

Comparison of Sewer Line Odor Control Treatments For A Wastewater Facility in Montana

SUMMARY

This study represents a comparative evaluation of Bioxide (Nitrate salt) chemical treatment versus Gener-Ox chemical-free, superoxygenation for H₂S suppression in a dedicated sewer line running from the force main injection point to the main POTW.

Treatment was initiated into the pressurized force main at a point leaving a malting facility. The main complaint was from Manhole #4049 which is approximately one mile from the malting plant. All other manholes are in sequential order to the WWTP, each with gravity flow conditions.

The results shown below were while feeding Bioxide product prior to the Gener-Ox installation

DATE 10/28/2008		DATE 10/29/2008		DATE 10/30/2008	
Manhole#	H ₂ S (ppm)	Manhole#	H ₂ S (ppm)	Manhole#	H ₂ S (ppm)
4049	83 ppm	4049	39 ppm	4049	148 ppm
4041	36 ppm	4041	3 ppm	4041	66 ppm
4026	24 ppm	4026	1 ppm	4026	45 ppm
4071	8 ppm	4071	1 ppm	4071	29 ppm
4069	3 ppm	4069	1 ppm	4069	26 ppm
4068	3 ppm	4068	1 ppm	4068	21 ppm
4067	3 ppm	4067	1 ppm	4067	20 ppm
Headworks		Headworks		Headworks	

The results shown below were achieved after commissioning of the Gener-Ox system

DATE 4/6/2009		DATE 4/7/2009		DATE 4/8/2009	
Manhole#	H ₂ S (ppm)	Manhole#	H ₂ S (ppm)	Manhole#	H ₂ S (ppm)
4049	2 ppm	4049	1 ppm	4049	2 ppm
4041	1 ppm	4041	1 ppm	4041	1 ppm
4026	3 ppm	4026	1 ppm	4026	2 ppm
4071	1 ppm	4071	0 ppm	4071	1 ppm
4069	1 ppm	4069	1 ppm	4069	1 ppm
4068	1 ppm	4068	0 ppm	4068	1 ppm
4067	1 ppm	4067	0 ppm	4067	1 ppm
Headworks		Headworks		Headworks	

CONCLUSION

IER's Gener-Ox chemical-free superoxygenation technology significantly outperformed the chemical application of Bioxide (Nitrate salt) for H₂S suppression in the force main, as well as the entire 5.5 mile sewer line through to the POTW.