

GES Biotek Provides Upgraded Biofilter Media

at the Temecula Valley Regional Water Reclamation Facility



The Temecula Valley Regional Wastewater Reclamation Facility (TVRWRF) has successfully completed the installation and optimization of the **GES Biotek Enhanced Cell-Max™ biofilter media** within its odor control biofiltration system, achieving a new benchmark in high-efficiency H₂S mitigation. This upgrade underscores GES Biotek's ongoing pursuit of advanced, sustainable solutions for odor abatement in wastewater treatment operations.

The project involved a comprehensive media replacement in two 60'-0" x 60'-0" biofilter cells, where the spent GES wood chip media was exchanged for 10,800 cubic feet of **Enhanced Cell-Max™** media per cell (21,600 cubic feet in total). Engineered to enhance microbial colonization, the media delivers superior long-term performance, facilitating a consistently high hydrogen sulfide (H₂S) removal efficiency. Additionally, GES Biotek's **Crater-Max®** media was introduced as an advanced air distribution substrate, optimizing air diffusion and promoting ideal microbial conditions for H₂S degradation.

With the completion of this project, **GES Biotek** reinforces its leadership in the development of innovative biofiltration technologies, providing high-performance solutions for odor management in wastewater treatment applications. The success of the Temecula installation paves the way for broader adoption of GES Biotek's cutting-edge solutions worldwide.

GES Biotek — Good for People, Good for the Environment

Enhanced Cell-Max™ Media:



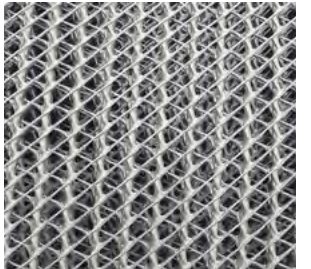
This inorganic, engineered media replaced the previous wood chip substrate, significantly improving biofilter system efficiency. **Enhanced Cell-Max™** is optimized for high surface area and porosity, promoting **advanced microbial growth** and **sustained H₂S adsorption**, making it highly effective in environments with elevated H₂S concentrations.

Crater-Max® Media: Utilized as the air-rock diffuser layer, **Crater-Max®** offers a highly porous structure that enhances both airflow distribution and microbial activity within the biofilter. Its configuration allows for **uniform air flow** and **supports the microbial communities** responsible for odor compound degradation.



Geonet Barrier Screen:

A high-density polyethylene (HDPE) **Geonet Barrier Screen** was installed to maintain separation between the Crater-Max® diffuser layer and the biofilter media. This component **enhances structural integrity** while ensuring efficient airflow and preventing particle migration within the biofilter system.



GES Super Nutrients:

These **proprietary nutrients** were introduced into the biofilter via humidification nozzles at the system's inlet, **optimizing microbial activity** by supplying essential growth factors, which further boosted H₂S degradation performance.



Air Distribution Validation via Smoke Testing:

Smoke testing was performed post-installation to assess the efficacy of the air distribution system, ensuring uniform air permeation across both biofilter cells. This process is crucial for **ensuring consistent odor control** across the entire biofilter system.

Performance Results: Post-installation testing confirmed that the biofilter system achieved an average **H₂S removal efficiency of 99.98%**, reducing inlet concentrations of 40 ppm H₂S to non-detectable levels. This exceptional removal rate **ensures compliance** with regulatory requirements and significantly **improves the air quality** surrounding the facility, **minimizing odor impact** on the local community.

