

Johnson, Sabrina O

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Thursday, December 13, 2018 1:18 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 November 2018
Attachments: November 2018 Report.pdf

Mr. Tafuni,

Attached is the Manatee County Lena Road Landfill Monthly Report (for November 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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December 13, 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 - November 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

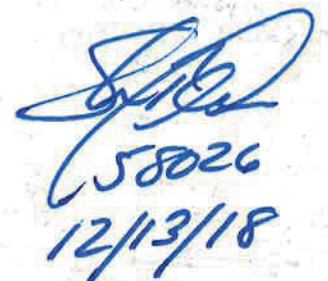


Donovan Dickey
Associate Professional
SCS Engineers

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



58026
12/13/18



EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
November-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-Nov-18	30,450	4,312	34,762	204,736	29,858	269,356	0.00	0
2-Nov-18	31,270	4,045	35,315	186,112	25,466	246,893	0.00	0
3-Nov-18	0	0	0	0	0	0	0.00	0
4-Nov-18	0	0	0	0	0	0	0.00	0
5-Nov-18	80,048	11,394	91,442	524,480	76,030	691,952	0.44	3,417,311
6-Nov-18	28,498	3,656	32,154	168,560	22,426	223,140	0.00	0
7-Nov-18	30,880	4,062	34,942	178,272	29,698	242,912	0.00	0
8-Nov-18	25,318	3,337	28,655	150,704	22,228	201,587	0.00	0
9-Nov-18	28,496	3,669	32,165	164,032	25,916	222,113	0.00	0
10-Nov-18	0	0	0	0	0	0	0.00	0
11-Nov-18	0	0	0	0	0	0	0.00	0
12-Nov-18	79,226	11,122	90,348	468,928	73,676	632,952	0.00	0
13-Nov-18	29,070	3,437	32,507	164,400	25,826	222,733	0.00	0
14-Nov-18	25,218	3,920	29,138	137,520	18,284	184,942	0.00	0
15-Nov-18	27,708	3,476	31,184	151,324	25,650	208,158	0.32	2,485,317
16-Nov-18	25,054	3,468	28,522	138,308	18,416	185,246	0.00	0
17-Nov-18	0	0	0	0	0	0	0.00	0
18-Nov-18	0	0	0	0	0	0	0.00	0
19-Nov-18	77,826	11,067	88,893	436,176	73,362	598,431	0.00	0
20-Nov-18	24,664	3,331	27,995	122,640	21,410	172,045	0.00	0
21-Nov-18	25,804	3,718	29,522	133,680	21,936	185,138	0.00	0
22-Nov-18	0	0	0	0	0	0	0.00	0
23-Nov-18	49,800	7,103	56,903	270,240	43,338	370,481	0.00	0
24-Nov-18	0	0	0	0	0	0	0.00	0
25-Nov-18	0	0	0	0	0	0	0.00	0
26-Nov-18	88,166	11,897	100,063	406,912	72,866	579,841	0.19	1,475,657
27-Nov-18	24,660	3,448	28,108	108,720	17,756	154,584	0.03	232,998
28-Nov-18	23,296	3,934	27,230	136,080	17,956	181,266	0.00	0
29-Nov-18	21,332	3,410	24,742	120,576	21,552	166,870	0.00	0
30-Nov-18	23,874	3,584	27,458	118,144	21,436	167,038	0.00	0
	0	0	0	0	0	0	0.00	0
TOTAL	800,658	111,390	912,048	4,490,544	705,086	6,107,678	0.98	7,611,284
Leachate Pumped as Percentage of Rainfall				33.6%	143.0%	40.1%		

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	912,048	4,490,544	705,086	6,107,678	0.98	7,611,284	33.6%	143.0%	40.1%
DECEMBER									
TOTAL	9,732,034	37,705,888	10,815,180	58,253,102	63.24	455,628,527	5.6%	21.5%	6.2%

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		
11/1/18	20206644	3651725	2632864	38434710	33.91	31.49	OK	R.B.
11/2/18	20239914	3655770	26356330	184533904	33.90	31.30	OK	R.B.
11/3/18								
11/4/18								
11/5/18	20319962	36671104	26434360	185056384	33.95	31.16	OK	R.B.
11/6/18	20348460	3670620	26456766	18522694	33.97	31.17	OK	R.B.
11/7/18	20379340	3674862	26464464	185405216	33.96	31.14	OK	R.B.
11/8/18	20404656	3678219	26506712	185555920	33.96	31.10	OK	R.B.
11/9/18	20433154	3681888	26534626	185719952	33.95	31.06	OK	R.B.
11/10/18								
11/11/18								
11/12/18	20512380	3693010	26606304	186166860	33.95	30.90	OK	M.G.
11/13/18	20541450	3696447	26634130	186353280	33.94	30.90	OK	R.B.
11/14/18	20566666	3900367	26652414	186490800	33.92	30.86	OK	R.B.
11/15/18	20594376	3903443	26678014	186642124	33.95	30.82	OK	R.B.
11/16/18	20619430	3907311	26696480	186780432	33.95	30.82	OK	R.B.
11/17/18								
11/18/18								
11/19/18	20647256	3916376	26716812	186921608	33.89	30.72	OK	R.B.
11/20/18	20721820	3921709	26791252	187389248	33.90	30.71	OK	R.B.
11/21/18	20747724	3925427	26813188	187472926	33.90	30.70	OK	R.B.
11/22/18								
11/23/18	20797534	3932530	26886452	187743168	33.90	30.69	OK	M.G.
11/24/18								
11/25/18								
11/26/18	20865180	3944427	26929392	188180080	33.89	30.52	OK	R.B.
11/27/18	20910350	3947675	26947148	188258800	33.91	30.54	OK	R.B.
11/28/18	20933646	3951609	26965104	188394680	33.90	30.52	OK	R.B.
11/29/18	20954976	3955219	26986656	188515456	33.87	30.50	OK	R.B.
11/30/18	20976852	3958603	27008092	188633600	33.87	30.46	OK	R.B.
11/31/2018								

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2018 Nov	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.060	42.30	40.50
2	0.00	0.056	42.40	40.50
3	0.00	0.041	42.30	40.50
4	0.00	0.048	42.40	40.50
5	0.44	0.043	42.40	40.50
6	0.00	0.041	42.40	40.50
7	0.00	0.042	42.40	40.50
8	0.00	0.048	42.40	40.50
9	0.00	0.049	42.40	40.50
10	0.00	0.047	42.40	40.50
11	0.00	0.046	42.40	40.50
12	0.00	0.049	42.40	40.50
13	0.00	0.050	42.40	40.50
14	0.00	0.047	42.40	40.50
15	0.32	0.034	42.40	40.50
16	0.00	0.037	42.40	40.50
17	0.00	0.043	42.40	40.50
18	0.00	0.049	42.40	40.50
19	0.00	0.050	42.40	40.54
20	0.00	0.049	42.40	40.50
21	0.00	0.047	42.40	40.50
22	0.00	0.047	42.40	40.50
23	0.00	0.046	42.40	40.50
24	0.00	0.049	42.40	40.50
25	0.00	0.045	42.40	40.50
26	0.19	0.042	42.40	40.50
27	0.03	0.030	42.40	40.50
28	0.00	0.036	42.40	40.50
29	0.00	0.038	42.40	40.50
30	0.00	0.045	42.40	40.50
31				
TOTAL	0.98	1.354		
AVG		0.045		
MIN				
MAX	0.44	0.060		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: November 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	25.31	<i>inward</i>	GW-3	39.40	32.20
P-4	40.78	23.79	<i>inward</i>	GW-4	40.53	31.42
P-5	40.73	23.81	<i>inward</i>	GW-5	39.90	31.23
P-6	40.74	23.74	<i>inward</i>	GW-6	38.95	30.53
P-7	40.60	23.69	<i>inward</i>	GW-7	39.49	28.26
P-8	40.21	23.61	<i>inward</i>	GW-8	39.75	26.95
P-9	39.97	23.74	<i>inward</i>	GW-9	39.65	26.90
P-10	39.86	22.74	<i>inward</i>	GW-10	38.34	27.17
P-11	40.52	23.96	<i>inward</i>	GW-11	38.26	30.21
P-12	43.28	29.62	<i>inward</i>	GW-12	42.09	33.09
P-13	44.78	30.83	<i>inward</i>	GW-13	44.79	33.83
P-14	45.09	30.65	<i>inward</i>	GW-14	39.63	34.13
P-15	45.57	30.84	<i>inward</i>	GW-15	42.33	34.87
P-16	44.67	30.97	<i>inward</i>	GW-16	44.41	35.58
P-17	44.28	30.11	<i>inward</i>	GW-17	42.19	33.86
P-18	43.16	24.10	<i>inward</i>	GW-18	41.76	31.24
P-19	42.91	23.14	<i>inward</i>	GW-19	41.20	30.40
P-20	42.54	25.74	<i>inward</i>	GW-20	41.00	29.46
P-21	42.23	25.12	<i>inward</i>	GW-21	40.94	27.26
P-22	42.06	24.02	<i>inward</i>	GW-22	41.53	26.79
P-23	42.08	22.54	<i>inward</i>	GW-23	40.91	28.63
P-24	42.03	20.04	<i>inward</i>	GW-24	41.37	28.86
P-25	42.16	19.26	<i>inward</i>	GW-25	41.11	30.05
P-26	42.50	19.25	<i>inward</i>	GW-26	41.44	32.05
P-27R	42.73	19.66	<i>inward</i>	GW-27R	40.90	32.04

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: 11/27/2018