

File No: NIT/ANDHRA/ESTATE/APRIL/STP – O & M/2021-2022/01

Date: 20.08.2021

NOTICE INVITING TENDERS

(Box Tenders/Open Tenders)

**(FOR OPERATION & NON-COMPREHENSIVE MAINTENANCE OF TWO
NUMBER 200 KLD SEWAGE TREATMENT PLANT (MBBR TECHNOLOGY) AT
NIT ANDHRA PRADESH, TADEPALLIGUDEM)**



National Institute of Technology- Andhra Pradesh,

Beside Chennai - Srikakulam Highway, Near Kadakatla,

Tadepalligudem, West Godavari District,

Andhra Pradesh-534101.

Phone No:08818-284710

Proprietary & Confidential:

No part of this document can be reproduced in any form or by any means, disclosed or distributed to any person without the prior consent of the Director, NIT Andhra Pradesh, Tadepalligudem, except to the extent required for submitting bid and no more.

Contents:

Description	Page No.
Tender Notice	03
Time Schedule	04
BID	06
STATEMENT RELATED TO BIDS	07
TENDER SCHEDULE	08
SCOPE OF WORK	08
ELIGIBILITY CRITERIA	11
PERIOD OF CONTRACT	12
METHOD OF SUBMISSION OF BIDS	19
EVALUATION PROCEDURE	20
PAYMENT	23
TECHNICAL BID	25
EXPERIENCE DETAILS	26
DECLARATION	27
CHECKLIST	28
FINANCIAL BID	29

Tender Notice



NIT Andhra Pradesh, Tadepalligudem

File No: NIT/ANDHRA/ESTATE/APRIL/STP – O & M/2021-2022/01

Date: 20.08.2021

Box Tenders/Open Tenders are hereby invited from reputed Registered Firms /Agencies/Contractors/Suppliers for providing the following services at NIT-Andhra Pradesh, Tadepalligudem, West Godavari district.

‘For Operation & Non-Comprehensive Maintenance of two number 200 KLD Sewage Treatment Plant (MBBR Technology) at NIT Andhra Pradesh, Tadepalligudem.’

Tender Schedules can be downloaded from NIT-Andhra Pradesh website from **20.08.2021** onwards. Bidders need to submit hard copy with relevant documents attested by gazetted officer.

The last date for submission of tenders is 10.09.2021 up to 05:00PM.

For further details regarding Tender notification & specifications, please visit www.nitandhra.ac.in.

**Date: 20.08.2021
NIT Andhra Pradesh,
Tadepalligudem.**

Time Schedule of various tender related events

(For Operation & Non-Comprehensive Maintenance of two number 200 KLD Sewage Treatment Plant (MBBR Technology)

Bid Document downloading Start date/ Time	20.08.2021 at 10:00AM.
Bid Document downloading End Date / Time	09.09.2021 up at 05:00PM.
Pre-Bid meeting	31.08.2021 at 03:00 PM.
Last Date and Time for receipt of Bids	10.09.2021 at 05:00 PM.
Technical Bid Opening Date /Time	13.09.2021 at 03:00 PM.
Financial Bid Opening Date / Time	Will be intimated later
Contact Person	The Executive Engineer, NIT Andhra Pradesh, Tadepalligudem.
Reference No:	File No: NIT/ANDHRA/ESTATE/APRIL/STP – O&M/2021- 2022/01 Date: 20.08.2021

Signature of the Bidder with stamp

CLARIFICATIONS

Queries, if any, can be made through e-mail only to ee@nitandhra.ac.in on or before 30.08.2021. Queries received via any mode other than e-mail id mentioned above shall not be entertained. The queries should only be sent in the following format on the official letter head of the company.

S. No.	Page No. (Tender Ref.)	Clause (Tender Ref.)	Description (Tender Ref.)	Query

If there is any addendum/corrigendum related to tenders, it shall only be published on NIT-Andhra Pradesh website (www.nitandhra.ac.in). The Bidders are advised to check NIT-Andhra Pradesh website regularly. No other mode of notice will be given.

The Bidders are requested to submit the bids after issue of clarifications duly considering the changes made, if any. Bidders are totally responsible for incorporating/complying the changes/amendments issued, if any, during pre-bid meeting in their bid.

If the last date of receiving/opening of the bids coincides with a holiday, then the next working day shall be the receiving/opening date.

The Technical bid along with relevant documents should be attached with original EMD and Tender processing fee. Physical submission of Financial bid only shall be considered.

**I/C REGISTRAR
NIT-ANDHRA PRADESH**

For any clarification and further details on the above tender, please contact. Office
Phone Number: 08818-284710

BID

File No: NIT/ANDHRA/ESTATE/APRIL/STP – O & M/2021-2022/01

Date: 20.08.2021

Subject: For Operation & Non-Comprehensive Maintenance of two number 200 KLD Sewage Treatment Plant (MBBR Technology) at NIT Andhra Pradesh, Tadepalligudem

Sir/Madam,

Bids are invited on the Box/Open Tender platform from the reputed registered Firms/Agencies/Contractors/Suppliers from the experienced premises of manpower services. The details of bidding conditions and other terms can be downloaded from the NIT Andhra Pradesh website.

The attested copies of all the documents of Technical bid, signed undertaking of Bidder should be submitted offline mode only to the Director, NIT Andhra Pradesh, Tadepalligudem, on or before opening of bid.

The participating Bidder/s shall have to pay tender processing fee (non-refundable) and EMD for the amounts specified in the Statement related to bids, in the form of DD drawn in favor of the Director, NIT Andhra Pradesh, Tadepalligudem.

Further, the Successful Bidder shall furnish a part of a bid as Performance Guarantee specified in the Statement related to bids, **to be paid in the form of BG as mentioned in the Tender Schedule.**

NIT Andhra Pradesh, Tadepalligudem, will not accept the tenders from blacklisted companies or undependable suppliers, whose past performance with NIT-Andhra Pradesh was found poor due to delayed and/or erratic supplies and those with frequent product failures, and also against whom there have been adverse reports of sub-standard quality/poor services, as defined in the other parts of the bidding documents.

For any clarification and further details of the above tender, please contact.

Office Phone Number: 08818-284710

Signature of the Bidder with stamp

STATEMENT RELATED TO BIDS

Bid Document Fee/ Tender Processing Fee (Non-refundable)	Rs. 5,000/- by way of DD from any Nationalized bank drawn in favor of the Director NIT-Andhra Pradesh, Payable at Tadepalligudem.
EMD	Rs. 75,000/- by way of DD from any Nationalized bank drawn in favor of the Director NIT-Andhra Pradesh, Payable at Tadepalligudem.
Bid Validity Period	90 days from the date of opening of Financial bid
EMD Validity Period	90 days from the date of opening of Financial bid
Contract Agreement	One years from the date of giving work order
Period of furnishing Performance Guarantee	Within 7days from date of receipt of LOA
Performance Guarantee Value	05 to 10% of Contract Value as approved by the competent authority
Performance Guarantee Validity Period	14 months from the date of commencement of services
Period for signing the order of acceptance	Within 14 days from date of receipt of LOA
Payment Terms (after Commencement of work)	Monthly payment after receiving the previous month allotted work schedule details and attendance particulars certified by the concerned authority

TENDER SCHEDULE

PREMEABLE:

National Institute of Technology, Andhra Pradesh is the 31stNIT among the chain of NITs started by the Government of India. NIT Andhra Pradesh is established in the state of Andhra Pradesh in the academic year 2015 – 2016.

Sealed tenders are invited under two bid system i.e., Technical bid and Financial bid from reputed a firm/ Proprietor/ company/ Patent for two number 200 KLD Sewage Treatment Plant (MBBR Technology) at NIT Andhra Pradesh, Tadepalligudem

SCOPE OF WORK:

1. The campus is zero discharge and is provided with two number of (200 KLD) Sewage treatment plants at NIT Andhra Pradesh.
2. All Consumables to run and operate STP shall be borne by the bidder.
3. 24X7running operation and maintenance of **Two** STP plants-Regular checking of following parameters required for smooth functioning of the plants by cleaning necessary filters and parts.
 - a) Bar Screen.
 - b) Fine Bubble Diffusers.
 - c) Coarse Bubble Diffusers.
 - d) Raw Sewage Transfer Pumps.
 - e) Air Blower with Motor.
 - f) MBBR & Tube Settler Media.
 - g) Sludge Transfer pumps.
 - h) Filter feed pumps.
 - i) Pressure sand filter.
 - j) Activated carbon filter.
 - k) Dosing pump.
 - l) Screw pump
 - m)Filter press.
 - n) Ozonation System.
 - o) Electrical Control Panel.
4. The plants will be operated by trained Qualified Supervisors, who will maintain necessary log books on daily basis, records of internal and external testing, submit periodic reports etc.
5. Regular dosing of chemicals in the system.
6. Visit of technical expert/s once in a month to review performance of the plant. An Engineer from the Head office of the agency would visit site, monitor and manage the activities at site to provide necessary technical backup to the site from Head office or otherwise. He will visit site to oversee the entire operations and initiate any major R&M works as required.

7. Break down maintenance calls- Unlimited break down calls on as required basis. The break down calls will cover 24X7- breakdown call within 24 hours of the time of complaint. Schedule maintenance calls- At least 4 (four) scheduled calls as per the program for regular preventive maintenance.
8. A complaint escalation matrix is to be provided by bidder.
9. The treated waste water should comply with the standards given in consent order by CPHEEO following parameters:
 - a. PH. Value 7.0 to 9.0
 - b. Oil & grease Not to exceed 1 mg/L
 - c. Suspended solids Not to exceed 50 mg/L
 - d. Chemical Oxygen demand Not to exceed 100 mg/L
 - e. BOD Not to exceed 10 mg/L
 - f. Temperature shall not to exceed 5 Degree Centigrade above the ambient Temperature of the receiving body.
10. The bidder shall ensure Testing of STP treated water sample as per CPHEEO standards once in a month from approved laboratory and report to be submitted by 05th of every month.
11. All printed log books required for the plants will be provided by vendor.
12. Record hourly data of the operations. Maintaining all sorts of records as per requirements viz sheets of system performance, chemical consumption records, electrical consumption records, daily inlet outlet discharge quantities.
13. The bidder shall fulfill the requirements of various law enforcing agencies / local authorities, such as Pollution Control Board etc.
14. The bidder shall not engage any sub-contractor or sublet/transfer the contract to any other agency/person in any manner
15. The bidder will be responsible for safety of their deputed staff during performance of duty at site.
16. The bidder shall ensure that the Bidder / Agency shall distribute the salary wages in full as per Minimum Wages Act to the deployed staff. Necessary payments to be made to staff by the 7th of every month by the agency. Proof of bank transfer details shall be required to be provided by the 7th of each month. All Labour laws must be complied with and payment details sent to Client on 7th of each month itself.
17. The bidder shall not engage any staff below the age of 18 years. All the staff deployed by the agency shall be medically fit and their antecedent be verified prior to the deployment in the Institute. The agency shall be responsible for the health and well-being of his staff.
18. The bidder will attend all Minor Electrical breakdowns. Major breakdowns/replacements /servicing/repairs in pumps panels motors shall be got done by the Client
19. No advance payment will be made to the bidder.

20. Dismantled / replaced parts should be handed over to Estate Department.

21. Following activities logbook shall be maintained: -

- a) Daily: checking of oil levels of all equipment
- b) Weekly: Oiling and greasing of bearings and gears of mechanical equipment's.
- c) Monthly: checking of nuts and Bolts of equipment's tightening of all nuts and Bolts of equipment's etc.,
- d) Quarterly: replacement of Gear oil and lubricants as necessary verification of section bearings, gears, motor winding, oil condition of Transformer, installation terminals of cable connections etc.,

22. For Electrical and Mechanical equipment logbook shall be maintained:

- a) Course screen chamber: cleaning daily
- b) Raw sewage sump cleaning at sump side walls & bottom in every month
- c) Removing Grit in grit chamber, Bar screen chamber and transporting every week.
- d) The bidder has to keep the area of plant neat and clean.

23. Bidder r should make a service report for all the maintenance jobs carried out and get it counter signed by the Executive Engineer. The necessary registers/Documents will be maintained by the Contractor only.

24. The bidder will also provide a Tests Certificate every month of effluent water before and after treatment and the certificate have to be obtained from the APPCB/CPHEEO/Govt. of India PCB approved Lab. For BOD, COD, PH, TSS, and O&G

25. It will be the responsibility of the Contractor to remove excess sludge from sludge holding tank. In addition, Contractor shall also carryout cleaning of Grease/Sludge holding Tanks periodically. Any disposal of grease / sludge outside the premises will be borne by the party.

26. Attendance register: Bidder shall be responsible to maintain biometric /manual records of daily attendance of the staff deployed by it. However, the Institute reserves the right to inspect the records & verify attendance as and when required or deemed fit.

27. Restrictions: Smoking cigarette, bidi, chewing tobacco, pan, Gutkha or any other banned item is strictly prohibited inside the Institute's premises. Non-Compliance may lead to suitable penalty /termination of contract, to be decided by the Institute.

28. The bidder shall take necessary insurance to cover the entire workmen's compensation act and also in respect of any other person on account of accident at site.

ELIGIBILITY CRITERIA:

1. Bidder must be a firm/ Proprietor/ company/ Bidder that should be CPWD Class-V / State of Andhra Pradesh or Telangana Class-V registered on or before 1/4/2016.
2. Bidder must have ESI* registration with competent authority as on 31/12/2020.
3. Bidder must have PAN Card on the name of firm/ proprietor/Company as claimed against Clause 1.
4. The bidder should have ISO Certification as on 31/12/2020.
(enclose self-attested copies of all of the above certificates)
5. The bidder shall have completed **36 months of experience (with or without overlay)** in **Operation & Maintenance minimum of 400 KLD Sewage Treatment Plant** on or before **31.12.2020**
6. The tenderers should have successfully completed the following work in any organization last 3 years on or before **31.12.2020** and one in which applications are invited should be either of the following: -
 - Three STP Maintenance & Operation completed works costing not less than the amount equal to Rs.12,80,000/- (Rupees Twelve lakhs eighty thousand only).
OR
 - Two STP Maintenance & Operation completed works costing not less than the amount equal to Rs.16,00,000/- (Rupees sixteen lakhs only).
OR
 - One STP Maintenance & Operation completed work costing not less than the amount equal to Rs.25,60,000/- (Rupees Twenty-five lakhs sixty thousand only).

The following documents must be submitted in supporting the experience claimed.

1. Should submit relevant work order(s) and satisfactory certificates.
2. The Average annual Financial turnover during the **last 3 years** ending 31st March 2020 should not be less than **50 Lakhs** and the same has to be certified with Chartered Accountant along with UDIN number. Without UDIN number the document is treated as Invalid.
3. Should submit income tax returns of the assessment years 2018-2019,2019-2020,2020-2021 along with financial statements, Profit and Loss Account, Balance sheets, Form26AS of Financial years 2017-18, 18-19, 19-20.
4. Each page of the tender document along with all other submitted documents must be duly signed by Authorized signatory with Bidder's signature and seal.

Name and Signature of bidder with seal

PERIOD OF CONTRACT:

The contract shall be initially for a period of **(01) One year**, subject to satisfactory performance of services and compliance of all terms and conditions of the agreement. The contract is extendable by one more year based on satisfactory performance and as per the norms of Government of India. The Competent Authority may allot the contract in full or a part of such contract to the next firm(s) out of the panel available with it at any time in the event of non-compliance or breach of any terms and conditions of this contract by the awarded Bidder or otherwise, if it is deemed fit to do so in the interest of the Institution, in order to ensure effective supply/supervision of these services by more than one Bidder even after the award of contract.

If the Successful Bidder has an existing contract with NIT Andhra Pradesh, for Operation & Maintenance Of 200 KLD Sewage Treatment Plant, it shall stand automatically terminated and the new contract will commence.

Design of Sewage Treatment Plant and other Parameters

1. EFFLUENT GENERATION AND CHARACTERISATION

Source of Pollution

The sources of wastewater in the campus is from hostel blocks, kitchen mess, and various other administrative as well as faculty and research block. The effluent generated from the unit is mainly domestic in nature.

Source of Water

The domestic water requirement of the institute has been estimated to be around 500 KLD. Source of water is from the Municipal Corporation as well as ground water.

Volume of wastewater

The waste water generated from the unit is domestic in nature. It has been estimated that approx. 320 KLD of wastewater is generated from the campus.

2. EFFLUENT GENERATION AND CHARACTERISATION

Characterization of the Effluent

The Study of effluent characterization is very important for efficient working of an STP. Based on the analysis report provided by the client the characteristics are as given below

The characteristics are given below:-

Name and Signature of bidder with seal

S.No	Parameters	Unit	Result
1	pH		7-9
2	Suspended Solids (TSS)	Mg/1	50
3	Bio Chemical oxygen demand (3 days at 27 degree C	Mg/1	10
4	Oil and grease	Mg/1	1
5	Chemical Oxygen Demand	Mg/1	100
6	Temperature Degree Centigrade		5

3. EFFLUENT TREATMENT SYSTEM

The effluent generated is passed through bar screen chamber then oil and grease trap and is collected by gravity through a drainage channel into an equalization tank. The effluent from the collection cum equalization tank is pumped to SAFF tank. The effluent is then allowed to settle in a tube setting tank, where the flocculated particles are allowed to settle down. The settled solids in the settling chamber is allowed to flow to sludge holding tank and is dewatered in the filter press. The dewatered sludge is stored and disposed of as per hazardous waste management rule. The clear water from the settling tank is passed through chlorine contact tank where chlorine is added for disinfection.

Then the effluent is passed through Multi grade filter and activated carbon filter for further polishing of the water before taken to treated water tank for its reuse. The treated water from activated carbon filter is passed through softener for its recycling as make up water for cooling towers.

4. EFFLUENT TREATMENT PLANT PROCESS UNITS.

Type of Treatment -biological
 Working Hours per(day) - 24 hours Average waste water discharge -
 200 KLD Design

Various process units of the effluent treatment plant and its detail specifications are given below:-

1. Bar Screen
2. Oil & Grease Trap
3. Equalization Tanks
4. SAFF Tank
5. Settling Tank
6. Chlorine contact Tank
7. Multi grade Filter
8. Activated Carbon filter
9. Softener
10. Filter press
11. Effluent Transfer pump
12. Filter feed pump
13. Air Blower.

14. Ozonation System
15. Dosing Pump.
16. Coarse Bubble Diffusers.
17. Raw Sewage transfer pumps.
18. MBBR & Tube Settler Media.
19. Sludge Transfer pumps.
20. Pressure Sand Filter.
21. Screw Pump.

DESIGN DISCHARGE 200.KLD

1. INTRODUCTION

Following are the Sewage that shall be generated from the entire site Phase - IA buildings:

Domestic Sewage from the Kitchens, Toilets & Bathrooms.

The above-mentioned wastes shall be handled as per the following systems: **Domestic Sewage from the kitchens, Toilets & Bathrooms:** Generally, shall be collected in the external sewerage system consisting of pipes and manholes and be discharged into the Treatment Plant.

It is proposed to treat the complete wastewater as given above shall be treated in a scientific manner through a properly planned sewage treatment plant. The objective is to stabilize the decomposable organic matters present in sewage so as to get an effluent and sludge having characteristics which are within safe limits, and which can be recycled and re-utilized for various purposes to help in maintaining the ecology of nature and save energy resources. The proposed sewage treatment plant is based on widely used and most **effective process of moving bed bio film reactor (MBBR) technology.**

Following are the benefits of providing the Sewage Treatment Plant in the present circumstances:

It is mandatory as per the latest requirements to provide the Sewage Treatment Plant. Reduced net daily fresh water requirements from various sources, by utilizing the treated effluent for recycling.

Reduced dependence on the public utilities for water supply and sewerage systems.

Solid waste generated from the Sewage Treatment Plant shall be rich in organic materials and is an excellent fertilizer for horticultural purposes.

2. DIFFERENT COMPONENTS OF THE PLANT

In the proposed treatment scheme, the following component unit shall be provided:

- Screen /Oil & grease trap within Equalization tank.
- Equalization tank
- Submersible type raw sewerage re-lifts pumps.
- Anoxic tank
- MBBR tank
- Secondary settling tank
- Clarified Water & Filtered Water Storage Tanks
- Filter feed pump
- Tertiary Treatment Units (Filtration)
- Disinfection System including Ultra Violet Treatment
- Treated Water Supply Pumps
- Sludge return pump
- Sludge holding tank
- Centrifuge

3. CHARACTERISTICS OF UNTREATED & TREATED EFFLUENT WASTE WATER

3.1 Raw sewage influent Characteristics(incoming)

- | | | |
|-----------------------------|---|----------------------------------------------------------------------------|
| (a) Total sewage produced | : | App. 90 m ³ /day |
| (b) Total Capacity Proposed | : | To the proposed Sewage Treatment plant of 90 m ³ /day capacity. |
| (c) Duration of flow to STP | : | 24 hours |
| (d) Peak Factor | : | 3.0 |
| (e) Temperature | : | Maximum 46°C |
| (f) pH | : | 7.15 to 8.2 |
| (g) Color | : | Mild |
| (h) T.S.S (mg/l) | : | 250 to 350 mg/l |
| (i) BOD (5) (mg/l) | : | 200 to 250 mg/l |
| (j) COD (mg/l) | : | 300 to 400 mg/l |
| (k) Oil and grease | : | 10 – 50 mg/l |

3.2 Final Effluent Characteristics after Tertiary Treatment

a) pH	:	7.0-9.0
b) B.O.D.	:	< 10 mg/l
c) C.O.D.	:	< 100 mg/l
d) Total suspended solids	:	< 10 mg/l
e) Oil & Grease	:	<1mg/l

4. PROCESS DESCRIPTION

- 4.1 Incoming Wastewater from Last Manhole will be collected in raw effluent equalization tank via a Sluice Control Valve; bar Screens & Oil & Grease trap (OGT) in series.
- 4.2 Manual cleaned bar screens will be installed to screen any large pieces. After screening, the waste water should be allowed to pass through an oil & grease trap to remove the grit material. The screens and grit chambers shall be accessible so that they may be manually cleaned from time to time.
- 4.3 The waste water from the OGT should then pass into the Equalization Tank.
- 4.4 The design of Equalization tank should cater for the condition that the waste water generation may not be uniform and higher quantity may come out during peak hours. There may be very low flow condition for few hours. To optimize the size of the plant, the plant design should cater for continuous operation and hence a buffer should be provided to store the waste water during its peak hour generation and supply the same during lean or no flow hours. The equalization tank is provided to homogenize the waste water quality and also even out flow fluctuations and feed waste water of uniform quality at constant rate to subsequent treatment units. Air mixing should be provided to mix the contents of the equalization tank. An aeration grid should be provided to mix the contents of the equalization tank and also to avoid septic conditions in the tank.
- 4.5 From the equalization tank the wastewater will be pumped into Anoxic tank for removal of nitrogen & phosphorous in the absence of oxygen by denitrification process. By-pass line shall be provided from the pumping system which shall only be provisional for disposal of sewage to mobile sewage tanker for emergency purposes.
From the Anoxic tank the wastewater will be overflowed into MBBR Tank.
- 4.6 The MBBR process uses small plastic carrier elements to provide growth sites for bacteria attachment in a suspended growth medium. The carrier elements shall allow a higher biomass concentration to be maintained in the reactor. This shall increase the biological treatment capacity for the given reactor volume.
- 4.7 The carrier elements shall be continuously kept in suspension by the aeration system. The agitation pattern in the reactor shall be designed to provide an upward movement of the carriers across the surface of the retention screen which creates a scrubbing effect to prevent clogging. Combination of fine & coarse bubbles may be provided to provide oxygen as per detailing.

- 4.8 From the MBBR tank mixed liquor shall flow by gravity into the secondary settling tank. The solids will settle in the tank. The sludge that settles down shall be transferred to sludge holding tank via sludge loading pumps, with provision of sludge return to the bioreactor if necessary.
- 4.9 From the settling tank, treated wastewater will flow into chlorine contact tank/clarified water tank. In this tank, chlorine will be added in the form of calcium or sodium hypochlorite solution by a suitable chlorinator/Dosing system.
- 4.10 Treated water after chlorine contact tank shall be clear, odourless, low BOD, low suspended solids, which shall be of quality which is acceptable as per standards prescribed by CPCB/Environmental norms for disposal directly into public/natural drain.
- 4.11 The treated water from chlorine contact tank is fed by means of filter feed pump sets to pass through dual media filters, activated carbon filters and stored in the filtered water tanks. The activated carbon filters shall ensure removal of all coloration and odours present in the treated effluent. Backwash of Filters and shall be done intermittently as per requirements. The filtered water being stored in the filtered water tank shall again be dosed with chlorine by a suitable chlorinator/Dosing system and a residual Chlorine level of 1 PPM shall be maintained.
- 4.12 The filtered, clean and odourless water from filtered water tank is then fed through a variable frequency drive hydro-pneumatic system to the external treated effluent rings as per the masterplan, from where connections are taken to the garden hydrant system and to each unit for flushing water as per detailing.
- 4.13 According to the guide lines of Ministry of Environment and Forest the UV system will be provided on the discharge point of treated effluent supply lines to ensure 100% pathogen free treated water for recycling and re-use. The UV system shall be provided as online installation on the treated water supply line being supplied to the external distribution ring.
- 4.14 Excess sludge from the clarifier/settling tank will be taken periodically into sludge holding tank. In this tank sludge will be aerated for self-stabilization. Air will be shut off periodically and superannate water will be transferred to the aeration tank creating stabilized sludge. The final sludge shall be de-watered through a centrifuge mechanism. Sludge loading arrangements shall also be provided for direct disposal of sludge-to-sludge tankers / trolleys. The dried sludge shall be reused as a manure for irrigation purposes.

Name and Signature of bidder with seal

MANPOWER DEPLOYMENT IN THE AMC FOR TWO PLANTS

S.NO	QUALIFICATION REQUIRED	EXPERIENCE IN THE FIELD OF MBBR TECHNOLOGY	NO. OF PERSONS
1	B Tech Civil/ Electrical/ Mechanical/ Chemical	05	01
2	Diploma Electrical/ Mechanical/ Chemical	03	02
3	ITI Electrical/ Plumbing	02	06
4	Sewer Men	-	03

DUTIES AND OBLIGATIONS:

a. Duties of Operators & Staff Employed:

- i. The Contractor should submit the names of the persons engaged for the work and they have to report to the Engineer-In-Charge on day-to-day basis. Persons employed should not be changed frequently and every person employed for the work has to obtain proper Gate Pass from Administration Department of the institute.
- ii. Operation and the maintenance of STP system comprising of various pumps, motors, blowers, pipelines, setting tanks, filter unit, etc. together with the electrical panels and connections. Operators employed should have knowledge of Hindi, & English (optional). The Contractor has to keep the area of plant neat and clean.

b. Repairs:

- i. The Contractor has to do all minor repairs, for which no additional Labour charges will be paid. However, for any spares/materials replaced, actual charges will be paid as per the bills from the authorized/dealers after ascertaining the rates on submission of original bills (except damage caused to any machinery/plant due to negligence of contractor), and such materials to be checked-in through Security Department as evidence being materials brought in.
- ii. The firm shall rectify any breakdown in a stipulated time failing which penalty for nonperformance @ 0.5 % per week of delay subject to a maximum of 5% on the

monthly bill will be imposed and in the event of any damage to the property or life or any machinery and installation in the STP arising out of non-performance or negligence of the workers, contractor will be solely responsible. The bidder shall be responsible for proper maintenance of decorum, punctuality, discipline and work out put etc.,

iv. The bidder has to keep all the area and surroundings at the site neat and clean and dump the scrapped materials at the scrap yard.

C. Motors & Pumps

- Cleaning and tightening of all screw connections and terminals on controllers.
- Examining of fuse contacts and terminals for cleanliness and tightness.
- Checking the pump immediately after starting the motor, to see if the pump is generating the rated head, by reading the pressure gauge. Painting of pipes, motor covers etc. once a year.
- Checking for any undue vibration of stuffing boxes.
- Checking of glands for overheating and leakage. Gland packing around the pump set is adjusted to permit only a slight leakage of droplets of water to cool and lubricate the shaft.
- Checking if the voltage fluctuation is within the permissible limit of 420-440V.
- Checking of current rating and actual loading of motor to prevent overloading, by frequently monitoring the ammeter reading.
- Ensuring that the water level in the water source does not drop more than 1 meter above foot valve and water at the receiving end is not wasted by over flow. Checking the bearings of the pump periodically and applying grease sufficiently.
- Checking the gland packing once in two months.
- Checking the valves and pressure gauges and tightening the gland at closer intervals when too much leak of water occurs.
- Checking the exhaust pump, its auxiliaries and impeller periodically.
- Operating of submersible pump once a week, and its maintenance.

METHOD OF SUBMISSION OF BIDS:

1. The bid documents can be downloaded from the Institute website <http://www.nitandhra.ac.in/main/tender> .
2. The bids should be filled in two bid formats with all the required documents as enclosures in separate sealed covers i.e.: (a) Part-I Technical bid, (b) Part-II Financial bid two separate sealed covers should be specifically super-scribed as **(a) "Technical bid for Operation & Non-Comprehensive Maintenance of two number 200 KLD Sewage Treatment Plant (MBBR Technology) at NIT Andhra Pradesh, Tadepalligudem"** and **(b) "Financial bid for Operation & Non-Comprehensive Maintenance of two number 200 KLD Sewage Treatment Plant (MBBR Technology) at NIT Andhra Pradesh, Tadepalligudem"**.
3. . Both the sealed envelopes (a) and (b) are to be kept in another Master envelope, which should also be sealed and submitted.
4. The Master envelope should be super-scribed with **"Tender for Operation & Non-Comprehensive Maintenance of two number 200 KLD Sewage Treatment Plant (MBBR Technology) at NIT Andhra Pradesh, Tadepalligudem"** and shall be addressed to The

Tender Box, C/o Director, National Institute of Technology Andhra Pradesh, Beside Chennai - Srikakulam Highway, Near Kondrupolu, Tadepalligudem, West Godavari District, Andhra Pradesh- 534101.

5. **Last date for submission of bid documents is 10.09.2021 up to 05:00 p.m.**
6. Bids received after the due date and time shall be summarily rejected.
7. Incomplete bids or bids not submitted in prescribed format are liable for rejection.
8. Institute will not be responsible for postal delay.

EVALUATION PROCEDURE:

1. At the first stage, the Technical Bids shall be opened in the presence of Bidders, who may like to be present on 13.09.2021 at 03.00 p.m in **Administrative/ Purchase section** of NIT- Andhra Pradesh, Tadepalligudem.
2. A Committee duly constituted by the Competent Authority would evaluate the Technical bids submitted by the Bidders.
3. Prior to detailed evaluation, the Institute will determine the substantial responsiveness of each bid to the tender document. A substantially responsive bid is one which conforms to all the terms and conditions of the bidding/tender document and is without any material defects and deviations. Deviations from, or objections or reservations to critical provisions such as those concerning qualification/eligibility criteria, availability of facilities and amenities as needed, availability of government/statutory approvals and clearances, ready and explicit willingness to accept and honor the terms and conditions of contract etc. will be deemed to be material deviations.
4. If a bid is not substantially responsive, it will be rejected by the Institute and may not subsequently be made responsive by the Bidder by correction of the non-conformity.
5. Only those Bidders whose technical bids have been found to be substantially responsive would be evaluated.
6. The Financial bids of those Bidders only shall be opened who qualified in the Technical Evaluation. The Institute will award the contract to the Successful Bidder, whose Financial bid is the lowest price bid among all the quoted bids. The decision of the Director, NIT Andhra Pradesh, Tadepalligudem, is final in this regard.
7. The Bidder should quote the Service charge in the Financial bid in figures as well as in words.
8. The validity of the bids shall be for a minimum period of 90 days.
9. Tenders with revised/modified rates/offer after opening of the tenders shall be summarily rejected and the entire Earnest Money Deposit (EMD) submitted with the tender shall be forfeited
10. The tender is not transferable under any circumstances.
11. Telegraphic, conditional or incomplete tenders shall not be accepted. Canvassing of any kind, direct or indirect, shall lead to disqualification of the Bidder.

12. Institute reserves the right to reject any or all the tenders at any stage or accept them in part or reject the lowest tender without assigning any reason thereof and the decision of the Institute in this respect shall be final.

13. The Institute reserves the right to cancel the tender process at any stage without assigning any reason. For further details, please contact the NIT Andhra Pradesh Administration on 08818-284710.

Name and Signature of bidder with seal

TIE BREAKING PROCEDURE:

In case of a tie in the least quoted price, tie-breaking points shall be given for the following.

S.No	Description	Points
1	No. of years of work experience in Government Higher Educational Institutions using MBBR Technology. (From 26AS must be submitted for the period of Experience claimed)	2 point per each running year
2	No. of years of work experience in Pvt Institutions/Organizations using MBBR Technology. (From 26AS must be submitted for the period of Experience claimed)	0.5 points per each running year
3	Financial turnover of the Firm certified by Auditor with UDIN.	0.5 Point for each crore

Note:

- 1) The contract will be awarded to bidder, who score highest points in the above table.**
- 2) In case of further tie, the bidder will be selected by a coin toss.**

I / we accept all the terms and conditions of the tender notice.

Date:

Place:

Name and Signature of Bidder with Seal

PAYMENT:

The **Payment** will be made every month by 10th of proceeding month after submission of the bills in duplicate in the last working day of previous month with the attendance reports, Inlet effluent & outlet effluent Monthly test certificates, daily wise job chart of outsourced manpower and upon proof of payment made towards all applicable statutory bodies.

RESOLUTION OF DISPUTES:

In the event of any dispute arising out of or in connection with this contract, whether during the subsistence of the contract or thereafter, the matter shall be referred to the Director, NIT Andhra Pradesh, Tadepalligudem, or any other officer nominated by the Director, NIT Andhra Pradesh, Tadepalligudem, for arbitration whose decision shall be final and binding on both the parties. The Agency agrees that the arbitrator could be an employee of the Institute and shall not have any objections in this regard. The proceedings before the arbitrator would be governed by the provision of the Arbitration Act 1996.

TERMINATION OF THE CONTRACT:

The contract may be terminated in any of the following contingencies: -

- a. On giving three months' notice by the Agency **OR**
- b. On the expiry of the contract, without any notice **OR**
- c. On giving one month notice by the Institute, at any time during the tenancy of contract, in case the services rendered by the Agency are not found satisfactory and in conformity with the terms and conditions of the contract and the standard prescribed for this services **OR**
- d. On Agency being declared insolvent by the competent Court of Law, without any notice **OR**
- e. On assigning of the contract or any part thereof or any benefit or interest therein or there under by the Agency to any third party or for sub-letting the whole or a part of the contract to any third party, without any notice.

Provided that, during the notice period for termination of the contract, in the situation contemplated above, the Agency shall keep on discharging his duties as before till the expiry of notice period.

In case of termination of contract on the grounds mentioned at **Sr. No (c)** above OR in case the Agency decides to conclude the contract before the expiry of 24months contract period without giving three months' notice as mentioned at **Sr. No (a)** above, the Agency shall forfeit the Performance guarantee held with the Institute and the Agency shall not have any claim/right against the Institute in satisfaction of this condition.

PENALTY:

- (a) Any serious lapse/complaints/breakdown/Fault in any equipment (or) in the process of operation, the firm has to attend the fault with in 24hrs of reporting on phone/fax/email etc., failing which will invite a penalty of Rs.5000/- per day of each day of delay.
- (b) If a contractor secures a penalty, 6 times during the contract shall be liable to be cancelled and the firm will be put in to the black list.
- (c) In case if the contractor fails to meet specified parameters of the quality of the treated sewage, the contractor shall pay to the NIT-Andhra Pradesh liquidated damages amounting to Rs.2000/- per each parameter as mentioned in Scope of work, over and above the costs and compensation that might be required by the NIT-Andhra Pradesh to pay to the affected people and parties, if any

COMMENCEMENT OF WORK:

The Successful Bidder should start the work with effect from the date of commencement of Agreement by mutual consent. In case, it is found that the work has not been taken up from the date of commencement of Agreement, the NIT Andhra Pradesh, Tadepalligudem, at its sole discretion may cancel the work order and the Performance guarantee shall be forfeited without any further reference to the Bidder. Further, the work order will be awarded to next least quoted bidder with the same terms and conditions.

DISCLAIMER:

Even though adequate care has been taken in the preparation of this Tender Schedule the Bidder should satisfy himself that the Schedule is complete in all respects.

NIT-Andhra Pradesh not their employees make any representation or warranty as to the accuracy, reliability or completeness of the information in this Tender Schedule and it is not possible for the NIT-Andhra Pradesh to consider the investment objective, financial situation and particular needs of each party who reads or uses the Tenders Schedule. Certain prospective Bidders may have a better knowledge of the scope of work than others. Each prospective Bidder should conduct his own investigations and analysis and check the accuracy, reliability and completeness of the information in the Tender Schedule and obtain independence advice from appropriate sources.

The Registrar, NIT-Andhra Pradesh reserves the right to change any or all of the provisions of this request for Proposal. Such changes would be intimated to all parties procuring this request for Proposal.

The Registrar, NIT-Andhra Pradesh reserves the right to reject any or all the Bids submitted in response to this request for Proposal at any stage without assigning any reasons whatsoever.

JURISDICTION:

The Court of Tadepalligudem alone will have jurisdiction to try any matter/dispute or reference between the parties arising out of this agreement/contract

Signature of the Bidder with stamp

PART-A (TECHNICAL BID)

All the commercial conditions shall also be indicated in this part. Deviations, if any, to our specifications shall be brought out very clearly. Bidders shall mention point-wise confirmation with regard to technical specifications given in our Enquiry.

S No.	Particulars	Details
1	Bidder's name	
2	Registered Office and address	
3	Working Place of the office	
4	Year of Establishment	
5	Type of Firm (Ownership, Partnership, Pvt Ltd or Ltd Co.	
6	Details of ownership (Name and Address of the Board of Director, Partners etc)	
7	Name of the authorised signatory who is authorised to sign all the relevant documents (power of attorney, if any to be submitted)	
8	Registration Numbers:	
	Firm Registration No.	
	Service Tax No.	
	GST No.	
	ESI No.	
	Any other registration which is mandatory for such agencies stipulated by Concerned authorities:	
9	Latest ISO certified company	YES/NO
10	PAN Number	
11	Total Annual Turnover for last three years	2018-19: Rs 2019-20: Rs 2020-21: Rs
12	Whether Agency has been blacklisted by any Govt or Semi-Govt. organization or any other organization? If yes, provide details	YES/NO
13	DD Number, Amount and Date of EMD submitted	
14	Bank Particulars	
	Account name	
	Type of A/C: (SB/CA/CC)	
	A/C No.	
	IFS code	
	Name of the Bank	
	Branch	

Enclose all certificates in support of the above statements.

Date: _____ Authorized Signatory
Name:
Place: _____ Designation:
Company:
Contact No:
Company Seal:

Annexure-II

EXPERIENCE DETAILS

S. No.	Year	Name of the Client	Order No. & Date	Contract value per year	No. of personnel deployed
01					
02					
03					
04					
05					

Note: Supporting documents are to be attached along with the **Annexure-VI**

Date: _____ Authorized Signatory
Name:
Place: _____ Designation:
Company:
Contact No.
Company Seal:

DECLARATION

(To be provided on letter head of the Bidder
and submit along with Technical bid)

I / We _____ do hereby certify that our firm is not blacklisted and no enquiries / cases are pending against us by Govt. of India / Govt. of Andhra Pradesh or by any State Board Universities, since inception of the firm / company.

All the terms and conditions given in the tender draft with **Ref. No.: File No:**

NIT/ANDHRA/ESTATE/APRIL/STP – O & M/2021-2022/01

Dated: 20.08.2021

” For Operation & Non-Comprehensive Maintenance of two number 200 KLD Sewage Treatment Plant (MBBR Technology) ” issued by the NIT Andhra Pradesh, Tadepalligudem, are acceptable to us.

We also certify that the information mentioned in the submitted documents is true and complete in any every respect and explicitly agree that in case at a later date it is found out by the Institute (NIT Andhra Pradesh, Tadepalligudem) that any details provided herein by us are incomplete/incorrect, any contract given to us may be summarily terminated forthwith, our firm may be blacklisted, and that the Institute may also initiate any other legal/penal proceedings, as deemed fit by it.

Date:

Authorized Signatory

Name:

Place:

Designation:

Company:

Contact No.

Company Seal:

CHECKLIST

(The Bidder may use the checklist below, to ensure that the tender submitted is complete in all respects)

S. No	Particulars	Yes	No
1	Copy of original tender draft downloaded from the NIT Andhra Pradesh website.		
2	Crossed Demand Draft from National Bank towards Tender Processing Fee		
3	Crossed Demand Draft from National Bank towards EMD		
4	Copy of firm registration		
5	Copy of Service Tax certificate		
6	Copy of GST registration		
7	Copy of ESI registration		
8	Copy of PAN card		
9	Copy of Latest ISO Certification		
10	Copy of relevant work order(s)		
11	Copy of Work satisfactory certificate(s)		
12	Copy of Financial turnover certificate issued from Chartered Accountant with UDIN on his letter head.		
13	Copies of Income Tax Saral form>Returns along with Audited financial statements, Profit and Loss Account, Balance sheets, Form 26AS and 3CA&3CB for last 3 years subjected to financial statement submitted to firm/proprietary/company.		
14	Declaration in the format given by the Institute		
15	Financial bid cover		
16	Form 26 AS must be submitted for the period of experience claimed (for each year of work done).		

Note: All the pages of the original bid document along with other hard copies should be serially numbered and attested by the Bidder.

Signature of the Bidder with stamp

PART-2. FINANCIAL BID (On Firm Letter head)

(For Operation & Non-Comprehensive Maintenance of two number 200 KLD Sewage Treatment Plant (MBBR Technology) at NIT Andhra Pradesh, Tadepalligudem)

Ref. No.: File No: NIT/ANDHRA/ESTATE/APRIL/STP – O & M/2021-2022/01

Date: 20.08.2021

Sl. No.	Description	Cycles	Amount (₹)
1	For Operation & Non-Comprehensive Maintenance of two number 200 KLD Sewage Treatment Plant (MBBR Technology).	MONTHLY	

Offered Price (in words): Rupees _____ Per month only. (Inclusive of all taxes)

NOTE:

- TDS & TDS on GST as per applicability shall be deducted monthly from the gross billed amount to be paid to the contractor.
- The contract shall be awarded to the bidder whose monthly quoted charge is lowest among all the submitted bidders.
- If further tie between firm/Agencies/company the L1 will be finalized by Coin Toss.

Signature of the Authorized Signatory

Name:

Designation:

Address:

Tel./Mobile No.:

E-mail ID:

Date:

Seal of the Firm: