

Johnson, Sabrina O

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Monday, December 7, 2020 12:47 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 November 2020
Attachments: November 2020 Report.pdf

Mr. Tafuni,

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

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December 7, 2020
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 – November 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

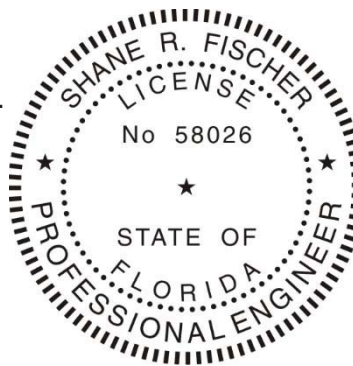
SRF/AFV

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: 2020.12.07
12:40:38 -05'00'

EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
November 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-Nov-20	0	0	0	0	0	0	0.00	0
2-Nov-20	107,524	225	107,749	335,456	105,428	548,633	0.00	0
3-Nov-20	28,708	69	28,777	81,664	28,844	139,285	0.00	0
4-Nov-20	33,268	80	33,348	97,824	32,928	164,100	0.00	0
5-Nov-20	33,332	78	33,410	135,008	31,488	199,906	0.00	0
6-Nov-20	34,312	72	34,384	67,616	30,664	132,664	0.00	0
7-Nov-20	0	0	0	0	0	0	0.00	0
8-Nov-20	0	0	0	0	0	0	0.07	543,663
9-Nov-20	119,836	326	120,162	302,048	97,572	519,782	0.15	1,164,992
10-Nov-20	38,376	138	38,514	87,104	30,848	156,466	0.10	776,662
11-Nov-20	41,624	187	41,811	121,792	38,508	202,111	6.08	47,221,025
12-Nov-20	39,140	166	39,306	48,960	39,036	127,302	0.83	6,446,291
13-Nov-20	39,124	386	39,510	159,272	91,928	290,710	0.00	0
14-Nov-20	0	0	0	0	0	0	0.00	0
15-Nov-20	0	0	0	0	0	0	0.00	0
16-Nov-20	121,960	946	122,906	460,824	201,844	785,574	0.00	0
17-Nov-20	38,508	279	38,787	141,024	52,548	232,359	0.00	0
18-Nov-20	39,820	299	40,119	149,984	52,612	242,715	0.00	0
19-Nov-20	33,784	264	34,048	128,704	43,360	206,112	0.00	0
20-Nov-20	39,156	308	39,464	143,584	47,660	230,708	0.00	0
21-Nov-20	0	0	0	0	0	0	0.05	388,331
22-Nov-20	0	0	0	0	0	0	0.00	0
23-Nov-20	129,312	970	130,282	412,256	130,896	673,434	0.00	0
24-Nov-20	37,316	306	37,622	117,728	37,640	192,990	0.00	0
25-Nov-20	39,176	339	39,515	133,344	39,688	212,547	0.00	0
26-Nov-20	0	0	0	0	0	0	0.00	0
27-Nov-20	83,236	704	83,940	251,968	79,700	415,608	0.00	0
28-Nov-20	0	0	0	0	0	0	0.00	0
29-Nov-20	0	0	0	0	0	0	0.00	0
30-Nov-20	127,716	1,131	128,847	368,992	112,464	610,303	0.30	2,329,985
TOTAL	1,205,228	7,273	1,212,501	3,745,152	1,325,656	6,283,309	7.58	58,870,949
Leachate Pumped as Percentage of Rainfall				5.8%	15.4%	9.8%		

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).

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	STAGE II	STAGE III	TOTAL	RAINFALL (inches)	RAINFALL (gallons)	STAGE I	STAGE II	STAGE III
	LEACHATE (gallons)	LEACHATE (gallons)	LEACHATE (gallons)	LEACHATE (gallons)			LEACHATE/ RAINFALL (%)	LEACHATE/ RAINFALL (%)	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	1,200,671	4,800,892	2,130,248	8,131,811	5.74	44,580,376	7.6%	26.1%	20.7%
OCTOBER	1,124,639	3,620,228	1,223,076	5,967,943	3.02	23,455,180	13.4%	37.4%	22.6%
NOVEMBER	1,212,501	3,745,152	1,325,656	6,283,309	7.58	58,870,949	5.8%	15.4%	9.8%
DECEMBER									
TOTAL	12,078,252	51,674,640	12,203,900	75,956,792	55.14	428,266,739	7.9%	33.8%	8.0%

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		
	11/1/20							
11/2/20	39145516	8668926	59678292	268341280	32.19	30.58	OK	DEK
11/3/20	39174224	8668995	59707136	268422944	32.20	30.50	OK	DEK
11/4/20	39207492	8669075	59740064	268520768	32.19	30.50	OK	DEK
11/5/20	39240824	8669153	59771552	268655776	32.19	30.49	OK	DEK
11/6/20	39275136	8669225	59802216	268723392	32.19	30.49	OK	DEK
11/7/20								
11/8/20								
11/9/20	39394972	8669551	59899788	269025440	32.19	30.38	OK	DEK
11/10/20	39433348	8669689	59930636	269112544	32.20	30.37	OK	DEK
11/11/20	39474972	8669876	59969144	269294320	32.20	31.55	OK	SP
11/12/20	39514112	8670042	60008180	269283296	34.85	32.60	OK	SP
11/13/20	39553236	8670428	60100108	269442560	34.29	32.35	OK	SP
11/14/20								
11/15/20								
11/16/20	39675196	8671374	60301952	269963392	32.98	32.95	OK	DEK
11/17/20	39713704	8671653	60354500	270044416	32.47	32.19	OK	DEK
11/18/20	39753524	8671952	60407112	270194400	32.20	32.07	OK	DEK
11/19/20	39787308	8672216	60450472	270323104	32.20	32.00	OK	DEK
11/20/20	39826416	8672524	60498132	270466688	32.19	31.88	OK	DEK
11/21/20								
11/22/20								
11/23/20	39955776	8673494	60629028	270878944	32.18	31.59	OK	DEK
11/24/20	39993092	8673800	6066668	270996672	32.19	31.49	OK	DEK
11/25/20	40032268	8674139	60706356	271130016	32.19	31.56	OK	DEK
11/26/20								
11/27/20	40115504	8674843	60786056	271351984	32.17	31.19	OK	BCW
11/28/20								
11/29/20								
11/30/20	40243220	8675974	60898520	271750976	32.19	31.20	OK	DEK

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2020 Nov	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.184	38.80	40.80
2	0.00	0.159	38.80	40.80
3	0.00	0.173	38.80	40.80
4	0.00	0.153	38.80	40.80
5	0.00	0.186	38.80	40.80
6	0.00	0.167	38.80	40.80
7	0.00	0.174	38.80	40.80
8	0.07	0.170	38.80	40.80
9	0.15	0.159	38.80	40.80
10	0.10	0.171	38.80	40.80
11	6.08	0.120	38.80	40.80
12	0.83	0.286	38.80	40.80
13	0.00	0.289	38.80	40.80
14	0.00	0.261	38.80	40.80
15	0.00	0.249	38.80	40.80
16	0.00	0.241	38.80	40.80
17	0.00	0.224	38.80	40.80
18	0.00	0.231	38.30	40.80
19	0.00	0.223	38.30	40.80
20	0.00	0.216	38.80	40.80
21	0.05	0.232	38.80	40.80
22	0.00	0.222	38.80	40.80
23	0.00	0.203	38.80	40.80
24	0.00	0.212	38.80	40.80
25	0.00	0.213	38.80	40.80
26	0.00	0.197	38.80	40.80
27	0.00	0.213	38.80	40.80
28	0.00	0.205	38.80	40.80
29	0.00	0.203	38.80	40.80
30	0.30	0.186	38.80	40.80
31				
TOTAL	7.58	6.122		
AVG		0.204		
MIN				
MAX	6.08	0.289		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: November 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	25.76	<i>inward</i>	GW-3	39.40	33.60
P-4	40.78	22.18	<i>inward</i>	GW-4	40.53	32.98
P-5	40.73	21.05	<i>inward</i>	GW-5	39.90	32.30
P-6	40.74	20.04	<i>inward</i>	GW-6	38.95	31.70
P-7	40.60	19.20	<i>inward</i>	GW-7	39.49	30.22
P-8	40.21	19.11	<i>inward</i>	GW-8	39.75	29.45
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	20.56	<i>inward</i>	GW-10	38.34	29.24
P-11	40.52	22.42	<i>inward</i>	GW-11	38.26	31.28
P-12	43.28	29.46	<i>inward</i>	GW-12	42.09	32.36
P-13	44.78	31.08	<i>inward</i>	GW-13	44.79	32.34
P-14	45.09	30.79	<i>inward</i>	GW-14	39.63	31.83
P-15	45.57	31.02	<i>inward</i>	GW-15	42.33	34.46
P-16	44.67	30.87	<i>inward</i>	GW-16	44.41	35.11
P-17	44.28	30.08	<i>inward</i>	GW-17	42.19	33.90
P-18	43.16	24.46	<i>inward</i>	GW-18	41.76	33.46
P-19	42.91	23.21	<i>inward</i>	GW-19	41.20	33.10
P-20	42.54	26.09	<i>inward</i>	GW-20	41.00	31.65
P-21	42.23	25.28	<i>inward</i>	GW-21	40.94	28.84
P-22	42.06	24.06	<i>inward</i>	GW-22	41.53	28.93
P-23	42.08	22.52	<i>inward</i>	GW-23	40.91	32.21
P-24	42.03	20.03	<i>inward</i>	GW-24	41.37	31.67
P-25	42.16	19.23	<i>inward</i>	GW-25	41.11	32.21
P-26	42.50	19.10	<i>inward</i>	GW-26	41.44	33.14
P-27R	42.73	20.03	<i>inward</i>	GW-27R	40.90	33.10

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: 11/25/2020