Odor and Corrosion Pilot Solution

Southwestern FL Water Reclamation Facility Headworks

The STX Process

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Pilot Challenge

Southwestern FL

Background: WRF in Southwestern FL put out a public bid to find and pilot solutions for their growing H_2S concerns at their headworks building. Source Technologies, LLC and a large competitor known for their Calcium Nitrate process, piloted their technologies by injecting into the influent force main of the WRF. Both companies were given 1 month each to pilot their technologies to prove their value and provide a solution to the high levels of H_2S. These competing solutions were both injected within the facilities fence-line, approximately 930' up stream of the headworks (~45 minute HRT).

The competing technology was an iron salt solution that "nuked" the plant twice within the first two weeks. Killing off the facility's healthy bacteria and upsetting the plant multiple times. After failing twice in two weeks without providing any quality benefits, only concerns, the company removed themselves from the opportunity.

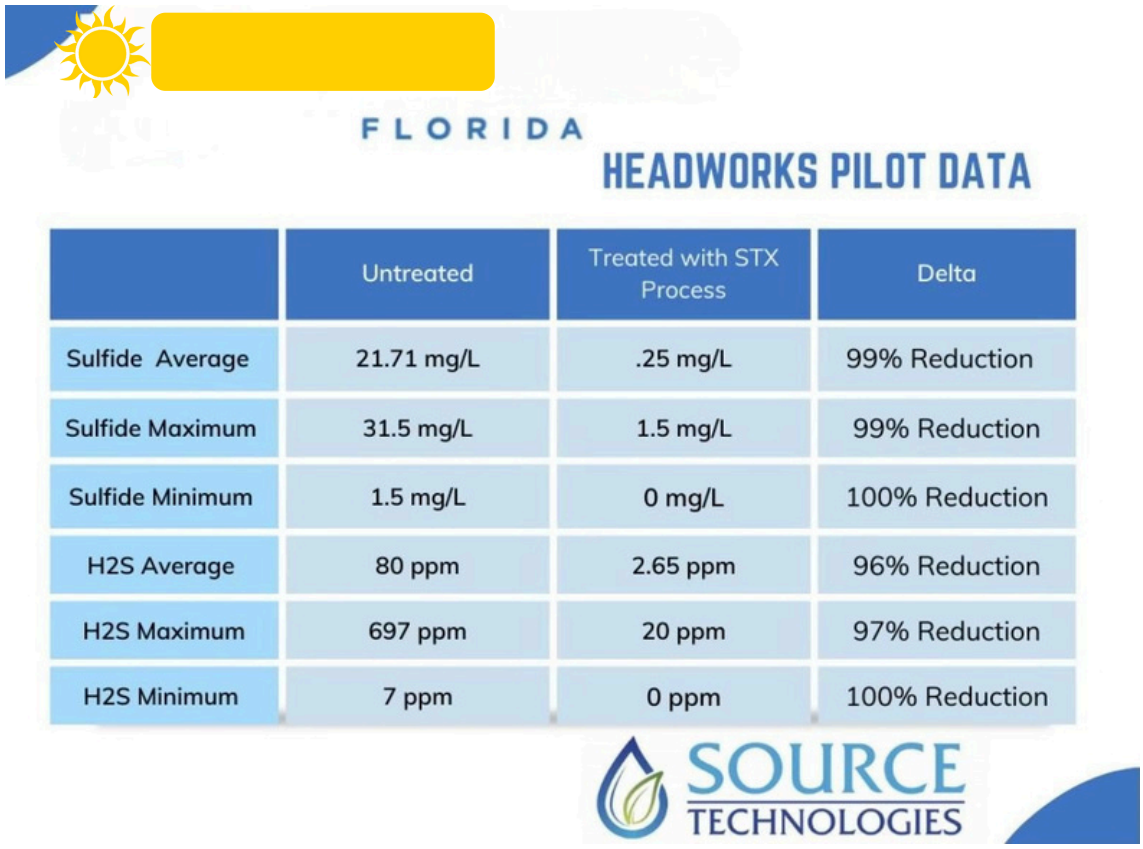
Process: The STX process from Source Technologies is a highly efficient, liquid REDOX technology. It is built around an organic, pH-neutral, and environmentally safe reagent that reacts with an oxidant. Properly mixed, this powerful solution delivers abatement of Sulfide and Volatile Organic Compounds (VOCs) within three minutes. The STX chemistry is designed to prioritize sulfide and VOC removal, resulting in remarkably low chemical feed rates despite its capacity to handle high-concentration sulfide issues. This reduced usage allows the system to operate for months in the same space a competitive solution might occupy for weeks, offering better quality control over sulfide issues and minimizing chemical delivery frequency.

Throughout the pilot testing period, the goals for measuring success were defined as reducing H_2S levels at the headworks to average 10 ppm or below, and reducing total sulfide in solution to average less than 1 mg/l. The desire was to reduce corrosion damage and most importantly, protect the health and safety of employees. Untreated H_2S levels averaged 80 ppm with lethal spikes over 695 ppm. Sulfide levels in solution averaged 21.71 mg/l with a maximum reading of 31.5 mg/l.

The STX Process successfully achieved its goals, maintaining sulfide control while preserving operational stability. Source Technologies reduced H_2S levels by over 96% (averaging 2.65 ppm with maximum spikes of 20 ppm) and incoming dissolved sulfide loading by over 99% (averaging 0.25 mg/l with maximum spikes of 1.5 mg/l). Crucially, the Water Reclamation Facility (WRF) maintained normal operations throughout the pilot, with Dissolved Oxygen (DO) levels remaining consistent and no noticeable changes to the plant's processes.

Pilot Success

Southwestern FL



	Untreated	Treated with STX Process	Delta
Sulfide Average	21.71 mg/L	.25 mg/L	99% Reduction
Sulfide Maximum	31.5 mg/L	1.5 mg/L	99% Reduction
Sulfide Minimum	1.5 mg/L	0 mg/L	100% Reduction
H2S Average	80 ppm	2.65 ppm	96% Reduction
H2S Maximum	697 ppm	20 ppm	97% Reduction
H2S Minimum	7 ppm	0 ppm	100% Reduction

Conclusion

Source Technologies, under the leadership of CEO Suzie Richards, has firmly established itself as a leading and enduring force within the odor and corrosion industry over the last two decades. The core strength of the company lies in its ability to provide one of the most powerful, comprehensive, and cost-effective odor treatment technologies available to the municipal wastewater market.

The company's commitment to innovation is evident in its proprietary family of advanced oxidation and catalyzed oxygenation technologies. These solutions are not only recognized as best-in-class in terms of performance but are also inherently "green," scalable, and simple to operate, aligning perfectly with the modern requirements for sustainable and efficient infrastructure management. This case study demonstrates that Source Technologies is more than just a provider—it is a trusted partner delivering essential, high-value solutions.