

Hanover

Engineering Associates, Inc.

June 16, 2015

JUN 18 2015

Mr. Jack Cahalan, Manager
Lower Saucon Township
3700 Old Philadelphia Pike
Bethlehem, PA 18015

RE: Inspection Conducted on June 16, 2015
IESI Bethlehem Landfill
Hanover Project LS90-7

Dear Mr. Cahalan:

The purpose of this letter is to report the results of the above-referenced post-rainstorm inspection, which was conducted by me along with Allen Schleyer, Compliance Manager for IESI. This was a special inspection conducted to assess the affects on the facility caused by a rainstorm on the evening of June 15, 2015, and IESI's response. The following items were noted during the inspection:

1. Applebutter Road was clear of sediment, except for some silt at the returns to the landfill entrance. The road was clear of litter. All cleanup work had taken place the morning of June 16, 2015.
2. The entrance drive to the landfill was clear of sediment and litter.
3. IESI had earlier repaired an erosion area on the north face, just above the maintenance building. Allen reported that garbage was exposed at the deepest part of the erosion channel.
4. IESI was in the process of repairing an erosion area on the west end of the southern face, using a bulldozer to grade.
5. The western face contained numerous erosion channels. No garbage was visible in any of these. Allen stated that this would be repaired next.
6. The west high wall was inspected, and no major slope failures were observed. Work to clean out the stormwater channel at the base of the wall, started before the storm event, was observed.
7. Allen reported that stormwater overflowed the lower benches on the southern face, starting at the fifth bench up from the bottom. This water flowed down the southern face, rather than along the benches to a down-pipe as designed, and into the channel at the toe of the southern face. Water also carried some garbage from the active disposal area (at the west end of the southern face) down to this channel. The stormwater flow in the channel was thus higher than designed. This is consistent with my observations.
8. Allen reported that the inlet of the junction box at the bottom of the down-pipe was partially clogged with sediment and garbage, shunting some of the water flow around the box instead of allowing it to enter the underground piping system. This kept the flow in the channel unusually high. This is consistent with my observations.

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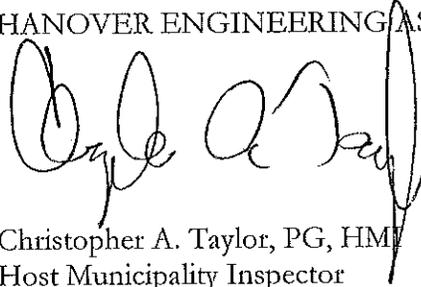
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- Solicitor
- Planner
- Landfill
- EMC
- Other

9. Allen reported that the channel flow inundated the thirty-six inch (36") pipe at the eastern end, overtopping the channel and carrying sediment and litter down the entrance driveway and onto Applebutter Road. This is consistent with my observations.
10. A crew was working to clean the sediment out of the channel.
11. I advised Allen that he should find a way to keep the junction box inlet from clogging under such conditions. In this way, even if the channel is carrying an unusually high flow due to a failure upstream, this will act as a "fail safe" to catch the water and force the flow to the underground piping system. He agreed, and stated he would also look into the feasibility of constructing an inlet on top of the manhole downstream of the junction box, as an extra measure to move storm flow from the channel to the underground piping system.

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 ASSOCIATES, INC.



Christopher A. Taylor, PG, HM
Host Municipality Inspector

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