

Johnson, Sabrina O

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Wednesday, July 11, 2018 8:28 AM
To: SWD_Waste; Tafuni, Steven
Cc: Anthony Detweiler; Bryan White; Cooper, Dan; Lebron, Carlo
Subject: Manatee County Lena Road Landfill Monthly Report June 2018
Attachments: Monthly Gradient Report June 2018.pdf

Mr. Tafuni,

Attached is the Manatee County Lena Road Landfill Monthly Report (for June 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.
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July 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 - June 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.

Sincerely,



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

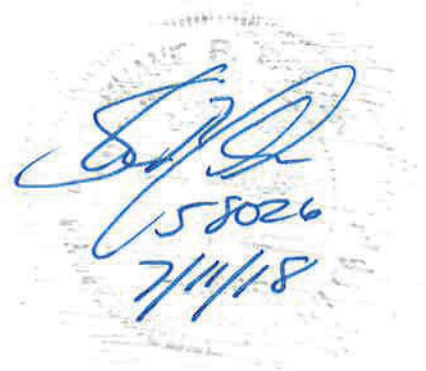


Donovan Dickey
Associate Professional
SCS Engineers

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



Signature: SRF
58026
7/11/18

EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
June-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-Jun-18	23,602	66	23,668	117,040	57,092	197,800	0.00	0
2-Jun-18	0	0	0	0	0	0	0.00	0
3-Jun-18	0	0	0	0	0	0	0.00	0
4-Jun-18	75,519	13,391	88,910	381,392	154,312	624,614	0.00	0
5-Jun-18	23,114	6,618	29,732	112,208	39,118	181,058	0.00	0
6-Jun-18	26,431	6,419	32,850	122,912	43,032	198,794	0.02	155,332
7-Jun-18	23,766	59	23,825	116,928	35,466	176,219	0.27	2,096,986
8-Jun-18	22,289	6,590	28,879	117,584	35,418	181,881	0.03	232,998
9-Jun-18	0	0	0	0	0	0	0.00	0
10-Jun-18	0	0	0	0	0	0	0.00	0
11-Jun-18	66,517	6,708	73,225	341,376	102,890	517,491	0.02	155,332
12-Jun-18	22,968	6,770	29,738	118,208	31,840	179,786	1.10	8,543,278
13-Jun-18	21,743	52	21,795	109,056	31,578	162,429	5.62	43,648,382
14-Jun-18	21,059	6,312	27,371	113,416	34,444	175,231	0.02	155,332
15-Jun-18	24,172	63	24,235	118,760	52,412	195,407	0.00	0
16-Jun-18	0	0	0	0	0	0	0.00	0
17-Jun-18	0	0	0	0	0	0	0.00	0
18-Jun-18	72,487	13,509	85,996	396,512	134,132	616,640	0.00	0
19-Jun-18	24,444	61	24,505	133,072	39,104	196,681	0.03	232,998
20-Jun-18	25,645	6,824	32,469	135,760	39,102	207,331	0.00	0
21-Jun-18	26,194	6,726	32,920	132,848	39,036	204,804	0.00	0
22-Jun-18	25,117	66	25,183	137,024	35,272	197,479	0.00	0
23-Jun-18	0	0	0	0	0	0	0.00	0
24-Jun-18	0	0	0	0	0	0	1.45	11,261,593
25-Jun-18	69,924	13,749	83,673	378,944	101,708	564,325	1.17	9,086,941
26-Jun-18	4,417	38	4,455	129,840	35,094	169,389	0.00	0
27-Jun-18	107	6,675	6,782	125,920	42,484	175,186	0.00	0
28-Jun-18	106	37	143	135,024	42,800	177,967	0.00	0
29-Jun-18	10,201	6,857	17,058	137,104	39,560	193,722	0.01	77,666
30-Jun-18	0	0	0	0	0	0	0.46	0
TOTAL	609,822	107,590	717,412	3,610,928	1,165,894	5,494,234	10.20	75,646,840
Leachate Pumped as Percentage of Rainfall				2.5%	11.0%	6.4%		

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	692,586	2,377,648	974,292	4,044,526	11.80	83,918,286	2.1%	6.3%	4.6%
JUNE	717,412	3,610,928	1,165,894	5,494,234	10.20	75,646,840	2.5%	11.0%	6.4%
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	4,229,569	14,777,408	4,086,614	23,093,591	29.25	215,873,091	5.2%	18.2%	5.0%

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

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2018 Jun	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.051	42.30	37.50
2	0.00	0.048	42.30	37.70
3	0.00	0.050	42.30	37.90
4	0.00	0.047	42.30	38.10
5	0.00	0.046	42.30	38.30
6	0.02	0.047	42.30	38.40
7	0.27	0.041	42.40	38.50
8	0.03	0.045	42.30	38.70
9	0.00	0.041	42.30	38.80
10	0.00	0.042	42.30	39.00
11	0.02	0.040	42.30	39.10
12	1.10	0.043	42.30	39.10
13	5.62	0.041	42.30	39.10
14	0.02	0.047	42.30	39.10
15	0.00	0.049	42.30	39.10
16	0.00	0.047	42.30	39.10
17	0.00	0.052	42.30	39.10
18	0.00	0.048	42.30	39.10
19	0.03	0.051	42.30	39.10
20	0.00	0.048	42.30	39.10
21	0.00	0.048	42.30	39.10
22	0.00	0.045	42.30	39.10
23	0.00	0.046	42.30	39.10
24	1.45	0.045	42.30	39.10
25	1.17	0.043	42.40	39.10
26	0.00	0.042	42.54	39.10
27	0.00	0.043	42.30	39.10
28	0.00	0.045	42.30	39.10
29	0.01	0.043	42.30	39.10
30	0.46	0.043	42.30	39.10
31				
TOTAL	10.20	1.367		
AVG		0.046		
MIN				
MAX	5.62	0.052		

Fax # 9-708-5668

LEACHATE METER READINGS

DATE	LEACHATE METERS				STORMWATER S.G.		COMMENTS	NAME (Initials)
	#1	#2	#3	#4	#1	#2		
6/1/18	15641577	2699669	21170724	162211232	34.02	32.38	OK	R.B.
6/2/18								
6/3/18								
6/4/18	159170916	2913260	21328036	162592624	33.89	32.36	OK	R.B.
6/5/18	15940210	2919678	21364154	162704632	33.85	32.35	OK	R.B.
6/6/18	15966641	2926297	21407186	16282744	33.80	32.34	OK	R.B.
6/7/18	15990407	2926356	21442162	162944672	33.76	32.33	OK	R.B.
6/8/18	16012616	2932946	21478070	163062256	33.77	32.29	OK	R.B.
6/9/18								
6/10/18								
6/11/18	16079213	29391654	21580960	163428632	33.69	32.00	OK	R.B.
6/12/18	16102181	2946424	21612800	163518410	33.67	31.96	OK	R.B.
6/13/18	16123924	2946476	21644378	163630896	33.65	32.04	OK	M.G.
6/14/18	16144983	2952788	21678822	163744312	33.46	32.56	OK	R.B.
6/15/18	16169155	2952851	21731234	163863072	34.56	32.42	OK	R.B.
6/16/18								
6/17/18								
6/18/18	162411642	2966360	21815366	164259584	34.10	32.35	OK	R.B.
6/19/18	16261086	2966421	21904470	164382656	34.06	32.34	OK	R.B.
6/20/18	16291731	2973245	21943572	164528416	34.00	32.34	OK	R.B.
6/21/18	16317925	2979971	21982608	16466124	33.97	32.32	OK	R.B.
6/22/18	16343042	2980037	22017860	164796288	33.92	32.28	OK	R.B.
6/23/18								
6/24/18								
6/25/18	16412966	2993786	22119588	165177232	34.06	32.34	OK	R.B.
6/26/18	16417383	2993824	22154688	165307072	34.30	32.39	O/R	cm
6/27/18	16417490	3000499	22197116	165432992	34.25	32.37	OK	R.B.
6/28/18	16417596	3000536	22239916	165560116	34.23	32.36	OK	R.B.
6/29/18	1642797	3007393	22279526	165705120	34.16	32.36	OK	R.B.
6/30/18								
6/31/2018								

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: June 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	26.23	<i>inward</i>	GW-3	39.40	35.09
P-4	40.78	23.77	<i>inward</i>	GW-4	40.53	34.28
P-5	40.73	24.25	<i>inward</i>	GW-5	39.90	33.46
P-6	40.74	23.75	<i>inward</i>	GW-6	38.95	32.89
P-7	40.60	23.66	<i>inward</i>	GW-7	39.49	31.90
P-8	40.21	23.57	<i>inward</i>	GW-8	39.75	30.73
P-9	39.97	23.75	<i>inward</i>	GW-9	39.65	30.81
P-10	39.86	22.82	<i>inward</i>	GW-10	38.34	31.88
P-11	40.52	23.94	<i>inward</i>	GW-11	38.26	32.09
P-12	43.28	29.53	<i>inward</i>	GW-12	42.09	33.12
P-13	44.78	30.72	<i>inward</i>	GW-13	44.79	34.24
P-14	45.09	30.27	<i>inward</i>	GW-14	39.63	34.95
P-15	45.57	31.00	<i>inward</i>	GW-15	42.33	34.94
P-16	44.67	31.12	<i>inward</i>	GW-16	44.41	35.00
P-17	44.28	30.22	<i>inward</i>	GW-17	42.19	35.16
P-18	43.16	24.31	<i>inward</i>	GW-18	41.76	35.45
P-19	42.91	23.30	<i>inward</i>	GW-19	41.20	35.20
P-20	42.54	26.05	<i>inward</i>	GW-20	41.00	34.17
P-21	42.23	25.20	<i>inward</i>	GW-21	40.94	29.93
P-22	42.06	24.08	<i>inward</i>	GW-22	41.53	30.39
P-23	42.08	22.63	<i>inward</i>	GW-23	40.91	34.72
P-24	42.03	20.11	<i>inward</i>	GW-24	41.37	33.93
P-25	42.16	19.36	<i>inward</i>	GW-25	41.11	35.02
P-26	42.50	19.11	<i>inward</i>	GW-26	41.44	35.38
P-27R	42.73	19.57	<i>inward</i>	GW-27R	40.90	35.62

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: 06/26/2018