



South Davis Sewer District

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July 5, 2024

RE: ODOR UPDATES

Dear Neighbors,

In May 2024, the District conducted a follow-up internal odor study, which included placing odor sensing devices at the plant and in the Foxboro neighborhood. It took some time to sift through and analyze the data, correlating information from the data loggers with plant operations/processes as well as the odor complaints we've received from the community. Prior to this study, the feedback we received seemed to point overwhelmingly at solids dewatering, storage and loadout. While we believe these processes continue to play a role in odor events, the study appears to point toward several other potentially significant sources.

In recent weeks, we've seen an increase in frequency and reported strength of odor events as captured by the odor complaints that have been submitted. Further diligence and site investigations have led to the discovery that we have some new leakage around the top seam of one of our tanks, allowing foul air to escape without treatment. The solution is slightly more complicated than simply sealing the leaks because we must ensure we don't create pressures that could damage the tank. This tank was already a target for odor mitigation, but it has now been moved to the top of the list and is our highest priority.



Over the course of the last week, staff has been working on a temporary odor scrubber for this tank, which we hope to pilot soon so we can determine how best to effectively capture and scrub the foul air exiting the tank. We'll be doing additional sampling of the foul air to identify the correct media for use in the scrubber and will also be working with vendors to identify and properly size a full-scale unit.

At the same time the odor study was underway, the District also completed routine cleaning of the municipal digesters at the treatment plant, which entailed removing all the biosolids from the digesters and placing them in solar drying beds. We believe this compounded some of the odor issues during that period. While we don't believe the biosolids are currently contributing significantly to ongoing odor events, we will soon need to begin mixing the biosolids to achieve further drying. As we mix and, eventually, haul the biosolids off site, odors may increase so we will advise the community when that work begins.

The money we use to tackle these issues is YOUR money and we want to make data-driven decisions to ensure that we use it wisely. The attached report shows money spent to date (minus staff time) and our current list of projects. This is a living document that we anticipate we'll continue to update and refine. Please note that this is not an exhaustive list of all the projects we are working on.

Finally, we are working on an "Odor Master Plan" that will become a guiding document in part for prioritizing improvement projects and setting thresholds for action on them. When a draft of this document is available for review, we will hold a public comment period to receive input on the document. We will report more on this as the draft plan becomes available.

If you have any questions or would like to review our odor control activities in more detail, please call the District's office at 801-295-3469.

Sincerely,



Matt Myers, PE
General Manager

COMPLETED ODOR CONTROL ACTIVITIES

DATE	DESCRIPTION	APPROX COST	NOTES
CAPITAL COSTS*			
Oct 2019	Eliminated Solids and Ammonium Sulfate Storage in Drying Beds	\$ 15,000	
Oct 2019	Installed Temporary Cover for Pressate Tank	\$ 4,000	
Feb 2020	Misc Projects to Reduce Tank and Line Venting / Installed Blower to Improve Odor Capture from FOG Receiving	\$ 12,000	
2020	Retrofitted Seal on Ammonia Scrubber Blower to Make it Gas-Tight	\$ 2,000	
2020	Fabricated Fume Hood over Solids Dewatering Presses to Improve Odor Capture	\$ 10,000	
2020	Plumbed Ammonia Scrubber Vent into the Foul Air System	\$ 20,000	
2020	Added Green Waste to the Biofilter to Bring it Back to Full Depth	\$ 15,000	
July 2020	Hired Jacobs Engineering to Complete an Odor Study	\$ 39,788	
Sept 2020	South Plant Tower Filter Odor Control Project	\$ 75,000	
2020-2021	Control System Changes (Digester Covers)	\$ 1,500	
Spring 2021	Purchased and Installed Perimeter and Solids Odor Control Systems	\$ 80,000	
Dec 2021	Relocated Foul Air Fan at Solids Dewatering	\$ 11,284	
Apr 2022	Eliminated On-Site Storage of Calcium Slurry	N/A	
Feb 2023	Installed Odor Control Perimeter System around Solids Loadout Area	\$ 6,000	
Jul 2023	Solids Odor Control System Upgrades	\$ 500	
May 2024	Collected and Analyzed Odor Data Using AcruLog Dataloggers (Facility and Neighborhood)	\$ 2,600	Reflects instrument costs only.
SUBTOTAL		\$ 294,672	
O&M COSTS*			
May 2021 to May 2024	QuickAir V	\$ 57,000	Added to solids during dewatering process for odor control.
May 2021 to May 2024	QuickAir 0900	\$ 27,000	Distributed through odor control perimeter systems.
January 2022 to May 2024	Odor Complaint Review and Response	\$ 20,000	
SUBTOTAL		\$ 104,000	
TOTAL		\$ 398,672	

*Costs do not include stafftime for work completed in-house.

ADDITIONAL ODOR CONTROL ACTIVITIES

LOCATION	DESCRIPTION	NOTES
Hydrolysis Buffer Tank	Pilot Independent Odor Scrubber	Equipment needs for this pilot have been identified and work is underway to begin operation.
	Assess the Need for an Extraction Blower	This will be part of the odor scrubber pilot.
	Tighten Bolts/Seal Leaks	Leaks were identified during a recent inspection. They will be sealed once the odor scrubber is in place to avoid pressurization and damage to the tank.
Biofilter	Smoke test to look for short-circuiting/blockages.	Smoke bombs have been obtained and smoke testing will be scheduled as soon as possible.
	Assess Sprinkler System Coverage	Reinspection due.
	Add Filter Media	
	Add Macro- and Micronutrient Metering and Injection System	
	Provide Temperature Monitoring	
	Provide Moisture Monitoring	
Dewatering Building	Reconnect duct work to biofilter.	This will be done in conjunction with smoke testing to confirm blockages.
Receiving Building	Provide Covers for Roll-Offs	
Digestate Tank	Check Pressure-Reducing Valve/Vacuum Relief Valve for Calibration and Leakage	
	Check Bolts/Panel Seams for Leaks and Tighten/Seal as Necessary	Reinspection due.
FOG Tank	Assess Need for Independent Odor Scrubber	Existing vent line tied to the Xerxes tank and connected to the foul air line from the reception building to the biofilter.
FOG Unloading	Investigate How to Provide Better Seals around Access Hatches	
	Install Valves in Place of Loose Caps Taken by Drivers during Unloading	
Liquid Receiving (Tanker Offloading Area)	Develop Solution to Odors Discharging from the Trench Drain System	
	Investigate Putting a Blower on the Trench Drain Vent (AC Scrubber)	
	Check for Leaks around the Xerxes Transfer Pumps and Bases	
	Install Auto-Closing Valves (Horizontal)	
Digestate Storage and Load-Out	Install building to contain digestate (solids) storage and load-out activities.	