

Sr. No.	Description	Unit	Rate (in Rs.) 2007-2008	Rate (in Rs.) 2008-2009
1	2	3	4	5
1.	<p><b>XVII. WATER TREATMENT PLANT ( WTP)</b>            Designing (aesthetically), providing and constructing high rate <b>Unconventional Water Treatment Plant</b> i.e. Simplified Water Treatment Plants consisting of Civil works including cost of Providing and applying Epoxy paint to inside surface of water retaining structures in contact with chlorine and providing anti - termite treatment to entire structure below Ground level, Mechanical and Electrical components of various sub-works as given below : including necessary hydraulic testing, structural testing and trial run for 3 months, etc. complete as directed by Engineer-in-charge (turn-key job) works.</p> <ol style="list-style-type: none"> <li>1) <b>Aeration Fountain</b></li> <li>2) <b>Inlet arrangements</b></li> <li>3) <b>Mixing channel</b> with ventury flume and flow measuring arrangement</li> <li>4) <b>Inlet channel</b></li> <li>5) <b>Flocculator -</b> Confirming to I.S. 7208-1974 (Type - C) with detention period of 30 minutes</li> <li>6) <b>Tube Settlers -</b> “Designing, fabricate and construct Tube Settlers with square or any other shaped tube like Circular, Chevron, Hexagonal etc. having proven performance.”</li> <li>7) <b>Rapid sand gravity filters</b></li> <li>8) <b>Filter house</b></li> <li>9) <b>Chemical house</b></li> <li>10) <b>Alum tanks</b> 2 Nos. with mixing carrying and dosing arrangements with piping.</li> <li>11) <b>Gravity feed gas chlorinator</b> with 100% standby.</li> <li>12) <b>TCL solution tank</b> with mixing, carrying and dosing arrangement with piping</li> <li>13) <b>Bye-pass arrangement</b></li> <li>14) <b>External and internal electrification</b></li> <li>15) <b>Laboratory equipments</b></li> <li>16) <b>Wash water tanks</b> of capacity equal to 2% of disigned quantity of filtered water in a day (+) 10%</li> <li>17) <b>Wash water pumps with</b> 100% standby</li> <li>18) <b>Air blowers</b> capable of delivering 600 LMP per square metre of free air of filter area at 0.4 Kg/sqcm at the under drains (100% standby)</li> </ol>			

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	<p>19) <b>Pure water sump</b> capacity equal to 1 hour pumping capacity</p> <p>20) <b>Pure water pump house</b> over the sump / by the side of sump</p> <p>21) <b>Drainage arrangements</b></p> <p>22) <b>Alum store</b></p> <p>23) <b>Sanitary block</b> with necessary water supply and drainage arrangement and internal WBM roads</p> <p>24) These rates are <b>applicable for seismic zones 2,3 and 4</b></p> <p>25) Rates given below are <b>inclusive of</b> uplift pressure if any and dewatering during the entire work</p> <p>26) All RCC structures shall be constructed in M-250.</p> <p>27) Unconventional Treatment Plants less than 1 MLD capacity shall not be constructed.</p> <p><b>Note : Conditions from Sr. No. 1 to 27 shall form a part and parcel of the tender and must be included in draft tender papers for the work of unconventional treatment plants.</b></p> <p>The rates are as under :</p> <p>1) Fixed cost for 1 MLD</p> <p>2) Add for capacity above 1 MLD upto 2 MLD</p> <p>3) Cost of 2 MLD treatment plant</p> <p>4) Add for capacity above 2 MLD upto 5 MLD</p> <p>5) Cost of 5 MLD treatment plant</p> <p>6) Add for capacity above 5 MLD</p> <p>7) Cost of 10 MLD treatment plant</p>		<b>Rs. in Lakhs</b>	
		----	17.07	
		Per MLD	12.36	
		-----	29.43	
		Per MLD	11.77	
		----	64.74	
		Per MLD	7.18	
		-----	100.63	

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2.	<p>Designing (aesthetically), providing and constructing and commissioning <b>Conventional Water Treatment Plant</b> consisting of all Civil, works including cost of Providing and applying Epoxy paint to inside surface of water retaining structures in contact with chlorine and providing anti - termite treatment to entire structure below Ground level, Mechanical and Electrical components of various sub-works as given below : including necessary hydraulic testing, structural testing equipment testing, trial run for a period of 3 months, etc. complete as directed by Engineer-in-charge (turn-key job).</p> <ol style="list-style-type: none"> <li>1) <b>Aeration Fountain</b> Plan area not less than 0.625 square metre per MLD</li> <li>2) <b>Ventury Flume</b> With necessary devices, consisting of simple mechanical indicator.( Pedestal type gauge)</li> <li>3) <b>Flash Mixer</b> Rapid mixing device, detention time 60 seconds to give velocity gradient 300 to 400 sec-1 vane mixer type confirming to I.S. 7090 of 1985.</li> <li>4) <b>Flocculator</b> Confirming to I.S. 7208 of 1974 (Type-C) with detention period of 30 minutes.</li> <li>5) <b>Clarifier</b> Horizontal flow circular tank, detention period 2-5 hours, overflow rate 30 cubic metre per square metre per day (to be specified), Weir loading not more than 300 cubic metre per metre per day, with mechanical sludge scraper conforming to I.S. No. 10313 -1982.</li> <li>6) <b>Rapid Sand Filters and Filter House</b> Filter designed for filtration rate of 5,000 liters per square metre per hour, minimum 2 beds for plant upto 10 MLD, for larger plants as specified, filters to be located in filter house with roof slab, pipe gallery and platform minimum 5.5 metre in width. <ol style="list-style-type: none"> <li>a) <b>Filter Sand</b> Effective size 0.45 to 0.70 mm, uniformity coefficient not more than 1.7, nor less than 1.3, depth of water over sand 0.75 M, free board 50 cm, gravel 0.45 M in depth, sand and gravel confirming to I.S. 849 (i)-77, back wash by air wash, standard appurtenances (to be specified), rate of flow controller, filler gauge, sand expansion gauge, etc.</li> <li>b) <b>Wash Water Tank</b> Capacity to be specified and suitable to supply water to wash 2 filter units at a time where the units are 4 or more.</li> </ol> </li> </ol>			

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	<p>c) <b>Wash Water Pumps</b> Capacity to fill water tank in 1 hour with 100 % standby.</p> <p>d) <b>Air Blowers</b> Capable of delivering 600 LMP per square metre of free air, of filter area at 0.4 kg/square cm at the underdrains (100% stand by).</p> <p>7) <b>Chemical House in Two Storeys</b> a) <b>Ground floor</b> to accommodate 7 days alum requirement and sundry storage. b) <b>First floor</b> to accommodate alum and lime tanks. etc. c) <b>Solution tanks</b> Minimum 3 tanks (one for preparation. second for dosing and third as standby), each tank capable of giving 8 hours maximum dose without interruption, minimum free board 0.30 M, trays for dissolving, level indicator, mechanical agitation devices, solution feed and drain lines, solution feed device (constant head device, strength of solution upto 10% only) conforming to I.S. 9222 part-I/1979.</p> <p>8) <b>Pure Water Sump and Pump House</b> a) <b>Capacity of sump</b> One hour of designed flow. b) <b>Pump House</b> Pump house of required size over the sump or by the side.</p> <p>9) <b>Store House</b> Suitable for alum storage of three months requirement in monsoon with 10 % extra capacity for other sundry articles.</p> <p>10) Vacuum feed type chlorinators - make to be approved by MJP. a) Confirming to I.S. 10533 - A Part-II 1983. b) <b>Rate of withdrawal.</b></p>			

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	<p>Temperature Kg.of Chlorine discharge per day</p> <table border="1"> <thead> <tr> <th>Degree "C"</th> <th colspan="2">Cylinders</th> <th>Tonnes</th> </tr> <tr> <td></td> <td>45</td> <td>67</td> <td></td> </tr> </thead> <tbody> <tr> <td>10</td> <td>6.35</td> <td>9.50</td> <td>110</td> </tr> <tr> <td>15</td> <td>10.75</td> <td>16.10</td> <td>130</td> </tr> <tr> <td>20</td> <td>14.50</td> <td>21.24</td> <td>254</td> </tr> <tr> <td>27 &amp; above</td> <td>18.70</td> <td>28.12</td> <td>315</td> </tr> </tbody> </table> <p>c) <b>Chlorinator equipment and container room</b> to confirm to I.S. 10553 Part - I 1983.</p> <p>d) <b>100 % standby</b> shall be provided.</p> <p>11) <b>By pass arrangements</b> - C.I. or M.S. pipes.</p> <p>12) <b>Drainage arrangements-</b> RCC pipes upto plot boundary.</p> <p>13) <b>Electrical installation.</b> Both internal and external including entire plant area.</p> <p>14) <b>Laboratory equipment.</b> As per requirement (to be specified during tendering.)</p> <p>15) <b>Sanitary blocks.</b> Carpet area-15 square metre minimum upto 25 Mld and 25 square metre above 25 Mld.</p> <p>16) <b>Administrative block and internal road.</b> To accommodate office room. chlorine room, laboratory room, panel board room, blower room etc. and WBM road to connect all units from main gate of plot.</p> <p>17) Rates given below are <b>inclusive of uplift pressure if any and dewatering</b> during entire work.</p> <p>18) These rates are <b>applicable for seismic zones-2,3 and 4.</b></p> <p>19) All RCC structures shall be constructed in M 250.</p> <p><b>Note :</b> Conditions from Sr. No. 1 to 19 shall form a part and parcel of the tender and must be incorporated in draft tender papers of conventional treatment plants <b>Rates for Conventional Treatment Plants (proposed)</b></p>	Degree "C"	Cylinders		Tonnes		45	67		10	6.35	9.50	110	15	10.75	16.10	130	20	14.50	21.24	254	27 & above	18.70	28.12	315			
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1	2	3	4	5
	<b>Sr. No.</b>	<b>Unit</b>	<b>Rupees in Lakh Rs.</b>	
	1. Upto 5 MLD	MLD	15.30	
	2. Cost of 5 MLD treatment plant	---	76.51	
	3. Add for capacity above 5 MLD upto 10 MLD	MLD	10.12	
	4. Cost of 10 MLD treatment plant	---	127.12	
	5. Add for capacity above 10 MLD upto 20 MLD	MLD	9.53	
	6. Cost of 20 MLD treatment plant	---	222.45	
	7. Add for capacity above 20 MLD upto 50 MLD	MLD	7.42	
	8. Cost of 50 MLD treatment plant	---	444.91	
	9. Add for capacity above 50 MLD upto 100 MLD	MLD	5.20	
	10. Cost of 100 MLD treatment plant	---	696.47	
	11. Add for capacity above 100 MLD	MLD	4.67	
3.	<p>Designing (aesthetically), providing, fabricating, <b>Package Water Treatment Plant</b>. At the shop, transporting to site, installing, testing and commissioning at the site, giving necessary one month's free test and trial run with guarantee for one year, etc. complete.</p> <p>Prefabricated Package Water Treatment Plant comprising following</p> <ol style="list-style-type: none"> <li><b>Rapid mixing channel</b> in M.S. sheets and M. S. baffle.</li> <li><b>Flocculator</b> not less than 10 minutes detention, in M.S. prefabricated box, flocculation being achieved either by glass pebbles of graded size or PVC tetrapod or equivalent arrangement to ensure good floc formation.</li> <li><b>Plate or tube settlers</b> of not less than 30 minutes detention, in M.S. prefabricated box, plates / tubes mounted in the settler basin with inclination of not less than 60 degree to horizontal.</li> <li><b>Rapid sand gravity filter in M. S. prefabricated box with filter sand</b> not less than 500 mm thick, supported on false floor below with polypropylene nozzles spaced at not more than 500 mm centres in either direction.</li> <li><b>Backwashing, inlet facilities</b> inlet and outlet facilities shall be provided. <ol style="list-style-type: none"> <li>Air Blowers Capacity of delivering 600 LMP per sq.mtr. of free air of filter area 0.4 Kg./Cm<sup>2</sup> at under drain ( 100 % stand by for capacity above one MLD)</li> </ol> </li> </ol>			

Sr. No.	Description	Unit	Rate (in Rs.) 2007-2008	Rate (in Rs.) 2008-2009
1	2	3	4	5
	<p>5.2 Wash water tank of capacity equal to 2 % of designed quantity of filtered in a day (+) 10 %.</p> <p>5.3 Wash water pumps with 100% standby ( Minimum 3 HP with all accessories)</p> <p>5.4 Back wash with water -not less than 0.6 m<sup>3</sup> / m<sup>2</sup> of filter bed area in filter box.</p> <p>5.5 Piping from outlet to sump.</p> <p>6. Laboratory equipments.</p> <p>7. External &amp; internal Electrification.</p> <p>8. TCL solution tank with mixing, carring &amp; dosing arrangement with piping.</p> <p>9. Gravity feed gas chlorinator with 100 % standby.</p> <p>10. Four Alum storage unit.</p> <p>11. Drainage arrangement.</p> <p>12. Providing room with RCC roof for office and Lab.Space with necessary water supply &amp; drainage arrangement and internal roads.</p> <p>13. R.C.C. sump of one hour cap. and pump house on it.</p> <p>14. Internal road.</p> <p>15. Wire fencing with gate for W. T. P. Premises.</p> <p>16. <b>All civil works</b> for foundation, consisting of raised RCC platform above G. L.or walls in B.B. masonry or UCR masonry shall be provided as per needs at site.</p> <p>17. <b>Bye pass in the form of pipes or M.S. channels</b> included in the design, effecting bye pass of such new tank and filter individually or both (Limit upto 5.0 M. from W.T.P. face)</p> <p>18. The entire M.S. <b>fabricated tank provided with FRP lining</b> (5 mm thick) to inside face in contact with water epoxy painting-two coats with one coat of primer on outside.The thickness of plates employed shall be not less than 6 mm.</p> <p>19. <b>Alum dosing and mixing arrangement</b> to be provided in twin tanks, each of 8 hours capacity, capable of import ing dose of 20 ppm with 5% solution. The alum tanks provided with a dose in steps of 5 ppm and entire unit mounted on the top of flocculator / settler box, in the form of prefabricated structure, with access platform and ladder. Alum boxes with FRP lining (5 mm thick) inside and epoxy paint two coats with one coat of primer on outside.</p>			

**SECTION - I: TREATMENT PLANT**

Sr. No.	Description	Unit	Rate (in Rs.) 2007-2008	Rate (in Rs.) 2008-2009	
1	2	3	4	5	
4.	<b>Rates for Package Water Treatment Plant</b>				
	<b>Sr. No.</b>	<b>Capacity of plant</b>	<b>Unit</b>	<b>Rupees in Lakh Rs.</b>	
	1.	21 Cum / Hr. (0.50 MLD)	Each	18.83	
	2.	34 Cum / Hr. (0.80 MLD)	Each	22.95	
	3.	42 Cum / Hr. (1.00 MLD)	Each	25.31	
	4.	63 Cum / Hr. (1.50 MLD)	Each	32.72	
	5.	83 Cum / Hr. (2.00 MLD)	Each	38.02	
	6.	125 Cum / Hr. (3.00 MLD)	Each	49.43	
	<b>Note : Depending upon the capacity required for the scheme, one of the above capacity should be choiced.</b>				
	<b>SEWAGE TREATMENT PLANT (STP )</b>				
A) Designing (aesthetically), providing, and constructing and giving satisfactory trials of modernised <b>Sewage Treatment Plant</b> consisting of receiving chamber, screen chamber, grit chamber, measuring flume, distribution chamber with primary and secondary treatment, etc. as detailed below, administration block of suitable size including allied units for waste disposal with all civil and mechanical works involved, etc. complete (Turn key job). Primary treatment - with extended sludge drying beds (oxidation ponds)					
<b>Sr. No.</b>	<b>Capacity of plant</b>	<b>Unit</b>	<b>Rupees in Lakh Rs.</b>		
1.	Upto 10 MLD	MLD	23.83		
2.	Cost of 10 MLD Palnt	---	238.34		
3.	Add for capacity above 10 MLD upto 20 MLD	MLD	20.83		
4.	Cost of 20 MLD Plant	---	447.02		
5.	Add for capacity above 20 MLD	MLD	17.67		

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1	2	3	4	5
	<p>B) Designing (Aesthetically) Providing and constructing, hydraulic testing commissioning and giving satisfactory trials of <b>modernised sewage treatment plant</b> consisting of inlet chamber, screen chamber, Detritus tanks, Parshall flume, primary settling tanks, Aeration tanks, Secondary settling tanks, Sludge Sump and Pump House ,Sludge Thickner, Primary digester , Secondary digester, SST Sump and Pump house, Chlorine contact tank, Chlorinators, Chlorinator room, sump cum blending tank, PST sludge sump cum blending tank,Pump house, Sludge Centrifuge, gas holder, necessary piping work with required valves, gates, drains, pathways, Administrative Building cum Laboratory, Laboratory equipments, tools and plants, Spare parts etc. complete as turnkey job with all involved civil electrical and mechanical works inclusive of following items, units as per detailed specification for civil, Electrical and Mechanical Components with all duties and taxes etc.complete.</p> <p><b>Inlet Chamber:</b> Designing, providing and constructing R.C.C. (M:250) Inlet chamber designed for the peak flow 2 DWF including necessary excavation in all types of strata including walkway around the periphery. Each compartment will have phosper bronze, steel gate with extension rod, head stock, opeating wheel, G.I. Pipe railig etc. The work includes providing and making necessary arrangements to connect the flow to screen chamber by approach channel as directed and as per specifications.</p> <p><b>Screen Chambers:</b> Designing, providing and constructing and testing commissioning screen chamber, designed for average 1DWF &amp; maximum 2 DWF in RCC (M-250), including inlet pipe/ Channel from inlet chamber outlet, pipe/channel to detritus tank, free board of 0.50 m minimum, RCC walkway 1.2M wide with G.I. Pipe railing. RCC stair case of 1.2 m width from G.L. to screen chamber.</p>			

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	<p><b>Detritus Tank :</b>            Designing, providing and constructing continuously grit removal type of Detritus Tank, mechanically operated in RCC (M-250) capable of removing 100% 0.20mm size particle and above, having specific gravity 2.30, designed for one peak 2 DWF with suitable arrangement of separation of grit from putrescible solids including providing and making necessary arrangement of JB-1. inlet and outlet channels of required sizes as may be required to connect the flow to parshall flume etc. complete including hydraulic testing for water tightness of the structure having minimum free board of 0.30 m, washout arrangement to grit chamber and platform 1.20m wide RCC walkway with G.I. pipe hand railing shall be provided. A pit for collecting grit conveyed by conveyor shall be provided It should be suitable to handle the grit for carting. All arrangements shall be as per detailed specifications and as directed.</p> <p><b>Parshall Flume:</b>            Designing, Providing and constructing Parshall Flume Channel in RCC(M:250) for measuring quantity of sewage received at the treatment works, max flow of 2 DWF and minimum flow of 1/2 DWF including providing and making necessary arrangement of approach channel as may be required to connect the flow having minimum velocity of 0.3m per second to Distribution Box (DB-1) The unit shall be provided with walkway &amp; RCC staircase having width of 1.20 m each etc. complete, including hydraulic testing for water tightness of the civil structure having free board of 0.6 m including electrically operated, flow indicating and flow integrating devices having a standby of float operated ROF meter. All arrangements as per specifications.</p> <p><b>Primary Settling Tanks With Equipments :</b>            Designing, providing, constructing and hydraulic testing in RCC (M-250) water tight Primary Settling Tanks of 1 DWF capacity with feed chamber sludge and effluent chamber, base adequately supported providing 1.20m wide clear peripheral and approach walkway interconnecting C.I. double flanged pipes from feed chamber of the clarifier distribution well grouting wherever necessary, including foundation etc. as per specifications water depth at outer side shall be minimum 3.0 meters, weir loading shall not be greater than 125 cum DMF for average flow Bottom slope shall be 1:12</p>			

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	<p>The floor of clarifier shall have 40 mm thick (min.) screed course of cement grout of mix in C.M. 1:2 Detention period shall be 2.25 hrs. dispersion box and stiffened weir plate made of mild steel plate not less than 8 mm thick, anitcorrosive epoxy paint on both faces shall be provided Minimum free board of 0.50 m. be provided it includes inlet pipe from distribution chamber, central shaft inlet baffle outlet chamber, Scum remover, skimming device, scum chamber, connecting channel from PST outlet chamber to DB-2 as per detailed specifications.</p> <p><b>Aeration Tank (AT) :</b>            Designing, providing and constructing in RCC mix (M-250) Aeration Tank in compartments to handle combined flow of 1 DWF, incoming flow and recirculation flow including construction of inlet, outlet and distribution chamber DB-3 and providing 1.20m wide clear peripheral and approach walk ways, expansion joints wherever necessary, including foundation etc. as per specifications. Peak factor shall be 2, F/M ratio shall be 0.40, low speed aerator speed between 20 to 100 RPM recirculation flow @ 50% and free board 0.60 m Depth, (SWD) 3.50 m minimum D.O. level at A.T. 2 Mg/Lit, MLVSS concentration shall be 2500 Mg/Lit and MLVSS concecntration shall be 2000 Mg/Lit, HRT shall be 4 to 6 hours and STR 6-8 days. It should have compartents for washing, oxygen transfer capacity of mechanical aerator shall not be less than 1.5 Kg/KWH, BOD of effluent 20 mg/lit with input to aerator 0.15 to 0.30 Kwh/1000 Cum of Aeratoin tank. All related works shall be as per detailed specifications.</p> <p><b>Secondary Settling Tanks with equipments :</b>            Designing, providing &amp; constructing in RCC (M:250) water tight secondary settling tank having detention period 2 hours and SWD shall be 4.20 meter. The effluent BOD &amp; SS from the secondary clarifier shall not be more then 20 Mg/lit and 30 mg/lit respectively. It should be hydraulically tested, bottom floor slope of 1:12 and free board of 0.60 m minimum Dispersion box shall be made of Mild Steel plate not less then 8 mm thick with anticorrosive epoxy paint from both faces and well stiffened The sewage admitted at the centre flowing upward and outwards towards periphery be slowly and continuously collected towards a convenient discharge point near centre by a rotating wheel arm.</p>			

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	<p>The Clarifier will be completed with end drive half rotating bridge, structural steel rake, over flow weir, walkway diffuser, over load alarms, having push buttons, starters for the clarifier, walkway and the suitable sludge withdrawing arrangement with flush valve capable of withdrawing moisture content not more than 97% to 98%, sloping floor shall have 40 mm thickness (Minimum), screed course of cement grout of mix 1 cement :2 sand, rotating sludge scrapper mechanism fitted with squeezes including providing and making necessary arrangement to connect the flow to outlet chamber (DB-4) then the gravity mains for final diaposal and as per detailed specifications and obligatory provision. All other arrangements shall be as per detailed specifications.</p> <p><b>Sludge Thickner with equipments:</b> Designing providing and constructing water tight of Sludge Thickner (Gravity type) including foundation in RCC (M-250) with inlet and outlet chamber influent well, inlet and outlet pipes, with sludge pit and sludge removal arrangement, grouting wherever necessary with walkway all around of 1.20 m width G.I. pipe railing interconnecting CI pipes all complete as per specifications Detention time 24 hours. SWD shall be 4.25 metre with necessary fixed bridge scraper arrangement as per detailed specifications and necessary inlet and outlet arrangement. All other arrangement as per detailed specifications.</p> <p><b>Primary Digester with mixer equipment (Fixed Cover)</b> Designing, providing and constructing unit of water tight and gas tight Primary Digester suitable for 1 DWF plant and complete with pipe gallery, building, staircase for access from dome of digester into inside staircase, walkways at springing levels etc. walls and base slab being in RCC M:250, domes in stucutural concrete including providing burners and civil works for gas collection, grouting wherever necessary etc. complete as per specifications. It should be designed for min 9<sup>0</sup> C and max. 45<sup>0</sup>C. and minimum detention time of 30 days, water depth shall not be more than 8.5m free board shall be 0.6m with inlet and outlet arrangement of C.I. flanged pipes including giving hydraulic testing and air tightness testing. The item includes providing works for collecting Gas and Gas burner as per specification.</p>			

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	<p><b>Secondary Digester with equipment (Fixed cover)</b>            Designing, providing and constructing including foudation unit of watertight and gastight Secondary Digester to deal with 1 DWF complete with pipe gallery, building, staircase for access from dome of digester into inside, staircase to walkways at springing levels etc., Walls and base slab and domes being in RCC M:250, providing arrangement for digested sludge from digesters to centrifuge, providing burners and civil works for gas collection grouting wherever necessary etc. complete. as per specifications and obligatory provision All other arrangements as per detailed specifications.</p> <p><b>S.S.T. Sump &amp; Pump House with recirculation Pumps and Sludge Pumps to Digester:</b>            Desiging, providing &amp; constructing Sump &amp; Pump house of requisite capacity with ceiling height not less then 6.M., Sludge stream for recirculation to aeration tank &amp; excess sludge to SCBT, including C.I. Piping to carry this flow to sump as per detailed specification &amp; as directed by Engineer-in-charge.</p> <p><b>Chlorine Contact Tank :</b>            Designing, providing and constructing Chlorine Contact chamber of adequate capacity to deal with 1 DWF. Average flow. The chlorine contact tank should be of 30 minutes capacity during average flow to achieve 99.99% coliform reduction. Chlorine dose shall be maintained as per standard provisions including provisions including designing, providing and constructing water supply arrangmeant for chlorination, including providing de-watering and by-pass arrangements jointing to final effluent main and outlet weir etc complete. The effluent quality should match with the standards laid down by Maharashtra Water pollution Control Board and as per the obligatoey provision and detailed specifications and as directed by Engineer-in- charge.</p> <p><b>Chlorinator and chlorinator Room/Tonner Room.</b>            Desiging, providing and constructing chlorinators vaccum type 2 Nos each having capacity of 10 Kg/Hr as per obligatory provisions and detailed sprcifications with necessary provision of chlorinator room having floor area not less then 30 Sqmt including automatic residual chiorine controller with actuator and residual chlorine analyser including cost of chlorine cylinder, piping, valves, measuring and controlling equipments, safty devices, lifting equipments, etc. complete as per I.S - 10553 (Part-II) 1982.</p>			

Sr. No.	Description	Unit	Rate (in Rs.) 2007-2008	Rate (in Rs.) 2008-2009
1	2	3	4	5
	<p>The tonner room should have 3 MT capacity crane for loading and unloading facility. Tonner storage should distinctly isolated and should be for minumum 10 Tonners space and arrangements as per gas laws 1981 and factory act shall be provided. and all other matching amenities be provided, 5 MT gantry shall be provided for full length of Tonner room at 6 m height from floor level, with /outlet chamber and treated effluent outlet channel etc. complete as per detailed specifications.</p> <p><b>Sump cum Blending Tank (SCBT)</b>  Designing providing and constructing sump cum blending tank of appropriate size and detention time with free board of 0.60 m. The slope of floor 1:4 with suction pit at the centre as per detailed specifications and obligatory requirements.</p> <p><b>P.S.T. Sump Cum Blending Tank, Pump House with re-circulation pumps:</b>  Designing providing and constructing pump house of appropriate size with pumps, ceiling height minimum 6m over the circular sump for discharging the sludge to thickner and recycling of flow for blending with C.I. piping etc. complete as per detailed specifications.</p> <p><b>Sludge Centrifuge Room with Centrifuges.:</b>  Designing, providing constrcuting and installing including foundation etc. Sludge Centrifuge to handle the sludge flow of one day in one hour per unit with sludge dewatering unit drain etc. Complete as per specifications. sludge centrifuge with all necessary arrangements as per detailed specifications mentioned in Volume -II and Volume -III of tender and obligatory provisions, be provided with satisfactory functioning.</p> <p><b>Gas Holder:</b>  Designing, providing and constructing gas holder having gas collection system, gas flow meter and gas burner with floating dome arrangement and storage time 6 hrs. to be constructed in M-250 having appropriate diameter as per detailed specifications and obligatory provisions. The floating dome shall be of 8mm thick M.S. Plate minimum and shall be provided with two coats of anticorrosive epoxy coating from both faces.</p>			

Sr. No.	Description	Unit	Rate (in Rs.) 2007-2008	Rate (in Rs.) 2008-2009
1	2	3	4	5
	<p><b>Outfall Sewer :</b> Designing providing and constructing appropriate Outfall Sewer of R.C.C. NP-2 pipe, to discharge treated effluent, untreated effluent form outlet chamber (after secondary clarifier) to the local nallah at a point shown on the drawing including necessary chambers for inspection / cleaning including necessary excavation dewatering, refilling, concrete encasing/bedding concrete steps to reach the nallah bed level. pitching and energy dissipation chamber in the nallah portion etc. complete upto 50m length R.C.C. NP-2 pipe line and including all above items.</p> <p><b>Piping work in C.I.-LA Class including Sluice Valve, Reflex Valve, M. S. Gate.</b> Providing laying and jointing pipes other than those already included in the above items for interconnection by-pass drains etc. of all units including adequate numbers of manhole chambers. The item includes excavations, refilling and hydraulic testing of pipes, valves , gates ,accessories and cost of jointing materials The item includes required channels with gates for interconnection of units by pass drains etc. for all units and as directed etc. complete as per detailed specifications.</p> <p><b>Administrative Building Cum Laboratory ( G + 1 )</b> Designing providing and constructing Adminisrative Building, Office Cum Laboratory including stores. This shall be a building having appropriate Carpet area at ground floor and at first floor complete as per specifications including necessary excavation, foundation in RCC M-200 framed structure B. B. masonry (II-Class in C. M. 1:6) 20 mm cement plaster in C. M. 1:3 inside and outside painting. Alluminum door and window with glass pannels, mosaic tile flooring and skirting and all other allied items, fixtures fastening electrification arrangement water supply arrangment etc. complete. The building will have laboratory on upper floor of administrative building and should be so centralised that it should not be attached with any unit but should have complete control of every unit as per Laboratory Equipment, beautification, telephone and intercome arrangement and Wireless system.</p>			

Sr. No.	Description	Unit	Rate (in Rs.) 2007-2008	Rate (in Rs.) 2008-2009
1	2	3	4	5
	<b>Primary and secondary treatment-with digesters, sludge drying beds etc. complete.</b>			
	<b>Sr. No.</b>	<b>Capacity of plant</b>	<b>Unit</b>	<b>Rupees in Lakh Rs.</b>
	1.	Upto 10 MLD Plant	MLD	27.96
	2.	Cost of 10 MLD Plant	---	278.95
	3.	Add for capacity above 10 MLD upto 20 MLD	MLD	22.36
	4.	Cost of 20 MLD Plant	---	502.58
	5.	Add for capacity above 20 MLD	MLD	17.15
5.	Designing manufacturing, supplying and erecting of <b>filter plant</b> , including cost of underdrain system, cost of filter media transportation to work site connecting inlet, outlet pipe lines of water supply scheme to the plant with fixing of required appuratanes, gauges, valves water level, and flow indicator etc. including all duties and taxes. The cost includes supply of operation and maintenance manual free of cost, one month trial run after completion of erection work with labour cost, the required training to the staff of Department and Gram Panchayat, 5 years performance guarantee after commissioning against manufacturing defect. The work includes cost of construction of RCC Masonry as and where necessary including excavation if required, EP-OXY Painting to all units inside and outside of the Plant. etc. complete.			
	<b>Sr. No.</b>	<b>Capacity of plant</b>		<b>Rupees in Lakh</b>
	1.	0.5 MLD Plant	Each	5.00
	2.	1.5 MLD Plant	Each	6.83