

Ramey, Ashleigh

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Tuesday, November 14, 2023 6:11 PM
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 October 2023
Attachments: October 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 October 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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November 14, 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 – October 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: Jacolyn Abdala, Manatee County
Stephen Whaley, Manatee County
Anthony Detweiler, Manatee County
Betsy Loaiza, FDEP

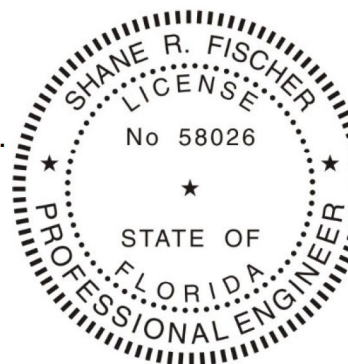


Shane R. Fischer, P.E.
Vice President/Office Manager
SCS Engineers

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:
2023.11.14
18:03:48 -05'00'

EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
October 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-Oct-23	0	0	0	0	0	0	0.00	0
2-Oct-23	83,772	27,530	111,302	237,100	92,960	441,362	0.00	0
3-Oct-23	30,861	10,844	41,705	49,487	38,848	130,040	0.00	0
4-Oct-23	25,287	9,026	34,313	32,707	24,128	91,148	0.00	0
5-Oct-23	28,616	10,266	38,882	101,648	27,056	167,586	0.00	0
6-Oct-23	28,672	10,302	38,974	81,817	28,848	149,639	0.00	0
7-Oct-23	0	0	0	0	0	0	0.00	0
8-Oct-23	0	0	0	0	0	0	0.00	0
9-Oct-23	78,408	28,782	107,190	209,620	99,192	416,002	0.00	0
10-Oct-23	28,448	10,664	39,112	73,301	36,840	149,253	0.00	0
11-Oct-23	24,856	9,588	34,444	54,276	31,032	119,752	0.19	1,475,657
12-Oct-23	29,748	10,338	40,086	45,533	34,728	120,347	0.25	1,941,654
13-Oct-23	24,944	6,928	31,872	21,074	25,448	78,394	0.00	0
14-Oct-23	0	0	0	0	0	0	0.00	0
15-Oct-23	0	0	0	0	0	0	0.00	0
16-Oct-23	74,472	975,258	1,049,730	216,333	79,616	1,345,679	0.00	0
17-Oct-23	21,928	261,082	283,010	58,683	32,208	373,901	0.00	0
18-Oct-23	21,080	0	21,080	42,748	30,088	93,916	0.00	0
19-Oct-23	26,320	0	26,320	46,994	36,384	109,698	0.00	0
20-Oct-23	27,236	0	27,236	12,748	35,976	75,960	0.00	0
21-Oct-23	0	0	0	0	0	0	0.00	0
22-Oct-23	0	0	0	0	0	0	0.00	0
23-Oct-23	61,136	2,080	63,216	8,449	78,872	150,537	0.00	0
24-Oct-23	19,588	7,622	27,210	0	20,480	47,690	0.00	0
25-Oct-23	19,012	9,347	28,359	164,476	24,632	217,467	0.00	0
26-Oct-23	20,364	9,503	29,867	84,460	26,680	141,007	0.00	0
27-Oct-23	21,096	9,836	30,932	78,731	29,560	139,223	0.00	0
28-Oct-23	0	0	0	0	0	0	0.00	0
29-Oct-23	0	0	0	0	0	0	0.00	0
30-Oct-23	63,960	27,021	90,981	188,592	86,472	366,045	0.00	0
31-Oct-23	2,976	9,207	12,183	52,279	37,528	101,990	0.00	0
TOTAL	762,780	1,445,224	2,208,004	1,861,056	957,576	5,026,636	0.44	3,417,311
Leachate Pumped as Percentage of Rainfall			181.2%	132.0%	121.4%			

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	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									
DECEMBER									
TOTAL	15,035,448	20,209,952	10,815,136	46,060,536	39.75	308,772,986	13.7%	15.9%	15.2%

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		
10/1/23								
10/2/23	61294828	24128086	104958488	8065062	34.49	30.18	OK	DRK
10/3/23	61325689	24138930	104997336	8114549	34.49	30.10	OK	DRK
10/4/23	61350976	24147956	105021464	8147256	34.49	30.01	OK	DRK
10/5/23	61379592	24158222	105048520	8248904	34.49	29.97	OK	DRK
10/6/23	61408264	24168534	105077368	8330721	34.49	29.89	OK	DRK
10/7/23								
10/8/23								
10/9/23	61486672	24197306	105176560	8540341	34.49	29.69	OK	DRK
10/10/23	61515120	24207970	105213400	8613642	34.38	29.59	OK	DRK
10/11/23	61539976	24217558	105244432	8667918	34.35	29.57	OK	DRK
10/12/23	61569724	24227896	105279160	8713451	34.38	29.56	OK	DRK
10/13/23	61594668	24234824	105304608	8734525	34.40	29.54	OK	DRK
10/14/23								
10/15/23								
10/16/23	61609140	25210082	105384224	8950858	34.35	29.4	OK	DRK
10/17/23	61691068	25471164	105416432	9009541	34.34	29.4	OK	DRK
10/18/23	6172148	NA	105446520	9052289	34.33	29.4	#2 METER REPLACEMENT	DRK
10/19/23	61738468	NA	105482904	9099283	34.30	29.4	// //	DRK
10/20/23	61765704	NA	105518880	9112031	34.29	29.4	// //	DRK
10/21/23								
10/22/23	New Meter installed 10-23-23							
10/23/23	61826840	2080	105597752	9120480	34.25	29.4	OK	DRK
10/24/23	61846428	9702	105618232	9120480	34.22	29.4	#4 PUMP ADJUSTMENT	DRK
10/25/23	61865440	19049	105642864	9284956	34.20	29.4	OK	DRK
10/26/23	61885804	28552	105669544	9369416	34.19	29.4	OK	DRK
10/27/23	61906900	38388	105699104	9448147	34.18	29.4	OK	DRK
10/28/23								
10/29/23								
10/30/23	61970860	65409	105785576	9636739	34.11	29.4	OK	DRK
10/31/23	61973836	74616	10582304	9689018	34.09	29.4	OK	DRK

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2023 Oct	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.139	7.47	16.98
2	0.00	0.105	7.44	17.07
3	0.00	0.076	7.47	16.90
4	0.00	0.128	7.43	16.76
5	0.00	0.143	7.40	16.50
6	0.00	0.132	7.43	16.37
7	0.00	0.131	7.43	16.32
8	0.00	0.129	7.75	15.93
9	0.00	0.119	8.36	15.01
10	0.00	0.097	8.85	14.19
11	0.19	0.088	9.32	13.47
12	0.25	0.083	9.79	12.90
13	0.00	0.104	10.21	12.35
14	0.00	0.089	10.44	12.00
15	0.00	0.061	10.68	11.65
16	0.00	0.057	10.83	11.37
17	0.00	0.059	10.80	11.20
18	0.00	0.056	10.84	10.99
19	0.00	0.057	10.80	10.90
20	0.00	0.058	10.80	10.67
21	0.00	0.049	10.94	10.67
22	0.00	0.047	11.20	10.70
23	0.00	0.047	11.34	10.64
24	0.00	0.059	11.50	10.45
25	0.00	0.118	11.60	10.40
26	0.00	0.119	11.60	10.30
27	0.00	0.111	11.62	10.36
28	0.00	0.106	11.66	10.36
29	0.00	0.105	11.90	10.30
30	0.00	0.091	12.20	9.80
31	0.00	0.086	12.23	9.54
TOTAL	0.44	2.849		
AVG		0.092		
MIN				
MAX	0.25	0.143		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: October 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	24.68	<i>inward</i>	GW-3	39.40	31.70
P-4	40.78	22.20	<i>inward</i>	GW-4	40.53	30.83
P-5	40.73	21.29	<i>inward</i>	GW-5	39.90	30.35
P-6	40.74	19.98	<i>inward</i>	GW-6	38.95	29.62
P-7	40.60	19.23	<i>inward</i>	GW-7	39.49	27.60
P-8	40.21	19.06	<i>inward</i>	GW-8	39.75	26.39
P-9	NA	NA	NA	NA	NA	NA
P-9A	39.83	19.81	<i>inward</i>	GW-9	39.65	26.06
P-10	39.86	19.42	<i>inward</i>	GW-10	38.34	26.30
P-11	40.52	22.27	<i>inward</i>	GW-11	38.26	29.00
P-12	43.28	29.68	<i>inward</i>	GW-12	42.09	31.83
P-13	44.78	30.89	<i>inward</i>	GW-13	44.79	34.18
P-14	45.09	29.81	<i>inward</i>	GW-14	39.63	33.93
P-15	45.57	30.80	<i>inward</i>	GW-15	42.33	32.53
P-16	44.67	31.22	<i>inward</i>	GW-16	44.41	34.30
P-17	44.28	29.42	<i>inward</i>	GW-17	42.19	33.98
P-18	43.16	24.14	<i>inward</i>	GW-18	41.76	30.11
P-19	42.91	23.12	<i>inward</i>	GW-19	41.20	28.84
P-20	42.54	25.49	<i>inward</i>	GW-20	41.00	27.98
P-21	42.23	24.78	<i>inward</i>	GW-21	40.94	25.30
P-22	42.06	23.88	<i>inward</i>	GW-22	41.53	25.44
P-23	42.08	22.47	<i>inward</i>	GW-23	40.91	27.91
P-24	42.03	19.95	<i>inward</i>	GW-24	41.37	28.02
P-25	42.16	19.24	<i>inward</i>	GW-25	41.11	29.22
P-26	42.50	19.30	<i>inward</i>	GW-26	41.44	31.44
P-27R	42.73	19.62	<i>inward</i>	GW-27R	40.90	31.37

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: 10/26/2023