# Ramey, Ashleigh

**From:** Fischer, Shane <SFischer@SCSEngineers.com>

Sent: Tuesday, November 14, 2023 6:11 PM

**To:** SWD\_Waste; Tafuni, Steven

Cc: Anthony Detweiler; Jacolyn Abdala; Stephen Whaley; Al-Khalaf, Laila; Loaiza, Betsy

**Subject:** Manatee County Lena Road Landfill Monthly Report October 2023

Attachments: October 2023 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 October 2023) which includes the following:

- Monthly Water Balance Report (Exhibit A)
- Monthly Leachate Tracking Summary 2023 (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

### **Driven by Client Success**

www.scsengineers.com

# SCS ENGINEERS

November 14, 2023 File No. 09217088.32

Mr. Steven Tafuni Florida Department of Environmental Protection Southwest District Office - Solid Waste Section 130501 N. Telecom Parkway Temple Terrace, Florida 33637-0926

Manatee County Lena Road Landfill Subject:

Monthly Report - October 2023

Dear Mr. Tafuni:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2023 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, and Monthly Groundwater Gradient Report.

Shane R. Fischer, P.E.

**SCS** Engineers

Vice President/Office Manager

Sincerely.

Robert Curtis, P.E. **Project Director SCS** Engineers

SRF/RBC

cc: Jacolyn Abdala, Manatee County

> Stephen Whaley, Manatee County Anthony Detweiler, Manatee County

Betsy Loaiza, FDEP

**Enclosures** 

Shane R. Fischer, PE on the date adjacent to the seal.

Printed copies of this document are not seen.

signed and sealed and the signature must be verified on any electronic copies.

Digitally signed No 58026 by Shane Fischer Date: 2023.11.14 18:03:48 -05'00'

# MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL MONTHLY WATER BALANCE REPORT October 2023

А	В	С	D	Е	F	G	Н	I
DATE	LEACHATE STAGE I Lift Station 1	LEACHATE STAGE I Lift Station 2	LEACHATE STAGE I TOTAL	LEACHATE STAGE II TOTAL	LEACHATE STAGE III TOTAL	TOTAL LEACHATE PUMPED	RAINFALL	RAINFALL
	(gallons)	(gallons)	(gallons)	(gallons)	(gallons)	(gallons)	(inches)	(gallons)
1-Oct-23	0	0	0	0	0	0	0.00	0
2-Oct-23	83,772	27,530	111,302	237,100	92,960	441,362	0.00	0
3-Oct-23	30,861	10,844	41,705	49,487	38,848	130,040	0.00	0
4-Oct-23	25,287	9,026	34,313	32,707	24,128	91,148	0.00	0
5-Oct-23	28,616	10,266	38,882	101,648	27,056	167,586	0.00	0
6-Oct-23	28,672	10,302	38,974	81,817	28,848	149,639	0.00	0
7-Oct-23	0	0	0	0	0	0	0.00	0
8-Oct-23	0	0	0	0	0	0	0.00	0
9-Oct-23	78,408	28,782	107,190	209,620	99,192	416,002	0.00	0
10-Oct-23	28,448	10,664	39,112	73,301	36,840	149,253	0.00	0
11-Oct-23	24,856	9,588	34,444	54,276	31,032	119,752	0.19	1,475,657
12-Oct-23	29,748	10,338	40,086	45,533	34,728	120,347	0.25	1,941,654
13-Oct-23	24,944	6,928	31,872	21,074	25,448	78,394	0.00	0
14-Oct-23	0	0	0	0	0	0	0.00	0
15-Oct-23	0	0	0	0	0	0	0.00	0
16-Oct-23	74,472	975,258	1,049,730	216,333	79,616	1,345,679	0.00	0
17-Oct-23	21,928	261,082	283,010	58,683	32,208	373,901	0.00	0
18-Oct-23	21,080	0	21,080	42,748	30,088	93,916	0.00	0
19-Oct-23	26,320	0	26,320	46,994	36,384	109,698	0.00	0
20-Oct-23	27,236	0	27,236	12,748	35,976	75,960	0.00	0
21-Oct-23	0	0	0	0	0	0	0.00	0
22-Oct-23	0	0	0	0	0	0	0.00	0
23-Oct-23	61,136	2,080	63,216	8,449	78,872	150,537	0.00	0
24-Oct-23	19,588	7,622	27,210	0	20,480	47,690	0.00	0
25-Oct-23	19,012	9,347	28,359	164,476	24,632	217,467	0.00	0
26-Oct-23	20,364	9,503	29,867	84,460	26,680	141,007	0.00	0
27-Oct-23	21,096	9,836	30,932	78,731	29,560	139,223	0.00	0
28-Oct-23	0	0	0	0	0	0	0.00	0
29-Oct-23	0	0	0	0	0	0	0.00	0
30-Oct-23	63,960	27,021	90,981	188,592	86,472	366,045	0.00	0
31-Oct-23	2,976	9,207	12,183	52,279	37,528	101,990	0.00	0
TOTAL	762,780	1,445,224	2,208,004	1,861,056	957,576	5,026,636	0.44	3,417,311
Leachate Pumped a	s Percentage of F	Rainfall	181.2%	132.0%	121.4%			

## **Column Notes:**

A - Date of reading.		Stage I	Stage II	Stage III	TOTAL
B - Leachate pumped (gallons) from Stage I by lift station 1.		(acres)	(acres)	(acres)	(acres)
C - Leachate pumped (gallons) from Stage I by lift station 2.	Initial Cover	102.0	113.0	66.0	281.0
D - Total Stage I leachate pumpage (B+C).	Interm. Cover	0.0	5.0		5.0
E - Leachate pumped (gallons) from Stage II.	Closed	30.0	0.0		30.0
F - Leachate pumped (gallons) from Stage III.	TOTAL	132.0	118.0	66.0	316.0
G - Total leachate pumped to WWTP storage tank (D+E+F).	Open Area	102.0	118.0	66.0	286.0

H - Rainfall (inches) recorded on this date.

### Comments

I - Rainfall (gallons) calculated based on open area (H x Area x 27,156 gal/acre-in).

# **EXHIBIT B**

# MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL MONTHLY LEACHATE TRACKING SUMMARY -- 2023

	В	С	D	E	F	G	Τ	_	ſ
	STAGE I	STAGE II	STAGE III	TOTAL			STAGE I LEACHATE/	STAGE II LEACHATE/	STAGE III LEACHATE/
MONTH	LEACHATE (gallons)	LEACHATE (gallons)	LEACHATE (gallons)	LEACHATE (gallons)	RAINFALL (inches)	RAINFALL (gallons)	RAINFALL (%)	RAINFALL (%)	RAINFALL (%)
JANUARY	1,891,568	2,321,311	1,545,016	5,757,895	2.73	21,202,862	25.0%	26.5%	31.6%
FEBRUARY	1,385,810	1,705,767	856,744	3,948,321	0.23	1,786,322	217.5%	231.4%	207.8%
MARCH	2,510,442	3,333,526	1,682,200	7,526,168	0.40	3,106,646	226.6%	260.1%	234.6%
APRIL	375,790	1,393,701	831,272	2,600,763	4.94	38,367,083	2.7%	8.8%	9.4%
MAY	1,703,880	1,641,633	979,928	4,325,441	80'6	70,520,873	8.9	2.6%	%0.9
JUNE	1,656,128	2,339,676	1,045,192	5,040,996	3.52	27,338,488	17.0%	20.7%	16.6%
JULY	798,448	1,843,608	857,448	3,499,504	6.45	50,094,673	4.5%	8.9%	7.4%
AUGUST	521,690	1,758,373	1,044,112	3,324,175	8.64	67,103,562	2.2%	6.4%	%2.9
SEPTEMBER	1,983,688	2,011,301	1,015,648	5,010,637	3.32	25,785,165	21.6%	18.9%	17.1%
OCTOBER	2,208,004	1,861,056	957,576	5,026,636	0.44	3,417,311	181.2%	132.0%	121.4%
NOVEMBER									
DECEMBER									
TOTAL	15,035,448	20,209,952	10,815,136	46,060,536	39.75	308,722,986	13.7%	15.9%	15.2%

# 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)

# Landfill Stage Land Area

TOTAL	(acres)	281.0	5.0	30.0	316.0	286.0
Stage III	(acres)	0.99	I	-	0.99	0.99
Stage II	(acres)	113.0	5.0	0.0	118.0	118.0
Stage I	(acres)	102.0	0.0	30.0	132.0	102.0
		Initial Cover	Intermed. Cover	Closed	TOTAL	Open Area
	Stage II Stage III	Stage II Stage III (acres)	Stage I         Stage II           (acres)         (acres)           102.0         113.0         66.0	Stage I         Stage III           (acres)         (acres)         (acres)           102.0         113.0         66.0           0.0         5.0	Stage I         Stage III           (acres)         (acres)           cover         102.0         113.0         66.0           ed. Cover         0.0         5.0            30.0         0.0	Stage I         Stage III         Stage III           (acres)         (acres)         (acres)           :over         102.0         113.0         66.0           ed. Cover         0.0             30.0         0.0             TOTAL         132.0         118.0         66.0

e
Ξ
<u>≓</u> .
_
₽
0
Ð
age
centag
⊏
ė
2
ē
ď
В
S
Ф
Ф
at
č
ᄀ
g
<u>u</u>
_
Ð
Ø
g
$\sim$
$\overline{}$
Ι.
~
_

<sup>8. (</sup>I) Stage II leachate pumped as a percentage of rainfall.

<sup>9. (</sup>J) Stage III leachate pumped as a percentage of rainfall.

# LEACHATE METER READINGS

DATE				HATE			WATER		NAME
101123 (1294838 24128080 10478388 806060 3449 30.18 01C 91016123 (1294838 24128080 10478388 806060 3449 30.18 01C 91016123 (129583 24128080 1047838 3414549 34.49 30.10 01C 91016123 (129583 24128034 241280	DATE							COMMENTS	(initials)
1012123 (12 94838 24138936 10495313 506504 3449 30.18 OK PARE 1013123 (12 94838 24138930 10491735) 5114549 34.49 30.10 OK PARE 1014123 (13 50976 24147956 10504444 5147356 34.49 30.01 OK PARE 1014123 (14 51954 24158324 10504852) 8248704 34.49 29.97 OR PARE 1014123 (14 1015123 1049614 24197304 105174540 8540341 34.49 29.89 OK PARE 1014123 (14 1166 22 24197304 105174540 8540341 34.49 29.89 OK PARE 1014123 (15 15 15 10 2) 240773 (105174540 8540341 34.49 29.59 OK PARE 1014123 (15 15 15 10 2) 240773 (105174540 8540341 34.49 29.59 OK PARE 1014123 (15 15 15 10 2) 240773 (105174540 8540341 34.49 29.59 OK PARE 1014123 (15 15 16 10 2) 24077558 (10527440 8713451 34.35 29.59 OK PARE 1014123 (15 16 16 16 2) 24077558 (10527440 8713451 34.38 29.59 OK PARE 1014123 (16 16 16 10 2) 24077558 (10527440 8713451 34.38 29.59 OK PARE 1014123 (16 16 16 10 25 16 16 16 16 16 16 16 16 16 16 16 16 16		#1	#2	#3	#4	#1	#2		,
1013123 (1375689 A138930 101991330 8114549 34.49 30.10 OK PIELE 1014123 (1350976 4147956 105031464 8147256 34.49 30.01 OK PIELE 1016123 (1350976 4147956 105031464 8147256 34.49 30.01 OK PIELE 1016123 (1488364) 24168334 (15017368 8330721 34.49 29.97 OK PIELE 1017123 (1018123 (1488662) 24197304 105174560 8540341 34.49 29.89 OK PIELE 1017123 (1518662) 24197304 105174560 8540341 34.49 29.89 OK PIELE 1017123 (1518662) 24197304 105174560 8540341 34.49 29.89 OK PIELE 1017123 (1518762) 24207358 10534403 845340 34.98 29.89 OK PIELE 1017123 (151876468) 24207470 105213400 8713431 34.38 29.89 OK PIELE 10171323 (151876468) 24234824 10530464 8713431 34.38 29.86 OK PIELE 10171323 (151876468) 24234824 10530464 8734525 34.40 25.84 OK PIELE 10171323 (16187140 25240082 10538424 8950858 34.35 22.84 OK PIELE 1017123 (16187140 25240082 10538424 8950858 34.35 22.84 OK PIELE 1017123 (16187140 25240082 10538424 8950858 34.35 22.84 OK PIELE 1017123 (16187140 25240082 10538424 8950858 34.35 22.84 OK PIELE 1017123 (16187140 25240082 10538424 8950858 34.35 22.84 OK PIELE 1017123 (16187140 25240082 10538424 8950858 34.35 22.84 OK PIELE 1017123 (16187140 25240082 10538424 8950858 34.35 22.84 OK PIELE 1017123 (16187140 25240082 10538424 8950858 34.35 22.84 OK PIELE 1017123 (16187140 25240082 10538424 8950858 34.35 22.84 OK PIELE 1017123 (16187140 25240082 10538424 8950858 34.35 22.84 OK PIELE 1017123 (16187140 2524082 10589775 9120480 34.39 2044 11 11 2042 1052123 1052123 1058678 9120480 34.39 2044 34.1		( , , , ) / 5000	a con med	··· · · · · · · · · · · · · · · · · ·	CALT WO	71.16	2010		20
1014123 (1350976) 34147956 (0503464) 3417356 34.49 30.01 OK PRIC 1015123 (137958) 34158334 (0504850) 8248904 34.49 29.97 OK PRIC 1016123 (0488364) 34168534 (05017368) 8330721 34.49 29.89 OK 9106 1017123 1018123 (1486672) 24197306 (0517656) 8540341 34.49 29.69 OK 9106 1017123 (15186672) 24197306 (0517656) 8540341 34.49 29.69 OK 9106 1010123 (15187672) 24197306 (0517656) 8540341 34.49 29.59 OK 9106 1010123 (15187672) 24297306 (0517656) 8763413 34.38 29.59 OK 9106 10112123 (15187672) 24297396 (052796) 8713451 34.38 29.50 OK 9106 10113123 (15187672) 24297396 (052796) 8713451 34.38 29.56 OK 9106 10113123 (15187672) 24234834 (0530464) 8734535 34.40 25.54 OK 9106 10113123 (1518666) 2538464 9350544 935054 93						_		<del> </del>	
1015123									
1018123	10/4/23	1					1		
1017123 1018123 101912	10/5/23							T	
10/8/23   10/8/6/12 24/97306 105176560 854034/ 34.49 29.69	10/6/23	61408264	24168524	105011368	8330721	34.49	29.89	OK.	VIER
1019123 61515120 24207970 105213400 8540341 34.49 29.69 OK WAKE 10110123 61515120 24207970 105213400 8613640 34.58 29.59 OFE YEAK 1011123 61515120 24207528 10524443 8667918 34.35 29.57 OKC YAKE 10112123 61519724 24217558 10524443 8667918 34.35 29.57 OKC YAKE 10112123 61519724 24217584 105279160 8713451 34.38 29.56 OKC YAKE 10113123 61519724 24217584 10530465 8734535 34.40 25.54 OKC YAKE 10114123 10116123 61669140 25210082 10538424 8950858 34.35 24.0 OKC YAKE 1011123 6161068 25471164 105416432 9009541 34.34 24 100 OKC YAKE 10118123 6176148 NA 105416630 9052389 34.33 2764 24 100 OKC YAKE 10119123 617638468 NA 105416630 9052389 34.33 2764 24 100 OKC YAKE 10120123 6176504 NA 105518880 9112031 34.39 2004 11 11 2012123 10122123 New Moder 165666 16523 1120480 34.32 2004 10122123 New Moder 165663 165633 1120480 34.32 2004 10122123 61864428 9702 10561833 1120480 34.32 2004 10122123 61865440 19049 10561833 1120480 34.32 2004 10122123 61865440 19049 10561833 1120480 34.32 2004 10122123 61865440 19049 10561833 1120480 34.32 2004 10122123 61865804 28552 105669549 3369414 34.19 2024 20 K 2016 10122123 61805804 28552 105669549 3369414 34.19 2024 10122123 61906900 38388 105699104 9148147 34.18 2024 10122123 61906900 38388 105699104 9148147 34.18 2024 10122123 61906900 38388 105699104 9148147 34.18 2024 10122123 61906900 38388 105699104 9148147 34.19 2024 10122123 61906900 38388 105699104 9148147 34.19 2024 10122123 61906900 38388 105699104 9148147 34.19 2024 10122123 61906900 38388 105699104 9148147 34.19 2024 10122123 61906900 38388 105699104 9148147 34.19 2024 10122123 61906900 38388 105699104 9148147 34.19 2024 10122123 61906900 38388 105699104 9148147 34.19 2024	10/7/23								
10/10/23 6/5/5/20 242/7558 1052/4482 8617918 34.35 29.57 0/C 7/4/C 10/11/23 6/53976 242/7558 1052/4482 8617918 34.35 29.57 0/C 7/4/C 10/12/23 6/5/9/46/8 2423/4824 105279/60 87/3/45/5 34.38 29.56 0/C 7/4/C 10/13/23 6/5/9/46/8 2423/4824 10520746 87/3/45/5 34.40 29.54 0/C 7/4/C 10/14/23 6/5/9/46/8 2423/4824 10520746 87/3/45/5 34.40 29.54 0/C 7/4/C 10/14/23 6/6/9/68 2547/64 1053/4824 909954 34.34 7/4 0/C 7/4/C 10/16/23 6/6/9/68 2547/64 1054/45/2 909954 34.34 7/4 0/C 7/4/C 10/16/23 6/7/2/14/8 NA 1054/45/2 909954 34.34 7/4 0/C 7/4/C 10/16/23 6/7/2/14/8 NA 1054/45/2 909928 34.33 7/4 1/2 1/2 1/2 10/16/23 6/7/2/14/8 NA 1054/45/2 909928 34.33 7/4 1/2 1/2 1/2 10/2/23 6/7/6/5/04 NA 1055/8/8/8 91/2/3/3 34.30 9/4/4 1/1 1/1 7/4/C 10/2/2/3 6/7/6/5/04 NA 1055/8/8/8 91/2/3/3 34.30 9/4/4 1/1 1/2 7/4/C 10/2/2/3 6/8/4/8/8 97/02 10/5/8/3/3 1/2/2/3 6/8/4/8/8 97/02 10/5/8/3/3 1/2/2/3 6/8/4/8/8 97/02 10/5/8/3/3 1/2/2/3 6/8/4/8/8 97/02 10/5/8/3/3 1/2/2/2/3 6/8/4/8/8 97/02 10/5/8/3/3 1/2/2/2/3 6/8/4/8/8 97/02 10/5/8/3/3 1/2/2/2/3 6/8/4/8/8 97/02 10/5/8/3/3 1/2/2/2/3 6/8/8/8/04 28/5/3 10/5/8/4/4/4 34.19 7/4/4/4 7/4	10/8/23			,					,
10/11/23 6/539976 242/7558 10534443 867918 34.35 29.56 OK PLAN 10/12/23 6/54/668 24234824 10537960 87/3451 34.38 29.56 OK PLAN 10/14/23 10/14/24 10/14/23 10/14/24 10/14/23 10/14/24 10	10/9/23	61486672	24197306	105176560	8540341	34.49	29.69	OK	
10/12/23 6/5/9764 24334834 10530464 87/34535 34.40 29.56 OK 94.66 10/13/23 6/594668 24334834 10530464 87/34535 34.40 29.54 0K DEK 10/14/23 10/16/23 (0/66/14/0 252/0083) 105384834 8950858 34.35 24 0K TEK 10/17/23 6/6/9/068 2547/164 1054/6432 9009541 34.34 2pt 0K 976K 10/18/23 6/76/48 NA 10544/6530 9052389 34.33 2pt 42 0K 976K 10/19/23 6/76/5704 NA 10548/392 909383 34.30 2pt 42 1/1 1/1 2pck 10/20/23 6/76/5704 NA 10558880 91/2031 34.29 2pt 1/1 1/1 2pck 10/21/23 New Moder in Shikki) 10-23-22 10/23/23 16/86/64/28 9702 10559752 91/2460 34.25 2pt 0K DEK 10/25/23 6/86/64/28 9702 10569383 1/20480 34.22 2pt 1/24 2pt 1/256/2333 1/20480 34.22 2pt 1/24 2pt 1/256/2333 1/20480 34.22 2pt 1/256/23 6/86/64/28 9702 1056/9584 936/94/4 34.19 2pt 0K 2pck 10/28/23 6/906/90 38388 1056/91/04 9448/47 34.19 2pt 0K 2pck 10/28/23 6/906/90 38388 1056/91/04 9448/47 34.19 2pt 0K 2pck 10/28/23 6/906/90 38388 1056/91/04 9448/47 34.19 2pt 0K 2pck 10/28/23 6/906/90 38388 1056/91/04 9448/47 34.19 2pt 0K 2pck 10/28/23 6/906/90 38388 1056/91/04 9448/47 34.18 2pt 0K 2pck	10/10/23	61515120	24207970	105213400	8613642	3438	29.59	ole	
10/13/23 6/594668 24334834 10530465 8734535 34.40 29.54 0K DEK  10/14/23 10/16/23 6/66/140 252/0083 105384634 8950858 34.35 DEY OK TIEK  10/17/23 6/69/068 2547/164 1054/6530 909541 34.34 DPH OK TIEK  10/18/23 6/7/3/48 NA 1054/6530 9053289 34.33 DPH *3 METICE REPUBLICANIA DEK  10/19/23 6/7/38468 NA 1054/6530 9053289 34.33 DPH *3 METICE REPUBLICANIA DEK  10/20/23 6/7/65704 NA 1055/8880 91/3031 34.39 DPH 1/ 1/ DIEK  10/20/23 NOW MODE INSULA 16-23-25  10/23/23 NOW MODE INSULA 16-23-25  10/23/23 6/88/4/38 9702 1056/8332 9/20480 34.32 DPY OK DEK  10/26/23 6/88/4/38 9702 1056/8332 9/20480 34.32 DPY DPY DEK  10/26/23 6/88/540 19049 1056/8344 9284/56 34.20 DPY DPY DEK  10/26/23 6/88/5804 28552 1056/8544 936/94/4 34.19 DPY DEK  10/28/23 6/906900 38388 1056/99/04 9448/47 34.18 DPY DEY  10/28/23  10/29/23  10/29/23	10/11/23	61539976	24217558	105244432	8667918	34.35	29.57	ok	TRIC
10/14/23 10/15/23 10/16/23 (0/(60)/40 252/1008) 105384244 8950858 3435 Sey OK TREK 10/17/23 (6/67/1068 3547/164) 1054/6432 900954/1 3434 Spet OK TREK 10/18/23 (17/21/48 NA 1054/6530 9052389) 3433 Spet By Metric Repartment Dele 10/19/23 (17/384/68 NA 1054/8530 909383 3430 Spet 11 11 Spek 10/20/23 (17/384/68 NA 1054/8530 909383 3430 Spet 11 1/1 Spek 10/20/23 (17/384/68 NA 1054/8586 91/303) 3439 Spet 1/1 // Spek 10/21/23 10/22/23 New Moder instance 16-23-25 10/23/23 (1/36/840 2080 105597752 91/2480 3435 Spet OK Dele 10/24/23 (1/384/6488 9702 105597752 91/2480 3435 Spet OK Dele 10/26/23 (1/384/6488 9702 1056/8532 1/30480 3435 Spet OK Dele 10/26/23 (1/384/6488 9702 1056/8544 93694/4 34.19 Spet OK Spek 10/28/23 (1/3885804 28552 1056/9544 93694/4 34.19 Spet OK Spek 10/28/23 (1/3885804 28552 1056/9544 94/8/47 34.18 Spet OK Spek 10/28/23 (1/3885804 28552 1056/9544 94/8/47 34.18 Spet OK Spek	10/12/23	61569724	24327896	105279160	8713451	34.38	29.56	6K	TRIC
10/15/23	10/13/23	61594668	24234824	105304608	8734535	34.40	29.54	OK	
10/16/23 (a)(6/9)(40 252/0082) 105384834 8950858 3435 \ \text{24} \ \text{OIC} \ \text{TEK} \ \ \text{10/17/23} \ (a)(6/9)(6/8 2547)(6/4) 1054/6532 9009541 3434 \ \text{PP4} \ \text{OIC} \ \ \text{TILK} \ \ \text{10/18/23} \ (a)7/3/4/8 \ \text{N.A.} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	10/14/23								
10/17/23 6/67/068 3547/164 1054/6432 9009541 34.34 DPH OK TIEKC 10/18/23 6/7/3/48 NA 1054/6530 9053289 34.33 DPH TO METER REPERCENTAL DEL 10/19/23 6/7/38468 NA 1054/89904 9099283 34.30 DPH 1/ 1/ DPAK 10/20/23 6/7/65704 NA 1055/8880 91/3031 34.39 DPH 1/ 1/ DPAK 10/20/23 NOW MODE: 10/55/8880 91/3031 34.39 DPH 1/ 1/ DPAK 10/20/23 NOW MODE: 10/55/8880 91/3031 34.39 DPH 1/ 1/ DPAK 10/20/23 NOW MODE: 10/55/8880 91/3031 34.39 DPH 0K DPAK 10/20/23 6/88/6840 2080 1055/9752 9/20480 34.35 DPH 0K DPAK 10/26/23 6/88/5440 1904/9 1056/8332 9/20480 34.32 DPH 0K DPAK 10/26/23 6/88/5440 1904/9 1056/8344 9284/86 34.20 DPH 0K DPK 10/26/23 6/88/5804 28.552 1056/9544 9284/86 34.20 DPH 0K DPK 10/26/23 6/906/900 38/388 1056/99/04 94/8/47 34.19 DPH 0K DPK 10/28/23 10/28/23 6/97/08/60 6/54/0 9 1057/8/5576 9436/739 34.1/ DPH 0K DPK 10/28/23 10/29/23 6/97/08/60 6/54/0 9 1057/8/5576 9436/739 34.1/ DPH 0K DPK 10/28/23 6/97/08/60 6/54/0 9 1057/8/5576 9436/739 34.1/ DPH 0K DPK 10/28/23 6/97/08/60 6/54/0 9 1057/8/5576 9436/739 34.1/ DPH 0K DPK 10/28/23 6/97/08/60 6/54/0 9 1057/8/5576 9436/739 34.1/ DPH 0K DPK 10/28/23 6/97/08/60 6/54/0 9 1057/8/5576 9436/739 34.1/ DPH 0K DPK 10/28/23 6/97/08/60 6/54/0 9 1057/8/5576 9436/739 34.1/ DPH 0K DPK 10/28/23 6/97/08/60 6/54/0 9 1057/8/5576 9436/739 34.1/ DPH 0K DPK 10/28/23 6/97/08/60 6/54/0 9 1057/8/5576 9436/739 34.1/ DPH 0K DPK 10/28/23 6/97/08/60 6/54/0 9 1057/8/5576 9436/739 34.1/ DPH 0K DPK 10/28/23 6/97/08/60 6/54/0 9 1057/8/5576 9436/739 34.1/ DPH 0K DPK 10/28/23 6/97/08/60 6/54/0 9 1057/8/5576 9436/739 34.1/ DPH 0K DPK 10/28/23 6/97/08/60 6/54/0 9 1057/8/5576 9436/739 34.1/ DPH 0K DPK 10/28/23 6/97/08/60 6/54/0 9 1057/8/5576 9436/739 34.1/ DPH 0K DPK 10/28/23 6/97/08/60 6/54/0 9 1057/8/5576 9436/739 34.1/ DPH 0K DPK 10/28/23 6/97/08/60 6/97/08/6	10/15/23		·						
10/17/23 6/67/068 3547/164 1054/6432 9009541 34.34 DPH OK TIEKC 10/18/23 6/7/21/48 NA 1054/6500 9052289 34.33 DPH TO METER REPUBLIMAN DEK 10/19/23 6/7/38468 NA 1054/89924 9099283 34.30 DPH 11 11 DEK 10/20/23 6/7/65704 NA 1055/8880 91/2031 34.39 DPH 11 11 DEK 10/21/23 New Moder 14/56/8880 91/2031 34.39 DPH 11 11 DEK 10/21/23 New Moder 14/56/833 9/20480 34.35 DPH 0K DEK 10/24/23 6/86/840 2080 1055/9752 9/20480 34.35 DPH 0K DEK 10/26/23 6/86/840 1904/9 1056/833 9/20480 34.32 DPH 0K DEK 10/26/23 6/86/840 1904/9 1056/833 9/20480 34.32 DPH 0K DEK 10/26/23 6/86/840 1904/9 1056/9844 9284/86 34.20 DPH 0K DEK 10/26/23 6/906/90 38/388 1056/99/04 94/8/47 34.19 DPH 0K DEK 10/28/23 10/29/23 6/906/90 38/388 1056/99/04 94/8/47 34.19 DPH 0K DEK 10/28/23 10/29/23 6/97/08/60 6/54/0 9 1057/8/57/6 94/36/739 34.11 DPH 0K DEK 10/28/23 10/29/23 6/97/08/60 6/54/0 9 1057/8/57/6 94/36/739 34.11 DPH 0K DEK 10/28/23 6/97/08/60 6/54/0 9 1057/8/57/6 94/36/739 34.11 DPH 0K DEK 10/28/23 6/97/08/60 6/54/0 9 1057/8/57/6 94/36/739 34.11 DPH 0K DEK 10/28/23 6/97/08/60 6/54/0 9 1057/8/57/6 94/36/739 34.11 DPH 0K DEK 10/28/23 6/97/08/60 6/54/0 9 1057/8/57/6 94/36/739 34.11 DPH 0K DEK 10/28/23 6/97/08/60 6/54/0 9 1057/8/57/6 94/36/739 34.11 DPH 0K DEK 10/28/23 6/97/08/60 6/54/0 9 1057/8/57/6 94/36/739 34.11 DPH 0K DEK 10/28/23 6/97/08/60 6/54/0 9 1057/8/57/6 94/36/739 34.11 DPH 0K DEK 10/28/23 6/97/08/60 6/54/0 9 1057/8/57/6 94/36/739 34.11 DPH 0K DEK 10/28/23 6/97/08/60 6/54/0 9 1057/8/57/6 94/36/739 34.11 DPH 0K DEK 10/28/23 6/97/08/60 6/54/0 9 1057/8/57/6 94/36/739 34.11 DPH 0K DEK 10/28/23 6/97/08/60 6/54/0 9 1057/8/57/6 94/36/739 34.11 DPH 0K DEK 10/28/23 6/97/08/60 6/54/0 9 1057/8/57/6 94/36/739 34.11 DPH 0K DEK 10/28/23 6/97/08/60 6/54/0 9 1057/8/57/6 94/36/739 34.11 DPH 0K DEK 10/28/23 6/97/08/60 6/54/0 9 1057/8/57/6 94/36/739 34.11 DPH 0K DEK 10/28/23 6/97/08/60 6/97/08/60 6/97/08/60 6/97/08/60 6/97/08/60 6/97/08/60 6/97/08/60 6/97/08/60 6/97/08/60 6/97/08/60 6/97/08/60 6/97/08/60 6/97/08/60 6/97/08/60 6/97/08/60 6/97/08/60 6/97/08/60 6/97/0	10/16/23	(01669/40	252/0082	105384234	8950858	74.35	DRY	OK	VIEK
10/18/23 6/7/38468 NA 10544650 9052389 34.33 TPY #3 METER REPURCEMENT TREE 10/19/23 6/7/38468 NA 105485904 9099383 34.30 PRY 1/1 // PREE 10/20/23 6/7/65704 NA 105518880 9113031 34.39 TRY 1/1 TYREE 10/21/23 New Moder Instance (o. 23-22) 10/23/23 6/836840 2080 105597752 9120480 34.35 TRY OK DER 10/24/23 6/846438 9702 1056/8333 9120480 34.32 TPY FY PAMP PRINSIPARMI TREE 10/25/23 6/865440 19049 105648384 9284956 34.30 TRY 0K DERE 10/26/23 6/865804 28552 105669544 9284956 34.30 TRY 0K TREE 10/28/23 6/906900 38388 105699104 9448/47 34.19 TRY 0K TREE 10/28/23 6/970860 65409 105785576 9436739 34.11 TRY 0K		(1.10 (1.10				34.34	DRY	OK	MEK
10/19/23 6/738468 NA 105483994 9099383 34.30 9PPY 1/1 // PIEKC 10/20/23 6/765704 NA 105518880 91/3031 34.39 PPY 1/1 // PVEKC 10/21/23 New Moder instance /o 23-22 10/23/23 6/836840 2080 105597752 9/20480 34.35 PPY OK DEKC 10/24/23 6/846438 9702 105618332 9/30480 34.32 PPY OK DEKC 10/25/23 6/865440 19049 105648332 9/30480 34.32 PPY OK DEKC 10/26/23 6/885804 28552 105669544 93694144 34.19 PPY OK PIEKC 10/27/23 6/906900 38388 105699104 9448147 34.18 PPY OK PIEKC 10/28/23/23 10/28/23/23 10/28/23/23 10/28/23/23 10/28/23/23 10/28/23/23/23/23/23/23/23/23/23/23/23/23/23/	10/18/23					34.33		#2 METTER PEPUPCEMIE	
10/20/23 6/765704 N X 1055/8880 9/13031 34.39 DPY 1/1/1 TKK 10/21/23 New Moder in Stated 10-23-22 10/23/23 6/836840 2080 105597752 9/20480 34.35 TRY OK DEK 10/24/23 6/846438 9702 1056/8332 2/20480 34.32 TRY OK DEK 10/25/23 6/865440 19049 1056/3832 2/20480 34.30 TRY OK DEK 10/26/23 6/865440 19049 1056/3844 9284956 34.20 TRY OK DEK 10/26/23 6/865804 28552 105669544 9369416 34.19 DRY OK TRK 10/27/23 6/906900 38388 105699104 9448147 34.19 TRY OK TRK 10/28/23 10/29/23		1		TANKET .			opper	1	
10/21/23								// //	
10/23/23 6/836840 3080 105597752 9120480 34.35 RPY OK DERC 10/24/23 6/846438 9702 1056/8333 9130480 34.32 VPY 4 PUMP ADJUSTIMANT WILL 10/25/23 6/865440 19049 105643864 9384956 34.20 VPY OK DERC 10/26/23 6/885804 28552 105669544 9369414 34.19 DPY OK WILL 10/27/23 6/906900 38388 105699104 9448147 34.18 DPY OK WILL 10/28/23 6/970860 65409 105785576 9636739 34.11 DPY OK TAKE				7000	71.0				
10/24/23 6/83/6840 3080 105597752 9/30480 34.35 TRY OK DEK 10/24/23 6/84/6438 9702 1056/8333 9/30480 34.32 TPY EXAMPLEMENT TICK 10/25/23 6/86540 19049 1056/384 9384956 34.20 TRY OK DEK 10/26/23 6/885804 28552 105669544 9369414 34.19 DRY OK TICK 10/27/23 6/906900 38388 105699104 9448147 34.18 TRY OK WIK 10/28/23 10/30/23 6/970860 65409 105785576 9436739 34.11 TRY OK		Nev	v makes ly	والمال (غ	22-23				
10/24/23 6/846438 9702 1056/8333 9/30480 34.32 VPY 4 PUMP ADJUSTIMANT WILL  10/25/23 6/865440 19049 105643864 9384956 34.20 VPY DK DEK  10/26/23 6/885804 38552 105669544 9369414 34.19 DPY DK VILL  10/27/23 6/906900 38388 105699104 9448/47 34.18 VPY DK VILL  10/28/23 10/29/23 10/20/20 6/5409 105785576 9636739 34.11 VPY DK VILL  10/30/23 6/970860 6/5409 105785576 9636739 34.11 VPY DK		_ i		-		74.25	TRY	OK	DRC
10/25/23 6/865440 19049 105643864 9384956 34.10 PRY DEK DEK 10/26/23 6/885804 28552 105669544 9369414 34.19 DPY DK PIKE 10/27/23 6/906900 38388 105699104 9448147 34.18 DPY DK YIK 10/28/23					0.				
10/26/23 6/885804 28552 105669544 9369414 34.19 DPY OK TINK 10/27/23 6/906900 38388 105699/04 9448/47 34.18 DPY OK TINK 10/28/23		The state of the s							-
10/28/23									
10/28/23									
10/29/23		01 10 + 10 0	20 200	10000	// 10/ 1	51110	<i>y.</i> /		* -
10/30/23 6/970860 65409 105785576 9636739 34.11 DRY OK TIME						<del></del>			
		1.1970860	65409	105785571	9631,729	34.11	DRY	OK	TANK
40134133 1/d/3 / (X (/ a   7/U/n/ln   1/1/K/2/ (/)94   7/H/   X   (/)7   1 N/W   1 1/1/H   1 1/1/K/						34.09	TRY	oK	TILL

[	ANDFILL	SHEET		LAKE LEVEL DA	ATA
			Ï	IN FEET NGV	/D
2023	RAIN	LEACHATE		SOUTH	EAST
Oct	FALL	MGD		(86 ACRE)	(63 ACRE)
1	0.00	0.139		7.47	16.98
2	0.00	0.105		7.44	17.07
3	0.00	0.076		7.47	16.90
4	0.00	0.128		7.43	16.76
5	0.00	0.143		7.40	16.50
6	0.00	0.132		7.43	16.37
7	0.00	0.131		7.43	16.32
8	0.00	0.129		7.75	15.93
9	0.00	0.119		8.36	15.01
10	0.00	0.097		8.85	14.19
11	0.19	0.088		9.32	13.47
12	0.25	0.083		9.79	12.90
13	0.00	0.104		10.21	12.35
14	0.00	0.089		10.44	12.00
15	0.00	0.061		10.68	11.65
16	0.00	0.057		10.83	11.37
17	0.00	0.059		10.80	11.20
18	0.00	0.056		10.84	10.99
19	0.00	0.057		10.80	10.90
20	0.00	0.058		10.80	10.67
21	0.00	0.049		10.94	10.67
22	0.00	0.047		11.20	10.70
23	0.00	0.047		11.34	10.64
24	0.00	0.059		11.50	10.45
25	0.00	0.118		11.60	10.40
26	0.00	0.119		11.60	10.30
27	0.00	0.111		11.62	10.36
28	0.00	0.106		11.66	10.36
29	0.00	0.105		11.90	10.30
30	0.00	0.091		12.20	9.80
31	0.00	0.086		12.23	9.54
TOTAL	0.44	2.849			
AVG		0.092			
MIN	0.05	0.440			
MAX	0.25	0.143			

Fax # 9-708-5668

# Manatee County Lena Road Landfill

# **Monthly Groundwater Gradient Report**

Month and Year: October 2023

Piezome	ters Inside Slu		Groundwater Monitoring Wells Outside Slurry Wall			
Piezometer	Riser	Leachate	Gradient	Monitoring	Riser	Groundwater
	Elevation	Elevation	Flow	Well	Elevation	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	24.68	inward	GW-3	39.40	31.70
P-4	40.78	22.20	inward	GW-4	40.53	30.83
P-5	40.73	21.29	inward	GW-5	39.90	30.35
P-6	40.74	19.98	inward	GW-6	38.95	29.62
P-7	40.60	19.23	inward	GW-7	39.49	27.60
P-8	40.21	19.06	inward	GW-8	39.75	26.39
P-9	NA	NA	NA	NA	NA	NA
P-9A	39.83	19.81	inward	GW-9	39.65	26.06
P-10	39.86	19.42	inward	GW-10	38.34	26.30
P-11	40.52	22.27	inward	GW-11	38.26	29.00
P-12	43.28	29.68	inward	GW-12	42.09	31.83
P-13	44.78	30.89	inward	GW-13	44.79	34.18
P-14	45.09	29.81	inward	GW-14	39.63	33.93
P-15	45.57	30.80	inward	GW-15	42.33	32.53
P-16	44.67	31.22	inward	GW-16	44.41	34.30
P-17	44.28	29.42	inward	GW-17	42.19	33.98
P-18	43.16	24.14	inward	GW-18	41.76	30.11
P-19	42.91	23.12	inward	GW-19	41.20	28.84
P-20	42.54	25.49	inward	GW-20	41.00	27.98
P-21	42.23	24.78	inward	GW-21	40.94	25.30
P-22	42.06	23.88	inward	GW-22	41.53	25.44
P-23	42.08	22.47	inward	GW-23	40.91	27.91
P-24	42.03	19.95	inward	GW-24	41.37	28.02
P-25	42.16	19.24	inward	GW-25	41.11	29.22
P-26	42.50	19.30	inward	GW-26	41.44	31.44
P-27R	42.73	19.62	inward	GW-27R	40.90	31.37

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: 10/26/2023