

Smith, George

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Monday, November 8, 2021 10:29 AM
To: SWD_Waste; Tafuni, Steven
Cc: Anthony Detweiler; Bryan White; Bob Bennett; Lebron, Carlo; Velosa, Andres; Al-Khalaf, Laila
Subject: Manatee County Lena Road Landfill Monthly Report October 2021
Attachments: October 2021 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 2021) which includes the following:

- Monthly Water Balance Report (Exhibit A)
- Monthly Leachate Tracking Summary - 2021 (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.
Vice President/Office Manager
SCS Engineers
3922 Coconut Palm Drive, Suite 102
Tampa, Florida 33619
(813) 804-6714 (W)
(813) 503-1044 (C)
sfischer@scsengineers.com

Driven by Client Success
www.scsengineers.com

November 8, 2021
File No. 09217088.24

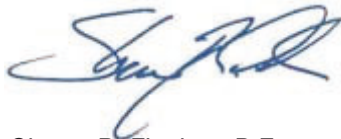
Mr. Steven Tafuni
Florida Department of Environmental Protection
Southwest District Office - Solid Waste Section
130501 N. Telecom Parkway
Temple Terrace, Florida 33637-0926

Subject: Manatee County Lena Road Landfill
Monthly Report – October 2021

Dear Mr. Tafuni:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2021 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, and Monthly Groundwater Gradient Report.

Sincerely,



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



Andres Velosa
Staff Professional I
SCS Engineers

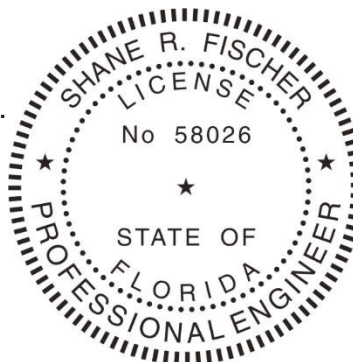
SRF/AFV

cc: Bryan White, Manatee County Landfill Superintendent
Anthony Detweiler, Manatee County Landfill Operations Supervisor
Bob Bennett, Manatee County Landfill Operations Supervisor

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:
2021.11.08
10:22:02 -05'00'

EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
October 2021**

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-21	5,631	34,730	40,361	127,852	101,740	269,953	0.00	0
2-Oct-21	0	0	0	0	0	0	0.00	0
3-Oct-21	0	0	0	0	0	0	0.00	0
4-Oct-21	16,898	103,753	120,651	430,300	123,676	674,627	0.00	0
5-Oct-21	6,284	35,690	41,974	121,197	90,680	253,851	0.00	0
6-Oct-21	6,884	33,950	40,834	142,235	89,440	272,509	0.00	0
7-Oct-21	5,988	32,598	38,586	115,374	85,368	239,328	0.01	77,666
8-Oct-21	5,284	35,798	41,082	139,028	90,832	270,942	0.22	1,708,656
9-Oct-21	0	0	0	0	0	0	0.14	1,087,326
10-Oct-21	0	0	0	0	0	0	0.00	0
11-Oct-21	12,980	104,040	117,020	374,309	204,530	695,859	0.00	0
12-Oct-21	4,992	33,484	38,476	115,346	79,982	233,804	0.00	0
13-Oct-21	6,232	33,408	39,640	133,095	77,160	249,895	0.00	0
14-Oct-21	5,696	33,467	39,163	115,186	82,584	236,933	0.00	0
15-Oct-21	5,752	33,183	38,935	115,751	79,888	234,574	0.00	0
16-Oct-21	0	0	0	0	0	0	0.00	0
17-Oct-21	0	0	0	0	0	0	0.00	0
18-Oct-21	53,788	71,792	125,580	338,884	172,232	636,696	0.00	0
19-Oct-21	6,936	24,342	31,278	112,011	67,896	211,185	0.00	0
20-Oct-21	6,716	29,405	36,121	111,480	83,856	231,457	0.00	0
21-Oct-21	5,616	25,732	31,348	110,539	63,504	205,391	0.00	0
22-Oct-21	6,916	31,814	38,730	112,626	78,648	230,004	0.00	0
23-Oct-21	0	0	0	0	0	0	0.00	0
24-Oct-21	0	0	0	0	0	0	0.05	388,331
25-Oct-21	17,748	91,820	109,568	311,690	151,152	572,410	0.06	465,997
26-Oct-21	6,344	34,083	40,427	104,553	77,352	222,332	0.01	77,666
27-Oct-21	6,360	32,563	38,923	99,089	69,880	207,892	0.00	0
28-Oct-21	7,332	34,229	41,561	114,533	73,400	229,494	0.83	6,446,291
29-Oct-21	83,964	24,613	108,577	89,836	68,064	266,477	0.03	232,998
30-Oct-21	0	0	0	0	0	0	0.18	1,397,991
31-Oct-21	0	0	0	0	0	0	0.01	77,666
TOTAL	284,341	914,494	1,198,835	3,434,914	2,011,864	6,645,613	1.54	11,960,589
Leachate Pumped as Percentage of Rainfall				28.1%	69.6%	72.9%		

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 -- 2021

	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	955,764	2,232,576	857,936	4,046,276	0.79	6,135,627	43.7%	88.2%	60.6%
FEBRUARY	1,014,970	0	721,028	1,735,998	3.39	26,328,828	10.8%	0.0%	11.9%
MARCH	990,938	2,060,431	774,580	3,746,493	3.72	28,891,812	9.6%	17.3%	11.6%
APRIL	1,011,823	1,599,386	806,524	3,417,733	5.13	39,842,740	7.1%	9.7%	8.8%
MAY	807,932	0	1,102,972	1,910,904	0.43	3,339,645	67.8%	0.0%	143.1%
JUNE	556,999	7,205,246	1,322,088	9,084,333	8.26	64,152,248	2.4%	27.2%	8.9%
JULY	1,082,483	4,844,443	2,165,856	8,092,782	11.52	89,471,416	3.4%	13.1%	10.5%
AUGUST	1,204,387	6,357,344	2,115,112	9,412,320	12.75	99,024,354	3.4%	15.6%	9.3%
SEPTEMBER	1,331,727	4,206,133	2,962,768	8,500,628	6.26	48,619,016	7.7%	21.0%	26.4%
OCTOBER	1,198,835	3,434,914	2,011,864	6,645,613	1.54	11,960,589	28.1%	69.6%	72.9%
NOVEMBER									
DECEMBER									
TOTAL	10,155,858	31,940,473	14,840,728	56,593,080	53.79	417,766,275	6.8%	21.4%	10.0%

No Display

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		
10/1/21	45976862	13158279	11482732	13214527	34.47	31.47	OK	BCW
10/2/21								
10/3/21								
10/4/21	45993780	13262032	74995608	4144367	34.37	31.10	OK	DEK
10/5/21	46000064	13297722	75086288	4265564	34.37	31.00	OK	DEK
10/6/21	46006948	13331672	75175728	4407799	34.36	30.89	OK	DEK
10/7/21	46012936	133604270	75261096	4523173	34.35	30.80	OK	DEK
10/8/21	46018220	13460068	75351928	4662201	34.34	30.68	OK	DEK
10/9/21								
10/10/21								
10/11/21	46031200	13504108	75556458	5036510	34.30	30.43	OK	DEK
10/12/21	46036192	13537592	75636440	5151856	34.30	30.35	OK	DEK
10/13/21	46042424	13571000	75713600	5284951	34.27	30.23	OK	DEK
10/14/21	46048120	13604467	75796184	5400137	34.25	30.17	OK	DEK
10/15/21	46053872	13637650	75876072	5515888	34.24	30.09	OK	DEK
10/16/21								
10/17/21								
10/18/21	46107660	13709442	76048304	5854772	34.18	29.80	OK	DEK
10/19/21	46114596	13733784	76116200	5966783	34.16	29.75	OK	DEK
10/20/21	46121312	13763189	76200056	6078263	34.12	DRY	OK	DEK
10/21/21	46126928	13788921	76263560	6188802	34.09	DRY	OK	DEK
10/22/21	46133844	13820735	76342208	6301428	34.09	DRY	OK	DEK
10/23/21								
10/24/21								
10/25/21	46151592	13912555	76493360	6613118	34.08	DRY	OK	DEK
10/26/21	46157936	13946638	76570712	6717671	34.08	DRY	OK	DEK
10/27/21	46164296	13979201	76640592	6816760	34.01	DRY	OK	DEK
10/28/21	46171628	14013430	76713992	6931293	34.01	DRY	OK	DEK
10/29/21	46255592	14038043	76782056	7021129	34.00	DRY	OK	DEK
10/30/21								
10/31/21								

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2021 Oct	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.239	18.80	40.80
2	0.00	0.242	18.80	40.80
3	0.00	0.218	18.80	40.80
4	0.00	0.262	18.80	40.80
5	0.00	0.248	18.80	40.80
6	0.00	0.270	18.80	40.80
7	0.01	0.263	18.80	40.80
8	0.22	0.246	18.80	40.80
9	0.14	0.249	18.80	40.80
10	0.00	0.200	18.80	40.80
11	0.00	0.246	18.80	40.80
12	0.00	0.231	18.80	40.80
13	0.00	0.241	18.80	40.80
14	0.00	0.242	18.80	40.80
15	0.00	0.231	18.80	40.80
16	0.00	0.211	18.80	40.80
17	0.00	0.201	18.80	40.80
18	0.00	0.220	18.80	40.80
19	0.00	0.218	18.80	40.80
20	0.00	0.214	18.80	40.80
21	0.00	0.205	18.80	40.80
22	0.00	0.217	18.80	40.80
23	0.00	0.200	18.80	40.80
24	0.05	0.183	18.80	40.80
25	0.06	0.196	18.80	40.80
26	0.01	0.227	18.80	40.80
27	0.00	0.218	18.80	40.80
28	0.83	0.235	18.80	40.80
29	0.03	0.310	18.80	40.80
30	0.18	0.230	18.80	40.80
31	0.01	0.197	18.80	40.80
TOTAL	1.54	7.110		
AVG		0.229		
MIN				
MAX	0.83	0.310		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: October 2021

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	32.44
P-4	40.78	22.18	<i>inward</i>	GW-4	40.53	31.50
P-5	40.73	20.88	<i>inward</i>	GW-5	39.90	31.23
P-6	40.74	20.00	<i>inward</i>	GW-6	38.95	30.51
P-7	40.60	19.28	<i>inward</i>	GW-7	39.49	28.42
P-8	40.21	19.22	<i>inward</i>	GW-8	39.75	27.03
P-9	NA	NA	NA	NA	NA	NA
P-9A	39.83	22.77	<i>inward</i>	GW-9	39.65	30.55
P-10	39.86	26.13	<i>inward</i>	GW-10	38.34	27.15
P-11	40.52	22.43	<i>inward</i>	GW-11	38.26	29.00
P-12	43.28	30.92	<i>inward</i>	GW-12	42.09	32.42
P-13	44.78	31.06	<i>inward</i>	GW-13	44.79	34.13
P-14	45.09	29.83	<i>inward</i>	GW-14	39.63	34.82
P-15	45.57	30.73	<i>inward</i>	GW-15	42.33	32.36
P-16	44.67	31.08	<i>inward</i>	GW-16	44.41	33.15
P-17	44.28	31.06	<i>inward</i>	GW-17	42.19	34.05
P-18	43.16	24.25	<i>inward</i>	GW-18	41.76	31.59
P-19	42.91	23.18	<i>inward</i>	GW-19	41.20	31.03
P-20	42.54	25.91	<i>inward</i>	GW-20	41.00	29.90
P-21	42.23	25.19	<i>inward</i>	GW-21	40.94	27.93
P-22	42.06	23.97	<i>inward</i>	GW-22	41.53	27.17
P-23	42.08	22.49	<i>inward</i>	GW-23	40.91	29.02
P-24	42.03	20.05	<i>inward</i>	GW-24	41.37	29.20
P-25	42.16	19.23	<i>inward</i>	GW-25	41.11	30.48
P-26	42.50	19.16	<i>inward</i>	GW-26	41.44	32.18
P-27R	42.73	20.23	<i>inward</i>	GW-27R	40.90	32.03

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: 10/28/2021