

CASE STUDY

OHxyPhogg® – City of Yuma



H₂S Odor Control Achieves Result in Arizona Test

Introduction

H₂S odor control poses a challenge for plants, such as the Figueroa Avenue Wastewater Treatment Facility in Yuma, Arizona. As the city's oldest plant, it processes 80% of wastewater and discharges effluent into the Colorado River. Two influent streams enter the plant: one, approximately 65% of the flow, is treated 30 miles from the plant with ferrous chloride to help eliminate odor, and the remaining 35% of the flow enters the plant untreated. Even with partial treatment, plant operators wanted to reduce H₂S, specifically in the sludge thickening process.

Methodology

Parkson's OHxyPhogg® Odor Control Technology was chosen to test its ability to remove H₂S in the sludge thickening space. OHxyPhogg® is an oxidant fog odor removal

system with a patented air atomizing 3-fluid nozzle. It combines small amounts of ozone with the rapid application of micro-sized water particles, creating a hydroxyl radical fog that is dispersed throughout an air space to generate the largest reaction surface area possible.

In Yuma, two Parkson OHxyPhogg® V150 units, equipped with two nozzles on each unit, were placed in the sludge thickener space. At times, H₂S levels in the space can exceed 70 ppm, and temperatures are frequently well above 120° F. Once the OHxyPhogg® unit was energized, the outlet H₂S levels decreased to virtually zero within 15 minutes. Plant personnel noticed the absence of H₂S immediately. Over the 24-hour test period, H₂S exhaust levels never exceeded 0.4 ppm and were undetectable

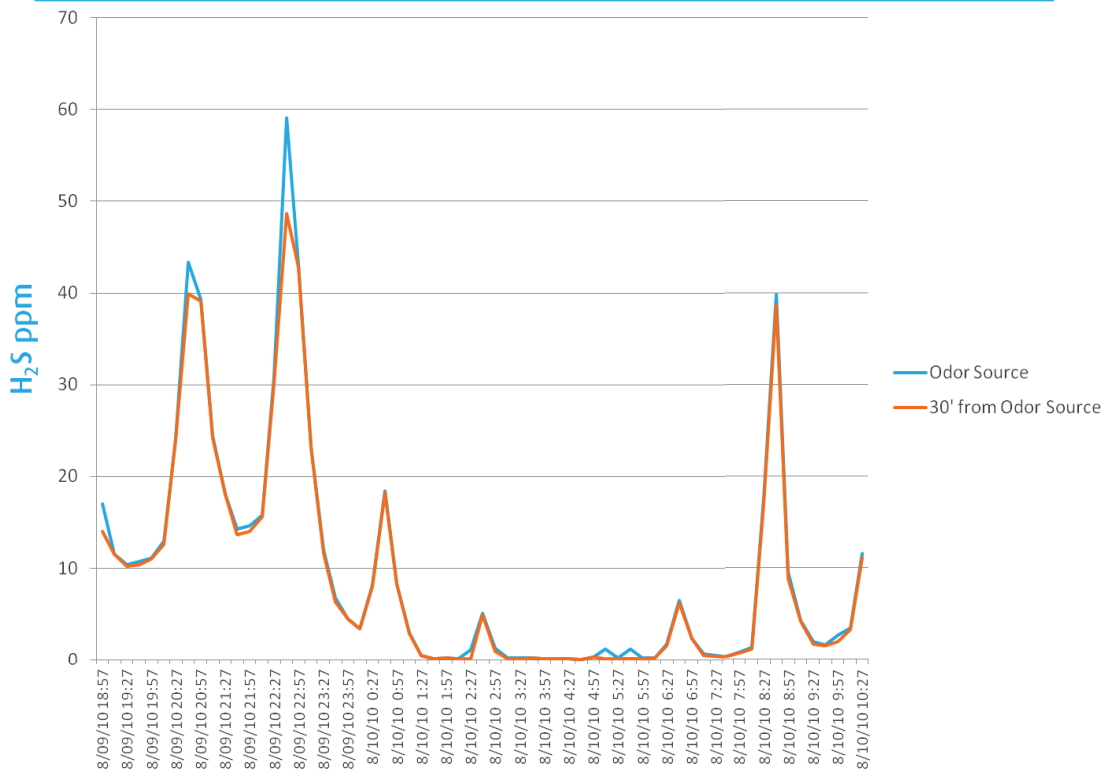
during most of the evaluation time.

"The objectives of the pilot trial were accomplished. The pilot test unambiguously established, both objectively and subjectively, that the OHxyPhogg® unit can reduce H₂S levels to virtually zero," said a report issued by Parkson and the city of Yuma. ■

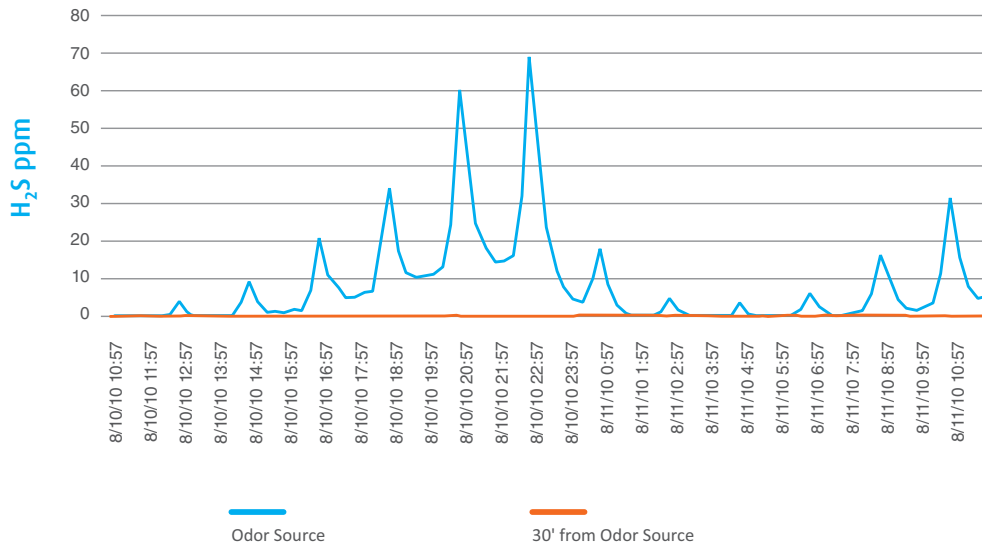
"The test documented that the fogging system was effective in removing H₂S."

**Jeremy McCall,
Plant Supervisor**

Pre-Test H₂S Levels in Sludge Thickening Structure



H₂S Levels in Sludge Thickening Structure with OHxyPhogg®



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