

TENDER DOCUMENT

TENDER SPECIFICATION No : BAP:CTS:OT:01 / 2013-14 Dt. 28.10.2013

NAME OF WORK:

**OPERATION & MAINTENANCE OF 1 MLD SEWAGE TREATMENT
PLANTS IN FACTORY & TOWNSHIP OF BHEL, RANIPET**

PERIOD OF CONTRACT: 8 MONTHS

PART – I – QUALIFICATION BID

(Pages 1 – 108)



CIVIL TOWNSHIP DEPARTMENT
BHARAT HEAVY ELECTRICALS LIMITED
(A Government of India Undertaking)
BOILER AUXILIARIES PLANT
INDIRA GANDHI INDUSTRIAL COMPLEX
RANIPET – 632 406

TENDERER

ACCEPTING OFFICER

	<u>Bharat Heavy Electricals Limited</u> Boiler Auxiliaries Plant Ranipet - 632 406 Tamil Nadu, India CIVIL TOWNSHIP OFFICE
	Phone: 04172 –284440 / 9442201087
	Email : mmselvam@bhelrpt.co.in
<u>CIVIL TOWNSHIP DEPARTMENT</u>	

BAP: CTS:CONTRACTS:

October 28, 2013

To

The Tenderer

Dear Sirs,

Sub: OPERATION & MAINTENANCE OF 1 MLD SEWAGE TREATMENT PLANTS IN FACTORY
& TOWNSHIP OF BHEL, RANIPET – 6. – REG.

Ref: 1. Tender Notice No. BAP:CTS:OT:01 / 2013-14 Dt. 28.10.2013

Please find enclosed / attached non-transferable tender document containing I) Qualification bid consisting of Preamble, Specifications, General Conditions & Special Conditions of Contract, Norms for Qualification to Tender etc ii) Price bid consisting of Bill of Quantities to offer your most competitive rates for all the items of Bill of Quantities.

Tender for the work should be submitted in a sealed cover consisting of three inner sealed covers viz. I) EMD cover ii) Qualification bid cover & iii) Price bid cover, all super scribing the name of work, tender schedule number etc.

01. **EMD cover shall contain requisite EMD in the form of DD.** Tenderers who had already remitted one time EMD should furnish the details of cash receipt No. _____ dt. _____, on the top of EMD cover. Tender without EMD / one time EMD reference will be summarily rejected and the qualification bid & price bid shall not be considered. **Tender documents can be downloaded from web sites.** Demand Draft towards EMD shall be drawn in favour of BHEL, Ranipet payable at Ranipet.
02. Qualification bid cover shall contain duly filled in qualification bid document signed by the tenderer in all the pages with documentary evidences for Qualification Criteria such as experience, value of work executed in the similar nature of work, etc. **Any bid without proper documentary evidence for Qualification Criteria shall not be considered for further evaluation.**
03. The Price Bid cover shall contain price bid document duly filled in and signed by the tenderer in all the pages. **The tenderer has to quote most competitive rates for all the items in the Bill of Quantities from page No. 2 TO 3 of Part – II - Price Bid only.**

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The completed qualification bid and price bid along with requisite EMD of **Rs.20,000/-** for the work in the form of Demand Draft in favour of BHEL, Ranipet shall reach the office of the undersigned on or before **22.11.13 at 15.00 hrs.** Tenderers who had already remitted one time EMD should furnish the details of cash receipt No. _____ dt. _____, on the top of EMD cover. EMD in any other form will not be accepted. The qualification bid will be opened on the **same day at 15.00 hrs.** In case of opening day falls on holiday or happened to be declared as a holiday, the receipt and opening of the tender shall automatically fall on the same timing of the next working day. Date and time of opening of the Price Bid shall be intimated only to the bidders those who have qualified after evaluation of the qualification bid. You / your authorized representative may participate in the tender opening. Clarification if any, can be obtained contacting following phone No. 04172 – 284440 / 284883. Fax No. : 04172 – 242026. e-mail: mmselvam@bhelrpt.co.in, mkpillai@bhelrpt.co.in,

Thanking you,

Thanking you,

Yours faithfully
For and on behalf of
BHARAT HEAVY ELECTRICALS LIMITED,

MANAGER / CIVIL TOWNSHIP

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CIVIL TOWNSHIP DEPARTMENT

CHAPTER - I

NOTICE INVITING TENDER	
1. Tender Notice No	BAP:CTS:OT:01 / 2013-14 Dt. 28.10.2013
2. Name of work	OPERATION & MAINTENANCE OF 1 MLD SEWAGE TREATMENT PLANTS IN FACTORY & TOWNSHIP OF BHEL, RANIPET – 6.
3. Period of contract	8 Months
4. ESTIMATED COST of the work:	N.A
5. Tender Document Cost	NIL –(can be downloaded freely from BHEL web site – http://www.bhel.com/tender/list_tender.php)
6. Earnest Money Deposit (EMD) Amount	Rs. 20,000/- (Rs. Twenty Thousand only)
7. Last date & Time for receipt of the completed Tender	22.11.2013 at 15.00 Hrs.
8. Date of Technical bid Opening	22.11.2013 .15.00 Hrs.
9. Date of Price Bid Opening	Tenderers whose technical bids are found acceptable will be intimated separately about the status of their offers and the date of opening of Price Bid
10. Place of submission of Tender	<u>Tender Box placed in</u> Office of the Manager / Civil Township, (Located near Mukundarayapuram Railway Station), BHEL Township, Ranipet – 632 406
11. Address on the Sealed Tender Cover to be:	ADDITIONAL GENERAL MANAGER <u>CIVIL TOWNSHIP DEPARTMENT</u> BHARAT HEAVY ELECTRICALS LIMITED RANIPET – 632 406 VELLORE DISTRICT TAMIL NADU
12. Venue of the Tender Opening	Office of the Manager / Civil Township
13. Tender Document Contains:	Totally 111 pages (Qualification bid & Price bid)
14. Period of contract	Eight (8) Months (From the date of commencement of the work which will be reckoned from the date of the site handed over to the Contractor)

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**BHARAT HEAVY ELECTRICALS LIMITED
RANIPET – 632 401**

CIVIL TOWNSHIP DEPARTMENT

CHAPTER – II

PREAMBLE

**Name of work: OPERATION & MAINTENANCE OF 1 MLD SEWAGE TREATMENT PLANTS
IN FACTORY & TOWNSHIP OF BHEL, RANIPET – 6**

01. The scope of work includes operation and maintenance activities for two Sewage Treatment Plants (STPs) of each 1 MLD capacity, one Plant located inside Factory premises and the other plant at Township premises of BHEL, Ranipet-6, Vellore District, Tamil Nadu. Both the plants are meant for treating the domestic sewage and canteen wastes. The work is to be executed on all BHEL working days including public holidays and Sundays in round the clock shifts. The STPs are **Membrane Bio-Reactor** based plants.

The scope of work also includes the following and the special conditions of the contract

Each of the existing Plant is capable of treating 1000 cum of sewage per day. Technical details of the Plant (Annexure – I) and the process layout (Drg. No.3-WT-220-00036) with characteristics of influent and effluent are enclosed.

Operation and Maintenance is to be carried out in Three shifts a day including maintaining pumps, blowers, pneumatic valves, dosing systems etc. The tenderers may visit the STP Plants before submitting their tenders. A copy of the O&M manual will be given to the successful tenderer after placement of order for the O&M.

The contractor should engage Supervisor and shift Operators. The Man power requirement is given in Annexure- II for operation, maintenance & treating the sewage to the norms specified by BHEL and dispose the treated water as directed by the BHEL Engineer-in-charge. The labourers engaged should be paid not less than the minimum wages prevailing time to time as per Tamil Nadu State Government norms.

Raw and treated water should be tested for pH, TSS, TDS, COD, BOD @20 ° C for 5 days / 27° C for 3 days, Oil & Grease, etc as per the schedule given in the Annexure -IV - shall be tested once in a month and record should be maintained and produced to BHEL for its verification. Apart from the daily field tests, the treated water has to be tested for the above tests in a Tamil Nadu pollution control board approved laboratory.

The contractor should maintain all monitoring records w.r.t STP operation and maintenance, Laboratory analysis, etc. List of records to be maintained is given in Annexure-V.

The Contractor should associate for collecting samples by statutory bodies like Central Pollution Control Board, Tamil Nadu Pollution Control Board and others if necessary.

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The details of spares required for all pumps, blowers and all other equipments shall be given by the contractor well in advance so as to procure and keep ready to run the plant without any interruption, and the same will be issued to them on written requisition. Replacing of defective spares is in the scope of contractor. Records shall be maintained for the receipt and use of spares supplied by BHEL. Any major repair of equipment & replacement of spares will be decided & taken up by BHEL. All minor repairs & replacement shall be carried out by the contractor. BHEL's decision is final & binding in this regard.

During this period the contractor should take whole responsibility of Plant operation including treatment efficiency. Any deviation from the specific performance requirement of any equipment or quality of treated effluent as per norms, the contractor shall immediately take steps to rectify the deficiency without any extra cost to the Authority.

02. Time is the essence of the contract. Being a time bound work on maintenance nature, the contractor should make all efforts to complete the work in the stipulated time.

03. The tenderers are advised to visit BHEL site at Ranipet and get themselves acquainted with the site conditions before submitting the offer.

04. QUALIFICATION REQUIREMENTS (QR): Qualifying / Eligibility Criteria for Tenderer for the work of OPERATION & MAINTENANCE OF 1 MLD SEWAGE TREATMENT PLANTS IN FACTORY & TOWNSHIP OF BHEL, RANIPET – 6

The essential qualification requirements of contractors for submission of this tender shall be as under :

- a. Average annual financial turnover of the Contractor during last 3 years ending on 31st March 2012, should be **at least 30 % of the Estimated cost of this tendered work** and the tenderer should submit audited balance sheet and Profit & Loss Account for the last three years (2009 – 10, 2010 – 11 & 2011 – 12), duly certified by chartered accountant / auditor.
- b. Contractors having experience of successfully completed similar works (Operation & Maintenance of Sewage Treatment Plants / Effluent treatment plants of industries) during the last 7 years as on 30.09.2013 for Government Organisations / Government undertakings / Corporations / Municipalities / reputed private sectors / reputed private industries etc. should be either of the following.
 - i. **Three similar completed works each costing not less than Rs.2.95 Lakh**
OR
 - ii. **Two similar completed works each costing not less than Rs.3.69 Lakh**
OR
 - iii. **One similar completed work costing not less Rs.5.90 Lakh**

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- c. The tenderer should have executed similar type of work in their own name shall be considered.
- d. The tenderers to note that possession of Provident Fund (PF) code is not a pre-condition for participation in the tender. However, the successful tenderer should ensure to get the PF code No. and the PF amount deducted from their employees are to be deposited in this PF code along with their contribution.
- e. Also Contractor should have separate Registration Code No. for ESI, Sales Tax, PAN and Service Tax. Contractor shall submit copy of the above registration codes or proof of having applied for the registration codes along with the tender bid.

Tender bids not meeting any of the above pre-qualification criteria shall be rejected

- 05. Dissimilar / irrelevant works will not be considered for eligibility criteria.
- 06. The details on turnover, works experience (**Works Completion Certificates issued by customers / clients must be enclosed**), P.F, ESI registration etc., all as furnished by the tenderer shall have to be supported with documentary evidences (Xerox copies -attested). If BHEL demands at any stage, original certificates also have to be shown to BHEL authorities.
- 07. Tender Value is only approximate and liable for variation without entitling the tenderer to any compensation, provided the total value of contract does not vary by more than 20% (twenty percentage).
- 08. **The rates quoted shall be valid for 3 months period from the date of Tender opening (Qualification bid).**
- 09. The offered rate is for finished item of work as per Bill of Quantities and shall provide for the complete cost towards labour, tools & plants, feed & permeate testing materials, levies, taxes, transport, lay-out, repairs, rectifications, maintenance, supervision, establishment, services, overheads, profits & all other incidentals etc., complete. **The rate quoted shall not include service tax. The applicable service tax (as quoted by the bidder in the Price Bid / limited to applicable tax, whichever is lesser) can be claimed from BHEL along with their monthly bills for further payment to be made for the authorities concerned.**
- 10. For any item of work not covered in Bill of Quantities, the rate will be arrived at based on the conditions given in BHEL General Conditions of Contract.
- 11. **After award of work the contractor has to furnish the security deposit, as per Clause 11, CHAPTER – IV, TENDER NOTICE. Also it is to be noted that after award of work the contractor has to furnish security deposit before the commencement of work.**

12. As and when required, the contractor has to supply manpower like Unskilled, Semi-skilled, Skilled, Trade certificate holders etc. for which payment (monthly) will be made to the contractor as per the prevailing rates of Government of Tamilnadu & BHEL's monthly adhoc wage (additional payment) including employer's contribution of P.F, ESI & minimum bonus for the wages and a profit margin of 10 % for all these payments.

WAGES & OTHER PAYMENTS / CONTRIBUTIONS TO BE MADE TO THE WORKERS DEPLOYED IN THE CONTRACT:

13. The tenderer has to ensure payment of Minimum Wages as per Tamil Nadu State Minimum Wages as applicable under law from time to time. The current minimum wage is Rs.251.00 per day for Unskilled worker; Rs.259.00 per day for Semi-skilled worker and Rs.266 .00 per day for Skilled worker / Supervisor.

The labourers engaged in this contract shall be paid 'additional payment' as mentioned below in addition to the payment of Minimum wages as stated above.

- a) Unskilled Worker Rs. 2000 per month
- b) Semi-skilled Worker Rs. 2300 per month
- c) Skilled Worker / Supervisor Rs. 2500 per month

Also the labourers shall be paid a minimum bonus which shall be 8.33% as per the payment of Bonus Act 1965 for the total wages paid (i.e) Payment of minimum wages and additional payment as mentioned above.

The Contractor shall have to remit EPF & ESI contributions at the rates applicable under law to the authorities concerned for the total wages paid (i.e) Payment of minimum wages and additional payment as mentioned above.

Normally the revision of Tamil Nadu govt. minimum wage will be with effect from 1st April of every year. TENDERERS ARE REQUESTED TO QUOTE THEIR OFFER AFTER TAKING IN TO ACCOUNT OF THE ABOVE FACTOR ALSO. The quoted rate shall be firm for the entire contract period of 8 months and any extension of contract if accepted thereafter.

14. The contractor has to carry out the work without affecting the working environment.
15. The decision of Engineer-in-charge shall be final and binding on the contractor regarding clarification of items in this tender schedule.
16. The contractor shall strictly adhere to various labour laws in force.
17. The contractor shall follow norms of BHEL security system for movement of men & materials within the complex including biometric system..

18. Daily labour report for the manpower engaged on previous day area wise shall have to be submitted next day.
19. Since the responsibility for the quality, workmanship and accuracy of any work being carried out under this contract lies with the contractor, the contractor should ensure that no work is done without the presence of contractor's representative at the work spot.
20. The contractor has to submit the organization chart of their set up for the works and any change thereafter in the organization set up shall have the prior approval of BHEL.
21. Statement of completed works with detailed measurements along with material reconciliation statements shall be submitted by the contractor every week and the payment for the work done will be paid once in a month.
22. The tenderer shall carry out health performance test at his cost for all the workmen engaged in the work through a registered medical practitioner and produce certificate on demand.
23. The works contract to be entered into with the successful tenderer will be governed by the BHEL General Conditions of Contract in force.
24. All materials brought by the Contractor for incorporation in the work shall be got inspected and approved by the Engineer-in-charge before they are incorporated in the work.
25. The contractor should extend fullest co-operation with the third party agencies engaged, if any by BHEL to adhere the Quality Control Procedures ensuring quality.
26. The contractor should extend full co-operation to the other contractors who may be doing other works in the same areas to enable them to execute their portions of work without any delay or difficulty.
27. Power, water and compressed air required for the operation & maintenance of the STPs will be given by BHEL on free issue basis.
28. BHEL reserves its right to reject a tender due to unsatisfactory past performance in the execution of a contract at another Project/Unit of BHEL awarded against a different enquiry.
29. BHEL reserves its right to accept / reject any or all the tenders.
30. No advance / mobilization advance will be given.
31. LD / Penalty clause is applicable as per General Conditions of Contract. All the terms & conditions in the documents are binding on the tenderers.

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CHAPTER- III

INSTRUCTIONS TO TENDERERS

1. The tender is open to all Contractors. The Contractors not borne on the approved list of contractors of this Organization must submit the following testimonials simultaneously with their tenders.
 - i. A Certificate to establish that the tenderer is an independent contractor working on his own.
 - ii. At least two certificates from responsible Officers of Government of Firms of repute, regarding the tenderer's capacity to undertake and carryout the work tendered for or similar work satisfactorily

NOTE :

- a) Copies of testimonials unless attested by a Gazetted Officer will not be accepted
 - b) Non – Submission of the above testimonials simultaneously with the tenders may result in the tender being rejected
2. The tenders should be accompanied by a list of contracts already held by the contractor at the time of submitting the tender and giving the following particulars
 - a) Value of each contract
 - b) The balance value of work to be done on the same

The tenderer is advised to download the tender document from BHEL / CPP / Tenders India web sites.
 3. **Rate for each item of the tender schedule should be quoted in FIGURES and in WORDS.**
 4. Rate quoted shall include all royalties, terminal taxes, Octroi duties, Central or Provincial Excise Tax, Sales Tax and any other taxes leviable under the State or Central Government rules. The Bharat Heavy Electricals Ltd., will not entertain any claim whatever in this respect. The rate quoted shall not include service tax. The applicable service tax (as quoted by the bidder / limited to applicable tax, whichever is lesser) can be claimed from BHEL along with their monthly bills for further payment to be made for the authorities concerned.

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5. Tender Value is only approximate and liable for variation without entitling the tenderer to any compensation, till the total **value of contract vary by more than 20% (Twenty Percentage)**
6. The works contract to be entered in to with the contractor will be governed by the BHEL General Conditions of contract in force.
7. Should a tender find discrepancies or omissions in the drawings or any of the tender documents or should be in doubt as to their meaning, he should at once address the authority inviting the tender for clarification. Every Endeavour is made to avoid any error which can materially affect the basis of the tender but the successful tenderer shall take upon himself to provide for the risk of any error which may be subsequently by discovered and shall make no subsequent claim on account thereof.
8. Tenders submitted by post should be sent "Registered Post with Acknowledgement due". These should be posted with due allowance for any delay in postal delivery. Tenders received after the due date and time of opening, tenders are liable to be rejected.
9. The contractor's responsibility under this shall commence from the date of receipt of contract or the order of acceptance of his tender. The scheduled period of completion for this work will be **8 months**, and the Contractor will have to plan his work accordingly.

15. The maintenance period for this work will be **Nil**.

16. Earnest Money Deposit:

Earnest Money is to be paid by each tenderer to ensure that the tenderer does not refuse to execute the work after it is awarded to him. **EMD be furnished only in the form of Pay Order or Demand Draft in favour of BHEL, Ranipet, EMD in any other form will not be accepted.** The rate of earnest money deposit shall be as under:

Works costing up to Rs. 2 lakhs	NIL
Works costing more than Rs.2 lakh and up to Rs. 5 lakhs	Rs. 10000/-
Works costing more than Rs.5 lakhs and up to Rs.10 lakhs	Rs. 20000/-
Works costing more than Rs.10 lakhs and up to Rs.20 lakhs	Rs. 40,000/-
Works costing more than Rs.20 lakhs and up to Rs.30 lakhs	Rs. 60,000/-
Works costing more than Rs.30 lakhs and up to Rs.50 lakhs	Rs.1,00,000/-
Works costing more than Rs.50 lakhs and up to Rs.100 lakhs	Rs.1,50,000/-
Works costing more than Rs.100 lakhs	Rs. 2,00,000/-

One time EMD will also be Rs.2.00 lakhs.

EMD by the Tenderer will be forfeited as per tender Documents if:

- a) After opening the tender, the tenderer revokes his tender within the validity period or increases his earlier quoted rates,

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- b) The tenderer does not commence the work within the period as per LOI / Contract. In case the LOI / contract is silent in this regard then within 15 days after award of contract

EMD given by all unsuccessful tenderers shall be refunded normally within fifteen days of acceptance of award of work by the successful tenderer. EMD shall not carry any interest.

17. Should a tenderer or a contractor on the list of approved Contractors have a relative, or in the case of a firm or Company of contractors any of its share holders or share holder's relative, employed in a gazetted capacity in the Engineering Department of the Bharat Heavy Electricals Limited, the authority inviting tenders shall be informed of this fact at the time of submission of the tender, failing which tender, may be disqualified or if such fact subsequently comes to light, the contract may be rescinded in accordance with the relevant provisions in the General Conditions of Contract.
18. If tenderer expires after the submission of his tender or after the acceptance of his tender the BHEL may, at their discretion, cancel such tender. If a partner of a firm expires after submission of tender or after the acceptance of the Tender, BHEL may cancel such Tender at their discretion unless the firm retain its character.
19. The Bharat Heavy Electricals Limited will not be bound by any power of attorney granted by the tenderer or by changes in the composition of firm made subsequent to the execution of the contract. They may however recognise such power of attorney and changes after obtaining proper legal advice the cost of which will be chargeable to the contract concerned.
20. If the tenderer deliberately gives wrong information in his tender or creates conditions favourable for the acceptance of his tender, the Bharat heavy Electricals Limited, reserves the right to reject such tender at any stage.
21. Words importing the singular number shall also be deemed to include the plural number and vice versa where the context so requires.
22. The expenses for competing and stamping the agreement shall be paid by the contractor.
23. The General and special conditions are complementary to each other and where they are conflict the Special Conditions shall prevail. In regard to matters not covered by the General and Special Conditions of Contract, those contained in the Tamil Nadu Building Practice Standard Specifications or other specifications approved by the Bharat Heavy Limited, Shall apply.

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24. Tenderers shall not increase their quoted rates in case the Bharat Heavy Electricals Limited, negotiates for negotiation for reduction of rates. Such negotiation shall not amount to cancellation or withdrawal of the original offer and the rates originally quoted shall be binding on the tenderes for a period of three months from the date of opening of tenders.
25. Canvassing in any form in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection
26. All contractors will have to produce Income tax Clearance Certificate from the Income Tax– Officer concerned along with their tenders. Those Contractors whose income is not taxable will be required to give an affidavit of their income on the prescribed form. If the successful tenderer fails to produce the Income – tax clearance certificate within the stated period the Earnest Money Deposit and Security Deposit of the tenderer may be forfeited and the contract terminated.
27. **Benefits to Micro, Small & Medium Enterprises (MSE) :** Guidelines of the Govt. of India shall be followed to provide benefits to MSE. MSE suppliers can avail the intended benefits only if they submit along with offer, attested copies of either EM-II certificate having deemed validity (Two years from the date of issue of acknowledgement in EM-II) or valid NSIC certificate or EM-II certificate along with CA certificate (Format enclosed as per Appendix – IV) applicable for the year, certifying quantum of investment in plant and machinery within the permissible limit as per the act for relevant status (Micro or small) where the deemed validity of EM-II is over. Date to be reckoned for determining the deemed validity will be the last date of technical bid submission. Non submission of such documents will lead to consideration of their bids at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE supplier till the supplier submits these documents

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APPENDIX – IVCertified by Chartered Accountant on letter head

This is certify that M/s, (hereinafter referred to as 'company') having its registered office at is registered under MSMED Act 2006, (Entrepreneur Memorandum No (part-II) dtd :.....
 Category:.....(Micro/Small)).(Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as on date as per MSMED Act 2006 is as follows:

1. **For Manufacturing Enterprises:** Investment in plant and machinery (i.e. original cost excluding land and building and the items specified by the Ministry of Small Scale Industries vide its notification No.S.O.1722(E) dated 5, 2006 :
 Rs..... Lakhs
2. **For Services Enterprises:** Investment in equipment (original cost excluding land and building and furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED Act, 2006:
 Rs..... Lakhs

The above investment of Rs..... Lakhs is within permissible limit of Rs..... Lakhs for Micro/Small **(Strike off which is not applicable)** Category under MSMED Act 2006.

Date:

(Signature)

Name –

Membership Number –

Seal of Chartered Accountant

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CHAPTER - IV
TENDER NOTICE

NAME OF WORK: OPERATION & MAINTENANCE OF 1 MLD SEWAGE TREATMENT PLANTS IN FACTORY & TOWNSHIP OF BHEL, RANIPET

ESTIMATED COST : Rs.: NA/-

1. SEALED TENDERS for the above noted work are hereby invited from contractor experienced in works of similar kind and magnitude. Tenders will be received by ADDITIONAL GENERAL MANAGER / CIVIL TOWNSHIP, Bharat Heavy Electricals Limited, Ranipet – 632 406 up to **15.00** Hrs. on **22.11.13** and (Qualification Bid only) will be opened on the same day at **15.00** Hrs. at the **Office of the MANAGER / CIVIL TOWNSHIP** in the presence of such of those tenderers Or their agents who may choose to attend.
2. TENDERS must be submitted in sealed covers and should be addressed to with full name and address of the tenderer and the name of work being noted on the cover.
3. All entries in the tender documents should be in the one ink. Erasers and over writings are not permitted. All cancellations and insertions should be duly signed by the tenderer concerned.
4. TENDERERS should fill in all the required particulars in the blank spaces provided for this purpose in the tender documents and also sign each and every page of Tender Documents including the drawings attach there to before submitting their tender.
5. Clause regarding rates quoted in the tender:-
 - a. If, in the price structure quoted for the required goods / services / works, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly, unless in the opinion of the purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price corrected accordingly.
 - b. If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
 - c. If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject of (a) and (b) above.
 - d. If there is such discrepancy in an offer, the same shall be conveyed to the bidder with target date up to which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of the purchaser, the bid is liable to be ignored.

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6. In quoting their rates, the tenderers are advised to take account all factors including any fluctuations in the market rates etc. No claim will be entertained on this account after acceptance of the tender or during the currency of the contract.
7. Before tendering, the tenderers are advised to inspect the site of work and its environments and be well acquainted with the actual working and other prevalent conditions, position of materials and labour, General and Special Conditions of Contract. Instructions to tenders, drawings and Specifications and all other documents which form part of the Agreements to be entered into.
8. **The rates quoted in the tender shall remain valid for a period THREE MONTHS** from the due date of opening of the tender (Qualification bid).
9. In the event of tender being submitted by firm the tender must be signed separately and legibly by each partner or member of the firm or in their absence, by the person holding the power of attorney on behalf of the firm concerned in the latter case a copy for the power of attorney duly attested by a Gazetted Officer must accompany the tender.
10. Every tender must be accompanied with EMD for the amount as specified in Page No. **12** in any of the form mentioned in Para **16** of the "Instruction to Tenderers". This Earnest Money will be refunded to the unsuccessful tenderers within fifteen days of finalization of the award of work. In case of the successful tenderer, the Earnest Money will be retained as part of the Security Deposit for satisfactory completion of the work in accordance with Clause 16 of the General Conditions of Contract

NOTE :Cheques, Currency Notes and Money Orders will not be accepted in lieu of the deposit receipt referred to above

No interest shall be payable by BHEL on Earnest Money or Security Deposit, if applicable, or any money due to the Contractor by BHEL.

11. **Security deposit** : Chapter – III clause 18 (18.1.1 to 18.1.5) Page Nos. 12 & 13 of General Conditions of contract booklet deleted & Revised as below.)

a) The rate of Security Deposit (SD) will be as below:

- Up to Rs. 10 lakhs: 10%
- Above 10 lakhs up to 50 lakhs: Rs. 1.lakh + 7.5% of amount exceeding Rs. 10 lakhs.
- Above 50 lakhs: Rs. 4 lakhs + 5% of the amount exceeding Rs. 50 lakhs.

The Securitiy Deposit should be collected before start of the work from the Contractor.

b) The security deposit may be furnished in any one of the following forms:

- 1) Cash (as permissible under the Income Tax Act)
- 2) Pay order, Demand draft in favour of BHEL,
- 3) Local cheques of scheduled banks, subject to realization.
- 4) Securities available from Post offices such as National Savings Certificates, Kisan Vikas Patras etc. (Certificates should be held in the name of Contractor furnishing the security and duly pledged in favour of BHEL and discharged on the back).
- 5) Bank guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL.
- 6) Fixed Deposit Receipt issued by Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The FDR should be in the name of the contractor, A/c BHEL, duly discharged on the back.
- 7) Security Deposit can also be recovered at the rate of 10% from running bills. However in such cases at least 50% of the Security Deposit should be collected before start of the work and the balance 50% may be recovered from the running bills.
- 8) EMD of the successful tenderer can be converted and adjusted against the security deposit.
- 9) The security deposit shall not carry any interest.
- 10)Cash (as permissible under the Income Tax Act)
- 11)Pay order, Demand draft in favour of BHEL,
- 12)Local cheques of scheduled banks, subject to realization.
- 13)Securities available from Post offices such as National Savings Certificates, Kisan Vikas Patras etc. (Certificates should be held in the name of Contractor furnishing the security and duly pledged in favour of BHEL and discharged on the back).
- 14)Bank guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL.
- 15)Fixed Deposit Receipt issued by Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The FDR should be in the name of the contractor, A/c BHEL, duly discharged on the back.

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16) Security Deposit can also be recovered at the rate of 10% from running bills. However in such cases at least 50% of the Security Deposit should be collected before start of the work and the balance 50% may be recovered from the running bills.

17) EMD of the successful tenderer can be converted and adjusted against the security deposit.

18) The security deposit shall not carry any interest.

(Note: Acceptance of security deposit against Serial No.4 & 6 above will be subject to hypothecation or endorsement on the documents in favour of BHEL. However BHEL will not be liable or responsible in any manner for the collection of Interest or renewal of the documents or in any other matter connected therewith.)

100% of the security deposit may be refunded on completion of the work along with the final bill as maintenance period is NIL for this contract.

19. Unless the contractor whose tender is accepted signs the Contract Agreements and makes the necessary security deposit specified in Para **11** above within Seven days of the date of the order directing him to do so the amount of Earnest Money Deposit already deposited by him will be forfeited and acceptance of his tender withdrawn.

20. If after opening of tenderer revokes his tender or increases his earlier quoted rates or after acceptance of his tender does not commence the work in accordance with the instruction of the Engineer-in-charge, the Earnest Money deposited by him will be forfeited and acceptance of his tender withdrawn. If only a part of the work included in the tender had been awarded to the tenderer, the amount of Earnest Money to be forfeited will be based on the value of the contract so awarded.

21. The Bharat Heavy Electricals Limited reserve the right to reject any or all the received or accept any tender or part thereof without assigning any reason thereof. In the case acceptance of part of tender, time for completion may also be reduced to the extent considered appropriate by the Accepting Authority.

22. Conditional and un witnessed tenders, tender containing absurd rates and amounts, tenders which are incomplete or otherwise considered defective and tenders not in accordance with the tender conditions laid down by the Accepting Officer are liable to be rejected.

23. Tenders not submitted on the prescribed form are liable to be rejected

24. The work must be completed within a contract period of 8 months.

25. The General Manager / Additional General Manager / Senior Manager / Senior Engineer or the Office mentioned by BHEL shall be Accepting Officer, herein after referred to as such for the purpose of this contract.
26. This tender notice shall be deemed to form an integral part of the contract to be entered into for this work.
27. The tenderers are advised to go through the condition stipulated in the Tender document & code of conduct for Health & Safety of Contract Labourer in details. Any violation thereof will invite punitive action being taken against them. While quoting the rate all the above factors are to be taken into account.
- 28. Quoted rates shall be firm through out the contract period of 8 months and extended contract period also and no cost escalation is allowed on any account.**
- 29. The similar works executed in the own name of the tenderer only will be considered for eligibility / qualification criteria.**
30. BHEL reserves the right to increase or decrease the tendered quantity.
31. Lowest prices received against BHEL tenders need not be the technically acceptable one, and in that case, BHEL reserves the right not to consider the same.
32. BHEL reserves the right to negotiate or refloat the tender opened, if L1 Price is not lowest acceptable price to them inter-alia other reasons.
- 33. The contract will be finalized based on the overall LOWEST value and to be awarded to single party only since split in schedules is not possible.**

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CHAPTER - V

SPECIAL CONDITIONS OF CONTRACT

1. Each of the existing Plant is capable of treating 1000 cum of sewage per day. Technical details of the Plant (Annexure – I) and the process layout (Drg. No.3-WT-220-00036) with characteristics of influent and effluent are enclosed.
2. The contractor should engage Supervisor and shift Operators for the O&M work. The Man power requirement is given in Annexure- II for operation & treating the sewage to the norms specified by BHEL and dispose the treated water as directed by the Engineer-in-charge.
3. **There are existing society contract workers in shifts and they will assist as helpers in the O&M work. They will remove away the screen rejects and process rejects regularly and help generally to keep the plant & surrounding neat and clean. They will take care of the blowers operation and the plants in the 3rd shift everyday. Permeate water will not be produced in the 3rd shift.**
4. Operation and Maintenance is to be carried out in Two shifts a day for all the activities of the plant maintaining pumps, blowers, pneumatic valves, dosing systems etc as listed in the Annexure – III. Daily log details have to be maintained for all equipment of the plant and their performance including energy / diesel consumption, feed and permeate water qualities as instructed by BHEL Engineer incharge. All equipment & valves may have to be operated / controlled manually also.
5. If the system is not operated for more than a shift of 8 hours due to break-down on account of other than Power Supply, non availability of effluent, Spares, etc., recovery will be made on pro rata basis as per the approved and awarded rate as in **Sl.No.1 and / or Sl. No. 2** for respective STP plant per month from the date of break down to the date of putting back the system to perform effectively. The work is to be executed on all BHEL working days including public holidays and Sundays.

Carryout preventive maintenance of the equipment like pumps, blowers valves etc as per the instructions given in the O&M manual. Attend all minor breakdowns. Materials, if any, required for repairs & maintenance of the equipment by Contractor will be given by BHEL.

Incase of major breakdown, arrange for removal of the motor, gearbox, blowers, pumps etc and handover to BHEL for repair.

The Operator / Supervisor shall report to the BHEL executive / supervisor incharge of the sewage treatment plant, about the performance & healthiness of the plant every day.

Contract supervisor shall be responsible for all official correspondences with BHEL.

The contractor shall depute alternate Supervisor / Mechanic / Operator if the shift Supervisor / Mechanic / Operator is on leave / absent / compensatory off.

6. Required Power and water for the Operation of the system will be provided by BHEL free of charges

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7. Required Consumables like citric acid, Sodium hypochlorite, polymer, lubricants etc., will be supplied by BHEL at stores.
8. Raw and treated water should be tested for pH, TSS, TDS, COD, BOD @20 ° C for 5 days / 27° C for 3 days, Oil & Grease, etc as per the schedule given in the Annexure –IV. Possible field tests have to be conducted on daily and routine basis and pollution control board approved lab tests have to be conducted atleast once in a month. All test records and results should be maintained and produced to BHEL for its verification. Analysis should be conducted in any lab approved by Tamil Nadu pollution control board for conducting the above said tests, within the quoted rates.
9. The contractor should maintain all monitoring records w.r.t STPs operation and maintenance, Laboratory analysis, etc as listed in the Annexure – V.
10. The Contractor should associate for collecting samples by Statutory bodies like Central Pollution Control Board, Tamil Nadu Pollution Control Board and others if necessary.
11. The contractor shall ensure payment of Minimum wages, Bonus to the workmen employed by him at the rate at which shall not less than the minimum wage applicable under Law from time to time.
12. PF &ESI Act should cover the workmen as applicable and payment will be made only on verification of the documents for the remittance of ESI and PF for the personnel engaged in the work
13. The contractor should submit the list and quantity of consumables and spares used every month for the verification by BHEL
14. The details of spares required for all pumps and the equipments shall be given by the contractor well in advance so as to procure and keep ready to run the plant without any interruption, and the same will be issued to them on written requisition. Replacing of defective spares is in the scope of contractor. Records shall be maintained for the receipt and use of spares supplied by BHEL
15. The workers should be provided with personal protective equipments such as Gloves, Goggles, safety shoes, Gum boots, face masks, waste cloths, soaps, etc by the Contractor within the quoted rates.
16. The contractor should follow all procedures pertaining to safety and EMS in day to day running of the plant
17. The contractor should keep a First Aid Box with list of Aids and should be refilled as and when required.
18. **During this period the contractor should take whole responsibility of the Plant operation including treatment efficiency. Any deviation from the specific performance requirement of any equipment or quality of treated effluent as per norms, the contractor shall immediately take steps to rectify the deficiency without any extra cost to the Authority.**

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CHAPTER - VI
GENERAL INSTRUCTIONS

1. The contractor shall not resort to sub-contracting under any circumstances. If found at a later date, BHEL reserves the right to take action whatever action it deems fit, including cancellation of the contract.
2. All the bills of contractors will be cleared by Finance department subject to production of "Clearance certificate" by the contractors in respect of compliance of all statutory requirements, issued by IR section of Human Resource Department
3. Disputes, grievances between the contractor and his labour, will have to be settled by the contractor.
4. If the management of BHEL engages workers to complete any part or whole of the work as per this contract for any period due to failure of the contractor or to engage adequate number of workers. He has to reimburse to BHEL, the extra cost involved on this account. The extra cost of engaging such workmen by BHEL will be reckoned at the rate as per minimum wages and other payments (as mentioned in the tender reg. wages payable to the workers) of BHEL for purpose of recovery from the contractor along with BHEL's administrative charges @ 12.5%.
5. The management of BHEL shall be at liberty to terminate the contract by issuing a month's notice to the contractor without assigning any reason what so ever. As regards unsatisfactory performance or non compliance with any of the terms and conditions of the contract by the contractor, BHEL shall have the right to terminate the contract forthwith without notice & rearrange the balance work through other agencies at the risk and cost of the contractor & under such circumstances, the security deposit paid by the contractor shall stand forfeited.
6. The contractor shall follow such Act, rules & regulations of the state / central Govt. that are in force & that may be framed from time to time. BHEL shall not be responsible for any infringement of the various statues in force by the contractor.
7. In case, the contractor fails to make payment of wages to his employees or remittance of contribution to the concerned authorities & a claim is made against BHEL for whatsoever reason, the security deposit / other dues / running bills under the contract can be utilized by BHEL to discharge the liability of the contractor.
8. Contractor shall indemnify BHEL against all claims and losses it suffers under various labour laws, statues or any civil or criminal law in connection with employees deployed by him.
9. Contractor shall obtain necessary insurance cover at his own cost to mitigate any risk of accidents, losses, damages etc. BHEL shall not be responsible for any losses, damages to the contractor or to his employees.

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CHAPTER - VII**Annexure - I****TECHNICAL WRITEUP OF THE SEWAGE TREATMENT PLANT (STP)****1. INTRODUCTION**

Basically the intent of the STP plant is to treat the domestic and canteen effluents coming from the factory at one location and the domestic sewage from the township at the second location. The average capacity of the each treatment plant is 1 MLD.

The plant is built with the state of the art **membrane based bioreactor technology (MBR)** to treat the effluent. All the technical requirements for the plant to produce permeate water meeting the pollution control norms and also reuse either for the gardening/toilet flushing have been incorporated in the plant design.

2. PRETREATMENT

In the pretreatment section sewage is fed from the sewage feed pump. We have a mechanical screen with automatic indexing to filter out particles of 6mm and more. An oil skimmer is provided after the screen chamber to capture the floating oil. A drum screen is also given at the discharge of submersible pump to filter particles of size 2mm and more.

3. PUMPS

The submersible pumps are provided in the equalization tank to feed water to the bioreactor tank. The pumps for producing permeate water (1w+1sb) from the effluent are given with variable frequency drive to meet the varying production capacity of the stream with savings in power based on the load. A storage of 2 m³ permeate is maintained to backpulse the membrane in a specific periodicity to dislodge the particles which were stuck to the membrane surface during production cycle. Backpulsing is carried out through reversing the flow through membrane ie. from inside to outside.

The maintenance of mixed liquor suspended solids (MLSS) in the bioreactor tank is accomplished by employing a pump which will be recirculating the sludge from the membrane tank to the bioreactor tank. This pump is called Return Activated Sludge (RAS) Pump. Necessary pneumatic actuated valves are provided to operate the plant in fully auto mode.

4. BLOWERS

The heart of the MBR system function is to keep the cultured bacteria alive in the bioreactor tank. To accomplish this function there are two needs. One is the maintenance of required oxygen level in the bioreactor tank for the bacteria to live. This is done by continuously running the process blower(1w+1sb) and supplying air to the bioreactor tank. The second is the food to the bacteria which is supplied from the fresh sewage admitted to the bioreactor tank. Mixing blower(1w+1sb) is provided to keep the incoming sewage in the equalization tank thoroughly mixed before being admitted to bioreactor tank. The membrane cassette is also having air diffusers at the bottom of the cassette to receive the air from the membrane blower (1w+1sb) and agitate the membrane fibers to dislodge the sludge particles from the membrane surface.

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A compressor with air dryer and air receiver is also installed to cater to the needs of the pneumatic operated valves in the STP plant

5. ZEEWEED MEMBRANES

GE's zeeweed submersible ultrafiltration membrane have been used to produce the permeate water from the effluent. The membrane chemistry have been so chosen to take care of the harsh liquids. The pore size available in the membrane is able to produce permeate water turbidity less than 1NTU. Necessary sizing of the tanks for equalization, bio-culture development, membrane holding & sludge holding have been done to take care of the designed capacity of the STP.

6. DOSING SYSTEMS

Necessary dosing system with tank, pump and piping for dosing chemicals which are required for maintenance cleaning and recovery cleaning of the membranes.

7. SLUDGE HANDLING SYSTEM

Sludge handling system consists of sludge feed pumps and a filter press. The liquid effluent coming from the squeezed effluent is fed back to the effluent feed well. The solids will be disposed off from the filter press. .

8. MCC, PLC & INSTRUMENTATION

Required Motor Control Centre(MCC), programmable logic controller (PLC) have been installed to take care of the operation of the MBR based STP plant in Auto/Manual mode. The touch screen display available in the PLC panel provides operator to operate, control, and monitor the plant operation.

Necessary instrumentation for the flow measurement of the permeate & sludge, pressure measurement of the blowers, level controls in the screen chamber, equalization tank & membrane tank, dissolved oxygen (DO) measurement in the bioreactor tank etc., have been provided for proper monitoring of the plant performance.

9. INLET EFFLUENT QUALITY FOR DESIGN

The MBR feed water quality considered for the design of MBR system is given below.

Parameters	Values	Unit
Ph	6.5 - 8.0	
Influent Temperature	25 – 35	°C
BOD ₅	150 – 210	mg/L
COD	300 – 400	mg/L
TSS	< 600	mg/L
TKN	45	mg/L
NH ₃ -N	35	mg/L
TP	8	mg/L
Oil & Grease	8 – 10	mg/l

10. TREATED EFFLUENT QUALITY OF MBR SYSTEM

Parameter	Unit	Values
BOD	mg/l	< 3
TSS	mg/l	< 2
COD	mg/l	<20
Turbidity	NTU	< 1

11. TERMINAL POINTS

- Inlet feed to Equalization tank from sewage collection (wet) wells, located adjacent to STP.
- Permeate from MBR plant will be terminated in the 3rd compartment of the existing oxidation pond. Further pumping & disposal of the permeate will be taken care of by BHEL.
- Electrical power 3ph, 415volts, 50 Hz will be supplied at the incomer of the MCC panel of the MBR plant by BHEL.
- Required Emergency power 3ph, 415volts 50 Hz to operate one no. of Process blower will be provided at the incomer of the MCC panel of the MBR plant by BHEL at Township STP.
- Disposal of solid waste from the mechanical screen, drum screen, filter press will be taken care of by Contractor (Our existing society contract workers will do this job as advised) and shall be disposed as directed by BHEL.

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MAN POWER REQUIREMENT

<u>MAN POWER REQUIREMENT FOR FACTORY STP</u>						
Sl. No.	DESCRIPTION	Edu. Qualifn	Nos. Reqd.	Shift(s)	Total Nos./ day	Remarks
1	Operators	ITI Electr.	2	A & B	2	Operators for Factory STP Though this Reliever Operator & Supervisor are to be accounted under the factory STP, they have to work for both Factory STP & Township STP.
2	Reliever duty Operator	ITI Electr.	1	A or B	1	
3	Supervisor	Diploma/ Gaduate Engineer	1	general	1	
<u>MAN POWER REQUIREMENT FOR TOWNSHIP STP</u>						
Sl. No.	DESCRIPTION	Edu. Qualifn	Nos. Reqd.	Shift(s)	Total Nos./ day	Remarks
1	Operators	ITI Electr.	2	A & B	2	Operators for Township STP
	TOTAL NO. OF WORKERS / DAY				6	

NOTE: -

1. Rates in the PART – II - PRICE BID have to be quoted considering the man power deployment as described above.
2. All the above Operators & the Supervisor shall have experienced in the Operation & Maintenance of similar Sewage / Effluent Treatment Plants.

SHIFT DETAILS:

- General Shift - 8.00 to 16.30 Hrs
- 'A' Shift - 6.00 to 14.00 Hrs
- 'B' Shift - 14.00 to 22.00 Hrs
- 'C' Shift - 22.00 to 6.00 Hrs

(NOTE: Shift timings for the STPs and reliever operator duty are modifiable time to time to suit efficient Operation & Maintenance of the STPs at the discretion of BHEL)

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Annexure - III											
ELECTRICAL LOAD LIST FOR PUMPS & OTHER PROCESS EQUIPMENT OF THE SEWAGE TREATMENT PLANT (1MLD MBR)											
SR. NO.	EQUIPMENT	TAG NAME	DRIVE / MOTOR TAG NAME:	TOTAL (W + S)	WORKING	STANDBY	MOTOR RATING (KW)*	TOTAL OPERATING LOAD (KW)	TOTAL STANDBY LOAD (KW)	TOTAL CONNECTED LOAD (KW)	TYPE OF STARTERS
1	MECHANICAL SCREEN MOTOR	08-MSC-100	08-MSC-100	1	1	0	0.75	0.75	0	0.75	DOL
2	OIL SKIMMER MOTOR	08-OS-100	08-OS-100	1	1	0	0.75	0.75	0	0.75	DOL
3	DRUM SCREEN MOTOR	08-SCR-200	08-SCR-200	1	1	0	0.75	0.75	0	0.75	DOL
4	BIOREACTOR FEED PUMPS	08-P-100-1/2	08-M-100-1/2	2	1	1	1.5	1.5	1.5	3	DOL
5	MIXING BLOWERS	08-B-100-1/2	08-M-100-1/2	2	1	1	9.3	9.3	9.3	18.6	Y/DELTA
6	PROCESS BLOWERS	16-B-400-1/2	16-BM-400-1/2	2	1	1	18.5	18.5	18.5	37	Y/DELTA
7	MEMBRANE BLOWERS	20-B-200-1/2	20-M-200-1/2	2	1	1	9.3	9.3	9.3	18.6	Y/DELTA
8	RAS TRANSFER PUMPS	16-P-400-1/2	16-PM-400-1/2	2	1	1	5.5	5.5	5.5	11	DOL
9	PERMEATE/BACKPULSE PUMPS	20-P-300-1/2	20-PM-300-1/2	2	1	1	3.7	3.7	3.7	7.4	VFD
10	SODIUM HYPOCHLORITE DOSING PUMP (MC)	23-P-120	23-PM-120	1	1	0	0.37	0.37	0	0.37	DOL
11	SODIUM HYPOCHLORITE DOSING PUMP (RC)	23-P-110	23-PM-110	1	1	0	0.37	0.37	0	0.37	DOL
12	CITRIC ACID DOSING TANK AGITATOR	23-MX-300	23-MX-300	1	1	0	0.75	0.75	0	0.75	DOL
13	CITRIC ACID DOSING PUMPS	23-P-310	23-PM-310	1	1	0	0.37	0.37	0	0.37	DOL
14	SLUDGE TRANSFER PUMP	80-P-100-1/2	80-PM-100-1/2	2	1	1	1.1	1.1	1.1	2.2	DOL
15	POLYMER DOSING TANK AGITATOR	80-MX-800	80-MX-800	1	1	0	0.75	0.75	0	0.75	DOL
16	POLYMER DOSING PUMP	80-P-800-1/2	80-PM-800-1/2	1	1	0	0.37	0.37	0	0.37	DOL
17	FILTER PRESS POWER PACK	80-FP-700	80-FP-700	1	1	0	0.75	0.75	0	0.75	DOL
18	AIR COMPRESSOR	90-AC-100	90-AC-100-M	1	1	0	2.2	2.2	0	2.2	DOL
19	AIR DRYER	90-DR-100	90-DR-100-M	1	1	0	0.04	0.04	0	0.04	1 PHASE
20	SPARE FEEDER FOR EOT CRANE			1	0	1	3.7	0	3.7	3.7	DOL
21	SPARE			1	0	1	0.37	0	0.37	0.37	DOL
22	SPARE			1	0	1	18.5	0	18.5	18.5	Y/DELTA
23	SPARE			1	0	1	3.7	0	3.7	3.7	DOL
24	EXHAUST FAN			1	1	0	3 PH				SFU 25A
25	ILLUMINATION			1	1	0	3 PH				SFU 25A
26	PLC PANEL			1	1	0	1 PH				SFU 16A
	TOTAL LOAD							54.87	75.17	130.04	

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Sampling and analysis

Sl. No.	Parameter	Periodicity
<u>FOR BOTH FACTORY & TOWNSHIP SEWAGE TREATMENT PLANTS</u>		
1	PH of feed	Field test daily as required (All apparatus, testing chemicals & testing at contractor's cost)
2	PH of permeate	
3	Dissolved oxygen	
4	MLSS	
	<u>Permeate to be Tested in TNPCB approved Lab</u>	
1	pH	Atleast once in a month (All sampling & testing charges at contractor's cost – To be tested at a TNPCB approved lab) at expenditures within the quoted rates
2	Total suspended solids	
3	Total dissolved solids	
4	Oil & Grease	
5	Chemical oxygen demand	
6	BOD ₅ @20 deg. C or BOD ₃ @27 deg. C	

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List of records to be maintained

1. Consumption of chemicals on weekly basis.
2. Hours of Operation of all pumps, blowers, etc.,
3. Flow meter reading of Permeate, sludge bleed etc.
4. Hours of operation of DG set during power failure
5. Consumption of Diesel, kerosene, lubricants, etc.
6. Electrical units consumption in each shift
7. Breakdown and corrective/preventive actions
8. Process failures and corrective/preventive actions
9. Lab monitoring records for all parameters of feed & permeate
10. Records for receipt and use of spares, dosing chemicals, etc.
11. Pay quittance and attendance register
12. EPF, ESI, Service Tax and Pan No

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CHAPTER – VIII

GENERAL SAFETY PRECAUTION TO BE FOLLOWED AT WORK SITE DURING EXECUTION

The following safety measures should be strictly adhered to during execution of works at sites.

1. Providing the working platform with toe – board and handrail for continuous working at heights
2. Providing safety belt and life – line at all times for men working at heights
3. Providing dust or fume respirator in places where dust and fume concentration exist
4. Providing goggles and welding screens
5. Providing acid and alkali – proof rubber gloves for handling acid and alkali and chemical which are corrosive
6. Providing rubber gloves for working on electrical works
7. Ensuring proper lashing of the components while being transported in vehicles
8. The vehicles must have side supports or have body to support the materials conveyed
9. The materials should not be allowed to extend or overflow the sides of the vehicles
10. Materials should not be allowed to overhang from the rear edge of the body of the vehicle
11. Driver of the vehicle must possess valid license
12. Vehicle must not be overloaded beyond the prescribed limits.
13. Red flags and lights for parts projecting from the body of vehicle must be provided.
14. The speed restrictions within the factory premises must be strictly adhered to.
15. The gas cylinders must be always handled on trolleys or kept tied down when not in use. They should never be rolled as Roller for conveying.
16. Cylinders should not be used without Regulators.
17. All excavations must be barricaded and red lamps must be provided

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18. All electrical connections must be properly earthed.
19. No work should be taken up of execution inside shop floor, without obtaining necessary work permit.
20. Providing helmet for high level work
21. The contractor should maintain a register regarding the driver license particulars
22. All personal protective equipment conform with standard specification as per the details given in the code of conduct.

All Contractors including their sub contractors, agents and labour engaged on the work are required to scrupulously adhere to the safety regulations, safety precautions and measurers. Any violation thereof will invite punitive action being taken against them. Also contractors with frequent violations of safety regulations will not be entrusted with further work in this organization.

23. **Contractor shall provide thick hat, safety glass with side shield, full face shield, ear plug set, face mask, protective & chemical resistant gloves, safety shoe, gum boots, safety belt, rain coat, chemical resistant protective clothing, gas detector and breathing apparatus to the operators & supervisor within the quoted rates.**

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TERMS AND CONDITIONS REGARDING COMPLIANCE WITH VARIOUS LABOUR LAWS BY THE CONTRACTORS FOR BHEL

1. The Contractor shall not employ in connection with the work any person who has not completed 18 years of age.
2. The Contractor shall in respect of labour employed by him either directly or through subcontractors, company with or cause to be complied with the following statutory provisions and rules and in regard to a all matters provided therein.
 - a) The Contract Labour (Regulation & Abolition) Act 1970 and the related Tamil Nadu Rules
 - b) The Minimum Wages Act 1948 and the related Tamil Nadu
 - c) The payment of Wages Act 1936 and the related Tamil Nadu Rules
 - d) The Factories Act 1948 and the related Tamil Nadu
 - e) The Employee"s Provident Fund & Miscellaneous Provisions Act 1952.
 - f) The Employees State Insurance Act 1948
 - g) The Workmen Compensation Act. 1923
 - h) The Industrial Disputes Act 1947.
 - i) The Payment of Bonus act 1965.**

and any other law or modifications to the above or the to the Rules made thereunder from time to time.

REGISTRATION AND LICENSING

3. Every Contractor shall register his name with the Welfare Section of BHEL before taking up the work awarded to him by giving the following information getting a Code Number:
 - a) The Name of the Contractor
 - b) Nature of Contract Work
 - c) Period of work
 - d) Number of maximum labour employed by him on any one day
 - e) License No. & Date (Applicable in case of contractor employing 20 or more workers)
 - f) Whether enrolled for PF, ESI, etc., and enrolment No.
4. The Contractor employing 20 or more workmen is required to obtain license from the authorities (The Deputy Chief Inspector of Factories / Assistant Commissioner of Labour as the case may be). The license shall be amended and / or renewed wherever, there is an increase in the workmen employed by him or in the event or contract being extended or renewed. The

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Contractor shall inform the license number to the BHEL Management before taking up the work.

5. The Contractor (Licensed or unlicensed) shall promptly furnish every information and document required by BHEL authorities for the purpose of fulfilling their obligations as Principal Employer and / or Occupier of the Factory and shall render all necessary assistance for the same.

WAGES

6. **The tenderer has to ensure payment of Minimum Wages as per Tamil Nadu State Minimum Wages as applicable under law from time to time for the employment in General Engineering & Fabrication Industry. The labourers engaged in this contract shall be paid additional payment as mentioned below in addition to the payment of Minimum wages as stated above.**

- a) Unskilled Worker Rs. 2000 per month
- b) Semi-skilled Worker Rs. 2300 per month
- c) Skilled Worker / Supervisor Rs. 2500 per month

Also the labourers shall be paid a minimum bonus which shall be 8.33% as per the payment of Bonus Act 1965 for the total wages paid (i.e) Payment of minimum wages and additional payment as mentioned above. The Contractor shall have to remit EPF & ESI contributions at the rates applicable under law to the authorities concerned for the total wages paid (i.e) Payment of minimum wages and additional payment as mentioned above. At present the Tamil Nadu State Government Minimum wages declared is indicated in Page No.09. Normally the revision will be with effect from 1st April of every year.

7. The Contractor shall fix wage periods in respect of which wages shall be payable. No wage period shall exceed one month.
8. The Contractor shall ensure payment of wages to the contract labour employed by him within three days from the end of wage period in case the wage period is one week or a fortnight and in all other cases before 10th day of the following month
9. All Payment of wages shall be made on working days at the work site and during the working time and on date notified in advance. In case the work is completed before the expiry of the wage period final payment shall be made within 48 hours of the last working day.
10. Where the employment of worker is terminated by or on behalf of the Contractor, the wages earned by him shall be paid before the expiry of the second working day from the day on which his employment is terminated.
11. Wages due to every worker shall be paid to him direct or to the person authorized him in this behalf. All wages shall be paid in current coin or in both.

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12. The Contractor shall ensure the disbursement of wages in the presence of authorized representative of BHEL Management
13. The above payment shall be verified by the authorized office / representative of BHEL with the following certificate of the payment sheet "Certified that the amount shown in Column No..... has been paid to the workmen concerned in the presence on at....."
14. A certificate of payment shall be furnished in duplicate by the Contractor to the Engineer in charge each month in Form „A" enclosed.
15. A notice showing the wage period and the place and time of disbursement of wages shall be displayed at the work and a copy to be sent to the Welfare Department by the Contractor under acknowledgement.
16. Notices showing the rate of wages, weekly rest days, hours of work, wage period, date of payment of wages, names and addresses of the Inspector having jurisdiction, the date of unpaid wages shall be displayed in Tamil and English in conspicuous places at the establishment and work at work site by the Contractor. The Contractor shall inform the BHEL Management every month the details of contract labour engaged for contract in this following form:
 - a. Serial Number
 - b. Location
 - c. Period of work
 - d. No. of days worked
 - e. No. of man worked
 - f. Wages paid to workers

The above statement shall be furnished to BHEL Management at the end of every month.

REGISTERS AND RECORDS AND COLLECTION OF STATISTICS

17. The following documents / formats under Contract Labour (Regulation & Abolition) Act 1970 and Tamil Nadu Rules thereunder shall be maintained by each contractor.
 - a. Register of persons employed by the Contractor
 - b. Employment Card
 - c. Service Certificate
 - d. Muster Roll, Wage Register, Deduction Register, wage slip, Overtime Register, register of Fines, Register of Advances etc.,
18. The Contractor shall display the abstract of the Contract Labour (Regulation & Abolition) Act and the Rules thereunder both in English and Tamil.

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19. Half yearly Return shall be by the Contractor in duplicate to the Licensing Officer
20. The Contractor shall submit the returns required under the Contract Labour (Regulation * Abolition) Act 1970 periodically to BHEL Management.
21. The Contractor shall without fail give upto date information in writing to the attendance of the workers employed by him.
22. The Contractor shall ensure that his workers keep and produce their Employment Card when coming to duty and take them back when leaving duty.
23. All the above registers and records shall be preserved in original for a period of three years. All the registers, records and notice maintained under the Act and rules shall be produced on demand by Inspector or any authority under the Act.

WORKING HOURS AND WORKING CONDITIONS

24. No worker shall be required or allowed to work on Sunday unless he has or will have a holiday on anyone of the three days before or after the said day.
25. The Contractor shall inform BHEL Management in the prescribed form details of the contract workers scheduled to work on Sunday, the way of rest and also indicate the substituted holiday in lieu thereof. This shall be intimated two days in advance before his workmen and booked for work Sunday.
26. The contract labour working for more than nine hours in any day or for more than 48 hours in any week shall be paid wages at the rate of twice the ordinary rate of twice the ordinary rate of wages in accordance with the provisions of Sections 59 of the Factories Act 1948.
27. The Contractor shall provide all safety devices and personal protective equipment to his workmen at his own cost and shall ensure that his workmen wear / use such devices or equipment provided to them while doing the work and there should not be any relaxation on this.
28. The Contractor shall give four paid National Holidays to his workers, viz., 26th January, 1st May 15th August and 2nd October.
29. The Contractor shall ensure that his workmen vacate the premises after the shift is over.
30. The Contractor shall give leave with wages to his workmen who have worked for a period of 240 days of work performed by the worker during the previous calendar year. The worker whose services commences on a day other than the first of January shall be entitled to leave with wages at the above rate (One day for every 20 days of work) only if he had worked for a minimum of 2 /3 of the total number of days in the remainder of the calendar year. This leave will be admissible only during the subsequent calendar year.
31. No woman worker shall be required or allowed to work in the Factory except between the hours of 6.00 A.M. and 7.00 P.M.

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32. The Contractor shall comply with the provisions relating to Welfare and Health facilities as provided in the Contractor Labour (Regulation and Abolition) Act 1970 read with the Tamil Nadu Contract Labour Rules 1975.

NOTICE OF ACCIDENTS

33. Notwithstanding anything contrary to this, in the event of accident the contractor shall be required to fill injury report and submit the Engineer in charge immediately and ensure the compliances of ESI / Workmen's compensation Act, Factories Act and Rules made there under. He shall also maintain a register of accident as per the Act.
34. The Contractor shall get the contract labour engaged by him insured under Workmen's Compensation policy from general should be for the entire period of Contract. The Contract shall comply with the provisions of the Workmen's Compensation Act 1923. (This should be read in conjunction with the provisions of ESI Act)

COVERAGE UNDER THE ESI ACT / PF AND MISCELLANEOUS PROVISIONS ACT

35. The contractor shall ensure that all his workmen are covered under the Employee's State Insurance Act and produce to BHEL such Registration Number / Enrolment Number before executing the contract work.
36. The Contractor shall regularly pay the amount of contribution. i.e., employer's contributions as well as employee's contribution pursuant to the above scheme as time. The Contribution payable presently is 1.75% wages to be recovered from his workmen and 4.75% of wages to be contributed by the Contractor. Contributions recovered from employee and contribution made by the contractor may be rounded to the higher multiples of five paise.
37. The Contractor shall take note of any amendment that may be brought forth in the above contribution rate and act accordingly.
38. The contractor shall ensure that his workmen are covered under the EPF & Miscellaneous Provisions Act 1952 and accordingly produce to the BHEL Management the registration / enrolment number before awarding of contract work. As per the existing provisions every worker shall be entitled and required to become a member of the fund. The employee's contribution payable at present is 12% of wages which will be recovered by the contractor from the wages of his workmen and the contractor should pay equal contribution. The contractor is also liable to pay any administrative charges in this behalf that may be decided from time to time. It will be the responsibility of the contractor to ensure such contribution payable in respect of workmen employed through sub-contractors also.
39. The Contractor shall take note of any amendment in the rate of contribution payable under the scheme from time to time.

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40. The Contractor shall with seven days of the close of every month submit to BHEL a statement showing the amount of contribution payable / paid for employees engaged by him or through him and shall also furnish to BHEL such information as Principal Employer is required to furnish under the provisions of the ESI Act and PF as well as the schemes made thereunder to the authorities concerned.
41. Whenever any sum of money is found to be recoverable from or payable by the contractor under the above Act, the sum shall be deducted from any sum that may be due or which at any time thereafter may become due to the Contractor under this contract or under any other contract or from his security deposit, the contractor shall immediately thereafter such further sums as may be required to replenish the shortage caused by such recoveries in amount of security deposit.
42. The Contractor shall abide by all the labour and other laws applicable to contract labour / worker under this contract and shall at all times keep BHEL indemnified against all losses, claims, prosecutions under any law.
43. In case of non-compliance of any of the provisions of the Acts and in case BHEL having complied with the same BHEL will be entitled to recover the same from the contractor / sub-contractor.
44. Non-exercise of any of the powers of rights available to BHEL hereunder to under any law, shall not in any way operate as waiver thereof.

Note: The Specimen forms for the following are available in BHEL.

- 1) Form „A” - Payment Certificate
- 2) Form IV - Application for License
- 3) Form XIII - Register of Workmen employed by contractor
- 4) Form XIV - Employment Card
- 5) Form XV - Service Certificate
- 6) Form XVI - Muster Roll
- 7) Form XVII - Register of wages
- 8) Form XIX - Wage up

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CHAPTER - IX

QUESTIONNAIRE

Questionnaire to be answered by the tenderer by ticking the suitable boxes.

Sl.No.	Description	Yes	No
01	Whether the tenderer has understood the scope of work and agrees to deploy required man power as indicated in the tender. (If there is any clarification required, the same may be got cleared from the Executive-in-charge, before submitting the offer.)		
02	Whether the tenderer has agreed to all Terms & Conditions given in the tender. (If there is any deviation, the same may be mentioned in separate sheet.)		
03	Whether the tenderer has their own code for ESI & PF. (A copy of the certificate to be enclosed).		
04	Whether the tenderer has enclosed copy of the present Service / Sales / Works contract sales Tax registration certificates. If a vendor is exempted from the registration under Service / Sales Tax, the reason there of be stated.		
05	Whether the vendor / Contractor is availing service Tax credit / VAT Credit for their inputs.		
06	Whether the vendor will submit Service Tax invoice as per the existing ACT and the rules their under.		
07	Whether the tenderer agrees to Pay Wages as per Minimum wages Act, EL Wages, Holiday Wages as per Tamil Nadu Factory rules. (Necessary proof should be submitted while claiming running bill and final bill.)		
08	Whether the PAN Number of the vendor is furnished. If exempted from IT, the exemption certificate shall be enclosed.		
09	Whether the tenderer agrees to keep the validity of their offer for three months from the date of opening of bid and keep the prices firm throughout the contract period.		
10	Whether the tenderer agrees for the payment terms of BHEL.		
11	Whether the tenderer has agreed to submit EMD of Rs20,000/- and has submitted the same along with technical bid. (If not enclosed, the tender will not be considered) shall be in the form of Pay order or DD payable at Ranipet.		
12	Whether the tenderer has agreed to submit Security Deposit immediately after receipt of the work order.		
13	Whether the tenderer has enclosed the list of their clients with addresses & contact persons.		

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14	Whether the tenderer has enclosed the completion certificates received from Government / Reputed organization for the similar work done for the last 7 years ending on 30.09.2013.		
15	Whether the tenderer has enclosed the list of similar works carried out with supporting documents		
16	Whether the includability / excludability of the taxes and duties in the rates offered has been clearly indicated. If the same is not done, BHEL will choose to assume the rates are inclusive only.		
17	All payments by BHEL will be made through e-payment only. The required certificate as enclosed in the tender is submitted by the vendor with Banker's signature.		
18	Whether the tenderer has enclosed the list of technical personnel, their qualification & experience who will be deployed for this work.		
19	Whether the tenderer has indicated the address of their local office in Ranipet along with phone no. & fax no.		
20	Whether the tenderer has enclosed the DD towards the cost of Tender Document, along with the Technical bid. (In case the tenderer has downloaded the tender document directly from the Web Site and If DD is not enclosed, the tender will not be considered).		
21	Whether the tenderer accepts reverse auctioning process through internet.		
22	Whether the tenderer has enclosed the annual report for the last three years (2008-09, 2009-10 & 2010-11).		
23	Whether the tenderer has submitted the proof of average annual turnover for last 3 years for a value of 30 % of estimated cost.		
24	Whether the tenderer agrees for the compensation for Delay clause as per GCC (Clause 43)		

Note: If any of the question is not applicable, please mention as "Not Applicable (NA)"

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CHAPTER – X**CERIFICATE OF NO DEVIATION**

I / We of M/s

hereby certify that **there is no deviation** from the tender conditions either technical or commercial and

I am / We are agreeing to all the terms and conditions mentioned in the Tender Specification.

I / We have submitted our offer for this tender. I / We have fully gone through, understood and accepted all specifications, terms & conditions of the whole tender documents uploaded in BHEL web site including all corrigenda, addenda etc published in the website time to time for this tender.

In case of any deviation, the detail of which I / we have to furnish in a separate sheet(s) along with our offer.

Date:

Signature of the tenderer

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CHAPTER – XI
ANNEXURES B, C, & D

ANNEXURE: B

It is hereby agreed by me / us that the BHEL General Conditions of Contract including subsequent amendments / additions / deletions to clauses if any, and conditions pertaining to the settlement of disputes by Arbitration form an integral part of the tender documents and that the tender submitted by me / us is subject to the aforesaid BHEL General Conditions of Contract which has been read and accepted by me/us.

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CLAUSE 22 OF GENERAL CONDITIONS OF CONTRACT**LABOUR**

The contractor shall employ labour in sufficient numbers either directly or through sub-contractors to maintain the required date of progress and of quality to ensure workmanship to the degree specified in the contract and to the satisfaction of the Engineer – in – charge. The contractor shall not employ, in connection with the works, any person who has not completed eighteen years of age.

The Contractor shall pay to labour employed by him, either directly or through sub-contractors, wages not less than fair wages, as defined in the Contractor's Labour Regulations.

The Contractor shall in respect of labour employed by him, either directly or through sub-contractors, comply with or cause to be complied with contractor's labour Regulations in regard to all matters provided therein.

The Contractor shall comply with the provisions of the payment of Wages Act, 1936, Minimum Wages Act, 1948, Workmen's Compensation Act 1923, Industrial Disputes Act, 1947, Maternity Benefit Act 1961, or any modifications thereof or any other law relating there to and rules made there under from time to time.

The Contractor shall be liable to pay his contribution and the employee's contribution of the State Insurance Scheme in respect of all labour employed by him for the execution of the contract, in accordance with the provision of "The Employees' State Insurance Act, 1948" as amended from time to time. The Contractor shall apply to the ESI Authorities, get himself registered with them and obtain a code Number. He shall pay the remittances under his Code Number only.

The Contractor shall be liable to his contribution and the employees contribution towards PF as per Provident Fund Rules and Regulations, in respect of all labour employed by him for the execution of the contract. The Contractor shall apply to the PF Authorities, get himself registered and obtain a code number from them. He shall pay the remittances towards PF under his code number only.

The Engineer-in-charge shall, on a report having been made by an Inspecting Officer as defined in the Contractor's Labour Regulations, have the power to deduct from the moneys due to the contractor any sum required or estimated to be required, for making good the loss suffered by a worker or workers by reason of non fulfillment of the conditions of the contract for the benefit of workers, non-payment of wages or of deductions made a from his or their wages which are not justified by the terms of the Contract of non observance of the said Contractor's Labour Regulations.

The Contractor shall indemnify BHEL against any payment to be made under and for observance of the Regulations aforesaid without prejudice to his right to claim indemnity from his sub-contractors.

In the event of the Contractor committing a default or breach of any of the provisions of the aforesaid contractor's Labour Regulations, as amended from time to time or furnishing any information or submitting or filling any form / Register / Slip under the provisions of these Regulations which is materially incorrect, then, on the report of the Inspecting Officers as defined in the Contractors Labour Regulations, the Contractor shall without prejudice to any other liability pay to BHEL a sum not exceeding Rs. 50/- as liquidated damages for every default, breach, or furnishing, making, submitting, filling materially incorrect statements as may be fixed by the Engineer-in-charge and in the event of the contractor's default continuing in this respect, the liquidated damages may be enhanced

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to Rs. 50/- per day for each day of default subject to a maximum percent of the estimated cost of works put to tender. The Contractor shall defend the case by himself any action brought in by such Government Agencies for non-compliance of any Labour Regulations and / or reimburse the expenses incurred by BHEL in this regard.

The Engineer-in-charge shall deduct such amount from bills or security deposit of the Contractor and credit the same to the welfare fund constituted under Regulations. The decisions of the Engineer-in-charge in this respect shall be final and binding.

MODEL RULES FOR LABOUR WELFARE

The Contractor shall, at his own expense, comply with or cause to be complied with Model Rules for Labour Welfare as appended to these conditions or rules framed by Government from time to time, for the protection of health and for making sanitary arrangements for workers employed directly or indirectly on the works. In case the Contractor fails to make arrangements as aforesaid, the Engineer-in-charge shall be entitled to do so and recover the cost there from the contractor.

SAFETY CODE

RESPONSIBILITIES OF THE CONTRACTOR IN RESPECT OF SAFETY OF MEN, EQUIPMENT, MATERIAL AND ENVIRONMENT

1. Before commencing the work, the contractor is required to submit a "SAFETY PLAN" to the authorized BHEL official. The 'safety plan' shall indicate, in detail, the measure that would be taken by the contractor to ensure safety of men, equipment, material and environment during execution of work. The plan shall take care to satisfy all requirements specified hereunder. The contractor shall submit safety plan along with his offer. During negotiations before placing of work order and during execution of the contract, BHEL shall have right to review and suggest modification in the safety plan. The contractor shall abide by BHEL's decision in this respect.
2. The contractor shall take all necessary safety precautions and arrange for appropriate appliances as per direction of BHEL, or its authorized officials, to prevent loss to human lives, injuries to personnel engaged, and damage to property and environment.
3. The contractor shall provide to its work force and ensure the use of the following personal protective equipment as found necessary and as directed by the authorized BHEL officials:-
 - (i) Safety helmets conforming to IS-2925: 1984.
 - (ii) Safety Belts conforming to IS-3521:1983
 - (iii) Safety Shoes conforming to IS-1989:1978.
 - (iv) Eye and Face protection devices conforming to IS-8520:1977. and IS-8940:1978.
 - (v) Hand and body protection devices conforming to
 1. IS-2573:1975 (2) IS-6994:1973 (3) IS-8807:1978 (4) IS-8519:1977.

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All tools, tackles, lifting appliances, material handling equipment, scaffolds, cradles, safety nets, ladders, equipment etc. used by the contractor shall be of safe design and construction. These shall be tested and certificate of fitness obtained, before putting them to use and from time to time as instructed by authorized BHEL official who shall have the right to ban the use of any item.

All the electrical equipment, connections and wiring for constructions, power, its Distribution and use shall conform to the requirement of Indian Electricity Act and Rules. Only electricians licensed by the appropriate statutory authority shall be employed by the contractor to carry out the all types of electrical works. All electrical appliances including portable electric tools used by the contractor shall have safe plugging system to source of power and be appropriately earthed.

The contractor shall not use any hand – lamp energized by electric power with supply voltage of more than 24 Volts. For work in confined spaces, lighting shall be arranged with power source of not more than 24 Volts.

The contractor shall adopt all fire safety measures as laid down in the “Code for Fire Safety at Construction sites” issued by the safety department of BHEL and as per the directions of the authorized BHEL official. A copy of the above referred “Code for Fire Safety at Construction sites” shall be made available by BHEL to the contractor for reference, on demand by the contractor, during tendering stage itself.

Where it becomes necessary to provide and/or store Petroleum Products, explosives, chemicals and liquid or gaseous fuel or any other substance that may cause fire or explosion, the contractor shall be responsible for carrying out such provisions and / or storage in accordance with the rules and regulations laid down in the relevant government acts, such as Petroleum Act, Petroleum and Carbides of Calcium Manual of the Chief Controller of Explosives, Govt. of India etc., Prior approval of the authorized BHEL official at the site shall also be taken by the contractor in all such matters.

The contractor shall arrange at his cost (wherever not specified), appropriate illumination at all work spots for safe working when natural daylight may not be adequate for clear visibility.

The contractor shall be held responsible for any violation of statutory regulations local, state or central and BHEL instructions, that may endanger safety of men, equipment, material and environment in his scope of work or another contractor's or agency's. cost of damages if any, to life and property arising out of such violation of statutory regulations and BHEL instructions, shall be borne by the contractor.

In case of fatal or disabling injury/accident to any person at construction / work sites due to lapses by the contractor, the victim and/or his/her dependents shall be compensated by the contractor as per statutory requirements. However, if considered necessary, BHEL have the right to impose appropriate financial penalty on the contractor and recover the same from payments due to the contractor for suitably compensating the victim and/or his/her dependents. Before imposing any such penalty, appropriate enquiry shall be held by BHEL giving opportunity to the contractor to present his case.

In case of any damage to property due to lapses by the contractor, BHEL shall have the right to recover cost of such damages from payments due to the contractor after holding an appropriate enquiry.

In case of any delay in the completion of a job due to mishaps attributable to lapses by the contractor, BHEL shall have the right to recover cost of such delay from payments due to the contractor, after notifying the contractor suitably and giving him opportunity to present his case.

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If the contractor fails to improve the standards of safety in its operation, to the satisfaction of BHEL, after being given a reasonable opportunity to do so and / or / if the contractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instructions regarding safety issued by the authorized BHEL official, BHEL shall have the right to take corrective steps at the risk and cost of the contractor, after giving a notice of not less than seven days, indicating the steps that would be taken by BHEL.

The contractor shall submit report of all accidents, fires and property damage, dangerous occurrence to the authorized BHEL official immediately after such occurrence, but in any case not later than twelve hours of the occurrence. Such reports shall be furnished in the manner prescribed by the contractor to the authorized BHEL official from time to time as prescribed.

Before commencing the work, the contractor shall appoint/nominate a responsible office to supervise implementation of all safety measures and liaison with his counterpart of BHEL.

If the Safety record of the contractor is to the satisfaction of Safety Department of BHEL, issue of an appropriate certificate to recognize the safety performance of the contractor may be considered by BHEL after completion of the job.

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CLAUSE 40 OF BHEL GENERAL CONDITIONS OF CONTRACT

INSURANCE OF WORKS AGAINST DAMAGE AND LOSS DUE TO FIRE, STRIKE, TEMPEST, FLOODS, EARTHQUAKE, RIOT AND AGAINST DAMAGE BY AIRCRAFT – (Not applicable for this work)

The contractor shall, within one month after the date of acceptance of the contract, insure the work against loss and damage by fire, tempest, floods, earthquake, riots, strike and against damage by aircraft with an insurance office approved by the accepting officer, from the date of acceptance of work or actual commencement of work whichever is earlier. Such insurance shall be effected in the name of BHEL and shall be for the full value of the contract sum. The contractor shall lodge with BHEL the policies and receipts of the premiums for such insurance and shall maintain such policies in force until the entire completion of the work as certified by the Engineer-in-charge.

If the contractor fails to comply with the terms of this condition, the accepting officer may insure the work and may deduct the amount of premiums from any money that may become payable to the contractor or may at his discretion refuse payment of any advance payment to the contractor until the contractor shall have complied with the terms of this condition.

Such insurance whether effected by the Accepting officer or the Contractor shall not be a limit or bar to the liability and obligation of the contractor to complete the entire work in all respects as certified by the Engineer-in-charge.

In case of such a loss or damage as aforesaid, the money payable under any such insurance shall be received and may be retained by BHEL until the work is finally completed and shall then be credited to the contractor in the final statement of accounts in the event of the contract not having been previously cancelled under these conditions, after taking into account the delay in completion, settlement to his workers for damages, damage to BHEL's property etc.

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SERVICE TAX

Operation & Maintenance of 1 MLD Sewage Treatment Plants in Factory & Township of BHEL, Ranipet

Service Tax

The Bidder shall not include Service Tax in their quoted rates; but the bidder has to separately indicate the Service Tax rate, amount and workings thereof in the Price bid schedule included in the bid documents.

If service tax amount is not indicated separately in the price bid schedule included in the Bid documents, it will be presumed that the quoted rate is inclusive of applicable service tax and bids will be evaluated accordingly.

Supply of Labour Service:

Bidders have to quote full Service Tax payable in the Price bid format included in the Bid document. Out of Full Service Tax amount indicated by the Bidder, 25% of the same shall be considered for evaluation of offers in the case of Bidders being an Individual, Sole Proprietary ship firm, Hindu Undivided Family or Partnership firm whether registered or not, including Association of Persons. For Other Bidders full Service Tax quoted shall be considered for evaluation.

In such cases of successful Bidder being an Individual, Sole Proprietary ship firm, Hindu Undivided Family or Partnership firm whether registered or not, including Association of Persons, 25% of the Service Tax amount quoted in the Price Bid format will be considered for reimbursement against valid documentary evidence ie. Service Tax Registration Certificate, Original Invoice, Service Tax Payment Certificate and copy of Service Tax payment Challan.

For others Service Tax quoted in the Price Bid will be considered for reimbursement against valid documentary evidence ie. Service Tax Registration Certificate, Original Invoice, Service Tax Payment Certificate and copy of Service Tax payment Challan.

In such cases of Bidders being an Individual, Sole Proprietary ship firm, Hindu Undivided Family or Partnership firm whether registered or not, including Association of Persons, Service Tax payable by BHEL as receiver of supply of manpower Service i.e. 75% of the Service Tax payable for the service on quoted price, by BHEL @ **9.27%** presently, shall be added to arrive at the total cost to BHEL for each bidder for the purpose of evaluation of Bids.

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PRICE BID – RATE SCHEDULE
(Un Priced)

Page : 1/2

Tenderers shall not quote their rates in this Rate Schedule; The schedule is provided as part of Qualification bid for acceptance of the description and signing

NAME OF WORK : Operation & Maintenance of 1 MLD Sewage Treatment Plants in
Factory & Township of BHEL, Ranipet

Sl.No	Description	Qty	Unit	Rate	Amount
01	Operation and Maintenance (O&M) of 1 MLD capacity Sewage Treatment Plant at Factory premises of BHEL, Ranipet in two shifts to treat the sewage from the plant. The scope covers deputing qualified and experienced operator for shift operation of the plant. The operator is required to monitor proper functioning of all the equipments and the system in total for effective performance of the plant for better results. The scope includes operation of the equipments, attending to minor defects then and there, cleaning and lubricating the rotating parts periodically, maintaining the electrical systems such as panel board etc, dosing chemicals as directed by BHEL, collecting & testing feed and permeate samples, maintaining the log book for all the activities. Required number of operators are to be made available for two shifts operation. Also a 'reliever operator' shall work in two shifts and a supervisor shall work in general shift. Though the 'reliever operator' and supervisor are common for both Factory STP & Township STP, their wages and all payments have to be covered under this factory STP, along with exclusive operators of the factory STP.	8	Month		

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ACCEPTING OFFICER

Sl.No	Description	Qty	Unit	Rate	Amount
02	Operation and Maintenance (O&M) of 1 MLD capacity Sewage Treatment Plant at BHEL Township, Ranipet round the clock to treat the sewage from the township. The scope covers deputing qualified and experienced operator for shift operation of the plant. The operator is required to monitor proper functioning of all the equipments and the system in total for effective performance of the plant for better results. The scope includes operation of the equipments, attending to minor defects then and there, cleaning and lubricating the rotating parts periodically, maintaining the electrical systems such as panel board etc, dosing chemicals as directed by BHEL, collecting & testing feed and permeate samples, maintaining the log book for all the activities. Required number of operators are to be made available for for two shifts operation.	8	Month		
03	Total Quoted value of Sl. No. 01 & 02 =				
04	Service tax_____ % & Service Tax amount on the above total value = (Quote here full service tax % and Service tax amount payable)				
05	Total Quoted value including Service Tax (Sl. No. 03 + 04) =				

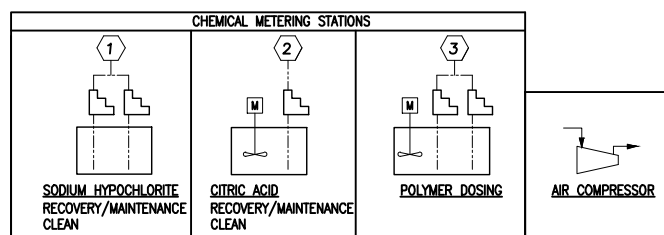
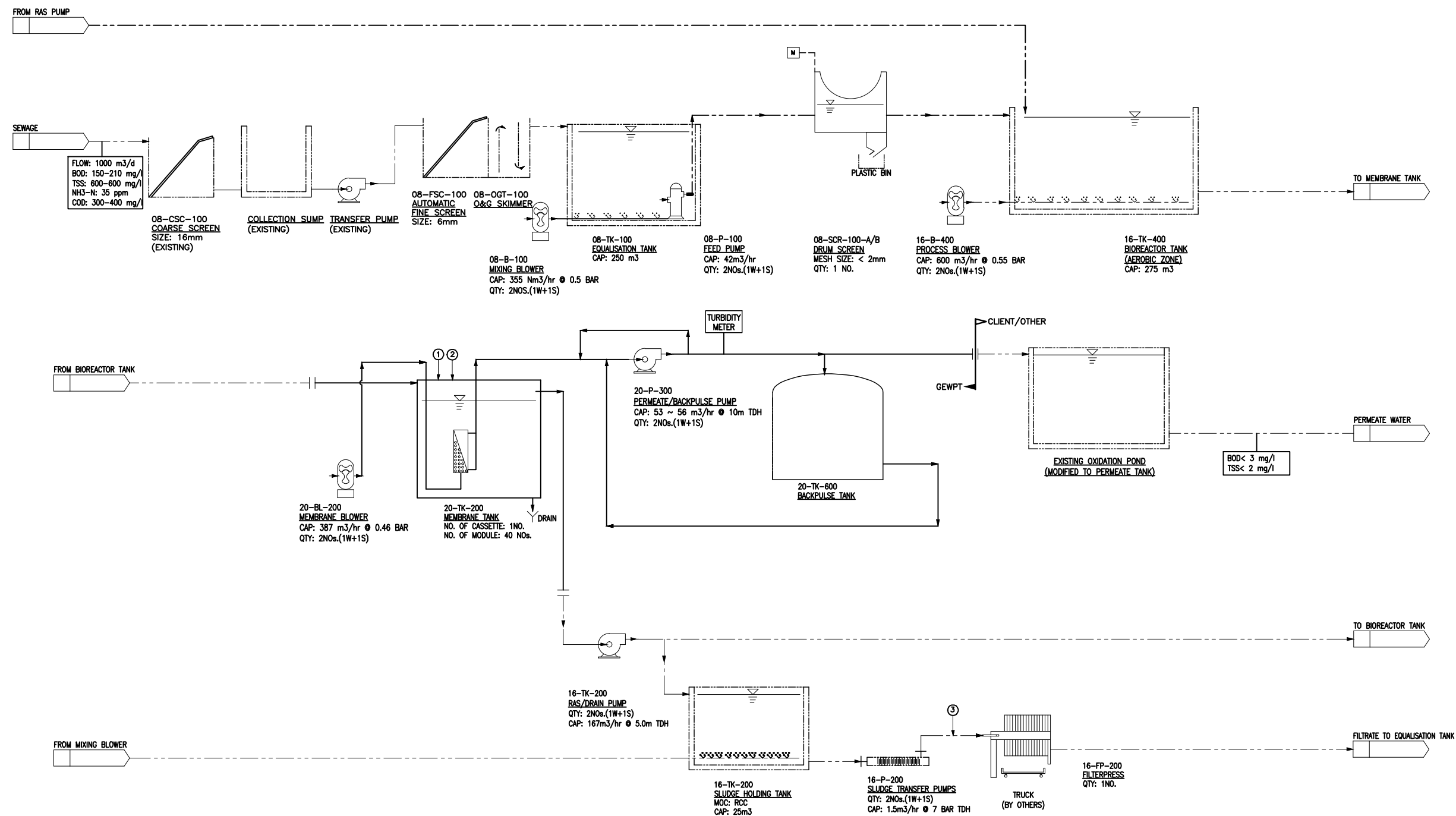
TENDERER

ACCEPTING OFFICER

3-WT-220-00036

DRAWING NO.

ALL DIMENSIONS ARE IN MILLIMETRES



PROJECT BHEL - BAP RANIPET
1 MLD SEWAGE TREATMENT PLANT



BHARAT HEAVY ELECTRICALS LTD
UNIT : BOILER AUXILIARIES PLANT, RANIPET - 632406
NEW PRODUCTS / DESALINATION

COPY RIGHT AND CONFIDENTIAL				DEPT	NAME	SIGN	DATE
The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED it must not be used directly or indirectly in any way detrimental to the interest of the company.				DRN	SS		20-Dec-11
				CHD	MSM		20-Dec-11
				APPD	MN		20-Dec-11

TITLE
PROCESS FLOW DIAGRAM

DEPT.	SCALE	NTS	DRAWING NO.
			3-WT-220-00036
SIGN	DATE	SHEET 1 OF 1	REV. 00



CERTIFICATE

AUTHORISED SIGNATORY OF VENDOR WITH SEAL

Note: This EFT Form is to be submitted duly filled in manually in all fields and duly signed by Authorised Signatory and certified by Banker.