



An employee-owned company

April 1, 2011

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

Dept. Of Environmental Protection
APR 05 2011
Southwest District

**Re: Manatee County Lena Road Landfill
Monthly Report – March 2011**

Dear Mr. Morris:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2011 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, and Monthly Groundwater Gradient Report.

An inward gradient was present in the Stage I Landfill and the Stage III Landfill.

If you should have any questions concerning this report, please call me at 407/806-4153.

Sincerely,

Joe Miller, P.E.
Senior Project Manager

Attachments

cc: Mike Gore, Manatee County Solid Waste Division Manager
Bryan White, Manatee County Landfill Superintendent
Anthony Detweiler, Manatee County Landfill Operations Supervisor
File – 120498.94 0100

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EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY

LENA ROAD LANDFILL

MONTHLY WATER BALANCE REPORT

MARCH, 2011

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-Mar-11	14,890	4,610	19,500	7,500	27,000	0.02	91,244
02-Mar-11	14,550	1,470	16,020	7,500	23,520	0.00	0
03-Mar-11	11,250	2,240	13,490	6,000	19,490	0.00	0
04-Mar-11	12,200	2,110	14,310	6,800	21,110	0.00	0
05-Mar-11	0	0	0	0	0	0.03	136,866
06-Mar-11	0	0	0	0	0	0.04	182,489
07-Mar-11	43,240	8,710	51,950	21,200	73,150	0.00	0
08-Mar-11	13,190	3,150	16,340	6,900	23,240	0.00	0
09-Mar-11	12,230	3,980	16,210	6,100	22,310	0.00	0
10-Mar-11	13,030	1,810	14,840	6,800	21,640	1.30	5,930,877
11-Mar-11	15,940	3,550	19,490	7,800	27,290	0.00	0
12-Mar-11	0	0	0	0	0	0.00	0
13-Mar-11	0	0	0	0	0	0.00	0
14-Mar-11	36,170	12,700	48,870	23,400	72,270	0.00	0
15-Mar-11	12,670	2,850	15,520	7,100	22,620	0.00	0
16-Mar-11	12,910	2,650	15,560	7,000	22,560	0.00	0
17-Mar-11	12,600	2,710	15,310	7,100	22,410	0.00	0
18-Mar-11	12,930	3,290	16,220	3,900	20,120	0.00	0
19-Mar-11	0	0	0	0	0	0.00	0
20-Mar-11	0	0	0	0	0	0.00	0
21-Mar-11	0	0	0	0	0	0.00	0
22-Mar-11	54,850	11,600	66,450	31,200	97,650	0.00	0
23-Mar-11	13,350	3,110	16,460	7,200	23,660	0.00	0
24-Mar-11	13,710	3,010	16,720	6,400	23,120	0.00	0
25-Mar-11	15,290	1,200	16,490	6,400	22,890	0.00	0
26-Mar-11	0	0	0	0	0	0.00	0
27-Mar-11	0	0	0	0	0	0.00	0
28-Mar-11	46,500	6,210	52,710	20,800	73,510	3.33	15,192,169
29-Mar-11	20,670	1,590	22,260	12,200	34,460	0.00	0
30-Mar-11	16,170	130	16,300	14,400	30,700	0.79	3,604,148
31-Mar-11	21,290	240	21,530	13,600	35,130	3.08	14,051,616
TOTAL	439,630	82,920	522,550	237,300	759,850	8.59	39,189,410
Leachate Pumped as Percentage of Rainfall			2.2%	1.5%			

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

EXHIBIT B

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL MONTHLY LEACHATE TRACKING SUMMARY -- 2011

	B	C	D	E	F	G	H
MONTH	STAGE I	STAGE III	TOTAL			STAGE I	STAGE III
	LEACHATE	LEACHATE	LEACHATE	RAINFALL	RAINFALL	LEACHATE/ RAINFALL	LEACHATE /RAINFALL
	(gallons)	(gallons)	(gallons)	(inches)	(gallons)	(%)	(%)
JANUARY	563,230	153,700	716,930	3.67	16,743,322	5.5%	2.3%
FEBRUARY	463,860	61,000	524,860	0.97	4,425,347	17.3%	3.5%
MARCH	522,550	237,300	759,850	8.59	39,189,410	2.2%	1.5%
APRIL							
MAY							
JUNE							
JULY							
AUGUST							
SEPTEMBER							
OCTOBER							
NOVEMBER							
DECEMBER							
TOTAL	1,549,640	452,000	2,001,640	13.23	60,358,079	4.2%	1.9%

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	Stage III	TOTAL
	(acres)	(acres)	(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 MARCH 2011

DATE	LEACHATE			STORMWATER		COMMENTS	NAME
	METER # 1	METER #2	METER # 3	S. G. # 1	S. G. # 2		
3/1/11	5977716	3508160	2774245	30.83	29.38	OK	R.B.
3/2/11	5979171	3509630	2774320	30.81	29.34	OK	R.B.
3/3/11	5980296	3511870	2774380	30.80	29.30	OK	R.B.
3/4/11	5981516	3513980	2774440	30.79	29.26	OK	R.B.
3/7/11	5985840	3522640	2774660	30.69	DRY	OK	R.B.
3/8/11	5987159	3525840	2774720	30.69	DRY	OK	R.B.
3/9/11	5988382	3529820	2774790	30.68	DRY	OK	R.B.
3/10/11	5989685	3531630	2774858	30.74	29.50	OK	R.B.
3/11/11	5991279	3535180	2774936	30.77	29.87	OK	R.B.
3/14/11	5994896	3547880	2775170	30.75	29.66	OK	R.B.
3/15/11	5996163	3550730	2775241	30.68	29.60	OK	R.B.
3/16/11	5997454	3553380	2775311	30.55	29.55	OK	R.B.
3/17/11	5998714	3556090	2775382	30.40	29.48	OK	Parker
3/18/11	6000007	3559380	2775421	30.38	29.45	OK	R.B.
3/21/11	6004096	3568820	2775663	30.37	29.38	OK	Parker
3/22/11	6005492	3570980	2775733	30.36	29.26	OK	R.B.
3/23/11	6006827	3574090	2775805	30.33	29.20	OK	R.B.
3/24/11	6008198	3577100	2775869	30.33	DRY	OK	R.B.
3/25/11	6009727	3578360	2775933	30.32	DRY	OK	Parker
3/28/11	6014377	3584510	2776141	30.46	30.42	OK	R.B.
3/29/11	6016444	3586100	2776263	30.67	32.32	OK	R.B.
3/30/11	6018061	3586230	2776407	30.66	32.15	OK	R.B.
3/31/11	6020190	3586470	2776543	30.88	32.38	OK	R.B.

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LANDFILL SHEET		
2011 Mar	RAIN FALL	LEACHATE MGD
1	0.02	0.008
2	0.00	0.008
3	0.00	0.007
4	0.00	0.007
5	0.03	0.008
6	0.04	0.009
7	0.00	0.008
8	0.00	0.007
9	0.00	0.008
10	1.30	0.009
11	0.00	0.009
12	0.00	0.008
13	0.00	0.008
14	0.00	0.008
15	0.00	0.008
16	0.00	0.008
17	0.00	0.008
18	0.00	0.008
19	0.00	0.008
20	0.00	0.008
21	0.00	0.008
22	0.00	0.008
23	0.00	0.008
24	0.00	0.009
25	0.00	0.008
26	0.00	0.008
27	0.00	0.008
28	3.33	0.009
29	0.00	0.014
30	0.79	0.014
31	3.08	0.019
TOTAL	8.59	0.273
AVG		0.009
MIN		
MAX	3.33	0.019

LAKE LEVEL DATA IN FEET NGVD	
SOUTH (86 ACRE)	EAST (63 ACRE)
36.70	28.90
36.70	28.70
36.60	28.70
36.40	28.60
36.40	28.70
36.40	28.70
36.40	28.90
36.30	28.90
36.20	29.00
36.40	29.30
36.40	29.50
36.30	29.30
36.30	29.50
36.20	30.30
36.30	30.60
36.30	30.60
36.10	30.40
36.10	30.80
36.10	30.80
36.10	30.80
36.00	30.50
35.90	30.60
35.80	30.90
35.90	30.70
35.80	30.70
35.80	30.80
35.70	30.90
35.70	31.20
35.60	31.40
35.60	31.80
35.60	32.50

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: MARCH 2011

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	29.46	<i>inward</i>	GW-1	38.68	34.04
P-2	42.32	28.73	<i>inward</i>	GW-2	40.92	31.07
P-3	40.36	24.88	<i>inward</i>	GW-3	39.40	31.73
P-4	40.78	21.97	<i>inward</i>	GW-4	40.53	31.18
P-5	40.73	21.47	<i>inward</i>	GW-5	39.90	30.99
P-6	40.74	21.25	<i>inward</i>	GW-6	38.95	30.14
P-7	40.60	21.26	<i>inward</i>	GW-7	39.49	27.78
P-8	40.21	21.21	<i>inward</i>	GW-8	39.75	26.72
P-9	39.97	21.23	<i>inward</i>	GW-9	39.65	26.47
P-10	39.86	20.25	<i>inward</i>	GW-10	38.34	26.52
P-11	40.52	22.31	<i>inward</i>	GW-11	38.26	29.47
P-12	43.28	29.40	<i>inward</i>	GW-12	42.09	30.42
P-13	44.78	30.55	<i>inward</i>	GW-13	44.79	30.69
P-14	45.09	29.38	<i>inward</i>	GW-14	39.63	33.30
P-15	45.57	30.46	<i>inward</i>	GW-15	42.33	34.31
P-16	44.67	30.93	<i>inward</i>	GW-16	44.41	34.18
P-17	44.28	29.75	<i>inward</i>	GW-17	42.19	34.06

Comments:

Date Data Collected: March 21, 2011

Form Revised December 6, 2004