

Hanover

Engineering Associates Inc

November 27, 2012

NOV 28 2012

LOWER SAUCON TOWNSHIP

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

RE: Joint Municipal Landfill Committee
Minutes of November 15, 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 1:00PM on November 15, 2012.

Attending the meeting were:

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

AGENDA ITEMS

I. Status of Waste Activities

Monthly Tonnages:

	<u>August</u>	<u>September</u>	<u>October</u>
Municipal Solid Waste (total)	28,065.80	24,540.50	26,109.10
Construction and Demo (total)	7,632.30	6,509.30	8,451.70
Residual Waste (total)	4,336.80	1,857.90	1,798.70
Asbestos	[48.10]	[18.40]	[36.60]
Out of state-total (percentage)	[24,843.30](62%)	[19,558.10](59%)	[22,081.00](61%)
TOTAL	40,034.90	32,907.70	36,359.50

Recycled Tonnage (percent from Lower Saucon Twp.)	0.00 (79%)	4.50 (79%)	0.00 (85%)
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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.

ROUTING

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

252 Brodhead Road, Suite 100 • Bethlehem, PA 18017-8944 • 610.691.5644 • Fax 610.691.6968 • www.hanovereng.com

Website

JML 11-15-12

<u>Form U Submittals</u>	<u>Waste</u>	<u>Approval Date</u>
BASF	ACM	10/17/12
Rahway Housing Auth.	ACM	10/29/12
Ford Motor Co.	Petroleum soil	11/06/12
Borough of E. Rutherford	ACM	11/06/12
Kings Point Gate Assoc.	ACM	submitted 11/12/12
Key Interiors	ACM	submitted 11/12/12

Mr. Hijazi asked about the Ford Motor Company site. Mr. Schleyer provided an explanation of the nature of the waste stream from that site. Mr. Hijazi asked if the contamination was associated with tanks. Mr. Schleyer responded no, that the contaminated soil was from past activities. Ms. Hijazi asked about the amounts. Mr. Schleyer responded that it was under one-hundred (100) tons, and added that this was the third or fourth submission from this site.

Ms. Louder asked how long Form Us were good for. Mr. Schleyer responded that a Form U is approved for one (1) year. Ms. Louder stated that the fax date of Form U 632 and 633, on Page 11, was 2006 and was scratched out. Mr. Schleyer retrieved a copy of this Form U for the committee to review. He observed that 2006 was when the blank form was faxed to the recipient, and they've been using this blank form ever since. Mr. Schleyer stated that he would get the waste generator to recertify the waste stream if that's what anyone wanted. Mr. Taylor asked that he do so.

II. Annual Groundwater Trend Analysis

- The 4th Quarter 2012 Quarterly Groundwater Report sampling is scheduled to take place during the week of December 10, 2012.

III. Correspondence and Reports

- Form U Submittals to PADEP and Lower Saucon Township
- Abatement System Report
- 3Q12 PADEP Facility Report
- LFG well construction notification
- 3Q12 Groundwater report
- AQ inspection report response letter

IV. Landfill Operations

- Department of Environmental Protection Inspections
 - October 11, 2012 – S. French: Engineers meeting
 - October 11, 2012 – W. Govern, D. Fisher: site inspection
 - October 11, 2012 – R. Croll, M. Harkins: Radiation Management
 - October 19, 2012 – B. Bham: groundwater site visit
 - October 31, 2012 – W. Govern, A. Faulch: site inspection
 - November 8, 2012 – S. French, W. Craft: Engineers meeting

Ms. deLeon asked if there were any surprises in these inspections. Mr. Schleyer replied none that he was aware of.

- Host Municipal Inspection
 - October 4, 2012 – Chris Taylor
 - *October 11, 2012 – Chris Taylor
 - October 18, 2012 – Chris Taylor
 - November 1, 2012 – Chris Taylor

*Note that on this date, Mr. Taylor visited the landfill as part of the survey crew that was performing work for the Lower Saucon Authority pursuant to the planned relocation of their elevated water tank. Therefore, a full inspection was not performed on this date.

- 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 since September 19, 2012.

Oct 1, 2012	Flare shutdown	11:34	High temperature
	Flare startup	12:19	Duration 45 min
Oct 3, 2012	Flare shutdown	10:52	High temperature
	Flare startup	13:46	Duration 2 hrs 54 min
Oct 16, 2012	Flare shutdown	16:04	High temperature
	Flare startup	17:04	Duration 1 hr
Oct 16, 2012	Flare shutdown	18:05	High temperature
	Flare startup	18:56	Duration 51 min
Oct 29, 2012	Flare shutdown	19:00	High temperature – Hurricane Sandy complete power outage.
Oct 31, 2012	Flare startup	18:16	Duration 47 hr 16 min – powered by Generator
Nov 3, 2012	Flare shutdown	13:45	Protective shutdown
Nov 4, 2012	Flare startup	12:15	Duration 22 hrs 30 min – PPL power on
Nov 7, 2012	Flare shutdown	13:05	High temperature
	Flare startup	13:44	Duration 39 min
Nov 9, 2012	Flare shutdown	13:52	Low temperature – maintenance
	Flare startup	14:55	Duration 1 hr 3 min
Nov 12, 2012	Flare shutdown	15:43	Maintenance replace N2
	Flare startup	15:59	Duration 16 min

All shutdown information is provided to the PADEP.

Mr. Hijazi asked about recent developments with the BRE plant. Mr. Schleyer provided a summary of the recent developments.

- 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.

During the inspection following the meeting, Mr. Taylor confirmed that the landfill flare was operating at 2,142 scfm.

Ms. deLeon asked if Mr. Taylor's evaluation of the BRE site permit conditions was completed yet. Mr. Taylor stated that it was not. Ms. deLeon requested to have it completed for the technical committee quarterly meeting on November 20, 2012. (Mr. Taylor's report was submitted to the technical committee at that time.)

Mr. Schleyer stated that he was getting ready today to install new gas wells and headers.

- Well Sampling

- The 4th Quarter 2012 Quarterly Groundwater Monitoring sampling is scheduled to take place during the week of December 10, 2012.

Ms. deLeon stated that she had sent an email to IESI advising them that a resident in The Narrows wants to have their well water tested. Mr. Schleyer responded that IESI would perform that sampling and testing during the next quarterly sampling event. He then explained the general procedure for obtaining a sample from a residential well. Mr. Hijazi asked if the resident wants to have the testing done routinely, from now on. Ms. deLeon responded yes, she believes that the resident does.

- North Slope

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

The condition and accessibility of the road were inspected by driving the road during the inspection following the meeting. It was observed that a tree felled by Hurricane Sandy was blocking the eastern portion of the road. Mr. Schleyer stated that he would have it removed. As previously observed during the mid-meeting inspection conducted on September 11, 2012, and documented in the minutes of the September 20, 2012 meeting, the alignment and grade of the entrance to the road have been changed at the direction of Mr. Schleyer. The slope of the road entrance has been decreased, and gravel has been placed on the road surface from the road beginning to the bottom of the initial slope. The side slopes of the road have been hydroseeded.

- Abatement System Operations

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

- Leachate Collection

Flow rates continue to be monitored and reported.

Following is a summary of the work history and developments:

- IESI submitted the report from Meiser and Earl, Inc. on December 23, 2008, to DEP and Lower Saucon Township evaluating the various tests that were performed to locate the source of the elevated detection zone flows as outlined in their May 7, 2008 Work Plan. Lower Saucon Township has forwarded their comments on the December 23, 2008 report to DEP.
- IESI has completed welding of approximately 1,200 L.F. of the secondary line to the primary liner along the northern end of Cell 3-D while the anchor trench was open and prior to completing the weld, a 2½-inch rain event occurred. A spike in the leachate collection/detection flow may be observed.
- IESI will retest the gabion stormwater channel over Cell 3-C and discharging into sedimentation Pond 4 for possible infiltration into the detection zone by flooding the channel on September 24, 2009.
- The capping of the remaining five (5) acres of Phase III has been completed.
- IESI provided an updated report on their LMC investigation to DEP and Lower Saucon Township November 2009. The reports in part indicated that:
 1. LMC 7 does not appear to be affected by rainfall since the northern Cell 3 anchor trench cap/liner welding occurred.
 2. LMC 8 still spiking from rainfall events.
- The next investigation will be to the integrity of the liner under gabion channel in Cell 3-C which will occur in the 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 flow readings were reviewed and found to be generally higher than for the previous month.
 - October 2012: The recent flow readings were reviewed and the last two (2) weeks reported were found to be significantly higher, apparently due to higher rainfall amounts.

The recent flow readings 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.

- Radiation Monitoring

- October 19, 2012: TC-99m
- October 23, 2012: I-131
- October 24, 2012: TC-99m
- October 25, 2012: I-131
- October 26, 2012: Driver had radiological testing; truck clear

All are Level 1 isotopes and disposed of on site.

Ra-226 Construction and Demolition material was transported off site October 9, 2012 for a permitted disposal site. PADEP provided a radiation surface monitoring of the isolation area where the material was stored on October 11, 2012. Based on their survey the isolation area was not impacted by the material and is at naturally occurring background levels.

- Phase IV Construction Activities

- Phase IV D Cell 4-B/A, C and Cell 4E Stage 1 are currently the active disposal areas. Cell E Stage 1 construction is complete and PADEP approved the cell certification November 2, 2012.

During the inspection following the meeting, it was observed that final capping is taking place in some of the areas of the southern face that had recently been brought up to final elevation. The placement of garbage in Cell 4E was observed, including the segregation of rejected waste that was removed by hand by the "spotters" and placed in a dumpster.

- Hurricane Sandy Events

IESI experienced a complete power outage resulting from Hurricane Sandy from Monday October 29, 2012 at 19:00 until Friday morning November 2, 2012 for the office and Phase IV operations, and until Sunday November 4, 2012 for the flare, Phase 3, and groundwater abatement wells. The flare and office were operated by separate generators until PPL electric power was restored. Post storm inspections observed no breach of sedimentation basins, stormwater channels, or in-place stormwater controls. Although there was an extended power outage for the flare, no off-site odors were detected. No release of leachate from any disposal cell or piping was observed. Phase III leachate continued to gravity-drain to the Bethlehem WWTP and Phase IV leachate flow resumed after power was restored.

Currently emergency waste disposal operations are in place to remove accumulated debris from the affected areas in Pennsylvania, New York, and New Jersey. These PADEP approved emergency waste disposal operations include an increase in maximum daily tonnage from 1,800 to 2,300 tons per day, Act 90 registration and weight restriction waivers, and Sunday operations for **storm related debris only**. Lower Saucon Township was informed of the emergency disposal operations.

Ms. deLeon asked if there was any damage from the Hurricane. Mr. Schleyer responded no, and that everything held up well. Mr. Hijazi asked, with the new increased capacity, is IESI seeing more tonnage. Mr. Schleyer responded yes.

In reference to the storm-related debris waivers, Mr. Taylor asked what Act 90 registration refers to. Mr. Schleyer explained that trucks used for waste hauling must normally display a sticker. The granted waiver means that if a truck doesn't have the Act 90 sticker, the landfill can still accept the load if it is storm-related debris. Mr. Taylor asked what kinds of trucks would be involved. Mr. Schleyer responded triaxles and trailers. Mr. Taylor asked about the weight restriction waivers. Mr. Schleyer responded that if a truck is overweight, they can still enter the landfill. He added that New York and New Jersey changed the weight limit to allow up to 90,000 pounds. Mr. Taylor asked if a truck carrying storm-related debris was over 90,000 pounds, would IESI cite them? Mr. Schleyer replied that IESI was delaying their weight compliance, which will resume after the storm debris emergency measures are done. Mr. Taylor stated that his concern is that there will be new drivers coming to the landfill, with trucks that are overweight, who don't know the proper route, and asked Mr. Schleyer to keep drivers advised of the proper route. Mr. Schleyer responded that the hauling companies are made aware of this when they first contact the landfill, before a truck is sent. Mr. Schleyer further stated that IESI will still send the overweight truck records to PADEP, but they won't enforce the weight limits until the emergency is done.

- **Complaints**

November 1, 2012 – A neighbor saw a front loader and a tractor trailer heading east bound on Applebutter Road past the landfill. During the power outages from Hurricane Sandy, the Route 412 area was gridlocked and those trucks exited left onto Applebutter Road to leave. Both trucks were informed to follow the approved truck routes.

Ms. Louder gave Mr. Schleyer the license plate of a truck (recorded photographically) that she observed speeding. Mr. Schleyer recorded the plate number and said that he would follow up.

- **Miscellaneous**

- Ms. deLeon asked if a report had been issued in response to the August storm washout event, as required in the PADEP's Notice of Violation letter. Ms. Schleyer replied that he wasn't sure, and that he would look into it.

V. Commercial Waste Vehicles

	<u>August 2012</u>	<u>Sept 2012</u>	<u>Oct 2012</u>
Total Trucks	3,310	2,757	3,008
Overweight	54	37	54
Warnings	32	27	33
Suspensions	22 (9@3-20%) 3-DT, 6-TT	10 (1@5%) 1-TT	21 (0>3%)

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
 - 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.

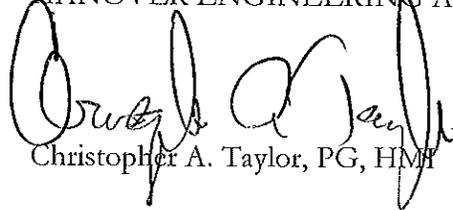
VIII. Establish Time for Next Meeting

12:00 Noon December 13, 2012 at the Landfill Facility Office. This meeting was moved from the regularly-scheduled third Thursday of the month due to a scheduling conflict for Mr. Taylor.

END OF MINUTES

Respectfully,

HANOVER ENGINEERING ASSOCIATES, INC.



Christopher A. Taylor, PG, HMI

cat:bls

S:\Projects\Municipal\LSauconTwp\000-Landfill\2012\IESI landfill report of Nov 15, 2012 mtg.doc

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)

BETHLEHEM LANDFILL
LEACHATE DEMAND REPORT

October 2012

<u>Location</u>	<u>Total gallons</u>
LMC-6	12,608
LMC-7	3,699
LMC-8	136,347
LMC-10	1,170,000
PS-1	338,927
PS-2	333,498
Phase-IV	672,425

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	1,170,000
<u>Phase IV</u>	<u>672,425</u>
TOTAL	1,842,425 gallons

Total Leachate

Leachate	255,155
<u>Phase IV</u>	<u>672,425</u>
TOTAL	927,580 gallons

LMC-10 Flow - Abatement System Flow = Leachate System Flow (gallons).
Abatement System Flow = 914,845 gallons (Neptune Flow meters)

IESI BETHLEHEM LANDFILL

	A	B	C	D	E	F	H	I	J	K	M	N	O
473		TIME	Phase IV PS-1 (Secondary Flows)				Phase IV PS-1 (Primary Flow)						Sump
474		(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		21509600	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*	
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*3/2/12 Added Cell F acreage to G/A/D

