July 8, 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 – June 2021

Dear Mr. Tafuni:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2021 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, and Monthly Groundwater Gradient Report.

Please note for June 1st to June 18th the Leachate Meter Readings for Stage II are highlighted "NO DISPLAY." The meter screen malfunctioned and data was not recorded properly. The County completed the meter repair on June 21, 2021 and has been collecting the readings.

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: 2021.07.08 09:51:31 -04'00'

EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
June 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-Jun-21	75,924	16,799	92,723	0	150,052	242,775	0.00	0
2-Jun-21	18,044	29,581	47,625	0	43,560	91,185	0.02	155,332
3-Jun-21	18,984	9,657	28,641	0	41,196	69,837	0.15	1,164,992
4-Jun-21	17,160	8,998	26,158	0	40,208	66,366	0.22	1,708,656
5-Jun-21	0	0	0	0	0	0	0.00	0
6-Jun-21	0	0	0	0	0	0	0.32	2,485,317
7-Jun-21	5,736	26,832	32,568	0	115,784	148,352	0.00	0
8-Jun-21	2,044	9,613	11,657	0	32,684	44,341	0.85	6,601,624
9-Jun-21	24	9,025	9,049	0	40,836	49,885	0.00	0
10-Jun-21	48	9,700	9,748	0	40,020	49,768	0.00	0
11-Jun-21	24	10,341	10,365	0	43,032	53,397	0.00	0
12-Jun-21	0	0	0	0	0	0	0.00	0
13-Jun-21	0	0	0	0	0	0	0.00	0
14-Jun-21	588	30,024	30,612	0	91,688	122,300	0.31	2,407,651
15-Jun-21	124	9,516	9,640	0	42,076	51,716	0.75	5,824,962
16-Jun-21	56	9,523	9,579	0	43,788	53,367	0.22	1,708,656
17-Jun-21	20	9,131	9,151	0	36,980	46,131	0.40	3,106,646
18-Jun-21	148	11,484	11,632	0	42,020	53,652	0.00	0
19-Jun-21	0	0	0	0	0	0	0.00	0
20-Jun-21	0	0	0	0	0	0	0.00	0
21-Jun-21	2,500	38,704	41,204	5,841,653	71,588	5,954,445	0.00	0
22-Jun-21	3,144	20,929	24,073	248,904	63,328	336,305	0.00	0
23-Jun-21	2,464	18,089	20,553	190,683	57,272	268,508	0.21	1,630,989
24-Jun-21	2,352	17,638	19,990	179,270	56,112	255,372	0.45	3,494,977
25-Jun-21	2,132	18,003	20,135	163,436	52,904	236,475	0.02	155,332
26-Jun-21	0	0	0	0	0	0	0.06	465,997
27-Jun-21	0	0	0	0	0	0	0.11	854,328
28-Jun-21	2,220	52,950	55,170	354,534	130,488	540,192	0.18	1,397,991
29-Jun-21	564	15,916	16,480	110,767	40,264	167,511	3.18	24,697,839
30-Jun-21	644	19,602	20,246	115,999	46,208	182,453	0.81	6,290,959
TOTAL	**154,944**	**402,055**	**556,999**	**7,205,246**	**1,322,088**	**9,084,333**	**8.26**	**64,152,248**
Leachate Pumped as Percentage of Rainfall				2.4%	27.2%	8.9%		

NO DISPLAY

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	807,932	0	1,102,972	1,910,904	0.43	3,339,645	67.8%	0.0%	143.1%
JUNE	556,999	7,205,246	1,322,088	9,084,333	8.26	64,152,248	2.4%	27.2%	8.9%
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	**5,338,426**	**13,097,639**	**5,585,128**	**23,941,737**	**21.72**	**168,690,900**	**8.9%**	**21.8%**	**9.3%**

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		
6/1/21	45062776	9877608	66285380	4277021	33.00	DRY	OK	DEK
6/2/21	45080820	9907189	66328940	4276908	32.99	DRY	OK	DEK
6/3/21	45099801	9916846	66370136	4276806	32.98	DRY	OK	DEK
6/4/21	45116964	9925877	66410344	4276640	32.98	DRY	OK	DEK
6/5/21								
6/6/21								
6/7/21	45122700	9952676	66526128	4277322	33.00	DRY	OK	DEK
6/8/21	45124744	9962289	66558812	4760182	33.00	DRY	OK	DEK
6/9/21	45124768	9971314	66599648	4795942	33.18	29.67	OK	DEK
6/10/21	45124816	9981014	66639668	4759674	33.18	DRY	OK	DEK
6/11/21	45124840	9991355	66682700	4759238	33.10	DRY	OK	DEK
6/12/21								
6/13/21								
6/14/21	45125428	10021379	66774388	4759129	33.09	DRY	OK	DEK
6/15/21	45125552	10030895	66816464	4759018	33.10	DRY	OK	DEK
6/16/21	45125608	10040418	66860252	4758661	33.12	DRY	OK	DEK
6/17/21	45125628	10049549	66897232	4758188	33.11	DRY	OK	DEK
6/18/21	45125776	10061033	66939252	4752828	33.14	DRY	OK	DEK
6/19/21								
6/20/21								
6/21/21	45128276	10099937	67010840	5841653	33.10	DRY	OK	DEK
6/22/21	45131420	10120666	67074168	6090557	33.09	DRY	OK	DEK
6/23/21	45133884	10138755	67131440	6281240	33.10	DRY	OK	DEK
6/24/21	45136236	10156393	67187552	6460510	33.11	DRY	OK	DEK
6/25/21	45138368	10174396	67240456	6623946	33.07	DEK	OK	DEK
6/26/21								
6/27/21								
6/28/21	45140588	10227346	67370944	6978480	33.05	DRY	OK	DEK
6/29/21	45141152	10243262	67411208	7089247	33.04	DRY	OK	DEK
6/30/21	45141796	10262864	67457416	7205246	34.00	32.31	OK	DEK
6/31/2021	45142552	10287436	67526456	7341620	34.11	32.30	OK	DEK

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2021 Jun	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.231	38.80	40.80
2	0.02	0.071	38.80	40.80
3	0.15	0.068	38.80	40.80
4	0.22	0.063	38.80	40.80
5	0.00	0.049	38.80	40.80
6	0.32	0.046	38.80	40.80
7	0.00	0.036	38.80	40.80
8	0.85	0.207	38.80	40.80
9	0.00	0.052	38.80	40.80
10	0.00	0.046	38.80	40.80
11	0.00	0.057	38.80	40.80
12	0.00	0.039	38.80	40.80
13	0.00	0.036	38.80	40.80
14	0.31	0.047	38.80	40.80
15	0.75	0.052	38.80	40.80
16	0.22	0.051	38.80	40.80
17	0.40	0.039	38.80	40.80
18	0.00	0.399	38.80	40.80
19	0.00	0.424	38.80	40.80
20	0.00	0.280	38.80	40.80
21	0.00	0.313	38.80	40.80
22	0.00	0.296	38.80	40.80
23	0.21	0.261	38.80	40.80
24	0.45	0.247	38.80	40.80
25	0.02	0.232	38.80	40.80
26	0.06	0.167	38.80	40.80
27	0.11	0.158	38.80	40.80
28	0.18	0.182	38.80	40.80
29	3.18	0.171	38.80	40.80
30	0.81	0.210	38.80	40.80
31				
TOTAL	8.26	4.529		
AVG		0.151		
MIN				
MAX	3.18	0.424		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: June 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	24.52	*inward*	GW-3	39.40	31.91
P-4	40.78	22.10	*inward*	GW-4	40.53	30.63
P-5	40.73	20.83	*inward*	GW-5	39.90	30.46
P-6	40.74	19.94	*inward*	GW-6	38.95	29.78
P-7	40.60	19.13	*inward*	GW-7	39.49	27.66
P-8	40.21	18.97	*inward*	GW-8	39.75	26.24
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	19.41	*inward*	GW-10	38.34	25.90
P-11	40.52	22.12	*inward*	GW-11	38.26	28.47
P-12	43.28	30.64	*inward*	GW-12	42.09	31.53
P-13	44.78	30.89	*inward*	GW-13	44.79	33.09
P-14	45.09	29.59	*inward*	GW-14	39.63	32.38
P-15	45.57	30.74	*inward*	GW-15	42.33	32.94
P-16	44.67	31.00	*inward*	GW-16	44.41	32.26
P-17	44.28	30.98	*inward*	GW-17	42.19	32.41
P-18	43.16	24.21	*inward*	GW-18	41.76	30.99
P-19	42.91	23.12	*inward*	GW-19	41.20	29.38
P-20	42.54	25.50	*inward*	GW-20	41.00	27.95
P-21	42.23	24.76	*inward*	GW-21	40.94	25.14
P-22	42.06	23.44	*inward*	GW-22	41.53	25.48
P-23	42.08	22.45	*inward*	GW-23	40.91	27.65
P-24	42.03	20.03	*inward*	GW-24	41.37	27.92
P-25	42.16	19.25	*inward*	GW-25	41.11	29.33
P-26	42.50	19.20	*inward*	GW-26	41.44	31.55
P-27R	42.73	20.38	*inward*	GW-27R	40.90	31.60

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: 6/28/2021