



**NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA-769008, ODISHA**

OPEN TENDER NOTICE NO.: NITR/PW/EM/2020/13

Dated: 28/01/2020

Tender for: - "OPERATION AND MAINTENANCE OF 5 MLD WATER TREATMENT PLANT AT NIT ROURKELA".

Sealed tenders are invited through e-Procurement Portal of Ministry of HRD, Govt. of India <https://mhrd.euniwizarde.com/> from reputed civil contractors of appropriate class having valid registration with PWD / CPWD / PSUs / NITR having sound financial status, machinery, resources and experience in execution of similar works i.e. Operation and Maintenance of Water Treatment Plants.

Name of work	EMD	Time of completion
Operation and maintenance of 5 MLD Drinking water treatment plant at NIT Rourkela.	67000.00	12 months.

- 1. Eligibility Criteria:** - Contractors who fulfil the following requirements shall be eligible to apply. Joint ventures are not accepted.
 - A. Should have successfully completed similar works during the last 3 (Three) years at least
 - One similar completed work costing not less than Rs.26.40 lakhs.
Or
 - Two similar completed work costing not less than Rs.16.00 lakhs.
Or
 - Three similar completed work costing not less than Rs.13.20 lakhs.
 - B. Should have average annual financial turnover of Rs.3.28 lakhs during last three years ending 31st March 2019
2. Bids on **Item rate basis** are invited in the prescribed form.
3. The firm should not have been black listed at any time. To this effect, an undertaking is to be given in the prescribed format.
4. Bid Security (EMD) and Tender Cost: EMD (Earnest Money Deposit) need to be submitted through online portal only for INR **67000.00/-** (Rupees sixty seven thousand only) and Tender cost (Non-refundable) through online mode for INR **1000.00/-** (Rupees one thousand only). The EMD (Earnest Money Deposit) of unsuccessful bidders should be returned to them at the earliest and latest on or before the 30th days after the award of the contract. EMD shall bear no interest. Any bid without accompanying with EMD & Tender Cost is liable to be treated as non-responsive and rejected.
5. Detailed advertisement including tender documents is available in our website https://nitrkl.ac.in/OldWebsite/Jobs_Tenders/8Maintenance/Default.aspx and send your quotations through e-Procurement Portal of Ministry of HRD Portal <https://mhrd.euniwizarde.com/>
6. The submission of bids by the tenderer should be addressed to the Registrar, National Institute of Technology, Rourkela in three separate sealed Envelopes.

**Tender for Operation and maintenance of 5 MLD Drinking water treatment plant at NIT Rourkela.
(Tender Notice No – NITR/PW/EM/2020/13 dated: 28/01/2020) Due on 18/02/2020 by 11:00 AM
Opening date of Bid (Cover I and II): 19/02/2020 at 11:00 AM**

Cover No-I: - To contain **Earnest Money Deposit (EMD) and Tender cost.**

Cover No-II:- The envelope marked as '**Techno-Commercial Bids**' shall contain prequalification requirements in NIT format (**Form-B, C & D**), other documents mentioned in checklist attached to the tender signed and stamped on all pages confirming acceptance.

Cover No –III:- The price bid need to submit through BOQ by online submission.

7. Important Dates

- a. Last date of submission of tender on **18.02.2020 by 11:00 AM** through e-Procurement Portal of Ministry of HRD, Govt. of India <https://mhrd.euniwizarde.com/>
- b. Opening of Bid(Cover I and II) of the tender on **19/02/2020 at 11:00 AM.**
- c. EMD and Cost of Tender need to be submitted through online mode of e-Procurement Portal of Ministry of HRD, Govt. of India <https://mhrd.euniwizarde.com/> only.
8. The prequalification shall be based on an objective evaluation of details regarding past performance in specific job areas, technical and financial capabilities and resources of the contractors including possession of appropriate equipment for the type of work etc. and with proven track record and will be evaluated by the NIT. Bidders are advised to enclose details of experience; status of Engineers employed and equipment at their disposal in each area of specialization. Bidders must make arrangement for inspection of their recent construction sites by NIT officials to ascertain their quality of construction.
9. The time of completion is firm, and penalty under liquidated damage clause will be charged for any delay in work.
10. A Pre-Bid meeting will be held on **07/02/2020 at 03:00 PM**, at the Board room of NIT, ROURKELA where all queries of bidders will be clarified.
11. The validity of the tender shall be **120 days** from the date of opening of the bids.
12. Details including our prescribed format for prequalification, BOQ, General condition and special condition of contract etc. are available in our website at https://nitrkl.ac.in/OldWebsite/Jobs_Tenders/8Maintenance/Default.aspx and through e-Procurement Portal of Ministry of HRD Portal <https://mhrd.euniwizarde.com/>
13. Each page of the tender documents should be signed by the authorized person or persons submitting the tender as token of his/her having acquainted himself/themselves with the general and special condition of contract, specifications etc. as laid down. Any tender with any of the documents not so signed will be subjected to rejection.
14. NIT reserves the right to qualify or deny prequalification of any or all applicants without assigning any reasons.
15. Detail scope of work and operative terms and conditions are prescribed as per annexure – C and Commercial terms and conditions, Contract validity clause and Statutory obligations are describes as per annexure-D in tender document attached.

16. INSTRUCTIONS FOR ONLINE BID SUBMISSION

The bidders are required to submit soft copies of their bid electronically on the e-Wizard Portal (<https://mhrd.euniwizarde.com>) using valid Digital Signature Certificates. Below mentioned instructions are meant to guide the bidders for registration on the e-Wizard Portal, prepare their bids in accordance with the requirements and submitting their bids online on the e-Wizard Portal. For more information, bidders may visit the e-Wizard Portal <https://mhrd.euniwizarde.com>

16.1 REGISTRATION PROCESS ON ONLINE PORTAL

1. Bidders to enroll on the e-Procurement module of the portal <https://mhrd.euniwizarde.com> by clicking on the link "Bidder Enrollment". Enrolment on the e-wizard Portal.

2. The bidders to choose a unique username and assign a password for their accounts. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the eWizard Portal. Bidders to register upon enrolment their valid Digital Signature Certificate (Only Class III Certificates with signing + encryption key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile.
3. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse. Foreign bidders are advised to refer "DSC details for Foreign Bidders" for Digital Signature requirements on the portal.
4. Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / eToken.
5. Bidders must ensure that they have the latest version of Java installed in their local system.
6. The scanned copies of all original documents should be uploaded in pdf format on portal <https://mhrd.euniwizarde.com>
7. After completion of registration payment, you need to send your acknowledgement copy on our help desk mail id ewizardhelpdesk@gmail.com for activation of your account.

16.2 TENDER DOCUMENTS SEARCH

1. Various built in options are available in the e-Wizard Portal to facilitate bidders to search active tenders by several parameters. These parameters include Tender ID, organization, location, date, value, etc.
2. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the Online Portal.
3. Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the Online Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
4. The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

16.3 BID PREPARATION

1. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
2. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid.
3. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
4. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / PNG etc. formats. Bid documents may be scanned with 100 dpi with black and white option.

16.4 BID SUBMISSION

1. Bidder to log into the site well in advance for bid submission so that he/she upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
2. The bidder to digitally sign and upload the required bid documents one by one as indicated in the tender document.

3. Bidder to select the payment option as Online" to pay the tender fee/ EMD wherever applicable and enter details of the instrument.
4. A standard BoQ format has been provided with the tender document to be filled by all the bidders. Bidders to note that they should necessarily submit their financial bids in the prescribed format and no other format is acceptable. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BOQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOQ file, open it and complete the white Colored (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.
5. The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
6. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data, which cannot be viewed by unauthorized persons until the time of bid opening.
7. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
8. Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
9. Kindly add scanned PDF of all relevant documents in a single PDF file of compliance sheet.

16.6 AMENDMENT OF BID DOCUMENT

At any time prior to the deadline for submission of proposals, the institutions reserve the right to add/modify/delete any portion of this document by issuance of a Corrigendum, which would be published on the website and will also be made available to the all the Bidder who have been issued the tender document. The Corrigendum shall be binding on all bidders and will form part of the bid documents.

16.7 ASSISTANCE TO BIDDERS

1. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
2. e-Procurement support any queries relating to the process of online bid submission or queries relating to e-Wizard Portal in general may be directed to the **24x7 e-Wizard Helpdesk. The contact number for the helpdesk is 011-49606060, 23710092, 23710091, Er Sanjeet Kumar Jha (+91-8882495599), 9355030626. Amit Kumar Jha 9355030627, 9205898226**

Email Support:

For any eProcurement Application Service Requests and Technical issues related to Document Uploads, Tender Publishing, Issue of Corrigendum, Encryption/Decryption Key issues, Bid Evaluation, Bidder Login issues, New Registration issues, Key Uploads, DSC Key installation, Bid Submission, system users may please mail to Sanjeet Kumar Jha ewizardsanjeet.kumar@gmail.com

REGISTRAR
NIT, Rourkela
Fax No- 0661-2462022
Ph. No -0661-2462021

CHECK LIST FOR PRE-QUALIFICATION

Forms to be filled in properly:

1. Form-A: This form (check list)
2. Form-B: Letter of Transmits
3. Form-C
4. Form-D
5. Photocopy of documents to be attached.
 - a) Valid license
 - b) Work orders executed of last 3 years.
 - c) VAT clearance certificate up to last year, PAN Card and GST Registration.
 - d) Performance report from authority/officer having rank not below Executive Engineer with specific mention about the project components, scheduled and actual time of completion, final project value etc. To be submitted.

(Signature of the Agency)

PRE-QUALIFICATION INFORMATION

LETTER OF TRANSMITTAL
(To be typed on the Agency's Letterhead)

To

**THE REGISTRAR
NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA- 769008**

SUB: Operation and maintenance of 5 MLD Drinking water treatment plant at NIT Rourkela.

Sir,

Having examined the details of pre-qualification document, I hereby submit the pre-qualification documents and other relevant information.

1. I hereby certify that all the statements made and information supplied in the enclosed forms A to D and accompanying statements are true and correct to the best of my knowledge. I understand that if any information found incorrect, the application is liable to be cancelled.
2. I have furnished all information and details necessary for pre-qualification and have no further pertinent information to supply.
3. I certify that my firm is not blacklisted/ banned from business by any organization.
4. I hereby accept the rules and procedures of the Institute for pre-qualification of Contractor and agree that the Institute has the right to accept or reject any application without assigning a reason thereto.

(Signature of the Agency)

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

APPLICATION FOR PRE-QUALIFICATION

1. Name of Agency/ Firm: - _____

2. Address: - _____

3. FAX/Telephone Number: - _____

4. Special Qualification for technical Person: _____

5. Details of Registration:

6. Volume of business in last three financial years:

2016-17 Rs _____

2017-18 Rs _____

2018-19 Rs _____

7. Important jobs executed in Govt. /PSU including specifications, materials used etc.

8. Field of Specialization.

9. Valid Income Tax clearance certificate (ITCC).

10. Any other information regarding technical capability.

(Signature of the Agency)

Annexure to Application for Pre-Qualification

WORKS COMPLETED AND IN PROGRESS DURING THE LAST 5 YEARS (INCLUDING ALL WORKS AWARDED)

{ADD ADDITIONAL SHEETS, IF NECESSARY}

Sl.No.	Name of Work & Agreement No	Date of Completion		Tendered Cost	Complete address of the Authority for whom the Work was done
		Stipulated	Actual		

A. GENERAL TERMS AND CONDITION :-

1. The scope of work of the contractor shall cover Operation & Maintenance of existing Drinking Water Treatment Plant, round-the-clock, complete from "Inlet of Cascade Aerator" to "Outlet Clear Water Storage Reservoir" including providing & deployment of skilled and unskilled Manpower, supplying and dosing all type of Coagulants, Chemicals, Consumables, Chlorination for disinfection, Water Sampling & Testing etc. The Operation & Maintenance of Drinking Water Treatment Plant shall be continuous, round-the-clock throughout the year, including all Week days, Sundays & Holidays.
2. This is a Comprehensive Operation & Maintenance contract. The scope of work of the Contractor shall also cover preventive maintenance and any required repair and replacement of mechanical & electrical installations, bridge & paddle rotating drive mechanism, pumps, blowers, chlorine tonners & chlorine dosing system, lifting hoists, chain-pulley blocks, pipelines, valves, gear boxes, rewinding of motors, oil & lubricants, gauges & instruments, weighing machine including providing & fixing spare parts & components, tools & tackles, bolts & nuts, hardware, safety items, oil & lubricants etc. However, repair and maintenance of ceiling fans, building & street lights, civil works & building painting are excluded from the scope of work.
3. The existing Drinking Water Treatment Plant has been commissioned and put on regular operation w.e.f. August, 2016. All the existing mechanical & electrical installations, bridge & paddle rotating drive mechanism, pumps, blowers, gear boxes, chlorine tonners & chlorine dosing system, lifting hoists, chain-pulley blocks, pipelines, valves, gauges & instruments, weighing machines etc. are in working condition. The Tenderer / Contractor, prior to submission of his tender, must visit the existing installation at Drinking Water Treatment Plant at his own cost and satisfy himself about the type and nature of work. After award of work order to the Contractor, no extra claim what so ever will be entertained.
4. After completion of this work order tenure your company should refill two chlorine tonner.
5. Accommodation of contractor's personnel within institute premises, if available, will be provided against payment of rent, electricity charges and water charges.
6. It is the responsibility of the Contractor to hand over the entire system to the Engineer I/c., NITRKL on completion of the contract period in its initial working condition. Any damages / replacement etc. should be done at free of cost with the knowledge of the Engineer I/c. of treatment plant, NITRKL. The final taking over will be done after detailed joint inspection by the Engineer I/c. of Plant NITRKL / or his authorized representative and the contractor on completion of the contract period.

B. SCOPE OF WORK :-

1. **JOB DESCRIPTION:** Annual Operation and Maintenance of 5MLD capacity drinking water Treatment Plant including providing & deployment of all required including skilled and unskilled man-power and chemist etc., Providing, solution preparation and dosing of all chemicals & coagulants viz. Alum, PAC, Hydrated Lime for treatment purpose, Chlorine for disinfection purpose (or Bleaching Powder solution or Sodium Hypo-chloride whenever required in absence of Chlorine), Water Sampling & Testing etc. throughout the year round-the-clock, 365 days x 24 hours basis including all Week days, Sundays & Holidays. Two (2) Liquid Chlorine Tonners are available in treatment plant. Re-filling of these Tonners including cost of liquid chlorine, hydro-testing, to-and-fro transportation from chlorine manufacturer, handling etc. shall be borne by the contractor and same are included in the scope of work. Testing instruments are provided in the laboratory but laboratory chemicals and reagents etc. as required for the testing shall be provided by the contractor at his own cost and responsibility.
2. **INSPECTION :-**
 1. Inspection will be carried out by department as and when required. The log book of the water treatment plants shall be submitted to department before submission of RA bill of every month for check and certification by the department.

2. In case of any shortage found during the surprise check, recovery shall be made from the payment due to the contractor for the affected category at double the rates prevailing or decided by the Concerned Authority of Water Treatment Plant NITRKL. In case of absence of any manpower the recovery proportionate to the quoted amount shall be made from the bill.

3. Major Units OF treatment Plant:

- i) Cascade Aerator
- ii) Parshall Flume
- iii) Flash Mixture with Agitator
- iv) Primary Clarifier with Scrapper and Rotating Bridge with motor drive.
- v) Clari-flocculator with Scrapper and Rotating Bridge with motor drive.
- vi) Water Channels
- vii) Rapid Gravity Sand Filter – 4 Beds
- viii) Pipe Gallery
- ix) Flow meters and Rate Setter and Head Loss gauges.
- x) Syphons at Filter bed.
- xi) Over Head Back Wash Tank - 180 CuM Capacity
- xii) All Types of Valves and Mechanical Fittings.
- xiii) All Mechanical Gates.
- xiv) VT Pumps & Motors – 2 Sets
- xv) Air Blower with Motor – 2 Sets
- xvi) Flash Mixer with Motor of 2 HP and Propeller. – 1 unit
- xvii) One Chemical Storage Room
- xviii) One Chemical Mixing Room with Four Mixing Chamber having
- xix) Four 1 HP motor with shaft and Propeller.
- xx) Two PAC Dosing Tanks with two induction motors of 0.5 HP power and propeller.
- xxi) One Chlorine Dosing Room with Two Chlorinators (Pre-Chlorinator and Post Chlorinator) and Three Dosing Pumps of Capacity 3 HP Each.
- xxii) One Chlorine Tonner Room with Leak Detection Instrument and Two Chlorine Tonner Tank.
- xxiii) One Laboratory with Testing Equipment (Turbidity Meter, Ph Meter, Jar Test Apparatus, Residual Chlorine Test Equipment and Chemicals for Testing)
- xxiv) All Electrical Instrument (All panel for Motor, Lights, fans etc.)
- xxv) Dewatering pump below pipe gallery.
- xxvi) Alum Dousing Chamber with Discharge Controller.

C. Operation and Maintenance of Treatment Plant (Mechanical & Electrical) :-

1. Daily Maintenance and Operation:

- xxvii) Deployment of required number of manpower for testing, treatment, filtration, disinfection of water round-the-clock throughout the contract period as per requirement and instruction of Engineer- I/c.
- xxviii) To operate all the Valves and Gates in Treatment Plant while the Treatment Processes of water is continue in plant throughout the Contract Period.

- xxix) To Operate & Maintain Chlorinators at Chlorine Chamber and Pumps for Dosing of Chlorine at Post or Pre Chlorination Unit as instructed by the Engineer I/c. (Care Should Be Taken That Proper Amount OF Chlorine Should Be dosed in Each Unit and Also Care Should Be Taken That There Is no Leakage In any point of Chlorine Dosing unit). If Gaseous Chlorine is going to be empty in Tonner, Then alternative measure should be taken by the Contractor (Like providing and dosing Bleaching powder solution or Hypo chloride by Manual means) Round The Clock. If there is any break down at Chlorine Dosing Unit maintenance or Repair Should be done on Immediate Basis throughout the Contract Period including providing all the consumable required parts of chlorinator.
- xxx) To Prepare the Chemical solution for Dosing Purpose (Like Alum, Lime, PAC etc.) For Treatment of Raw Water for Round The Clock throughout the Contract Period.
- xxxii) Dosing of Prepared Chemical Solutions at instructed Points whenever the treatment Processes is Going on or Round the clock Throughout the Contract Period.
- xxxiii) The Water channels from Aerator up to Primary clarifier should be cleaned by Contractor Especially in rainy Season or whenever the medium is dirty by deploying a labour Throughout the Contract Period.
- xxxiv) Back Wash All the Filter Beds In a regular Interval of time as instructed By Engineer I/c. So as there should not any abrasive Head loss in Filter Bed throughout the Contract Period.
- xxxv) Filling the Back Wash Tank On daily Basis for Back Wash the Filter Bed throughout the Contract Period.
- xxxvi) Regularly Testing Of Water at Treatment Plant Laboratory on daily basis by a Specialist or Supervisor as per instructed by Engineer I/c. whenever water is treated throughout the year and round the clock.
- xxxvii) Proper Safety Measure should be given to the worker at treatment plat by the contractor. Care should be taken that any kind of accidental circumstance should be avoided.
- xxxviii) Operate and Maintenance the Corresponding Motors require during the Treatment Processes is going on.
- xxxix) The Bridges at Both the clarifier should run for cleaning of sludge from the Clarifier tank.
- xl) Proper Record of all the data OF Treatment plant operation and maintenance by the Contractor Personnel's as instructed by the Engineer I/c.
- xl) Leakages rectification in DI pipe, GI Pipe, Cpvc, PVC, MS pipe line network at Water Treatment Plant on Urgent Basis.

2. Weekly Operation And Maintenance :

- xli) Proper care should be Taken for the Pumps and Motor by checking weekly all the parts.
- xlii) Required lubricants should be applied at all the bearings and pumps and at all nuts and Bolt joints.
- xliii) The surface of wall at filter bed and pipes, drain and siphon should be cleaned regularly.
- xliv) All electrical units should be tested and checked in proper manner by the contractor.
- xlvi) All The Water channels should be cleaned by the Contractor regularly and as instructed by Engineer I/c.

3. Monthly Operation And Maintenance:

- xlvi) Preventive maintenance every months or as per instruction given by Engineer I/c. for pumps, motors, electrical panels and valves.
- xlvii) Every month water samples from clear water storage sumps or from any user point at Campus Area in lets for testing a) Physical b) Bacteriological c) Chemical at testing Laboratory.

4. Yearly Maintenance :

- i) The Contactor shall desilt, wash and clean the internals & externals of all the Plant Units such as Cascade Aerator, Flume, Flash Mixer, Primary Clarifier, Clariflocculator, Under Ground Clear Water Reservoir, OH Back wash Water Tank, all Water Channels, Stand Wells, Valve Pits etc. once every year preferable in winter or summer season or as per direction of Engineer I/c. Muck and debris shall dispose outside the Plant.
- ii) All The Mechanical Devices installed at treatment plant unit which are in direct contact with water should be cleaned from rusting by wire brushing and cleaned. All structural steel, bridge, walk way, hand railing etc. shall be cleaned and painted once in year during summer season.
- iii) The Rubber Pads & Scrappers Fitted at the Bottom of Clarifier and Clariflocculator with the Bridges should be repaired / replaced / refitted as per the instruction given by Engineer I/c.
- iv) Once a year, after cleaning of steel structures, both above water or submerged in water, shall be painted properly with primer and enamel paint as required.

5. Annual Requirement of Materials & Chemicals:

- i) **Chlorine Cylinders:** About 1700 kg Chlorine Gas is required for disinfection of drinking water throughout the year. Two (2) empty Liquid Chlorine cylinders will be provided by the Institute. The Chlorine Cylinders are to be refilled by the contractor from time to time as per requirement of the water treatment plant. If the Plant is running out of Chlorine an immediate step must be taken by the Contractor to compensate the deficiency of Chlorine gas by providing Bleaching powder solution or Hypo Chloride for as a temporary measure. Within this short duration the Contractor shall arrange refilling of Tonners for smooth function of Treatment process.
- ii) **Alum or Coagulant:** The Contractor should maintain adequate stock of Alum (in brick form) throughout the year. The Contractor should store minimum 3-4 months stock at any time. If there is any deficiency of alum stock during the contract period a penalty may be imposed from the running bill, which should be fixed by Engineer I/c. Other Coagulant like PAC in Liquid form should be stored in Chemical Room as per process requirement of the Treatment Plant. Approximately 750 Liters PAC would be required for treatment processes throughout the year.
- iii) **Hydrated Lime:** The Contractor should provide Hydrated Lime throughout the year as required for treatment of water. Approximately 5000 kg would be required for treatment of water throughout the year. The contractor should store minimum 3-4 months requirement of Hydrated. If there is any deficiency of Hydrated Lime observed during the contract period penalty of suitable amount will be deducted from the running bill, which should be fixed by Engineer I/c.

D. MAINTENANCE OF PUMPS (including providing all spear parts & components), BLOWERS, MOTORS, OVER HEAD CRANES & HOIST, ROTATING BRIDGE DRIVE MECHANISM, AGITATORS, CHLORINATION UNIT, PIPE GALLERY etc.:

- i) Alignment of pump sets to be checked & is required rectification to be carried out. And readings to be recorded.
- ii) Coupling brushes, pins, rubber parts will be checked & replaced if required.
- iii) Gland packing should be checked & replaced if it is worn-out.
- iv) Oil level & grease in bearings will be checked & replenished if necessary.
- v) Current, Voltage, Speed, Pressure, should be measured & recorded.
- vi) Noise, vibration & temperature levels should be checked.

- vii) Overhauling of above machines should be done as per the OEM's recommendations of operating manual.
- viii) Any Parts required for maintenance of Chlorination should be provided by the contractor on immediate basis.
- ix) Dismantling of pumps should be done only with approval of Engineer I/c.
- x) Total tool, tackles, chain pulley, try pad lifting materials, assisting manpower and complete job is under the contractor's scope.

E. QUALIFICATION OF MANPOWER TO BE DEPLOYED FOR O&M OF WATER TREATMENT PLANT BY THE CONTRCATOR:

- i) The operating personnel shall have thorough knowledge on safety precautions during emergency cases and also conversant with state electricity rules, regulations and Indian factory act rules and Indian explosive rules & regulations. The contractor shall provide and maintain first Aid box in each installation complete with necessary medicines etc.

The following are the qualification of staff to be employed by the contractor for efficient operation and maintenance of the Water Treatment Plant.

- ii) **Plant Operator :(shall be consider also as plant supervisor)**
The Plant Operator must have good technical and practical experience in carrying out operation and maintenance of clarifier, Clarifloculator, Rapid Sand Gravity Filtration Plant including chlorine disinfection system with maintenance of mechanical devises like pump sets, blower etc.
- iii) **Helper:**
They should have experience in carrying out O&M in drinking water treatment plant or equivalent.
- Iv) **Chemist:**
Minimum HSC Pass and having good technical knowledge in Drinking Water Treatment process, Jar Test and chemical/coagulants dosing calculation and Water Testing.

F. DEPLOYMENT OF MAN POWER :-

- i) Required no. of personnel (i.e. including leave reserve) should be deployed on 365days x 24Hrs. basis including Sundays & Holidays.
- ii) All the Seven Days (Monday to Sunday) including Holidays There will be three Shifts: Days Shift + Night Shift + Daily Maintenance Shift.
- iii) Depending on the supply of raw water contractor may adjust the time of shift.
- iv) During the supply of raw water from intake well for treatment purpose minimum required of man power is-----1.0 no. of plant operator+ 2.0 nos. of helper+ 1.0 no of chemist (At day shift).
- v) Time other than supply of raw water minimum required of man power is ----1.0 nos. of helper.
- vi) Total minimum manpower required per day is ---- A) 2.0 nos. of plant operator
B) 1.0 nos. Chemist C) 5.0 nos. of helper.

Notes:-

- 1) Whenever there is any urgent situation arise in treatment plant extra laboure or expertise if required should be deployed on emergency basis as per direction of engineer I/c. No extra claim shall be entitled against the work of deployment of man power.
- 2) The contractor shall employ only certificate holders as mentioned above proof of documentary evidence for experience, qualification and antecedents should be submitted for approval of the Engineer I/c.

G. TOOLS & TACKLES:

The contractor should keep the following minimum tools, tackles, furniture and calibrated instruments at site for carrying – out the, operation maintenance and other jobs as required.

1. Pipe wrenches to handle GI pipe sizes of 12mm to 100mm – 2nos
2. Pipe wrenches to handle GI pipe sizes for above 100mm – 1no
3. Thread die set for above GI pipe sizes – 1no
4. Ring spanner set – 1no
5. De spanner set – 1no
6. Cutting plier – 2nos
7. Screw drivers – 4nos
8. Multimeter – 1no
9. 1000volts megger – 1no
10. Ln key set – 1no
11. Bearing puller -1no
12. Sprit level indicator – 1 no.
13. Measuring tape 15 mtrs – 1no
14. Electrical Crimping tool – 185sqmm -1no
15. Testing lamp – 1no
16. Nose plier – 2nos
17. Drill machine – 1nos
18. Industrial Knives – 3nos
19. Tester – 2nos (electrician)
20. Electrical hand gloves – 1set
21. Aluminum or timber ladders.
22. Any other tools and tackles required for smooth operation of AMC contract from time to time provided items should be in working condition & latest calibrated.
23. Torch light -4 Batteries type: - 2no.

H. House Keeping

Proper House Keeping (excluding gardening) of various units, interior & exterior of treatment plant buildings, filter house and premises as well as surrounding area within the boundary wall shall be under the scope of work of the contractor. The contractor shall take care to maintain the building and premises neat and tidy manner.

The contractor should periodically clean the treatment plant premises viz. uprooting of rank vegetation, grass bush wood tees and sapling of girth etc. as per direction of engineer I/c.

I. STATUTORY OBLIGATION:-

- 1) The Agency/ Firm shall be directly responsible for payment of minimum wages as per central government orders and circulars (including other benefits like E.P.F. & E.S.I) to his man power engaged under this contract at his own cost. When the contract terminates there shall be no physical or moral pressure on the institute, on grounds of "person/ resources displace from job".
- 2) Month wise detailed statement of wages paid to the employees including E.P.F/E.S.I deduction should be enclosed along with the monthly bill by the Firm/ Agency and submitted to the designated Officer of the institute.
- 3) The Agency should have E.P.F registration No. and a valid labour license under section 7 of the contract labour (R & A) act, 1970 and contract labour (R & A central Govt. rules, 1971).
- 4) The Firm/Agency shall abide by all statutory and regulatory Acts of both Central Govt. & State Govt.
- 5) The firm/Agency shall comply the regulatory clauses of labour Act and shall not engage any minor under this contract.
- 6) All safety measures must be taken care of, in order to avoid any accident, fire and other safety hazards. Any type of loss of assets due to any such incident is the sole responsibility of the Firm/Agency. The institute shall in no way be liable for any such incident.
- 7) If there is any damage to the institute property or any other financial burden on the institute because of willful or negligent action by the Firm or its personnel, the institute shall be entitled to recover the same by means of compensation from the Firm/ Agency.
- 8) The Registrar or an Officer explicitly authorized by him will represent the institute in all dealings with the Firm/ Agency.
- 9) The staff engaged by the Agency shall draw their remuneration from their Agency and will not claim any employment benefit from the institute at any time. The agency shall also be responsible for the statutory obligations of such personnel and shall indemnify the institute in the matter.
- 10) The contractor shall not be entitled to any additional payment during the tenure of the contract due to increase in cost of manpower and the rates should be quoted accordingly.

J. COMMERCIAL TERMS AND CONDITION:-

- 1) The successful bidder/ firms shall deposit the bank draft of an amount equal to one month's contract value (With Less EMD amount) from a nationalized bank in favor of National Institute of Technology, Rourkela as Security Deposit. The security money shall be released within one month after realization of the institute due, if there would be any on termination of the contract the security deposit shall be forfeited.
- 2) If the firm/ Agency fails to initiate the job within specified time given by the institute, the EMD shall forfeited and the next eligible Firm/Agency shall be forfeited.
- 3) The Agency shall submit a monthly claim (the mutually agreed rate as per the contract) to the institute through the designated officer of the institute, who shall endorse a certificate on the bill for the services rendered by it during that month. The payment of certified monthly bill shall normally be made within fifteen days from the date of receipt of the bill.
- 4) The EMD/Initial Security amount **Rs. 67,000/-** will be deposited along with the tender documents which was retained with N.I.T Rourkela till the maintenance period is over. Unsuccessful tenderers will get back their EMD/ISD after official procedure. The Security deposit amount will be retained with NIT Rourkela till the maintenance period is over. After successful completion of the job the SD amount will be released after one month of completion of the maintenance period.

K. CONTRACT VALIDITY:-

1. The contract is valid for a period of one year i.e. from to subject to continuous satisfactory performance. However, this will be reviewed after 09 (nine) months from the date of award of contract each year based on performance and if found satisfactory it will be renewed for one year more up to total three years subjected to mutual acceptance of both the party, on year to year basis at the sole discretion of the Director, NIT Rourkela. The contractor is obliged to enhance the wages paid to its own employee accordingly.
2. The contract can be terminated under any one of the following circumstances.
 - a. By giving one month's notice by the institute, anytime without assigning a reason. If the opinion of the authorities such termination is in the interest of the institute. This termination will not be challenged by the contractor.
 - b. The Firm/Agency not performing his duties properly as per the agreed terms and conditions of the contract. The institute shall decide whether the performance of the contractor meets specification or is deficient and to what degree. In such case the notice period shall be one week without any compensation.
 - c. For committing breach of the terms & Condition of the contract or assigning the contract or any party thereof by the Agency to any third party. The notice period shall be one week without any compensation.
 - d. The Firm/Agency being declared as insolvent by the court of law. The notice period shall be one week without any compensation.
 - e. For indulging in any grossly unsafe practice, stealing or willfully damaging institute property or engaging in any illegal activity, the contract may be terminated on immediate notice. Decision of Director, NIT Rourkela in this matter shall be final and binding.

During notice period for termination of contract in any of the situations contemplated above, the contractor shall keep discharging his duties as before till the expire of notice period, It shall be duty of the contractor to remove all the persons and/or resources deployed by him on termination of the contract on any ground whatsoever and to ensure that no person creates any disruption/ hindrance/ problem of any nature to NIT Rourkela.

L. JURIDICTION AND RIGHT TO AMRND RULES:

- 1) The Institute reserve the right to amend the rules whenever and wherever considered necessary and appropriate. The same shall be intimated to the contractor in due course.
- 2) The institute rules shall be binding for execution of the contractor. Further, in case of any dispute arising out of or in connection with the aforesaid contract either during subsistence of the contractor thereafter, the Director, NIT Rourkela is the sole arbitrator to decide the same or his decision is final and binding on both the parties as per the provision of the arbitration and conciliation Act 1996. If differences persist even after arbitration and there are compelling reasons to go to the court, it will be decided in the court of Rourkela only.

NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

Tender for: - "OPERATION AND MAINTENANCE OF 5 MLD WATER TREATMENT PLANT AT NIT ROURKELA".

BOQ (Bill of Quantity) /PRICE BID / QUOTED PRICE FORMAT [Should only be uploaded in the Price-Bid cover. Not to be enclosed with the Technical bid]

NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA- 769008										
Tender Inviting Authority: REGISTRAR NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA- 769008										
Name of Work: Tender for Operation and maintenance of 5 MLD drinking water treatment plant at NIT Rourkela.										
Tender Notice No: NITR/PWEM/2020/13 DATED: 28 /01/2020										
Name of the Bidder/ Bidding Firm / Company :										
Note: Details of Job Description are given in Annexure- C in tender documents										
PRICE SCHEDULE (DOMESTIC TENDERS - RATES ARE TO GIVEN IN RUPEES (INR) ONLY) (This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)										
Sl. No.	Item Description	Item Code / Make	Quantity	Units	Monthly price to be entered in Figures by the Bidder including all charges through out the contract period in Rs. P	GST Amount in INR Rs. P	Any Other Taxes in Rs. P	Any Other Duties/Levies in Rs. P	TOTAL AMOUNT Without Taxes in Rs. P	TOTAL AMOUNT including taxes/any other taxes/any other duties/levies in Rs. P
1	2	3	4	5	6	7	8	9	10	11
1	Description:-									
1.01	Comprehensive operation and maintenance of 5 MLD Drinking water treatment plant at NIT rourkela as per attached Annexure-C .	item1	1.00	Monthly					0.00	0.00
Total in Figures									0.00	0.00
Quoted Rate in Figures										
Quoted Rate in Words										