

Johnson, Sabrina O

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Thursday, November 7, 2019 9:36 AM
To: SWD_Waste; Tafuni, Steven
Cc: Anthony Detweiler; Bryan White; Cooper, Dan; Lebron, Carlo
Subject: Manatee County Lena Road Landfill Monthly Report October 2019
Attachments: October 2019 Report.pdf

Mr. Tafuni,

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

Shane R. Fischer, P.E.
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November 7, 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 – October 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.
Office Manager/Project Director
SCS Engineers



Andres Velosa
Associate Professional
SCS Engineers

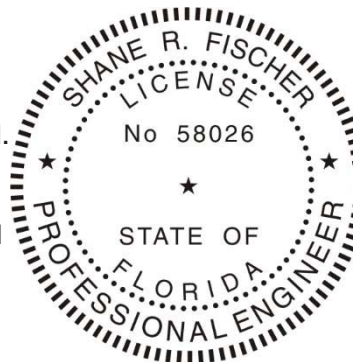
SRF/AFV

cc: Bryan White, Manatee County Landfill Superintendent
Anthony Detweiler, 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: 2019.11.07
09:31:12 -05'00'

EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
October 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-Oct-19	32,678	5,058	37,736	336	42,628	80,700	0.00	0
2-Oct-19	30,722	5,048	35,770	352	40,708	76,830	0.00	0
3-Oct-19	31,852	4,918	36,770	336	41,752	78,858	0.00	0
4-Oct-19	29,822	4,644	34,466	304	40,652	75,422	0.00	0
5-Oct-19	0	0	0	0	0	0	0.00	0
6-Oct-19	0	0	0	0	0	0	0.00	0
7-Oct-19	96,306	15,225	111,531	1,120	125,140	237,791	0.09	698,995
8-Oct-19	30,564	4,760	35,324	336	37,220	72,880	0.00	0
9-Oct-19	32,048	4,894	36,942	384	40,772	78,098	0.73	5,669,630
10-Oct-19	30,172	4,759	34,931	288	40,388	75,607	0.00	0
11-Oct-19	29,740	4,879	34,619	304	39,452	74,375	0.00	0
12-Oct-19	0	0	0	0	0	0	0.00	0
13-Oct-19	0	0	0	0	0	0	0.00	0
14-Oct-19	87,120	13,860	100,980	864	113,728	215,572	0.00	0
15-Oct-19	26,586	4,364	30,950	240	34,308	65,498	0.00	0
16-Oct-19	32,140	5,145	37,285	304	39,804	77,393	0.10	776,662
17-Oct-19	29,784	4,854	34,638	256	34,904	69,798	0.00	0
18-Oct-19	31,472	4,987	36,459	304	38,688	75,451	0.45	3,494,977
19-Oct-19	0	0	0	0	0	0	2.34	18,173,881
20-Oct-19	0	0	0	0	0	0	0.00	0
21-Oct-19	90,830	14,488	105,318	848	127,164	233,330	0.02	155,332
22-Oct-19	26,440	4,067	30,507	272	40,480	71,259	0.00	0
23-Oct-19	45,308	4,660	49,968	228	43,592	93,788	0.00	0
24-Oct-19	29,838	4,471	34,309	204	40,680	75,193	0.00	0
25-Oct-19	30,634	4,898	35,532	240	42,116	77,888	0.13	1,009,660
26-Oct-19	0	0	0	0	0	0	0.06	465,997
27-Oct-19	0	0	0	0	0	0	0.00	0
28-Oct-19	89,794	14,239	104,033	896	117,744	222,673	0.00	0
29-Oct-19	25,840	4,295	30,135	240	37,304	67,679	0.00	0
30-Oct-19	27,382	4,546	31,928	272	37,916	70,116	0.00	0
31-Oct-19	30,620	4,933	0	304	38,480	0	0.00	0
TOTAL	947,692	147,992	1,060,131	9,232	1,235,620	2,266,199	3.92	30,445,135
Leachate Pumped as Percentage of Rainfall				9.8%	0.1%	17.6%		

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	Stage II	Stage III	TOTAL
	(acres)	(acres)	(acres)	(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**

	B	C	D	E	F	G	H	I	J
MONTH	STAGE I	STAGE II	STAGE III	TOTAL			STAGE I	STAGE II	STAGE III
	LEACHATE (gallons)	LEACHATE (gallons)	LEACHATE (gallons)	LEACHATE (gallons)	RAINFALL (inches)	RAINFALL (gallons)	LEACHATE/ RAINFALL (%)	LEACHATE/ RAINFALL (%)	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									
DECEMBER									
TOTAL	9,614,094	31,632,624	18,171,880	59,104,994	60.41	469,181,273	5.7%	18.9%	10.9%

Notes:

- | | |
|---|---|
| 1. (B) Total leachate pumped from Stage I. | 7. (H) Stage I leachate as a percentage of rainfall. |
| 2. (C) Total leachate pumped from Stage II | 8. (I) Stage II leachate pumped as a percentage of rainfall. |
| 3. (D) Total leachate pumped from Stage III | 9. (J) Stage III leachate pumped as a percentage of rainfall. |
| 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) | |

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		
	10/1/19	28667122	5828220	45588966	220055568	33.97		
10/2/19	28637844	5833278	45679664	220055920	33.97	31.57	OK	[Signature]
10/3/19	28669696	5838196	45671416	220056256	33.97	31.53	OK	[Signature]
10/4/19	28699518	5842840	45711068	220056560	33.95	31.52	OK	[Signature]
10/5/19								
10/6/19								
10/7/19	28795824	5858065	45837208	220057680	33.92	31.41	OK	[Signature]
10/8/19	28826288	5862825	45874428	220058016	33.92	31.38	OK	[Signature]
10/9/19	28868436	5867719	45915200	220058400	33.92	31.34	OK	[Signature]
10/10/19	28888608	5872478	45955588	220058880	34.00	31.45	OK	[Signature]
10/11/19	28918348	5877357	45995040	220059320	34.00	31.47	OK	[Signature]
10/12/19								
10/13/19								
10/14/19	29005468	5891217	46108768	220059856	33.89	31.42	OK	[Signature]
10/15/19	29032054	5895581	46143076	220060296	33.89	31.38	OK	[Signature]
10/16/19	29064194	5900726	46182880	220060700	33.89	31.35	OK	[Signature]
10/17/19	29093978	5905580	46217784	220061156	33.90	31.31	OK	[Signature]
10/18/19	29125456	5910567	46256472	220061600	33.89	31.29	OK	[Signature]
10/19/19								
10/20/19								
10/21/19	29216280	5925055	46383636	220061808	34.23	32.33	OK	[Signature]
10/22/19	29242720	5929122	46424116	220062280	34.13	32.32	OK	[Signature]
10/23/19	29288028	5933782	46467708	220062738	34.15	32.29	OK	[Signature]
10/24/19	29317866	5938253	46508388	220063172	34.10	32.25	OK	[Signature]
10/25/19	29348500	5943151	46550504	220063762	34.05	32.23	OK	[Signature]
10/26/19								
10/27/19								
10/28/19	29438244	5957370	46668248	220063648	33.92	32.17	OK	[Signature]
10/29/19	29464134	5961685	46705552	220063988	34	32.17	OK	[Signature]
10/30/19	29491516	5966231	46743468	220064416	33.92	32.15	OK	[Signature]
10/31/19	29522136	5971164	46781948	220064844	33.92	32.02	OK	[Signature]

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2019 Oct	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.017	42.50	40.50
2	0.00	0.016	42.50	40.50
3	0.00	0.016	42.50	40.50
4	0.00	0.016	42.50	40.50
5	0.00	0.016	42.50	40.50
6	0.00	0.016	42.50	40.50
7	0.09	0.016	42.50	40.50
8	0.00	0.016	42.50	40.50
9	0.73	0.015	42.50	40.50
10	0.00	0.015	42.50	40.50
11	0.00	0.015	42.50	40.50
12	0.00	0.015	42.50	40.50
13	0.00	0.015	42.50	40.50
14	0.00	0.014	42.50	40.50
15	0.00	0.015	42.50	40.50
16	0.10	0.015	42.50	40.50
17	0.00	0.015	42.50	40.50
18	0.45	0.015	42.50	40.50
19	2.34	0.017	42.50	40.50
20	0.00	0.017	42.50	40.50
21	0.02	0.017	42.50	40.50
22	0.00	0.018	42.50	40.50
23	0.00	0.016	42.50	40.50
24	0.00	0.015	42.50	40.50
25	0.13	0.016	42.50	40.50
26	0.06	0.016	42.50	40.50
27	0.00	0.015	42.50	40.50
28	0.00	0.015	42.50	40.50
29	0.00	0.015	42.50	40.50
30	0.00	0.015	42.50	40.50
31	0.00	0.014	42.50	40.50
TOTAL	3.92	0.484		
AVG		0.016		
MIN				
MAX	2.34	0.018		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: October 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	25.21	<i>inward</i>	GW-3	39.40	33.96
P-4	40.78	22.08	<i>inward</i>	GW-4	40.53	33.05
P-5	40.73	20.89	<i>inward</i>	GW-5	39.90	32.35
P-6	40.74	19.77	<i>inward</i>	GW-6	38.95	31.72
P-7	40.60	19.28	<i>inward</i>	GW-7	39.49	31.44
P-8	40.21	19.18	<i>inward</i>	GW-8	39.75	30.18
P-9	39.97	18.62	<i>inward</i>	GW-9	39.65	29.29
P-10	39.86	19.29	<i>inward</i>	GW-10	38.34	30.97
P-11	40.52	22.84	<i>inward</i>	GW-11	38.26	32.06
P-12	43.28	29.60	<i>inward</i>	GW-12	42.09	32.88
P-13	44.78	30.78	<i>inward</i>	GW-13	44.79	34.11
P-14	45.09	29.84	<i>inward</i>	GW-14	39.63	34.56
P-15	45.57	30.97	<i>inward</i>	GW-15	42.33	35.04
P-16	44.67	30.97	<i>inward</i>	GW-16	44.41	34.86
P-17	44.28	30.27	<i>inward</i>	GW-17	42.19	33.99
P-18	43.16	25.95	<i>inward</i>	GW-18	41.76	32.84
P-19	42.91	26.20	<i>inward</i>	GW-19	41.20	32.90
P-20	42.54	26.22	<i>inward</i>	GW-20	41.00	31.88
P-21	42.23	26.16	<i>inward</i>	GW-21	40.94	28.04
P-22	42.06	26.16	<i>inward</i>	GW-22	41.53	28.23
P-23	42.08	26.18	<i>inward</i>	GW-23	40.91	33.35
P-24	42.03	26.18	<i>inward</i>	GW-24	41.37	32.52
P-25	42.16	26.26	<i>inward</i>	GW-25	41.11	32.55
P-26	42.50	26.20	<i>inward</i>	GW-26	41.44	33.21
P-27R	42.73	26.18	<i>inward</i>	GW-27R	40.90	33.76

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: 10/24/2019