

Johnson, Sabrina O

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Friday, May 11, 2018 4:02 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 April 2018
Attachments: Monthly Gradient Report April 2018.pdf

Mr. Tafuni,

Attached is the Manatee County Lena Road Landfill Monthly Report (for April 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

May 11, 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 - April 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

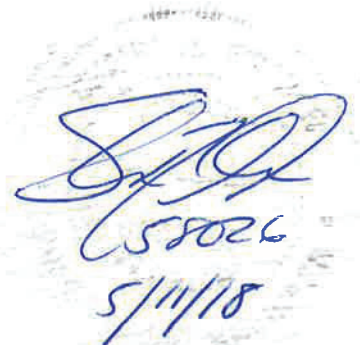
SRF/DJM:srf



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
5/11/18



EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
April-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-Apr-18	0	0	0	0	0	0	0.00	0
2-Apr-18	56,187	7,411	63,598	190,544	44,168	298,310	0.00	0
3-Apr-18	19,941	63	20,004	63,871	13,406	97,281	0.00	0
4-Apr-18	18,641	18	18,659	55,858	13,122	87,639	0.00	0
5-Apr-18	18,927	7,555	26,482	56,303	13,416	96,201	0.00	0
6-Apr-18	17,907	33	17,940	63,632	10,008	91,580	0.00	0
7-Apr-18	0	0	0	0	0	0	0.06	465,997
8-Apr-18	0	0	0	0	0	0	0.05	388,331
9-Apr-18	59,450	7,501	66,951	189,392	44,218	300,561	0.00	0
10-Apr-18	15,213	7,541	22,754	55,072	13,258	91,084	1.00	7,766,616
11-Apr-18	16,531	31	16,562	61,380	12,874	90,816	0.00	0
12-Apr-18	16,102	40	16,142	69,116	20,094	105,352	0.00	0
13-Apr-18	15,477	7,433	22,910	62,944	16,072	101,926	0.00	0
14-Apr-18	0	0	0	0	0	0	0.00	0
15-Apr-18	0	0	0	0	0	0	1.00	7,766,616
16-Apr-18	54,565	7,225	61,790	196,304	52,794	310,888	0.00	0
17-Apr-18	14,044	31	14,075	55,520	15,874	85,469	0.00	0
18-Apr-18	17,755	6,994	24,749	70,832	23,268	118,849	0.00	0
19-Apr-18	16,514	35	16,549	64,480	15,974	97,003	0.00	0
20-Apr-18	15,905	6,980	22,885	61,632	16,022	100,539	0.00	0
21-Apr-18	0	0	0	0	0	0	0.20	1,553,323
22-Apr-18	0	0	0	0	0	0	0.00	0
23-Apr-18	52,144	6,923	59,067	194,656	51,508	305,231	0.00	0
24-Apr-18	19,013	33	19,046	72,720	15,900	107,666	0.18	1,397,991
25-Apr-18	18,474	7,088	25,562	63,648	16,250	105,460	0.02	155,332
26-Apr-18	17,869	39	17,908	63,712	15,908	97,528	0.00	0
27-Apr-18	19,198	38	19,236	64,848	16,070	100,154	0.00	0
28-Apr-18	0	0	0	0	0	0	0.00	0
29-Apr-18	0	0	0	0	0	0	0.00	0
30-Apr-18	51,115	7,200	58,315	187,984	37,320	283,619	0.00	0
TOTAL	550,972	80,212	631,184	1,964,448	477,524	3,073,156	2.51	19,494,206
Leachate Pumped as Percentage of Rainfall				9.1%	24.4%	10.6%		

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

	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	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									
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	2,819,571	8,788,832	1,946,428	13,554,831	7.25	56,307,966	14.0%	43.8%	9.7%

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		
4/1/18								
4/2/18	14729112	2728494	19705984	157942610	33.19	Dry	OK	R.B.
4/3/18	14749053	2728537	19719390	158006544	33.18	Dry	OK	R.B.
4/4/18	14767684	2728575	19732512	158062348	33.18	Dry	OK	R.B.
4/5/18	14786621	2736130	19745928	158118672	33.15	Dry	OK	R.B.
4/6/18	14804528	2736163	19755936	158182304	33.12	Dry	OK	R.B.
4/7/18								
4/8/18								
4/9/18	14829178	2743264	19800154	158371696	33.08	Dry	OK	R.B.
4/10/18	14849191	2751205	19813412	158426768	33.07	Dry	OK	R.B.
4/11/18	14895722	2751236	19826262	158488148	33.21	31.25	OK	R.B.
4/12/18	14911824	2751276	19846380	158557264	33.19	31.00	OK	R.B.
4/13/18	14927301	2758709	19862452	158620208	33.17	30.85	OK	R.B.
4/14/18								
4/15/18								
4/16/18	14961866	2765931	19915246	158816512	33.21	30.76	OK	R.B.
4/17/18	14995910	2765965	19931120	158872032	33.19	30.62	OK	R.B.
4/18/18	15013665	2772959	19954388	158942864	33.17	30.54	OK	R.B.
4/19/18	15030779	2772994	19970362	159007344	33.16	30.42	OK	R.B.
4/20/18	15041081	2779974	19986384	159068768	33.15	30.33	OK	R.B.
4/21/18								
4/22/18								
4/23/18	15096228	2786987	20037692	159262832	33.11	30.06	OK	R.B.
4/24/18	15117241	2786930	20053792	159336352	33.10	30.00	OK	R.B.
4/25/18	15135715	2794018	20070042	159400000	33.08	29.90	OK	R.B.
4/26/18	15153584	2794057	20085950	159463712	33.06	29.80	OK	R.B.
4/27/18	15172782	2794095	20102000	159528560	33.05	29.70	OK	R.B.
4/28/18								
4/29/18								
4/30/18	15223897	2801295	20139340	159716544	32.96	29.50	OK	R.B.

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2018 Apr	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.025	42.30	37.40
2	0.00	0.024	42.30	37.30
3	0.00	0.023	42.30	37.30
4	0.00	0.026	42.30	36.80
5	0.00	0.024	42.30	36.80
6	0.00	0.022	42.30	36.80
7	0.06	0.026	42.30	36.80
8	0.05	0.024	42.30	36.80
9	0.00	0.023	42.30	36.50
10	1.00	0.024	42.30	36.70
11	0.00	0.023	42.30	36.80
12	0.00	0.026	42.30	36.80
13	0.00	0.024	42.30	36.80
14	0.00	0.025	42.30	36.70
15	1.00	0.026	42.30	36.70
16	0.00	0.024	42.30	36.40
17	0.00	0.026	42.30	36.60
18	0.00	0.026	42.30	36.60
19	0.00	0.025	42.30	36.50
20	0.00	0.026	42.30	36.50
21	0.20	0.026	42.30	36.40
22	0.00	0.026	42.30	36.40
23	0.00	0.026	42.30	36.30
24	0.18	0.025	42.30	36.10
25	0.02	0.026	42.30	35.80
26	0.00	0.025	42.30	35.60
27	0.00	0.026	42.30	35.80
28	0.00	0.024	42.30	35.30
29	0.00	0.022	42.30	35.50
30	0.00	0.023	42.30	35.50
31				
TOTAL	2.51	0.741		
AVG		0.025		
MIN				
MAX	1.00	0.026		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill
Monthly Groundwater Gradient Report
 Month and Year: April 2018

Piezometers Inside Slurry Wall			Gradient Flow	Groundwater Monitoring Wells Outside Slurry Wall		
Piezometer	Riser Elevation	Leachate Elevation		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	25.26	<i>inward</i>	GW-3	39.40	32.09
P-4	40.78	23.73	<i>inward</i>	GW-4	40.53	31.60
P-5	40.73	23.74	<i>inward</i>	GW-5	39.90	31.44
P-6	40.74	23.65	<i>inward</i>	GW-6	38.95	30.64
P-7	40.60	23.59	<i>inward</i>	GW-7	39.49	28.24
P-8	40.21	23.51	<i>inward</i>	GW-8	39.75	27.47
P-9	39.97	23.70	<i>inward</i>	GW-9	39.65	26.82
P-10	39.86	22.76	<i>inward</i>	GW-10	38.34	27.49
P-11	40.52	23.91	<i>inward</i>	GW-11	38.26	29.73
P-12	43.28	29.62	<i>inward</i>	GW-12	42.09	31.57
P-13	44.78	30.79	<i>inward</i>	GW-13	44.79	33.14
P-14	45.09	30.10	<i>inward</i>	GW-14	39.63	32.97
P-15	45.57	31.01	<i>inward</i>	GW-15	42.33	33.60
P-16	44.67	31.09	<i>inward</i>	GW-16	44.41	32.30
P-17	44.28	30.25	<i>inward</i>	GW-17	42.19	33.10
P-18	43.16	23.92	<i>inward</i>	GW-18	41.76	31.44
P-19	42.91	22.91	<i>inward</i>	GW-19	41.20	29.58
P-20	42.54	25.29	<i>inward</i>	GW-20	41.00	28.09
P-21	42.23	24.43	<i>inward</i>	GW-21	40.94	24.74
P-22	42.06	23.73	<i>inward</i>	GW-22	41.53	25.19
P-23	42.08	22.43	<i>inward</i>	GW-23	40.91	26.97
P-24	42.03	19.91	<i>inward</i>	GW-24	41.37	27.34
P-25	42.16	19.19	<i>inward</i>	GW-25	41.11	29.33
P-26	42.50	19.16	<i>inward</i>	GW-26	41.44	31.17
P-27R	42.73	19.62	<i>inward</i>	GW-27R	40.90	31.26

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: 04/25/2018