

Johnson, Sabrina O

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Thursday, November 15, 2018 4:18 PM
To: SWD_Waste; Tafuni, Steven
Cc: Anthony Detweiler; Bryan White; Jim Bokish; Cooper, Dan; Lebron, Carlo
Subject: Manatee County Lena Road Landfill Monthly Report October 2018
Attachments: October 2018 Report.pdf

Mr. Tafuni,

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

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November 15, 2018
File No. 09217088.10

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 - October 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



EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
October-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-Oct-18	109,806	12,485	122,291	463,264	134,604	720,159	0.00	0
2-Oct-18	36,416	3,799	40,215	160,784	45,480	246,479	0.00	0
3-Oct-18	37,840	3,886	41,726	157,600	41,148	240,474	0.00	0
4-Oct-18	37,974	3,877	41,851	143,024	41,278	226,153	0.00	0
5-Oct-18	36,706	4,111	40,817	146,112	41,088	228,017	0.00	0
6-Oct-18	0	0	0	0	0	0	0.00	0
7-Oct-18	0	0	0	0	0	0	0.10	776,662
8-Oct-18	109,322	12,426	121,748	419,984	115,222	656,954	0.25	1,941,654
9-Oct-18	38,018	4,024	42,042	138,448	37,120	217,610	0.00	0
10-Oct-18	39,632	3,829	43,461	136,560	37,562	217,583	0.34	2,640,649
11-Oct-18	36,818	3,765	40,583	137,056	36,990	214,629	0.65	5,048,300
12-Oct-18	35,070	4,163	39,233	137,312	37,117	213,662	0.00	0
13-Oct-18	0	0	0	0	0	0	0.00	0
14-Oct-18	0	0	0	0	0	0	0.00	0
15-Oct-18	97,392	12,794	110,186	375,616	97,333	583,135	0.00	0
16-Oct-18	29,480	4,165	33,645	121,424	33,200	188,269	0.00	0
17-Oct-18	28,050	3,722	31,772	110,032	29,918	171,722	0.00	0
18-Oct-18	28,716	4,065	32,781	116,976	29,724	179,481	0.00	0
19-Oct-18	28,578	4,193	32,771	118,384	29,670	180,825	0.00	0
20-Oct-18	0	0	0	0	0	0	0.00	0
21-Oct-18	0	0	0	0	0	0	0.00	0
22-Oct-18	93,346	13,237	106,583	341,900	92,660	541,143	0.00	0
23-Oct-18	33,590	4,454	38,044	377,472	37,446	452,962	0.00	0
24-Oct-18	24,806	3,789	28,595	431,652	21,520	481,767	0.00	0
25-Oct-18	31,206	4,614	35,820	356,448	29,594	421,862	0.00	0
26-Oct-18	33,678	4,874	38,552	282,352	33,320	354,224	0.16	1,242,659
27-Oct-18	0	0	0	0	0	0	0.00	0
28-Oct-18	0	0	0	0	0	0	0.00	0
29-Oct-18	89,384	13,516	102,900	731,584	77,288	911,772	0.00	0
30-Oct-18	25,350	3,867	29,217	194,480	25,728	249,425	0.00	0
31-Oct-18	27,092	4,030	31,122	205,840	25,724	262,686	0.00	0
TOTAL	1,088,270	137,685	1,225,955	5,804,304	1,130,734	8,160,993	1.50	11,649,924
Leachate Pumped as Percentage of Rainfall				29.5%	120.8%	42.1%		

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	815,455	4,038,080	1,371,106	6,224,641	12.55	76,967,165	2.3%	10.0%	6.1%
AUGUST	1,368,889	3,781,888	1,909,764	7,060,541	13.17	98,558,357	3.8%	9.0%	8.1%
SEPTEMBER	1,180,118	4,813,664	1,611,876	7,605,658	5.79	44,968,707	7.4%	25.9%	15.5%
OCTOBER	1,225,955	5,804,304	1,130,734	8,160,993	1.50	11,649,924	29.5%	120.8%	42.1%
NOVEMBER									
DECEMBER									
TOTAL	8,819,986	33,215,344	10,110,094	52,145,424	62.26	448,017,244	5.1%	19.3%	5.9%

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		
10/1/18	19199730	3722213	27306876	176602016	34.16	32.39	OK	R.B.
10/2/18	19236146	3726012	27352356	176962800	34.14	32.37	OK	R.B.
10/3/18	19273966	3729699	27393504	179120400	34.11	32.37	OK	R.B.
10/4/18	19311960	3733775	27434782	179263424	34.09	32.37	OK	R.B.
10/5/18	19348666	3737686	27475870	179409536	34.07	32.36	OK	R.B.
10/6/18								
10/7/18								
10/8/18	19457988	3750312	27591092	179889520	34.04	32.28	OK	R.B.
10/9/18	19496006	3754336	27626212	179967916	34.05	32.28	OK	R.B.
10/10/18	19535638	3758165	27665774	180104528	34.05	32.28	OK	R.B.
10/11/18	19572456	3761930	27702764	180241584	34.12	32.32	OK	R.B.
10/12/18	19607526	3766093	27739886	180378896	34.11	32.32	OK	R.B.
10/13/18								
10/14/18								
10/15/18	19704918	3779887	27832114	180754512	34.07	32.26	OK	R.B.
10/16/18	1973398	3783052	27870414	180878936	34.06	32.24	OK	R.B.
10/17/18	19762446	37861774	27900332	180968968	34.04	32.26	OK	R.B.
10/18/18	19791164	3790839	27936056	181102944	34.02	32.24	OK	R.B.
10/19/18	19819742	3795032	27975726	181221328	34.00	32.10	OK	A.K.
10/20/18								
10/21/18								
10/22/18	19913086	3805269	28052386	18192328	33.99	32.00	OK	R.B.
10/23/18	19946678	3812723	28089832	181940700	33.96	31.84	OK	R.B.
10/24/18	19971484	3816512	28111352	182372352	33.96	31.82	OK	R.B.
10/25/18	20002690	3821126	28140946	182726800	33.95	31.61	OK	R.B.
10/26/18	20035368	3826000	28174266	183011152	33.94	31.61	OK	R.B.
10/27/18								
10/28/18								
10/29/18	20125752	3839516	28251554	183742736	33.91	31.50	OK	R.B.
10/30/18	20151102	3843383	28277262	183937216	33.91	31.50	OK	R.B.
10/31/18	20178194	3847413	28303006	184143088	33.91	31.49	OK	R.B.

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2018 Oct	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.056	42.40	38.40
2	0.00	0.052	42.40	38.30
3	0.00	0.050	42.40	38.90
4	0.00	0.049	42.40	38.90
5	0.00	0.046	42.40	42.80
6	0.00	0.050	42.40	40.10
7	0.10	0.051	42.40	40.10
8	0.25	0.047	42.40	40.00
9	0.00	0.045	42.40	40.00
10	0.34	0.040	42.40	39.90
11	0.65	0.073	42.40	39.90
12	0.00	0.036	42.30	39.80
13	0.00	0.036	42.40	39.80
14	0.00	0.041	42.40	39.60
15	0.00	0.045	42.40	39.60
16	0.00	0.045	42.40	39.40
17	0.00	0.046	42.40	39.30
18	0.00	0.041	42.40	39.10
19	0.00	0.044	42.40	39.10
20	0.00	0.042	42.40	38.50
21	0.00	0.044	42.40	38.50
22	0.00	0.040	42.40	37.90
23	0.00	0.130	42.40	37.70
24	0.00	0.088	42.30	37.70
25	0.00	0.075	42.30	37.50
26	0.16	0.066	42.40	37.50
27	0.00	0.056	42.40	37.50
28	0.00	0.059	42.40	37.50
29	0.00	0.056	42.30	40.50
30	0.00	0.057	42.30	40.50
31	0.00	0.054	42.30	40.50
TOTAL	1.50	1.660		
AVG		0.054		
MIN				
MAX	0.65	0.130		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: October 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	26.64	<i>inward</i>	GW-3	39.40	33.10
P-4	40.78	23.85	<i>inward</i>	GW-4	40.53	32.16
P-5	40.73	23.83	<i>inward</i>	GW-5	39.90	31.72
P-6	40.74	23.80	<i>inward</i>	GW-6	38.95	31.17
P-7	40.60	23.80	<i>inward</i>	GW-7	39.49	30.20
P-8	40.21	23.66	<i>inward</i>	GW-8	39.75	29.31
P-9	39.97	23.77	<i>inward</i>	GW-9	39.65	28.70
P-10	39.86	22.83	<i>inward</i>	GW-10	38.34	28.66
P-11	40.52	24.08	<i>inward</i>	GW-11	38.26	31.27
P-12	43.28	29.72	<i>inward</i>	GW-12	42.09	32.47
P-13	44.78	30.88	<i>inward</i>	GW-13	44.79	34.11
P-14	45.09	30.73	<i>inward</i>	GW-14	39.63	34.25
P-15	45.57	31.05	<i>inward</i>	GW-15	42.33	34.15
P-16	44.67	31.32	<i>inward</i>	GW-16	44.41	35.50
P-17	44.28	30.28	<i>inward</i>	GW-17	42.19	33.96
P-18	43.16	24.21	<i>inward</i>	GW-18	41.76	32.04
P-19	42.91	23.21	<i>inward</i>	GW-19	41.20	31.51
P-20	42.54	25.93	<i>inward</i>	GW-20	41.00	30.47
P-21	42.23	25.21	<i>inward</i>	GW-21	40.94	28.62
P-22	42.06	24.06	<i>inward</i>	GW-22	41.53	27.95
P-23	42.08	22.59	<i>inward</i>	GW-23	40.91	30.33
P-24	42.03	20.43	<i>inward</i>	GW-24	41.37	30.08
P-25	42.16	19.38	<i>inward</i>	GW-25	41.11	31.01
P-26	42.50	19.29	<i>inward</i>	GW-26	41.44	32.56
P-27R	42.73	19.68	<i>inward</i>	GW-27R	40.90	32.65

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: 10/26/2018