

Johnson, Sabrina O

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Thursday, July 9, 2020 4:24 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 June 2020
Attachments: June 2020 Report.pdf

Mr. Tafuni,

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

July 9, 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 – June 2020

Dear Mr. Tafuni:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2020 (Exhibit B),

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.

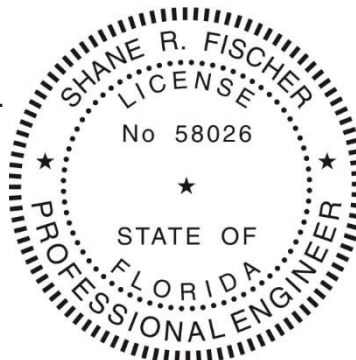


EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
June 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-Jun-20	66,704	39,114	105,818	303,744	88,996	498,558	0.00	0
2-Jun-20	18,616	10,891	29,507	88,240	26,800	144,547	0.00	0
3-Jun-20	16,196	9,205	25,401	77,984	22,292	125,677	3.72	28,891,812
4-Jun-20	21,936	12,052	33,988	96,672	33,260	163,920	1.00	7,766,616
5-Jun-20	24,016	12,257	36,273	115,490	59,100	210,863	0.93	7,222,953
6-Jun-20	0	0	0	0	0	0	2.25	17,490,419
7-Jun-20	0	0	0	0	0	0	0.20	1,553,323
8-Jun-20	91,192	41,449	132,641	498,638	362,408	993,687	0.07	543,663
9-Jun-20	27,052	11,773	38,825	163,376	90,792	292,993	0.00	0
10-Jun-20	31,344	14,059	45,403	193,718	89,504	328,625	0.10	776,662
11-Jun-20	29,504	12,444	41,948	173,722	72,964	288,634	1.02	7,921,948
12-Jun-20	32,056	11,901	43,957	176,192	68,124	288,273	0.00	0
13-Jun-20	0	0	0	0	0	0	0.49	3,805,642
14-Jun-20	0	0	0	0	0	0	0.17	1,320,325
15-Jun-20	104,588	36,604	141,192	514,864	204,976	861,032	0.00	0
16-Jun-20	29,360	14,193	43,553	148,968	59,892	252,413	0.00	0
17-Jun-20	34,480	13,516	47,996	168,824	62,884	279,704	0.00	0
18-Jun-20	39,432	15,234	54,666	190,112	69,288	314,066	0.00	0
19-Jun-20	25,524	9,680	35,204	120,496	43,136	198,836	0.00	0
20-Jun-20	0	0	0	0	0	0	0.00	0
21-Jun-20	0	0	0	0	0	0	0.00	0
22-Jun-20	92,332	35,478	127,810	453,724	153,312	734,846	0.00	0
23-Jun-20	28,730	11,045	39,775	139,316	46,476	225,567	0.00	0
24-Jun-20	32,498	12,986	45,484	154,400	48,592	248,476	0.00	0
25-Jun-20	31,516	18,967	50,483	147,680	46,416	244,579	0.00	0
26-Jun-20	25,156	14,164	39,320	126,688	39,488	205,496	0.05	388,331
27-Jun-20	0	0	0	0	0	0	0.00	0
28-Jun-20	0	0	0	0	0	0	0.00	0
29-Jun-20	67,504	39,342	106,846	394,768	121,636	623,250	0.00	0
30-Jun-20	264	12,853	13,117	137,510	40,472	191,099	0.07	543,663
	0	0	0	0	0	0	0.00	0
TOTAL	870,000	409,207	1,279,207	4,585,126	1,850,808	7,715,141	10.07	78,225,356
Leachate Pumped as Percentage of Rainfall				4.6%	14.2%	10.3%		

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 -- 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									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	5,663,452	32,318,214	5,938,988	43,920,654	22.07	171,424,748	9.3%	52.9%	9.7%

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		
6/1/20	33906828	7424171	52871796	248112168	33.65	30.73	OK	JTB
6/2/20	33725444	7435068	52898596	248201408	33.65	30.63	OK	JTB
6/3/20	33941640	7444273	52920888	24827392	33.64	30.63	OK	AMC
6/4/20	33963576	7456325	52954148	24837604	34.50	32.41	OK	en
6/5/20	33987592	7468582	5303248	24849554	34.63	32.53	OK	AMC
6/6/20								
6/7/20								
6/8/20	34078784	7510031	53375656	248990192	34.52	32.28	OK	JTB
6/9/20	34105836	7521804	5346548	249163568	34.40	32.18	OK	JTB
6/10/20	34137180	7535868	53555952	249347286	34.28	32.00	OK	JTB
6/11/20	3416684	7548307	53628916	249521008	34.22	32.22	OK	JTB
6/12/20	34198740	7560208	53697040	249697200	34.95	32.32	OK	JTB
6/13/20								
6/14/20								
6/15/20	34203328	7596812	53907016	250212064	34.26	32.27	OK	JTB
6/16/20	34332688	7611005	53961908	250364032	34.2	32.27	OK	JTB
6/17/20	34367168	7624521	54024792	250529856	34.2	32.18	OK	JTB
6/18/20	34406600	7639755	54097080	25071968	34.2	32.32	OK	JTB
6/19/20	34432124	7649435	54137216	250846164	34.02	32.32	OK	JTB
6/20/20								
6/21/20								
6/22/20	34524456	7684513	54790528	251251488	34	32.18	OK	JTB
6/23/20	34553186	7695558	54337064	251433504	34	32.12	OK	JTB
6/24/20	34585684	7708944	54385596	251587904	34	33.02	OK	JTB
6/25/20	34617200	7727911	54432012	251736584	33.98	31.89	OK	JTB
6/26/20	34642356	7742075	54471500	251862272	33.98	31.85	OK	JTB
6/27/20								
6/28/20								
6/29/20	34709860	7781417	54593136	252257070	33.89	31.49	OK	JTB
6/30/20	34710124	7794270	54633608	252239456	33.87	31.35	OK	JTB

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2020 Jun	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.032	42.80	40.80
2	0.00	0.032	42.80	40.80
3	3.72	0.035	42.80	40.80
4	2.00	0.043	42.80	40.80
5	0.93	0.053	42.80	40.80
6	2.52	0.067	42.80	40.80
7	0.20	0.084	42.80	40.80
8	0.07	0.077	42.80	40.80
9	0.00	0.071	42.80	40.80
10	0.10	0.065	42.80	40.80
11	1.02	0.064	42.80	40.80
12	0.00	0.064	42.80	40.80
13	0.49	0.063	42.80	40.80
14	0.17	0.062	42.80	40.80
15	0.00	0.061	42.80	40.80
16	0.00	0.059	42.80	40.80
17	0.00	0.060	42.80	40.80
18	0.00	0.058	42.80	40.80
19	0.00	0.056	42.80	40.80
20	0.00	0.055	42.80	40.80
21	0.00	0.053	42.80	40.80
22	0.00	0.053	42.80	40.80
23	0.00	0.051	42.80	40.80
24	0.00	0.053	42.80	40.80
25	0.00	0.050	42.80	40.80
26	0.05	0.048	42.80	40.80
27	0.00	0.046	42.80	40.80
28	0.00	0.045	42.80	40.80
29	0.00	0.039	42.80	40.80
30	0.07	0.038	42.80	40.80
31				
TOTAL	11.34	1.637		
AVG		0.055		
MIN				
MAX	3.72	0.084		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: June 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	25.51	<i>inward</i>	GW-3	39.40	33.00
P-4	40.78	22.08	<i>inward</i>	GW-4	40.53	31.93
P-5	40.73	20.83	<i>inward</i>	GW-5	39.90	31.60
P-6	40.74	19.84	<i>inward</i>	GW-6	38.95	31.00
P-7	40.60	19.35	<i>inward</i>	GW-7	39.49	30.14
P-8	40.21	19.11	<i>inward</i>	GW-8	39.75	29.55
P-9	39.97	19.67	<i>inward</i>	GW-9	39.65	28.70
P-10	39.86	19.16	<i>inward</i>	GW-10	38.34	29.24
P-11	40.52	22.32	<i>inward</i>	GW-11	38.26	30.96
P-12	43.28	29.48	<i>inward</i>	GW-12	42.09	32.69
P-13	44.78	30.88	<i>inward</i>	GW-13	44.79	33.79
P-14	45.09	30.09	<i>inward</i>	GW-14	39.63	33.68
P-15	45.57	30.92	<i>inward</i>	GW-15	42.33	34.58
P-16	44.67	31.07	<i>inward</i>	GW-16	44.41	34.61
P-17	44.28	30.18	<i>inward</i>	GW-17	42.19	33.94
P-18	43.16	24.21	<i>inward</i>	GW-18	41.76	32.21
P-19	42.91	23.11	<i>inward</i>	GW-19	41.20	31.40
P-20	42.54	25.94	<i>inward</i>	GW-20	41.00	30.20
P-21	42.23	25.23	<i>inward</i>	GW-21	40.94	27.34
P-22	42.06	24.06	<i>inward</i>	GW-22	41.53	27.83
P-23	42.08	22.48	<i>inward</i>	GW-23	40.91	30.61
P-24	42.03	20.06	<i>inward</i>	GW-24	41.37	28.97
P-25	42.16	19.23	<i>inward</i>	GW-25	41.11	30.91
P-26	42.50	19.15	<i>inward</i>	GW-26	41.44	32.44
P-27R	42.73	19.63	<i>inward</i>	GW-27R	40.90	32.50

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

Date Data Collected: 6/30/2020