

## MINUTES OF PRE-BID MEETING

**Name of the work: Supply, installation, testing and commissioning of biological plant, membrane bio reactors (MBR), Reverse Osmosis plant (RO), and accessories for 1 MLD Zero Liquid discharge (ZLD) plant at Cochin SEZ, Kakkanad**

**Tender No** : NIT No.: WAP/ENVT/ H-3082/CSEZ/2019-20/06 dated 12.06.2019

**Date & Time:** 25.06.2019 at 15:00 Hours

**Venue:** WAPCOS Limited, CSEZ Project Office, Kakkanad

### **Members Present:**

1. M/s Ion Exchange (India) Ltd
2. M/s Aquanza Technologies

### **Email Received:**

3. M/s Toshiba Water Solutions Private Limited
4. M/s W.O.G Group of Companies
5. M/s Aldee Water Pvt. Ltd.
6. M/s JBR Technologies Ltd

<b>Sl. No</b>	<b>Queries</b>	<b>Replies</b>
<b>I</b>	<b>M/s Ion Exchange (India) Ltd</b>	
1	<b>3.0 Earnest Money Deposit</b> Kindly accept EMD in the form of Bank Guarantee also.	The NIT condition shall prevail.
2	<b>4.1. Payment Terms</b> Kindly reconsider the term as <ul style="list-style-type: none"><li>• "10% of the cost against submission of bank guarantee of equivalent amount valid upto date of commissioning</li><li>• 10% on submission and approval of detailed engineering including layout, GA, P&amp;ID, HFD, PFD etc.</li><li>• 70% on delivery of materials/equipments at site and mobilization of team at site after certification of the original bill by the concerned officials.</li><li>• 10% on installation, testing, commissioning and submission</li></ul>	The revised payment terms shall be: <ul style="list-style-type: none"><li>• "10% of the cost against submission of bank guarantee of equivalent amount valid upto date of commissioning.</li><li>• 10% on submission and approval of detailed engineering including layout, GA, P&amp;ID, HFD, PFD etc.</li><li>• 60% on delivery of materials/equipments at site and mobilization of team at site after certification of the original bill by the concerned officials.</li><li>• 10% on installation, testing and commissioning</li><li>• 10% on successful completion of the trial run, performance testing and submission of Performance Bank Guarantee of equivalent amount valid for 2 years from</li></ul>

Sl. No	Queries	Replies
	of performance Bank Guarantee of equivalent amount valid for 2 years from the end of trial run.	the end of trial run.”
3.	<b>Completion:</b> We kindly request for a time period of 8 months for complete Supply; Two months thereafter for Erection & Commissioning	The project completion period shall be 8 months. However, effort should be taken to complete the work within 150 days as the project deals with public interest.
4.	<b>2.0 Scope of Work</b> Based on the provided scheme it is understand that RO is 3 stages with 94% recovery. And for the RMS there is a separate RO with 45% recovery with PT with saturator and UF system. Based on the inlet silica - 25 ppm, RO Reject silica at the second stage will >200 ppm. Kindly confirm shall we consider our scheme for the membrane design and silica reduction	The scheme as per NIT shall prevail.
5.	<b>2.0 Scope of Work</b> Kindly reconsider the scheme like this " Screen - EQT -- Biological Tank -- MBR --- HRSCC (Lime Soda Softening) -- MGF--- RO I --- RO I Reject Tank --- RO II --- RO II Reject Tank --- HRSCC (Dolomite Dosing for Silica Removal) -- MGF --- UF -- RO III --- RO III Reject Tank ---- RO IV --- To ZLD Process	The scheme as per NIT shall prevail. Chemical / Physical treatment (Lime softening) shall lead to more chemical sludge generation and hence not considered.
6	<b>2.0 Scope of Work</b> With the inlet colour - 3000 Pt. Co, the colour reduction based on the biological treatment will be around 50%. Colour will foul the RO Membranes, Kindly clarify the cause of colour and any separate treatment need to be consider for the same?	The cause of colour is on account of effluent from textile processing unit in CSEZ. No separate treatment is required to be considered.
7	<b>General</b> We(IEIL) are manufacturing the RO membranes, Kindly consider the IEIL make of Hydramem RO Membranes	The make for RO membranes shall be:  DOW/GE/TORAY/HYDRONAUTICS
8	3.0 Technical Specification/Pt. No. 24	The Defect Liability Period (DLP) shall be

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	DLP Period For the normal Tenders, the DLP will be 12 months only. Kindly provide the DLP as 12 months instead of 24 months which is quite longer.	for a period of 12 months with effect from the date of successful completion of trial run. Guarantee for Membrane shall be Four years. Details are Given in <b>Annexure-1</b> .
9	<b>3.2 Membrane Bio Reactor</b> Kindly mention the membrane make? MBR design will be based on individual membrane manufacturer standards and specification, SO the technical specification (Membrane modules, Dosing Systems) will be based on Membrane manufacturer standards. And also mention Whether MBR module need to consider hollow fibre or Flat sheet Membranes? MBR module to have flitration flux closer to 20 L/m2h, Hydraulic flux of 17.8 L/m2h likewise	The make for MBR membranes shall be:  KOCH/GE/TORAY  Hollow Fibre / Flat sheet membranes can be considered.
10	<b>3.4 Softener Filter Unit</b> We understand that Softener Unit is provided for the reduction of hardness and for the better recovery in the RO System. Based on the provided scheme we recommends that the requirement of Softener is not required. Kindly clarify	The scheme including softener as per NIT shall prevail. Softener with weak cationic resin is recommended.
11	<b>3.7 Saturator Unit</b> Silica Reduction will be better with the help of Lime / Dolomite Dosing. Shall we consider the same	The scheme including saturator as per NIT shall prevail. Chemical / Physical treatment is not recommended.
12	Based on the HFD, we understand that the RO stages are continuous without any break tanks. These shall be required and the same shall be in civil and in client's scope	The scheme as per NIT shall prevail.RO has to be Assembled in a Single Skid ROIII stage has to be installed with pumps to avoid additional civil work.
13	<b>3.7 Saturator Unit</b> Shall we consider HRSCC for the better performance?	The scheme as per NIT shall prevail.
14	<b>Conditions of Contract -</b> Penalty Clause Overall recovery including RMS will be difficult, Kindly reconsider the penalty clause based on stage wise permeate production	Recovery on stage wise has to be as per the NIT. Penalty up to 5% shall be imposed.
15	<b>Hydraulic Flow Diagram</b> Based on the HFD, we understand that, RO Stages are continuous without any	The scheme as per NIT shall prevail.

<b>Sl. No</b>	<b>Queries</b>	<b>Replies</b>
	break tanks. IEIL will recommend the break tank between the stages --- RO I -- RO I Reject Tank --- RO II --- RO II Reject Tank --- RO III	
16	PCB & Statutory Approvals	All PCB related and other Statutory approvals shall be in client's scope; Bidders has to provide with all technical detail/ presentation in this regard.
17	Time Extension	Last date and Time is as per NIT.
18	Trial run period after Commissioning	Trail Run shall be for One Month. The Bidder has to add the cost in their bid for the trail run also. <b>Annexure-II.</b>
<b>III</b>	<b>Toshiba Water Solutions Pvt Ltd</b>	
1	Section— II Clause No.2 Qualifying Criteria: SI. No. (e) first Point i.e Profit after Tax, Page No.20 of NIT <ul style="list-style-type: none"> <li>We would like to propose here that instead of the loss criteria, positive net worth criteria should be considered for financial qualification as the same is a reliable parameter and is being used by all the PSUs and other major Clients in the country.</li> </ul>	The clause as per NIT shall prevail.
<b>IV</b>	<b>W.O.G Group of Companies</b>	
1	Request to review on relaxing the criteria in terms of having the experience anywhere in the world and a sound presence in India in the field of water, waste water treatment business	The experience criteria as per NIT shall prevail.
<b>V</b>	<b>Aldee Water Pvt. Ltd</b>	
1	Confirm whether tender fee & EMD is exempted or not	Tender Fee and EMD exemption shall be applicable to registered MSMEs as per extant rules and policies. Registration fees for registration on MSTC portal shall be applicable to all the interested bidders including MSMEs.
<b>VI</b>	<b>JBR TECHNOLOGIES LTD</b>	
1	Clause 2.0 f) The bidder/Consortium must have jointly or separately constructed /implemented successfully in India as mentioned below during the last seven years ending previous day of	The qualification criteria as per NIT shall prevail.

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	<p>last date of submission of tender.</p> <p>i) We humbly request you for reconsideration of above mentioned clause especially in point ii) Two similar work including supply, installation and commissioning Biological treatment, MBR and RO, of Total Capacity 0.8 MLD for ETP. As we have successfully completed installation, running and maintenance of (300 KLD +500 KLD) Plants separately.</p>	

**Sd/-**  
**General Manager (SEZ)**

## **ANNEXURE-I**

### **PERFORMANCE GUARANTEE**

The guarantee is applicable for the performance of individual process equipment as well as overall performance of the Effluent Treatment Plant.

#### **Performance Guarantee for Effluent Treatment Plant**

The Contractor shall give guarantee for a period of Two year from the date of successful Commissioning of the treatment plant against design, defective materials, workmanship and performance. The contractor shall give guaranteed treated waste water quality as per NIT. Any defects found in the workmanship, materials or performance of the unit shall be made good by the Contractor at his own expense within the time specified by Engineer-In-Charge. In case the quality of treated Effluent from ETP varies from what is required, the Contractor shall rectify the plant at no extra cost so as to achieve the requisite performance guarantee and satisfy commissioning of the plant to the Engineer-In-Charge.

#### **Manufacturer's Guarantees**

The manufacturer's guarantee for design, workmanship and performance for all bought out items shall be made available to the owner and shall be valid at least for the entire performance guarantee period. In the event of failure of any particular equipment which fails more than three times during the guarantee period as mentioned in clause below, the contractor shall replace the equipment at his own cost. Manufacturer's / Contractor's guarantee, for such replaced equipment shall also be made available to the Owner and should be kept at least for one year from the date of last replacement.

#### **Equipment Guarantee**

The Contractor shall guarantee for the period of One year from the date of successful commissioning of the treatment plant against defective performance of all equipment / instruments / mechanical or electrical parts under Contractor's scope of supply. Any defects found either in materials or workmanship shall be made good by the Contractor at his own expense within the time specified by the Engineer-In-Charge.

#### **Guarantee for Membrane**

The Contractor shall guarantee for the period of Four years from the date of successful commissioning of the treatment plant against defective performance of RO & MBR Membrane without loss of recovery and shall replace the defective membrane at his own expense within the time specified by the Engineer-In-Charge.

## **ANNEXURE-II**

### **Testing and Trial Run**

- The Vendor shall have to test the each equipment used for the plant for at least 72 hours continuous running with designed load and to the full satisfaction of Engineer-In-Charge. Any defects found, has to be rectified by the contractor at his own cost immediately and within reasonable time to be decided by client.
- The contractor shall have to dry test each process equipment used for the plant for about 48 hours continuous running to the full satisfaction of the Engineer-In-Charge. After satisfactory testing of the individual equipment, the Contractor shall run the whole plant at no extra cost to the owner for at least 30 days as directed by the Engineer-In-Charge and ensure the treated water quality.
- Necessary instruments, gauges, supervisory personnel etc. shall be furnished / provided by the Contractor free of cost for conducting the trial runs.