March 14, 2023
File No. 09217088.28

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 2023

Dear Mr. Tafuni:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2023 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, and Monthly Groundwater Gradient Report.

Sincerely,

Robert Curtis, P.E.
Project Director
SCS Engineers

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

SRF/RBC

cc: Anthony Detweiler, Manatee County Landfill Operations Supervisor
Sarah Metcalfe, Manatee County

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: 2023.03.14 09:40:09 -04'00'

EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
February 2023

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-23	57,684	1,050	58,734	66,009	35,312	160,055	0.00	0
2-Feb-23	57,820	1,120	58,940	67,016	31,024	156,980	0.00	0
3-Feb-23	51,168	910	52,078	58,339	27,904	138,321	0.13	1,009,660
4-Feb-23	0	0	0	0	0	0	0.00	0
5-Feb-23	0	0	0	0	0	0	0.00	0
6-Feb-23	167,868	3,036	170,904	199,766	98,608	469,278	0.00	0
7-Feb-23	52,604	994	53,598	62,267	29,864	145,729	0.00	0
8-Feb-23	49,700	812	50,512	61,558	27,768	139,838	0.00	0
9-Feb-23	56,016	1,062	57,078	62,625	27,440	147,143	0.00	0
10-Feb-23	49,088	746	49,834	59,769	29,280	138,883	0.00	0
11-Feb-23	0	0	0	0	0	0	0.03	232,998
12-Feb-23	0	0	0	0	0	0	0.05	388,331
13-Feb-23	160,412	2,212	162,624	193,784	91,160	447,568	0.00	0
14-Feb-23	44,348	808	45,156	54,603	27,160	126,919	0.00	0
15-Feb-23	47,944	976	48,920	59,031	31,960	139,911	0.00	0
16-Feb-23	53,884	1,006	54,890	64,965	34,064	153,919	0.00	0
17-Feb-23	49,212	886	50,098	59,460	30,968	140,526	0.00	0
18-Feb-23	0	0	0	0	0	0	0.00	0
19-Feb-23	0	0	0	0	0	0	0.00	0
20-Feb-23	0	0	0	0	0	0	0.00	0
21-Feb-23	184,944	3,772	188,716	232,343	123,904	544,963	0.00	0
22-Feb-23	50,104	962	51,066	60,666	30,632	142,364	0.01	77,666
23-Feb-23	43,756	1,038	44,794	56,403	27,160	128,357	0.00	0
24-Feb-23	35,260	958	36,218	57,646	28,392	122,256	0.01	77,666
25-Feb-23	0	0	0	0	0	0	0.00	0
26-Feb-23	0	0	0	0	0	0	0.00	0
27-Feb-23	109,268	2,814	112,082	174,522	94,528	381,132	0.00	0
28-Feb-23	38,448	1,120	39,568	54,995	29,616	124,179	0.00	0
TOTAL	**1,359,528**	**26,282**	**1,385,810**	**1,705,767**	**856,744**	**3,948,321**	**0.23**	**1,786,322**
Leachate Pumped as Percentage of Rainfall			217.5%	231.4%	207.8%			

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 -- 2023

	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	1,891,568	2,321,311	1,545,016	5,757,895	2.73	21,202,862	25.0%	26.5%	31.6%
FEBRUARY	1,385,810	1,705,767	856,744	3,948,321	0.23	1,786,322	217.5%	231.4%	207.8%
MARCH									
APRIL									
MAY									
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	**3,277,378**	**4,027,078**	**2,401,760**	**9,706,216**	**2.96**	**22,989,183**	**40.0%**	**42.5%**	**45.3%**

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		
2/1/23	55924408	19895872	97445040	3572152	34.49	DRY	OK	TEK
2/2/23	55982228	19896992	97476064	3639168	34.49	DRY	OK	TEK
2/3/23	56033396	19897902	97503968	3697507	34.49	DRY	OK	DRS
2/4/23								
2/5/23								
2/6/23	56201264	19900938	97602576	3897273	34.49	DRY	OK	TEK
2/7/23	56253868	19901932	97632440	3959540	34.49	DRY	OK	TEK
2/8/23	56303568	19902744	97660208	4021098	34.49	DRY	OK	TEK
2/9/23	56359584	19903806	97687648	4083723	34.48	DRY	OK	TEK
2/10/23	56408672	19904552	97716928	4143492	34.48	DRY	OK	TEK
2/11/23								
2/12/23								
2/13/23	56569084	19906764	97808088	4337276	34.48	DRY	OK	TEK
2/14/23	56613432	19907572	97835248	4391879	34.48	DRY	OK	TEK
2/15/23	56661376	19908548	97867208	4450910	34.48	DRY	OK	TEK
2/16/23	56715260	19909554	97901272	4515875	34.48	DRY	OK	TEK
2/17/23	56764472	19910440	97932240	4575335	34.48	DRY	OK	TEK
2/18/23								
2/19/23								
2/20/23								
2/21/23	56949416	19914212	98056144	4807678	34.48	DRY	OK	TEK
2/22/23	56999520	19915174	98086776	4868344	34.47	DRY	OK	TEK
2/23/23	57043276	19916212	98113936	4924747	34.47	DRY	OK	TEK
2/24/23	57078536	19917170	98142328	4982393	34.47	DRY	OK	TEK
2/25/23								
2/26/23								
2/27/23	57188804	19919984	98236856	5156915	34.38	DRY	OK	TEK
2/28/23	57226252	19921104	98266472	5211910	34.37	DRY	OK	TEK

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2023 Feb	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.110	18.80	40.80
2	0.00	0.157	18.80	40.80
3	0.13	0.122	18.80	40.80
4	0.00	0.114	18.80	40.80
5	0.00	0.121	18.80	40.80
6	0.00	0.117	18.80	40.80
7	0.00	0.116	18.80	40.80
8	0.00	0.118	18.80	40.80
9	0.00	0.116	18.80	40.80
10	0.00	0.116	18.80	40.80
11	0.03	0.118	18.80	40.80
12	0.05	0.116	18.80	40.80
13	0.00	0.109	18.80	40.80
14	0.00	0.109	18.80	40.80
15	0.00	0.108	18.80	40.80
16	0.00	0.109	18.80	40.80
17	0.00	0.106	18.80	40.80
18	0.00	0.101	18.80	40.80
19	0.00	0.105	18.80	40.80
20	0.00	0.105	18.80	40.80
21	0.00	0.107	18.80	40.80
22	0.01	0.102	18.80	40.80
23	0.00	0.094	18.80	40.80
24	0.01	0.091	18.80	40.80
25	0.00	0.094	18.80	40.80
26	0.00	0.097	18.80	40.80
27	0.00	0.096	18.80	40.80
28	0.00	0.095	18.80	40.80
29				
30				
31				
TOTAL	0.23	3.069		
AVG		0.110		
MIN				
MAX	0.13	0.157		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: February 2023

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	25.05	*inward*	GW-3	39.40	32.80
P-4	40.78	22.26	*inward*	GW-4	40.53	32.49
P-5	40.73	21.25	*inward*	GW-5	39.90	30.98
P-6	40.74	20.03	*inward*	GW-6	38.95	31.11
P-7	40.60	19.25	*inward*	GW-7	39.49	28.64
P-8	40.21	19.08	*inward*	GW-8	39.75	27.63
P-9	NA	NA	*NA*	*NA*	*NA*	*NA*
P-9A	39.83	22.77	*inward*	GW-9	39.65	27.40
P-10	39.86	19.46	*inward*	GW-10	38.34	27.64
P-11	40.52	22.41	*inward*	GW-11	38.26	29.61
P-12	43.28	29.89	*inward*	GW-12	42.09	32.80
P-13	44.78	30.99	*inward*	GW-13	44.79	34.58
P-14	45.09	30.84	*inward*	GW-14	39.63	34.88
P-15	45.57	31.21	*inward*	GW-15	42.33	33.34
P-16	44.67	31.07	*inward*	GW-16	44.41	35.63
P-17	44.28	30.75	*inward*	GW-17	42.19	34.51
P-18	43.16	24.33	*inward*	GW-18	41.76	32.78
P-19	42.91	23.17	*inward*	GW-19	41.20	31.12
P-20	42.54	24.86	*inward*	GW-20	41.00	29.48
P-21	42.23	25.18	*inward*	GW-21	40.94	26.83
P-22	42.06	23.98	*inward*	GW-22	41.53	30.03
P-23	42.08	22.51	*inward*	GW-23	40.91	28.60
P-24	42.03	20.01	*inward*	GW-24	41.37	29.35
P-25	42.16	19.23	*inward*	GW-25	41.11	31.25
P-26	42.50	19.20	*inward*	GW-26	41.44	32.74
P-27R	42.73	19.60	*inward*	GW-27R	40.90	32.63

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: 2/22/2023