

# Hanover

Engineering Associates Inc

February 29, 2012

MAR - 2 2012

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

RE: Joint Municipal Landfill Committee  
Minutes of February 16, 2012 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 p.m. on February 16, 2012.

Attending the meeting were:

Ms. Priscilla deLeon  
Mr. Allen Schleyer  
Mr. Christopher Taylor

## AGENDA ITEMS

### I. Status of Waste Activities

Monthly Tonnages:

	<u>November 2011</u>	<u>December 2011</u>	<u>January 2012</u>
Mun Solid Waste (total)	24,873.00	26,058.60	23,490.00
Mun Solid Waste (out/state)	(15,727.50)	(17,479.10)	(15,221.30)
Construction and Demolition	4,204.60	3,257.30	11,867.80
Residual Waste (Total)	7,584.60	1,914.70	975.00
Asbestos	<u>118.10</u>	<u>36.30</u>	<u>51.40</u>
<b>TOTAL</b>	<b>36,662.20</b>	<b>31,230.60</b>	<b>36,332.80</b>

Recycled Tonnage (percent from Lower Saucon Twp.)

6.90 (85%)	0.0 (86%)	9.70 (77%)
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Ms. deLeon wanted to know the origin of the out of state waste. Mr. Schleyer retrieved those figures for the three (3) months of the fourth quarter of 2011 and read them off.

Mr. Taylor asked why the amount of Construction and Demolition waste was so high. Mr. Schleyer responded that this was due to waste generated by the Brandenburg demolition project for the Allentown hockey arena. Mr. Taylor noted that the amount of residual waste had dropped off. Mr. Schleyer responded that this had to do with the amount of waste coming in from a contaminated soil job.

### ROUTING

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

<u>Form U Submittals</u>	<u>Waste</u>	<u>Approval Date</u>
Se-Wy-Co Fire Company	Heating Oil contaminated soil 508	01-05-12
67 Whippany Inv.	ACM 501	01-24-12
Ford Motor Company	Contaminated soil 506	02-15-12

II. Annual Groundwater Trend Analysis

- The 1<sup>st</sup> Quarter 2012 Quarterly Groundwater Monitoring sampling is scheduled to take place the week of March 12, 2012.
- The Annual 2011 Groundwater Trend report is due June 30, 2012.

III. Correspondence and Reports

- Form U Submittals to PADEP and Lower Saucon Township
- Abatement System Report
- Cell F correspondence
- 4<sup>th</sup> Quarter 2011 Groundwater Quarterly Report
- Annual Recycling Report
- Cell 4E Permit Modification

IV. Landfill Operations

- Department of Environmental Protection Inspections
  - January 9, 2012 – R. Croll, Radiation Management Program
  - January 9, 2012 – W. Govern: site inspection, radiation monitoring
  - January 12, 2012 – S. French: Engineer's meeting
  - January 12, 2012 – S. Pletchan, Water Quality: Basin #4 inspection
  - January 24, 2012 – Facility inspections by the following personnel:
    - D. Fisher, W. Govern, S. French – Bureau of Waste Management
    - A. Sweitzer, R. Policichio, J. Wagoner – Air Quality
    - B. Bham, S. Ripple – Water Quality
  - February 8, 2012 – S. French, W. Craft: Engineer's meeting

Mr. Schleyer stated that he had a busy day on January 24 because someone had filed an e-mail complaint with the PADEP. Ms. deLeon asked him to elaborate. Mr. Schleyer provided a verbal summary of the circumstances, which are explained in the "Complaints" section of these minutes. He stated his belief that it was a former employee of IESI who had lodged the complaint, based on the fact that the former employee's work vehicle was captured in one of the photographs that were sent to the PADEP as part of the complaint. Ms. deLeon asked if Mr. Schleyer was saying that the complaint came from a disgruntled employee. Mr. Schleyer responded yes. In reference to the PADEP inspections that took place on January 24, Mr. Schleyer stated that the landfill was thoroughly inspected that day. Ms. deLeon asked if any reports had been issued. Mr. Schleyer responded that the air quality report was issued that same day. Ms. deLeon asked if the Township had received a copy of the report. Mr. Taylor responded that he did not recall seeing it.

The discussion regarding the specific inspections conducted by the PADEP continued. Mr. Schleyer stated that the Air Quality personnel conducted a surface monitoring survey and found some exceedances around the base of some wells, meaning gas concentrations greater than 500 parts per million (ppm). He explained that the usual remedy is to dig out the soil around the well and pack the area with clay. He stated that this work was completed for all wells with exceedances within a week, and that these wells were then rechecked by SCS. He stated that SCS would return for a thirty (30) day check. Mr. Taylor asked what the personnel from the Bureau of Waste Management did as part of the inspection. Mr. Schleyer responded that they had gotten the correct personnel together for the inspection and that their role was to organize and oversee the inspection.

Mr. Schleyer stated that Water Quality personnel checked the discharge from all of the stormwater basins and from the sediment traps in the back of the facility. He stated that they also checked the engineering drawings for the basin design versus how they were actually constructed. He stated that allegations were made that the basins weren't functioning properly because they drain completely, but explained that they are designed with a small orifice in the bottom of the outlet structure so that they can slowly drain completely. Mr. Taylor asked how the PADEP checked the stormwater basin discharge. Mr. Schleyer responded that they checked it visually for clarity, and used a hand held meter to check the pH. Mr. Taylor asked if any samples were taken. Mr. Schleyer replied no. Mr. Taylor asked what the next step would be to address and resolve the complaint issues. Mr. Schleyer replied that IESI will provide a response with thirty (30) days. Mr. Taylor asked if that would be a formal, written response to the PADEP, with a copy to Lower Saucon Township. Mr. Schleyer replied yes. Mr. Schleyer explained that IESI had previously investigated an area in Basin 1 where a white material was oozing out of the basin bottom. He stated that IESI informed the PADEP, and collected a sample that was sent to Penn State for analysis. He stated that the sample came back as calcium carbonate, which is a naturally-occurring mineral.

Ms. deLeon asked when the complaint came in to the PADEP. Mr. Schleyer replied December. Ms. deLeon asked why it wasn't listed in the complaint log in the report that Mr. Schleyer had provided at the meeting. Mr. Schleyer agreed that it should be on there, thanked Ms. deLeon for catching the error, and stated that he would revise the Complaints section on Page 5. (NOTE: the revised section was subsequently provided by e-mail and is reflected herein.) Ms. deLeon asked Mr. Schleyer when he found out about the complaint. Mr. Schleyer responded that he found out about it on January 24 when the PADEP arrived at the facility to conduct their surprise inspections.

- Host Municipal Inspection
  - January 6, 2012 – Chris Taylor
  - January 20, 2012 – Chris Taylor
  - February 13, 2012 – Chris Taylor
  
- Bethlehem Renewable Energy (BRE) and Flare Operations

The following is an update to the Gas Turbine Generator/Flare activity. We had the following BRE/LFG Generator shutdowns at Bethlehem Landfill. Auto-valves closed as designed for each shutdown of either the flare or turbine. No odors were noted or odor

complaints received by Bethlehem Landfill during the outage events. The flare and BRE plant are both operating.

Jan 5, 2012	Turbine shutdown	10:38	Maintenance
	Turbine startup	23:09	Flare running
Jan 11, 2012	Turbine shutdown	08:39	Maintenance
	Turbine startup	12:25	Flare running
	Turbine shutdown	12:45	Protective shutdown
	Turbine startup	13:41	Flare running
Jan 16, 2012	Flare shutdown	04:26	High temperature
	Flare startup	08:36	Turbine running during shutdown
Jan 18, 2012	Turbine shutdown	08:08	Maintenance
	Turbine start-up	14:24	Flare running
	Turbine shutdown	14:50	Protective shutdown
	Turbine startup	17:25	Flare running
	Turbine shutdown	17:37	Protective shutdown
Jan 19, 2012	Turbine startup	23:33	Flare running
Jan 22, 2012	Flare shutdown	03:46	High temperature due to a drop in turbine load. Turbine still running.
	Turbine shutdown	05:34	Protective shutdown
	Turbine startup	09:11	Duration 3 hr 37 min
	Flare startup	09:52	Duration 3 hr 37 min then turbine running

All shutdown information is provided to the PADEP.

- Well Sampling
  - The 1<sup>st</sup> Quarter 2012 Quarterly Groundwater Monitoring sampling is scheduled to take place the week of March 12, 2012.
- 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.
- Gas Collection
  - The Bethlehem Renewable Energy plant continues to operate as the primary landfill gas control system. The flare is a back-up to the generating plant. The flare is currently running simultaneously with the power plant.

During the inspection following the meeting, Mr. Taylor confirmed that the BRE plant flare and the landfill flare were both operating.

- Leachate Collection

Flow rates continue to be monitored and reported. Additional toe-drain drainage piping was constructed during the beginning of May. A final construction report was submitted to the PADEP and the Township. Following is a summary of the work history and developments:

- IESI submitted the report from Mieser 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 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 overflowing" 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 overflow 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.

A leachate release incident occurred due to a rain event early in the morning of January 12, 2012. Storm water from the open Cell F was collected and conveyed into the down gradient Cell 4-C leachate collection system. The hydraulic pressure from the storm water/leachate forced off a cleanout cap at the lowest point, just west of Pump Station No. 1, and caused a release of leachate into Basin #4. IESI personnel observed the water flowing from the cleanout during their routine daily activities and notified the Compliance Manager. The cap was immediately replaced and fastened with screws. IESI notified PADEP of the leachate release by phone and also during a scheduled meeting that morning with S. French, PADEP Engineer. Mr. S. Pletchan, PADEP Water Management Program, came out to the site for an inspection. After sealing the cleanout, IESI informed the Bethlehem WWTP of the remediation plan to pump out Basin #4 and convey the water to the Bethlehem WWTP for treatment. Bethlehem WWTP sent a representative to the site to collect a water sample and analyze prior to IESI discharging the Basin #4 water to the WWTP. IESI consultants also collected Basin #4 discharge water for independent laboratory analysis. Mobil Dredge was contracted to pressure clean the main leachate collection piping, and determined that there was a partial blockage in the line between the cleanout and the pump station, thereby restricting the leachate flow to the pump station. IESI will prepare an incident report and submit the report to PADEP and Lower Saucon Township.

Mr. Schleyer stated that the report regarding the leachate release was going out “today”. He stated that he left the above reporting in the minutes since it’s still relevant. Ms. deLeon stated that this incident would have qualified for “courtesy reporting” to the Township. She asked Mr. Schleyer to please keep that in mind, and stated that that (reporting) is what he’s supposed to do. Mr. Schleyer replied yes, he will. Ms. deLeon continued her thought by saying that, if there is an environmental incident, which this was, the Township is supposed to be notified so that the landfill committee can assess and decide if they want Mr. Taylor to go out to the facility.

Ms. deLeon asked what the complaint about leachate smell was. Mr. Schleyer stated that, at the sewage pump station down Applebutter Road, workers had the access hatch open, and a resident was able to smell leachate.

- Radiation Monitoring

- January 7, 2012: Ra-226; Level 1 no on-site disposal. Two (2) trucks from the City of Allentown (C&D) staged at the designated isolation area for PADEP inspection and direction.
- January 19, 2012: Ra-226 waste was consolidated to one (1) roll-off under recommendation from PADEP. Remainder of non-radioactive C&D waste disposed in landfill. Roll-off is in isolation area.

On Saturday January 7, 2012, IESI radiation monitoring equipment detected radioactive material in two (2) trucks of C&D debris from the center city Allentown demolition project. The trucks were scanned and determined to contain Radium 226 isotope. IESI reported the incident via email that day and inadvertently listed it as a Level 2 but it should have been listed as a Level 1. Radium 226 is not on the accepted for disposal list without specific PADEP authorization. Both trailers were staged in the isolation area until Monday, January 9, 2012 when PADEP Radiation Management Program could be directly contacted. IESI personnel and their contracted Health Physicist arrived on site Monday and met with R. Croll, PADEP Radiation Management Program, and W. Govern, PADEP site inspector. Both trailers were re-scanned and confirmed to contain the Radium 226 isotope. Per the IESI Radiation Management Plan and under the direction of R. Croll, PADEP, one (1) trailer was off-loaded onto a plastic tarp near the working face. This is standard practice to locate and remove the radioactive material. Typically Radium 226 may be a World War II era instrument or device that would glow in the dark (i.e. - instrument panel, etc.). The material containing the Radium 226 was determined to be in the grit and fines of the debris and could not be easily extracted. The debris pile was covered with a second tarp and left in-situ for further evaluation by the Department. The Department determined that as much non-radioactive debris should be segregated from the radioactive material to reduce the mass. This process was conducted for both waste loads on January 19, 2012 under the direction of the IESI health physicist. The remaining radioactive waste from both trailers was loaded onto a roll-off container and placed back in the isolation area awaiting further instruction from PADEP for off-site disposal.

During the inspection following the meeting, Mr. Schleyer pointed out that the roll-off container was still staged on in the isolation area, and that IESI was still awaiting further instruction from PADEP for off-site disposal.

- Phase IV Construction Activities

- Phase IV D-Stage 3 cell is currently the active disposal area. Cell F and the MSE wall construction is completed. Approximately 1.2 acres of cap was completed during the week of December 12, 2011. Certification for cell construction was submitted to the PADEP. Capping certification is in the process of completion for submittal.

- Complaints

- January 3, 2012 – Litter complaint. A complaint was left as voicemail over the weekend to the PADEP Bethlehem Office that bags were blowing across Applebutter Road and one (1) caught on their windshield and hampered their vision. On Tuesday January 3, 2012, IESI received an email from Dean Fisher, PADEP,

regarding the complaint. In response, Mr. Schleyer and Mr. Donato conducted a litter survey along Applebutter Road from Shimersville Road past Ringhoffer Road. They observed some litter that did include a few grocery store bags, but no more that would be "typical" roadside litter. IESI sent a litter crew out to clean up the road and collected less than one (1) bag full for the entire road. The information was conveyed via email back to D. Fisher, PADEP.

- January 18, 2012 – A neighbor called in to inform IESI that waste truck drivers were driving too fast around the bad curve on Applebutter Road. The weigh master contacted the hauling companies and the drivers and gave them warnings to slow down.
- January 24, 2012 – PADEP personnel arrived on site to conduct an unannounced inspection to follow-up on a complaint the Department received via e-mail about Bethlehem Landfill. The complaint listed several issues: stormwater basin construction and discharge quality, leachate spill, odors, and miscellaneous maintenance and construction items. Eight PADEP personnel inspected the site relative to the specific complaints. IESI is preparing a response to be completed by the first week of March regarding the allegations.

V. Commercial Waste Vehicles

	<u>November 2011</u>	<u>December 2011</u>	<u>January 2012</u>
Total Trucks	2,978	2,815	3,071
Overweight	47	39	59
Warnings	34	28	38
Suspensions	13 (1>3%) 1-TT	11 (0>3%)	21 (3>3%) 1-RO, 2-TT

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

Mr. Schleyer stated that the three (3) suspensions were overweight, and that was the most that they've had for a while. He stated that none of the overweight loads were related to demolition work.

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
  - Ms. deLeon stated that several residents had lodged complaints or raised concerns at the meeting that had taken place the previous evening. Specifically, she stated that one resident had complained about seeing the MSE wall from his house. She asked to visit the site of the wall during the post-meeting inspection, which she did. Ms. deLeon inspected conditions and observed the sight lines from the west end of the bottom of the wall, and took photographs. She asked about the tree cutting and clearing that had taken place immediately north of the wall in this area. Mr. Schleyer responded that clearing had been done by Pennsylvania Power and Light (PPL) pursuant to the rerouting of their high-tension power line in this area, that the clearing was limited to the width of PPL's easement, and that, in this area, all of the clearing was on the adjacent property and not on IESI's property. Ms. deLeon stated the Township's stance that "we didn't want any trees cut here".
  - The second citizen complaint from the previous evening's meeting mentioned by Ms. deLeon was in regards to leachate seeps behind a barn. She stated at the end of the meeting that Mr. Schleyer and Mr. Taylor had to go look at the area of the barn where leachate is supposedly coming out of the ground. Mr. Schleyer stated that he did not know which barn Ms. deLeon was referring to. A discussion ensued, but ultimately a specific location could not be determined. During the inspection following the meeting, Mr. Schleyer and Mr. Taylor drove up and down Applebutter Road trying to determine which property containing a barn was the subject of the complaint. Mr. Schleyer stated that he could not make this determination, and did not want to start entering properties without knowing who the owner was or having permission. Mr. Taylor stated that he would request definitive location information from Ms. deLeon and conduct a site inspection upon receiving it.
  - Ms. deLeon stated that a third resident discussed the grade and maximum height of the landfill and voiced concerns about these issues.

VIII. Establish Time for Next Meeting

1:00 p.m. March 15, 2012 at the Landfill Facility Office.

**END OF MINUTES**

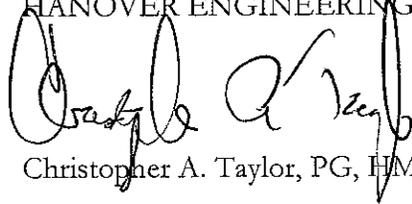
Mr. Jack Cahalan  
Lower Saucon Township

11

February 29, 2012

Respectfully,

HANOVER ENGINEERING ASSOCIATES, INC.



Christopher A. Taylor, PG, HMI

cat:rfr

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Enclosure(s)

cc: Ms. Priscilla deLeon (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 (via e-mail)  
Ms. Leslie Huhn (via e-mail)  
Ms. Diane Palik (via e-mail)

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

January 2012

<u>Location</u>	<u>Total gallons</u>
LMC-6	15,016
LMC-7	43,059
LMC-8	53,067
 LMC-10	 2,057,000
PS-1	596,626
PS-2	214,035
 Phase-IV	 810,661

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

Total Discharge

LMC-10	2,057,000
<u>Phase IV</u>	<u>810,661</u>
<b>TOTAL</b>	<b>2,867,661 gallons</b>

Total Leachate

*** Leachate	383,455
<u>Phase IV</u>	<u>810,661</u>
<b>TOTAL</b>	<b>1,194,116 gallons</b>

LMC-10 Flow – Abatement System Flow = Leachate System Flow (gallons).  
 Abatement System Flow = 1,586,853 gallons (Neptune Flow meters)

\*\*\* Total Leachate discharge = 668,455 – 285,000 = 383,455

\*\*\* 285,000 gallons represents leachate contaminated stormwater pumped from Basin #4 due to a leachate release from a cleanout pipe west of pump station #1 that entered Basin # 4 on January 12, 2012.





