



AIRPORTS AUTHORITY OF INDIA

Notice Inviting Quotation

(NIQ)

Ref:- AAI/KIA/Engg(E)/STP/2020-21

Dated: 24.03.2021

Name of work: - Operation & Maintenance Contract of 150KLD SBR type Sewage Treatment Plant at New AAI Residential Colony, Bagalur, Bangalore.

Name of Office: - Airports Authority of India, KIA, Bangalore-560 300.

Estimated Cost of the Work: Rs.3,11,546.00 (Rupees Three lakh Eleven Thousand five hundred and Forty Six only) excluding applicable GST.

On behalf of Chairman Airports Authority of India, Sealed Quotations are invited by Sr. Manager (Engg-E), AAI, KIA, Bangalore from the Contractors having valid registration on the date of issue of tender in appropriate class of CPWD/MES/P&T/Railways/State PWD/PSU/Municipal corporations & Development authorities of Delhi, Mumbai, Chennai, Bangalore and Kolkata or specialized agencies having specific experience in similar nature of work i.e. **"Operation and Maintenance of Sewage Treatment Plant."**

The quotations should be in two bid system i.e. TECHNICAL BID and PRICE BID in the prescribed form as per Annexure-I to Annexure-VI. Bidders are required to submit Technical and price bid in separate envelope as given below:

- 1. Technical bid** must be submitted in **Envelope 'I'** containing following documents
 - Copy of NIQ document signed by the bidder (With office seal) in all the pages
 - Copy of Min wages Affidavit as per **Annexure-I**
 - Copy of PAN card and GST certificate
 - Copy of Valid Electrical License
 - Copy of Undertaking regarding GST compliance duly sealed & Signed (Enclosed as **Annexure-II**)
 - E-Payment details as per **Annexure-III**.
 - Balanced sheets with profit/Loss statements.
 - Copy of Power of attorney
 - copy of 'Undertaking' regarding Blacklisting/ Debarment on Company's Letter Head as per **Annexure-IV**.
 - Copy of Net worth certificate as per **Annexure-V**.
- 2. Price Bid** must be submitted in **Envelope 'II'** containing only the Annexure-VI. The commercial bid of only those bidders will be opened whose papers submitted in Envelop 'I' are found to be in order.
- 3. Both the envelopes** are to be sealed in another Envelope and marked as **'Master Envelope'** super scribed as "Operation & Maintenance Contract of 150KLD SBR type Sewage Treatment Plant at New AAI Residential Colony, Bagalur, Bangalore." and submitted to

O/o Senior Manager Engg (E),
AAI, KIA, Bangalore-560300

on or before 31.03.2021 upto 10:30 Hrs.



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Quotation will be opened on 31.03.2021 at 11:00 Hrs. (Envelope-I Only). After completion of technical bid evaluation, price bid will be opened.

Last Date and time of receipt of Quotation: 31.03.2021 up to 10:30 hrs.

Date and Time of Opening of Quotation (Envelope-I): 31.03.2021 at 11:00 Hrs.

Date and Time of Opening of Quotation (Envelope-II): 31.03.2021 at 15:30 Hrs.

4. The quotation will remain valid for acceptance for a period of 60 days from the date of receipt of the same by AAI.
5. Incomplete & ambiguous quotations will be rejected.
6. AAI reserves the right to accept/reject any quotation without assigning any reason.
7. The work shall be approved by the Sr.Manager (Engg-E),AAI,KIA,Bangalore,who will be In-Charge for this work or by his authorized representative.
8. In case of any Query, please contact, Sr. Manager (Engg-E) on the telephone No:- 080-22019917 on all working days (Monday -Friday) in between 1000 IST to 1730 IST except closed holidays.
9. **Qualifying requirements of Contractor / Firm:** -The firm should posses following Qualification: -

- a) Agency should have valid registration on the date of issue of tender in appropriate class of CPWD/MES/P&T/Railways/State PWD/PSU/Municipal corporations & Development authorities of Delhi Mumbai, Chennai, Bangalore and Kolkata.

Or

Should have satisfactorily completed (Phase/Part completion of the scope of work in a contract shall not be considered, however pre-determined **phasing of the work will be accepted**) three works, each of **Rs. 124618.40** or two works, each of **Rs. 155773.00** or one work of **Rs. 249236.80** in single contract of similar nature i.e. **"Operation and Maintenance of Sewage Treatment Plant"** "during last seven years ending on **last date or extended date of submission of bids** in India.

"The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum, calculated from the date of completion to the last date of submission of bid".

Client certificate for experience should show the nature of work done, the value of work, date of start, date of completion as per agreement, actual date of completion and satisfactory completion of work. Firms showing work experience certificate from non-government/non-PSU organizations should submit copy of tax deduction at sources certificate in support of their claim for having experience of stipulated value of work.

- b) Should have annualized average **financial turnover** of **Rs.93463.80** against works executed during last three financial years ending 31st of March previous financial year. As a proof, copy of abridged balance sheet along with profit & loss account statement of firm should be submitted along with the application. Firms showing continuous losses during the last three years in the balance sheet shall be summarily rejected.
- c) The tenderers should have a **minimum net worth** of **Rs.46731.90** issued by certified Chartered Accountants. (Performa given on-Annexure VI of Tender Document). Scanned copy of all the Documents of Envelope-I mentioned above shall be submitted on the CPP Portal.



4. SPECIAL CONDITIONS:-

1. GENERAL

The Scope of work covers the following items:

- (a) Providing operational & maintenance services of 150KLD Sewerage Treatment Plant.
- (b) Providing day to day maintenance services, general cleaning of various installations as per maintenance schedule specified.

2. Period of Contract: -

The service contract shall be for a period of **06** Months from the date of handing over of site. The contract period can be extended for further period of **06** months on the same terms and conditions of the agreement. AAI reserves the right to terminate the contract fully or partially by giving 30 days' notice in writing to the contractor. If in the opinion of the Engineer-in-Charge, it is observed that the contractor is not doing the works satisfactorily as per the terms and conditions of contract, then the contract can be terminated with immediate effect without giving any reasons thereof.

3. Statutory & Regulatory Clauses: -The contractor has to discharge all the obligations as provided under various statutory enactment including the EPF/ ESI/ Contract Labour (Regulation and abolition)/ Minimum Wages/ Payment of Wages/ Payment of Bonus/ Payment of Gratuity/Workmen's compensation / Works Contract and other relevant Acts, Rules and Regulations in force and as amended from time to time in the State, as applicable.

The engagement and employment of workers and payment of wages to them as per existing Provisions of various labour laws and regulations is the sole responsibility of the contractor and Any breach of such laws or regulations shall be deemed to be violation of this contract. May Ask the contractor to produce documents to verify that these provisions/laws are complied by the contractor.

The contractor has to follow the local security/safety rules & regulations and such instructions on restricted hours of work as may be imposed on him by the department / local authorities, while working in security restricted zones and no claim whatsoever on account of this, will be entertained.

The contractor has to deploy their staff to run the system on all days (365 days) including Sundays and Gazetted holidays in shift as per BOQ for which nothing extra shall be paid.

Contractor has to submit the details of staff such as, qualification documents and experience letters of the staff, the CV and passport size coloured photograph along with copy of police verification (not older than six months on the date of start of work) before engaging them on work. All the documents should be self-attested by each worker and signed and stamped by contractor/ agency. The decision of Engineer-in-charge, to accept or reject any candidate on the basis of lack of experience, qualification, lack of skills required for job, will be final and binding on the Agency.

4. Uniform:-The contractor/agency has to provide every year during the currency of the contract, 2 sets of uniform (pant and shirt), 1 pair of shoes & 3 pair of socks to his staff of approved colour during the contract period, (within one month from the date of award) failing which, AAI recover an amount of Rs 200/- per person per week till the compliance of the same from the contractors running/final bill, In the event of non-compliance of wearing uniform & shoes by Workers on daily basis at recovery of Rs.50/per day per persons shall be made from running bills. The workers should wear a



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badge on the left pocket of the shirt mentioning company's name.

5. No accommodation shall be arranged by the AAI for the staff / workers of the contractor. It is the responsibility of contractor to make his own arrangements for the facilities.
6. **Rates:** -The prices quoted shall be **excluding GST/ PF/ ESI & Bonus**. PF&ESI amount paid to the statutory authorities by the contractor shall be reimbursed on actual basis throughout the contract period on submission of the documentary evidence in next bill or after the final bill.

Bonus amount as per latest Govt.rules or 8.33% of annual salary whichever is higher will be paid to the deployed manpower per year by the contractor and the same shall be reimbursed on actual basis throughout the contract period on submission of the documentary evidence in next bill or after the final bill. In case of non-payment of bonus necessary recovery/withheld against bonus from their RA Bill/ Final bill shall be made as decided by EIC and appropriate action will be initiated by AAI against the contractor. The decision of EIC is the regard will be final and binding on the Agency.

In case a Lump sum discount is offered by the tenderer, the same will be converted into percentage of the total quote and the same percentage discount will be affected in the complete contract.

7. PF & ESIC Contribution: -

- (i) The contractor shall register himself with Labour Licensing Authority and obtain Labour License Number in this regard,
- (ii) The contractor shall have to register with PF & ESIC (where ever applicable) for workmen engaged for the work & challans / deposit receipts of PF & ESI contribution shall be submitted in AAI office for verification/reimbursement, at the time of submission of bill.
- (iii) The PF dues (including EDLI and administrative charges) in respect of workers engaged by the contractor for AAI works to be deposited by the contractor every month by a challan and the documentary evidence in support of such payments along-with employee wise details of the PF contribution (both Employee's share and the employer's contribution) needs to be submitted to the Engineer in charge for the work/contract.
- (iv) ESI:(where ever applicable)& EPF amount (contractor's contribution & administrative charges) paid to the statutory authorities by the contractor shall be reimbursed on actual basis on submission of documentary evidence.
- (v) If ESI not applicable, the agency shall provide Rs. 2.0 lacs Mediclame policy to each person engaged at the site.
- (vi) The contractor has to deposit PF&ESI as applicable, failing which recovery/ withheld@26% and 6% against PF and ESI respectively from their RA bills/Final Bill shall be made.

8. Labour Wages:

- (i) The contractor has to pay the prevailing minimum wages issued by the office of Regional Labour Commissioner/ Chief Labour Commissioner (whichever is higher), from time to time. However, the difference in minimum wages based on actual payment made to the labour and wages applicable at the time submission of tender will be reimbursed including difference in EPF and ESI payment to the contractor on revision of minimum wages and no additional amount such as contractor's overhead & profit will be paid on this of account.



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In this regard the successful bidder shall submit an affidavit on non-judicial stamp paper of Rs.100 as per Annexure before award of the work.

Minimum wages considered as on Date as follows:

Skilled : Rs. 777.00 per day

Unskilled : Rs.639.00 per day

- (ii) For the purpose of admitting the claim for reimbursement of statutory increase in wages Paid by him, the contractor has to produce the required documentary evidence to the satisfaction of Engineer-In-Charge.
- (iii) The payment to the workmen's engaged by the contractor is to be paid through NEFT/ RTGS/ Cheque on or before 7th of every month irrespective of Saturday, Sunday and bank holidays. If any violation with respect to payment of wages for any two months in a contract period, necessary action for cancellation of contract, debarring of the agency for participating in future contracts in AAI shall be initiated. The agency will not be allowed to participate in any of the tendering process in AAI till finalization of the decision.
9. During the contract period if any new installations are added/replaced or modified the existing ones in these areas, which do not warrant any additional manpower, the maintenance services for these installations are also to be provided by the contractor without any extra cost.
10. **Qualification & Wages of Staff:** - The contractor should depute the persons as per the qualification given below for maintenance works. Each shift should be covered with Skilled, Un- skilled persons as required as per SOQ item No.01 is as below.

Shift	Skilled Operator cum Technician	Unskilled (Helper)
General	1	1
TOTAL	1	1

- (i) **Skilled manpower** - shall be I.T.I holder in Electrician / Wireman / Fitter with minimum 01 year experience in similar STP/Electrical works or wireman trade license with minimum 02 year experience in similar works / field and shall be paid as per minimum wages.
- (ii) **Unskilled manpower**- Shall be min. VIIIthClass pass with good physique & shall have basic knowledge of similar STP/Electrical works and shall be paid as per minimum wages.
- However, EIC reserve the rights to relax above mentioned educational requirement and experience criteria for any specialized skilled person suitable to site requirements.
11. In case of absence of staff from duty recovery will be made by the department at the following rates, which shall be binding on the contractor.
- (i) **Skilled** : As per daily wages
- (ii) **Un-Skilled** : As per daily wages

But a part from daily wages, an amount of Rs.100/. will be recovered from the agency per person per shift for absenteeism of any worker as a penalty.

The EIC has full rights to instruct the agency of expel/replace the person with the regular habit of taking unauthorized leaves frequently or continuously absent without proper justification, which may impact the morale of co-workers.



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12. The complete detail of the installations under the scope of work are attached in Annexure "C".
13. It is the responsibility of the contractor to maintain and ensure 100% serviceability of the equipment's / installations under this contract, except for the reasons beyond the control of the contractor. The decision of engineer-in-charge is final and binding on the contractor in respect of establishment & "there as on beyond the control of the contractor ". If the failure to maintain this serviceability of installations attributed to the contractors/agency, penalty to be imposed on the contractor as deemed fit by the Engineer in Charge.
14. In case the agency is not able to attend/ rectify fault in the system within the stipulated time period, AAI reserves the rights to engage outside agency to check / inspect the faulty system. If the system is rectified by the outside agency or third party, the amount of checking, rectification along with suitable penalty towards delay in attending breakdown shall be recovered from the agency. Who otherwise is responsible for the up keeping of this equipment's.
15. There shall be no liability on the part of the AAI to pay any compensation arising out of the labour dispute, accident etc. At site. The contractor will be fully responsible for safety, security and coordination of the workers deployed at AAI site. Noting extra will be paid to the Agency on this account.
16. Contractor or his authorized representative shall visit the site at least once in one month and as and when called by the Engineer-in-Charge or his representative and will report about satisfactory working of all equipment.
17. Any material taken out for the purpose of repair/ rectification/ replacement from the building or work premises shall have necessary permission from the EIC and security personnel/ competent authority in the form of a Gate pass.
18. The timings of operation & maintenance/ upkeep work etc. shall be as decided by Engineer-in charge from time to time depending upon operational & technical requirement.
19. If agency is doing any maintenance work as per schedule then they have to take prior approval for the same from EIC and also have coordination with other entities/wings (ATC/CNS/Airlines etc.) as required.

20. Handing / Taking over of the Equipment/ Machines after contract:

i) For AMC Contract

All the equipment's / installations/ systems with accessories complete in all respect shall be checked by agency before taking over the site and the same has to be handed over to AAI by the contractor in good running condition at the end of the contract. List of defects, If any notified during contract period shall be rectified by the agency before the closure of the contract. If the Agency failed to rectify the defects, notified to him (during contract period) the EIC shall rectify the defects at the contractors risk & cost. The decision of EIC in this regard will be final & binding on the agency.

ii) For CMC Contract

For items under Comprehensive Maintenance Contract (if any), the agency will check the installations thoroughly at the time of taking over and any defect found will be intimated to AAI in writing.

List of defects, If any, notified during contract period shall be rectified by the agency before the closure of the contract. If the agency failed to rectify the defects, notified



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to him (during contract period) the EIC shall rectified the defects at the contractors risk & cost. The decision of EIC in this regard will be final & binding on the agency.

- 21. For delay in attending maintenance schedules:** -All the preventive maintenance works shall be done as per schedule and complete records in those regards has to be prepared and submitted to AAI engineers, failing which recovery of Rs. 5,000/- for monthly checks, Rs. 10,000/- for quarterly maintenance, Rs, 15,000/- for half yearly maintenance and Rs. 20,000/- for yearly maintenance shall be made from the bills for each set/system of installations, subject to the shutdown provided by AAI , which shall be Co- ordinated by the agency.
- 22.** The contractor has to deploy their staff to run the systemically day as per BOQ.
- 23.** The work shall be carried out as per specifications and relevant applicable standard including ISI/CPWD specification.
- 24. Safety & availability of Material:** -
 - (i) The firm/agency shall submit test certificates, wherever applicable as per CPWD/IS/ manufacturers practice and the department reserves the right to get them independently checked for the material supplied by contractor as required.
 - (ii) All debris due to works shall be removed and site shall be cleared by the contractor as soon as the task is completed. Non-removal of debris from site will attract a penalty of Rs. 500/- per day from the running bill/final bill.
 - (iii) Issue of materials stipulated in the tender will be regulated to the actual needs from time to time. Unused materials shall be returned to the department failing which the recovery will be made at the penalty rate i.e. double the market rate. Any damage caused to the materials during transit or under storage will be to the contractor's account.
 - (iv) If there is any requirement of material at site which is not available in AAI store then contractor has to procure from market as per approved makes with EIC permission and close the complaint as soon as possible. Contractor will provide the tax invoice/ bill for the same and the payment for such material will be given along with 15% OH & CP in running / final bill as an extra item,
- 25. Guarantee:** -. In case of supply of any material, the tenderer shall guarantee the equipment/ material against all defects as per manufacturer. Any defects arising during the guarantee period shall be rectified by the Tenderer at his own expenses to the satisfaction of the E-I-C.
- 26. Water, Electricity and Enquiry Room:** -The AAI will provide an enquiry room, water & Electricity for maintenance purpose, free of cost.
- 27. Make of items:** - The contractor shall use / supply the material as per approved make of AAI or as per schedule of quantities or exact replacement of existing material suitable to site after taking permission from EIC/authorized representative in writing incase makes are not defined for particular material and the department reserves the right to accept or reject any other makes offered by the contractor.
The contractor has to supply the materials as and when reqd. /ordered by the Engineer-in- charge or his representative during the currency of the contract.
- 28. Terms of payment:** -
The Running payments for the work done shall be released Monthly by AAI only after salary payments to all workers & submitting the proof of disbursement and deducting the applicable Taxes. The Security Deposit @ 10% shall be deducted from the running bills, which shall be released after successful completion of Defects Liability Period which is 06 Months from the certified date of completion.



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The following documents as applicable shall be produced and self -attested photo copy shall be submitted by the contractor during each running bills: -

- i. Delivery challan / copy of invoice of all the material supplied.
- ii. Test Certificate to confirm that the materials meet the contract specification and relevant standard in all respects.
- iii. Monthly Challans of E.P.F. and E.S.I. deposits upto previous month.
- iv. Wages register signed by workers of each month.
- v. Bonus details received and signed by workers.
- vi. Log books & attendance register.
- vii. Original GST invoice in triplicate

Final Bill Payment: -The total amount of final bill worked out at the accepted tender rates, if found to be more than the amount worked out at the quoted rate of second lowest, the contractor shall be paid lower of the two.

The agencies shall submit final bill along with all the documents related with PF, ESIC & Bonus to AAI in addition to all maintenance schedule registers, documents etc. related to the work. The agency also formally handover the list of equipments in good working condition, without any damage as handed over to them by AAI.

29. The contractor shall be responsible for any damage caused to any equipment's/building of AAI due to the negligence of the staff. The same shall be made good by the contractor at his cost.
30. Agency has to submit the Preventive Maintenance Activity Plan within 15 days of award of work in line with the Preventive Maintenance Schedule, considering site requirement for approval of Engineer-In-Charge or his authorized representative.
31. The agency shall provide minimum 01no. mobile phone with active SIM to the site incharge /authorized representative for official use during the currency of the contract, nothing extra will be paid on this account.
32. **Dismantled materials:** -
 - (i) The contractor shall make entry of all the materials issued for the work, time to time in the material issue register (to be separately maintained by the contractor).
 - (ii) After completion of the work necessary entries shall also be made in the register indicating the location where the materials are installed and the balance materials left out need to deposited to AAI store after completion of work.
 - (iii) The dismantled materials shall be duly handed over to Engineer in charge or his authorized representative and necessary endorsement shall be obtained in both material issue registers and also the dismantled material register.
33. **Equipment's For Night Working:**

In case, it appears, at any stage that the work may not be completed within the stipulated period due to restricted working hours in the day in view of any reasons, the contractor shall execute the work during the night as and when required. Nothing extra shall be payable to contractor for working in night time.
34. **Consumables:-** All the consumables such as insulation tape, Test Lamps, cotton waste, soap, dusters, grease, Petroleum jelly, hack-saw blade, Oil for refill/replacement in pumps, chemical or any other suitable material for cleaning of cooling coils, tanks etc. as per site requirement will be provided by the contractor.
35. Stationeries such as log books, work diaries to work men, printed maintenance records, logbook of various installations, various registers, preventive maintenance schedules as per MI format and as per the instructions of Engineer-in-charge will be provided within the 15 days of award of contract and maintained by the contractor at



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the site. Reserve Stock quantity to be decided by the EIC & nothing extra payment will be made in this regard and the agency has to keep minimum quantity of consumables for one month in stock depending on the actual requirement failing which the material will be arranged by the AAI and the expenditure will be recovered from the agency with 15% overhead.

36. Tools and Tackles: -

The contractor shall provide all the tools and tackles for the works including Measuring instruments and safety gadgets for attending breakdown of equipment. Cost of transportation of labour and material to Airport/ office premises shall have to be borne by the contractor.

i) Each Skilled manpower will be provided with the following minimum tools of reputed brand (Make: Taparia or equivalent) along with carrying bag for routine maintenance works:

- Cutting pliers - 01no.s
- Screw Drivers (Big & Small) – 01set
- Wire strippers – 01set
- Line Testers - 01no.
- Test Lamps with holder-01no.

ii) The following tools shall be provided by the agency at AAI store for use of Maintenance and breakdown works: -

- Box Spanner Set complete with
- Socket accessories, ratchet, etc – 01 set
- Double end spanner set (Set of 12) – 01set
- Ring Spanner set (Set of 12) – 01set
- Screw Spanners of different sizes. – 01set
- Hammers of different sizes. – 01set
- Screw Driver Set of different sizes. -01set
- Crimping tools (different sizes).-01set
- Nose pliers.-01set
- Wire Cutters/Cutting pliers.- 01set
- Punch/ Chisel-01set
- Electric drilling machine.-01set
- Blower-01 set
- Vacuum Cleaner (Big size).-01set

iii) The following instruments/ items shall be provided by the agency at STP for use of maintenance and breakdown works each of 01 set :-

- Multi-meter (VAO Meter)
- Megger (500 V & 1000V)
- Earth Tester
- Clip-on-meter
- Cell Tester
- Raincoat
- Gum boot
- Safety Gloves
- Rechargeable torchlight
- Safety Helmet
- Safety Rope
- Any other tools as per the site requirement.



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In addition to these if any additional tools are required during breakdown the contractor shall provide the same without any extra cost.

37. Guidance To Tenderer:

The contractor shall quote the tender based on the expenditure towards providing of manpower (based on minimum wages) Tool & Plants, Uniform to workers, Statutory items, PIC Charges, Cost of consumables, miscellaneous expenses, taxes & duties etc.

38. Penalty Clause:

No total Breakdown is acceptable, In case of total Breakdown due to negligence of the contractor or his work men, suitable recovery proposed by Engineer-In-Charge will be final and binding on the contractor. Special care is required in attending the faults for the equipments where no standby is available.

Note: - In any case the total penalty at any point of time on account of any or all the categories put together shall not exceed 15 % of the total contract value per month.

If any equipments damaged due to the negligence of the manpower, the agency shall repair the same and nothing extra shall be paid on this account by the AAI. Once the total penalty reaches this limit, the contract shall be liable for review / rescind as per the provisions of the contract agreement and the decision of Engineer-in-Charge in this regard shall be final and binding on the contractor.



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TECHNICAL SPECIFICATIONS

1. Scope:

1. This section specifies the operation and maintenance requirements of 150KLD SBR type STP under this contract. The scope of work essentially consists of:
 - a). Operation and Maintenance of various Electrical & Mechanical installations of 150KLD Sewage Treatment Plant at AAI, Residential Colony, Bagalur, Bangalore and services mentioned in this document by engaging suitable staff of requisite qualification and experience, minor tools & tackles, consumables and sundry items etc. including trouble shooting, carrying out minor repairs, preventive and breakdown maintenance/repairs.
 2. The scope of work however excludes the following:
 - a) Supply of Electrical & Mechanical spares.
 - b) Replacement of activated carbon granules.
 - c) Replacement of Media for pressure sand filters.
 - d) Major repairs, overhauling of major electrical & mechanical installations and specialized equipments, (which will be carried out through specialized agencies) and Rewinding of motors.
 3. The broad scope of work detailed in succeeding paragraphs. Maintenance of E&M installations shall be carried out according to sound engineering practice and as per the site requirements and directions given by the Engineer-in-charge.
 4. Quality of treated outlet water shall be tested in a lab approved by certified / recognized testing lab and submission of test analysis report every month by the firm and remedial action if any, to be taken is also in the scope of the successful tenderer.
 5. The original installations shall not be disturbed/modified without instructions in writing by Engineer- in-charge.
 6. The contract shall comply with all applicable laws, Ordinance, Rules & Regulations in respect of this contract and shall pay at his own cost all charges in connection there with.
 7. The contract does not include supply of materials required / spares other than chemicals (as stipulated in SOQ). However, in case of any emergency breakdown, the contractor may be asked to supply the materials as a separate work on chargeable basis subject to written order of AAI indicating the material specifications, terms & conditions.
 8. The timings of operation & maintenance / upkeep work etc. shall be as decided by Engineer-in-Charge from time to time depending upon operational & technical requirement.
 9. The contractor shall carryout the work strictly as per the specification and schedule of work (quality and quantity), failing which AAI shall be empowered to carry out such works (after serving notices in this regard) through any other agency at the risk & cost of the contractor. The decision of Engineer-in- charge shall be final and binding on the contractor in this regard.
 10. House Keeping / Cleanliness of all Electrical & Mechanical installations like LT panels / Operator Room and Electrical pumps, civil installations including premises of electrical installations shall be the responsibility of the Contractor.
2. Brief Details Of 150KLD STP Installations:
- a) As detailed in the ANNEXURE-C.
 - b) Any other installations as directed by the Engineer-in-charge.
3. Operation & Maintenance Procedures For STP:



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The periodicity of preventive maintenance on each equipment shall be as per site requirement or as defined by manufacturer. The schedule of maintenance shall be prepared and got approved by AAI before commencing the work.

The following are the responsibilities and activities to be carried out by the contractor during the period for various systems.

1. The Operation and maintenance manual of the STP provided by the manufacturer shall be read and strictly followed by the Contractor.
2. Day-to-day operation of the plant as recommended by the OEM on three shift basis for 24 Hrs per day.
3. All preventive and scheduled maintenance activities as recommended by the OEM and as decided by AAI from time to time.
4. Cleaning of filters periodically.
5. Monthly & Quarterly checking and servicing of plant as per maintenance manual of the manufacturer.
6. Attending to complaints / fault carrying out necessary rectification / repair works.
7. Repairing the equipment at site in case of minor faults.
8. Lubricating the bearings of motor, pumps and fans, as per maintenance manual of the manufacturer.
9. Inspection of belts and replacing worn out belts as per site requirement or as per recommendation of the manufacturer.
10. Monthly checking of the serviceability of all safety devices and rectifying the defects if any.
11. Preventive & break down maintenance and consumables etc.
12. Maintenance of panel boards, switch gears, contactors, cables, etc.
13. Ensuring all necessary electrical & fire safety procedures, precautions while carrying out the work including making available safety gadgets like hand gloves, torch light, rain coat, leather safety shoes, safety helmets at the locations as per site requirements.
14. Meeting the requirement of labour regulations / registration / labour license / Local laws / by-laws etc.
15. In addition to the above scope of work, the contract or has to be carry out all related works for keeping better performance of the plant as and when required. All tools & plants and consumables shall be arranged by the contractor.
16. All consumables required for replacement during the maintenance period as per manufacturer's recommendation for upkeep of plant and other electrical items like indicating lamps, fuse links of panels supplied under this contract shall be covered in the scope of maintenance contract.
17. Any other works assigned by AAI time to time by Engineer-in-charge
18. The contractor is required to carry out scheduled preventive maintenance as per schedule Preventive maintenance schedule shall be finalized within a period of 15 days from the commencement of work. Above penalties shall be applicable thereafter. Penalties for not carrying out preventive maintenance activities for individual equipment shall be worked out on prorata basis. The checks are applicable for equipments in serviceable condition only. Equipments under breakdown shall be dealt separately as per the relevant clauses.
19. Engineer-in-charge has full powers to waive off penalty in full or in part , if in the opinion of him/her, the delay was beyond the control of the contractor (e.g testing /rewinding works / spares to be imported from other countries



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or any other justified reason cited by the contractor and acceptable to AAI) and AAI has not suffered any loss on account of such delay.

4. Breakdown Repairs:

1. Any breakdown of Electrical & Mechanical installations shall be attended immediately.
2. Breakdown of services in critical areas shall be attended on top priority within minimum possible time as per instructions of AAI.
3. The contractor, if required, shall deploy additional workmen for carrying out any urgent / breakdown repairs to restore the normal operation of system.

5. Testing of Treated Water:

The treated water shall be tested once in a month from Govt. Certified/recognized testing lab and the certificate shall be submitted to the Engineer-in-charge. The sample collection shall be in pre-source of the Engineer-in-charge/AAI Representative.

The treated effluent will meet the following levels as per KSPCB standards:

<u>S.No</u>	<u>Parameter</u>	<u>Value</u>	<u>Unit</u>
1.	PH	6.5-9.0	
2.	Suspended Solids	<50	Mg/L
3.	BOD	<20	Mg/L
4.	COD	<250	Mg/L
5.	Fecal coliform	<1000	Mg/L

6. CONSUMABLES/SUNDRY MATERIAL: - Following consumables/sundry materials are to be supplied free of cost:

- (1) Cotton waste : As actual
- (2) Cleaning Soap : As actual
- (3) Pump gland packing : As actual.
- (4) Insulation Tapes : As actual
- (5) Cleaning Materials : As actual
- (6) Gear Oil : As Actual
- (7) Grease : As actual

The contractor has to keep sufficient quantity of consumables in stock depending on the actual requirement. Stationeries such as logbooks, work diaries to work men etc. also will be provided by the contractor.

7. LOG BOOKS, REGISTERS ETC.: - The Contractor shall carry out the documentation and maintain records by arranging all the printed registers / log books, etc., at his own cost as per the requirement and as per the directions of Engineer-in-charge. Minimum following registers shall be maintained.

- a. Log Books or operation of plant / pump, showing voltage, current, duration of operation.
- b. Preventive maintenance schedule books



SEWAGE TREATMENT PLANT (150KLD):

The Sewage treatment plant has the following features:

- A) List of Civil Units:
1. Bar Screen Chamber
 2. Equalization Tank
 3. Sequential Batch Reactor (SBR)
 4. Decant tank
 5. Treated water tank
 6. Sludge holding tank
 7. Filtered water tank
 8. Pump room sump
- B) List of Mechanical Equipment:
1. Bar Screen
 2. Air blower
 3. Raw sewage transfer pumps
 4. Hypo dosing system
 5. Filter Feed pumps
 6. Sludge transfer pumps
 7. Fine pore diff user
 8. Coarse Bubble diffuser
 9. Pressure sand filter
 10. Activated carbon filter
 11. Softener
 12. Ultra Violet System
 13. Polymer dosing system
 14. Flushing pumps
 15. Flowmeter
 16. Sump pump

Process Details:

Raw sewage piped from various sources is taken by gravity through the Bar Screen into the Equalization Tank for homogenization. The sewage is then constantly pumped to the Aeration Tank. In the Aeration Tank, sufficient detention time is provided to oxidize organics absorbed by the bacterial biomass in the waste water.

Required quantity of oxygen is supplied and mixing done by the Diffused aeration system. Stoichiometric quantity of air supply and increased hydraulic retention time ensures complete oxidation of organics contributing to BOD/ COD.

The aerobic environment in the Aeration Tank is achieved by the use of 'Diffused Aeration', which also serves to maintain the mixed liquor in a completely mixed regime. Air application is uniform throughout the tank area. During the aeration period, adsorption, flocculation, and oxidation of organic matter occur. The conversion of organics by the bacteria is as follows:

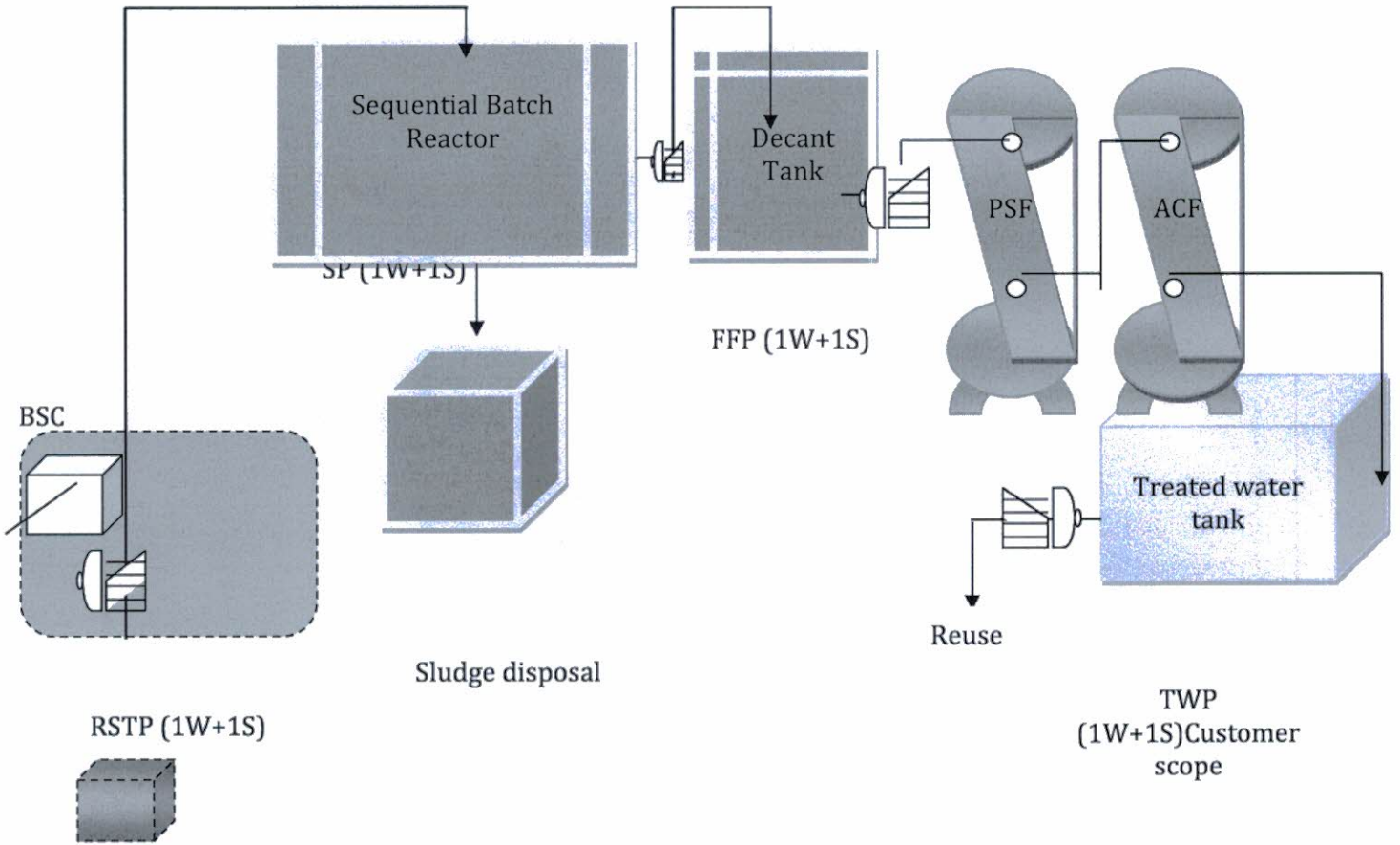


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USE OF TREATED SEWAGE WATER

- Gardening, Irrigation / Horticulture / Arboriculture.
- Cooling tower Makeup water (After Softening).
- Toilet Flushing.

PROCESS FLOW BLOCK DIAGRAM



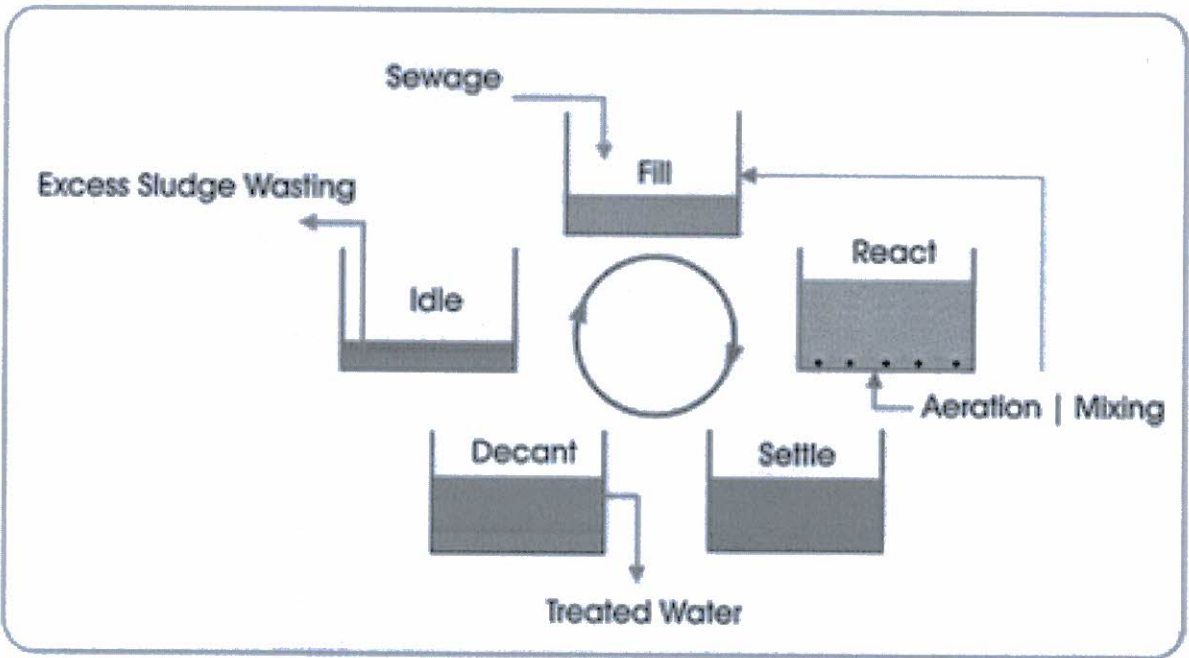
Legend:

- Civil Works
- BSC - Bar screen chamber
- EQT - Equalization tank
- SBR - Sequential Batch reactor
- SHT - Sludge Holding tank
- MGF - Multi grade sand filter
- ACF - Activated carbon filter
- RSTP - Raw sewage transfer pump
- SP - Sludge pump
- FFP - Filter feed pump
- TWP - Treated water pump



PROCESS DESCRIPTION

SBR Operating Principle



Signature of Contractor

(With Seal)(With Seal)

Senior Manager Engg.(E)

Schedule of Quantities

Name of work: - Operation & Maintenance Contract of 150KLD SBR type Sewage Treatment Plant at New AAI Residential Colony, Bagalur, Bangalore.

SL	Description of item	Unit	Qty	HSN Code	Rate (In INR) Excluding GST		Amount(In INR)
					In Figures	In Words	
1	SH-I: OPERATION & MAINTENANCE OF E&M INSTALLATIONS in STP						
1.1	Job contract for Operation and Maintenance of 150KLD Sewage Treatment Plant on all days including Sundays and public holidays and in general shift of operation as detailed in as detailed in Particular/Technical specification complete as required.	Months	06				
2	SH: II Supply of Chemicals. Supply of following Chemicals for day to day operation of Sewage Treatment Plant & as and when required.						
2.1	Liquid Chlorine	Ltr	270				
2.2	Bleaching powder	Kg	30				
2.3	Poly electrolyte (PE)	Kg	30				
3	SH: III Miscellaneous works.						
3.1	Testing of treated water sample for PH, Total Suspended solids(in mg/L), Biochemical Oxygen Demand(BOD) (in mg/L), Chemical Oxygen Demand(COD) (in mg/L), Oil & Grease (in mg/L) and Total Residual chlorine(Cl ₂) (in mg/L) from NABL accredited lab and submission of test analysis reports as per norms of statutory authority as required.	Job	06				

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3.2	Carrying out cleaning of following tanks including providing of cleaning agents / materials / consumables and with special tools & tackles on quarterly basis complete as required. "Pre final tank (or) Final tank " [2 Tanks x 2 Quarters = 2 job] .	Job	02			
Total Amount in Rs.						
Discount if any @.....%						
Grand Total in Rs.						

(Total Amount in Rs.....)

1.09
 21/11/14
 SRS



AFFADAVIT FOR MINIMUM WAGES

I..... (Name), aged years, S/o (Name),
Proprietor / Managing Partner / Managing Director of (Name of the
Agency) do hereby solemnly affirm and state as follows.

I am competent to swear this affidavit on behalf of (Name of
Agency). I state that, in the event of work is awarded to our agency; the wages to be paid to
the workers engaged shall not be less than the minimum wages determined by appropriate
Govt. Authority from time to time.

Dated this, the Day of Month, years

DEPONENT.

Note : This affidavit shall be executed on non-judicial stamp paper of Rs.100/- duly counter
signed by Notary. The cost of the stamp paper has to be born by the successful tenderer.

GST UNDERTAKING

I.....(Name of the proprietor/ Agency with complete address)

do hereby solemnly affirm and state as follow.

1. The bidder is registered under GST and Compliant of GST provision.
2. The case of noncompliance of GST provisions and blockage of any input credit, the bidder shall beresponsible to indemnify AAI.
3. That all input credit has been passed on to AAI by Bidder.

Name of the Agency(Seal and sign of agency)

Date:-

Place:-



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Annexure – III

E-Payment details (To be put in ENVELOPE-A)

1	Name of the Company	
2	STREET (ADDRESS)	
3	Postal Code	
4	City	
5	Telephone No	
6	Fax no	
7	Mobile No	
8	Email	
9	PAN Number	
10	Bank A/c holder name	
11	Bank A/c Number	
12	Type of Account	
13	Name of Bank	
14	IFSC Code	
15	City	
16	SWIFT Code	
17	Method of Payment	
18	RTGS/NEFT details	
19	GSTIN	



UNDERTAKING

(Regarding Debarred / Blacklisted)
(To be submitted by bidders in Envelope-I on
letter head of Company/Firm)

Name of Work: "Operation & Maintenance Contract of 150KLD SBR type Sewage
Treatment Plant at New AAI Residential Colony, Bagalur, Bangalore."

I/ We, _____ the director(s)/
proprietor(s) of M/s _____

do hereby declare that, neither this firm nor its any subsidiary firm is debarred /
blacklisted by AAI / Government / Semi-Govt. / PSU for participating in Tenders.

Date:

Place:

Signature and name of the authorized
signatory of the firm



CERTIFICATE OF NET WORTH FROM CHARTERED ACCOUNTANT

"It is to certify that as per the audited balance sheet and profit & loss account during the financial year 2019-20, the Net Worth of M/s (Name & Registered Address of individual/firm/company), as on.....(the relevant date) is Rs. After considering all liabilities. It is further certified that the Net Worth of the company has not eroded by more than 30% in the last three years ending on 31.03.2020".

Signature of Chartered Accountant

.....

Name of Chartered Accountant

.....

Membership No. of ICAI

.....

Date and Seal