

Hanover Engineering

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JAN - 7 2019
LOWER SAUCON TOWNSHIP

January 4, 2019

Ms. Leslie Huhn, Township Manager
Lower Saucon Township
3700 Old Philadelphia Pike
Bethlehem, PA 18015

RE: Inspection Conducted on January 3, 2019
IESI Bethlehem Landfill
Hanover Project LS90-7

Dear Ms. Huhn:

The purpose of this letter is to report the results of the above-referenced "mid-meeting" inspection. The inspection was conducted by me along with David Pannucci, Regional Engineer, Cody White, Landfill Gas Technician, and John Baughman, Operations Manager at the Blue Ridge Landfill. The following items were noted during the inspection:

1. The BRE plant was running at full capacity (both compressors online) at 1850 scfm.
2. We entered the scale house to inspect trucking slips from Waste Connections' transfer stations. For both transfer stations combined, one (1) out of five (5) trucks were overweight.
3. The landfill flare was running at a flow rate of 1,435 scfm and a temperature of 1,680 degrees Fahrenheit and appeared to be operating normally. There were no visible emissions from the flare at the time of the inspection. Mr. Pannucci stated that there have been no visible emissions since the incident on November 28, 2018 (see report of December 6, 2018 inspection). The bar graph on the instrument panel indicated that the flare was running at fifty-three percent (53%) of the Variable Frequency Drive (VFD) capacity. The largest blower was in operation. The paper chart was not operational. Mr. Pannucci stated that the pen failed and would be replaced.
4. The truck wash was open due to muddy conditions.
5. Some sediment was observed on Applebutter Road west of the landfill driveway. No blowing litter or odors were observed along Applebutter Road up to Ringhoffer Road, the entrance driveway, or the office parking lot. Mr. Pannucci stated that the street sweeper had cleaned Applebutter Road earlier in the day and would continue to do so. The street sweeper was observed on site during the inspection.
6. Wind during the inspection was from the north/northwest at five to ten (5 - 10) miles per hour. Weather conditions were cloudy to partly sunny, dry, and low 40s.
7. Garbage was being disposed of at one (1) working face in the northwest corner of Cell SE-1A. From here garbage is being pushed eastward to fill the cell all the way to the east side. The approach to the working face is muddy, and one (1) truck had to be towed by a dozer after unloading. The first eight foot (8') "fluff lift" has been installed in the cell area being utilized for disposal. Therefore, disposal today is taking place above the fluff lift, no spotters are required at the working face, and all types of permitted waste are allowed for

- S
- ROUTING
- Council
 - Manager *mm*
 - Asst. Mgr. *6*
 - Zoning
 - Finance
 - Police
 - P. Works
 - P/C
 - P & R
 - EAC
 - Engineer
 - Solicitor
 - Planner
 - Landfill
 - EMC
 - Other *webb*

head-03-19

- disposal (not just Municipal Solid Waste). One (1) truck was unloading on the tipper and one (1) was unloading conventionally (dump body). Two (2) trucks were waiting to unload. Two (2) dozers were spreading and placing garbage, and one (1) dozer was spreading daily cover. One (1) compactor was in use. Soil for daily cover was being hauled from the eastern stockpile by two (2) trucks and staged at the working face. Dump trucks were also hauling cover soil onto the site and depositing it on the eastern stockpile. One (1) truck was observed dumping asphalt in a stockpile, which Mr. Pannucci stated would be used for road base. One (1) wind screen was in place at the east end of the cell.
8. The east end slope of the landfill still contains garbage on the surface and still needs to be dressed up to cover the litter showing on the surface.
 9. Two (2) pickers were working on site to remove blown litter: south of SE-1A, and on the northern slope.
 10. The north slope road was driven. No additional erosion since the last inspection was observed. The rock-lined drainage swale and rock check dams in front of the runoff points are still in good shape.
 11. No disposal is taking place at top of the landfill. Mr. Pannucci stated previously that they are at maximum elevation at the top.
 12. Mr. Pannucci stated that more seeps have occurred on the south face and will be remediated.
 13. The east end of the south face will be dressed up to remove erosion rills and cover flagging garbage when site conditions are conducive.
 14. The temporary cap on the south face was observed. No ballooning of the cap was occurring.
 15. The west high wall was observed. No slope failures or major movement of soil or rock since the last inspection was evident.
 16. No odors were observed on the site.
 17. The customer convenience area is in use.
 18. I observed a geotechnical drill rig installing borings just to the east of the access road, directly across from the flare enclosure. Mr. Pannucci stated that this was a third-party driller hired by Aria Energy to test the soil conditions at the possible site of their proposed plant.
 19. I observed that construction work was continuing to take place at the base of the main gabion down channel on the south face. Mr. Pannucci previously stated that the channel had partially washed out. Upon removal of the gabion baskets on the lower portion of the channel, it was observed that multiple holes existed in the underlying liner. A capping crew was on site replacing the damaged liner sections ahead of the new channel construction, which is complete up to the first bench. This work will progress up the south face and encompass the entire length of the channel. This may be an area where stormwater is entering the waste pack and ultimately the leachate collection system.
 20. I observed a new utility hut constructed just west of the down channel. Mr. Pannucci stated that this will house new compressor equipment being installed by SCS, the landfill's gas consultant. It will be called Compressor Shed 2. Air lines from the compressor will be routed to about fifteen (15) gas wells in this area and used to run pumps in those wells that operate pneumatically rather than electrically. The wells are all "watered in" (contain leachate which inhibits the flow of gas from the wells). Pumping the wells will allow for more efficient removal of larger volumes of gas.
 21. I conducted a driving patrol along the intersection of Applebutter Road and Ringhoffer Road before the inspection, starting at 10:18 am. No landfill-related odors were observed. The sight and sound of trucks and equipment working on the landfill (engines, travel alarms, tailgate slapping) was observed. The sight of the tipper was observed. The sight and sound

of the drill rig operating (pounding sampling spoons making a "pile driving sound") was observed. I conducted a driving patrol along Skyline Drive after the inspection, starting at 11:52 a.m. No landfill-related odors were observed. The sight and sound of trucks on the landfill (south face haul road) were observed from the end of Skyline Drive. I conducted a driving patrol through Steel City after the inspection, starting at 12:05 p.m. No landfill-related odors were observed. From the entrance to the Hill Climb the sight and sound of trucks on the landfill road on top of the MSE wall was observed. This is the route taken by trucks after leaving the working face and returning to the scale. On the driving patrol through the Narrows it was observed that the road downslope of the runoff point from the landfill was clean. No water was running at the time of the inspection (dry weather conditions).

22. The issue of the culvert under Applebutter Road just west of Ringhoffer Road was addressed. The culvert pipe outlets were measured at twenty-four-inch (24") diameter and observed to be flowing less than one-quarter full. The inlet side was observed to be free of ponded water. A large accumulation of organic debris (leaves, sticks, branches) and sediment was observed to be concealing and burying the inlets of the pipes. I was unable to see if the pipes are bare-end, or at a headwall. The inlets are several feet inside the landfill perimeter fence. The culvert is on the natural stream channel that carries an unnamed tributary to the East Branch of the Saucon Creek. The issue of the culvert needing to be unclogged was discussed with Mr. Pannucci, who stated that the culvert is not owned by the landfill and he does not believe the landfill would be obligated or even allowed to clean it out. The fact that the culvert carries the flow of a natural stream, and that any work done in the stream channel may need a State permit, was also discussed.

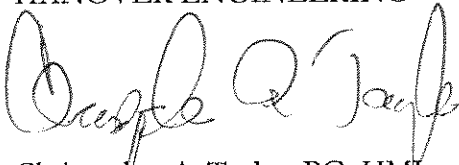
Activity Related to the Southeast Realignment Expansion

23. Newly constructed Cell SE-1A has received PA DEP certification and is now actively receiving garbage.

If you have any comments or questions regarding any of the above, or find that you need additional information, please do not hesitate to call me immediately.

Respectfully,

HANOVER ENGINEERING



Christopher A. Taylor, PG, HMI
Host Municipality Inspector

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