Smith, George

From:	Fischer, Shane <sfischer@scsengineers.com></sfischer@scsengineers.com>
Sent:	Monday, October 08, 2018 8:34 AM
То:	SWD_Waste; Tafuni, Steven
Cc:	Anthony Detweiler; Bryan White; Jim Bokish; Cooper, Dan; Lebron, Carlo
Subject:	Manatee County Lena Road Landfill Monthly Report September 2018
Attachments:	September 2018 Report.pdf

Mr. Tafuni,

Attached is the Manatee County Lena Road Landfill Monthly Report (for September 2018) which includes the following:

- Monthly Water Balance Report (Exhibit A)
- Monthly Leachate Tracking Summary 2018 (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) 804-6714.

Thanks

Shane R. Fischer, P.E. Project Director 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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SCS ENGINEERS

October 8, 2018 File No. 09217088.05

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 2018

Dear Mr. Tafuni:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2018 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, and Monthly Groundwater Gradient Report.

Sincerely,

Shane R. Fischer, P.E. Project Director SCS Engineers

Donovan Dickey Assoicate Professional SCS Engineers

SRF/DHD

cc: C. Mike Gore, Manatee County Utilities Department Director Bryan White, Manatee County Landfill Superintendent Anthony Detweiler, Manatee County Landfill Operations Supervisor

Enclosures

EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL MONTHLY WATER BALANCE REPORT September-18

А	В	С	D	E	F	G	Н	
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-Sep-18	0	0	0	0	0	0	0.00	0
2-Sep-18	0	0	0	0	0	0	0.55	4,271,639
3-Sep-18	0	0	0	0	0	0	0.10	776,662
4-Sep-18	152,424	30,961	183,385	819,072	291,938	1,294,395	0.10	776,662
5-Sep-18	38,086	7,282	45,368	187,040	72,416	304,824	0.00	0
6-Sep-18	37,536	7,779	45,315	181,696	73,688	300,699	0.16	1,242,659
7-Sep-18	39,518	8,238	47,756	193,216	74,358	315,330	0.13	1,009,660
8-Sep-18	0	0	0	0	0	0	0.06	465,997
9-Sep-18	0	0	0	0	0	0	0.00	0
10-Sep-18	114,886	22,034	136,920	509,632	177,862	824,414	0.91	7,067,621
11-Sep-18	32,848	6,840	39,688	155,600	58,030	253,318	0.00	0
12-Sep-18	37,762	7,501	45,263	157,216	62,240	264,719	0.67	5,203,633
13-Sep-18	32,310	6,677	38,987	166,304	54,244	259,535	0.00	0
14-Sep-18	36,804	8,645	45,449	171,672	69,960	287,081	0.00	0
15-Sep-18	0	0	0	0	0	0	0.18	1,397,991
16-Sep-18	0	0	0	0	0	0	0.00	0
17-Sep-18	111,974	21,115	133,089	494,220	170,194	797,503	0.00	0
18-Sep-18	35,062	3,707	38,769	173,564	48,602	260,935	0.18	1,397,991
19-Sep-18	32,176	3,366	35,542	139,648	40,476	215,666	0.66	5,125,967
20-Sep-18	33,492	3,555	37,047	163,728	44,072	244,847	0.08	621,329
21-Sep-18	31,982	3,784	35,766	164,016	47,050	246,832	0.04	310,665
22-Sep-18	0	0	0	0	0	0	0.00	0
23-Sep-18	0	0	0	0	0	0	0.88	6,834,622
24-Sep-18	99,382	13,447	112,829	487,360	134,100	734,289	0.21	1,630,989
25-Sep-18	32,930	4,189	37,119	153,280	43,980	234,379	0.37	2,873,648
26-Sep-18	34,734	4,432	39,166	172,640	48,062	259,868	0.51	3,960,974
27-Sep-18	36,832	3,917	40,749	160,288	51,164	252,201	0.00	0
28-Sep-18	37,794	4,117	41,911	163,472	49,440	254,823	0.00	0
29-Sep-18	0	0	0	0	0	0	0.00	0
30-Sep-18	0	0	0	0	0	0	0.00	0
TOTAL	1 009 533	171 596	1 100 110	4 912 664	1 611 976	7 605 659	5.79	44 969 707
	1,008,532	171,586	1,180,118	4,813,664 7.4%	1,611,876	7,605,658	5.79	44,968,707
Leachate Pumpe	ed as Percentage	oi kaintali		7.4%	25.9%	15.5%		

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.

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

Comments

EXHIBIT B

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY **MONTHLY LEACHATE TRACKING SUMMARY -- 2018 LENA ROAD LANDFILL**

	В	C	D	Е	E	Ð	н	_	-
	STAGE I	STAGE II	STAGE III	тотац			STAGE I LEACHATE/	STAGE II LEACHATE/	STAGE III LEACHATE/
HINOM	LEACHATE (gallons)	LEACHATE (gallons)	LEACHATE (gallons)	LEACHATE (gallons)	RAINFALL (inches)	RAINFALL (gallons)	RAINFALL (%)	RAINFALL (%)	RAINFALL (%)
JANUARY	637,352	2,649,648	521,360	3,808,360	2.32	18,018,549	6.6%	35.6%	12.5%
FEBRUARY	883,518	2,222,160	516,750	3,622,428	0.96	7,455,951	33.2%	72.2%	30.0%
MARCH	667,517	1,952,576	430,794	3,050,887	1.46	11,339,259	16.5%	41.7%	16.5%
APRIL	631,184	1,964,448	477,524	3,073,156	2.51	19,494,206	9.1%	24.4%	10.6%
MAY	692,586	2,377,648	974,292	4,044,526	11.80	83,918,286	2.1%	6.3%	4.6%
JUNE	717,412	3,610,928	1,165,894	5,494,234	10.20	75,646,840	2.5%	11.0%	6.4%
лигү	815,455	4,038,080	1,371,106	6,224,641	12.55	76,967,165	2.3%	10.0%	6.1%
AUGUST	1,368,889	3,781,888	1,909,764	7,060,541	13.17	98,558,357	3.8%	9.0%	8.1%
SEPTEMBER	1,180,118	4,813,664	1,611,876	7,605,658	5.79	44,968,707	4,813,664	1,611,876	7,605,658
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	7,594,031	27,411,040	8,979,360	43,984,431	60.76	436,367,320	4.5%	16.3%	5.3%

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

	Stage I	Stage II	Stage III	TOTAL
	(acres)	(acres)	(acres)	(acres)
Initial Cover	102.0	113.0	66.0	281.0
Intermed. Cover	0.0	5.0	I	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

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.

LEACHATE METER READINGS

Drie milling state state commilients 9/1/18 #1 #2 #3 #4 #1 #2 9/1/18 9/2/18		LEACHATE				STORM	WATER	4 	NAME
min min <thmin< th=""> min min</thmin<>	DATE							COMMENTS	(Initials
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9/15/18 9/16/18 9/17/18 1877/554/9 36652/4 2656376 9/18/18 1877/554/9 36652/4 2656376 9/20/18 18755662 366872/ 26713928 17673928 17673928 34.20 32.35 CK 6 9/20/18 18755672 366877 26713928 17673928 1767972 1767973 24.41 32.45 0K 4 9/20/18 189471634 2676974 2676974 26713946 17769973 24.41 32.45 0K 4 9/20/18 189471634 267054 267054 267054 2707056 24.41 22.45 0K 4 9/20/18 1007056 21.70545 24.37 24.41 22.45 0K 4 9/20/18 1007056 27.7054 24.37 24.41 22.45 0K 4 9/20/18 1007056 27.7054 27.37 24.41 22.45 0K 4 27.57 24.41 22.45 0K 4 27.57 24.41 22.45 0K 4 27.57 24.41 22.45 0K 4 27.57 24.41 22.45 0K 4 27.57 24.41 22.45 0K 4 27.57 24.41 22.45 0K 4 27.57 24.41 22.45 0K 4 27.57 24.41 22.45 0K 4 27.57 24.41 22.45 0K 4 27.57 24.41 22.45 0K 4 27.57 24.41 22.45 0K 4 27.57 24.41 22.45 0K 4 27.57 24.41 22.45 0K 4 27.57 24.41 22.45 0K 4 27.57 24.41 22.45 0K 4 27.57 24.41 22.45 0K 4 27.57 27	9/14/18	1							RB-
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9/19/18 15765776 30267 2054404 17667396 34.20 32.37 0K 19 9/20/18 16646252 3079626 2079647647767707 34.24 29 32.37 0K 19 9/21/18 16946252 3079626 2079626 17720710 34.26 32.37 0K 19 9/22/18 9/22/18 9/22/18 1694073 24.74 32.45 0K 19 9/24/18 16947624 3293073 2479626 177697072 34.24 32.45 0K 19 9/25/18 16960524 3297262 2702366 177692352 34.37 32.38 0K 19 9/26/18 16950524 3297262 2702366 177692352 34.37 32.38 0K 19 9/26/18 16950524 3297262 2702366 177692352 34.37 32.38 0K 19 9/26/18 16950524 3297262 2702366 177692492 34.34 3.2.38 0K 19 9/26/18 1605243 370561 27122526 34.33 32.40 0K 19 9/26/18 19052130 370561 27122526 34.33 32.40 0K 19 9/28/18 19052130 370561 27122526 34.33 32.40 0K 19 9/28/18 19059130 370561 27122526 34.33 32.40 0K 19 9/28/18 19059130 370561 271722526 34.33 32.40 0K 19 9/28/18 19059130 370561 271722526 34.33 32.40 0K 19 9/28/18 19059130 370561 27172526 34.33 32.40 0K 19 9/28/18 19059130 370561 27167538750 34.37 32.40 0K 19 9/28/18 19059130 190501 2716838750 34.37 32.40 0K 19 9/29/18 9	9/18/18							2/0	Con
9/20/18 12616270 3275742 26799776 177037696 34.299 32.37 0K 14 9/21/18 126746252 3679626 2645526 177201712 34.26 32.37 0K 14 9/22/18 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2									R.B.
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9/23/18 9/24/18 1894471634 3243073 31979626 177689672 34.41 32.45 012 012 9/25/18 189460544 3297362 2703846 177694972 34.37 32.35 012 12 9/26/18 1905246 3701644 270766492 34.34 32.35 012 12 9/26/18 19052430 370961 2712266 176014992 34.34 32.35 012 12 9/26/18 19052430 370961 2712265 176014992 34.34 32.35 012 12 9/27/18 19052130 370961 2712265 176015266 34.33 32.40 012 12 9/28/18 19099924 3709661 27172276 176338752 34.37 32.40 012 12 9/29/18 9 1122663 11722276 176338752 34.37 32.40 012 12 9/30/18 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1									
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9/28/18 909999 3709736 27172272 178338752 37.27 32.40 010 P 9/29/18 9/30/18 10 10 10 10 10 10 10 10 10 10 10 10 10									P-B
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9/30/18		1. W. L. L. 1. 58. 1.				11141	0.0	010	
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	9/31/2018	l							

Landfill

	ANDFILL	SHEET	Ì	LAKE LEVEL D	ATA
			ļ	IN FEET NGV	
2018	RAIN	LEACHATE		SOUTH	EAST
Sept	FALL	MGD		(86 ACRE)	(63 ACRE)
1	0.00	0.071		42.40	38.00
2	0.55	0.065		42.40	38.50
3	0.10	0.059		42.40	38.30
4	0.10	0.061		42.40	39.10
5	0.00	0.058		42.40	39.40
6	0.16	0.060		42.40	39.60
7	0.13	0.057		42.40	39.90
8	0.06	0.051		42.40	40.30
9	0.00	0.055		42.40	40.70
10	0.91	0.047		42.40	40.70
11	0.00	0.052		42.40	41.50
12	0.67	0.051		42.40	41.60
13	0.00	0.055		42.40	41.50
14	0.00	0.057		42.40	41.50
15	0.18	0.053		42.40	41.40
16	0.00	0.053		42.30	41.40
17	0.00	0.055		42.30	41.30
18	0.18	0.052		42.30	41.30
19	0.66	0.044		42.40	41.30
20	0.08	0.049		42.40	41.20
21	0.04	0.053		42.40	40.20
22	0.00	0.055		42.40	41.00
23	0.88	0.051		42.40	40.10
24	0.21	0.046		42.40	41.20
25	0.37	0.056		42.40	39.60
26	0.51	0.061		42.40	41.10
27	0.00	0.054		42.40	38.80
28	0.00	0.051		42.40	39.40
29	0.00	0.056		42.40	39.80
30	0.00	0.056		42.40	38.80
31					
TOTAL	5.79	1.644			
AVG		0.055			
MIN	0.04	0.074			
Eax #	0.91	0.071			

Fax # 9-708-5668

Manatee County Lena Road Landfill Monthly Groundwater Gradient Report Month and Year: September 2018

Piezome	ters Inside Slu	rry Wall		Groundwate	r Monitoring Slurry Wal	g Wells Outside I
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	27.18	inward	GW-3	39.40	35.36
P-4	40.78	23.84	inward	GW-4	40.53	34.21
P-5	40.73	24.13	inward	GW-5	39.90	33.53
P-6	40.74	23.79	inward	GW-6	38.95	32.82
P-7	40.60	23.72	inward	GW-7	39.49	31.77
P-8	40.21	23.64	inward	GW-8	39.75	30.37
P-9	39.97	23.82	inward	GW-9	39.65	30.28
P-10	39.86	22.89	inward	GW-10	38.34	31.54
P-11	40.52	24.11	inward	GW-11	38.26	31.94
P-12	43.28	29.73	inward	GW-12	42.09	33.05
P-13	44.78	30.82	inward	GW-13	44.79	34.38
P-14	45.09	30.59	inward	GW-14	39.63	35.11
P-15	45.57	31.06	inward	GW-15	42.33	35.51
P-16	44.67	31.12	inward	GW-16	44.41	36.65
P-17	44.28	30.24	inward	GW-17	42.19	35.05
P-18	43.16	24.48	inward	GW-18	41.76	35.25
P-19	42.91	23.45	inward	GW-19	41.20	35.04
P-20	42.54	26.37	inward	GW-20	41.00	33.87
P-21	42.23	25.27	inward	GW-21	40.94	31.31
P-22	42.06	24.18	inward	GW-22	41.53	30.51
P-23	42.08	22.71	inward	GW-23	40.91	33.91
P-24	42.03	22.73	inward	GW-24	41.37	33.55
P-25	42.16	23.21	inward	GW-25	41.11	34.69
P-26	42.50	22.22	inward	GW-26	41.44	35.11
P-27R	42.73	22.48	inward	GW-27R	40.90	35.36

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 Date Data Collected: 09/26/2018