

Smith, George

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Thursday, December 7, 2023 9:37 AM
To: SWD_Waste; Tafuni, Steven
Cc: Anthony Detweiler; Jacolyn Abdala; Stephen Whaley; Al-Khalaf, Laila; Loaiza, Betsy
Subject: Manatee County Lena Road Landfill Monthly Report November 2023
Attachments: November 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 November 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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December 7, 2023
File No. 09217088.32

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 – November 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. The meter for Stage III malfunctioned after November 3, 2023. The County has ordered a replacement meter and is coordinating installation. Daily meter readings will continue as normal when the new meter is installed.

Sincerely,



Robert Curtis, P.E.
Project Director
SCS Engineers

SRF/RBC

cc: Jacolyn Abdala, Manatee County
Stephen Whaley, Manatee County
Anthony Detweiler, Manatee County
Betsy Loaiza, FDEP

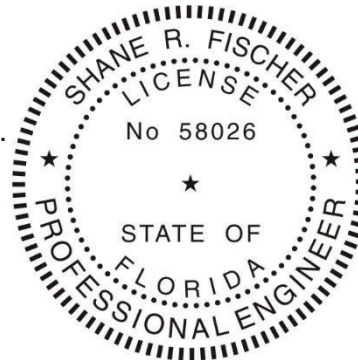


Shane R. Fischer, P.E.
Vice President/Office Manager
SCS Engineers

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.



**Shane
Fischer**

Digitally signed
by Shane Fischer
Date: 2023.12.07
09:34:13 -05'00'

EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
November 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-Nov-23	1,660	8,117	9,777	53,596	29,584	92,957	0.00	0
2-Nov-23	84,380	1,257	85,637	66,660	32,864	185,161	0.00	0
3-Nov-23	28	6,957	6,985	45,780	6,728	59,493	0.00	0
4-Nov-23	0	0	0	0	0	0	0.00	0
5-Nov-23	0	0	0	0	0	0	0.00	0
6-Nov-23	880	30,364	31,244	166,896	0	198,140	0.00	0
7-Nov-23	21,704	8,701	30,405	51,810	0	82,215	0.00	0
8-Nov-23	19,084	7,687	26,771	49,965	0	76,736	0.00	0
9-Nov-23	25,476	9,702	35,178	59,980	0	95,158	0.00	0
10-Nov-23	15,692	6,231	21,923	39,207	0	61,130	0.00	0
11-Nov-23	0	0	0	0	0	0	0.00	0
12-Nov-23	0	0	0	0	0	0	0.00	0
13-Nov-23	55,872	22,992	78,864	150,284	0	229,148	0.00	0
14-Nov-23	18,320	7,741	26,061	48,319	0	74,380	0.35	2,718,316
15-Nov-23	23,146	9,382	32,528	59,045	0	91,573	0.43	3,339,645
16-Nov-23	16,390	6,762	23,152	39,623	0	62,775	0.02	155,332
17-Nov-23	21,508	8,535	30,043	47,593	0	77,636	0.00	0
18-Nov-23	0	0	0	0	0	0	0.02	155,332
19-Nov-23	0	0	0	0	0	0	0.00	0
20-Nov-23	56,756	23,964	80,720	144,372	0	225,092	0.00	0
21-Nov-23	16,528	7,180	23,708	47,657	0	71,365	0.00	0
22-Nov-23	15,648	7,144	22,792	44,957	0	67,749	0.21	1,630,989
23-Nov-23	0	0	0	0	0	0	0.25	1,941,654
24-Nov-23	31,348	13,662	45,010	86,979	0	131,989	0.00	0
25-Nov-23	0	0	0	0	0	0	0.01	77,666
26-Nov-23	0	0	0	0	0	0	0.08	621,329
27-Nov-23	51,348	21,583	72,931	136,326	0	209,257	0.00	0
28-Nov-23	16,176	7,771	23,947	50,967	0	74,914	0.00	0
29-Nov-23	14,616	6,232	20,848	41,486	0	62,334	0.00	0
30-Nov-23	15,628	7,254	22,882	43,188	0	66,070	0.00	0
TOTAL	522,188	229,218	751,406	1,474,690	69,176	2,295,272	1.37	10,640,264
Leachate Pumped as Percentage of Rainfall			19.8%	33.6%	2.8%			

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).

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	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	1,983,688	2,011,301	1,015,648	5,010,637	3.32	25,785,165	21.6%	18.9%	17.1%
OCTOBER	2,208,004	1,861,056	957,576	5,026,636	0.44	3,417,311	181.2%	132.0%	121.4%
NOVEMBER	751,406	1,474,690	69,176	2,295,272	1.37	10,640,264	19.8%	33.6%	2.8%
DECEMBER									
TOTAL	15,786,854	21,684,642	10,884,312	48,355,808	41.12	319,363,250	13.9%	16.5%	14.8%

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		
11/1/23	601975496	82733	105852688	9742614	34.09	DRY	OK	DRK
11/2/23	602059876	83990	105885552	9809274	34.07	DRY	OK	DRK
11/3/23	602059904	90947	105892280	9855054	34.03	DRY	OK	DRK
11/4/23								
11/5/23								
11/6/23	602060784	121311	N/A	21950	33.98	DRY	#3 DOWN FOR REPAIRS #4 RESTART	DRK
11/7/23	602082488	130012	N/A	73760	33.95	DRY	OK	DRK
11/8/23	602101572	137699	N/A	123725	33.94	DRY	OK	DRK
11/9/23	602127048	147401	N/A	183705	33.93	DRY	OK	DRK
11/10/23	602142740	153632	N/A	222712	33.90	DRY	OK	DRS
11/11/23								
11/12/23								
11/13/23	602198612	176624	N/A	373196	33.89	DRY	OK	AM
11/14/23	602216932	184365	N/A	421515	33.88	DRY	OK	AM
11/15/23	602240078	193747	N/A	480560	33.89	DRY	OK	AM
11/16/23	602256468	200509	N/A	520183	33.90	DRY	OK	AM
11/17/23	602277976	209044	N/A	567776	33.89	DRY	OK	AM
11/18/23								
11/19/23								
11/20/23	602334732	233008	N/A	712148	33.85	DRY	OK	DRK
11/21/23	602351260	240188	N/A	759805	33.84	DRY	OK	DRK
11/22/23	602366908	247332	N/A	804762	33.82	DRY	OK	DRK
11/23/23			N/A					
11/24/23	602398256	260994	N/A	891741	33.80	DRY	OK	DRS
11/25/23								
11/26/23								
11/27/23	602449604	282577	N/A	1028067	33.76	DRY	OK	DRK
11/28/23	602465780	290348	N/A	1079034	33.73	DRY	OK	DRK
11/29/23	602480396	296580	N/A	1120520	33.71	DRY	OK	DRK
11/30/23	602496024	303834	N/A	1163708	33.70	DRY	OK	DRK
11/31/2023								

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2023 Nov	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.070	12.20	9.42
2	0.00	0.071	12.20	9.10
3	0.00	0.122	12.50	8.80
4	0.00	0.102	12.82	8.14
5	0.00	0.099	12.83	7.88
6	0.00	0.095	12.80	7.80
7	0.00	0.095	12.80	7.80
8	0.00	0.096	12.79	7.88
9	0.00	0.094	12.82	7.88
10	0.00	0.091	12.80	7.88
11	0.00	0.091	12.70	7.88
12	0.00	0.088	12.74	7.88
13	0.00	0.089	12.72	6.65
14	0.35	0.092	12.72	6.57
15	0.43	0.091	12.72	6.57
16	0.02	0.090	12.70	6.57
17	0.00	0.092	12.72	6.57
18	0.02	0.090	12.70	6.60
19	0.00	0.082	12.70	6.60
20	0.00	0.077	12.70	6.71
21	0.00	0.082	12.70	6.71
22	0.21	0.085	12.70	6.80
23	0.25	0.081	12.70	6.80
24	0.00	0.078	12.70	6.80
25	0.01	0.080	12.70	6.80
26	0.08	0.084	12.70	6.80
27	0.00	0.087	12.70	6.80
28	0.00	0.076	12.70	7.04
29	0.00	0.078	12.70	7.17
30	0.00	0.076	14.40	7.50
31				
TOTAL	1.37	2.624		
AVG		0.087		
MIN				
MAX	0.43	0.122		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: November 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	24.46	<i>inward</i>	GW-3	39.40	30.99
P-4	40.78	22.19	<i>inward</i>	GW-4	40.53	30.22
P-5	40.73	21.24	<i>inward</i>	GW-5	39.90	29.69
P-6	40.74	19.92	<i>inward</i>	GW-6	38.95	28.93
P-7	40.60	19.27	<i>inward</i>	GW-7	39.49	26.88
P-8	40.21	19.08	<i>inward</i>	GW-8	39.75	25.51
P-9	NA	NA	NA	NA	NA	NA
P-9A	39.83	19.72	<i>inward</i>	GW-9	39.65	25.48
P-10	39.86	19.45	<i>inward</i>	GW-10	38.34	25.67
P-11	40.52	22.27	<i>inward</i>	GW-11	38.26	28.76
P-12	43.28	29.68	<i>inward</i>	GW-12	42.09	31.20
P-13	44.78	29.89	<i>inward</i>	GW-13	44.79	33.92
P-14	45.09	30.27	<i>inward</i>	GW-14	39.63	33.26
P-15	45.57	30.77	<i>inward</i>	GW-15	42.33	32.12
P-16	44.67	31.11	<i>inward</i>	GW-16	44.41	33.21
P-17	44.28	30.48	<i>inward</i>	GW-17	42.19	32.72
P-18	43.16	24.02	<i>inward</i>	GW-18	41.76	29.34
P-19	42.91	23.10	<i>inward</i>	GW-19	41.20	27.85
P-20	42.54	25.26	<i>inward</i>	GW-20	41.00	27.00
P-21	42.23	24.58	<i>inward</i>	GW-21	40.94	24.82
P-22	42.06	23.79	<i>inward</i>	GW-22	41.53	24.66
P-23	42.08	22.48	<i>inward</i>	GW-23	40.91	26.59
P-24	42.03	19.23	<i>inward</i>	GW-24	41.37	26.86
P-25	42.16	19.29	<i>inward</i>	GW-25	41.11	28.37
P-26	42.50	19.25	<i>inward</i>	GW-26	41.44	30.64
P-27R	42.73	19.62	<i>inward</i>	GW-27R	40.90	30.56

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: 11/22/2023