May 12, 2021
File No. 09217088.21

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 2021

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.

Please note for last month's readings on March 31, 2021 the Leachate Meter Readings for Stage II was submitted as 9,306,030 gallons. There was a typo reading the data supplied for the meter reading and the correct number should have been 9,300,030 gallons.

Sincerely,

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

Andres Velosa
Staff Professional I
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 R. FISCHER
LICENSE
No 58026
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

Shane Fischer
Digitally signed by Shane Fischer
Date: 2021.05.12 10:13:36 -04'00'

EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
April 2021

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-21	4,141	496	4,637	25,233	3,758	33,628	0.22	1,708,656
2-Apr-21	18,323	9,689	28,012	49,533	19,562	97,107	0.00	0
3-Apr-21	0	0	0	0	0	0	0.00	0
4-Apr-21	0	0	0	0	0	0	0.00	0
5-Apr-21	21,464	9,585	31,049	73,715	22,424	127,188	0.00	0
6-Apr-21	77,848	36,768	114,616	289,748	88,484	492,848	0.00	0
7-Apr-21	22,260	10,053	32,313	57,764	23,056	113,133	0.00	0
8-Apr-21	22,892	10,198	33,090	72,202	22,252	127,544	0.00	0
9-Apr-21	82,196	10,226	92,422	72,647	21,520	186,589	0.00	0
10-Apr-21	0	0	0	0	0	0	0.32	2,485,317
11-Apr-21	0	0	0	0	0	0	2.10	16,309,894
12-Apr-21	10,736	30,695	41,431	221,456	65,644	328,531	0.00	0
13-Apr-21	21,204	9,727	30,931	62,118	24,728	117,777	0.01	77,666
14-Apr-21	18,624	8,945	27,569	63,141	23,800	114,510	0.00	0
15-Apr-21	21,276	9,610	30,886	81,938	26,172	138,996	0.00	0
16-Apr-21	23,480	10,050	33,530	64,391	25,024	122,945	0.00	0
17-Apr-21	0	0	0	0	0	0	0.00	0
18-Apr-21	0	0	0	0	0	0	0.00	0
19-Apr-21	68,324	29,227	97,551	230,272	74,196	402,019	1.65	12,814,916
20-Apr-21	21,188	5,055	26,243	72,611	22,792	121,646	0.83	6,446,291
21-Apr-21	27,552	13,842	41,394	79,557	51,456	172,407	0.00	0
22-Apr-21	33,284	9,827	43,111	78,124	37,104	158,339	0.00	0
23-Apr-21	30,420	11,685	42,105	806	36,156	79,067	0.00	0
24-Apr-21	0	0	0	0	0	0	0.00	0
25-Apr-21	0	0	0	0	0	0	0.00	0
26-Apr-21	87,768	31,605	119,373	1,205	108,512	229,090	0.00	0
27-Apr-21	28,668	10,256	38,924	954	29,136	69,014	0.00	0
28-Apr-21	27,372	9,767	37,139	698	29,876	67,713	0.00	0
29-Apr-21	25,092	10,207	35,299	864	30,108	66,271	0.00	0
30-Apr-21	21,492	8,706	30,198	409	20,764	51,371	0.00	0
	0	0	0	0	0	0	0.00	0
TOTAL	**715,604**	**296,219**	**1,011,823**	**1,599,386**	**806,524**	**3,417,733**	**5.13**	**39,842,740**
Leachate Pumped as Percentage of Rainfall				7.1%	9.7%	8.8%		

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).

	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**

Comments

"0" = no data recorded

EXHIBIT B

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY LEACHATE TRACKING SUMMARY -- 2021

	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	955,764	2,232,576	857,936	4,046,276	0.79	6,135,627	43.7%	88.2%	60.6%
FEBRUARY	1,014,970	0	721,028	1,735,998	3.39	26,328,828	10.8%	0.0%	11.9%
MARCH	990,938	2,060,431	774,580	3,746,493	3.72	28,891,812	9.6%	17.3%	11.6%
APRIL	1,011,823	1,599,386	806,524	3,417,733	5.13	39,842,740	7.1%	9.7%	8.8%
MAY									
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	**3,973,495**	**5,892,393**	**3,160,068**	**12,946,500**	**13.03**	**101,199,006**	**11.0%**	**16.3%**	**8.8%**

No Display

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	**Stage II**	**Stage III**	**TOTAL**
	(acres)	(acres)	(acres)	*(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		
4/1/21	43732017	9300526	64229590	2085764	32.95	30.82	OK	RGS
4/2/21	43750340	9310215	64249152	2135197	32.94	30.82	OK	RGS
4/3/21								
4/4/21								
4/5/21	43771804	9319800	64275576	2208912	32.93	30.72	OK	AG
4/6/21	43849652	9356568	64360060	2498660	32.80	30.33	OK	AG
4/7/21	43871912	9366621	64383116	2556424	32.78	30.28	OK	AG
4/8/21	43894804	9376819	64405368	2628626	32.80	30.15	OK	SP
4/9/21	43977000	9387045	64426888	2701273	32.73	30.03	OK	AG
4/10/21								
4/11/21								
4/12/21	43987736	9417740	64492532	2922729	33.10	32.19	OK	DEK
4/13/21	44008940	9427467	64517260	2984847	33.10	32.02	OK	DEK
4/14/21	44027564	9436412	64541060	3047988	33.10	31.88	OK	SP
4/15/21	44048840	9446022	64567232	3129926	33.08	31.72	OK	DEK
4/16/21	44072320	9456072	64592256	3194317	33.07	31.57	OK	DEK
4/17/21								
4/18/21								
4/19/21	44140644	9485299	64666452	3424589	33.50	32.40	OK	DEK
4/20/21	44161832	9490354	64689244	3497200	33.70	32.60	OK	DEK
4/21/21	44189384	9504196	64740700	3576757	33.89	32.30	OK	DEK
4/22/21	44222668	9514023	64777804	3654881	33.89	32.27	OK	DEK
4/23/21	44253088	9525708	64813960	3655687	33.88	32.17	OK	DEK
4/24/21								
4/25/21								
4/26/21	44340856	9557313	64922472	3656892	33.80	31.77	OK	DEK
4/27/21	44369524	9567569	64951608	3657846	33.80	31.59	OK	DEK
4/28/21	44396896	9577336	64981484	3658544	33.79	31.50	OK	DEK
3/29/21	44421988	9587543	65011592	3659408	33.78	31.41	OK	DEK
4/30/21	44443480	9596249	65032356	3659812	33.76	31.28	OK	DEK
4/31/2021								

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2021 Apr	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.22	0.131	38.80	40.80
2	0.00	0.104	38.80	40.80
3	0.00	0.133	38.80	40.80
4	0.00	0.116	38.80	40.80
5	0.00	0.123	38.80	40.80
6	0.00	0.127	38.80	40.80
7	0.00	0.128	38.80	40.80
8	0.00	0.127	18.80	40.80
9	0.00	0.108	38.80	40.80
10	0.32	0.139	38.80	40.80
11	2.10	0.124	38.80	40.80
12	0.00	0.125	38.80	40.80
13	0.01	0.125	38.80	40.80
14	0.00	0.127	38.80	40.80
15	0.00	0.132	38.80	40.80
16	0.00	0.132	38.80	40.80
17	0.00	0.118	38.80	40.80
18	0.00	0.132	38.80	40.80
19	1.65	0.128	38.80	40.80
20	0.83	0.144	38.80	40.80
21	0.00	0.173	38.80	40.80
22	0.00	0.117	38.80	40.80
23	0.00	0.089	38.80	40.80
24	0.00	0.078	38.80	40.80
25	0.00	0.067	38.80	40.80
26	0.00	0.068	38.80	40.80
27	0.00	0.067	38.80	40.80
28	0.00	0.062	38.80	40.80
29	0.00	0.062	38.80	40.80
30	0.00	0.059	38.80	40.80
31				
TOTAL	5.13	3.365		
AVG		0.112		
MIN				
MAX	2.10	0.173		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: April 2021

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	25.13	*inward*	GW-3	39.40	33.20
P-4	40.78	22.23	*inward*	GW-4	40.53	32.61
P-5	40.73	20.93	*inward*	GW-5	39.90	32.08
P-6	40.74	19.96	*inward*	GW-6	38.95	31.38
P-7	40.60	19.10	*inward*	GW-7	39.49	30.25
P-8	40.21	18.97	*inward*	GW-8	39.75	29.54
P-9	NA	NA	*NA*	*NA*	*NA*	*NA*
P-9A	39.83	22.77	*inward*	GW-9	39.65	30.55
P-10	39.86	19.46	*inward*	GW-10	38.34	29.21
P-11	40.52	22.18	*inward*	GW-11	38.26	31.00
P-12	43.28	29.52	*inward*	GW-12	42.09	32.87
P-13	44.78	30.48	*inward*	GW-13	44.79	33.79
P-14	45.09	29.78	*inward*	GW-14	39.63	33.80
P-15	45.57	30.92	*inward*	GW-15	42.33	34.26
P-16	44.67	31.07	*inward*	GW-16	44.41	33.47
P-17	44.28	30.28	*inward*	GW-17	42.19	33.94
P-18	43.16	24.28	*inward*	GW-18	41.76	33.15
P-19	42.91	23.26	*inward*	GW-19	41.20	32.77
P-20	42.54	26.01	*inward*	GW-20	41.00	31.79
P-21	42.23	25.19	*inward*	GW-21	40.94	27.52
P-22	42.06	24.00	*inward*	GW-22	41.53	28.52
P-23	42.08	22.52	*inward*	GW-23	40.91	33.40
P-24	42.03	21.49	*inward*	GW-24	41.37	32.45
P-25	42.16	21.41	*inward*	GW-25	41.11	32.61
P-26	42.50	21.40	*inward*	GW-26	41.44	33.23
P-27R	42.73	21.57	*inward*	GW-27R	40.90	33.50

NA = Not Applicable - wells and piezometers abondoned in March 2016
Wells (GW-18 through GW-27R) and piezometers (P-18 through P-27R) installed in April 2016
Piezometer P-9 abandoned and P-9A installed August 25, 2020
Date Data Collected: 4/29/2021