UBN No: DLB2223SLOB31190

Municipal Corporation Jodhpur South

Nagar Nigam Bhawan, Inside Polytechnic college campus, Residency Road, Jodhpur- 342004
Phone No: - 0291-2651464 Fax 0291- 2651464 e-mail: semcj11@gmail.com

Municipal Corporation Jodhpur South
Invites Tender
for

Supply, installation, testing, trial run & commissioning of Online Continuous Effluent Monitoring System (OCEMS) at outlet with data transfer to CPCB, RSPCB server & STP server for 50 MLD Sewage Treatment Plant phase1 at Salawas Jodhpur including three year operation and maintenance with Defect Liability Period of 3 years.

कार्यालय नगर निगम जोधपुर दक्षिण

[नगर निगम भवन] पोलिटेक्निक कॉलेज के अंदर, रेजिडेन्सी रोड, जोधपुर 342004
फोन नं. : - 0291-2651464 फेक्स 0291- 2651464 ईमेल :- ceo_nnj@rediffmail.com

Sr. No:- 30442 Date:- 8-3-23

ON LINE NOTICE INVITING TENDER

Online Tender is hereby invited by Municipal Corporation Jodhpur South for the following work in two envelope from eligible/experienced contractors as per bid conditions. Tender to be submitted duly digitally signed in electronic format only on website http:/eproc.rajasthan.gov.in and www.sppp.rajasthan.gov.in. The tender document shall be available for downloading from above mentioned website from Date:- 9-3-23 6:00 PM

Sr. No.	Name of Work	Estimated Project (Rs.)	Earnest Money (Rs.) 2% of estimated project cost	Cost of Tender form (Rs.)	Processing Fee (Rs.)	Duration of Contract
1	Supply Installation, Testing & Commissioning of online Continuous Emission & Effluent Monitoring System (OCEMS) At 50 MLD Sewage Treatment Plant at Salawas Phase - I and connect to CPCB/RSPCB Portal including 3 Years Operation & Maintenance.	1200000/-	24000/- or as per latest govt. Rules	1000/-	500/-	One Month

1. Important Dates

S. No.	Events	Date and Time
A.	Availability of tender document	9-3-23 at 6:00 PM
B	Last date and time of online submission of tender	20-3-23 upto 6:00 PM
C.	Submission of tender fee, RISL Charges and EMD in physical form through DD/ BC only (At Nagar Nigam Jodhpur South Office Room No. 319 only)	21-3-23 upto 3:00 PM
D.	Date and timing of Opening of Technical Bid	21-3-23 at 4:00 PM
E.	Date and timing of Opening of Financial Bid	will be informed later

Terms and conditions

1. Bidders who wish to participate in online bidding will have to procure digital Certificate as per IT Act 2000 to sign their electronic bids. Offers which are not Digitally signed will not be accepted.

2. The cost of tender document and EMD as mentioned against NIT is to be paid in the form of DD/ BC in the name of "Commissioner, Municipal Corporation, Jodhpur South" payable at Jodhpur Separately in the manner prescribed in the tender document and processing fee as mentioned against NIT is to be paid in DD in the name of "Managing Director, RISL" payable at Jaipur.

3. Eligibility Criteria: As per tender conditions.

4. Tender fee and process is not refundable.

5. The bid validity period is up to 120 days from the date of opening of tender.

6. Tender will not be opened without following documents.

   (A) Processing fee, tender fee & EMD fee
   (B)Self attested Certificate regarding no black listing/debarment form any govt./Semi. Govt. deptt./ULB

7. Self attested Certificate regarding no blood relation Certificate.

Other details can be obtained from website http://eproc.rajasthan.gov.in, www.jodhpurmc.org & www.sppp.rajasthan.gov.in

Sd/-
Commissioner
Municipal Corporation Jodhpur South

Sr.No:- 30443 to 30448 Date:- 8/3/23

Copy to:-

1. PA to Mayor, Municipal Corporation, Jodhpur South
2. Add. Chief Engineer, Municipal Corporation, Jodhpur South
3. Executive Engineer, Municipal Corporation, Jodhpur South
4. Assistant Account Officer, Municipal Corporation, Jodhpur South
5. Assistant Engineer, Municipal Corporation, Jodhpur South
6. Gaurd file.

Commissioner
Municipal Corporation Jodhpur South

MUNICIPALCORORATION JODHPUR SOUTH

Name of work:- Supply, installation, testing, trial run & commissioning of Online Continuous Effluent Monitoring System (OCEMS) at outlet with data transfer to CPCB, RSPCB server & STP server for 50 MLD Sewage Treatment Plant phase1 at Salawas Jodhpur including three year operation and maintenance with Defect Liability Period of 3 years.

INTRODUCTION

The bidder should visit and examine the site and fully understand the condition of the site and establish the equipment before tendering .The work shall be carried out in accordance with the RSPCB/CPCB and MCJS (Municipal Corporation Jodhpur South) detailed specification and to the entire satisfaction of the Engineer Incharge of the work as per RSPCB/CPCB guideline.

1. Qualification Criteria

1. The Bidder should have successfully executed and commissioned similar nature OCEMS installation work with successful data transmission for at least 2 STP/CETP in last five years in India.
2. The Bidder should have experience of successful operation and maintenance of OCEMS and data transmission for atleast one STP for at least six months within last five years in India.
3. Copy of work orders and Successful completion/execution Certificate for above required experiences issued by Govt. of India, State Government Department / Local Body / Board / Development Authority & Union Territory shall only be considered.
4. The Model quoted by Bidder should be in operation in India for the last at least 7 years in Govt. Plant/ Supplied to Govt. plant. PO/ Robust functioning letter to be furnished.

2. Eligibility Criteria

1. Tender without processing fee, tender fee, Earnest money as mentioned in NIT, certificate of registration, blood relation and debarment shall not be considered.
2. Bidder must submit along with bid documents a certificate issued by manufacturer stating that they will provide after sales service and supply of spare parts for 5 years from date of supply of the instruments and machineries.
3. At least one registered office of manufacture shall be located in India.

3. The work described in this tender documents consist of Two parts;

Part "A"-Supply, installation, testing, commissioning & trial run of Online Continuous

Effluent Monitoring System (OCEMS) at outlet of STP with data transfer to CPCB, RSPCB server & STP server for 50 MLD Sewage Treatment Plant phase1 at Salawas Jodhpur including

Part "B"- Three year Annual operation and maintenance with Defect Liability Period of 3 years.

4. Approval of Material and Equipment

Prior to dispatch of material / equipment the datasheet including specification, drawings, performance curve, operation instruction etc. has to be submit to MCJ and get it approved before procurement. Contractor shall submit inspection report of all the instruments before installation at site.

5. COMPLETION OF THE WORK

1. Time for completion

The whole of the work, including mobilization, reconnaissance, construction, installation, testing, commissioning and trial runs, data transmission and demobilization has to be completed within a period of 03 months (including one month trial and run period) calculated from the commencement date, which is 07 days after the issue of work order to commence the Work.

2. Completion of work and fully commissioning

Once the entire system has been installed, tested, commissioned, up to data transmission and removal of all defects upto the satisfaction of Engineer In Charge-in-Charge and one month successful trial run after commissioning , the work shall be treated as "Completed".

3. Defects liability period and Operation and maintenance work

The Operation and Maintenance & defect liability period shall be of 3 year, starting from the date of the completion of the work as above . The contractor shall be responsible for satisfactory performance for operation and maintenance of OCEMS.

6. DOCUMENT REQUIRED FOR PAYMENT

The contractor shall submit the following documents in duplicate along with the invoice / bill.

1. Invoice indicating details of equipment's, material manufactured, supplied and installed or work carried out, supply value of such material or equipment or value of such work carried out and amount claimed.
2. Reports /certificate of inspections, calibration, tests carried out by the supplier of the contractor or by the contractor himself.
3. Any other such details/documents as may be reasonably specified by the Engineer In Charge from time to time during execution of the contract.

4. OCEMS parameters daily report/ logbook during , routine and preventive maintenance records, calibration documents etc. during Operation and maintenance period

7. PAYMENT TERMS

1. 60 % on supply & installation, testing , commissioning and data transmission of complete system.
2. 10% on completion of successful one month trial run period.
3. 10% after successful completion of First year O&M work.
4. 10% after successful completion of Second year O&M work.
5. 10% after successful completion of Third year O&M work.

8. PRICE VARIATION

1. No Price Escalation shall be payable in work.
2. Price quote shall be including all types of Taxes. Bidder shall not claim for any increase or decrease in taxes.

9. For any litigation Jurisdiction of court shall be Jodhpur.

10. Client (MCJS) reserves the rights to cancel the tender at any stage without giving any reason.

11. Perfomance Security shall be as per latest rules of Government and RTPP act and Rules.

TECHNICAL SPECIFICATION

Technical specifications of OCEMS instruments are as follows.

1. Online BOD, COD, TSS, pH & Temperature Analyser with Transmitter and Sensor complete with all accessories.

2. COD: Measuring Range: 0-800 mg/L, Accuracy: ±2% or 5 mg/L, Resolution: 1 mg/L or better, Measurement Principle: Absorption - Double Beam UV vis with full spectrum (of wavelength range 200-720 mm) scanning, Cleaning: Automatic Self-Cleaning using compressed Air.

3. BOD: Measuring Range: 0-500 mg/L, Accuracy: ≤ 1 mg/L, Resolution:1 mg/L or better, Measurement Principle: Absorption - Double Beam UV vis with full spectrum (of wavelength range 200-720 mm). Cleaning: Automatic Self-Cleaning using compressed Air.

4. TSS :Range: 0-900 mg/L, Accuracy: ≤ 3%, Resolution: ≤ 0.15 mg/L, Operating Temperature: 0- 60°C, Cleaning: Automatic Self-Cleaning using compressed Air.

5. pH and Temperature Analyser, Transmitter: Power Supply 230 VAC, Input: One Digital Sensor, Output: 4-20mA HART, IP66 Protection / Tx protection cover required / Sensor Range 0-14 pH , able to transmit digital signal to transmitter, calibration data can be transferred to Transmitter , process temp: 65 deg cen/ flow through tee, MOC SS. Automatic temperature measurement and compensation should be provided in the pH sensor.

6. Outlet Flow data- At outlet channel Flow meter is installed. Bidder has to provide facility to display and transmit its reading along with other parameters .

7. Providing, installation, testing and commissioning of ONLINE 1KVA UPS SYSTEM, Single Phase 230 V, 50 Hz with 2 hour backup SMF battery bank as per specification.

8. CON-CUBE TERMINAL: High-end IoT (Internet of Things) terminal based on an industrial PC, IP65, widescreen colour graphical display (9”) and touch screen, 4xLED functional indicators. Main Memory 2 GB RAM, On-board Memory- 8 GB, highly intuitive use, informative visualization & easy operation: time series, optical spectra and all events in clear text sensor and station management of up to 64 parameters: automatic cleaning, data logging, sample & calibration including history and multipoint calibration, sensor function check, user management and easy data transfer via USB-stick low power operation with less than 3 watts (@ 15 min. measuring interval): wide range AC and DC variants available IoT (Internet of Things) and M2M (Machine to Machine) connectivity: 100 Mb/s Ethernet, 300 Mb/s WLAN and optional worldwide WCDMA 4G interface, remote control (http) and data transfer into “Cloud” via FTP, SSH and TML Process interface to SCADA via Modbus RTU/TCP, SDI- 12, Profibus DP, analogue 0/4-20 mA and relay outputs (state) Integration of third-party sensors via antilog 0/4-20 mA and digital (solid state) inputs, Modbus RTU/TCP.

9. The MoC should be Titanium or better to sustain the sensor in highly corrosive wastewater environment.

10. Chinese Made products /instruments shall not be acceptable as per Gov. ruling date 23rd July 2020 inserting Rule 144 (xi) in GFRs (General Finance Rules) 2017 by "Department of Expenditure, Public Procurement Division, Ministry of Finance".

10. Operating temperature- 0 to +60°C, Storage temperature -10°C to +60°C, IP 66

Basic requirement of an efficient online continuous Effluent Quality Monitoring System (OCEMS)

1. OCEMS system Should produce analytically valid results with precision and repeatability should be capable of operating unattended over prolonged period of time.

2. The instrument/analyzer should be robust and rugged, for optimal operation under extreme environmental conditions, while maintaining its calibrated status.

3. The analyzer should have inbuilt features for automatic water matrix change adaption.

4. Should have provision for Multi-server data transmission from each station without intermediate PC or plant server.

5. System Should have provision to send system alarm & SMS to central server in case any changes made in configuration or calibration

6. System Should have provision to record all operation information in log file.

7. For each parameter there should be provision for Independent analysis, validation, calibration & data transmission.

8. System Must have provision of a system memory (non-volatile) to record data for at-least one year of continuous operation.

9. System Should have provision of Plant level data viewing and retrieval with selection of Ethernet, wireless, Modbus & USB.

10. The correlation/interpretation factor for estimating COD and BOD using UV-Visible Absorption Technique shall be regularly authenticated/validated and details provided.

11. Record of online diagnostic features including sensor status should be available in database for user friendly maintenance.

12. Expandable program to calculate parameter load daily, weekly or monthly basis for future evaluation with flow rate signal input.

13. Should have facility to send SMS and email/mail alerts to designated MCJS's officials for any deviation from permissible effluent discharge standards limits. The facility to be provided for updating mobile No./email for any change in contact details/Mobile No./email due to transfer, retirement etc.

14. System must have low operation and maintenance requirements with low chemical consumption and recurring cost of consumables and spares.

15. USB-interface for data transfer, upgrading software etc.

16. The Controller should be able to power all the sensors and terminals or accessories attached to it without having to need any additional power sources in the system for increased protection against lightening and possible electromagnetic interference.

Reporting:

1. The Real Time (RT) Effluent Quality Monitoring System (EQMS) suppliers have to provide central server at RSPCB and CPCB, MCJS with latest software to view the data in graphical/ tabular format and also features to compare the data .
2. One minute data average must be transmitted/retrieved to servers every 15 minutes. In the event of transmission loss the time stamped data in the data logger memory must be transmitted to fill from the last transmission break with a stamp of time delay.
3. Two way communications, so that data from the system can be seen whenever desired and remote of controller/data logger can be taken to visualize the immediate status of the System.

Scope of Supply and Work :-

1. Bidder shall Supply, installation, testing, trial run & commissioning of Online Continuous Effluent Monitoring System (OCEMS) for BOD, COD, TSS, Flow data, pH & temperature parameter at outlet with data transfer to CPCB, RSPCB server & STP server to meet all statutory requirements for 50 MLD Sewage Treatment Plant phase1 at Salawas Jodhpur.
2. During pre-mobilizing Meeting, Vendor shall visit the site and collect all required data for successful installation and commissioning. Vendor shall take approval for all the bought out items from Engineer In Charge at the time of kick-off meeting.
4. Bidder shall submit complete system architecture and technical literature of offered system along with the bid.
5. Bidder shall submit all As-Built documentation pertaining to the bid and shall also impart operational and maintenance training to MCJS personnel.
6. Supply & laying of interconnecting cables in conduits and termination in the newly installed cabinets/panels with analyzer and server systems to be installed, will be in the scope of the bidder.
7. No hardware from any existing system shall be used in the new system, it shall be vendor's responsibility to envisage and supply all the hardware required to ensure the complete functionality of the system.

8. Distribution of Power supply and stepping up or down of Power as per system requirement shall be in vendor's scope MCJS shall provide 220V AC power supply at one place for the system. Vendor shall provide current consumption details for the new system and provide redundant power supplies with reverse current protection diode as required. UPS required for uninterrupted power supply will be arranged by vendor.

9. Bidder shall supply mandatory spares like pH Electrode, buffer solution (for one year operation), standard solution (one year operation), one number of all installed cards, proprietary cable, along with offered system.
10. Additionally modbus and Ethernet communications capability shall also be available. Provision must also be kept for addition of any future parameters into the system that may be incorporated into the OCEMS monitoring System.
11. Vendor shall arrange own wireless transmission through Sim cards of mobile network operators. Bidder to use the same for data transmission up to local server kept at MCJS, CPCB, RSPCB Office. However, the hardware components required for enabling connectivity as well as ensuring that transmission of all data shall be in Bidder's scope.
12. Vendor to depute sufficient manpower including erection and commissioning engineers, technicians, electricians, etc. with necessary tools and tackles to complete the job in minimum possible time. Intimation for starting the job shall be communicated to MCJS.
13. The offered system must also be compatible with other forms of data transmission such Broadband/Dongle as provided by ISP in case of complete breakdown/inaccessibility of LAN for data transmission.
14. Online Instrument operation will be evaluated using the known buffers, traceable standards and laboratory techniques. When the variance is outside of the set points, this can be an indication the monitor requires calibration and service.
15. Bidder shall caliberate all instruments as per rules and as and when required.
16. The system proposed should have adequate channels to accommodate above measurements along with capacity to display extra sensors/parameters to future-proof the system, accordingly transmit the measured data of effluent to RSPCB and to CPCB as per CPCB guidelines.
17. Any arrangement related to installation of OCEMS such as civil/mechanical/electronic/fabrication cost etc. required for proper installation shall be on bidders part.
18. Any other work not defined under the above but which are required for the completion of the system shall be in the scope of the bidder.

Operation & Maintenance

Operation and maintenance and defect liability period of 3 years shall start from successful completion of work. Operation and maintenance consists of major and minor repair, maintenance and replacement of any item. Contractor has to submit a comprehensive O&M manual for carrying out systematic operation & maintenance. All the costs towards replacement and repair of the system including the cost of spare parts, Labour Charges, Consumables, Electrodes, Statutory fee etc. during the DLP and O&M period shall be borne by the contractor. Following minimum checks for the system shall be required :-

1. Weekly Check - GPS Transmission, System Diagnostic alarms, sensor cleaning.

2. Monthly Check - Sensors & system cleaning, data backup, Parameter Calibration as specified in calibration schedule.

3. Periodic Check - System validation with known standards, Laboratory & Online parameters Comparative Periodic calibration of the system as recommended by the manufacturer/regulating body/CPCB etc. whichever is earlier shall be got done by the contractor at his own cost. Electrical installation shall be in accordance with the latest prevailing standards.

Bidder shall provide a technical person at site within 24 hours for any repair and maintenance purpose and replacement time for instrument should not be more than 7 days.

Penalty

Penalty provisions for not performing the work are as follows.

1. Not showing / transmitting any parameter to RSPCB, CPCB and MCJ server- 200 Rs/parameter/day up to 5 days and 500 Rs/parameter/day after 5 days shall be deducted from monthly Running Bill.
2. Not Operating, maintaining and replacing any instrument or any part of OCEMS system- 300 Rs/instrument/day up to 7 days and 500 Rs/instrument/day up to 7 days shall be deducted from monthly Running Bill.

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Municipal Cororation Jodhpur South

Bill of Quantities

Name of Work:-. Supply, installation, testing, trial run & commissioning of Online Continuous Effluent Monitoring System (OCEMS) at outlet with data transfer to CPCB, RSPCB & MCJS server for 50 MLD Sewage Treatment Plant phase1 at Salawas Jodhpur including three year operation and maintenance with Defect Liability Period of 3 years.

Estimate

S.No.	Particulars	Qty	Unit	Rate Rs	Amount Rs
1.	Supply, installation, testing , trial run & commissioning of Online Continuous Effluent Monitoring System (OCEMS) with complete accessories required to complete the work at outlet of STP with data transfer to CPCB, RSPCB and MCJS server for 50 MLD STP phase1 at Salawas Jodhpur including three year O&M and three year DLP period . For following parameters BOD, COD, TSS, pH, Temperature, Flow data, Technical specifications as mentioned in this tender document. (Rate including all taxes)	1 Set	Job	-	-
Total Amount in Rs.					