Smith, George

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Wednesday, February 14, 2018 10:43 AM
To: SWD_Waste; Tafuni, Steven
Cc: Anthony Detweiler; Bryan White; Lynette Falkowski; Cooper, Dan; Lebron, Carlo
Subject: Manatee County Lena Road Landfill Monthly Report January 2018
Attachments: Monthly Gradient Report January 2018.pdf

Mr. Tafuni,

Attached is the Manatee County Lena Road Landfill Monthly Report (for January 2018) which includes the following:

- Monthly Water Balance Report (Exhibit A)
- Monthly Leachate Tracking Summary - 2017 (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.
Project Director
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SCS ENGINEERS

February 14, 2018
File No. 09217088.05

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 2018

Dear Mr. Tafuni:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2018 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, and Monthly Groundwater Gradient Report.

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

Sincerely,

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

Carlos A. Restrepo, P.E.
Sr. Project Professional
SCS ENGINEERS

SRF/CAR:srf

Attachments

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



EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
January-18

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-18	0	0	0	0	0	0	0.19	1,475,657
2-Jan-18	64,283	7,472	71,755	351,584	64,886	488,225	0.02	155,332
3-Jan-18	19,201	6,956	26,157	79,936	20,484	126,577	0.50	3,883,308
4-Jan-18	15,656	31	15,687	89,728	13,406	118,821	0.00	0
5-Jan-18	12,117	7,232	19,349	81,264	13,504	114,117	0.00	0
6-Jan-18	0	0	0	0	0	0	0.00	0
7-Jan-18	0	0	0	0	0	0	0.00	0
8-Jan-18	44,892	6,986	51,878	253,840	50,976	356,694	0.00	0
9-Jan-18	20,687	35	20,722	80,384	17,130	118,236	0.42	3,261,979
10-Jan-18	18,806	7,043	25,849	81,616	17,302	124,767	0.00	0
11-Jan-18	18,972	35	19,007	82,608	17,188	118,803	0.02	155,332
12-Jan-18	18,984	7,290	26,274	81,712	17,220	125,206	0.00	0
13-Jan-18	0	0	0	0	0	0	0.00	0
14-Jan-18	0	0	0	0	0	0	0.00	0
15-Jan-18	32,845	7,103	39,948	239,040	40,554	319,542	0.00	0
16-Jan-18	13,266	31	13,297	80,128	16,954	110,379	0.00	0
17-Jan-18	16,012	6,973	22,985	73,424	13,244	109,653	0.00	0
18-Jan-18	12,071	28	12,099	81,696	13,242	107,037	0.00	0
19-Jan-18	12,473	726	13,199	75,360	14,800	103,359	0.00	0
20-Jan-18	0	0	0	0	0	0	0.00	0
21-Jan-18	0	0	0	0	0	0	0.00	0
22-Jan-18	53,568	13,938	67,506	234,768	50,870	353,144	0.00	0
23-Jan-18	19,035	33	19,068	73,360	16,744	109,172	0.03	232,998
24-Jan-18	13,851	28	13,879	76,000	13,058	102,937	0.00	0
25-Jan-18	10,486	7,119	17,605	74,976	13,234	105,815	0.00	0
26-Jan-18	10,436	24	10,460	69,072	13,108	92,640	0.00	0
27-Jan-18	0	0	0	0	0	0	0.00	0
28-Jan-18	0	0	0	0	0	0	1.00	7,766,616
29-Jan-18	55,514	13,502	69,016	232,400	53,656	355,072	0.14	1,087,326
30-Jan-18	13,862	29	13,891	79,248	13,230	106,369	0.00	0
31-Jan-18	47,657	64	47,721	77,504	16,570	141,795	0.00	0
TOTAL	**544,674**	**92,678**	**637,352**	**2,649,648**	**521,360**	**3,808,360**	**2.32**	**18,018,549**
Leachate Pumped as Percentage of Rainfall				9.9%	35.6%	12.5%		

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 -- 2018

	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	637,352	2,649,648	521,360	3,808,360	2.32	18,018,549.12	9.9%	35.6%	12.5%
FEBRUARY									
MARCH									
APRIL									
MAY									
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	**637,352**	**2,649,648**	**521,360**	**3,808,360**	**2.32**	**18,018,549**	**9.9%**	**41.2%**	**8.1%**

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	**Stage II**	**Stage III**	**TOTAL**
	(acres)	(acres)	(acres)	*(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		
12/1/17	12351222	2326234	17726060	146380892	33.56	30.33	OK	R.B
12/2/17								
12/3/17								
12/4/17	12394433	2371551	17782224	148697120	33.56	30.10	OK	R.B.
12/5/17	12417349	2383886	17803954	148811072	33.56	30.04	OK	R.B.
12/6/17	12433266	2383922	17821422	148900320	33.56	30.01	OK	R.B.
12/7/17	12454584	2390970	17842798	149006736	33.56	29.98	OK	R.B.
12/8/17	12475911	2391012	17864406	149105408	33.56	2996	OK	R.B.
12/9/17								
12/10/17								
12/11/17	12519032	2396390	17913964	149412560	33.60	30.42	OK	R.B.
12/12/17	12533345	2405470	17935186	149502896	33.60	30.40	OK	R.B.
12/13/17	12552366	2405511	17953156	149601840	33.60	30.40	OK	R.B
12/14/17	12570121	2412699	17974662	149684480	33.59	30.38	OK	R.B
12/15/17	12587866	2412741	17992246	149798164	33.59	30.37	OK	R.B
12/16/17								
12/17/17								
12/18/17	12628692	2420192	18044494	150088616	33.58	30.32	OK	R.B
12/19/17	12642895	2422479	18058176	150176240	33.58	30.30	ok	CM.
12/20/17	12662577	2427517	18079360	150266720	33.56	30.28	OK	RB
12/21/17	12681951	2427556	18091688	150340168	33.58	30.27	OK	R.B.
12/22/17	12696101	2424882	18110648	150455024	33.59	30.30	Ok	CM.
12/23/17								
12/24/17								
12/25/17								
12/26/17	12755946	2442276	18179792	150814576	33.55	30.18	OK for	M.G.
12/27/17	12771758	2449534	18193752	150911776	33.56	30.14	OK	R.B.
12/28/17	12785907	2449566	18211018	150992192	33.56	30.10	OK	R.B.
11/29/17	12803429	2456855	18226280	151080736	33.56	30.06	OK	R.B.
11/30/17								

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2017 Dec	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.035	53.60	35.90
2	0.00	0.036	53.60	35.90
3	0.00	0.035	53.60	35.90
4	0.00	0.032	53.60	35.90
5	0.00	0.037	53.60	35.90
6	0.00	0.035	53.60	35.90
7	0.00	0.036	53.60	35.90
8	1.30	0.039	53.60	35.90
9	0.98	0.029	53.60	35.90
10	0.00	0.030	53.60	35.90
11	0.00	0.033	53.60	35.90
12	0.00	0.034	53.60	35.90
13	0.00	0.034	53.60	35.90
14	0.00	0.034	53.60	35.90
15	0.00	0.030	53.60	35.90
16	0.00	0.033	53.60	35.90
17	0.00	0.030	53.60	35.90
18	0.00	0.032	53.60	35.90
19	0.00	0.033	53.60	35.90
20	0.00	0.034	53.60	35.90
21	0.00	0.031	50.60	35.90
22	0.00	0.030	50.60	35.90
23	0.00	0.032	50.60	35.90
24	0.00	0.030	50.60	35.90
25	0.05	0.029	50.60	35.90
26	0.00	0.032	50.60	35.90
27	0.00	0.030	50.60	35.90
28	0.00	0.031	50.60	35.90
29	0.00	0.029	50.60	35.90
30	0.00	0.031	50.60	35.90
31	0.00	0.031	50.60	35.90
TOTAL	2.33	1.007		
AVG		0.032		
MIN				
MAX	1.30	0.039		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: January 2018

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	25.01	*inward*	GW-3	39.40	31.40
P-4	40.78	23.68	*inward*	GW-4	40.53	30.93
P-5	40.73	23.73	*inward*	GW-5	39.90	30.70
P-6	40.74	23.64	*inward*	GW-6	38.95	30.00
P-7	40.60	23.60	*inward*	GW-7	39.49	27.64
P-8	40.21	23.51	*inward*	GW-8	39.75	26.30
P-9	39.97	23.67	*inward*	GW-9	39.65	26.90
P-10	39.86	22.76	*inward*	GW-10	38.34	26.84
P-11	40.52	23.92	*inward*	GW-11	38.26	29.21
P-12	43.28	30.58	*inward*	GW-12	42.09	32.14
P-13	44.78	30.68	*inward*	GW-13	44.79	33.49
P-14	45.09	30.19	*inward*	GW-14	39.63	34.13
P-15	45.57	30.97	*inward*	GW-15	42.33	34.43
P-16	44.67	31.07	*inward*	GW-16	44.41	34.76
P-17	44.28	30.63	*inward*	GW-17	42.19	33.64
P-18	43.16	23.91	*inward*	GW-18	41.76	30.91
P-19	42.91	23.01	*inward*	GW-19	41.20	29.00
P-20	42.54	25.29	*inward*	GW-20	41.00	28.20
P-21	42.23	24.68	*inward*	GW-21	40.94	25.69
P-22	42.06	23.76	*inward*	GW-22	41.53	25.73
P-23	42.08	22.48	*inward*	GW-23	40.91	27.11
P-24	42.03	19.93	*inward*	GW-24	41.37	27.62
P-25	42.16	19.21	*inward*	GW-25	41.11	29.21
P-26	42.50	19.15	*inward*	GW-26	41.44	31.39
P-27R	42.73	19.63	*inward*	GW-27R	40.90	31.35

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: 01/25/2018