

Johnson, Sabrina O

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Monday, November 9, 2020 12:50 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 October 2020
Attachments: October 2020 Report.pdf

Mr. Tafuni,

Attached is the Manatee County Lena Road Landfill Monthly Report (for October 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.
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November 9, 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 – October 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

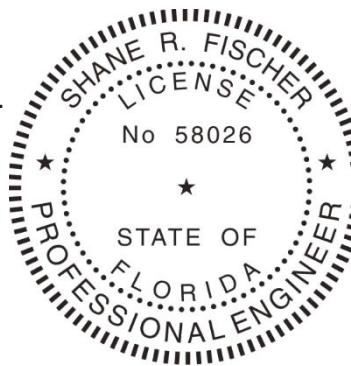
SRF/AFV

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: 2020.11.09
12:44:38 -05'00'

EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
October 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-Oct-20	37,674	119	37,793	147,249	47,868	232,910	0.00	0
2-Oct-20	29,506	118	29,624	138,307	47,668	215,599	0.00	0
3-Oct-20	0	0	0	0	0	0	0.10	776,662
4-Oct-20	0	0	0	0	0	0	0.75	5,824,962
5-Oct-20	128,776	359	129,135	404,400	141,048	674,583	0.16	1,242,659
6-Oct-20	39,708	121	39,829	136,240	45,956	222,025	0.10	776,662
7-Oct-20	39,036	121	39,157	137,680	44,852	221,689	0.00	0
8-Oct-20	39,576	124	39,700	136,528	45,916	222,144	0.00	0
9-Oct-20	33,044	101	33,145	114,256	39,216	186,617	0.00	0
10-Oct-20	0	0	0	0	0	0	0.34	2,640,649
11-Oct-20	0	0	0	0	0	0	0.16	1,242,659
12-Oct-20	121,604	371	121,975	392,400	136,608	650,983	0.00	0
13-Oct-20	33,660	102	33,762	117,280	37,868	188,910	0.00	0
14-Oct-20	36,964	118	37,082	118,032	40,472	195,586	0.00	0
15-Oct-20	37,572	116	37,688	117,456	41,260	196,404	0.00	0
16-Oct-20	38,796	121	38,917	118,376	41,692	198,985	0.00	0
17-Oct-20	0	0	0	0	0	0	0.00	0
18-Oct-20	0	0	0	0	0	0	0.00	0
19-Oct-20	107,528	359	107,887	361,832	117,620	587,339	0.07	543,663
20-Oct-20	31,840	124	31,964	98,880	37,128	167,972	0.35	2,718,316
21-Oct-20	41,816	129	41,945	119,152	37,376	198,473	0.10	776,662
22-Oct-20	35,424	131	35,555	116,000	36,504	188,059	0.04	310,665
23-Oct-20	33,468	126	33,594	96,064	36,708	166,366	0.00	0
24-Oct-20	0	0	0	0	0	0	0.00	0
25-Oct-20	0	0	0	0	0	0	0.00	0
26-Oct-20	114,984	438	115,422	332,896	108,848	557,166	0.29	2,252,319
27-Oct-20	32,036	124	32,160	112,003	33,496	177,659	0.00	0
28-Oct-20	35,064	131	35,195	110,125	36,364	181,684	0.05	388,331
29-Oct-20	36,976	146	37,122	97,872	54,848	189,842	0.40	3,106,646
30-Oct-20	35,860	128	35,988	97,200	13,760	146,948	0.11	854,328
31-Oct-20	0	0	0	0	0	0	0.00	0
TOTAL	1,120,912	3,727	1,124,639	3,620,228	1,223,076	5,967,943	3.02	23,455,180
Leachate Pumped as Percentage of Rainfall				13.4%	37.4%	22.6%		

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 -- 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	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									
DECEMBER									
TOTAL	10,865,751	47,929,488	10,878,244	69,673,483	47.56	369,395,790	8.2%	36.4%	8.3%

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		
10/1/20	37954784	8665095	58391656	26482248	32.19	31.19	OK	BW
10/2/20	37994260	8665211	58445324	26471152	32.19	31.19	OK	
10/3/20								
10/4/20								
10/5/20	38113036	8665570	58586372	26502552	32.2	31.25	OK	DEK
10/6/20	38152744	8665691	58632328	26521792	32.18	31.2	OK	DEK
10/7/20	38191780	8665812	58677180	26534942	32.2	31.32	OK	DEK
10/8/20	38231356	8665936	58723096	26548000	32.18	31.10	OK	DEK
10/9/20	38264400	8666037	58762312	265600256	32.18	31.2	OK	DEK
10/10/20								
10/11/20								
10/12/20	38386004	8666408	58898920	26592656	32.2	31.1	OK	DEK
10/13/20	38419664	8666510	58936788	266109936	32.18	31	OK	DEK
10/14/20	38456628	8666628	58977260	266227968	32.2	31	OK	DEK
10/15/20	38494200	8666744	59018520	266345124	32.18	30.92	OK	DEK
10/16/20	38532996	8666865	59060212	26646380	32.1	30.89	OK	DEK
10/17/20								
10/18/20								
10/19/20	38640524	8667224	59177832	266825632	32.19	30.80	OK	DEK
10/20/20	38672364	8667348	59214960	266924512	32.20	30.75	OK	DEK
10/21/20	38714180	8667477	59252336	267043664	32.19	30.80	OK	CM
10/22/20	38749604	8667608	59288840	267159664	32.19	30.77	OK	DEK
10/23/20	38783072	8667734	59323548	267255128	32.20	30.70	OK	DEK
10/24/20								
10/25/20								
10/26/20	38898056	8668172	59434396	267588624	32.20	30.68	OK	DEK
10/27/20	38930092	8668296	59467892	267700627	32.20	30.68	OK	DEK
10/28/20	38965156	8668427	5904256	267810732	32.20	30.67	OK	DEK
10/29/20	39002132	8668573	59539104	267908624	32.20	30.68	OK	DEK
10/30/20	39037992	8668701	59572864	268005824	32.20	30.67	OK	DEK

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2020 Oct	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.231	38.80	40.80
2	0.00	0.215	38.80	40.80
3	0.10	0.217	38.80	40.80
4	0.75	0.225	38.80	40.80
5	0.16	0.215	38.80	40.80
6	0.10	0.221	38.80	40.80
7	0.00	0.221	38.80	40.80
8	0.00	0.197	38.80	40.80
9	0.00	0.215	38.80	40.80
10	0.34	0.218	38.80	40.80
11	0.16	0.203	38.80	40.80
12	0.00	0.199	38.80	40.80
13	0.00	0.196	38.80	40.80
14	0.00	0.213	38.80	40.80
15	0.00	0.198	38.80	40.80
16	0.00	0.193	38.80	40.80
17	0.00	0.186	38.80	40.80
18	0.00	0.189	38.80	40.80
19	0.07	0.193	38.80	40.80
20	0.35	0.191	38.80	40.80
21	0.10	0.176	38.80	40.80
22	0.04	0.188	38.80	40.80
23	0.00	0.189	38.80	40.80
24	0.00	0.173	38.80	40.80
25	0.00	0.192	38.80	40.80
26	0.29	0.167	38.80	40.80
27	0.00	0.178	38.80	40.80
28	0.05	0.184	38.80	40.80
29	0.40	0.169	38.80	40.80
30	0.11	0.165	38.80	40.80
31	0.00	0.177	38.80	40.80
TOTAL	3.02	6.094		
AVG		0.197		
MIN				
MAX	0.75	0.231		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: October 2020

Piezometers Inside Slurry Wall			Gradient Flow	Groundwater Monitoring Wells Outside Slurry Wall		
Piezometer	Riser Elevation	Leachate Elevation		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	25.56	<i>inward</i>	GW-3	39.40	33.20
P-4	40.78	22.13	<i>inward</i>	GW-4	40.53	32.58
P-5	40.73	20.93	<i>inward</i>	GW-5	39.90	31.90
P-6	40.74	19.97	<i>inward</i>	GW-6	38.95	31.15
P-7	40.60	19.30	<i>inward</i>	GW-7	39.49	28.89
P-8	40.21	18.98	<i>inward</i>	GW-8	39.75	27.35
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	19.36	<i>inward</i>	GW-10	38.34	28.54
P-11	40.52	22.44	<i>inward</i>	GW-11	38.26	30.66
P-12	43.28	29.48	<i>inward</i>	GW-12	42.09	32.24
P-13	44.78	30.78	<i>inward</i>	GW-13	44.79	32.19
P-14	45.09	30.71	<i>inward</i>	GW-14	39.63	33.93
P-15	45.57	30.92	<i>inward</i>	GW-15	42.33	34.13
P-16	44.67	31.07	<i>inward</i>	GW-16	44.41	35.01
P-17	44.28	30.23	<i>inward</i>	GW-17	42.19	33.54
P-18	43.16	24.26	<i>inward</i>	GW-18	41.76	32.36
P-19	42.91	23.09	<i>inward</i>	GW-19	41.20	31.50
P-20	42.54	25.74	<i>inward</i>	GW-20	41.00	30.00
P-21	42.23	25.10	<i>inward</i>	GW-21	40.94	27.24
P-22	42.06	23.93	<i>inward</i>	GW-22	41.53	27.48
P-23	42.08	22.38	<i>inward</i>	GW-23	40.91	29.56
P-24	42.03	19.98	<i>inward</i>	GW-24	41.37	30.87
P-25	42.16	19.16	<i>inward</i>	GW-25	41.11	31.06
P-26	42.50	19.10	<i>inward</i>	GW-26	41.44	32.79
P-27R	42.73	19.70	<i>inward</i>	GW-27R	40.90	32.65

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: 10/29/2020