Johnson, Sabrina O

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Thursday, September 10, 2020 1:47 PM
To: SWD_Waste; Tafuni, Steven
Cc: Anthony Detweiler; Bryan White; Bob Bennett; Cooper, Dan; Lebron, Carlo; Velosa, Andres
Subject: Manatee County Lena Road Landfill Monthly Report August 2020
Attachments: August 2020 Report.pdf

Mr. Tafuni,

Attached is the Manatee County Lena Road Landfill Monthly Report (for August 2020) which includes the following:

- Monthly Water Balance Report (Exhibit A)
- Monthly Leachate Tracking Summary - 2020 (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) 804-6714.

Thanks

Shane R. Fischer, P.E.
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September 10, 2020
File No. 09217088.15

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 2020

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.

Sincerely,

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

Andres Velosa
Associate Professional
SCS Engineers

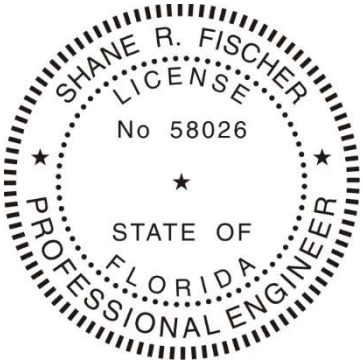
SRF/AFV

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: 2020.09.10 13:39:58 -04'00'

EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
August 2020

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-20	0	0	0	0	0	0	0.00	0
2-Aug-20	0	0	0	0	0	0	0.93	7,222,953
3-Aug-20	87,884	33,962	121,846	345,536	113,333	580,715	0.00	0
4-Aug-20	24,016	9,789	33,805	96,496	34,167	164,468	0.42	3,261,979
5-Aug-20	152,860	10,965	163,825	114,128	4,644	282,597	0.97	7,533,618
6-Aug-20	169,160	10,788	179,948	116,416	1,428	297,792	0.11	854,328
7-Aug-20	117,376	11,625	129,001	128,368	1,988	259,357	0.00	0
8-Aug-20	0	0	0	0	0	0	0.00	0
9-Aug-20	0	0	0	0	0	0	0.67	5,203,633
10-Aug-20	89,876	31,365	121,241	356,416	5,732	483,389	0.04	310,665
11-Aug-20	22,216	7,849	30,065	80,128	1,116	111,309	0.52	4,038,640
12-Aug-20	34,752	11,858	46,610	126,032	47,368	220,010	0.00	0
13-Aug-20	32,776	11,385	44,161	125,440	352	169,953	0.02	155,332
14-Aug-20	32,336	11,073	43,409	118,176	368	161,953	0.01	77,666
15-Aug-20	0	0	0	0	0	0	0.00	0
16-Aug-20	0	0	0	0	0	0	0.14	1,087,326
17-Aug-20	96,988	34,230	131,218	364,048	1,444	496,710	0.00	0
18-Aug-20	27,808	9,949	37,757	105,936	296	143,989	0.02	155,332
19-Aug-20	30,876	10,994	41,870	119,280	336	161,486	0.61	4,737,636
20-Aug-20	30,048	11,125	41,173	112,080	368	153,621	2.59	20,115,535
21-Aug-20	31,536	11,767	43,303	125,328	508	169,139	0.48	3,727,976
22-Aug-20	0	0	0	0	0	0	0.54	4,193,973
23-Aug-20	0	0	0	0	0	0	0.03	232,998
24-Aug-20	135,020	36,843	171,863	469,872	1,620	643,355	0.33	2,562,983
25-Aug-20	32,152	10,458	42,610	141,808	620	185,038	0.00	0
26-Aug-20	36,984	13,890	50,874	166,736	608	218,218	0.00	0
27-Aug-20	35,572	10,676	46,248	169,072	660	215,980	0.00	0
28-Aug-20	32,740	11,718	44,458	159,376	640	204,474	0.00	0
29-Aug-20	0	0	0	0	0	0	0.00	0
30-Aug-20	0	0	0	0	0	0	0.37	2,873,648
31-Aug-20	94,512	29,853	124,365	101,968	225,180	451,513	0.01	77,666
TOTAL	**1,347,488**	**342,162**	**1,689,650**	**3,642,640**	**442,776**	**5,775,066**	**8.81**	**68,423,887**
Leachate Pumped as Percentage of Rainfall				6.9%	12.9%	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).

	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 -- 2020

	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	227,433	11,377,632	954,028	12,559,093	1.14	8,853,942	7.2%	311.5%	46.7%
FEBRUARY	1,281,599	5,749,824	723,184	7,754,607	1.96	15,222,567	23.6%	91.5%	20.6%
MARCH	1,002,110	4,283,984	737,112	6,023,206	0.00	0	0.0%	0.0%	0.0%
APRIL	814,608	3,218,320	731,000	4,763,928	5.66	43,959,047	5.2%	17.7%	7.2%
MAY	1,058,495	3,103,328	942,856	5,104,679	3.24	25,163,836	11.8%	29.9%	16.2%
JUNE	1,279,207	4,585,126	1,850,808	7,715,141	10.07	78,225,356	4.6%	14.2%	10.3%
JULY	1,187,339	3,547,514	1,143,156	5,878,009	7.92	61,511,599	5.4%	14.0%	8.1%
AUGUST	1,689,650	3,642,640	442,776	5,775,066	8.81	68,423,887	6.9%	12.9%	2.8%
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	**8,540,441**	**39,508,368**	**7,524,920**	**55,573,729**	**38.80**	**301,360,234**	**7.9%**	**36.8%**	**7.0%**

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		
8/1/20								
8/2/20								
8/3/20	35623328	8190191	55890097	256287600	34.10	32.04	OK	
8/4/20	35647404	8199280	55524264	256384096	34.10	31.94	OK	
8/5/20	35800264	8210745	56728508	256458284	34.04	32.22	OK	
8/6/20	35969424	8221733	56930336	256614640	34.24	32.32	OK	
8/7/20	36081800	8233358	55932324	256743008	34.20	32.26	OK	
8/8/20								
8/9/20								
8/10/20	36176676	8264723	56938056	257084624	34.08	32.31	OK	
8/11/20	36198892	8272572	55939172	257179552	34.06	32.35	OK	
8/12/20	36233644	8284830	55986540	257305584	34.04	32.28	OK	
8/13/20	36266420	8295815	56986892	257431624	34.06	32.32	OK	
8/14/20	36298756	8306888	55587260	257549200	34.06	32.30	OK	
8/15/20								
8/16/20								
8/17/20	36395744	8341118	55988704	257913248	34.03	32.24	OK	
8/18/20	36423552	8351067	55985000	258019184	34.03	32.16	OK	
8/19/20	36454428	8362061	55989356	258138464	34.04	32.13	OK	
8/20/20	36484476	8373186	55989704	258250544	34.05	32.02	OK	
8/21/20	36516012	8384753	55990212	258375872	34.88	32.55	OK	
8/22/20								
8/23/20								
8/24/20	36651032	8421746	55991832	258845744	34.38	32.38	OK	
8/25/20	36683184	8432254	55992452	258987552	34.38	32.38	ok	DEL
8/26/20	36720168	844614	55993060	259154288	34.28	32.35	ok	DEL
8/27/20	36755740	8456830	55993720	259323360	34.34	32.38	ok	DEL
8/28/20	36788480	8468538	55994360	259482736	34.28	32.1	ok	DEL
8/29/20								
8/30/20								
8/31/20	36852992	8498391	56219540	259584704	34.2	32.3	ok	DEL

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2020 Aug	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.041	42.80	40.80
2	0.93	0.042	42.80	40.80
3	0.00	0.044	42.80	40.80
4	0.42	0.051	42.80	40.80
5	0.97	0.060	42.80	40.80
6	0.11	0.058	42.80	40.80
7	0.00	0.036	42.80	40.80
8	0.00	0.166	42.80	40.80
9	0.67	0.161	42.80	40.80
10	0.04	0.036	42.80	40.80
11	0.52	0.044	42.80	40.80
12	0.00	0.037	42.80	40.80
13	0.02	0.036	42.80	40.80
14	0.01	0.036	42.80	40.80
15	0.00	0.036	42.80	40.80
16	0.14	0.034	42.80	40.80
17	0.00	0.033	42.80	40.80
18	0.02	0.152	42.80	40.80
19	0.61	0.036	42.80	40.80
20	2.59	0.155	38.80	40.80
21	0.48	0.161	38.80	40.80
22	0.54	0.176	38.80	40.80
23	0.03	0.181	38.80	40.80
24	0.33	0.234	38.80	40.80
25	0.00	0.218	38.80	40.80
26	0.00	0.215	38.80	40.50
27	0.00	0.214	38.80	40.50
28	0.00	0.214	38.80	40.50
29	0.00	0.208	38.80	40.80
30	0.37	0.043	38.80	40.80
31	0.01	0.384	38.80	40.80
TOTAL	8.81	3.542		
AVG		0.114		
MIN				
MAX	2.59	0.384		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: August 2020

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	27.11	*inward*	GW-3	39.40	34.90
P-4	40.78	24.23	*inward*	GW-4	40.53	33.83
P-5	40.73	24.03	*inward*	GW-5	39.90	33.30
P-6	40.74	24.14	*inward*	GW-6	38.95	32.65
P-7	40.60	23.90	*inward*	GW-7	39.49	31.69
P-8	40.21	23.81	*inward*	GW-8	39.75	30.55
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	22.66	*inward*	GW-10	38.34	30.64
P-11	40.52	23.72	*inward*	GW-11	38.26	32.06
P-12	43.28	29.58	*inward*	GW-12	42.09	33.49
P-13	44.78	30.78	*inward*	GW-13	44.79	34.34
P-14	45.09	29.89	*inward*	GW-14	39.63	34.93
P-15	45.57	30.87	*inward*	GW-15	42.33	34.93
P-16	44.67	30.97	*inward*	GW-16	44.41	35.01
P-17	44.28	30.23	*inward*	GW-17	42.19	34.99
P-18	43.16	24.43	*inward*	GW-18	41.76	34.36
P-19	42.91	23.21	*inward*	GW-19	41.20	35.00
P-20	42.54	26.24	*inward*	GW-20	41.00	33.35
P-21	42.23	25.18	*inward*	GW-21	40.94	27.79
P-22	42.06	24.06	*inward*	GW-22	41.53	29.03
P-23	42.08	22.53	*inward*	GW-23	40.91	34.11
P-24	42.03	20.03	*inward*	GW-24	41.37	32.47
P-25	42.16	20.66	*inward*	GW-25	41.11	34.36
P-26	42.50	19.10	*inward*	GW-26	41.44	34.54
P-27R	42.73	19.73	*inward*	GW-27R	40.90	35.00

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: 8/27/2020