owner will also provide 2 nos. feeder for AC UPS Supply from their existing ACDB installed at Water Block Control Room.		As per the bidder design, the UPS power requirement will be between 15 to 20 KVA. Please confirm if this power will be available from the owner UPS system.	The CONTRACTOR shall visit the site and collect the existing data etc.

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32.	14 831 - 900 Pages RFCL ZLD NEW TENDER 14.10.2025.	Page 848 of 2315 18 of 70		No new substation is required. Owner will provide the space to install PMCC, EPMCC, Normal &Emergency Lighting DB and DCDB in the existing electrical Substation-5 and ACDB in existing Water Block Control Room. Owner will also provide space for installation of VFD in AC room of Substation-5.		The Bidder requests the provision of the existing Substation-5 General Arrangement drawing and the details of the available space for the new PMCC/MCC/EPMCC installation.	The CONTRACTOR shall visit the site and collect the existing data etc.
33.	Part 1 - Commercial	15 of 2315	2	CTE & CTO		In accordance with this clause, the Contractor to do the statutory activities post EC. We request that this shall be under the scope of the Owner.	All statutory approval shall be in the scope of LSTK Bidder. The bidder has to obtain consent to establish from State Pollution Control Board before start of construction work at site and consent to operate in advance i.e. at least three months prior to date of commissioning.

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34.	Part 1 - Commercial	23 of 2315	15.9	BOCW Cess		Bidder understands that the BOCW Cess shall not be applicable during the O&M period of one year and shall not be deducted from the O&M Payment. Please confirm our understanding.	BOCW cess shall be deducted as per statutory guidelines in vogue.
35.	Part 1 - Commercial	36 of 2315	29.2	FOR FAILING TO MEET GUARANTEED PARAMETERS		Bidder requests that the Performance damages under this clause shall be limited to 5% of the Contract Price.	NIT Prevails
36.	Part 1 - Commercial	38 of 2315 76 of 2315 203 of 2315	36.1 9.4.2 12.1	Contract Security cum PBG / SD		Bidder request that the Bank Guarantee amount shall be equal to 5% of the Contract Price, which is standard in most LSTK contracts in India. Kindly consider the Contractor's requests, and provide any amendments deemed necessary.	NIT Prevails
37.	Part 1 - Commercial	38 of 2315 76 of 2315 203 of 2315	36.1 9.4.2 12.1	Validity of the Contract Security cum PBG / SD		Bidder request that the value of PBG shall be reduced to 50% upon commissioning and remaining 50% of the Value of PBG shall be valid till Defects Liability Period (DLP). Kindly consider the Contractor's requests, and provide any	NIT Prevails

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						amendments deemed necessary.	
38.	Part 1 - Commercial	47 of 2315	1.0 (BQC)	MoU for MVR Technology based Evaporator System		Bidder understands that the as per the BQC, the bidder is allowed to submit more than one MoU for the MVR Technology. Kindly confirm our understanding.	Single MOU is allowed.
39.	GCC	75 of 2315	9.4.1	Mobilization Advance Guarantee		Bidder requests that the Contractor shall furnish Mobilziation Advance Guarantee for a sum equal to 10% of the 100% of the Contract Price, which is standard in EPC Contracts. Kindly consider the Contractor's requests, and provide any amendments deemed necessary.	NIT Prevails
40.	GCC	77 of 2315	9.4.2.f	Return of CPBG		Bidder requests that the CPBG shall be returned to the Contractor not later than 30 days from the expiry of Extended DLP. Kindly consider the Contractor's requests, and provide any amendments deemed necessary.	NIT Prevails

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41.	GCC	114 & 115 of 2315	13.2.1	Price Reduction due to delay in completion		Bidder requests the Price Reduction due to delay in completion shall be at the rate of 0.05% per day of delay for unfinished value of works subject to a maximum deduction of 5% of the value of unfinished works. Kindly consider the Contractor's requests, and provide any amendments deemed necessary.	NIT Prevails
42.	GCC	120 of 2315	16.1	Commissioning, Trial Operation and Performance Guarantee Test Run		Bidder understands that the Scope of Electricity / Power Back up during Commissioning, Trial Operation and PGTR shall be under the responsibility of the Client. Kindly confirm our understanding.	From the start date of O&M utility required shall be provided free of cost. The start date (Zero date) of O&M activities shall be the date of successful commissioning of the plant. Electricity / Power Back up during – - Mechanical Completion: Chargeable - Commissioning: Chargeable - Trial Operation: Chargeable - Performance Guarantee Test Run of The ZLD

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							Plant (Post Commissioning): Free - O&M: Free
43.	GCC / SCC	131 of 2315 204 of 2315	23.1.1 13.1.1	Mobilization Advance		Bidder requests that Mobilization shall be provided to the Contractor as an interest free at the rate of 10% of the awarded contract price in a single installment. Kindly consider our requests.	NIT Prevails
44.	GCC	134 of 2315	23.3.2.(c)	Running Bill Payment timeline		Bidder requests that the payment against running bill shall be paid to the Contractor within 30 working days. In the event of delay of payment by the Client, then applicable interest at the rate of 2% plus SBI MCLR shall be paid to the Contractor for the period delayed beyond the date of payment. Kindly consider the Contractor's requests, and provide any amendments deemed necessary.	NIT Prevails
45.	GCC	136 of	23.5	Final Payments		Bidder requests that the payment against Final Payments shall be paid to the Contractor within 45 working days. In the event of delay of payment by the Client, then applicable interest at the rate of	NIT Prevails

PRE-BID QUERIES RESOLUTION (SET-2)							
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		2315				2% plus SBI MCLR shall be paid to the Contractor for the period delayed beyond the date of payment. Kindly consider the Contractor's requests, and provide any amendments deemed necessary.	
46.	GCC	143 of 2315	27.d	Event of Force Majeure		Bidder requests that Pandemics shall be included as one of the even of Force Majeure considering the past event which disrupted the supply chain at a global level in 2020.	NIT Prevails
47.	SCC	204 of 2315	14.2	Secured Advance		Bidder requests that the Secured Advance on the materials provided to the Contractor as per this clause shall be interest free.	NIT Prevails
48.	SCC	209 of 2315	39	Price Variation		Bidder would like to highlight that the Price Variation clause is deleted in SCC. Therefore, the Bidder requests that the relevant provisions shall be reinstated in entire context to mitigate the fluctuations of prices of materials, labour, equipments, POL, which is as per industry standards for LSTK Contracts and the contract period which is exceeding 12	NIT Prevails

PRE-BID QUERIES RESOLUTION (SET-2)							
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						months. Kindly consider the Contractor's requests, and provide any amendments deemed necessary.	
49.	SCC	225 of 2315	2	Terms of Payment - Design & Engineering		Bidder proposes the following payment terms for the scope of Design & Engineering - 75% on submission of drawings and P&IDs (as applicable) and their approval under Code 2. - 15% submission of AFC drawings under Code 1. - 05% on submission of As-built drawings, Operating & Instruction manual (as applicable). - 2.5% on completion of Commissioning works certificate. - 2.5% on completion of all works in all respects and issuance of completion certificate. Kindly consider the Contractor's requests, and provide any amendments deemed necessary.	NIT Prevails
50.						Bidder proposes the following payment terms for the scope of	NIT Prevails

PRE-BID QUERIES RESOLUTION (SET-2)							
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	SCC	225 of 2315	2	Terms of Payment - Procurement & Supply		Procurement & Supply - 10% on issuance of sub-order (Excluding the submission of equivalent BG) - 75% on receipt of materials at Site / fabrication yard within Project premises. - 10% on fabrication and erection/installation, alignment and grouting as required including testing where involved and required. - 2.5% on completion of Commissioning works certificate. - 2.5% on completion of all works in all respects and issuance of completion certificate. Kindly consider the Contractor's requests, and provide any amendments deemed necessary.	
51.	SCC	226 to 235 of 2315	2	Terms of Payment - Construction, Trial Run & Commissioning, Miscellaneous works		Bidder proposes the last stage of payment for all the cited categories shall be paid as follows: - 2.5% on completion of Commissioning works certificate. - 2.5% on completion of all works in all	NIT Prevails

PRE-BID QUERIES RESOLUTION (SET-2)							
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						respects and issuance of completion certificate.	
52.	SCC	236 of 2315	Note.8	5% of Part A (S. No. 1.01 of SP-0)		Bidder requests that the payment terms mentioned in this note "5% of Part A which will be released along with the submission of final bill and completion of O&M Period" shall be exempted, and shall be paid upon completion of all works in all respects and issuance of completion certificate as the Contractor submits the CPBG valid till DLP, which is sufficient to cover any default of the Contractor. Therefore, withholding the huge value of 5% on SP-0 and releasing after O&M will affect the Contractor's cash flow at the end of the Contract.	NIT Prevails
53.				LUMPSUM PRICE - ONE (1) YEAR OPERATION AND MAINTENANCE SERVICES (including Comprehensive Maintenance & all Spares for ZLD Unit including Control System for 01 Year but excluding GST) IS TO BE QUOTED AT SR. NO. 1.02 IN SP-0. In case, Actual consumption is less than the Guaranteed consumption specified/quoted by bidder in his bid, bidder has to handover remaining		We respectfully request the removal of the following penalty clause from the tender document: “In addition to this, there will be penalty (at the rate of minimum 1% of total O&M Cost quoted by bidder in his bid) for each line item where shortfall of chemicals	NIT Prevails

PRE-BID QUERIES RESOLUTION (SET-2)							
Sr. No.	**Volume No. / Section No. of bid document**	**Page No.**	**Clause No.**	**Subject**	**Tender Content**	**Query**	**RFCL/PDIL Reply**
	PNMM/PC211/E/002/ PI/Annex1.3A	457 OF 2315	9	stock of chemicals to RFCL at the end of O&M Period (on FOC basis) and in case, Actual consumption of Chemicals exceeds the Guaranteed chemical consumption figures as specified/quoted by bidder in his bid then bidder to ensure availability of chemicals at no additional cost to RFCL for operation of ZLD plant during O&M Period. In addition to this, there will be penalty (at the rate of minimum 1% of total O&M Cost quoted by bidder in his bid) for each line item where shortfall of chemicals happens during O&M Period. This penalty is subject to maximum of 10% of total O&M cost.		happens during O&M Period. This penalty is subject to maximum of 10% of total O&M cost." As the bidder is already supplying the required chemicals at no additional cost under the scope of O&M, imposing the above penalty would result in a double penalty for the same obligation. We therefore request that this clause be deleted to ensure fair and balanced contract conditions. Kindly consider our request favorably	
54.	Part-I: Commercial Section-1.0 Instructions to Bidders	17 of 2315	6.0	Time Schedule	Time Schedule specified for subject works is 21 Months for Commissioning, Trail Run, Performance & Guarantee Test The quantum of Engineering, Procurement and Civil Construction & Piping works apart from other Electro-Mechanical & Instrumentation job is huge and it would not be possible to complete these works in 21 months. Therefore, we request that realistic completion period of at least 36 months may please be considered.		NIT prevails
55.	Special Conditio	209 of 2315	39.0	Price Variation	Subject clause on Price Variation has been deleted.		NIT prevails

PRE-BID QUERIES RESOLUTION (SET-2)							
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	ns of Contract				You are aware that there is huge volatility in Steel market & prices of Steel are increasing every month without any control. In this situation, it is extremely difficult for bidder to estimate escalation of Steel cost over next one year. Therefore, we request you to allow escalation on Steel Prices with following formula: Vm = IR x Q x (M - Mo) Mo Where Vm = Variation in Price IR = Basic Rate of steel items Q = Qty. of Structural Steel, Reinforcement bar and Steel Grating / Chequered Plate/CS Plates supplied by CONTRACTOR. Mo = All India Wholesale Monthly Price Index for Steel Commodity released by Office of Economic Advisor to Govt. of India, Ministry of Commerce and Industry (http://www.eaindustry.nic.in) on due date of submission of last price bid M = All India Wholesale Monthly Price Index for Steel Commodity released by Office of Economic Advisor to Govt. of India, Ministry of Commerce and Industry (http://www.eaindustry.nic.in) one month prior to the month in which the Steel materials are received at designated site or tax invoice date, whichever is earlier.		

PRE-BID QUERIES RESOLUTION (SET-2)							
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					Basic Rate of steel items may also please be specified by Owner for this Formula.		
56. .	Instructions to Bidders	23 of 2315	15.9	BOCW Cess	Please confirm the rate at which BOCW cess shall be deducted by Owner. Please confirm that same shall be deducted after applying the BOCW cess rate on price quoted at SL.NO. 3 of SP-1 of Price Schedule only, i.e the on the "Construction Works" price only.		BOCW cess shall be deducted as per statutory guidelines in vogue.
57.	Instructions to Bidders	22 of 2315	15.5 (k)	TPI list	Subject clause specifies that Bidder's scope includes *"Appointment of Third party inspection agency (as per TPI list)…".* Please provide the referred list of approved Third Party Inspection Agencies.		Refer clause 17 of SCC.
58.	PC211/E/002/P-II/Sec-5.2.1	616 of 2315	3.1.16	Support structure for roof plate	Client to consider roof plate will be supported Externally.		As per NIT.
59.	PC211/E-002/P-II/Sec-5.3 Design specification-Electrica	8, 14 OF 75	1.13, 1.14 & 2.1.6, 5.1.10	No new substation is required.	Please confirm that sufficient space with minimum clearances is available to accommodate PMCC, EPMCC, & other auxiliary AC & DC Panels and the common Marshalling I/O Panel/s as well as their future extension provisions to be envisaged for ZLD in Owner's existing SS#05, considering the ARC FLASH HAZARD boundary limits.		Owner will provide the space to install PMCC, EPMCC, Normal & Emergency Lighting DB and DCDB in the existing electrical Substation-5 and ACDB in existing Water Block Control Room. Owner will also provide space for installation of VFD in AC room of Substation-5.

PRE-BID QUERIES RESOLUTION (SET-2)							
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	l						For more clarity, the CONTRACTOR shall visit the site.
60. .	PC211/E-002/P-II/Sec-5.3 Design specification-Electrical	8 OF 75	1.14	Arc Flash hazard Analysis	We understand that the Arc Flash Analysis shall be restricted upto ZLD Switchboards only, any effect due to it on the UPSTREAM / DOWNSTREM due to outcome of this analysis shall be taken care by the Owner. To complete the Arc Flash Hazard study of ZLD Switchboards, the Owner shall provide the existing ARC Flash Analysis report in Hard & Soft copy so that the existing values shall be extracted from it to annex the ZLD Plant switchboards. Please confirm.		The CONTRACTOR shall visit the site and study the existing site condition, reports etc.
61. .	PC211/E-002/P-II/Sec-5.3 Design specification-Electrical	8 OF 75	1.9, 1.10,1.11 & 2.1.6	Incoming Power Supply feeders by Owner	Please clarify maximum current rating per incomer given and maximum length limitation per switchboard for ZLD plant Main Power Supply to PMCC / EPMCC if any to be provided in the the SS#05. Since based on the same as per the ZLD Plant load we shall split the PMCC/EPMCC/MCC and consider required no of switchboards accordingly.		The CONTRACTOR shall visit the site and study the rating of existing switchgears.
62.	PC211/E-002/P-II/Sec-5.3 Design	13 OF 75	5.1.1, 5.1.2,5.1.3, 5.2, 5.3,	Supply & laying of cables, cable termination at both end, owner's	Please provide the maximum distance to be considered between the existing Owner's switchboard/s and the ZLD Plant new PMCC/EPMCC/DC/AC/Lighting Switchboards to consider cables and its laying accordingly in SS#05 and AC UPS Power from Water Block Control Room ACDB.		Refer Plot Plan. The CONTRACTOR shall visit the site and collect the existing data etc.

PRE-BID QUERIES RESOLUTION (SET-2)							
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	specification-Electrical		5.4	feeder modification… AND Instrument Power	Also please confirm that as SS#05 is existing building, hence cable trays and supports are available to use or to build new for ZLD switchboard cables. For considering the modification in the existing switchboards, please provide the details of existing boards/the outgoing feeders kept as SPARE for ZLD Plant switchboard power supply.		
63.	PC211/E-002/P-II/Sec-5.3 Design specification-Electrical	14 OF 75	5.1.11, 5.1.12	Interfacing with LMS	What is LMS? Please clarify the LMS and provide the specification/description/functionality of LMS to consider the interface accordingly.		LMS : Load Management System
64.	PC211/E-002/P-II/Sec-5.3 Design specification-Electrical	15 OF 75	5.1.23	Owner's SS#06	Location for this existing Owner's Sub Station is not mention on the Layout given in the tender document, hence please provide the location of the same and the maximum distance to be considered from the existing Switchboard from which the power shall be fed to the new Guard Pond drives. Also provide the details of the existing feeder used for the guard pond drives in case it need to be modified.		Refer Plot Plan. The CONTRACTOR shall visit the site and collect the existing data etc.
65.	PC211/E	45 OF	8.7.11	Cable Trays,	Both the clauses are conflicting for Spare Space to be considered; 8.7.11		Cable tray size shall be selected based on single layers

PRE-BID QUERIES RESOLUTION (SET-2)							
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	-002/P-II/Sec-5.3 Design specification-Electrical	75	& 8.7.12	Spare Space/Margin	says 50% spare for Owner's use and 8.7.12 says 25% spare space as Margin. What factor to consider for SPARE space per cable tray, please clarify?		laying of cables with minimum 25% spare margin.
66.	PC211/E-002/P-II/Sec-5.3 Design specification-Electrical	41, 42 OF 75	8.8	I/O RACK, DATA CONCENTRATOR, ETHERNET SWITCH ETC. FOR EXISTING ECS SYSTEM (HONEYWELL MAKE)	Please provide the details/specification/vendor documents of existing Honeywell ECS system including the details of interfacing SPARE Hardware/Software capability in integrate the new ZLD plant I/Os. Also provide the list of Hardware to be added for augmenting ZLD plant into the existing ECS system. Also provide the contact details of Honeywell team presently maintaining the existing ECS system so that specific enquiry/offers from them shall be obtained.		The CONTRACTOR shall visit the site and collect the existing data etc.
67.	PC211/E-002/P-II/Sec-5.3 Design specification-Electrica	7 OF 75	1.7	Power Factor 0.9 improvement…	Please clarify/confirm that whether for ZLD Plant Power Supply input, a power factor control to be provided through LV Capacitors & APFCR by contractor OR As the Main Power is provided from the Owner's upstream Switchboard; it shall be controlled/maintained at Owner's end?		LSTK Contractor shall ensure that the minimum power factor of 0.9 shall be maintained at their end by providing suitable power factor improvement devices.

PRE-BID QUERIES RESOLUTION (SET-2)							
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PRE-BID QUERIES RESOLUTION (SET-3)	
Tender No.:	**PNMM/PC211/E/003**
Tender Title:	IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT
Client:	M/S RAMAGUNDAM FERTILIZERS AND CHEMICALS LIMITED (RFCL), TELANGANA
Consultant:	M/s PDIL
Bid Closing Date:	14.11.2025 at 15:00 (IST)

PRE-BID QUERIES RESOLUTION (SET-3)							
Sr. No.	**Volume No. / Section No. of bid document**	**Page No.**	**Clause No.**	**Subject**	**Tender Content**	**Query**	**RFCL/PDIL Reply**
1.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 564 of 2315	1.0 GENERAL	XIX. 25 NB discharge line from ZLD to water analysis room, instrument rooms, oil and gas analysis room, resin and raw material testing room and pollution control room of chemical laboratory with isolation valves shall be provided.	We could not understand this point. Since there is no any oil and gas analysis room, resin and raw material testing room and pollution control room of chemical lab etc. in the ZLD plant. Hence, we understand that this clause is not applicable for proposed ZLD bidder. Please elaborate and clarity/confirm the same.	Shall be as per NIT.
2.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 573 of 2315	4.0 TECHNICAL SPECIFICATION	Minimum total effective Capacity of each tank m^3 Adequate to hold 7 days requirement on design flow & dosing with 20% margin	7 days storage capacity seems very high and will also occupy more space which will definitely increase civil building size (RO building/MEE shed/Chemical house etc) and civil cost too. As per our experience 1day storage tank will be sufficient. You are requested to allow 15 days storage tank for bulk chemical i.e. HCL,NaOH and NaOCl while 1day storage tank for rest other chemicals, which is industrial practice and followed by most of client /consultant. Also for chemical used in RO plant (Antiscalant, SMBS etc) it is recommended to make fresh solution daily due to short shelf life.	Shall be as per NIT.
3.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 575 of 2315	4.0 TECHNICAL SPECIFICATION	Disposal Trolley shall be in the scope of bidder.	Please confirm the type of trolley i.e either of simple trolley Or tipper Or dumber etc. However, the capacity of trolley will be decided by bidder based on sludge generation qtys and sludge disposal criteria. While qty of trolley will be one (1 Nos). Please confirm the same.	- Type of Trolley: Dumper (Hydraulic type) to be considered. - Qty of Dumper: Suitable quantity (minimum two no's with minimum Payload Capacity of 12 Tonne each) to be considered by the bidder so that proper sludge disposal logistic maintained.
4.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL,	Page 577 of 2315	4.0 TECHNICAL SPECIFICATION	Blower Material of Construction e) Casing & lobe 2.0% Ni-Cast iron IS210 FG260,	Please note that twin lobe blower MOC of casing and Lobe shall be Cast Iron IS 210 FG260. None of blower mfgs will fabricate/provide MOC of 2 % NI- Cast iron and which is also not required from design and process point of view because the handling fluid will be atmospheric air only. Hence kindly give your concurrence on Cast Iron	Shall be as per NIT.

PRE-BID QUERIES RESOLUTION (SET-3)							
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	RAMAGUNDAM PLANT					IS 210 FG260.	
5.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 584 of 2315	3.0 TECHNICAL SPECIFICATION	Bulk Caustic storage tank MOC:- MSRL Bulk PAC/FeCL3 storage tanks MOC:-MSRL	Bulk tank MOC: - FRP is also mostly suitable for acid, caustic and PAC/Fecl3 chemical application. Also FRP tanks delivery are faster than MSRL tank. Hence you are requested to approve FRP tank also for abovesaid application with considering all aspect.	Shall be as per NIT.
6.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 584 of 2315	3.0 TECHNICAL SPECIFICATION	Bulk Acid Storage tank Bulk Caustic storage tank Bulk PAC/FeCL3 storage tanks Number: -2 Nos per each application	Please confirm the storage requirement i.e either 2 X 100 % (1W+1S) Or 2 X 50 % (2W+0S) for each bulk storage tank application.	Bidder to consider storage requirement which should be sufficient to hold solution for the required capacity as defined in the NIT.
7.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 595 of 2315	1.0 GENERAL	The plants shall be designed to operate safely and satisfactorily at a capacity of 50 to 110% of Design Capacity	we confirm ZLD plant Turndown - 50 % with considering 2 X 50 % configuration of UF/RO and MVR unit. However, if we follow the plant design of 110 % Turn Up, this will increase overall CAPEX and OPEX of the ZLD plant. Hence please relook into this clause and re-confirm the same.	Shall be as per NIT
8.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 598 of 2315	4.0 VELOCITY IN PIPES	Acceptable range velocity to be followed is as follows: Pump Suction & Gravity Flow : 0.5-0.8m/s Pressure Line : 1.2-1.8m/s Air Velocity : Not more than 20m/s Steam line less than 20 m/sec.	The given velocity range for piping is too conservative. If we consider the same then overall sizing and thereby the cost of piping, valves, instruments and associated fitting will be going on higher side. We are suggesting below mentioned velocity criteria for piping/valves/instruments which are also followed and approved by most of reputed client/consultant. Gravity flow: - 0.8 to 1.0 m/s	Shall be as per NIT

PRE-BID QUERIES RESOLUTION (SET-3)							
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						Pump suction end: - 1.2 m/sec (maximum) Pump discharge end: - 2.2 to 2.4 m/sec (maximum) Kindly give your concurrence on the same.	
9.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 601 of 2315	10.5 Storage (resin/Chemical) Notes:	All chemical dosing discharge lines shall have minimum Rotameter flow meter.	Because of very less flow rate of dosing pump (in term of LPH), the rotameter at discharge lines of dosing pump cannot be worked and even it is also required. While instead of rotameter we will provide calibration pot for the same purpose. Kindly give your concurrence on the same.	Shall be as per NIT
10.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 680 of 2315	5.2.4 Pump Piping	Unless otherwise specified T-type strainers shall be used on pump suction piping for sizes 2" and above.	As per process requirement, strainer will not be required after DMF/PSF filter vessel. If we provide strainer on suction sider of each pump then the system will become more complex and shall have other challenge on suction end considering pressure drop, choking, priming issue (NPSH) etc and it will increase the project cost also. Hence we are strongly suggesting to avoid any type of strainer after DMF/PSF filter vessel. Pls give your concurrence on the same.	NIT Prevails
11.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 602 of 2315	Notes:	All trips shall be 2 out of 3 logic & auto start shall be 1 out of 2 logic.	We are unable to understand this point. You are requested to elaborate the same.	Please refer the respective clause of the NIT.
12.	NIT FOR IMPLEMENTATION OF	Page 602 of 2315	Notes:	Basket Type Strainers (1W + 1S) to be provided at UF inlets. • Micron Cartridge filters (1W + 1S) Low & high	Since the proposed UF/RO system will have 2 X 50 % configuration, hence we understand that Qty's of basket strainers and Micron cartridge filter	No change. Shall be as per NIT.

PRE-BID QUERIES RESOLUTION (SET-3)							
Sr. No.	**Volume No. / Section No. of bid document**	**Page No.**	**Clause No.**	**Subject**	**Tender Content**	**Query**	**RFCL/PDIL Reply**
	ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT				pressure RO feed pumps.	will be 2 Working + 1 Standby i.e. (2 X 50 % working + 1 X 50 % standby unit) and we are proceeding with same philosophy. Pls give your single line confirmation on the same.	
13.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 603 of 2315	PFD (Process flow diagram)			We understand that the given PFD is tentative and it is allowed to bidder to choose the different scheme by either adding Or eliminating any components/items/technology/system etc subject to meet the final treated water quality. Pls give your concurrence on the same.	Facilities mentioned in the attached PFD is minimum required. Detailed PFD along with all the required facilities shall be generated by the bidder for the final treated water quality. Refer NIT.
14.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 656 of 2315	3.2 DESIGN REQUIREMENTS FOR METERING PUMPS	3.2.2 Positive displacement pumps (controlled volume) shall conform to relevant API / IS/ ISO / Equivalent national & international standards. 3.2.3 The metering pumps model shall be preferred as mechanically actuated type.		As per clause 3.2.3, we are proceeding with mechanically actuated type dosing pump which comes under mfg std and not follow the API std (hydraulic actuated dosing pump) as mentioned under clause 3.2.2. Both clauses are contradictory. Mechanical actuated dosing pumps falls under mfg std. While hydraulic actuated dosing pumps falls under API std. Mechanical actuated dosing pumps are usually suitable for intended application. Kindly give your confirmation on the same.	NIT to be followed
15.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL,	Page 693 of 2315	6.7 Valves	Valve body basic MOC shall be equivalent or above basic MOC of connecting pipe.		We have noted this clause for ball valve, gate valve, globe valve and non-return valve. However for butterfly valve (auto/manual) where butterfly valve body does not comes in contact with process fluid, we are proceeding with MOC of BFV body :- CS as per best engineering practice and followed by most of reputed client/consultant.	NIT Prevails

PRE-BID QUERIES RESOLUTION (SET-3)							
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	RAMAGUNDAM PLANT					Kindly give your concurrence on the same.	
16.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 719 to 809 of 2315	Piping Material Specification			We are proceeding with Material of construction for pipes carrying fluids as defined under the clause 5.0 SELECTION OF MATERIAL OF CONSTRUCTION (part 6 of 9 page no -Page 587 of 1685). However piping class /rating will be either ERW Or Seamless (Sch 10, Sch 20, Sch 40, Sch 80) as per design and process requirement. Please give your confirmation on the same.	NIT Prevails Same shall be finalized during detail engineering.
17.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 1196 of 2315	3. CONTROL PHILOSOPHY (GENERAL)	Auto start for pumps must be designed using 1oo2 philosophy.		We could not understand the term /'' Auto start for pumps must be designed using 1oo2 philosophy'' Hence you are requested to elaborate the same with more clarity for which Pumps 1oo2 philosophy is required.	For all pumps requiring Auto Start from process point of view shall be designed using 1oo2 philosophy.
18.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 1197 of 2315	3. CONTROL PHILOSOPHY (GENERAL)	All trip interlocks must be designed on 2oo3 philosophy.		We could not understand the term /'' All trip interlocks must be designed on 2oo3 philosophy.'' Hence you are requested to elaborate the same with more clarity for which instruments 2oo3 philosophy is required.	For all process trip (pumps, equipments, valves shutdown etc.) shall be designed on 2oo3 philosophy.
19.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 1246 of 2315	12. STORAGE TANK	For each storage tank 2 Nos. of Level measurement of two different principles shall be provided (One ultrasonic/radar & one DP Type level measurement.)		Pls note that any one type of Level transmitter (ultrasonic / radar based on application) will be sufficient for storage tank. There is no need of other level measurement (DP type LT) for the same tank, which is ultimately increase complexity in terms of philosophy, IO list and will also affecting to significant cost of PLC, Cable etc and thereby overall project cost too. Hence you are requested to re look into this regard and give your final confirmation for the	NIT prevails.

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						same.	
20.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 573 of 2315	7 Dosing System	Chemical solution strength Poly:-0.5 % Soda ash/Dolomite :- 0.1 %	We understand that chemical solution strength as defined under dosing system is being interchanged (as typo error) for poly and soda ash/dolomite application. Hence, we are proceeding with solution strength for poly: -0.1 % and Soda ash/Dolomite: -5% as per std practice. Kingly give your concurrence on the same.	Shall be as per NIT.
21.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 2129 of 2315	PART II: TECHNICAL SECTION – 11.0 VENDOR LIST (MASTER VENDOR LIST)	RO PLANTS 1. ION EXCHANGE INDIA LTD. 2. PARAMOUNT INDIA LTD 3. DOSHI ION EXCHANGE & CHEMICAL INDUSTRIES LTD 4. HINDUSTAN DORR OLIVER LTD 5. NEWCHEM WEIR LTD. 6. VA TECH WABAG LTD 7. TRIVENI ENGINEERING & INDUSTRIES LIMITED	Please approve Arvind Envisol ownRO Plant make.	Bidder shall select sub vendors from the vendor list as specified below. In case vendor for any items are not available in the given list, then bidder shall ensure that sub vendor for the specified item has supplied item for the specified service & the supplied item is in satisfactory service since last 3 years as on date of offer, along with successful PTR. The same shall be acceptable after approval of Client/ PMC. Vendor shall have well proven record for the specified services and shall submit unpriced purchase order copy, performance certificate from client as etc. for owner/consultant approval.
22.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 2153 of 2315	PART II: TECHNICAL SECTION – 11.0 VENDOR LIST (MASTER VENDOR LIST)	UF UNIT 1. DRIPLEX WATER ENGINEERING PVT.LTD.	Please approve Arvind Envisol ownUF Unit make.	Bidder shall select sub vendors from the vendor list as specified below. In case vendor for any items are not available in the given list, then bidder shall ensure that sub vendor for the specified item has supplied item for the specified service & the supplied item is in satisfactory service since last 3 years as on date of offer, along with successful PTR. The same shall be acceptable after approval of Client/ PMC. Vendor shall have well proven record for the specified services and shall submit unpriced purchase order copy, performance certificate from client as etc. for owner/consultant approval.
23.	NIT FOR IMPLEMENTATION OF ZERO LIQUID	Page 1858 of 2315	PART II: TECHNICAL SECTION – 11.0 VENDOR LIST (MASTER VENDOR LIST)	ROTARY PUMPS AND SCREW PUMPS 1. AIRAUTO INDUSTRIES INDIA 2. DELTA CORPORATION INDIA 3. ROTO PUMPS LTD INDIA 4. UT PUMPS AND SYSTEMS LTD INDIA	please approve below mentioned additional makes which is also reputed & approved by most of client/consultant. ROTOMAC PUMP	Bidder shall select sub vendors from the vendor list as specified below. In case vendor for any items are not available in the given list, then bidder shall ensure that sub vendor for the specified item has supplied item for the

PRE-BID QUERIES RESOLUTION (SET-3)							
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	DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT						specified service & the supplied item is in satisfactory service since last 3 years as on date of offer, along with successful PTR. The same shall be acceptable after approval of Client/ PMC. Vendor shall have well proven record for the specified services and shall submit unpriced purchase order copy, performance certificate from client as etc. for owner/consultant approval.
24.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 1878 of 2315	PART II: TECHNICAL SECTION – 11.0 VENDOR LIST (MASTER VENDOR LIST)	FANS & BLOWERS 1. ABB FLAKT INDIA LTD. INDIA 2. AEROVENT PROJECTS PVT.LTD 3 AIR CONDITIONING CORPN LTD 4.. AIR CONTROL & CHEMICAL ENGG. CO.LTD. 5. BOLDROCCHI INDIA PRIVATE LIMITED INDIA 6. BHEL INDIA 7. TLT ENGINEERING INDIA PVT. LTD INDIA 8. DRAFT-AIR INDIA PVT. LTD. INDIA 9. M/S CB DOCTOR VENTILATORS PVT. LTD. INDIA 10. MAXFLOW FANS MANUFACTURING (P) LTD. INDIA 11. SWAM PNEUMATICS PVT. LTD. INDIA 12. THERMAX BABCOCK & WILCOX LIMITED INDIA 13. ILLONOIS BLOWERS INC U.S.A 14. FIMA MASCHINENBAU GMBH GERMANY 15. AERZENER MASCHINENFABRIK GMBH. GERMANY	please approve below mentioned additional makes which is also reputed & approved by most of client/consultant. EVEREST / TMVT	Bidder shall select sub vendors from the vendor list as specified below. In case vendor for any items are not available in the given list, then bidder shall ensure that sub vendor for the specified item has supplied item for the specified service & the supplied item is in satisfactory service since last 3 years as on date of offer, along with successful PTR. The same shall be acceptable after approval of Client/ PMC. Vendor shall have well proven record for the specified services and shall submit unpriced purchase order copy, performance certificate from client as etc. for owner/consultant approval.
25.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 1584 of 1685	PART II: TECHNICAL SECTION – 11.0 VENDOR LIST (MASTER VENDOR LIST)	AGITATORS/ MIXERS 1. GANSONS LTD. INDIA 2. HYTEC GRANT INSTRUMENTS INDIA 3. MARS DYE CHEM PVT. LTD INDIA 4. RATHI LIGHTNIN MIXERS PRIVATE LIMITED INDIA 5. REMI PROCESS PLANT & MACHINERY LTD. INDIA 6. SAFE MAX AGITATOR INDIA	please approve below mentioned additional makes which is also reputed & approved by most of client/consultant. CEECON ENGG / S.J INDUSTRY	Bidder shall select sub vendors from the vendor list as specified below. In case vendor for any items are not available in the given list, then bidder shall ensure that sub vendor for the specified item has supplied item for the specified service & the supplied item is in satisfactory service since last 3 years as on date of offer, along with successful PTR. The same shall be acceptable after approval of Client/ PMC. Vendor shall have well proven record for the specified services and shall submit unpriced purchase order copy, performance certificate from client as etc. for owner/consultant approval.
26.	NIT FOR IMPLEMENTATION OF		PART II: TECHNICAL SECTION – 11.0 VENDOR LIST (MASTER	General	Wherever the make is not specified in the tender, the bidder may consider their own or preferred make.	Bidder shall select sub vendors from the vendor list as specified below. In case vendor for any items are not available in the given list, then

PRE-BID QUERIES RESOLUTION (SET-3)							
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	ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT			VENDOR LIST)			bidder shall ensure that sub vendor for the specified item has supplied item for the specified service & the supplied item is in satisfactory service since last 3 years as on date of offer, along with successful PTR. The same shall be acceptable after approval of Client/ PMC. Vendor shall have well proven record for the specified services and shall submit unpriced purchase order copy, performance certificate from client as etc. for owner/consultant approval.
27.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	General				Please confirm MCC/PMCC/EMCC/PDB/MLDB Panels In substation -5 & PLC Panel In Water Block Control Rooms comes under non-hazardous Area. Pl confirm.	Bidder understanding is correct
28.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page1229/Sec 5.4/Cl.8.1.c				Please confirm following Points: (i). Bidder Shall consider Process PLC for Entire new ZLD Plant. Kindly confirm. (iI). Bidder Shall considered Dual Redundant (Processor, I/O, Power Supply, communication bus, I/O Communication module). Kindly Confirm. (iii). Please confirm Process PLC shall be Non-SIL PLC. (iv).We also Understand all Instrument /Auto Valve Signal shall be directly connected to PLC (Water Block Control Room) system through JB.No any RIO Panel at Substation -5 Is acceptable . (v) Hardware or Communication Connection between PLC control system and main DCS Shall be Consider By Bidder Kindly Confirm.	i) Noted. ii) Noted. iii) Noted. iv) No RIO Panel shall be considered. v) Noted Redundant communication shall be provided. Necessary hardware, software etc. for integration shall be in the scope of LSTK Contractor.
29.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE	General				We Understand CCTV &TELEPHONE EXCHANGE AND ASSOCIATED ACCESSORIES Will be In Bidder Scope .Pl confirm.	Noted.

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Sr. No.	**Volume No. / Section No. of bid document**	**Page No.**	**Clause No.**	**Subject**	**Tender Content**	**Query**	**RFCL/PDIL Reply**
	(ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT						
30.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	Page 2040/Make List				We Understand Authorized System Integrator of AB, Schneider, Siemens. Honeywell, GE PLC system Will Be Approved For PLC panel Manufacturing.Pl Confirm.	Bidder shall select sub vendors from the vendor list as specified below. In case vendor for any items are not available in the given list, then bidder shall ensure that sub vendor for the specified item has supplied item for the specified service & the supplied item is in satisfactory service since last 3 years as on date of offer, along with successful PTR. The same shall be acceptable after approval of Client/ PMC. Vendor shall have well proven record for the specified services and shall submit unpriced purchase order copy, performance certificate from client as etc. for owner/consultant approval.
31.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	General Civil points				Clarification of finished grade level of plant.	All available document/ data have been shared with NIT. For more clarity, The CONTRACTOR shall visit the site.
32.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	General Civil points				Clarification regarding structure (Tanks) construction : • Underground • Partially Underground • Above the Ground	Same shall be finalized during detailed engineering based upon process requirement.
33.	NIT FOR IMPLEMENTATION OF ZERO LIQUID	General Civil points				Existing sewerage system tie-in point and location/distance.	All available document/ data have been shared with NIT. For more clarity, The CONTRACTOR shall visit the site.

PRE-BID QUERIES RESOLUTION (SET-3)							
Sr. No.	**Volume No. / Section No. of bid document**	**Page No.**	**Clause No.**	**Subject**	**Tender Content**	**Query**	**RFCL/PDIL Reply**
	DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT						
34.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	General Civil points				Existing Strom water drain tie-in point and location/distance.	All available document/ data have been shared with NIT. For more clarity, The CONTRACTOR shall visit the site.
35.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	General Civil points				Method of dismantling of existing structure i.e. JCB breaker or explosives/detonation.	Same shall be done by mechanical means. Explosion/detonation is not acceptable in any case.
36.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT RFCL, RAMAGUNDAM PLANT	General Civil points				Disposal area for dismantling materials	Same shall be finalised during execution stage. For more clarity, The CONTRACTOR shall visit the site.
37.	NIT FOR IMPLEMENTATION OF ZERO LIQUID DISCHARGE (ZLD) UNIT AT	General Civil points				Soil for backfilling of projected area& distance.	All available document/ data have been shared with NIT. For more clarity, The CONTRACTOR shall visit the site.

PRE-BID QUERIES RESOLUTION (SET-3)							
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	RFCL, RAMAGUNDAM PLANT						
38.	Site Visit - General					Bidder shall consider all process location as Safe Area. Bidder Shall provide Process instruments & Analyzers for safe area application. Please Confirm.	NIT prevails
39.	General				Existing Pipe Rack Bridge	Kindly provide the height of the existing pipe rack and the pipe rack bridge.	Bidder may visit site for data collection.
40.	General				Existing Pipe Rack	We propose to use cantilever pipe supports on the existing pipe rack so that the same structure can be used to lay the pipeline from the pump discharge to Tie- in Point A. Please Confirm.	Available space on rack to be utilized on priority. In case no space available after all efforts other possibilities to be explored during detailed engineering.
41.	General				Proposed Fire water line	We propose that the fire water line from Tie-in Point A to the Fire Water Reservoir be installed below ground. Please Confirm	Query not clear. Kindly refer the attached fire fighting layout.
42.	General				ZLD Plant	As we observed from the site visit, we presume that there are no underground pipelines/Cables in the proposed area of the new ZLD plant. Please Confirm.	Re-routing of few Utility lines (Service water, Fire water, Instrument air, etc.) as per details specified in Part-II of the NIT shall be in the scope LSTK Contractor.
43.	General				Fire Water Line	As we observed from the site visit, for fire water reservoir we propose that the new proposed fire water pipeline to reservoir inlet pipe connection shall be same as the existing pipe connection.	Same shall be finalized during detail engineering.
44.	General				Finished Ground level	As per Site Visit, the existing ground level of the proposed site is below the Finished ground level of the existing plant/ Road level. Hence, for considering the filling & foundation level. Kindly provide the Existing Ground level & Finished ground level of the proposed site.	Same shall be finalized during execution stage. For more clarity, The CONTRACTOR shall visit the site.
45.	General				Finished Ground level	We presume, necessary slope protection shall be provided to retain the filling for the proposed plot area without any retaining wall. Kindly Confirm	Same shall be finalized during detailed engineering. Retaining wall, if required shall be in scope of LSTK Contractor.
46.	General				Storm Water	We presume, the storm water from the proposed site, shall be interconnected with the existing nearest storm water network. Kindly Confirm	NIT prevails
47.	General	Page 562 of 2315	1. VI.		VI. The piping required for the lines to/from guard pond, water to cooling water makeup/ fire water reservoir shall be in contractor scope".	As per Site visit, the pipe routing from ZLD to Fire water reservoir shall be provided with On ground RCC sleepers. Please Confirm	As per NIT, the same shall be finalized during detail engineering.
48.	General	Page 562 of	1. VI.		VI. The piping required for the lines to/from guard pond, water to cooling water makeup/ fire water reservoir shall be in contractor scope".	As per Site visit, the pipe routing from ZLD to Urea/ Ammonia Cooling tower shall be provided in existing Pipe Rack. Please confirm	Kindly refer the attached fire water layout.

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		2315					
49.	General			AUTO CAD file		We request the client to provide the AUTO CAD format of layout.	AutoCAD Drawing shall be provided to successful bidder (if available)
50.	General			Site Clearance		From the site visit it is observed that the allocated area for ZLD have wild bushes and plantation. We presume that the site clearance of the existing tree's is under cllient's scope.	Site shall be provided as and where basis and Clearances of all bushes, Trees, plantation etc shall be in the scope of LSTK Contractor
51.	General			Site Clearance		It is observed that the allocated area for ZLD contains dismantled pipes and other materials. We pressume that these materials will be cleared by the client before handing over the site to the contractor	Site shall be provided as and where basis and Clearances of all pipes and other materials etc shall be in the scope of LSTK Contractor
52.	General			Construction demolishment debris		During the site visit, it was informed that the debris from the demolition of the existing RCC tank is to disposed approximately 7 km away from the site, The location of the same will be confirmed after the award of the contract. Kindly Confirm	Debris from the demolition of the existing RCC tank shall be disposed by LSTK Contractor approximately 7 km away from the site, The location of the same will be confirmed after the award of the contract.
53.	General			Existing pipe rerouting		As per the site conditions the bidder pressumes that there is no LT/HT cables or underground pipelines present in the site location. In case of such presence, we pressume that the rerouting of the same will be under client's scope. Kindly Confirm	Re-routing of few Utility lines (Service water, Fire water, Instrument air, etc.) as per details specified in Part-II of the NIT shall be in the scope LSTK Contractor.
54.	07 451 - 500 Pages RFCL ZLD NEW TENDER 14.10.2025	Page 479 of 2315 29 of 50	Bid Security Form	IN CONSIDERATION OF RAMAGUNDAM FERTILIZERS & CHEMICALS LIMITED (RFCL), HAVING ITS REGISTERED OFFICE AT SCOPE COMPLEX, CORE NO.III ,7, INSTITUTIONAL AREA LODHI ROAD, NEW DELHI-110003 and Corporate Office at: 4th Floor, KRIBHCO Building, Sector-1, NOIDA- 201301 (HEREINAFTER CALLED RFCL WHICH EXPRESSION SHALL UNLESS REPUGNANT TO THE SUBJECT OR CONTEXT INCLUDES ITS SUCCESSORS AND ASSIGNS) HAVING AGREED TO EXEMPT _____(HEREINAFTER CALLED THE, THE SAID TENDERER(S)' WHICH EXPRESSION SHALL UNLESS REPUGNANT TO THE SUBJECT OR CONTEXT INCLUDES HIS SUCCESSORS AND ASSIGNS) FROM THE DEMAND UNDER THE TERMS AND CONDITIONS OF TENDER NO _____FOR_____HEREINAFTER CALLED "THE SAID TENDERER' OF SUCH BID SECURITY DEPOSIT FOR THE DUE FULFILMENT BY THE SAID TENDERER(S) OF THE TERMS AND CONDITIONS CONTAINED IN THE SAID TENDER _____FOR _____ON PRODUCTION OF BANK GUARANTEE FOR RS._____(RUPEES _____ONLY).		In the Bank Guarantee format, the term “Tenderer” appears twice consecutively in the clause “…FOR _ HEREINAFTER CALLED ‘THE SAID TENDERER’…”, which makes the sentence unclear — kindly confirm if this is a typographical error or intentional.	Ample clarity has been provided in tender.
55.				Design Calculations for sizing of equipments Process Specification Resins and chemicals Reference list of agitators, Compressors, HVAC pacakage Details of Shop & Field Testing and Inspection Procedures Details of evaporator/TVR/ crystallizer system.		Considering the limited time available for tender submission, we request the Client to allow submission of the aforesaid documents during the Detailed Engineering phase. Also, the same membranes of the provided projection for RO & UF, Reference list etc., will result in monopoly which may afect the tender. Kindly confirm.	NIT Prevails Bidder to submit the documents as per NIT.

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Sr. No.	**Volume No. / Section No. of bid document**	**Page No.**	**Clause No.**	**Subject**	**Tender Content**	**Query**	**RFCL/PDIL Reply**
	17 1501 - 1800 Pages RFCL ZLD NEW TENDER 14.10.2025	1609, 1610 of 2315 1640 of 2315			Indicative chemical consumption along with detailed supporting calculation, which is mandatory. Projections for UF & RO membrane duly authenticated from selected supplier. Steam consumption & chemical requirement for evaporator supplier		
56.	General				PID	Kindly provide the reference P&ID	Engineering has to be done by the bidder, Hence P&ID shall be generated by the bidder. Bidder to develop based on the proposed system during detail engineering.
57.	17 1501 - 1800 Pages RFCL ZLD NEW TENDER 14.10.2025	1609 of 2315	17		Interface Battery Limit Parameters as per Sample format given below	Kindly provide the foresaid format of Interface battery limit parameter	Bidder to submit the same in their format
58.	Part 1 - Commercial	47 of 2315	1.0 (BQC)		MoU for MVR Technology based Evaporator System	Bidder understands that the as per the BQC, the bidder is allowed to submit more than one MoU for the MVR Technology. Kindly confirm our understanding.	Single MoU to be submitted by the bidder
59.	PC-211/E/002/P II/Sec-5.5	Page 1359 of 2315	5.3.11		BUILDING REQUIREMENTS	5.3.11 All new buildings shall be designed for vertical extension in future. Query: Please specify how many additional floors to be considered for future.	Additional One floor vertical extension of maximum height to be considered for designing of new buildings.
60.	PC211/E/002 /P II/Sec-3.0	Page 562 of 2315	VII.		CONTRACTOR SCOPE OF WORK	VII. The complete civil and structural work for ZLD plant including site grading, site survey & soil investigation, modification of existing control room, detailed design, preparation of all drawings for construction, fabrication, erection, grouting, etc. of all structural works e.g. platforms, stairs, ladders, hand railing (including insert plates) and wherever required, pipe and cable racks / supports, underground & above road crossing (including culvert / trench) for piping and cabling, etc. are to be included. Query: Please confirm size and requirement of modification of control room with detail sketch.	Refer plot plan and relevant clause of NIT for tentative minimum dimension of rack room. However, actual dimension shall be finalized at the time of detailed engineering.
61.	ANNEXURE-IX	Page 1476 of 2315			SPOT LEVEL SHEET	Query: Please provide reference of R.L. of contour map relates to FGL (172.00m) mentioned in the layout.	FGL = MSL + 172.00 m
62.	PC211/E/002 /P II/Sec-3.0	Page 563 of 2315			IX.	Fire proofing as per requirement of the bid package. Query: A per bidder‘s understanding there is no requirement of fireproofing of the project. Please confirm.	Bidder’s understating is correct.
63.	PC-211/E/002/P	Page 1328 of 2315			1.4 Disposal of surplus earth	Query: As per bidder‘s understanding, owner will provide space for disposal of surplus earth within premises. Please confirm distance	All available document/ data have been shared with NIT. For more clarity, The CONTRACTOR shall visit the site.

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	II/Sec-5.5						
64.	Soil Investigation			Ground water		Query: Please specify the Ground water table for design of underground structure.	Carrying out the soil investigation is in bidder's scope The soil investigation report provided in NIT is for reference only.
65.	GENERAL CIVIL			Fabrication & storage yard		As per bidder's understanding, Owner shall provide space for fabrication work, Storage of construction material and other structural, piping materials etc., Please confirm area and distance from working area to storage area.	Within the Battery limit of ZLD Plant
66.	GENERAL CIVIL			Space for Batching plant		As per bidder's understanding, Owner shall provide space for Concrete Batching Plant. Please confirm area and distance from working area to storage area.	Space for Concrete Batching Plant shall be approximately 7 km away from the site, The location of the same will be confirmed after the award of the contract.
67.	GENERAL CIVIL			Work Permit		QUERY: As it is working refinery Please confirm work permit requirements.	Modality shall be discussed after Post award of Contract.
68.	GENERAL CIVIL			Working Hours		1.0 What will be allowable normal working hours? 2.0 Working for late hours beyond normal will be permitted or not.	May be allowed as per site prevailing conditions.
69.	GENERAL CIVIL			FENCING AND BOUNDARY WALL:		As per Scope Fencing and boundary wall are not in contractor's scope. Kindly confirm.	NIT Prevails.
70.	PC211/E/002 /P-II/Sec-5.2.2	657 of 2315	3.3.5	Standard process & Mechanical data sheet		For Rotary equipments, provide standard process & mechanical data sheet (if available)	All equipments shall be designed as per NIT requirements
71.	PC211/E/002 /P-II/Sec-5.2.2	657 of 2315	3.3.2 & general	Pumps design & manufacturing as per API code		All pumps will be API pumps only or PL can supply general/ water service pumps as non-API? Please confirm	NIT to be followed
72.	Part II / Sec 1.0	549 of 2315	3.0	Design inlet capacity		<table><tr><th>Sl. No.</th><th>Plants & Facilities</th><th>Cap</th></tr><tr><td>1</td><td>REVERSE OSMOSIS (RO) BASED TREATMENT PLANT</td><td>300 (M M³</td></tr></table> 1) PMC to clarify the requirement of capacity i.e. 300 m3/hr shall be considered at inlet of HRSCC-I or at inlet of RO-I or at Outlet of RO permeate transfer pump. Because as per above clause RO based treatment plant to be design on 300 m3/hr.	1) Shall be as NIT specifications. RO-1 feed flow rate shall be 300m3/hr. Clearly defined in NIT sec.1.0 2) Refer above Sr. no. 1 reply.

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Sr. No.	Volume No. / Section No. of bid document	Page No.	Clause No.	Subject	Tender Content	Query	RFCL/PDIL Reply
						18 **Ultra-Filtration (U.F.) Module-I** No. of Skid — Nos. — Three Feed flow rate — m^3/hr Permeate flow rate — m^3/hr But as per above clause from design basis, UF feed flow rate is 2 x 150 m3/hr and permeate capacity 2 x 135 m3/hr. Hence RO feed capacity shall be 2 x 135m3/hr = 270 m3/hr. PMC to clarify the same. 2) Bidder understand that if design capacity of Plant i.e. 300 m3/hr shall be considered at inlet of HRSCC-I then contractor need to include recycle from Filter backwash waste, UF backwash waste, centrate etc on provides inlet capacity. Bidder has to include recycle flow in provided design capacity i.e. 300 m3/hr for design of HRSCC, DMF and UF system. Kindly confirm bidder understanding.	
73.	Part II / Sec 1.0	549 of 2315	3.1	Quantity of centrifuge	pumped to thickener. The thickened sludge shall be treated in one	As per process description, quantity of centrifuge will be 1 No. But as per PFD quantity of centrifuge will be 1W +1S. Kindly confirm quantity of centrifuge.	The configuration of Centrifuge shall be 1 W + 1 S.
74.	Part II / Sec 1.0	551 of 2315	3.3	Storage capacity of sludge	Centrifuge shall be collected for disposal in tractor trolleys. Storage capa days is required dedicated for sludge storage. Disposal of sludge outside B/L of plant is not under bidder's scope. H sludge storage (covered with shed) inside B/L shall be under bidder's sc	There is two separate statement provided for sludge storage in above clause. From above both statement, bidder understand that minimum 45(15+30) days storage with shed to be considered for sludge storage. Kindly confirm bidder understanding.	- Crystallizer sludge storage (covered with shed) sufficient for 1 Month storage. - Storage capacity for Fifteen (15) days is required for sludge handling system for sludge storage (covered with shed).
75.	Part II / Sec 2.0	553 of 2315	1.0	Design parameter		Bidder understand that plant to be design on maximum parameter. Kindly confirm bidder understanding.	Bidder to design system considering normal feed quality parameters as base. However, system shall also be capable to handle/operate mentioned minimum/maximum feed water quality parameters adhering to the product quality.
76.	Part II / Sec 3.0	559 of 2315	1.0	Type of HRSCC feed pump	pumps Tag no. 307-PA-005 A&B (Treated effluent pump for using to be dismantled and new effluent transfer pumps (of the req	As per Scope of work new effluent transfer	Bidder to decide during detail engineering in consultation with PMC/Owner

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						pumps i.e. HRSCC feed pump is in contractor scope. As per layout, Existing treated effluent transfer pump is vertical centrifugal type. Hence type of new effluent transfer pumps is vertical centrifugal only. But as per design basis, type of HRSCC feed pump is horizontal centrifugal. Kindly confirm the type of HRSCC feed pump (Effluent transfer pump).	
77.	Part II / Sec 3.0	559 of 2315	1.0	Qty of HRSCC feed pump	As per design basis, qty of HRSCC feed pump shall be 2 Nos (1W+1S) But as per PFD, qty of HRSCC feed pump shall be 3 Nos (2W+1S) PMC to confirm the qty of HRSCC feed pump.		HRSCC feed pump shall be 2 Nos (1W+1S)
78.	Part II / Sec 3.0	560 of 2315	1.0	Fencing for ZLD plant	Approach road and fencing are also included in LSTK Kindly clarify the requirement of fencing for ZLD plant.		1-Approach road is in LSTK contractor's scope. 2- As per prevailing standard industrial practice fencing is not required. However, same shall be finalized during detailed engineering and in the scope of LSTK contractor, if required.
79.	Part II / Sec 3.0	564 of 2315	1.0	Type of discharge line	**XIX.** 25 NB discharge line from ZLD to water analysis room, instrument roor analysis room, resin and raw material testing room and pollution c chemical laboratory with isolation valves shall be provided. 1) Which kind of water to be transferred from ZLD plant to all room described in above clause. 2) Location of all room described in above clause is not found in equipment layout. Please provide the same for working out the cost of piping.		1. Please refer Part II / Sec 7.0 These parameters pertains to the guaranteed values specified in the tender and LSTK Contractor shall ensure stage wise (including O&G if any), compliance of parameters with tender conditions For Cl. No. 1.1.2 (6) of Part II/ Sec 7.0 Bidder's to indicate and Figures marked as * are to be indicated by Bidder based on the actual RO membrane projections. Bidder shall submit material balance based on all parameters at the Inlet & outlet of all equipment at the time of bidding with detailed calculation. 2. All available document/ data have been shared with NIT. For more clarity, The CONTRACTOR shall visit the site.
80.	Part II / Sec 3.0	564 of 2315	1.0	Instrument air line	**XX.** 25 NB instrument air pipeline be provided in all the rooms ment (q) above Kindly provide location of all room for working		All available document/ data have been shared with NIT. For more clarity, The CONTRACTOR shall visit the site.

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						out cost of instrument air pipe in equipment layout.	
81.	Part II / Sec 3.0	572 of 2315	3.0	Type of Cover		<table><tr><td>4</td><td>Clarified I Water sump</td><td></td><td></td></tr><tr><td></td><td>Number</td><td>No.</td><td>One</td></tr><tr><td></td><td>Effective capacity</td><td>m³</td><td>60</td></tr><tr><td></td><td>MOC</td><td></td><td>RCC, above gr</td></tr></table> Bidder understand that RCC covered to provide for clarified I water sump. Typical query for all RCC tanks. Kindly confirm bidder understanding.	RCC roof shall be provided for Clarified water Sump, Backwash DMF sumps etc.. For balance of the plants (for eg. RO skids, Dosing Tanks, DMF, UF Skids, etc.) shall be provided under shed (with FRP roof supported by Steel Structure).
82.	Part II / Sec 3.0	573 of 2315	3.0	Dosing strength		<table><tr><td>Solution strength</td><td>%</td><td>10</td></tr></table> As per design requirement and past project experience only polyelectrolyte shall have 0.5% of dosing strength whereas all other chemical shall have minimum 10% dosing strength.	Shall be as per NIT
83.	Part II / Sec 3.0	575 of 2315	3.0	Which details to be follow for Dolomite dosing		<table><tr><td>8</td><td>Dolomite Dosing Tank</td><td></td><td></td></tr><tr><td></td><td>No.</td><td></td><td></td></tr></table> In equipment details 7 & 8, there are two separate details are provided for dolomite dosing system. Kindly clarify which specification to be followed for dolomite dosing system.	Bidder to consider MOC of the chemical line as per standard engineering practices and compatibility in consultation with PMC/Owner.
84.	Part II / Sec 3.0	573 of 2315	3.0	Dosing system for HRSCC-I & HRSCC-II		Bidder understand common 2 Nos dosing tank i.e. 1W+1S with common 2 Nos of dosing pumps i.e. 1W+1S for each chemicals shall be considered for HRSCC-I & HRSCC-II. Kindly confirm bidder understanding.	Shall be as per NIT
85.	Part II / Sec 3.0	573 of 2315	3.0	Dosing system for RO-I & RO-II		Bidder understand common 2 Nos dosing tank i.e. 1W+1S with common 2 Nos of dosing pumps i.e. 1W+1S for each chemicals shall be considered for RO-I & RO-II. Kindly confirm bidder understanding.	Shall be as per NIT
86.	Part II / Sec 3.0	573 of 2315	3.0	Type of dosing pump for poly electrolyte		<table><tr><td>7</td><td>Dosing System</td><td>Nos.</td><td>PAC/FeCL3</td><td>Lime</td><td>Poly</td><td>Soda ash</td></tr><tr><td></td><td>Dosing Pumps</td><td></td><td>2 (1W+1S)</td><td>2 (1W+1S)</td><td></td><td>2 (1W</td></tr><tr><td></td><td>Type of pump</td><td></td><td>Positive Displacement Diaphram</td><td>Screw</td><td></td><td>Positive Displ Diap</td></tr></table> PMC to note that generally positive displacement diaphragm shall be used for Poly dosing system but as per tender document screw type pump shall be provide for Poly dosing system. PMC to re verify the type of pump for poly dosing system.	Shall be as per NIT.
87.	Part II / Sec 3.0	583 of 2315	3.0	Type of dosing pump for DWPE		<table><tr><td>Dewatering Polyelectrolyte</td><td></td><td></td></tr><tr><td>Min . dosage</td><td></td><td>25 ppm</td></tr><tr><td>Dosing pump</td><td></td><td>SS 316 plunger type</td></tr></table>	Shall be as per NIT.

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Sr. No.	Volume No. / Section No. of bid document	Page No.	Clause No.	Subject	Tender Content	Query	RFCL/PDIL Reply
						PMC to note that generally positive displacement diaphragm shall be used for DWPE dosing system but as per tender document plunger type pump shall be provide for DWPE dosing system. PMC to re verify the type of pump for DWPE dosing system.	
88.	Part II / Sec 3.0	579 of 2315	3.0	Design of High pressure pump head		Since there is power guarantee, PMC to clarify head of high pressure pump to be select on which temperature.	Shall be as per NIT.
89.	Part II / Sec 3.0	580 of 2315	3.0	Guaranteed RO permeate TDS		3. Total dissolved solids, ppm 100 As per treated water quality table, Guaranteed RO-1 permeate TDS is 100ppm and RO-2 permeate is 150 ppm. Permeate – TDS (ROI + RO II) @ 35 Deg C ppm Whereas as per technical details, Guaranteed RO-1 + RO-2 permeate TDS is 150ppm. Kindly clarify the guaranteed RO-1 permeate TDS and RO-2 Permeate TDS.	Shall be as per NIT.
90.	Part II / Sec 3.0	583 of 2315	3.0	Salt storage capacity		Crystallizer sludge storage shed sufficient for 1 Month storage bidder. As per above clause, salt storage shed sufficient for 1 month storage to be provide. crystallisers to concentrate sludge in powder form. The powder sludg PVC bags and shall be stored in covered shed of 15 Days capacity. But as per project description, salt storage shed sufficient for 15 day storage to be provide. PMC to clarify the requirement.	Shall be as per NIT.
91.	Part II / Sec 3.0	583 of 2315	3.0	Sludge handling system		37 **Sludge Handling System** Thickener capacity M3/hr 50 m3/hr Capacity of thickener is on very high side compare to overall plant capacity. Maximum feed capacity of thickener shall be around 10 m3/hr. Kindly note that thickener system is running on continuous basis and provided capacity of thickener is not justified as per overall plant capacity. Overall plant capacity of plant is 300 m3/hr and maximum 2-3 5 water shall be transferred into sludge handling system. Hence capacity of thickener shall be around 10 m3/hr instead of 50 m3/hr. PMC to verify and confirm capacity of thickener	Shall be as per NIT.

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						on system running on continuous basis.	
92.	Part II / Sec 3.0	583 of 2315	3.0	DWPE dosing for centrifuge		Dewatering Polyelectrolyte | Min . dosage | 25 ppm Provided minimum dosage of DWPE of centrifuge is on very high side. As per past project experience and as per centrifuge supplier recommendation minimum dosage capacity of DWPE for centrifuge is 2-3 kg/ ton of dry solid. PMC to re verify the same.	Shall be as per NIT.
93.	Part II / Sec 3.0	585 of 2315	4.1	No equalization tank		1. pH & conductivity analyzer at the discharge of Equa Since there is no equalization tank in plant, bidder understand that pH and conductivity analyzer to be provided at discharge of HRSCC feed pump. PMC to confirm the bidder understanding.	Noted. Bidder's understanding is correct.
94.	Part II / Sec 3.0	585 of 2315	4.1	Requirement of turbidity analyzer		3. Turbidity analyzer at downstream of Ultra Filter Bidder understand that turbidity analyzer to be provide at downstream of each UF-I & II. PMC to confirm the bidder understanding.	Shall be as per NIT.
95.	Part II / Sec 3.0	585 of 2315	4.1	Requirement of Conductivity analyzer		5. Conductivity analyzers at the Permeate & reject Bidder understand that Conductivity analyzer to be provide at permeate and reject of each RO-I & II. PMC to confirm the bidder understanding.	Shall be as per NIT.
96.	Part II / Sec 3.0	585 of 2315	4.1	Requirement of analyzer		8. Analyzers as required for guaranteed water qualit 1) There is guarantee of TSS at outlet of HRSCC, hence TSS analyzer to be provide at clarifier water outlet. Kindly confirm 2) There is guarantee of pH at permeate of Each RO-I & II, hence pH analyzer to be provide at permeate of each RO-I & RO-II. PMC to confirm. 3) There is guarantee of SDI at permeate of Each UF-I & II, hence SDI analyzer to be provide at permeate of each UF-I & UF-II. PMC to confirm.	Shall be as per NIT.
97.	Part II / Sec 3.0	585 of 2315	4.1	Requirement of FT		PMC to clarify the requirement of FT at DMF backwash pump.	Shall be as per NIT.
98.	Part II / Sec 3.0	585 of 2315	4.1	Requirement of FT		PMC to clarify the requirement of FT at DMF-I & II air blower.	Shall be as per NIT.
99.	Part II / Sec 3.0	585 of 2315	4.1	Requirement of FT		PMC to clarify the requirement of FT at RO-I & II cartridge filter feed pump.	Shall be as per NIT.
100.	Part II / Sec 3.0	585 of 2315	4.1	Requirement of FT		PMC to clarify the requirement of FT at backwash waste-I & II transfer pump.	Shall be as per NIT.

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101.	Part II / Sec 3.0	585 of 2315	4.1	Requirement of Level transmitter		4. All tanks shall be equipped with Level Transr **12. STORAGE TANK** For each storage tank 2 Nos. of Level measurement of two different provided (One ultrasonic/radar & one DP Type level measurement.) From both design basis and instrument design specification, bidder understand that Two nos of level transmitter (1 No of radar and 1 No of DP type LT) to be provide for all storage tank and 1 No of level transmitter with 1 No of level gauge to be provide for all dosing tanks. Kindly confirm bidder understanding.	Shall be as per NIT.
102.	Part II / Sec 3.0	585 of 2315	4.1	Requirement of instrument of ZLD plant		5. All Incoming /outgoing lines from ZLD Plant shall have PG, PT, totalizer. Since inlet line from existing guard pond to ZLD plant and RO permeate line from ZLD plant to Fire water reservoir and Cooling water sump is in contractor scope. Hence bidder understand that all mentioned instruments in above clause is not required to provide at battery limit of ZLD plant. Kindly confirm bidder understanding.	Shall be as per NIT.
103.	Part II / Sec 5.0	601 of 2315	10.5	Level gauge requirement		• All lines at B/L shall be provided with lockable isolation valve along with drai Tanks shall be provided with local level gauge, transmitters with indication Generally level gauges are not required for storage tank & all underground and aboveground sumps. Because all level transmitter located on tanks & sumps shall have power loop level indication at grade level for locally checking level of tank/sump from field. PMC to check this requirement and confirm.	Shall be as per NIT.
104.	Part II / Sec 5.0	601 of 2315	10.5	DPT across strainer		• All strainers, filters shall have Differential Pressure Transfer (DPT) with indication – Alarms to be provided. 1) From above clause, all strainers means Y&T type strainer located on pump suction or basket type strainers? PMC clarify? 2) If strainer means Y & T type strainer located on pump suction then Kindly note that Differential Pressure transmitter (DPT) are normally provided only for all filters. In regular practice for water service no transmitters are provided on Pump suction's strainers. We would like to submit that for Water treatment projects (RO, ZLD & WWTP) in India as well as international projects & in all our past projects DPT for Pump suction's strainers have not been specified in any of the project.	Shall be as per NIT.

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						Request to review the requirement of DPT for Pump suction's strainers as it will have huge cost impact.	
105.	Part II / Sec 5.0	601 of 2315	10.5	Off spec of RO permeate		• RO permeate shall be diverted to UF permeate tank automatically Bidder understand that only TDS value of RO permeate line shall be considered for diverting off spec to UF permeate tank. PMC confirm bidder understanding.	Clearly defined in NIT.
106.	Part II / Sec 5.0	601 of 2315	10.5	Minimum recirculation line		• All centrifugal pumps shall be provided with automatic minim 1) Bidder understand that pneumatic operated On/Off valve shall be acceptable for automatic minimum recirculation line of centrifugal pumps. PMC to confirm bidder understanding. 2) Bidder understand that minimum recirculation line is not applicable for intermittent service pumps like Filter / UF backwash pump, RO/UF cleaning pump, Backwash waste transfer pump-I& II, all chemical unloading transfer pumps, etc. PMC to confirm bidder understanding as same philosophy we are following in all our past projects. 3) Bidder understand that minimum recirculation line is not applicable in RO high pressure pumps as pumps are operated with VFD hence minimum recirculation line is not required. PMC to confirm bidder understanding.	Shall be as per NIT.
107.	Part II / Sec 5.0	601 of 2315	10.5	Pressure gauge for Pumps		• Pumps shall be provided with local pressure gauge at suction & discharge indication & alarms in CCR, auto trip & auto start as applicable. 1) From above clause bidder understand that individual pumps suction & discharge shall have pressure gauge and pressure transmitter only at individual pump discharges. PMC to confirm bidder understanding. 2) PMC to note that generally all pumps are having flooded suction and tripping of pump is provided for low level in tanks. Hence pressure gauge at pump suction line is not required. In all our past project, we have not provided pressure gauge at pump suction. PMC check this requirement and re confirm. 3) Bidder understand that above tender	Shall be as per NIT.

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						clause is not applicable for Dosing pumps. PMC to confirm bidder understanding.	
108.	Part II / Sec 5.0	601 of 2315	10.5	Requirement of Flow transmitter	• Flow transmitters with pressure & temperature compensation shall be pro	Kindly note that Flow transmitter with pressure & temperature compensation is not required in WWTP & RO-ZLD. In all our past project, we haven't provided pressure & temperature compensation for flow transmitter. Also note that pressure and temperature compensation for flow transmitter is required for compressible fluid and effluent flow through the WWTP & RO-ZLD plant are non-compressible. Hence we are request to re-check the requirement of flow transmitter with pressure and temperature compensation.	Shall be as per NIT.
109.	Part II / Sec 5.0	601 of 2315	10.5	FT at inlet of DMF inlet	• Flow transmitters with pressure & temperature compensation shall be pr All DMF inlet & individual outlets, UF outlets, RO inlets & RO outlets perm	1) Requirement of FT at DMF inlet means common inlet header of DMF. PMC to confirm bidder understanding. 2) Kindly note that FT at DMF inlet is not required as outlet of each DMF shall have FT for flow measurement. PMC to re check the requirement.	Shall be as per NIT.
110.	Part II / Sec 5.0	601 of 2315	10.5	Requirement of 2oo3	• All trips shall be 2 out of 3 logic & auto start shall be	1) Kindly note that normally 2oo3 philosophy is required where complete plants gets shut down because of critical tripping. In our case all interlocks are related to pump tripping based on the levels to avoid dry run. This will result to tripping of that particular pump not complete plant. Hence 2oo3 philosophy is not requested in any RO & ZLD plants. In view of the above kindly confirm the requirement of 2oo3. 2) If at all you need 2oo3 logic than bidder understand that pump tripping based on level to be considered in 2oo3 logic. PMC to confirm bidder understanding. 3) PMC to note that diameter of dosign tanks & cleaning tank are very small and accommodation of 3 Nos of level transmitters for 2oo3 logic are not possible because larger space are covered by agitator, service water and vent. Hence we request for not considering 2oo3 logic for dosing and	Shall be as per NIT.

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						cleaning tanks. PMC to confirm the same. 4) PMC to clarify that tripping of RO high pressure pump based on low pressure at pump suction shall be considered in 2oo3 logic or not? 5) PMC to clarify that tripping of RO high pressure pump based on high pressure at pump discharge shall be considered in 2oo3 logic or not? 6) Bidder understand that sequential logic like backwashing / cleaning based on differential pressure of Filters, UF system and interstage of RO skid are not to be considered in 2oo3 logic. PMC to confirm bidder understanding.	
111.	Part II / Sec 5.0	810 of 2315	Layout	Tie in point of Storm water	PMC to provide the tie-in point for storm water drain for RO ZLD plant.	All available document/ data have been shared with NIT. For more clarity, The CONTRACTOR shall visit the site.
112.	Part II / Sec 5.0	810 of 2315	Layout	Tie in point of Sanitary water	PMC to provide the tie-in point for sanitary water drain for RO ZLD plant.	All available document/ data have been shared with NIT. For more clarity, The CONTRACTOR shall visit the site.
113.	Part II / Sec 5.0	810 of 2315	Layout	Unit location in tentative layout	Bidder understand that unit location given is tentative and bidder can relocate the units based on process flow sequence, if required. PMC to confirm bidder understanding.	Refer Plot Plan
114.	Part II / Sec 5.0	810 of 2315	Layout	NGL, FGL and HPP	PMC to provide Natural Ground level, Finished ground level, High point pavement.	NIT prevails The CONTRACTOR shall establish the finished grade levels after studying the existing site conditions, high flood level, +0.300 M form existing road between proposed plant and existing plant facilities, whichever is higher ,so as to maintain proper efficient drainage of the plant area at no extra cost to OWNER / PMC. At bidding stage, the CONTRACTOR shall visit the site and study the existing site conditions & existing structures, etc.
115.	Part II / Sec 5.0	810 of 2315	Layout	Existing road TOP level	PMC to provide the existing road top level.	All available document/ data have been shared with NIT. For more clarity, The CONTRACTOR shall visit the site.
116.	Part II / Sec 7.0	1585 of 2315	1.1.2	TSS at HRSCC outlet	Clarified water total suspended solid Kindly note that maximum achievable TSS at outlet of HRSCC shall be 20 ppm. If less than 10 ppm TSS achievable at outlet of HRSCC then there is no requirement of Dual media filter. It can be directly transferred to UF system.	Shall be as per NIT.

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						It is not possible to achieve less than 10ppm TSS at outlet of HRSCC. Kindly recheck guaranteed TSS parameter at outlet of HRSCC.	
117.	Part II / Sec 7.0	1585 of 2315	1.1.2	TSS at DMF outlet		**b. DMF** Filtered water total suspended solid 1.0 As per PGTR, guaranteed TSS at DMF treated water is less than 1 ppm. Kindly note that If it is possible to achieve <1 ppm TSS by only DMF then there is no requirement UF system in RO ZLD plant. It is not possible to achieve less than 5 ppm TSS at outlet of DMF. PMC to check Guaranteed TSS of DMF water. It must be less than 5 ppm.	Shall be as per NIT.
118.	Part II / Sec 7.0	1585 of 2315	1.1.2	pH at RO permeate		**d. RO-1/RO-2** Sr. No. | Parameters | RO-1 permeate | RO-2 1. | pH | 7-8.5 | 7-8.5 Kindly note that in RO system maintained inlet pH shall be around 7-7.5. so from projection pH of permeate water from RO system shall be around 5-5.5. If we increase pH value of RO-I & II permeate than it will affect the TDS of RO permeate. Hence we request to specify maintained pH value in cooling water make up. So that we will provide suitable arrangement to maintain pH of cooling water make up without affecting TDS value.	NIT prevails.
119.	Part II / Sec 7.0	1585 of 2315	1.1.2	TDS value of RO permeate		**d. RO-1/RO-2** Sr. No. | Parameters | RO-1 permeate 1. | pH | 7-8.5 2. | Total suspended solids, ppm | NIL 3. | Total dissolved solids, ppm | 100 We are requesting PMC/client that remove individual TDS guaranteed of RO-I, II & III permeate and considered final TDS guaranteed at RO permeate transfer pump by providing guaranteed TDS requirement of cooling water make up. Because required TDS i.e. 100 ppm, 150 ppm & 150 ppm for RO-I permeate, RO-II permeate and RO-III permeate is very stringent based on	For guarantee, the Combined RO Permeate TDS from all RO stages (RO-1, RO-2 and RO-3) as < 150 mg/l may be considered.

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						provided inlet design TDS i.e. 2500ppm.	
120.	Part II / Sec 7.0	1588 of 2315	8.0	Continuous power consumption		15. Power, kWh 15 .....KV Bidder understand that only continuous (24 hr working drive) shall be considered in Power consumption of price schedule. Like filter backwash / UF backwash pump shall be operated intermediate in daily operation is not to be considered in Power consumption of price schedule. Kindly confirm bidder understanding.	Total Power Consumption during Test run shall be considered including power consumption by all the intermittent loads, as applicable.
121.	Part II / Sec 5.0	810 of 2315	Layout	Pipe support		1) Bidder understand that inlet line from existing guard pond and RO permeate line to Fire water reservoir and Cooling water sump shall be laying on existing pipe rack. Kindly confirm bidder understanding. 2) If pipe rack is not available at any point of location than pipe support outside ZLD plant shall be in other scope. Kindly confirm bidder understanding.	NIT Prevails Pipeline shall be laid on existing pipe rack (as available) in case the existing pipe rack is not available new Pipe rack shall be in the scope of contractor. No piping shall be laid underground. For more clarity, The CONTRACTOR shall visit the site and study the existing site Conditions
122.	Part II / Sec 5.0	810 of 2315	Layout	Shed for UF/RO		Since there is no specific requirement of structural shed or building for UF & RO system, bidder understand that contractor is allow to provide Shed or building for UF/RO system. Kindly confirm bidder understanding.	Bidder's understanding is correct
123.	Part II / Sec 5.0	810 of 2315	Layout	Shed for Blower		Kindly clarify the requirement of shed for air blower.	Shall be as per standard industrial practice
124.	Part II / Sec 5.0	810 of 2315	Layout	Pavement requirement		PMC to clarify the pavement requirement in ZLD plant.	Shall be as per Cl. No. 1.10 of Part II / Sec 5.5
125.	Part II / Sec 3.0	583 of 2315	3.0	Head of RO permeate transfer pump		Pressure Minimum 3.5Kg/cm2g a plant Bidder understand that head of RO permeate transfer pump shall be select based provided pressure requirement at ZLD plant. Kindly confirm bidder understanding.	Shall be as per NIT.
126.	Part II / Sec 3.0	581 of 2315	3.0	Qty of DMF feed pump-II		30 DMF feed pump II Numbers Nos. Three (3 As per design basis, qty of DMF feed pump-II shall be 3 Nos (2W+1S). but as per PFD, qty of DMF feed pump-II shall be 2 Nos (1W+1S). PMC to confirm the qty of DMF feed pump-II.	Shall be as per NIT

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127.	Part II / Sec 3.0	581 of 2315	3.0	Qty of DMF-II		PMC to provide the qty of DMF-II.	Shall be as per NIT
128.	Part II / Sec 5.0	603 of 2315	PFD	Filter Blower requirement		Bidder understand that separate filter air blower to provide for DMF-I & DMF-II. Kindly confirm bidder understanding.	Shall be as per NIT
129.	Part II / Sec 5.0	603 of 2315	PFD	Filter backwash pump requirement		Bidder understand that Common filter backwash pump to be provide for DMF-I & DMF-II. Kindly confirm bidder understanding.	Shall be as per NIT
130.	Part II / Sec 3.0	565 of 2315	1.0	Start date of O&M		all chemical (including proprietary chemical, if any). The start d O&M activities shall be the data of successful commissioning of the (including proprietary chemical, if any). The start date (Zero date) shall be the data of acceptable of PGTR. Only Power shall b PMC to clarify the start date of O&M activities shall be from successful commissioning or shall be from PGTR.	Shall be as per NIT
131.	Part II / Sec 5.0	603 of 2315	PFD	Requirement of thickened sludge sump		Kindly note that thickened sludge sump before the centrifuge feed pump must be require. PMC to recheck and considered thickened sludge sump before centrifuge feed pump.	Shall be as per NIT
132.	Part II / Sec 5.0	603 of 2315	PFD	CLO2 system		1) PMC to note that there is no details or description about the requirement of ClO2 generation system. PMC to provide complete details of CLO2 generation system with capacity, tank and dosing pumps requirement. Also specify the purpose of ClO2 generation system. 2) Kindly note that there is no requirement of Clo2 dosing in HRSCC PMC to check and confirm.	Clearly defined in NIT. NIT prevails.
133.	Part II / Sec 5.0	603 of 2315	PFD	Requirement of separate sump for DMF backwash		As per PFD, separate sump for DMF backwash shall be provide. In generally DMF backwash shall be directly taking suction from UF permeate water tank. Kindly re check the requirement.	Shall be as per NIT
134.	Part II / Sec 2.0	555 of 2315	1.0	Effluent quality		1.0 FEED EFFLUENT QUALITY The contaminated liquid effluent generated from various sources shall be existing guard pond after blending it shall be treated in effluent treatment pla Kindly define what kind of effluent generated from various sources in existing guard pond.	Clearly defined in NIT.
135.	Part II / Sec 2.0	565 of 2315	1.0	Scope of Work of O&M		Kindly provide scope of work for O&M including details of manpower.	NIT prevails
136.	General	-	-	Type of On-Off valve		Bidder understand that Butterfly type valve shall be acceptable for On/Off valve. PMC to confirm bidder understanding.	Not acceptable. Kindly comply Tender requirement. All ON/OFF valves shall be Ball type.

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137.	General	-	-	Manual Isolation valve		Bidder understand that Manual isolation valve shall be required in addition to On/Off valve for all Filters. PMC to confirm bidder understanding.	Noted
138.	General	-	-	Type of FT		PMC to clarify the type of flow transmitter.	Type of Flow Transmitter shall be on the basis of Process condition.
139.	General	-	-	Bypass requirement of FT		PMC to clarify the bypass requirement of magnetic type flow transmitter.	All inline flow meters shall have bypass arrangement.
140.	General	-	-	Vendor list		Make of UF/RO membrane and centrifuge shall be decide by bidder. PMC to clarify.	Bidder shall select sub vendors from the vendor list as specified below. In case vendor for any items are not available in the given list, then bidder shall ensure that sub vendor for the specified item has supplied item for the specified service & the supplied item is in satisfactory service since last 3 years as on date of offer, along with successful PTR. The same shall be acceptable after approval of Client/ PMC. Vendor shall have well proven record for the specified services and shall submit unpriced purchase order copy, performance certificate from client as etc. for owner/consultant approval.
141.	General	-	-	Heat tracing requirement		PMC to clarify the requirement of Heat tracing for Sludge lines.	NIT prevails
142.	Part II / Sec 2.0	587 of 2315	5.1	MOC of Air blower line		11. Process Air Ga Kindly note that CS material is also compatible for all air Blower discharge lines in place of galvanized steel. In all our past project, We have used CS material for air Blower discharge lines. PMC to check and confirm the same.	Shall be as per NIT
143.	Part II / Sec 2.0	587 of 2315	5.1	MOC of backwash line		22. DMF , UF-1 & II Backwash Kindly note that CS material is compatible for Pipe line of DMF & UF-I backwash instead of CSRL. In all our past project, We have used CS material for Pipe line of DMF & UF-I backwash.	Shall be as per NIT
144.	SOR		SP-03	Guaranteed chemical and power		Bidder understand that chemical consumption and power consumption mentioned in SP-03 is not for guaranteed purpose only. There is no price loading/ penalty on guaranteed chemical and power consumption in quoted price.	Bidder to indicate power Consumption per day (24 hrs) for required capacity as per Specifications in SP-03 Price loading/ penalty shall remain as per NIT terms and conditions (Part I / Sec 1.0 Cl. 29.0 and Part II / Sec 7.0).
145.	Part II / Sec 2.0	565 of 2315	1.0	ZLD sludge disposal		Sludge generated from ZLD unit to be taken to a designa (identified by RFCL) before disposal is in bidder scope. As per above clause, kindly provide the distance	All available document/ data have been shared with NIT. For more clarity, The CONTRACTOR shall visit the site.

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						of designated pre-storage area from MEE system.	
146.	Part II / Sec 2.0	570 of 2315	2.2	Salt storage capacity		crystallisers to concentrate sludge in powder form. The powder slu PVC bags and shall be stored in covered shed of 15 Days capacity. We understand that the pre-storage area (identified by RFCL) for sludge storage from MEE system is sufficient for 15 days storage capacity. Kindly confirm.	Shall be as per NIT
147.	Part II / Sec 2.0	570 of 2315	2.2	MEE salt disposal		crystallisers to concentrate sludge in powder form. The powder slu PVC bags and shall be stored in covered shed of 15 Days capacity. We understand that hopper arrangement shall be provided at the solid chute of pusher centrifuge for salt outlet and the collection of salt shall be done directly through hopper in a manual hand pulled trolley (open from top and with wheels) placed at the bottom of the pusher centrifuge. Kindly confirm.	Shall be as per NIT
148.	Part II / Sec 2.0	570 of 2315	2.2	MEE salt collection		Please confirm required number of trolleys & capacity of the same.	Shall be as per NIT Refer Pre-Bid Queries reply
149.	Part II / Sec 2.0	570 of 2315	2.2	MEE salt collection		We understand that the salt collected in trolley shall be manually filled in HDPE bags by the operators (capacity of HDPE bags shall be 25/50 kg) and it shall be manually sealed for further disposal. Kindly confirm.	Shall be as per NIT Refer Pre-Bid Queries reply
150.	Part II / Sec 2.0	-	-	P&ID of MEE system		Kindly provide complete P&ID for MEE system to have clear understanding of required level of automation & to keep same level of understanding among all the bidders.	Bidder to provide during detail engineering.
151.	Part II / Sec 2.0	-	-	MEE structure		We understand that Multiple Effect Evaporator (MEE) System shall be installed in multi-storey structure. The ground base and up to first floor level shall be of RCC column and above that shall be structural steel. All floor levels (except ground base) shall be FRP chequered plate covered. There shall be MS staircase (1500 mm wide) on both the side of the structure. Top of structure shall be MS covered with side cladding. Base for Pusher Centrifuge installation shall be of RCC. Kindly confirm.	Same shall be finalized during Detail Engineering
152.	Part II / Sec 2.0	-	-	Design code for MEE system		We understand that the MEE system shall be designed as per TEMA code B for this application in ETP. Kindly confirm.	TEMA-R will be applicable for MEE package.

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153.	Part II / Sec 2.0	58 of 2315	3.1	Working standby philosophy		There are 2W (2 * 50 %) with 15% overdesign but, Kindly provide the working and standby philosophy for complete Multiple Effect Evaporator (MEE) System for smooth operation on day to day basis. i.e. recirculation pumps, condensate pumps, vacuum pumps etc.	Shall be as per NIT
154.	Part II / Sec 2.0	557 of 2315	3.0	Steam availability		1. L.P Steam (for start-up only) Operating: Pressure, kg/cm^{2}g (Min/Nor/Max) 2 /3/3.5; Temperature, °C (Min/Nor/Max) Saturated/154/160 Design: 6 / FV Above it is mentioned that LP steam (for start-up only). Kindly confirm, if LP steam is available for operation of MEE system during comissioning, normal operation, PGTR and O&M period also.	Steam shall be free of cost.
155.	Part II / Sec 2.0	583 of 2315	3.1	Crystallizer		36 CRYSTALLIZER Number — Nos. — 2 (1W + 1S) Settling tank — As per require MOC — SS 316 Pusher Centrifuge — As per systen 1S) MOC — SS 316 Mother Liquor tank — As per systen Crystallizer sludge storage shed sufficient for 1 Month storag bidder. From the above we understand that MEE system shall be 2 working chains (2x50%). And the settler and Pusher Centrifuge shall be 2(1w + 1s) i.e. one common working between both MEE chain and one standby. Kindly confirm.	Shall be as per NIT.
156.	Part II / Sec 2.0	583 of 2315	3.1	MEE Salt storage duration		36 CRYSTALLIZER Number — Nos. — 2 (1W + 1S) Settling tank — As per require MOC — SS 316 Pusher Centrifuge — As per systen 1S) MOC — SS 316 Mother Liquor tank — As per systen Crystallizer sludge storage shed sufficient for 1 Month storag bidder. crystallisers to concentrate sludge in powder form. The powder slu PVC bags and shall be stored in covered shed of 15 Days capacity. In the above two clauses, there is descripency in number of days to be considered for MEE salt storage. Please confirm whether 15 days storage or 1 month storage is to be considered?	Clearly defined in NIT.

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157.	Part II / Sec 2.0	583 of 2315	3.1	MEE Salt storage duration		In continuation to above query, kindly confirm whether the pre-storage area (identified by RFCL) for sludge storage from MEE system is sufficient for required number of days of storage capacity.	NIT prevails
158.	Part II / Sec 2.0	557 of 2315	3.0	Steam availability		Kindly confirm if MP steam is also available at plant battery limit for use in MEE system.	No MP Steam is available Shall be as per NIT
159.	Part II / Sec 2.0	-	-	Cleaning philosophy		Kindly confirm requirement of cleaning philosophy of heat exchangers.	Same shall be finalized during Detail Engineering
160.	Part II / Sec 2.0	-	-	Drain from MEE system		Kindly confirm the location where the drain from MEE system shall be routed to.	To be disposed to safe location.
161.	Part II / Sec 2.0	557 of 2315	2.5	Treated quality from ZLD	**MECHANICAL VAPOUR RECOVERY (MVR) TYPE EVAP(** Solid waste consistency Minimum 50% Process condensate TDS 300 ppm Final salt from Evaporator System shall be Free Flowing po Kindly clarify the moisture content required for salt generated from Pusher Centrifuge.		Moisture content in solids (salt) at ZLD outlet to be considered as: Max-10%
162.	Part II / Sec 2.0	-	-	Risk Matrix		Kindly provide the Risk Matrix to be considered during Hazop Study.	Same shall be finalized during detail engineering.
163.	Part II / Sec 2.0	814 of 2315	4.1	Size of Flushing connection		Flushing point with isolation gate valve and pressure gauge points (a and at all battery limit tie in points) with isolation gate valve shall be prov Kindly confirm the size of flushing point with isolation gate valve to be considered.	Minimum 6” flushing point. However size to be finalize during detail engineering.
164.	Part II / Sec 2.0	840 of 2315	-	Layout of fire water network		In this drawing no. A747-308-81-41-040804 Rev.03, existing12” fire water header is shown around the proposed ETP plot. We understand that we can use the same and take taping for new fire header. Kindly confirm. Also we can use the existing hydrant and monitor for coverage. Kindly confirm.	Fire water Tie-in shall be taken from the nearest point (contractors have to physically verify the tapping location) on the existing FW ring. Tapping for supply of water for hydrant system should be provided with two direction to ensure easy maintenance and uninterrupted water supply in case of break down and shall be planned in such a way that outage of any section of fire water line should not affect other section. Dedicated hydrant, monitor, landing valve to be envisage for the new facility.
165.	PC-211-PNMP-TS951 Annexure-6	Page 717 of 2315	Sr. No.32	Specific software package for Engineering drawings		PDS/SP3D, Auto Plant & PDMS mention as 3D Modelling software to be used for engineering drawings. Bidder’s Query: As our understanding, bidder to select any one of above mention software package for 3D modelling,	Bidder’s understanding is correct. Bidder may use any latest version of software for 3D modelling viz. S3D or E3D. It is to be noted that PDS and PDMS have been superseded by S3D and E3D respectively.
166.	DESIGN SPECIFICA	1207 / 2315	7.1.3.1			It is indicated under this clause that “Silica Analyzer shall be of Hach make.”	.”Since, Vendor list doesn’t have silica analyzer categories, so kindly follow tender

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	TION - INSTRUMENTATION					We understand that the make of all the Instrument Items shall be as per the project approved vendor list given with the tender. Please confirm our understanding.	clause "Silica Analyzer shall be of Hach make"
167.	DESIGN SPECIFICATION - INSTRUMENTATION	1210 / 2315	7.2.2			It is indicated under this clause that "All Rotametres shall be metal tube type with transmitter." We would like to submit that in RO, DM, CPU, ZLD & WWTP Rotameters are only used in discharge line of dosing pump for local indication of flow of dosing chemicals. Hence we understand that, if the rotameters are used for local indication only, then the transmitters are NOT required. Please confirm our understanding.	All Rota metres shall be metal tube type with transmitter
168.	DESIGN SPECIFICATION - INSTRUMENTATION	1214 / 2315	7.2.4.4			It is specified under this clause that the Electromagnetic flowmeter shall have Ceramic lining. We would like to submit that as per project requirement Electro magnetic flowmeter are required upto line size 14" Two of the approved vendors have regret to offer Ceramic lined flowmeter as they are NOT manufacturing the same. One approved vendor has informed that they have ceramic lined flowmeter upto size 8" only also the flowmeter end connection will be wafer and NOT flanged end. Other approved vendor is able to supply the ceramic lined flowmeter with flanged end. However completer flowmeter will be imported. In view of above there will be only one vendor who can meet the specification. This will have huge cost impact also it may have impact on delivery. Hence we once again request you to review the	The Electromagnetic flow meter shall have Ceramic lining.

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						requirement and confirm your acceptance to PTFE/PFA lined flowmeter which are generally used in all Oil and Gas, Refineries and Petrochemicals projects	
169.	DESIGN SPECIFICATION - INSTRUMENTATION	1215 / 2315	7.3.2			It is indicated under this clause that “Gauge glass columns will not exceed 1500 mm. Multiple level gauges shall be used for visible lengths more than 1500 mm.” We understand that for Magnetic Type Level Gauge the C to C distance of 3000 mm is acceptable. Please confirm our understanding.	Gauge glass columns will not exceed 1500 mm. Multiple level gauges shall be used for visible lengths more than 1500 mm
170.	DESIGN SPECIFICATION - INSTRUMENTATION	1221 / 2315	7.6			It is indicated under this clause that “The valves shall have smart electropneumatic positioners of same OEM make as the valve.” We would like to submit that all the control valve manufacturers are NOT making their own SMART electropneumatic positioner. Hence we propose to use following make of Electropneumatic positioner in addition to Electropneumatic positioner manufactured by Control valve manufacturer. i) Siemens India ii) Metso India iii) Dresser India iv) Fisher India Please confirm your acceptance.	The valves shall have smart electro pneumatic positioners of same OEM make as the valve.”Kindly follow Vendor list for additional make
171.	DESIGN SPECIFICATION - INSTRUMENTATION	1222 / 2315	7.6			It is indicated under this clause that “All on-off valves shall be ball type on-off valves only.” However in Design Specification – Process, under clause 9.0 on Page 600 of 2315 it is indicated that “All solenoid operated On – off valve 4” and above shall be butterfly type. In view of above please clarify following a) Whether we have to consider all On Off valve as Ball type or On Off valve size 4” and above butterfly type. As a standard practise in water treatment projects (WWTP/RO-DM-CPU & ZLD) On Off butterfly valves are	All on-off valves shall be ball type on-off valves only.

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						used. b) Please inform the rating of On Off valve to be considered whether it shall be as per piping class or minimum 300#.	
172.	DESIGN SPECIFICATION - INSTRUMENTATION	1222 / 2315	7.6			It is indicated under this clause that “The ball valves of up to 2” size shall be floating ball design with full bore design, unless otherwise specified. Other ball valves with higher size can be trunnion supported ball type design type.” We would like to submit that in all our past projects in Refineries following philosophy has been followed i) For valve rating 150# for sizes 10” and above Trunion mounted. ii) For valve rating 300# for sizes 6” and above Trunion mounted. iii) For valve rating 600# and above for sizes 2” and above Trunion mounted. We therefore request you to review and confirm the size for which we have to consider Trunion mounted ball type design.	The ball valves of up to 2” size shall be floating ball design with full bore design, unless otherwise specified. Other ball valves with higher size can be trunnion supported ball type design type
173.	DESIGN SPECIFICATION - INSTRUMENTATION	1222 / 2315	7.6			It is indicated under this clause that “For all shutdown valves on fire safe applications, air volume tank shall be supplied for the storage of air volume for minimum 3 stroke operation.” Kindly note that in water service (RO, DM, CPU, ZLD & WWTP) the fire safe On- off valves are not required. Hence the requirement is NOT applicable. Please confirm our understanding	Noted.
174.	DESIGN SPECIFICATION - INSTRUMENTATION	1223 / 2315	7.6			It is indicated under this clause that “All instrumentation butterfly control valves shall be triple offset type only.” Kindly note that in water service (RO, DM, CPU, ZLD & WWTP) Double offset type On Off Butterfly valves are used. Hence triple offset valves are not required for water service. Please confirm our understanding	All instrumentation butterfly control valves shall be triple offset type only.”
175.	DESIGN SPECIFICA	1229 / 2315	8.1			It is indicated under this clause that “The Operation and control of ZLD plant shall be	Non SIL PLC based control system is required

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	TION - INSTRUMENTATION					through Process PLC(Server based control system). The system shall be microprocessor based programmable logic control with fault tolerant redundant processor based on DMR technology." We understand that PLC system required is General purpose (NOT SIL Certified) DMR PLC. Please confirm our understanding.	
176.	DESIGN SPECIFICATION - INSTRUMENTATION	1232 / 2315	8.2 g			It is indicated under this clause that IO card channel density shall NOT exceed the following limit. Analog Input 16 Channels Analog Output 16 Channels Digital Input 32 Channels Digital Output 16 Channels We understand that Digital Output card with 32 channels are also acceptable. Please confirm our understanding.	Digital Output card with 32 channels not acceptable.
177.	DESIGN SPECIFICATION - INSTRUMENTATION	1255 / 2315				On the referred page under Annexure 2 details of Field Instrument connection is given. For Radar Level Instrument following is provided i) Radar direct mount on vessel (Min. Rating ANSI 300#) --- 3" Flanged ii) Tank level Instrument (Radar) on Atmospheric tank clean service / Pressurized equipment – 8" Flanged 1) From the above we understand that for Radar LT to be used in RO, DM, CPU, ZLD & WWTP for level measurement, we have to consider the Radar LT connection 3" 300#. Please confirm our understanding	Radar LT connection 3" 300#.is acceptable

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178.	General Specification for Programmable Logic Controller (PLC)	1305 / 2315	8.0			It is indicated under this clause that "The Package Vendor shall provide five years Comprehensive Annual Maintenance Contract (AMC) as part of their supply, installation and commissioning for the complete control System." We understand that the requirement of CAMC is given in General specification for PLC and the requirement of 5 Years CAMC for PLC has NOT been specified in scope of supply hence 5 Years CAMC for PLC is NOT required. Please confirm our understanding	AMC clause for the project is not applicable. Operation & Maintenance of the plants for a period of 1 year including supply of spares, chemicals & consumables including control system for 1 year; including Project Management and handing over of the plants and facilities are under contractor scope.
179.	DESIGN SPECIFICATION - INSTRUMENTATION	1244 / 2315	11.8			It is indicated under this clause that "All intermediate fittings shall be double compression SS316 MOC, Swagelok / Parker make only. We understand that make of SS316 fittings of other make as per the vendors given under 311619 Compression fittings on Page 2078/2315 are also acceptable. Please confirm our understanding.	Noted.
180.	Contractor Scope of Work	562 / 2315	VII			It is indicated under this clause that "Modification of existing control room is in the scope of contractor.." Hence we understand the following i) The PLC system of ZLD plant is required to be installed in this existing control room and there is sufficient space in existing control room to accommodate the NEW PLC system. ii) The existing control room is within the battery limit of proposed ZLD plant. iii) If the existing control room is NOT within battery limit of proposed ZLD plant, then the cable tray / cable duct and their support from proposed ZLD plant battery limit to existing control room shall be by others. However cables from proposed ZLD plant to existing control room shall be in contractor's scope. Please confirm our above understanding.	Bidder to note that ES &OS for ZLD plant shall be accommodated in the existing Water block control room. .However, existing rack room will need to be extended on the east side (without breaking the wall) for accommodating panels for ZLD with split type air conditioning system. Dimension of Extended portion of Rack room shall be approx 15mx10m. Rack room shall consist of all panels for PLC, panels for telephone, panels for CCTV System, panels for Fire Alarm etc. ii) Refer Plot Plan for location of existing Control room. iii) All cable tray, cable duct, supporting structures, cables upto (supply, installation/laying, termination, commissioning etc.) shall be in the

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							scope of LSTK Contractor for minimum following : - – From ZLD Plant to Rack Room / Existing Control Room - – From SS # 5 to ZLD Plant - From SS # 5 to Rack Room / Existing Control Room - .
181.	Contractor Scope of Work	562 / 2315	VII			It is indicated under this clause that “Modification of existing control room is in the scope of contractor.” i) Please provide the location of this existing control room in overall layout and the distance of the existing control room from proposed ZLD plant so that we can estimate the length of cables from ZLD plant to control room. ii) Please provide the location where MCC panels of ZLD are to be placed as we have to lay cable between MCC & PLC.	Refer Plot Plan for location of existing Control room. MCC etc. shall be placed in existing Substation # 5. PLC Panels shall be in placed in new Rack Room (in (adjoining to the existing Control room). All E& I interfaces shall be in scope of LSTK Contractor
182.	Design Specification Rotating Equipment	659 / 2315	3.6			It is indicated under this clause that “All civil buildings / facility, Control room, substation, labs etc to be equipped with suitable HVAC system with 100 % redundancy..” Since the PLC panels of ZLD plant are to be installed in existing control room we understand that the HVAC system for control room is NOT in bidder’s scope. Please confirm our understanding.	PLC Panels shall be placed in the Rack Room. Split type air conditioning system shall be provided in Rack Room and same shall be in the scope of LSTK Contractor.