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March 8, 2016

Mr. John Morris, P.G.
Florida Department of Environmental Protection
Southwest District Office - Solid Waste Section
13051 N. Telecom Parkway
Temple Terrace, Florida 33637-0926

Re: Manatee County Lena Road Landfill
Monthly Report – February 2016

Dear Mr. Morris:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2016 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, Monthly Groundwater Gradient Report.

If you should have any questions concerning this report, please call me at 813/281-8377.

Sincerely,

Bradley D. Bayne

Bradley Bayne, P.G.
Senior Geologist
Florida PG #1733

Attachments

cc: C. Mike Gore, Manatee County Utilities Department Director
Bryan White, Manatee County Landfill Superintendent
Anthony Detweiler, Manatee County Landfill Operations Supervisor
File – 100047674-01.01

EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
February-16

A	B	C	D	E	F	G	H
DATE	LEACHATE STAGE I Lift Station 1 (gallons)	LEACHATE STAGE I Lift Station 2 (gallons)	LEACHATE STAGE I TOTAL (gallons)	LEACHATE STAGE III TOTAL (gallons)	TOTAL LEACHATE PUMPED (gallons)	RAINFALL (inches)	RAINFALL (gallons)
01-Feb-16	89,310	3,110	92,420	0	92,420	0.00	0
02-Feb-16	30,990	650	31,640	0	31,640	0.00	0
03-Feb-16	30,130	60	30,190	0	30,190	0.00	0
04-Feb-16	39,180	580	39,760	0	39,760	0.17	775,576
05-Feb-16	19,680	2,080	21,760	0	21,760	0.00	0
06-Feb-16	0	0	0	0	0	0.40	1,824,885
07-Feb-16	0	0	0	0	0	0.00	0
08-Feb-16	96,070	7,860	103,930	0	103,930	0.00	0
09-Feb-16	33,740	1,700	35,440	0	35,440	0.00	0
10-Feb-16	27,880	920	28,800	0	28,800	0.00	0
11-Feb-16	23,560	3,080	26,640	0	26,640	0.00	0
12-Feb-16	30,170	0	30,170	0	30,170	0.00	0
13-Feb-16	0	0	0	0	0	0.00	0
14-Feb-16	0	0	0	0	0	0.00	0
15-Feb-16	0	0	0	0	0	0.00	0
16-Feb-16	127,870	7,170	135,040	0	135,040	0.53	2,417,973
17-Feb-16	29,690	470	30,160	0	30,160	0.00	0
18-Feb-16	25,140	410	25,550	0	25,550	0.00	0
19-Feb-16	21,080	1,230	22,310	0	22,310	0.00	0
20-Feb-16	0	0	0	0	0	0.00	0
21-Feb-16	0	0	0	0	0	0.00	0
22-Feb-16	93,530	2,830	96,360	0	96,360	0.02	91,244
23-Feb-16	36,280	380	36,660	0	36,660	0.00	0
24-Feb-16	35,810	830	36,640	0	36,640	0.55	2,509,217
25-Feb-16	22,910	1,870	24,780	0	24,780	0.00	0
26-Feb-16	23,980	4,510	28,490	0	28,490	0.00	0
27-Feb-16	0	0	0	0	0	0.00	0
28-Feb-16	0	0	0	0	0	0.00	0
29-Feb-16	78,520	6,420	84,940	0	84,940	0.00	0
01-Mar-16	0	0	0	0	0	0.00	0
02-Mar-16	0	0	0	0	0	0.00	0
TOTAL	**915,520**	**46,160**	**961,680**	**0**	**961,680**	**1.67**	**7,618,896**
Leachate Pumped as Percentage of Rainfall			20.8%	0.0%			

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 III.
F - Total leachate pumped to WWTP storage tank (D+E).
G - Rainfall (inches) recorded on this date.
H - Rainfall (gallons) calculated based on open area (G x Area x 27,156 gal/acre-in).

	Stage I (acres)	Stage III (acres)	TOTAL (acres)
Initial Cover	--	66.0	66.0
Intermediate Cover	102.0	--	102.0
Closed	30.0	--	30.0
TOTAL	132.0	66.0	198.0
Open Area	**102.0**	**66.0**	**168.0**

Comments

"0" = no data recorded

EXHIBIT B

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY LEACHATE TRACKING SUMMARY -- 2016

	B	C	D	E	F	G	H
MONTH	**STAGE I LEACHATE** (gallons)	**STAGE III LEACHATE** (gallons)	**TOTAL LEACHATE** (gallons)	**RAINFALL** (inches)	**RAINFALL** (gallons)	**STAGE I LEACHATE/ RAINFALL** (%)	**STAGE III LEACHATE /RAINFALL** (%)
JANUARY	785,550	0	785,550	5.67	25,867,748	5.0%	0.0%
FEBRUARY	961,680	0	961,680	1.67	7,618,986	20.8%	0.0%
MARCH							
APRIL							
MAY							
JUNE							
JULY							
AUGUST							
SEPTEMBER							
OCTOBER							
NOVEMBER							
DECEMBER							
TOTAL	**1,747,230**	**0**	**1,747,230**	**7.34**	**33,486,734**	**8.6%**	**0.0%**

Notes:

1. (B) Total leachate pumped from Stage I.
2. (C) Total leachate pumped from Stage III.
3. (D) Total leachate (Column B+C) pumped to the WWTP storage tank.
4. (E) Total rainfall in inches.
5. (F) Total rainfall in gallons (Stage I and III Open Area of 168-acres x Rainfall)
6. (G) Stage I leachate pumped as a percentage of rainfall.
7. (H) Stage III leachate pumped as a percentage of rainfall.

Landfill Stage Land Areas

	Stage I *(acres)*	**Stage III** *(acres)*	**TOTAL** *(acres)*
Initial Cover	--	66.0	66.0
Intermediate Cov	102.0	--	102.0
Closed	30.0	--	30.0
TOTAL	132.0	66.0	198.0
Open Area	**102.0**	**66.0**	**168.0**

LECHATE FEBUARY 2015

DATE	LEACHATE			STORMWATER		COMMENTS	NAME
	METER # 1	METER # 2	METER # 3	S. G. # 1	S. G. # 2		
2/1/16	9638861	8599580	9231211	33.63	32.35	OK	R.B
2/2/16	9641980	8600230	9231211	33.79	32.35	OK	RB
2/3/16	9644993	8600240	9231211	33.77	32.34	ok	R.B
2/4/16	9648911	8600870	9231211	33.78	32.36	OK	RB.
2/5/16	9650879	8602950	9231211	33.70	32.37	OK	RB
2/8/16	9660486	8610810	9231211	33.68	32.36	OK	RB.
2/9/16	9663860	8612510	9231211	33.66	32.34	OK	RB
2/10/16	9666666	8613430	9231211	33.65	32.32	OK	R.B.
2/11/16	9669004	8616510	9231211	33.64	32.31	OK	RB
2/12/16	9672021	8616510	9231211	33.64	32.30	OK	RB
2/15/16							
2/16/16	9684808	8623680	9231211	33.68	32.32	OK	R.B.
2/17/16	9687777	8624150	9231211	33.68	32.31	OK	RB
2/18/16	9690291	8624560	9231211	33.66	32.30	OK	RB
2/19/16	9692399	8625790	9231211	33.65	32.29	OK	RB
2/22/16	9701752	8628620	9231211	33.63	32.25	OK	RB.
2/23/16	9705380	8629000	9231211	33.63	32.23	OK	RB.
2/24/16	9708961	8629630	9231211	33.63	32.24	OK	RB.
2/25/16	9711252	8631700	9231211	33.67	32.33	OK	RB
2/26/16	9713650	8632010	9231211	33.65	32.35	OK	RB
2/29/16	9721502	8642130	9231211	33.62	32.28	OK	RB

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2016 Feb	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.014	43.60	41.10
2	0.00	0.011	43.60	41.30
3	0.00	0.011	43.60	41.40
4	0.17	0.012	43.70	41.60
5	0.00	0.009	43.70	41.80
6	0.40	0.013	43.70	42.00
7	0.00	0.011	43.70	42.20
8	0.00	0.014	43.60	42.30
9	0.00	0.010	43.60	42.30
10	0.00	0.009	43.80	42.20
11	0.00	0.011	44.00	42.10
12	0.00	0.010	44.30	41.70
13	0.00	0.010	44.30	41.70
14	0.00	0.012	44.50	41.80
15	0.00	0.014	44.70	41.80
16	0.53	0.011	44.70	41.70
17	0.00	0.008	44.80	41.70
18	0.00	0.010	44.70	41.60
19	0.00	0.011	44.90	41.50
20	0.00	0.010	45.00	41.40
21	0.00	0.013	45.30	41.30
22	0.02	0.012	45.40	40.80
23	0.00	0.013	45.50	41.00
24	0.55	0.010	45.50	40.90
25	0.00	0.008	45.50	40.90
26	0.00	0.010	45.30	40.90
27	0.00	0.009	45.30	40.90
28	0.00	0.009	45.30	40.90
29	0.00	0.012	45.30	40.90
30				
31				
TOTAL	1.67	0.317		
AVG		0.011		
MIN				
MAX	0.55	0.014		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: FEBRUARY 2016

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	30.37	*inward*	GW-1	38.68	33.22
P-2	42.32	30.03	*inward*	GW-2	40.92	33.20
P-3	40.36	25.39	*inward*	GW-3	39.40	33.24
P-4	40.78	23.74	*inward*	GW-4	40.53	32.67
P-5	40.73	23.75	*inward*	GW-5	39.90	32.01
P-6	40.74	23.65	*inward*	GW-6	38.95	31.47
P-7	40.60	23.62	*inward*	GW-7	39.49	31.41
P-8	40.21	23.56	*inward*	GW-8	39.75	30.14
P-9	39.97	23.67	*inward*	GW-9	39.65	30.17
P-10	39.86	22.69	*inward*	GW-10	38.34	30.97
P-11	40.52	23.97	*inward*	GW-11	38.26	31.91
P-12	43.28	29.92	*inward*	GW-12	42.09	32.24
P-13	44.78	30.67	*inward*	GW-13	44.79	33.70
P-14	45.09	30.33	*inward*	GW-14	39.63	34.28
P-15	45.57	30.99	*inward*	GW-15	42.33	34.92
P-16	44.67	31.07	*inward*	GW-16	44.41	35.75
P-17	44.28	30.20	*inward*	GW-17	42.19	33.76

Comments:

Date Data Collected: FEBRUARY 23, 2016

Form Revised December 6, 2004