Johnson, Sabrina O

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Friday, February 8, 2019 8:33 AM
To: SWD_Waste; Tafuni, Steven
Cc: Anthony Detweiler; Bryan White; Cooper, Dan; Lebron, Carlo
Subject: Manatee County Lena Road Landfill Monthly Report January 2019
Attachments: January 2019 Report.pdf

Mr. Tafuni,

Attached is the Manatee County Lena Road Landfill Monthly Report (for January 2019) which includes the following:

- Monthly Water Balance Report (Exhibit A)
- Monthly Leachate Tracking Summary - 2019 (Exhibit B)
- Monthly Leachate Meter Readings
- Monthly Rainfall
- Monthly Groundwater Gradient Report

If you should have any questions concerning this report, please contact me at (813) 804-6714.

Thanks

Shane R. Fischer, P.E.
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February 8, 2019
File No. 09217088.10

Mr. Steven Tafuni
Florida Department of Environmental Protection
Southwest District Office - Solid Waste Section
130501 N. Telecom Parkway
Temple Terrace, Florida 33637-0926

Subject: Manatee County Lena Road Landfill
Monthly Report - January 2019

Dear Mr. Tafuni:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2019 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, and Monthly Groundwater Gradient Report.

Sincerely,

Shane R. Fischer, P.E.
Project Director
SCS Engineers

Donovan Dickey
Assoicate Professional
SCS Engineers

SRF/DHD

cc: C. Mike Gore, Manatee County Utilities Department Director
Bryan White, Manatee County Landfill Superintendent
Anthony Detweiler, Manatee County Landfill Operations Supervisor

Enclosures

58026
1/8/19

EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
January 2019

A	B	C	D	E	F	G	H	I
DATE	**LEACHATE STAGE I** Lift Station 1 (gallons)	**LEACHATE STAGE I** Lift Station 2 (gallons)	**LEACHATE STAGE I** TOTAL (gallons)	**LEACHATE STAGE II** TOTAL (gallons)	**LEACHATE STAGE III** TOTAL (gallons)	**TOTAL LEACHATE PUMPED** (gallons)	**RAINFALL** (inches)	**RAINFALL** (gallons)
1-Jan-19	0	0	0	0	0	0	0.00	0
2-Jan-19	58,886	7,533	66,419	263,744	65,822	395,985	0.00	0
3-Jan-19	29,608	3,659	33,267	135,792	32,790	201,849	0.00	0
4-Jan-19	32,304	4,008	36,312	130,336	36,874	203,522	0.73	5,669,630
5-Jan-19	0	0	0	0	0	0	0.02	155,332
6-Jan-19	0	0	0	0	0	0	0.00	0
7-Jan-19	85,862	11,337	97,199	369,856	90,320	557,375	0.00	0
8-Jan-19	27,440	3,600	31,040	122,832	32,658	186,530	0.00	0
9-Jan-19	29,874	3,771	33,645	131,808	32,758	198,211	0.00	0
10-Jan-19	29,986	3,525	33,511	129,696	32,336	195,543	0.00	0
11-Jan-19	27,400	3,242	30,642	113,504	31,810	175,956	0.00	0
12-Jan-19	0	0	0	0	0	0	0.00	0
13-Jan-19	0	0	0	0	0	0	0.00	0
14-Jan-19	84,048	10,422	94,470	367,840	86,236	548,546	0.00	0
15-Jan-19	26,656	3,335	29,991	110,192	28,654	168,837	0.00	0
16-Jan-19	1,176	3,421	4,597	121,824	28,448	154,869	0.00	0
17-Jan-19	15,238	3,201	18,439	123,920	34,545	176,904	0.00	0
18-Jan-19	67,868	3,318	71,186	362,168	22,317	455,671	0.00	0
19-Jan-19	89,716	10,674	100,390	83,128	79,736	263,254	0.00	0
20-Jan-19	22,420	3,226	25,646	108,992	23,582	158,220	0.00	0
21-Jan-19	24,854	3,319	28,173	109,504	24,958	162,635	0.00	0
22-Jan-19	32,360	3,317	35,677	130,080	28,848	194,605	0.00	0
23-Jan-19	28,402	3,234	31,636	87,552	24,836	144,024	0.00	0
24-Jan-19	84,620	10,141	94,761	334,512	87,690	516,963	0.80	6,213,293
25-Jan-19	26,302	3,398	29,700	117,920	33,178	180,798	0.00	0
26-Jan-19	0	0	0	0	0	0	0.00	0
27-Jan-19	0	0	0	0	0	0	1.91	14,834,237
28-Jan-19	0	0	0	0	0	0	0.02	155,332
29-Jan-19	24,907	30	24,937	99,537	32,700	157,174	0.00	0
30-Jan-19	731	6,582	7,313	431	200	7,944	0.00	0
31-Jan-19	23,014	3,981	26,995	98,272	32,893	158,160	0.00	0
TOTAL	**873,672**	**112,274**	**985,946**	**3,653,440**	**924,189**	**5,563,575**	**3.48**	**27,027,824**
Leachate Pumped as Percentage of Rainfall				10.2%	32.8%	14.8%		

Column Notes:

A - Date of reading.

B - Leachate pumped (gallons) from Stage I by lift station 1.

C - Leachate pumped (gallons) from Stage I by lift station 2.

D - Total Stage I leachate pumpage (B+C).

E - Leachate pumped (gallons) from Stage II.

F - Leachate pumped (gallons) from Stage III.

G - Total leachate pumped to WWTP storage tank (D+E+F).

H - Rainfall (inches) recorded on this date.

I - Rainfall (gallons) calculated based on open area (H x Area x 27,156 gal/acre-in).

	Stage I (acres)	**Stage II** (acres)	**Stage III** (acres)	**TOTAL** (acres)
Initial Cover	102.0	113.0	66.0	281.0
Interm. Cover	0.0	5.0	--	5.0
Closed	30.0	0.0	--	30.0
TOTAL	132.0	118.0	66.0	316.0
Open Area	**102.0**	**118.0**	**66.0**	**286.0**

Comments

"0" = no data recorded

EXHIBIT B

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY LEACHATE TRACKING SUMMARY -- 2019

	B	C	D	E	F	G	H	I	J
MONTH	**STAGE I LEACHATE (gallons)**	**STAGE II LEACHATE (gallons)**	**STAGE III LEACHATE (gallons)**	**TOTAL LEACHATE (gallons)**	**RAINFALL (inches)**	**RAINFALL (gallons)**	**STAGE I LEACHATE/ RAINFALL (%)**	**STAGE II LEACHATE/ RAINFALL (%)**	**STAGE III LEACHATE/ RAINFALL (%)**
JANUARY	985,946	3,653,440	924,189	5,563,575	3.48	27,027,824	10.2%	32.8%	14.8%
FEBRUARY									
MARCH									
APRIL									
MAY									
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	**985,946**	**3,653,440**	**924,189**	**5,563,575**	**3.48**	**27,027,824**	**10.2%**	**37.9%**	**9.6%**

Notes:

1. (B) Total leachate pumped from Stage I.
2. (C) Total leachate pumped from Stage II
3. (D) Total leachate pumped from Stage III
4. (E) Total leachate (Column B+C+D) pumped to WWTP storage tank.
5. (F) Total rainfall in inches.
6. (G) Total rainfall in gallons (Stage I, II, and III Open Area of 286-acres x Rainfall)
7. (H) Stage I leachate as a percentage of rainfall.
8. (I) Stage II leachate pumped as a percentage of rainfall.
9. (J) Stage III leachate pumped as a percentage of rainfall.

Landfill Stage Land Area

	Stage I (acres)	**Stage II** (acres)	**Stage III** (acres)	**TOTAL** *(acres)*
Initial Cover	102.0	113.0	66.0	281.0
Intermed. Cover	0.0	5.0	--	5.0
Closed	30.0	0.0	--	30.0
TOTAL	132.0	118.0	66.0	316.0
Open Area	**102.0**	**118.0**	**66.0**	**286.0**

LEACHATE METER READINGS

DATE	LEACHATE METERS				STORMWATER S.G.		COMMENTS	NAME (Initials)
	#1	#2	#3	#4	#1	#2		
1/1/19								
1/2/19	21673146	40628571	30031612	19241456	34.17	32.30	OK	R.B.
1/3/19	21902756	40866530	30064652	19277246	34.17	32.30	OK	R.B.
1/4/19	21935060	40910538	30101526	19290758	34.15	32.30	OK	M.G.
1/5/19								
1/6/19								
1/7/19	22020922	41016575	30191846	19327440	34.17	32.31	OK	R.B.
1/8/19	22046362	41054475	30224804	19340028	34.16	32.31	OK	R.B.
1/9/19	22076236	41092446	30257262	19353205	34.16	32.30	OK	RB
1/10/19	22108222	4112771	30289598	19366177	34.15	32.30	OK	M.G.
1/11/19	22135622	411613	30321408	19377528	34.15	32.29	OK	A.V.K
1/12/19								
1/13/19								
1/14/19	22219670	4126435	30407644	19414312	34.10	32.13	OK	A.V.K
1/15/19	22246326	4129770	30436298	19425331	34.10	32.10	OK	A.V.K
1/16/19	22275021	4133191	30464746	19437518	34.09	32.07	OK	A.V.K
1/17/19	22302740	4136392	30491925	19449056	34.10	32.00	OK	M B
1/18/19	22330608	4139710	30521608	1946122	34.10	32.00	OK	A.V.K
1/19/19	22420824	4150384	30601344	19494357	34.10	32.10	OK	M.G.
1/20/19	22442744	4153610	30624926	19505344	34.10	32.10	OK	A.V.K
1/21/19	22467598	4156929	30649884	19516284	34.10	32.10	OK	A.V.K
1/22/19	22499158	416246	30678732	19527928	34.12	32.13	OK	A.V.K
1/23/19	22528360	4163480	30703168	19538048	34.12	32.12	OK	A.V.K
1/24/19	22612980	4173621	30791258	19571499	34.32	32.33	OK	A.V.K
1/25/19	22639782	4177019	30824436	19583297	34.28	32.10	OK	M.G.
1/26/19								
1/27/19								
1/28/19								
1/29/19	22664889	4179019.5	30857336	19593268	34.28	32.18	OK	CM
1/30/19	2664920	4183631	30857336	19593208	34.30	32.31	OK	CM
1/31/19	22687934	4187612	30890229	19603152	34.20	32.30	OK	CM

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2019 Jan	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.038	42.40	40.50
2	0.00	0.039	42.40	40.50
3	0.00	0.049	42.40	40.50
4	0.73	0.063	42.40	40.50
5	0.02	0.061	42.40	40.50
6	0.00	0.053	42.40	40.50
7	0.00	0.053	42.50	40.50
8	0.00	0.049	42.50	40.50
9	0.00	0.041	42.50	40.50
10	0.00	0.034	42.50	40.50
11	0.00	0.032	42.50	40.50
12	0.00	0.032	42.50	40.50
13	0.00	0.033	42.50	40.50
14	0.00	0.034	42.50	40.50
15	0.00	0.032	42.50	40.50
16	0.00	0.031	42.50	40.50
17	0.00	0.030	42.50	40.50
18	0.00	0.031	42.50	40.50
19	0.00	0.038	42.50	40.54
20	0.00	0.029	42.50	40.50
21	0.00	0.029	42.50	40.50
22	0.00	0.029	42.50	40.50
23	0.00	0.031	42.50	40.50
24	0.80	0.031	42.50	40.50
25	0.00	0.028	42.50	40.50
26	0.00	0.029	42.50	40.50
27	1.91	0.035	42.50	40.50
28	0.02	0.031	42.50	40.50
29	0.00	0.034	42.50	40.50
30	0.00	0.032	42.50	40.50
31	0.00	0.032	42.50	40.50
TOTAL	3.48	1.143		
AVG		0.037		
MIN				
MAX	1.91	0.063		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: January 2019

Piezometers Inside Slurry Wall				Groundwater Monitoring Wells Outside Slurry Wall		
Piezometer	Riser Elevation	Leachate Elevation	Gradient Flow	Monitoring Well	Riser Elevation	Groundwater Elevation
P-1	42.68	NA	*NA*	GW-1	38.68	NA
P-2	42.32	NA	*NA*	GW-2	40.92	NA
P-3	40.36	24.45	*inward*	GW-3	39.40	33.16
P-4	40.78	23.75	*inward*	GW-4	40.53	32.95
P-5	40.73	23.72	*inward*	GW-5	39.90	32.20
P-6	40.74	23.59	*inward*	GW-6	38.95	31.60
P-7	40.60	23.52	*inward*	GW-7	39.49	30.83
P-8	40.21	23.41	*inward*	GW-8	39.75	29.85
P-9	39.97	23.64	*inward*	GW-9	39.65	29.04
P-10	39.86	22.83	*inward*	GW-10	38.34	29.79
P-11	40.52	23.90	*inward*	GW-11	38.26	31.61
P-12	43.28	29.61	*inward*	GW-12	42.09	32.61
P-13	44.78	30.81	*inward*	GW-13	44.79	34.07
P-14	45.09	30.63	*inward*	GW-14	39.63	34.70
P-15	45.57	30.92	*inward*	GW-15	42.33	35.19
P-16	44.67	30.87	*inward*	GW-16	44.41	35.51
P-17	44.28	30.04	*inward*	GW-17	42.19	34.30
P-18	43.16	24.22	*inward*	GW-18	41.76	32.99
P-19	42.91	24.17	*inward*	GW-19	41.20	31.98
P-20	42.54	25.84	*inward*	GW-20	41.00	30.91
P-21	42.23	25.19	*inward*	GW-21	40.94	28.26
P-22	42.06	23.98	*inward*	GW-22	41.53	28.17
P-23	42.08	22.54	*inward*	GW-23	40.91	30.20
P-24	42.03	20.00	*inward*	GW-24	41.37	30.33
P-25	42.16	19.25	*inward*	GW-25	41.11	31.66
P-26	42.50	19.22	*inward*	GW-26	41.44	33.00
P-27R	42.73	19.62	*inward*	GW-27R	40.90	32.88

NA = Not Applicable - wells and piezometers abondoned in March 2016
Wells (GW-18 through GW-27R) and piezometers (P-18 through P-27R) installed in April 2016
Date Data Collected: 1/25/2019