

Smith, George

From: Fischer, Shane <SFischer@SCSEngineers.com>
Sent: Friday, April 14, 2017 1:30 PM
To: SWD_Waste (Shared Mailbox)
Cc: Morris, John R.; Anthony Detweiler; Bryan White; Lynette Falkowski; Cooper, Dan; Lebron, Carlo
Subject: Manatee County Lena Road Landfill Monthly Report March 2017
Attachments: Monthly Gradient Report-March 2017.pdf

Mr. Morris,

Attached is the Manatee County Lena Road Landfill Monthly Report (for March 2017) which includes the following:

- Monthly Water Balance Report (Exhibit A)
- Monthly Leachate Tracking Summary - 2017 (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.
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SCS Engineers
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SCS ENGINEERS

April 14, 2017
File No. 09217088.01

Mr. John Morris, P.G.
Florida Department of Environmental Protection
Southwest District Office - Solid Waste Section
130501 N. Telecom Parkway
Temple Terrace, Florida 33637-0926

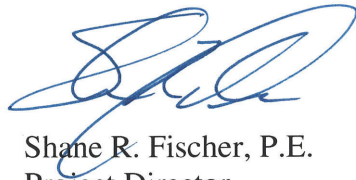
Subject: Manatee County Lena Road Landfill
Monthly Report - March 2017

Dear Mr. Morris:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2017 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, and Monthly Groundwater Gradient Report.

If you should have any questions concerning this report please contact us at (813) 804-6714.

Sincerely,



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



Buckley Weglarz, E.I.
Associate Staff Professional
SCS ENGINEERS

SRF/BMW:srf

Attachments

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

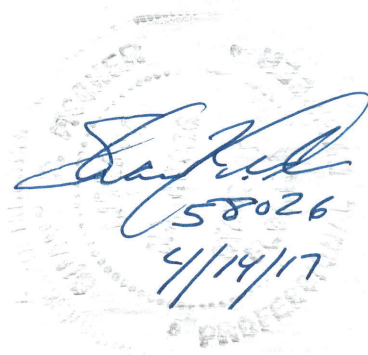


EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL MONTHLY WATER BALANCE REPORT March-17

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-Mar-17	21,930	242	22,172	85,080	12,238	141,662	0.00	0
2-Mar-17	28,000	7,514	35,514	91,248	22,549	184,825	0.00	0
3-Mar-17	21,731	25	21,756	90,368	4,286	138,166	0.00	0
4-Mar-17	-	-	-	-	-	-	0.00	0
5-Mar-17	-	-	-	-	-	-	0.00	0
6-Mar-17	24,498	7,632	32,130	268,136	35,841	368,237	0.00	0
7-Mar-17	38,687	29	38,716	92,376	9,917	179,725	0.00	0
8-Mar-17	12,472	28	12,500	84,656	12,236	121,892	0.00	0
9-Mar-17	-	-	-	-	-	-	0.00	0
10-Mar-17	19,918	7,891	27,809	176,096	24,972	256,686	0.00	0
11-Mar-17	-	-	-	-	-	-	0.00	0
12-Mar-17	-	-	-	-	-	-	0.00	0
13-Mar-17	9,099	7,657	16,756	262,808	35,840	332,160	0.75	5,824,962
14-Mar-17	2,737	6,932	9,669	78,112	12,441	109,891	0.00	0
15-Mar-17	3,040	28	3,068	85,512	8,218	99,866	0.00	0
16-Mar-17	3,830	27	3,857	85,088	8,289	101,091	0.00	0
17-Mar-17	4,190	26	4,216	85,672	8,128	102,232	0.00	0
18-Mar-17	-	-	-	-	-	-	0.00	0
19-Mar-17	-	-	-	-	-	-	0.00	0
20-Mar-17	13,341	15,212	28,553	260,820	37,363	355,289	0.00	0
21-Mar-17	3,803	14,351	18,154	81,972	12,241	130,521	0.00	0
22-Mar-17	3,466	7,547	11,013	95,368	8,160	125,554	0.00	0
23-Mar-17	3,040	7,620	10,660	81,280	8,422	111,022	0.00	0
24-Mar-17	3,098	9,633	12,731	80,720	8,225	114,407	0.00	0
25-Mar-17	-	-	-	-	-	-	0.00	0
26-Mar-17	-	-	-	-	-	-	0.00	0
27-Mar-17	15,548	28,362	43,910	251,656	33,453	372,929	0.00	0
28-Mar-17	7,092	14,967	22,059	81,968	8,404	134,490	0.00	0
29-Mar-17	27,188	29	27,217	81,600	11,333	147,367	0.00	0
30-Mar-17	18,240	28	18,268	81,368	14,835	132,739	0.00	0
31-Mar-17	16,760	7,476	24,236	73,128	8,229	129,829	0.00	0
TOTAL	301,708	143,256	444,964	2,655,032	345,620	3,890,580	0.75	5,824,962
Leachate Pumped as Percentage of Rainfall				16.6%	110.5%	25.7%		

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 -- 2017

	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/R AINFALL (%)	STAGE II LEACHATE/R AINFALL (%)	STAGE III LEACHATE/R AINFALL (%)
JANUARY	638,719	3,558,368	468,096	4,665,183	1.82	14,135,257	12.7%	61.0%	14.4%
FEBRUARY	700,268	2,701,624	373,077	3,774,969	2.49	19,338,895	10.2%	33.9%	8.4%
MARCH	444,964	2,655,032	345,620	3,890,580	0.75	5,824,962	21.4%	110.5%	25.7%
APRIL									
MAY									
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	1,783,951	8,915,024	1,186,793	12,330,732	5.06	39,299,114	12.7%	63.6%	8.5%

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

DATE	LEACHATE				STORMWATER		COMMENTS	NAME (Initials)
	METERS				S.G.			
	#1	#2	#3	#4	#1	#2		
3/1/17	7420520	1016937	9231635	102652680	33.38	Dry	OK	R.B.
3/2/17	7446520	1024451	9254184	102743928	33.37	Dry	OK	R.B.
3/3/17	7470251	1024476	9258470	102834296	33.37	Dry	OK	R.B.
3/4/17								
3/5/17								
3/6/17	7494749	1032108	9294311	103102432	33.25	Dry	OK	ORS
3/7/17	7533436	1032137	9304228	103194808	33.25	Dry	OK	R.B.
3/8/17	7545908	1032165	9316464	103279464	33.25	Dry	OK	ORS
3/9/17	7545908	1032165	9316464	103279464	33.25	Dry	OK	MB
3/10/17	7565826	1040056	9311436	103455580	33.25	Dry	OK	cm.
3/11/17								
3/12/17								
3/13/17	7574925	1047713	9371276	1037116328	33.17	Dry	OK	R.B.
3/14/17	7577122	1054645	9389717	1037916480	33.22	Dry	OK	R.B.
3/15/17	7580702	1054673	9397935	103866492	33.19	Dry	OK	R.B.
3/16/17	7584532	1054700	9406224	1039167080	33.18	Dry	OK	R.B.
3/17/17	7588722	1054726	9414352	104052332	33.16	Dry	OK	R.B.
3/18/17								
3/19/17								
3/20/17	7602063	1069938	9451715	104313512	33.12	Dry	OK	R.B.
3/21/17	7605866	1084269	9463956	104395544	33.07	Dry	OK	R.B.
3/22/17	7609332	1091836	9472116	104413792	33.07	Dry	OK	R.B.
3/23/17	7612372	1099456	9480538	104555072	33.07	Dry	OK	R.B.
3/24/17	7615470	1109089	9488763	104635792	33.06	Dry	OK	R.B.
3/25/17								
3/26/17								
3/27/17	7631018	1137451	9522216	104867448	33.02	Dry	OK	R.B.
3/28/17	7638110	1152418	9530620	104969416	32.99	Dry	OK	R.B.
3/29/17	765298	1152447	9541953	105051016	32.97	Dry	OK	R.B.
3/30/17	7663538	1152475	9550768	10513384	32.97	Dry	OK	R.B.
3/31/17	7700298	1159951	9565017	105205512	32.97	Dry	OK	R.B.

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2017 Mar	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.028	41.20	32.40
2	0.00	0.026	41.30	32.30
3	0.00	0.023	41.50	32.20
4	0.00	0.024	41.50	32.20
5	0.00	0.027	41.40	32.10
6	0.00	0.028	41.40	31.90
7	0.00	0.025	41.30	31.90
8	0.00	0.027	41.20	31.80
9	0.00	0.022	41.20	31.80
10	0.00	0.025	41.40	31.70
11	0.00	0.024	41.30	31.60
12	0.00	0.022	41.30	31.60
13	0.75	0.025	41.30	31.60
14	0.00	0.023	41.40	31.30
15	0.00	0.021	41.50	31.30
16	0.00	0.022	41.40	31.30
17	0.00	0.022	41.50	31.20
18	0.00	0.025	41.10	31.20
19	0.00	0.024	41.10	31.20
20	0.00	0.024	41.10	31.20
21	0.00	0.023	41.10	31.20
22	0.00	0.025	41.00	31.10
23	0.00	0.025	41.00	31.10
24	0.00	0.023	41.00	31.10
25	0.00	0.026	40.80	31.10
26	0.00	0.023	40.80	31.00
27	0.00	0.026	40.80	31.00
28	0.00	0.027	40.80	31.00
29	0.00	0.026	40.80	30.90
30	0.00	0.028	40.70	30.90
31	0.00	0.025	40.70	30.90
TOTAL	0.75	0.764		
AVG		0.025		
MIN				
MAX	0.75	0.028		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: MARCH 2017

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	24.87	inward	GW-3	39.40	30.71
P-4	40.78	23.75	inward	GW-4	40.53	30.03
P-5	40.73	23.76	inward	GW-5	39.90	29.46
P-6	40.74	23.72	inward	GW-6	38.95	28.70
P-7	40.60	23.67	inward	GW-7	39.49	26.56
P-8	40.21	23.59	inward	GW-8	39.75	25.43
P-9	39.97	23.63	inward	GW-9	39.65	25.41
P-10	39.86	22.68	inward	GW-10	38.34	25.58
P-11	40.52	23.87	inward	GW-11	38.26	28.19
P-12	43.28	30.49	inward	GW-12	42.09	30.86
P-13	44.78	30.66	inward	GW-13	44.79	33.02
P-14	45.09	30.17	inward	GW-14	39.63	32.54
P-15	45.57	30.89	inward	GW-15	42.33	33.62
P-16	44.67	31.05	inward	GW-16	44.41	33.16
P-17	44.28	30.46	inward	GW-17	42.19	32.80
P-18	43.16	23.96	inward	GW-18	41.76	30.27
P-19	42.91	22.92	inward	GW-19	41.20	28.02
P-20	42.54	25.31	inward	GW-20	41.00	27.08
P-21	42.23	24.66	inward	GW-21	40.94	24.75
P-22	42.06	23.71	inward	GW-22	41.53	24.80
P-23	42.08	22.40	inward	GW-23	40.91	26.17
P-24	42.03	19.90	inward	GW-24	41.37	26.59
P-25	42.16	19.20	inward	GW-25	41.11	28.26
P-26	42.50	19.18	inward	GW-26	41.44	30.36
P-27R	42.73	19.60	inward	GW-27R	40.90	30.22

Comments:

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

Date Data Collected: MARCH 24, 2017

Form Revised December 6, 2004