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October 11, 2005

Mr. John Morris, P.G.  
Florida Department of Environmental Protection  
Southwest District Office - Solid Waste Section  
3804 Coconut Palm Drive  
Tampa, Florida 33619



**Re: Manatee County Lena Road Landfill  
Monthly Report – September 2005**

Dear Mr. Morris:

Attached is the September 2005 monthly report for the Lena Road Landfill. The report consists of the monthly water balance report (Exhibit A), the leachate-tracking summary (Exhibit B), the field readings for the water balance report, and the monthly groundwater gradient report. An inward gradient was present in Stage I and Stage III of the landfill.

The groundwater monitoring wells and piezometers were replaced as required by the recently issued landfill operation permit. Piezometers P-3, P-4, P-5, P-6, and P-7 could not be installed on the north side of the Stage III Landfill due to the construction in this area related to replacement of the leachate collection system. To determine the gradient direction, the water levels in GW-3, GW-4, GW-5, and GW-6 were compared to the leachate level as measured by P-2. For GW-7, the leachate level as determined by PZ-13 was used since this piezometer is still in place. P-11 and GW-11 could not be installed on the south side of the Stage III Landfill due to the pending construction. Existing PZ-17 and GC-6 were left in place to measure the gradient direction on the south side of the Stage III Landfill. These piezometers and wells will be installed as soon as the leachate collection system replacement is completed.

If you should have any questions concerning this report, please contact me in our Orlando office at 407/647-7275, Ext. 4153.

Sincerely,

Joe Miller, P.E.  
Senior Project Manager

cc: Daniel T. Gray, Director, Utility Operations Department  
Gus DiFonzo, Solid Waste Manager  
Mike Gore/Jeanne Detweiler, Manatee County Landfill Division  
File – 120498.93 0100, August 2005

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EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY  
 LENA ROAD LANDFILL  
 MONTHLY WATER BALANCE REPORT  
 SEPTEMBER, 2005

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-Sep-05	16,470	3,870	20,340	97,400	117,740	0.00	0
02-Sep-05	15,600	3,850	19,450	94,700	114,150	0.00	0
03-Sep-05	0	0	0	0	0	0.00	0
04-Sep-05	0	0	0	0	0	0.00	0
05-Sep-05	0	0	0	0	0	0.11	501,843
06-Sep-05	64,440	15,050	79,490	369,700	449,190	0.00	0
07-Sep-05	16,870	4,120	20,990	84,900	105,890	0.00	0
08-Sep-05	17,320	3,820	21,140	85,600	106,740	0.00	0
09-Sep-05	17,100	3,810	20,910	83,800	104,710	0.00	0
10-Sep-05	0	0	0	0	0	0.00	0
11-Sep-05	0	0	0	0	0	0.00	0
12-Sep-05	44,530	10,580	55,110	240,300	295,410	0.00	0
13-Sep-05	16,310	3,820	20,130	80,100	100,230	0.00	0
14-Sep-05	16,720	3,520	20,240	76,300	96,540	0.00	0
15-Sep-05	15,880	3,520	19,400	69,800	89,200	0.00	0
16-Sep-05	15,020	3,520	18,540	83,500	102,040	0.00	0
17-Sep-05	0	0	0	0	0	0.00	0
18-Sep-05	0	0	0	0	0	0.00	0
19-Sep-05	48,460	11,180	59,640	224,300	283,940	0.00	0
20-Sep-05	16,310	3,810	20,120	72,800	92,920	0.02	91,244
21-Sep-05	18,760	4,090	22,850	71,500	94,350	0.46	2,098,618
22-Sep-05	18,120	4,080	22,200	72,300	94,500	0.06	273,733
23-Sep-05	17,500	3,770	21,270	73,700	94,970	0.13	593,088
24-Sep-05	0	0	0	0	0	0.00	0
25-Sep-05	0	0	0	0	0	0.00	0
26-Sep-05	45,010	10,490	55,500	210,100	265,600	0.00	0
27-Sep-05	17,870	4,110	21,980	71,600	93,580	0.02	91,244
28-Sep-05	16,990	3,810	20,800	69,100	89,900	0.58	2,646,084
29-Sep-05	17,220	3,770	20,990	75,700	96,690	0.00	0
30-Sep-05	16,060	3,520	19,580	68,700	88,280	0.00	0
	0	0	0	0	0	0.00	0
<b>TOTAL</b>	<b>488,560</b>	<b>112,110</b>	<b>600,670</b>	<b>2,375,900</b>	<b>2,976,570</b>	<b>1.38</b>	<b>6,295,854</b>
Leachate Pumped as Percentage of Rainfall			15.7%	96.1%			

**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 -- 2005

	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	736,740	2,684,167	3,420,907	1.51	6,888,942	17.6%	99.2%
FEBRUARY	545,500	2,046,567	2,592,067	4.89	22,309,222	4.0%	23.4%
MARCH	779,900	5,231,667	6,011,567	5.34	24,362,218	5.3%	54.7%
APRIL	607,730	2,340,867	2,948,597	4.57	20,849,314	4.8%	28.6%
MAY	636,620	2,336,167	2,972,787	3.92	17,883,875	5.9%	33.3%
JUNE	710,600	4,870,700	5,581,300	10.15	46,306,462	2.5%	26.8%
JULY	675,600	4,090,000	4,765,600	8.35	38,094,479	2.9%	27.3%
AUGUST	686,010	3,424,800	4,110,810	4.47	20,393,092	5.5%	42.7%
SEPTEMBER	600,670	2,375,900	2,976,570	1.38	6,295,854	15.7%	96.1%
OCTOBER							
NOVEMBER							
DECEMBER							
<b>TOTAL</b>	<b>5,979,370</b>	<b>29,400,835</b>	<b>35,380,205</b>	<b>44.58</b>	<b>203,383,457</b>	<b>4.8%</b>	<b>36.8%</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	Stage III	TOTAL
	(acres)	(acres)	(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>



Landfill

LANDFILL SHEET		
2005 Sep	RAIN FALL	LEACHATE MGD
1	0.00	0.083
2	0.00	0.083
3	0.00	0.083
4	0.00	0.083
5	0.11	0.106
6	0.00	0.089
7	0.00	0.089
8	0.00	0.087
9	0.00	0.084
10	0.00	0.091
11	0.00	0.088
12	0.00	0.088
13	0.00	0.088
14	0.00	0.088
15	0.00	0.086
16	0.00	0.085
17	0.00	0.086
18	0.00	0.083
19	0.00	0.083
20	0.02	0.084
21	0.46	0.084
22	0.06	0.084
23	0.13	0.084
24	0.00	0.081
25	0.00	0.080
26	0.00	0.081
27	0.02	0.082
28	0.58	0.079
29	0.00	0.084
30	0.00	0.083
<b>TOTAL</b>	<b>1.38</b>	<b>2.578</b>
<b>AVG</b>		<b>0.086</b>
<b>MIN</b>		
<b>MAX</b>	<b>0.58</b>	<b>0.106</b>

Fax # 9-741-3396

## FIGURE L-7

Manatee County Lena Road Landfill

# Monthly Groundwater Gradient Report

Month and Year: SEPTEMBER 2005

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	29.43	<i>inward</i>	GW-1	38.68	31.65
P-2	42.32	28.46	<i>inward</i>	GW-2	40.92	31.10
P-3 *	42.32	28.46	<i>inward</i>	GW-3	39.40	32.39
P-4 *	42.32	28.46	<i>inward</i>	GW-4	40.53	31.47
P-5 *	42.32	28.46	<i>inward</i>	GW-5	39.90	31.10
P-6 *	42.32	28.46	<i>inward</i>	GW-6	38.95	30.26
P-7 (PZ-13) *	35.36	24.51	<i>inward</i>	GW-7	39.49	28.21
P-8	40.21	21.92	<i>inward</i>	GW-8	39.75	26.98
P-9	39.97	20.22	<i>inward</i>	GW-9	39.65	27.38
P-10	39.86	20.55	<i>inward</i>	GW-10	38.34	28.78
P-11(PZ-17) **	40.57	28.32	<i>inward</i>	GW-11 (GC-6)**	39.02	30.17
P-12	43.28	29.37	<i>inward</i>	GW-12	42.09	30.50
P-13	44.78	30.23	<i>inward</i>	GW-13	44.79	34.61
P-14	45.09	29.78	<i>inward</i>	GW-14	39.63	34.64
P-15	45.57	30.87	<i>inward</i>	GW-15	42.33	36.23
P-16	44.67	31.02	<i>inward</i>	GW-16	44.41	37.00
P-17	44.28	29.83	<i>inward</i>	GW-17	42.19	34.28

Comments:

\* Piezometers P-3, P-4, P-5, P-6 and P-7 could not be installed due to construction in this area.

The reading from P-2 was used to compare water levels to GW-3, GW-4, GW-5 and GW-6, and PZ-13 for GW-7.

\*\* P-11 and GW-11 could not be installed due to construction in this area.

PZ-17 and GC-6 were left in-place and used to measure the gradient in this area.

Date Data Collected: September 14, 2005

Form Revised December 6, 2004