



## CASE STUDY (VBS)

### Chisholm Creek WWTP Dual Train Vertical Bed System

Chisholm Creek Water Treatment Plant (Chisholm Creek) in Oklahoma City, Oklahoma needed an odor solution for their extremely elevated levels of H<sub>2</sub>S and other sulfur compounds released during sewage processing. The city was interested in an effective, low-cost solution for complete odor removal.

Wanting to stay away from high maintenance units, like chemical or wet scrubbers, PureAir recommended using a Dual Train VBS-720 system and Sulphasorb FeXL™ and Sulphasorb XL™ adsorbent media. The VBS-720 is a limited maintenance system designed to manage a high volume of airflow with a considerable saturation of H<sub>2</sub>S.

PureAir recommended using Sulphasorb FeXL™ blended adsorbent media because it can remove 45% of its weight in H<sub>2</sub>S, making it an all-around more effective choice than carbon. It is a 50/50 blend of Sulphasorb XL™ and Sulphasorb Fe™. Sulphasorb FeXL™ is used as a roughing filter along with other adsorbent media for cost-effective and complete odor removal.



PureAir custom manufactured and engineered a Dual Train system with two VBS-720 scrubbers. The system was designed to capture the malodorous air through the bottom of the first unit as it passes through a media bed of Sulphasorb FeXL™, then it moves through a header and into the blower of the bottom of the second unit where it encounters another media bed filled with Sulphasorb XL™.

- VBS-720 FRP roughing air scrubber has a 3' media bed filled with 560 cubic feet of Sulphasorb FeXL™
- VBS-720 polishing air scrubber vessel filled with 420 cubic feet of Sulphasorb XL™

Due to the especially large odor volume, our custom engineered units and superior performing media saved the plant considerable maintenance and costs. A standard competitor unit would require frequent media changeouts, leaving the plant with a costly system without the same 99.99% removal efficiency.

The unit was successful in removing escaping odors from the air leaving workers and the surrounding area happy and smell free.



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