

Hanover Engineering

252 Brodhead Road • Suite 100 • Bethlehem, PA 18017-8944
Phone: 610.691.5644 • Fax: 610.691.6968 • HanoverEng.com

September 21, 2018

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

RE: Inspection Conducted on September 20, 2018
IESI Bethlehem Landfill
Hanover Project LS90-7

Dear Ms. Huhn:

The purpose of this letter is to report the results of the above-referenced "Pre-meeting" inspection. The inspection was conducted by me along with Donald Hallock, General Manager and Jayme Steigerwalt, the newly-hired Operations Manager. The following items were noted during the inspection:

1. The BRE plant was running. It was learned at the meeting following the inspection that BRE was taking one (1) compressor off-line during this time frame and decreasing their gas flow to about 1,200 scfm.
2. The landfill flare was running at a flow rate of 2,275 scfm and a temperature of 1,678 degrees Fahrenheit and appeared to be operating normally. There were no visible emissions from the flare. The bar graph on the instrument panel indicated that the flare was running at fifty-seven percent (57%) of the Variable Frequency Drive (VFD) capacity. The largest blower was in operation. The paper chart went back to September 10, 2018 and indicated a decrease in gas flow on September 12, 2018, with steady gas flow since. The paper chart showed numerous fluctuations in temperature, which is usually very constant. Nick Rogers, Environmental Compliance Manager, was consulted about this. He stated that this was due to an oxygen leak in the system that was caused when a gas well was struck by a piece of machinery. He stated that a new PLC system to control the louvers had recently been installed, and that this system allows all four (4) banks of louvers to work in sync. As a result, the louvers were able to keep the flare temperature within an acceptable operating range during the oxygen leak, thus preventing a flare shutdown and also preventing malfunctions such as visible emissions. He stated that the leak was found and fixed.
3. The truck wash was in use due to wet conditions.
4. No blowing litter, mud, or odors were observed along Applebutter Road up to Ringhoffer Road, the entrance driveway, or the office parking lot. Sediment was observed on the westbound lane of Applebutter Road going west from the landfill entrance. Mr. Hallock stated that the street sweeper had been out on Monday and Wednesday of this week. He stated that either the sweeper would be brought back today, or they would use a piece of their equipment to "broom" the road.
5. No wind-blown litter was observed on the site.

ROUTING

- ☒ Council
- ☒ Manager
- ☐ Asst. Mgr.
- ☐ Zoning
- ☐ Finance
- ☐ Police
- ☐ P. Works
- ☐ P/C
- ☐ P & R
- ☐ EAC
- ☐ Engineer
- ☐ Solicitor
- ☐ Planner
- ☒ Landfill
- ☐ EMC
- ☒ Other

6. Wind during the inspection was 5 to 10 mph from the east/southeast. Weather conditions were cloudy, drizzly, and cool.
7. We visited the scale house and I was shown trucking slips for the loads that had come in so far that day from the two (2) transfer stations owned by Waste Connections. These are identified as the station at 110 50th Street and the station at 577 Court Street, both in Brooklyn, New York. A total of twelve (12) slips were provided. All of them indicated that all trucks had departed the transfer stations under 80,000 pounds, and all but one (1) had weighed into the landfill under 80,000 pounds (that truck was 80,800 pounds).
8. Garbage was being disposed of toward the eastern end of the landfill. Long haul tractor trailers were being unloaded using the truck tipper. One (1) truck was unloading on the tipper and two (2) were waiting to unload. Local collection trucks were unloading conventionally. One (1) truck was unloading and two (2) were waiting to unload. One (1) compactor was running at the working face. All trucks are using the south face haul road to approach and leave the working face. The portable mister was in operation in the area of the new cell construction, southeast of the working face. The approach road to the working face was muddy but passable, and a dozer was observed working to smooth out the road.
9. The north mister line was not in use. The south mister line has been removed. Mr. Hallock stated that it will be installed closer to the new cell.
10. Areas of daily and intermediate cover are adequate to cover garbage, with no flagging garbage or seeps observed. Mr. Hallock stated that two (2) seeps had been found and repaired recently.
11. The temporary cap on the south face was observed. No ballooning of the cap was occurring.
12. The west high wall was observed. No slope failures or major movement of soil or rock since the last inspection was evident.
13. The recycling and customer drop-off area (for small, non-commercial vehicles with garbage) is still relocated to the southern access road. The new area for these services has been constructed as part of the Southeast Realignment but cannot be utilized until other construction in the area has been completed. Work has started to pave the roadway leading into the new drop-off area.
14. The north slope road was driven. As reported from the last inspection, the entire length of the road running downhill from the maintenance shop to the western end had been compacted, and the swale along the south side of the road had been cleaned out and relined with large stones. Also, large stones had been piled in front of the two (2) locations where stormwater runs off the road northward before leaving the site. This includes the area of the concrete spillway. The purpose of this work was to have stormwater flow in the swale rather than down the roadway, and to be detained before leaving the site so that any sediment carried by the water will drop out. Based on observations during this inspection, it appears that these measures are working as intended. Extremely minor erosion was observed in a very small section of the road. A deposit of sediment was observed at the base of the stone piles at both runoff locations, indicating that water had ponded here long enough for the sediment to drop out, as intended. The section of the road between the upper and lower runoff points needs to be covered with stone and compacted, and more stone has to be added in front of the lower runoff point. Mr. Hallock stated that he would have this work completed.
15. Mr. Hallock stated that hydroseeding of about five (5) acres is planned for the southern face in the first week of October, given suitable weather and site conditions.

16. I conducted a driving patrol along the intersection of Applebutter Road and Ringhoffer Road before the inspection, starting at 9:50 a.m. No landfill-related odors were observed. Portions of the landfill are now visible through the trees. The sounds of machinery working and truck engines were observed coming from the landfill. I conducted a driving patrol along Skyline Drive after the inspection, starting at 11:25 a.m. No landfill-related odors were observed. The sight and sound of garbage trucks and dump 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 11:40 a.m. No landfill-related odors or sounds were observed from the entrance to the Hill Climb. The sound of equipment working was clearly audible (but not visible) coming from the top of the hill, but this seemed to be on the Hillclimb property or just beyond in the power line right-of-way. 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.

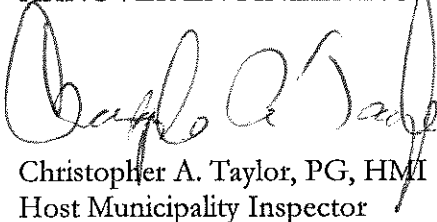
Activity Related to the Southeast Realignment Expansion

17. Construction activity related to the expansion is continuing in new Cell SE-1A. Rob Tyler of Martin and Martin was onsite overseeing the construction work. Protective stone cover continues to be placed on the liner. The superstructure of the leachate pump house has been constructed. Sediment Basin 2 has collected water, which was being pumped out to facilitate hydroseeding.

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

cat: llb

S:\Projects\Municipal\LSauconTwp\LS90-07-BethLandfill\Docs\IESI landfill report of Sept 20, 2018 insp.doc