

Ramey, Ashleigh

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Thursday, October 13, 2022 2:06 PM
To: SWD_Waste; Tafuni, Steven
Cc: Anthony Detweiler; Bryan White
Subject: Manatee County Lena Road Landfill Monthly Report September 2022
Attachments: September 2022 Report.pdf

EXTERNAL MESSAGE

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Mr. Tafuni,

Attached is the Manatee County Lena Road Landfill Monthly Report (for September 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.
Vice President/Office Manager
SCS Engineers
3922 Coconut Palm Drive, Suite 102
Tampa, Florida 33619
(813) 804-6714 (W)
(813) 503-1044 (C)
sfischer@scsengineers.com

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October 13, 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 – September 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.

Please note, power was lost and the readings for meter number 4 were the same from September 14, 2022 through September 20, 2022. Starting September 21, 2022 the meter was working correctly. Also, due to Hurricane Ian the gradient readings were not able to be collected during the last week in September which is the standard practice. Therefore, the readings for September were taken on October 6, 2022. The readings required for the November report will be collected as normal sometime during the last full week in October.

Sincerely,



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



Andres Velosa
Staff Professional II
SCS Engineers

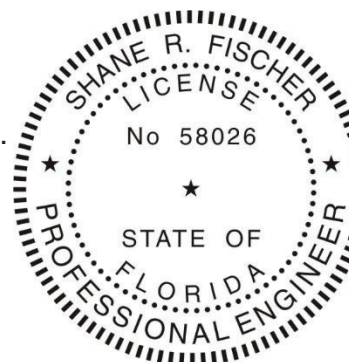
SRF/AFV

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:
2022.10.13
13:58:33 -04'00'

EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
September 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-Sep-22	2,456	31,856	0	99,466	47,112	146,578	0.02	155,332
2-Sep-22	116,900	12,890	129,790	95,855	40,696	266,341	0.00	0
3-Sep-22	0	0	0	0	0	0	0.00	0
4-Sep-22	0	0	0	0	0	0	0.00	0
5-Sep-22	0	0	0	0	0	0	0.00	0
6-Sep-22	244,104	37,562	281,666	388,952	172,200	842,818	0.18	1,397,991
7-Sep-22	53,548	9,756	63,304	98,676	45,104	207,084	0.17	1,320,325
8-Sep-22	50,888	10,444	61,332	94,431	52,136	207,899	1.42	11,028,595
9-Sep-22	51,972	10,578	62,550	98,252	34,792	195,594	1.80	13,979,909
10-Sep-22	0	0	0	0	0	0	0.90	6,989,954
11-Sep-22	0	0	0	0	0	0	0.70	5,436,631
12-Sep-22	151,100	27,024	178,124	123,383	212,536	514,043	0.09	698,995
13-Sep-22	52,968	11,864	64,832	137,315	91,422	293,569	0.34	2,640,649
14-Sep-22	56,732	11,046	67,778	667,071	89,026	823,875	0.02	155,332
15-Sep-22	52,668	9,876	62,544	0	83,176	145,720	0.49	3,805,642
16-Sep-22	52,360	10,068	62,428	0	98,016	160,444	0.37	2,873,648
17-Sep-22	0	0	0	0	0	0	0.87	6,756,956
18-Sep-22	0	0	0	0	0	0	0.02	155,332
19-Sep-22	147,308	30,938	178,246	0	256,416	434,662	0.02	155,332
20-Sep-22	58,844	13,256	72,100	0	98,664	170,764	1.70	13,203,247
21-Sep-22	52,448	11,630	64,078	737,977	82,248	884,303	0.01	77,666
22-Sep-22	61,680	13,672	75,352	498,527	102,600	676,479	0.00	0
23-Sep-22	73,168	16,688	89,856	368,980	120,584	579,420	0.00	0
24-Sep-22	0	0	0	0	0	0	0.00	0
25-Sep-22	0	0	0	0	0	0	0.00	0
26-Sep-22	169,468	40,140	209,608	713,502	251,992	1,175,102	1.62	12,581,918
27-Sep-22	51,077	11,920	62,997	200,633	73,464	337,094	0.31	2,407,651
28-Sep-22	0	0	0	0	0	0	6.40	49,706,342
29-Sep-22	0	0	0	0	0	0	0.05	388,331
30-Sep-22	172,603	16,618	189,221	1,394,756	359,008	1,942,985	0.00	0
TOTAL	1,672,292	337,826	1,975,806	5,717,776	2,311,192	10,004,774	17.50	135,915,780
Leachate Pumped as Percentage of Rainfall			4.1%	10.2%	7.4%			

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

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	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	1,975,806	5,717,776	2,311,192	10,004,774	17.50	135,915,780	4.1%	10.2%	7.4%
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	8,088,714	27,188,486	9,447,560	44,485,649	55.04	427,474,545	5.3%	17.8%	6.2%

Notes:

- (B) Total leachate pumped from Stage I.
- (C) Total leachate pumped from Stage II
- (D) Total leachate pumped from Stage III
- (E) Total leachate (Column B+C+D) pumped to WWTP storage tank.
- (F) Total rainfall in inches.
- (G) Total rainfall in gallons (Stage I, II, and III Open Area of 286-acres x Rainfall)
- (H) Stage I leachate as a percentage of rainfall.
- (I) Stage II leachate pumped as a percentage of rainfall.
- (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		
	9/1/22	50441980	18767942	86774184	2682101	34.50		
9/2/22	50558880	18780832	86814880	2777956	34.49	31.28	OK	TRK
9/3/22								
9/4/22								
9/5/22								
9/6/22	50802984	18818394	86987080	3166908	34.57	30.87	OK	TRK
9/7/22	50856532	18828150	87032184	3265584	34.58	30.79	OK	TRK
9/8/22	50907420	18838594	87074320	3360015	34.50	30.69	OK	TRK
9/9/22	50959392	18849172	87119112	3458267	34.57	32.15	OK	TRK
9/10/22								
9/11/22	1							
9/12/22	5110492	18876196	87331648	358165	34.58	32.37	OK	TRK
9/13/22	51163460	18888060	87423070	3718965	34.59	32.32	OK	TRK
9/14/22	51220192	18899106	87512096	4386036	34.59	32.35	OK	TRK
9/15/22	51272860	18908982	87595272	4386036	34.57	32.31	OK	TRK
9/16/22	51325220	18919050	87693288	4386036	34.61	32.33	OK	TRK
9/17/22								
9/18/22								
9/19/22	51422528	18949988	87949704	4386036	34.60	32.31	OK	TRK
9/20/22	51531372	18963244	88048368	4386036	34.54	32.29	OK	TRK
9/21/22	51583820	18974874	88130616	5124073	34.70	32.35	OK	TRK
9/22/22	51645500	18988546	88233216	5622540	34.59	32.35	OK	TRK
9/23/22	51718668	19005234	88353800	5991520	34.56	32.30	OK	TRK
9/24/22								
9/25/22								
9/26/22	51888136	19045374	88605792	6705022	34.49	32.05	OK	TRK
9/27/22	51939213	19057294	88679256	6905655	34.70	32.35	OK	TRK
9/28/22								
9/29/22								
9/30/22	52111816	19073912	89038264	8350411	36.25	32.36	OK	MS
9/31/2022								

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2022 Sep	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.02	0.222	18.80	40.80
2	0.00	0.200	18.80	40.80
3	0.00	0.189	18.80	40.80
4	0.00	0.182	18.80	40.80
5	0.00	0.174	18.80	40.80
6	0.18	0.168	18.80	40.80
7	0.17	0.168	18.80	40.80
8	1.42	0.168	18.80	40.80
9	1.80	0.175	18.80	40.80
10	0.90	0.150	18.80	40.80
11	0.70	0.110	18.80	40.80
12	0.09	0.176	18.80	40.80
13	0.34	0.725	18.80	40.80
14	0.02	0.271	18.80	40.80
15	0.49	0.109	18.80	40.80
16	0.37	0.107	18.80	40.80
17	0.87	0.120	18.80	40.80
18	0.02	0.137	18.80	40.80
19	0.02	0.156	18.80	40.80
20	1.70	0.555	18.80	40.80
21	0.01	0.813	18.80	40.80
22	0.00	0.481	18.80	40.80
23	0.00	0.408	18.80	40.80
24	0.00	0.370	18.80	40.80
25	0.00	0.345	18.80	40.80
26	1.62	0.325	18.80	40.80
27	0.31	0.343	18.80	40.80
28	6.40	0.417	18.80	40.80
29	0.05	0.904	18.80	40.80
30	0.00	1.154	18.80	40.80
31				
TOTAL	17.50	9.822		
AVG		0.327		
MIN				
MAX	6.40	1.154		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: September 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	26.92	<i>inward</i>	GW-3	39.40	35.03
P-4	40.78	22.65	<i>inward</i>	GW-4	40.53	33.72
P-5	40.73	21.93	<i>inward</i>	GW-5	39.90	33.15
P-6	40.74	20.14	<i>inward</i>	GW-6	38.95	32.59
P-7	40.60	19.54	<i>inward</i>	GW-7	39.49	31.25
P-8	40.21	19.47	<i>inward</i>	GW-8	39.75	29.59
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	19.62	<i>inward</i>	GW-10	38.34	30.54
P-11	40.52	22.52	<i>inward</i>	GW-11	38.26	31.69
P-12	43.28	31.12	<i>inward</i>	GW-12	42.09	34.34
P-13	44.78	31.57	<i>inward</i>	GW-13	44.79	34.69
P-14	45.09	30.69	<i>inward</i>	GW-14	39.63	35.13
P-15	45.57	31.06	<i>inward</i>	GW-15	42.33	33.55
P-16	44.67	31.07	<i>inward</i>	GW-16	44.41	31.71
P-17	44.28	30.28	<i>inward</i>	GW-17	42.19	34.79
P-18	43.16	24.53	<i>inward</i>	GW-18	41.76	34.16
P-19	42.91	23.56	<i>inward</i>	GW-19	41.20	34.00
P-20	42.54	26.34	<i>inward</i>	GW-20	41.00	32.45
P-21	42.23	25.33	<i>inward</i>	GW-21	40.94	30.47
P-22	42.06	24.55	<i>inward</i>	GW-22	41.53	30.01
P-23	42.08	22.68	<i>inward</i>	GW-23	40.91	33.36
P-24	42.03	20.40	<i>inward</i>	GW-24	41.37	32.69
P-25	42.16	19.26	<i>inward</i>	GW-25	41.11	33.51
P-26	42.50	19.29	<i>inward</i>	GW-26	41.44	33.87
P-27R	42.73	19.63	<i>inward</i>	GW-27R	40.90	34.18

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: 10/6/2022