

Bharat Heavy Electricals Limited
High Pressure Boiler Plant
Tiruchirappalli – 620 014. India
Civil Engineering Department (Township)

TENDER DOCUMENT (PRICE BID)

Name of work : Design, supply, construction, erection and commissioning of Sewage Treatment Plant (6 lakh litre per day) for PPPU – BHEL near Thirumayam in Pudukottai (Dt) Tamilnadu

Tender Notice No. : Township 07 / 10

Tender Schedule No. : T 38/ 10

Period of Contract : 8 Months

Issued to :



BHARAT HEAVY ELECTRICALS LIMITED
(A Government of India Undertaking)
Unit : TIRUVERUMBUR, BOILER PROJECT, P.O.
TIRUCHIRAPALLI - 620 014.

CIVIL ENGINEERING DEPARTMENT

NOTICE INVITING TENDER

01. Name of Work : **Design & construction of 5 lakh litre capacity shaft type RCC over head tank and sump including piping for PPPU – BHEL near Thirumayam in Pudukottai (Dt) Tamilnadu**
02. Earnest Money Deposit : **Rs.2,00,000/-**
03. Completion Time : **EIGHT (8) Months**
(From the date of commencement of the work which will be reckoned from the date of handing over of the site to the Contractor)
04. Cost of Tender Document : **Rs.750/-** (including Sales Tax)
This amount will not be refunded under any circumstances
05. Last Date for Receipt of Tenders : **09.30 Hrs. on 22.11.2010**
06. Date of Tender Opening : **10.00 Hrs. on 22.11.2010**
07. Maintenance Period : **6 (Six Months from the date of actual completion of the entire work and handing over to Bharat Heavy Electricals Limited)**

Tender document contains **209** pages in Qualification Bid and **35** pages in Price Bid including Bill of Quantities, Drawing etc.

Issued to Messrs. / Thiru :

.....

.....

.....

ISSUING OFFICER

CONTRACTOR

2

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI – 620 014**

CIVIL ENGINEERING DEPARTMENT (TOWNSHIP)

PREAMBLE

01. The scope of work includes **Design, supply, construction, erection and commissioning of Sewage Treatment Plant (6 Lakh litre per day) for PPPU – BHEL near Thirumayam in Pudukottai (Dt) Tamilnadu**
02. Time is the essence of the contract. Being a time bound project with capital expenditure, the contractor should make all efforts to complete the work in time
03. The scope includes Design Engineering, Construction of Civil Units, Supply and Erection of Mechanical units, Electricals and related activities for the successful commissioning of the total system followed by one month trial run with 48 hrs continuous performance run of the equipment, twelve months operation and maintenance of the system including consumables and testing of raw sewage & treated sewage for the effectiveness of the system. The scope also includes cost of cement, Reinforcement steel and Structural steel.
04. However, cement, reinforcement steel and structural steel will be issued by BHEL at site and the cost of the same will be recovered from the contractor's running bills for quantity consumed at the recovery rate mentioned below.
- | | | |
|---------------------|---|---------------|
| Cement | - | Rs 5160 / MT |
| Reinforcement Steel | - | Rs 36030 / MT |
| Structural Steel | - | Rs 40290 / MT |
| Tubular Steel | - | Rs 40290 / MT |
05. The tenderers are advised to visit the plant area near Thirumayam in Pudukottai (Dt.) and get themselves acquainted with the site conditions before submitting the offer
06. **The following eligibility criteria shall be complied to fulfill the Qualification Bid**
- The tenderer should have EPF, PAN, Service Tax New Registration No., proof of having submitted IT return for the last three years, Profit & Loss account and balance sheet certified by the auditor.
 - Average annual financial turnover in the execution of STPs in the last three years should be atleast Rs.46 Lakh
 - During last seven years should have successfully completed either
 - Three similar works each not less than Rs.61 Lakh (or)
 - Two similar works each not less than Rs.76 Lakh (or)
 - One similar work not less than Rs.122 Lakh .
 - Latest Solvency (obtained within 6 months) from the Nationalised / Scheduled bank shall be at least Rs.61 Lakh
07. The works executed in the own name of the tenderer only will be considered for eligibility criteria. The nominated committee may also visit the works executed by the contractor to ascertain the nature of work before qualifying

08. BHEL reserves its right to reject the tender on account of unsatisfactory past performance by the present tenderer in another project / sister unit awarded under different enquiry.
09. Dissimilar / irrelevant works will not be considered for eligibility criteria.
10. Documentary evidences (Xerox copies - attested) for turnover, works experience, P.F. & Sales Tax registration etc., all as indicated & required in the tender document should be furnished without which it will not be taken into account.
11. The value of turnover and the value of similar works mentioned above includes cost of cement, reinforcement steel and structural steel.
12. The norms for qualification with prescribed score are attached in the Qualification Bid Document. Evaluation will be done accordingly. Minimum score required for qualification is 60.
13. Quoted rate shall be firm throughout the contract period of 8 months and no cost escalation is allowed on any account.
14. The lumpsum rate offered is for finished item of works and shall provide for the complete cost towards fuel, tools, tackles, plant & machinery, temporary works, labour, materials, levies, taxes, transport, lay-out, repairs, rectifications, maintenance till handing over, supervision, labour colonies, establishment, services, roads, revenue expenses, overheads, profits & all other incidentals etc., complete. However if the service tax is applicable for this contract work and free issue materials, the same will be extra and will be reimbursed on production of valid document proof for having paid service tax by the contractor.
15. Some changes are likely in the layout, design and specifications of the work. The rates quoted shall be deemed to be inclusive of all such contingencies.
16. The contractor should submit the mix design for RCC for different mix of concrete for different grade of cement at his cost through reputed institution.
17. The contractor should use only weigh batch for all reinforced cement concrete works (controlled concrete).
18. Usually, working hours are limited to day time only. In emergency cases to carryout works during nights, it may be done so with the specific prior permission of BHEL. In such case, it is to be carried out in the presence of BHEL officials or their authorized persons.
19. The work shall be carried out as per the approved drawings, Civil Engineering Department Work & Safety procedure, AWS / BIS specifications, standard code of practice and as per the instructions of Engineer-in-charge. The brief description of items of work is given in the bill of quantities provided in the Price Bid. Tenderer has to quote rates both in figures and in words for all the items given in the Bill of Quantities provided in the Price Bid. **(page No. 26 - 28)**.
20. 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 in force.
21. The contractor has to furnish the security deposit, as per Clause 13 of Tender Notice, attached in the Price Bid if the work is awarded. Also it is to be noted that after award of work the contractor has to furnish 50 % of security deposit before the commencement of work.

22. The contractor should bring the construction earth moving machineries like Poclain, JCB etc., as and when required for the work without any delay. Also required number of the following tools & Plants / instruments shall be made available always at site for the works.
- a. Full load mixture machine
 - b. Petrol / Kerosene driven vibrator/ mechanical vibrator
 - c. Cube moulds
 - d. Inter carting vehicle (tractor, hand trolley etc)
 - e. Mobile / Hydraulic crane
 - f. Welding machine etc.
 - g. Steel shuttering
 - h. Pipe scaffolding
23. The contractor has to arrange sufficient number of lorries to collect & transport the surplus earth, construction debris generated, etc. at site. Otherwise BHEL would clear the debris at the contractor's risk and cost.
24. 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. The contract should arrange for surveying construction site at his own cost.
25. Statement of completed works with detailed measurements along with material reconciliation statements shall be submitted by the contractor in the last week of every month for processing bill.
26. The decision of Engineer-in-charge shall be final and binding on the contractor regarding clarification of items in this tender schedule.
27. The works contract to be entered into with the successful tenderer will be governed by the BHEL Revised General Conditions of Contract in force.
28. The contractor shall strictly adhere to various labour laws in force.
29. The contractor has to submit the list of machineries to be deployed exclusively for this work, 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.
30. The contractor should submit the programme for the completion of work and the list of machineries and site personnel to be deployed for the work along with tender.
31. The contractor should establish his own site office, for which vacant land will be allotted on specific request for which the rent will not be collected. No land will be provided towards labour colony.
32. The contractor should establish his own site office, fabrication yard, handling facility, storage facility to stock about 100 MT of cement etc., for which vacant land will be allotted on specific request for which the rent will not be collected.
33. The contractor is required to carry out construction activities as directed by the department officials. It is required to engage certain minimum strength of staff for effective supervision of works as indicated below:
- | | | |
|--|---|--------|
| Site in-charge / Construction Manager | - | 1 No. |
| Planning Engineer and coordinator | - | 1 No. |
| Qualified Surveyor | - | 1 No. |
| Civil Engineer (Graduate in Civil Engineering) | - | 1 No |
| Mechanical / Electrical Engineer | - | 1 No |
| Supervisor/Engineer (Diploma Holder) | - | 2 Nos. |

34. In addition to the above, Quantity surveyors have to be engaged to prepare measurements and submit the bills.
35. Adequate number of Quality Engineer and qualified Safety Engineer should be deployed at site.
36. To safeguard the persons working at underground etc., sufficient number of Industrial Safety PPE shall be provided at tenderer's cost in appropriate level and locations. The working hand including Supervisors, Engineers should wear the personal protective items and safety measures such as helmets, safety belts, shoes, etc., before entering into working place.
37. The tenderer has to deploy adequate labour of required categories such as Unskilled, Skilled, Mason, Carpenter, Plumber, Welder, Fitter, Mistry, Technically experienced, etc. so as to execute the works simultaneously in all areas of work. The Technical persons with experience shall have to produce valid certificate for verification.
38. The contractor shall follow norms of BHEL security system for movement of men & materials within the complex.
39. Exclusive Stores personnel should be engaged who would co ordinate with department official for clearance and collection of BHEL supplied materials required for works.
40. Separate non-technical persons should be engaged for arranging daily gate passes for labours and vehicles entry in all the gates of Factory Complex.
41. 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.
42. It shall be the responsibility of the contractor to see that the workmen do not utilize the departmental canteen facilities. Contractor has to make his own arrangements to provide refreshment for the workmen.
43. All the works shall be executed as per the standard specifications as provided in TNBP / BIS.
44. All the materials to be used in the work and the nature of work shall conform to the respective TNBP & BIS and National Building Organisation, Standard Specifications forming part of "ALL INDIA STANDARD SCHEDULE OF RATES" specifications and shall be got approved by the Engineer-in-charge before actual incorporation in the work.
45. The contractor should maintain proper accounts for cement, reinforcement steel and structural steel sections and other materials if any supplied by this department and should be available at the site of work for verification and check by the Officials of this Organisation at any time.
46. 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. All the structural works including fabrication, erection etc., are subjected to inspection and clearance by Third Party Agency fixed by BHEL.
47. The contractor should use only the materials of brand and quality as approved by BHEL.
48. All materials and consumables brought by the contractor should have manufacturer's certificate.
49. All tools and plants including jack hammer with silencer & bits, rock drilling machine, etc., required for all the works covered under this contract will have to be brought by the contractor.
50. All safety measures are to be followed during execution of work, particularly during blasting and only licensed blaster should be engaged for this purpose. Sufficient care shall be taken by the contractor during excavation to avoid damages to the buried pipe lines, cables and other infrastructure like railway lines if any etc. Controlled blasting including muffling can be carried out with prior permission from safety department.

51. Contractor's materials and tools & plants shall have to be brought inside the plant area with proper invoice / voucher and make necessary entry in the security gate. They should maintain proper record for tools and plats, materials, etc., brought inside the factory complex.
52. The contractor should extend full co-operation with the third party agencies engaged, if any by BHEL to adhere the Quality Control Procedures ensuring quality.
53. 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.
54. With regard to specifications 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 Bharat Heavy Electricals Limited, shall apply.
55. The Contractor will have to make his own arrangements for water without any extra claims.
56. On the written request from the **contractor Electrical energy required for the work may be given by this organization at any one point at the site of work at chargeable basis.** The approximate power requirement shall have to be indicated while submitting the tender. BHEL does not accept any liability whatsoever for non-supply, delay in supply or failure of supply of electrical energy. Contractor shall ensure that there is no wastage of electrical energy otherwise supply is liable to be stopped at contractor's risk and cost. The contractor shall make leak proof / fire proof shed and provide control panel board of required capacity and lay the required cables at their own cost for further distribution. The contractor has to mobilize DG sets of suitable capacity at his own cost for uninterrupted progress of the work in case of non availability of power from the grid.
57. The contractor should be in a position to make his own arrangement for compressed air without any extra claim for the uninterrupted operation of jack hammer with silencer
58. Purchase preference policy if applicable will be extended to CPSE bidders subject to other terms & conditions as provided in the office memorandum issued by DPE. The tenderer has to furnish copy of Government circular for claiming purchase preference.
59. Tenderers are requested to furnish the duly filled in E format attached as separate sheet along with a cancelled cheque leaf to accept Electronic fund transfer / R T G S transfer for any payment from BHEL, Trichy.
60. The main work order may further be split in too few sub work orders. The process of billing, material tallying and submission of completion reports will be according to the individual sub work orders.
61. Bank Guarantee format can be obtained after award of work in case of successful tenderer.
62. No advance / mobilization advance will be given.
63. LD / Penalty clause is applicable as per General Conditions of Contract in force.
64. BHEL reserves its right to accept / reject any or all the tenders without assigning any reasons.
65. Also BHEL reserves its right to finalize the contract through reverse auction for which only qualified tenderers will be provided with necessary documents containing reverse auction rules, terms and conditions for this purpose.

66. The quoted amount as provided in this tender will be in full and final for functions to be performed by the contractor and no claim whatsoever shall be made against BHEL in respect of any part relating to the plans, drawings and other documents submitted by the contractor. The drawings, design, plan, related details prepared and acquired by the Contractor for the work entrusted to him under this agreement will become the property of BHEL. The drawings, design, plan, related details cannot be issued to any other person, firm or authority or used by the Contractor for any other project without prior permission of BHEL.
67. The contractor shall supply required drawings to the Department, free of cost, till the completion of the work.
68. The contract shall not make any deviations, alterations or omissions from the approved drawings, without prior consent of the Department.
69. All the approved drawings shall be the property of BHEL. The same shall be submitted to the department immediately after getting them approved.
70. BHEL may review the work carried out by the contractor at planning, detailed engineering or at any pre-constructional stage to get satisfied with the standards and procedures adopted by the contractor to make available the concerned documents to BHEL on demand.
71. It is the responsibility of the contractor to plan and design the STP based on standard engineering practice. The contractor shall stand guarantee for the performance of the system designed by them for a minimum of 50 years. A guarantee bond on standard approved proforma shall be provided by the contractor.
72. The contractor shall provide detailed computations and back up of structural design sheets to BHEL
73. The contractor shall provide all drawings and designs on auto CAD STADD-PRO or any relevant computer programmes. Copy of final design / drawings shall be made available to BHEL in soft copy also.
74. All structural designs shall be vetted by IIT / SERC / NIT or any approved institution at the contractor's own cost. Nothing extra shall be paid on this account. The structural design drawings and the calculation sheets shall be signed and verified by the proof checking agency and the certificates regarding safety of structure as per codal provisions shall be submitted to BHEL

INSTRUCTIONS TO TENDERERS

1. The tender is open to all Contractors. The Contractors not borne on the approved list of contractors of this Organisation 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
3. The tenderer is advised to obtain the tender documents in person or by a messenger duly authorized to do so. The BHARAT HEAVY ELECTRICALS LIMITED will not under any circumstances accept responsibility for the non – receipt of delay in the receipt of the tender documents by the tender.
4. Rate for each item of the tender schedule should be quoted in FIGURES and in WORDS. In case of any difference in the rates quoted in figures and in words, the lower of the two rates will be taken as the tendered rate. Unit rate quoted shall be the basis for arriving the total value of the tender. The total amount for every item shall be arrived by multiplying the unit rate with the quantity indicated for that item. In case of any arithmetic deviation is noticed in the total amount, the same will be corrected and evaluated by taking unit rate as basis and multiplying with the quantity indicated.
5. 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. **However if the service tax is applicable for this contract work including free issue materials, the same will be extra and will be reimbursed on submission of the documentary evidence for having paid service tax by the tenderer.**
6. 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 endeavor 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.

7. 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.
8. Where the tender called for covers only the building work and excludes internal services such as sanitary and water supply installations, electrification etc., the building contractor will have to leave pockets, holes, etc., as required for other works and will have to phase his work to ensure smooth progress of the work of the other agencies also as directed by the Engineer – in – charge.
9. Where the tender schedule contains special items of work such special floor finishes, foam concrete for insulation, special water proofing treatment to roofs etc., it will be entirely at the discretion of the Project Authorities to allot these items of work to other contractors specialized in these works. In such cases, the main building Contractor will have to tender all necessary co-operation to the agencies involved so as to ensure the smooth progress of all work.
10. The contractor's responsibility under this contract shall commence from the date of receipt of the LOI by the tenderer. The scheduled period of completion for this work will be as mentioned in page No. 02, and the Contractor will have to plan his work accordingly.
11. Generally, the maintenance period for any work under BHEL Organisation will be SIX (6) MONTHS .
12. **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. Shall also be furnished in the form of Pay Order or Demand Draft in favour of BHEL, 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. 10,000/-
Works costing more than Rs.5 lakhs and up to Rs.10 lakhs	Rs. 20,000/-
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 Lakh.

EMD by the Tenderer will be forfeited if,

- a) After opening the tender, the tenderer revokes his tender within the validity period or increases his earlier quoted rates.
 - c) 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.
 - c) EMD given by all unsuccessful tenderers shall be refunded normally within fifteen days of acceptance of award of work by the successful tenderer.
 - d) EMD shall not carry any interest.
13. Should a tenderer or a contractor on the list of approved Contractors have a relative, or in the case or a firm or Company of contractors any of its share holders or shareholder'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.

14. If tenderer expires after the submission of his tender or after the acceptance of his tender the BHEL may, at their discretion, cancels 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.
15. 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 dispatch such power of attorney and changes after obtaining proper legal advice the cost of which will be chargeable to the contract concerned.
16. 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. Also BHEL reserves its right to finalize the contract through reverse auction for which only qualified tenderers will be provided with necessary documents containing reverse auction rules, terms and conditions for this purpose.
17. Words importing the singular number shall also be deemed to include the plural number and vice versa where the context so requires.
18. The expenses for completing and stamping the agreement shall be paid by the contractor.
19. 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.
20. Tenderers shall not increase their quoted rate in case the Bharat Heavy Electricals Limited, negotiates for negotiation for reduction of rate. Such negotiation shall not amount to cancellation or withdrawal of the original offer and the rate originally quoted shall be binding on the tenderes for a period of three months from the date of opening of tenders.
21. 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
22. All contractors will have to produce copy of Income tax Return for the last three years 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.

TENDER NOTICE

NAME OF WORK : Design, supply, construction, erection and commissioning of Sewage Treatment Plant (6 lakh litre per day) for PPPU – BHEL near Thirumayam in Pudukottai (Dt) Tamilnadu

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 ADDL.GENERAL MANAGER / CIVIL / TOWNSHIP Bharat Heavy Electricals Limited, Tiruchirappalli – 620 014. up to **09.30 Hrs** on **22.11.2010** and will be opened on the same day at **10.00** hrs. at the Office of the ADDL. GENERAL MANAGER / CIVIL / TOWNSHIP in the presence of such of those tenderers. Or their agents who may choose to attend.
2. TENDER FORMS and other particulars regarding the proposed work can be obtained on any working day from 8.00 A.M. to 4.30 P.M. up to **19.11.2010** on payment of the prescribed sum of **Rs.750/** - per set (including Sales Tax) Amount nor refundable.
3. TENDERS must be submitted in sealed covers and should be addressed to **DY.MANAGER/CIVIL/PLANNING (TOWNSHIP)** with full name and address of the tenderer and the name of work being noted on the cover
4. All entries in the tender documents should be in one ink. Erasers and overwritings are not permitted. All cancellations and insertions should be duly signed by the tenderer concerned.
5. 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 attached there to before submitting their tender.
6. UNIT rate should be quoted in figures as well as in words with reference to each item and for all the items shown in the attached schedule. These rates shall be for the finished work in site. Amount of each item and the total page by page and also the grand total amount of the whole contract should be filled in by the tenderers. Unit rate quoted shall be the basis for arriving the total value of the tender. The total amount for every item shall be arrived by multiplying the unit rate with the quantity indicated for that item. In case of any deviation is noticed in the total amount, the same will be corrected and evaluated by taking unit rate as basis and multiplying with the quantity indicated.
7. 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.
8. 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.
9. In case of any discrepancy between general conditions of contract & preamble , only preamble prevails over the other . Likewise the specification in the BOQ over the rest of the document.
10. Quoted rate shall be firm throughout the contract period of **8 months** and no cost escalation is allowed on any account.

CONTRACTOR

12

ACCEPTING OFFICER

11. 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 of the power of attorney duly attested by a Gazetted Officer must accompany the tender.
12. Every tender must be accompanied with EMD for the amount as specified in Page No. 02 in any of the form mentioned in Para 12 of the "Instruction to Tenderers". This Earnest Money will be refunded to the unsuccessful tenderers within fifteen days of finalisation 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

13. Security Deposit

13.1 Security Deposit should be collected from the successful tenderer.

The rate of Security Deposit will be as below:

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

The security Deposit should be collected before start of the work from the contractor.

13.2 Security Deposit may be furnished in any one of the following forms

- i) Cash (as permissible under the Income Tax Act)
- ii) Pay Order, Demand Draft in favour of BHEL.
- iii) Local cheques of scheduled banks, subject to realization.
- iv) 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).

v) Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act subject to a maximum of 50% of the total security deposit value. The balance 50% has to be remitted either by cash or in the other form of security. The Bank Guarantee format should have the approval of BHEL.

vi) 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.

vii) Security deposit can also be recovered at the rate of 10% from the 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.

viii) EMD of the successful tenderer shall be converted and adjusted against the security deposit.

ix) The security deposit shall not carry any interest.

NOTE: Acceptance of Security Deposit against Sl. No. (iv) and (vi) 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.

13. Unless the contractor whose tender is accepted signs the Contract Agreements and makes the necessary security deposit specified in Para 13 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.
14. After tender opening if tenderer revokes his tender or increases his earlier quoted percentage rate 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.
15. The Bharat Heavy Electricals Limited reserved 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. Also BHEL reserves its right to finalize the contract through reverse auction for which only qualified tenderers will be provided with necessary documents containing reverse auction rules, terms and conditions for this purpose.
16. 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.
17. Tenders not submitted on the prescribed form are liable to be rejected
18. The work must be completed within a period as mentioned in page No.02.
19. The Chairman / General Manger / Deputy General Manager / Deputy Manager / Senior Engineer shall be Accepting Officer, herein after referred to as such for the purpose of this contract.
20. This tender notice shall be deemed to form an integral part of the contract to be entered into for this work.
21. The tenderers are advised to go through the condition stipulated in 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.

ISSUING OFFICER

SCOPE OF WORK FOR SEWAGE TREATMENT PLANT OF CAPACITY 600 CUM / DAY

1.0 DESIGN BASIS :

SI No	Characteristics	Raw Effluent	Desired Quality of Treated Effluent
1	pH	6.0-8.5	6.5-8.5
2	TSS	450 mg/l	< 30 mg/l
3	BOD	300 mg/l	< 20 mg/l
4	COD	700 mg/l	< 100mg/l
5	Oil & Grease	50 mg/l	< 5 mg/l

2.0 SCOPE OF WORK

1. The scope of work includes all civil construction works, including trenches, steps, platforms, hand rails and inserts,
2. Supply, erection, testing of equipments ,cabling, piping, & successful commissioning of the plant meeting the output requirement.
3. Yard lighting, pump house lighting & lightning protection, earthing, cable trays .
4. All chemicals, consumables, lubricants etc during the commissioning & trial running of the plant for 1 month after commissioning
5. Testing of raw sewage and treated sewage every as indicated under performance test.
6. Technical assistance for filling / filing the application with TNPCB & to attend technical discussions with TNPCB officials.
7. The battery limit is from collection sump to Treated sewage storage tank

2.1 Design, supply, erection and commissioning including performance test (48 hours continuous operation) and trial operation (one month).

Design and Engineering:

- i. Carry out Process design based on present hydraulic and organic loading specified above
- ii. Preparation of Hydraulic Flow Diagram, Plan Layout & General arrangement drawing.
- iii. Preparation of Mechanical and Electrical design calculations for arriving the suitable capacity of pumps & motors and aeration system. Submission of supplier's technical details including characteristic features of equipment.
- iv. Structural Design and preparation of Civil Construction Drawing vetted by third party and approved by BHEL.
- v. Civil drawings should be provided with details like handrail, ladders, platforms, foundations, inserts etc complete.

Note: Above said drawings should be submitted in 3 sets after incorporating necessary changes if required as suggested by BHEL.

Supply, erection and commissioning

- i. Includes supply, storage at site, erection, testing, commissioning of all mechanical and electrical equipment as indicated under "Specification for Mechanical Units"
- ii. Supply of necessary piping including laying, jointing with necessary specials and flow control valves (gate valves & Non-return valves) within the battery limit.
- iii. Supply and erection of lifting devices for the pumps wherever necessary with chain pulley arrangement.
- iv. Earthwork excavation for laying pipes and cables within the battery limit.
- v. Supply and erection of HDPE dosing tank and connections

- vi. All type of electrical wiring and laying of electrical cables within the battery limit. Power source will be provided at control room from which the contractor has to tap for his requirement.
- vii. The MCC should include Amps Incomer, RYB Indicator, Ammeter and Voltmeter, Electronic KWH Meter, Single Phase Preventer, Power Feeder of each 9 Amps Power contactor, Overload relay, MCB, Trip Indicator, Push Buttons for all Motors, an additional set of Push Button near the Motors and aerators. Provision for one spare feeder.
- viii. The Submersible Pumps should be provided with auto float switch. And the Sludge Pump should run on Electronic Timer to regulate the frequency of Sludge re-circulation to Aeration Tank.
- ix. MIMIC LED Indication with Hydraulic Flow Diagram on the Control Panel Showing Motor ON/OFF indication.
- x. Providing labour, supervision, material, scaffolding, erection equipment, tools and plants, temporary works, transportation and all incidental items not shown or specified but reasonably implied or necessary for proper successful completion of work in all respects.

Performance test (48 hours) and Trial operation (one month)

- i. After successful commissioning of the plant in all respects, all the equipments will be tested for performance guarantee for a duration of 48 hours, within the one-month trial operation.
- ii. During this period, all the equipment should run continuously without stoppage and performance parameters as required for each equipment need to be proved.
- iii. The Contractor shall supply all the materials and labour to supervise, operate, keep in operation, adjust, test service, repair and do all things necessary to keep the plant running. This is inclusive of the provision of such labour on a 24 hour – a – day basis during the period of Contract.
- iv. During this period, all the equipments should be checked for Vibration, Noise Level and alignment. Contractor shall take immediate steps to rectify the deficiency if found without any extra cost to BHEL.
- v. The Contractor should supply chemicals like hypo chlorite solution for disinfection and other chemicals if require for stabilizing the process.
- vi. During the period of trial operation, the contractor has to stabilize the total treatment and prove the results as stated for the post treatment. The contractor has to get the samples (both inlet and outlet to plant) analysed once in a week from pollution control board (PCB) approved laboratory to establish the results. Parallel sampling will be done by BHEL to cross check the results.

Note:

- a. The Contractor is responsible for any defect in the equipments (mechanical & electrical) for a period of one year after satisfactory commissioning of the complete works. In case of any defects coming to the notice within this period the same shall be made good by the Contractor at no cost to BHEL.
- b. Various items of work have been only briefly described in the scope of work and some of the minor items may not have been described. The contract being a lump sum turnkey one with respect to design, supply, erection & commissioning of Electrical and Mechanical equipment and related civil works the contractor shall execute the works in all respects for satisfactory operation and maintenance of the plant to the full satisfaction of BHEL.
- c. Operation & Maintenance manual should be specific to the equipment supplied by the contractor including operation and trouble shooting of treatment process. The following points should be covered in the O & M manual:
 - 1. Brief description of overall plant operation including chemicals preparation and handling, trouble shooting methods, etc.
 - 2. Operation and maintenance of all equipment both mechanical and electrical.
 - 3. General Safety precautions to be taken during the plant operation

4. Periodical preventive checks/maintenance to be conducted for all the equipment for long running life
 5. Power requirement, equipment wise and the total Power requirement per day
 6. General arrangement drawing of all equipment (As built) preferably in A4 size.
 7. Power panel wiring diagram for housing electrical installations for motors and aerators.
 8. List of Agencies with full correspondence addresses for supply of spares equipment wise.
- d. The Contractor shall furnish a schedule for submitting process layout, hydraulic profiles and equipment GA drawings within a week of award of Contract.

2.2 Operation and Maintenance (one year)

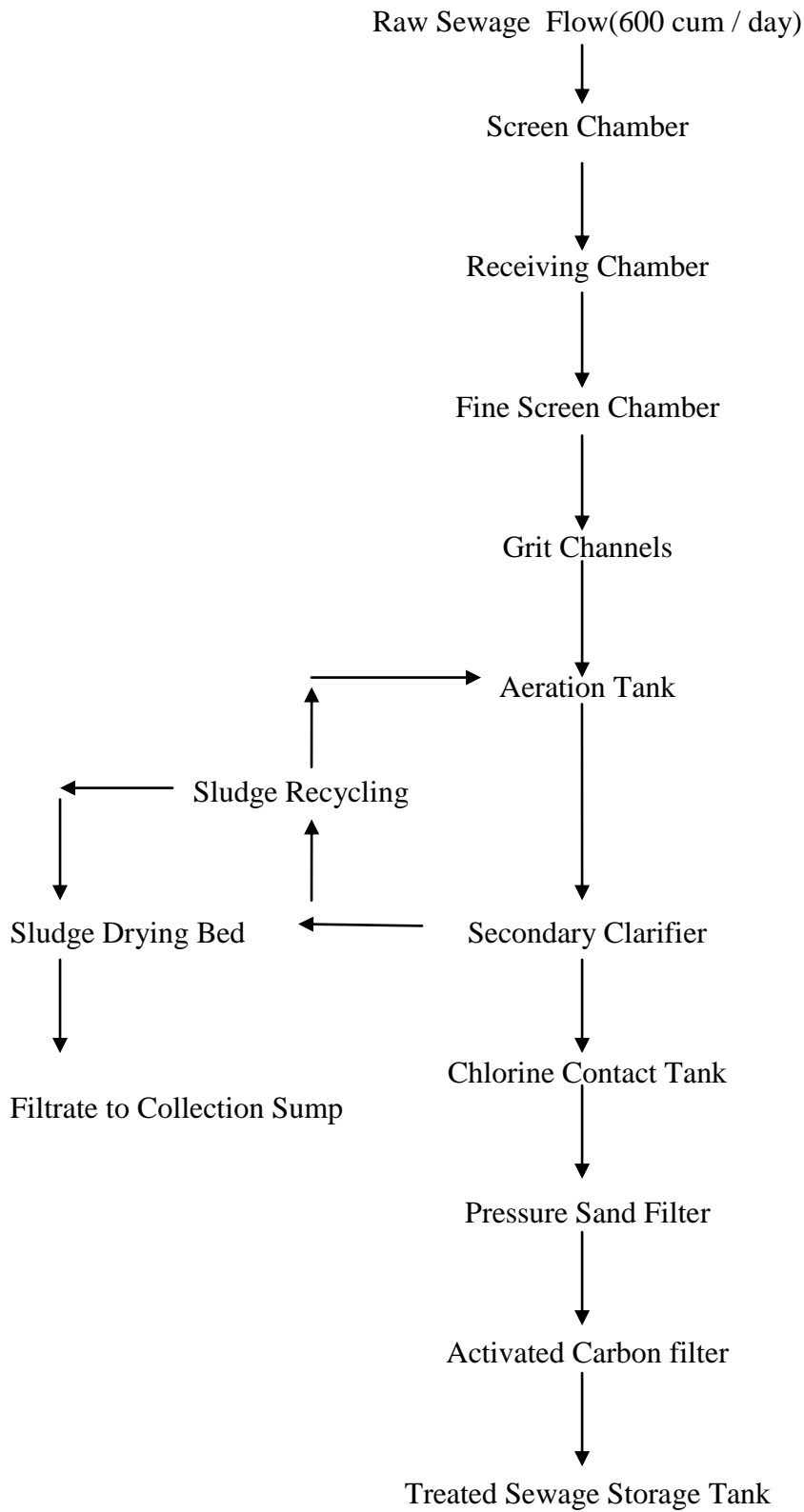
- i. The scope includes Operation & Maintenance of all the equipments including the process treatment for a period of one year.
- ii. After successful completion of trial operation (one month) including performance test of equipment, the Plant should be operated for a period of One year on 24 hours basis including preventive/breakdown maintenance.
- iii. Supply of all the materials, Spares, tools and labour to supervise, operate, keep in operation, adjust, test service, repair and do all things necessary to keep the plant running.
- iv. Supply of hypochlorite solution for disinfection, and other laboratory chemical, test kits and glass beakers for performing onsite tests to assess the quality of treatment and for plant control.
- v. The Contractor should maintain operation log book, recording details like duration of pumps operation quantity of chlorine solution consumed per day, Break down maintenance, etc.
- vi. The parameters like pH, DO, residual chlorine, etc should be checked on daily basis for the inlet raw sewage and final treated sewage after Chlorination. The contractor has to keep all equipment necessary for testing the above parameters at the plant site.
- vii. Once in a month, composite samples should be collected at the inlet of aeration tank and after treated sewage storage tank and get it tested from the PCB approved laboratory for pH, TSS, TDS, COD, BOD5@20°C, Oil & Grease, Residual Chlorine, etc.
- viii. 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 sewage as per pollution control norms, the Contractor shall immediately take steps to rectify the deficiency without any extra cost to BHEL.

Exclusions:

1. Inlet to screen chamber
2. Disposal of sewage from treated sewage storage tank

Note: Power supply will be provided at one point in the control room.

INDICATIVE FLOW CHART FOR STP



Indicative Specification for Civil Units		
1	Screen Chamber	Size and Numbers to be decided as per the design requirements
2	Raw Sewage Collection Sump	
3	Receiving Chamber	
4	Fine Bar Screen Chamber	
5	Grit Channel	
6	Aeration Tank	
7	Secondary Clarifier Tank	
8	Chlorine Contact Tank	
9	Treated Sewage Storage Tank	
10	Sludge Drying Beds	
11	Office cum control room	

Indicative Specification for Mechanical Units

BAR SCREEN	
No of units	One
Size	As per the Design requirement
Material of construction	MS Epoxy
SEWAGE TRANSFER PUMPS	
No of units	As per Design with 100 % Stand by
Capacity	As per the Design requirement
Type	Non clog, submersible
Head	As per the Design requirement
Motor HP	As per the Design requirement
MOC	CI
Make	Grundfos / KSP/ Kishore / Equivalent
AERATION SYSTEM	
No of units	As per Design with 100 % Stand by
Coarse bubble diffusers (SCS)	One lot – PP
Fine bubble diffusers (ASP)	One lot – PP
Air compressor make	Kay Engineering / Equivalent
SECONDARY CLARIFIER MECHANISM	
No of units	As per Design with 100 % Stand by
SLUDGE RECIRCULATION PUMPS	
No of units	As per Design with 100 % Stand by
Type	Horizontal, centrifugal, non clog
MOC	CI
Make	Kirloskar / Anala / Equivalent
FILTRATE PUMPS	
No of units	As per Design with 100 % Stand by
Type	Horizontal, centrifugal, non clog
MOC	CI
Make	Kirloskar / Anala / Equivalent

HYPO DOSING SYSTEM	
No of units	One.
Type of Pump	PP - Electronic Metering
Material of Construction	Polypropylene
MOC of Tank	HDPE
Make	Milton Roy / Equivalent
FILTER FEED PUMPS	
No of units	As per Design with 100 % Stand by
Type	Horizontal, centrifugal, Monobloc
MOC	Cast Iron
Make	Kirloskar / Anala / Equivalent
PRESSURE SAND FILTER	
No of units	As per Design
Type of vessel	Vertical
MOC	MSEP
Type of valve	Butterfly Valves
Media	Filtering Sand & Pebbles
BACK WASH PUMPS	
No of units	As per Design with 100 % Stand by
Type	Horizontal, centrifugal, Monobloc
MOC	Cast Iron
Make	Kirloskar / Anala / Equivalent
ACTIVATED CARBON FILTER	
No of units	As per Design
Type of vessel	Vertical
MOC	MSEP
Type of valve	Butterfly Valves
Media	Granular Activated Carbon & Pebbles

CONTROL PANEL SPECIFICATION FROM MOTOR CONTROL CENTRE (MCC)

1	PANEL CONSTRUCTION	14 /16 MM (DOOR / LOAD MEMBER) CRCA
2	BASE FRAME	Sheet steel enclosure as per IS. 8623 3 MM folded construction
3	PANEL TYPE	MCC (Individual Compartment Type)
4	PAINTING	Pretreatment followed by powder coating Shade siemens grey – I s.631
5	BUSBAR	Aluminum of suitable rating with necessary Support
6	INCOMER	Suitable rating of FSU with necessary Door Interlock
7	INSTRUMENT	Digital voltmeter, ammeter with current Transformer, R – Y – B indication
8	MOTOR	Each D.O.L starter comprise of one no FSU Contactor, selector switches, over load relay illuminated start / stop Push Button, O/L trip indication lamp Each Star / Delta starter comprise of one no FSU Contactor selector switches over load relay illuminated start / stop Push Button, O/L trip indication lamp
9	WIRING	Suitable power wire minimum 2.5 sq. mm with Ferrule No, Socket terminal block control wiring 1 .5 sq mm 1100 volt grade
10	CABLE ENTRY	Bottom Removable Gland plate will be provided degree of protection IP – 54
11	FINISH	Both Interior and Exterior will be Light Grey Shade 631 OF ID – 5
12	BASE FRAME	Bright Black
13	FEEDER & CABLE CHAMBER DOORS	Hinged
14	BUSBAR CHAMBER DOOR	Bolted

MAKE OF COMPONENT

INCOMER (FSU)	:	TELEMECHANIQUE / L & T / SIEMENS
MPCB	:	TELEMECHANIQUE / L & T / SIEMENS
CONTACTOR	:	TELEMECHANIQUE / L & T / SIEMENS
ILLUMINATED PB	:	TELEMECHANIQUE / SIEMENS / MKAY
ANALOG VOLTMETER	:	RISHAB
ANALOG AMMETER	:	RISHAB
POWER WIRE	:	FINOLEX / QFLEX / KEI
PANEL TO MOTOR CABLE (COPPER ARMOURED CABLE)	:	PARAGON / POLYCAB / KEI
CABLE LAYING	:	BURRIED CABLE or CABLE TRENCH WITH NECESSARY CABLE GLANDS
MOTOR EARTHING	:	25 X 3 mm GI PLATE (Double Earthing) and 8 SWG copper wire
PANEL INCOMER POWER	:	THREE PHASE NEUTRAL WITH SUITABLE ALUMINIUM ARMOURED CABLE, MAKE – KEI
INCOMING EARTHING	:	EARTH PIT
PANEL TESTING	:	HIGH VOLTAGE TEST – AT THE TIME OF INSPECTION AT MANUFACTURING UNIT

Schedule of Payment

No advance payment is entertained. On each stage payment 10 % as security will be retained by BHEL till full security deposit as in clause 13 of the tender notice in price bid is reached.

<u>I Civil Units</u>	
a) On approval of design, construction drawing of all civil units and completion of collection sump up to and including aeration tank	25%
b) On completion of Secondary clarifier tank and Sludge drying Beds	25%
c) On Completion of chlorine contact tank, treated sewage storage tank & control room	30%
d) Piping & inter connection with all fittings among civil units	20%

II Mechanical Units	Supply	Erection	Total
a) Raw sewage Transfer pumps, Sludge recirculation pumps, Filtrate pumps, PSF feed pumps, Back wash pumps, Hypo dosing pumps	30	10	40
b) Pressure Sand filter, Activated Carbon Filter and diffuser unit	30	10	40
c) Secondary Clarifier System plus rest of the mechanical units	10	10	20

III Electrical Units - On commissioning of the plant	100 %
---	--------------

IV On successful Erection Commissioning & trial run of the system	100 %
--	--------------

SHEDULE 'A'

LIST OF WORKS AND PRICES

NAME OF WORK: Design, supply, construction, erection and commissioning of Sewage Treatment Plant (6 lakh litre per day) for PPPU – BHEL near Thirumayam in Pudukottai (Dt) Tamilnadu

DETAILS & QUANTITIES of each item of work shown in the BILL OF QUANTITIES are only approximate. They are given as a guide for the purpose of tendering only and are liable to variation and alteration of the Competent Authority. The work under each item as executed shall be measured and priced at the corresponding rate quoted by the contractor in the BILL OF QUANTITIES

Sl.No.	Description of work / supplied	Total amount of work / supplies (in figures and words) Rs. Ps.	Period of contract
1.	Design, supply, construction, erection and commissioning of Sewage Treatment Plant (6 lakh litre per day) for PPPU – BHEL near Thirumayam in Pudukottai (Dt) Tamilnadu		8 MONTHS

BILL OF QUANTITIES

Sl. No.	Appx. Qty.	Description of work	TNBP No.	Rate (Both in Unit fig & Words)	Amount Rs. Ps.
---------	------------	---------------------	----------	---------------------------------	-------------------

AS PER SEPARATE SHEETS ATTACHED CONTAINING 3 PAGES

FROM SERIAL No. 1 and 2

CONTRACTOR

25

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI- 620 014**

BILL OF QUANTITIES

NAME OF WORK: Design, supply, construction, erection and commissioning of Sewage Treatment Plant (6 lakh litre per day) for PPPU – BHEL near Thirumayam in Pudukottai (Dt) Tamilnadu

Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Amount
1		Design, supply, construction, erection and commissioning of Sewage Treatment Plant (6 lakh litre per day) including evolving structural design and drawing vetted by third party and approved by BHEL before starting the work. The quoted rate shall include design, drawing, construction including all civil, mechanical units , electrical units , all materials that go in to the work, conveyance of material, loading unloading & all other incidental charges etc complete., The scope also includes trial run for a period of one month, conducting continuous performance run for a duration of 48 hours including all consumables.			
a)	1	All Civil units		SET	
b)	1	All Mechanical Units		SET	

CONTRACTOR

26

ACCEPTING OFFICER

Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Amount
c)	1	All Electrical units		SET	
d)	1	Erection, Commissioning & trial run for a periods of one month including conducting continuous performance test for a duration of 48 hours of the system		SET	
2	12	Operation and Maintenance of 600 CUM capacity sewage treatment plant round the clock at PPPU BHEL ,Thirumayam to treat the sewage from the plant .The scope covers deputing qualified and experienced operator for round the clock operation of the plant		PER MONTH	

CONTRACTOR

27

ACCEPTING OFFICER

Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Amount
---------	----------	---------------------	-------------------------------------	------	--------

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 samples for testing, maintaining the log book for all the activities. Required number of operators are to be made available for round the clock shifts.

Total

(RUPEES ONLY)

NOTE:-

1. Service Tax will be extra if applicable for this contract. Service Tax paid by the contractor with respect to this work will be reimbursed by BHEL on production of documentary evidence for having paid the service tax.
2. The period of contract is Eight months. The contractor is required to plan accordingly and complete the work in time.

CONTRACTOR

28

ACCEPTING OFFICER

SCHEDULE 'B'

LIST OF FREE ISSUE MATERIAL FROM BHEL STORE

Sl.No	Name of Material
1	Nil

SCHEDULE 'C'

ISSUE OF TOOLS AND PLANTS TO CONTRACTORS

Sl.No.	Qty.	Particulars	Details of BHEL Crew Supplied	Hire Charges Per unit Per Day	Place of Issue	Remarks
.....Nil.....						

a. Machineries shall not be operated over time without the written permission of the Sr. Engineer / Dy. Manager / Manager.

b. All Coolies, Watermen etc., required in addition to BHEL crew mentioned in column 4 above shall be arranged by the contractor at his own expense.

SCHEDULE 'D'

NOTE: All Drawings are to be signed by the Contractor as well as the officer entering into contract.

SL.No.	DRAWING NUMBER	DESCRIPTION
1	CTS:PPPU:01	Layout of STP

SCHEDULE 'E'

LEAD STATEMENT

SI.No	Name of Material	Name of Source	Lead Particulars
1	Cement	Will Be supplied at PPP Unit - BHEL	
2	M.S Rounds, CTD Bars & Structural Steel, rails and all railway materials		
3	Broken Stones RR Stones etc	Paralimalai	10 km
4	Sand	Koodalur	18 km
5	Brick and Gravel	Kadiyapatti	6 km
6	Lime	Thirumayam	1 km

CONTRACTOR

30

ACCEPTING OFFICER

C.A.....Date
(To be used in conjunction with BHE Ltd., General Conditions of Contract)

AUTHORITY TO TENDER

Tender Notice No. **Township 07/ 10**

Office of the
ADDL.GEN. MANAGER / CIVIL /TOWNSHIP
BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHY – 14.

Tender Schedule No. **T 38 / 10**

Item rate tender for work required Design, supply, construction, erection and commissioning of Sewage Treatment Plant (6 lakh litre per day) for PPPU – BHEL near Thirumayam in Pudukottai (Dt) Tamilnadu

Messrs / Mr.

.....of.....

are / is hereby authorized to tender for the above work. The Tender is to be delivered at the Office of the ADDL.GEN. MANAGER / CIVIL /TOWNSHIP Bharat Heavy Electricals Limited Unit, Thiruverumbur, Tiruchirappalli – 620 014, **up to 09.30 hrs. on 22.11.2010** addressed to the DY.Manager / Civil / Planning (Township), BHEL. Tiruverumbur, Tiruchirapalli – 620 014 superscribing the name of work as mentioned above.

Any correspondence concerning this tender should be addressed as indicated above quoting the Tender Notice, Schedule No. and other relevant particulars.

BHARAT HEAVY ELECTRICALS LIMITED DO NOT BIND THEMSELVES TO ACCEPT THE LOWEST OR ANY TENDER.

Issuing Officer with
Designation

Contract Agreement No.....

TENDER

To

The Additional General Manager/Civil/ Township
Bharat Heavy Electricals Limited
Unit : Tiruverumbur
TIRUCHIRAPPALLI – 620 014.

I / We hereby offer to carry out the **Design, supply, construction, erection and commissioning of Sewage Treatment Plant (6 lakh litre per day) for PPPU – BHEL near Thirumayam in Pudukottai (Dt) Tamilnadu**

I / We hereby carefully perused the following documents connected with the above noted work and agree to abide by the same.

- 1.Specifications (General & Particular)
- 2.Schedule 'A', 'B', 'C', 'D' & 'E'
- 3.BHE Ltd., General & Special Conditions of Contract, Tender Notice and Instructions to Tenders attached hereto.

I / We forward herewith the sum of Rs.....as Earnest Money, which shall be refunded should this tender be rejected. I / We further agree to deposit such sum which along with the sum of Rs.....mentioned above shall make up 50% of the fully Security Deposit for this work as provided for under conditions of the BHARAT HEAVY ELECTRICALS LIMITED General Conditions of Contract.

I / We further agree to execute all the work referred to in the said documents upon the terms & conditions contained or referred therein and as detailed in Schedule 'A' and Bill of Quantities annexure thereto and to carry out such deviations as may be ordered, vide conditions 6 of the BHEL Ltd., General Conditions of Contract up to a maximum of 20% of the tendered amount of Rs.....

I / We further agree to refer all disputes, as required by condition 62 of the General conditions of Contract to the sole arbitration of an Officer, to be appointed by the General Manager, B.H.E Ltd., in his sole discretion whose decision shall be final and binding.

WITNESS

Signature of the Contractor

Date :

- 1.
- 2.

GENERAL SUMMARY

1.	(a) Net Cost of works or building etc., from Schedule 'A'	Rs.
2.	Provisional sum	Rs.
	
	Total	Rs.
	

Rupees.....
.....
.....

Shri..... in the
capacity of has been
duly authorized by me / us to sign the tender for and on behalf of
.....

(in block letters)

Date : SIGNATURE OF CONTRACTOR

Witness : Postal Address :

1.....
Address Telephone No.

2.....
Address

..... alterations have been made in the Tender Document and as evidence that these alterations were made before the execution of contract agreement, they have been initialed by the Contractor and the

.....
.....
.....

.....the said officer is hereby authorized to sign and initial on my behalf the documents forming part of this contract (Number of alternation in figures and words to be given here)

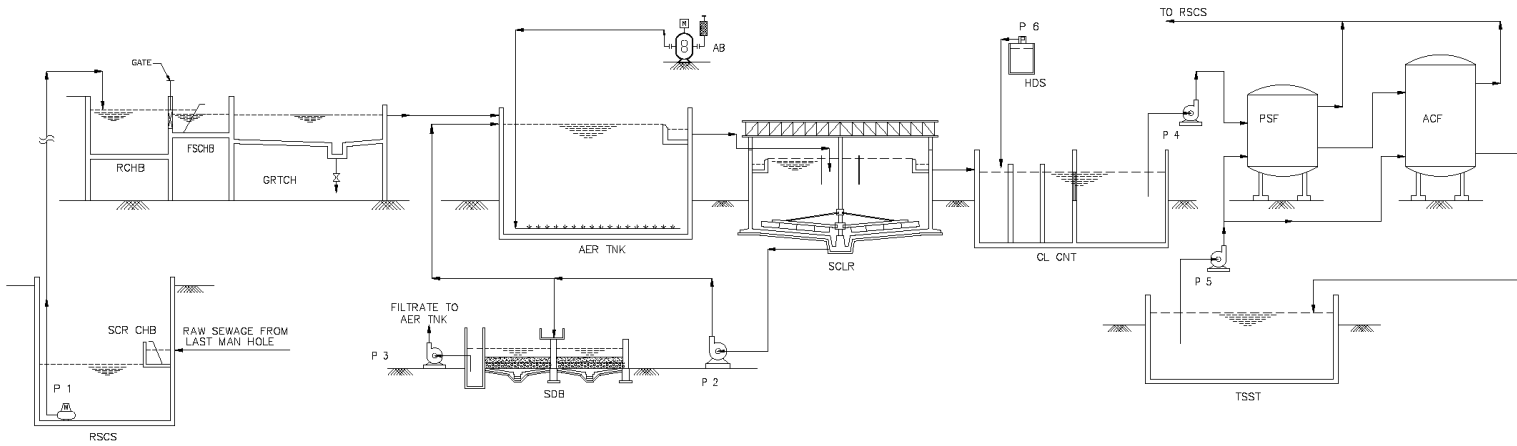
The above tender is accepted by me on behalf of the Bharat Heavy Electricals Limited, Unit: Thriuverumbur, Tiruchirappalli – 620 014. for a sum of Rs.....

.....
.....

.....at the rates as indicated in Schedule 'A'.(Bill of Quantities)

SignatureDate.....

Designation



TAG.Nos.	DESCRIPTION	QTY & SIZE	MCC
SCR CHB	SCREEN CHAMBER	As per the design requirements	RCC
RSCS	RAW SEWAGE COLLECTION SUMP	As per the design requirements	RCC & BRICK WORK
RCHB	RECEIVING CHAMBER	As per the design requirements	RCC
FSCHB	FINE SCREEN CHAMBERS	As per the design requirements	RCC
GRICH	GRIT CHANNELS	As per the design requirements	RCC
AER TNK	AERATION TANK	As per the design requirements	RCC
SCLR	SECONDARY CLARIFIER	As per the design requirements	RCC
CL CNT	CHLORINE CONTACT TANK	As per the design requirements	RCC
PSF	PRESSURE SAND FILTER	As per the design requirements	MS
ACF	ACTIVATED CARBAN FILTER	As per the design requirements	MS
TSST	TREATED SEWAGE STORAGE TANK	As per the design requirements	RCC
SDB	SLUDGE DRYING BEDS	As per the design requirements	BRICK WORK
HDS	NaOCl DOSING TANK	As per the design requirements	HDPE
P 1	RAW SEWAGE TRANSFER PUMPS	As per the design requirements with a provision of 100 % Standby	C.I
P 2	SLUDGE RECIRCULATION PUMPS		C.I
P 3	FILTRATE PUMPS		C.I
P 4	PSF FEED PUMPS		C.I
P 5	BACKWASH PUMPS		C.I
P 6	NaOCl DOSING PUMPS		PP
AB	AIR BLOWER FOR AERATION TANK		C.I

FOR TENDER PURPOSE

CAUTION: The information on this document is the property of BHARAT Heavy Electricals Ltd. It is to be used directly or indirectly in only the manner intended by the company.		TYPE OF PRODUCT POWER PLANT PIPING UNIT- OR NAME OF CUSTOMER/PROJECT THIRUMAYAM	
BHARAT Heavy Electricals Ltd UNIT: HIGH PRESSURE BOILER PLANT TIRUCHIRAPALLI - 620014		NAME SIGNATURE DATE	NO. OF VOP
DEPT CODE	GRADE OF ARTCL. DM C/N/F	WEIGHT (Kg) PFT TO ASSY / OLD DWG	ITEM NO NO OF ITEMS
TITLE LAYOUT OF STP		Dwg. Code U 01	DRAWING NO : CTS:PPPU:01