



Open Channel
Effluent Disinfection



Municipal



India

Municipal Effluent Treatment in India

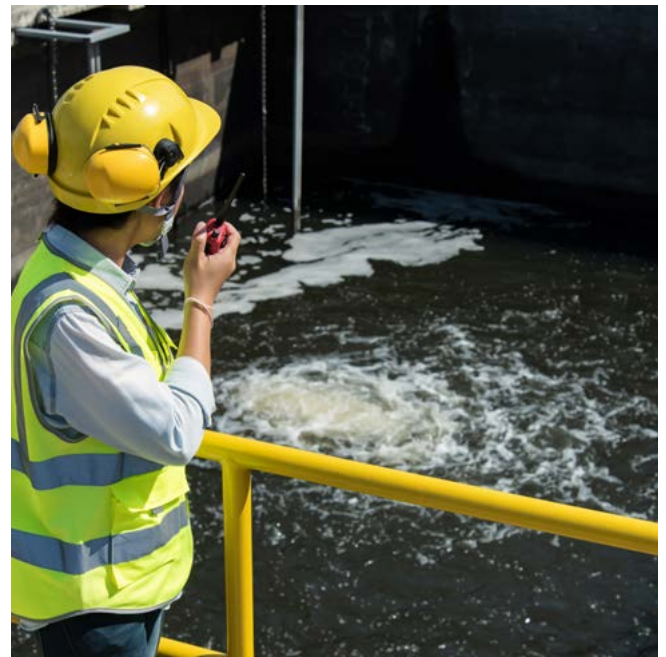
Overview & Challenges

The government agency responsible for water supply, sewage disposal, and wastewater treatment for one of India's largest cities aims to provide sustainable and efficient services to its residents. To meet the growing demand for water, the agency is actively engaged in various water conservation initiatives and infrastructure development projects.

At the sewage treatment plant (STP), sewage water is treated at a peak flow of 91 MLD, with an actual UVT of 60%-65% (designed for 65%). The municipal effluent undergoes rigorous primary and secondary treatment processes, followed by disinfection to ensure safety and quality. While chlorination is employed for disinfection, it presents significant environmental and safety challenges due to the formation of harmful disinfection by-products (DBPs) such as trichloroethane and haloacetic acids.

Handling chlorine poses health risks to workers and nearby communities, particularly in densely populated urban areas where space for equipment installation is limited. Compliance with stringent environmental and occupational safety regulations is crucial, as failure to meet these standards can result in penalties ranging from fines to legal action.

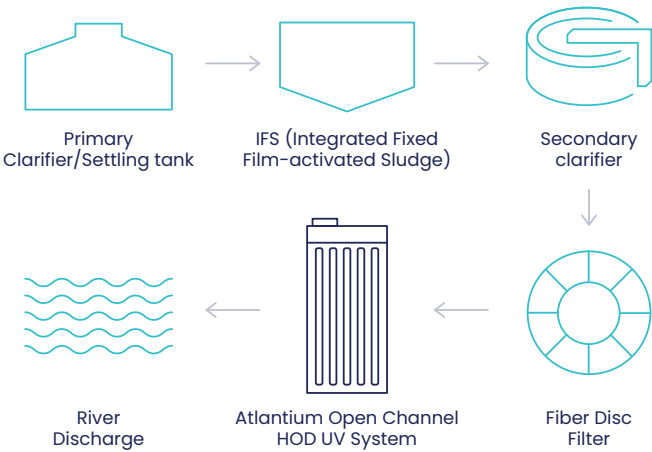
The agency faces the ongoing challenge of balancing effective disinfection with minimizing environmental impact and ensuring the safety of both the public and workers in its wastewater treatment practices.



The Solution

Atlantium's HOD™ (Hydro-Optic Disinfection) UV technology for Open Channel was installed to treat the plant's 91MLD flow in February 2024, using only 22 UV lamps, providing efficiency and reliability.

The HOD UV systems feature unique engineering which enables it to deliver pure results. The system design includes: Optimized lamp position and hydraulic structure which ensure optimal flow of the water around the lamps, making sure there are no escape routes for organisms; dual sensor configuration that ensures that only the minimum required dose is delivered: with a sensor on each lamp and a UVT sensor; and controller that measures mission-critical parameters (flow rate, UVT, UV lamp output, and actual UV dose) and enables real-time monitoring and control.



Results

Tests showed that following the installation of Atlantium's OC Series HOD UV, the amount of MPN Fecal Coliform per 100 ml was reduced from 1,700 to 33. These results were in compliance with the stringent regulatory requirements set by the relevant authorities in India, ensuring that the treated water met the necessary safety and quality standards.

98%  reduction.



About us

For more than two decades, Atlantium Technologies has helped to ensure water safety with its innovative HOD™ (Hydro-Optic Disinfection) UV technology and novel approach to performance, monitoring, and control. Atlantium's superior, environmentally friendly water treatment solutions ensure stable, efficient, and dependable production.

With thousands of full-scale installations for leading brands in various industries globally, we're committed to consistently meeting our customers' water quality needs, ensuring pure results.

