



We are pleased with the successful completion of comprehensive performance testing of the GES Biotek Biofilter System at the City of Richmond Wastewater Treatment Plant in Richmond, California. The test was conducted on February 27, 2024, this testing marks a significant milestone in advancing new odor control within the wastewater treatment plant operations.

Biofilter systems play a vital role in wastewater treatment plants by effectively removing hydrogen sulfide (H₂S) and other odor-causing compounds from the air stream. The recent testing focused on evaluating the performance of a 10,770 cfm biofilter equipped with GES Biotek medias. Situated in a new 1,968 square-foot biofilter, this system represents an innovative approach to odor control.

During the eight-hour performance test, field measurements, samples, and laboratory analyses were conducted to assess the Biofilter's efficiency. In addition to >98% H₂S removal efficiency, the biofilter system also excelled in removing odors, as indicated by the Detection Threshold (DT) and Recognition Threshold (RT) removal efficiencies, which both surpassed 90%. These metrics underscore the system's ability to effectively mitigate odor-related challenges, enhancing the overall environment of the treatment plant.

The success of the biofilter system can be attributed to the innovative GES Biotek media components integrated into its design:



Crater-Max® Media: This porous media serves as an ecosystem for the growth of acidithiobacillus thiooxidans and acidithiobacillus ferrooxidans microorganisms, crucial for H₂S removal. The porous Crater-Max® media also contains the necessary iron content that in a low pH environment will create a chemistry of iron ions to support a colony of acidithiobacillus ferrooxidans microorganisms. The fiberglass air distribution header and air exhaust branches are covered with the Crater-Max® media bed.



The Geonet Barrier Screen: The screen typically serves as a support layer between the Fiber-Max™ biofilter media and the Crater-Max® media to limit mitigation of particles. The geonet screen barrier used is the tri-planar geonet screen consisting of middle ribs that provide direct channelized flow, with diagonally placed top and bottom ribs. The screen is manufactured from the extrusion of high-density polyethylene (HDPE) resin and carbon black, and it is inert to chemical and biological attack.



Fiber-Max™ Media: Derived from natural sources such as trees and large branches, Fiber-Max™ fosters the selection and degradation of organic compounds and odors by fungal and bacterial microorganisms. Its composition excludes materials known to inhibit microbial activity, ensuring optimal performance. The media is a fibrous cellular substrate material manufactured from natural sources. Fiber-Max™ is manufactured only from trees and large tree branches. No yard/construction/demolition waste or commercial wood-based materials are used. No eucalyptus, cedar, redwood, or any other trees having a known inhibitor or germicidal effect on microorganisms.

As the wastewater treatment industry continues to prioritize environmental stewardship and community well-being, advancements in odor control technology are paramount. The successful testing of the GES Biotek Biofilter System underscores our commitment to innovation and sustainability, setting a high standard for odor management in wastewater treatment facilities.