

F.No. PM/R&D/ETP/2018  
Govt. of India  
Office of the General Manager  
Govt. Opium & Alkaloid Works  
NEEMUCH 458 441 (M.P.)

Date: 07/09/2018

**TENDER NOTICE**

1. Sealed tenders are invited from party(ies) for Operation and Maintenance of the Effluent Treatment Plant and to maintain various parameters fixed by M.P. Pollution Control Board and IS-2490/part I/1974 or latest amendment(s).
2. Last date for receipt of tender(s) is 27 -09-2018 up to 10:30 hours, tenders received after 10:30 hours on 27-09-2018 by post or person shall not be considered.
3. Tenders shall be opened at 11:00 hours on 27 -09-2018 in the office of General Manager Government Opium & Alkaloid Works, Neemuch (M.P.) in presence of such tenderer(s) or his/their authorised representative(s) who wish to be present at the time of opening of the tenders. Tender notice is also available at our official web site i.e. [www.goaf.gov.in](http://www.goaf.gov.in) and <https://eprocure.gov.in/cppp/>.
4. Tenders not submitted on this tender form shall not be considered.
5. The tenders should be sent in double sealed cover and both the covers should have the following superscription "TENDER" For Operation & Maintenance of ETP to be OPENED ON 27 -09-2018.
6. Rates are to be quoted for the complete work and inclusive of all taxes in the proforma schedule-"B".
7. Tender should as far as possible be free from cutting over writings and errors. However, in case of unavoidable circumstances, such cuttings etc. should be neatly scored out and written a fresh and attested with dated signature of the tenderer.
8. Tenderers should quote the number of their GST, TAN/PAN.
9. EARNEST MONEY DEPOSIT OF THE UNSUCCESSFUL TENDERERS SHALL BE RELEASED AFTER FINALISATION OF THE TENDER at the earliest possible.
10. No interest on the EMD/SD shall be paid by this Works on any score, whatsoever be.
11. Two sets of terms and conditions are also enclosed herewith. The tenderers have to enclose one set of terms and conditions alongwith schedule of rates i.e. Schedule 'B' duly accepted signed and sealed. The tenders received without accompanying of terms and conditions duly sealed and signed will not be considered.
12. The tenderer should enclose a list of clients and their addresses indicating person to be contacted & contact Telephone Number. The tenderers should also enclose details of work done & type and size of Effluent Treatment Plant run & maintained by him as per the norm fixed by Pollution Control Board and as per IS-2490 Part I/1974 or latest editions. **It would be mandatory for bidders to enclose 3 years experience certificate in the area of ETP/STP/CETP/Maintainance. They have to enclose successful completion certificate from the concerned organisation(s).**
13. The tenderer should follow all the regulation in respect of supply of Manpower through Service Provider viz Provident Fund, ESIC, Labour Welfare, GST, Minimum Wages Act, 1948, The Contract Labour (Regulation and Abolition) Act, 1970, The Payment of Wages Act, 1956 and Safety as per Factory Act, etc.

  
Production Manager

5/6

TERMS AND CONDITIONS

The tenderers have to accept the following terms and conditions and enclose a copy of this duly accepted alongwith their tender.

1. Tenders not strictly in conformity with the specifications of the work given in the tender form shall not be considered.
2. Rates should be quoted on F.O.R. Neemuch basis (inclusive of all taxes/levies applicable). Neemuch is located 135 kms from Ratlam (MP) and 55Kms from Chittorgarh (Rajasthan).
3. Tenders should be accompanied alongwith earnest money @ 2% of the total value of work quoted in the form of DD/FDR/Bankers Cheque/BG in favour of the Assistant Chief Accounts Officer of this Works payable at Neemuch. Tenders not accompanied with the earnest money prescribed shall not be considered at all irrespective of any type of constitution of the contractor.
4. Rates should be quoted net after deducting of discount etc. whatsoever be and Rates are to be quoted for the complete work and inclusive of all taxes in the proforma schedule- "B"
5. All expenses and taxes/levies shall be borne by the Contractor.
6. The rates quoted should be valid for a period of 1 year from the date of commencement of contracted operation & maintenance. The contract can be extended further for one more year on mutual consent from both the parties i.e. the Contractor and the General Manager, GOAW, Neemuch.
7. In case the tenderer withdraws his tenders or in the event of his tender being accepted, fails to accept the order within the stipulated time the EARNEST MONEY furnished by him shall be liable to be forfeited without any prejudice to other rights of the Government under the law.
8. In the event of tender being accepted, the tenderer shall have to furnish PERFORMANCE SECURITY at the rate of FIVE PERCENT of the total value of the work. In such cases EMD furnished by the tenderer shall be released against the PERFORMANCE SECURITY.
9. In case of delay or failure to maintain the ETP as per standards prescribed and accepted by tenderer, the General Manager of this Works without prejudice to any other rights available under the law shall have the option:-
  - (i) Either to recover from the contractor liquidated damages up to 1/12th of the annual value of the contract per month ; or
  - (ii) to get the work done from any other source at the risk and cost of the contractor ; or
  - (iii) to cancel the contract without any liability on either side.
10. Payment to the contractor shall be made in 4 equal instalments of the total value of the contract after receipt of positive analytical results of treated effluent from R&D Lab and/or MPPCB Lab. of each month. No payment will be made to the contractor for the month in which the desired parameters/ specifications of the treated effluent are not found conforming to standards as prescribed by the M. P. Pollution Control Board and IS-2490 part I/1974 or latest amendments of the M.P./ Central Pollution Control Board.
11. In case of any penalty or fine imposed by the M.P.Pollution Control Board / Central Pollution Control Board because of inability to conform to the parameters/specifications prescribed for discharged effluent the same shall be recovered from the contractor.
12. Income tax etc as applicable, shall be deducted at source from the bills of the contractor.

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13. In case of exigencies, unforeseen circumstances the General Manager reserves the right to cancel the work order for whole work or part of it by way of one month notice without assigning any reason.
14. The General Manager reserves the right not to accept the lowest or any quotation/tenders or to split up the tender and place order with one or more tenderer without assigning any reason whatsoever be.
15. Legal proceedings, if any, emanating from this contract shall fall within the jurisdiction of the competent court of Neemuch, District Neemuch, State Madhya Pradesh.
16. The Tenderer shall Liason with M.P.Pollution Control Board/CPCB & implement their instructions/suggestions as and when required.
17. The samples of treated effluent shall be provided by you periodically /as & when required to the officials of MPPCB. Also the samples of treated effluent shall be sent by you to the lab of MPPCB periodically/ as & when required by MPPCB. It is your responsibility to provide the samples at the site or at the lab of MPPCB.  
The Tenderer shall also report the efficiency to MPPCB as per norms.
18. The Tenderer shall arrange for regular visit of the Senior Personnel of Company to the site to assess the performance of ETP. The periodicity shall be once in a month.
19. No advance payment on any account shall be made against this contract.
20. The tenderer shall enclose the certificate of similar work done in different department.
21. The tenderer shall enclose the list of work done indicating the amount of contract value, period and the details of the work carried out during the last three years.
22. The tenderer shall submit the Income Tax clearance Certificate indicating the amount taken from different Deptt. for the last five years for such work carried out.
23. The tenderer shall submit a copy of partnership deed in case of partnership firm or certificate of proprietorship in case of proprietary firm in case of partnership firm the name of the person who is authorised to sign the documents & agreement etc. shall be submitted by the tenderer on required stamp papers.
24. The contract will be initially for a period of one year which can be extended with mutual understanding from the date of acceptance.
25. It would be sole responsibility of the contractor to ensure the compliance of various rules governing the work viz Provident Fund, ESIC, Labour Welfare, GST, Minimum Wages Act, 1948, The Contract Labour (Regulation and Abolition) Act, 1970, The Payment of Wages Act, 1936 and Safety as per Factory Act etc.

  
Production Manager

SCHEDULE SHOWING THE MATERIALS TO BE SUPPLIED TO THE EXTENT AVAILABLE BY THE GOVERNMENT OPIUM AND ALKALOID WORKS FOR THE WORK CONTRACT TO BE EXECUTED AND THE RATE AT WHICH RECOVERY FOR SUCH SUPPLY WILL BE MADE FROM THE BILLS PAYABLE TO THE CONTRACTORS.

NAME OF WORK :- OPERATION AND MAINTENANCE OF EFFLUENT TREATMENT PLANT.

Particular	Rate at which the materials will be charge to the contractor (issue rate & storage rates to be shown separately)	Place of delivery
1. Electricity	free of Cost	At work site
2. Water	free of Cost	At site
3. All consumable & stores (Chemicals, Gobar Lubricants, Cotton wastes, cleaning brushes, hazardous chemical handling equipment.	free of Cost	At site
4. Laboratory facility	free of Cost	At site

*[Handwritten Signature]*

Signature of Production Manager

Signature of Contractor

Name of the work : Operation & Maintenance of the Effluent treatment Plant & to Maintain various parameters fixed by M. P. Pollution Control Board & IS-2490/Part I/1974 or latest edition.

S.No.	Description	Qty.	Unit	(Rate Annual)	Amount
1.	Checking the flow and parameters BOD,COD, SS, DS & pH etc. of Raw effluent & making the ETP Operational to get these parameters with the norms fixed in IS-2490 Part-1 /1974 & MPPCB and round the clock operation by providing helper/ Technicians/Chemist/Supervisor, so that the Parameters of discharged effluent i.e. pH, COD, BOD, suspended solids DS etc. remain always in the limits fixed as per IS-2490/ Part-I 1974 or latest edition and as per norms of M.P. Pollution Control Board including liaisoning with MPPCB and implementing their suggestions instruction as & when required. In case of water supply shortage from Munciplaity the vacuum pumps water may be recirculated and the quantity of water discharged with the effluent may be less than the normal quantity. However, the parameters of that effluent in this condition should also conform to IS-2490 Part-I of 1974/ fixed by MPPCB. To keep the discharged effluent within the prescribed norms shall be the responsibility of the contractor. In case traces of oil are found in the drain suitable means should also be taken by you to arrest their flow outside the factory premises.	Job	L S.	L.S.	
2.	Routine check up of the machinery & their lubrication for smooth operation of equipment & remove the routine faults, choking & leakage in the pipe line system & equipments of the ETP for the whole year i.e. 365 days including oiling, greasing, cleaning, servicing and removing of sludge from lagoons and aeration, equalisation tank etc. Whenever required. Maintenance of garden and cleanliness around E.T.P. Description of our ETP is enclosed. The tenderer shall also clean the sludge of the lagoon once in a year by arranging labour tants & tools required for job.	Job	L.S.	L.S.	
3.	Jurisdiction of ETP Commences from all Drainage / pipelines emerging from process house, from Canteen, Boiler and Sewage Tank.				
4.*	Submission of Industry data to MPPCB (Online in XGN Software)/CPCB with consultation to the Production Manager on weekly and monthly basis as per the requirement of MPPCB/CPCB.				
5.	GST (details of IGST/CGST/SGST, as applicable)				
<b>Grand Total</b>					

\* Note:- The firm shall provide a technical expert for submission of Industry data to MPPCB (Online in XGN Software)/CPCB with consultation of the Production Manager on weekly and monthly basis.

*[Handwritten Signature]*  
Signature of Production Manager

Signature of Contractor

## DESCRIPTION OF EFFLUENT TREATMENT PLANT

This is an activated sludge type Effluent Treatment Plant based on UASB technology. Effluent flow is nearly 100 metric cube per 16 hour i.e. two shifts working of the plant.

### TREATMENT PROCESS:

The wastewater will be screened in a screen chamber to eliminate the possibility of any floating matter entering into further treatment process. Semi-solids will be trapped in solvent trap unit, where under & over baffles provided. Screened semi-solid waste & floating objects will be collected in to collection tank, where pH will be raised with help of alkali solution for removal of ammonia condition by using a twin lobe blower. An additional collection tanks is proposed for alternate operations. The effluent below toxic level of ammonia in homogeneous & neutralized condition will be pumped from collection tank to USAB for anaerobic treatment. Collection tanks will be used as buffer tank alternatively to trigger of the acidogenous phase of the anaerobic treatment and also accepted the re-circulation flow of 1:05 ratio. Due to destruction of COD under anaerobic condition, methane gas will be generated and collected in gas holder, where gas vent will be provided for flare or use of collected gas. After reduction of high pollution load, effluent will be taken in to aeration tank, where oxygen is transferred by diffusion with the help of membrane tube type diffusers & air purging grid from air blower, which will continuously pass to support living micro organisms under aerobic condition. The sludge generated as a result of biological process will be allowed to settle in the settling tank. This tank will also be provided with tube settlers for increasing effective area for settlement and reducing the land area requirement. Nutrients & de-foaming solution dosing arrangement will also be provided in the aeration tank. Part of the sludge will be drained in to aeration tank for maintaining proper MLSS level, if required and or excess sludge will be drained over the sludge during beds provided for dewatering & solar evaporation. The overflow of the settling tank will be sent to filter feed sump and from here it will be pumped through a pressure sand & activated carbon filters provided as a polishing treatment. Before filtration, effluent will also be disinfected/chlorinated with help of bleaching powder solution for oxidation of residual organic matter. V-notch chamber will also be used for flow measurement to maintain records. Filtered water can be disposed off safely on land for irrigation/gardening Hazardous waste collected in semi-dried condition from SDB will be stored in specially designed storage pit with HDPE liner & leachate collection pit.

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**Table : Design criteria for ETP:**

S.No.	Parameters	Inlet	Outlet
1	Flow	70 cu. Mt/day	< 70 cu. Mt/day
2	BOD	15000 to 17000 mg/lit	< 30 mg/lit
3	Suspended Solid	2200 to 2650 mg/lit	< 100 mg/lit
4	COD	30000 to 35000 mg/lit	< 250 mg/lit

Design criteria has been considered for renovation is based on three shift operations with peak discharge, with approx 50% extra capacity of percent discharge to care of additional effluent load due to any type of expansion activities in future or changes due to seasonal variations.

**Details of existing ETP:**

S.No.	Modifications/Additions	Dimensions/Specifications	Qty
1	Bar Screen	MS, float bars with spacing of mm c/c, to suit existing inlet chamber size.	201 nos.
2	Solvent Trap Unit	1.25 mt x 5.0 m x 1.25 mt, RCC, UG	1 no.
3	Additional Collection Tank	40 KL capacity RCC, UG	1 no.
4	Air Blower for effluent collection tanks	73 M <sup>3</sup> /Hr, 4MWC, twin lobe complete with motor, base plate etc.	1 no.
5	Air distribution grid for effluent collection tanks	Complete distribution network with lateral in HDPE pipes to suit tank size.	2 set
6	Chemical solution dosing tanks for alkali, acid, bleaching powder, nutrients/ anti foaming	500 ltrs capacity in HDPE/PP tank with dosing nipple & valve.	4 nos.
7	Agitators of chemical solutions tank	SS-304, 960 RPM, Shaft, Impeller, Propeller type design.	4 nos.
8	UASB Reactor	6.0 mt. Dia x 6.0 mt. Height in MS with anti corrosive with safety valve, temperature & pressure gauge, flushing & sampling provision etc.	1 no.
9	Gas Holder	3 mt Dia x 2 mt Dia, in MS dome type with anticorrosive painted, complete weight, safety valve, pressure gauge, vent pipe for flare/use etc.	1 no.
10	Modification in existing Aeration Tank	Repairing of damaged structure, removal of existing aerator & raise the height of wall up to 1.55 meter of aeration tank	1 no.
11	Air blower for aeration tank	300 M <sup>3</sup> /Hr, 5 MWC m, twin lobe complete with motor, base plate etc.	2 nos.
12	Air Diffusers	65 mm x 1000 mm long, Tabular, Membrane type with complete no. appr. Assembly.	30 nos.
13	Sludge Drying Beds	16 Sq. Mt. each with graded media in brick work with RCC slab at bottom.	4 nos.

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14	Tube Setter	2 mt x 2.3 mt x 1.75 mt SWD, MS painted with epoxy, filled with PVC tube media with sludge withdrawal arrangements.	1 no.
15	Minor modifications required in civil foundation for USAB, Gas Holder, filters etc/ electrical/ interconnection piping works including sewage line connection from sewage sump to aeration tank directly.	To suit recommended modifications/ additions in/ equipments.	LS
16	Pressure Sand Filter	5 M <sup>3</sup> /Hr, MS Shell with anticorrosive painted, with aggregates & sand with complete frontal piping, pressure gauge, sampling port, backwash drain pipe etc.	1 no.
17	Activated Carbon Filter	3 M <sup>3</sup> /Hr., MS shell with anticorrosive painted, with aggregates & activated carbon with complete frontal piping, pressure gauge, sampling, port, backwash drain pipe etc.	1 no.
18	Filter feeds pumps	5 M <sup>3</sup> /Hr CI Centrifugal, 30 meter head	2 nos.
19	Hazardous waste storage facility	4.5 x 2.3 x 1.2 mt LD+ 0.3 FB storage pit & leachate collection pit of 1.0 x 1.0 x 2.0 mt. with HDPE liner of 1.5 mm thick sheet.	1 no.

**Hazardous waste storage facility:**

Based on characteristics of raw effluents 0.25 to .3 kg of sludge per kg of BOD will be produced from effluent treatment plant. Approx 100 kg/year sludge generated effluent treatment plant will be collected after possible dryness (approx 50 to 60%) over proposed sludge drying beds. The dried ETP sludge needs to be temporarily stored before its further disposal as per standard guideline of regulatory authority.