

Johnson, Sabrina O

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Wednesday, June 13, 2018 12:13 PM
To: SWD_Waste; Tafuni, Steven
Cc: Anthony Detweiler; Bryan White; Cooper, Dan; Lebron, Carlo
Subject: Manatee County Lena Road Landfill Monthly Report May 2018
Attachments: Monthly Gradient Report May 2018.pdf

Mr. Tafuni,

Attached is the Manatee County Lena Road Landfill Monthly Report (for May 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
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SCS ENGINEERS

June 13, 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 - May 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

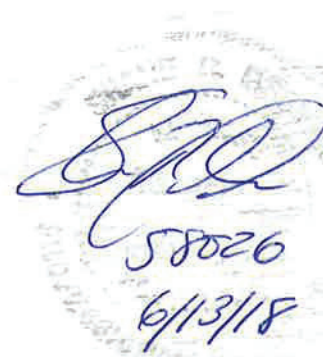
SRF/DJM:srf



David J. Moreno, E.I.T.
Staff Professional
SCS ENGINEERS

Attachments

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



58026
6/13/18



EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
May-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-May-18	15,431	7,158	22,589	60,980	12,036	95,605	0.00	0
2-May-18	16,038	31	16,069	61,452	11,568	89,089	0.00	0
3-May-18	16,499	34	16,533	61,906	15,256	93,695	0.00	0
4-May-18	17,724	7,045	24,769	64,142	11,766	100,677	0.00	0
5-May-18	0	0	0	0	0	0	0.31	2,407,651
6-May-18	0	0	0	0	0	0	0.02	155,332
7-May-18	57,360	7,054	64,414	178,226	41,736	284,376	0.00	0
8-May-18	17,745	6,554	24,299	61,950	11,790	98,039	0.00	0
9-May-18	15,792	31	15,823	61,984	12,008	89,815	0.00	0
10-May-18	15,640	30	15,670	57,120	12,280	85,070	0.00	0
11-May-18	16,788	7,030	23,818	65,360	12,489	101,667	0.00	0
12-May-18	0	0	0	0	0	0	0.00	0
13-May-18	0	0	0	0	0	0	0.56	4,349,305
14-May-18	48,116	7,024	55,140	195,824	41,075	292,039	3.45	26,794,825
15-May-18	19,291	39	19,330	41,408	26,130	86,868	0.50	3,883,308
16-May-18	18,517	6,398	24,915	75,776	46,680	147,371	0.18	1,397,991
17-May-18	18,544	47	18,591	60,480	40,328	119,399	0.23	1,786,322
18-May-18	17,872	6,455	24,327	76,624	36,394	137,345	0.00	0
19-May-18	0	0	0	0	0	0	1.25	9,708,270
20-May-18	0	0	0	0	0	0	0.46	3,572,643
21-May-18	55,174	6,352	61,526	232,176	111,678	405,380	0.36	2,795,982
22-May-18	17,815	6,129	23,944	85,746	46,734	156,424	0.02	155,332
23-May-18	19,069	55	19,124	85,598	51,226	155,948	1.12	8,698,610
24-May-18	20,420	57	20,477	101,536	44,150	166,163	0.05	349,498
25-May-18	22,252	6,474	28,726	100,304	54,770	183,800	0.43	3,339,645
26-May-18	0	0	0	0	0	0	1.34	10,407,265
27-May-18	0	0	0	0	0	0	0.53	4,116,306
28-May-18	0	0	0	0	0	0	0.00	0
29-May-18	99,873	17,989	117,862	420,320	230,476	768,658	0.00	0
30-May-18			22,430	112,848	51,268	186,546	0.99	0
31-May-18	25,748	6,462	32,210	115,888	52,454	200,552	0.00	0
TOTAL	571,708	98,448	692,586	2,377,648	974,292	4,044,526	11.80	83,918,286
Leachate Pumped as Percentage of Rainfall				2.1%	6.3%	4.6%		

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

MONTH	B STAGE I LEACHATE (gallons)	C STAGE II LEACHATE (gallons)	D STAGE III LEACHATE (gallons)	E TOTAL LEACHATE (gallons)	F RAINFALL (inches)	G RAINFALL (gallons)	H STAGE I LEACHATE/ RAINFALL (%)	I STAGE II LEACHATE/ RAINFALL (%)	J 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	667,517	1,952,576	430,794	3,050,887	1.46	11,339,259	16.5%	41.7%	16.5%
APRIL	631,184	1,964,448	477,524	3,073,156	2.51	19,494,206	9.1%	24.4%	10.6%
MAY	692,586	2,377,648	974,292	4,044,526	11.80	83,918,286	2.1%	6.3%	4.6%
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	3,512,157	11,166,480	2,920,720	17,599,357	19.05	140,226,252	6.7%	21.2%	5.5%

Notes:

- (B) Total leachate pumped from Stage I.
- (C) Total leachate pumped from Stage II
- (D) Total leachate pumped from Stage III
- (E) Total leachate (Column B+C+D) pumped to WWTP storage tank.
- (F) Total rainfall in inches.
- (G) Total rainfall in gallons (Stage I, II, and III Open Area of 286-acres x Rainfall)
- (H) Stage I leachate as a percentage of rainfall.
- (I) Stage II leachate pumped as a percentage of rainfall.
- (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		
	5/1/18	15239328	2806453	20151376	15977744	32.94		
5/2/18	15255366	2808484	20162944	15953876	32.92	Dry	OK	R.B.
5/3/18	15271815	2808518	20178220	15990088	32.91	Dry	OK	M.G.
5/4/18	15289589	2815563	20189466	15990508	37.85	Dry	OK	M.G.
5/5/18								
5/6/18								
5/7/18	15346949	2822617	20231702	16014320 222	32.87	Dry	OK	M.G.
5/8/18	15364694	2829171	20243497	16020520	32.88	Dry	OK	M.G.
5/9/18	15380486	2829202	20255500	16026784	32.79	Dry	OK	M.G.
5/10/18	15396126	2829232	20267780	16033404	32.76	Dry	OK	R.B.
5/11/18	15412914	2836262	2028024	16038968	32.77	Dry	OK	M.G.
5/12/18								
5/13/18								
5/14/18	15461030	2843286	20321344	16058488	32.76	Dry	OK	R.B.
5/15/18	15480321	2843325	2034744	16062696	33.38	32.31	OK	R.B.
5/16/18	15498635	2849723	20394154	16072272	33.45	32.23	OK	R.B.
5/17/18	15517362	2849770	20434482	16076352	33.47	32.10	OK	R.B.
5/18/18	15535254	2856225	20470876	16083976	33.50	31.95	OK	M.G.
5/19/18								
5/20/18								
5/21/18	15590428	2862577	20582554	16107192	34.02	32.36	OK	R.B.
5/22/18	15608343	2866706	20629288	16115768	33.99	32.36	OK	R.B.
5/23/18	15627312	2868761	20680514	16124386	33.93	32.35	OK	R.B.
5/24/18	15647732	2868818	20724664	16134832	34.06	32.37	OK	R.B.
5/25/18	15669984	2875292	20779434	16144536	34.01	32.35	OK	R.B.
5/26/18								
5/27/18								
5/28/18								
5/29/18	15769657	2893281	21009910	16181642	34.04	32.38	OK	R.B.
5/30/18	15792227	2893341	21061178	16197804	34.00	32.38	OK	R.B.
5/31/18	15817975	2899803	21113632	16209498	34.14	32.38	OK	R.B.

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2017 May	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.022	42.30	35.50
2	0.00	0.023	42.30	35.50
3	0.00	0.024	42.30	35.50
4	0.00	0.024	42.30	35.50
5	0.31	0.024	42.30	35.50
6	0.02	0.024	42.30	35.50
7	0.00	0.021	42.30	35.50
8	0.00	0.023	42.30	35.50
9	0.00	0.023	42.30	35.50
10	0.00	0.021	42.30	35.60
11	0.00	0.023	42.30	35.60
12	0.00	0.023	42.30	35.60
13	0.56	0.023	42.30	35.60
14	3.45	0.024	42.30	35.80
15	0.50	0.033	42.30	36.00
16	0.18	0.033	42.30	36.20
17	0.23	0.033	42.30	36.20
18	0.00	0.030	42.30	36.20
19	1.25	0.030	42.30	36.30
20	0.46	0.035	42.30	36.50
21	0.36	0.038	42.30	36.50
22	0.02	0.039	42.30	36.50
23	1.12	0.041	42.30	36.60
24	0.45	0.041	42.30	36.60
25	0.43	0.043	42.30	36.70
26	1.34	0.048	42.30	36.70
27	0.53	0.047	42.30	36.80
28	0.00	0.046	42.30	36.90
29	0.00	0.045	42.30	36.90
30	0.99	0.047	42.30	37.10
31	0.00	0.048	42.30	37.20
TOTAL	12.20	0.999		
AVG		0.032		
MIN				
MAX	3.45	0.048		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill
Monthly Groundwater Gradient Report
 Month and Year: May 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	27.16	<i>inward</i>	GW-3	39.40	34.85
P-4	40.78	23.79	<i>inward</i>	GW-4	40.53	33.99
P-5	40.73	23.92	<i>inward</i>	GW-5	39.90	33.42
P-6	40.74	23.72	<i>inward</i>	GW-6	38.95	32.88
P-7	40.60	23.65	<i>inward</i>	GW-7	39.49	31.77
P-8	40.21	23.48	<i>inward</i>	GW-8	39.75	30.65
P-9	39.97	23.56	<i>inward</i>	GW-9	39.65	30.07
P-10	39.86	22.80	<i>inward</i>	GW-10	38.34	31.31
P-11	40.52	23.90	<i>inward</i>	GW-11	38.26	32.14
P-12	43.28	29.60	<i>inward</i>	GW-12	42.09	33.04
P-13	44.78	30.83	<i>inward</i>	GW-13	44.79	34.18
P-14	45.09	30.09	<i>inward</i>	GW-14	39.63	34.89
P-15	45.57	31.05	<i>inward</i>	GW-15	42.33	34.93
P-16	44.67	31.11	<i>inward</i>	GW-16	44.41	33.72
P-17	44.28	30.21	<i>inward</i>	GW-17	42.19	34.72
P-18	43.16	24.21	<i>inward</i>	GW-18	41.76	34.96
P-19	42.91	23.20	<i>inward</i>	GW-19	41.20	34.34
P-20	42.54	26.18	<i>inward</i>	GW-20	41.00	33.25
P-21	42.23	25.18	<i>inward</i>	GW-21	40.94	27.40
P-22	42.06	24.09	<i>inward</i>	GW-22	41.53	28.97
P-23	42.08	22.52	<i>inward</i>	GW-23	40.91	34.19
P-24	42.03	20.04	<i>inward</i>	GW-24	41.37	33.14
P-25	42.16	19.23	<i>inward</i>	GW-25	41.11	34.11
P-26	42.50	19.14	<i>inward</i>	GW-26	41.44	34.29
P-27R	42.73	19.60	<i>inward</i>	GW-27R	40.90	34.98

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: 05/29/2018