

PureAIR

FILTRATION

ROPEC

THE PROBLEM:

Robert O. Pickard Environmental Centre (ROPEC) in Ottawa, Canada was undergoing needed upgrades and expansions to the thickening and dewatering building on site. This building plays a vital role by providing sewage receiving and pumping, sludge mixing and thickening, as well as dewatering of digested biosolids. These processes release H₂S, Ammonia, and other VOC's into the air which cause an unpleasant odor. Due to the expansion, the need for additional odor control solutions, with large airflow capacity, became vital to the facility to help prevent future odors 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:

In order to provide the City of Ottawa with the most efficient 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 and a compact design. PureAir provided three VTS 15000 systems constructed out of fiber reinforced plastic (FRP), with the airflow capacity of 7,500 CFM each unit. To be able to target the high release of H₂S, Ammonia, and other VOC's, PureAir was able to customize each VTS to have four beds of chemical adsorbent medias rather than the standard two or three. PureAir offered the following chemical adsorbent media to remove these high levels of odor: Sulphasorb XL, CPS Blend, Ammoniasorb, and



Omnisorb. In order to guarantee optimum and long-term system performance, including no odor escape, ROPEC also decided to also install one Electronic Adsorbent Bed Monitor (EBM) on each VTS. These EBM's are able to measure the remaining life of the adsorbent media in the system in real time to ensure that there is no surprise breakthrough of gases.

TESTING

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

RESULTS

In conclusion, PureAir is proud "stand the test" in successfully removing large volume of odorous gases through custom engineered and quality systems. We are happy to work with All-Round Systems to provide a quality solution for the thickening and dewatering building at ROPEC. PureAir looks forward to providing high efficiently systems to new clients in the future.