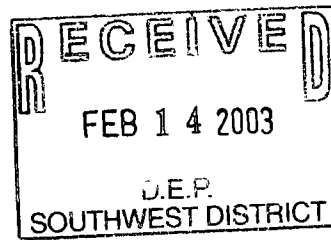




An employee-owned company



February 13, 2003

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 – January 2003**

Dear Mr. Morris:

Attached is the January 2003 monthly report for the Lena Road Landfill in accordance with specific condition numbers 17, 18, and 33 of Operations Permit Number 39884-001-SO. The report consists of the monthly water balance report, leachate tracking summary, monthly gradient report and the field readings for the water balance report.

An inward gradient was present in Stage I and Stage III at all of the gradient pairs. An outward gradient was present in Stage II at four of the gradient pairs. However, Stage II has no solid waste.

If you should have any questions concerning this report, please contact me in our Orlando office at 407/647-7275 Ext. 153, or Javen Figueroa at Ext. 288.

Sincerely,

Joe Miller, P.E.
Senior Project Manager

Cc: Kim Ford, P.E., FDEP SW District
Daniel T. Gray, Director, Utility Operations Department
Gus DiFonzo, Solid Waste Manager
C. Michael Gore, Landfill Superintendent
Gwen Pagington, Solid Waste Program Specialist
File – 120498.90 9100, January 2003 Monitoring

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**Manatee County Lena Road Landfill
Groundwater Gradient
JANUARY 2003**

Inside Slurry Wall				Outside Slurry Wall		
Piezometer	Riser Elevation	Groundwater Elevation	Gradient Flow	Monitoring Well	Riser Elevation	Groundwater Elevation
STAGE I						
PZ-1	42.55	29.11	<i>inward</i>	MW-5	39.88	31.67
PZ-2	42.47	30.27	<i>inward</i>	MW-2	41.13	32.85
PZ-3A	44.90	29.65	<i>inward</i>	MW-1	42.58	35.54
PZ-4A	47.73	29.98	<i>inward</i>	CW-4	37.48	35.47
PZ-5	43.94	30.35	<i>inward</i>	CW-5A	41.18	38.65
PZ-6	44.73	31.28	<i>inward</i>	SG-1		34.46
PZ-7	47.76	30.44	<i>inward</i>	MW-6	39.29	34.50
PZ-19	45.87	28.74	<i>inward</i>	PZ-11	38.94	33.89
Dry 32.80						
STAGE II						
PZ-8	37.63	33.98	<i>outward</i>	LRII-5	36.75	32.23
PZ-9	39.20	33.98	<i>outward</i>	LRII-4	33.85	29.51
PZ-10	37.05	34.28	<i>outward</i>	LRII-2	36.48	31.79
PZ-11	38.94	33.89	<i>outward</i>	LRII-1	37.97	33.71
NO BURIED WASTE IN STAGE II						
STAGE III						
PZ-12	38.35	38.35	N/A	GC-2	38.15	32.20
PZ-13	35.36	28.54	<i>inward</i>	GC-3	35.02	31.01
PZ-14A	34.58	20.88	<i>inward</i>	GC-4A	35.02	28.86
PZ-15C	40.46	20.33	<i>inward</i>	PZ-15A	39.79	28.98
PZ-16B	40.22	21.02	<i>inward</i>	PZ-16A	39.05	28.01
PZ-17	40.57	28.74	<i>inward</i>	SG-2		30.60
PZ-18	40.16	29.36	<i>inward</i>	SG-3		34.46
Dry 28.90 Dry 33.14						

Additional In-House Monitoring Data						
Stage I						
PZ-2	42.47	30.27	<i>inward</i>	MW-3	42.32	34.85
Stage II						
PZ-9	39.20	33.98	<i>outward</i>	LRII-3	33.47	28.79
Stage III						
PZ-15C	40.46	20.33	<i>inward</i>	GC-1A	31.75	27.47
PZ-16B	40.22	21.02	<i>inward</i>	GC-5	36.46	29.31
PZ-17	40.57	28.74	<i>inward</i>	GC-6	39.02	31.35

Notes: The table is arranged so any piezometer can be compared to its corresponding monitoring point. For example, PZ-1 is located on the opposite side of the slurry wall from MW-5. Thus data from PZ-1 are compared to data from MW-5.

PZ-12 DAMAGED;
CANNOT DEMONSTRATE
INWARD GRADIENT w/
AVAILABLE DATA

This report includes riser elevations determined by certified survey conducted by County Staff and dated Aug. 10. Riser elevations for MW-1, MW-3, PZ-9, PZ-11 and PZ-19 were resurveyed on November 13, 2002. PZ-12 was destroyed by scale house construction activities. Will be replaced by contractor.

Stage I Landfill - 131 acres (Closed - 30 ac., Intermediate - 91 ac., Open - 10 ac.)
Stage II Landfill - 110 acres (Closed - 0 ac., Intermediate - 0 ac., Open - 0 ac. No waste in Stage II.)
Stage III Landfill - 75 acres (Closed - 0 ac., Intermediate - 75 ac., Open - 0 ac.)

Data Collection: January 9, 2003 ; January 30, 2003 (PZ-17 and SG-2 only)

EXHIBIT A

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY

LENA ROAD LANDFILL

MONTHLY WATER BALANCE REPORT

January, 2002

A	B	C	D	E	F
DATE	LEACHATE STAGE I Lift Station 1	LEACHATE STAGE I Lift Station 2	LEACHATE STAGE III	TOTAL LEACHATE PUMPED	RAINFALL INCHES
01-Jan-03	0	0	0	0	0.12
02-Jan-03	54,570	24,400	1,534,000	1,612,970	0.00
03-Jan-03	21,480	28,050	375,100	424,630	0.02
04-Jan-03	0	0	0	0	0.00
05-Jan-03	0	0	0	0	0.00
06-Jan-03	62,030	82,060	932,200	1,076,290	0.00
07-Jan-03	18,920	13,580	256,100	288,600	0.00
08-Jan-03	20,080	0	236,400	256,480	0.00
09-Jan-03	22,330	46,630	221,400	290,360	0.00
10-Jan-03	22,510	8,760	211,000	242,270	0.00
11-Jan-03	0	0	0	0	0.10
12-Jan-03	0	0	0	0	0.00
13-Jan-03	55,140	22,740	573,600	651,480	0.00
14-Jan-03	20,540	18,490	189,900	228,930	0.00
15-Jan-03	16,740	8,060	170,600	195,400	0.00
16-Jan-03	18,870	8,580	169,700	197,150	0.00
17-Jan-03	21,310	9,740	164,000	195,050	0.02
18-Jan-03	0	0	0	0	0.00
19-Jan-03	0	0	0	0	0.00
20-Jan-03	48,790	21,840	501,400	572,030	0.00
21-Jan-03	21,050	10,250	167,100	198,400	0.00
22-Jan-03	20,810	10,230	152,000	183,040	0.02
23-Jan-03	20,360	9,500	151,000	180,860	0.00
24-Jan-03	13,510	5,920	181,400	200,830	0.00
25-Jan-03	0	0	0	0	0.00
26-Jan-03	0	0	0	0	0.00
27-Jan-03	49,850	22,600	453,800	526,250	0.00
28-Jan-03	15,910	7,670	143,900	167,480	0.00
29-Jan-03	17,630	8,380	140,200	166,210	0.00
30-Jan-03	19,140	8,670	138,300	166,110	0.00
31-Jan-03	19,750	9,210	139,500	168,460	0.00
TOTAL	601,320	385,360	7,202,600	8,189,280	0.28

Notes:

A - DATE OF READINGS.

B - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 1 IN GALLONS SINCE PREVIOUS DATE RECORDED.

C - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 2 IN GALLONS SINCE PREVIOUS DATE RECORDED.

D - LEACHATE PUMPED FROM STAGE III IN GALLONS SINCE PREVIOUS DATE RECORDED.

E - TOTAL LEACHATE PUMPED TO WWTP STORAGE TANK, WHICH IS THE SUM OF COLUMNS B + C + D.

F - RAINFALL RECORDED ON THIS DATE IN INCHES.

EXHIBIT B

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL

MONTHLY LEACHATE TRACKING SUMMARY -- 2003

	A	B	C	D
MONTH	LEACHATE STAGE I	LEACHATE STAGE III	TOTAL LEACHATE	RAINFALL INCHES
JANUARY	986,680	7,202,600	8,189,280	0.28
FEBRUARY				
MARCH				
APRIL				
MAY				
JUNE				
JULY				
AUGUST				
SEPTEMBER				
OCTOBER				
NOVEMBER				
DECEMBER				
TOTAL	986,680	7,202,600	8,189,280	0.28

Notes:

1. (A) Total leachate generated from Stage I.
2. (B) Total leachate generated from Stage III.
3. (C) Total leachate generate (Column A+B) and pumped to the WWTP storage tank.
4. (D) Total rainfall in inches.


MANATEE COUNTY PUBLIC WORKS
SOLID WASTE/LANDFILL SECTION

FACSIMILE COVER MEMO

FAX # (941)795-3490

PLEASE DELIVER THE FOLLOWING PAGE(S)

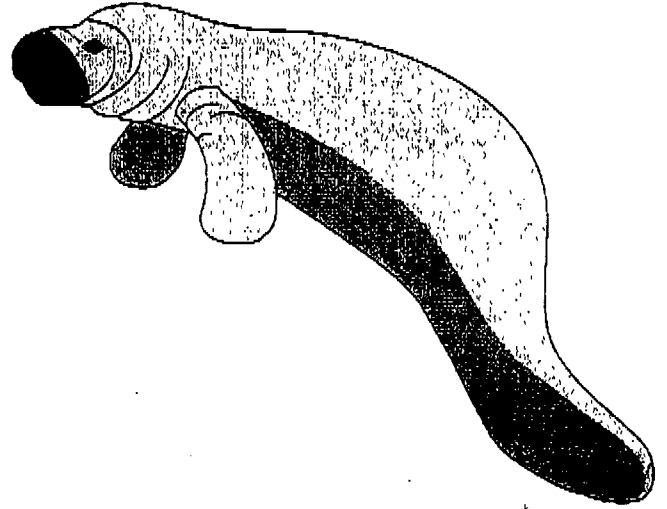
TO: Joe Miller, PBS&J
407/647-8945

FROM: Gwen Pagington, SW Program Specialist 

DATE: February 3, 2003

SUBJECT: Monthly Monitoring Report – January, 2003

NUMBER OF PAGES: 4



Hello Joe:

The following pages contain the field readings taken throughout the month of **January, 2003** for the above noted report.

If you have any questions, please contact either Mike Gore at 941/748-5543 (4) or myself at 941/795-3428. Thank you.

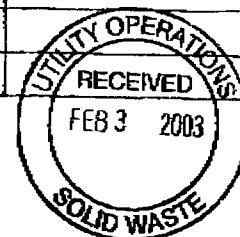
cc: Mike Gore, Landfill Superintendent

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL AS SOON AS POSSIBLE.

4410 66th Street West
Bradenton, Florida 34210
941/795-3428

**LEACHATE METER READINGS
JANUARY 2003**

DATE	LEACHATE				STORMWATER		W.W.T.P. INTAKE	NAME
	METER #1	METER #2	METER #3	TOTALS	S.G.	S.G. #2	METER	
1-01-03	CL	USED		HAPPY	NEW	YEAR	☺	J.S.
1-02-03	633560	189456	439138		35.86	30.10		L.P.
1-03-03	635708	192261	442889		35.58	29.54		L.P.
1-06-03	641911	200467	452211		35.00	29.65		L.S.
1-07-03	643803	201825	454772		34.65	29.55		J.S.
1-08-03	645811	201825	457136		34.50	29.04		J.S.
1-09-03	648044	206488	459350		34.44	28.96		J.S.
1-10-03	650295	207364	461460		34.40	28.94		J.S.
1-13-03	655809	209658	467196		34.35	29.08		J.S.
1-14-03	657863	211487	469095		34.33	30.20		J.S.
1-15-03	659537	212293	470801		34.30	30.60		J.S.
1-16-03	661424	213151	472498		34.28	30.64		J.S.
1-17-03	663555	214125	474138		34.26	30.58		J.S.
1-20-03	668434	216309	479152		34.21	30.60		J.S.
1-21-03	670539	217334	480823		34.21	30.60		J.S.
1-22-03	672620	218357	482343		34.21	30.57		J.S.
1-23-03	674656	219307	483853		34.25	30.58		J.S.
1-24-03	676007	219899	485667		34.24	30.61		J.S.
1-27-03	680992	222159	490205		34.26	30.61		J.S.
1-28-03	682583	222926	491644		34.26	30.60		J.S.
1-29-03	684346	223764	493046		34.26	30.59		J.S.
1-30-03	686260	224631	494429		34.27	30.59		J.S.
1-31-03	688235	225552	495824		34.29	30.60		J.S.



Hour	Meter Pump # 1	readings # 2 pump # 2	L.S.
1-02-03	2241.6	2283.2	
1-03-03	2242.0	2283.6	
1-06-03	2243.0	2284.6	
1-07-03	2243.3	2284.9	
1-08-03	2243.6	2285.2	
1-09-03	2244.0	2285.5	
1-10-03	2244.5	2285.9	
1-13-03	2245.3	2286.8	

1-13-02 1:00 PM Brad Hallhoff with Advanced Flow Technology Company resealed the gel coating inside # 2 flow transmitter. Brad said a leak might have developed when the company removed the clamps that are used to hold the circuit board in place when the transmitter was assembled. Brad checked the recorder and it was showing a positive flow at this time.

Landfill

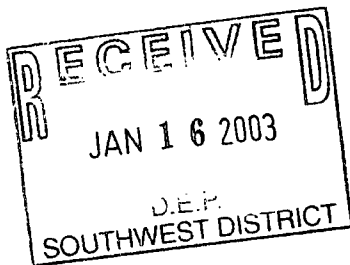
LANDFILL SHEET		
2003 Jan	RAIN FALL	LEACHATE MGD
1	0.12	0.793
2	0.00	0.510
3	0.02	0.340
4	0.00	0.291
5	0.00	0.269
6	0.00	0.253
7	0.00	0.236
8	0.00	0.224
9	0.00	0.220
10	0.00	0.211
11	0.10	0.197
12	0.00	0.187
13	0.00	0.187
14	0.00	0.182
15	0.00	0.175
16	0.00	0.177
17	0.02	0.176
18	0.00	0.162
19	0.00	0.158
20	0.00	0.157
21	0.00	0.160
22	0.02	0.159
23	0.00	0.155
24	0.00	0.138
25	0.00	0.140
26	0.00	0.143
27	0.00	0.138
28	0.00	0.136
29	0.00	0.138
30	0.00	0.138
31	0.00	0.137
TOTAL	0.28	6.687
AVG		0.216
MIN		
MAX	0.12	0.793

Fax # 9-795-3490





An employee-owned company
January 15, 2003



GAS MONITORING DATA
FILED SEPARATELY

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 – December 2002**

Dear Mr. Morris:

Attached is the December 2002 monthly report for the Lena Road Landfill in accordance with specific Condition Numbers 17, 18, and 33 of Operations Permit Number 39884-001-SO. The report consists of the monthly water balance report, leachate tracking summary, monthly gradient report, field readings for the water balance report and a quarterly gas monitoring table.

An inward gradient was present in Stage I and Stage III at all of the gradient pairs. An outward gradient was present in Stage II at two of the gradient pairs. However, Stage II has no solid waste. One of the piezometers, PZ-12, was destroyed as a result of the new scale house construction. Therefore, a comparison of the groundwater elevations of PZ-12 and GC-2 was not available. The contractor responsible for destroying the well is planning to reinstall it as soon as possible.

Twenty-three methane monitoring points on site were sampled on December 17, 2002 using a CES-Landtec Gas Extraction Monitor (GEM) Model 2000. Methane levels at all of the 23 sample points were less than the maximum levels of 25% of the Lower Explosive Limit (LEL) for the interior of structures and 100% for points at or beyond the landfill boundary, as described by Chapter 62-701.530(1) of the Florida Administrative Code.

If you should have any questions concerning this report, please contact me in our Orlando office at 407/647-7275, Ext. 153, or Javen Figueroa at Ext. 288.

Sincerely,

Joe Miller, P.E.
Senior Project Manager

cc: Kim Ford, P.E., FDEP SW District
Daniel T. Gray, Director, Utility Operations Department
Gus DiFonzo, Solid Waste Manager
C. Michael Gore, Landfill Superintendent
Gwen Pagington, Solid Waste Program Specialist
File – 120498.90 9100, December 2002 Monitoring

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Manatee County Lena Road Landfill
Groundwater Gradient
DECEMBER 2002

Inside Slurry Wall

Outside Slurry Wall

Piezometer	Riser Elevation	Groundwater Elevation	Gradient Flow	Monitoring Well	Riser Elevation	Groundwater Elevation
STAGE I						
PZ-1	42.55	29.39	<i>inward</i>	MW-5	39.88	32.23
PZ-2	42.47	29.91	<i>inward</i>	MW-2	41.13	32.98
PZ-3A	44.90	29.26	<i>inward</i>	MW-1	42.58	34.44
PZ-4A	47.73	29.96	<i>inward</i>	CW-4	37.48	34.93
PZ-5	43.94	30.31	<i>inward</i>	CW-5A	41.18	38.56
PZ-6	44.73	31.27	<i>inward</i>	SG-1		34.86
PZ-7	47.76	30.36	<i>inward</i>	MW-6	39.29	35.81
PZ-19	45.87	28.34	<i>inward</i>	PZ-11	38.94	34.48
STAGE II						
PZ-8	37.63	32.09	<i>inward</i>	LR11-5	36.75	33.57
PZ-9	39.20	31.42	<i>outward</i>	LR11-4	33.85	30.00
PZ-10	37.05	33.01	<i>inward</i>	LR11-2	36.48	33.12
PZ-11	38.94	34.48	<i>outward</i>	LR11-1	37.97	33.43
STAGE III						
PZ-12	38.35	38.35		GC-2	38.15	33.79
PZ-13	35.36	26.92	<i>inward</i>	GC-3	35.02	30.69
PZ-14A	34.58	20.02	<i>inward</i>	GC-4A	35.02	29.25
PZ-15C	40.46	21.79	<i>inward</i>	PZ-15A	39.79	29.39
PZ-16B	40.22	21.18	<i>inward</i>	PZ-16A	39.05	28.68
PZ-17	40.57	28.89	<i>inward</i>	SG-2		30.82
PZ-18	40.16	29.28	<i>inward</i>	SG-3		34.88

Dry 32.80

No (blue) WASTE IN STAGE II

Dry 28.90
Dry 33.14

Notes: The table is arranged so any piezometer can be compared to its corresponding monitoring point. For example, PZ-1 is located on the opposite side of the slurry wall from MW-5. Thus data from PZ-1 are compared to data from MW-5.

PZ-12 DAMAGED ; CANNOT DEMONSTRATE INWARD GRADIENT w/ AVAILABLE DATA

Additional In-House Monitoring Data						
Stage I						
PZ-2	42.47	29.91	<i>inward</i>	MW-3	42.32	34.36
Stage II						
PZ-9	39.20	31.42	<i>outward</i>	LR11-3	33.47	29.26
Stage III						
PZ-15C	40.46	21.79	<i>inward</i>	GC-1A	31.75	28.35
PZ-16B	40.22	21.18	<i>inward</i>	GC-5	36.46	30.06
PZ-17	40.57	28.89	<i>inward</i>	GC-6	39.02	32.27

This report includes riser elevations determined by certified survey conducted by County Staff and dated Aug. 10, 1999. Riser elevations for MW-1, MW-3, PZ-9, PZ-11 and PZ-19 were resurveyed on November 13, 2002. Due to scale house construction, GC-4 was replaced with GC-4A. Stage I Landfill - 131 acres (Closed - 30 ac., Intermediate - 91 ac., Open - 10 ac.) Stage II Landfill - 110 acres (Closed - 0 ac., Intermediate - 0 ac., Open - 0 ac. No waste in Stage II.) Stage III Landfill - 75 acres (Closed - 0 ac., Intermediate - 75 ac., Open - 0 ac.)

Data Collection: December 10, 2002

EXHIBIT A

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY

LENA ROAD LANDFILL

MONTHLY WATER BALANCE REPORT

December, 2002

A	B	C	D	E	F
DATE	LEACHATE STAGE I Lift Station 1	LEACHATE STAGE I Lift Station 2	LEACHATE STAGE III	TOTAL LEACHATE PUMPED	RAINFALL INCHES
01-Dec-02	0	0	0	0	0.00
02-Dec-02	30,440	27,930	333,800	392,170	0.00
03-Dec-02	0	7,400	102,400	109,800	0.00
04-Dec-02	41,640	7,350	92,900	141,890	0.00
05-Dec-02	22,860	8,930	101,500	133,290	0.60
06-Dec-02	5,940	8,490	96,200	110,630	0.28
07-Dec-02	0	0	0	0	0.00
08-Dec-02	0	0	0	0	0.00
09-Dec-02	61,460	74,920	297,400	433,780	2.76
10-Dec-02	26,370	17,620	542,600	586,590	0.13
11-Dec-02	19,410	11,490	186,300	217,200	0.08
12-Dec-02	18,110	10,080	182,700	210,890	0.93
13-Dec-02	28,070	16,750	662,900	707,720	1.99
14-Dec-02	0	0	0	0	0.00
15-Dec-02	0	0	0	0	0.00
16-Dec-02	60,240	2,980	1,035,600	1,098,820	0.00
17-Dec-02	25,030	0	252,200	277,230	0.00
18-Dec-02	20,090	0	222,600	242,690	0.00
19-Dec-02	19,380	820	204,600	224,800	0.00
20-Dec-02	23,180	0	225,600	248,780	0.58
21-Dec-02	0	0	0	0	0.00
22-Dec-02	0	0	0	0	0.00
23-Dec-02	55,340	2,260	637,600	695,200	0.00
24-Dec-02	22,510	0	172,700	195,210	0.70
25-Dec-02	0	0	0	0	0.12
26-Dec-02	40,820	0	380,400	421,220	0.00
27-Dec-02	16,060	0	172,000	188,060	0.00
28-Dec-02	0	0	0	0	0.00
29-Dec-02	0	0	0	0	0.00
30-Dec-02	55,170	24,350	48,100	127,620	0.00
31-Dec-02	20,760	9,800	279,000	309,560	4.00
TOTAL	612,880	231,170	6,229,100	7,073,150	12.17

Notes:

A - DATE OF READINGS.

B - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 1 IN GALLONS SINCE PREVIOUS DATE RECORDED.

C - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 2 IN GALLONS SINCE PREVIOUS DATE RECORDED.

D - LEACHATE PUMPED FROM STAGE III IN GALLONS SINCE PREVIOUS DATE RECORDED.

E - TOTAL LEACHATE PUMPED TO WWTP STORAGE TANK, WHICH IS THE SUM OF COLUMNS B + C + D.

F - RAINFALL RECORDED ON THIS DATE IN INCHES.

EXHIBIT B

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY

LENA ROAD LANDFILL

MONTHLY LEACHATE TRACKING SUMMARY -- 2002

	A	B	C	D
MONTH	LEACHATE STAGE I	LEACHATE STAGE III	TOTAL LEACHATE	RAINFALL INCHES
JANUARY	753,100	2,154,000	2,907,100	2.27
FEBRUARY	1,437,600	1,827,000	3,264,600	3.44
MARCH	757,110	1,809,840	2,566,950	0.47
APRIL	695,680	1,355,200	2,050,880	1.53
MAY	701,910	1,800,400	2,502,310	2.45
JUNE	723,960	2,847,100	3,571,060	8.20
JULY	1,196,460	6,141,900	7,338,360	8.20
AUGUST	1,083,750	7,178,000	8,261,750	12.33
SEPTEMBER	1,012,630	7,598,400	8,611,030	4.53
OCTOBER	707,906	4,694,000	5,401,906	4.13
NOVEMBER	699,280	3,880,600	4,579,880	3.95
DECEMBER	844,050	6,229,100	7,073,150	12.17
TOTAL	10,613,436	47,515,540	58,128,976	63.67

Notes:

1. (A) Total leachate generated from Stage I.
2. (B) Total leachate generated from Stage III.
3. (C) Total leachate generate (Column A+B) and pumped to the WWTP storage tank.
4. (D) Total rainfall in inches.


MANATEE COUNTY PUBLIC WORKS
SOLID WASTE/LANDFILL SECTION

FACSIMILE COVER MEMO

FAX # (941)795-3490

PLEASE DELIVER THE FOLLOWING PAGE(S)

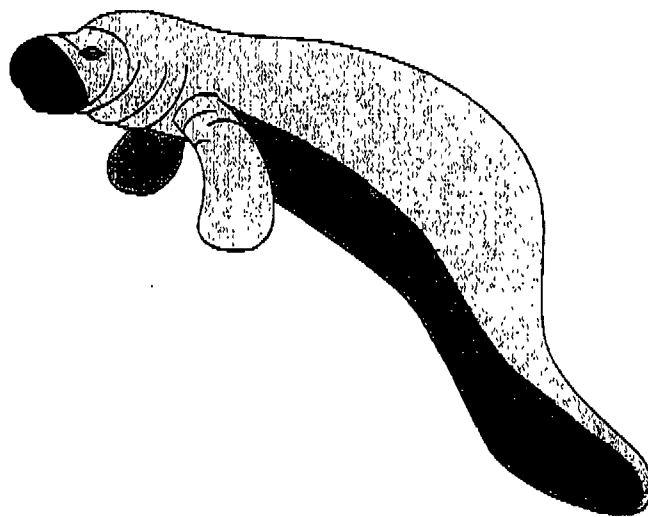
TO: Joe Miller, PBS&J
407/647-8945

FROM: Gwen Pagington, SW Program Specialist 

DATE: January 2, 2003

SUBJECT: Monthly Monitoring Report – December, 2002

NUMBER OF PAGES: 4



Hello Joe:

The following pages contain the field readings taken throughout the month of **December, 2002** for the above noted report.

If you have any questions, please contact either Mike Gore at 941/748-5543 (4) or myself at 941/795-3428. Thank you.

cc: Mike Gore, Landfill Superintendent

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL AS SOON AS POSSIBLE.

4410 66th Street West
Bradenton, Florida 34210
941/795-3428

Landfill

LANDFILL SHEET		
2002 Dec	RAIN FALL	LEACHATE MGD
1	0.00	0.111
2	0.00	0.099
3	0.00	0.098
4	0.00	0.133
5	0.60	0.115
6	0.28	0.099
7	0.00	0.117
8	0.00	0.110
9	2.78	0.112
10	0.13	0.497
11	0.08	0.195
12	0.93	0.193
13	1.99	0.614
14	0.00	0.403
15	0.00	0.285
16	0.00	0.255
17	0.00	0.238
18	0.00	0.222
19	0.00	0.210
20	0.58	0.201
21	0.00	0.187
22	0.00	0.187
23	0.00	0.183
24	0.70	0.187
25	0.12	0.187
26	0.00	0.174
27	0.00	0.165
28	0.00	0.216
29	0.00	0.023
30	0.00	0.092
31	4.00	0.270
TOTAL	12.17	6.178
AVG		0.199
MIN		
MAX	4.00	0.614

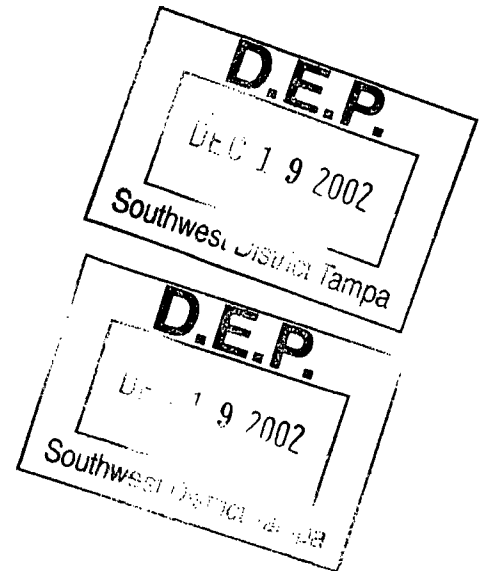
Fax # 9-795-3490



An employee-owned company

December 16, 2002

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 – November 2002**

Dear Mr. Morris:

Attached is the November 2002 monthly report for the Lena Road Landfill in accordance with specific condition numbers 17, 18, and 33 of Operations Permit Number 39884-001-SO. The report consists of the monthly water balance report, leachate tracking summary, monthly gradient report and the field readings for the water balance report.

An inward gradient was present in Stage I and Stage III at all of the gradient pairs. An outward gradient was present in Stage II at three of the gradient pairs. However, Stage II has no solid waste.

If you should have any questions concerning this report, please contact me in our Orlando office at 407/647-7275 Ext. 153, or Javen Figueroa at Ext. 288.

Sincerely,

Joe Miller, P.E.
 Senior Project Manager

Cc: Kim Ford, P.E., FDEP SW District
 Daniel T. Gray, Director, Utility Operations Department
 Gus DiFonzo, Solid Waste Manager
 C. Michael Gore, Landfill Superintendent
 Gwen Pagington, Solid Waste Program Specialist
 File – 120498.90 9100, November Monitoring

G:\WASTEMAN\Manatee County\SW-5 Annual Monitoring\November 2002\MonthlyLtrNov2002.doc

Manatee County Lena Road Landfill
Groundwater Gradient
NOVEMBER 2002



Inside Slurry Wall				Outside Slurry Wall		
Piezometer	Riser Elevation	Groundwater Elevation	Gradient Flow	Monitoring Well	Riser Elevation	Groundwater Elevation
STAGE I						
PZ-1	42.55	29.05	<i>inward</i>	MW-5	39.88	31.23
PZ-2	42.47	29.95	<i>inward</i>	MW-2	41.13	32.03
PZ-3A	44.90	29.15	<i>inward</i>	MW-1	42.58	34.08
PZ-4A	47.73	29.99	<i>inward</i>	CW-4	37.48	34.98
PZ-5	43.94	30.38	<i>inward</i>	CW-5A	41.18	38.12
PZ-6	44.73	31.31	<i>inward</i>	SG-1		33.90
PZ-7	47.76	30.08	<i>inward</i>	MW-6	39.29	33.55
PZ-19	45.87	28.92	<i>inward</i>	PZ-11	38.94	31.65
STAGE II						
PZ-8	37.63	31.53	<i>outward</i>	LRII-5	36.75	31.51
PZ-9	39.20	31.50	<i>outward</i>	LRII-4	33.85	29.05
PZ-10	37.05	31.72	<i>outward</i>	LRII-2	36.48	31.11
PZ-11	38.94	31.65	<i>inward</i>	LRII-1	37.97	32.27
STAGE III						
PZ-12	38.35	28.79	<i>inward</i>	GC-2	38.15	31.89
PZ-13	35.36	26.70	<i>inward</i>	GC-3	35.02	29.17
PZ-14A	34.58	19.59	<i>inward</i>	GC-4A	35.02	27.45
PZ-15C	40.46	20.01	<i>inward</i>	PZ-15A	39.79	26.66
PZ-16B	40.22	21.01	<i>inward</i>	PZ-16A	39.05	26.91
PZ-17	40.57	28.67	<i>inward</i>	SG-2		30.56
PZ-18	40.16	28.96	<i>inward</i>	SG-3		33.14

Dry 32.80

NO BVALED WASTE IN STAGE II

Dry 28.90
Dry 33.14

Notes: The table is arranged so any piezometer can be compared to its corresponding monitoring point. For example, PZ-1 is located on the opposite side of the slurry wall from MW-5. Thus data from PZ-1 are compared to data from MW-5.

Additional In-House Monitoring Data						
<u>Stage I</u>						
PZ-2	42.47	29.95	<i>inward</i>	MW-3	42.32	33.75
<u>Stage II</u>						
PZ-9	39.20	31.50	<i>outward</i>	LRII-3	33.47	28.67
<u>Stage III</u>						
PZ-15C	40.46	20.01	<i>inward</i>	GC-1A	31.75	26.42
PZ-16B	40.22	21.01	<i>inward</i>	GC-5	36.46	28.04
PZ-17	40.57	28.67	<i>inward</i>	GC-6	39.02	30.35

This report includes riser elevations determined by certified survey conducted by County Staff and dated Aug. 10, 1999. Riser elevations for MW-1, MW-3, PZ-9, PZ-11 and PZ-19 were resurveyed on November 13, 2002. Due to scale house construction, GC-4 was replaced with GC-4A. Stage I Landfill - 131 acres (Closed - 30 ac., Intermediate - 91 ac., Open - 10 ac.) Stage II Landfill - 110 acres (Closed - 0 ac., Intermediate - 0 ac., Open - 0 ac. No waste in Stage II.) Stage III Landfill - 75 acres (Closed - 0 ac., Intermediate - 75 ac., Open - 0 ac.)

Data Collection: November 7, 2002

EXHIBIT A

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY

LENA ROAD LANDFILL

MONTHLY WATER BALANCE REPORT

November, 2002

A	B	C	D	E	F
DATE	LEACHATE STAGE I Lift Station 1	LEACHATE STAGE I Lift Station 2	LEACHATE STAGE III	TOTAL LEACHATE PUMPED	RAINFALL INCHES
01-Nov-02	15,510	6,400	120,600	142,510	0.00
02-Nov-02	0	0	0	0	0.00
03-Nov-02	0	0	0	0	0.00
04-Nov-02	48,910	20,460	336,700	406,070	0.00
05-Nov-02	17,650	7,650	109,000	134,300	0.00
06-Nov-02	19,160	8,220	113,300	140,680	0.07
07-Nov-02	13,680	5,490	103,900	123,070	0.00
08-Nov-02	14,220	5,720	101,500	121,440	0.00
09-Nov-02	0	0	0	0	0.00
10-Nov-02	0	0	0	0	0.00
11-Nov-02	52,570	22,980	303,800	379,350	0.00
12-Nov-02	16,180	7,210	95,800	119,190	0.34
13-Nov-02	15,530	6,610	95,900	118,040	0.31
14-Nov-02	15,400	6,320	102,000	123,720	0.00
15-Nov-02	17,100	7,500	94,700	119,300	0.03
16-Nov-02	0	0	0	0	2.18
17-Nov-02	0	0	0	0	1.02
18-Nov-02	54,830	24,710	784,400	863,940	0.00
19-Nov-02	16,190	6,860	182,400	205,450	0.00
20-Nov-02	18,640	8,390	160,500	187,530	0.00
21-Nov-02	24,000	10,130	168,200	202,330	0.00
22-Nov-02	19,720	8,340	144,000	172,060	0.00
23-Nov-02	0	0	0	0	0.00
24-Nov-02	0	0	0	0	0.00
25-Nov-02	47,010	19,280	403,100	469,390	0.00
26-Nov-02	18,020	7,710	128,600	154,330	0.00
27-Nov-02	16,230	6,810	114,000	137,040	0.00
28-Nov-02	0	0	0	0	0.00
29-Nov-02	30,070	11,870	218,200	260,140	0.00
30-Nov-02	0	0	0	0	0.00
TOTAL	490,620	208,660	3,880,600	4,579,880	3.95

Notes:

A - DATE OF READINGS.

B - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 1 IN GALLONS SINCE PREVIOUS DATE RECORDED.

C - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 2 IN GALLONS SINCE PREVIOUS DATE RECORDED.

D - LEACHATE PUMPED FROM STAGE III IN GALLONS SINCE PREVIOUS DATE RECORDED.

E - TOTAL LEACHATE PUMPED TO WWTP STORAGE TANK, WHICH IS THE SUM OF COLUMNS B + C + D.

F - RAINFALL RECORDED ON THIS DATE IN INCHES.

EXHIBIT B

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL MONTHLY LEACHATE TRACKING SUMMARY -- 2002

MONTH	A LEACHATE STAGE I	B LEACHATE STAGE III	C TOTAL LEACHATE	D RAINFALL INCHES
JANUARY	753,100	2,154,000	2,907,100	2.27
FEBRUARY	1,437,600	1,827,000	3,264,600	3.44
MARCH	757,110	1,809,840	2,566,950	0.47
APRIL	695,680	1,355,200	2,050,880	1.53
MAY	701,910	1,800,400	2,502,310	2.45
JUNE	723,960	2,847,100	3,571,060	8.20
JULY	1,196,460	6,141,900	7,338,360	8.20
AUGUST	1,083,750	7,178,000	8,261,750	12.33
SEPTEMBER	1,012,630	7,598,400	8,611,030	4.53
OCTOBER	707,906	4,694,000	5,401,906	4.13
NOVEMBER	699,280	3,880,600	4,579,880	3.95
DECEMBER			0	
TOTAL	9,769,386	41,286,440	51,055,826	51.50

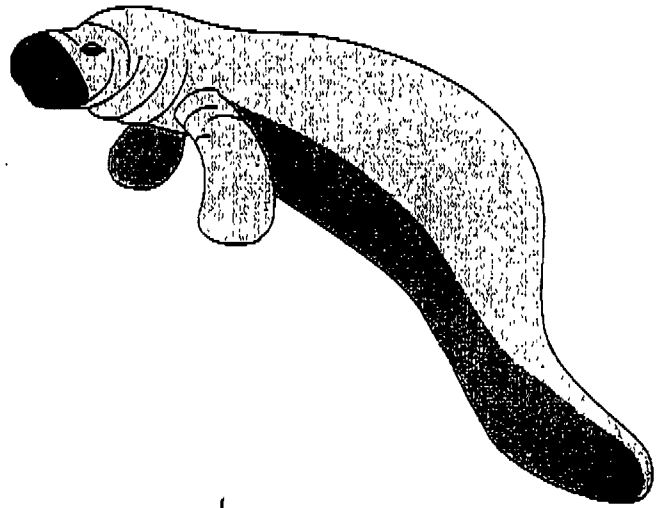
Notes:

1. (A) Total leachate generated from Stage I.
2. (B) Total leachate generated from Stage III.
3. (C) Total leachate generate (Column A+B) and pumped to the WWTP storage tank.
4. (D) Total rainfall in inches.

MANATEE COUNTY PUBLIC WORKS
SOLID WASTE/LANDFILL SECTION

FACSIMILE COVER MEMO

FAX # (941) 795-3490



PLEASE DELIVER THE FOLLOWING PAGE(S)

TO: Joe Miller, PBS&J
407/647-8945

FROM: Gwen Paglington, SW Program Specialist *GP*

DATE: December 2, 2002

SUBJECT: Monthly Monitoring Report – December, 2002

NUMBER OF PAGES: 4

Resend

Hello Joe:

The following pages contain the field readings taken throughout the month of **November, 2002** for the above noted report.

Gary Seeley, Landfill Supervisor, recorded the meter readings. If you have any questions, please contact either Mike Gore or Gary at 941/748-5543 (4) as I will be out of the office from Tuesday, December 3 through December 9. Thank you.

cc: Gus DiFonzo, Solid Waste Division Manager
Mike Gore, Landfill Superintendent

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL AS SOON AS POSSIBLE.

4410 66th Street West
Bradenton, Florida 34210
941/795-3428

ACHATE FLOW METER TOTALS

NOVEMBER 2002

	LEAVING LandFill	INTO W.W.T.P
11-01	142,510	147,000
11-04	406,070	425,100
11-05	134,300	140,400
11-06	140,680	145,400
11-07	123,070	126,100
11-08	121,440	125,000
11-11	379,350	395,400
11-12	119,190	127,900
11-13	118,040	119,600
11-14	123,720	126,500
11-15	119,300	125,500
11-18	863,940	835,100
11-19	205,450	201,600
11-20	187,530	185,000
11-21	202,330	206,800
11-22	172,060	175,900
11-25	469,390	488,300
11-26	154,330	165,100
11-27	137,040	146,300
11-28	Landfill	Closed ☺
11-29	260,140	275,900



LEACHATE METER READINGS
NOVEMBER 2002

DATE	LEACHATE				STORMWATER		W.W.T.P. INTAKE METER	NAME	
	METER #1	METER #2	METER #3	TOTALS	S.G.	S.G. #2	X100		
11-01	519304	143673	323907	142,510	33.85	30.56	449679	SLP.	
11-04	524195	145719	327274	406,070	33.80	30.56	453930	SLP.	
11-05	525960	148484	328364	134,300	33.80	30.56	455334	SLP.	
11-06	527876	147306	329497	140,680	33.81	30.56	456788	SLP.	
11-07	529244	147855	330536	123,070	33.77	30.55	458049	SLP.	
11-08	530666	148427	331551	121,440	33.76	30.55	459299	SLP.	
11-11	535923	150725	334589	379,350	33.74	30.55	463253	SLP.	
11-12	537541	151446	335547	119,190	33.67	30.73	464532	SLP.	
11-13	539094	152107	336506	118,040	33.55	30.67	465728	SLP.	
11-14	540634	152739	337526	123,720	33.43	30.63	466983	SLP.	
11-15	542344	153489	338473	119,200	33.38	30.62	468248	SLP.	
11-18	547827	155960	346317	863,940	34.44	30.70	476779	SLP.	
11-19	549446	156646	348141	205,450	34.30	30.67	478795	SLP.	
11-20	551310	157485	349746	187,530	34.21	30.66	480645	SLP.	
11-21	553710	158498	351428	202,330	34.13	30.40	482713	SLP.	
11-22	555682	159332	352868	172,060	34.05	29.90	484472	SLP.	
11-25	560383	161260	356899	469,390	33.85	30.61	489355	SLP.	
11-26	562185	162031	358185	154,330	33.80	30.61	491006	SLP.	
11-27	563808	162712	359325	137,040	33.75	30.60	492469	SLP.	
11-28	CLOSED		HAPPY THANKS GIVING						SLP.
11-29	566815	163899	361507	260,140	33.66	30.60	495228	SLP.	

Landfill

LANDFILL SHEET		
2002 Nov	RAIN FALL	LEACHATE MGD
1	0.00	0.119
2	0.00	0.119
3	0.00	0.118
4	0.00	0.119
5	0.00	0.119
6	0.07	0.118
7	0.00	0.107
8	0.00	0.108
9	0.00	0.111
10	0.00	0.111
11	0.00	0.108
12	0.34	0.106
13	0.31	0.104
14	0.00	0.103
15	0.03	0.107
16	2.18	0.166
17	1.02	0.362
18	0.00	0.176
19	0.00	0.169
20	0.00	0.164
21	0.00	0.162
22	0.00	0.151
23	0.00	0.136
24	0.00	0.133
25	0.00	0.133
26	0.00	0.131
27	0.00	0.129
28	0.00	0.153
28	0.00	0.118
30	0.00	0.120
	0.00	0.000
TOTAL	3.95	4.080
AVG		0.132
MIN		
MAX	2.18	0.362

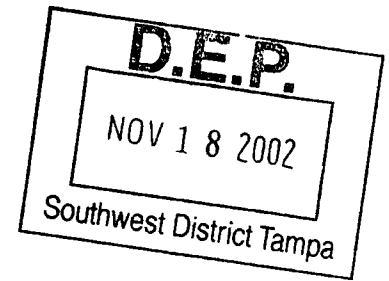
Fax # 9-795-3490





An employee-owned company

November 15, 2002



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 – October 2002**

Dear Mr. Morris:

Attached is the October 2002 monthly report for the Lena Road Landfill in accordance with specific condition numbers 17, 18, and 33 of Operations Permit Number 39884-001-SO. The report consists of the monthly water balance report, leachate tracking summary, monthly gradient report and the field readings for the water balance report.

An inward gradient was present in Stage I and Stage III at all of the gradient pairs. An outward gradient was present in Stage II at one of the gradient pairs. However, Stage II has no solid waste.

If you should have any questions concerning this report, please contact me in our Orlando office at 407/647-7275 Ext. 153, or Javen Figueroa at Ext. 288.

Sincerely,

Joe Miller, P.E.
Senior Project Manager

cc: Kim Ford, P.E., FDEP SW District
Daniel T. Gray, Director, Utility Operations Department
Gus DiFonzo, Solid Waste Manager
C. Michael Gore, Landfill Superintendent
Gwen Pagington, Solid Waste Program Specialist
File – 120498.90 9100, October Monitoring

G:\WASTEMAN\Manatee County\SW-5 Annual Monitoring\October2002\MonthlyLtrOct2002.doc

EXHIBIT A

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
 LENA ROAD LANDFILL
 MONTHLY WATER BALANCE REPORT
 October, 2002



A	B	C	D	E	F
DATE	LEACHATE STAGE I Lift Station 1	LEACHATE STAGE I Lift Station 2	LEACHATE STAGE III	TOTAL LEACHATE PUMPED	RAINFALL INCHES
01-Oct-02	0	0	174,100	174,100	0.37
02-Oct-02	0	30	149,200	149,230	0.00
03-Oct-02	16,056	6,690	496,000	518,746	0.00
04-Oct-02	3,400	1,110	95,800	100,310	0.00
05-Oct-02	0	0	0	0	0.00
06-Oct-02	0	0	0	0	0.00
07-Oct-02	56,530	20,550	300	77,380	0.28
08-Oct-02	19,190	7,080	125,200	151,470	0.00
09-Oct-02	17,840	5,930	318,200	341,970	0.00
10-Oct-02	18,570	0	210,100	228,670	0.00
11-Oct-02	17,590	8,940	178,600	205,130	0.00
12-Oct-02	0	0	0	0	1.14
13-Oct-02	0	0	0	0	0.88
14-Oct-02	54,140	26,960	537,500	618,600	0.09
15-Oct-02	22,750	9,310	184,000	216,060	0.08
16-Oct-02	21,190	8,960	171,600	201,750	0.20
17-Oct-02	15,270	5,830	152,200	173,300	0.00
18-Oct-02	15,520	5,810	164,700	186,030	0.00
19-Oct-02	0	0	0	0	0.00
20-Oct-02	0	0	0	0	0.00
21-Oct-02	52,550	21,400	432,800	506,750	0.00
22-Oct-02	17,190	6,760	137,600	161,550	0.00
23-Oct-02	18,330	7,660	148,900	174,890	0.72
24-Oct-02	16,430	7,030	124,600	148,060	0.02
25-Oct-02	17,950	7,660	139,300	164,910	0.00
26-Oct-02	0	0	0	0	0.00
27-Oct-02	0	0	0	0	0.02
28-Oct-02	51,410	21,200	367,700	440,310	0.00
29-Oct-02	18,950	7,650	141,200	167,800	0.00
30-Oct-02	17,980	7,610	119,300	144,890	0.33
31-Oct-02	17,280	7,620	125,100	150,000	0.00
TOTAL	506,116	201,790	4,694,000	5,401,906	4.13

Notes:

- A - DATE OF READINGS.
- B - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 1 IN GALLONS SINCE PREVIOUS DATE RECORDED.
- C - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 2 IN GALLONS SINCE PREVIOUS DATE RECORDED.
- D - LEACHATE PUMPED FROM STAGE III IN GALLONS SINCE PREVIOUS DATE RECORDED.
- E - TOTAL LEACHATE PUMPED TO WWTP STORAGE TANK, WHICH IS THE SUM OF COLUMNS B + C + D.
- F - RAINFALL RECORDED ON THIS DATE IN INCHES.

EXHIBIT B

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL MONTHLY LEACHATE TRACKING SUMMARY -- 2002

MONTH	A LEACHATE STAGE I	B LEACHATE STAGE III	C TOTAL LEACHATE	D RAINFALL INCHES
JANUARY	753,100	2,154,000	2,907,100	2.27
FEBRUARY	1,437,600	1,827,000	3,264,600	3.44
MARCH	757,110	1,809,840	2,566,950	0.47
APRIL	695,680	1,355,200	2,050,880	1.53
MAY	701,910	1,800,400	2,502,310	2.45
JUNE	723,960	2,847,100	3,571,060	8.20
JULY	1,196,460	6,141,900	7,338,360	8.20
AUGUST	1,083,750	7,178,000	8,261,750	12.33
SEPTEMBER	1,012,630	7,598,400	8,611,030	4.53
OCTOBER	707,906	4,694,000	5,401,906	4.13
NOVEMBER			0	
DECEMBER			0	
TOTAL	9,070,106	37,405,840	46,475,946	47.55

Notes:

1. (A) Total leachate generated from Stage I.
2. (B) Total leachate generated from Stage III.
3. (C) Total leachate generate (Column A+B) and pumped to the WWTP storage tank.
4. (D) Total rainfall in inches.

Manatee County Lena Road Landfill
Groundwater Gradient
OCTOBER 2002

Inside Slurry Wall				Outside Slurry Wall		
Piezometer	Riser Elevation	Groundwater Elevation	Gradient Flow	Monitoring Well	Riser Elevation	Groundwater Elevation
STAGE I						
PZ-1	42.55	29.10	<i>inward</i>	MW-5	39.88	31.37
PZ-2	42.47	30.24	<i>inward</i>	MW-2	41.13	32.55
PZ-3A	44.90	29.15	<i>inward</i>	MW-1	42.63	34.54
PZ-4A	47.73	29.91	<i>inward</i>	CW-4	37.48	35.03
PZ-5	43.94	30.32	<i>inward</i>	CW-5A	41.18	37.29
PZ-6	44.73	31.27	<i>inward</i>	SG-1		34.20
PZ-7	47.76	30.24	<i>inward</i>	MW-6	39.29	33.83
PZ-19	45.83	28.81	<i>inward</i>	PZ-11	37.92	31.19
STAGE II						
PZ-8	37.63	29.85	<i>inward</i>	LRII-5	36.75	31.84
PZ-9	36.53	27.31	<i>inward</i>	LRII-4	33.85	29.36
PZ-10	37.05	31.73	<i>outward</i>	LRII-2	36.48	31.45
PZ-11	37.92	31.19	<i>inward</i>	LRII-1	37.97	34.16
STAGE III						
PZ-12	38.35	29.22	<i>inward</i>	GC-2	38.15	32.61
PZ-13	35.36	27.96	<i>inward</i>	GC-3	35.02	29.94
PZ-14A	34.58	20.14	<i>inward</i>	GC-4	33.90	27.73
PZ-15C	40.46	20.28	<i>inward</i>	PZ-15A	39.79	27.32
PZ-16B	40.22	21.12	<i>inward</i>	PZ-16A	39.05	27.29
PZ-17	40.57	28.87	<i>inward</i>	SG-2		30.58
PZ-18	40.16	28.98	<i>inward</i>	SG-3		34.14

Dry 32.80

NO BURIED
WASTE IN
STAGE III

Dry 28.90
Dry 33.14

Notes: The table is arranged so any piezometer can be compared to its corresponding monitoring point. For example, PZ-1 is located on the opposite side of the slurry wall from MW-5. Thus data from PZ-1 are compared to data from MW-5.

Additional In-House Monitoring Data						
<u>Stage I</u>						
PZ-2	42.47	30.24	<i>inward</i>	MW-3	39.94	35.26
<u>Stage II</u>						
PZ-9	36.53	27.31	<i>inward</i>	LRII-3	33.47	29.15
<u>Stage III</u>						
PZ-15C	40.46	20.28	<i>inward</i>	GC-1A	31.75	26.72
PZ-16B	40.22	21.12	<i>inward</i>	GC-5	36.46	29.14
PZ-17	40.57	28.87	<i>inward</i>	GC-6	39.02	30.46

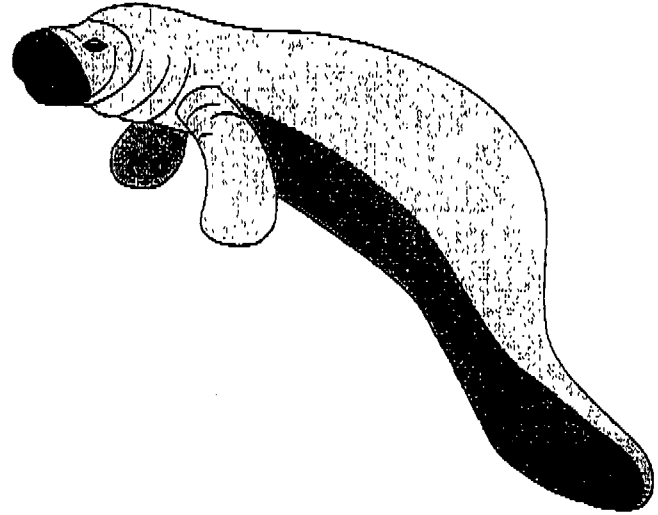
This report includes riser elevations determined by certified survey conducted by County Staff and dated Aug. 10, 1999. Westra Construction certified riser elevations of PZ-14A, PZ-15C, and PZ-16B on February 15, 2001
 Stage I Landfill - 131 acres (Closed - 30 ac., Intermediate - 91 ac., Open - 10 ac.)
 Stage II Landfill - 110 acres (Closed - 0 ac., Intermediate - 0 ac., Open - 0 ac. No waste in Stage II.)
 Stage III Landfill - 75 acres (Closed - 0 ac., Intermediate - 75 ac., Open - 0 ac.)

Data Collection: October 1, 2002

**MANATEE COUNTY PUBLIC WORKS
SOLID WASTE/LANDFILL SECTION**

FACSIMILE COVER MEMO

FAX # (941)795-3490



PLEASE DELIVER THE FOLLOWING PAGE(S)

**TO: Joe Miller, PBS&J
407/647-8945**

FROM: Gwen Pagation, SW Program Specialist

DATE: November 4, 2002

SUBJECT: Monthly Monitoring Report – November, 2002

NUMBER OF PAGES: 7

Hello Joe:

The following pages contain the field readings taken throughout the month of **October, 2002** for the above noted report. .

Gary Seeley, Landfill Supervisor, recorded the meter readings. If you have any questions, please contact either myself or Gary at 941/748-5543 (4). Thank you.

cc: Mike Gore, Landfill Superintendent

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL AS SOON AS POSSIBLE.

**4410 66th Street West
Bradenton, Florida 34210
941/795-3428**

Landfill

LANDFILL SHEET		
2002 Oct	RAIN FALL	LEACHATE MGD
1	0.37	0.164
2	0.00	0.000
3	0.00	0.159
4	0.00	0.092
5	0.00	0.021
6	0.00	0.020
7	0.28	0.000
8	0.00	0.129
9	0.00	0.245
10	0.00	0.034
11	0.00	0.171
12	1.14	0.159
13	0.88	0.163
14	0.09	0.194
15	0.08	0.181
16	0.20	0.172
17	0.00	0.157
18	0.00	0.149
19	0.00	0.149
20	0.00	0.147
21	0.00	0.142
22	0.00	0.137
23	0.72	0.133
24	0.02	0.139
25	0.00	0.139
26	0.00	0.135
27	0.02	0.132
28	0.00	0.124
29	0.00	0.136
30	0.33	0.129
31	0.00	0.123
TOTAL	4.13	3.975
AVG		0.128
MIN		
MAX	1.14	0.245

Fax # 9-795-3490

LEACHATE METER READINGS				
DATE	METER#1 X 10	METER#2 X 10	METER#3 X 100	NAME
10-1-02	468747	123526	280735	AA
10-2-02	468747	123526	282227	AA
10-3-02	468747	123526	283954	AA
10-4-02	469087	123637	284912	AA
10-7-02	474740	125692	284915	AA
10-8-02	476659	126400	286167	AA
10-9-02	478443	126993	289349	AA
10-10-02	480300	126993	291450	AA
10-11-02	482059	127887	293236	AA
10-14-02	487473	130583	298611	AA
10-15-02	489748	131514	300451	AA
10-16-02	491867	132410	302167	AA
10-17-02	493394	132993	303689	AA
10-18-02	494946	133574	305336	F
10-21-02	500201	135714	309664	AA
10-22-02	501920	136390	311040	AA
10-23-02	503753	137156	312529	AA
10-24-02	505396	137859	313775	AA
10-25-02	507191	138625	315168	AA
10-28-02	512332	140745	318845	AA
10-29-02	514227	141510	320257	AA
10-30-02	516025	142271	321450	AA
10-31-02	517753	143033	322701	AA

read in meters
F1 & F2
in meters
= 1253
"

1-243
ma

201,750
173,300
186,030
= 506,700
= 161,550
= 174,890
= 148,060
= 164,910
= 440,310
= 167,800
= 144,890
= 150,000

STORM WATER POND ELEVATIONS

DATE	STORM WATER S.G.	S.G.#2
10-01-02	34.12	30.58
10-02-02	34.14	30.60
10-03-02	34.10	30.59
10-04-02	34.07	30.59
10-07-02	33.97	30.58
10-08-02	33.97	30.59
10-09-02	33.93	30.58
10-10-02	33.90	30.58
10-11-02	33.86	30.58
10-14-02	34.30	30.65
10-15-02	34.22	30.64
10-16-02	34.18	30.64
10-17-02	34.12	30.62
10-18-02	34.06	30.60
10-21-02	33.93	30.58
10-22-02	33.92	30.60
10-23-02	34.00	30.65
10-24-02	34.04	30.60
10-25-02	33.98	30.58
10-28-02	33.90	30.58
10-29-02	33.88	30.58
10-30-02	33.86	30.57
10-31-02	33.86	30.57
10-31-02		

Leachate flow

10-2-02 = noticed no flow record on meter numbers 1 & 2! checked pump stations and found them to be operating properly. started recording hr. meters from pumps!

10-3-02 = contacted A.M.T., Keith checked out magnetic flow meters! found nothing wrong!

Keith contacted Brad = tech. to come out on Tues 10-8 Brad checked meters, coils and grounding options! determined in correct readings maybe be due to improper location of back flow preventers or air build up! He will send Mike Gore a letter of recommendations to help resolve problem!

10-8-02 = started recording pump hrs Pump Sta. #3

10-11-02 = started recording gals of leachate going to W.W.T.P. at there meter located west of fence and our meters? also started checking for air in lines down stream of our meters!

10-15-02 = Fri 10-11, Mon 10-14 and today I have gotten very little or no air from numbers 1, 2, & 3 but a good amount of air from #4!

Note = #4 is not in use at this time and the gate valve is closed! valve is located just ^{down}~~up~~ stream of our meters!

10-16-02 #1, #2, #4 = no air in system
#3 = had a small amount of air in system

Continued on next page →

10-17-02 = numbers 1 & 2 had little or no air
in system #3 & #4 had a small amount of air!

10-18-02 = 1-2-3+4 had no air

10-21-02 = 1-2-3 no air 4, a little air
 10-22-02 = 1-2-3 no air 4 = a little air
 10-23-02 = 1-2-3 " " 4 = " "
 10-24-02 = 1-2-3 " " 4 = " "
 10-25-02 = 1-2-3 " " 4 = " "
 10-28-02 = 1-2 no air 3-4 a little air
 10-29-02 = 1-2-3 " " 4 " "
 10-30-02 = 1-2-3 " " 4 " "
 10-31-02 = 1-2-3 " " 4 " "

**PUMP STATION HOURS METERS RECORDED
OCTOBER 2002**

P.07
9417928811
MANATEE CITY UTILITY OF
NOV-04-2002 09:18

DATE	PUMP STATION #1		PUMP STATION #2		PUMP STATION #3		W.W.T.P. LEACHATE FLOW METER X 100
	PUMP #1	PUMP #2	PUMP #1	PUMP #2	PUMP #1	PUMP #2	
10-1							
10-2	2613.9	2586.9	2211.8	2257.1			
10-3	2614.5	2587.5	2212.0	2257.4			
10-4	2615.0	2588.0	2212.3	2257.6			
10-7	2616.4	2589.3	2213.0	2258.3			
10-8	2617.0	2589.8	2213.3	2258.6	1295.0	1319.8	
10-9	2617.5	2590.3	2216.5	2258.8	1299.0	1324.1	
10-10	2618.0	2590.8	N.W.	N.W.	1301.9	1327.2	
10-11	2618.5	2591.2	2217.0	2259.1	1304.5	1329.9	31887 X 100
10-14	2619.9	2592.7	2217.8	2260.0	1312.2	1338.2	32004
10-15	2620.6	2593.3	2218.2	2260.3	1314.8	1341.0	32034 WAS READING
10-16	2621.2	2593.8	2218.5	2260.6	1317.4	1343.6	32100 WRING METER
10-17	2621.4	2594.2	2218.7	2260.8	1319.6	1346.0	32214
10-18	2622.0	2594.6	2218.9	2261.0	1322.1	1348.6	32296
10-21	2623.4	2996.0	2219.7	2261.8	1328.7	1355.5	32488
10-22							32547 = 433837 X 100
10-23							435624
10-24							437167
10-25							438840
10-28							443402
10-29							445177
10-30							446655
10-31							448209

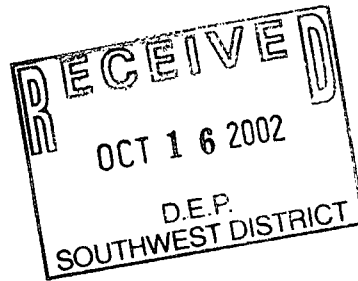
10: P. TOTAL
11-01-2002 9:38AM
FRL MANATEECITYUTIL 9417928811
P. 1



An employee-owned company

October 8, 2002

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



GAS DATA
FILED SEPARATELY

**Re: Manatee County Lena Road Landfill
Monthly Report – September 2002**

Dear Mr. Morris:

Attached is the September 2002 monthly report for the Lena Road Landfill in accordance with specific condition numbers 17, 18, and 33 of Operations Permit Number 39884-001-SO. The report consists of the monthly water balance report, leachate tracking summary, monthly gradient report, field readings for the water balance report and a quarterly gas monitoring table.

An inward gradient was present in Stage I and Stage III at all of the gradient pairs. An outward gradient was present in Stage II at one of the gradient pairs. However, Stage II has no solid waste.

Twenty-three methane sampling points on site were sampled on October 2, 2002 using a CES-Landtec Gas Extraction Monitor (GEM) Model 2000. Methane levels at all of the 23 sample points were less than the maximum levels of 25% of the Lower Explosive Limit (LEL) for the interior of structures and 100% for points at or beyond the landfill boundary, as described by Chapter 62-701.530(1) of the Florida Administrative Code. Wells 9 and 11 could not be located due to construction activities in that area.

If you should have any questions concerning this report, please contact me in our Orlando office at 407/647-7275 Ext. 153, or Javen Figueroa at Ext. 288.

Sincerely,

Joe Miller, P.E.
Senior Project Manager

cc: Kim Ford, P.E., FDEP SW District
Daniel T. Gray, Director, Utility Operations Department
Gus DiFonzo, Solid Waste Manager
C. Michael Gore, Landfill Superintendent
Gwen Pagington, Solid Waste Program Specialist
File – 120498.05 0101 September Monitoring

G:\WASTEMAN\Manatee County\SW-5 Annual Monitoring\September2002\MonthlyLtrSept2002.doc

EXHIBIT A

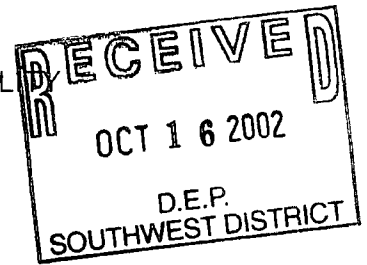
(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY

LENA ROAD LANDFILL

MONTHLY WATER BALANCE REPORT

September, 2002



A	B	C	D	E	F
DATE	LEACHATE STAGE I Lift Station 1	LEACHATE STAGE I Lift Station 2	LEACHATE STAGE III	TOTAL LEACHATE PUMPED	RAINFALL INCHES
01-Sep-02	0	0	0	0	0.03
02-Sep-02	0	0	0	0	0.00
03-Sep-02	133,560	39,170	36,800	209,530	0.87
04-Sep-02	27,220	8,350	278,600	314,170	0.01
05-Sep-02	24,630	8,640	257,200	290,470	0.43
06-Sep-02	29,320	8,950	642,300	680,570	0.00
07-Sep-02	0	0	0	0	0.00
08-Sep-02	0	0	0	0	0.00
09-Sep-02	70,580	22,400	1,047,000	1,139,980	0.25
10-Sep-02	23,450	7,740	266,800	297,990	0.06
11-Sep-02	25,920	8,270	279,000	313,190	0.85
12-Sep-02	32,160	7,420	313,800	353,380	1.07
13-Sep-02	45,100	9,400	542,800	597,300	0.03
14-Sep-02	0	0	0	0	0.10
15-Sep-02	0	0	0	0	0.00
16-Sep-02	89,740	27,180	901,000	1,017,920	0.00
17-Sep-02	25,530	9,890	254,500	289,920	0.05
18-Sep-02	23,860	8,050	231,200	263,110	0.00
19-Sep-02	24,450	8,630	234,200	267,280	0.00
20-Sep-02	24,310	8,320	295,600	328,230	0.01
21-Sep-02	0	0	0	0	0.03
22-Sep-02	0	0	0	0	0.13
23-Sep-02	66,300	23,130	673,600	763,030	0.00
24-Sep-02	22,130	7,090	219,500	248,720	0.12
25-Sep-02	19,650	6,830	192,000	218,480	0.01
26-Sep-02	24,190	8,820	206,400	239,410	0.47
27-Sep-02	19,520	6,800	181,200	207,520	0.00
28-Sep-02	0	0	0	0	0.01
29-Sep-02	0	0	0	0	0.00
30-Sep-02	19,290	6,640	544,900	570,830	0.00
TOTAL	770,910	241,720	7,598,400	8,611,030	4.53

Notes:

- A - DATE OF READINGS.
- B - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 1 IN GALLONS SINCE PREVIOUS DATE RECORDED.
- C - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 2 IN GALLONS SINCE PREVIOUS DATE RECORDED.
- D - LEACHATE PUMPED FROM STAGE III IN GALLONS SINCE PREVIOUS DATE RECORDED.
- E - TOTAL LEACHATE PUMPED TO WWTP STORAGE TANK, WHICH IS THE SUM OF COLUMNS B + C + D.
- F - RAINFALL RECORDED ON THIS DATE IN INCHES.

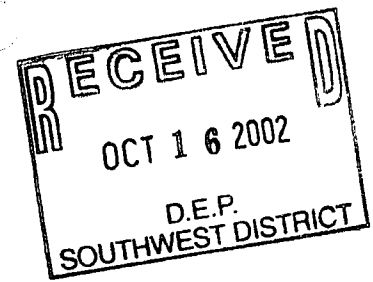


EXHIBIT B

(REVISED DECEMBER 13, 2001)

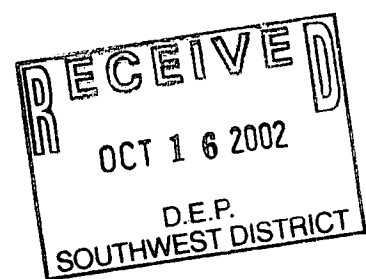
MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL MONTHLY LEACHATE TRACKING SUMMARY -- 2002

MONTH	A LEACHATE STAGE I	B LEACHATE STAGE III	C TOTAL LEACHATE	D RAINFALL INCHES
JANUARY	753,100	2,154,000	2,907,100	2.27
FEBRUARY	1,437,600	1,827,000	3,264,600	3.44
MARCH	757,110	1,809,840	2,566,950	0.47
APRIL	695,680	1,355,200	2,050,880	1.53
MAY	701,910	1,800,400	2,502,310	2.45
JUNE	723,960	2,847,100	3,571,060	8.20
JULY	1,196,460	6,141,900	7,338,360	8.20
AUGUST	1,083,750	7,178,000	8,261,750	12.33
SEPTEMBER	1,012,630	7,598,400	8,611,030	4.53
OCTOBER			0	
NOVEMBER			0	
DECEMBER			0	
TOTAL	8,362,200	32,711,840	41,074,040	43.42

Notes:

1. (A) Total leachate generated from Stage I.
2. (B) Total leachate generated from Stage III.
3. (C) Total leachate generate (Column A+B) and pumped to the WWTP storage tank.
4. (D) Total rainfall in inches.

Manatee County Lena Road Landfill
Groundwater Gradient
SEPTEMBER 2002



Inside Slurry Wall

Outside Slurry Wall

Piezometer	Riser Elevation	Groundwater Elevation	Gradient Flow	Monitoring Well	Riser Elevation	Groundwater Elevation
STAGE I						
PZ-1	42.55	29.13	<i>inward</i>	MW-5	39.88	31.93
PZ-2	42.47	30.27	<i>inward</i>	MW-2	41.13	33.13
PZ-3A	44.90	29.15	<i>inward</i>	MW-1	42.63	35.06
PZ-4A	47.73	29.86	<i>inward</i>	CW-4	37.48	35.15
PZ-5	43.94	30.25	<i>inward</i>	CW-5A	41.18	38.23
PZ-6	44.73	31.28	<i>inward</i>	SG-1		34.56
PZ-7	47.76	30.44	<i>inward</i>	MW-6	39.29	34.73
PZ-19	45.83	28.79	<i>inward</i>	PZ-11	37.92	32.07
Dry 32.80						
STAGE II						
PZ-8	37.63	30.86	<i>inward</i>	LRII-5	36.75	32.88
PZ-9	36.53	28.61	<i>inward</i>	LRII-4	33.85	29.86
PZ-10	37.05	32.60	<i>outward</i>	LRII-2	36.48	32.54
PZ-11	37.92	32.07	<i>inward</i>	LRII-1	37.97	34.69
NO BURIED WASTE IN STAGE II						
STAGE III						
PZ-12	38.35	30.96	<i>inward</i>	GC-2	38.15	34.18
PZ-13	35.36	29.81	<i>inward</i>	GC-3	35.02	33.02
PZ-14A	34.58	24.78	<i>inward</i>	GC-4	33.90	29.08
PZ-15C	40.46	25.80	<i>inward</i>	PZ-15A	39.79	28.92
PZ-16B	40.22	26.17	<i>inward</i>	PZ-16A	39.05	28.24
PZ-17	40.57	29.62	<i>inward</i>	SG-2		29.88
PZ-18	40.16	29.84	<i>inward</i>	SG-3		34.50
Dry 28.90 Dry 33.14						

Notes: The table is arranged so any piezometer can be compared to its corresponding monitoring point. For example, PZ-1 is located on the opposite side of the slurry wall from MW-5. Thus data from PZ-1 are compared to data from MW-5.

* GC-3 estimated by level of surface water surrounding well location.

Additional In-House Monitoring Data						
<u>Stage I</u>						
PZ-2	42.47	30.27	<i>inward</i>	MW-3	39.94	34.50
<u>Stage II</u>						
PZ-9	36.53	28.61	<i>inward</i>	LRII-3	33.47	29.68
<u>Stage III</u>						
PZ-15C	40.46	25.80	<i>inward</i>	GC-1A	31.75	27.95
PZ-16B	40.22	26.17	<i>inward</i>	GC-5	36.46	29.46
PZ-17	40.57	29.62	<i>inward</i>	GC-6	39.02	31.37

This report includes riser elevations determined by certified survey conducted by County Staff and dated Aug. 10, 1999.
Westra Construction certified riser elevations of PZ-14A, PZ-15C, and PZ-16B on February 15, 2001
Stage I Landfill - 131 acres (Closed - 30 ac., Intermediate - 91 ac., Open - 10 ac.)
Stage II Landfill - 110 acres (Closed - 0 ac., Intermediate - 0 ac., Open - 0 ac. No waste in Stage II.)
Stage III Landfill - 75 acres (Closed - 0 ac., Intermediate - 75 ac., Open - 0 ac.)

Data Collection: September 5, 2002

MANATEE COUNTY PUBLIC WORKS
SOLID WASTE/LANDFILL SECTION

FACSIMILE COVER MEMO

FAX # (941) 795-3490

PLEASE DELIVER THE FOLLOWING PAGE(S)

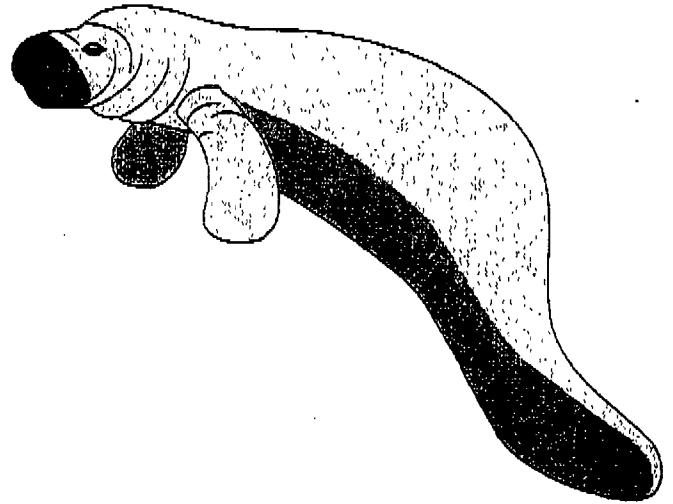
TO: Joe Miller, PBS&J
407/647-8945

FROM: Gwen Pagington, SW Program Specialist

DATE: October ⁴1, 2002

SUBJECT: Monthly Monitoring Report - October, 2002

NUMBER OF PAGES: 4



Joe:

The following pages contain the field readings taken throughout the month of **September, 2002** for the above noted report. As a reminder, this report should include the quarterly methane readings.

Gary Seeley, Landfill Supervisor, recorded the meter readings. If you have any questions, please contact either myself or Gary at 941/748-5543 (4). Thank you.

cc: Mike Gore, Landfill Superintendent

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL AS SOON AS POSSIBLE.

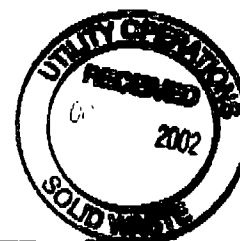
4410 66th Street West
Bradenton, Florida 34210
941/795-3428



MANATEE COUNTY GOVERNMENT

Public Works Department
Landfill Division

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OCT 16 2002
D.E.P.
SOUTHWEST DISTRICT



PLEASE DELIVER THE FOLLOWING PAGE(S) 2

TO: GWEN P.

FROM: GARY S.

DATE: 10-01-02 TIME TRANSMITTED: 8:02 AM

SUBJECT: LEACHATE METER READINGS & STORMWATER POND ELEVATIONS

PLEASE CALL UPON RECEIPT PLEASE HANDLE CONFIDENTIALLY

COMMENTS: _____

TOTAL NUMBER OF PAGES INCLUDING COVER MEMO: 3

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL AS SOON AS POSSIBLE.

PHONE #941/748-5543

FAX #941/795-3451

Landfill

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LANDFILL SHEET		
2002 Sep	RAIN FALL	LEACHATE MGD
1	0.03	0.030
2	0.00	0.030
3	0.87	0.077
4	0.01	0.211
5	0.43	0.322
6	0.00	0.459
7	0.00	0.360
8	0.00	0.370
9	0.25	0.283
10	0.06	0.263
11	0.85	0.260
12	1.07	0.377
13	0.03	0.437
14	0.10	0.314
15	0.00	0.289
16	0.00	0.277
17	0.05	0.258
18	0.00	0.246
19	0.00	0.239
20	0.01	0.224
21	0.03	0.216
22	0.13	0.209
23	0.00	0.202
24	0.12	0.195
25	0.01	0.192
26	0.47	0.189
27	0.00	0.180
28	0.01	0.173
29	0.00	0.000
30	0.00	0.168
31	0.00	0.000
TOTAL	4.53	7.050
AVG		0.227
MIN		
MAX	1.07	0.459

Fax # 9-795-3490



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OCT 16 2002
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SOUTHWEST DISTRICT

LEACHATE METER READINGS

DATE	METER#1	METER#2	METER#3	NAME
9-2-02	Labor	Day	Closed	☺
9-3-02	405012	103271	203378	AS.
9-4-02	407734	104106	206164	AS.
9-5-02	410197	104970	208736	AS.
9-6-02	413129	105865	215159	AS.
9-9-02	420187	108105	225629	AS.
9-10-02	422532	108879	228297	AS.
9-11-02	425124	109706	231087	AS.
9-12-02	428346	110448	234225	AS.
9-13-02	432850	111328	239653	AS.
9-16-02	441824	114106	248663	AS.
9-17-02	444377	115095	251208	AS.
9-18-02	446763	115900	253520	AS.
9-19-02	449208	116763	255862	AS.
9-20-02	451639	117595	258818	AS.
9-23-02	458269	119908	265554	AS.
9-24-02	460482	120617	267749	AS.
9-25-02	462447	121300	269669	AS.
9-26-02	464866	122182	271773	AS.
9-27-02	466818	122862	273545	AS.
9-30-02	468747	123526	278994	AS.

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SOUTHWEST DISTRICT

STORM WATER POND ELEVATIONS

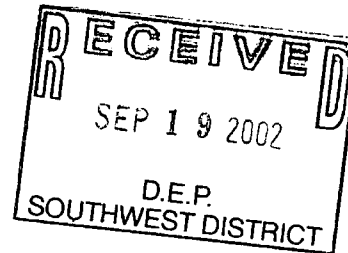
DATE	STORM WATER S.G.	S.G.#2
9-2-02	Labor Day Closed	☺
9-3-02	34.52	unable to read gauge was covered with branches & weeds
9-4-02	34.55	29.97
9-5-02	34.48	29.88
9-6-02	34.45	29.84
9-9-02	34.35	29.71
9-10-02	34.32	29.74
9-11-02	34.38	29.82
9-12-02	34.60	30.70
9-13-02	34.77	30.82
9-16-02	34.55	30.65
9-17-02	34.49	30.60
9-18-02	34.44	30.60
9-19-02	34.40	30.60
9-20-02	34.37	30.58
9-23-02	34.29	30.58
9-24-02	34.26	30.58
9-25-02	34.24	30.58
9-26-02	34.22	30.58
9-27-02	34.22	30.58
9-30-02	34.15	30.58





An employee-owned company

September 11, 2002



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 – August 2002**

Dear Mr. Morris:

Attached is the August 2002 monthly report for the Lena Road Landfill in accordance with specific condition numbers 17, 18, and 33 of Operations Permit Number 39884-001-SO. The report consists of the monthly water balance report, leachate-tracking summary, monthly gradient report, and the field readings for the water balance report.

An inward gradient was present in Stage I and Stage III at all of the gradient pairs. An outward gradient was present in Stage II at all the gradient pairs, however, Stage II has no solid waste.

If you should have any questions concerning this report, please contact me in our Orlando office at 407/647-7275 Ext. 153, or Javen Figueroa at Ext. 288.

Sincerely,

Joe Miller, P.E.
Senior Project Manager

cc: Kim Ford, P.E., FDEP SW District
Daniel T. Gray, Director, Utility Operations Department
Gus DiFonzo, Solid Waste Manager
C. Michael Gore, Landfill Superintendent
Gwen Pagington, Solid Waste Program Specialist
File – 120498.05 Manatee, Lena Road Landfill, Monitoring

G:\WASTEMAN\Manatee County\SW-5 Annual Monitoring\August2002\MonthlyLtrAug2002.doc

EXHIBIT A

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY

LENA ROAD LANDFILL

MONTHLY WATER BALANCE REPORT

August, 2002

A	B	C	D	E	F
DATE	LEACHATE STAGE I Lift Station 1	LEACHATE STAGE I Lift Station 2	LEACHATE STAGE III	TOTAL LEACHATE PUMPED	RAINFALL INCHES
01-Aug-02	30,390	9,680	220,000	260,070	0.00
02-Aug-02	2,020	8,020	174,200	184,240	0.24
03-Aug-02	0	0	0	0	0.23
04-Aug-02	0	0	0	0	0.07
05-Aug-02	2,190	20,840	503,100	526,130	0.00
06-Aug-02	75,050	8,100	158,900	242,050	0.00
07-Aug-02	33,060	7,810	152,500	193,370	0.43
08-Aug-02	26,290	6,480	147,100	179,870	0.00
09-Aug-02	23,030	6,220	140,000	169,250	0.41
10-Aug-02	0	0	0	0	0.00
11-Aug-02	0	0	0	0	0.08
12-Aug-02	68,500	19,600	434,700	522,800	0.08
13-Aug-02	20,540	5,900	133,400	159,840	0.44
14-Aug-02	22,170	6,760	140,100	169,030	1.75
15-Aug-02	37,450	8,760	373,800	420,010	0.02
16-Aug-02	23,540	8,150	220,200	251,890	0.05
17-Aug-02	0	0	0	0	1.11
18-Aug-02	0	0	0	0	0.07
19-Aug-02	95,520	27,320	843,700	966,540	0.01
20-Aug-02	24,000	7,550	182,300	213,850	1.55
21-Aug-02	51,020	9,670	541,800	602,490	0.37
22-Aug-02	29,660	8,660	265,700	304,020	0.00
23-Aug-02	28,820	9,810	258,300	296,930	0.01
24-Aug-02	0	0	0	0	0.00
25-Aug-02	0	0	0	0	0.00
26-Aug-02	76,070	24,850	618,800	719,720	0.00
27-Aug-02	24,330	6,760	197,100	228,190	2.87
28-Aug-02	82,480	13,240	755,800	851,520	0.72
29-Aug-02	34,270	11,980	414,500	460,750	0.00
30-Aug-02	27,800	9,390	302,000	339,190	1.80
31-Aug-02	0	0	0	0	0.02
TOTAL	838,200	245,550	7,178,000	8,261,750	12.33

Notes:

A - DATE OF READINGS.

B - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 1 IN GALLONS SINCE PREVIOUS DATE RECORDED.

C - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 2 IN GALLONS SINCE PREVIOUS DATE RECORDED.

D - LEACHATE PUMPED FROM STAGE III IN GALLONS SINCE PREVIOUS DATE RECORDED.

E - TOTAL LEACHATE PUMPED TO WWTP STORAGE TANK, WHICH IS THE SUM OF COLUMNS B + C + D.

F - RAINFALL RECORDED ON THIS DATE IN INCHES.

EXHIBIT B

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL MONTHLY LEACHATE TRACKING SUMMARY -- 2002

MONTH	A LEACHATE STAGE I	B LEACHATE STAGE III	C TOTAL LEACHATE	D RAINFALL INCHES
JANUARY	753,100	2,154,000	2,907,100	2.27
FEBRUARY	1,437,600	1,827,000	3,264,600	3.44
MARCH	757,110	1,809,840	2,566,950	0.47
APRIL	695,680	1,355,200	2,050,880	1.53
MAY	701,910	1,800,400	2,502,310	2.45
JUNE	723,960	2,847,100	3,571,060	8.20
JULY	1,196,460	6,141,900	7,338,360	8.20
AUGUST	1,083,750	7,178,000	8,261,750	12.33
SEPTEMBER			0	
OCTOBER			0	
NOVEMBER			0	
DECEMBER			0	
TOTAL	7,349,570	25,113,440	32,463,010	38.89

Notes:

1. (A) Total leachate generated from Stage I.
2. (B) Total leachate generated from Stage III.
3. (C) Total leachate generate (Column A+B) and pumped to the WWTP storage tank.
4. (D) Total rainfall in inches.

Manatee County Lena Road Landfill
Groundwater Gradient
AUGUST 2002

Inside Slurry Wall				Outside Slurry Wall		
Piezometer	Riser Elevation	Groundwater Elevation	Gradient Flow	Monitoring Well	Riser Elevation	Groundwater Elevation
STAGE I						
PZ-1	42.55	29.69	<i>inward</i>	MW-5	39.88	31.60
PZ-2	42.47	29.08	<i>inward</i>	MW-2	41.13	35.38
PZ-3A	44.90	29.13	<i>inward</i>	MW-1	42.63	34.33
PZ-4A	47.73	29.94	<i>inward</i>	CW-4	37.48	34.87
PZ-5	43.94	30.34	<i>inward</i>	CW-5A	41.18	37.85
PZ-6	44.73	31.33	<i>inward</i>	SG-1		34.04
PZ-7	47.76	30.33	<i>inward</i>	MW-6	39.29	34.16
PZ-19	45.83	29.74	<i>inward</i>	PZ-11	37.92	34.77
STAGE II						
PZ-8	37.63	32.51	<i>outward</i>	LRII-5	36.75	32.22
PZ-9	36.53	33.18	<i>outward</i>	LRII-4	33.85	28.64
PZ-10	37.05	33.55	<i>outward</i>	LRII-2	36.48	31.09
PZ-11	37.92	34.77	<i>outward</i>	LRII-1	37.97	33.20
STAGE III						
PZ-12	38.35	29.25	<i>inward</i>	GC-2	38.15	32.84
PZ-13	35.36	28.03	<i>inward</i>	GC-3	35.02	30.44
PZ-14A	34.58	20.24	<i>inward</i>	GC-4	33.90	28.66
PZ-15C	40.46	20.25	<i>inward</i>	PZ-15A	39.79	28.29
PZ-16B	40.22	21.17	<i>inward</i>	PZ-16A	39.05	27.75
PZ-17	40.57	28.90	<i>inward</i>	SG-2		30.76
PZ-18	40.16	29.07	<i>inward</i>	SG-3		33.90

Dry 32.80

No Colored
WASTE IN
STAGE II

Dry 28.90
Dry 33.14

Notes: The table is arranged so any piezometer can be compared to its corresponding monitoring point. For example, PZ-1 is located on the opposite side of the slurry wall from MW-5. Thus data from PZ-1 are compared to data from MW-5.

Additional In-House Monitoring Data						
<u>Stage I</u>						
PZ-2	42.47	29.08	<i>inward</i>	MW-3	39.94	31.31
<u>Stage II</u>						
PZ-9	36.53	33.18	<i>outward</i>	LRII-3	33.47	28.47
<u>Stage III</u>						
PZ-15C	40.46	20.25	<i>inward</i>	GC-1A	31.75	27.05
PZ-16B	40.22	21.17	<i>inward</i>	GC-5	36.46	29.48
PZ-17	40.57	28.90	<i>inward</i>	GC-6	39.02	30.82

This report includes riser elevations determined by certified survey conducted by County Staff and dated Aug. 10, 1999. Westra Construction certified riser elevations of PZ-14A, PZ-15C, and PZ-16B on February 15, 2001
Stage I Landfill - 131 acres (Closed - 30 ac., Intermediate - 91 ac., Open - 10 ac.)
Stage II Landfill - 110 acres (Closed - 0 ac., Intermediate - 0 ac., Open - 0 ac. No waste in Stage II.)
Stage III Landfill - 75 acres (Closed - 0 ac., Intermediate - 75 ac., Open - 0 ac.)

Data Collection: August 5, 2002

**MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT
SOLID WASTE/LANDFILL SECTION**

FACSIMILE COVER MEMO

FAX # (941)795-3490

PLEASE DELIVER THE FOLLOWING PAGE(S)

TO: Joe Miller, P.E.
ADDRESS: 407/647-8945
FROM: Gwen Pagington
DATE: 9-02-02
**SUBJECT: Monthly Monitoring Report - August, 2002
Field Readings**



COMMENTS:

The following pages contain the field readings taken throughout the month of August, 2002 for the above noted report.

If you have any questions, please contact me at 941/795-3428. Thank you!

cc: Gus DiFonzo
Mike Gore

NUMBER of PAGES: 4

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL AS SOON AS POSSIBLE.

**P.O. Box 25010
Bradenton, Florida 34206
941/795-3428**

Landfill

9/3/02 / *Quen*

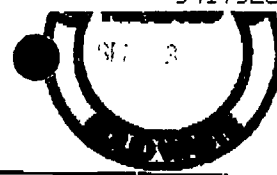


Quen

LANDFILL SHEET		
2002 Aug	RAIN FALL	LEACHATE MGD
1	0.00	0.201
2	0.24	0.183
3	0.23	0.169
4	0.07	0.160
5	0.00	0.184
6	0.00	0.185
7	0.43	0.173
8	0.00	0.162
8	0.41	0.159
10	0.00	0.156
11	0.08	0.149
12	0.08	0.144
13	0.44	0.142
14	1.75	0.142
15	0.02	0.360
16	0.05	0.211
17	1.11	0.213
18	0.07	0.363
19	0.01	0.216
20	1.55	0.301
21	0.37	0.382
22	0.00	0.260
23	0.01	0.233
24	0.00	0.219
25	0.00	0.207
26	0.00	0.198
27	2.87	0.242
28	0.72	0.707
29	0.00	0.360
30	1.80	0.289
31	0.02	0.038
TOTAL	12.33	7.108
AVG		0.229
MIN		0.038
MAX	2.87	0.707

Fax # 9-795-3490

LEACHATE METER READINGS				
DATE	METER#1 X 10	METER#2 X 10	METER#3X/100	NAME
8-1-02	310875	75767	133430	AS
8-2-02	311077	76569	135172	AS
8-5-02	311296	78653	140203	AS
8-6-02	318801	79463	141792	AS
8-7-02	322107	80244	143317	AS
8-8-02	324236	80892	144788	AS
8-9-02	327039	81514	146188	AS
8-12-02	333889	83474	150535	AS
8-13-02	335943	84064	151869	AS
8-14-02	338160	84740	153270	AS
8-15-02	341905	85616	157008	AS
8-16-02	344259	86431	159210	AS
8-19-02	353811	89163	162647	AS
8-20-02	356211	89918	169470	AS
8-21-02	361313	90885	174888	AS
8-22-02	364279	91751	177545	AS
8-23-02	367161	92732	180128	AS
8-26-02	374768	95217	186316	AS
8-27-02	377201	95893	188287	AS
8-28-02	385449	97217	195845	AS
8-29-02	388876	98415	199990	AS
8-30-02	391656	99354	203010	AS



STORM WATER POND ELEVATIONS

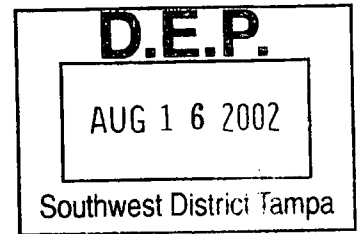
DATE	STORM WATER S.G.	S.G.#2
8-1	34.10	30.77
8-2	34.06	30.75
8-5	33.89	30.76
8-6	33.81	30.76
8-7	33.77	30.76
8-8	33.74	30.76
8-9	33.68	30.74
8-12	33.58	30.74
8-13	33.58	30.74
8-14	33.58	30.72
8-15	34.30	30.83
8-16	34.22	30.80
8-19	34.44	30.77
8-20	34.37	30.75
8-21	34.70	30.78
8-22	34.77	30.80
8-23	34.68	30.76
8-26	34.46	30.76
8-27	34.70	30.80
8-28	36.00	30.43
8-29	35.50	31.05
8-30	35.00	30.60



An employee-owned company

August 13, 2002

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 – July 2002**

Dear Mr. Morris:

Attached is the July 2002 monthly report for the Lena Road Landfill in accordance with specific condition numbers 17, 18, and 33 of Operations Permit Number 39884-001-SO. The report consists of the monthly water balance report, leachate-tracking summary, monthly gradient report, and the field readings for the water balance report.

An inward gradient was present in Stage I and Stage III at all of the gradient pairs. An outward gradient was present in Stage II at all the gradient pairs, however, Stage II has no solid waste. Piezometer PZ-5 was damaged at the time of data collection. Therefore, the gradient flow direction could not be calculated for the PZ-5 / CW-5A pair.

If you should have any questions concerning this report, please contact me in our Orlando office at 407/647-7275 Ext. 153, or Javen Figueroa at Ext. 288.

Sincerely,

Joe Miller, P.E.
Senior Project Manager

cc: Kim Ford, P.E., FDEP SW District
Daniel T. Gray, Director, Utility Operations Department
Gus DiFonzo, Solid Waste Manager
C. Michael Gore, Landfill Superintendent
Gwen Pagington, Solid Waste Program Specialist
File – 120498.05 Manatee, Lena Road Landfill, Monitoring

G:\WASTEMAN\Manatee County\SW-5 Annual Monitoring\July 2002\MonthlyLtrJuly2002.doc

Manatee County Lena Road Landfill
Groundwater Gradient
JULY 2002



Inside Slurry Wall				Outside Slurry Wall		
Piezometer	Riser Elevation	Groundwater Elevation	Gradient Flow	Monitoring Well	Riser Elevation	Groundwater Elevation
STAGE I						
PZ-1	42.55	29.48	<i>inward</i>	MW-5	39.88	31.40
PZ-2	42.47	30.24	<i>inward</i>	MW-2	41.13	32.20
PZ-3A	44.90	29.06	<i>inward</i>	MW-1	42.63	33.74
PZ-4A	47.73	29.97	<i>inward</i>	CW-4	37.48	34.60
PZ-5	43.94	Damaged	Not Available	CW-5A	41.18	36.59
PZ-6	44.73	31.25	<i>inward</i>	SG-1		33.84
PZ-7	47.76	30.05	<i>inward</i>	MW-6	39.29	33.58
PZ-19	45.83	29.45	<i>inward</i>	PZ-11	37.92	34.75
STAGE II						
PZ-8	37.63	33.78	<i>outward</i>	LRII-5	36.75	30.71
PZ-9	36.53	33.59	<i>outward</i>	LRII-4	33.85	26.47
PZ-10	37.05	33.84	<i>outward</i>	LRII-2	36.48	28.48
PZ-11	37.92	34.75	<i>outward</i>	LRII-1	37.97	31.62
STAGE III						
PZ-12	38.35	28.71	<i>inward</i>	GC-2	38.15	33.59
PZ-13	35.36	25.78	<i>inward</i>	GC-3	35.02	30.49
PZ-14A	34.58	19.69	<i>inward</i>	GC-4	33.90	28.10
PZ-15C	40.46	22.40	<i>inward</i>	PZ-15A	39.79	28.18
PZ-16B	40.22	23.06	<i>inward</i>	PZ-16A	39.05	27.80
PZ-17	40.57	28.73	<i>inward</i>	SG-2		30.64
PZ-18	40.16	29.18	<i>inward</i>	SG-3		34.13

Dry 32.80

NO BULKED WASTE IN STAGE II

Dry 28.90

Dry 33.14

Notes: The table is arranged so any piezometer can be compared to its corresponding monitoring point. For example, PZ-1 is located on the opposite side of the slurry wall from MW-5. Thus data from PZ-1 are compared to data from MW-5.

PZ-5 DAMAGED & SG-3 DRY; CANNOT DEMONSTRATE INWARD GRADIENT W/ AVAILABLE DATA

Additional In-House Monitoring Data						
<u>Stage I</u>						
PZ-2	42.47	30.24	<i>inward</i>	MW-3	39.94	33.26
<u>Stage II</u>						
PZ-9	36.53	32.41	<i>outward</i>	LRII-3	33.47	24.48
<u>Stage III</u>						
PZ-15C	40.46	22.40	<i>inward</i>	GC-1A	31.75	25.20
PZ-16B	40.22	23.06	<i>inward</i>	GC-5	36.46	28.54
PZ-17	40.57	28.73	<i>inward</i>	GC-6	39.02	29.74

This report includes riser elevations determined by certified survey conducted by County Staff and dated Aug. 10, 1999. Westra Construction certified riser elevations of PZ-14A, PZ-15C, and PZ-16B on February 15, 2001
 Stage I Landfill - 131 acres (Closed - 30 ac., Intermediate - 91 ac., Open - 10 ac.)
 Stage II Landfill - 110 acres (Closed - 0 ac., Intermediate - 0 ac., Open - 0 ac. No waste in Stage II.)
 Stage III Landfill - 75 acres (Closed - 0 ac., Intermediate - 75 ac., Open - 0 ac.)

Data Collection: JULY 5, 2002

EXHIBIT A

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY

LENA ROAD LANDFILL

MONTHLY WATER BALANCE REPORT

July, 2002

A	B	C	D	E	F
DATE	LEACHATE STAGE I Lift Station 1	LEACHATE STAGE I Lift Station 2	LEACHATE STAGE III	TOTAL LEACHATE PUMPED	RAINFALL INCHES
01-Jul-02	50,940	17,970	183,100	252,010	0.14
02-Jul-02	31,940	6,440	172,600	210,980	0.00
03-Jul-02	26,090	6,550	126,700	159,340	0.07
04-Jul-02	0	0	0	0	0.70
05-Jul-02	24,900	10,890	224,900	260,690	0.00
06-Jul-02	0	0	0	0	0.00
07-Jul-02	0	0	0	0	0.17
08-Jul-02	3,270	18,230	21,500	43,000	0.48
09-Jul-02	860	5,050	100	6,010	0.00
10-Jul-02	1,120	5,280	300	6,700	0.35
11-Jul-02	880	6,090	0	6,970	0.65
12-Jul-02	95,450	16,260	557,100	668,810	1.70
13-Jul-02	0	0	0	0	1.44
14-Jul-02	0	0	0	0	0.02
15-Jul-02	248,880	15,820	329,100	593,800	0.00
16-Jul-02	30,430	10,140	218,300	258,870	0.00
17-Jul-02	39,070	13,350	675,500	727,920	0.00
18-Jul-02	28,330	9,340	357,000	394,670	0.12
19-Jul-02	29,400	8,890	332,800	371,090	0.00
20-Jul-02	0	0	0	0	0.00
21-Jul-02	0	0	0	0	0.00
22-Jul-02	80,270	21,390	790,700	892,360	0.96
23-Jul-02	25,580	6,750	277,900	310,230	0.00
24-Jul-02	25,190	6,800	225,400	257,390	0.00
25-Jul-02	22,530	6,830	197,100	226,460	0.48
26-Jul-02	26,310	7,080	216,800	250,190	0.00
27-Jul-02	0	0	0	0	0.01
28-Jul-02	0	0	0	0	0.00
29-Jul-02	97,810	21,960	712,100	831,870	0.90
30-Jul-02	42,730	9,640	326,900	379,270	0.01
31-Jul-02	25,540	8,190	196,000	229,730	0.00
TOTAL	957,520	238,940	6,141,900	7,338,360	8.20

Notes:

A - DATE OF READINGS.

B - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 1 IN GALLONS SINCE PREVIOUS DATE RECORDED.

C - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 2 IN GALLONS SINCE PREVIOUS DATE RECORDED.

D - LEACHATE PUMPED FROM STAGE III IN GALLONS SINCE PREVIOUS DATE RECORDED.

E - TOTAL LEACHATE PUMPED TO WWTP STORAGE TANK, WHICH IS THE SUM OF COLUMNS B + C + D.

F - RAINFALL RECORDED ON THIS DATE IN INCHES.

EXHIBIT B
(REVISED DECEMBER 13, 2001)
MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY LEACHATE TRACKING SUMMARY -- 2002

	A	B	C	D
MONTH	LEACHATE STAGE I	LEACHATE STAGE III	TOTAL LEACHATE	RAINFALL INCHES
JANUARY	753,100	2,154,000	2,907,100	2.27
FEBRUARY	1,437,600	1,827,000	3,264,600	3.44
MARCH	757,110	1,809,840	2,566,950	0.47
APRIL	695,680	1,355,200	2,050,880	1.53
MAY	701,910	1,800,400	2,502,310	2.45
JUNE	723,960	2,847,100	3,571,060	8.20
JULY	1,196,460	6,141,900	7,338,360	8.20
AUGUST			0	
SEPTEMBER			0	
OCTOBER			0	
NOVEMBER			0	
DECEMBER			0	
TOTAL	6,265,820	17,935,440	24,201,260	26.56

Notes:

1. (A) Total leachate generated from Stage I.
2. (B) Total leachate generated from Stage III.
3. (C) Total leachate generate (Column A+B) and pumped to the WWTP storage tank.
4. (D) Total rainfall in inches.

**MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT
SOLID WASTE/LANDFILL SECTION**

FACSIMILE COVER MEMO

FAX # (941)795-3490

PLEASE DELIVER THE FOLLOWING PAGE(S)

TO: Joe Miller, P.E.
ADDRESS: 407/647-8945
FROM: Gwen Pagington
DATE: 8-02-02
**SUBJECT: Monthly Monitoring Report - July, 2002
Field Readings**

COMMENTS:

The following pages contain the field readings taken throughout the month of July, 2002 for the above noted report.

Both Gary Seeley, Landfill Supervisor, and John Ferris, Landfill Operator, recorded the meter readings. If you have any questions, please contact either Landfill staff at 941/748-5543 or myself. Thank you!

cc: Gus DiFonzo
Mike Gore
Gary Seeley

NUMBER of PAGES: 4

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL AS SOON AS POSSIBLE.

**P.O. Box 25010
Bradenton, Florida 34206
941/795-3428**

LEACHATE METER READINGS				
DATE	METER#1 x 10	METER#2 x 10	METER#3 x 100	NAME
7-1-02	217178	52702	71642	J
7-2-02	220372	53346	73368	J
7-3-02	222981	54001	74635	J
7-4-02	Independence day - closed			
7-5-02	225471	55090	76884	RB
7-8-02	225798	56913	77099	JS
7-9-02	225884	57418	77100	JS
7-10-02	225996	57946	77103	JS
7-11-02	226084	58555	77103	JS
7-12-02	235629	60181	82674	JS
7-15-02	260517	61763	85965	JS
7-16-02	263560	62777	88148	JS
7-17-02	267467	64112	94903	JS
7-18-02	270300	65046	98473	JS
7-19-02	273240	65935	101801	JS
7-22-02	281267	68074	109708	JS
7-23-02	283825	68749	112487	JS
7-24-02	286344	69429	114741	JS
7-25-02	288597	70112	116712	JS
7-26-02	291228	70820	118880	JS
7-29-02	301009	73016	126001	JS
7-30-02	305282	73980	129270	JS
7-31-02	307836	74799	131230	JS

7-11-02 found blown fuse on power pole that feeds L.S. # III A

JUL 31 2002

STORM WATER POND ELEVATIONS		
DATE	STORM WATER S.G.	S.G.#2
7-1-02	33.49	30.63
7-2-02	33.47	30.63
7-3-02	33.44	30.64
7-4-02	Independence day - closed	
7-5-02	33.49	30.64
7-8-02	33.44	30.64
7-9-02	33.46	30.63
7-10-02	33.52	30.63
7-11-02	33.49	30.63
7-12-02	34.29	31.23
7-15-02	34.81	30.87
7-16-02	34.58	30.80
7-17-02	34.32	30.78
7-18-02	34.17	30.74
7-19-02	34.03	30.72
7-22-02	33.95	30.77
7-23-02	33.96	30.72
7-24-02	33.88	30.73
7-25-02	33.80	30.72
7-26-02	33.80	30.72
7-29-02	33.87	30.74
7-30-02	34.30	30.80
7-31-02	34.17	30.77

Landfill

LANDFILL SHEET		
2002 July	RAIN FALL	LEACHATE MGD
1	0.14	0.109
2	0.00	0.145
3	0.07	0.122
4	0.70	0.115
5	0.00	0.118
6	0.00	0.007
7	0.17	0.007
8	0.48	0.006
9	0.00	0.006
10	0.35	0.006
11	0.65	0.055
12	1.70	0.474
13	1.44	0.117
14	0.02	0.040
15	0.00	0.280
16	0.00	0.355
17	0.00	0.437
18	0.12	0.068
19	0.00	0.280
20	0.00	0.250
21	0.00	0.231
22	0.96	0.255
23	0.00	0.229
24	0.00	0.221
25	0.48	0.198
26	0.00	0.000
27	0.01	0.289
28	0.00	0.224
29	0.90	0.210
30	0.01	0.321
31	0.00	0.220
TOTAL	8.20	5.395
AVG		0.174
MIN		
MAX	1.70	0.474

Fax # 9-795-3490



An employee-owned company

July 16, 2002

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 – June 2002**

Dear Mr. Morris:

Attached is the June 2002 monthly report for the Lena Road Landfill in accordance with specific condition numbers 17, 18, and 33 of Operations Permit Number 39884-001-SO. The report consists of the monthly water balance report, leachate tracking summary, monthly gradient report, field readings for the water balance report and a quarterly gas monitoring table.

An inward gradient was present in Stage I and Stage III at all of the gradient pairs. An outward gradient was present in Stage II at all the gradient pairs, however, Stage II has no solid waste.

The 23 methane sampling points on site were sampled on June 27, 2002 using a CES-Landtec Gas Extraction Monitor (GEM) Model 2000. Methane levels at 22 of the 23 sample points were less than the maximum levels of 25% of the Lower Explosive Limit (LEL) for the interior of structures and 100% for points at or beyond the landfill boundary, as described by Chapter 62-701.530(1) of the Florida Administrative Code. However, the level of methane gas in Well 18, within the Stage III landfill, was above 100% of LEL. Wells 9 and 11 could not be located due to construction activities in that area.

If you should have any questions concerning this report, please contact me in our Orlando office at 407/647-7275 Ext. 153, or Javen Figueroa at Ext. 288.

Sincerely,

Joe Miller, P.E.
Senior Project Manager

cc: Kim Ford, P.E., FDEP SW District
Daniel T. Gray, Director, Utility Operations Department
Gus DiFonzo, Solid Waste Manager
C. Michael Gore, Landfill Superintendent
Gwen Pagington, Solid Waste Program Specialist
File – 120498.05 Manatee, Lena Road Landfill, Monitoring

EXHIBIT A

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY

LENA ROAD LANDFILL

MONTHLY WATER BALANCE REPORT

June, 2002

A	B	C	D	E	F
DATE	LEACHATE STAGE I Lift Station 1	LEACHATE STAGE I Lift Station 2	LEACHATE STAGE III	TOTAL LEACHATE PUMPED	RAINFALL INCHES
01-Jun-02	0	0	0	0	0.00
02-Jun-02	0	0	0	0	0.00
03-Jun-02	51,700	11,030	172,100	234,830	0.00
04-Jun-02	14,320	2,990	45,600	62,910	0.00
05-Jun-02	17,770	3,760	56,800	78,330	0.30
06-Jun-02	15,500	3,250	40,000	58,750	0.08
07-Jun-02	18,470	4,300	48,700	71,470	0.00
08-Jun-02	0	0	0	0	2.60
09-Jun-02	0	0	0	0	0.00
10-Jun-02	57,290	14,260	110,400	181,950	0.00
11-Jun-02	18,560	4,040	0	22,600	0.00
12-Jun-02	22,080	4,750	195,200	222,030	0.00
13-Jun-02	20,400	4,470	109,100	133,970	0.04
14-Jun-02	19,460	4,610	90,400	114,470	0.22
15-Jun-02	0	0	0	0	1.01
16-Jun-02	0	0	0	0	0.02
17-Jun-02	55,460	13,180	257,700	326,340	0.10
18-Jun-02	23,850	4,820	165,300	193,970	0.30
19-Jun-02	22,560	4,260	136,100	162,920	0.16
20-Jun-02	20,880	4,320	112,500	137,700	0.07
21-Jun-02	21,530	5,150	120,900	147,580	1.25
22-Jun-02	0	0	0	0	0.05
23-Jun-02	0	0	0	0	0.02
24-Jun-02	96,670	15,870	629,800	742,340	0.00
25-Jun-02	20,490	4,860	112,400	137,750	1.00
26-Jun-02	27,970	5,650	187,400	221,020	0.00
27-Jun-02	26,530	6,260	136,900	169,690	0.00
28-Jun-02	24,090	6,550	119,800	150,440	0.75
29-Jun-02	0	0	0	0	0.17
30-Jun-02	0	0	0	0	0.06
TOTAL	595,580	128,380	2,847,100	3,571,060	8.20

Notes:

A - DATE OF READINGS.

B - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 1 IN GALLONS SINCE PREVIOUS DATE RECORDED.

C - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 2 IN GALLONS SINCE PREVIOUS DATE RECORDED.

D - LEACHATE PUMPED FROM STAGE III IN GALLONS SINCE PREVIOUS DATE RECORDED.

E - TOTAL LEACHATE PUMPED TO WWTP STORAGE TANK, WHICH IS THE SUM OF COLUMNS B + C + D.

F - RAINFALL RECORDED ON THIS DATE IN INCHES.

EXHIBIT B

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL MONTHLY LEACHATE TRACKING SUMMARY -- 2002

MONTH	A LEACHATE STAGE I	B LEACHATE STAGE III	C TOTAL LEACHATE	D RAINFALL INCHES
JANUARY	753,100	2,154,000	2,907,100	2.27
FEBRUARY	1,437,600	1,827,000	3,264,600	3.44
MARCH	757,110	1,809,840	2,566,950	0.47
APRIL	695,680	1,355,200	2,050,880	1.53
MAY	701,910	1,800,400	2,502,310	2.45
JUNE	723,960	2,847,100	3,571,060	8.20
JULY			0	
AUGUST			0	
SEPTEMBER			0	
OCTOBER			0	
NOVEMBER			0	
DECEMBER			0	
TOTAL	5,069,360	11,793,540	16,862,900	18.36

Notes:

1. (A) Total leachate generated from Stage I.
2. (B) Total leachate generated from Stage III.
3. (C) Total leachate generate (Column A+B) and pumped to the WWTP storage tank.
4. (D) Total rainfall in inches.

Manatee County Lena Road Landfill
Groundwater Gradient
JUNE 2002

Inside Slurry Wall				Outside Slurry Wall		
Piezometer	Riser Elevation	Groundwater Elevation	Gradient Flow	Monitoring Well	Riser Elevation	Groundwater Elevation
STAGE I						
PZ-1	42.55	29.13	<i>inward</i>	MW-5	39.88	30.27
PZ-2	42.47	29.96	<i>inward</i>	MW-2	41.13	30.73
PZ-3A	44.90	28.98	<i>inward</i>	MW-1	42.63	32.69
PZ-4A	47.73	29.98	<i>inward</i>	CW-4	37.48	30.21
PZ-5	43.94	30.37	<i>inward</i>	CW-5A	41.18	33.74
PZ-6	44.73	31.22	<i>inward</i>	SG-1		33.53
PZ-7	47.76	29.96	<i>inward</i>	MW-6	39.29	31.89
PZ-19	45.83	28.76	<i>inward</i>	PZ-11	37.92	32.35
STAGE II						
PZ-8	37.63	32.50	<i>outward</i>	LRII-5	36.75	28.04
PZ-9	36.53	32.44	<i>outward</i>	LRII-4	33.85	24.96
PZ-10	37.05	32.18	<i>outward</i>	LRII-2	36.48	27.06
PZ-11	37.92	32.35	<i>outward</i>	LRII-1	37.97	30.04
STAGE III						
PZ-12	38.35	28.28	<i>inward</i>	GC-2	38.15	30.01
PZ-13	35.36	24.24	<i>inward</i>	GC-3	35.02	27.52
PZ-14A	34.58	19.18	<i>inward</i>	GC-4	33.90	25.52
PZ-15C	40.46	19.61	<i>inward</i>	PZ-15A	39.79	25.47
PZ-16B	40.22	20.87	<i>inward</i>	PZ-16A	39.05	25.46
PZ-17	40.57	28.48	<i>inward</i>	SG-2		29.65
PZ-18	40.16	28.81	<i>inward</i>	SG-3		33.14

Dry 32.80

NO BURIED WASTE IN STAGE II

Dry 28.90
Dry 33.14

Notes: The table is arranged so any piezometer can be compared to its corresponding monitoring point. For example, PZ-1 is located on the opposite side of the slurry wall from MW-5. Thus data from PZ-1 are compared to data from MW-5.

SG-3 DRY; CANNOT DEMONSTRATE INWARD GRADIENT w/ AVAILABLE DATA

Additional In-House Monitoring Data						
<u>Stage I</u>						
PZ-2	42.47	29.96	<i>inward</i>	MW-3	39.94	33.26
<u>Stage II</u>						
PZ-9	36.53	32.41	<i>outward</i>	LRII-3	33.47	24.48
<u>Stage III</u>						
PZ-15C	40.46	19.61	<i>inward</i>	GC-1A	31.75	25.20
PZ-16B	40.22	20.87	<i>inward</i>	GC-5	36.46	28.54
PZ-17	40.57	28.48	<i>inward</i>	GC-6	39.02	29.74

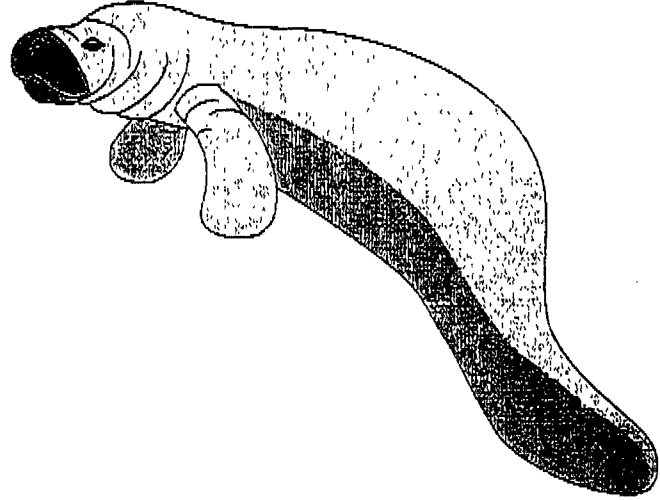
This report includes riser elevations determined by certified survey conducted by County Staff and dated Aug. 10, 1999. Westra Construction certified riser elevations of PZ-14A, PZ-15C, and PZ-16B on February 15, 2001
 Stage I Landfill - 131 acres (Closed - 30 ac., Intermediate - 91 ac., Open - 10 ac.)
 Stage II Landfill - 110 acres (Closed - 0 ac., Intermediate - 0 ac., Open - 0 ac. No waste in Stage II.)
 Stage III Landfill - 75 acres (Closed - 0 ac., Intermediate - 75 ac., Open - 0 ac.)

Data Collection: JUNE 1, 2002


**MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT
SOLID WASTE/LANDFILL SECTION**

FACSIMILE COVER MEMO

FAX # (941)795-3490



PLEASE DELIVER THE FOLLOWING PAGE(S)

TO: Joe Miller, P.E.
ADDRESS: 407/647-8945
FROM: Gwen Pagington 
DATE: 7-02-02
**SUBJECT: Monthly Monitoring Report - June, 2002
Field Readings**

COMMENTS:

The following pages contain the field readings taken throughout the month of June, 2002 for the above noted report.

Both Gary Seeley, Landfill Supervisor, and John Ferris, Landfill Operator, recorded the meter readings. If you have any questions, please contact either Landfill staff at 941/748-5543 or myself. Thank you!

cc: Gus DiFonzo
Mike Gore
Gary Seeley

NUMBER of PAGES: 4

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL AS SOON AS POSSIBLE.

**P.O. Box 25010
Bradenton, Florida 34206
941/795-3428**

Landfill

LANDFILL SHEET		
2002 June	RAIN FALL	LEACHATE MGD
1	0.00	0.052
2	0.00	0.051
3	0.00	0.050
4	0.00	0.048
5	0.30	0.048
6	0.08	0.050
7	0.00	0.049
8	2.60	0.080
9	0.00	0.032
10	0.00	0.021
11	0.00	0.072
12	0.00	0.131
13	0.04	0.094
14	0.22	0.084
15	1.01	0.088
16	0.02	0.086
17	0.10	0.087
18	0.30	0.155
19	0.16	0.113
20	0.07	0.107
21	1.25	0.000
22	0.05	0.286
23	0.02	0.136
24	0.00	0.127
25	1.00	0.000
26	0.00	0.167
27	0.00	0.129
28	0.75	0.008
29	0.17	0.118
30	0.06	0.006
TOTAL	8.20	2.475
AVG		0.083
MIN		
MAX	2.60	0.286

Fax # 9-795-3490

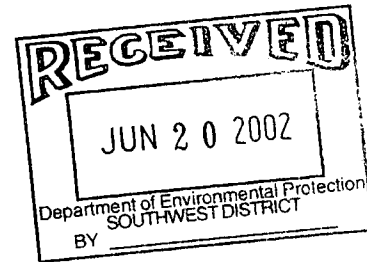
LEACHATE METER READINGS				
DATE	METER#1	METER#2	METER#3	NAME
6-3-02	157696 X 10	39170 X 10	43061 X 100	LDL
6-4-02	159128	39469	43517	LDL
6-5-02	160905	39845	44085	LDL
6-6-02	162455	40170	44485	LDL
6-7-02	164302	40600	44972	LDL
6-10-02	170031	42026	46076	LDL
6-11-02	171887	42430	46076?	LDL float controller in L.S. #3A intangled
6-12-02	174095	42905	48028	LDL
6-13-02	176135	43352	49119	LDL
6-14-02	178081	43813	50023	LDL
6-17-02	183627	45131	52600	JF
6-18-02	186012	45613	54253	JF
6-19-02	188268	46039	55614	JF
6-20-02	190356	46471	56739	JF
6-21-02	192509	46986	57948	JF
6-24-02	202176	48573	64246	JF
6-25-02	204225	49059	65370	JF
6-26-02	207022	49624	67244	JF
6-27-02	209675	50250	68613	JF
6-28-02	212084	50905	69811	JF



An employee-owned company

June 18, 2002

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 – May 2002**

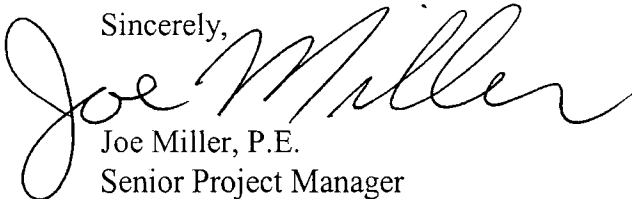
Dear Mr. Morris:

Attached is the May 2002 monthly report for the Lena Road Landfill in accordance with specific condition numbers 17, 18, and 33 of Operations Permit Number 39884-001-SO. The report consists of the monthly water balance report, leachate tracking summary, monthly gradient report, and field readings for the water balance report.

An inward gradient was present in Stage I and Stage III at all of the gradient pairs. An outward gradient was present in Stage II at all the gradient pairs, however, Stage II has no solid waste.

If you should have any questions concerning this report, please contact me in our Orlando office at 407/647-7275 Ext. 153, or Javen Figueroa at Ext. 288.

Sincerely,



Joe Miller, P.E.
Senior Project Manager

cc: Robert Butera, P.E., FDEP SW District
Kim Ford, P.E., FDEP SW District
Steve Morgan, FDEP SW District
Daniel T. Gray, Director, Utility Operations Department
Gus DiFonzo, Solid Waste Manager
C. Michael Gore, Landfill Superintendent
Gwen Pagington, Solid Waste Program Specialist
File – 120498.05 Manatee, Lena Road Landfill, Monitoring

\\ORLANDO-PBSJ\ENVCOMMONS\WASTEMAN\Manatee County\SW-5 Annual Monitoring\May2002\MonthlyLtrMay2002.doc

EXHIBIT A

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY

LENA ROAD LANDFILL

MONTHLY WATER BALANCE REPORT

MAY, 2002

A	B	C	D	E	F
DATE	LEACHATE STAGE I Lift Station 1	LEACHATE STAGE I Lift Station 2	LEACHATE STAGE III	TOTAL LEACHATE PUMPED	RAINFALL INCHES
01-May-02	20,190	3,420	40,600	64,210	0.00
02-May-02	19,330	3,410	38,900	61,640	0.00
03-May-02	17,250	3,100	35,800	56,150	0.00
04-May-02	0	0	0	0	0.00
05-May-02	0	0	0	0	0.00
06-May-02	52,310	8,600	114,000	174,910	0.00
07-May-02	17,030	3,120	34,600	54,750	0.00
08-May-02	37,400	3,670	35,900	76,970	0.00
09-May-02	2,620	3,420	34,700	40,740	0.00
10-May-02	13,210	2,630	33,400	49,240	0.00
11-May-02	0	0	0	0	0.00
12-May-02	0	0	0	0	0.00
13-May-02	52,330	10,130	105,700	168,160	0.00
14-May-02	22,350	4,710	38,200	65,260	0.00
15-May-02	15,960	2,650	32,100	50,710	0.00
16-May-02	18,450	3,400	38,600	60,450	1.11
17-May-02	20,250	4,030	185,300	209,580	0.00
18-May-02	0	0	0	0	0.00
19-May-02	0	0	0	0	1.28
20-May-02	61,250	12,040	255,200	328,490	0.00
21-May-02	18,490	13,480	95,900	127,870	0.00
22-May-02	20,730	3,710	92,800	117,240	0.00
23-May-02	16,560	3,180	76,500	96,240	0.00
24-May-02	16,860	3,180	72,000	92,040	0.00
25-May-02	0	0	0	0	0.00
26-May-02	0	0	0	0	0.00
27-May-02	0	0	0	0	0.06
28-May-02	79,020	16,310	256,400	351,730	0.00
29-May-02	20,640	4,660	61,300	86,600	0.00
30-May-02	20,940	4,640	68,200	93,780	0.00
31-May-02	17,400	3,850	54,300	75,550	0.00
TOTAL	580,570	121,340	1,800,400	2,502,310	2.45

Notes:

A - DATE OF READINGS.

B - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 1 IN GALLONS SINCE PREVIOUS DATE RECORDED.

C - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 2 IN GALLONS SINCE PREVIOUS DATE RECORDED.

D - LEACHATE PUMPED FROM STAGE III IN GALLONS SINCE PREVIOUS DATE RECORDED.

E - TOTAL LEACHATE PUMPED TO WWTP STORAGE TANK, WHICH IS THE SUM OF COLUMNS B + C + D.

F - RAINFALL RECORDED ON THIS DATE IN INCHES.

EXHIBIT B

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL MONTHLY LEACHATE TRACKING SUMMARY -- 2002

MONTH	A LEACHATE STAGE I	B LEACHATE STAGE III	C TOTAL LEACHATE	D RAINFALL INCHES
JANUARY	753,100	2,154,000	2,907,100	2.27
FEBRUARY	1,437,600	1,827,000	3,264,600	3.44
MARCH	757,110	1,809,840	2,566,950	0.47
APRIL	695,680	1,355,200	2,050,880	1.53
MAY	701,910	1,800,400	2,502,310	2.45
JUNE			0	
JULY			0	
AUGUST			0	
SEPTEMBER			0	
OCTOBER			0	
NOVEMBER			0	
DECEMBER			0	
TOTAL	4,345,400	8,946,440	13,291,840	10.16

Notes:

1. (A) Total leachate generated from Stage I.
2. (B) Total leachate generated from Stage III.
3. (C) Total leachate generate (Column A+B) and pumped to the WWTP storage tank.
4. (D) Total rainfall in inches.

Manatee County Lena Road Landfill
Groundwater Gradient
MAY 2002

Inside Slurry Wall				Outside Slurry Wall		
Piezometer	Riser Elevation	Groundwater Elevation	Gradient Flow	Monitoring Well	Riser Elevation	Groundwater Elevation
STAGE I						
PZ-1	42.55	28.95	<i>inward</i>	MW-5	39.88	30.28
PZ-2	42.47	30.03	<i>inward</i>	MW-2	41.13	30.97
PZ-3A	44.90	28.95	<i>inward</i>	MW-1	42.63	32.87
PZ-4A	47.73	30.03	<i>inward</i>	CW-4	37.48	31.03
PZ-5	43.94	30.41	<i>inward</i>	CW-5A	41.18	33.50
PZ-6	44.73	31.22	<i>inward</i>	SG-1		33.56
PZ-7	47.76	29.91	<i>inward</i>	MW-6	39.29	31.24
PZ-19	45.83	28.73	<i>inward</i>	PZ-11	37.92	32.77
STAGE II						
PZ-8	37.63	32.71	<i>outward</i>	LRII-5	36.75	27.75
PZ-9	36.53	32.95	<i>outward</i>	LRII-4	33.85	25.27
PZ-10	37.05	32.63	<i>outward</i>	LRII-2	36.48	27.25
PZ-11	37.92	32.77	<i>outward</i>	LRII-1	37.97	30.80
STAGE III						
PZ-12	38.35	28.13	<i>inward</i>	GC-2	38.15	31.62
PZ-13	35.36	24.09	<i>inward</i>	GC-3	35.02	27.37
PZ-14A	34.58	19.14	<i>inward</i>	GC-4	33.90	25.65
PZ-15C	40.46	19.62	<i>inward</i>	PZ-15A	39.79	25.03
PZ-16B	40.22	20.86	<i>inward</i>	PZ-16A	39.05	25.07
PZ-17	40.57	28.39	<i>inward</i>	SG-2		29.90
PZ-18	40.16	28.95	<i>inward</i>	SG-3		33.14

Dry 32.80

NO BURNED WASTE IN STAGE II

Dry 28.90
Dry 33.14

Notes: The table is arranged so any piezometer can be compared to its corresponding monitoring point. For example, PZ-1 is located on the opposite side of the slurry wall from MW-5. Thus data from PZ-1 are compared to data from MW-5.

SG-3 DRY; CANNOT DEMONSTRATE (INWARD) GRADIENT w/ AVAILABLE DATA

Additional In-House Monitoring Data						
<u>Stage I</u>						
PZ-2	42.47	30.03	<i>inward</i>	MW-3	39.94	33.00
<u>Stage II</u>						
PZ-9	36.53	32.95	<i>outward</i>	LRII-3	33.47	24.69
<u>Stage III</u>						
PZ-15C	40.46	19.62	<i>inward</i>	GC-1A	31.75	24.69
PZ-16B	40.22	20.86	<i>inward</i>	GC-5	36.46	28.39
PZ-17	40.57	28.39	<i>inward</i>	GC-6	39.02	29.62

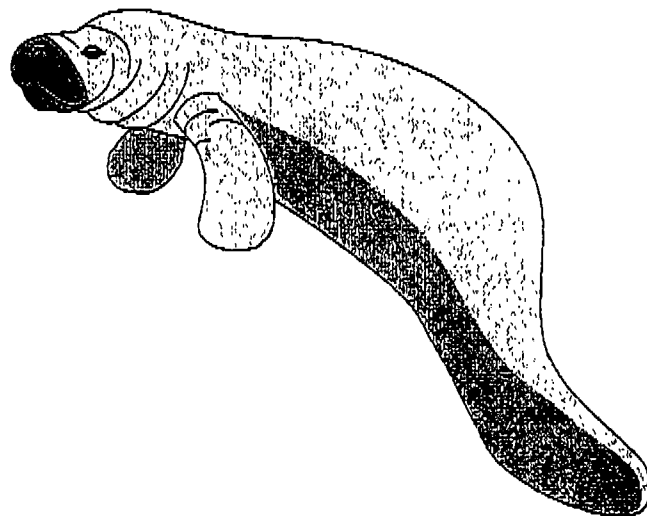
This report includes riser elevations determined by certified survey conducted by County Staff and dated Aug. 10, 1999. Westra Construction certified riser elevations of PZ-14A, PZ-15C, and PZ-16B on February 15, 2001
 Stage I Landfill - 131 acres (Closed - 30 ac., Intermediate - 91 ac., Open - 10 ac.)
 Stage II Landfill - 110 acres (Closed - 0 ac., Intermediate - 0 ac., Open - 0 ac. No waste in Stage II.)
 Stage III Landfill - 75 acres (Closed - 0 ac., Intermediate - 75 ac., Open - 0 ac.)

Data Collection: May 8, 2002

**MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT
SOLID WASTE/LANDFILL SECTION**

FACSIMILE COVER MEMO

FAX # (941)795-3490



PLEASE DELIVER THE FOLLOWING PAGE(S)

TO: Joe Miller, P.E.
ADDRESS: 407/647-8945
FROM: Gwen Pagington
DATE: 6-03-02
**SUBJECT: Monthly Monitoring Report - May 2002
Field Readings**

COMMENTS:

The following pages contain the field readings taken throughout the month of May, 2002 for the above noted report.

Gary Seeley, Landfill Supervisor, recorded the meter readings. If you have any questions, please contact either Gary at 941/748-5543 or myself. Thank you!

cc: Gus DiFonzo
Mike Gore
Gary Seeley

NUMBER of PAGES: 4

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL AS SOON AS POSSIBLE.

P.O. Box 25010
Bradenton, Florida 34206
941/795-3428

May 2002

MAY 30 2002

LEACHATE METER READINGS				
DATE	METER#1	METER#2	METER#3	NAME
5-1-02	96488 x 10	26275 x 10	23742 x 100	H.S.
5-2-02	98421	26616	24131	H.S.
5-3-02	100146	26926	24489	H.S.
5-6-02	105377	27786	25629	H.S.
5-7-02	107080	28098	25975	H.S.
5-8-02	108972	28465	26334	H.S.
5-9-02	110820	28807	26681	H.S.
5-10-02	112403	29070	27015	H.S.
5-13-02	117636	30083	28072	H.S.
5-14-02	119871	30554	28454	H.S.
5-15-02	121467	30819	28775	H.S.
5-16-02	123312	31159	29161	J
5-17-02	125337	31562	31014	J
5-20-02	131462	32766	33566	H.S.
5-21-02	133311	34114	34525	H.S.
5-22-02	135384	34485	35453	H.S.
5-23-02	137040	34803	36218	H.S.
5-24-02	138726	35121	36938	J
5-27-02	Memorial Day		"closed"	☺
5-28-02	146628	36752	39502	H.S.
5-29-02	148692	37218	40115	H.S.
5-30-02	150786	37682	40797	H.S.
5-31-02	152526	38067	41340	H.S.

started pumping from storm water pond to S.G.#2 = 1-04

May 2002

STORM WATER POND ELEVATIONS		
DATE	STORM WATER S.G.	S.G.#2
5 - 1 - 02	32.70	29.47
5 - 2 - 02	32.70	29.60
5 - 3 - 02	32.70	29.50
5 - 6 - 02	32.60	29.18
5 - 7 - 02	32.55	29.70
5 - 8 - 02	32.55	29.88
5 - 9 - 02	32.50	29.75
5 - 10 - 02	32.49	29.63
5 - 13 - 02	32.40	29.30
5 - 14 - 02	32.35	29.73
5 - 15 - 02	32.34	29.65
5 - 16 - 02	32.38	29.70
5 - 17 - 02	32.50	30.49
5 - 20 - 02	32.67	30.53
5 - 21 - 02	32.65	30.47
5 - 22 - 02	32.60	30.39
5 - 23 - 02	32.60	30.33
5 - 24 - 02	32.57	30.27
5 - 27 - 02	Memorial Day "closed"	☺
5 - 28 - 02	32.50	29.90
5 - 29 - 02	32.48	29.80
5 - 30 - 02	32.47	29.72
5 - 31 - 02	32.45	29.65

JUN-03-2002

Landfill

LANDFILL SHEET		
2002 May	RAIN FALL	LEACHATE MGD
1	0.00	0.048
2	0.00	0.047
3	0.00	0.046
4	0.00	0.044
5	0.00	0.043
6	0.00	0.043
7	0.00	0.044
8	0.00	0.045
9	0.00	0.044
10	0.00	0.043
11	0.00	0.042
12	0.00	0.000
13	0.00	0.044
14	0.00	0.047
15	0.00	0.041
16	1.11	0.098
17	0.00	0.107
18	0.00	0.073
19	1.28	0.097
20	0.00	0.088
21	0.00	0.083
22	0.00	0.077
23	0.00	0.071
24	0.00	0.068
25	0.00	0.065
26	0.00	0.072
27	0.06	0.062
28	0.00	0.060
29	0.00	0.059
30	0.00	0.058
31	0.00	0.055
TOTAL	2.45	1.814
AVG		0.059
MIN		
MAX	1.28	0.107

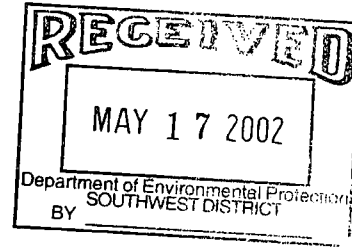
Fax # 9-795-3490



An employee-owned company

May 13, 2002

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 – April 2002**

Dear Mr. Morris:

Attached is the April 2002 monthly report for the Lena Road Landfill in accordance with specific condition numbers 17, 18, and 33 of Operations Permit Number 39884-001-SO. The report consists of the monthly water balance report, leachate tracking summary, monthly gradient report, and field readings for the water balance report.

An inward gradient was present in Stage I and Stage III at all of the gradient pairs. An outward gradient was present in Stage II at all the gradient pairs, however, Stage II has no solid waste.

If you should have any questions concerning this report, please contact me in our Orlando office at 407/647-7275 Ext. 153, or Javen Figueroa at Ext. 288.

Sincerely,

Joe Miller, P.E.

Senior Project Manager

cc: Robert Butera, P.E., FDEP SW District
Kim Ford, P.E., FDEP SW District
Steve Morgan, FDEP SW District
Daniel T. Gray, Director, Utility Operations Department
Gus DiFonzo, Solid Waste Manager
C. Michael Gore, Landfill Superintendent
Gwen Pagington, Solid Waste Program Specialist
File – 120498.05 Manatee, Lena Road Landfill, Monitoring

G:\WASTEMAN\Manatee County\SW-5 Annual Monitoring\April2002\MonthlyLtrApril2002.doc

EXHIBIT A

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY

LENA ROAD LANDFILL

MONTHLY WATER BALANCE REPORT

APRIL, 2002

A	B	C	D	E	F
DATE	LEACHATE STAGE I Lift Station 1	LEACHATE STAGE I Lift Station 2	LEACHATE STAGE III	TOTAL LEACHATE PUMPED	RAINFALL INCHES
01-Apr-02	59,200	14,780	135,700	209,680	0.00
02-Apr-02	19,140	2,880	44,300	66,320	0.00
03-Apr-02	17,080	7,470	41,600	66,150	0.30
04-Apr-02	17,780	2,870	44,300	64,950	0.00
05-Apr-02	18,010	7,230	43,700	68,940	0.00
06-Apr-02	0	0	0	0	0.00
07-Apr-02	0	0	0	0	0.00
08-Apr-02	50,950	7,570	124,900	183,420	0.00
09-Apr-02	18,810	2,740	45,100	66,650	0.00
10-Apr-02	17,010	2,230	41,000	60,240	0.00
11-Apr-02	17,210	2,220	41,200	60,630	0.00
12-Apr-02	19,110	2,810	43,000	64,920	0.00
13-Apr-02	0	0	0	0	0.28
14-Apr-02	0	0	0	0	0.15
15-Apr-02	55,400	7,780	126,100	189,280	0.00
16-Apr-02	17,080	2,200	40,900	60,180	0.00
17-Apr-02	16,990	2,190	40,900	60,080	0.80
18-Apr-02	18,730	2,710	43,800	65,240	0.00
19-Apr-02	19,690	3,070	44,600	67,360	0.00
20-Apr-02	0	0	0	0	0.00
21-Apr-02	0	0	0	0	0.00
22-Apr-02	59,380	10,510	133,100	202,990	0.00
23-Apr-02	18,420	3,210	40,800	62,430	0.00
24-Apr-02	18,540	2,930	42,500	63,970	0.00
25-Apr-02	18,580	3,230	42,300	64,110	0.00
26-Apr-02	16,870	2,660	38,100	57,630	0.00
27-Apr-02	0	0	0	0	0.00
28-Apr-02	0	0	0	0	0.00
29-Apr-02	55,300	9,830	119,200	184,330	0.00
30-Apr-02	19,300	3,980	38,100	61,380	0.00
TOTAL	588,580	107,100	1,355,200	2,050,880	1.53

Notes:

A - DATE OF READINGS.

B - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 1 IN GALLONS SINCE PREVIOUS DATE RECORDED.

C - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 2 IN GALLONS SINCE PREVIOUS DATE RECORDED.

D - LEACHATE PUMPED FROM STAGE III IN GALLONS SINCE PREVIOUS DATE RECORDED.

E - TOTAL LEACHATE PUMPED TO WWTP STORAGE TANK, WHICH IS THE SUM OF COLUMNS B + C + D.

F - RAINFALL RECORDED ON THIS DATE IN INCHES.

EXHIBIT B

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL MONTHLY LEACHATE TRACKING SUMMARY -- 2002

MONTH	A LEACHATE STAGE I	B LEACHATE STAGE III	C TOTAL LEACHATE	D RAINFALL INCHES
JANUARY	753,100	2,154,000	2,907,100	2.27
FEBRUARY	1,437,600	1,827,000	3,264,600	3.44
MARCH	757,110	1,809,840	2,566,950	0.47
APRIL	695,680	1,355,200	2,050,880	1.53
MAY			0	
JUNE			0	
JULY			0	
AUGUST			0	
SEPTEMBER			0	
OCTOBER			0	
NOVEMBER			0	
DECEMBER			0	
TOTAL	3,643,490	7,146,040	10,789,530	7.71

Notes:

1. (A) Total leachate generated from Stage I.
2. (B) Total leachate generated from Stage III.
3. (C) Total leachate generate (Column A+B) and pumped to the WWTP storage tank.
4. (D) Total rainfall in inches.

Manatee County Lena Road Landfill
Groundwater Gradient
APRIL 2002

Inside Slurry Wall

Outside Slurry Wall

Piezometer	Riser Elevation	Groundwater Elevation	Gradient Flow	Monitoring Well	Riser Elevation	Groundwater Elevation
STAGE I						
PZ-1	42.55	29.10	<i>inward</i>	MW-5	39.88	30.31
PZ-2	42.47	30.25	<i>inward</i>	MW-2	41.13	31.07
PZ-3A	44.90	28.35	<i>inward</i>	MW-1	42.63	33.21
PZ-4A	47.73	29.93	<i>inward</i>	CW-4	37.48	32.95
PZ-5	43.94	30.55	<i>inward</i>	CW-5A	41.18	34.40
PZ-6	44.73	31.22	<i>inward</i>	SG-1		33.76
PZ-7	47.76	29.95	<i>inward</i>	MW-6	39.29	32.50
PZ-19	45.83	28.73	<i>inward</i>	PZ-11	37.92	34.59
Dry 32.80						
STAGE II						
PZ-8	37.63	33.69	<i>outward</i>	LRII-5	36.75	28.72
PZ-9	36.53	33.84	<i>outward</i>	LRII-4	33.85	26.17
PZ-10	37.05	33.83	<i>outward</i>	LRII-2	36.48	28.13
PZ-11	37.92	34.59	<i>outward</i>	LRII-1	37.97	31.47
NO BURNED WASTE IN STAGE II						
STAGE III						
PZ-12	38.35	28.24	<i>inward</i>	GC-2	38.15	30.64
PZ-13	35.36	24.43	<i>inward</i>	GC-3	35.02	27.57
PZ-14A	34.58	19.19	<i>inward</i>	GC-4	33.90	25.60
PZ-15C	40.46	19.67	<i>inward</i>	PZ-15A	39.79	26.07
PZ-16B	40.22	21.90	<i>inward</i>	PZ-16A	39.05	25.86
PZ-17	40.57	28.46	<i>inward</i>	SG-2		29.54
PZ-18	40.16	28.91	<i>inward</i>	SG-3		33.14
Dry 28.90 Dry 33.14						

Notes:

The table is arranged so any piezometer can be compared to its corresponding monitoring point. For example, PZ-1 is located on the opposite side of the slurry wall from MW-5. Thus data from PZ-1 are compared to data from MW-5.

SG-3 DRY; CANNOT DEMONSTRATE OUTWARD GRADIENT IF AVAILABLE DATA

Additional In-House Monitoring Data						
<u>Stage I</u>						
PZ-2	42.47	30.25	<i>inward</i>	MW-3	39.94	33.21
<u>Stage II</u>						
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PZ-15C	40.46	19.67	<i>inward</i>	GC-1A	31.75	25.88
PZ-16B	40.22	20.86	<i>inward</i>	GC-5	36.46	28.64
PZ-17	40.57	28.46	<i>inward</i>	GC-6	39.02	29.71

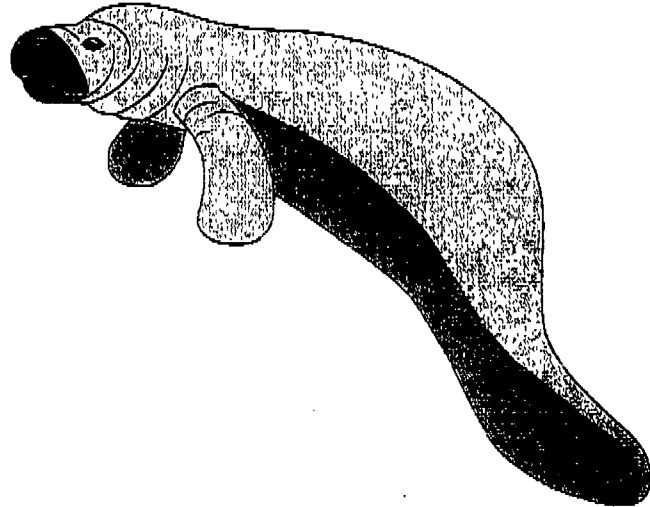
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 Stage I Landfill - 131 acres (Closed - 30 ac., Intermediate - 91 ac., Open - 10 ac.)
 Stage II Landfill - 110 acres (Closed - 0 ac., Intermediate - 0 ac., Open - 0 ac. No waste in Stage II.)
 Stage III Landfill - 75 acres (Closed - 0 ac., Intermediate - 75 ac., Open - 0 ac.)

Data Collection: APRIL 9, 2002

**MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT
SOLID WASTE/LANDFILL SECTION**

FACSIMILE COVER MEMO

FAX # (941)795-3490



PLEASE DELIVER THE FOLLOWING PAGE(S)

TO: Joe Miller, P.E.
ADDRESS: 407/647-8945
FROM: Gwen Pagington
DATE: 5-01-02
**SUBJECT: Monthly Monitoring Report - April 2002
Field Readings**

COMMENTS:

The following pages contain the field readings taken throughout the month of April, 2002 for the above noted report.

Gary Seeley, Landfill Supervisor, recorded the meter readings. If you have any questions, please contact either Gary at 941/748-5543 or myself. Thank you!

cc: Gus DiFonzo
Mike Gore
Gary Seeley

NUMBER of PAGES: 4

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL AS SOON AS POSSIBLE.

**P.O. Box 25010
Bradenton, Florida 34206
941/795-3428**

Landfill

LANDFILL SHEET		
2002 Apr	RAIN FALL	LEACHATE MGD
1	0.00	0.059
2	0.00	0.054
3	0.30	0.056
4	0.00	0.053
5	0.00	0.057
6	0.00	0.052
7	0.00	0.050
8	0.00	0.051
9	0.00	0.050
10	0.00	0.050
11	0.00	0.049
12	0.00	0.051
13	0.28	0.031
14	0.15	0.051
15	0.00	0.049
16	0.00	0.047
17	0.80	0.047
18	0.00	0.052
19	0.00	0.000
20	0.00	0.053
21	0.00	0.053
22	0.00	0.051
23	0.00	0.050
24	0.00	0.050
25	0.00	0.048
26	0.00	0.047
27	0.00	0.047
28	0.00	0.046
29	0.00	0.049
30	0.00	0.048
TOTAL	1.53	1.451
AVG		0.048
MIN		
MAX	0.80	0.059

Fax # 9-795-3490

STORM WATER POND ELEVATIONS		
DATE	STORM WATER S.G.	S.G.#2 <i>stage III</i>
4-1-02	32.95	30.20
4-2-02	32.95	29.96
4-3-02	32.95	29.88
4-4-02	32.95	29.88
4-5-02	32.98	29.83
4-8-02	32.90	29.60
4-9-02	32.90	29.52
4-10-02	32.90 <small>CLOSED VALVE</small>	29.45
4-11-02	32.90	29.40
4-12-02	32.88	29.34
4-15-02	32.90	29.25
4-16-02	32.88	29.19
4-17-02	32.87	29.15
4-18-02	32.95	29.33
4-19-02	32.95	29.38
4-22-02	32.90	29.15
4-23-02	32.90	29.10
4-24-02	32.88	29.05
4-25-02	32.86	29.00
4-26-02	32.85	28.95
4-29-02	32.80	28.84
4-30-02	32.80	28.80

Mwen P. FAX 895795-3490

MAY - 1 2002

unit 5428

LEACHATE METER READINGS				
DATE	METER#1	METER#2	METER#3	NAME
4-1-02	41531 X 10	16701 X 10	11141 X 100	J
4-2-02	43445 X 10	16989 X 10	11584 X 100	J
4-3-02	45153 X 10	17736 X 10	12000 X 100	A.S.
4-4-02	46931 X 10	18023 X 10	12443 X 100	A.S.
4-5-02	48732 X 10	18746 X 10	12880 X 100	A.S.
4-8-02	53827 X 10	19503 X 10	14129 X 100	A.S.
4-9-02	55708 X 10	19777 X 10	14580 X 100	A.S.
4-10-02	57409 X 10	20000 X 10	14990 X 100	A.S.
4-11-02	59130 X 10	20222 X 10	15402 X 100	A.S.
4-12-02	61041 X 10	20503 X 10	15832 X 100	A.S.
4-15-02	66581 X 10	21281 X 10	17093 X 100	A.S.
4-16-02	68289 X 10	21501 X 10	17502 X 100	A.S.
4-17-02	69988 X 10	21720 X 10	17911 X 100	A.S.
4-18-02	71861 X 10	21991 X 10	18349 X 100	A.S.
4-19-02	73830 X 10	22298 X 10	18795 X 100	A.S.
4-22-02	79768 X 10	23349 X 10	20126 X 100	A.S.
4-23-02	81610 X 10	23670 X 10	20534 X 100	A.S.
4-24-02	83464 X 10	23963 X 10	20959 X 100	A.S.
4-25-02	85322 X 10	24286 X 10	21382 X 100	A.S.
4-26-02	87009 X 10	24552 X 10	21763 X 100	A.S.
4-29-02	92539 X 10	25595 X 10	22955 X 100	A.S.
4-30-02	94469 X 10	25933 X 10	23336 X 100	A.S.



An employee-owned company

April 12, 2002

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

D.E.P.
APR 16 2002
Southwest District Tampa

**Re: Manatee County Lena Road Landfill
Monthly Report – March 2002**

Dear Mr. Morris:

Attached is the October 2001 monthly report for the Lena Road Landfill in accordance with specific condition numbers 17, 18, and 33 of Operations Permit Number 39884-001-SO. The report consists of the monthly water balance report, leachate tracking summary, monthly gradient report, field readings for the water balance report and a quarterly gas monitoring table.

An inward gradient was present in Stage I and Stage III at all of the gradient pairs. An outward gradient was present in Stage II at all the gradient pairs, however, Stage II has no solid waste.

The 25 methane sampling points on site were sampled on March 27, 2002 using a CES-Landtec Gas Extraction Monitor (GEM) Model 2000. Methane levels at all 25 sample points were less than the maximum levels of 25% of the Lower Explosive Limit (LEL) for the interior of structures and 100% of LEL at or beyond the landfill boundary, as described by Chapter 62-701.530(1) of the Florida Administrative Code.

If you should have any questions concerning this report, please contact me in our Orlando office at 407/647-7275 Ext. 153, or Javen Figueroa at Ext. 288.

Sincerely,

Joe Miller, P.E.
Senior Project Manager

cc: Robert Butera, P.E., FDEP SW District
Kim Ford, P.E., FDEP SW District
Steve Morgan, FDEP SW District
Daniel T. Gray, Director, Utility Operations Department
Gus DiFonzo, Solid Waste Manager
C. Michael Gore, Landfill Superintendent
Gwen Pagington, Solid Waste Program Specialist
File – 120498.05 Manatee, Lena Road Landfill, Monitoring

G:\WASTEMAN\Manatee County\SW-5 Annual Monitoring\March2002\MonthlyLtrMar2002.doc

GAS FILED
SEPARATELY

EXHIBIT A

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY

LENA ROAD LANDFILL

MONTHLY WATER BALANCE REPORT

MARCH, 2002

A	B	C	D	E	F
DATE	LEACHATE STAGE I Lift Station 1	LEACHATE STAGE I Lift Station 2	LEACHATE STAGE III	TOTAL LEACHATE PUMPED	RAINFALL INCHES
01-Mar-02	19,900	9,600	98,000	127,500	0.00
02-Mar-02	0	0	0	0	0.00
03-Mar-02	0	0	0	0	0.00
04-Mar-02	55,100	22,900	240,000	318,000	0.33
05-Mar-02	0	0	0	0	0.00
06-Mar-02	20,700	14,280	115,830	150,810	0.00
07-Mar-02	18,630	6,120	84,560	109,310	0.10
08-Mar-02	18,630	6,120	80,190	104,940	0.00
09-Mar-02	0	0	0	0	0.00
10-Mar-02	0	0	0	0	0.00
11-Mar-02	53,820	16,320	231,660	301,800	0.00
12-Mar-02	22,520	12,670	69,100	104,290	0.04
13-Mar-02	20,990	7,330	59,100	87,420	0.00
14-Mar-02	18,560	8,970	59,900	87,430	0.00
15-Mar-02	19,290	6,800	61,600	87,690	0.00
16-Mar-02	0	0	0	0	0.00
17-Mar-02	0	0	0	0	0.00
18-Mar-02	55,050	17,760	169,700	242,510	0.00
19-Mar-02	19,770	3,560	51,000	74,330	0.00
20-Mar-02	20,230	3,830	52,500	76,560	0.00
21-Mar-02	20,520	14,570	52,400	87,490	0.00
22-Mar-02	19,390	3,430	50,100	72,920	0.00
23-Mar-02	0	0	0	0	0.00
24-Mar-02	0	0	0	0	0.00
25-Mar-02	57,170	29,740	148,600	235,510	0.00
26-Mar-02	19,800	9,130	48,300	77,230	0.00
27-Mar-02	19,470	8,280	46,000	73,750	0.00
28-Mar-02	19,700	7,210	47,200	74,110	0.00
29-Mar-02	18,340	10,910	44,100	73,350	0.00
30-Mar-02	0	0	0	0	0.00
31-Mar-02	0	0	0	0	0.00
TOTAL	537,580	219,530	1,809,840	2,566,950	0.47

Notes:

A - DATE OF READINGS.

B - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 1 IN GALLONS SINCE PREVIOUS DATE RECORDED.

C - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 2 IN GALLONS SINCE PREVIOUS DATE RECORDED.

D - LEACHATE PUMPED FROM STAGE III IN GALLONS SINCE PREVIOUS DATE RECORDED.

E - TOTAL LEACHATE PUMPED TO WWTP STORAGE TANK, WHICH IS THE SUM OF COLUMNS B + C + D.

F - RAINFALL RECORDED ON THIS DATE IN INCHES.

EXHIBIT B

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL MONTHLY LEACHATE TRACKING SUMMARY -- 2002

MONTH	A LEACHATE STAGE I	B LEACHATE STAGE III	C TOTAL LEACHATE	D RAINFALL INCHES
JANUARY	753,100	2,154,000	2,907,100	2.27
FEBRUARY	1,437,600	1,827,000	3,264,600	3.44
MARCH	757,110	1,809,840	2,566,950	0.47
APRIL			0	
MAY			0	
JUNE			0	
JULY			0	
AUGUST			0	
SEPTEMBER			0	
OCTOBER			0	
NOVEMBER			0	
DECEMBER			0	
TOTAL	2,947,810	5,790,840	8,738,650	6.18

Notes:

1. (A) Total leachate generated from Stage I.
2. (B) Total leachate generated from Stage III.
3. (C) Total leachate generate (Column A+B) and pumped to the WWTP storage tank.
4. (D) Total rainfall in inches.

Manatee County Lena Road Landfill
Groundwater Gradient
MARCH 2002

Inside Slurry Wall				Outside Slurry Wall		
Piezometer	Riser Elevation	Groundwater Elevation	Gradient Flow	Monitoring Well	Riser Elevation	Groundwater Elevation
STAGE I						
PZ-1	42.55	29.15	<i>inward</i>	MW-5	39.88	30.81
PZ-2	42.47	30.28	<i>inward</i>	MW-2	41.13	31.60
PZ-3A	44.90	28.61	<i>inward</i>	MW-1	42.63	36.64
PZ-4A	47.73	29.98	<i>inward</i>	CW-4	37.48	34.86
PZ-5	43.94	30.39	<i>inward</i>	CW-5A	41.18	37.78
PZ-6	44.73	31.21	<i>inward</i>	SG-1		33.98
PZ-7	47.76	30.06	<i>inward</i>	MW-6	39.29	33.43
PZ-19	45.83	28.78	<i>inward</i>	PZ-11	37.92	34.53
STAGE II						
PZ-8	37.63	34.39	<i>outward</i>	LRII-5	36.75	30.05
PZ-9	36.53	34.44	<i>outward</i>	LRII-4	33.85	27.20
PZ-10	37.05	34.42	<i>outward</i>	LRII-2	36.48	29.40
PZ-11	37.92	34.53	<i>outward</i>	LRII-1	37.97	32.30
STAGE III						
PZ-12	38.35	28.46	<i>inward</i>	GC-2	38.15	31.84
PZ-13	35.36	24.71	<i>inward</i>	GC-3	35.02	28.70
PZ-14A	34.58	19.23	<i>inward</i>	GC-4	33.90	26.85
PZ-15C	40.46	19.71	<i>inward</i>	PZ-15A	39.79	26.88
PZ-16B	40.22	21.90	<i>inward</i>	PZ-16A	39.05	27.33
PZ-17	40.57	28.66	<i>inward</i>	SG-2		30.54
PZ-18	40.16	28.88	<i>inward</i>	SG-3		33.14

Dry 32.80

NO BURIED WASTE IN STAGE II

Dry 28.90
Dry 33.14

Notes: The table is arranged so any piezometer can be compared to its corresponding monitoring point. For example, PZ-1 is located on the opposite side of the slurry wall from MW-5. Thus data from PZ-1 are compared to data from MW-5.

SG-3 DRY; CANNOT DEMONSTRATE INWARD GRADIENT w/ AVAILABLE DATA

Additional In-House Monitoring Data						
<u>Stage I</u>						
PZ-2	42.47	30.28	<i>inward</i>	MW-3	39.94	33.68
<u>Stage II</u>						
PZ-9	36.53	34.44	<i>outward</i>	LRII-3	33.47	26.22
<u>Stage III</u>						
PZ-15C	40.46	19.71	<i>inward</i>	GC-1A	31.75	26.50
PZ-16B	40.22	21.90	<i>inward</i>	GC-5	36.46	28.11
PZ-17	40.57	28.66	<i>inward</i>	GC-6	39.02	29.69

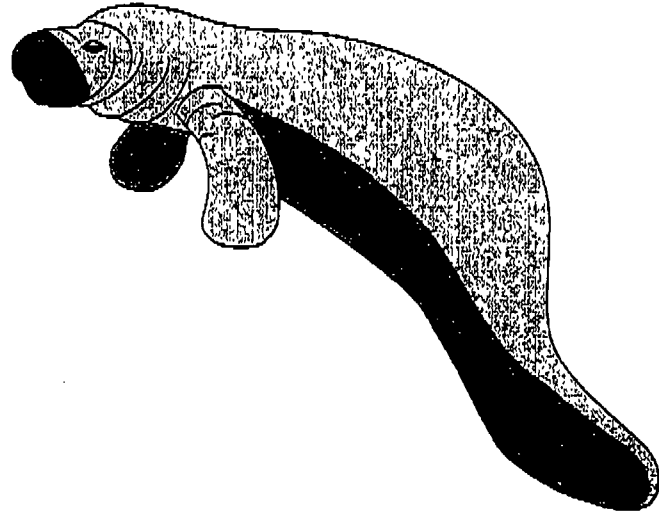
This report includes riser elevations determined by certified survey conducted by County Staff and dated Aug. 10, 1999. Westra Construction certified riser elevations of PZ-14A, PZ-15C, and PZ-16B on February 15, 2001
 Stage I Landfill - 131 acres (Closed - 30 ac., Intermediate - 91 ac., Open - 10 ac.)
 Stage II Landfill - 110 acres (Closed - 0 ac., Intermediate - 0 ac., Open - 0 ac. No waste in Stage II.)
 Stage III Landfill - 75 acres (Closed - 0 ac., Intermediate - 75 ac., Open - 0 ac.)

Data Collection: MARCH 11, 2002

**MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT
SOLID WASTE/LANDFILL SECTION**

FACSIMILE COVER MEMO

FAX # (941)795-3490



PLEASE DELIVER THE FOLLOWING PAGE(S)

TO: Joe Miller, P.E.
ADDRESS: 407/647-8945
FROM: Gwen Pagington
DATE: 4-03-02
**SUBJECT: Monthly Monitoring Report - March 2002
Field Readings**

COMMENTS:

The following pages contain the field readings taken throughout the month of March, 2002 for the above noted report.

Gary Seeley, Landfill Supervisor, recorded the meter readings. If you have any questions, please contact either Gary at 941/748-5543 or myself. Thank you!

cc: Gus DiFonzo
Mike Gore
Gary Seeley

NUMBER of PAGES: 7

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL AS SOON AS POSSIBLE.

**P.O. Box 25010
Bradenton, Florida 34206
941/795-3428**

March 2002 Lechate Meter Readings

3-1-02	#1 = 01767500	#2 = 01131900	#3 = 006669000	W.
3-2-02	#1 =	#2 =	#3 =	
3-3-02	Sunday	N.A.		
3-4-02	#1 = 01822600	#2 = 01154800	#3 = 006909000	W.
3-5-02	#1 = replaced pumps	#2 = replaced pumps	#3 = replacing meters	W.
3-6-02	#1 =	#2 =	#3 =	
3-7-02	#1 =	#2 =	#3 =	
3-8-02	#1 =	#2 =	#3 =	
3-9-02	#1 =	#2 =	#3 =	
3-10-02	Sunday	N.A.		
3-11-02	#1 = 531 + 10	#2 = 804 + 10	#3 = 188 + 100	W.
3-12-02	#1 = 2783 + 10	#2 = 2071 + 10	#3 = 879 + 100	W.
3-13-02	#1 = 4882 X 10	#2 = 2804 X 10	#3 = 1470 X 100	W.
3-14-02	#1 = 6938 X 10	#2 = 3701 X 10	#3 = 2069 X 100	W.
3-15-02	#1 = 8667 X 10	#2 = 4381 X 10	#3 = 2685 X 100	W.
3-16-02				
3-17-02	Sunday	N.A.		
3-18-02	#1 = 14172 X 10	#2 = 6157 X 10	#3 = 4382 X 100	W.
3-19-02	#1 = 16149 X 10	#2 = 6513 X 10	#3 = 4892 X 100	W.
3-20-02	#1 = 18172 X 10	#2 = 6896 X 10	#3 = 5417 X 100	W.
3-21-02	#1 = 20224 X 10	#2 = 8353 X 10	#3 = 5941 X 100	W.
3-22-02	#1 = 22163 X 10	#2 = 8696 X 10	#3 = 6442 X 100	F
3-23-02				
3-24-02	Sunday	N.A.		
3-25-02	#1 = 27880 X 10	#2 = 11670 X 10	#3 = 7928 X 100	W.
3-26-02	#1 = 29860 X 10	#2 = 12583 X 10	#3 = 8411 X 100	W.
3-27-02	#1 = 31807 X 10	#2 = 13411 X 10	#3 = 8871 X 100	W.
3-28-02	#1 = 33777 X 10	#2 = 14132 X 10	#3 = 9343 X 100	F
3-29-02	#1 = 35611 X 10	#2 = 15223 X 10	#3 = 9784 X 100	F
3-30-02				
3-31-02	Sunday	N.A.		

Storm Water Pond Elevations
March 2002

stage III
SB #2 - Elev.

3-1-02	33.30	30.55
3-2-02		
3-3-02	Sunday	
3-4-02	33.25	30.55
3-5-02	33.20	30.54
3-6-02	33.19	30.54
3-7-02	33.19	30.55
3-8-02	33.19	30.55
3-9-02		
3-10-02	Sunday	
3-11-02	33.16	30.54
3-12-02	33.15	30.54
3-13-02	33.15	30.54
3-14-02	33.15	30.54
3-15-02	33.14	30.54
3-16-02		
3-17-02	Sunday	
3-18-02	33.10	30.54
3-19-02	33.10	30.54
3-20-02	33.09	30.54
3-21-02	33.09	30.53
3-22-02	33.08	30.50
3-23-02		
3-24-02	Sunday	
3-25-02	33.03	30.42
3-26-02	33.02	30.39
3-27-02	33.00	30.34
3-28-02	33.00	30.29
3-29-02	33.00	30.24
3-30-02		
3-31-02	Sunday	

March 2002
Lift Station # I

Note! on 3-5-02 the old 5 H.P. pumps in lift station #1 were pulled out and replaced with new 7.5 H.P. pumps.

The old style impeller meters were also taken out and replaced & calibrated with electronic flow meters on 3-11-02. at that time pump #2 was showing a flow of 345 G.P.M. 20700 GPH

We were unable to record G.P.M. on pump #1 due to a malfunction in one of the electrical control panels breaker switch!

Pump Hrs recorded

					GALLONS
3-5-02	Pump #1 =	2227.2	= Pump #2 =	2190.3	
3-6-02	" #1 =	2227.2	= " #2 =	2191.3	20700
3-7-02	" #1 =	2227.2	= " #2 =	2192.2	18630
3-8-02	" #1 =	2227.2	= " #2 =	2193.1	18630
3-11-02	" #1 =	2227.2	= " #2 =	2195.7	59820

March 2002
Lift Station # II

Note! on 3-5-02 the old 3 H.P. pumps in lift station #2 were pulled out and replaced with new 5 H.P. pumps.

The old style impeller meters were also taken out and replaced & calibrated with electronic flow meters on 3-11-02 at that time pump #1 was showing a flow of 270 G.P.M.

Pump #2 recorded 260 G.P.M.

Both pumps running 340 G.P.M. 20400

Pump HRS Recorded

Pump HRS Recorded				BOTH PUMP
3-5-02	Pump #1 = 2158.6	=	Pump #2 = 2212.6	
3-6-02	" #1 = 2159.3	=	" #2 = 2213.3	14280
3-7-02	" #1 = 2159.6	=	" #2 = 2213.6	6120
3-8-02	" #1 = 2159.9	=	" #2 = 2213.9	6120
3-11-02	" #1 = 2160.7	=	" #2 = 2214.7	16320

March 2002
Lift Station # III

Note! The existing pumps were left in lift station # 3-A

The old style impeller meters were removed on 3-5-02 and were replaced with new electronic flow meters and calibrated on 3-11-02

Pump #1 = recorded 750 G.P.M. 45000 GPH

Pump #2 = " " 735 G.P.M. 44100 GPH

Due to a lack of Teschata we were unable to record both pumps G.P.M.!

Pump Hrs Recorded

3-5-02	Pump #1 =	902.8	=	Pump #2 =	914.9
3-6-02	" " #1 =	904.1	=	" " #2 =	916.2
3-7-02	" " #1 =	905.0	=	" " #2 =	917.2
3-8-02	" " #1 =	905.9	=	" " #2 =	918.1
3-11-02	" " #1 =	908.5	=	" " #2 =	920.7

Landfill

LANDFILL SHEET				
2002 Mar	RAIN FALL	LEACHATE MGD	LEACHATE LEVEL	STORMWATER LEVEL
1	0.00	1.030		
2	0.00	0.000		
3	0.00	0.081		
4	0.33	0.083		
5	0.00	0.066		
6	0.00	0.000		
7	0.10	0.000		
8	0.00	0.160		
9	0.00	0.071		
10	0.00	0.071		
11	0.00	0.077		
12	0.04	0.080		
13	0.00	0.071		
14	0.00	0.166		
15	0.00	0.000		
16	0.00	0.082		
17	0.00	0.126		
18	0.00	0.067		
19	0.00	0.104		
20	0.00	0.061		
21	0.00	0.111		
22	0.00	0.059		
23	0.00	0.058		
24	0.00	0.058		
25	0.00	0.075		
26	0.00	0.061		
27	0.00	0.063		
28	0.00	0.061		
29	0.00	0.063		
30	0.00	0.056		
31	0.00	0.056		
TOTAL	0.47	3.095	#DIV/0!	#DIV/0!
AVG		0.100	0.0	0.0
MIN			0.0	0.0
MAX	0.33	1.030		

ACTIVE
APR 3 - 2002

Fax # 9-795-3490



An employee-owned company

March 15, 2002

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

D.E.P.

MAR 19 2002

Southwest District Tampa

**Re: Manatee County Lena Road Landfill
Monthly Report - February 2002**

Dear Mr. Morris:

Attached is the February 2002 monthly report for the Lena Road Landfill in accordance with specific condition numbers 17, 18, and 33 of Operations Permit Number 39884-001-SO. The report consists of the monthly water balance report, leachate tracking summary, monthly gradient report and field readings for the water balance report.

An inward gradient was present in Stage I and Stage III at all of the gradient pairs. An outward gradient was present in Stage II at all the gradient pairs; however, Stage II has no solid waste.

If you should have any questions concerning this report, please contact me in our Orlando office at 407/647-7275 Ext. 153, or Javen Figueroa at Ext. 288.

Sincerely,



Joe Miller, P.E.
Senior Project Manager

cc: Robert Butera, P.E., FDEP SW District
Kim Ford, P.E., FDEP SW District
Steve Morgan, FDEP SW District
Daniel T. Gray, Director, Utility Operations Department
Gus DiFonzo, Solid Waste Manager
C. Michael Gore, Landfill Superintendent
Gwen Pagation, Solid Waste Program Specialist
File - 120498.05 0101 Manatee, Lena Road Landfill, February Monitoring

EXHIBIT A

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY

LENA ROAD LANDFILL

MONTHLY WATER BALANCE REPORT

FEBRUARY, 2002

A	B	C	D	E	F
DATE	LEACHATE STAGE I Lift Station 1	LEACHATE STAGE I Lift Station 2	LEACHATE STAGE III	TOTAL LEACHATE PUMPED	RAINFALL INCHES
01-Feb-02	15,900	3,500	53,000	72,400	0.00
02-Feb-02	0	0	0	0	0.00
03-Feb-02	0	0	0	0	0.00
04-Feb-02	53,300	5,700	180,000	239,000	0.00
05-Feb-02	15,400	1,000	57,000	73,400	0.00
06-Feb-02	17,400	2,600	55,000	75,000	0.00
07-Feb-02	22,100	2,000	57,000	81,100	0.87
08-Feb-02	17,500	2,000	62,000	81,500	0.00
09-Feb-02	0	0	0	0	0.00
10-Feb-02	0	0	0	0	0.16
11-Feb-02	51,700	2,000	176,000	229,700	0.00
12-Feb-02	17,400	2,000	56,000	75,400	0.00
13-Feb-02	17,800	2,000	54,000	73,800	0.22
14-Feb-02	18,800	2,000	60,000	80,800	0.02
15-Feb-02	16,500	2,000	50,000	68,500	0.00
16-Feb-02	0	0	0	0	0.00
17-Feb-02	0	0	0	0	0.00
18-Feb-02	0	0	0	0	0.00
19-Feb-02	66,500	2,000	204,000	272,500	0.00
20-Feb-02	22,500	4,400	63,000	89,900	0.00
21-Feb-02	16,700	3,800	43,000	63,500	0.00
22-Feb-02	20,900	5,900	51,000	77,800	1.40
23-Feb-02	0	0	0	0	0.74
24-Feb-02	43,100	40,900	220,000	304,000	0.00
25-Feb-02	19,000	413,100	99,000	531,100	0.00
26-Feb-02	20,800	379,900	113,000	513,700	0.00
27-Feb-02	20,500	49,600	100,000	170,100	0.03
28-Feb-02	13,100	4,300	74,000	91,400	0.00
TOTAL	506,900	930,700	1,827,000	3,264,600	3.44

Notes:

A - DATE OF READINGS.

B - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 1 IN GALLONS SINCE PREVIOUS DATE RECORDED.

C - LEACHATE PUMPED FROM STAGE I BY LIFT STATION 2 IN GALLONS SINCE PREVIOUS DATE RECORDED.

D - LEACHATE PUMPED FROM STAGE III IN GALLONS SINCE PREVIOUS DATE RECORDED.

E - TOTAL LEACHATE PUMPED TO WWTP STORAGE TANK, WHICH IS THE SUM OF COLUMNS B + C + D.

F - RAINFALL RECORDED ON THIS DATE IN INCHES.

EXHIBIT B

(REVISED DECEMBER 13, 2001)

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL MONTHLY LEACHATE TRACKING SUMMARY -- 2002

MONTH	A LEACHATE STAGE I	B LEACHATE STAGE III	C TOTAL LEACHATE	D RAINFALL INCHES
JANUARY	753,100	2,154,000	2,907,100	2.27
FEBRUARY	1,437,600	1,827,000	3,264,600	3.44
MARCH			0	
APRIL			0	
MAY			0	
JUNE			0	
JULY			0	
AUGUST			0	
SEPTEMBER			0	
OCTOBER			0	
NOVEMBER			0	
DECEMBER			0	
TOTAL	2,190,700	3,981,000	6,171,700	5.71

Notes:

1. (A) Total leachate generated from Stage I.
2. (B) Total leachate generated from Stage III.
3. (C) Total leachate generate (Column A+B) and pumped to the WWTP storage tank.
4. (D) Total rainfall in inches.

Manatee County Lena Road Landfill
Groundwater Gradient
FEBRUARY 2002

Inside Slurry Wall				Outside Slurry Wall		
Piezometer	Riser Elevation	Groundwater Elevation	Gradient Flow	Monitoring Well	Riser Elevation	Groundwater Elevation
STAGE I						
PZ-1	42.55	29.12	<i>inward</i>	MW-5	39.88	30.30
PZ-2	42.47	29.95	<i>inward</i>	MW-2	41.13	30.95
PZ-3A	44.90	28.50	<i>inward</i>	MW-1	42.63	34.01
PZ-4A	47.73	30.00	<i>inward</i>	CW-4	37.48	34.13
PZ-5	43.94	30.33	<i>inward</i>	CW-5A	41.18	35.78
PZ-6	44.73	31.23	<i>inward</i>	SG-1		33.94
PZ-7	47.76	30.01	<i>inward</i>	MW-6	39.29	33.39
PZ-19	45.83	33.78	<i>inward</i>	PZ-11	37.92	34.33
STAGE II						
PZ-8	37.63	34.36	<i>outward</i>	LRII-5	36.75	29.29
PZ-9	36.53	34.36	<i>outward</i>	LRII-4	33.85	26.76
PZ-10	37.05	34.38	<i>outward</i>	LRII-2	36.48	28.85
PZ-11	37.92	34.33	<i>outward</i>	LRII-1	37.97	31.79
STAGE III						
PZ-12	38.35	28.36	<i>inward</i>	GC-2	38.15	31.27
PZ-13	35.36	24.29	<i>inward</i>	GC-3	35.02	27.98
PZ-14A	34.58	19.17	<i>inward</i>	GC-4	33.90	26.31
PZ-15C	40.46	18.65	<i>inward</i>	PZ-15A	39.79	26.61
PZ-16B	40.22	20.84	<i>inward</i>	PZ-16A	39.05	26.77
PZ-17	40.57	28.47	<i>inward</i>	SG-2		29.70
PZ-18	40.16	29.05	<i>inward</i>	SG-3		33.76

Dry 32.80

NO BURIED WASTE IN STAGE II YET

Dry 28.90

Dry 33.76

Notes: The table is arranged so any piezometer can be compared to its corresponding monitoring point. For example, PZ-1 is located on the opposite side of the slurry wall from MW-5. Thus data from PZ-1 are compared to data from MW-5.

SG-3 DRY; CANNOT DEMONSTRATE INWARD GRADIENT w/ AVAILABLE DATA

Additional In-House Monitoring Data						
Stage I						
PZ-2	42.47	29.95	<i>inward</i>	MW-3	39.94	33.68
Stage II						
PZ-9	36.53	34.36	<i>outward</i>	LRII-3	33.47	26.22
Stage III						
PZ-15C	40.46	18.65	<i>inward</i>	GC-1A	31.75	26.50
PZ-16B	40.22	20.84	<i>inward</i>	GC-5	36.46	28.11
PZ-17	40.57	28.47	<i>inward</i>	GC-6	39.02	29.69

This report includes riser elevations determined by certified survey conducted by County Staff and dated Aug. 10,1999. Westra Construction certified riser elevations of PZ-14A, PZ-15C, and PZ-16B on February 15, 2001
 Stage I Landfill - 131 acres (Closed - 30 ac., Intermediate - 91 ac., Open - 10 ac.)
 Stage II Landfill - 110 acres (Closed - 0 ac., Intermediate - 0 ac., Open - 0 ac. No waste in Stage II.)
 Stage III Landfill - 75 acres (Closed - 0 ac., Intermediate - 75 ac., Open - 0 ac.)

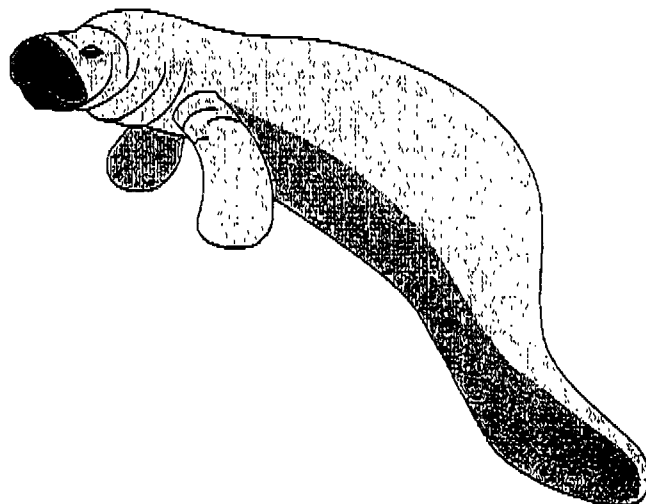
Data Collection: FEBRUARY 15, 2002

JRM
6/25/02

**MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT
SOLID WASTE/LANDFILL SECTION**

FACSIMILE COVER MEMO

FAX # (941)795-3490



PLEASE DELIVER THE FOLLOWING PAGE(S)

TO: Joe Miller, P.E.
ADDRESS: 407/647-8945
FROM: Gwen Pagington
DATE: 3-06-02
**SUBJECT: Monthly Monitoring Report - March 2002
Field Readings**

COMMENTS:

The following pages contain the field readings taken throughout the month of February, 2002 for the above noted report.

Gary Seeley, Landfill Supervisor, recorded the meter readings. If you have any questions, please contact either Gary at 941/748-5543 or myself. Thank you!

cc: Gus DiFonzo
Mike Gore
Gary Seeley

NUMBER of PAGES: 5

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL AS SOON AS POSSIBLE.

**P.O. Box 25010
Bradenton, Florida 34206
941/795-3428**

ECEIVE

MAR 05 2002

February 2002

LEACHATE METER

READINGS

Date	Meter #1	Meter #2	Meter #3	Notes
2-1-02	1012566 + 00	2002068 + 00	3004797 + 000	H.S.
2-2-02				
2-3-02	Sunday			
2-4-02	1 = 013099	2 = 002125	3 = 004977	H.S.
2-5-02	1 = 013253	2 = 002135	3 = 005034	H.S.
2-6-02	1 = 013427	2 = 002161	3 = 005089	H.S.
2-7-02	1 = 013648	2 = 002181	3 = 005146	H.S.
2-8-02	1 = 013823	2 = 002201	3 = 005208	H.S.
2-9-02	1 =	2 =	3 =	
2-10-02	Sunday			
2-11-02	1 = 014340	2 = 002204	3 = 005384	H.S.
2-12-02	1 = 014514	2 = 002204	3 = 005440	H.S.
2-13-02	1 = 014692	2 = 002204	3 = 005494	H.S.
2-14-02	1 = 014880	2 = 002204	3 = 005554	H.S.
2-15-02	1 = 015045	2 = 002204	3 = 005604	H.S.
2-16-02	1 =	2 =	3 =	
2-17-02	Sunday			
2-18-02	Presidents day			
2-19-02	1 = 015710	2 = 002204	3 = 005808	H.S.
2-20-02	1 = 015935	2 = 002248	3 = 005871	H.S.
2-21-02	1 = 016102	2 = 002286	3 = 005914	H.S.
2-22-02	1 = 016311	2 = 002345	3 = 005965	H.S.
2-23-02	1 =	2 =	3 =	
2-24-02	1 = 016742	2 = 002754	3 = 006185	H.S.
2-25-02	1 = 016932	2 = 006885	3 = 006294	H.S.
2-26-02	1 = 017140	2 = 010684	3 = 006397	H.S.
2-27-02	1 = 017345	2 = 011180	3 = 006497	H.S.
2-28-02	1 = 017476	2 = 011223	3 = 006571	H.S.

day

FEB 2002

2-1-02 =	33.95	
2-2-02 =		
2-3-02 =	Sunday	
2-4-02 =	33.95	
2-5-02 =	33.90	
2-6-02 =	33.80	
2-7-02 =	33.80	
2-8-02 =	33.80	
2-9-02 =		
2-10-02 =	Sunday	
2-11-02 =	33.82	
2-12-02 =	33.82	
2-13-02 =	33.80	
2-14-02 =	33.80	
2-15-02 =	33.80	
2-16-02 =		
2-17-02 =	Sunday	
2-18-02 =	Presidents	Day Closed
2-19-02 =	33.79	
2-20-02 =	33.75	
2-21-02 =	33.74	
2-22-02 =	33.85	
2-23-02 =		
2-24-02 =	Sunday	
2-25-02 =	34.35	
2-26-02 =	33.60	
2-27-02 =	33.45	
2-28-02 =	33.35	

Note = leachate meter readings
for lift station # II and pump hrs
for pump #1 + pump #2.

2-11-02	Pump #1 = 2104.4	pump #2 = 2159.2
2-12-02	pump #1 = 2104.5	pump #2 = 2159.2
2-13-02	pump #1 = 2104.6	pump #2 = 2159.2
2-14-02	pump #1 = 2104.7	pump #2 = 2159.3
2-15-02	pump #1 = 2104.9	pump #2 = 2159.5
2-19-02	pump #1 = 2105.5	pump #2 = 2160.1
2-20-02	pump #1 = 2105.7	pump #2 = 2160.3

on Tues 2-19-02 we took the
impeller apart of flow meter #2 and
found a piece of wood wedged in the
impeller!

Landfill

RECEIVED

MAR 01

LANDFILL SHEET		
2002 Feb	RAIN FALL	LEACHATE MGD
1	0.00	0.000
2	0.00	0.071
3	0.00	0.064
4	0.00	0.000
5	0.00	0.000
6	0.00	0.139
7	0.87	0.132
8	0.00	0.125
9	0.00	0.130
10	0.16	0.129
11	0.00	0.130
12	0.00	0.129
13	0.22	0.000
14	0.02	0.180
15	0.00	0.125
16	0.00	0.062
17	0.00	0.061
18	0.00	0.057
19	0.00	0.057
20	0.00	0.050
21	0.00	0.061
22	1.40	0.080
23	0.74	0.106
24	0.00	0.164
25	0.00	0.000
26	0.00	0.387
27	0.03	0.127
28	0.00	0.087
TOTAL	3.44	2.663
AVG		0.095
MIN		
MAX	1.40	0.387

FROM: SE RTP

3/1/02

Revert

RECEIVED

MAR 01 2002

Utility Operations

Fax # 9-795-3490