

## CASE STUDY

# V-Bank Transition (VTS)

Robert O. Pickard Environmental Centre  
Ottawa, Canada



## THE PROBLEM

The Robert O. Pickard Environmental Centre (ROPEC) was undergoing needed upgrades and expansions to its thickening and dewatering building. This building plays a vital role by in water treatment providing sewage receiving and pumping, sludge mixing and thickening, as well as dewatering digested biosolids. These processes release H<sub>2</sub>S, Ammonia, and other VOC's into the air, which cause unpleasant odors. Due to the expansion, the need for additional odor control solutions with large airflow capacity became vitally important to prevent any increased odor and gas releases. ROPEC needed a unique solution to remove the high volume of these gases from the air at high efficiency levels.



## THE SOLUTION

PureAir proposed their V-Bank Transition Systems (VTS), a high efficiency, horizontal air flow configuration that provides large airflow capacity with low pressure drop in a compact design. PureAir engineered three VTS 15000 systems constructed of fiber reinforced plastic (FRP) with an airflow capacity of 7,500 CFM each. To target the high release of H<sub>2</sub>S, Ammonia, and other VOC's, PureAir customized each VTS to have four beds of chemisorbant media, rather than the standard two or three beds, filled with Sulphasorb XL™, CPS Blend, Ammoniasorb®, and Omnisorb.

To guarantee optimum and long-term system performance, which includes no escaping odors, ROPEC also decided to install an Electronic Bed Monitor (EBM) in each VTS. EBM's measure the remaining life of the media in real time to ensure there is no breakthrough of gases.

## RESULTS

After the systems was in place, the City asked Welburn Consulting to design and conduct an air testing program to assess the performance of PureAir's odor control systems. These tests were conducted through gas injections and air sampling. The samples were analyzed through various laboratory methods to determine the reduced levels of VOC's. The test results revealed a removal efficiency of  $>99.9 \pm 0.04\%$  of Hydrogen Sulfide and  $99.7 \pm 0.2\%$  of Ammonia.