

Bristol Landfill Facility Update

2:00 PM 05-03-21

Attendees: **DEQ:** Crystal Bazyk, Dan Manweiler, Dan Scott, Stacy Bowers, John Surber,
City of Bristol: Wallace McCulloch, Sam Hess, **Draper Aden Associates:** Ernie Hoch, Don Marickovich, Anthony Tomlin

Weekly Review of Actions

1. Landfill:

- a. Daily monitor the SE Chimney and other locations if discovered with GEM and Hydrogen meter.
 - i. Additional samples to be taken today and this week
- b. Monitor temperatures on wells 46 & 47 & 48
- c. Connect North end cleanout to active gas system
 - i. Samples from all North and South end cleanouts.
- d. Air samples from flow testing.
 - i. Gradient: Thursday 12-3 AM
 - ii. Leachate: Friday 12-3 AM
- e. Verifying Leachate and Gradient flow volumes
- f. Camera the wet well is scheduled for May 18th
- g. Continue to apply additional cover.
- h. Respond to citizen complaints.
 - i. Odor Management Plan
 - ii. Odor Complaint Response Plan

2. Draper:

- a. Steps to consider if the landfill has a SSF or a SSR
 - i. Ensure that the active gas system is working properly
 - ii. Connect the north end cleanout, this week
 1. Samples (attached)
 - iii. Improve connection with the south end cleanout
 - iv. Recommend and install additional gas wells
 - v. Ensure landfill has maximum intermediate and daily cover
 - vi. Daily monitoring, GEM, Hydrogen, Temperature
 1. Chimney's (attached)
 2. Wells 46,47,48
 3. Surface monitoring
 4. Air Grab Samples TO-15 (attached)

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- vii. Additional Tests for:
 - 1. Thermal scanning
 - 2. EPA Method 3C (being taken today)
 - Determination of carbon dioxide, methane, nitrogen, and oxygen from stationary sources using a Thermal Conductivity Detector
 - 3. Volatile Organic Acids EAS-03 (Waiting on canisters, <1 week)
 - 4. Aldehydes and ketones TO-11A (Waiting on canisters, <1 week)
 - 5. Ammonia (Waiting on canisters, <1 week)
- viii. Geoprobe
- ix. Add Gas Wells
- b. Waiting results of Leachate and Gradient, water (ammonia), air grab sample
- c. Wet Well: Identify needs with the City.
 - i. Working to set up advanced camera imaging. (May 18th)
 - ii. Verify operations of all systems
- d. Wastewater System Odor Sampling (May 6 & 7)
 - i. With separate flows (leachate & gradient) test the air with Gem monitor and summa grab sample at three locations. Landfill Manhole, Manhole at State line, at a Manhole location TBD inside TN near the area of complaints.
 - 1. Gradient Air Sampling Plan
 - 2. Leachate Air Sampling Plan
- e. Review 2020 Air reports
- f. Odor Management Plan, Pending DEQ acceptance
- g. Odor Complaint Response Plan, Pending DEQ acceptance
 - i. Waiting on the results of monthly 24-hour sample taken last week
- h. Monitoring Facebook and Smell My City App
 - i. Mapping complaints with weather and location data
- i. Review BVU NOV
- j. Working with SCS on gas field repairs and maintenance

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3. SCS:

a. Last week's report:

- i. Progress was made this week out at Bristol but still some questions left unanswered. SCS filled a poly tank at a rate of approximately 12-13 gpm at the leachate sump. However, the forcemain from the leachate sump pumped 5 gpm approximately at the cleanout adjacent to CPS-1 under the same air pressure of approx. 103 psi. As you recall from Bob's e-mail this resulted in 40' of artificially induced head on the leachate forcemain. SCS proposes the following next steps be taken next week to improve leachate removal, as well as these other action items:
- ii. Dig up road crossing where 2" airline and 4" forcemain are snaked through individual 6" HDPE protective sleeves. ID any kinks, bellies, etc. that could partially obstruct flow from forcemain. Use 12" HDPE protective sleeve or equivalent at road crossing for both air and forcemain. Cover 12" HDPE sleeve with residual stone left adjacent to leachate sump for additional protection.
- iii. Install ARI air release valve between road crossing and the leachate sump at the high point in the leachate forcemain, this was ordered today, should arrive on Monday.
- iv. Retry pump test at the leachate forcemain cleanout (Recall first test there was 33 gallons in 6 minutes 18 seconds)

b. Week of 5-3-21

- i. Well checks
- ii. Look for new wellhead, Ingenco or Bristol, for GW-38. Segway off lateral piping to GW-48 to connect GW-38 to vacuum, and tune.
- iii. Help Bristol connect southern cleanouts to 588 if not done already. Retune southern cleanouts to vacuum change.
- iv. Assist Bristol in the remaining inventory of 4" pipe and fittings to get northern cleanouts connected, place remaining parts order for northern cleanouts after next weeks trip
- v. Epoxy seal two cracked witness zone cleanouts
- vi. Tune well field and ensure all viable wells are operations.

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- vii. Confirm well field labeling and viability partly completed
 - 1. Determine if underperforming existing wells are recoverable (water level test)
 - a. "From Brandon King, SCS: GW-30 and GW-31 were both abandoned. GW-30R was drilled adjacent to GW-30, but GW-31 leaves a wide-open area in the middle for a new well. I recommend replacement of the 5 poor quality wells on the south end of the quarry. I'd like to see pumps installed in these new vertical wells. Also, I'd like to explore options available to route dewatering liquids from proposed west side wells through the west side quarry wall to the sanitary sewer. I'll be on-site this week to discuss this further.
 - b. Other areas of interest for additional wells are the south end of the quarry below wells GW-41 and GW-46, but I'm not sure how it will coincide with the City's filling schedule.
 - c. Updated Well performance list (attached)
 - viii. Check south end cleanout connections.
 - ix. Recommend placement of new wells / horizontal collectors.
 - 1. Optimum amount
 - 2. Minimum amount
 - 3. Survival plan in coordination with landfill filling plan
 - x. Work with the City on the north end clean out connections (Planning) (completed 1-2 weeks)
 - 1. Add sample ports to each of the lines (10 Done!)
 - xi. Compare flow rates to Ingenco Arrival / Departure
- c. **Week of 5-10-21:** Should it be necessary to relocate the leachate collection tank and install a third pump than that work will be scheduled for the following week.
- i. Complete system repairs if needed subject to Weeks 2 results.
- d. **Week of 5-17-21:** Trouble shoot the south end clean out and landfill 221 system for flow and possible air infiltration.