

Smith, George

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Thursday, February 10, 2022 2:43 PM
To: SWD_Waste; Tafuni, Steven
Cc: Anthony Detweiler; Bryan White; Bob Bennett; Lebron, Carlo; Al-Khalaf, Laila
Subject: Manatee County Lena Road Landfill Monthly Report January 2022
Attachments: January 2022 Report.pdf

EXTERNAL MESSAGE

This email originated outside of DEP. Please use caution when opening attachments, clicking links, or responding to this email.

Mr. Tafuni,

Attached is the Manatee County Lena Road Landfill Monthly Report (for January 2022) which includes the following:

- Monthly Water Balance Report (Exhibit A)
- Monthly Leachate Tracking Summary - 2022 (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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February 10, 2022
File No. 09217088.24

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 – January 2022

Dear Mr. Tafuni:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2022 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, and Monthly Groundwater Gradient Report. During this monthly event an outward hydraulic gradient was identified at monitoring point P-16/GW-16. The following liquid measurements were identified at these locations.

Monitoring Point (1/27/22)	Leachate Elevation	Groundwater Elevation	Gradient Differential (Feet)
P-16/GW-16	30.97	30.28	0.69 Outward

On February 1st, 2022 the following liquid measurements were identified at monitoring point P-16/GW-16. The location is now in compliance with an inward gradient.

Monitoring Point (2/1/22)	Leachate Elevation	Groundwater Elevation	Gradient Differential (Feet)
P-16/GW-16	31.07	31.71	0.64 Inward

Sincerely,



Shane R. Fischer, P.E.
Vice President/Office Manager
SCS Engineers

SRF/AFV



Andres Velosa
Staff Professional I
SCS Engineers

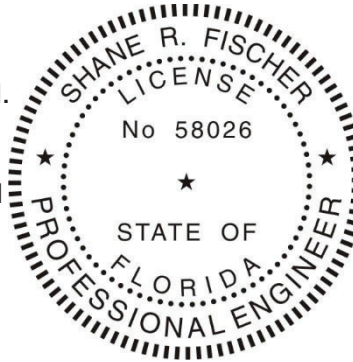
cc: Bryan White, Manatee County Landfill Superintendent
Anthony Detweiler, Manatee County Landfill Operations Supervisor
Bob Bennett, Manatee County Landfill Operations Supervisor

Enclosures

Mr. Steven Tafuni
February 10, 2022
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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:
2022.02.10
14:34:53 -05'00'

EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
January 2022**

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-Jan-22	0	0	0	0	0	0	0.00	0
2-Jan-22	0	0	0	0	0	0	0.00	0
3-Jan-22	69,960	26,665	96,625	0	66,376	163,001	0.07	543,663
4-Jan-22	19,460	7,948	27,408	1,621	21,928	50,957	0.00	0
5-Jan-22	28,488	11,119	39,607	365,145	25,448	430,200	0.00	0
6-Jan-22	23,996	9,047	33,043	139,652	21,592	194,287	0.01	77,666
7-Jan-22	23,644	8,972	32,616	130,554	22,152	185,322	0.00	0
8-Jan-22	0	0	0	0	0	0	0.00	0
9-Jan-22	0	0	0	0	0	0	0.00	0
10-Jan-22	54,740	20,546	75,286	309,621	60,232	445,139	0.00	0
11-Jan-22	22,912	8,937	31,849	84,894	22,584	139,327	0.00	0
12-Jan-22	22,676	8,793	31,469	106,650	22,376	160,495	0.00	0
13-Jan-22	26,408	9,873	36,281	85,167	23,400	144,848	0.00	0
14-Jan-22	22,708	8,207	30,915	73,070	17,504	121,489	0.00	0
15-Jan-22	0	0	0	0	0	0	0.00	0
16-Jan-22	0	0	0	0	0	0	0.14	1,087,326
17-Jan-22	67,704	26,373	94,077	238,643	64,272	396,992	0.00	0
18-Jan-22	24,448	7,694	32,142	82,376	19,856	134,374	0.00	0
19-Jan-22	20,640	8,525	29,165	82,667	25,328	137,160	0.00	0
20-Jan-22	18,914	6,538	25,452	62,221	19,056	106,729	0.00	0
21-Jan-22	22,626	8,004	30,630	82,766	20,960	134,356	0.00	0
22-Jan-22	0	0	0	0	0	0	0.04	310,665
23-Jan-22	0	0	0	0	0	0	0.00	0
24-Jan-22	63,460	22,653	86,113	202,117	62,704	350,934	0.00	0
25-Jan-22	24,712	9,102	33,814	83,453	22,344	139,611	0.39	3,028,980
26-Jan-22	22,092	8,203	30,295	62,481	20,360	113,136	0.01	77,666
27-Jan-22	20,400	7,545	27,945	61,446	20,368	109,759	0.00	0
28-Jan-22	21,820	8,341	30,161	82,706	20,536	133,403	0.00	0
29-Jan-22	0	0	0	0	0	0	0.00	0
30-Jan-22	0	0	0	0	0	0	0.00	0
31-Jan-22	53,572	19,942	0	179,935	59,176	0	0.00	0
TOTAL	675,380	253,027	854,893	2,517,185	658,552	3,791,519	0.66	5,125,967
Leachate Pumped as Percentage of Rainfall				46.8%	119.0%	55.7%		

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 -- 2022

	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	854,893	2,517,185	658,552	3,791,519	0.66	5,125,967	46.8%	119.0%	55.7%
FEBRUARY									
MARCH									
APRIL									
MAY									
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	854,893	2,517,185	658,552	3,791,519	0.66	5,125,967	46.8%	137.7%	36.0%

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		
1/1/22								
1/2/22								
1/3/22	48372144	14606294	79708384	1769053	33.45	DRY	OK	DEK
1/4/22	48391604	14614242	79730312	1770674	33.45	DRY	OK	DEK
1/5/22	48420092	14625361	79755760	2135819	33.40	DRY	OK	DEK
1/6/22	484444088	14634408	79777352	2275471	33.39	DRY	OK	DEK
1/7/22	48467732	14643380	79799504	2406025	33.38	DRY	OK	DEK
1/8/22								
1/9/22								
1/10/22	48522472	14663926	79859736	2715646	33.37	DRY	OK	DEK
1/11/22	48545384	14672863	79882320	2800540	33.37	DRY	OK	DEK
1/12/22	48568060	14681656	79904696	2907190	33.36	DRY	OK	DEK
1/13/22	48594468	14691529	79928096	2992357	33.34	DRY	OK	DEK
1/14/22	48617176	14699736	79945600	3065427	33.30	DRY	OK	SP
1/15/22								
1/16/22								
1/17/22	48689880	14726109	80009872	3304070	33.25	DRY	OK	SP
1/18/22	48709328	1473803	80024728	3386446	33.20	DRY	OK	SP
1/19/22	48729968	14742328	80055056	3469113	33.25	DRY	OK	SP
1/20/22	48748882	14748866	80074112	3531334	33.22	DRY	OK	SP
1/21/22	48771508	14756870	80095072	3614100	33.20	DRY	OK	SP
1/22/22								
1/23/22								
1/24/22	48834968	14779523	80157776	3816217	33.19	DRY	OK	DEK
1/25/22	48859680	14788625	80180120	3899670	33.19	DRY	OK	DEK
1/26/22	48881772	14796828	80200480	3962151	33.21	DRY	OK	DEK
1/27/22	48902172	14804373	80220848	4023597	33.21	DRY	OK	DEK
1/28/22	48923992	14812714	80241384	4106305	33.20	DRY	OK	DEK
1/29/21								
1/30/22								
1/31/22	48977561	14832656	80300560	4286238	33.14	DRY	OK	DEK

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2022 Jan	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.145	38.80	40.80
2	0.00	0.145	38.80	40.80
3	0.07	0.145	38.80	40.80
4	0.00	0.288	38.80	40.80
5	0.00	0.262	38.80	40.80
6	0.01	0.191	38.80	40.80
7	0.00	0.162	38.80	40.80
8	0.00	0.168	38.80	40.80
9	0.00	0.145	38.80	40.80
10	0.00	0.136	38.80	40.80
11	0.00	0.156	38.80	40.80
12	0.00	0.141	38.80	40.80
13	0.00	0.143	38.80	40.80
14	0.00	0.139	38.80	40.80
15	0.00	0.139	38.80	40.80
16	0.14	0.127	38.80	40.80
17	0.00	0.117	38.80	40.80
18	0.00	0.131	38.80	40.80
19	0.00	0.132	38.80	40.80
20	0.00	0.113	38.80	40.80
21	0.00	0.135	38.80	40.80
22	0.04	0.110	38.80	40.80
23	0.00	0.128	38.80	40.80
24	0.00	0.113	38.80	40.80
25	0.39	0.120	38.80	40.80
26	0.01	0.128	38.80	40.80
27	0.00	0.112	38.80	40.80
28	0.00	0.115	38.80	40.80
29	0.00	0.123	38.80	40.80
30	0.00	0.103	38.80	40.80
31	0.00	0.106	38.80	40.80
TOTAL	0.66	4.418		
AVG		0.143		
MIN				
MAX	0.39	0.288		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: January 2022

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	24.42	<i>inward</i>	GW-3	39.40	31.11
P-4	40.78	22.15	<i>inward</i>	GW-4	40.53	30.59
P-5	40.73	20.84	<i>inward</i>	GW-5	39.90	30.13
P-6	40.74	19.92	<i>inward</i>	GW-6	38.95	29.37
P-7	40.60	19.16	<i>inward</i>	GW-7	39.49	27.26
P-8	40.21	19.14	<i>inward</i>	GW-8	39.75	25.95
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	19.28	<i>inward</i>	GW-10	38.34	26.60
P-11	40.52	21.92	<i>inward</i>	GW-11	38.26	28.38
P-12	43.28	29.45	<i>inward</i>	GW-12	42.09	30.80
P-13	44.78	30.69	<i>inward</i>	GW-13	44.79	33.19
P-14	45.09	29.85	<i>inward</i>	GW-14	39.63	33.81
P-15	45.57	31.00	<i>inward</i>	GW-15	42.33	31.13
P-16	44.67	30.97	<i>outward</i>	GW-16	44.41	30.28
P-17	44.28	30.14	<i>inward</i>	GW-17	42.19	32.69
P-18	43.16	24.19	<i>inward</i>	GW-18	41.76	30.82
P-19	42.91	23.09	<i>inward</i>	GW-19	41.20	28.96
P-20	42.54	25.52	<i>inward</i>	GW-20	41.00	28.12
P-21	42.23	24.84	<i>inward</i>	GW-21	40.94	25.66
P-22	42.06	23.86	<i>inward</i>	GW-22	41.53	25.66
P-23	42.08	22.44	<i>inward</i>	GW-23	40.91	27.16
P-24	42.03	19.94	<i>inward</i>	GW-24	41.37	27.58
P-25	42.16	19.24	<i>inward</i>	GW-25	41.11	29.17
P-26	42.50	19.18	<i>inward</i>	GW-26	41.44	31.34
P-27R	42.73	20.03	<i>inward</i>	GW-27R	40.90	31.37

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: 1/27/2022