

Mahoney, Tobey

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Thursday, July 13, 2023 2:11 PM
To: SWD_Waste; Tafuni, Steven
Cc: Anthony Detweiler; Sarah Metcalfe; Jacolyn Abdala; Stephen Whaley; Al-Khalaf, Laila
Subject: Manatee County Lena Road Landfill Monthly Report June 2023
Attachments: June 2023 Report.pdf

EXTERNAL MESSAGE

This email originated outside of DEP. Please use caution when opening attachments, clicking links, or responding to this email.

Mr. Tafuni,

Attached is the Manatee County Lena Road Landfill Monthly Report (for June 2023) which includes the following:

- Monthly Water Balance Report (Exhibit A)
- Monthly Leachate Tracking Summary - 2023 (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) 503-1044.

Thanks

Shane R. Fischer, P.E.
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July 13, 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 – June 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

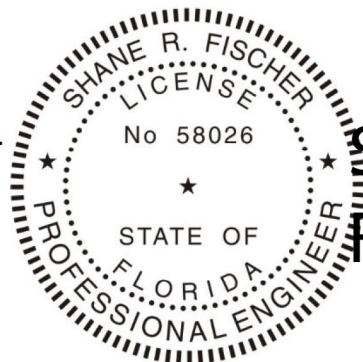
Enclosures

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, P.E.
Vice President/Office Manager
SCS Engineers



Shane
Fischer

Digitally signed
by Shane Fischer
Date: 2023.07.13
14:08:51 -04'00'

EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
June 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-Jun-23	14,564	37,506	52,070	59,930	28,512	140,512	0.17	1,320,325
2-Jun-23	15,000	39,287	54,287	57,430	32,691	144,408	1.04	8,077,281
3-Jun-23	0	0	0	0	0	0	0.00	0
4-Jun-23	0	0	0	0	0	0	0.00	0
5-Jun-23	30,792	148,271	179,063	308,210	147,757	635,030	0.01	77,666
6-Jun-23	10,404	46,912	57,316	112,866	55,160	225,342	0.00	0
7-Jun-23	5,680	40,216	45,896	94,164	45,064	185,124	0.00	0
8-Jun-23	5,776	39,868	45,644	89,832	39,792	175,268	0.07	543,663
9-Jun-23	17,388	34,688	52,076	76,343	34,816	163,235	0.00	0
10-Jun-23	0	0	0	0	0	0	0.00	0
11-Jun-23	0	0	0	0	0	0	0.00	0
12-Jun-23	54,100	113,426	167,526	254,756	110,792	533,074	0.00	0
13-Jun-23	21,788	40,288	62,076	89,721	39,952	191,749	0.00	0
14-Jun-23	19,380	36,666	56,046	78,740	36,256	171,042	0.00	0
15-Jun-23	18,088	33,883	51,971	72,792	34,072	158,835	0.00	0
16-Jun-23	15,168	33,045	48,213	69,506	31,088	148,807	0.04	310,665
17-Jun-23	0	0	0	0	0	0	0.68	5,281,299
18-Jun-23	0	0	0	0	0	0	0.83	6,446,291
19-Jun-23	45,392	101,714	147,106	213,038	90,344	450,488	0.00	0
20-Jun-23	6,840	34,880	41,720	75,583	32,992	150,295	0.00	0
21-Jun-23	50,700	36,922	87,622	76,252	34,808	198,682	0.55	4,271,639
22-Jun-23	94,548	34,930	129,478	63,014	23,352	215,844	0.00	0
23-Jun-23	47,752	41,838	89,590	81,071	31,768	202,429	0.01	77,666
24-Jun-23	0	0	0	0	0	0	0.00	0
25-Jun-23	0	0	0	0	0	0	0.00	0
26-Jun-23	16,252	108,754	125,006	200,717	85,248	410,971	0.00	0
27-Jun-23	8,124	34,904	43,028	63,548	25,784	132,360	0.00	0
28-Jun-23	6,300	37,612	43,912	67,196	27,624	138,732	0.00	0
29-Jun-23	4,536	35,514	40,050	66,137	29,704	135,891	0.12	931,994
30-Jun-23	4,184	32,248	36,432	68,830	27,616	132,878	0.00	0
TOTAL	512,756	1,143,372	1,656,128	2,339,676	1,045,192	5,040,996	3.52	27,338,488
Leachate Pumped as Percentage of Rainfall			17.0%	20.7%	16.6%			

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 -- 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	1,656,128	2,339,676	1,045,192	5,040,996	3.52	27,338,488	17.0%	20.7%	16.6%
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	9,523,618	12,735,614	6,940,352	29,199,584	20.90	162,322,274	16.5%	19.0%	18.5%

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 METERS				STORMWATER S.G.		COMMENTS	NAME (Initials)
	#1	#2	#3	#4	#1	#2		
6/1/23	58899568	21504160	100931640	9934933	34.77	32.35	OK	DEK
6/2/23	58914568	21543447	100964531	9992363	34.61	32.30	OK	DEK
6/3/23								
6/4/23								
6/5/23	58945360	20691718	10112088	300574	34.50	32.19	#4 RESTART	DEK
6/6/23	58955764	21738630	101167248	413440	34.49	32.02	OK	DEK
6/7/23	58961444	21778846	101212312	507604	34.49	31.90	OK	DEK
6/8/23	58967220	21818714	101252104	597436	34.48	31.79	OK	DEK
6/9/23	58984608	21853402	101286820	673779	34.48	31.68	OK	DEK
6/10/23								
6/11/23								
6/12/23	59038708	21966828	101397712	928535	34.44	31.33	OK	DEK
6/13/23	59060496	22007116	101437664	1018256	34.44	31.21	OK	DEK
6/14/23	59079876	22043782	101473220	1096996	34.43	31.12	OK	DEK
6/15/23	59097964	22077650	101507992	1169788	34.42	31.02	OK	DEK
6/16/23	59113132	22110710	101539080	1239294	34.40	30.89	OK	DEK
6/17/23								
6/18/23								
6/19/23	59158524	22212424	101629424	1452332	34.48	30.87	OK	DEK
6/20/23	59165364	222247304	101662416	1527915	34.48	30.77	OK	DEK
6/21/23	59216064	22284226	101697224	1604167	34.48	30.71	OK	DEK
6/22/23	59310612	22319156	101720576	1667181	34.49	30.75	OK	DEK
6/23/23	59358364	22360994	101752344	1748252	34.49	30.65	OK	DEK
6/24/23								
6/25/23								
6/26/23	59374616	22469718	101837592	1948969	34.48	30.29	OK	DEK
6/27/23	59382740	22504652	101863376	2012517	34.49	30.29	OK	DEK
6/28/23	59389040	22512264	101891000	2079713	34.42	30.18	OK	DEK
6/29/23	59393576	22527278	101920704	214585	34.40	30.20	OK	DM
6/30/23	59397760	22610026	10194832	22468	34.39	30.16	OK	MO
6/31/2023								

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2023 Jun	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.17	0.138	18.80	40.80
2	1.04	0.156	18.80	40.80
3	0.00	0.179	18.80	40.80
4	0.00	0.189	18.80	40.80
5	0.01	0.183	18.80	40.80
6	0.00	0.176	18.80	40.80
7	0.00	0.169	18.80	40.80
8	0.07	0.153	18.80	40.80
9	0.00	0.145	18.80	40.80
10	0.00	0.142	18.80	40.80
11	0.00	0.142	18.80	40.80
12	0.00	0.132	18.80	40.80
13	0.00	0.128	18.80	40.80
14	0.00	0.127	18.80	40.80
15	0.00	0.127	18.80	40.80
16	0.04	0.131	18.80	40.80
17	0.68	0.119	18.80	40.80
18	0.83	0.127	18.80	40.80
19	0.00	0.128	18.80	40.80
20	0.00	0.133	18.80	40.80
21	0.55	0.221	18.80	40.80
22	0.00	0.200	18.80	40.80
23	0.01	0.127	18.80	40.80
24	0.00	0.123	18.80	40.80
25	0.00	0.129	18.80	40.80
26	0.00	0.135	18.80	40.80
27	0.00	0.137	18.80	40.80
28	0.00	0.115	18.80	40.80
29	0.12	0.108	18.80	40.80
30	0.00	0.105	18.80	40.80
31				
TOTAL	3.52	4.324		
AVG		0.144		
MIN				
MAX	1.04	0.221		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: June 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	25.13	<i>inward</i>	GW-3	39.40	32.79
P-4	40.78	22.20	<i>inward</i>	GW-4	40.53	31.88
P-5	40.73	21.26	<i>inward</i>	GW-5	39.90	31.45
P-6	40.74	19.89	<i>inward</i>	GW-6	38.95	30.64
P-7	40.60	19.19	<i>inward</i>	GW-7	39.49	28.86
P-8	40.21	19.03	<i>inward</i>	GW-8	39.75	27.65
P-9	NA	NA	NA	NA	NA	NA
P-9A	39.83	22.77	<i>inward</i>	GW-9	39.65	27.73
P-10	39.86	19.44	<i>inward</i>	GW-10	38.34	28.00
P-11	40.52	22.16	<i>inward</i>	GW-11	38.26	29.85
P-12	43.28	30.77	<i>inward</i>	GW-12	42.09	33.04
P-13	44.78	31.00	<i>inward</i>	GW-13	44.79	34.43
P-14	45.09	29.73	<i>inward</i>	GW-14	39.63	34.34
P-15	45.57	30.81	<i>inward</i>	GW-15	42.33	32.72
P-16	44.67	31.07	<i>inward</i>	GW-16	44.41	35.70
P-17	44.28	30.97	<i>inward</i>	GW-17	42.19	34.43
P-18	43.16	24.15	<i>inward</i>	GW-18	41.76	31.74
P-19	42.91	23.07	<i>inward</i>	GW-19	41.20	30.85
P-20	42.54	25.81	<i>inward</i>	GW-20	41.00	29.58
P-21	42.23	25.07	<i>inward</i>	GW-21	40.94	26.59
P-22	42.06	19.55	<i>inward</i>	GW-22	41.53	26.87
P-23	42.08	22.43	<i>inward</i>	GW-23	40.91	30.00
P-24	42.03	19.89	<i>inward</i>	GW-24	41.37	29.73
P-25	42.16	19.22	<i>inward</i>	GW-25	41.11	30.84
P-26	42.50	19.15	<i>inward</i>	GW-26	41.44	32.56
P-27R	42.73	19.61	<i>inward</i>	GW-27R	40.90	32.37

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: 6/27/2023