Hanover
Engineering Associates Inc

August 20, 2013

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

RE: Joint Municipal Landfill Committee
Minutes of August 15, 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 August 15, 2013. The meeting began at 1:20PM. Attending the meeting were:

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

The meeting notes provided at that time did not include the flare operations report for July, and contained several minor clerical errors. Mr. Schleyer issued revised meeting notes by e-mail on August 19, 2013 which addressed these issues. The revisions are reflected in this report.

AGENDA ITEMS

I. Status of Waste Activities

Monthly Tonnages:

	May	June	July
Municipal Solid Waste (total)	24,957.00	23,137.30	26,485.30
Construction and Demo (total)	6,482.40	10,238.30	10,094.50
Residual Waste (total)	1,062.90	976.10	1,428.30
Asbestos	[80.80]	[24.90]	[613.90]
Out of state-total (percentage)	[19,382.70](59.6%)	22,424.30(65%)	25,144.00(66%)
TOTAL	**32,502.30**	**34,351.70**	**38,008.10**
Recycled Tonnage (percent from Lower Saucon Twp.)	1.10 (78%)	0.00 (80%)	4.80(60.5%)

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.

Mr. Taylor asked if there was one big asbestos project that accounted for the increased tonnage. Mr. Schleyer responded yes, that a couple of the asbestos submittals "hit" at one time.

Form U Submittals	Waste	Approval Date
Prism Capital – Bloomfield	ACM	07/03/13
DelGuerico's	Surface Coatings	07/03/13
Airtite	Sand blast grit	07/16/13
MacElroy	ACM/Debris	07/30/13
Alcatez-Lucent	ACM	07/30/13
South Orange Maplewood BOE	ACM	08/14/13
Ramapo Regional BOE	ACM	08/14/13

II. Annual Groundwater Trend Analysis

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

III. Correspondence and Reports

- Form U Submittals to PADEP and Lower Saucon Township
- Abatement System Report
- Minor Permit Modification – re-grade contours 2013 - correspondence
- Second Quarter 2013 PADEP Facility Report
- Annual Groundwater Report
- Air Quality Title V Compliance Report
- Air Quality Collection Efficiency Report

Ms. deLeon asked if there was any correspondence between DEP Air Quality and IESI regarding the BRE plant. Mr. Schleyer responded that there wouldn't need to be, since BRE has a separate air permit. He continued that his concern relative to the BRE plant is how its operation affects landfill gas management.

IV. Landfill Operations

- Department of Environmental Protection Inspections

  - July 15, 2013 – W. Govern: site inspection
  - July 22, 2013 – L. Forte: mosquito inspection/Water Supply
  - July 29, 2013 – S. French: Engineer's meeting
  - July 31, 2013 – C. Kuba: site inspection Fox Borrow area
  - August 12, 2013 – S. French, D. Evans: cell construction inspection
  - August 12, 2013 – W. Govern: site inspection

  Mr. Schleyer noted the visit from a new inspector, Mr. Forte, who conducted a mosquito inspection. He explained that Mr. Forte introduced an agent into the truck wash water to prevent mosquitos, and that he also looked at the sedimentation basins, which he found were all clear. Mr. Schleyer stated that Mr. Kuba is with the Department of Mining. Ms. deLeon asked if his visit generated any paperwork. Mr. Schleyer replied no, that Mr. Kuba just gave him a verbal review. Ms. deLeon asked if Mr. Taylor would follow up with Mr. Kuba. Mr. Taylor responded yes.

- Host Municipal Inspection

  - July 5, 2013 – Chris Taylor
  - July 18, 2013 – Chris Taylor
  - August 5, 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 shutdowns at Bethlehem Landfill. The auto-valve closed as designed for each shutdown of the flare. No odors were noted or odor complaints received by Bethlehem Landfill during the outage events. The BRE power plant began a startup July 13, 2013.

July 13, 2013	Turbine startup	17:35	Begin test run
July 14, 2013	Turbine shutdown	12:11	Protective shutdown
	Turbine startup	14:45	Flare operating
July 15, 2013	Flare shutdown	11:34	Manual
	Turbine shutdown	12:11	Protective shutdown
	Turbine startup	12:29	Duration 18 min
July 16, 2013	Turbine shutdown	12:11	Protective shutdown
	Turbine startup	13:41	Duration 1 hr 30 min
July 17, 2013	Turbine shutdown	12:11	PLC shutdown issue corrected
	Flare startup	14:22	Duration 2 hr 11 min
	Turbine startup	16:11	Duration 2 hr 11 min then flare running
	Flare shutdown	16:31	Manual shutdown
July 18, 2013	Flare startup	09:15	Turbine running
	Flare shutdown	21:21	High temperature due to louver adjustment
	Flare startup	21:39	Turbine running
July 20, 2013	Turbine shutdown	01:15	Protective shutdown
	Flare shutdown	01:16	High temperature
	Flare startup	02:46	Duration 1 hr 30 min
	Turbine startup	07:54	Duration 1 hr 30 min then flare running
	Turbine shutdown	13:36	Loss of power
	Flare shutdown	13:36	Loss of power
	Turbine startup	18:28	Duration 4 hr 52 min
	Turbine shutdown	22:07	Protective shutdown
July 21, 2013	Flare startup	02:48	Duration 4 hr 41 min
July 22, 2013	Turbine startup	11:57	Flare running
	Flare shutdown	12:36	Low temperature increase turbine load
	Turbine shutdown	14:55	Protective shutdown
	Turbine startup	15:21	Duration 26 min
	Flare startup	15:56	Duration 26 min turbine running
	Turbine shutdown	16:26	Protective shutdown
	Flare shutdown	16:28	High temperature
	Turbine startup	16:47	Duration 19 min
	Flare startup	17:44	Duration 19 min turbine running
July 26, 2013	Flare shutdown	09:42	Maintenance
	Flare startup	10:06	Turbine running
	Turbine shutdown	12:19	Protective shutdown

	Flare shutdown	12:20	High temperature
	Turbine startup	12:50	Duration 30 min
	Flare startup	13:26	Duration 30 min turbine running
July 28, 2013	Turbine shutdown	14:20	Protective shutdown
	Flare shutdown	14:21	High temperature
	Turbine startup	18:24	Duration 4 hr 3 min
	Flare startup	20:23	Duration 4 hr 3 min then turbine running
July 30, 2013	Turbine shutdown	18:26	Protective shutdown
	Flare shutdown	18:27	High temperature
	Turbine startup	22:00	Duration 3 hr 33min
	Turbine shutdown	22:14	Protective shutdown
	Turbine startup	22:39	Duration 25 min
	Flare startup	23:38	Duration 3 hr 58 min with turbine running

All shutdown information is provided to the PA DEP.

Mr. Schleyer stated that the landfill flare is now a backup for gas management, since the BRE plant has returned to operation.

- Gas Collection

  - The Bethlehem Renewable Energy Plant is currently operating using the temporary holding tanks to contain condensate. The flare is now the backup to the BRE facility.

On the walk into the office prior to the meeting, the committee members observed that the BRE plant was not running. Ms. deLeon asked when they shut down. Mr. Schleyer stated that the BRE plant had been running, but just shut down about one (1) hour before the meeting. Ms. deLeon asked how long they had been running. Mr. Schleyer responded since July 13. Ms. Louder stated that they didn't have an occupancy permit until July 26. A lengthy discussion on the topic followed.

During the inspection following the meeting, it was observed that the BRE plant was already back up and running again. Mr. Taylor confirmed that the landfill flare was operating at 1,688 scfm at 1581 degrees F.

- Well Sampling

  - No activity reported.

- North Slope

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

During the inspection following the meeting, Mr. Taylor confirmed that the north slope road was open and passable.

- 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. Flow rates in PS-3 were elevated during the week of July 5, 2013 due to the liner construction between Cell 4E Stage 1 and Stage 2. A significant rain event occurred during the connection of secondary and primary liners between Cell 4E Stages 1 and 2. The increased flow was due to a direct inflow of rainwater during the liner tie-in.

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 1st 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 IESI'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 rills.
- 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 100 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.

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.

- Radiation Monitoring

  - July 3, 2013: I-131
  - July 30, 2013: I-131
  - August 5, 2013: TC-99M
  - August 12, 2013: TC-99M
  - August 13, 2013: I-131

All are Level 1 isotopes and disposed of on site.

- Phase IV Construction Activities

  - Constructing Cell 4E – Stage 2.
  - Cell 4-D Stage 1/Stage 2 is the current active disposal area.
  - Perimeter fencing was repaired.

Mr. Schleyer stated that cell construction is just about completed, and that the certification book is being prepared.

Mr. Taylor had previously confirmed that the fencing along Applebutter Road had been repaired. Mr. Taylor observed garbage being disposed of in Cell 4D Stage 3 at or near the interface with Cell 4F. Wind screens were observed in place at the working face. Mr. Taylor confirmed that Cell 4E Stage 2 appeared complete, and that no work was taking place. Mr. Schleyer stated that connection of the Stage 2 leachate collection piping into the existing Stage 1 leachate collection piping remains to be done, and will wait until the other elements of cell construction are approved. Then, this connection will be made and certified just before the cell is placed in use. He explained that this is done to limit the amount of stormwater that enters the open cell and runs into the collection system, thus requiring treatment as leachate.

- Complaints

  - June 17, 2013 – A neighbor called and stated that a tractor trailer crossed the yellow line at the curve in Applebutter Road. The truck driver and company were warned.
  - June 19, 2013 – Neighbor saw roll-off truck coming to landfill from Ringhoffer Road. Driver was given a warning.
  - June 27, 2013 – Neighbor saw Gary Grey tractor trailer speeding and crossing yellow line on Applebutter Road. Dispatch was notified.
  - July 12, 2013 – Neighbor had a Russell Reid truck pull out in front of him without stopping at the stop sign at Applebutter Road exiting the landfill. Driver was written up.
  - July 18, 2013 – Local resident Ron Feist requested to attend the July 18, 2013 landfill committee meeting held at Bethlehem Landfill. He raised several issue that were not all landfill related.
  - July 22, 2013 – Steel City resident smelled heavy odor around 8:30AM and 17:30 – 18:00 PM on July 21, 2013.

- July 23, 2013 – Neighbor called stating that a truck did not go through the truck wash and also made a left turn at exiting the gate. Truck driver was suspended one (1) week.
- August 13, 2013 – Steel City resident called to report a methane smell at the time of the call (10:45 AM) and also at 09:15 AM. IESI representatives responded to the residence by 11:00 AM. No odor was detected by IESI or the resident at that time. A survey of the area was conducted and one (1) burn barrel was in use east of the residence and one (1) front load container was observed to be overfilled with refuse NE of the residence. No odors were detected during the survey of the area.

Ms. deLeon asked why Mr. Feist's visit to the July landfill committee meeting wasn't recorded in the Complaints section of the original meeting notes. Mr. Schleyer responded that he wasn't sure how to characterize or describe what Mr. Feist had to say, since he didn't seem to have a specific complaint against the landfill. However, Mr. Schleyer stated that he would revise the meeting notes to reflect Mr. Feist's visit. Mr. Schleyer covered this issue in the revised meeting notes, as reflected above.

- Miscellaneous

Ms. deLeon asked if there were any washouts with the rain Tuesday. Mr. Schleyer responded that they fared well, and that there were no washouts.

During the inspection following 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.

- No litter was observed in the trees within the landfill perimeter.

- It appeared that grass was continuing to grow sparsely on the lower part of the south face (the lower bench) that had been regraded and re-topsoiled to address erosion in an area of intermediate cover. A bulldozer was observed dressing a small area of erosion at the bottom of the south face.

- The west high wall was observed. No new slope failures were evident.

- Construction on the new 36" HDPE pipe is still ongoing at the toe of the southern slope. The pipe is now installed and backfilled to a point approximately two hundred feet (200') west of its outlet into Basin 4. The eastern end of the roadside swale and the 30" pipe that drains it to Basin 4 are still in place at this time.

- 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 fairly calm, out of the north/northwest at up to 5 mph. A patrol of Steel City was performed. No landfill-related odors or noises were observed.

V. Commercial Waste Vehicles

	May 2013	June 2013	July 2013
Total Trucks	2,776	2,701	2,954
Overweight	38	53	59
Warnings	23	26	41
Suspensions	15 (7>3%) 6-TT, 1- RO	27 (8>3%) 6-TT, 2-RO	18 (2>3%) 2-TT

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

VI. Correspondence

- Correspondence from Department of Environmental Protection
  - The DEP Consent Assessment of Civil Penalty sent to Olexion Rubbish Hauling, Inc. was discussed. Mr. Taylor stated that he wished that there was a way for the Township to contact the DEP to thank them for taking this action, while at the same time encouraging them to continue to use this enforcement mechanism as needed to curb the overweight truck problem.
- 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

1:00 PM September 19, 2013 at the Landfill Facility Office.

END OF MINUTES

Respectfully,

HANOVER ENGINEERING ASSOCIATES, INC.

Christopher A. Taylor, PG, HMI

cat:cat/llb
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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. Lauressa 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)

	A	B	C	D	E	F	J	K	L	M	O	R	S	T
694														
695														
696														
697		TIME	LMC-6 (Secondary Flows)					LMC-7 (Secondary Flows)			LMC-8 (Secondary Flows)			
698		(days)	TOTALIZER	GALLONS	FLOW (gpd)	G/A/D	TOTALIZER	GALLONS	FLOW (gpd)	G/A/D	TOTALIZER	GALLONS	LOW (gpd	G/A/D
699	12/28/2012	7.00	1002142	1,721	246	16	1515673	911	130	11	3,460,100	21945	3,135	541
700	1/4/2013	7.00	1004365	2,223	318	20	1516488	815	116	10	3,478,787	18687	2,670	466
701	1/11/2013	7.00	1006487	2,122	303	19	1517271	783	112	9	3,489,476	10689	1,527	263
702	1/18/2013	7.00	1008461	1,974	282	18	1518183	912	130	11	3,505,362	15886	2,269	391
703	1/25/2013	7.00	1010312	1,851	264	17	1519001	818	117	10	3,520,041	14679	2,097	362
704	1/31/2013	6.00	1011915	1,603	267	17	1519729	728	121	10	3,528,153	8112	1,352	233
705	2/8/2013	8.00	1014356	2,441	305	19	1520730	1001	125	10	3,547,775	19622	2,453	423
706	2/15/2013	7.00	1016726	2,370	339	22	1521700	970	139	11	3,564,540	16765	2,395	413
707	2/22/2013	7.00	1019178	2,452	350	22	1522735	1035	148	12	3,580,766	16226	2,318	400
708	3/1/2013	7.00	1021503	2,325	332	21	1523862	1127	161	13	3,596,172	15406	2,201	379
709	3/8/2013	7.00	1023740	2,237	320	20	1524699	837	120	10	3,610,583	14411	2,059	355
710	3/15/2013	7.00	1026036	2,296	328	21	1525739	1040	149	12	3,626,909	16326	2,332	402
711	3/21/2013	6.00	1028175	2,139	357	23	1526596	857	143	12	3,640,924	14015	2,336	403
712	3/28/2013	8.00	1031543	3,368	421	27	1527573	977	122	10	3,656,359	15435	1,929	333
713	4/5/2013	7.00	1034507	2,964	423	27	1528379	806	115	9	3,665,676	9317	1,331	229
714	4/12/2013	7.00	1037083	2,576	368	23	1529069	690	99	8	3,674,097	8421	1,203	207
715	4/19/2013	7.00	1039548	2,465	352	22	1529880	811	116	9	3,691,861	17764	2,538	438
716	4/26/2013	7.00	1041880	2,332	333	21	1530568	688	98	8	3,706,437	14576	2,082	359
717	5/2/2013	6.00	1044065	2,185	364	23	1531169	601	100	8	3,711,573	5136	856	148
718	5/10/2013	8.00	1046674	2,609	326	21	1531950	781	98	8	3,714,146	2573	322	55
719	5/17/2013	7.00	1048775	2,101	300	19	1532700	750	107	9	3,716,593	2447	350	60
720	5/24/2013	7.00	1050522	1,747	250	16	1533334	634	91	7	3,718,229	1636	234	40
721	5/31/2013	7.00	1052083	1,561	223	14	1534144	810	116	9	3,721,113	2884	412	71
722	6/7/2013	7.00	1053338	1,255	179	11	1534916	772	110	9	3,723,203	2090	299	51
723	6/13/2013	6.00	1054436	1,098	183	12	1536275	1359	227	19	3,742,816	19613	3,269	564
724	6/21/2013	8.00	1055808	1,372	172	11	1537395	1120	140	11	3,763,248	20432	2,554	440
725	6/28/2013	7.00	1057055	1,247	178	11	1538090	695	99	8	3,766,586	3338	477	82
726	7/5/2013	7.00	1,058,232	1,177	168	11	1,538,848	758	108	9	3,779,439	12853	1,836	317
727	7/12/2013	7.00	1,059,513	1,281	183	12	1,539,665	817	117	10	3,784,799	5360	766	132
728	7/19/2013	7.00	1,060,757	1,244	178	11	1,540,482	817	117	10	3,787,501	2702	385	67
729	7/26/2013	7.00	1,062,000	1,243	178	11	1,541,418	936	134	11	3,789,790	2289	327	56
730	8/2/2013	7.00	1,063,298	1,298	185	12	1,542,297	879	126	10	3,791,752	1962	280	48
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IESI BETHLEHEM LANDFILL

	A	B	C	D	E	F	H	I	J	K	M	N	O
541		TIME	Phase IV PS-1 (Secondary Flows)						Phase IV PS-1 (Primary Flow)				Sump
542		(days)	TOTALIZER	GALLONS	FLOW (gpd)	g/ac/day		TIME	TOTALIZER	Gallons	FLOW (gpd)	g/ac/day	Level
543													
544	12/26/2012	41271	238102	238102	6	0			24894178	24894178	603	23	22.5"
545	1/4/2013	7	238296	194	28	1			24932503	38325	5475	211	23.2"
546	1/11/2013	7	238469	173	25	1			25001488	68985	9855	379	23.4"
547	1/18/2013	7	238654	185	26	1			25079895	78407	11201	431	23.4"
548	1/25/2013	7	238847	193	28	1			25152050	72155	10308	396	24.0"
549	1/31/2013	6	239007	160	27	1			25213625	61575	10263	395	23.2"
550	2/8/2013	8	239251	244	31	1			25299625	86000	10750	413	22.3"
551	2/15/2013	7	239454	203	29	1			25375695	76070	10867	418	16.6"
552	2/22/2013	7	239658	204	29	1			25447646	71951	10279	395	16.6"
553	3/1/2013	7	239878	218	31	1			25519898	72252	10322	397	16.6"
554	3/8/2013	7	240107	231	33	1			25588391	68493	9785	376	17.8"
555	3/15/2013	7	240339	232	33	1			25659291	70900	10129	390	23.8"
556	3/21/2013	6	240525	186	31	1			25720692	61401	10234	394	17.8"
557	3/29/2013	8	240772	247	31	1			25795278	74586	9323	359	23.4"
558	4/5/2013	7	241001	229	33	1			25863922	68644	9806	377	20.4"
559	4/12/2013	7	241276	275	39	2			25956823	92901	13272	510	24.0"
560	4/19/2013	7	241437	161	23	1			26020743	63920	9131	351	22.5"
561	4/26/2013	7	241604	167	24	1			26082016	61272	8753	337	14.2"
562	5/2/2013	6	241732	128	21	1			26135496	53481	8914	343	32.2"
563	5/10/2013	8	241884	152	19	1			26204110	68614	8577	330	24.0"
564	5/17/2013	7	242026	142	20	1			26268459	64349	9193	354	23.2"
565	5/24/2013	7	242168	142	20	1			26326913	58454	8351	321	23.8"
566	5/31/2013	7	242310	142	20	1			26389956	63043	9006	346	20.0"
567	6/7/2013	7	242465	155	22	1			26448766	58810	8401	323	18.1"
568	6/13/2013	6	242640	175	29	1			26513484	64718	10786	415	14.9"
569	6/21/2013	8	242888	226	28	1			26590531	77047	9631	370	22.5"
570	6/28/2013	7	243028	162	23	1			26651363	60832	8690	334	14.5"
571	7/5/2013	7	243188	160	23	1			26714969	63606	9087	349	18.4"
572	7/12/2013	7	243358	170	24	1			26776193	60224	8603	331	19.3"
573	7/19/2013	7	243498	138	20	1			26834018	56825	8404	323	20.6"
574	7/26/2013	7	243635	139	20	1			26893604	59786	8541	328	22.3"
575	8/2/2013	7	243778	143	20	1			26952126	58322	8332	320	21.7"
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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)	g/ac/day		TIME	TOTALIZER	Gallons	FLOW (gpd)	g/ac/day	
543													
544	12/28/2012	41271	5595	5595	0	0.0							
545	1/4/2013	7	5595	0	0	0.0			10573007	10573007	256	24	28.2"
546	1/11/2013	7	5595	0	0	0.0			10623461	50454	7208	680	32.7"
547	1/18/2013	7	5595	0	0	0.0			10648572	25111	3587	338	23.4"
548	1/25/2013	7	5595	0	0	0.0			10668955	20383	2912	275	32.0"
549	1/31/2013	6	5595	0	0	0.0			10689573	20618	2945	276	26.7"
550	2/8/2013	8	5595	0	0	0.0			10701797	12224	2037	192	33.3"
551	2/15/2013	7	5595	0	0	0.0			10726538	24741	3093	292	33.5"
552	2/22/2013	7	5595	0	0	0.0			10748423	21885	3126	295	32.2"
553	3/1/2013	7	5598	3	0	0.0			10776700	28277	4040	381	35.0"
554	3/8/2013	7	5603	5	1	0.1			10790467	13767	1967	186	34.8"
555	3/15/2013	7	5603	0	0	0.0			10822950	32483	4640	438	24.4"
556	3/21/2013	6	5637	34	6	0.8		*	10848802	25852	3693	348	23.8"
557	3/29/2013	8	5637	0	0	0.0		*	10849029	17227	2871	271	25.5"
558	4/6/2013	7	5637	0	0	0.0			10849029	18575	2322	219	26.1"
559	4/12/2013	7	5637	0	0	0.0			10856317	7288	1041	98	24.8"
560	4/19/2013	7	5638	1	0	0.0			10918172	61855	8836	834	42.3"
561	4/26/2013	7	5638	0	0	0.0			10988110	67938	9705	916	28.2"
562	5/2/2013	6	5638	0	0	0.0			11039037	52927	7561	713	35.6"
563	5/10/2013	8	5638	0	0	0.0			11083935	44898	7483	706	32.2"
564	5/17/2013	7	5638	0	0	0.0			11142648	58713	7339	692	34.3"
565	5/24/2013	7	5638	0	0	0.0			11158815	12997	1852	175	34.6"
566	5/31/2013	7	5638	0	0	0.0			11201306	45691	6527	616	31.2"
567	6/7/2013	7	5638	0	0	0.0			11240032	38726	5532	522	32.4"
568	6/13/2013	6	5672	234	39	5.7			11284386	44354	6336	598	38.2"
569	6/21/2013	8	5968	86	11	1.6			11330280	45894	7649	722	26.9"
570	6/28/2013	7	5968	0	0	0.0			11387996	57716	7216	681	26.9"
571	7/5/2013	7	6218	250	37	5.4			11432475	44479	6354	599	33.9"
572	7/12/2013	7	6218	0	0	0.0			11477417	44942	6420	606	29.1"
573	7/19/2013	7	6230	14	2	0.3			11521324	43907	6272	592	30.1"
574	7/26/2013	7	6469	239	34	5.0			11565713	44389	6341	598	28.6"
575	8/2/2013	7	6470	1	0	0.0			11613510	47797	6828	644	34.6"
576									11666004	51494	7356	694	28.6"
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608	* = estimated flow rate due to flow meter malfunction.												
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IESI BETHLEHEM LANDFILL

	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ
541		TIME	Phase IV PS-3 (Secondary Flows)					Phase IV PS-3 Primary Flow					
542		(days)	TOTALIZER	GALLONS	FLOW (gpd	g/ac/day		TIME	TOTALIZER	Gallons	FLOW (gpd	g/ac/day	
543													
544	12/26/2012	41271	0	0	0	0.0							
545	1/4/2013	7	0	0	0	0.0			445523	445523	11	3	18.5"
546	1/11/2013	7	0	0	0	0.0			471032	25509	3644	878	23.7"
547	1/18/2013	7	0	0	0	0.0			483586	12554	1793	432	16.1"
548	1/25/2013	7	0	0	0	0.0			512225	28639	4091	986	21.2"
549	1/31/2013	6	0	0	0	0.0			519743	7518	1074	101	20.6"
550	2/8/2013	8	3	3	0	0.0			559644	39901	6650	627	19.9"
551	2/15/2013	7	3	0	0	0.0			573413	13769	1721	162	21.2"
552	2/22/2013	7	3	0	0	0.0			584752	11339	1620	153	17.1"
553	3/1/2013	7	3	0	0	0.0			594468	9716	1388	131	15.0"
554	3/8/2013	7	3	0	0	0.0			608297	11829	1690	159	20.9"
555	3/15/2013	7	3	0	0	0.0			615256	8959	1280	121	16"
556	3/21/2013	6	3	0	0	0.0			637920	22664	3238	305	22.7"
557	3/29/2013	8	3	0	0	0.0			648709	10789	1798	170	12.2"
558	4/5/2013	7	6	3	0	0.0			658035	9326	1166	110	21"
559	4/12/2013	7	6	0	0	0.0			662176	4141	592	56	23.3"
560	4/19/2013	7	6	0	0	0.0			692837	30661	4380	413	19.7"
561	4/26/2013	7	6	0	0	0.0			703378	10541	1506	142	22.9"
562	5/2/2013	6	6	0	0	0.0			722737	19359	2766	261	18.0"
563	5/10/2013	8	6	0	0	0.0			726945	4208	701	66	18.8"
564	5/17/2013	7	6	0	0	0.0			731910	4965	621	59	17.1"
565	5/24/2013	7	6	0	0	0.0			739889	7979	1140	108	18.6"
566	5/31/2013	7	6	0	0	0.0			749400	9511	1359	128	23.7"
567	6/7/2013	7	6	0	0	0.0			757474	8074	1153	109	17.1"
568	6/13/2013	8	6	0	0	0.0			771049	13575	1939	183	22.7"
569	6/21/2013	8	14	8	1	0.1			946548	175497	29250	2759	21.8"
570	6/28/2013	7	14	0	0	0.0			977701	31155	3894	367	23.5"
571	7/5/2013	7	9274	9260	1323	124.8			1005421	27720	3960	374	19.3"
572	7/12/2013	7	11441	2167	310	29.2			1080156	74735	10676	1007	17.8"
573	7/19/2013	7	12478	1037	148	14.0			1099311	19155	2736	258	17.8"
574	7/26/2013	7	13812	1334	191	18.0			1184576	85265	12181	1149	16.4"
575	8/2/2013	7	14493	681	97	9.2			1320307	135731	19390	1829	23.3"
576									1378621	58314	8331	786	21.8"
577													
578													
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BETHLEHEM LANDFILL

LEACHATE DEMAND REPORT

July 2013

Location	Total gallons
LMC-6	9,005
LMC-7	23,167
LMC-8	41,546
LMC-10	1,607,000
PS-1	283,573
PS-2	217,248
PS-3	331,699
Phase-IV	832,520

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	1,607,000
Phase IV	832,520
TOTAL	2,439,520 gallons

Total Leachate

Leachate	204,682
Phase IV	832,520
TOTAL	1,037,202 gallons

LMC-10 Flow – Abatement System Flow = Leachate System Flow (gallons).
Abatement System Flow = 1,402,318 gallons (Neptune Flow meters)