

Smith, George

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Wednesday, March 11, 2020 5:10 PM
To: SWD_Waste; Tafuni, Steven
Cc: Anthony Detweiler; Bryan White; Bob Bennett; Cooper, Dan; Lebron, Carlo
Subject: Manatee County Lena Road Landfill Monthly Report February 2020
Attachments: February 2020 Report.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Mr. Tafuni,

Attached is the Manatee County Lena Road Landfill Monthly Report (for February 2020) which includes the following:

- Monthly Water Balance Report (Exhibit A)
- Monthly Leachate Tracking Summary - 2020 (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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March 11, 2020
File No. 09217088.15

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 – February 2020

Dear Mr. Tafuni:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2020 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, and Monthly Groundwater Gradient Report.

Sincerely,



Shane R. Fischer, P.E.
Vice President/Office Manager
SCS Engineers



Andres Velosa
Associate Professional
SCS Engineers

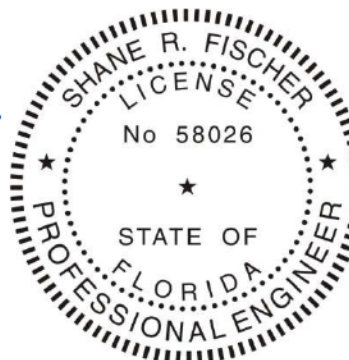
SRF/AFV

cc: Bryan White, Manatee County Landfill Superintendent
Anthony Detweiler, Manatee County Landfill Operations Supervisor
Bob Bennett, Manatee County Landfill Operations Supervisor

Enclosures

This item has been digitally signed and sealed by
Shane R. Fischer, PE on the date adjacent to the seal.

Printed copies of this document are not considered
signed and sealed and the signature must be verified
on any electronic copies.



Shane
Fischer

Digitally signed by
Shane Fischer
Date: 2020.03.11
17:05:56 -04'00'

EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
February 2020**

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-Feb-20	0	0	0	0	0	0	0.47	3,650,310
2-Feb-20	0	0	0	0	0	0	0.00	0
3-Feb-20	968	141,589	142,557	777,104	80,552	1,000,213	0.00	0
4-Feb-20	278	35,477	35,755	236,032	24,576	296,363	0.00	0
5-Feb-20	312	37,477	37,789	249,760	26,884	314,433	0.00	0
6-Feb-20	296	38,480	38,776	231,624	26,740	297,140	0.46	3,572,643
7-Feb-20	332	39,896	40,228	176,920	26,496	243,644	0.19	1,475,657
8-Feb-20	0	0	0	0	0	0	0.00	0
9-Feb-20	0	0	0	0	0	0	0.00	0
10-Feb-20	732	76,950	77,682	738,832	79,104	895,618	0.00	0
11-Feb-20	121,918	10,654	132,572	221,952	28,280	382,804	0.00	0
12-Feb-20	592	6,986	7,578	208,272	26,872	242,722	0.10	776,662
13-Feb-20	1,438	10,133	11,571	206,080	25,740	243,391	0.00	0
14-Feb-20	33,542	17,644	51,186	198,720	25,656	275,562	0.25	1,941,654
15-Feb-20	0	0	0	0	0	0	0.00	0
16-Feb-20	0	0	0	0	0	0	0.00	0
17-Feb-20	0	0	0	0	0	0	0.00	0
18-Feb-20	257,006	23,159	280,165	758,848	100,884	1,139,897	0.00	0
19-Feb-20	46,192	5,891	52,083	185,728	24,672	262,483	0.00	0
20-Feb-20	42,950	5,561	48,511	193,296	26,868	268,675	0.00	0
21-Feb-20	40,880	5,412	46,292	178,500	25,880	250,672	0.05	388,331
22-Feb-20	0	0	0	0	0	0	0.00	0
23-Feb-20	0	0	0	0	0	0	0.00	0
24-Feb-20	109,624	15,601	125,225	546,956	78,392	750,573	0.00	0
25-Feb-20	35,092	5,253	40,345	153,504	22,228	216,077	0.08	621,329
26-Feb-20	35,700	5,386	41,086	161,744	24,232	227,062	0.36	2,795,982
27-Feb-20	38,812	6,168	44,980	197,776	29,332	272,088	0.00	0
28-Feb-20	23,240	3,978	27,218	128,176	19,796	175,190	0.00	0
29-Feb-20	0	0	0	0	0	0	0.00	0
	0	0	0	0	0	0	0.00	0
	0	0	0	0	0	0	0.00	0
TOTAL	789,904	491,695	1,281,599	5,749,824	723,184	7,754,607	1.96	15,222,567
Leachate Pumped as Percentage of Rainfall				23.6%	91.5%	20.6%		

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	Stage II	Stage III	TOTAL
	(acres)	(acres)	(acres)	(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 -- 2020

	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	227,433	11,377,632	954,028	12,559,093	1.14	8,853,942	7.2%	311.5%	46.7%
FEBRUARY	1,281,599	5,749,824	723,184	7,754,607	1.96	15,222,567	23.6%	91.5%	20.6%
MARCH									
APRIL									
MAY									
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	1,509,032	17,127,456	1,677,212	20,313,700	3.10	24,076,510	17.6%	199.5%	19.5%

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		
2/1/20								
2/2/20								
2/3/20	30821412	6388520	49727200	2322362	33.81	31.10	OK	OK
2/4/20	30821690	6424497	49753776	232467104	33.81	31.06	OK	OK
2/5/20	30822002	6462474	49780660	232710664	33.78	31.06	OK	OK
2/6/20	30822258	6500954	49807408	23294848	33.76	31.04	OK	OK
2/7/20	30822630	6540860	49833896	233185408	33.81	31.26	OK	OK
2/8/20								
2/9/20								
2/10/20	30823362	6617800	49913000	233264240	33.87	31.33	OK	OK
2/11/20	30945280	6628454	49941280	234086192	33.87	31.28	OK	OK
2/12/20	30945872	6635440	49968152	234294164	33.88	31.38	OK	OK
2/13/20	30947310	6645573	49993892	234500544	33.86	31.38	OK	OK
2/14/20	30986852	6663217	50019548	234699264	33.88	31.36	OK	OK
2/15/20								
2/16/20								
2/17/20								
2/18/20	31237858	6686326	50120452	235458112	33.80	31.40	OK	OK
2/19/20	31284050	6692262	50145104	235643840	33.81	31.40	OK	OK
2/20/20	31327076	6697828	501171972	235837136	33.80	31.39	OK	OK
2/21/20	31367880	6703240	50197852	236015636	33.80	31.53	OK	OK
2/22/20								
2/23/20								
2/24/20	31477504	6718841	50276244	236562692	33.82	31.31	OK	OK
2/25/20	31512896	6724094	50298472	236716096	33.77	31.27	OK	OK
2/26/20	31548296	6729480	50322704	236877840	33.77	31.27	OK	OK
2/27/20	31587108	6735648	50352036	237025616	33.72	31.20	OK	OK
2/28/20	31610358	6739626	50371832	237203792	33.70	31.20	OK	OK

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2020 Feb	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.47	0.071	42.80	40.80
2	0.00	0.068	42.80	40.80
3	0.00	0.066	42.80	40.80
4	0.00	0.066	42.80	40.80
5	0.00	0.064	42.80	40.80
6	0.46	0.066	42.80	40.80
7	0.19	0.059	42.80	40.80
8	0.00	0.057	42.80	40.80
9	0.00	0.057	42.80	40.80
10	0.00	0.075	42.80	40.80
11	0.00	0.059	42.80	40.00
12	0.10	0.052	42.80	40.80
13	0.00	0.052	42.80	40.80
14	0.25	0.069	42.80	40.80
15	0.00	0.062	42.80	40.80
16	0.00	0.060	42.80	40.80
17	0.00	0.057	42.80	40.80
18	0.00	0.056	42.80	40.80
19	0.00	0.052	42.80	40.80
20	0.00	0.054	42.80	40.80
21	0.05	0.051	42.80	40.80
22	0.00	0.050	42.80	40.80
23	0.00	0.050	42.80	40.80
24	0.00	0.050	42.80	40.80
25	0.08	0.050	42.80	40.80
26	0.36	0.048	42.80	40.80
27	0.00	0.046	42.80	40.80
28	0.00	0.047	42.80	40.80
29	0.00	0.045	42.80	40.80
30				
31				
TOTAL	1.96	1.659		
AVG		0.057		
MIN				
MAX	0.47	0.075		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill
Monthly Groundwater Gradient Report
 Month and Year: February 2020

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	24.46	<i>inward</i>	GW-3	39.40	31.60
P-4	40.78	22.03	<i>inward</i>	GW-4	40.53	31.23
P-5	40.73	20.78	<i>inward</i>	GW-5	39.90	30.95
P-6	40.74	19.79	<i>inward</i>	GW-6	38.95	30.05
P-7	40.60	19.20	<i>inward</i>	GW-7	39.49	27.79
P-8	40.21	19.01	<i>inward</i>	GW-8	39.75	26.65
P-9	39.97	19.27	<i>inward</i>	GW-9	39.65	28.45
P-10	39.86	19.26	<i>inward</i>	GW-10	38.34	29.54
P-11	40.52	22.12	<i>inward</i>	GW-11	38.26	31.16
P-12	43.28	29.48	<i>inward</i>	GW-12	42.09	32.59
P-13	44.78	30.68	<i>inward</i>	GW-13	44.79	33.59
P-14	45.09	29.84	<i>inward</i>	GW-14	39.63	34.23
P-15	45.57	30.87	<i>inward</i>	GW-15	42.33	34.43
P-16	44.67	30.77	<i>inward</i>	GW-16	44.41	34.71
P-17	44.28	30.18	<i>inward</i>	GW-17	42.19	33.54
P-18	43.16	23.66	<i>inward</i>	GW-18	41.76	30.86
P-19	42.91	23.11	<i>inward</i>	GW-19	41.20	28.70
P-20	42.54	25.64	<i>inward</i>	GW-20	41.00	27.40
P-21	42.23	25.13	<i>inward</i>	GW-21	40.94	25.14
P-22	42.06	23.86	<i>inward</i>	GW-22	41.53	25.28
P-23	42.08	22.38	<i>inward</i>	GW-23	40.91	27.06
P-24	42.03	19.93	<i>inward</i>	GW-24	41.37	27.47
P-25	42.16	19.16	<i>inward</i>	GW-25	41.11	29.21
P-26	42.50	19.10	<i>inward</i>	GW-26	41.44	31.54
P-27R	42.73	19.53	<i>inward</i>	GW-27R	40.90	31.35

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: 2/27/2020