Smith, George

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Friday, September 9, 2022 11:16 AM
To: SWD_Waste; Tafuni, Steven
Cc: Anthony Detweiler; Bryan White; Lebron, Carlo; Al-Khalaf, Laila
Subject: Manatee County Lena Road Landfill Monthly Report August 2022
Attachments: August 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 August 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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www.scsengineers.com

September 9, 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 – August 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.

Sincerely,

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

Andres Velosa
Staff Professional II
SCS Engineers

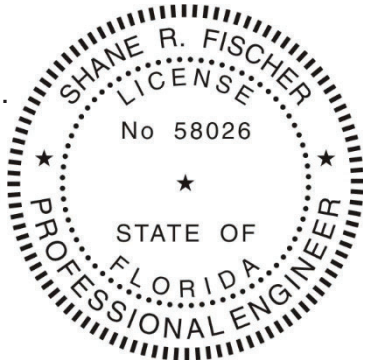
SRF/AFV

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: 2022.09.09 11:09:29 -04'00'

EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
August 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-Aug-22	2,744	92,012	0	432,891	162,800	595,691	0.00	0
2-Aug-22	1,936	33,524	35,460	146,030	56,568	238,058	0.57	4,426,971
3-Aug-22	1,584	30,374	31,958	126,063	46,368	204,389	1.11	8,620,944
4-Aug-22	1,924	32,132	34,056	134,541	52,112	220,709	0.54	4,193,973
5-Aug-22	1,908	30,908	32,816	150,768	49,256	232,840	0.17	1,320,325
6-Aug-22	0	0	0	0	0	0	0.04	310,665
7-Aug-22	0	0	0	0	0	0	0.02	155,332
8-Aug-22	2,608	96,402	99,010	477,399	160,384	736,793	0.44	3,417,311
9-Aug-22	648	28,096	28,744	115,386	40,792	184,922	0.13	1,009,660
10-Aug-22	396	28,602	28,998	115,926	42,800	187,724	0.00	0
11-Aug-22	660	34,204	34,864	137,503	46,512	218,879	0.00	0
12-Aug-22	808	31,988	32,796	120,729	48,050	201,575	0.00	0
13-Aug-22	0	0	0	0	0	0	0.00	0
14-Aug-22	0	0	0	0	0	0	0.00	0
15-Aug-22	3,604	94,722	98,326	344,172	143,678	586,176	0.83	6,446,291
16-Aug-22	1,872	33,816	35,688	132,720	49,072	217,480	0.00	0
17-Aug-22	1,416	30,634	32,050	117,047	41,920	191,017	0.06	465,997
18-Aug-22	1,428	30,162	31,590	108,546	40,584	180,720	0.12	931,994
19-Aug-22	1,056	30,792	31,848	112,970	38,400	183,218	0.43	3,339,645
20-Aug-22	0	0	0	0	0	0	0.03	232,998
21-Aug-22	0	0	0	0	0	0	0.00	0
22-Aug-22	4,360	87,394	91,754	323,911	118,320	533,985	0.53	4,116,306
23-Aug-22	7,712	31,528	39,240	105,833	44,600	189,673	0.91	7,067,621
24-Aug-22	10,508	30,728	41,236	117,257	40,728	199,221	0.87	6,756,956
25-Aug-22	3,364	29,694	33,058	100,022	42,800	175,880	0.02	155,332
26-Aug-22	3,476	35,948	39,424	118,868	54,552	212,844	0.10	776,662
27-Aug-22	0	0	0	0	0	0	0.02	155,332
28-Aug-22	0	0	0	0	0	0	0.17	1,320,325
29-Aug-22	7,024	94,000	101,024	292,388	154,936	548,348	0.00	0
30-Aug-22	2,464	31,522	33,986	98,560	52,192	184,738	0.14	1,087,326
31-Aug-22	2,476	30,854	0	96,536	45,232	141,768	0.83	6,446,291
TOTAL	**65,976**	**1,030,036**	**967,926**	**4,026,066**	**1,572,656**	**6,566,648**	**8.08**	**62,754,257**
Leachate Pumped as Percentage of Rainfall			4.3%	15.5%	10.9%			

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).

	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**

Comments

"0" = no data recorded

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	833,064	2,470,917	723,872	4,027,853	0.81	6,290,959	37.1%	95.2%	49.9%
MARCH	894,525	1,834,294	746,848	3,475,667	1.75	13,591,578	18.5%	32.7%	23.8%
APRIL	384,275	1,690,780	623,224	2,698,279	3.18	24,697,839	4.4%	16.6%	10.9%
MAY	660,819	2,009,224	876,984	3,547,027	4.07	31,610,127	5.9%	15.4%	12.0%
JUNE	660,474	1,877,952	612,376	3,150,802	7.07	54,909,975	3.4%	8.3%	4.8%
JULY	856,932	5,044,292	1,321,856	7,223,080	11.92	92,578,063	2.6%	13.2%	6.2%
AUGUST	967,926	4,026,066	1,572,656	6,566,648	8.08	62,754,257	4.3%	15.5%	10.9%
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	**6,112,908**	**21,470,710**	**7,136,368**	**34,480,875**	**37.54**	**291,558,765**	**5.9%**	**20.6%**	**6.9%**

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		
8/1/22	50376292	17798062	85317216	8989460	34.43	31.70	OK	DEK
8/2/22	50378228	17831586	85373784	9135490	34.42	31.66	OK	DEK
8/3/22	50379812	17861960	85420152	9261553	34.47	31.57	OK	DEK
8/4/22	50381736	17894092	85472264	9396094	34.51	31.95	OK	DEK
8/5/22	50383644	17925000	85521520	9546862	34.52	32.30	OK	DEK
8/6/22								
8/7/22								
8/8/22	50386252	18021402	85681904	24261	34.49	32.00	#4 RESTART	DEK
8/9/22	50386900	18049498	85722696	139647	34.49	31.92	OK	DEK
8/10/22	50387296	18078100	85765496	255573	34.49	31.70	OK	DEK
8/11/22	50387956	18112304	85812008	393076	34.49	31.69	OK	DEK
8/12/22	50388764	18144292	85860058	513805	34.46	31.68	OK	DEK
8/13/22								
8/14/22								
8/15/22	50392368	18239044	86003736	857977	34.50	31.28	OK	DEK
8/16/22	50394240	18272830	86052808	990697	34.51	31.30	OK	DEK
8/17/22	50395656	18303464	86094728	1107744	34.48	31.29	OK	DEK
8/18/22	50397084	18333626	86135812	1216290	34.48	31.28	OK	DEK
8/19/22	50398140	18364418	86173712	1329260	34.48	31.19	OK	DEK
8/20/22								
8/21/22								
8/22/22	50402500	18451812	86292032	1653171	34.48	30.72	OK	DEK
8/23/22	50410212	18483340	86336632	1759004	34.48	30.71	OK	DEK
8/24/22	50420720	18514068	86377360	1876261	34.50	30.96	OK	DEK
8/25/22	50424084	18543762	86420160	1976283	34.54	31.40	OK	DEK
8/26/22	50427560	18579710	86474712	2095151	34.54	31.39	OK	DEK
8/27/22								
8/28/22								
8/29/22	50434584	18673710	86629648	2387539	34.49	31.30	OK	DEK
8/30/22	50437048	18705232	86681840	2486099	34.48	31.29	OK	DEK
8/31/22	50439524	18736080	86727072	2582635	34.47	31.27	OK	DEK

LANDFILL SHEET		
2022 Aug	RAIN FALL	LEACHATE MGD
1	0.00	0.230
2	0.57	0.246
3	1.11	0.188
4	0.54	0.215
5	0.17	0.284
6	0.04	0.208
7	0.02	0.213
8	0.44	0.234
9	0.13	0.205
10	0.00	0.199
11	0.00	0.200
12	0.00	0.206
13	0.00	0.198
14	0.00	0.199
15	0.83	0.198
16	0.00	0.213
17	0.06	0.186
18	0.12	0.182
19	0.43	0.169
20	0.03	0.178
21	0.00	0.180
22	0.53	0.173
23	0.91	0.174
24	0.87	0.156
25	0.02	0.157
26	0.10	0.161
27	0.02	0.165
28	0.17	0.164
29	0.00	0.161
30	0.14	0.157
31	0.83	0.153
TOTAL	8.08	5.952
AVG		0.192
MIN		
MAX	1.11	0.284

LAKE LEVEL DATA IN FEET NGVD	
SOUTH (86 ACRE)	EAST (63 ACRE)
18.80	40.80
18.80	40.80
18.80	40.80
18.80	40.80
18.80	40.80
18.80	40.80
18.80	40.80
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18.80	40.80
18.80	40.80
18.80	40.80

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: August 2022

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	26.12	*inward*	GW-3	39.40	34.95
P-4	40.78	22.40	*inward*	GW-4	40.53	34.01
P-5	40.73	21.22	*inward*	GW-5	39.90	33.24
P-6	40.74	19.94	*inward*	GW-6	38.95	32.52
P-7	40.60	19.30	*inward*	GW-7	39.49	31.04
P-8	40.21	19.19	*inward*	GW-8	39.75	29.86
P-9	NA	NA	*NA*	*NA*	*NA*	*NA*
P-9A	39.83	22.77	*inward*	GW-9	39.65	30.55
P-10	39.86	19.57	*inward*	GW-10	38.34	29.91
P-11	40.52	22.38	*inward*	GW-11	38.26	31.06
P-12	43.28	30.88	*inward*	GW-12	42.09	33.09
P-13	44.78	31.13	*inward*	GW-13	44.79	34.52
P-14	45.09	29.68	*inward*	GW-14	39.63	35.03
P-15	45.57	30.66	*inward*	GW-15	42.33	33.02
P-16	44.67	31.07	*inward*	GW-16	44.41	31.71
P-17	44.28	31.08	*inward*	GW-17	42.19	34.63
P-18	43.16	24.49	*inward*	GW-18	41.76	34.36
P-19	42.91	23.38	*inward*	GW-19	41.20	32.58
P-20	42.54	25.88	*inward*	GW-20	41.00	30.19
P-21	42.23	25.18	*inward*	GW-21	40.94	26.98
P-22	42.06	23.99	*inward*	GW-22	41.53	27.85
P-23	42.08	22.53	*inward*	GW-23	40.91	30.41
P-24	42.03	20.03	*inward*	GW-24	41.37	30.23
P-25	42.16	19.26	*inward*	GW-25	41.11	31.45
P-26	42.50	19.30	*inward*	GW-26	41.44	33.91
P-27R	42.73	19.65	*inward*	GW-27R	40.90	34.16

NA = Not Applicable - wells and piezometers abondoned 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: 8/26/2022