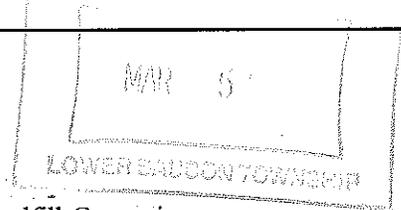


Hanover

Engineering Associates Inc

March 4, 2013



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

RE: Joint Municipal Landfill Committee
Minutes of February 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 at 1:00 PM on February 21, 2013.

Attending the meeting were:

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

AGENDA ITEMS

I. Status of Waste Activities

Monthly Tonnages:

	<u>November</u>	<u>December</u>	<u>January</u>
Municipal Solid Waste (total)	32,011.60	24,220.20	23,938.40
Construction and Demo (total)	10,375.10	11,598.80	9,671.00
Residual Waste (total)	2,077.20	2,015.30	2,068.10
Asbestos	[1.00]	[107.90]	[96.40]
Out of state-total (percentage)	[30,419.00](68%)	[25,251.40](67%)	22,936.90(64%)
TOTAL	44,463.90	37,834.30	35,677.50

<p>Recycled Tonnage (percent from Lower Saucon Twp.)</p>	<p>5.00 (78%)</p>	<p>0.00 (81%)</p>	<p>23.30 (79%)</p>
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- 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. Schleyer stated that the recycling load for January included a scrap metal box, which explains the unusually high tonnage.

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

website

<u>Form U Submittals</u>	<u>Waste</u>	<u>Approval Date</u>
BASF	ACM/petroleum contaminated soil	01/17/13
Bloomfield	ACM	01/04/13
The Village School	ACM	01/04/13
Drew University	ACM	01/04/13
Tilcon of New York	ACM	01/17/13
Fitzpatrick	Plant Trash	02/05/13
S. Beach Psych. Center	ACM	02/05/13

II. Annual Groundwater Trend Analysis

- The 1st Quarter 2013 Quarterly Groundwater Report sampling is scheduled to take place the week of March 18, 2013.

III. Correspondence and Reports

- Form U Submittals to PADEP and Lower Saucon Township
- Abatement System Report
- 4Q12 PADEP Facility Report
- 4Q12 Groundwater Report
- LFG well construction notice
- Minor Permit Modification – re-grade final contours
- GP3/9 permit renewal applications for the Fintech rock crusher

Ms. deLeon asked why there is a minor permit modification. Mr. Schleyer provided an explanation, using the wall map as a visual aid. Mr. Schleyer stated that the goal (of the proposed re-grading) is to send storm water to the east, into the swale and eventually to Basin 2, rather than sending it south to Basin 4. A lengthy discussion on this topic followed. Mr. Schleyer stated that they were trying to shift some storm water flow from Basin 4 to Basin 2. Ms. Louder stated her concern that this meant sending water toward the 'old landfill'. Ms. deLeon and Ms. Louder were concerned that this water would infiltrate into the landfill, and possibly worsen the problem of high leachate flows in LMC-8. Mr. Schleyer stated that the swale channel has a liner that would prevent water from infiltrating. Mr. Taylor asked if the swale was designed to handle this extra flow, and a discussion followed on the size and construction of the swale and its ability to carry this extra water without becoming eroded or damaged. Mr. Schleyer stated his belief that the landfill consultant had done the necessary calculations to ensure adequate carrying capacity of the swale.

IV. Landfill Operations

- Department of Environmental Protection Inspections
 - January 9, 2013 – B. Bham: site visit
 - January 10, 2013 – S. French, J. Spaide: Engineers meeting
 - January 30, 2013 – W. Govern: site inspection
 - February 14, 2013 – S. French: Engineers meeting
- Host Municipal Inspection
 - January 17, 2013 – Chris Taylor
 - February 1, 2013 – Chris Taylor

- February 21, 2013 – Chris Taylor

Mr. Schleyer stated that the notes provided at the meeting did not contain the most up-to-date inspection information. Mr. Taylor asked Mr. Schleyer if he could update that page. The updated information was provided by Mr. Schleyer to Mr. Taylor by e-mail later that same day. Mr. Taylor then distributed the e-mail to the rest of the landfill committee.

- 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 is currently shut down.

Jan 13, 2013	Flare shutdown	01:16	Power outage
	Flare startup	08:39	Duration 7 hr 23 min
Jan 14, 2013	Flare shutdown	10:32	Power outage
	Flare startup	11:39	Duration 1 hr 6 min
Feb 8, 2013	Flare shutdown	14:40	Power outage
	Flare startup	16:32	Duration 1 hr 52 min

All shutdown information is provided to the PADEP.

Mr. Schleyer stated that he hasn't heard anything on the BRE power plant, and that he does not expect them to be back up in the next several weeks. A lengthy discussion on the BRE Land Development Plan and concerns with the BRE operations followed.

- Gas Collection

- The Bethlehem Renewable Energy Plant is currently shut down for further pretreatment evaluation. The flare is the primary landfill gas collection and control system. Additional LFG horizontal wells were constructed in the 4-F area.

Mr. Schleyer stated that they added three (3) more horizontal landfill gas collectors along the north perimeter. Ms. deLeon asked why this was necessary. Mr. Schleyer replied that no one told them to do it, that they thought it was prudent to stay ahead of gas issues. He stated that the work was completed in the last month. Mr. Taylor asked Mr. Schleyer where he was with the fourteen-inch (14") main header installation. Mr. Schleyer stated that it was pretty much done, and that it's meant to get an even pull (of gas) around the landfill. He stated that the installation has gone as far as it can now, pending the filling of Cell 4E. Mr. Taylor asked if he noticed a difference in gas flow to the flare. Mr. Schleyer replied that when the four (4) new vertical wells came online (several months ago), the flow bumped up to over 2,400 (standard cubic feet per minute), but that no increase was noticed with this latest installation. Mr. Taylor asked if the landfill flare is "maxed out". Mr. Schleyer replied no, it is functioning okay with current flows, and has excess capacity. He added that the flare is rated for 4,000 scfm. Ms. Louder asked why we don't have a second flare. Mr. Schleyer responded that we may someday, but that we don't need one now. Mr. Taylor asked if the bigger problem is balancing the draw from the wells and getting the proper pull

on each well. Mr. Schleyer responded yes, and added that every month their consultant is reading and balancing the wells.

During the inspection following the meeting, Mr. Taylor confirmed that the landfill flare was operating at 2,430 scfm at 1651 degrees F.

- Well Sampling

- The 1st Quarter 2013 Quarterly Groundwater Monitoring sampling is scheduled to take place during the week of March 18, 2013.

Ms. deLeon asked if this sampling will include the new residential well. Mr. Schleyer responded 'yes'. Ms. deLeon asked if the residents will get a copy of the results. Mr. Schleyer responded yes, the results come straight from the lab. Ms. deLeon stated that no one ever answered her e-mail regarding the safety of the residential well. Mr. Schleyer replied that Mr. Hershey had provided the best response that he could to Ms. deLeon's previous e-mail regarding the significance and meaning of the testing results. Ms. Louder stated that she advised the resident to contact the water testing company with any questions.

- North Slope

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

Mr. Schleyer stated that workers had removed the fallen tree that was blocking the road, but they had advised him that the entrance to the road was icy and difficult to climb.

- 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.

Mr. Taylor stated that the latest reporting indicated that in Well AB-10, the water level is below the pump control levels, and asked Mr. Schleyer for an explanation and update on this situation. Mr. Schleyer stated that the well is pumping now, that the water level was below the 'pump on' float level, and that they got it fixed. Mr. Taylor asked what caused the problem, a lower water level? Mr. Schleyer responded that it could have been a seasonal thing. Mr. Taylor asked how the problem was fixed. Mr. Schleyer responded that they lowered the transducer to cause the well to pump at a lower level.

- 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 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 PADEP 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 PADEP 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 PADEP 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.

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.

- Radiation Monitoring

- January 2, 2013: I-131
- January 17, 2013: I-131
- February 2, 2013: Tc-99M

All are Level 1 isotopes and disposed of on site.

- Phase IV Construction Activities

- Cell 4E Stage 1/Cell 4-D Stage 1 is the current active disposal area.

- Complaints

- February 6, 2013 – A Steel City resident called in an odor complaint at approximately 3:49PM. IESI responded to the call and arrived at the Steel City resident's house that called in the complaint at approximately 4:00PM. Sam conducted an odor patrol and also spoke to the resident. At that time no landfill odors were detected at the residence or throughout the Steel City area; only smoke and odor from wood burning stoves/fireplaces could be detected. A Lower Saucon Township Police officer was also on patrol in the Steel City area and Sam asked him if he detected any landfill odors. The officer stated that he only detected odors from wood burning stoves. IESI conducted an on-site odor inspection at 3:00 PM prior to the call and again specifically in the north and west area at 4:00PM (in response to the complaint) and no odors were detected. IESI discussed the complaint with Susan French PADEP during the routine meeting that occurred on Thursday 2/7/13.
- February 19, 2013 – A resident on Skyline Drive complained of a contractor around their house on Tuesday and startled their daughter and caregiver. The contractor was setting up and collecting seismic equipment used for checking areas resulting from the on-site blasting. The contractor was instructed to stay away from local residential homes and if there was a need to be there then IESI should be informed to provide at least a 24 hour notice to the residences.

Mr. Schleyer provided a lengthy explanation of the IESI response to the February 6 odor complaint. Ms. Louder asked if there is any kind of (odor) monitor that could be set up somewhere. Mr. Schleyer responded that he didn't know, and added that as far as he knew no one's come up with a landfill odor detector.

Mr. Schleyer provided an explanation of the February 19 complaint and a general discussion followed.

Ms. deLeon stated that she talked to a resident on Applebutter Road who said they occasionally smell the landfill. She stated that she advised them to notify the landfill of any such complaints.

- Miscellaneous

- Ms. deLeon asked if Mr. Schleyer could add a section to the meeting notes for air quality. Mr. Schleyer responded yes.
- Mr. Taylor asked how the work was coming along to prepare Pump Stations 1, 2, and 3 for emergency generator hook-ups. Mr. Schleyer stated that they were still working on it, and that it was moving forward. He stated that they were looking into energizing the main panel box for the pump stations on the advice of the electrician. Mr. Taylor asked if the pump stations were all that was wired into that box. Mr. Schleyer responded that the box might run the office trailer too.
- Mr. Taylor stated the high turbidity had been noted in BL 14 DR and asked Mr. Schleyer what action was being taken. Mr. Schleyer responded that they were looking at their options. He stated that they may have pumped the well too hard, that Bob (Hershey) had noticed the problem, and that they are working on getting it addressed.
- Mr. Taylor asked about the progress of revisions to the PPC plan, including the issue of providing auxiliary power to the pump stations. Mr. Schleyer stated that the revised plan was issued in January. Mr. Taylor asked if he could get a copy, and Mr. Schleyer agreed to provide him with one. Mr. Taylor asked if there were any other major changes to the plan. Mr. Schleyer responded that he added a stormwater inspection section, that he had developed a post-storm inspection report that would be an internal document containing a punch list of items to be addressed. Mr. Taylor asked if there was anything in the PPC plan related to the BRE plant. Mr. Schleyer responded no, since they are a separated company and have their own plan.
- Mr. Taylor asked Mr. Schleyer if he could provide a copy of the as-built drawing for Cell 4E. Mr. Schleyer responded that this was a very large and detailed document. Mr. Taylor asked if there was a simple plan that showed the location of the major features. Mr. Schleyer said that he would look into it.
- Mr. Taylor produced a document from the PADEP regarding the Covered Device Recycling Act (Act 108), read the requirements for landfills to be in compliance with the Act, and asked Mr. Schleyer if IESI had completed any of the requirements. Mr. Schleyer responded that they have done all of them. Ms. deLeon stated that the

Township has a “free-cycle” program. Mr. Schleyer asked her to let him know in advance of a Township recycling event, and that he’d post it.

- Ms. deLeon stated that Well TW-9A had high readings for some parameters. Mr. Schleyer stated his belief that hitting old garbage during the storm manhole installation in this area impacted the groundwater as a temporary, localized affect. He noted that the elevated parameters, such as nitrate, were indicative of the decomposition of older garbage versus fresh garbage. Ms. deLeon asked him what he was going to do. Mr. Schleyer responded that he would monitor the situation over future sampling events. He added that IESI noted the elevated readings in this well in their cover letter to show that they’re aware of the situation and keeping an eye on it. During the inspection following the meeting, it was observed that Well TW-9A is situated only about forty feet (40’) northeast of the storm manhole.
- During the inspection following the meeting, three (3) vultures were observed on the north side of the landfill, away from the working face and any areas of garbage.
- During the inspection following the meeting, a patrol of Steel City was performed. The wind was blowing from the north/northwest at approximately 10 to 20 miles per hour. No landfill-related odors or noises were observed.

V. Commercial Waste Vehicles

	<u>Nov 2012</u>	<u>Dec 2012</u>	<u>Jan 2013</u>
Total Trucks	3,202	2,852	2,870
Overweight	57	61	35
Warnings	23	37	23
Suspensions	34 (22>3%) 22-TT	24 (5>3%) 5-TT	12 (3>3%) 3-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
 - No discussion
- Correspondence to Department of Environmental Protection
 - No discussion.
- Other Correspondences
 - Ms. deLeon noted that the Township had just received a response from the landfill consulting engineering firm (Martin and Martin) to the issues raised in the Hanover Engineering comment letter of January 3, 2013 (regarding Martin and Martin’s report on the August 4, 2012 storm overflow event).
 - Mr. Taylor noted that he has not seen any response to the letters from agencies such as the Pennsylvania Historical and Museum Commission which cited conflicts and

issues with the proposed PPL line relocation. Mr. Schleyer stated that PPL has their own consultants who will address such issues and provide a response.

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.

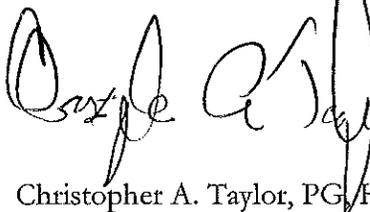
VIII. Establish Time for Next Meeting

1:00PM March 21, 2013 at the Landfill Facility Office.

END OF MINUTES

Respectfully,

HANOVER ENGINEERING ASSOCIATES, INC.



Christopher A. Taylor, PG/HMI

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. Laouressa 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 (via e-mail)
Ms. Leslie Huhn (via e-mail)
Ms. Diane Palik (via e-mail)
Ms. Susan French (via e-mail)

IESI BETHLEHEM LANDFILL

473	A	B	C				D		E		F		H	I	J		K	M	N	O
	474	TIME (days)	TOTALIZER	GALLONS	FLOW (gpd)	g/ac/day	TIME	TOTALIZER	Gallons	FLOW (gpd)	g/ac/day	Level								
475	12/30/2011	40907	225335	469	67	3		20146806	171752	24536	1031	12.5"								
476	1/6/2012	7	225609	274	39	2		20241943	95137	13591	571	22.1"								
477	1/13/2012	7	225889	280	40	2		20365489	123546	17649	742	22.1"								
478	1/20/2012	7	226169	280	40	2		20478132	112643	16092	676	21.2"								
479	1/27/2012	7	226503	334	48	2		20618373	140241	20034	842	18.9"								
480	2/3/2012	7	226872	369	53	2		20787532	169159	24166	1015	19.1"								
481	2/10/2012	7	227083	211	30	1		20877618	90086	12869	541	22.7"								
482	2/16/2012	6	227261	178	30	1		20952699	75081	12514	526	14.2"								
483	2/24/2012	8	227503	242	30	1		21044854	92155	11519	484	20.8"								
484	3/2/2012	7	227746	243	35	1		21126496	81642	11663	449	23.8"								
485	3/9/2012	7	227981	235	34	1		21213120	86624	12375	476	23.4"								
486	3/16/2012	7	228269	288	41	2		21318994	105874	15125	582	23.6"								
487	3/23/2012	7	228535	266	38	1		21411515	92521	13217	508	21.2"								
488	3/30/2012	7	228823	288	41	2		21509800	98085	14012	539	23.8"								
489	4/6/2012	7	229131	308	44	2		21611815	102215	14602	562	14.4"								
490	4/13/2012	7	229420	289	41	2		21710217	98402	14057	541	19.5"								
491	4/20/2012	7	229684	264	38	1		21800600	90383	12912	497	18.5"								
492	4/26/2012	6	229999	315	53	2		21913246	112646	18774	722	21.7"								
493	4/30/2012	4	230213	214	54	2		21965567	52321	13080	503	22.5"								
494	5/4/2012	4	230391	178	45	2		22010373	44806	11202	431	23.2"								
495	5/11/2012	7	230748	357	51	2		22097316	86943	12420	478	20.6"								
496	5/18/2012	7	231087	339	48	2		22179489	82173	11739	452	23.6"								
497	5/25/2012	7	231419	332	47	2		22258261	78772	11253	433	20.8"								
498	6/1/2012	7	231789	370	53	2		22338573	80312	11473	441	21.0"								
499	6/8/2012	7	232034	245	35	1		22422882	84309	12044	463	23.8"								
500	6/15/2012	7	232277	243	35	1		22508696	85814	12259	472	21.7"								
501	6/21/2012	6	232506	229	38	1		22581521	72825	12138	467	24.8"								
502	6/29/2012	8	232776	270	34	1		22678218	96697	12087	465	21.2"								
503	7/7/2012	8	233050	274	34	1		22772001	93783	11723	451	17.4"								
504	7/13/2012	6	233240	190	32	1		22841946	69945	11658	448	16.8"								
505	7/20/2012	7	233471	231	33	1		22918263	76317	10902	419	21.9"								
506	7/27/2012	7	233709	238	34	1		22999189	80926	11561	445	22.3"								
507	8/3/2012	7	233950	241	34	1		23081261	82072	11725	451	20.2"								
508	8/10/2012	7	234166	216	31	1		23161772	80511	11502	442	23.4"								
509	8/17/2012	7	234370	204	29	1		23247091	85319	12188	469	23.4"								
510	8/24/2012	7	234568	198	28	1		23331543	84452	12065	464	22.3"								
511	8/31/2012	7	234795	227	32	1		23417358	85815	12259	472	22.3"								
512	9/7/2012	7	235013	218	31	1		23501772	84414	12059	464	21.5"								
513	9/14/2012	7	235227	214	31	1		23581090	79318	11331	436	23.6"								
514	9/20/2012	6	235448	221	37	1		23681215	100125	16688	642	21.2"								
515	9/28/2012	8	235501	53	7	0		23804119	122904	15363	591	23.2"								
516	10/5/2012	7	235755	254	36	1		23918356	114237	16320	628	23.6"								
517	10/12/2012	7	235955	200	29	1		23995197	76841	10977	422	13.6"								
518	10/18/2012	6	236145	190	32	1		24057788	62591	10432	401	17"								
519	10/26/2012	8	236385	240	30	1		24143046	85258	10657	410	22.1"								
520	11/2/2012	7	236573	188	27	1		24222278	79232	11319	435	20.4"								
521	11/9/2012	7	236777	204	29	1		24301643	79365	11338	436	22.3"								
522	11/16/2012	7	236983	206	29	1		24387895	86252	12322	474	19.1"								
523	11/23/2012	7	237168	185	26	1		24461816	73921	10560	406	19.5"								
524	11/30/2012	7	237329	161	23	1		24540440	78624	11232	432	21.2"								
525	12/7/2012	7	237527	198	28	1		24618738	78298	11185	430	23.4"								
526	12/14/2012	7	237717	190	27	1		24697203	78465	11209	431	17.2"								
527	12/21/2012	7	237915	198	28	1		24774991	77788	11113	427	17.2"								
528	12/28/2012	7	238102	187	27	1		24894178	119187	17027	655	22.5"								
529	1/4/2013	7	238296	194	28	1		24932503	38325	5475	211	23.2"								
530	1/11/2013	7	238469	173	25	1		25001488	68985	9855	379	23.4"								
531	1/18/2013	7	238654	185	26	1		25079895	78407	11201	431	23.4"								
532	1/25/2013	7	238847	193	28	1		25152050	72155	10308	396	24.0"								
533	1/31/2013	6	239007	160	27	1		25213625	61575	10263	395	23.2"								
534																				
535																				
536																				
537																				
538																				
539																				
540																				

*3/2/12 Added Cell F acreage to G/A/D

BETHLEHEM LANDFILL
LEACHATE DEMAND REPORT

January 2013

<u>Location</u>	<u>Total gallons</u>
LMC-6	11,242
LMC-7	55,275
LMC-8	37,966
LMC-10	1,479,000
PS-1	323,179
PS-2	104,803
PS-3	98,709
Phase-IV	526,691

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	1,479,000
<u>Phase IV</u>	<u>526,691</u>
TOTAL	2,005,691 gallons

Total Leachate

Leachate	313,181
<u>Phase IV</u>	<u>526,691</u>
TOTAL	838,872 gallons

LMC-10 Flow – Abatement System Flow = Leachate System Flow (gallons).
Abatement System Flow = 1,165,819 gallons (Neptune Flow meters)