

JAN 22 2014

# Hanover

Engineering Associates Inc

November 25, 2013

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

RE: Joint Municipal Landfill Committee  
Minutes of November 21, 2013 Meeting  
Hanover Project LS90-07

Dear Mr. Cahalan:

The Joint Municipal Committee between IESI Bethlehem Landfill and Lower Saucon Township met at the Landfill Office on November 21, 2013. The meeting began at 1:00PM. Attending the meeting were:

Ms. Priscilla deLeon  
Ms. Donna Louder  
Mr. Allen Schleyer  
Mr. Christopher Taylor, PG, HMI

Mr. Wally Govern of the Pennsylvania Department of Environmental Protection (DEP) arrived at the end of the meeting to conduct an inspection on behalf of the DEP. He participated in the inspection following the meeting.

## AGENDA ITEMS

### I. Status of Waste Activities

Monthly Tonnages:

	<u>August</u>	<u>September</u>	<u>October</u>
Municipal Solid Waste (total)	27,592.50	25,295.30	25,608.10
Construction and Demo (total)	9,023.90	6,621.50	8,668.50
Residual Waste (total)	1,204.60	762.90	1,035.00
Asbestos	[241.70]	[76.60]	235.90
Out of state-total (percentage)	[26,038.70](69%)	[20,993.20](64%)	[23,063.90](65%)
<b>TOTAL</b>	<b>37,821.00</b>	<b>32,679.70</b>	<b>35,311.60</b>
Recycled Tonnage (percent from Lower Saucon Twp.)	21.80 (76%)	4.70 (76%)	0.00 (83%)

NOTES: 1. The tonnage for 'Asbestos' is included in the tonnage for 'Residual Waste (total)' and is therefore shown in brackets.  
2. The 'Out of state - total' tonnage figure has now been consolidated to include total tonnage from all waste categories, and is shown in brackets because it is included in the tonnage for the other categories.

### ROUTING

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

website

Jml 11-21-13

<u>Form U Submittals</u>	<u>Waste</u>	<u>Approval Date</u>
NJ Transit Corp	PCB soil/debris	10/11/13
NJDEP	ACM	10/29/13
Hatfield TMA	Mun. incinerator WWTP sludge ash	11/04/13
Central Steel Drum	Non-petroleum soil/debris	11/09/13
Bio-Med	ACM	11/12/13
St. Patrick's Cathedral	ACM	11/12/13
UGI Utilities	RR ties/soil	11/16/13

II. Annual Groundwater Trend Analysis

- The Annual Groundwater Trend Report submitted before June 30, 2013.

III. Correspondence and Reports

- Form U Submittals to PA DEP and Lower Saucon Township
- Abatement System Report
- Second Quarter 2013 Lower Saucon Township Facility Report
- Third Quarter 2013 Lower Saucon Township Facility Report
- Minor Permit Modification for Alternative Daily Cover correspondence

IV. Landfill Operations

- Department of Environmental Protection Inspections
  - October 3, 2013 – S. French: site meeting
  - October 9, 2013 – S. French, D. Evans: engineer's meeting
  - October 28, 2013 – W. Govern: site inspection
  - November 7, 2013 – S. French: site meeting
  - November 14, 2013 – S. French, D. Evans: engineer's meeting

Mr. Schleyer stated that Ms. French stopped in a couple of extra times to observe the fill Sequence in the minor permit modification area.

- Host Municipal Inspection
  - September 19, 2013 – Chris Taylor
  - October 4, 2013 – Chris Taylor
  - October 17, 2013 – Chris Taylor
  - November 6, 2013 – Chris Taylor
- Bethlehem Renewable Energy (BRE) and Flare Operations

The following is an update to the Bethlehem LFG Flare activity. We had the following LFG flare and BRE turbine shutdowns at Bethlehem Landfill. The auto-valve closed as designed at each location. No odors were noted or odor complaints received by Bethlehem Landfill during the outage events. The BRE power plant is currently down for equipment

repairs and estimated to restart November 22, 2013. The flare is the primary gas control system at this time.

Oct 1, 2013	Flare startup	09:30	Turbine running
	Flare shutdown	17:34	Increase load to turbine
Oct 2, 2013	Turbine shutdown	02:11	PLC Control Malfunction
	Turbine startup	03:03	Duration 52 min
	Turbine shutdown	06:10	Protective shutdown
	Turbine startup	06:51	Duration 41 min
	Flare startup	08:37	Duration 41 min then turbine running
Oct 3, 2013	Flare shutdown	09:19	Low temperature shutdown
	Flare startup	11:10	Turbine running
	Turbine shutdown	17:05	Protective shutdown
	Flare shutdown	17:06	High temperature
	Flare startup	17:44	Duration 38 min
	Flare shutdown	22:41	Manual
	Turbine startup	23:34	Duration 53 min
Oct 4, 2013	Flare startup	00:09	Duration 53 min then turbine running
	Flare shutdown	08:57	Maintenance
	Flare startup	09:34	Turbine running
Oct 7, 2013	Turbine shutdown	19:57	Protective shutdown
	Flare shutdown	19:58	High temperature
Oct 8, 2013	Turbine startup	00:26	Duration 4 hr 28 min
Oct 11, 2013	Turbine shutdown	08:36	Maintenance
	Flare startup	11:23	Duration 2 hr 47 min
	Turbine startup	12:51	Duration 2 hr 47 min then flare running
	Flare shutdown	12:29	Manual shutdown to increase load to turbine
Oct 12, 2013	Turbine shutdown	18:42	Protective shutdown
	Turbine startup	21:23	Duration 2 hr 41 min
Oct 13, 2013	Turbine shutdown	11:04	Protective shutdown
	Flare startup	11:32	Duration 28 min
Oct 14, 2013	Flare shutdown	19:36	Manual shutdown to start turbine
	Turbine startup	20:42	Duration 6 min
	Turbine shutdown	23:06	Protective shutdown
	Turbine startup	23:22	Duration 16 min
Oct 17, 2013	Flare startup	08:23	Duration 16 min then turbine running
	Turbine shutdown	16:45	Protective shutdown
	Flare shutdown	16:46	High temperature
	Flare startup	17:13	Duration 27 min
Oct 18, 2013	Flare shutdown	01:05	Manual shutdown to start turbine
	Turbine startup	02:16	Duration 1 hr 11 min
	Flare startup	03:00	Duration 1 hr 11 min turbine running
	Flare shutdown	09:20	Manual shutdown
	Turbine shutdown	12:30	Loss of plant air pressure
	Turbine startup	13:10	Duration 40 min
	Turbine shutdown	13:30	Loss of power
	Turbine startup	14:08	Duration 38 min
	Turbine shutdown	19:57	Loss of plant air pressure
Oct 19, 2013	Flare startup	08:46	Duration 12 hr 49 min

Oct 21, 2013	Flare shutdown	14:12	Manual
	Turbine startup	14:41	Duration 29 min
	Flare startup	15:14	Duration 29 min turbine running
Oct 22, 2013	Turbine shutdown	03:29	Protective shutdown
Oct 23, 2013	Flare shutdown	20:48	Manual shutdown to start turbine
	Turbine startup	21:46	Duration 58 min
Oct 24, 2013	Turbine shutdown	16:32	Maintenance
	Turbine startup	16:48	Duration 16 min
	Flare startup	17:24	Duration 16 min then turbine running
Oct 25, 2013	Turbine shutdown	06:12	Protective shutdown
	Flare shutdown	13:50	Manual
	Turbine startup	15:30	Duration 1 hr 40 min
	Flare startup	15:49	Duration 1 hr 40 min turbine running
	Turbine shutdown	22:13	Protective shutdown
Oct 26, 2013	Flare shutdown	13:57	Manual
	Turbine startup	15:10	Duration 1 hr 13 min
	Flare startup	15:40	Duration 1 hr 13 min turbine running
	Turbine shutdown	18:57	Protective shutdown for equipment repairs

All shutdown information is provided to the PA DEP.

Ms. Louder noted that there was a lot of activity at the BRE plant (a lot of vehicles present at the plant). Mr. Schleyer stated that the plant is not running. Ms. deLeon asked for how long. Mr. Schleyer responded about one (1) month. Ms. Louder asked Mr. Schleyer if he had any idea what's wrong, and is it the same thing as last time. Mr. Schleyer responded no, and stated part of the problem was related to the odor complaint (see complaint section). He stated that there was a seal leak, and that workers disassembled and rebuilt some components to fix the problem. Ms. deLeon read the odor complaint and stated to Mr. Schleyer that the landfill might be getting blamed for odor that is actually attributable to the BRE plant. A general discussion followed.

#### Gas Collection

- The Bethlehem Renewable Energy Plant is currently down for equipment repairs. The flare is the primary gas control system at this time. Additional landfill gas collection wells are installed in the Phase 4-D/C area.

Mr. Schleyer stated that the new, larger blower is still not connected, and that PLC control work must yet be completed. He stated that the flare must be shut down to make the connection, and that he doesn't want to shut the flare down if the BRE plant isn't running. He stated that he must make sure he has negative pressure and is controlling the gas. Ms. deLeon asked what would happen to the gas without this, would it go out to the air? Mr. Schleyer responded it would not go out to the air because valves shut. He stated that it would sit in the landfill, but you can't let it sit for too long or it will eventually start to seep out and cause odor problems. Ms. deLeon asked what is the reason for the new blower? Mr. Schleyer responded that the landfill is building further west, further from the flare, and that they will need more "pull". He stated that the larger blower fits within their existing air quality permit conditions. Mr. Schleyer added that when the BRE plant is running, the smaller existing blowers can handle the gas. If the BRE plant is down, they want to have a

larger unit to handle the gas, for current and future conditions. A lengthy general discussion followed.

During the inspection following the meeting, it was confirmed that the BRE plant was not running. Mr. Taylor confirmed that the landfill flare was operating at 2,481 scfm at 1,664 degrees F.

- Well Sampling

- Mr. Schleyer previously stated that groundwater sampling took place the week of September 23, 2013 as scheduled.

- North Slope

- The North Slope sedimentation traps are functional.
- The North Slope perimeter road is accessible.

- Abatement System Operations

- The abatement system continues to operate and discharge to the Bethlehem Waste Water Treatment Plant. Intermittent malfunctions of the well pumps and controls are repaired or replaced as needed.

- Leachate Collection

Flow rates continue to be monitored and reported.

Following is a summary of the work history and developments:

- IESI submitted the report from Meiser and Earl, Inc. on December 23, 2008, to DEP and Lower Saucon Township evaluating the various tests that were performed to locate the source of the elevated detection zone flows as outlined in their May 7, 2008 Work Plan. Lower Saucon Township has forwarded their comments on the December 23, 2008 report to DEP.
- IESI has completed welding of approximately 1,200 L.F. of the secondary line to the primary liner along the northern end of Cell 3-D while the anchor trench was open and prior to completing the weld, a 2½-inch rain event occurred. A spike in the leachate collection/detection flow may be observed.
- IESI will retest the gabion stormwater channel over Cell 3-C and discharging into sedimentation Pond 4 for possible infiltration into the detection zone by flooding the channel on September 24, 2009.
- The capping of the remaining five (5) acres of Phase III has been completed.
- IESI provided an updated report on their LMC investigation to DEP and Lower Saucon Township November 2009. The reports in part indicated that:
  1. LMC 7 does not appear to be affected by rainfall since the northern Cell 3 anchor trench cap/liner welding occurred.
  2. LMC 8 still spiking from rainfall events.
- The next investigation will be to the integrity of the liner under gabion channel in Cell 3-C which will occur in the 1<sup>st</sup> Quarter 2010. IESI is looking for a seven to ten (7-10) day window with no rain for a meaningful evaluation. IESI received authorization for the Gabion Channel Work Plan from DEP on December 22, 2009.

- The investigation of the integrity of the liner under the gabion downchannel located in Cell 3C began April 10, 2010. The southern-most end of the gabion channel was excavated down to the anchor trench as well as to the east and west of the channel along the anchor trench. Toe drains above the primary liner were replaced and the primary and secondary liners were welded together in the excavated areas. The gabion channel and piping leading to Basin 4 were reconstructed. IESI will continue to monitor the LMC flows and prepare a report on the latest work performed.
- To date the flows into LMC-8 appear to have been substantially reduced since the repair in the first week of April 2010.
- As of this date the data appears to indicate that the repairs to the southern end of the gabion downchannel leading to Sedimentation Pond 4 and the toe drains running east/west at the southern most end of the gabion channel have caused a substantial reduction in the detection zone of LMC-8.
- The LMC-8 Detection Zone flow rate continues to be monitored. Existing data continues to show a substantial reduction in the flow rate.
- September/October 2010 – the recent rain events have shown influence on LMC-8. The committee is recommending that IESI investigate and consider extending the toe-drain, which was replaced in April along the toe of the southern slope and above Sedimentation Pond 4, to the east and west. Mr. Schleyer provided a summary of the remedial work completed to date to alleviate the high leachate flows being recorded in LMC-8. He reviewed the recent flow data, and stated his opinion that the remedial work has helped to reduce the overall flows. He stated his opinion that the flow data for 2010 indicates that the “response time” between a storm event and high flows observed in LMC-8 is less, and that the flows are of a shorter duration, since the work has been completed. He stated that he is monitoring the flow data and planning out the next step in the process, but is currently concentrating his efforts on the methane gas problem experienced at the residence at 2293 Applebutter Road. Ms. deLeon stated that Lower Saucon Township is very concerned about the high leachate flows, since these could indicate a tear in the landfill liner or other serious problem.
- February 2011: Discussion regarding monitoring results, as provided in the Third Quarter 2010 Quarterly Facility Report, revealed that samples taken from the leachate detection zone provided very similar chemical analyses to samples taken from the leachate collection zone. Mr. Schleyer indicated that IESI had recognized this correlation, and noted it in their cover letter for the report. Mr. Schleyer provided further explanation with regard to how the report is prepared, and noted that the drainage area for LMC-8 is Phase 3, Cell C, which was completed prior to IESP's ownership of the facility.
- March 2011: Mr. Schleyer stated that rainy weather is necessitating working on erosion control, but that the toe-drain work is still at the forefront of his work plan. Ms. deLeon asked “What’s going on there” in reference to the high leachate flows documented in the leachate demand report. Mr. Schleyer stated that “stormwater is still getting in” and that they have an “open cell; rainwater is going directly in there”. Ms. deLeon stated that leachate flows jumped up starting February 11, 2011. Mr. Schleyer attributed this to a neighboring cell “filling up and overtopping” the short barrier between cells. He stated that LMC-8 serves Phase 3 Cell C, and that when this cell “fills up” with leachate, it causes the high flows documented in LMC-8, but also causes leachate to overspill to the adjacent Phase IV, causing high flows there also.
- April 2011: Mr. Schleyer noted that flows recorded in LMC 6 increased starting March 18, 2011, but that he is not sure exactly why other than to say it is stormwater-related. Mr. Schleyer stated that it is “the same scenario” as last month,

- with heavy rains every week that has his crews busy repairing leachate seeps and erosion fills.
- May 2011: Additional toe-drain drainage piping was constructed during the beginning of May. A final report will be completed and submitted to the PA DEP and Township.
- June 2011: Mr. Taylor asked if the toe drains have been carrying water to daylight (i.e. – has water been flowing out of the new outlets installed in May). Mr. Schleyer responded that there have been a few flowing out.
- July 2011: Ms. deLeon asked what the PA DEP says about the LMC 8 work that was completed. Mr. Schleyer stated that they're okay with it, and that it's "everything we said we'd do". Mr. Taylor commented that we'll probably need up to one (1) year of data to evaluate the effectiveness of the work.
- August 2011: Mr. Schleyer confirmed that that he is still collecting leachate flow data. He stated that he is taking LMC 8 detection zone readings every other day to see if the recent heavy rain causes a "bump" in the data. He indicated that the flow data during rain events should be a good tell-tale sign of whether the toe drains are working. He stated that he wants to collect more data, through the wet season.
- September 2011: Mr. Schleyer acknowledged higher detection zone flows during the monitoring period reported herein. He stated that the toe drains are functioning, because he has seen water flowing from them, and noted the extreme rainfall conditions that occurred during this monitoring period.
- October 2011: Mr. Schleyer stated that the flows in LMC 8 still bounce up when it rains. Ms. deLeon asked if anyone has any other ideas (to remediate this problem). Mr. Schleyer responded no. During the inspection following the meeting, I observed water flowing from each of the toe drain outlets. It had just rained in the last twenty-four (24) hours preceding the inspection.
- November 2011: Mr. Taylor asked what specific steps IESI is taking to identify the source of the inflow creating high flows in LMC 8. Mr. Schleyer responded that they are monitoring flow rates versus rainfall.
- December 2011: Mr. Schleyer stated that, as part of the construction of new cell 4F, the anchor trench along the north side of adjacent Cell 4B was exposed in order to "attach" the old cell to the new cell. He stated that this exposure allowed water from rain events at that time to run right into the collection and detection zones, which caused a spike in the flow numbers for those zones in both LMC 7 and LMC 8. He stated that he expects the numbers to come down. Mr. Taylor asked if everything was buttoned up now (i.e. – no continuing exposure to stormwater). Mr. Schleyer responded that, yes, it was.
- January 2012: Mr. Taylor noted that secondary leachate flows continue to exceed 100 gallons per acre per day (G/A/D) through LMC-8, and are also elevated above normal levels for LMC-6 and LMC-7. Mr. Taylor asked Mr. Schleyer if he is still attributing these higher leachate flows to Cell F being open. Mr. Schleyer stated that, yes, he was.
- February 2012: Mr. Schleyer stated that the high leachate flow numbers are, in his opinion, still due to Cell F being open.
- March 2012: Mr. Schleyer stated that there was a misunderstanding between himself and Mr. Taylor, and that what he meant to say was that there was only one (1) week where the connection between Cell 4F and the adjacent cells were open, in order to fuse the liners together, and that there was a large rain event that week. He

stated that in no way did he mean this condition was the continuous cause of high flows in LMC-8 (over many weeks).

- April 2012: Mr. Taylor noted that leachate flows are down overall, including secondary flows in LMC-8. Ms. deLeon asked if, regarding the leachate totals, did it help that it didn't rain much lately. Mr. Schleyer responded yes, and noted that LMC-8 is now down to 15 gallons per acre per day (secondary flows).

- May 2012: Mr. Taylor addressed the issue of secondary leachate flows in LMC-8 as one of the issues that is being tracked by him at the monthly landfill committee meetings, and reminded Mr. Schleyer that this is still an issue of concern with the Township. Mr. Taylor noted that flows were up in the last two (2) weeks due to increased rainfall, but still just under one-hundred gallons per acre per day in the last week of reporting.

- July 2012: Mr. Schleyer provided a description, using landfill plans, of which areas LMC 6, 7, and 8 drain. Mr. Schleyer stated that, in regard to LMC 8, that they've significantly reduced the infiltration into it, but it's not one-hundred percent. He stated that they've determined that stormwater is getting into the system, but that it still all gets collected and sent to the Wastewater Treatment Plant. Mr. Schleyer provided an explanation of work completed to date, including the toe drain work, re-sealing the liner and cap system, and installing clay as a sealer. He stated that a quick rain will give a little bump in the flow numbers, and that a soaking rain will cause a broad increase. Mr. Taylor stated that elevated secondary leachate flows in LMC-8 is an issue that is being tracked by him, and is still an issue of concern with the Township.

- August 2012: In accordance with direction received at the technical committee meeting on August 21, 2012, Mr. Taylor advised Mr. Schleyer that the Township Council had authorized the issuance of a letter to the PA DEP documenting the Township's concerns with elevated flows in the leachate detection zone.

- September 2012: The recent secondary flow readings in LMC-8 were reviewed and found to be generally higher than for the previous month.

- October 2012: The recent secondary flow readings in LMC-8 were reviewed and the last two (2) weeks reported were found to be significantly higher, apparently due to higher rainfall amounts.

- November 2012: The recent secondary flow readings in LMC-8 were reviewed and the last four (4) weeks were found to be very high, apparently due to high rainfall amounts. Mr. Schleyer stated that there were still spikes in the LMC-8 detection zone, which drop off after a rain.

- December 2012: The recent secondary flow readings in LMC-8 were reviewed and the last four (4) weeks were found to be high, apparently due to high rainfall amounts.

- January 2013: The recent secondary flow readings in LMC-8 were reviewed and the last four (4) readings were found to be very high, apparently due to high rainfall amounts. Mr. Schleyer noted that the reported flow rates jumped up for several weeks. Ms. deLeon asked were there storms? Mr. Schleyer responded yes, several rain events.

- February 2013: The recent secondary flow readings in LMC-8 were reviewed and found to be very high. Mr. Taylor noted that there currently was a very long stretch of readings well in excess of 100 gallons per acre per day, dating back to October 5, 2012, and stated that the Township was not happy about this situation.

- March 2013: The recent secondary flow readings in LMC-8 were reviewed and found to be very high, continuing the unbroken stretch of readings well in excess of 100 gallons per acre per day (g/a/d) which began October 5, 2012.
  - April 2013: The latest secondary flow readings in LMC-8 were reviewed and found to still be in excess of 100 g/a/d. Mr. Schleyer commented that the weather's been drier, that LMC-8 is showing a downward trend in flow.
  - May 2013: The latest secondary flow readings in LMC-8 were reviewed and found to still be in excess of 100 g/a/d, which began October 5, 2012. Mr. Schleyer noted that the reading for the last week was lower.
  - June 2013: The most recent secondary flow readings in LMC-8 were reviewed and found to be below 100 g/a/d for the last five (5) weeks. Mr. Schleyer noted that the recent weather has been fairly dry and predicted that the flows will fluctuate with the weather (precipitation).
  - July 2013: The most recent secondary flow readings in LMC-8 were reviewed and found to be significantly above 100 g/a/d for three (3) of the last four (4) weeks.
  - August 2013: The most recent secondary flow readings in LMC-8 were reviewed and found to be below 100 g/a/d for three (3) of the last four (4) weeks.
  - Mr. Schleyer noted that these flows had slowed down somewhat. Mr. Schleyer stated that, in Pump Station 3, the elevated flows were due to heavy rain during the liner tie-in.
  - September 2013: The most recent secondary flow readings in LMC-8 were reviewed and found to be above 100 g/a/d for three (3) of the last five (5) weeks.
  - October 2013: The most recent secondary flow readings in LMC-8 were reviewed and found to be below 100 g/a/d for three (3) of the last four (4) weeks.
- Mr. Schleyer noted that the flows are slowing down, but so is the rain.

The most recent secondary flow readings in LMC-8 were reviewed and found to be below 100 g/a/d for the last eight (8) weeks.

- Radiation Monitoring

- No alarm triggered for October
- November 18, 2013: I-131
- November 19, 2013: I-131

All are Level 1 isotopes and disposed of on site.

- Phase IV Construction Activities

Cell 4E-Stage 2 construction requires the tie-in for the leachate collection and removal of stormwater diversion berms prior to final certification. Cell 4-A/3-D is the current active disposal area. Approximately one (1) acre of landfill area is currently being capped on the south slope of Cell 4-D/C.

During the inspection following the meeting, Mr. Taylor observed that the active disposal area is Cell 4A. However, no trucks were dumping or waiting at the time of the observation. Wind screens were observed in place at the working face. Mr. Taylor confirmed that no work was taking place in newly constructed Cell 4E Stage 2. Mr. Taylor observed a contractor placing soil cover over the synthetic cap as part of the final capping activity taking place on the southern face. Mr. Schleyer stated that the contractor was using imported soil for this work. Mr. Taylor observed that soil material was being removed from the north end of Cell 4E and trucked to the working face for use as daily cover material.

Ms. deLeon asked how many acres are not final capped. Mr. Schleyer responded that he didn't know off the top of his head but that he could find out. Mr. deLeon said yes, just let Chris (Taylor) know.

- Complaints

October 12 and 13, 2013 – Al Schleyer met with a resident from Skyline Drive Monday morning to discuss an odor complaint IESI received over the past weekend. The resident stated she detected landfill odors on Saturday afternoon approximately 2:00 PM through 4:00 PM and also on Sunday morning. IESI noted that on Saturday the IESI contractors were installing new landfill gas header piping that required trenching into sections of the landfill. The odor was attributed to that operation. All trenching was backfilled and covered prior to leaving the site that day. Contractors were instructed to use additional odor control spray if needed during trenching operations. In addition the Sunday odor is attributed to a mechanical seal leak at the BRE power plant. When BRE personnel arrived on site they immediately shut down the plant and started the IESI flare. BRE corrected the problems before restarting the turbine.

- Miscellaneous

Ms. deLeon asked Mr. Schleyer who fills in for him when he is not at the landfill. Mr. Schleyer responded Sam Donato or Mike Sheldon the Operations Manager.

Mr. Taylor stated that he has been directed by the Technical Committee to ask questions, as follows:

1. On the Quarterly Host Municipality Benefit Fee Report, why is “% of area” included the calculations, and how does it figure in?  
Mr. Schleyer responded that he would find out.
2. How long can you dispose of garbage in the area of Cells 4A/3D?  
Mr. Schleyer responded that he would prepare an estimate based on available engineering data.
3. How many acres of unfinal-capped area are sitting with intermediate cover, at final grade and ready for final capping? This question was asked by Ms. deLeon earlier in the meeting (see “Phase IV Construction Activities” above). Can you provide an updated version of the Existing Conditions plan sheet showing current final capped areas?  
Mr. Schleyer stated that he would find out regarding the acreage and updated plan.
4. Regarding the new larger blower being installed (see also discussion under “Gas Collection” above):
  - a. Why is a new blower being installed now?  
Mr. Schleyer responded that it is to meet existing gas management needs and future needs. He said that you want to be at least one (1) year ahead, and that if you wait until you have more gas that you can handle (to begin installation of a larger blower), you're a year behind.

- b. Will the new blower affect emissions from the flare requiring approval or re-permitting from the Air Quality program?

Mr. Schleyer stated that the current air plant approval is good up to 4,000 scfm.

Mr. Taylor asked how can you be sure you'll be below that? Mr. Schleyer responded that the flow rate is registered on the meter readout. Mr. Taylor asked that he'll assure compliance through controlling the equipment? Mr. Schleyer responded yes.

5. Why were two (2) gas probes recently added, and where? Why were they labeled PEPCO 1 and PEPCO 2?

Mr. Schleyer responded that probes PEPCO 1 and 2 were added before the BRE plant went online in the mid-2000s. He stated that the most recent gas probes added were the two (2) installed around Cell 4E Stage 1 before garbage was placed there. He believes these are identified as Probe #13 and Probe #14. He added that in addition to the fourteen (14) probes in the ground around the landfill, there are the two (2) probes at the BRE plant, and also monitoring points in structures such as the maintenance building and Leachate Management Chambers 6, 7, and 8. He stated that the probes are monitored quarterly.

6. Why have Surface Emission Monitoring locations increased from 470 to 503 recently?

Mr. Schleyer responded that it is because the surface area of the landfill has increased. He stated that as the landfill size expands, they must grow the monitoring locations.

During inspections after the meeting, the following was noted in addition to the items mentioned above:

- No mud, odors, or litter were observed along Applebutter Road, along the entrance driveway to the landfill, or at the trailer.
- The truck wash was not open due to dry conditions.
- Some litter (plastic bags) was observed in the trees within the landfill perimeter. Mr. Schleyer stated that he would schedule the tree contractor to remove the litter.
- Pickers were working to remove stray litter at the top of the south face.
- Numerous seagulls were present at the landfill. An "air gun" was in operation near the maintenance building in an attempt to disperse the seagulls.
- The silt fence along the northern perimeter was in good condition.
- The west high wall was observed. No new slope failures were evident.
- Several large seep areas were observed near the bottom of the western face in the form of moist (darker) soil. No running seeps were observed, just moist soil at the surface. The seeps were causing odor which was observed along the north perimeter road (odor being carried northward). Mr. Schleyer stated that he would remediate the seeps.

- The adjoining parcel to the west (commonly called the "Fox property") was observed from the landfill site. No earthmoving activity was evident on this property.
- The wind was out of the south at 10 to 15 mph. A patrol of Steel City was conducted following the meeting. No landfill-related odors or noises were observed.

V. Commercial Waste Vehicles

	<u>August 2013</u>	<u>Sept 2013</u>	<u>Oct 2013</u>
Total Trucks	2,971	2,620	2,892
Overweight	55	33	40
Warnings	30	23	29
Suspensions	25 (11>3%) 10-TT, 1-DT	10 (1>3%) 1-TT	11 (4>3%) 4-TT

FL = front loader, RO = roll off, TT = tractor trailer, RL = rear loader,  
DT = triaxle dump truck

Mr. Schleyer stated that many of the overweight trucks were from Serveco.

VI. Correspondence

- Correspondence from Department of Environmental Protection
  - No discussion
- Correspondence to Department of Environmental Protection
  - No discussion.
- Other Correspondences
  - No discussion.

VII. Township Activities/Township Staff Meeting Update

- Township correspondence to the Department of Environmental Protection
  - No discussion.
- Council Meeting IESI Issues
  - No discussion.
- Miscellaneous
  - No discussion.

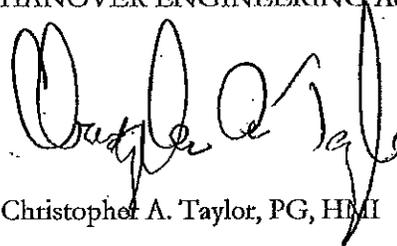
VIII. Establish Time for Next Meeting

1:00PM Tuesday December 17, 2013 at the Landfill Facility Office. As documented in last month's minutes, this meeting was moved from the regularly-scheduled third Thursday of the month at the request of Mr. Taylor due to a scheduling conflict.

**END OF MINUTES**

Respectfully,

HANOVER ENGINEERING ASSOCIATES, INC.



Christopher A. Taylor, PG, HMI

cat:cat/dad

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Enclosure(s)

cc: Ms. Priscilla deLeon (via e-mail)  
Mr. Hazem Hijazi, PE (via e-mail)  
Ms. Donna Louder (via e-mail)  
Mr. Allen Schleyer (via e-mail)  
Ms. Laressa J. McNemar, PE (via e-mail)  
Mr. James B. Birdsall, PE (via e-mail)  
Mr. Scott J. Brown, HMI (via e-mail)  
Mr. Jacob A. Schray, HMI (via e-mail)  
Mr. Rich Sichler, PG (via e-mail)  
Ms. Leslie Huhn (via e-mail)  
Ms. Diane Palik (via e-mail)  
Ms. Susan French (via e-mail)

**BETHLEHEM LANDFILL**  
**LEACHATE DEMAND REPORT**

**October 2013**

<u>Location</u>	<u>Total gallons</u>
LMC-6	7,713
LMC-7	9,767
LMC-8	54,560
LMC-10	1,170,000
PS-1	282,422
PS-2	213,192
PS-3	105,416
Phase-IV	601,030

Total LMC-10 Flow = LMC-6, 7, 8, Abatement Well System, Phase I and II, and LFG condensate. Phase-IV total from PS-1, PS-2 and PS-3.

**Total Discharge**

LMC-10	1,170,000
Phase IV	601,030
<b>TOTAL</b>	<b>1,771,030 gallons</b>

**Total Leachate**

Leachate	140,712
Phase IV	601,030
<b>TOTAL</b>	<b>741,742 gallons</b>

LMC-10 Flow -- Abatement System Flow = Leachate System Flow (gallons).  
Abatement System Flow = 1,029,288 gallons (Neptune Flow meters)





IESI BETHLEHEM LANDFILL

	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
541		TIME	Phase IV PS-2 (Secondary Flows)				Phase IV PS-2 Primary Flow						
542		(days)	TOTALIZER	GALLONS	FLOW (gpd)	gal/day		TIME	TOTALIZER	Gallons	FLOW (gpd)	gal/day	
543													
544	12/28/2012	41271	5595	5595	0	0.0			10573007	10573007	256	24	28.2"
545	1/4/2013	7	5595	0	0	0.0			10623461	60454	7208	680	32.7"
546	1/11/2013	7	5595	0	0	0.0			10648572	25111	3587	338	23.4"
547	1/18/2013	7	5595	0	0	0.0			10668955	20383	2912	275	32.0"
548	1/25/2013	7	5595	0	0	0.0			10689573	20618	2945	278	26.7"
549	1/31/2013	6	5595	0	0	0.0			10701797	12224	2037	192	33.3"
550	2/8/2013	8	5595	0	0	0.0			10726538	24741	3093	292	33.5"
551	2/15/2013	7	5595	0	0	0.0			10748423	21885	3126	295	32.2"
552	2/22/2013	7	5595	0	0	0.0			10778700	28277	4040	381	35.0"
553	3/1/2013	7	5598	3	0	0.0			10790407	13787	1967	186	34.8"
554	3/8/2013	7	5603	5	1	0.1			10822950	32483	4840	438	24.4"
555	3/16/2013	7	5603	0	0	0.0			10848802	25852	3693	348	23.8"
556	3/21/2013	6	5637	34	6	0.8			10849029	17227	2671	271	25.5"
557	3/28/2013	8	5637	0	0	0.0			10849029	18576	2322	219	26.1"
558	4/6/2013	7	5637	0	0	0.0			10868317	7288	1041	98	24.8"
559	4/12/2013	7	5637	0	0	0.0			10918172	61855	8836	834	42.3"
560	4/19/2013	7	5638	1	0	0.0			10966110	67938	9705	916	28.2"
561	4/26/2013	7	5638	0	0	0.0			11039037	52927	7561	713	35.6"
562	5/2/2013	6	5638	0	0	0.0			11083935	44898	7483	706	32.2"
563	5/10/2013	8	5638	0	0	0.0			11142648	58713	7339	692	34.3"
564	5/17/2013	7	5638	0	0	0.0			11155615	12967	1852	173	34.6"
565	5/24/2013	7	5638	0	0	0.0			11201306	45891	6527	616	31.2"
566	6/1/2013	7	5638	0	0	0.0			11240032	38728	5532	522	32.4"
567	6/7/2013	7	5638	0	0	0.0			11284388	44364	6336	608	35.2"
568	6/13/2013	6	5672	234	39	5.7			11330280	45894	7949	722	26.9"
569	6/21/2013	8	5658	86	11	1.6			11387995	57716	7216	681	26.9"
570	6/28/2013	7	5658	0	0	0.0			11432475	44479	6354	599	33.9"
571	7/6/2013	7	6216	258	37	5.4			11477417	44942	6420	605	29.1"
572	7/12/2013	7	6216	0	0	0.0			11521324	43907	6272	592	30.1"
573	7/19/2013	7	6230	14	2	0.3			11565713	44389	6341	598	28.8"
574	7/26/2013	7	6469	239	34	5.0			11613510	47797	6828	644	34.8"
575	8/2/2013	7	6470	1	0	0.0			11685004	51484	7356	694	28.6"
576	8/9/2013	7	6470	0	0	0.0			11693475	28471	4067	384	29.3"
577	8/16/2013	7	6470	0	0	0.0			11735521	42046	6007	567	28.9"
578	8/23/2013	7	6472	2	0	0.0			11792838	57117	8160	770	27.8"
579	8/30/2013	7	6473	1	0	0.0			11845373	52735	7534	711	28.6"
580	9/6/2013	7	6616	143	20	3.0			11900624	55251	7893	745	31.8"
581	9/13/2013	7	6616	0	0	0.0			11958529	55905	7986	753	28.4"
582	9/20/2013	7	6616	0	0	0.0			12009845	53110	7588	716	28.2"
583	9/27/2013	7	6664	48	7	1.0			12029795	20150	2979	272	28.4"
584	10/4/2013	7	6665	1	0	0.0			12048307	18512	2645	249	28.8"
585	10/11/2013	7	6665	0	0	0.0			12097374	49067	7010	661	28.2"
586	10/18/2013	7	6665	0	0	0.0			12149216	51842	7408	699	29.7"
587	10/25/2013	7	6665	0	0	0.0			12200380	51164	7308	690	34.3"
588	10/31/2013	6	6665	0	0	0.0			12242987	42807	7101	670	29.7"
589	11/8/2013	8	6665	0	0	0.0			12286232	43245	5406	510	33.9"
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\* = estimated flow rate due to flow meter malfunction.

