

Smith, George

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Wednesday, March 14, 2018 3:59 PM
To: SWD_Waste; Tafuni, Steven
Cc: Anthony Detweiler; Bryan White; Lynette Falkowski; Cooper, Dan; Lebron, Carlo
Subject: Manatee County Lena Road Landfill Monthly Report February 2018
Attachments: Monthly Gradient Report February 2018.pdf

Mr. Tafuni,

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

- Monthly Water Balance Report (Exhibit A)
- Monthly Leachate Tracking Summary - 2018 (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
SCS Engineers
3922 Coconut Palm Drive, Suite 102
Tampa, Florida 33619
(813) 804-6714 (Direct)
(813) 503-1044 (Cell)
(813) 621-0080 (Office)
(813) 623-6757 (Fax)
sfischer@scsengineers.com

www.scsengineers.com

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March 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 – February 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

SRF/BMW:srf

Attachments

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



Buckley Weglarz, E.I.
Associate Staff Professional
SCS ENGINEERS



EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
February-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-Feb-18	29,087	6,992	36,079	74,336	16,892	127,307	0.00	0
2-Feb-18	26,037	47	26,084	80,656	17,138	123,878	0.00	0
3-Feb-18	0	0	0	0	0	0	0.00	0
4-Feb-18	0	0	0	0	0	0	0.94	7,300,619
5-Feb-18	73,945	14,043	87,988	236,160	54,730	378,878	0.00	0
6-Feb-18	19,580	23	19,603	74,720	13,318	107,641	0.00	0
7-Feb-18	63,508	25	63,533	81,536	24,010	169,079	0.02	155,332
8-Feb-18	33,358	6,762	40,120	66,896	12,892	119,908	0.00	0
9-Feb-18	29,127	21	29,148	79,614	20,242	129,004	0.00	0
10-Feb-18	0	0	0	0	0	0	0.00	0
11-Feb-18	0	0	0	0	0	0	0.00	0
12-Feb-18	80,759	6,854	87,613	225,938	53,096	366,647	0.00	0
13-Feb-18	23,102	6,983	30,085	73,440	16,542	120,067	0.00	0
14-Feb-18	24,553	25	24,578	79,584	18,796	122,958	0.00	0
15-Feb-18	74,913	7,031	81,944	226,320	52,814	361,078	0.00	0
16-Feb-18	26,540	7,184	33,724	72,864	17,120	123,708	0.00	0
17-Feb-18	0	0	0	0	0	0	0.00	0
18-Feb-18	0	0	0	0	0	0	0.00	0
19-Feb-18	0	0	0	0	0	0	0.00	0
20-Feb-18	103,609	7,208	110,817	285,472	65,460	461,749	0.00	0
21-Feb-18	23,338	7,311	30,649	74,272	17,278	122,199	0.00	0
22-Feb-18	21,221	21	21,242	74,240	13,838	109,320	0.00	0
23-Feb-18	22,383	24	22,407	66,064	17,166	105,637	0.00	0
24-Feb-18	0	0	0	0	0	0	0.00	0
25-Feb-18	0	0	0	0	0	0	0.00	0
26-Feb-18	73,542	14,773	88,315	216,640	51,662	356,617	0.00	0
27-Feb-18	21,108	31	21,139	66,576	16,824	104,539	0.00	0
28-Feb-18	21,351	7,099	28,450	66,832	16,932	112,214	0.00	0
TOTAL	791,061	92,457	883,518	2,222,160	516,750	3,622,428	0.96	7,455,951
Leachate Pumped as Percentage of Rainfall				33.2%	72.2%	30.0%		

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).

Comments

"0" = no data recorded

	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

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	9.9%	35.6%	12.5%
FEBRUARY	883,518	2,222,160	516,750	3,622,428	0.96	7,455,951	33.2%	72.2%	30.0%
MARCH									
APRIL									
MAY									
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	1,520,870	4,871,808	1,038,110	7,430,788	3.28	25,474,500	16.7%	53.6%	11.4%

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				STORMWATER		COMMENTS	NAME (Initials)
	METERS				S.G.			
	#1	#2	#3	#4	#1	#2		
2/1/18	13377190	2556525	16766502	15604720	33.66	29.82	OK	R.B.
2/2/18	13403227	2556572	16763240	15665376	33.65	29.91	OK	R.B.
2/3/18								
2/4/18								
2/5/18	13477172	2570615	16636370	15412156	33.72	30.51	OK	R.B.
2/6/18	13496752	2570638	16651688	15419628	33.71	30.66	OK	R.B.
2/7/18	13560260	2570663	16675298	15427792	33.71	30.60	OK	R.B.
2/8/18	13593619	2577425	16665590	15434468	33.71	30.67	OK	R.B.
2/9/18	13622745	2577446	16678632	154424302	33.70	30.90	OK	R.B.
2/10/18								
2/11/18								
2/12/18	13703504	2584300	16961928	15465240	33.69	31.00	OK	R.B.
2/13/18	13726602	2591263	16978470	15472360	33.67	31.00	OK	R.B.
2/14/18	13751159	2591308	16997266	15480364	33.67	31.00	OK	R.B.
2/15/18	13776417	2591331	19014742	15485768	33.66	30.99	OK	R.B.
2/16/18	13804957	2598515	19031862	15494924	33.65	30.96	OK	R.B.
2/17/18								
2/18/18								
2/19/18								
2/20/18	13908566	2605123	19097320	15523486	33.60	30.74	OK	R.B.
2/21/18	13931904	2613034	19114600	155309168	33.59	30.70	OK	R.B.
2/22/18	13953125	2613055	19124438	155363406	33.59	30.62	OK	R.B.
2/23/18	13975508	2613079	19145604	155409472	33.58	30.52	OK	R.B.
2/24/18								
2/25/18								
2/26/18	14049050	2627652	19197266	15566612	33.57	30.32	OK	R.B.
2/27/18	14070158	2627683	19214090	155732688	33.57	30.28	OK	R.B.
2/28/18	14091509	2634962	19231022	155799520	33.56	30.20	OK	R.B.

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2018 Feb	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.030	50.60	35.90
2	0.00	0.028	50.60	35.90
3	0.00	0.031	50.60	35.90
4	0.94	0.030	50.60	35.90
5	0.00	0.029	50.60	35.90
6	0.00	0.035	50.60	35.90
7	0.02	0.027	50.60	35.90
8	0.00	0.027	50.60	35.90
9	0.00	0.025	50.60	35.90
10	0.00	0.029	50.60	35.90
11	0.00	0.024	50.60	35.90
12	0.00	0.025	50.60	35.90
13	0.00	0.024	50.60	35.90
14	0.00	0.030	50.60	35.90
15	0.00	0.031	50.60	35.90
16	0.00	0.029	42.30	40.50
17	0.00	0.030	42.30	40.20
18	0.00	0.028	42.30	40.20
19	0.00	0.030	42.30	40.20
20	0.00	0.029	42.30	40.10
21	0.00	0.027	42.30	40.10
22	0.00	0.025	42.30	40.10
23	0.00	0.029	42.30	39.70
24	0.00	0.026	42.30	39.80
25	0.00	0.030	42.30	39.80
26	0.00	0.026	42.30	39.80
27	0.00	0.025	42.30	39.50
28	0.00	0.029	42.30	39.60
29				
30				
31				
TOTAL	0.96	0.788		
AVG		0.028		
MIN				
MAX	0.94	0.035		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill
Monthly Groundwater Gradient Report
 Month and Year: February 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	25.21	<i>inward</i>	GW-3	39.40	31.95
P-4	40.78	23.86	<i>inward</i>	GW-4	40.53	31.60
P-5	40.73	23.86	<i>inward</i>	GW-5	39.90	31.41
P-6	40.74	23.81	<i>inward</i>	GW-6	38.95	30.55
P-7	40.60	23.77	<i>inward</i>	GW-7	39.49	28.07
P-8	40.21	23.69	<i>inward</i>	GW-8	39.75	26.84
P-9	39.97	23.76	<i>inward</i>	GW-9	39.65	26.93
P-10	39.86	22.84	<i>inward</i>	GW-10	38.34	27.26
P-11	40.52	24.01	<i>inward</i>	GW-11	38.26	30.39
P-12	43.28	29.70	<i>inward</i>	GW-12	42.09	32.29
P-13	44.78	30.78	<i>inward</i>	GW-13	44.79	33.62
P-14	45.09	30.05	<i>inward</i>	GW-14	39.63	34.23
P-15	45.57	30.99	<i>inward</i>	GW-15	42.33	34.43
P-16	44.67	31.11	<i>inward</i>	GW-16	44.41	34.46
P-17	44.28	30.25	<i>inward</i>	GW-17	42.19	33.65
P-18	43.16	23.98	<i>inward</i>	GW-18	41.76	31.55
P-19	42.91	23.01	<i>inward</i>	GW-19	41.20	29.41
P-20	42.54	25.33	<i>inward</i>	GW-20	41.00	28.23
P-21	42.23	24.62	<i>inward</i>	GW-21	40.94	25.53
P-22	42.06	23.76	<i>inward</i>	GW-22	41.53	25.77
P-23	42.08	22.50	<i>inward</i>	GW-23	40.91	27.02
P-24	42.03	19.95	<i>inward</i>	GW-24	41.37	27.62
P-25	42.16	19.23	<i>inward</i>	GW-25	41.11	29.63
P-26	42.50	19.21	<i>inward</i>	GW-26	41.44	31.56
P-27R	42.73	19.64	<i>inward</i>	GW-27R	40.90	31.51

NA = Not Applicable - wells and piezometers abandoned in March 2016

Wells (GW-18 through GW-27R) and piezometers (P-18 through P-27R) installed in April 2016

Date Data Collected: 02/23/2018