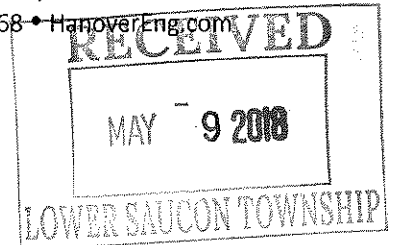


# Hanover Engineering

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May 7, 2018

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

RE: Inspection Conducted on May 3, 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 "Mid-meeting" inspection. The inspection was conducted by me along with Don Hallock, District General Manager. Mr. Hallock stated that Nick Rogers, Compliance Manager, had the day off. The following items were noted during the inspection:

1. The BRE plant was running on one (1) compressor at a flow rate of about 1,100 scfm. Mr. Hallock stated that they were working on the problem with the second compressor.
2. The landfill flare was running at a flow rate of 1,760 scfm and a temperature of 1,670 degrees Fahrenheit, and appeared to be operating normally. The bar graph on the instrument panel indicated that the flare was running at fifty-five percent (55%) of the Variable Frequency Drive (VFD) capacity. The largest blower was in operation. The record of gas flow to the flare recorded on the paper chart went back to April 25, 2018. The chart showed a step up in gas flow to the flare between April 25 and April 27, then steady flow, then a shutdown late April 30/early May 1, then running steady since May 1. Mr. Hallock stated that it was a planned shutdown for a tie-in to the gas collection system from the new cell construction. As discussed in the report of the April 5 inspection, Mr. Hallock stated that the major collector pipe that runs under the new south face haul road had become "watered in" (i.e. - filled with liquid), due apparently to a sag in the pipe at this location. This blocked off the flow of gas through the pipe. A pump was installed to remove the liquid when the problem was discovered. Mr. Hallock had planned to have this pipe replaced when the contractor arrived on site to begin construction of additional gas wells. However, he stated that they did not have the proper fittings to complete this work, so it had to be postponed. In the meanwhile, they continue to pump the liquid out of the pipe to keep it open for gas flow.

Mr. Hallock stated that there have been no issues with visible emissions from the flare lately. Previously the Pennsylvania Department of Environmental Protection had observed visible emissions from the top of the flare stack, and had assessed a violation against the landfill for failing to report the incident to them and for failing to bring a trained observer to the site to assess the situation. Mr. Hallock stated that, in response to these issues, he is having their

ROUTING

- Council
- Manager *by*
- Asst. Mgr.
- Zoning
- Finance
- Police
- P. Works
- P/C 3.
- P & R
- EAC
- Engineer
- Solicitor
- Planner
- Landfill
- EMC
- Other

*web*

- consultant (EarthRes Group) perform trouble-shooting on the flare operation, concentrating on the functioning of the louvers. He believes the louvers are not operating perfectly in sync, and that this is causing the visible emissions. He also stated that they are going to have a training session in-house to get staff certified as trained observers so that staff members can assess visible emissions. He offered to have me join in on the training session. The details of this would have to be worked out.
4. Mr. Hallock stated that the contractor for the installation of new vertical gas wells, AEG Environmental, has mobilized to the site, has completed two (2) of the re-drill wells, and is working on the third re-drill well. This work was observed ongoing during the inspection. He stated that odor neutralizer is being sprayed on the garbage that is brought up during the drilling operation. This garbage is then loaded on a truck and taken to the working face. This was observed during the inspection. The re-drilled wells are constructed next to, or in the area of, older wells that are no longer productive and are meant to replace those older wells. He stated that they will complete all ten (10) re-drills first, then move on to the four (4) new gas wells.
  5. The truck wash was not in use due to dry conditions.
  6. No mud, blowing litter or odors were observed along Applebutter Road up to Ringhoffer Road, the entrance driveway, or the office parking lot. Some dry sediment was observed on the westbound lane of Applebutter Road from the landfill entrance going west. A water truck was observed spraying the internal roads for dust control.
  7. Wind-blown litter was observed on the south face and the north face. Two (2) pickets were observed working to remove the litter from the south face.
  8. Wind during the inspection was from the west/northwest at ten to twenty (10 - 20) miles per hour. The weather was sunny and warm.
  9. Garbage was being disposed of toward the eastern end of the top of the landfill in Cell 3D in an area previously approved as part of the expansion. One (1) compactor and one (1) bulldozer were running at the working face to spread and compact garbage. The truck tipper was being used to unload one (1) truck during the inspection, with one (1) truck waiting to use the tipper. Two (2) trucks were unloading conventionally and none were waiting to unload conventionally. The portable mister was in operation at the working face. Portable wind screens were in place at the working face. Mr. Hallock stated that he has ordered new portable wind screens to increase the number he has to use. No odors were observed anywhere else on site. The approach road to the working face is very stable. Mr. Hallock stated that they added crushed rock to stabilize it.
  10. It was observed during the February 1, 2018 inspection that the daily soil cover in some areas of recent disposal at the top of the landfill was inadequate, and that pieces of garbage were showing through the cover. At the time I advised Mr. Rogers that this was unacceptable and needed to be corrected. On April 18, 2018, the PA DEP conducted an inspection and noted this condition as a violation. In response, Mr. Hallock reported at the Township Council meeting on May 2 that they were aggressively addressing the situation. During this inspection, I conducted a walking tour of the areas called out by PA DEP to observe the progress of this work. I observed that the low areas around wells that needed to be raised had been cleared of garbage (including mattresses). I observed that large areas of flagging garbage on the north slope had been covered, and that additional cover soil was being staged here for placement over areas that were not yet covered. I observed the area on the southwest "shoulder" of the landfill that had been identified by PA DEP as having multiple seeps. Mr. Hallock stated that all the seeps in this area had been dug out and

- repaired, and the area then recovered. I observed fresh soil cover in this area, and no seeps were evident. Mr. Hallock that the top two (2) benches on the west end of the southern face had been cleaned, reshaped, and re-covered with soil. Fresh soil cover was observed in these areas. He stated that this work would continue to proceed down the south face as needed.
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 is now being constructed as part of the Southeast Realignment. Work on this area recently resumed.
  14. I conducted a driving patrol along the intersection of Applebutter Road and Ringhoffer Road before the inspection, starting at 10:17 p.m. No landfill-related odors were observed. The sight and sound of trucks driving and dumping on the top of the landfill was observed. The sight and sound of equipment working on the landfill (track hoe loading fill, a compactor driving, a dozer driving) were observed. More noise from the landfill was observed at this time than during any previous inspection. I conducted a driving patrol along Skyline Drive after the inspection, starting at 11:56 a.m. No landfill-related odors were observed. The sight and sound of garbage trucks on the landfill (south face haul road) were observed. I conducted a driving patrol through Steel City after the inspection, starting at 12:06 p.m. No landfill-related odors or sounds were observed. No landfill-related issues were observed on the driving patrol through the Narrows.

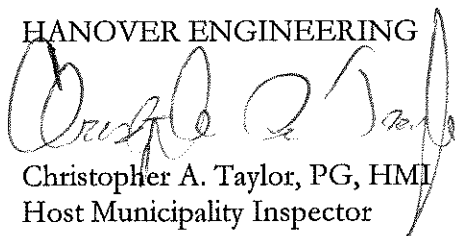
Activity Related to the Southeast Realignment Expansion

15. Mr. Hallock stated that construction activity related to the expansion has resumed thanks to suitable weather and site conditions. Rob Tyler, the field engineer from Martin and Martin, was on site overseeing the construction work. Mr. Tyler stated that they were placing and compacting structural fill to create the intercell berm between new Cells SE-1 and SE-2, and to achieve subgrade below new Cell SE-1A. A technician from Martin and Martin was observed onsite to check the compaction with a nuclear densometer. Once the subgrade is constructed, the survey consultant will be brought in to check the elevations throughout the cell. Once this is complete, the construction of the cell subbase will then begin.

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