South Davis Sewer District

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Foxboro Neighborhood Residents,

The South Davis Sewer District (District) recognizes the impact of the odors from our facilities on the quality of life of residents in the Foxboro neighborhood. We understand the urgency of solving this problem. The City of North Salt Lake has issued a Notice of Code Violation and the District is working diligently to comply with this Notice.

The odors experienced in the Foxboro neighborhood from October 2019 - February 2020 originated from the Wasatch Resource Recovery (WRR) food waste to energy project. We believe that we have eliminated or contained the WRR odors that affected the Foxboro neighborhood.

Sometime between March 12-17th, the wastewater treatment plant (Plant) was hit by something toxic in the wastewater. A significant degradation in Plant performance was accompanied by significant odors. The exact source and cause of these odors has been difficult to identify and locate.

We contacted Dr. David Parry, a Vice President and Senior Technology Fellow with the Jacobs Engineering Group, an international engineering firm. Dr. Parry lives in the area and is familiar with the District. Jacobs has several highly qualified and experienced engineers who deal with odor issues.

Dr. Parry conducted a thorough site assessment of the Plant and WRR to determine what Jacobs could do to identify the odor problem. During this site visit, Jacobs' engineers developed a list of issues and questions to be addressed by the District. Several locations were identified where instrumentation packages could be installed to detect and quantify specific odor causing chemicals.

Jacobs developed a scope-of-work, schedule and budget for their evaluation, and the District has awarded them a contract for this work. Their work will require 90 days. Jacobs' original proposed timeline was 120 days, but when we explained the situation, they worked to tighten their schedule. The District will do everything we can to expedite this process. Jacobs has agreed to share odor sources as quickly as they are determined, and we will work concurrently with their study to correct them.

The District is very sorry for causing such a disruption in the enjoyment of your home and neighborhood. Thank you for your patience and support.

Sincerely,

Dal D. Wayment, P.E.
General Manager

The District has taken the following actions for odor control:

1. To address the first odor issues in October, we hauled away all Wasatch Resource Recovery (WRR) biosolids and ammonium sulfate from the South Plant drying beds. This material all went to agricultural reuse. (cost about $15,000)
2. All new biosolids, South Plant and WRR, are hauled away within 24 to 48 hours.
3. Ammonium Sulfate produced by the ammonia scrubber (10,000 gallons/week) is now stored in a closed tank and hauled away approximately weekly without being exposed to the open air.
4. One remaining drying bed of South Plant biosolids was covered with 6-inch layer of water to reduce odors. This material has defeated every effort to dewater it mechanically. In the spring with hotter weather we will finish solar drying it and haul it to a landfill.
5. A temporary cover for the pressate (the most odorous material) tank was installed in October. We have since converted to the use of reclaimed wastewater, so pressate is no longer stored in this tank. ($4,000)
6. Several projects to reduce tanks and lines from venting to the atmosphere have been completed. Tight fitting covers for the Fats, Oil and Grease (FOG) receiving area have been fabricated and installed. A blower has been installed to improve capture of odors from FOG receiving and the main food waste receiving tank. We have added activated carbon scrubbers to tank vents. (cost about $12,000)
7. We fabricated a fume hood over the biosolids dewatering presses to better target odor capture in the dewatering building. The hood has been installed and a contractor installed the duct work to connect it with the foul air system. (cost about $10,000)
8. We had concluded that the main source of odor at this point was the vent stack to the ammonia scrubber. This stack has been bypassed and the vent plumbed into the foul air system to be scrubbed in the compost odor scrubber. We offered the contractor a significant bonus for dropping other work to do this job. (cost about $20,000)
9. The large, 30 horsepower blower that serves the ammonia scrubber had a totally ineffective seal between the blower shaft and the blower housing. This allowed a large amount of odor to escape. The District's maintenance staff designed and retrofitted a gas tight seal. (cost about $2,000)
10. Once these odors were eliminated, we were able to identify what we hoped was the last major source of odor. We found that under certain conditions digester gas was venting from the digester pressure relief valves. System controls were adjusted to eliminated venting.
11. We made various operational changes to eliminate minor odor sources. This includes keeping doors closed, keeping vaults and sumps covered and/or closed, keeping condensate sumps drained, etc.
12. We have provided solid manhole covers for the pressate line going to the headworks.
13. About two feet of the compost in the odor scrubber had settled and/or been consumed. We have brought in four feet of green waste to bring the bed back to full depth. (cost about $15,000)
14. We have increased the frequency of inspections and maintenance at the two sewer lift stations in Foxboro.
15. We sealed all the manhole covers on the manholes in the main sewer line along the Legacy Parkway trail.
16. We have spot checked sewer mains and manholes in Foxboro.
17. We are adding forced aeration to the 1st stage trickling filter. ($75,000)
18. We have been intermittently flooding the 1st stage trickling filter, increasing the flushing action of its distribution arms, and increasing recycle rates to provide more flushing with the intent of clearing the filter of unproductive biomass and improving ventilation.
19. We are adding micronutrients, a disinfectant neutralizer, and odor control chemical at the South Plant ($8,000 for initial trial)
20. We have retained Jacobs Engineering Group, a national engineering firm with odor control experience to do a complete odor evaluation for the entire South Plant/WRR site. ($28,000)
21. We are covering all boxes, vents, wet wells, etc. where possible.