

Smith, George

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Monday, June 08, 2020 12:22 PM
To: SWD_Waste; Tafuni, Steven
Cc: Anthony Detweiler; Bryan White; Bob Bennett; Cooper, Dan; Lebron, Carlo; Velosa, Andres
Subject: Manatee County Lena Road Landfill Monthly Report May 2020
Attachments: May 2020 Report.pdf

Mr. Tafuni,

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

Shane R. Fischer, P.E.
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June 8, 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 – May 2020

Dear Mr. Tafuni:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2020 (Exhibit B),

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: 2020.06.08
12:16:59 -04'00'

EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
May 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-May-20	26,220	4,465	30,685	118,080	38,212	186,977	0.00	0
2-May-20	0	0	0	0	0	0	0.00	0
3-May-20	0	0	0	0	0	0	0.00	0
4-May-20	74,254	12,761	87,015	352,768	122,052	561,835	0.00	0
5-May-20	26,868	4,654	31,522	114,608	38,048	184,178	0.00	0
6-May-20	28,532	4,947	33,479	126,992	38,440	198,911	0.01	77,666
7-May-20	25,396	4,303	29,699	116,565	33,232	179,496	0.00	0
8-May-20	20,160	3,669	23,829	99,835	29,764	153,428	0.00	0
9-May-20	0	0	0	0	0	0	0.00	0
10-May-20	0	0	0	0	0	0	0.97	7,533,618
11-May-20	70,010	12,433	82,443	327,408	91,480	501,331	0.00	0
12-May-20	22,844	3,977	26,821	106,272	29,844	162,937	0.00	0
13-May-20	22,706	4,127	26,833	113,024	31,108	170,965	0.00	0
14-May-20	21,462	3,983	25,445	106,240	28,844	160,529	0.00	0
15-May-20	24,092	4,438	28,530	106,288	29,332	164,150	0.39	3,028,980
16-May-20	0	0	0	0	0	0	0.01	77,666
17-May-20	0	0	0	0	0	0	0.00	0
18-May-20	75,304	143,348	218,652	324,848	86,736	630,236	0.26	2,019,320
19-May-20	21,576	18,819	40,395	93,392	39,440	173,227	0.01	77,666
20-May-20	24,072	18,693	42,765	105,728	34,416	182,909	0.00	0
21-May-20	22,028	16,742	38,770	101,248	34,416	174,434	0.08	621,329
22-May-20	17,116	16,463	33,579	101,472	29,956	165,007	0.06	465,997
23-May-20	0	0	0	0	0	0	0.14	1,087,326
24-May-20	0	0	0	0	0	0	0.18	1,397,991
25-May-20	0	0	0	0	0	0	1.13	8,776,276
26-May-20	93,608	62,438	156,046	400,096	117,920	674,062	0.00	0
27-May-20	21,956	14,041	35,997	96,480	30,068	162,545	0.00	0
28-May-20	20,584	12,896	33,480	95,280	29,840	158,600	0.00	0
29-May-20	19,960	12,550	32,510	96,704	29,708	158,922	0.00	0
30-May-20	0	0	0	0	0	0	0.00	0
31-May-20	0	0	0	0	0	0	0.00	0
TOTAL	678,748	379,747	1,058,495	3,103,328	942,856	5,104,679	3.24	25,163,836
Leachate Pumped as Percentage of Rainfall				11.8%	29.9%	16.2%		

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 -- 2020

MONTH	B	C	D	E	F	G	H	I	J
	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	1,002,110	4,283,984	737,112	6,023,206	0.00	0	0.0%	0.0%	0.0%
APRIL	814,608	3,218,320	731,000	4,763,928	5.66	43,959,047	5.2%	17.7%	7.2%
MAY	1,058,495	3,103,328	942,856	5,104,679	3.24	25,163,836	11.8%	29.9%	16.2%
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	4,384,245	27,733,088	4,088,180	36,205,513	12.00	93,199,392	13.2%	83.4%	12.3%

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
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		
	5/1/20	33187596	7009781	51878156	244824176	33.90		
5/2/20								
5/3/20								
5/4/20	33261850	7022542	52000208	245176944	33.88	32.15	OK	JTB
5/5/20	33228718	7027196	52038256	245291552	33.88	32.03	OK	JTB
5/6/20	33317250	7032143	52076656	245418544	33.85	31.95	OK	JTB
5/7/20	33342646	7036446	52105928	245553504	33.85	31.85	OK	JTB
5/8/20	33362806	7040115	5213962	245634944	33.78	31.65	OK	JTB
5/9/20								
5/10/20								
5/11/20	33432216	7052948	52231172	245962362	33.78	31.58	OK	JTB
5/12/20	33455660	7056525	52261016	246068624	33.78	31.52	OK	JTB
5/13/20	33478366	7060662	52292124	246181648	33.72	31.43	OK	JTB
5/14/20	33499828	7064635	52320968	246287888	33.72	31.40	OK	JTB
5/15/20	33523520	7069073	52350300	246394176	33.68	31.32	OK	JTB
5/16/20								
5/17/20								
5/18/20	33599224	7212421	52437036	246719024	33.68	31.18	OK	JTB
5/19/20	33620800	7231240	52476476	246812416	33.65	31.15	OK	JTB
5/20/20	33644872	7249933	52516892	246918144	33.65	31.02	OK	JTB
5/21/20	33666900	7266675	52545308	247019392	33.65	31.02	OK	JTB
5/22/20	33687016	7283138	52575264	247120864	33.65	30.97	OK	JTB
5/23/20								
5/24/20								
5/25/20								
5/26/20	33777624	7345576	52693184	247520960	33.78	31.00	OK	JTB
5/27/20	33799580	7359617	52723252	247617440	33.75	31.00	OK	JTB
5/28/20	33820164	7372513	52753052	247712720	33.71	30.98	OK	JTB
5/29/20	33840124	7385063	52782800	247809124	33.68	30.85	OK	JTB
5/30/20								
5/31/20								

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2020 May	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.041	42.80	40.80
2	0.00	0.041	42.80	40.80
3	0.00	0.041	42.80	40.80
4	0.00	0.039	42.80	40.80
5	0.00	0.038	42.80	40.80
6	0.01	0.038	42.80	40.80
7	0.00	0.036	42.80	40.80
8	0.00	0.036	42.80	40.80
9	0.00	0.036	42.80	40.80
10	0.97	0.036	42.80	40.80
11	0.00	0.036	42.80	40.80
12	0.00	0.035	42.80	40.80
13	0.00	0.034	42.80	40.80
14	0.00	0.034	42.80	40.80
15	0.39	0.041	42.80	40.80
16	0.01	0.045	42.80	40.80
17	0.00	0.040	42.80	40.80
18	0.26	0.039	42.80	40.80
19	0.01	0.039	42.80	40.80
20	0.00	0.036	42.80	40.80
21	0.08	0.037	42.80	40.80
22	0.06	0.034	42.80	40.80
23	0.14	0.035	42.80	40.80
24	0.18	0.035	42.80	40.80
25	1.13	0.034	42.80	40.80
26	0.00	0.036	42.80	40.80
27	0.00	0.034	42.80	40.80
28	0.00	0.032	42.80	40.80
29	0.00	0.034	42.80	40.80
30	0.00	0.034	42.80	40.80
31	0.00	0.033	42.80	40.80
TOTAL	3.24	1.139		
AVG		0.037		
MIN				
MAX	1.13	0.045		

Fax # 9-708-5668

FIGURE L-7

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

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	25.26	<i>inward</i>	GW-3	39.40	33.25
P-4	40.78	22.08	<i>inward</i>	GW-4	40.53	32.53
P-5	40.73	20.73	<i>inward</i>	GW-5	39.90	32.20
P-6	40.74	19.74	<i>inward</i>	GW-6	38.95	31.55
P-7	40.60	19.10	<i>inward</i>	GW-7	39.49	29.34
P-8	40.21	19.01	<i>inward</i>	GW-8	39.75	28.85
P-9	39.97	19.27	<i>inward</i>	GW-9	39.65	29.25
P-10	39.86	24.76	<i>inward</i>	GW-10	38.34	29.54
P-11	40.52	22.32	<i>inward</i>	GW-11	38.26	30.96
P-12	43.28	29.48	<i>inward</i>	GW-12	42.09	32.59
P-13	44.78	30.78	<i>inward</i>	GW-13	44.79	33.84
P-14	45.09	30.09	<i>inward</i>	GW-14	39.63	33.63
P-15	45.57	30.87	<i>inward</i>	GW-15	42.33	34.68
P-16	44.67	30.97	<i>inward</i>	GW-16	44.41	34.91
P-17	44.28	30.28	<i>inward</i>	GW-17	42.19	33.79
P-18	43.16	24.06	<i>inward</i>	GW-18	41.76	31.26
P-19	42.91	23.06	<i>inward</i>	GW-19	41.20	29.70
P-20	42.54	25.59	<i>inward</i>	GW-20	41.00	28.05
P-21	42.23	24.93	<i>inward</i>	GW-21	40.94	25.09
P-22	42.06	23.88	<i>inward</i>	GW-22	41.53	26.18
P-23	42.08	22.68	<i>inward</i>	GW-23	40.91	29.21
P-24	42.03	19.93	<i>inward</i>	GW-24	41.37	28.72
P-25	42.16	19.16	<i>inward</i>	GW-25	41.11	30.31
P-26	42.50	19.10	<i>inward</i>	GW-26	41.44	32.04
P-27R	42.73	19.53	<i>inward</i>	GW-27R	40.90	32.25

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: 5/28/2020