

## **Robert O. Pickard Environmental Centre**

### **THE PROBLEM:**

The Robert O. Pickard Environmental Centre (ROPEC) in Ottawa, Canada 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 vital to the facility 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:**

To provide the City of Ottawa with the most effective solution to remove the large volume of gases emitted at the facility, PureAir proposed their V-Bank Transition Systems (VTS). The V-Bank Transition System is a high efficiency, horizontal air flow configuration that provides large air flow capacity with low pressure drop in a compact design. PureAir provided three VTS 15000 systems constructed out of fiber reinforced plastic (FRP) with an airflow capacity of 7,500 CFM per unit. 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 chemical adsorbent media rather

than the standard two or three beds. PureAir offered the following chemical adsorbent media to remove the high levels of odors: 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 adsorbent 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.

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