

Johnson, Sabrina O

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Thursday, June 10, 2021 11:25 AM
To: SWD_Waste; Tafuni, Steven
Cc: Anthony Detweiler; Bryan White; Bob Bennett; Lebron, Carlo; Velosa, Andres
Subject: RE: Manatee County Lena Road Landfill Monthly Report May 2021
Attachments: May 2021 Report.pdf

Mr. Tafuni,

Attached is the Manatee County Lena Road Landfill Monthly Report (for May 2021) which includes the following:

- Monthly Water Balance Report (Exhibit A)
- Monthly Leachate Tracking Summary - 2021 (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

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June 10, 2021
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 – April 2021

Dear Mr. Tafuni:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2021 (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 (5/28/21)	Leachate Elevation	Groundwater Elevation	Gradient Differential (Feet)
P-16/GW-16	31.08	30.96	0.12

Monitoring point P-16/GW-16 is located on the east side of Stage 1 across from the treatment plant's effluent pond. The County currently has an ongoing construction project in this area. The project consists of lowering the berm around the pond and working on the bottom of this pond, for this reason the water has been pulled out of this area, thus this has dried up the east ditch and is causing the outward gradient.

It is important to mention that for monitoring point P-16/GW-16 it remains an inward gradient throughout its life cycle, and should return to an inward gradient once construction is completed.

The County will continue normal pumping operations and will review the readings at these monitoring points during the next monthly event.

Please note for May 1st to May 31st the Leachate Meter Readings for Stage II are highlighted "NO DISPLAY." The meter screen malfunctioned and data was not recorded properly. The County is currently working on getting the meter repaired.

Mr. Steven Tafuni
June 10, 2021
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Sincerely,



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




Andres Velosa
Staff Professional I
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



58026
6/10/2021

EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
May 2021**

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-May-21	0	0	0	0	0	0	0.00	0
2-May-21	0	0	0	0	0	0	0.00	0
3-May-21	65,956	27,744	93,700	0	82,220	175,920	0.00	0
4-May-21	23,420	9,884	33,304	0	26,944	60,248	0.00	0
5-May-21	20,716	9,456	30,172	0	42,700	72,872	0.00	0
6-May-21	18,820	9,180	28,000	0	49,948	77,948	0.00	0
7-May-21	19,696	9,235	28,931	0	46,512	75,443	0.00	0
8-May-21	0	0	0	0	0	0	0.00	0
9-May-21	0	0	0	0	0	0	0.00	0
10-May-21	61,960	28,764	90,724	0	124,264	214,988	0.00	0
11-May-21	18,960	9,554	28,514	0	48,512	77,026	0.00	0
12-May-21	17,992	8,708	26,700	0	41,176	67,876	0.00	0
13-May-21	19,788	9,525	29,313	0	48,460	77,773	0.10	776,662
14-May-21	18,040	9,357	27,397	0	45,548	72,945	0.00	0
15-May-21	0	0	0	0	0	0	0.00	0
16-May-21	0	0	0	0	0	0	0.00	0
17-May-21	56,172	30,034	86,206	0	116,336	202,542	0.00	0
18-May-21	18,968	10,295	29,263	0	47,396	76,659	0.00	0
19-May-21	18,132	9,228	27,360	0	28,664	56,024	0.00	0
20-May-21	19,204	8,831	28,035	0	27,228	55,263	0.00	0
21-May-21	17,160	9,285	26,445	0	45,776	72,221	0.00	0
22-May-21	0	0	0	0	0	0	0.00	0
23-May-21	0	0	0	0	0	0	0.00	0
24-May-21	55,288	27,669	82,957	0	114,524	197,481	0.00	0
25-May-21	16,308	7,860	24,168	0	37,964	62,132	0.00	0
26-May-21	17,988	9,010	26,998	0	42,320	69,318	0.00	0
27-May-21	18,168	10,692	28,860	0	45,016	73,876	0.00	0
28-May-21	20,636	10,249	30,885	0	41,464	72,349	0.00	0
29-May-21	0	0	0	0	0	0	0.00	0
30-May-21	0	0	0	0	0	0	0.33	2,562,983
31-May-21	0	0	0	0	0	0	0.00	0
TOTAL	543,372	264,560	807,932	0	1,102,972	1,910,904	0.43	3,339,645
Leachate Pumped as Percentage of Rainfall				67.8%	0.0%	143.1%		

NO DISPLAY

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 -- 2021

	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	955,764	2,232,576	857,936	4,046,276	0.79	6,135,627	43.7%	88.2%	60.6%
FEBRUARY	1,014,970	0	721,028	1,735,998	3.39	26,328,828	10.8%	0.0%	11.9%
MARCH	990,938	2,060,431	774,580	3,746,493	3.72	28,891,812	9.6%	17.3%	11.6%
APRIL	1,011,823	1,599,386	806,524	3,417,733	5.13	39,842,740	7.1%	9.7%	8.8%
MAY	807,932	0	1,102,972	1,910,904	0.43	3,339,645	67.8%	0.0%	143.1%
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	4,781,427	5,892,393	4,263,040	14,857,404	13.46	104,538,651	12.8%	15.8%	11.4%

No Display

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		
5/1/21								
5/2/21								
5/3/21	44509436	9623993	165114576	3660837	33.68	30.91	OK	DEK
5/4/21	44532856	9633877	165141520	3662055	33.67	30.80	OK	DEK
5/5/21	44553572	9643333	165184220	3662453	33.67	30.69	OK	DEK
5/6/21	44572392	9652513	165234168	3661949	33.64	30.59	OK	DEK
5/7/21	44592088	9661748	165280680	3661575	33.62	30.58	OK	Avh
5/8/21								
5/9/21								
5/10/21	44654048	9690512	165404944	3660725	33.59	30.12	OK	Avh
5/11/21	44673008	9700066	165453456	3660208	33.47	30.00	OK	DEK
5/12/21	44691000	9708774	1654941632	3659832	33.47	29.95	OK	DEK
5/13/21	44710788	9718299	165513072	3659396	33.45	29.88	OK	DEK
5/14/21	44728828	9727656	165585440	3659081	33.40	29.80	OK	DEK
5/15/21								
5/16/21								
5/17/21	44785000	9757690	165704976	3658551	33.35	DRY	OK	DEK
5/18/21	44803968	9767985	165752372	3658067	33.30	DRY	OK	DEK
5/19/21	44822100	9777213	165781036	3802902	33.28	DRY	OK	DEK
5/20/21	44841304	9786044	165808264	3802850	33.25	DRY	OK	DEK
5/21/21	44858464	9795329	165854040	3802649	33.22	DRY	OK	DEK
5/22/21								
5/23/21								
5/24/21	44913752	9822998	165968564	3948075	33.13	DRY	OK	DEK
5/25/21	44930060	9830858	166006528	3947889	33.11	DRY	OK	DEK
5/26/21	44948048	9839868	166048848	3947737	33.10	DRY	OK	DEK
5/27/21	44966216	9850560	166093864	3947373	33.09	DRY	OK	DEK
5/28/21	44986852	9860809	166135328	4111716	33.08	DRY	OK	DEK
5/29/21								
5/30/21								
5/31/21								

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2021 May	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.060	38.80	40.80
2	0.00	0.057	38.80	40.80
3	0.00	0.059	38.80	40.80
4	0.00	0.064	38.80	40.80
5	0.00	0.079	38.80	40.80
6	0.00	0.080	38.80	40.80
7	0.00	0.078	38.80	40.80
8	0.00	0.073	38.80	40.80
9	0.00	0.057	38.80	40.80
10	0.00	0.072	38.80	40.80
11	0.00	0.075	38.80	40.80
12	0.00	0.077	38.80	40.80
13	0.10	0.075	38.80	40.80
14	0.00	0.074	38.80	40.80
15	0.00	0.073	38.80	40.80
16	0.00	0.057	38.80	40.80
17	0.00	0.070	38.80	40.80
18	0.00	0.212	38.80	40.80
19	0.00	0.055	38.80	40.80
20	0.00	0.065	38.80	40.80
21	0.00	0.068	38.80	40.80
22	0.00	0.069	38.80	40.80
23	0.00	0.204	38.80	40.80
24	0.00	0.058	38.80	40.80
25	0.00	0.070	38.80	40.80
26	0.00	0.071	38.80	40.80
27	0.00	0.235	38.80	40.80
28	0.00	0.074	38.80	40.80
29	0.00	0.074	38.80	40.80
30	0.33	0.058	38.80	40.80
31	0.00	0.061	38.80	40.80
TOTAL	0.43	2.552		
AVG		0.082		
MIN				
MAX	0.33	0.235		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: May 2021

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	24.53	<i>inward</i>	GW-3	39.40	31.56
P-4	40.78	22.12	<i>inward</i>	GW-4	40.53	30.54
P-5	40.73	20.82	<i>inward</i>	GW-5	39.90	30.25
P-6	40.74	19.94	<i>inward</i>	GW-6	38.95	29.66
P-7	40.60	19.07	<i>inward</i>	GW-7	39.49	27.77
P-8	40.21	18.94	<i>inward</i>	GW-8	39.75	26.30
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	19.29	<i>inward</i>	GW-10	38.34	25.92
P-11	40.52	22.11	<i>inward</i>	GW-11	38.26	28.58
P-12	43.28	29.45	<i>inward</i>	GW-12	42.09	31.65
P-13	44.78	30.74	<i>inward</i>	GW-13	44.79	33.19
P-14	45.09	29.70	<i>inward</i>	GW-14	39.63	32.38
P-15	45.57	30.80	<i>inward</i>	GW-15	42.33	33.03
P-16	44.67	31.08	<i>outward</i>	GW-16	44.41	30.96
P-17	44.28	30.29	<i>inward</i>	GW-17	42.19	32.24
P-18	43.16	24.12	<i>inward</i>	GW-18	41.76	30.91
P-19	42.91	23.10	<i>inward</i>	GW-19	41.20	29.56
P-20	42.54	25.62	<i>inward</i>	GW-20	41.00	28.71
P-21	42.23	24.95	<i>inward</i>	GW-21	40.94	25.89
P-22	42.06	23.90	<i>inward</i>	GW-22	41.53	26.15
P-23	42.08	22.43	<i>inward</i>	GW-23	40.91	28.83
P-24	42.03	22.04	<i>inward</i>	GW-24	41.37	28.76
P-25	42.16	22.02	<i>inward</i>	GW-25	41.11	29.59
P-26	42.50	21.85	<i>inward</i>	GW-26	41.44	31.54
P-27R	42.73	21.95	<i>inward</i>	GW-27R	40.90	31.49

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: 5/28/2021