



An employee-owned company  
July 7, 2010

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  
JUL 09 2010  
Southwest District

**Re: Manatee County Lena Road Landfill  
Monthly Report – July 2010**

Dear Mr. Morris:

July  
dl

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2010 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, and Monthly Groundwater Gradient Report.

An inward gradient was present in the Stage III Landfill. The Stage I Landfill had an inward gradient at all gradient pairs except at P-1/GW-1 and P-2/GW-2. These pairs measure the gradient across the slurry wall between the Stage I Landfill and the Stage II Landfill. The outward gradient was caused when groundwater was pumped from the Stage II Landfill. The groundwater was pumped to demonstrate that the Stage II Landfill pump station was capable to lower the water level within Stage II Landfill to maintain an inward gradient, to test the integrity of the Stage II Landfill slurry wall and leachate collection system, and to lower the water level in the manholes so Manatee County could insert a camera to video the leachate collection pipes. At the conclusion of the test, the pump station was turned off and the water level in the Stage II Landfill is slowly returning to the previous level. At that level the gradient between Stage I and II will return to an inward gradient into the Stage I Landfill. With the summer rains that should occur soon.

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  
Jeanne' Detweiler, Manatee County Division/Landfill  
File – 120498.94 0100

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# EXHIBIT A

## MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY

### LENA ROAD LANDFILL

#### MONTHLY WATER BALANCE REPORT

**JUNE, 2010**

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-Jun-10	70,000	5,190	75,190	48,900	124,090	0.00	0
02-Jun-10	16,950	2,780	19,730	11,900	31,630	0.00	0
03-Jun-10	18,000	2,340	20,340	12,600	32,940	0.00	0
04-Jun-10	18,910	1,940	20,850	13,100	33,950	0.49	2,235,484
05-Jun-10	0	0	0	0	0	0.00	0
06-Jun-10	0	0	0	0	0	0.00	0
07-Jun-10	49,060	3,480	52,540	34,400	86,940	0.00	0
08-Jun-10	1,790	1,310	3,100	2,700	5,800	0.00	0
09-Jun-10	33,110	1,290	34,400	21,900	56,300	0.00	0
10-Jun-10	17,890	620	18,510	11,700	30,210	0.00	0
11-Jun-10	17,490	1,220	18,710	11,000	29,710	0.00	0
12-Jun-10	0	0	0	0	0	0.00	0
13-Jun-10	0	0	0	0	0	0.41	1,870,507
14-Jun-10	50,820	2,360	53,180	32,900	86,080	0.00	0
15-Jun-10	16,430	770	17,200	10,400	27,600	0.00	0
16-Jun-10	16,700	540	17,240	10,900	28,140	0.00	0
17-Jun-10	14,870	470	15,340	9,800	25,140	0.00	0
18-Jun-10	16,130	270	16,400	10,600	27,000	1.73	7,892,629
19-Jun-10	0	0	0	0	0	2.20	10,036,869
20-Jun-10	0	0	0	0	0	0.02	91,244
21-Jun-10	62,130	680	62,810	34,200	97,010	0.16	729,954
22-Jun-10	17,250	660	17,910	12,200	30,110	0.00	0
23-Jun-10	15,600	1,250	16,850	11,600	28,450	0.00	0
24-Jun-10	17,640	1,120	18,760	12,100	30,860	0.00	0
25-Jun-10	17,600	870	18,470	11,300	29,770	0.00	0
26-Jun-10	0	0	0	0	0	0.03	136,866
27-Jun-10	0	0	0	0	0	0.38	1,733,641
28-Jun-10	20,670	460	21,130	10,000	31,130	1.91	8,713,827
29-Jun-10	37,800	440	38,240	19,700	57,940	0.47	2,144,240
30-Jun-10	23,410	660	24,070	14,000	38,070	0.88	4,014,747
01-Jul-10	0	0	0	0	0	0.00	0
<b>TOTAL</b>	<b>570,250</b>	<b>30,720</b>	<b>600,970</b>	<b>367,900</b>	<b>968,870</b>	<b>8.68</b>	<b>39,600,009</b>
Leachate Pumped as Percentage of Rainfall			2.5%	2.4%			

**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
<b>TOTAL</b>	<b>132.0</b>	<b>66.0</b>	<b>198.0</b>
<b>Open Area</b>	<b>102.0</b>	<b>66.0</b>	<b>168.0</b>

**Comments**

## EXHIBIT B

### MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL MONTHLY LEACHATE TRACKING SUMMARY -- 2010

	B	C	D	E	F	G	H
MONTH	STAGE I	STAGE III	TOTAL			STAGE I	STAGE III
	LEACHATE (gallons)	LEACHATE (gallons)	LEACHATE (gallons)	RAINFALL (inches)	RAINFALL (gallons)	LEACHATE/ RAINFALL (%)	LEACHATE /RAINFALL (%)
JANUARY	680,510	605,300	1,285,810	3.21	14,644,704	7.7%	10.5%
FEBRUARY	728,310	543,100	1,271,410	2.72	12,409,219	9.7%	11.1%
MARCH	890,130	579,900	1,470,030	4.36	19,891,249	7.4%	7.4%
APRIL	780,100	485,800	1,265,900	2.54	11,588,021	11.1%	10.7%
MAY	536,970	374,700	911,670	1.78	8,120,739	10.9%	11.7%
JUNE	600,970	367,900	968,870	8.68	39,600,009	2.5%	2.4%
JULY							
AUGUST							
SEPTEMBER							
OCTOBER							
NOVEMBER							
DECEMBER							
<b>TOTAL</b>	<b>4,216,990</b>	<b>2,956,700</b>	<b>7,173,690</b>	<b>23.29</b>	<b>106,253,942</b>	<b>6.5%</b>	<b>7.1%</b>

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
<b>TOTAL</b>	<b>132.0</b>	<b>66.0</b>	<b>198.0</b>
<b>Open Area</b>	<b>102.0</b>	<b>66.0</b>	<b>168.0</b>

LECHATE JUNE 2010

DATE	LEACHATE			STORMWATER		COMMENTS	NAME
	METER #1	METER #2	METER #3	S. G. #1	S. G. #2		
6/1/10	5409252	2905740	2750378	32.79	Dry	OK	R.B.
6/2/10	5410947	2908520	2750497	32.78	Dry	OK	R.B.
6/3/10	5412747	2910860	2750623	32.76	Dry	OK	R.B.
6/4/10	5414638	2912600	2750754	32.81	Dry	OK	R.B.
6/7/10	5419544	2916280	2751098	32.78	Dry	OK	R.B.
6/8/10	5419723	2917590	2751125	32.75	Dry	OK	R.B.
6/9/10	5423034	2918880	2751344	32.73	Dry	OK	R.B.
6/10/10	5424823	2919500	2751461	32.69	Dry	OK	R.B.
6/11/10	5426522	2920720	2751591	32.67	Dry	OK	N.J.
6/14/10	5431654	2923080	2751900	32.67	Dry	OK	K.B.
6/15/10	5433297	2923850	2752004	32.63	Dry	OK	ZP
6/18/10	5434967	2924390	2752123	32.62	Dry	OK	N.J.
6/17/10	5436454	2924960	2752211	32.60	Dry	OK	KP
6/18/10	5438067	2925150	2752317	32.61	Dry	OK	N.J.
6/21/10	5444280	2925810	2752659	33.14	31.52	OK	R.B.
6/22/10	5446005	2926470	2752781	33.16	31.35	OK	R.B.
6/23/10	5447565	2927720	2752887	33.16	31.17	OK	R.B.
6/24/10	5449329	2928840	2753018	33.15	31.00	OK	R.B.
6/25/10	5451089	2929710	2753131	33.13	30.86	OK	R.B.
6/28/10	5453186	2930170	2753231	33.13	30.50	OK	R.B.
6/29/10	5456436	2930610	2753428	33.51	32.19	OK	R.B.
6/30/10	5459177	2931270	2753568	33.59	32.13	OK	R.B.

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2010 jun	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.009	40.80	32.20
2	0.00	0.011	40.60	32.10
3	0.00	0.011	40.50	32.10
4	0.49	0.010	40.60	31.80
5	0.00	0.010	40.50	31.90
6	0.00	0.010	40.40	31.70
7	0.00	0.011	40.40	31.60
8	0.00	0.011	40.20	31.50
9	0.00	0.013	40.00	31.50
10	0.00	0.011	39.90	31.10
11	0.00	0.011	39.60	30.90
12	0.00	0.010	39.50	31.00
13	0.41	0.011	39.40	30.90
14	0.00	0.011	39.30	30.90
15	0.00	0.011	39.10	30.70
16	0.00	0.010	39.10	30.90
17	0.00	0.010	39.00	30.80
18	1.73	0.010	39.00	30.80
19	2.20	0.010	38.80	31.00
20	0.02	0.014	38.80	31.10
21	0.16	0.012	38.70	31.10
22	0.00	0.012	38.60	31.20
23	0.00	0.012	38.60	31.20
24	0.00	0.012	38.50	31.00
25	0.00	0.010	38.40	30.90
26	0.03	0.010	38.20	30.90
27	0.38	0.010	38.30	31.30
28	1.91	0.018	38.30	31.30
29	0.47	0.019	38.30	31.20
30	0.88	0.019	38.60	31.40
31				
TOTAL	8.68	0.349		
AVG		0.012		
MIN				
MAX	2.20	0.019		

Fax # 9-708-5668

## FIGURE L-7

Manatee County Lena Road Landfill

# Monthly Groundwater Gradient Report

Month and Year: JUNE 2010

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	29.49	outward	GW-1	38.68	26.42
P-2	42.32	28.74	outward	GW-2	40.92	27.30
P-3	40.36	25.87	inward	GW-3	39.40	34.53
P-4	40.78	22.14	inward	GW-4	40.53	33.70
P-5	40.73	21.01	inward	GW-5	39.90	32.86
P-6	40.74	19.95	inward	GW-6	38.95	32.14
P-7	40.60	19.00	inward	GW-7	39.49	30.79
P-8	40.21	18.90	inward	GW-8	39.75	29.99
P-9	39.97	19.51	inward	GW-9	39.65	29.10
P-10	39.86	19.37	inward	GW-10	38.34	30.11
P-11	40.52	22.39	inward	GW-11	38.26	31.48
P-12	43.28	29.34	inward	GW-12	42.09	32.01
P-13	44.78	30.41	inward	GW-13	44.79	33.40
P-14	45.09	29.80	inward	GW-14	39.63	34.29
P-15	45.57	30.98	inward	GW-15	42.33	35.30
P-16	44.67	31.02	inward	GW-16	44.41	34.05
P-17	44.28	29.96	inward	GW-17	42.19	33.41

Comments:

Date Data Collected: June 29, 2010

Form Revised December 6, 2004