



Hydrogen Sulfide Control in Collections Systems

There are several options to control hydrogen sulfide (H₂S) and volatile fatty acid (VFA) odor challenges in collection systems. **Greener Planet Systems bioaugmentation treatment program offers the most robust option** to attack these challenges, remove them and prevent them from returning.

TABLE SYNOPSIS: Conventional methods to control H₂S often do not control VFA odors or prevent H₂S from occurring in the first place and often push issues downstream. Frequently high capital costs are required to administer high volumes of chemicals, several of which are hazardous. Our microbial products reduce H₂S and VFA odor at the source by digesting solids, VFA, fat, oil and grease (FOG) which prevents H₂S and VFA odors from occurring. Bioaugmentation may have a high cost/lb. but benefits from the lowest effective dose with the widest range of effect.

Common Hydrogen-Sulfide Control Methods ✓ = Yes ✗ = No ● = Yes, but minimally

METHOD		Vacuum Pumping / Hydro Jetting	Magnesium Hydroxide/ Caustic	Iron Salts	Oxidizers	Nitrates	Scrubbers/ Filters	Enzymes, Degreaser and Micronutrients
MODE OF ACTION	Uses sulfur, digests sludge & FOG habitat of odor producing bacteria	Removes the sludge & FOG habitat of odor producing bacteria	Raises pH increasing solubility of sulfides	Precipitates sulfides	Oxidizes sulfides back to sulfate	Provides bacteria preferred electron acceptor to sulfate	Scrubs H ₂ S from the air	Breaks up the sludge & FOG habitat of odor producing bacteria
VFA ODOR CONTROL	✓	●	✗	✗	●	✗	✓	●
PREVENTS H ₂ S	✓	●	✗	✗	✗	✓	✗	●
RESOLVES ISSUE WITHOUT PUSHING IT DOWN STREAM	✓	✓	✗	✓	✗	✓	✗	✗
NO CAPITAL COST	✓	✗	✗	✗	✗	✗	✗	✓
COST / LB.	\$\$\$	n/a	\$	\$	\$\$	\$\$	n/a	\$\$\$
ANNUAL COST	\$	\$\$	\$\$\$	\$\$\$	\$\$\$	\$\$\$	\$\$	\$\$
NON HAZARDOUS	✓	✓	✗	✗	✗	✗	✓	✗

SUMMARY: Most treatments are like using a key to unlock a problem. Each key opens one lock very well, but multiple keys are required to treat multiple problems. Using bioaugmentation is similar to using a master key. Bioaugmentation has the ability to eliminate all of the H₂S and odor problems while also preventing them from re-occurring. Additionally, bioaugmentation solves challenges associated with fat, oil, grease and sludge simultaneously.