



# **TENDER DOCUMENTS**

**FOR**

**DESIGN, ERECTION, TESTING AND COMMISSIONING OF  
10 KLD EFFLUENT TREATMENT PLANT (E.T.P.) AT  
HAMDARD INSTITUTE OF MEDICAL SCIENCES &  
RESEARCH AND ASSOCIATED HAH CENTENARY  
HOSPITAL, HAMDARD NAGAR, NEW DELHI – 110062**



## GENERAL TERMS & CONDITIONS

### 1.0 DECLARATION:

1.1 The submission of a tender by a tenderer implies that he/she has read the notice and conditions of the tender and the terms and conditions of contract and has made himself/herself aware of scope and specifications of the supplies to be made and the destination where the supplies have to be made and satisfied himself/herself regarding the quality and specifications of the articles.

### 2.0 TENDER SUBMISSION:

- 2.1 The tender should be addressed to “Medical Superintendent, HAHC Hospital & HIMSR, New Delhi – 110062” and submit in the tender box near office of the Medical Superintendent by duly filled up to scheduled time and date of submission of the tender. The Hamdard Institute of Medical Sciences & Research shall not be responsible for any delay.
- 2.2 Individuals signing on the tender and other related documents must specify in which capacity of the firm he/she has signed the documents.
- 2.3 Offer for each tender should be submit under cover super scribing as “Tender for Design, Erection, Testing and Commissioning of Effluent Treatment Plant at HIMSR & HAHC Hospital. Failure to adhere to this instruction will render the offer liable for rejection.
- 2.4 The tenderer(s) should clearly state in their offer the address, telephone, e-mail (if any), PAN and GST and without which the tender may not be entertained.
- 2.5 Negligence on the part of tenderer in filling the tender form offers him/her no right to withdraw tender after it has been opened.
- 2.6 The acceptance of the tender and award of contract will be the sole right of HIMSR. who does not bind himself to accept a tender in whole or in part or reject any or all the tenders received without assigning any reasons and no explanation can be demanded of the cause of rejection of the tender by any tenderer.
- 2.7 The tenderers should submit their offers along with the specifications, necessary drawing (if required) which will form the basis of their offer and is an integral part thereof.
- 2.8 The HIMSR reserves the right to place order for whole requirement with any



tenderer or split the orders among one or more tenderers or not to purchase at all any item even after rate approval.

- 2.9 The tenderers should submit rate as per schedule-II. The conditional tenders are liable to be rejected.
- 2.10 No person or firm is permitted to submit more than one tender under different names.
- 2.11 Each page of the tender and its enclosure should be signed at the bottom by the tenderer.
- 2.12 The tenderer shall not sublet the contract or assign to any other party or parties, the whole or any portion of the contract without prior written permission of competent authority of HIMSR.
- 2.13 Demonstration of equipment, machines or articles available with the firm shall be arranged by the tenderer at his own cost.
- 2.14 Tenderer shall fill all the details of the unit in the enclosed Annexure - I.

### **3.0 EARNEST MONEY DEPOSIT**

- 3.1 All the tenderers are required to deposit fresh Earnest Money as specified in tender document in the form of crossed demand draft/bankers Cheque in favour of "HIMSR" payable at New Delhi. Submissions of earnest money deposit by any other mode than specified above shall not be acceptable and the related tender shall not be eligible for consideration.
- 3.2 Any tender which is not accompanied by Earnest Money deposit are liable to be rejected. Earnest money deposit of unsuccessful tenderers will be returned within 90 days from the date of opening of the tender. The earnest money deposit of the successful tenderers will be released after the completion of warranty period.
- 3.3 No interest will be paid on the earnest money for the period during which (the EMD) lies in deposit with HIMSR.
- 3.4 Demand Draft towards earnest money should be submitted enclosed alongwith the tender offer in sealed cover.

### **4.0 PRICES**

- 4.1. Rate should be quoted for the work in Annexure – II of the tender document.
- 4.2. The tenderer should quote rate on FOR basis.



- 4.3. Provide GST Certificate self-attested.
- 4.4. If need be, negotiations will be done for prices and as well as terms & conditions of material supply only with the party which offers the lowest rate.
- 4.5. The prices charged for the material supplies under the contract by the supplier firm in no event shall exceed the lowest price at which the supplier firm sells the material of identical tender description to any other persons/ firms during the period and until the execution of all work orders placed during contract period.
- 4.6. The lowest rate shall not be the only criteria for approving the tender.

**Signature of Tenderer**

Sd/-  
*Medical Superintendent*  
*HAH Centenary Hospital & HIMSR*  
*New Delhi - 110062*



## SCOPE OF WORK

### 1.0 INTRODUCTION

Effluent Treatment Plant (ETP) is proposed for the pretreatment of Bio Medical waste liquid water generated in the hospital/health care facility i.e. from operation theaters, blood bank and various labs before mixing it with other waste water of hospital.

### 2.0 SCOPE OF THE WORK

The tender is invited for Design, Engineering, Supply, Erection and Commissioning of 10 KLD Effluent Treatment Plant (ETP), based on chemical treatment, to provide pretreated effluent quality as specified under clause 4.0 of this document with performance guarantee for two years.

The schematic diagram/drawing is attached with this document is preliminary. However, the successful contractor will be required to submit the Detailed Process & Erection drawings incorporating the working details. These detailed drawings shall be submitted to Engineering & Maintenance Department, HIMSR. Vendor has to submit all the technical details for equipments used for operation of plant.

All the works shall be carried out as per approved drawings only. The project involves Design, Erection, Testing & Commissioning of ETP of 10 KLD capacity complete in all respects including all contingent Civil, Electrical, Mechanical, piping & instrumentation works and including two year performance warranty at Hamdard Institute of Medical Sciences & Research to strictly meet out the requirement of DPCC/BMWM Rules-2016.

The tender is for turnkey job where it will be the responsibility of the contractor to hand over a completely functional unit complying with DPCC/BMWM Rules-2016 norms and with all necessary components.

The work shall include but not limited to the following major items

- i.** Design and engineering of ETP to be operator friendly and for the operator's safety, health and hygiene.
- ii.** Design Calculations and drawings shall be submitted to Client. Erection shall be started only after approval of drawings by competent authority of HIMSR.
- iii.** Getting the required approvals, permissions, NOC from the statutory/ government agencies including incurring related expenses. 'Consent to establish' ETP has already been obtained by concerned department i.e. DPCC/CPCB. 'Consent to operate' shall be taken by Contractor.
- iv.** All aspects of quality assurance, including testing of equipment, procurement of materials from approved agencies/suppliers and other components of the work.



- v. Complete interconnecting piping between various units as per piping details including supply of all materials like GI/CPVC/UPVC pipes, fittings, all valves, gaskets, flanges, nuts and bolts , necessary pipe supports, etc., complete
- vi. Submission of Operators' Manual and training of personnel.
- vii. Submission of the completion ('as-built') drawings and other related documents along with a soft copy.
- viii. Making good any defect during the performance guarantee period of two years. Spares for the entire equipments and instruments for two years including all damaged components of ETP are also covered under vendor scope vide the performance guarantee.
- ix. The location of the treatment plant is indicated in the layout plan enclosed.

### 3.0 QUALITY OF INLET EFFLUENT

The inlet liquid waste water generated from OT, Blood Bank & Labs will generally have the following characteristics:	
pH	6.0 – 7.5
BOD	800 – 1200 mg/l
COD	2500 – 600 mg/l
Suspended Solids	150 – 200 mg/l
Oil & Grease	2.0 – 8.0 mg/l

### 4.0 REQUIRED WATER QUALITY

Quality of Treated water

The treated water shall have following characteristics before the mixing with other waste water of STP:	
pH	6.5 – 9.0
BOD	Less than 70 mg/l
COD	Less than 270 mg/l
Suspended Solids	Less than 5 mg/l
Oil & Grease	Less than 2 mg/l

Any other parameters required by Central Pollution Control Board or Delhi Pollution Control Committee shall be complied by the Contractor at no extra cost.

The contractor shall submit the report confirming the above parameters for the testing of treated water during the warranty period on half yearly basis from reputed/ Govt. approved Laboratory, failing which the penalty of Rs. 5,000/- per half shall be deducted from the bill of the contractor. The test report of treated water shall confirming the above parameters within the permissible limit of (+/-) 5%.



## 5.0 TREATMENT SCHEME

The treatment scheme shall be based on chemical based treatment. The ETP will consist of following stages:

Stage 1: Preliminary Treatment

Stage 2: Chemical Treatment

Stage 3: Tertiary Treatment

Stage 4: Ultra Violet Sterilization Treatment

Stage 5: Sludge Handling (Sludge Drying Beds/Centrifuge)

## 5.1 EFFICIENCIES OF TREATMENT UNITS

Following are the main units involved in above treatment scheme:

1) Preliminary Treatment:

- a. BOD Removal = 20 – 25%
- b. S.S. Removal = 50 – 60%

2) Chemical Treatment

- a. BOD Removal = 70 – 78%
- b. COD = 60 – 70%
- c. S.S. Removal = 80 – 90%

3) Tertiary Treatment

- a. BOD Removal = 80 – 90%
- b. COD = 70 – 80%
- c. T.S.S. Removal = 75 – 85%

4) Ultra Violet Sterilization Treatment

- a. BOD Removal = 15% of residue
- b. COD = 10% of residue
- c. T.S.S. Removal = 90% of total



## **6.0 SCOPE OF SUPPLY OF EQUIPMENTS**

Following equipments of suitable capacity shall be supplied by the Contractor.

Supporting calculations to arrive at the capacities shall also be furnished.

1. Chemical Reaction Tank
2. Flocculation Tank
3. Effluent Transfer Pump
4. Twin Lobe Roots Blowers (Compressors)
5. Plumbing Fittings/Accessories
6. Erection Fittings & Platform for Dosing Tank
7. Tube Settler
8. Chemical Dosing Tank (PVC Tank)
9. Dual Media cum Activated Carbon Filter
10. Ultra Violet System
11. Centrifugal Pump for Dual Media Filter
12. Inlet Flow Meter
13. Electrical and instrumentation items

**Any other equipment required for smooth operation of the plant shall be under the scope of contractor at no extra cost.**

## **7.0 Approval from Central Pollution Control Board (CPCB)/ Delhi Pollution Control Committee (DPCC)**

Obtaining necessary approval from Central Pollution Control Board/ Delhi Pollution Control Committee shall be under the scope of ETP Contractor. All statutory fees shall be paid by the contractor and shall be reimbursed by HIMSR provided the fee invoices are raised in the name of HIMSR. All expenses related to liaison, travel of statutory authorities, lodging and any other expenses incurred thereby shall be borne by the contractor and shall not be reimbursed by HIMSR.

## **8.0 PERFORMANCE GUARANTEE**

The guarantee is applicable for the performance of individual process equipment as well as overall performance of the Effluent Treatment Plant.

The Contractor shall give guarantee for a period of two years from the date of successful





Commissioning of the treatment plant against design, defective materials, workmanship and performance. The contractor shall give guaranteed of required treated waste water quality. Any defects found in the workmanship, materials or performance of the unit shall be made good by the Contractor at his own expense within the time specified by Engineer-In-Charge.

#### **9.0 Commissioning and Approval from Pollution Control Board**

The Contractor shall satisfy the Engineer-In-Charge in all respects regarding the satisfactory quality of materials, equipment and workmanship used in the plant and quality of treated water. Only after satisfying the completion certificate will be issue and such date shall be deemed as date of commissioning.

The performance guarantee Period described above will start from the date of commissioning or on obtaining approval from Central Pollution Control Board/Delhi Pollution Control Committee by the Contractor whichever is later.

**Signature of Tenderer**

*Sd/-  
Medical Superintendent  
HAH Centenary Hospital & HIMSR  
New Delhi - 110062*



*Annexure - I*

**PROFILE BID**

*(To be filled in and submitted along with the offer by the tenderer)*

**I/We hereby furnish particulars of our firm as under:**

- 1 Name of the firm M/s.....
- 2 Address of the firm .....
- 3 Telephone No / Mobile No. ....
- 4 Name of proprietor / partner .....
- 5 PAN No. ....
- 6 GST No. ....
- 7 Any other information important in the opinion of the tenderer:

I/We undertake that the information furnished in this tender document is correct to the best of my/our knowledge and belief.

Date:

Place:

**Seal & Authorized Signatory of the Firm**



*Annexure - II*

**PRICE BID**

<b>S. No</b>	<b>Name of Work</b>	<b>Amount (in Rs)</b>
<b>1</b>	<b>Design, erection, testing &amp; commissioning of ETP (Effluent Treatment Plant) of 10 KLD capacity at Hamdard Institute of Medical Sciences &amp; Research and Associated HAH Centenary Hospital, Hamdard Nagar, New Delhi - 110062</b>	
	<b>GST Amount</b>	
	<b>Total Amount (inclusive of GST)</b>	

*Note:-*

- 1. Civil Work whatever required will be in contractor's scope.*
- 2. Rate should be based on F.O.R. destination.*

Date:

Place:

**Seal & Authorized Signatory of the Firm**