

June 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 – May 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

SRF/RBC

cc: Anthony Detweiler, Manatee County
Sarah Metcalfe, Manatee County
Jacolyn Abdala, Manatee County
Stephen Whaley, Manatee County



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

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.

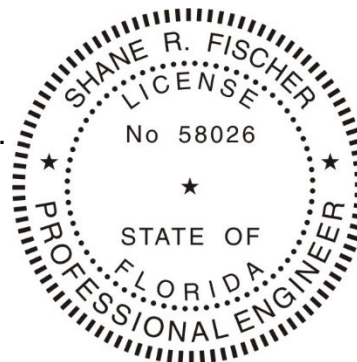


EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
May 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-May-23	3,748	4,138	7,886	138,809	76,616	223,311	0.00	0
2-May-23	11,468	2,812	14,280	50,608	43,800	108,688	0.00	0
3-May-23	18,216	28,876	47,092	58,255	37,440	142,787	0.00	0
4-May-23	9,916	12,722	22,638	46,060	30,824	99,522	0.00	0
5-May-23	16,332	15,282	31,614	45,745	29,384	106,743	0.00	0
6-May-23	0	0	0	0	0	0	0.55	4,271,639
7-May-23	0	0	0	0	0	0	0.00	0
8-May-23	50,788	46,126	96,914	135,944	87,328	320,186	0.00	0
9-May-23	21,748	18,226	39,974	48,115	30,648	118,737	0.00	0
10-May-23	23,860	20,648	44,508	50,419	33,184	128,111	0.00	0
11-May-23	17,356	36,626	53,982	44,885	30,168	129,035	0.00	0
12-May-23	17,664	136,478	154,142	44,167	24,064	222,373	0.17	1,320,325
13-May-23	0	0	0	0	0	0	0.11	854,328
14-May-23	0	0	0	0	0	0	0.00	0
15-May-23	17,780	67,890	85,670	131,589	69,944	287,203	0.00	0
16-May-23	14,660	143,198	157,858	44,153	20,976	222,987	0.00	0
17-May-23	16,660	10,748	27,408	43,821	28,240	99,469	0.00	0
18-May-23	16,044	19,368	35,412	46,824	48,552	130,788	0.00	0
19-May-23	18,116	140,498	158,614	41,998	24,416	225,028	0.00	0
20-May-23	0	0	0	0	0	0	0.08	621,329
21-May-23	0	0	0	0	0	0	0.00	0
22-May-23	52,279	63,206	115,485	139,625	88,616	343,726	0.00	0
23-May-23	17,049	7,918	24,967	43,823	26,416	95,206	0.15	1,164,992
24-May-23	16,024	32,879	48,903	46,484	26,152	121,539	4.73	36,736,094
25-May-23	20,168	114,141	134,309	48,587	30,568	213,464	0.60	4,659,970
26-May-23	20,860	69,252	90,112	56,865	32,184	179,161	0.19	1,475,657
27-May-23	0	0	0	0	0	0	0.00	0
28-May-23	0	0	0	0	0	0	0.00	0
29-May-23	0	0	0	0	0	0	0.00	0
30-May-23	40,440	199,970	240,410	257,995	124,664	623,069	0.00	0
31-May-23	18,988	52,714	71,702	76,862	35,744	184,308	2.50	19,416,540
TOTAL	460,164	1,243,716	1,703,880	1,641,633	979,928	4,325,441	9.08	70,520,873
Leachate Pumped as Percentage of Rainfall			6.8%	5.6%	6.0%			

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

	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

"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	2,510,442	3,333,526	1,682,200	7,526,168	0.40	3,106,646	226.6%	260.1%	234.6%
APRIL	375,790	1,393,701	831,272	2,600,763	4.94	38,367,083	2.7%	8.8%	9.4%
MAY	1,703,880	1,641,633	979,928	4,325,441	9.08	70,520,873	6.8%	5.6%	6.0%
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	7,867,490	10,395,938	5,895,160	24,158,588	17.38	134,983,786	16.3%	18.7%	18.9%

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				STORMWATER		COMMENTS	NAME (Initials)
	METERS				S.G.			
	#1	#2	#3	#4	#1	#2		
5/1/23	58428588	20227076	99999816	8372179	34.00	30.54	OK	YIK
5/2/23	58440056	20239888	100043616	8422787	34.00	30.44	OK	YIK
5/3/23	58458272	20258764	100081056	8481042	34.00	30.36	OK	YIK
5/4/23	58468188	20271486	100111880	8527102	34.00	30.27	OK	YIK
5/5/23	58484520	20286768	100141264	852847	33.98	30.15	OK	YIK
5/6/23								
5/7/23								
5/8/23	58535308	20332894	100228582	8708791	33.98	29.87	OK	YIK
5/9/23	58557056	20351120	100259240	8756906	33.98	29.79	OK	YIK
5/10/23	58580916	20371768	10029264	8807325	33.94	29.69	OK	YIK
5/11/23	58598272	20408394	10032252	8852210	33.92	29.62	OK	YIK
5/12/23	58615936	20544872	100346656	8896377	33.89	29.54	OK	YIK
5/13/23								
5/14/23								
5/15/23	58633716	20612762	100416600	9027966	33.88	DRY	OK	YIK
5/16/23	58648376	20755960	100437576	9072119	33.88	DRY	OK	YIK
5/17/23	58665076	20766708	100465816	9115940	33.84	DRY	OK	AK
5/18/23	58681080	20786076	100514368	9162764	33.81	DRY	OK	AK
5/19/23	58699196	20926574	100538784	9204762	33.78	DRY	OK	AK
5/20/23								
5/21/23								
5/22/23	58751475	20989780	100627400	9344387	33.77	DRY	OK	YIK
5/23/23	58768524	20997698	100653816	9388210	33.76	DRY	OK	YIK
5/24/23	58784548	21030577	100679968	9434694	33.73	DRY	OK	YIK
5/25/23	58804716	21144718	100710536	9483281	34.71	32.35	OK	YIK
5/26/23	58825576	21213970	100742720	9540146	34.62	32.30	OK	YIK
5/27/23								
5/28/23								
5/29/23								
5/30/23	58866016	21413940	100867854	9798141	34.46	31.79	OK	YIK
5/31/23	58885004	21466654	100903128	9875003	34.57	31.60	OK	YIK

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2023 May	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.062	18.80	40.80
2	0.00	0.070	18.80	40.80
3	0.00	0.073	18.80	40.80
4	0.00	0.072	18.80	40.80
5	0.00	0.073	18.80	40.80
6	0.55	0.074	18.80	40.80
7	0.00	0.075	18.80	40.80
8	0.00	0.079	18.80	40.80
9	0.00	0.077	18.80	40.80
10	0.00	0.073	18.80	40.80
11	0.00	0.171	18.80	40.80
12	0.17	0.149	18.80	40.80
13	0.11	0.054	18.80	40.80
14	0.00	0.050	18.80	40.80
15	0.00	0.158	18.80	40.80
16	0.00	0.099	18.80	40.80
17	0.00	0.062	18.80	40.80
18	0.00	0.188	18.80	40.80
19	0.00	0.110	18.80	40.80
20	0.08	0.068	18.80	40.80
21	0.00	0.098	18.80	40.80
22	0.00	0.098	18.80	40.80
23	0.15	0.065	18.80	40.80
24	4.73	0.168	18.80	40.80
25	0.60	0.162	18.80	40.80
26	0.19	0.159	18.80	40.80
27	0.00	0.148	18.80	40.80
28	0.00	0.135	18.80	40.80
29	0.00	0.130	18.80	40.80
30	0.00	0.123	18.80	40.80
31	2.50	0.117	18.80	40.80
TOTAL	9.08	3.240		
AVG		0.105		
MIN				
MAX	4.73	0.188		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: May 2023

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	24.45	<i>inward</i>	GW-3	39.40	30.99
P-4	40.78	22.09	<i>inward</i>	GW-4	40.53	30.06
P-5	40.73	21.12	<i>inward</i>	GW-5	39.90	29.58
P-6	40.74	19.97	<i>inward</i>	GW-6	38.95	28.82
P-7	40.60	19.19	<i>inward</i>	GW-7	39.49	26.73
P-8	40.21	19.06	<i>inward</i>	GW-8	39.75	25.57
P-9	NA	NA	NA	NA	NA	NA
P-9A	39.83	22.77	<i>inward</i>	GW-9	39.65	24.97
P-10	39.86	19.40	<i>inward</i>	GW-10	38.34	25.32
P-11	40.52	22.27	<i>inward</i>	GW-11	38.26	28.61
P-12	43.28	31.54	<i>inward</i>	GW-12	42.09	31.72
P-13	44.78	31.37	<i>inward</i>	GW-13	44.79	33.84
P-14	45.09	31.34	<i>inward</i>	GW-14	39.63	32.90
P-15	45.57	31.66	<i>inward</i>	GW-15	42.33	31.95
P-16	44.67	31.07	<i>inward</i>	GW-16	44.41	33.99
P-17	44.28	31.73	<i>inward</i>	GW-17	42.19	32.75
P-18	43.16	24.14	<i>inward</i>	GW-18	41.76	30.16
P-19	42.91	23.12	<i>inward</i>	GW-19	41.20	28.19
P-20	42.54	25.47	<i>inward</i>	GW-20	41.00	27.49
P-21	42.23	24.72	<i>inward</i>	GW-21	40.94	25.40
P-22	42.06	23.81	<i>inward</i>	GW-22	41.53	24.78
P-23	42.08	22.47	<i>inward</i>	GW-23	40.91	26.83
P-24	42.03	19.90	<i>inward</i>	GW-24	41.37	26.95
P-25	42.16	19.23	<i>inward</i>	GW-25	41.11	28.58
P-26	42.50	19.21	<i>inward</i>	GW-26	41.44	30.49
P-27R	42.73	19.59	<i>inward</i>	GW-27R	40.90	30.45

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

Piezometer P-9 abandoned and P-9A installed August 25, 2020

Date Data Collected: 5/24/2023