

Odor Control

Odor Control was a key issue for the Plant upgrade. Before the upgrades, complaints about odor were frequent, and improvements to address odor over the years served only as band aids, and did not sufficiently help the plant meet evolving standards. Older technology, coupled with Wilsonville's population growth, overwhelmed the former odor control systems.

Odor control technology has evolved significantly over the life of the Plant. Odor complaints in the 80's and 90's led to covering the digesters with diamond-plate aluminum and installation of a Calgon activated carbon tower. The tower worked great, the carbon lasted four to five years and complaints went away. During a plant upgrade in 1998, the secondary process tanks were converted into biosolids storage units and also connected to the tower. The carbon then only lasted about five months before needing to be changed, so a decision was made to replace them with a bark chip filter. That worked for a couple of years, but there was so much hydrogen sulfide and organics in the air that it eventually broke down the media and filter. This led to replacement with potting soil, which didn't work, which then led to the installation of twin tower bio-filters.

The bio-filters work well, but did not capture all of the different sources, including the headworks, aeration basins, and solids handling. To address this problem, the recent upgrade and expansion constructed an interconnected network of ventilation ductwork which sucks odors from all of the different processes to a central bio-filter facility for treatment. Individual processes were also required to be covered or otherwise contained.

Air discharges from the new bio-filter facility are subject to very strict limits, with frequent monitoring. The City wrote an "Odor Guarantee" into the operations contract for CH2M-Hill, which includes stiff financial penalties for non-compliance. Since coming on-line in April 2014, there have been no odor upsets at the Plant.