

Mahoney, Tobey

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Tuesday, September 12, 2023 2:00 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 August 2023
Attachments: August 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 August 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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September 12, 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 – August 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

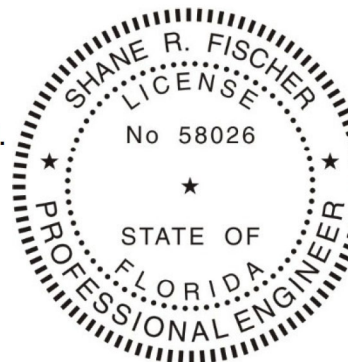
Enclosures

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: 2023.09.12
13:58:02 -04'00'

EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
August 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-Aug-23	2,840	710	3,550	65,294	34,520	103,364	0.07	543,663
2-Aug-23	3,212	1,248	4,460	71,117	36,711	112,288	0.00	0
3-Aug-23	1,692	0	1,692	51,687	27,281	80,660	0.17	1,320,325
4-Aug-23	2,200	0	2,200	63,244	31,510	96,954	0.00	0
5-Aug-23	0	0	0	0	0	0	0.00	0
6-Aug-23	0	0	0	0	0	0	0.00	0
7-Aug-23	4,352	0	4,352	178,595	97,474	280,421	0.00	0
8-Aug-23	4,152	0	4,152	64,425	36,968	105,545	0.00	0
9-Aug-23	3,288	0	3,288	57,295	29,448	90,031	0.00	0
10-Aug-23	2,816	0	2,816	50,452	26,216	79,484	0.00	0
11-Aug-23	3,354	0	3,354	63,199	31,872	98,475	0.00	0
12-Aug-23	0	0	0	0	0	0	0.00	0
13-Aug-23	0	0	0	0	0	0	0.11	854,328
14-Aug-23	3,746	0	3,746	160,134	98,408	262,288	0.00	0
15-Aug-23	1,752	0	1,752	63,197	38,824	103,773	0.00	0
16-Aug-23	1,428	0	1,428	48,387	29,216	79,031	0.06	465,997
17-Aug-23	4,564	0	4,564	52,189	34,240	90,993	0.73	5,669,630
18-Aug-23	5,288	0	5,288	52,800	39,488	97,576	0.29	2,252,319
19-Aug-23	0	0	0	0	0	0	0.00	0
20-Aug-23	0	0	0	0	0	0	0.51	3,960,974
21-Aug-23	14,300	0	14,300	161,309	116,416	292,025	0.11	854,328
22-Aug-23	4,556	0	4,556	61,591	40,160	106,307	0.00	0
23-Aug-23	3,956	480	4,436	55,162	33,136	92,734	0.00	0
24-Aug-23	3,196	404	3,600	50,396	26,864	80,860	0.06	465,997
25-Aug-23	5,364	1,094	6,458	54,879	33,280	94,617	0.01	77,666
26-Aug-23	0	0	0	0	0	0	0.00	0
27-Aug-23	0	0	0	0	0	0	0.05	388,331
28-Aug-23	15,364	2,578	17,942	164,507	115,048	297,497	0.56	4,349,305
29-Aug-23	0	0	0	0	0	0	2.33	18,096,215
30-Aug-23	0	0	0	0	0	0	3.48	27,027,824
31-Aug-23	45,336	378,420	423,756	168,514	87,032	679,302	0.10	776,662
TOTAL	136,756	384,934	521,690	1,758,373	1,044,112	3,324,175	8.64	67,103,562
Leachate Pumped as Percentage of Rainfall			2.2%	6.4%	6.7%			

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	798,448	1,843,608	857,448	3,499,504	6.45	50,094,673	4.5%	8.9%	7.4%
AUGUST	521,690	1,758,373	1,044,112	3,324,175	8.64	67,103,562	2.2%	6.4%	6.7%
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	10,843,756	16,337,595	8,841,912	36,023,263	35.99	279,520,510	10.9%	14.2%	13.7%

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		
8/1/23	59504256	23305528	1028840288	4123582	34.50	31.89	OK	DEK
8/2/23	59507468	23306776	102876888	4194699	34.50	31.75	OK	DEK
8/3/23	59509160	No #s	102904280	4246386	34.49	31.64	LEACHATE #2 DOWN UNABLE TO GET	DEK
8/4/23	59511360	No #s	102935790	4309630	34.48	31.59	" #s "	DEK
8/5/23								
8/6/23								
8/7/23	59515712	No #s	103033264	4488225	34.44	31.09	OK	DEK
8/8/23	59519864	No #s	103070232	4552650	34.42	30.95	OK	DEK
8/9/23	59523152	No #s	103099680	4609945	34.40	30.80	OK	DEK
8/10/23	59525968	No #s	103125896	4660397	34.40	30.66	OK	DEK
8/11/23	59529332	No #s	103157768	4723596	34.40	30.65	OK	DEK
8/12/23								
8/13/23								
8/14/23	59533068	No #s	103256176	4883730	34.35	30.19	OK	DEK
8/15/23	59534820	No #s	103295000	4946927	34.35	30.09	OK	DEK
8/16/23	59536248	No #s	103324216	4995314	34.32	29.98	OK	DEK
8/17/23	59540812	No #s	103358456	5047503	34.30	29.89	OK	DEK
8/18/23	59546100	No #s	103397944	5100303	34.38	29.87	OK	DEK
8/19/23								
8/20/23								
8/21/23	59560400	No #s	103514360	5261612	34.39	29.69	OK	DEK
8/22/23	59564956	No #s	103554520	5323203	34.38	29.62	OK	DEK
8/23/23	59568912	23307256	103587656	5378365	34.38	29.53	OK	DEK
8/24/23	59572108	23307660	103614520	5428761	34.35	29.42	OK	DEK
8/25/23	59577472	23308754	103647800	5483640	34.35	DRY	OK	DEK
8/26/23								
8/27/23								
8/28/23	59592836	23311332	103762848	5648147	34.31	DRY	OK	DEK
8/29/23							LANDFILL CLOSED	
8/30/23							" "	
8/31/23	59638172	233688752	103849880	5816661	34.70	32.35		DEK

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2023 Aug	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.07	0.085	18.80	40.80
2	0.00	0.081	6.06	16.51
3	0.17	0.081	6.00	16.51
4	0.00	0.081	6.10	16.50
5	0.00	0.079	6.06	16.51
6	0.00	0.078	6.06	16.51
7	0.00	0.080	6.10	16.50
8	0.00	0.080	6.06	16.50
9	0.00	0.077	6.10	16.50
10	0.00	0.078	6.10	16.50
11	0.00	0.077	6.10	16.50
12	0.00	0.074	6.10	16.50
13	0.11	0.073	6.10	16.51
14	0.00	0.074	6.10	16.50
15	0.00	0.073	6.10	16.50
16	0.06	0.074	6.10	16.50
17	0.73	0.071	6.10	16.50
18	0.29	0.070	6.10	16.51
19	0.00	0.068	6.10	16.50
20	0.51	0.068	6.10	16.50
21	0.11	0.071	6.06	16.51
22	0.00	0.070	6.10	16.50
23	0.00	0.071	6.10	16.51
24	0.06	0.068	6.10	16.51
25	0.01	0.071	6.04	15.23
26	0.00	0.067	6.04	15.23
27	0.05	0.067	6.02	15.12
28	0.56	0.195	6.00	15.10
29	2.33	0.198	6.65	15.34
30	3.48	0.179	7.12	15.69
31	0.10	0.249	7.31	15.90
TOTAL	8.64	2.828		
AVG		0.091		
MIN				
MAX	3.48	0.249		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: August 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	24.73	<i>inward</i>	GW-3	39.40	31.99
P-4	40.78	22.26	<i>inward</i>	GW-4	40.53	31.07
P-5	40.73	21.39	<i>inward</i>	GW-5	39.90	30.61
P-6	40.74	19.95	<i>inward</i>	GW-6	38.95	29.85
P-7	40.60	19.23	<i>inward</i>	GW-7	39.49	28.06
P-8	40.21	19.10	<i>inward</i>	GW-8	39.75	26.75
P-9	NA	NA	NA	NA	NA	NA
P-9A	39.83	19.70	<i>inward</i>	GW-9	39.65	27.03
P-10	39.86	19.42	<i>inward</i>	GW-10	38.34	27.24
P-11	40.52	22.24	<i>inward</i>	GW-11	38.26	29.10
P-12	43.28	9.64	<i>inward</i>	GW-12	42.09	10.94
P-13	44.78	33.33	<i>inward</i>	GW-13	44.79	34.41
P-14	45.09	32.99	<i>inward</i>	GW-14	39.63	34.37
P-15	45.57	12.00	<i>inward</i>	GW-15	42.33	12.29
P-16	44.67	33.17	<i>inward</i>	GW-16	44.41	35.51
P-17	44.28	33.16	<i>inward</i>	GW-17	42.19	34.15
P-18	43.16	24.08	<i>inward</i>	GW-18	41.76	30.13
P-19	42.91	23.12	<i>inward</i>	GW-19	41.20	28.74
P-20	42.54	25.49	<i>inward</i>	GW-20	41.00	27.45
P-21	42.23	24.73	<i>inward</i>	GW-21	40.94	24.78
P-22	42.06	23.83	<i>inward</i>	GW-22	41.53	25.03
P-23	42.08	22.56	<i>inward</i>	GW-23	40.91	27.63
P-24	42.03	19.95	<i>inward</i>	GW-24	41.37	27.52
P-25	42.16	19.24	<i>inward</i>	GW-25	41.11	29.01
P-26	42.50	19.25	<i>inward</i>	GW-26	41.44	30.79
P-27R	42.73	19.57	<i>inward</i>	GW-27R	40.90	31.64

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: 8/25/2023