

Bethlehem Landfill Committee Meeting Minutes

Date: Thursday, May 16, 2019
Time: 1:00 p.m.
Location: Lower Saucon Township
Attendance: **Hanover Engineering:** Chris Taylor; **Bethlehem Landfill:** Dave Pannucci; **Staff:** Leslie Huhn & Diane Palik; **Council Liaison:** Priscilla deLeon (by phone); **Absent:** Neil Ortwein & Haz Hijazi

Mr. Pannucci reviewed the monthly tonnages for April:

	<u>February</u>	<u>March</u>	<u>April</u>
MSW	23,887.16	20,422.10	22,864.56
C&D	1,830.91	1,626.50	1,593.65
Residual (Total)	4,883.87	3,811.30	2,425.86
Asbestos	0.00	0.00	0.00
Sewage Sludge (90/10)	73.65	109.00	93.75
Out of State (Total)	18,969.23 (62%)	13,361.40 (51%)	12,890.02 (48%)
Recycle	5 (83%)	7 (86%)	7 (86%)

Mr. Pannucci said there was one Form U Submittal from Cera-Met on May 7, 2019. The second quarter Annual Groundwater Trend Analysis is scheduled for May 28th through the 30th by EarthRes Group. The Groundwater Monitoring Report was submitted today for 1Q2019. On May 22nd there was an inspection; and DEP was on-site today. Mrs. deLeon said Air Quality didn't show up? Mr. Pannucci said they haven't been there since October 2018. Mr. Taylor said did they do SEM? Mr. Pannucci said they monitored 20 penetration vertical wells on the southwest slope and on the top where the stockpiles are. They had two exceedances, and he should have a report on that tomorrow and they will follow up on that.

Mr. Pannucci said there were two host municipal inspections on May 2nd and May 16th. For Commercial Waste Vehicles, there were 2,666 in April with 49 overweight, 38 warnings, and 11 suspensions.

Mrs. deLeon said your out-of-state waste in February was 62%, now it's 48%, are you taking less out-of-state? Mr. Pannucci said yes, and it's driven by the way they are filling right now, so they push their internal waste from their transfer stations to another site.

Mr. Pannucci said BRE is shut down for the foreseeable future. Bethlehem Landfill continues to communicate with SCS Field Services with any routine or non-routine maintenance to maximize LFG production and minimize odors between plant and the flare. The April average flare flow was 2,830 SCFM. There was a shutdown on May 1st and then they had one yesterday, May 15th. The flare is running normally.

Mr. Taylor had some questions from the TCC meeting held on May 14th, which Mr. Pannucci answered and Mr. Taylor went over. (*Email questions and answers are attached to these minutes*). The first question, Mr. Taylor said his concerns were answered. Mrs. deLeon said how long of a period can you go if the flares are shut down. Mr. Pannucci said it all depends on what occurs. If there's a significant shutdown and it's going to be down for a long period of time, they can mobilize or rent a unit. He feels they have the proper parts and pieces in place to mitigate anything along those lines. Mrs. deLeon asked when Aria would be up and running. Mr. Pannucci said by the end of 2020 or beginning of 2021.

Mr. Taylor said question 6 on the email said they are not required to monitor in the leachate chambers. Mr. Pannucci said correct. He's sure what's causing around the LMC chamber, it's not a good seal and they not getting a good hit there. Mr. Taylor said you mentioned 5% compliance limit. Mr. Pannucci said it's the lower explosive limit. If they go above 5%, they have to do some corrective action to bring it down.

Mr. Taylor said the probe monitoring is done quarterly by SCS. Mr. Pannucci said yes. Mr. Taylor said the last one was February so you are due for one shortly. Mr. Taylor asked if Cody goes around with them? Mr. Pannucci said not typically, they report back to Bethlehem Landfill. Mr. Taylor asked if there is any way to get that reporting sooner than in the quarterly report as a stand-alone document? Mr. Pannucci said he can, he follows what is on the list, but there are more that Mr. Taylor wants to see, than what is on that list. He said Mr. Taylor should make a

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list of what he wants to see and by when. Mrs. deLeon said isn't that Laressa's list. Mr. Taylor said he'll provide Mr. Pannucci a list of what he wants to see, there's 17 different reports. Mrs. Huhn said are we getting these twice if you ask for it separately and then it comes in the quarterly report. Mr. Pannucci said it does come in the quarterly reports, so technically you are getting it twice. Mrs. Huhn said she just wants to make sure we are not paying for Mr. Taylor to review it twice as you are getting it separately from Mr. Pannucci and then it comes in the quarterly report. Mr. Taylor said understood. Mrs. deLeon said yes, you have to be mindful of that, but if there are issues with certain things, you need to see it. Mrs. Huhn said she understands if he has to see it before it comes in the quarterly report. Mr. Taylor said the way he does it, if he gets one piece of landfill stuff, and it would take him five minutes to look at, he puts it in a pile so he has a big enough pile that he has 50 minutes to look at as that's his minimum chargeable rate.

Mr. Taylor asked if there was any news on the regulatory review for the new flare. Mr. Pannucci said no updates. Mr. Taylor said they have bids out. Mr. Pannucci said yes, but wants to wait until the right time, it's all dictated on flows. They are into the next year until they start getting production from the new alignment.

Mr. Pannucci said the North Slope Road and swale have not needed repairs. Sedimentation traps and ponds need to be cleaned out. Mr. Taylor said you have a stormwater correction action plan and you have the silt sock and will get it placed in the next couple of weeks and the cleanouts have to wait to dry. Mr. Pannucci said correct.

Mr. Pannucci said the abatement system continues to operate and discharge to Bethlehem WWTP. Intermittent malfunctions of the well pumps and controls are repaired or replaced as needed. Control Systems 21 checked all the transducers. AB-8's transducer was replaced. Mr. Taylor said question no. 3 on the email was about AB-10 which used to pump 12 gallons a minute and in February it went from 12 to 0 and has remained there in March and April. Mr. Pannucci said they checked both the transducers and pump and both are working perfectly. After the email was sent, they were on-site and they double-checked AB-10 and it was working properly. It's all groundwater level driven.

Mr. Pannucci said leachate collection flow rates continue to be monitored and reported. Intermittent malfunctions of the well pumps and controls are repaired and replaced as needed. The cleaning out of LMC-7 is complete. General maintenance on PS-2 is complete. One primary pump in PS-2 was replaced. Mr. Taylor said there are near zero flows and detection flows in LMC-7 since January. You confirm your equipment is functioning properly. Mr. Pannucci said correct and it was reported there's no water in the secondary when they were in there doing the work and the transducers and pumps are working. Mr. Pannucci said he doesn't have an answer why it's zero.

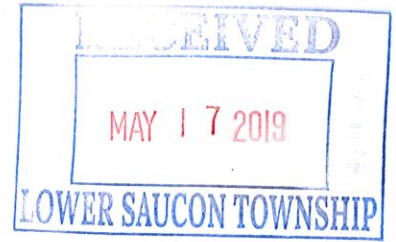
Mr. Pannucci said there was no radiation monitoring hits. Phase IV construction waste operations have moved off of this area. The SE Realignment construction activities continue in Cell SE-1A and the construction of Cell SE-1B is underway.

Mr. Pannucci said there have been nine odor complaints in 2019, the latest being on April 4th and 13th. Mrs. deLeon had two odor complaints in March as there was someone working at her house and they smelled the garbage so she called DEP. Mr. Taylor reviewed the flows in all the pump stations.

Mr. Taylor said question no. 5 on the email regarding the Form 50, he's waiting for Rich Sichler to send the information and then Mr. Taylor will email it to Mr. Pannucci.

Mr. Taylor said the next meeting is on June 27, 2019 starting at 1:00 p.m. The meeting adjourned at 1:39 p.m.

**Bethlehem Landfill Company
LST Committee Meeting Notes May 2019
May 16, 2019**



Agenda Items

I. Waste Activities

Monthly Tonnages

	February	March	April
MSW	23,887.16	20,422.10	22,864.56
C&D	1,830.91	1,626.50	1,593.65
Residual (Total)	4,883.87	3,811.30	2,425.86
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<u>Form U Submittals</u>	<u>Waste</u>	<u>Approval Date</u>
Cera-Met, LLC	Ceramic Wastes (414)	5/7/19

II. Annual Groundwater Trend Analysis

Second quarter sampling event is scheduled for May 28th through the 30th by Earthres Group.

III. Correspondence / Reports

Groundwater Monitoring Report – 1st Quarter 2019

IV. Landfill Operations

Department of Environmental Protection Inspections

Scheduled for 5/22/19 M. Glogowski (Solid Waste)

Host Municipal Inspection

5/2/19 J. Schray
5/16/19 C. Taylor

<u>Commercial Waste Vehicles</u>	February	March	April
Total # Trucks	2394	2455	2666
	February	March	April
Overweight	79	55	49
Warnings	68	49	38
Suspensions	11	6	11

February – TT=44, RL=3, DT=32 March – TT=28, RL=3, FL=1, RO=3, DT=20 April – TT=42, RL=3, FL=1, DT=3

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

Bethlehem Renewable Energy and Flare Operations and Gas Collection

BRE is shut down for the foreseeable future. The LFG flare is the main GCCS. Bethlehem Landfill continues to communicate with SCS Field Services with any routine or non-routine maintenance to maximize LFG production and minimize odors between plant and flare.

March Average Flare Flow = 2,830 SCFM

See times for flare shutdowns. Do not have Plant SSM forms yet

Beginning of event shutdown Flare Date: 5/1/19 Time: 9:14
End of event startup Date: 5/1/19 Time: 10:20 Duration: 1:06min

Documentation is on file.

North Slope Road and swale have not needed repairs. Sedimentation traps and ponds need to be cleaned out.

Abatement System

Abatement system continues to operate and discharge to the Bethlehem WWTP. Intermittent malfunctions of the well pumps and controls are repaired or replaced as needed. Control Systems 21 checked all the transducers. AB-8's transducer was replaced.

Leachate collection

Flow rates continue to be monitored and reported. Intermittent malfunctions of the well pumps and controls are repaired or replaced as needed. The cleaning out of LMC-7 is complete. General maintenance on PS-2 is complete. One primary pump in PS-2 was replaced.

Radiation Monitoring

None

Phase IV Construction Activities

Waste operations have moved off of this area.

SE Realignment Construction Activities

Waste operations continue in Cell SE-1A. Construction of Cell SE-1B is underway.

Complaints received by Waste Connections

9 complaints received in 2019:

- 1/8/19 (Odor Complaint)
- 2/1/19 (Odor Complaint)
- 2/26/19 (Odor Complaint)
- 3/1/19 (Odor Complaint)
- 3/7/19 (Odor Complaint)
- 3/12/19 (Odor Complaint)
- 3/13/19 (Odor Complaint)
- 4/4/19 (Odor Complaint)
- 4/13/19 (Odor Complaint)

BETHLEHEM LANDFILL
LEACHATE DEMAND REPORT
April 2019

<u>Location</u>	<u>Total gallons</u>
LMC-6	109,113
LMC-7	25,917
LMC-8	109,707
PS-4	426,483
LMC-10	1,718,547
PS-1	360,340
PS-2	235,878
PS-3	169,483
Phase-IV	765,701

Total LMC-10 Flow = LMC-6, 7, 8, Abatement Well System, Phase I and II, SE Realignment (PS-4), and LFG condensate. Phase-IV total from PS-1, PS-2 and PS-3 and LFG condensate.

Total Discharge

LMC-10	1,718,547
<u>Phase IV</u>	<u>765,701</u>
TOTAL	2,484,248 gallons

Total Leachate

Leachate	671,220
<u>Phase IV</u>	<u>765,701</u>
TOTAL	1,436,921 gallons

LMC-10 Flow – Abatement System Flow = Leachate System Flow (gallons).
 Abatement System Flow = 1,047,327 gallons (Neptune Flow meters)

BETHLEHEM LANDFILL
GROUNDWATER DEMAND REPORT
April 2019

Well No.	Water Level (avg. ft SWL*)	Flow (avg. GPM)	(Total gal)
AB-1	85.9	7.0	320,993
AB-2	46.9	4.5	207,607
AB-3	68.5	0.2	9,900
AB-4	30.4	2.7	125,280
AB-5	40.9	0.7	30,961
AB-6	43.6	3.6	164,267
AB-7	41.9	3.4	158,280
AB-8	37.5	0.2	8,704
AB-9	76.1	0.4	19,725
AB-10	78.9	<0.1	0.0
TW-1	54.4	<0.1	0.0
Total Flow		1,047,327 gallons	

*SWL above transducer set point

* Per DEP approval well TW-1 was shut down September 14, 2009.

	TIME (days)	LMC-6 (Primary Flows)				LMC-7 (Primary Flows)				LMC-8 (Primary Flows)			
		TOTALIZER	GALLONS	LOW (gpc)	G/A/D	TOTALIZER	GALLONS	LOW (gpc)	G/A/D	TOTALIZER	GALLONS	LOW (gpc)	G/A/D
4/12/2018	10.00	1908965	3,202	320	20	4135735	7872	787	65	7,291,172	8734	873	151
4/17/2018	5.00	1913740	4,775	955	61	4139567	3832	766	63	7,295,629	4457	891	154
4/25/2018	8.00	1923985	10,245	1,281	82	4145883	6316	790	65	7,302,357	6728	841	145
5/1/2018	6.00	1927224	3,239	540	34	4150402	4519	753	62	7,307,719	5362	894	154
5/7/2018	6.00	1929415	2,191	365	23	4153984	3582	597	49	7,312,372	4653	776	134
5/14/2018	7.00	1931714	2,299	328	21	4157899	3915	559	46	7,317,861	5489	784	135
5/22/2018	8.00	1941451	9,737	1,217	78	4162642	4743	593	49	7,324,158	6297	787	136
5/30/2018	8.00	1957150	15,699	1,962	125	4168640	5998	750	61	7,330,876	6718	840	145
6/7/2018	8.00	1962087	4,937	617	39	4173975	5335	667	55	7,337,432	6556	820	141
6/11/2018	4.00	1963994	1,907	477	30	4176297	2322	581	48	7,340,758	3326	832	143
6/20/2018	9.00	1968645	4,651	517	33	4181070	4773	530	43	7,347,903	7145	794	137
6/29/2018	9.00	1972093	3,448	383	24	4185888	4818	535	44	7,354,995	7092	788	136
7/5/2018	6.00	1975571	3,478	580	37	4188922	3034	506	41	7,359,559	4564	761	131
7/9/2018	4.00	1977247	1,676	419	27	4190621	1699	425	35	7,362,407	2848	712	123
7/16/2018	7.00	1980957	3,710	530	34	4193793	3172	453	37	7,367,648	5241	749	129
7/23/2018	7.00	1987902	6,945	992	63	4197413	3620	517	42	7,373,190	5542	792	137
8/1/2018	9.00	2002364	14,462	1,607	102	4203043	5630	626	51	7,380,786	7596	844	146
8/6/2018	5.00	2009784	7,420	1,484	95	4206558	3515	703	58	7,387,834	7048	1,410	243
8/13/2018	7.00	2016356	6,572	939	60	4211550	4992	713	58	7,397,325	9491	1,356	234
8/20/2018	7.00	2031303	14,947	2,135	136	4216001	4451	636	52	7,406,036	8711	1,244	215
8/31/2018	11.00	2041040	9,737	885	56	4222779	6778	616	51	7,417,472	11436	1,040	179
9/7/2018	7.00	2048903	7,863	1,123	72	4226212	3433	490	40	7,423,929	6457	922	159
9/12/2018	5.00	2062345	13,442	2,688	171	4229341	3129	626	51	7,429,272	5343	1,069	184
9/18/2018	6.00	2075788	13,443	2,241	143	4232471	3130	522	43	7,434,616	5344	891	154
10/1/2018	13.00	2126610	50,822	3,909	249	4240280	7809	601	49	7,448,700	14084	1,083	187
10/11/2018	10.00	2144225	17,615	1,762	112	4248664	8384	838	69	7,459,592	10892	1,089	188
10/19/2018	8.00	2162440	18,215	2,277	145	4254418	5754	719	59	7,468,523	8931	1,116	192
10/26/2018	7.00	2168193	5,753	822	52	4259031	4613	659	54	7,476,178	7655	1,094	189
11/8/2018	13.00	2218469	50,276	3,867	246	4267917	8886	684	56	7,494,605	18427	1,417	244
11/12/2018	4.00	2235017	16,548	4,137	264	4270862	2945	736	60	7,503,285	8680	2,170	374
11/20/2018	8.00	2281915	46,898	5,862	373	4277348	6486	811	66	7,519,184	15899	1,987	343
11/26/2018	6.00	2323727	41,812	6,969	444	4282847	5499	917	75	7,536,060	16876	2,813	485
12/3/2018	7.00	2362413	38,686	5,527	352	4288737	5890	841	69	7,549,897	13837	1,977	341
12/12/2018	9.00	2378987	16,574	1,842	117	4295542	6805	756	62	7,562,467	12570	1,397	241
12/17/2018	5.00	2385229	6,242	1,248	80	4298911	3369	674	55	7,569,124	6657	1,331	230
12/27/2018	10.00	2410111	24,882	2,488	158	4308355	9444	944	77	7,588,337	19213	1,921	331
1/3/2019	7.00	2421998	11,887	1,698	108	4313118	4763	680	56	7,596,652	8315	1,188	205
1/8/2019	5.00	2432734	10,736	2,147	137	4318265	5147	1,029	84	7,604,683	8031	1,606	277
1/14/2019	6.00	2440995	8,261	1,377	88	4323231	4966	828	68	7,612,768	8085	1,348	232
1/21/2019	7.00	2448933	7,938	1,134	72	4328080	4849	693	57	7,622,157	9389	1,341	231
1/31/2019	10.00	2478187	29,254	2,925	186	4335657	7577	758	62	7,636,997	14840	1,484	256
2/5/2019	5.00	2485497	7,310	1,462	93	4338934	3277	655	54	7,643,370	6373	1,275	220
2/14/2019	9.00	2512578	27,081	3,009	192	4344859	5925	658	54	7,655,197	11827	1,314	227
2/19/2019	5.00	2524553	11,975	2,395	153	4348515	3656	731	60	7,662,695	7498	1,500	259
2/28/2019	9.00	2544435	19,882	2,209	141	4355882	7367	819	67	7,674,910	12215	1,357	234
3/11/2019	11.00	2559281	14,846	1,350	86	4363719	7837	712	58	7,689,920	15010	1,365	235
3/18/2019	7.00	2568635	9,354	1,336	85	4367689	3970	567	46	7,695,592	5672	810	140
3/29/2019	11.00	2589246	20,611	1,874	119	4380618	12929	1,175	96	7,716,139	20547	1,868	322
4/4/2019	6.00	2595143	5,897	983	63	4385069	4451	742	61	7,724,469	8330	1,388	239
4/10/2019	6.00	2600597	5,454	909	58	4389338	4269	712	58	7,733,238	8769	1,462	252
4/17/2019	7.00	2625500	24,903	3,558	227	4394070	4732	676	55	7,747,020	13782	1,969	339
4/24/2019	7.00	2647515	22,015	3,145	200	4400649	6579	940	77	7,759,015	11995	1,714	295
5/1/2019	7.00	2664369	16,854	2,408	153	4406533	5884	841	69	7,769,945	10930	1,561	269

ID	A	B	C	D	E	F	J	K	L	M		O		R	S	T
										TIME (days)	TOTAL	LMC-6 (Secondary Flows) GALLONS	LMC-7 (Secondary Flows) GALLONS			
1024																
1025																
1040	4/12/2018	10.00	1762142	14,540	1,454	93	219802	5948	593	49	5,891,237	25694	2,569	443		
1041	4/17/2018	5.00	1765144	4,002	800	51	220162	3160	632	52	5,900,344	9107	1,821	314		
1042	4/25/2018	8.00	1714931	8,787	1,098	70	2205366	3804	476	39	5,921,495	21151	2,644	456		
1043	5/1/2018	6.00	1722278	7,347	1,225	78	2207790	2424	404	33	5,928,129	6634	1,106	191		
1044	5/7/2018	6.00	1725986	3,608	601	38	2209465	1695	283	23	5,929,579	1450	242	42		
1045	5/14/2018	7.00	1728630	2,744	392	25	2212645	3160	451	37	5,931,093	1514	216	37		
1046	5/22/2018	8.00	1736610	7,380	923	59	2223681	11036	1,380	113	5,940,569	9476	1,185	204		
1047	5/30/2018	8.00	1744630	8,620	1,078	69	2228653	5172	647	53	5,959,946	19377	2,422	418		
1048	6/7/2018	8.00	1748135	3,505	438	28	2231875	3022	378	31	5,961,248	1302	163	28		
1049	6/11/2018	4.00	1749261	1,126	282	18	2232209	334	84	7	5,961,695	387	97	17		
1050	6/20/2018	9.00	1751966	2,705	301	19	2232905	96	11	1	5,962,208	573	64	11		
1051	6/29/2018	9.00	1754068	2,102	234	15	2232575	270	30	2	5,962,808	600	67	11		
1052	7/5/2018	6.00	1755473	1,405	234	15	2232654	79	13	1	5,963,266	458	76	13		
1053	7/8/2018	4.00	1756345	872	218	14	2232654	0	0	0	5,963,606	340	85	15		
1054	7/16/2018	7.00	1759035	2,690	384	24	2232707	53	8	1	5,964,367	761	109	19		
1055	7/23/2018	7.00	1765849	6,814	973	62	2232819	112	16	1	5,970,316	5949	850	147		
1056	8/1/2018	9.00	1791023	25,174	2,797	178	2232883	64	7	1	6,008,724	38408	4,268	736		
1057	8/6/2018	5.00	1814255	23,232	4,646	296	2232978	95	19	2	6,031,285	22561	4,512	778		
1058	8/13/2018	7.00	1828115	13,860	1,980	126	2232978	0	0	0	6,051,372	20087	2,870	495		
1059	8/20/2018	7.00	1841525	13,410	1,916	122	2233031	53	8	1	6,094,975	43603	6,229	1,074		
1060	8/31/2018	11.00	1853573	12,048	1,095	70	2234334	1303	118	10	6,128,175	33200	3,018	520		
1061	9/7/2018	7.00	1857973	4,400	629	40	2234334	0	0	0	6,136,651	8476	1,211	209		
1062	9/12/2018	5.00	1862522	4,549	910	58	2234334	0	0	0	6,140,059	3408	682	118		
1063	9/19/2018	6.00	1867071	4,543	758	48	2234334	0	0	0	6,143,458	3399	567	98		
1064	10/7/2018	13.00	1870004	2,933	226	14	2234334	0	0	0	6,177,029	33571	2,562	445		
1065	10/11/2018	10.00	1870004	0	0	0	2234334	0	0	0	6,178,945	1916	192	33		
1066	10/19/2018	8.00	1870004	0	0	0	2234353	19	2	0	6,217,640	38695	4,837	834		
1067	10/26/2018	7.00	1870004	0	0	0	2234353	0	0	0	6,222,926	5286	755	130		
1068	11/2/2018	13.00	1870004	0	0	0	2234364	11	1	0	6,256,016	33090	2,545	439		
1069	11/12/2018	4.00	1870004	0	0	0	2234364	0	0	0	6,271,294	15278	3,820	659		
1070	11/20/2018	8.00	1870004	0	0	0	2234364	0	0	0	6,305,391	34097	4,262	735		
1071	11/26/2018	6.00	1870004	0	0	0	2234364	0	0	0	6,330,351	24960	4,160	717		
1072	12/3/2018	7.00	1870070	66	9	1	2234364	0	0	0	6,355,909	25558	3,651	630		
1073	12/12/2018	9.00	1870075	5	1	0	2234364	0	0	0	6,375,901	19992	2,221	383		
1074	12/17/2018	5.00	1870075	0	0	0	2234364	0	0	0	6,386,162	10261	2,052	354		
1075	12/27/2018	10.00	1878681	8,606	861	55	2234364	0	0	0	6,415,039	28877	2,888	498		
1076	1/3/2019	7.00	1884940	6,259	894	57	2234364	0	0	0	6,433,524	18485	2,641	455		
1077	1/8/2019	5.00	1891124	6,184	1,237	79	2234364	0	0	0	6,450,342	16818	3,364	580		
1078	1/14/2019	6.00	1896692	5,568	928	59	2234364	0	0	0	6,462,673	12331	2,055	354		
1079	1/21/2019	7.00	1901893	5,201	743	47	2234419	55	8	1	6,476,106	13433	1,919	331		
1080	1/31/2019	10.00	1910172	8,279	828	53	2234419	0	0	0	6,502,398	26292	2,629	453		
1081	2/5/2019	5.00	1914165	3,993	799	51	2234419	0	0	0	6,508,143	5745	1,149	198		
1082	2/14/2019	9.00	1922540	8,375	931	59	2234419	0	0	0	6,526,298	18065	2,007	346		
1083	2/19/2019	5.00	1926775	4,235	847	54	2234419	0	0	0	6,539,884	13676	2,735	472		
1084	2/28/2019	9.00	1935312	8,537	949	60	2234419	0	0	0	6,564,906	25022	2,780	479		
1085	3/11/2019	11.00	1943491	8,179	744	47	2234420	1	0	0	6,589,354	24448	2,223	383		
1086	3/18/2019	7.00	1947359	3,868	553	35	2234420	0	0	0	6,598,117	9763	1,395	240		
1087	3/28/2019	11.00	1959286	11,927	1,084	69	2234420	0	0	0	6,628,871	29754	2,705	466		
1088	4/4/2019	6.00	1967743	8,457	1,410	90	2234420	0	0	0	6,635,533	6662	1,110	191		
1089	4/10/2019	6.00	1972943	4,600	767	49	2234425	5	1	0	6,639,477	3944	657	113		
1090	4/17/2019	7.00	1980223	7,880	1,126	72	2234425	0	0	0	6,650,837	11360	1,623	280		
1091	4/24/2019	7.00	1985666	5,443	778	50	2234425	0	0	0	6,670,374	19537	2,791	481		
1092	5/1/2019	7.00	1993276	7,610	1,087	69	2234430	5	1	0	6,684,772	14398	2,057	355		

IESI BETHLEHEM LANDFILL

	A	B	C	D	E	F	H	I	J	K	M	N	O
866		TIME	Phase IV PS-1 (Secondary Flows)				Phase IV PS-1 (Primary flow)						sump
867		(days)	TOTALIZER	GALLONS	FLOW (gpd)	g/ac/day			Totalizer	gallons	flow(gpd)	g/ac/day	inches
882	4/12/2018	10	312355	1429	143	5			48563817	48426	4843	186	15.9"
883	4/17/2018	5	312358	3	1	0			48589965	26148	5230	201	14.4"
884	4/25/2018	8	313666	1308	164	6			48632494	42529	5316	204	22.9"
885	5/1/2018	6	313670	4	1	0			48668382	35888	5981	230	21.9"
886	5/7/2018	6	314364	694	116	4			48699782	31400	5233	201	20.4"
887	5/14/2018	7	314639	275	39	2			48737142	37360	5337	205	18.7"
888	5/22/2018	8	315273	634	79	3			48785701	48559	6070	233	18.9"
889	5/30/2018	8	316171	898	112	4			48840699	54998	6875	264	19.8"
890	6/7/2018	8	316474	303	38	1			48890927	50228	6279	241	18.1"
891	6/11/2018	4	316480	6	2	0			48915631	24704	6176	238	22.9"
892	6/20/2018	13	316484	10	1	0			48971353	80426	6187	238	16.1"
893	6/29/2018	9	316495	11	1	0			49025903	54550	6061	233	13.6"
894	7/5/2018	6	316498	3	1	0			49059729	33826	5638	217	20.2"
895	7/9/2018	4	316502	4	1	0			49082662	22933	5733	221	14.0"
896	7/16/2018	7	316504	2	0	0			49120934	38272	5467	210	18.4"
897	7/23/2018	7	316507	3	0	0			49161305	40371	5767	222	15.4"
898	8/1/2018	9	316545	38	4	0			49205956	44651	4961	191	23.6"
899	8/6/2018	5	316633	88	18	1			49231931	25975	5195	200	18.9"
900	8/13/2018	7	316776	143	20	1			49288430	36499	5214	201	21.5"
901	8/20/2018	7	316944	168	24	1			49305805	37375	5339	205	18.9"
902	8/31/2018	11	317122	178	16	1			49369414	63609	5783	222	23.4"
903	9/7/2018	7	317301	179	26	1			49415154	45740	6534	251	18.7"
904	9/12/2018	5	317403	102	20	1			49455655	40501	8100	312	22.1"
905	9/18/2018	6	317557	154	26	1			49496755	41100	6850	263	21.2"
906	10/1/2018	13	317871	314	24	1			49565289	68534	5272	203	22.1"
907	10/11/2018	10	318122	251	25	1			49623186	57897	5790	223	21.2"
908	10/19/2018	8	318345	223	28	1			49664658	41472	5184	199	23.4"
909	10/26/2018	7	318500	155	22	1			49706343	41685	5955	229	17.4"
910	11/8/2018	13	318736	236	18	1			49784960	78617	6047	233	14.0"
911	11/12/2018	4	318746	10	3	0			49805391	20431	5108	196	17.4"
912	11/20/2018	8	319503	757	95	4			49860144	54753	6844	263	17.4"
913	11/26/2018	6	319996	493	82	3			51031479	1171335	195223	7509	20.4"
914	12/3/2018	7	325089	5093	728	28			51105543	74064	10581	407	20.6"
915	12/12/2018	9	329426	4337	482	19			51747262	641719	71302	2742	17.6"
916	12/17/2018	5	331435	2009	402	15			51802463	55201	11040	425	21.9"
917	12/27/2018	10	339877	8442	844	32			54197652	2395189	239519	9212	23.6"
918	1/3/2019	7	343848	3971	567	22			54208523	10871	1553	60	14.9"
919	1/8/2019	5	347137	3289	658	25			54208523	0	0	0	18.9"
920	1/14/2019	6	349233	2096	349	13			54233557	25034	4172	160	20.4"
921	1/21/2019	7	352210	2977	425	16			54270683	37126	5304	204	20.8"
922	1/31/2019	10	357979	5769	577	22			54324279	53596	5360	206	15.3"
923	2/5/2019	5	360083	2104	421	16			54334479	10200	2040	78	20.2"
924	2/14/2019	9	367044	6961	773	30			54387599	53120	5902	227	14.7"
925	2/19/2019	5	374215	7171	1434	55			54424895	37296	7459	287	20.2"
926	2/28/2019	9	383870	9655	1073	41			54555066	130171	14463	556	16.4"
927	3/11/2019	11	398975	15105	1373	53			56523918	1968852	178987	6884	22.3"
928	3/18/2019	7	403499	4524	646	25			56524849	931	133	5	22.7"
929	3/29/2019	11	414058	10559	960	37			57361365	836516	76047	2925	23.4"
930	4/4/2019	6	416236	2178	363	14			57505186	143821	23970	922	19.1"
931	4/10/2019	6	417759	1523	254	10			57571289	66103	11017	424	17.2"
932	4/17/2019	7	421560	3801	543	21			57615162	43873	6268	241	23.2"
933	4/24/2019	7	426076	4516	645	25			57665813	50651	7236	278	14.4"
934	5/1/2019	7	427709	1633	233	9			57708054	42241	6034	232	20.8"

IESI BETHLEHEM LANDFILL

	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
866	TIME	Phase IV PS-2 (Secondary Flows)				Phase IV PS-2 (Primary)							sump
867	(days)	TOTALIZER	GALLONS	FLOW (gpd)	g/ac/day				Totalizer	gallons	flow(gpd)	g/ac/day	inches
882	4/12/2018	10	7138	0	0	0.0			19408085	53932	5393	509	32.9"
883	4/17/2018	5	7138	0	0	0.0			19433177	25112	5022	474	29.9"
884	4/25/2018	8	7138	0	0	0.0			19475666	42489	5311	501	31.4"
885	5/1/2018	6	7138	0	0	0.0			19505950	30284	5047	476	30.7"
886	5/7/2018	6	7138	0	0	0.0			19532651	26701	4450	420	30.2"
887	5/14/2018	7	7138	0	0	0.0			19563115	30464	4352	411	31.6"
888	5/22/2018	8	7138	0	0	0.0			19600835	37720	4715	445	29.7"
889	5/30/2018	8	7138	0	0	0.0			19642231	41396	5175	488	28.8"
890	6/7/2018	8	7138	0	0	0.0			19678291	36060	4508	425	33.7"
891	6/11/2018	4	7138	0	0	0.0			19695505	17214	4304	406	30.5"
892	6/20/2018	13	7138	0	0	0.0			19733233	54942	4226	399	33.9"
893	6/29/2018	9	7138	0	0	0.0			19770463	37230	4137	390	31.4"
894	7/5/2018	6	7138	0	0	0.0			19794854	24391	4065	384	33.1"
895	7/9/2018	4	7138	0	0	0.0			19810534	15680	3920	370	34.6"
896	7/16/2018	7	7138	0	0	0.0			19829442	18908	2701	255	32.0"
897	7/23/2018	7	7138	0	0	0.0			19849101	19659	2808	265	33.1"
898	8/1/2018	9	7138	0	0	0.0			19867442	18341	2038	192	29.3"
899	8/6/2018	5	7138	0	0	0.0			19871321	3879	776	73	28.0"
900	8/13/2018	7	7138	0	0	0.0			19878945	7624	1089	103	32.9"
901	8/20/2018	7	7138	0	0	0.0			19880023	1078	154	15	32.2"
902	8/31/2018	11	7138	0	0	0.0			19891899	11876	1080	102	33.5"
903	9/7/2018	7	7138	0	0	0.0			19927242	35343	5049	476	34.5"
904	9/12/2018	5	7138	0	0	0.0			19957019	29777	5955	562	30.7"
905	9/18/2018	6	7138	0	0	0.0			19986895	29876	4979	470	31.8"
906	10/1/2018	13	7138	0	0	0.0			20061731	74836	5757	543	31.2"
907	10/11/2018	10	7138	0	0	0.0			20121467	59736	5974	564	33.3"
908	10/19/2018	8	7138	0	0	0.0			20167014	45547	5693	537	28.2"
909	10/26/2018	7	7138	0	0	0.0			20204646	37632	5376	507	34.1"
910	11/8/2018	13	7138	0	0	0.0			20279418	74772	5752	543	33.3"
911	11/12/2018	4	7138	0	0	0.0			20304457	25039	6260	591	28.2"
912	11/20/2018	8	7138	0	0	0.0			20358630	54173	6772	639	28.4"
913	11/26/2018	6	7138	0	0	0.0			20405933	47303	7884	744	29.3"
914	12/3/2018	7	7138	0	0	0.0			20461258	55325	7904	746	31.4"
915	12/12/2018	9	7138	0	0	0.0			20522082	60824	6758	638	33.7"
916	12/17/2018	5	7138	0	0	0.0			20550035	27953	5591	527	30.3"
917	12/27/2018	10	7138	0	0	0.0			20620324	70289	7029	663	32.9"
918	1/3/2019	7	7138	0	0	0.0			20660606	40282	5755	543	29.5"
919	1/8/2019	5	7138	0	0	0.0			20700486	39880	7976	752	33.3"
920	1/14/2019	6	7138	0	0	0.0			20740910	40424	6737	638	30.3"
921	1/21/2019	7	7138	0	0	0.0			20780285	39375	5625	531	34.1"
922	1/31/2019	10	7138	0	0	0.0			20842598	62313	6231	588	28.5"
923	2/5/2019	5	7138	0	0	0.0			20871208	26610	5722	540	30.2"
924	2/14/2019	9	7138	0	0	0.0			20923558	52350	5817	549	31.4"
925	2/19/2019	5	7138	0	0	0.0			20952717	29159	5832	550	27.8"
926	2/28/2019	9	7138	0	0	0.0			21007697	54980	6109	576	26.9"
927	3/11/2019	11	7138	0	0	0.0			21067002	59305	5391	509	31.4"
928	3/18/2019	7	7138	0	0	0.0			21091793	24791	3542	334	30.7"
929	3/29/2019	11	7138	0	0	0.0			21163357	71564	6506	614	34.6"
930	4/4/2019	6	7138	0	0	0.0			21196738	33381	5564	525	24.5"
931	4/10/2019	6	7138	0	0	0.0			21261533	64795	10799	1019	29.7"
932	4/17/2019	7	7138	0	0	0.0			21299432	37899	5414	511	27.1"
933	4/24/2019	7	7138	0	0	0.0			21341263	41831	5976	564	30.7"
934	5/1/2019	7	7138	0	0	0.0			21399235	57972	8282	781	29.9"

IESI BETHLEHEM LANDFILL

	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ
866	Phase IV PS-3 (Secondary)						Phase IV PS-3 (Primary)						sump
867	Date	days	totalizer	gallon	flow(gpd)	g/ac/day			totalizer	gallons	flow(gpd)	g/ac/day	Inches
882	4/12/2018	10	42631	0	0	0			8918259	40467	4047	975	24.7"
883	4/17/2018	5	42631	0	0	0			8935021	16762	3352	808	25.7"
884	4/25/2018	8	42632	1	0	0			8967304	32283	4035	972	25.7"
885	5/1/2018	6	42632	0	0	0			8986273	18969	3162	762	25.5"
886	5/7/2018	6	42632	0	0	0			9002559	16286	2714	654	26.8"
887	5/14/2018	7	42632	0	0	0			9020498	17939	2563	618	24.9"
888	5/22/2018	8	42632	0	0	0			9047728	27230	3404	820	25.9"
889	5/30/2018	8	42665	33	4	0			9086032	38304	4788	1154	27.4"
890	6/7/2018	8	42665	0	0	0			9110208	24176	3022	728	25.5"
891	6/11/2018	4	42665	0	0	0			9120377	10169	2542	613	26.2"
892	6/20/2018	13	42665	0	0	0			9142393	32185	2476	597	26.8"
893	6/29/2018	9	42665	0	0	0			9162659	20266	2252	543	23.6"
894	7/5/2018	6	42665	0	0	0			9176312	13653	2276	648	23.6"
895	7/9/2018	4	42665	0	0	0			9185141	8829	2207	532	27.9"
896	7/16/2018	7	42665	0	0	0			9199913	14772	2110	509	26.8"
897	7/23/2018	7	42666	1	0	0			9216822	16909	2416	582	25.1"
898	8/1/2018	9	42666	0	0	0			9259666	42844	4760	1147	21.1"
899	8/6/2018	5	42666	0	0	0			9284508	24842	4968	1197	24.9"
900	8/13/2018	7	42666	0	0	0			9322417	37909	5416	1305	24.9"
901	8/20/2018	7	42666	0	0	0			9354156	31739	4534	1093	25.7"
902	8/31/2018	11	42689	23	2	0			9396489	42333	3848	927	25.3"
903	9/7/2018	7	42689	0	0	0			9416454	19965	2852	687	26.8"
904	9/12/2018	5	42689	0	0	0			9434353	17899	3580	863	24.8"
905	9/18/2018	6	42689	0	0	0			9452352	17999	3000	723	25.7"
906	10/1/2018	13	42689	0	0	0			9488864	36512	2809	677	66.9"
907	10/11/2018	10	42689	0	0	0			9490856	1992	199	48	67.8"
908	10/19/2018	8	42781	92	12	1			9494868	4012	502	121	63.1"
909	10/26/2018	7	42817	36	5	0			9500655	5787	827	199	60.5"
910	11/8/2018	13	42817	0	0	0			9596127	95472	7344	1770	24.5"
911	11/12/2018	4	43246	429	107	10			9627326	31199	7800	1879	15.3"
912	11/20/2018	8	43246	0	0	0			9692363	65037	8130	1959	17.7"
913	11/28/2018	6	43246	0	0	0			9747387	55024	9171	2210	21.5"
914	12/3/2018	7	43266	20	3	0			9811123	63736	9105	2194	18.5"
915	12/12/2018	9	43266	0	0	0			9869983	58860	6540	1576	26.6"
916	12/17/2018	5	43266	0	0	0			9893769	23788	4757	1146	27.6"
917	12/27/2018	10	43266	0	0	0			9968493	74724	7472	1801	23.2"
918	1/3/2019	7	43266	0	0	0			10015193	46700	6671	1608	20.2"
919	1/8/2019	5	43266	0	0	0			10063124	47931	9586	2310	18.5"
920	1/14/2019	6	43266	0	0	0			10105956	42832	7139	1720	26.2"
921	1/21/2019	7	43266	0	0	0			10142879	36923	5275	1271	21.5"
922	1/31/2019	10	43266	0	0	0			10216913	74034	7403	1784	20.0"
923	2/5/2019	5	43266	0	0	0			10250043	33130	6626	1597	18.7"
924	2/14/2019	9	43266	0	0	0			10303601	53558	5951	1434	23.2"
925	2/19/2019	5	43266	0	0	0			10344671	41070	8214	1979	16.4"
926	2/28/2019	9	43549	283	31	3			10429876	85205	9467	2281	22.3"
927	3/11/2019	11	43549	0	0	0			10502158	72282	6571	1583	16.4"
928	3/18/2019	7	43549	0	0	0			10530183	28025	4004	965	21.5"
929	3/29/2019	11	43718	169	15	1			10643865	113682	10335	2490	27.4"
930	4/4/2019	6	43718	0	0	0			10685160	41295	6883	1658	26.4"
931	4/10/2019	6	43718	0	0	0			10715075	29915	4986	1201	17"
932	4/17/2019	7	43718	0	0	0			10753687	38612	5516	1329	26.2"
933	4/24/2019	7	43718	0	0	0			10799919	46232	6605	1591	23.0"
934	5/1/2019	7	43718	0	0	0			10813348	13429	1918	462	17.9"

IESI BETHLEHEM LANDFILL

	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD
865	Phase IV PS-4 (Secondary)												
866	Date	days	totalizer	gallon	flow(gpd)	g/ac/day	Phase IV PS-4 (Primary)						sump
867								totalizer	gallons	flow(gpd)	g/ac/day	inches	
882													
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910			0	0	0	0		0	0	#DIV/0!	#DIV/0!	0"	
911	11/12/2018	0	147	147	0	0		207023	207023	#DIV/0!	#DIV/0!	28.3"	
912	11/20/2018	8	147	0	0	0		575433	368410	46051	11097	31.4"	
913	11/26/2018	6	147	0	0	0		880527	305094	50849	12253	21.5"	
914	12/3/2018	7	147	0	0	0		1158031	277504	39643	9553	18.5"	
915	12/12/2018	9	147	0	0	0		1158032	1	0	0	18.5"	
916	12/17/2018	5	147	0	0	0		1158033	1	0	0	18.5"	
917	12/27/2018	10	404	257	26	2		1560142	402109	40211	9689	19.3"	
918	1/3/2019	7	404	0	0	0		1560143	1	0	0	19.3"	
919	1/8/2019	5	483	79	16	1		1856842	296699	59340	14299	22.1"	
920	1/14/2019	6	586	103	17	2		1875514	18672	3112	750	15"	
921	1/21/2019	7	586	0	0	0		2019879	144365	20624	4970	14.1"	
922	1/31/2019	10	941	355	36	3		2269621	249742	24974	6018	22.5"	
923	2/5/2019	5	941	0	0	0		2286229	16608	3322	800	21.0"	
924	2/14/2019	9	941	0	0	0		2352286	66057	7340	1769	28.4"	
925	2/19/2019	5	941	0	0	0		2413009	60723	12145	2926	20.4"	
926	2/28/2019	9	941	0	0	0		2515643	102634	11404	2748	21.8"	
927	3/11/2019	11	941	0	0	0		2598596	82953	7541	1817	23.6"	
928	3/18/2019	7	941	0	0	0		2638297	39701	5672	1367	27.2"	
929	3/29/2019	11	941	0	0	0		2781453	143156	13014	3136	28.4"	
930	4/4/2019	6	1410	469	78	7		2813906	32453	5409	1303	25.8"	
931	4/10/2019	6	1410	0	0	0		2825936	12030	2005	483	23.0"	
932	4/17/2019	7	1876	466	67	6		2960696	134760	19251	4639	20.3"	
933	4/24/2019	7	2347	471	67	6		3115337	154641	22092	5323	20.5"	
934	5/1/2019	7	2347	0	0	0		3206530	91193	13028	3139	22.5"	

Diane Palik

Subject: FW: Issues raised at TCC meeting

Subject: Issues raised at TCC meeting

Bob and Dave,

I have included Astor, though I believe he is out of town now.

I'm writing to make you aware of the following issues that were raised at the Technical Consultant Committee meeting today. Please be prepared to formally address them by the monthly committee meeting Thursday. Or you're free to email back sooner if you'd like.

1. What happens to landfill gas if the flare goes off-line, now that there is no backup (with BRE retired)? Are valves or other mechanisms present to prevent escape to the atmosphere? Do these close automatically? Do you have a set list of procedures to follow in the event of a prolonged flare outage? **Yes, the flare has automatic shutoff valves that close immediately during a flare shutdown. The flare is also designed to automatically restart and sends out alerts so we get notified when it does shut down. We developed a Startup, Shutdown and Malfunction (SSM) plan that we follow when the flare goes off-line, and we maintain an inventory of key spare parts so flare repairs can be made quickly. In the case of a prolonged outage, the most likely cause of that would be an extended power outage from say a hurricane, and in that situation, we could mobilize a rental generator to restore temporary power.**
2. The maintenance of LMC-7 has been planned since the end of last year. When will that take place? **This was completed on May 6th. LMC-7 secondary is showing no flow because there is no flow to pump. SCS Field Services and Kline's have confirmed that everything in LMC-7 is working properly.**
3. Abatement Well AB-10 went from a pumpage of about 12 gallons per minute as of the February report to 0 gpm in March and remained at 0 gpm in April. Your reporting states that all wells are functioning normally. This was the highest-producing abatement well. Have you diagnosed and fixed the problem? If so, what was wrong? If not, when will this work be completed? **We checked both the transducer and the pump. Both are working properly.**
4. According to my records, PA DEP Air Quality has not conducted a full inspection with SEM since October 2018. Can you please confirm that, or let me know if they've been out recently, and the result. **Correct. Keep in mind that Bethlehem Landfill conducts quarterly SEM which is done through a 3rd party, SCS Field Services. This is not going unchecked.**
5. Form 50 still seems to be submitted to PA DEP incomplete. **Could you please be more specific or possibly show me what you are referring to at the meeting tomorrow? I am looking at the Q1 Ground Water Monitoring Report for 2019, which I will bring with me tomorrow for LST, and everything looks to be completed on the Form 50.**
6. During sampling by SCS on Feb 11, methane was detected in 2 gas migration probes. The first was LFG-3A, which had a detection the prior quarter as well. The second was LMC-3, which has had several detections previously. Have any measures been taken to address this situation? **Bethlehem Landfill is not required to monitor the LMC chambers, but we have done this in the past as a BMP for informational purposes. Also, LFG-3A's readings were both below the 5% compliance limit. Therefore, no action has been taken on either of these locations.**

Thank you for your attention to these issues.

Chris.