Hanover

Engineering Associates Inc

November 6, 2012

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

RE: Joint Municipal Landfill Committee
Minutes of October 18, 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 October 18, 2012. The meeting notes provided at that time were incomplete, since the Bethlehem Renewable Energy and Flare Operations Start-up/Shutdown Report was not yet completed. This information was provided by Mr. Schleyer to Mr. Taylor in completed meeting notes transmitted via e-mail on November 3, 2012.

Attending the meeting were:

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

Ms. McClaskie is a private citizen and resident of Lower Saucon Township and was welcomed to the meeting at the request of Ms. deLeon.

AGENDA ITEMS

I. Status of Waste Activities

Monthly Tonnages:

	July	August	September
Municipal Solid Waste (total)	24,133.30	28,065.80	24,540.50
Construction and Demo (total)	6,355.30	7,632.30	6,509.30
Residual Waste (total)	3,638.20	4,336.80	1,857.90
Asbestos	[52.50]	[48.10]	[18.40]
Out of state-total (percentage)	[20,047.80](59%)	[24,843.30](62%)	[19,558.10](59%)
TOTAL	**34,126.80**	**40,034.90**	**32,907.70**
Recycled Tonnage (percent from Lower Saucon Twp.)	0.00 (79%)	0.00 (79%)	4.50 (79%)

NOTES: 1. The tonnage for 'Asbestos' is included in the tonnage for 'Residual Waste (total)' and is therefore shown in brackets.

S

ROUTING
- [X] Council
- [X] Manager (Orig)
- [ ] Asst. Mgr,
- [ ] Zoning
- [ ] Finance
- [ ] Police
- [ ] P. Works
- [ ] P/C
- [ ] P & R
- [ ] EAC
- [ ] Engineer
- [ ] Solicitor
- [ ] Planner
- [X] Landfill
- [ ] EMC
- [X] Other Website

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.

Ms. deLeon asked Mr. Schleyer to provide an overview of IESI's waste acceptance practices for the benefit of Ms. McClaskie. Mr. Schleyer provided a detailed explanation.

Form U Submittals	Waste	Approval Date
Kings Park	PCB/debris	09/05/12
BASF	PCB/debris	09/05/12
IMTT – Bayonne	ACM	09/05/12
BASF	ACM	10/17/12

Mr. Schleyer explained the Form U submission and review process for the benefit of Ms. McClaskie.

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 due 10/20/12

IV. Landfill Operations

- Department of Environmental Protection Inspections

  - September 13, 2012 – S. French, J. Spaide: Engineers meeting
  - September 18, 2012 – B. Bham: groundwater monitoring
  - September 19, 2012 – B. Bham: groundwater monitoring
  - 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

  Mr. Taylor asked if the PADEP radiation management inspectors gave the landfill a "clean bill of health" on October 11, 2012 after the material contaminated with Radium-226 was removed. Mr. Schleyer responded that Mr. Croll and Mr. Harkins scanned the area where the radioactive material was stored and determined that there was no leakage to the ground and that the site is clean. (This issue is also discussed in the "Radiation Monitoring" section.)

- Host Municipal Inspection

  - September 11, 2012 – Chris Taylor
  - September 18, 2012 – Chris Taylor
  - September 20, 2012 – Chris Taylor
  - October 4, 2012 – Chris Taylor

- *October 11, 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 Gas Turbine Generator/Flare activity. We had the following LFG shutdowns at Bethlehem Landfill. Auto-valves closed as designed for each shutdown of the flare or BRE. No odors were noted or odor complaints received by Bethlehem Landfill during the outage events.

Aug 27, 2012	Turbine startup	13:00	Flare running
	Turbine shutdown	13:49	Protective shutdown
	Flare shutdown	13:50	High temperature
	Flare startup	14:33	Duration 43 min
	Turbine shutdown	17:57	Duration 43 min then flare running
	Turbine shutdown	19:08	Protective shutdown
Aug 28, 2012	Turbine startup	08:23	Flare running
	Turbine shutdown	12:48	Protective shutdown
	Flare shutdown	12:49	High temperature
	Turbine startup	13:28	Duration 39 min
	Flare startup	14:24	Duration 39 min turbine running
Aug 29, 2012	Turbine shutdown	09:30	Maintenance
	Flare shutdown	09:31	High temperature
	Flare startup	09:52	Duration 21 min
	Turbine startup	12:30	Duration 17 min then flare running
	Turbine shutdown	15:47	Maintenance
	Turbine startup	19:05	Flare running
Aug 30, 2012	Turbine shutdown	00:45	Protective shutdown
	Flare shutdown	00:46	High temperature
	Turbine startup	04:33	Duration 3 hr 47 min
	Flare startup	05:48	Duration 3hr 47 min then turbine running
Aug 31, 2012	Turbine shutdown	12:35	Manual shutdown
Sept 4, 2012	Turbine startup	08:22	Flare running
Sept 7, 2012	Turbine shutdown	10:10	Maintenance
	Turbine startup	18:07	Flare running
	Flare shutdown	18:50	High temperature
	Flare startup	19:54	Turbine running
Sept 10, 2012	Turbine startup	12:43	Protective shutdown
	Flare shutdown	12:43	High temperature
	Flare startup	13:32	Duration 49 min
	Turbine startup	14:57	Duration 49 min then flare running
	Flare shutdown	15:19	Low temperature
	Flare startup	15:35	Turbine running
	Turbine shutdown	17:24	Protective shutdown
	Flare shutdown	17:25	High temperature
	Turbine startup	20:02	Duration 2 hr 28 min

	Turbine shutdown	20:24	Protective shutdown
	Turbine startup	20:54	Duration 30 min
	Flare startup	21:36	Duration 2 hr 58 min then turbine running
	Turbine shutdown	21:26	Protective shutdown
	Turbine startup	21:58	Duration 10 min then flare running
	Flare shutdown	22:14	Low temperature
	Flare startup	22:30	Turbine running
Sept 11, 2012	Flare shutdown	00:57	High temperature
	Flare startup	07:21	Turbine running
Sept 12, 2012	Turbine shutdown	08:14	Maintenance
	Turbine startup	16:06	Flare running
Sept 13, 2012	Turbine shutdown	18:48	Protective shutdown
	Flare shutdown	18:49	High temperature
	Flare startup	22:45	Duration 3 hr 56 min
Sept 14, 2012	Turbine startup	14:09	Duration 3 hr 56 min then flare running
Sept 17, 2012	Flare shutdown	12:07	High temperature
	Flare startup	13:48	Turbine running
	Flare shutdown	15:56	High temperature
	Flare startup	17:26	Turbine was running
	Turbine shutdown	10:27	Maintenance
Sept 18, 2012	Flare shutdown	10:28	High temperature
	Flare startup	10:40	Duration 12 min
	Turbine startup	10:53	Duration 12 min then flare running
Sept 19, 2012	Turbine shutdown	11:32	PEPCO manual shutdown
Sept 20, 2012	Flare shutdown	09:23	High temperature
	Flare startup	09:39	Duration 16 min
Sept 28, 2012	Flare shutdown	08:29	High temperature
	Flare startup	08:36	Duration 7 min
	Flare shutdown	08:44	High temperature
	Flare startup	16:38	Duration 7 hr 54 min
Oct 1, 2012	Flare shutdown	11:34	High temperature
	Flare startup	12:19	Duration 45 min

All shutdown information is provided to the PADEP.

As stated in the opening paragraph, the startup/shutdown data listed above was not available at the time of the committee meeting. Mr. Schleyer stated that he was awaiting the reporting from BRE personnel, and that he would forward it by e-mail when he received it. This information was provided by Mr. Schleyer to Mr. Taylor in completed meeting notes transmitted via e-mail on November 3, 2012.

- Well Sampling

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

- 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. 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.

- 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.

Ms. deLeon asked if the conditions of Township approval of the BRE plant site require proper functioning of the plant. She asked if there is anything the Township can do based on the conditions of permit approval. Mr. Taylor responded that he did not know the answer to this, and asked if he should bring this question to Mr. Birdsall. Ms. deLeon requested that he do so. A general discussion on the BRE plant operation, malfunction problem, and role in landfill gas management followed.

- 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 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 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 reconstricted. 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.

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.

Mr. Schleyer provided a general explanation of the liner system for the benefit of Ms. McClaskie. A discussion on the leachate collection system in general, and flows to LMC-8 in particular, followed.

- Radiation Monitoring

  - September 5, 2012: TC-99M
  - September 28, 2012: I-131
  - September 29, 2012: TC-99M

Level 1 isotopes were 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, and C are currently the active disposal areas. Cell E Stage 1 construction is complete and the cell certification is under review by PADEP.

During the inspection following the meeting, it was confirmed that garbage disposal was taking place on the southern face, in the cells listed above. This is in accordance with IESI's plans, as previously documented, to bring areas of the southern face up to final garbage elevation.

- Complaints

No complaints in September.

Ms. deLeon stated that she talked to a resident on Easton Road who reported that there are still garbage trucks coming in using the wrong route, and that she is trying to get information on times and truck descriptions.

- Miscellaneous

  - Ms. deLeon brought up the subject of the recent air quality inspections conducted by PADEP and the associated reports, which showed exceedances of five-hundred parts per million (500 ppm) for methane in ten (10) different locations. Mr. Taylor pulled out his copy of the reports for reference. Mr. Schleyer stated that he had just submitted a report to PADEP and Lower Saucon Township detailing the repairs that were made and the follow-up inspections and testing that was conducted in response to the PADEP's findings.

V. Commercial Waste Vehicles

	July 2012	August 2012	Sept 2012
Total Trucks	3,015	3,310	2,757
Overweight	39	54	37
Warnings	24	32	27
Suspensions	15 (6>3%) 4-TT	22 (9@3-20%) 3-DT, 6-TT	10 (1@5%) 1-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
  - No discussion.

VII. Township Activities/Township Staff Meeting Update

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

VIII. Establish Time for Next Meeting

1:00 P.M. November 15, 2012 at the Landfill Facility Office.

END OF MINUTES

Respectfully,

HANOVER ENGINEERING ASSOCIATES, INC.

Christopher A. Taylor, PG, HMI

cat:bls/rfr
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Enclosure(s)

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

	A	B	C	D	E	F	J	K	L	M	Q	R	S	T
628														
629		TIME	LMC-6 (Secondary Flows)				LMC-7 (Secondary Flows)				LMC-8 (Secondary Flows)			
630		(days)	TOTALIZER	GALLONS	FLOW (gpd	G/A/D	TOTALIZER	GALLONS	FLOW (gpd)	G/A/D	TOTALIZER	GALLONS	LOW (gpd	G/A/D
631	12/30/2011	7.00	937,452	2,998	428	27	1,468,467	1270	181	15	3,131,363	15177	2,168	374
632	1/6/2012	7.00	940027	2,575	368	23	1469540	1073	153	13	3,141,407	10044	1,435	247
633	1/13/2012	7.00	942479	2,452	350	22	1470785	1245	178	15	3,148,256	6849	978	169
634	1/20/2012	7.00	945050	2,571	367	23	1472264	1479	211	17	3,161,816	13560	1,937	334
635	1/27/2012	7.00	947260	2,210	316	20	1473312	1048	150	12	3,172,977	11161	1,594	275
636	2/3/2012	7.00	950171	2,911	416	26	1474656	1344	192	16	3,190,086	17109	2,444	421
637	2/10/2012	7.00	952655	2,484	355	23	1475767	1111	159	13	3,196,722	6636	948	163
638	2/16/2012	6.00	954767	2,112	352	22	1476575	808	135	11	3,200,335	3613	602	104
639	2/24/2012	8.00	957409	2,642	330	21	1477728	1153	144	12	3,204,057	3722	465	80
640	3/2/2012	7.00	959460	2,051	293	19	1478572	844	121	10	3,206,660	2603	372	64
641	3/9/2012	7.00	961038	1,578	225	14	1479287	715	102	8	3,210,518	3858	551	95
642	3/16/2012	7.00	962967	1,929	276	18	1480161	874	125	10	3,215,233	4715	674	116
643	3/23/2012	7.00	964495	1,528	218	14	1480785	624	89	7	3,217,082	1849	264	46
644	3/30/2012	7.00	965839	1,344	192	12	1481261	476	68	6	3,218,105	1023	146	25
645	4/6/2012	7.00	967106	1,267	181	12	1481658	397	57	5	3,218,717	612	87	15
646	4/13/2012	7.00	968374	1,268	181	12	1482343	685	98	8	3,219,289	572	82	14
647	4/20/2012	7.00	969477	1,103	158	10	1483188	845	121	10	3,219,632	343	49	8
648	4/26/2012	6.00	970415	938	156	10	1484780	1592	265	22	3,223,862	4230	705	122
649	4/30/2012	4.00	971060	645	161	10	1485692	912	228	19	3,226,162	2300	575	99
650	5/4/2012	4.00	971649	589	147	9	1486268	576	144	12	3,227,126	964	241	42
651	5/11/2012	7.00	972717	1,068	153	10	1487190	922	132	11	3,228,873	1747	250	43
652	5/18/2012	7.00	973706	989	141	9	1488330	1140	163	13	3,234,627	5754	822	142
653	5/25/2012	7.00	974721	1,015	145	9	1489299	969	138	11	3,238,761	4134	591	102
654	6/1/2012	7.00	975735	1,014	145	9	1490478	1179	168	14	3,246,401	7640	1,091	188
655	6/8/2012	7.00	977056	1,321	189	12	1491921	1443	206	17	3,260,337	13936	1,991	343
656	6/15/2012	7.00	978158	1,102	157	10	1493163	1242	177	15	3,265,258	4921	703	121
657	6/21/2012	6.00	979044	886	148	9	1494252	1089	182	15	3,266,782	1524	254	44
658	6/29/2012	8.00	980037	993	124	8	1495617	1365	171	14	3,268,138	1356	170	29
659	7/7/2012	8.00	980914	877	110	7	1496890	1273	159	13	3,269,677	1539	192	33
660	7/13/2012	6.00	981551	637	106	7	1497749	859	143	12	3,270,939	1262	210	36
661	7/20/2012	7.00	982293	742	106	7	1498550	801	114	9	3,272,455	1516	217	37
662	7/27/2012	7.00	983009	716	102	7	1499314	764	109	9	3,273,999	1544	221	38
663	8/3/2012	7.00	983726	717	102	7	1499991	677	97	8	3,276,096	2097	300	52
664	8/10/2012	7.00	983833	107	15	1	1500823	832	119	10	3,279,956	3860	551	95
665	8/17/2012	7.00	984210	377	54	3	1501629	806	115	9	3,283,776	3820	546	94
666	8/24/2012	7.00	984940	730	104	7	1502327	698	100	8	3,289,210	5434	776	134
667	8/31/2012	7.00	985676	736	105	7	1502986	659	94	8	3,291,161	1951	279	48
668	9/7/2012	7.00	986360	684	98	6	1503642	656	94	8	3,292,976	1815	259	45
669	9/14/2012	7.00	987021	661	94	6	1504307	665	95	8	3,294,768	1792	256	44
670	9/20/2012	6.00	987605	584	97	6	1504872	565	94	8	3,298,366	3598	600	103
671	9/28/2012	8.00	988162	557	70	4	1505664	792	99	8	3,302,570	4204	526	91
672	10/5/2012	7.00	988674	512	73	5	1506506	842	120	10	3,316,183	13613	1,945	335
673	10/12/2012	7.00	989248	574	82	5	1507294	788	113	9	3,329,474	13291	1,899	327
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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'
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IESI BETHLEHEM LANDFILL

	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
473		TIME	Phase IV PS-2 (Secondary Flows)					Phase IV PS-2 Primary Flow					
474		(days)	TOTALIZER	GALLONS	FLOW (gpd)	g/ac/day		TIME	TOTALIZER	Gallons	FLOW (gpd)	g/ac/day	
475	12/30/2011	40907	4859	0	0	0.0			8405587	31246	13035	1917	33.9*
476	1/6/2012	7	4859	0	0	0.0			8405587	0	0	0	33.9*
477	1/13/2012	7	4859	0	0	0.0			8456494	50907	7272	1069	34.6*
478	1/20/2012	7	4859	0	0	0.0			8517008	60514	8645	1271	33.3*
479	1/27/2012	7	4859	0	0	0.0			8562944	45936	6562	965	34.4*
480	2/3/2012	7	4859	0	0	0.0			8645558	82614	11802	1736	33.1*
481	2/10/2012	7	4859	0	0	0.0			8657563	12005	1715	252	31.0*
482	2/16/2012	6	4859	0	0	0.0			8675014	17451	2909	428	35*
483	2/24/2012	8	4860	1	0	0.0			8700655	25641	3205	471	32.2*
484	3/2/2012	7	4860	0	0	0.0			8749790	49135	7019	1032	31.4*
485	3/9/2012	7	4860	0	0	0.0			8767039	17249	2464	362	32.3*
486	3/16/2012	7	4860	0	0	0.0			8788121	21082	3012	443	22.1*
487	3/23/2012	7	5138	278	40	3.7			8827219	39098	5585	527	22.7*
488	3/30/2012	7	5138	0	0	0.0			8856781	29562	4223	398	30.3*
489	4/6/2012	7	5138	0	0	0.0			8894322	37541	5363	506	30.1*
490	4/13/2012	7	5138	0	0	0.0			8924069	29747	4250	401	22.1*
491	4/20/2012	7	5140	2	0	0.0			8942766	18697	2671	252	33.9*
492	4/26/2012	6	5140	0	0	0.0			8963305	20539	3423	323	34.1*
493	4/30/2012	4	5140	0	0	0.0			8968817	5512	1378	130	31.6*
494	5/4/2012	4	5140	0	0	0.0			8987954	19137	4784	451	34.6*
495	5/11/2012	7	5140	0	0	0.0			9013520	25566	3652	345	32*
496	5/18/2012	7	5141	1	0	0.0			9028975	15455	2208	208	29.9*
497	5/25/2012	7	5141	0	0	0.0			9073586	44611	6373	601	28.2*
498	6/1/2012	7	5141	0	0	0.0			9122630	49044	7006	661	18*
499	6/8/2012	7	5141	0	0	0.0			9181306	58676	8382	791	32.9*
500	6/15/2012	7	5142	1	0	0.0			9231693	50387	7198	679	30.7*
501	6/21/2012	6	5142	0	0	0.0			9266841	35148	5858	553	19.7*
502	6/29/2012	8	5143	1	0	0.0			9313658	46817	5852	552	32.0*
503	7/7/2012	8	5143	0	0	0.0			9366335	52677	6585	621	34.8*
504	7/13/2012	6	5145	2	0	0.0			9398278	31943	5324	502	32.2*
505	7/20/2012	7	5149	4	1	0.1			9429698	31420	4489	423	20.8*
506	7/27/2012	7	5149	0	0	0.0			9466738	37038	5291	499	33.7*
507	8/3/2012	7	5149	0	0	0.0			9504942	38206	5458	515	34.1*
508	8/10/2012	7	5149	0	0	0.0			9547321	42379	6054	571	32.1*
509	8/17/2012	7	5149	0	0	0.0			9591395	44074	6296	594	32.6*
510	8/24/2012	7	5149	0	0	0.0			9656242	64847	9264	874	30.1*
511	8/31/2012	7	5151	2	0	0.0			9708980	52738	7534	711	28.6*
512	9/7/2012	7	5152	1	0	0.0			9750248	41268	5895	556	31.0*
513	9/14/2012	7	5153	1	0	0.0			9791013	40765	5824	549	33.9*
514	9/20/2012	6	5431	278	46	4.4			9835304	44291	7382	696	34.8*
515	9/28/2012	8	5431	0	0	0.0			9917879	82575	10322	974	32.9*
516	10/5/2012	7	5431	0	0	0.0			9996107	78228	11175	1054	32.4*
517	10/12/2012	7	5431	0	0	0.0			10120026	123919	17703	1670	33.9*
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BETHLEHEM LANDFILL

LEACHATE DEMAND REPORT

September 2012

Location	Total gallons
LMC-6	8,207
LMC-7	3,851
LMC-8	70,147
LMC-10	1,013,000
PS-1	386761
PS-2	208,899
Phase-IV	595,660

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	1,013,000
Phase IV	595,660
TOTAL	1,608,660 gallons

Total Leachate

Leachate	114,203
Phase IV	595,660
TOTAL	709,863 gallons

LMC-10 Flow – Abatement System Flow = Leachate System Flow (gallons).
Abatement System Flow = 898,797 gallons (Neptune Flow meters)