

Johnson, Sabrina O

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Monday, December 9, 2019 8:56 AM
To: SWD_Waste; Tafuni, Steven
Cc: Anthony Detweiler; Bryan White; Bob Bennett; Cooper, Dan; Lebron, Carlo
Subject: RE: Manatee County Lena Road Landfill Monthly Report November 2019
Attachments: November 2019 Report.pdf

Sorry, would help if I attached it...

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www.scsengineers.com

From: Fischer, Shane
Sent: Monday, December 9, 2019 8:56 AM
To: SWD_Waste (Shared Mailbox) <SWD_Waste@dep.state.fl.us>; Steven Tafuni <steven.tafuni@dep.state.fl.us>
Cc: Anthony Detweiler <anthony.detweiler@mymanatee.org>; Bryan White <bryan.white@mymanatee.org>; Bob Bennett <bob.bennett@mymanatee.org>; Cooper, Dan <DCooper@SCSEngineers.com>; Carlo Lebron <CLEbron@scsengineers.com>
Subject: Manatee County Lena Road Landfill Monthly Report November 2019

Mr. Tafuni,

Attached is the Manatee County Lena Road Landfill Monthly Report (for November 2019) which includes the following:

- Monthly Water Balance Report (Exhibit A)
- Monthly Leachate Tracking Summary - 2019 (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

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December 9, 2019
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 – November 2019

Dear Mr. Tafuni:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2019 (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

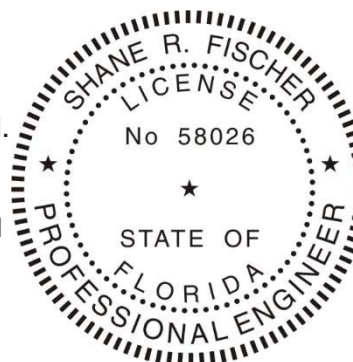
SRF/AFV

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: 2019.12.09
08:50:34 -05'00'

EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
November 2019**

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-19	28,342	4,419	32,761	288	37,584	70,633	0.00	0
2-Nov-19	0	0	0	0	0	0	0.00	0
3-Nov-19	0	0	0	0	0	0	0.00	0
4-Nov-19	85,616	13,977	99,593	800	110,928	211,321	0.00	0
5-Nov-19	27,800	4,434	32,234	256	35,804	68,294	0.00	0
6-Nov-19	27,800	4,431	32,231	256	34,960	67,447	0.00	0
7-Nov-19	27,858	4,154	32,012	256	35,460	67,728	0.00	0
8-Nov-19	29,130	69	29,199	272	34,112	63,583	0.00	0
9-Nov-19	0	0	0	0	0	0	0.10	776,662
10-Nov-19	0	0	0	0	0	0	0.00	0
11-Nov-19	80,764	102	80,866	736	101,560	183,162	0.00	0
12-Nov-19	28,526	171	28,697	288	33,340	62,325	0.00	0
13-Nov-19	29,046	74	29,120	292	33,932	63,344	0.07	543,663
14-Nov-19	26,318	68	26,386	252	35,608	62,246	0.03	232,998
15-Nov-19	27,900	70	27,970	256	33,048	61,274	0.17	1,320,325
16-Nov-19	0	0	0	0	0	0	0.00	0
17-Nov-19	0	0	0	0	0	0	0.00	0
18-Nov-19	85,074	209	85,283	848	99,800	185,931	0.00	0
19-Nov-19	30,780	80	30,860	288	27,616	58,764	0.00	0
20-Nov-19	25,178	64	25,242	256	31,952	57,450	0.00	0
21-Nov-19	23,768	20,079	43,847	208	32,904	76,959	0.00	0
22-Nov-19	23,202	58	23,260	2	29,888	53,150	0.00	0
23-Nov-19	0	0	0	0	0	0	0.00	0
24-Nov-19	0	0	0	0	0	0	0.60	4,659,970
25-Nov-19	81,272	199	81,471	898	93,496	175,865	0.00	0
26-Nov-19	24,520	60	24,580	316	29,360	54,256	0.00	0
27-Nov-19	27,152	71	27,223	240	31,900	59,363	0.00	0
28-Nov-19	0	0	0	0	0	0	0.00	0
29-Nov-19	48,254	121	48,375	432	58,340	107,147	0.00	0
30-Nov-19	0	0	0	0	0	0	0.00	0
TOTAL	788,300	52,910	841,210	7,440	961,592	1,810,242	0.97	7,533,618
Leachate Pumped as Percentage of Rainfall				31.3%	0.2%	55.3%		

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 -- 2019

MONTH	B STAGE I LEACHATE (gallons)	C STAGE II LEACHATE (gallons)	D STAGE III LEACHATE (gallons)	E TOTAL LEACHATE (gallons)	F RAINFALL (inches)	G RAINFALL (gallons)	H STAGE I LEACHATE/ RAINFALL (%)	I STAGE II LEACHATE/ RAINFALL (%)	J STAGE III LEACHATE/ RAINFALL (%)
JANUARY	985,946	3,653,440	924,189	5,563,575	3.48	27,027,824	10.2%	32.8%	14.8%
FEBRUARY	881,333	3,006,288	1,745,237	5,632,858	2.23	17,319,554	14.3%	42.1%	43.7%
MARCH	779,697	3,388,032	1,910,490	6,078,219	2.06	15,999,229	13.7%	51.3%	51.7%
APRIL	819,304	3,945,872	1,355,972	6,121,148	2.04	15,843,897	14.5%	60.4%	37.1%
MAY	699,681	7,390,560	2,560,600	10,650,841	2.41	18,717,545	10.5%	95.7%	59.3%
JUNE	745,979	2,745,936	1,169,260	4,661,175	7.83	60,812,603	3.4%	10.9%	8.3%
JULY	765,489	5,313,184	2,503,452	8,307,305	16.05	124,654,187	1.7%	10.3%	8.7%
AUGUST	1,530,136	2,173,456	3,016,204	6,719,796	17.95	139,410,757	3.1%	3.8%	9.4%
SEPTEMBER	1,346,398	6,624	1,750,856	3,103,878	2.44	18,950,543	19.9%	0.1%	40.0%
OCTOBER	1,060,131	9,232	1,235,620	2,266,199	3.92	30,445,135	9.8%	0.1%	17.6%
NOVEMBER	841,210	7,440	961,592	1,810,242	0.97	7,533,618	31.3%	0.2%	55.3%
DECEMBER									
TOTAL	10,455,304	31,640,064	19,133,472	60,915,236	61.38	476,714,890	6.1%	18.6%	11.3%

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		
	11/1/19	29550478	5975583	46819532	220014752	33.89		
11/2/19								
11/3/19								
11/4/19	29636094	5989560	46930460	220065552	33.82	31.52	OK	
11/5/19	29663894	5993994	46966264	220065808	33.82	31.52	OK	
11/6/19	29691694	5998425	47001224	220066064	33.82	31.49	OK	
11/7/19	29719552	6002579	47036634	220066320	33.89	31.49	OK	
11/8/19	29748682	6002648	47070796	220066576	33.89	31.49	OK	
11/9/19								
11/10/19								
11/11/19	29829446	6002550	47172356	220067328	33.88	31.25	OK	Bcw
11/12/19	29857972	6002921	47205696	220067616	33.87	31.22	OK	
11/13/19	29887018	6002995	47239628	220067904	33.89	31.15	OK	
11/14/19	29913336	6003063	47275236	220068160	33.78	31.12	OK	
11/15/19	29941236	6003133	47308284	220068416	33.85	31.12	OK	
11/16/19								
11/17/19								
11/18/19	30026310	6003342	47404084	220069264	33.82	31.05	OK	
11/19/19	30057090	6003422	47435700	220069552	33.82	31.05	OK	
11/20/19	30082268	6003486	47467652	220069808	33.82	31.02	OK	
11/21/19	30106036	6003565	47500556	220070016	33.80	31.02	OK	
11/22/19	30129238	6003623	47530444	220070216	33.80	31.02	OK	
11/23/19								
11/24/19								
11/25/19	30210516	6003822	47623940	220070976	33.85	31.11	OK	
11/26/19	30235030	6003882	47653300	220071232	33.83	31.10	OK	
11/27/19	30262182	6003953	47685200	220071472	33.81	31.01	OK	
11/28/19								
11/29/19	30310436	6004074	477143540	220071904	33.65	31.00	OK	
11/30/19								
11/31/2019								

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2019 Nov	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.014	42.50	40.50
2	0.00	0.015	42.50	40.50
3	0.00	0.015	42.50	40.50
4	0.00	0.014	42.50	40.50
5	0.00	0.014	42.50	40.50
6	0.00	0.014	42.50	40.50
7	0.00	0.014	42.50	40.50
8	0.00	0.014	42.50	40.50
9	0.10	0.013	42.50	40.50
10	0.00	0.012	42.50	40.50
11	0.00	0.013	42.50	40.50
12	0.00	0.013	42.50	40.50
13	0.07	0.012	42.50	40.50
14	0.03	0.012	42.50	40.50
15	0.17	0.013	42.50	40.50
16	0.00	0.013	42.50	40.50
17	0.00	0.013	42.50	40.80
18	0.00	0.013	42.50	40.80
19	0.00	0.013	42.80	40.80
20	0.00	0.016	42.80	40.80
21	0.00	0.011	42.80	40.80
22	0.00	0.012	42.80	40.80
23	0.00	0.012	42.80	40.80
24	0.60	0.012	42.80	40.80
25	0.00	0.012	42.80	40.80
26	0.00	0.012	42.80	40.80
27	0.00	0.011	42.80	40.80
28	0.00	0.012	42.80	40.80
29	0.00	0.012	42.80	40.80
30	0.00	0.013	42.80	40.80
31				
TOTAL	0.97	0.389		
AVG		0.013		
MIN				
MAX	0.60	0.016		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: November 2019

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	24.76	<i>inward</i>	GW-3	39.40	32.20
P-4	40.78	22.03	<i>inward</i>	GW-4	40.53	31.44
P-5	40.73	20.83	<i>inward</i>	GW-5	39.90	31.00
P-6	40.74	19.64	<i>inward</i>	GW-6	38.95	30.34
P-7	40.60	19.28	<i>inward</i>	GW-7	39.49	28.35
P-8	40.21	19.21	<i>inward</i>	GW-8	39.75	27.05
P-9	39.97	19.27	<i>inward</i>	GW-9	39.65	28.00
P-10	39.86	19.26	<i>inward</i>	GW-10	38.34	28.44
P-11	40.52	22.42	<i>inward</i>	GW-11	38.26	31.11
P-12	43.28	30.33	<i>inward</i>	GW-12	42.09	32.67
P-13	44.78	33.28	<i>inward</i>	GW-13	44.79	33.79
P-14	45.09	30.69	<i>inward</i>	GW-14	39.63	33.83
P-15	45.57	31.07	<i>inward</i>	GW-15	42.33	34.63
P-16	44.67	31.12	<i>inward</i>	GW-16	44.41	34.41
P-17	44.28	31.78	<i>inward</i>	GW-17	42.19	33.79
P-18	43.16	26.41	<i>inward</i>	GW-18	41.76	31.16
P-19	42.91	26.71	<i>inward</i>	GW-19	41.20	29.97
P-20	42.54	26.66	<i>inward</i>	GW-20	41.00	29.00
P-21	42.23	26.66	<i>inward</i>	GW-21	40.94	27.24
P-22	42.06	26.61	<i>inward</i>	GW-22	41.53	27.13
P-23	42.08	26.48	<i>inward</i>	GW-23	40.91	29.11
P-24	42.03	26.53	<i>inward</i>	GW-24	41.37	30.07
P-25	42.16	26.51	<i>inward</i>	GW-25	41.11	30.21
P-26	42.50	26.80	<i>inward</i>	GW-26	41.44	32.09
P-27R	42.73	26.58	<i>inward</i>	GW-27R	40.90	32.10

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

Date Data Collected: 11/26/2019