

## Scope of Work/Bill of Quantity

Comprehensive annual maintenance of 25 KLD and 75 KLD Sewage Treatment Plant (STP) in Darbhanga House Campus for 2 years under Welfare & Services CCL HQ, Ranchi.

Sl.	Particulars	Quantity	Unit	Estimated Rate (₹)	Estimated Amount (₹)
1	Comprehensive annual maintenance of STPs (Detailed Scope of work enclosed in annexure A & B)				
	75 KLD	24	Per month	₹ 86,636.00	₹ 20,79,264.00
	25 KLD	24	Per month	₹ 62,536.00	₹ 15,00,864.00
				TOTAL (Excluding GST)	₹ 35,80,128.00
				Add GST @ 18 %	₹ 6,44,423.04
				Total value (Including GST)	₹ 42,24,551.04

**ANNEXURE A & B**

<b>Annual Maintenance contract for 75 KLD STP</b>				
<b>Sl. No.</b>	<b>Description</b>	<b>Estimated Amount in Rs. (per month) EXCLUDING GST</b>	<b>Estimated Amount in Rs. (yearly) EXCLUDING GST</b>	<b>Details of Scope of work</b>
1	Rate for 2 no of Skilled operator in 2 Shifts	45136.00	541632.00	Two no of skilled operator will be provided in 2 shifts on daily basis.
2	Rate of Filtration & treatment	7000.00	84000.00	Replacement of Activated Carbon Media including labour charges all complete (once a year) ,Replacement of sand media including labour charges all complete (once a year) & Tube settler media cleaning & alignment (once a year)
3	Rate of servicing of all equipment & maintenance of spares	12000.00	144000.00	Blower oil replacement (once in two month), Blower belt replacement (twice in a year), Ozone system checking and servicing (once in a year), Servicing of UF system (once in a year), Checking and servicing of filter press (as & when required), Servicing of electric panel (once in a year) :- all complete
4	Rate of maintenance of all types of pumps	8600.00	103200.00	Maintenance of Raw sewage transfer pump (2 nos.), Maintenance of recycle pump (2 nos.), Maintenance of filter feed pump (2 nos.), Maintenance of Garden pump (2 nos.), Maintenance of UF feed pump (2 nos.), Filter press pump maintenance (2 nos.) , Dosing pump replacement (if required)
5	Rate of cleaning of all types tanks & chamber, Painting of tanks	5300.00	63600.00	Cleaning of collection tank, Anoxic tank, Aeration tank, Tube settler tank, Sludge holding tank, Filter feed tank, UF feed tank & Treated water tank & any other liquid tank (One time yearly or as & when required) & all outside Chambers/Gutters connected to STP (Cleaning quarterly) , Painting of all tanks (once in a year)
6	Repairing & Maintenance of pipeline inlet to outlet	2400.00	28800.00	All pipeline network (inlet to outlet) connected to STP will be repaired in case of damage and As & when required as per the direction of EIC
7	Rate of testing of water sample from NABL approved Lab	3000.00	36000.00	STP treated water lab testing report will be submitted from NABL approved testing Lab as per norms.
8	Rate for Consumable including chemical , Safety/PPE Kit , Dress etc	1200.00	14400.00	Providing of Hypochlorite (Min. of 60L per months), other required chemicals for efficient operation of plant , Hand Gloves, Mask , Shoes( 2 times in a year), Rain coat, Dress (with logo of the company), Identity Card and other safety Kits
	<b>Total (Excluding GST)</b>	<b>84636.00</b>	<b>1015632.00</b>	

<b>Annual Maintenance contract for 25 KLD STP</b>				
Sl. No.	Description	Estimated Amount in Rs. (per month) EXCLUDING GST	Estimated Amount in Rs. (yearly) EXCLUDING GST	Details of Scope of work
1	Rate for 2 no of Skilled operator in 2 Shifts	45136.00	541632.00	Two no of skilled operator will be provided in 2 shifts on daily basis.
2	Rate of Filtration & treatment	2200.00	26400.00	Replacement of Activated Carbon Media including labour charges all complete (once a year) ,Replacement of sand media including labour charges all complete (once a year) & Tube settler media cleaning & alignment (once a year)
3	Rate of servicing of all equipment & maintenance of spares	3700.00	44400.00	Blower oil replacement (once in two month), Blower belt replacement (twice in a year), Ozone system checking and servicing (once in a year), Servicing of UF system (once in a year), Checking and servicing of filter press (as & when required), Servicing of electric panel (once in a year) :- all complete
4	Rate of maintenance of all types of pumps	2700.00	32400.00	Maintenance of Raw sewage transfer pump (2 nos.), Maintenance of recycle pump (2 nos.), Maintenance of filter feed pump (2 nos.), Maintenance of Garden pump (2 nos.), Maintenance of UF feed pump (2 nos.), Filter press pump maintenance (2 nos.) , Dosing pump replacement (if required)
5	Rate of cleaning of all types tanks & chamber, Painting of tanks	2500.00	30000.00	Cleaning of collection tank, Anoxic tank, Aeration tank, Tube settler tank, Sludge holding tank, Filter feed tank, UF feed tank & Treated water tank & any other liquid tank (One time yearly or as & when required) & all outside Chambers/Gutters connected to STP (Cleaning quarterly) , Painting of all tanks (once in a year)
6	Repairing & Maintenance of pipeline inlet to outlet	800.00	9600.00	All pipeline network (inlet to outlet) connected to STP will be repaired in case of damage and As & when required as per the direction of EIC
7	Rate of testing of water sample from NABL approved Lab	3000.00	36000.00	STP treated water lab testing report will be submitted from NABL approved testing Lab as per norms.
8	Rate for Consumable including chemical , Safety/PPE Kit , Dress etc	500.00	6000.00	Providing of Hypochlorite (Min. of 60L per months), other required chemicals for efficient operation of plant , Hand Gloves, Mask , Shoes( 2 times in a year), Rain coat, Dress (with logo of the company), Identity Card and other safety Kits
<b>Total (Excluding GST)</b>		<b>60536.00</b>	<b>726432.00</b>	

Sl. No.	Description	Estimated Amount in Rs. (per month) EXCLUDING GST	Estimated Amount in Rs. (yearly) EXCLUDING GST	Details of Scope of work
1	Rate for Technical engineer visit	4000.00	48000.00	Engineer will visit once a week for inspection for both the plants and as when required during break down.

	Total (Excluding GST)		48000.00	
	Total for 2 Years Total (Excluding GST)		<b>3580128.00</b>	
	GST @ 18%		<b>644423.04</b>	
	Total for 2 Years Total (Including GST)		<b>4224551.04</b>	

**Note:**

1. This work will be comprehensive annual maintenance contract work for the both STPs (75 KLD & 25 KLD)
  2. We will treat, operate and maintain the process of Sewage Treatment Plant as per the Standard Operating procedure.
  3. We will treat, operate and maintain the process of STP in Two shifts as per the Standard Operating procedure to achieve the treated water quality.
  4. (2 operator). We will provide you one operator per shift for operation of STP in two shifts (8 hrs. per shift) per day will be there (with one weekly off).
  5. Replacement of Activated Carbon Media including labour charges all complete, Replacement of sand media including labour charges all complete & Tube settler media cleaning & alignment.
  6. We shall keep adequate stock of chemicals & other consumables at the site.
  7. One Supervisor at site will monitor the performance of STP. He will maintain the records of process, routine check-ups, do's and do not's, analysis or testing of water parameters and monitor the site workmen to maintain healthy working conditions at site. He will also update on shortfall in treatment process. (Chemical requirement, Breakdown maintenance etc.).
  8. We shall also indicate in advance about any plan of major maintenance of the plant or its equipment.
  9. Break down work shall be attended by us on time bound manner.
  10. The operator will take care of preventive maintenance like oiling and greasing etc. of the plants. However consumables like belt, bearing, oil & grease, spares, chemicals etc. for the same will be in our scope.
  11. Maintenance of all types of pumps.
  12. We will ensure that the outlet parameters are as per statutory norms.
  13. Our technical engineer from office will visits the plant once in a week.
  14. During the site visit our technical engineer will monitor the performance of the plant, will check the stock of chemicals and suggest the required chemicals for efficient operation of the plant However, required chemicals will be supplied by us
  15. The operator will maintain the daily record of operation and preventive maintenance activities in logbook and will be available to you for inspection.
  16. Our operator will follow safety rules/requirements at site; we will be responsible for providing uniform, Safety shoes & raincoat etc. to our operator.
  17. Analysis of the Treated effluent sample STP Outlet by NABL Approved Lab as per norms.
  18. Equipment and Lab Apparatus for effective operation and monitoring of the plant.
  19. Cleaning of collection tank, Anoxic tank, Aeration tank, Tube settler tank, Sludge holding tank, Filter feed tank, UF feed tank & Treated water tank ,Chambers/Gutters connected to STP & another liquid tank & Painting of all tanks
  20. Repair & maintenance of all pipeline networks from inlet to outlet.
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