

Bethlehem Landfill Committee Meeting Minutes

Date: Thursday, February 20, 2020
Time: 1:00 p.m.
Location: Lower Saucon Township
Attendance: **Hanover Engineering:** Chris Taylor; **Bethlehem Landfill:** Astor Lawson & David Pannucci;
Members: Neil Ortwein **Staff Members:** Leslie Huhn & Diane Palik; **Council Liaison:** Priscilla deLeon (via speaker phone); Absent: Hazem Hijazi.

Mr. Pannucci reviewed the monthly tonnages for January:

	<u>November</u>	<u>December</u>	<u>January</u>
MSW	26,863.19	28,432.27	26,238.22
C&D	5,155.07	4,552.65	5,393.85
Residual (Total)	2,237.89	1,844.97	1,599.23
Asbestos	1.70	0.00	8.21
Sewage Sludge (90/10)	75.56	96.18	98.13
Out of State (Total)	20,823.54 (61%)	22,285.97 (64%)	22,471.95 (6%)
Recycle	7 (86%)	8 (88%)	11 (81%)

Mr. Pannucci said there were two Form U Submittals both on January 22, 2020, one from Buffalo Fuel Corp. and one from Recycle Logistics & Transport. Annual groundwater trend analysis first quarter sampling event is scheduled February 24th to the 26th. Mr. Taylor said the part of the North Slope Road they drove is fine, but they will check out the rest of it. Mr. Pannucci said yes they will check access points next week.

Mr. Pannucci said there were no correspondences or reports. They had no DEP inspections since the last meeting. Mr. Taylor said he shows there were no Air Quality inspections since September 2019 and no reporting since then. Mr. Pannucci said that's probably accurate. He said there were two Host Municipal Inspections by Mr. Taylor on February 6th and 20th.

Mr. Pannucci said regarding Commercial Waste Vehicles, there were 2,859 total trucks for January with 72 overweight's, 60 warnings and 12 suspensions. Mr. Lawson said they are refreshing everyone's memory on what the requirements are for traveling to and from the site like safety-wise routes, things like that. They are sending a message out to all the haulers that they are serious about the rules they have in place.

Mr. Pannucci said regarding flare operations and gas collection, 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. The January average flare flow was 2,912 SCFM. There were three shutdowns for January. Mr. Taylor said the flare is running fine. Under gas management, you are in contact with SCS to get you their upgrade plans for the gas collection systems, which are routinely done every year? Mr. Pannucci said correct, they will start that process later in the year. They are going around and looking at all their sites.

Mr. Pannucci said the North Slope Road has not needed repairs nor has the swale needed repairs. The 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 to replace transducer in AB-9. Control Systems 21 performed electrical work in AB-2. Mr. Taylor said prior to that, was it AB-10. Mr. Pannucci said it was AB-10 and it was a flow meter. Mr. Taylor asked you think you got that solved? Mr. Pannucci said yes. Mr. Taylor said you replaced the transducer in 9 so it was not calling for pumpage and 10 we had pumpage but we weren't metering it. Mr. Pannucci said it was fixed.

Mr. Pannucci said leachate collection, flow rates continue to be monitored and reported. Intermittent malfunctions of the well pumps and controls are repaired or replaced as needed. Radiation monitoring there were 5 loads for January, all Tc-99m. The waste streams met level 1 requirement and disposed on site. The SE Realignment Construction Activities, waste operations are in SE-1B. Mr. Taylor said construction activities, you are ramping

up to construct your next cell and you gave him a good explanation in the field, how you are going to go about that? The way it was planned out was Cell 2A South and Cell 2B to the North, you now talked to DEP and got their okay to build things a little differently and instead of building all of A and filling that and then building B, you are going to build half of each so you have continued uphill, downhill, north, south disposal area which is half of A & half of B, which you will call AB Phase 1. Mr. Pannucci said correct. Mr. Taylor said then you'll move on to the eastern half of each of those. When you start reporting on that, we're not going to be talking about 2A and 2B, but 2AB Phase 1 and 2AB Phase 2 so everyone will understand that. He said you are ramping up to that construction and already have equipment on site. Mr. Pannucci said the liner has been ordered and shipped. They are working on bringing in the wall materials coming on site currently and a lot of the stone for later on. Mr. Taylor said we are looking at a lot more traffic. Mr. Pannucci said a lot of the Bayshore trucks are being ramped down so it may not really affect the truck traffic too much. There will be more employees, so there will be a little bit more traffic.

Mr. Taylor asked for an update on any final capping that will take place this year. Mr. Pannucci said he wouldn't say they have any update, they are trying to set up a meeting with Roger Bellas and his team for the first week of March. Mr. Taylor said he was out in December and that was the topic of discussion at that time. Mr. Pannucci said it was.

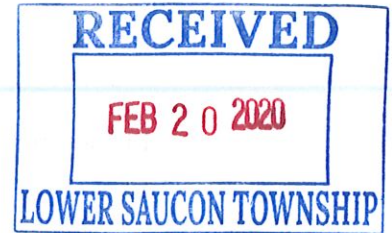
Mr. Taylor said there were 12 odor complaints from January to February 5, 2020, all from Steel City and descriptions are landfill gas. Mr. Taylor said the odors are reported from DEP. He hasn't been made aware of anything in 2020. Mr. Taylor said when does DEP give you this report. Mr. Pannucci said they sent him the report this week for the meeting. They usually do send it out periodically. Mr. Taylor said odors can come from garbage, he didn't get any offsite odors anywhere. When he was on the top of the landfill with a NW wind off the north face, he caught something that wasn't landfill gas, it was seep and they showed him a spot where they fixed the seep last week and you'll have Cody and Phillip go over that area and track down any odors. He asked if they wanted to say anything about the mister line. Mr. Lawson said they are refurbishing the entire line that was there and replacing the misters. The motor is out for repair right now and will be back in March. They are going to double-check the line and make sure it's intact including the nozzles. Mr. Taylor said right now the top of the landfill is higher than any structures you can put a mister on. Mr. Lawson said they have the fans up there right now. Mr. Taylor said you are always putting up deer fences. Mr. Lawson said correct.

Mr. Taylor said that's good news about the gas plan and you're still looking at a blower for the motor to see if you can increase the vacuum in the well fields. These are all things working towards better gas management. IESI's efforts in that regard are appreciated and we wish them luck. It would be great if you could get a handle on odors. Keep up the good work and keep moving in that direction.

Mr. Pannucci said you'll see AB-1 had a pump issue, which has been corrected. AB-3 they are looking into that one as they aren't sure what's going on there. Mr. Taylor asked about AB-8. Mr. Pannucci said everything is working properly and the numbers are showing there's no water in the well. Mr. Taylor said it could be a meter issue. Mr. Pannucci said not from what the control systems have seen. They checked everything to make sure it was working properly. Mr. Taylor said he's glad they are keeping after the abatement systems.

Mr. Taylor said the street sweeper was going around today. The truck wash was open although he didn't see any trucks going in or out. There was no activity at BRE. There were five pickers out. Windscreens were in place around the working face. ERG and Copco was out to look at their blower and the PLC in your well and everything checked out. You are still looking at grading around the flare. There were no off-site issues.

Mrs. Huhn asked about the quarterly report, which will be on the March 4th agenda. Mr. Taylor said the capping and final capping is the biggest thing they have to follow up on and there wasn't much else on the quarterly report to talk about. Mrs. deLeon asked if a representative from the landfill could attend that meeting. Mr. Pannucci said they will have to check their calendar. Mr. Taylor said the next meeting will be on Thursday, March 19, 2020 at 1:00 p.m. The meeting adjourned at 1:25 p.m.



**Bethlehem Landfill Company
LST Committee Meeting Notes January 2020
February 20, 2020**

Agenda Items

I. Waste Activities

Monthly Tonnages

	November	December	January
MSW	26,863.19	28,432.27	26,238.22
C&D	5,155.07	4,552.65	5,393.85
Residual (Total)	2,237.89	1,844.97	1,599.23
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Recycle	7 (86%)	8 (88%)	11 (81%)

Form U Submittals

Waste

Approval Date

Buffalo Fuel Corp.	Paper & Plastic Waste (404)	1/22/20
Recycle Logistics & Transport	Waste Tires (501)	1/22/20

II. Annual Groundwater Trend Analysis

First quarter sampling event is scheduled for 2/24/20 – 2/26/20.

III. Correspondence / Reports

None

IV. Landfill Operations

Department of Environmental Protection Inspections

None

Host Municipal Inspection

2/6/20 C. Taylor
2/20/20 C. Taylor

Commercial Waste Vehicles

Total #Trucks November December January

2,843 2,651 2,859

Overweight November December January

48 95 72

Warnings 44 68 60

Suspensions 4 27 12

November – TT=37, RL=5, RO=1, DT=5 December – TT=83, RL=8, RO=1, DT=3 January – TT=59, RL=3, RO=1, FL=1, DT=8

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

Flare Operations and Gas Collection

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.

January Average Flare Flow = 2,912 SCFM

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

Beginning of event shutdown Flare	Date: 1/9/20	Time: 09:34	
End of event startup	Date: 1/9/20	Time: 09:53	Duration: 00:19min
Beginning of event shutdown Flare	Date: 1/27/20	Time: 09:30	
End of event startup	Date: 1/27/20	Time: 10:19	Duration: 00:49min
Beginning of event shutdown Flare	Date: 1/27/20	Time: 10:26	
End of event startup	Date: 1/27/20	Time: 11:26	Duration: 01:00min

Documentation is on file.

North Slope Road has not needed repairs. The swale has not needed repairs.

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 to replaced transducer in AB-9. Control Systems 21 performed electrical work in AB-2.

Leachate collection

Flow rates continue to be monitored and reported. Intermittent malfunctions of the well pumps and controls are repaired or replaced as needed.

Radiation Monitoring

There were 5 radioactive loads for January Tc-99m (5). The waste streams met level 1 requirements and were disposed of onsite.

SE Realignment Construction Activities

Waste operations are in SE-1B.

Complaints received by Waste Connections

See Attached.

BETHLEHEM LANDFILL

LEACHATE DEMAND REPORT

January 2020

<u>Location</u>	<u>Total gallons</u>
LMC-6	35,144
LMC-7	9,822
LMC-8	163,383
PS-4	145,237
LMC-10	1,214,898
PS-1	454,532
PS-2	170,609
PS-3	346,601
Phase-IV	971,742

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	1,214,898
Phase IV	<u>971,742</u>
TOTAL	2,186,640 gallons

Total Leachate

Leachate	353,586
Phase IV	<u>971,742</u>
TOTAL	1,325,328 gallons

LMC-10 Flow - Abatement System Flow = Leachate System Flow (gallons).
Abatement System Flow = 861,312 gallons (Neptune Flow meters)

BETHLEHEM LANDFILL
GROUNDWATER DEMAND REPORT
January 2020

Well No.	Water Level (avg. ft SWL*)	Flow (avg. GPM)	(Total gal)
AB-1	93.8	0.0	0.0
AB-2	78.4	2.2	99,267
AB-3	71.4	0.0	1
AB-4	70.8	2.2	99,245
AB-5	41.3	0.6	28,837
AB-6	44.2	3.0	134,016
AB-7	41.5	2.8	124,628
AB-8	0.0	0.0	0.0
AB-9	58.9	3.0	135,333
AB-10	78.3	5.4	239,985
TW-1	54.4	<0.1	0.0
Total Flow		861,312 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
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
5/10/2019	9.00	2685158	20,789	2,310	147	4414270	7737	860	70	7,784,469	14524	1,614	278
5/17/2019	7.00	2699233	14,075	2,011	128	4420917	6647	950	78	7,797,010	12541	1,792	309
5/23/2019	6.00	2710148	10,915	1,819	116	4426176	5259	877	72	7,807,571	10561	1,760	303
5/28/2019	5.00	2713182	3,034	607	39	4428676	2500	500	41	7,813,572	6001	1,200	207
6/5/2019	8.00	2730274	17,092	2,137	136	4434327	5651	706	58	7,826,345	12773	1,597	275
6/13/2019	8.00	2749382	19,108	2,389	152	4439837	5510	689	56	7,838,610	12265	1,533	264
6/20/2019	7.00	2751930	2,548	364	23	4444290	4453	636	52	7,849,768	11158	1,594	275
6/28/2019	8.00	2755174	3,244	406	26	4449531	5241	655	54	7,861,043	11275	1,409	243
7/1/2019	3.00	2765773	10,599	3,533	225	4451306	1775	592	48	7,864,310	3267	1,089	188
7/11/2019	10.00	2796263	30,490	3,049	194	4457119	5813	581	48	7,876,648	12338	1,234	213
7/16/2019	5.00	2812684	16,421	3,284	209	4459951	2832	566	46	7,878,992	2344	469	81
7/24/2019	8.00	2831870	19,186	2,398	153	4463593	3642	455	37	7,886,403	7411	926	160
7/30/2019	6.00	2843280	11,410	1,902	121	4467209	3616	603	49	7,896,140	9737	1,623	280
8/6/2019	7.00	2850243	6,963	995	63	4472476	5267	752	62	7,909,399	13259	1,894	327
8/15/2019	9.00	2856113	5,870	652	42	4476747	4271	475	39	7,917,866	8467	941	162
8/23/2019	8.00	7657	7,657	957	61	4486359	9612	1,202	98	7,938,076	20210	2,526	436
8/30/2019	7.00	13947	6,290	899	57	4490990	4631	662	54	7,949,696	11620	1,660	286
9/6/2019	7.00	19366	5,419	774	49	4495205	4215	602	49	7,960,462	10766	1,538	265
9/13/2019	7.00	24485	5,119	731	47	4499487	4282	612	50	7,971,110	10648	1,521	262
9/19/2019	6.00	28441	3,956	659	42	4503238	3751	625	51	7,979,832	8722	1,454	251
9/27/2019	8.00	32103	3,662	458	29	4505413	2175	272	22	7,984,431	4599	575	99
9/30/2019	3.00	35409	3,306	1,102	70	4509388	3975	1,325	109	7,995,900	11469	3,823	659
10/7/2019	7.00	35464	55	8	1	4512708	3320	474	39	8,005,007	9107	1,301	224
10/15/2019	8.00	38403	2,939	367	23	4515616	2908	364	30	8,017,447	12440	1,555	268
10/22/2019	7.00	40137	1,734	248	16	4517331	1715	245	20	8,024,712	7265	1,038	179
10/31/2019	9.00	52975	12,838	1,426	91	4519802	2471	275	23	8,050,591	25879	2,875	496
11/9/2019	9.00	53102	127	14	1	4521292	1490	166	14	8,070,360	19769	2,197	379
11/15/2019	6.00	54054	952	159	10	4522495	1203	201	16	8,087,848	17488	2,915	503
11/18/2019	3.00	54644	590	197	13	4523014	519	173	14	8,091,288	3440	1,147	198
11/26/2019	8.00	54711	67	8	1	4524071	1057	132	11	8,102,133	10845	1,356	234
12/3/2019	7.00	64374	9,663	1,380	88	4525231	1160	166	14	8,135,003	32870	4,896	810
12/13/2019	10.00	70142	5,768	577	37	4526907	1676	168	14	8,165,339	30336	3,034	523
12/18/2019	5.00	75331	5,189	1,038	66	4528047	1140	228	19	8,193,507	28168	5,634	971
12/23/2019	5.00	79449	4,118	824	52	4530718	2671	534	44	8,209,321	15814	3,163	545
12/31/2019	8.00	80508	1,059	132	8	4531027	309	39	3	8,223,899	14578	1,822	314
1/9/2020	9.00	86103	5,595	622	40	4533683	2656	295	24	8,254,367	30468	3,385	584
1/16/2020	7.00	103734	17,631	2,519	160	4535796	2113	302	25	8,272,539	18172	2,596	448
1/20/2020	4.00	105431	1,697	424	27	4537200	1404	351	29	8,283,908	11369	2,842	490
1/31/2020	11.00	113861	8,430	766	49	4540849	3649	332	27	8,313,691	29783	2,708	467

ESIPA BETHLEHEM LANDFILL CORP

ID	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T		
																					TIME (days)	TOTALIZER GALLONS
1024																						
1025																						
1026	12/28/19	7.00	1884940	6,259	894	57	2234364	0	0	6,430,524	18485	2,641	455									
1027	1/9/2019	5.00	1881124	6,184	1,237	79	2234364	0	0	6,450,342	16818	3,364	580									
1028	1/14/2019	5.00	1886592	5,588	928	59	2234364	0	0	6,482,673	12331	2,055	354									
1029	1/21/2019	7.00	1801833	5,201	743	47	2234419	8	8	6,476,108	13413	1,919	331									
1030	1/31/2019	10.00	1810172	8,275	826	53	2234419	0	0	6,502,388	26292	2,629	453									
1031	2/5/2019	5.00	1814165	3,993	799	51	2234419	0	0	6,508,143	5745	1,149	198									
1032	2/14/2019	9.00	1822540	8,375	931	59	2234419	0	0	6,538,208	18065	2,007	346									
1033	2/19/2019	5.00	1826775	4,235	847	54	2234419	0	0	6,538,884	13676	2,735	472									
1034	2/28/2019	9.00	1835312	8,537	949	60	2234419	0	0	6,564,906	25022	2,760	479									
1035	3/11/2019	11.00	1843491	8,179	744	47	2234420	1	0	6,589,754	24448	2,223	383									
1036	3/18/2019	7.00	1847359	3,859	553	35	2234420	0	0	6,593,117	9763	1,395	240									
1037	3/28/2019	11.00	1852266	11,927	1,084	69	2234420	0	0	6,628,871	29754	2,705	466									
1038	4/4/2019	6.00	1867743	8,457	1,410	90	2234420	0	0	6,635,533	6662	1,110	191									
1039	4/10/2019	7.00	1872343	4,500	767	49	2234425	5	1	6,639,477	3944	657	113									
1040	4/17/2019	6.00	1880223	7,890	1,326	72	2234425	0	0	6,650,837	11360	1,623	280									
1041	4/24/2019	7.00	1885666	5,443	778	50	2234425	0	0	6,670,724	19537	2,781	481									
1042	5/1/2019	7.00	1893276	7,610	1,087	69	2234430	5	1	6,684,772	14398	2,057	355									
1043	5/10/2019	6.00	2002276	7,000	778	50	2235022	592	86	6,706,960	25188	2,799	483									
1044	5/17/2019	7.00	2007276	7,000	1,000	64	2235022	0	0	6,737,841	27891	3,983	687									
1045	5/23/2019	6.00	2014276	7,000	1,167	74	2235022	0	0	6,752,978	15138	2,523	435									
1046	5/29/2019	5.00	2021276	7,000	1,400	89	2235022	0	0	6,760,120	7141	1,428	246									
1047	6/5/2019	8.00	2028276	7,000	875	56	2235022	0	0	6,767,412	7292	912	157									
1048	6/13/2019	8.00	2035276	7,000	875	56	2425304	190282	23,785	6,772,651	5239	655	113									
1049	6/20/2019	7.00	2042276	7,000	1,000	64	2425304	0	0	6,779,548	6897	985	170									
1050	6/28/2019	8.00	2049276	7,000	875	56	2425304	0	0	6,785,245	5997	712	123									
1051	7/1/2019	3.00	2056276	7,000	2,333	149	2425304	0	0	6,788,111	7866	2,622	452									
1052	7/11/2019	10.00	2063276	7,000	700	45	2425304	0	0	6,799,459	6348	635	109									
1053	7/18/2019	5.00	2070276	7,000	1,400	89	2425304	0	0	6,804,208	3749	750	130									
1054	7/24/2019	8.00	2077276	7,000	875	56	2425304	0	0	6,812,295	14027	1,753	302									
1055	7/30/2019	6.00	2084276	7,000	1,167	74	2425304	0	0	6,824,390	3457	494	85									
1056	8/6/2019	7.00	2091276	7,000	1,000	64	2425304	0	0	6,828,525	2145	238	41									
1057	8/13/2019	9.00	2098276	7,000	778	50	2425304	0	0	6,827,443	918	115	20									
1058	8/20/2019	8.00	3	3	0	0	2425304	0	0	6,827,533	90	13	2									
1059	8/27/2019	7.00	3	0	0	0	2425304	0	0	6,827,533	0	0	0									
1060	9/3/2019	7.00	3	0	0	0	2425304	0	0	6,829,448	1225	175	30									
1061	9/10/2019	6.00	5745	5,714	952	61	2425304	0	0	6,835,148	690	116	20									
1062	9/17/2019	3.00	5746	1	0	0	2425304	0	0	6,838,137	5700	713	123									
1063	9/24/2019	6.00	5746	0	0	0	2425304	0	0	6,839,377	989	330	57									
1064	10/1/2019	7.00	1970	1,970	281	18	2425304	0	0	6,837,068	1052	150	26									
1065	10/8/2019	6.00	8015	299	37	2	2425304	0	0	6,839,252	2063	258	44									
1066	10/22/2019	7.00	8211	196	28	2	2425304	0	0	6,840,627	775	111	19									
1067	10/31/2019	9.00	8746	535	59	4	2425304	0	0	6,844,454	4427	492	85									
1068	11/6/2019	9.00	8875	129	14	1	2425304	0	0	6,874,132	29678	3,298	569									
1069	11/13/2019	6.00	9138	263	44	3	2425304	0	0	6,874,370	239	40	7									
1070	11/20/2019	3.00	9215	77	26	2	2425304	0	0	6,874,370	600	200	34									
1071	11/27/2019	8.00	9231	16	2	0	2425304	0	0	6,875,041	71	9	2									
1072	12/4/2019	7.00	9868	577	82	5	2425304	0	0	6,890,783	15742	2,249	388									
1073	12/11/2019	10.00	10183	375	38	2	2425304	0	0	6,892,170	41387	4,139	714									
1074	12/18/2019	5.00	10647	464	93	6	2425304	0	0	6,943,318	11148	2,230	384									
1075	12/25/2019	5.00	10801	154	31	2	2425304	0	0	6,976,378	33060	6,612	1,140									
1076	1/1/2020	8.00	10882	81	10	1	2425304	0	0	6,989,688	7310	914	158									
1077	1/8/2020	9.00	11523	641	71	5	2425304	0	0	6,984,928	920	102	18									
1078	1/15/2020	7.00	11870	347	50	3	2425304	0	0	7,018,109	33501	4,786	825									
1079	1/22/2020	4.00	12097	227	57	4	2425304	0	0	7,029,830	11721	2,930	505									
1080	1/29/2020	11.00	12673	576	52	3	2425304	0	0	7,057,278	27449	2,495	430									

IESI BETHLEHEM LANDFILL

	A	B	C	D	E	F	H	I	J	K	M	N	O
856		TIME	Phase IV PS-1 (Secondary Flows)				Phase IV PS-1 (Primary flow)						sump
857		(days)	TOTALIZER	GALLONS	FLOW (gpd)	g/ac/day			Totalizer	gallons	flow(gpd)	g/ac/day	Inches
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	5789	577	22			54324279	53596	5360	206	19.3"
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			56624849	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	418236	2178	363	14			57505186	143821	23970	922	19.1"
931	4/10/2019	6	417759	1523	254	10			57571289	86103	11017	424	17.2"
932	4/17/2019	7	421560	3801	543	21			57615182	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	1833	233	9			57709054	42241	6034	232	20.8"
935	5/10/2019	9	433016	5307	590	23			57765925	57871	6430	247	17.4"
936	5/17/2019	7	438115	5099	728	28			57815139	49214	7031	270	19.9"
937	5/23/2019	6	440911	2796	466	18			57871478	56339	9390	361	23.1"
938	5/28/2019	5	442052	1141	228	9			57882566	11088	2218	85	22.9"
939	6/5/2019	8	446716	4664	593	22			57932871	60305	6288	242	23.2"
940	6/13/2019	8	451455	4739	592	23			57980083	47192	5899	227	19.8"
941	6/20/2019	7	457388	5933	848	33			58021627	41564	5938	228	21.7"
942	6/28/2019	8	462243	4855	607	23			58063955	42338	5292	204	21.0"
943	7/1/2019	3	465426	3183	1061	41			58087271	23306	7769	299	21.5"
944	7/11/2019	10	474667	9241	924	36			58146872	59601	5960	229	24.0"
945	7/16/2019	5	477526	2859	572	22			58189011	42139	8428	324	21.6"
946	7/24/2019	8	482019	4493	562	22			58251418	62407	7801	300	22.4"
947	7/30/2019	8	485154	3135	523	20			58306461	55043	9174	353	18.9"
948	8/6/2019	7	490422	5268	753	29			58367307	60846	8692	334	13.6"
949	8/15/2019	9	495099	4677	520	20			58422434	55127	6125	236	16.7"
950	8/23/2019	8	498871	4772	597	23			58488300	65866	8233	317	23.3"
951	8/30/2019	7	501925	2054	293	11			58526789	38459	6494	211	23.9"
952	9/6/2019	7	505437	3512	502	19			58566789	40010	5716	220	15.7"
953	9/13/2019	7	508667	3230	461	18			58602412	35643	5092	196	21.5"
954	9/19/2019	6	511028	2359	393	15			58635982	33570	5595	215	14.7"
955	9/27/2019	8	511838	812	102	4			58671134	35152	4394	169	20.1"
956	9/30/2019	3	511838	0	0	0			58696611	25477	8492	327	19.5"
957	10/7/2019	7	511838	0	0	0			58733041	36430	5204	200	19.5"
958	10/15/2019	8	519849	8011	1001	39			58775510	42469	5309	204	8.7"
959	10/22/2019	7	520043	194	28	1			58829110	53600	7657	295	8.1"
960	10/31/2019	9	521277	1234	137	5			58844747	15637	1737	67	8.5"
961	11/9/2019	9	521678	401	45	2			58883755	39008	4334	167	22.1"
962	11/15/2019	6	521678	0	0	0			58915415	31660	5277	203	8.5"
963	11/18/2019	3	521678	0	0	0			58925455	10040	3347	129	21.8"
964	11/26/2019	8	521678	0	0	0			58930245	4790	599	23	21.3"
965	12/3/2019	7	521678	0	0	0			58996053	65808	9401	362	18.3"
966	12/13/2019	10	521678	0	0	0			59034888	38835	3884	149	17.8"
967	12/18/2019	5	521678	0	0	0			59067543	32655	6531	251	18.1"
968	12/23/2019	5	521678	0	0	0			59097424	29881	5976	230	17.9"
969	1/9/2020	17	521678	0	0	0			59392717	295293	17370	668	21.7"
970	1/16/2020	7	521718	40	6	0			60772939	92494	13213	508	24.0"
971	1/20/2020	4	521792	74	19	1			60791604	18885	4666	179	21.9"
972	1/31/2020	11	522081	289	26	1			60839281	47677	4334	167	23.8"

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)						
867	(days)	TOTALIZE	GALLONS	FLOW (gpd)	g/ac/day			Totalizer	gallons	flow(gpd)	g/ac/day	sump	inches
918	1/3/2019	7	7138	0	0	0.0		20660806	40282	5755	543	29.5"	
919	1/8/2019	5	7138	0	0	0.0		20700486	39880	7876	782	33.3"	
920	1/14/2019	6	7138	0	0	0.0		20740910	40424	6737	636	30.3"	
921	1/21/2019	7	7138	0	0	0.0		20780285	39375	5625	631	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	28610	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	28.9"	
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		21163157	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		21261633	64795	10799	1019	29.7"	
932	4/17/2019	7	7138	0	0	0.0		21299432	37699	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"	
935	5/10/2019	9	7138	0	0	0.0		21444235	45000	5000	472	34.1"	
936	5/17/2019	7	7138	0	0	0.0		21489235	45000	6429	606	31.4"	
937	5/23/2019	6	7138	0	0	0.0		21534235	45000	7500	708	29.9"	
938	5/28/2019	5	7138	0	0	0.0		21579235	45000	9000	849	29.7"	
939	6/5/2019	8	7161	23	3	0.3		2168712	-410523	-51315	-4841	3.7"	
940	6/13/2019	8	7161	0	0	0.0		21193657	24945	3118	294	4.7"	
941	6/20/2019	7	7161	0	0	0.0		21203611	9954	1422	134	5.9"	
942	6/28/2019	8	7161	0	0	0.0		21209278	5567	708	67	6.5"	
943	7/1/2019	3	7161	0	0	0.0		21244305	35027	11676	1101	6.5"	
944	7/11/2019	10	7161	0	0	0.0		21272410	28105	2811	265	7.2"	
945	7/16/2019	5	7161	0	0	0.0		21291982	18572	3914	369	7.1"	
946	7/24/2019	8	7161	0	0	0.0		21313201	21218	2652	250	7.1"	
947	7/30/2019	6	7161	0	0	0.0		21325920	12718	2120	200	7.2"	
948	8/6/2019	7	7161	0	0	0.0		21332564	6644	949	90	7.3"	
949	8/15/2019	9	7161	0	0	0.0		21343052	10488	1165	110	3.4"	
950	8/23/2019	8	7161	0	0	0.0		21460217	117165	14648	1382	3.6"	
951	8/30/2019	7	7210	49	7	0.7		21498716	38499	5500	519	2.5"	
952	9/8/2019	7	7210	0	0	0.0		21531663	32947	4707	444	2.5"	
953	9/13/2019	7	7210	0	0	0.0		21563949	32286	4612	435	2.5"	
954	9/19/2019	6	7210	0	0	0.0		21591096	27147	4525	427	2.5"	
955	9/27/2019	8	7210	0	0	0.0		21597091	5985	748	71	2.4"	
956	9/30/2019	3	7210	0	0	0.0		21642027	44946	14982	1413	2.5"	
957	10/7/2019	7	7210	0	0	0.0		21673491	31464	4495	424	2.6"	
958	10/15/2019	8	7210	0	0	0.0		21703033	29542	3693	348	2.5"	
959	10/22/2019	7	7210	0	0	0.0		21763421	60388	8627	814	3.1"	
960	10/31/2019	9	7210	0	0	0.0		21773029	9608	1068	101	3.1"	
961	11/9/2019	9	7210	0	0	0.0		21816870	43841	4871	460	3.3"	
962	11/15/2019	6	7210	0	0	0.0		21841826	24856	4159	392	3.2"	
963	11/18/2019	3	7210	0	0	0.0		21854481	12655	4218	398	3.1"	
964	11/26/2019	8	7210	0	0	0.0		21860041	5560	595	66	2.9"	
965	12/3/2019	7	7263	53	8	0.7		21807112	47071	6724	634	3.6"	
966	12/13/2019	10	7263	0	0	0.0		21948045	40933	4093	366	4.0"	
967	12/18/2019	5	7263	0	0	0.0		21979040	30995	6199	585	3.9"	
968	12/23/2019	5	7263	0	0	0.0		21988606	9566	1913	180	4.0"	
969	1/9/2020	17	7263	0	0	0.0		22073720	85114	5007	472	4.1"	
970	1/16/2020	7	7263	0	0	0.0		22101039	27319	3903	368	4.0"	
971	1/20/2020	4	7263	0	0	0.0		22117251	16212	4053	382	4.1"	
972	1/31/2020	11	7263	0	0	0.0		22159215	41964	3815	380	4.5"	

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
918	1/3/2019	7	43266	0	0	0			10015193	46700	6671	1608	20.2'
919	1/8/2019	5	43266	0	0	0			10053124	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	6628	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	1970	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	865	21.5'
929	3/29/2019	11	43718	169	15	1			10643865	113682	10395	2490	27.4'
930	4/4/2019	6	43718	0	0	0			10685160	41295	6883	1858	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	482	17.9'
935	5/10/2019	9	43718	0	0	0			10840079	26731	2970	716	25.1'
936	5/17/2019	7	43718	0	0	0			10906158	66079	9440	2275	16.3'
937	5/23/2019	6	43718	0	0	0			11010719	104561	17427	4199	20.1'
938	5/28/2019	5	43722	4	1	0			11012129	1410	282	68	18.9'
939	6/5/2019	8	43736	14	2	0			11058072	45943	5743	1384	16.5'
940	6/13/2019	8	43736	0	0	0			11091919	33847	4231	1019	20.2'
941	6/20/2019	7	43736	0	0	0			11117289	25370	3624	873	25.7'
942	6/28/2019	8	43736	0	0	0			11143077	25788	3224	777	23.1'
943	7/1/2019	3	43736	0	0	0			11178444	35367	11789	2841	23.4'
944	7/11/2019	10	43736	0	0	0			11235487	57043	5704	1375	16.4'
945	7/16/2019	5	43736	0	0	0			11252551	17064	3413	822	20.6'
946	7/24/2019	8	43736	0	0	0			11328050	75499	9437	2274	27.3'
947	7/30/2019	6	43736	0	0	0			11379440	51390	8565	2064	16.6'
948	8/6/2019	7	43736	0	0	0			11424479	45039	6434	1550	25.7'
948	8/15/2019	9	43736	0	0	0			11443070	16591	2066	498	16.6'
950	8/23/2019	8	43736	0	0	0			11490596	47528	5941	1432	26.2'
951	8/30/2019	7	43750	14	2	0			11513300	22704	3243	782	16.4'
952	9/6/2019	7	43758	8	1	0			11534203	20903	2986	720	15.6'
953	9/13/2019	7	43758	0	0	0			11556100	21897	3128	754	15.1'
954	9/19/2019	6	43758	0	0	0			11576313	20213	3369	812	18.9'
955	9/27/2019	8	43758	0	0	0			11599711	23398	2925	705	21.2'
956	9/30/2019	3	43758	0	0	0			11611153	11442	3814	919	22.5'
957	10/7/2019	7	43997	239	34	3			11630409	19256	2751	683	25.9'
958	10/15/2019	8	43997	0	0	0			11652565	22158	2770	667	24.5'
959	10/22/2019	7	43997	0	0	0			11693441	40878	5839	1407	22.1'
960	10/31/2019	9	43997	0	0	0			11714501	21060	2340	564	21.0'
961	11/9/2019	9	43997	0	0	0			11787041	72540	8060	1942	17.9'
962	11/15/2019	6	43997	0	0	0			11832455	45414	7569	1824	23.2'
963	11/18/2019	3	43999	2	1	0			11884455	52000	17333	4177	21.3'
964	11/26/2019	8	44050	51	6	1			11891022	8567	821	198	21.4'
965	12/3/2019	7	44835	785	112	11			11921991	30989	4424	1066	27.2'
966	12/13/2019	10	44835	0	0	0			11988929	66938	6694	1613	21.3'
967	12/18/2019	5	44835	1	0	0			12019804	30875	6175	1488	21.1'
968	12/23/2019	5	44836	0	0	0			12027360	7556	1511	364	21.3'
969	1/9/2020	17	44836	0	0	0			12254762	227402	13377	3223	16.5'
970	1/16/2020	7	44842	6	1	0			12294996	40234	5748	1385	21.5'
971	1/20/2020	4	44842	0	0	0			12320670	25674	6419	1547	18.1'
972	1/30/2020	10	44842	0	0	0			12373955	53285	5329	1284	21.2'

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		
918	1/3/2019	7	404	0	0	0	1560143	1	0	0	19.3'		
919	1/8/2019	5	463	79	16	1	1658842	295599	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	2019679	144355	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	102534	11404	2748	21.8'		
927	3/11/2019	11	941	0	0	0	2598596	82953	7541	1817	23.6'		
928	3/19/2019	7	941	0	0	0	2638297	39701	5672	1367	27.2'		
929	3/29/2019	11	941	0	0	0	2781453	143156	13014	3138	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	463	23.0'		
932	4/17/2019	7	1876	466	67	6	2960596	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'		
935	5/10/2019	9	3177	830	92	9	3344706	138178	15353	3699	24.5'		
936	5/17/2019	7	4100	923	132	12	3467360	122654	17522	4222	17.5'		
937	5/23/2019	6	5025	925	154	15	3498223	30863	5144	1239	24.7'		
938	5/28/2019	5	5025	0	0	0	3539718	41495	8299	2000	25.3'		
939	6/5/2019	8	5867	842	105	10	3809010	68292	8662	2087	16.4'		
940	6/13/2019	8	5867	0	0	0	3831923	22913	2864	690	23.3'		
941	6/20/2019	7	5867	0	0	0	3713591	81668	11667	2811	20.4'		
942	6/28/2019	8	5867	0	0	0	3759324	45733	5717	1378	18.0'		
943	7/1/2019	3	7204	1337	446	42	3767723	8399	2800	675	17.0'		
944	7/11/2019	10	8125	921	92	9	4498897	731174	73117	17619	26.1'		
945	7/16/2019	5	8592	467	93	9	4823581	424684	84937	28467	18.4'		
946	7/24/2019	8	8592	0	0	0	5664842	741261	92658	22327	30'		
947	7/30/2019	6	9032	440	73	7	5733986	69144	11524	2777	22'		
948	8/6/2019	7	9032	0	0	0	5754642	20556	2951	711	24.3'		
949	8/15/2019	9	9032	0	0	0	5765687	11045	1227	295	24.4'		
950	8/23/2019	8	9032	0	0	0	6038789	273102	34138	8226	28.1'		
951	8/30/2019	7	9116	84	12	1	6134285	95476	13639	3287	20.6'		
952	9/6/2019	7	9189	73	10	1	6147898	13733	1962	473	22.1'		
953	9/13/2019	7	9191	2	0	0	6159500	11502	1643	395	29.2'		
954	9/19/2019	6	9191	0	0	0	6168665	9165	1528	368	24.6'		
955	9/27/2019	8	9191	0	0	0	6171665	3090	375	90	29.7'		
956	9/30/2019	3	9191	0	0	0	6182314	10649	3550	855	30.8'		
957	10/7/2019	7	9191	0	0	0	6196175	13851	1980	477	25.5'		
958	10/15/2019	8	9191	0	0	0	6226108	29933	3742	902	28.5'		
959	10/22/2019	7	9394	203	29	3	6246068	19960	2851	687	22.3'		
960	10/31/2019	9	9618	224	25	2	6260571	14503	1611	388	21.3'		
961	11/9/2019	8	9619	1	0	0	6294895	34324	3814	919	28'		
962	11/15/2019	6	9619	0	0	0	6303289	8394	1399	337	18.4'		
963	11/18/2019	3	9619	0	0	0	6307164	3975	1292	311	17.8'		
964	11/26/2019	8	9619	0	0	0	6316287	9123	1140	275	21.1'		
965	12/3/2019	7	9683	64	9	1	6338235	22948	3278	700	29.3'		
966	12/13/2019	10	10108	425	43	4	6388537	49302	4930	1188	29.4'		
967	12/19/2019	5	10546	438	88	8	6423205	34658	6934	1671	28.7'		
968	12/23/2019	5	10546	0	0	0	6434183	10978	2196	529	28.1'		
969	1/9/2020	17	10546	0	0	0	6518658	84485	4970	1198	28.0'		
970	1/16/2020	7	10823	77	11	1	6534974	16305	2329	561	28.6'		
971	1/20/2020	4	10665	42	11	1	6544237	9263	2316	558	27.1'		
972	1/31/2020	11	10733	68	6	1	6579233	34998	3181	767	14.5'		

IESI ODOR COMPLAINT LOG (2335 Applebutter Rd, Bethlehem, PA 18017)

Date	Time	Address	Weather Data (Allentown IRI&E)			Residence / Drive-by Description / Notes	Gas Management Data			Addressed in log Report Dated	
			Distance from Landfill (miles)	Skies	Temperature		Wind (out of)	Flare (cfm)	BSE (pcfm)		Total (cfm)
01/02/20	8:53	Saucon Ave, Steel City	0.893			Residence	Landfill gas odor detected on property				1/9/2020
01/07/20	10:52	Johnston Ave., Steel City	1.170			Residence	Slight gas odor that is intermittent				
01/14/20	9:30	Johnston Ave., Steel City	1.170			Residence	Went to let dog out & when opened door can smell landfill gas. It is strong now, but complainant is on their way out.				
01/23/20	8:23	Saucon Ave, Steel City	0.980			Residence	Gas odor on property, noticed when went outside to start car. Complainant is on their way out.				
01/23/20	9:01	Johnston Ave., Steel City	1.170			Residence	Landfill gas odor, has been going on for 2 hours.				
01/24/20	18:09	Johnston Ave., Steel City	1.170			Residence	The landfill gas is horrible on property.				
01/30/20	17:45	Jefferson Ave, Steel City	0.839			Residence	The odor of landfill gas is very strong on property				
01/30/20	18:10	Johnston Ave., Steel City	1.170			Residence	Landfill odors on property for the past 5 min.				
01/30/20	18:18	Saucon Ave, Steel City	0.980			Residence	Landfill gas smell is very strong for the last couple of hours on property				
01/30/20	18:19	Misell Ave, Steel City	0.796			Residence	There is a slight landfill gas odor again today on property				
01/31/20	14:12	Johnston Ave., Steel City	1.170			Residence	There is a terrible landfill odor tonight that can be detected on their property.				
02/04/20	20:20	Saucon Ave, Steel City	0.893			Residence					