Johnson, Sabrina O

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Thursday, April 8, 2021 8:17 AM
To: SWD_Waste; Tafuni, Steven
Cc: Anthony Detweiler; Bryan White; Bob Bennett; Lebron, Carlo; Velosa, Andres
Subject: Manatee County Lena Road Landfill Monthly Report March 2021
Attachments: March 2021 Report.pdf

Mr. Tafuni,

Attached is the Manatee County Lena Road Landfill Monthly Report (for March 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

April 8, 2021
File No. 09217088.21

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 – March 2021

Dear Mr. Tafuni:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2020 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, and Monthly Groundwater Gradient Report.

Please note for March 1st to March 2nd the Leachate Meter Readings for Stage II are highlighted "NO DISPLAY." The County completed the meter screen repair on March 3, 2021 and has been collecting the readings.

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

58026
4/8/2021

EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
March 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-Mar-21	64,288	21,398	85,686	0	73,712	159,398	0.00	0
2-Mar-21	24,060	8,105	32,165	0	25,312	57,477	0.00	0
3-Mar-21	23,136	8,364	31,500	64,377	23,088	118,965	0.33	2,562,983
4-Mar-21	25,964	9,626	35,590	73,991	26,572	136,153	0.00	0
5-Mar-21	23,860	9,820	33,680	82,874	24,736	141,290	0.00	0
6-Mar-21	0	0	0	0	0	0	0.42	3,261,979
7-Mar-21	0	0	0	0	0	0	0.00	0
8-Mar-21	55,720	26,039	81,759	201,205	66,660	349,624	0.00	0
9-Mar-21	14,912	7,590	22,502	79,224	21,748	123,474	0.00	0
10-Mar-21	18,764	8,147	26,911	67,669	23,624	118,204	0.00	0
11-Mar-21	18,736	7,462	26,198	67,559	21,728	115,485	0.00	0
12-Mar-21	22,436	8,923	31,359	78,707	24,332	134,398	0.00	0
13-Mar-21	0	0	0	0	0	0	0.00	0
14-Mar-21	0	0	0	0	0	0	0.00	0
15-Mar-21	64,872	23,468	88,340	202,775	65,040	356,155	0.00	0
16-Mar-21	23,012	9,335	32,347	349	22,464	55,160	0.00	0
17-Mar-21	23,764	9,608	33,372	152,050	23,992	209,414	0.00	0
18-Mar-21	20,612	7,742	28,354	55,861	19,664	103,879	2.34	18,173,881
19-Mar-21	22,264	9,271	31,535	67,166	22,636	121,337	0.00	0
20-Mar-21	0	0	0	0	0	0	0.00	0
21-Mar-21	0	0	0	0	0	0	0.00	0
22-Mar-21	60,296	26,398	86,694	215,475	75,620	377,789	0.00	0
23-Mar-21	23,240	9,643	32,883	80,943	25,832	139,658	0.00	0
24-Mar-21	17,348	5,994	23,342	66,959	21,132	111,433	0.00	0
25-Mar-21	38,132	11,588	49,720	70,071	24,728	144,519	0.00	0
26-Mar-21	36,120	12,154	48,274	85,401	27,894	161,569	0.00	0
27-Mar-21	0	0	0	0	0	0	0.00	0
28-Mar-21	0	0	0	0	0	0	0.00	0
29-Mar-21	68,196	29,943	98,139	216,535	68,222	382,896	0.01	77,666
30-Mar-21	20,952	9,636	30,588	75,144	22,484	128,216	0.00	0
31-Mar-21	20,272	15,655	0	56,096	23,360	0	0.62	4,815,302
TOTAL	**730,956**	**295,909**	**990,938**	**2,060,431**	**774,580**	**3,746,493**	**3.72**	**28,891,812**
Leachate Pumped as Percentage of Rainfall				9.6%	17.3%	11.6%		

NO DISPLAY

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).

	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**

Comments

"0" = no data recorded

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									
MAY									
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	**2,961,672**	**4,293,007**	**2,353,544**	**9,528,767**	**7.90**	**61,356,266**	**13.5%**	**19.6%**	**10.8%**

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 METERS				STORMWATER S.G.		COMMENTS	NAME (Initials)
	#1	#2	#3	#4	#1	#2		
3/1/21	43061208	9031519	63524964	NO DISPLAY	32.59	29.90	OK	DEK
3/2/21	43085268	9039624	63550276	NO DISPLAY	32.59	29.86	OK	DEK
3/3/21	43108404	9047988	63573364	643.7.7.	32.59	29.80	OK	DEK
3/4/21	43134368	9057614	63599934	138368	32.58	29.77	OK	DEK
3/5/21	43158228	9067434	63624674	222242	32.57	29.69	OK	DEK
3/6/21								
3/7/21								
3/8/21	43213948	9093473	63691332	482447.	32.54	DRY	OK	DEK
3/9/21	43228860	9101063	63713080	501671	32.49	DRY	OK	DEK
3/10/21	43247624	9109210	63736704	569340	32.49	DRY	OK	DEK
3/11/21	43266360	9116672	63758432	636899	32.48	DRY	OK	DEK
3/12/21	43288796	9125595	63782764	715606	32.47	DRY	OK	DEK
3/13/21								
3/14/21								
3/15/21	43353668	9149063	63847804	918381	32.45	DRY	OK	DEK
3/16/21	43376680	9158398	63870276	918730	32.54	DRY	OK	SP
3/17/21	43400444	9168006	63894260	1070700	32.42	DRY	OK	DEK
3/18/21	43421056	9175748	63913924	1126641	32.40	DRY	OK	DEK
3/19/21	43443320	9185419	63936456	1193807	33.03	32.40	OK	AVK
3/20/21								
3/21/21								
3/22/21	43502616	9211417	64012180	1409282	33.02	31.79	OK	DEK
3/23/21	43526856	9221060	64038012	1490225	33.00	31.65	OK	DEK
3/24/21	43544204	9227054	64059144	1557184	32.99	31.50	OK	DEK
3/25/21	43582336	9238642	64083872	1627255	32.98	31.50	OK	AVK
3/26/21	43618456	9250796	64111766	1712656	32.98	31.32	OK	AVK
3/27/21								
3/28/21								
3/29/21	43686452	9280739	64179888	1929191	32.91	31.11	OK	AVK
3/30/21	43707604	9290375	64202472	2004335	32.90	31.10	OK	AVK
3/31/21	43727976	9300030	64225932	2066431	32.94	30.92	OK	AVK

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2021 Mar	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.141	38.80	40.80
2	0.00	0.142	38.80	40.80
3	0.33	0.169	38.80	40.80
4	0.00	0.124	38.80	40.80
5	0.00	0.125	38.80	40.80
6	0.42	0.137	38.80	40.80
7	0.00	0.111	38.80	40.80
8	0.00	0.109	38.80	40.80
9	0.00	0.129	38.80	40.80
10	0.00	0.118	38.80	40.80
11	0.00	0.119	38.80	40.80
12	0.00	0.120	38.80	40.80
13	0.00	0.132	38.80	40.80
14	0.00	0.117	38.80	40.80
15	0.00	0.121	38.80	40.80
16	0.00	0.123	38.80	40.80
17	0.00	0.123	38.80	40.80
18	2.34	0.125	38.80	40.80
19	0.00	0.130	38.80	40.80
20	0.00	0.123	38.80	40.80
21	0.00	0.171	38.80	40.80
22	0.00	0.137	38.80	40.80
23	0.00	0.121	38.80	40.80
24	0.00	0.133	38.80	40.80
25	0.00	0.148	38.80	40.80
26	0.00	0.138	38.80	40.80
27	0.00	0.128	38.80	40.80
28	0.00	0.124	38.80	40.80
29	0.01	0.129	38.80	40.80
30	0.00	0.128	38.80	40.80
31	0.62	0.130	38.80	40.80
TOTAL	3.72	4.025		
AVG		0.130		
MIN				
MAX	2.34	0.171		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: March 2021

Piezometers Inside Slurry Wall				Groundwater Monitoring Wells Outside Slurry Wall		
Piezometer	Riser Elevation	Leachate Elevation	Gradient Flow	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	24.94	*inward*	GW-3	39.40	32.36
P-4	40.78	22.14	*inward*	GW-4	40.53	31.73
P-5	40.73	20.86	*inward*	GW-5	39.90	31.40
P-6	40.74	19.94	*inward*	GW-6	38.95	30.57
P-7	40.60	19.11	*inward*	GW-7	39.49	29.05
P-8	40.21	19.03	*inward*	GW-8	39.75	28.17
P-9	NA	NA	*NA*	*NA*	*NA*	*NA*
P-9A	39.83	22.77	*inward*	GW-9	39.65	30.55
P-10	39.86	19.41	*inward*	GW-10	38.34	29.04
P-11	40.52	22.14	*inward*	GW-11	38.26	30.66
P-12	43.28	29.57	*inward*	GW-12	42.09	32.01
P-13	44.78	30.73	*inward*	GW-13	44.79	32.89
P-14	45.09	29.50	*inward*	GW-14	39.63	33.13
P-15	45.57	30.61	*inward*	GW-15	42.33	33.72
P-16	44.67	30.96	*inward*	GW-16	44.41	32.43
P-17	44.28	30.18	*inward*	GW-17	42.19	33.39
P-18	43.16	24.16	*inward*	GW-18	41.76	32.50
P-19	42.91	23.12	*inward*	GW-19	41.20	31.70
P-20	42.54	25.68	*inward*	GW-20	41.00	30.68
P-21	42.23	24.89	*inward*	GW-21	40.94	26.54
P-22	42.06	23.91	*inward*	GW-22	41.53	27.22
P-23	42.08	22.48	*inward*	GW-23	40.91	30.51
P-24	42.03	20.01	*inward*	GW-24	41.37	30.15
P-25	42.16	19.21	*inward*	GW-25	41.11	31.11
P-26	42.50	19.14	*inward*	GW-26	41.44	32.42
P-27R	42.73	19.65	*inward*	GW-27R	40.90	32.58

NA = Not Applicable - wells and piezometers abondoned 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: 3/30/2021