

Pharmaceutical Industry wastewater Treatment Plant

Background:

This is a pharmaceutical industry, located in South India, manufacturing Active Pharmaceutical Ingredients (API), such as Bleomycin, Acyclovir, Aripiprazole, Clarithromycin, etc. Some of these ingredients are antibiotics and their residues when present in the effluent kill the microbes present in the microbial culture which they were using in their Effluent Treatment plant (ETP), for treating their effluent. As a consequence the microbes were not effective in reducing COD in the wastewater. Also, the effluent generated comprised of very high levels of TDS. This in turn affected the growth and effectiveness of the microbes in the effluent.

The wastewater engineers looking after the ETP at the site, approached Organica for a solution with a view to treat the effluent in cost effective manner and meet the norms of the Central Pollution Control Board.



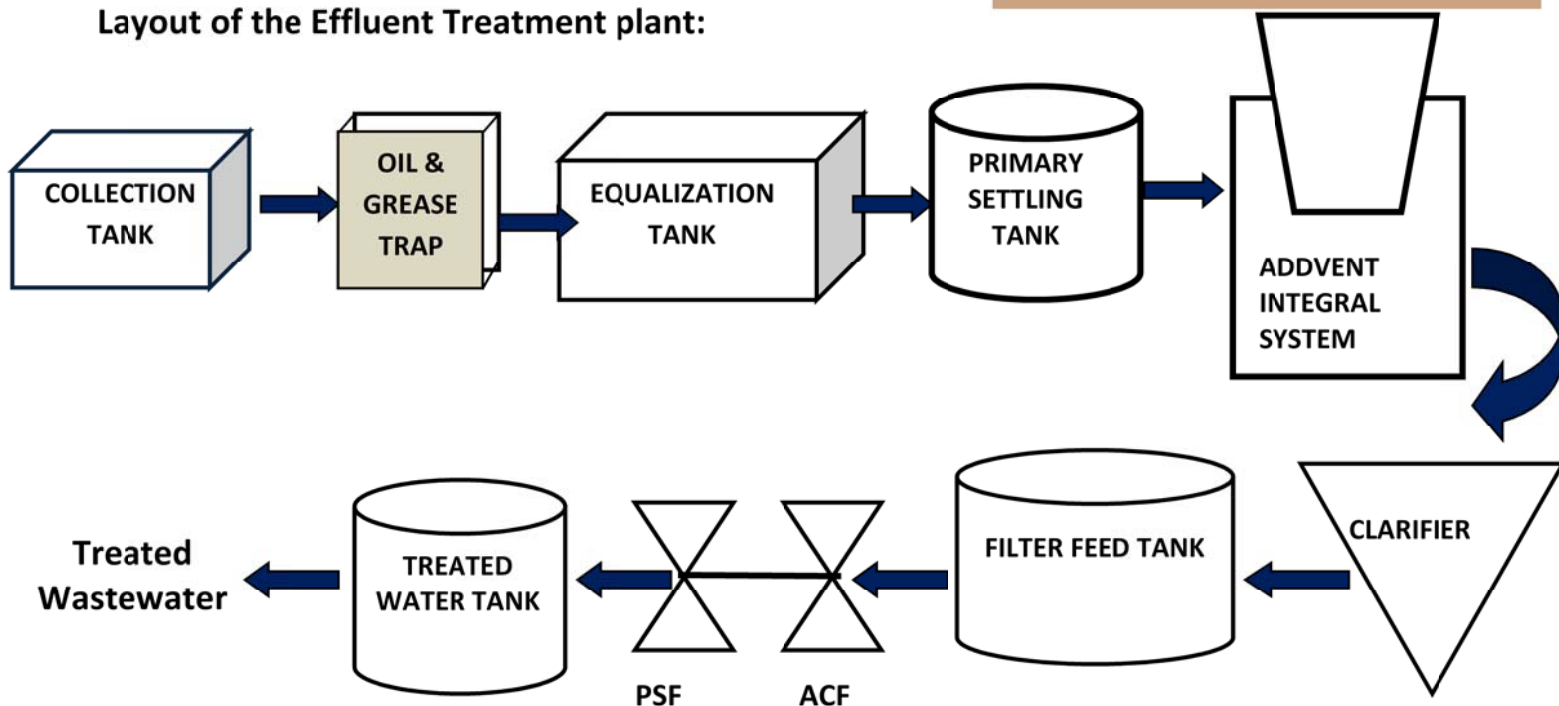
Major Concerns :

- Ineffective reduction in COD level
- Anaerobic tank becoming septic
- MLSS could not be maintained
- High TDS

Influent parameters

- Flow: 200 m³/day
- pH: 6-7
- COD: 3000-3500 mg/lit
- (TDS): 15000

Layout of the Effluent Treatment plant:

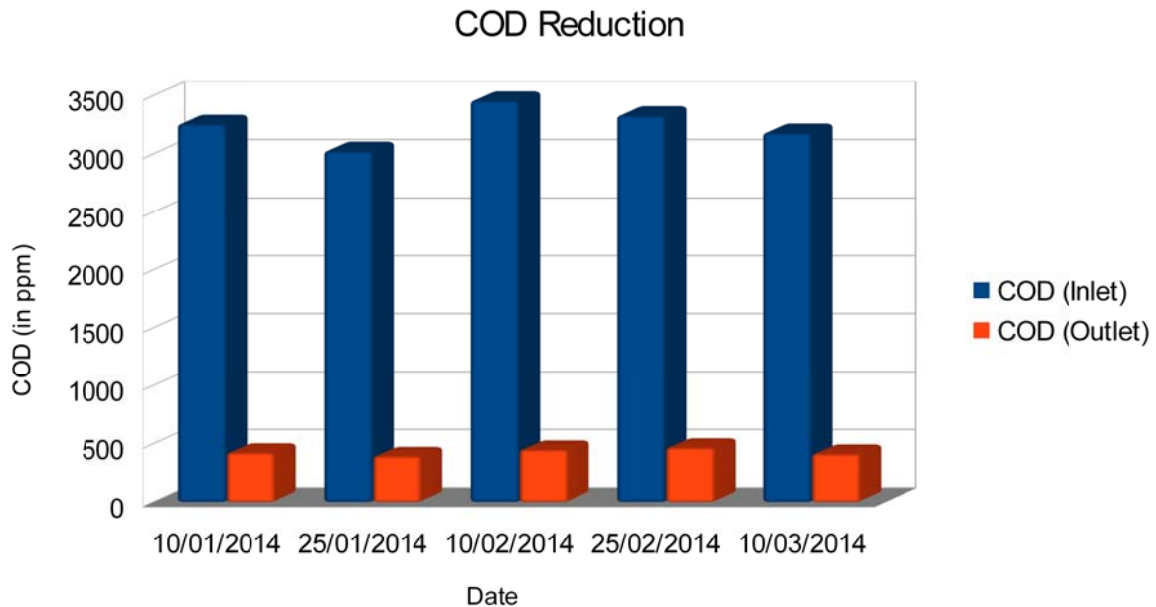


CleanMaxx- the economical biotech solution!

CleanMaxx is a consortium of 76-90 different strains of microbes that help in effective reduction of wastewater parameters. These microbes are isolated from soil and they secrete enzymes which are natural and safe. This technology was provided by extensive research and development for the past 15 years, thereby suiting this particular effluent.

Our Technology helped in:

- **COD Reduction:**



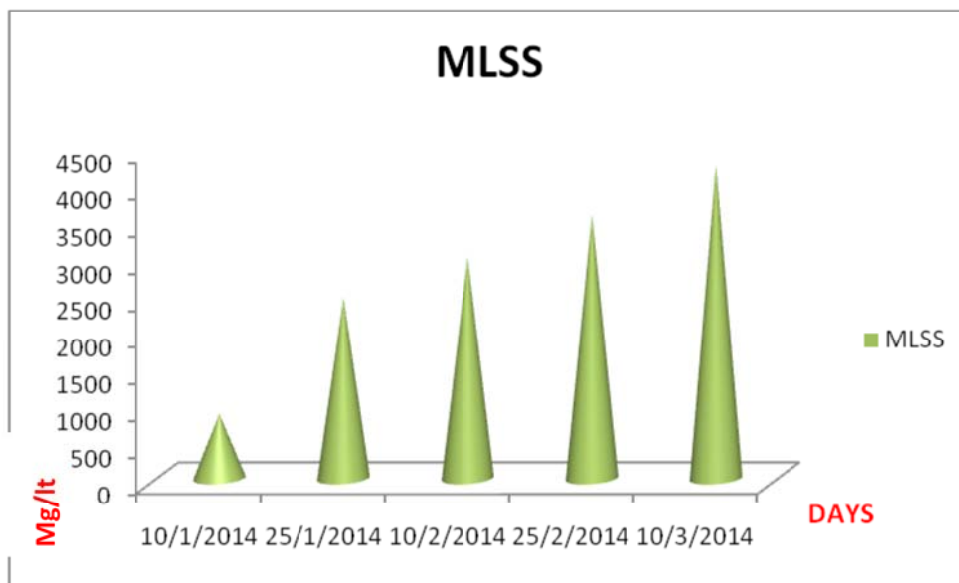
Graph-1: COD Reduction after CleanMaxx Addition

- **MLSS Development:**

After bioaugmentation, the MLSS level was improved significantly. On the 15th day from the date of project start, the MLSS reached to the range of 2000-2500 mg/lit. Desired MLSS in the range of 3500-4300 mg/lit and MLVSS in the range of 2650-3200 mg/lit was achieved.

Optimum MLVSS/MLSS ratio of 0.7 was attained and the MLSS levels were consistently maintained .

Hence, our advanced microbial technology helped in maintaining the desired MLSS level.



Graph 2: Improve in MLSS level after CleanMaxx Addition

- **Results:**

- Almost 87% reduction was achieved in COD level
- MLSS level was significantly and MLVSS/MLSS ratio was maintained to 0.7, which is the optimum desired parameter
- Septic condition issue in anoxic tank was resolved
- Efficiency of the ETP was increased and overall plant stabilization was achieved

Client Feedback:

“We have been using Organica Biotech’s CleanMaxx and we have seen improvement in the performance of our ETP.

Our discharge from secondary has improved and we observed reduction in COD

We welcome this biotechnology approach to this industry.”

- **Conclusion:**

Our advanced technology once again proved to be very efficient in handling all the issues of the effluent treatment plant and successfully resolved them. The client was really satisfied with their ETP performance after the end of the project. The plant is now working at its peak efficiency and is also stabilized.