

## Johnson, Sabrina O

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**From:** Fischer, Shane <SFischer@SCSEngineers.com>  
**Sent:** Monday, May 6, 2019 12:52 PM  
**To:** SWD\_Waste; Tafuni, Steven  
**Cc:** Anthony Detweiler; Bryan White; Cooper, Dan; Lebron, Carlo  
**Subject:** Manatee County Lena Road Landfill Monthly Report April 2019  
**Attachments:** April 2019 Report.pdf

Mr. Tafuni,

Attached is the Manatee County Lena Road Landfill Monthly Report (for April 2019) which includes the following:

- Monthly Water Balance Report (Exhibit A)
- Monthly Leachate Tracking Summary - 2019 (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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SCS Engineers  
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May 6, 2019  
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 - April 2019


Dear Mr. Tafuni:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2019 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, and Monthly Groundwater Gradient Report.

Sincerely,



Shane R. Fischer, P.E.  
Office Manager/Project Director  
SCS Engineers

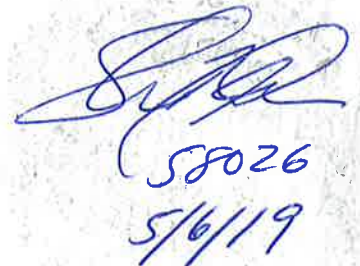


Katherine Sun  
Associate Professional  
SCS Engineers

SRF/KMS

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

Enclosures



58026  
5/6/19

EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY  
LENA ROAD LANDFILL  
MONTHLY WATER BALANCE REPORT  
April 2019**

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-19	92,178	551	92,729	496,040	190,010	778,779	0.00	0
2-Apr-19	1,780	0	1,780	14,216	10,950	26,946	0.55	4,271,639
3-Apr-19	22,468	870	23,338	149,360	0	172,698	0.00	0
4-Apr-19	20,708	557	21,265	184,352	0	205,617	0.00	0
5-Apr-19	24,690	95	24,785	134,832	0	159,617	0.00	0
6-Apr-19	0	0	0	0	0	0	0.00	0
7-Apr-19	0	0	0	0	0	0	0.00	0
8-Apr-19	72,394	223	72,617	375,264	182,560	630,441	0.00	0
9-Apr-19	25,096	67	25,163	117,472	45,856	188,491	0.20	1,553,323
10-Apr-19	30,080	73	30,153	122,320	48,928	201,401	0.01	77,666
11-Apr-19	25,930	68	25,998	114,320	46,812	187,130	0.00	0
12-Apr-19	28,026	74	28,100	124,176	50,744	203,020	0.00	0
13-Apr-19	0	0	0	0	0	0	0.00	0
14-Apr-19	0	0	0	0	0	0	0.69	5,358,965
15-Apr-19	54,780	202	54,982	354,800	135,864	545,646	0.00	0
16-Apr-19	42,212	62	42,274	112,400	41,836	196,510	0.00	0
17-Apr-19	21,938	68	22,006	121,456	45,984	189,446	0.00	0
18-Apr-19	25,456	68	25,524	114,528	44,452	184,504	0.00	0
19-Apr-19	26,256	72	26,328	120,784	45,272	192,384	0.50	3,883,308
20-Apr-19	0	0	0	0	0	0	0.02	155,332
21-Apr-19	0	0	0	0	0	0	0.00	0
22-Apr-19	67,952	196	68,148	354,832	131,292	554,272	0.00	0
23-Apr-19	23,858	13,945	37,803	119,712	43,102	200,617	0.00	0
24-Apr-19	19,870	14,927	34,797	110,800	40,146	185,743	0.00	0
25-Apr-19	22,990	9,183	32,173	122,192	43,540	197,905	0.00	0
26-Apr-19	22,024	7,427	29,451	118,064	43,556	191,071	0.07	543,663
27-Apr-19	0	0	0	0	0	0	0.00	0
28-Apr-19	0	0	0	0	0	0	0.00	0
29-Apr-19	60,340	17,646	77,986	355,232	125,484	558,702	0.00	0
30-Apr-19	17,290	4,614	21,904	108,720	39,584	170,208	0.00	0
							0.00	
<b>TOTAL</b>	<b>748,316</b>	<b>70,988</b>	<b>819,304</b>	<b>3,945,872</b>	<b>1,355,972</b>	<b>6,121,148</b>	<b>2.04</b>	<b>15,843,897</b>
Leachate Pumped as Percentage of Rainfall				14.5%	60.4%	37.1%		

**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
<b>TOTAL</b>	<b>132.0</b>	<b>118.0</b>	<b>66.0</b>	<b>316.0</b>
<b>Open Area</b>	<b>102.0</b>	<b>118.0</b>	<b>66.0</b>	<b>286.0</b>

EXHIBIT B

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY  
 LENA ROAD LANDFILL  
 MONTHLY LEACHATE TRACKING SUMMARY -- 2019

	B	C	D	E	F	G	H	I	J
MONTH	STAGE I	STAGE II	STAGE III	TOTAL			STAGE I	STAGE II	STAGE III
	LEACHATE (gallons)	LEACHATE (gallons)	LEACHATE (gallons)	LEACHATE (gallons)	RAINFALL (inches)	RAINFALL (gallons)	LEACHATE/ RAINFALL (%)	LEACHATE/ RAINFALL (%)	LEACHATE/ RAINFALL (%)
JANUARY	985,946	3,653,440	924,189	5,563,575	3.48	27,027,824	10.2%	32.8%	14.8%
FEBRUARY	881,333	3,006,288	1,745,237	5,632,858	2.23	17,319,554	14.3%	42.1%	43.7%
MARCH	779,697	3,388,032	1,910,490	6,078,219	2.06	15,999,229	13.7%	51.3%	51.7%
APRIL	819,304	3,945,872	1,355,972	6,121,148	2.04	15,843,897	14.5%	60.4%	37.1%
MAY									
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
<b>TOTAL</b>	<b>3,466,280</b>	<b>13,993,632</b>	<b>5,935,888</b>	<b>23,395,800</b>	<b>9.81</b>	<b>76,190,503</b>	<b>12.8%</b>	<b>51.5%</b>	<b>21.8%</b>

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
<b>TOTAL</b>	<b>132.0</b>	<b>118.0</b>	<b>66.0</b>	<b>316.0</b>
<b>Open Area</b>	<b>102.0</b>	<b>118.0</b>	<b>66.0</b>	<b>286.0</b>

## LEACHATE METER READINGS

DATE	LEACHATE METERS				STORMWATER S.G.		COMMENTS	NAME (Initials)
	#1	#2	#3	#4	#1	#2		
	4/1/19	2415424	4475041	34735966	208921572	34.15		
4/2/19	2415604	4475041	34746916	208935726	34.15	30.62	OK	R.B.
4/3/19	24178512	4475911	34746916	208958086	34.19	30.65	OK	R.B.
4/4/19	24199220	4476468	34746916	203218440	34.19	30.62	OK	R.B.
4/5/19	24223910	4476563	34746916	208404272	34.18	30.60	OK	R.B.
4/6/19								
4/7/19								
4/8/19	24296304	4476766	34929476	205779536	34.19	30.56	OK	R.B.
4/9/19	24321400	4476653	34975332	203897008	34.19	30.50	OK	R.B.
4/10/19	24351480	4476926	35024610	20409326	34.20	30.46	OK	R.B.
4/11/19	24377410	4476994	35071072	204133646	34.20	30.42	OK	R.B.
4/12/19	24405436	2477868	35121816	204257824	34.22	30.40	OK	M.G.
4/13/19								
4/14/19								
4/15/19	24460216	4477270	35257660	20462624	34.23	30.36	OK	R.B.
4/16/19	24502428	4477332	35299516	204725024	34.23	30.34	OK	R.B.
4/17/19	24524366	4477400	35345500	204846480	34.23	30.32	OK	R.B.
4/18/19	24549822	4477468	35389952	204961008	34.22	30.30	OK	R.B.
4/19/19	24576518	4477540	35435224	205081792	34.22	30.30	OK	R.B.
4/20/19								
4/21/19								
4/22/19	24624400	4477736	35566516	205436624	34.20	30.30	OK	R.B.
4/23/19	24627888	4491688	35609668	205556386	34.18	30.28	OK	R.B.
4/24/19	24687758	4506608	35849764	205667136	34.17	30.26	OK	R.B.
4/25/19	24710748	4515791	35893304	205788326	34.17	30.24	OK	R.B.
4/26/19	24732772	4523218	35736610	205907392	34.17	30.24	OK	R.B.
4/27/19								
4/28/19								
4/29/19	24793112	4540864	35862344	20626224	34.15	30.00	OK	R.B.
4/30/19	24810402	4545478	35909228	206371344	34.15	29.98	OK	R.B.



FIGURE L-7

Manatee County Lena Road Landfill

# Monthly Groundwater Gradient Report

Month and Year: April 2019

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	24.71	<i>inward</i>	GW-3	39.40	31.54
P-4	40.78	21.83	<i>inward</i>	GW-4	40.53	30.78
P-5	40.73	20.93	<i>inward</i>	GW-5	39.90	30.80
P-6	40.74	19.91	<i>inward</i>	GW-6	38.95	30.05
P-7	40.60	19.30	<i>inward</i>	GW-7	39.49	27.69
P-8	40.21	19.25	<i>inward</i>	GW-8	39.75	26.38
P-9	39.97	19.62	<i>inward</i>	GW-9	39.65	26.83
P-10	39.86	19.56	<i>inward</i>	GW-10	38.34	26.54
P-11	40.52	22.51	<i>inward</i>	GW-11	38.26	29.96
P-12	43.28	29.53	<i>inward</i>	GW-12	42.09	32.43
P-13	44.78	30.78	<i>inward</i>	GW-13	44.79	33.98
P-14	45.09	29.92	<i>inward</i>	GW-14	39.63	34.38
P-15	45.57	31.00	<i>inward</i>	GW-15	42.33	35.08
P-16	44.67	31.17	<i>inward</i>	GW-16	44.41	35.96
P-17	44.28	30.27	<i>inward</i>	GW-17	42.19	33.99
P-18	43.16	24.02	<i>inward</i>	GW-18	41.76	30.91
P-19	42.91	23.14	<i>inward</i>	GW-19	41.20	29.55
P-20	42.54	26.14	<i>inward</i>	GW-20	41.00	28.70
P-21	42.23	25.21	<i>inward</i>	GW-21	40.94	26.05
P-22	42.06	23.98	<i>inward</i>	GW-22	41.53	25.71
P-23	42.08	22.53	<i>inward</i>	GW-23	40.91	27.59
P-24	42.03	20.06	<i>inward</i>	GW-24	41.37	27.96
P-25	42.16	19.21	<i>inward</i>	GW-25	41.11	29.53
P-26	42.50	19.17	<i>inward</i>	GW-26	41.44	31.64
P-27R	42.73	19.63	<i>inward</i>	GW-27R	40.90	31.60

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: 04/25/2019