



December 2, 2009

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

Dept. Of Environmental Protection

DEC 03 2009

Southwest District

**Re: Manatee County Lena Road Landfill
Monthly Report – November 2009**

Dear Mr. Morris:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2009 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, and Monthly Groundwater Gradient Report.

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

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

Sincerely,

Joe Miller, P.E.
Senior Project Manager

Attachments

cc: Mike Gore, Manatee County Solid Waste Division Manager
Bryan White, Manatee County Landfill Superintendent
Jeanne' Detweiler, Manatee County Division/Landfill
File – 120498.94 0100

EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY

LENA ROAD LANDFILL

MONTHLY WATER BALANCE REPORT

NOVEMBER, 2009

Dept Of Environmental Protection
DEC 03 2009
Southwest District

A	B	C	D	E	F	G	H
DATE	LEACHATE STAGE I Lift Station 1 (gallons)	LEACHATE STAGE I Lift Station 2 (gallons)	LEACHATE STAGE I TOTAL (gallons)	LEACHATE STAGE III TOTAL (gallons)	TOTAL LEACHATE PUMPED (gallons)	RAINFALL (inches)	RAINFALL (gallons)
01-Nov-09	0	0	0	0	0	0.00	0
02-Nov-09	58,260	370	58,630	77,900	136,530	0.00	0
03-Nov-09	21,800	0	21,800	24,100	45,900	0.00	0
04-Nov-09	19,880	30	19,910	25,700	45,610	0.00	0
05-Nov-09	14,170	0	14,170	24,000	38,170	0.00	0
06-Nov-09	18,040	190	18,230	23,500	41,730	0.00	0
07-Nov-09	0	0	0	0	0	0.00	0
08-Nov-09	0	0	0	0	0	0.00	0
09-Nov-09	59,200	0	59,200	74,100	133,300	0.03	136,866
10-Nov-09	17,890	0	17,890	21,100	38,990	0.17	775,576
11-Nov-09	22,400	0	22,400	23,600	46,000	0.25	1,140,553
12-Nov-09	20,900	0	20,900	24,000	44,900	0.01	45,622
13-Nov-09	21,540	150	21,690	23,700	45,390	0.00	0
14-Nov-09	0	0	0	0	0	0.00	0
15-Nov-09	0	0	0	0	0	0.00	0
16-Nov-09	50,620	0	50,620	67,800	118,420	0.00	0
17-Nov-09	16,640	0	16,640	21,700	38,340	0.00	0
18-Nov-09	16,300	0	16,300	20,900	37,200	0.00	0
19-Nov-09	15,600	0	15,600	21,900	37,500	0.00	0
20-Nov-09	17,060	0	17,060	22,200	39,260	0.00	0
21-Nov-09	0	0	0	0	0	0.00	0
22-Nov-09	0	0	0	0	0	0.00	0
23-Nov-09	55,310	210	55,520	67,100	122,620	0.00	0
24-Nov-09	14,870	210	15,080	20,600	35,680	0.00	0
25-Nov-09	38,550	0	38,550	27,400	65,950	3.18	14,507,837
26-Nov-09	0	0	0	0	0	0.03	136,866
27-Nov-09	37,820	1,800	39,620	77,800	117,420	0.00	0
28-Nov-09	0	0	0	0	0	0.00	0
29-Nov-09	0	0	0	0	0	0.00	0
30-Nov-09	70,200	4,810	75,010	102,600	177,610	0.00	0
01-Dec-09	0	0	0	0	0	0.00	0
TOTAL	607,050	7,770	614,820	791,700	1,406,520	3.67	16,743,322
Leachate Pumped as Percentage of Rainfall			6.0%	12.0%			

Column Notes:

A - Date of reading.

B - Leachate pumped (gallons) from Stage I by lift station 1.

C - Leachate pumped (gallons) from Stage I by lift station 2.

D - Total Stage I leachate pumpage (B+C).

E - Leachate pumped (gallons) from Stage III.

F - Total leachate pumped to WWTP storage tank (D+E).

G - Rainfall (inches) recorded on this date.

H - Rainfall (gallons) calculated based on open area (G x Area x 27,156 gal/acre-in).

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

Comments

EXHIBIT B

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL MONTHLY LEACHATE TRACKING SUMMARY -- 2009

	B	C	D	E	F	G	H
MONTH	STAGE I LEACHATE (gallons)	STAGE III LEACHATE (gallons)	TOTAL LEACHATE (gallons)	RAINFALL (inches)	RAINFALL (gallons)	STAGE I LEACHATE/ RAINFALL (%)	STAGE III LEACHATE /RAINFALL (%)
JANUARY	2,838,610	733,000	3,571,610	1.85	8,440,094	55.4%	22.1%
FEBRUARY	824,068	700,500	1,524,568	0.69	3,147,927	43.1%	56.6%
MARCH	527,440	674,200	1,201,640	0.86	3,923,503	22.1%	43.7%
APRIL	422,420	588,300	1,010,720	2.23	10,173,735	6.8%	14.7%
MAY	410,380	957,600	1,367,980	5.25	23,951,618	2.8%	10.2%
JUNE	785,230	1,769,900	2,555,130	6.32	28,833,186	4.5%	15.6%
JULY	1,055,670	1,538,800	2,594,470	8.67	39,554,387	4.4%	9.9%
AUGUST	819,790	1,114,000	1,933,790	10.90	49,728,122	2.7%	5.7%
SEPTEMBER	859,110	1,153,800	2,012,910	11.53	52,602,316	2.7%	5.6%
OCTOBER	600,370	780,600	1,380,970	0.89	4,060,370	24.4%	48.9%
NOVEMBER	614,820	791,700	1,406,520	3.67	16,743,322	6.0%	12.0%
DECEMBER			0		0		
TOTAL	9,757,908	10,802,400	20,560,308	52.86	241,158,581	6.7%	11.4%

Notes:

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

Landfill Stage Land Areas

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

LECHATE NOVEMBER 2009

DATE	LEACHATE			STORMWATER		COMMENTS	NAME
	METER # 1	METER # 2	METER # 3	S. G. # 1	S. G. # 2		
11/2/09	4925508	2643360	2708084	32.87	29.50	OK	R.B.
11/3/09	4927655	2643360	2708330	32.86	29.36	OK	R.B.
11/4/09	4929676	2643390	2708507	32.86	29.28	OK	R.B.
11/5/09	4931093	2643390	2708827	32.86	29.25	OK	R.B.
11/6/09	4932897	2643580	2709062	32.85	Dry	OK	R.B.
11/9/09	4938817	2643580	2709803	32.81	Dry	OK	R.B.
11/10/09	4940606	2643580	2710014	32.82	Dry	OK	R.B.
11/11/09	4942846	2643580	2710250	32.87	Dry	OK	R.B.
11/12/09	4944936	2643580	2710490	32.87	Dry	OK	R.B.
11/13/09	4947090	2643730	2710727	32.87	Dry	OK	R.B.
11/16/09	4952152	2643730	2711405	32.86	29.02	OK	R.B.
11/17/09	4953816	2643730	2711622	32.85	Dry	OK	R.B.
11/18/09	4955446	2643730	2711831	32.85	Dry	OK	R.B.
11/19/09	4957006	2643730	2712050	32.85	Dry	OK	R.B.
11/20/09	4958712	2643730	2712272	32.84	Dry	OK	R.B.
11/23/09	4964243	2643940	2712543	32.86	Dry	OK	R.B.
11/24/09	4965730	2644150	2713149	32.86	Dry	OK	R.B.
11/25/09	4969585	2644150	2713423	33.70	32.45	OK	R.B.
11/26/09							
11/27/09	4973367	2645950	2714201	33.79	32.06	OK	R.B.
11/30/09	4980387	2650760	2715227	33.73	31.67	OK	R.B.

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2009 Nov	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.013	43.20	35.30
2	0.00	0.013	43.00	35.20
3	0.00	0.013	43.10	35.00
4	0.00	0.012	43.00	34.50
5	0.00	0.012	43.00	34.40
6	0.00	0.013	42.90	34.40
7	0.00	0.013	43.00	34.10
8	0.00	0.013	42.90	33.70
9	0.03	0.012	42.80	33.80
10	0.17	0.012	42.60	33.60
11	0.25	0.013	42.70	33.70
12	0.01	0.013	42.70	33.90
13	0.00	0.012	42.70	34.10
14	0.00	0.012	42.60	34.00
15	0.00	0.011	42.40	34.40
16	0.00	0.011	42.50	34.50
17	0.00	0.012	42.40	34.40
18	0.00	0.012	42.40	34.30
19	0.00	0.011	42.40	34.40
20	0.00	0.012	42.30	34.00
21	0.00	0.012	42.20	34.10
22	0.00	0.012	42.10	34.20
23	0.00	0.012	42.10	33.80
24	0.00	0.011	42.00	33.80
25	3.18	0.017	42.40	34.40
26	0.03	0.020	42.30	34.30
27	0.00	0.019	42.30	34.40
28	0.00	0.018	42.20	34.80
29	0.00	0.017	42.20	35.00
30	0.00	0.016	42.10	35.20
31				
TOTAL	3.67	0.399		
AVG		0.013		
MIN				
MAX	3.18	0.020		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: November 2009

Piezometers Inside Slurry Wall				Groundwater Monitoring Wells Outside Slurry Wall		
Piezometer	Riser Elevation	Leachate Elevation	Gradient Flow	Monitoring Well	Riser Elevation	Groundwater Elevation
P-1	42.68	29.55	<i>inward</i>	GW-1	38.68	31.95
P-2	42.32	28.77	<i>inward</i>	GW-2	40.92	31.97
P-3	40.36	25.71	<i>inward</i>	GW-3	39.40	32.08
P-4	40.78	22.02	<i>inward</i>	GW-4	40.53	31.19
P-5	40.73	20.83	<i>inward</i>	GW-5	39.90	30.91
P-6	40.74	19.79	<i>inward</i>	GW-6	38.95	30.14
P-7	40.60	18.83	<i>inward</i>	GW-7	39.49	27.89
P-8	40.21	18.57	<i>inward</i>	GW-8	39.75	28.15
P-9	39.97	19.39	<i>inward</i>	GW-9	39.65	26.50
P-10	39.86	19.25	<i>inward</i>	GW-10	38.34	26.38
P-11	40.52	22.54	<i>inward</i>	GW-11	38.26	29.16
P-12	43.28	29.28	<i>inward</i>	GW-12	42.09	31.37
P-13	44.78	30.34	<i>inward</i>	GW-13	44.79	32.88
P-14	45.09	27.31	<i>inward</i>	GW-14	39.63	33.09
P-15	45.57	30.94	<i>inward</i>	GW-15	42.33	34.03
P-16	44.67	31.02	<i>inward</i>	GW-16	44.41	34.45
P-17	44.28	29.94	<i>inward</i>	GW-17	42.19	33.29

Comments:

Date Data Collected: November 17, 2009

Form Revised December 6, 2004



An employee-owned company

44795

Dept. of Environmental
Protection
JAN 14 2010
Southwest District

January 11, 2010

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

**Re: Manatee County Lena Road Landfill
Monthly Report – December 2009**

Dear Mr. Morris:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2009 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, and Monthly Groundwater Gradient Report.

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

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

Sincerely,

Joe Miller, P.E.
Senior Project Manager

Attachments

cc: Mike Gore, Manatee County Solid Waste Division Manager
Bryan White, Manatee County Landfill Superintendent
Jeanne' Detweiler, Manatee County Division/Landfill
File – 120498.94 0100

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EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY

LENA ROAD LANDFILL

MONTHLY WATER BALANCE REPORT

DECEMBER, 2009

A	B	C	D	E	F	G	H
DATE	LEACHATE STAGE I Lift Station 1 (gallons)	LEACHATE STAGE I Lift Station 2 (gallons)	LEACHATE STAGE I TOTAL (gallons)	LEACHATE STAGE III TOTAL (gallons)	TOTAL LEACHATE PUMPED (gallons)	RAINFALL (inches)	RAINFALL (gallons)
01-Dec-09	23,600	0	23,600	29,700	53,300	0.00	0
02-Dec-09	26,510	0	26,510	26,700	53,210	0.12	547,466
03-Dec-09	22,810	0	22,810	24,200	47,010	0.67	3,056,683
04-Dec-09	18,670	780	19,450	31,900	51,350	0.98	4,470,969
05-Dec-09	0	0	0	0	0	0.69	3,147,927
06-Dec-09	0	0	0	0	0	0.00	0
07-Dec-09	105,190	4,280	109,470	127,100	236,570	0.00	0
08-Dec-09	31,830	0	31,830	36,900	68,730	0.00	0
09-Dec-09	36,570	0	36,570	93,000	129,570	0.00	0
10-Dec-09	33,430	20	33,450	6,600	40,050	0.04	182,489
11-Dec-09	25,260	1,050	26,310	9,700	36,010	0.01	45,622
12-Dec-09	0	0	0	0	0	0.00	0
13-Dec-09	0	0	0	0	0	0.00	0
14-Dec-09	83,370	2,840	86,210	85,700	171,910	0.00	0
15-Dec-09	28,070	0	28,070	26,700	54,770	0.00	0
16-Dec-09	27,100	0	27,100	26,500	53,600	0.00	0
17-Dec-09	22,670	670	23,340	26,000	49,340	0.00	0
18-Dec-09	32,720	500	33,220	24,900	58,120	0.20	912,443
19-Dec-09	0	0	0	0	0	0.00	0
20-Dec-09	0	0	0	0	0	0.00	0
21-Dec-09	78,480	10,190	88,670	75,200	163,870	0.00	0
22-Dec-09	20,510	3,760	24,270	21,900	46,170	0.00	0
23-Dec-09	25,560	1,110	26,670	25,200	51,870	0.00	0
24-Dec-09	29,950	1,520	31,470	27,100	58,570	0.00	0
25-Dec-09	0	0	0	0	0	0.03	136,866
26-Dec-09	0	0	0	0	0	0.00	0
27-Dec-09	0	0	0	0	0	0.00	0
28-Dec-09	85,250	4,010	89,260	90,300	179,560	0.00	0
29-Dec-09	17,540	2,010	19,550	19,200	38,750	0.00	0
30-Dec-09	15,610	3,650	19,260	21,200	40,460	0.00	0
31-Dec-09	23,870	1,460	25,330	21,700	47,030	0.00	0
TOTAL	814,570	37,850	852,420	877,400	1,729,820	2.74	12,500,464
Leachate Pumped as Percentage of Rainfall			11.2%	17.9%			

Column Notes:

A - Date of reading.

B - Leachate pumped (gallons) from Stage I by lift station 1.

C - Leachate pumped (gallons) from Stage I by lift station 2.

D - Total Stage I leachate pumpage (B+C).

E - Leachate pumped (gallons) from Stage III.

F - Total leachate pumped to WWTP storage tank (D+E).

G - Rainfall (inches) recorded on this date.

H - Rainfall (gallons) calculated based on open area (G x Area x 27,156 gal/acre-in).

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

Comments

EXHIBIT B

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL MONTHLY LEACHATE TRACKING SUMMARY -- 2009

	B	C	D	E	F	G	H
MONTH	STAGE I LEACHATE (gallons)	STAGE III LEACHATE (gallons)	TOTAL LEACHATE (gallons)	RAINFALL (Inches)	RAINFALL (gallons)	STAGE I LEACHATE/ RAINFALL (%)	STAGE III LEACHATE /RAINFALL (%)
JANUARY	2,838,610	733,000	3,571,610	1.85	8,440,094	55.4%	22.1%
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MAY	410,380	957,600	1,367,980	5.25	23,951,618	2.8%	10.2%
JUNE	785,230	1,769,900	2,555,130	6.32	28,833,186	4.5%	15.6%
JULY	1,055,670	1,538,800	2,594,470	8.67	39,554,387	4.4%	9.9%
AUGUST	819,790	1,114,000	1,933,790	10.90	49,728,122	2.7%	5.7%
SEPTEMBER	859,110	1,153,800	2,012,910	11.53	52,602,316	2.7%	5.6%
OCTOBER	600,370	780,600	1,380,970	0.89	4,060,370	24.4%	48.9%
NOVEMBER	614,820	791,700	1,406,520	3.67	16,743,322	6.0%	12.0%
DECEMBER	852,420	877,400	1,729,820	2.74	12,500,464	11.2%	17.9%
TOTAL	10,610,328	11,679,800	22,290,128	55.60	253,659,045	6.9%	11.7%

Notes:

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

Landfill Stage Land Areas

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

LECHATE DECEMBER 2009

DATE	LEACHATE			STORMWATER		COMMENTS	NAME
	METER # 1	METER # 2	METER # 3	S. G. # 1	S. G. # 2		
12/1/09	4982747	2650760	2715524	33.11	31.58	OK	R.B.
12/2/09	4985398	2650760	2715791	32.51	31.56	OK	R.B.
12/3/09	4987679	2650760	2716033	32.79	31.80	OK	R.B.
12/4/09	4989546	2651540	2716352	32.81	31.67	OK	R.B.
12/7/09	5000065	2655820	2717623	33.35	32.21	OK	R.B.
12/8/08	5003248	2655820	2717992	32.77	32.17	OK	R.B.
12/9/09	5006905	2655820	2718422	32.18	32.09	OK	R.B.
12/10/09	5010248	2655840	2718968	32.28	32.00	OK	R.B.
12/11/09	5012774	2656896	2719085	32.27	31.90	OK	R.B.
12/14/09	5021111	2659730	2719942	30.32	31.60	OK	R.B.
12/15/09	5023918	2659730	2720209	32.37	31.50	OK	R.B.
12/16/09	5026628	2659730	2720474	32.38	31.40	OK	R.B.
12/17/09	5028345	2660400	2720734	32.34	31.39	OK	R.B.
12/18/09	5032167	2660400	2720882	32.41	31.18	OK	R.B.
12/21/09	5040015	2671090	2721735	32.43	30.84	OK	R.B.
12/22/09	5042066	2674850	2721954	32.45	30.78	OK	R.B.
12/23/09	5044622	2675960	2722206	32.46	30.70	OK	R.B.
12/24/09	5047617	2677450	2722477	32.44	30.60	OK	R.B.
12/25/09							
12/28/09	5056142	2681490	2723380	32.50	30.38	OK	R.B.
12/29/09	5057896	2683500	2723572	32.49	30.30	OK	R.B.
12/30/09	5059457	2687150	2723784	32.48	30.25	OK	R.B.
12/31/09	5061844	2688610	2724001	32.48	30.28	OK	R.B.

JAN 14 2010

Southwest District

Protection

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2008 Dec	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.016	42.00	35.10
2	0.12	0.015	42.00	35.00
3	0.67	0.016	42.10	35.40
4	0.98	0.015	42.10	35.30
5	0.69	0.027	42.20	35.90
6	0.00	0.021	42.10	36.10
7	0.00	0.021	42.10	36.40
8	0.00	0.021	42.10	36.50
9	0.00	0.022	42.00	36.50
10	0.04	0.020	42.00	36.70
11	0.01	0.017	42.00	36.80
12	0.00	0.017	41.90	36.80
13	0.00	0.017	41.80	37.00
14	0.00	0.016	41.80	36.90
15	0.00	0.016	41.80	36.80
16	0.00	0.017	41.70	36.80
17	0.00	0.016	41.80	36.70
18	0.20	0.018	41.80	36.60
19	0.00	0.016	41.70	36.80
20	0.00	0.014	41.70	37.00
21	0.00	0.014	41.70	37.00
22	0.00	0.014	41.70	36.50
23	0.00	0.014	41.70	36.60
24	0.00	0.015	41.60	36.50
25	0.03	0.015	41.60	36.20
26	0.00	0.014	41.70	36.20
27	0.00	0.013	41.70	35.90
28	0.00	0.013	41.50	36.00
29	0.00	0.012	41.60	35.80
30	0.00	0.012	41.50	35.50
31	0.00	0.014	41.50	35.70
TOTAL	2.74	0.508		
AVG		0.016		
MIN				
MAX	0.98	0.027		

Fax # 9-708-5663

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: December 2009

Piezometers Inside Slurry Wall			Gradient Flow	Groundwater Monitoring Wells Outside Slurry Wall		
Piezometer	Riser Elevation	Leachate Elevation		Monitoring Well	Riser Elevation	Groundwater Elevation
P-1	42.68	29.68	inward	GW-1	38.68	33.86
P-2	42.32	29.06	inward	GW-2	40.92	33.91
P-3	40.36	27.74	inward	GW-3	39.40	33.94
P-4	40.78	22.23	inward	GW-4	40.53	33.42
P-5	40.73	20.94	inward	GW-5	39.90	32.48
P-6	40.74	19.82	inward	GW-6	38.95	31.85
P-7	40.60	18.90	inward	GW-7	39.49	31.03
P-8	40.21	18.63	inward	GW-8	39.75	30.06
P-9	39.97	19.58	inward	GW-9	39.65	29.34
P-10	39.86	19.34	inward	GW-10	38.34	29.99
P-11	40.52	22.55	inward	GW-11	38.26	31.13
P-12	43.28	29.32	inward	GW-12	42.09	31.79
P-13	44.78	30.27	inward	GW-13	44.79	32.55
P-14	45.09	30.31	inward	GW-14	39.63	34.15
P-15	45.57	30.97	inward	GW-15	42.33	34.78
P-16	44.67	31.07	inward	GW-16	44.41	35.31
P-17	44.28	30.03	inward	GW-17	42.19	33.98

Comments:

Date Data Collected: December 17, 2009

Form Revised December 6, 2004

44785



An employee-owned company

Dept. of Environmental
Protection
FEB 04 2010
Southwest District

February 2, 2010

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

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

Dear Mr. Morris:

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

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

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

Sincerely,

A handwritten signature in black ink that reads 'Joe Miller'. The signature is fluid and cursive, with the first name 'Joe' and last name 'Miller' clearly distinguishable.

Joe Miller, P.E.
Senior Project Manager

Attachments

cc: Mike Gore, Manatee County Solid Waste Division Manager
Bryan White, Manatee County Landfill Superintendent
Jeanne' Detweiler, Manatee County Division/Landfill
File – 120498.94 0100

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EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY

LENA ROAD LANDFILL

MONTHLY WATER BALANCE REPORT

JANUARY, 2010

Dept. of Environmental Protection
FEB 04 2010
Southwest Florida

A	B	C	D	E	F	G	H
DATE	LEACHATE STAGE I Lift Station 1 (gallons)	LEACHATE STAGE I Lift Station 2 (gallons)	LEACHATE STAGE I TOTAL (gallons)	LEACHATE STAGE III TOTAL (gallons)	TOTAL LEACHATE PUMPED (gallons)	RAINFALL (inches)	RAINFALL (gallons)
01-Jan-10	0	0	0	0	0	1.00	4,562,213
02-Jan-10	0	0	0	0	0	0.00	0
03-Jan-10	0	0	0	0	0	0.00	0
04-Jan-10	82,850	21,840	104,690	93,000	197,690	0.00	0
05-Jan-10	14,680	6,100	20,780	17,300	38,080	0.00	0
06-Jan-10	19,190	5,220	24,410	23,700	48,110	0.00	0
07-Jan-10	22,680	2,690	25,370	19,400	44,770	0.00	0
08-Jan-10	24,840	3,130	27,970	21,900	49,870	0.02	91,244
09-Jan-10	0	0	0	0	0	0.20	912,443
10-Jan-10	0	0	0	0	0	0.00	0
11-Jan-10	54,930	8,340	63,270	63,800	127,070	0.00	0
12-Jan-10	16,530	700	17,230	15,100	32,330	0.00	0
13-Jan-10	19,630	4,290	23,920	20,100	44,020	0.00	0
14-Jan-10	19,450	3,900	23,350	21,800	45,150	0.00	0
15-Jan-10	21,660	1,430	23,090	20,400	43,490	0.00	0
16-Jan-10	0	0	0	0	0	1.29	5,885,255
17-Jan-10	0	0	0	0	0	0.05	228,111
18-Jan-10	67,310	5,970	73,280	64,300	137,580	0.00	0
19-Jan-10	19,690	740	20,430	17,700	38,130	0.00	0
20-Jan-10	23,990	1,220	25,210	22,600	47,810	0.00	0
21-Jan-10	25,560	1,930	27,490	23,100	50,590	0.00	0
22-Jan-10	23,410	220	23,630	17,800	41,430	0.00	0
23-Jan-10	0	0	0	0	0	0.00	0
24-Jan-10	0	0	0	0	0	0.01	45,622
25-Jan-10	73,900	4,850	78,750	64,200	142,950	0.62	2,828,572
26-Jan-10	16,810	800	17,610	18,000	35,610	0.00	0
27-Jan-10	16,550	2,170	18,720	20,000	38,720	0.00	0
28-Jan-10	17,300	1,670	18,970	20,000	38,970	0.00	0
29-Jan-10	21,450	890	22,340	21,100	43,440	0.00	0
30-Jan-10	0	0	0	0	0	0.02	91,244
31-Jan-10	0	0	0	0	0	0.00	0
TOTAL	602,410	78,100	680,510	605,300	1,285,810	3.21	14,644,704
Leachate Pumped as Percentage of Rainfall			7.7%	10.5%			

Column Notes:

A - Date of reading.

B - Leachate pumped (gallons) from Stage I by lift station 1.

C - Leachate pumped (gallons) from Stage I by lift station 2.

D - Total Stage I leachate pumpage (B+C).

E - Leachate pumped (gallons) from Stage III.

F - Total leachate pumped to WWTP storage tank (D+E).

G - Rainfall (inches) recorded on this date.

H - Rainfall (gallons) calculated based on open area (G x Area x 27,156 gal/acre-in).

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

Comments

EXHIBIT B

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

	B	C	D	E	F	G	H
MONTH	STAGE I LEACHATE (gallons)	STAGE III LEACHATE (gallons)	TOTAL LEACHATE (gallons)	RAINFALL (inches)	RAINFALL (gallons)	STAGE I LEACHATE/ RAINFALL (%)	STAGE III LEACHATE/ RAINFALL (%)
JANUARY	680,510	605,300	1,285,810	3.21	14,644,704	7.7%	10.5%
FEBRUARY							
MARCH							
APRIL							
MAY							
JUNE							
JULY							
AUGUST							
SEPTEMBER							
OCTOBER							
NOVEMBER							
DECEMBER							
TOTAL	680,510	605,300	1,285,810	3.21	14,644,704	7.7%	10.5%

Notes:

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

Landfill Stage Land Areas

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

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2010 Jan	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	1.00	0.014	41.70	35.80
2	0.00	0.012	41.60	35.80
3	0.00	0.013	41.70	35.60
4	0.00	0.012	41.60	35.40
5	0.00	0.012	41.50	35.30
6	0.00	0.012	41.40	35.10
7	0.00	0.013	41.40	35.20
8	0.02	0.013	41.40	35.00
9	0.20	0.013	41.50	35.00
10	0.00	0.010	41.40	34.80
11	0.00	0.011	41.40	34.80
12	0.00	0.016	41.30	34.60
13	0.00	0.013	41.20	34.40
14	0.00	0.013	41.20	34.40
15	0.00	0.013	41.20	34.40
16	1.29	0.014	41.20	34.40
17	0.05	0.015	41.30	34.90
18	0.00	0.014	41.30	35.30
19	0.00	0.013	41.30	35.40
20	0.00	0.014	41.30	35.80
21	0.00	0.015	41.30	35.90
22	0.00	0.014	41.30	36.20
23	0.00	0.013	41.30	36.50
24	0.01	0.014	41.30	36.60
25	0.62	0.015	41.40	36.90
26	0.00	0.012	41.40	37.00
27	0.00	0.012	41.40	37.40
28	0.00	0.013	41.30	37.60
29	0.00	0.014	41.40	37.70
30	0.02	0.016	41.40	37.70
31	0.00	0.014	41.40	37.70
TOTAL	3.21	0.398		
AVG		0.013		
MIN				
MAX	1.29	0.016		

Fax # 9-708-5668

LECHATE JANUARY 2010

DATE	LEACHATE			STORMWATER		COMMENTS	NAME
	METER # 1	METER # 2	METER # 3	S. G. # 1	S. G. # 2		
1/4/10	5070129	2710450	2724931	32.66	30.20	OK	R.B.
1/5/10	5071597	2716550	2725104	32.66	30.15	OK	R.B.
1/6/10	5073516	2721770	2725341	32.66	30.06	OK	R.B.
1/7/10	5075764	2724460	2725535	32.65	30.00	OK	R.B.
1/8/10	5078268	2727590	2725754	32.65	30.00	OK	M.Z.
1/11/10	5083761	2735930	2726392	32.69	29.28	OK	R.B.
1/12/10	5085414	2736630	2726583	32.69	29.27	OK	R.B.
1/13/10	5087377	2740920	2726744	32.70	29.90	OK	R.B.
1/13/10							
1/14/10	5089332	2744830	2726744	32.70	29.90	OK	R.B.
1/15/10	5091438	2746250	2727162	32.68	29.86	OK	M.Z.
1/18/10	5098219	2752220	2727809	33.00	31.76	OK	R.B.
1/19/10	5100188	2752960	2727986	33.10	31.58	OK	R.B.
1/20/10	5102587	2754180	2728212	33.10	31.54	OK	R.B.
1/21/10	5105143	2756110	2728428	33.11	31.37	OK	R.B.
1/22/10	5107484	2756330	2728621	33.12	31.28	OK	R.B.
1/25/10	5114874	2761180	2729263	33.25	31.44	OK	R.B.
1/26/10	5116555	2761980	2729443	33.26	31.45	OK	R.B.
1/27/10	5118210	2764150	2729643	33.27	31.32	OK	R.B.
1/28/10	5119940	2765820	2729813	33.26	31.26	OK	R.B.
1/29/10	5122085	2766710	2730054	33.27	31.12	OK	R.B.

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: JANUARY 2010

Piezometers Inside Slurry Wall				Groundwater Monitoring Wells Outside Slurry Wall		
Piezometer	Riser Elevation	Leachate Elevation	Gradient Flow	Monitoring Well	Riser Elevation	Groundwater Elevation
P-1	42.68	29.63	<i>inward</i>	GW-1	38.68	33.26
P-2	42.32	29.02	<i>inward</i>	GW-2	40.92	33.16
P-3	40.36	27.18	<i>inward</i>	GW-3	39.40	34.20
P-4	40.78	22.18	<i>inward</i>	GW-4	40.53	33.71
P-5	40.73	20.92	<i>inward</i>	GW-5	39.90	32.92
P-6	40.74	19.83	<i>inward</i>	GW-6	38.95	32.21
P-7	40.60	19.08	<i>inward</i>	GW-7	39.49	30.80
P-8	40.21	18.76	<i>inward</i>	GW-8	39.75	29.99
P-9	39.97	19.41	<i>inward</i>	GW-9	39.65	29.08
P-10	39.86	19.37	<i>inward</i>	GW-10	38.34	29.71
P-11	40.52	22.50	<i>inward</i>	GW-11	38.26	30.97
P-12	43.28	29.42	<i>inward</i>	GW-12	42.09	31.72
P-13	44.78	30.42	<i>inward</i>	GW-13	44.79	32.96
P-14	45.09	29.86	<i>inward</i>	GW-14	39.63	34.64
P-15	45.57	30.92	<i>inward</i>	GW-15	42.33	34.98
P-16	44.67	31.04	<i>inward</i>	GW-16	44.41	34.99
P-17	44.28	29.96	<i>inward</i>	GW-17	42.19	34.19

Comments:

Date Data Collected: January 18, 2010

Form Revised December 6, 2004

44795



An employee-owned company

March 9, 2010

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

Dept. of Environmental
Protection
MAR 11 2010
Southwest District

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

Dear Mr. Morris:

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

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

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

Sincerely,

A handwritten signature in cursive script that reads 'Joe Miller'.

Joe Miller, P.E.
Senior Project Manager

Attachments

cc: Mike Gore, Manatee County Solid Waste Division Manager
Bryan White, Manatee County Landfill Superintendent
Jeanne' Detweiler, Manatee County Division/Landfill
File – 120498.94 0100

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EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
FEBRUARY, 2010

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
MAR 11 2010
SOUTHWEST DISTRICT
TAMPA

A	B	C	D	E	F	G	H
DATE	LEACHATE STAGE I Lift Station 1 (gallons)	LEACHATE STAGE I Lift Station 2 (gallons)	LEACHATE STAGE I TOTAL (gallons)	LEACHATE STAGE III TOTAL (gallons)	TOTAL LEACHATE PUMPED (gallons)	RAINFALL (Inches)	RAINFALL (gallons)
01-Feb-10	71,260	4,640	75,900	61,500	137,400	0.06	273,733
02-Feb-10	22,150	3,450	25,600	29,500	55,100	0.32	1,459,908
03-Feb-10	22,580	710	23,290	9,900	33,190	0.00	0
04-Feb-10	19,610	1,500	21,110	18,600	39,710	0.00	0
05-Feb-10	24,370	8,370	32,740	20,500	53,240	0.84	3,832,259
06-Feb-10	0	0	0	0	0	0.00	0
07-Feb-10	0	0	0	0	0	0.00	0
08-Feb-10	84,990	0	84,990	59,800	144,790	0.00	0
09-Feb-10	25,200	2,050	27,250	20,200	47,450	0.15	684,332
10-Feb-10	26,700	1,340	28,040	19,800	47,840	0.00	0
11-Feb-10	23,360	3,190	26,550	20,100	46,650	0.00	0
12-Feb-10	24,890	2,280	27,170	19,300	46,470	0.48	2,189,862
13-Feb-10	0	0	0	0	0	0.00	0
14-Feb-10	0	0	0	0	0	0.00	0
15-Feb-10	0	0	0	0	0	0.00	0
16-Feb-10	98,430	6,340	104,770	78,200	182,970	0.00	0
17-Feb-10	24,240	2,360	26,600	20,600	47,200	0.00	0
18-Feb-10	20,000	1,420	21,420	16,700	38,120	0.00	0
19-Feb-10	25,960	2,000	27,960	22,600	50,560	0.00	0
20-Feb-10	0	0	0	0	0	0.00	0
21-Feb-10	0	0	0	0	0	0.00	0
22-Feb-10	72,070	3,540	75,610	54,300	129,910	0.00	0
23-Feb-10	29,880	3,060	32,940	18,500	51,440	0.00	0
24-Feb-10	25,980	690	26,670	18,000	44,670	0.02	91,244
25-Feb-10	20,180	1,010	21,190	17,500	38,690	0.00	0
26-Feb-10	16,950	1,560	18,510	17,500	36,010	0.00	0
27-Feb-10	0	0	0	0	0	0.85	3,877,881
28-Feb-10	0	0	0	0	0	0.00	0
01-Mar-10	0	0	0	0	0	0.00	0
02-Mar-10	0	0	0	0	0	0.00	0
03-Mar-10	0	0	0	0	0	0.00	0
TOTAL	676,800	49,510	726,310	543,100	1,271,410	2.72	12,409,219
Leachate Pumped as Percentage of Rainfall			9.7%	11.1%			

Column Notes:

A - Date of reading.

B - Leachate pumped (gallons) from Stage I by lift station 1.

C - Leachate pumped (gallons) from Stage I by lift station 2.

D - Total Stage I leachate pumpage (B+C).

E - Leachate pumped (gallons) from Stage III.

F - Total leachate pumped to WWTP storage tank (D+E).

G - Rainfall (inches) recorded on this date.

H - Rainfall (gallons) calculated based on open area (G x Area x 27,156 gal/acre-in).

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

Comments

EXHIBIT B

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

	B	C	D	E	F	G	H
	STAGE I	STAGE III	TOTAL			STAGE I	STAGE III
MONTH	LEACHATE	LEACHATE	LEACHATE	RAINFALL	RAINFALL	LEACHATE/ RAINFALL	LEACHATE /RAINFALL
	(gallons)	(gallons)	(gallons)	(inches)	(gallons)	(%)	(%)
JANUARY	680,510	605,300	1,285,810	3.21	14,644,704	7.7%	10.5%
FEBRUARY	728,310	543,100	1,271,410	2.72	12,409,219	9.7%	11.1%
MARCH							
APRIL							
MAY							
JUNE							
JULY							
AUGUST							
SEPTEMBER							
OCTOBER							
NOVEMBER							
DECEMBER							
TOTAL	1,408,820	1,148,400	2,557,220	5.93	27,053,923	8.6%	10.8%

Notes:

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

Landfill Stage Land Areas

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

LECHATE FEBRUARY 2010

DATE	LEACHATE			STORMWATER		COMMENTS	NAME
	METER # 1	METER # 2	METER # 3	S. G. # 1	S. G. # 2		
2/1/10	5129211	2771850	2730669	33.28	30.89	OK	R.B.
2/2/10	5131426	2774800	2730864	33.29	30.86	OK	R.B.
2/3/10	5133684	2775510	2731063	33.33	30.87	OK	R.B.
2/4/10	5135645	2777010	2731249	33.31	30.78	OK	R.B.
2/5/10	5138082	2781150	2731454	33.33	30.70	OK	R.B.
2/8/10	5146581	2785381	2732052	33.63	31.61	OK	R.B.
2/9/10	5149101	2787430	2732254	33.63	31.53	OK	R.B.
2/10/10	5151771	2788771	2732452	33.65	31.46	OK	R.B.
2/11/10	5154107	2791960	2732653	33.65	31.34	OK	R.B.
2/12/10	5156596	2794240	2732846	33.63	31.28	OK	M.E.
2/15/10							
2/18/10	5166439	2800580	2733628	33.68	31.14	OK	M.E.
2/17/10	5168863	2802940	2735839	33.73	31.08	OK	R.B.
2/18/10	5170843	2804360	2734661	33.73	30.92	OK	R.B.
2/19/10	5173459	2806360	2734227	33.72	30.82	OK	R.B.
2/22/10	5180666	2809900	2734770	33.72	30.66	OK	R.B.
2/23/10	5183654	2812960	2734955	33.71	30.58	OK	R.B.
2/24/10	5186252	2813650	2735135	33.72	30.47	OK	R.B.
2/25/10	5188270	2814660	2735310	33.71	30.40	OK	R.B.
2/26/10	5189965	2816270	2735485	33.70	30.34	OK	R.B.

Southwest District

MAR 11 2010

Dept. of Environmental
Protection

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2010 Feb	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.06	0.013	41.40	37.70
2	0.32	0.013	41.40	39.40
3	0.00	0.01	41.60	39.10
4	0.00	0.01	41.70	39.20
5	0.84	0.016	42.00	39.30
6	0.00	0.017	42.10	39.10
7	0.00	0.014	42.40	39.10
8	0.00	0.014	42.60	39.20
9	0.15	0.014	42.70	39.20
10	0.00	0.013	42.80	39.20
11	0.00	0.013	42.90	39.10
12	0.48	0.016	43.20	38.90
13	0.00	0.014	43.30	38.80
14	0.00	0.011	43.40	40.00
15	0.00	0.013	43.50	40.00
16	0.00	0.014	43.70	38.80
17	0.00	0.014	43.80	38.90
18	0.00	0.014	43.90	38.70
19	0.00	0.014	43.90	38.50
20	0.00	0.014	44.10	38.60
21	0.00	0.014	44.20	38.80
22	0.00	0.016	44.30	38.50
23	0.00	0.016	44.40	38.50
24	0.02	0.013	44.50	38.50
25	0.00	0.013	44.60	38.70
26	0.00	0.013	44.70	38.50
27	0.85	0.014	44.80	38.70
28	0.00	0.01	44.90	38.50
29				
30				
31				
TOTAL	2.72	0.400		
AVG		0.014		
MIN				
MAX	0.85	0.017		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: FEBRUARY 2010

Piezometers Inside Slurry Wall				Groundwater Monitoring Wells Outside Slurry Wall		
Piezometer	Riser Elevation	Leachate Elevation	Gradient Flow	Monitoring Well	Riser Elevation	Groundwater Elevation
P-1	42.68	29.75	inward	GW-1	38.68	33.28
P-2	42.32	29.01	inward	GW-2	40.92	33.22
P-3	40.36	26.65	inward	GW-3	39.40	34.02
P-4	40.78	22.19	inward	GW-4	40.53	33.58
P-5	40.73	20.90	inward	GW-5	39.90	32.67
P-6	40.74	19.81	inward	GW-6	38.95	31.98
P-7	40.60	18.85	inward	GW-7	39.49	30.18
P-8	40.21	18.59	inward	GW-8	39.75	29.49
P-9	39.97	19.40	inward	GW-9	39.65	29.13
P-10	39.86	19.33	inward	GW-10	38.34	29.89
P-11	40.52	22.48	inward	GW-11	38.26	30.81
P-12	43.28	29.52	inward	GW-12	42.09	31.72
P-13	44.78	30.49	inward	GW-13	44.79	33.70
P-14	45.09	29.87	inward	GW-14	39.63	34.61
P-15	45.57	30.90	inward	GW-15	42.33	35.06
P-16	44.67	31.07	inward	GW-16	44.41	35.86
P-17	44.28	30.00	inward	GW-17	42.19	34.06

Comments:

Date Data Collected: February 19, 2010

Form Revised December 6, 2004



An employee-owned company

41725

April 6, 2010

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

Dept. of Environmental
Protection
APR 14 2010
Southwest District

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

Dear Mr. Morris:

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

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

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

Sincerely,

Joe Miller, P.E.
Senior Project Manager

Attachments

cc: Mike Gore, Manatee County Solid Waste Division Manager
Bryan White, Manatee County Landfill Superintendent
Jeanne' Detweiler, Manatee County Division/Landfill
File – 120498.94 0100

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EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY
LENA ROAD LANDFILL
MONTHLY WATER BALANCE REPORT
MARCH, 2010

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
APR 14 2010
SOUTHWEST DISTRICT
TAMPA

A	B	C	D	E	F	G	H
DATE	LEACHATE STAGE I Lift Station 1 (gallons)	LEACHATE STAGE I Lift Station 2 (gallons)	LEACHATE STAGE I TOTAL (gallons)	LEACHATE STAGE III TOTAL (gallons)	TOTAL LEACHATE PUMPED (gallons)	RAINFALL (inches)	RAINFALL (gallons)
01-Mar-10	71,030	4,260	75,290	53,900	129,190	0.00	0
02-Mar-10	23,780	590	24,370	16,200	40,570	0.00	0
03-Mar-10	25,560	540	26,100	16,800	42,900	0.00	0
04-Mar-10	17,820	530	18,350	17,800	36,150	0.00	0
05-Mar-10	19,260	2,350	21,610	17,400	39,010	0.00	0
06-Mar-10	0	0	0	0	0	0.00	0
07-Mar-10	0	0	0	0	0	0.00	0
08-Mar-10	57,100	2,470	59,570	58,900	118,470	0.00	0
09-Mar-10	26,990	890	27,880	9,800	37,680	0.00	0
10-Mar-10	19,980	720	20,700	14,500	35,200	0.00	0
11-Mar-10	25,620	3,220	28,840	17,200	46,040	0.05	228,111
12-Mar-10	27,850	1,450	29,300	16,100	45,400	2.52	11,496,777
13-Mar-10	0	0	0	0	0	0.00	0
14-Mar-10	0	0	0	0	0	0.00	0
15-Mar-10	112,420	3,210	115,630	53,800	169,430	0.00	0
16-Mar-10	25,910	1,140	27,050	17,900	44,950	0.00	0
17-Mar-10	24,720	270	24,990	17,500	42,490	0.03	136,866
18-Mar-10	27,370	1,879	29,249	18,600	47,849	0.00	0
19-Mar-10	25,470	481	25,951	23,100	49,051	0.00	0
20-Mar-10	0	0	0	0	0	0.00	0
21-Mar-10	0	0	0	0	0	0.68	3,102,305
22-Mar-10	75,710	2,520	78,230	50,000	128,230	0.00	0
23-Mar-10	24,440	950	25,390	17,800	42,990	0.00	0
24-Mar-10	23,230	1,040	24,270	18,600	42,870	0.00	0
25-Mar-10	24,740	1,120	25,860	17,600	43,460	0.00	0
26-Mar-10	27,850	410	28,260	17,300	45,560	0.00	0
27-Mar-10	0	0	0	0	0	0.00	0
28-Mar-10	0	0	0	0	0	0.62	2,828,572
29-Mar-10	90,800	4,160	94,960	55,800	150,760	0.46	2,098,618
30-Mar-10	27,180	820	28,000	15,800	43,800	0.00	0
31-Mar-10	29,130	1,150	30,280	17,700	47,980	0.00	0
TOTAL	853,960	36,170	890,130	579,900	1,470,030	4.36	19,891,249
Leachate Pumped as Percentage of Rainfall			7.4%	7.4%			

Column Notes:

- A - Date of reading.
B - Leachate pumped (gallons) from Stage I by lift station 1.
C - Leachate pumped (gallons) from Stage I by lift station 2.
D - Total Stage I leachate pumpage (B+C).
E - Leachate pumped (gallons) from Stage III.
F - Total leachate pumped to WWTP storage tank (D+E).
G - Rainfall (inches) recorded on this date.
H - Rainfall (gallons) calculated based on open area (G x Area x 27,156 gal/acre-in).

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

Comments

EXHIBIT B

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

	B	C	D	E	F	G	H
MONTH	STAGE I LEACHATE (gallons)	STAGE III LEACHATE (gallons)	TOTAL LEACHATE (gallons)	RAINFALL (inches)	RAINFALL (gallons)	STAGE I LEACHATE/ RAINFALL (%)	STAGE III LEACHATE/ RAINFALL (%)
JANUARY	680,510	605,300	1,285,810	3.21	14,644,704	7.7%	10.5%
FEBRUARY	728,310	543,100	1,271,410	2.72	12,409,219	9.7%	11.1%
MARCH	890,130	579,900	1,470,030	4.36	19,891,249	7.4%	7.4%
APRIL							
MAY							
JUNE							
JULY							
AUGUST							
SEPTEMBER							
OCTOBER							
NOVEMBER							
DECEMBER							
TOTAL	2,298,950	1,728,300	4,027,250	10.29	46,945,172	8.1%	9.4%

Notes:

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

Landfill Stage Land Areas

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

LECHATE MARCH 2010

DATE	LEACHATE			STORMWATER		COMMENTS	NAME
	METER # 1	METER # 2	METER # 3	S. G. # 1	S. G. # 2		
3/1/10	5191068	2820480	2736024	33.76	30.49	OK	R.B.
3/2/10	5199446	2821070	2736186	33.77	30.42	OK	R.B.
3/3/10	5202002	2821610	2736354	33.77	30.38	OK	R.B.
3/4/10	5203784	2822140	2736532	33.76	30.30	OK	R.B.
3/5/10	5205710	2824490	2736706	33.75	30.22	OK	R.B.
3/8/10	5211420	2826960	2737195	33.70	30.18	OK	R.B.
3/9/10	5214119	2827850	2737393	33.70	30.00	OK	R.B.
3/10/10	5216117	2828570	2737530	33.70	29.98	OK	R.B.
3/11/10	5218679	2831790	2737710	33.71	30.00	OK	R.B.
3/12/10	5221464	2833240	2737871	33.04	31.70	OK	R.B.
3/15/10	5232706	2836450	2738409	33.13	32.14	OK	R.B.
3/18/10	5235297	2837590	2738588	33.07	32.06	OK	R.B.
3/17/10	5237769	2837860	2738763	33.11	31.96	OK	R.B.
3/18/10	5240506	2839735	2738949	33.15	31.88	OK	M.E.
3/19/10	5243065	2840300	2739130	33.15	31.78	OK	M.E.
3/22/10	5250624	2842740	2739680	33.36	31.71	OK	M.E.
3/23/10	5253062	2843690	2739866	33.53	31.84	OK	M.E.
3/24/10	5255371	2844730	2740042	33.60	31.88	OK	M.E.
3/25/10	5257869	2845810	2740218	33.66	32.10	OK	M.E.
3/26/10	5260635	2846800	2740391	33.74	32.30	OK	M.E.
3/29/10	5264730	2847800	2740948	34.13	32.59	OK	M.E.
3/30/10	5272448	2851400	2741107	34.18	32.82	OK	M.E.
3/31/10	5275661	2852390	2741284	34.16	32.32	OK	M.E.

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2010 Mar	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.013	45.00	38.50
2	0.00	0.015	45.10	38.50
3	0.00	0.013	45.30	38.40
4	0.00	0.012	45.40	38.30
5	0.00	0.012	45.40	38.10
6	0.00	0.012	45.30	38.20
7	0.00	0.012	45.20	38.60
8	0.00	0.013	45.30	38.40
9	0.00	0.014	45.30	38.00
10	0.00	0.013	45.30	38.00
11	0.05	0.015	45.30	38.30
12	2.52	0.018	45.60	38.60
13	0.00	0.019	45.50	38.70
14	0.00	0.016	45.40	39.00
15	0.00	0.048	45.50	38.80
16	0.00	0.015	45.50	39.00
17	0.03	0.015	45.60	38.70
18	0.00	0.015	45.60	38.70
19	0.00	0.014	45.50	38.60
20	0.00	0.014	45.50	38.50
21	0.68	0.015	45.70	38.80
22	0.00	0.015	45.70	38.70
23	0.00	0.014	45.70	38.70
24	0.00	0.014	45.70	39.10
25	0.00	0.015	45.70	39.10
26	0.00	0.017	45.80	39.30
27	0.00	0.015	45.80	39.70
28	0.62	0.016	45.80	39.70
29	0.46	0.017	45.90	40.30
30	0.00	0.016	45.80	40.60
31	0.00	0.016	45.90	40.70
TOTAL	4.36	0.488		
AVG		0.016		
MIN				
MAX	2.52	0.048		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: MARCH 2010

Piezometers Inside Slurry Wall				Groundwater Monitoring Wells Outside Slurry Wall		
Piezometer	Riser Elevation	Leachate Elevation	Gradient Flow	Monitoring Well	Riser Elevation	Groundwater Elevation
P-1	42.68	29.67	<i>inward</i>	GW-1	38.68	31.13
P-2	42.32	28.41	<i>inward</i>	GW-2	40.92	29.02
P-3	40.36	26.61	<i>inward</i>	GW-3	39.40	34.87
P-4	40.78	22.19	<i>inward</i>	GW-4	40.53	33.83
P-5	40.73	20.88	<i>inward</i>	GW-5	39.90	33.20
P-6	40.74	19.78	<i>inward</i>	GW-6	38.95	32.52
P-7	40.60	18.85	<i>inward</i>	GW-7	39.49	31.38
P-8	40.21	18.59	<i>inward</i>	GW-8	39.75	30.48
P-9	39.97	19.39	<i>inward</i>	GW-9	39.65	29.74
P-10	39.86	19.33	<i>inward</i>	GW-10	38.34	30.67
P-11	40.52	22.47	<i>inward</i>	GW-11	38.26	31.50
P-12	43.28	29.45	<i>inward</i>	GW-12	42.09	32.04
P-13	44.78	30.39	<i>inward</i>	GW-13	44.79	33.57
P-14	45.09	29.84	<i>inward</i>	GW-14	39.63	34.61
P-15	45.57	30.94	<i>inward</i>	GW-15	42.33	35.58
P-16	44.67	30.99	<i>inward</i>	GW-16	44.41	35.91
P-17	44.28	29.98	<i>inward</i>	GW-17	42.19	34.08

Comments:

Date Data Collected: March 25, 2010

Form Revised December 6, 2004



An employee-owned company

44785

May 14, 2010

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

Dept. Of Environmental Protection

MAY 17 2010

Southwest District

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

Dear Mr. Morris:

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

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

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

Sincerely,

Joe Miller, P.E.
Senior Project Manager

Attachments

cc: Mike Gore, Manatee County Solid Waste Division Manager
Bryan White, Manatee County Landfill Superintendent
Jeanne' Detweiler, Manatee County Division/Landfill
File – 120498.94 0100

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EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY

LENA ROAD LANDFILL

MONTHLY WATER BALANCE REPORT

APRIL, 2010

Dept. Of Environmental Protection
MAY 17 2010
Southwest District

A	B	C	D	E	F	G	H
DATE	LEACHATE STAGE I Lift Station 1 (gallons)	LEACHATE STAGE I Lift Station 2 (gallons)	LEACHATE STAGE I TOTAL (gallons)	LEACHATE STAGE III TOTAL (gallons)	TOTAL LEACHATE PUMPED (gallons)	RAINFALL (Inches)	RAINFALL (gallons)
01-Apr-10	27,380	610	27,990	17,400	45,390	0.00	0
02-Apr-10	29,430	960	30,390	17,700	48,090	0.00	0
03-Apr-10	0	0	0	0	0	0.00	0
04-Apr-10	0	0	0	0	0	0.00	0
05-Apr-10	85,040	4,570	89,610	53,400	143,010	0.00	0
06-Apr-10	26,890	1,200	28,090	17,500	45,590	0.00	0
07-Apr-10	29,460	2,170	31,630	18,100	49,730	0.00	0
08-Apr-10	32,320	2,510	34,830	18,700	53,530	0.00	0
09-Apr-10	25,180	210	25,390	14,800	40,190	0.02	91,244
10-Apr-10	0	0	0	0	0	0.00	0
11-Apr-10	0	0	0	0	0	0.00	0
12-Apr-10	73,980	5,040	79,020	50,500	129,520	0.00	0
13-Apr-10	24,850	2,900	27,750	16,600	44,350	0.00	0
14-Apr-10	22,640	1,890	24,530	15,700	40,230	0.00	0
15-Apr-10	20,980	1,760	22,740	25,400	48,140	0.00	0
16-Apr-10	23,190	2,700	25,890	6,700	32,590	0.00	0
17-Apr-10	0	0	0	0	0	0.25	1,140,553
18-Apr-10	0	0	0	0	0	0.36	1,642,397
19-Apr-10	78,460	2,080	80,540	48,400	128,940	0.03	136,866
20-Apr-10	22,200	890	23,090	14,600	37,690	0.05	228,111
21-Apr-10	24,650	190	24,840	16,100	40,940	0.00	0
22-Apr-10	21,860	1,200	23,060	14,400	37,460	0.00	0
23-Apr-10	23,870	1,150	25,020	16,800	41,820	0.00	0
24-Apr-10	0	0	0	0	0	0.00	0
25-Apr-10	0	0	0	0	0	0.00	0
26-Apr-10	69,400	1,660	71,060	43,100	114,160	1.83	8,348,850
27-Apr-10	23,590	400	23,990	14,900	38,890	0.00	0
28-Apr-10	20,240	540	20,780	15,100	35,880	0.00	0
29-Apr-10	18,640	2,010	20,650	15,500	36,150	0.00	0
30-Apr-10	19,140	70	19,210	14,400	33,610	0.00	0
01-May-10	0	0	0	0	0	0.00	0
TOTAL	743,390	36,710	780,100	485,800	1,265,900	2.54	11,588,021
Leachate Pumped as Percentage of Rainfall			11.1%	10.7%			

Column Notes:

A - Date of reading.

B - Leachate pumped (gallons) from Stage I by lift station 1.

C - Leachate pumped (gallons) from Stage I by lift station 2.

D - Total Stage I leachate pumpage (B+C).

E - Leachate pumped (gallons) from Stage III.

F - Total leachate pumped to WWTP storage tank (D+E).

G - Rainfall (inches) recorded on this date.

H - Rainfall (gallons) calculated based on open area (G x Area x 27,156 gal/acre-in).

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

Comments

EXHIBIT B

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

	B	C	D	E	F	G	H
MONTH	STAGE I LEACHATE (gallons)	STAGE III LEACHATE (gallons)	TOTAL LEACHATE (gallons)	RAINFALL (Inches)	RAINFALL (gallons)	STAGE I LEACHATE/ RAINFALL (%)	STAGE III LEACHATE /RAINFALL (%)
JANUARY	680,510	605,300	1,285,810	3.21	14,644,704	7.7%	10.5%
FEBRUARY	728,310	543,100	1,271,410	2.72	12,409,219	9.7%	11.1%
MARCH	890,130	579,900	1,470,030	4.36	19,891,249	7.4%	7.4%
APRIL	780,100	485,800	1,265,900	2.54	11,588,021	11.1%	10.7%
MAY							
JUNE							
JULY							
AUGUST							
SEPTEMBER							
OCTOBER							
NOVEMBER							
DECEMBER							
TOTAL	3,079,050	2,214,100	5,293,150	12.83	58,533,193	8.7%	9.6%

Notes:

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

Landfill Stage Land Areas

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

LECHATE APRIL 2010

DATE	LEACHATE			STORMWATER		COMMENTS	NAME
	METER # 1	METER # 2	METER # 3	S. G. # 1	S. G. # 2		
4/1/10	5278099	2853000	2741458	34.18	32.31	OK	M.E.
4/2/10	5281042	2853960	2741635	33.71	32.29	OK	M.E.
4/5/10	5289546	2858530	2742669	32.20	32.08	OK	M.E.
4/6/10	5292235	2859730	2742344	32.20	32.77	OK	M.E.
4/7/10	5295181	2861900	2742525	32.19	32.05	OK	R.B.
4/8/10	5298413	2864410	2742712	32.21	32.16	OK	R.B.
4/9/10	5300431	2866620	2742860	32.24	32.17	OK	R.B.
4/12/10	5308324	2869660	2743365	32.30	31.85	OK	R.B.
4/13/10	5310814	2872560	2743531	32.31	31.68	OK	R.B.
4/14/10	5313078	2874480	2743688	32.31	31.62	OK	R.B.
4/15/10	5315176	2876210	2743942	32.31	31.46	OK	R.B.
4/16/10	5317495	2878910	2744009	32.31	31.33	OK	R.B.
4/19/10	5325391	2880990	2744493	32.43	31.04	OK	M.E.
4/20/10	5327541	2881880	2744639	32.44	30.80	OK	R.B.
4/21/10	5330026	2882070	2744800	32.47	30.80	OK	R.B.
4/22/10	5332212	2883270	2744944	32.46	30.71	OK	R.B.
4/23/10	5334599	2884420	2745112	32.47	30.57	OK	R.B.
4/26/10	5341539	2886080	2745543	32.81	31.69	OK	R.B.
4/27/10	5343898	2886480	2745692	32.80	31.77	OK	R.B.
4/28/10	5345922	2887020	2745813	32.81	31.58	OK	R.B.
4/29/10	5347186	2889030	2745998	32.82	31.42	OK	R.B.
4/30/10	5349700	2889100	2746142	32.83	31.27	OK	R.B.

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2010 APR	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.016	45.90	40.80
2	0.00	0.017	45.80	41.00
3	0.00	0.016	45.80	41.00
4	0.00	0.016	45.90	41.00
5	0.00	0.015	45.90	41.20
6	0.00	0.016	45.90	41.20
7	0.00	0.016	45.90	41.00
8	0.00	0.016	45.90	40.60
9	0.02	0.016	45.90	40.30
10	0.00	0.014	45.90	39.80
11	0.00	0.014	45.90	39.60
12	0.00	0.015	45.80	39.20
13	0.00	0.015	45.70	39.00
14	0.00	0.014	45.70	38.60
15	0.00	0.014	45.60	38.50
16	0.00	0.014	45.10	38.10
17	0.25	0.015	45.20	38.10
18	0.36	0.015	45.30	37.80
19	0.03	0.014	45.20	37.70
20	0.05	0.014	45.00	37.90
21	0.00	0.014	45.00	37.50
22	0.00	0.014	44.90	37.40
23	0.00	0.013	44.70	37.10
24	0.00	0.013	44.50	37.10
25	0.00	0.014	44.50	37.00
26	1.83	0.016	44.60	37.20
27	0.00	0.014	44.50	37.30
28	0.00	0.013	44.40	37.40
29	0.00	0.013	44.30	37.30
30	0.00	0.013	44.30	37.00
31				
TOTAL	2.54	0.439		
AVG		0.015		
MIN				
MAX	1.83	0.017		

Fax # 9-708-5668

Dept. Of Environmental Protection

MAY 17 2010

Southwest District

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: APRIL 2010

Piezometers Inside Slurry Wall			Gradient Flow	Groundwater Monitoring Wells Outside Slurry Wall		
Piezometer	Riser Elevation	Leachate Elevation		Monitoring Well	Riser Elevation	Groundwater Elevation
P-1	42.68	29.62	<i>inward</i>	GW-1	38.68	30.13
P-2	42.32	28.82	<i>inward</i>	GW-2	40.92	29.41
P-3	40.36	26.46	<i>inward</i>	GW-3	39.40	34.10
P-4	40.78	22.08	<i>inward</i>	GW-4	40.53	32.82
P-5	40.73	20.82	<i>inward</i>	GW-5	39.90	32.08
P-6	40.74	19.78	<i>inward</i>	GW-6	38.95	31.30
P-7	40.60	18.82	<i>inward</i>	GW-7	39.49	29.38
P-8	40.21	18.59	<i>inward</i>	GW-8	39.75	28.45
P-9	39.97	19.36	<i>inward</i>	GW-9	39.65	28.95
P-10	39.86	19.25	<i>inward</i>	GW-10	38.34	29.25
P-11	40.52	22.39	<i>inward</i>	GW-11	38.26	30.29
P-12	43.28	29.37	<i>inward</i>	GW-12	42.09	31.64
P-13	44.78	30.35	<i>inward</i>	GW-13	44.79	32.46
P-14	45.09	29.79	<i>inward</i>	GW-14	39.63	33.86
P-15	45.57	30.89	<i>inward</i>	GW-15	42.33	35.17
P-16	44.67	30.96	<i>inward</i>	GW-16	44.41	35.08
P-17	44.28	29.94	<i>inward</i>	GW-17	42.19	33.26

Comments:

Date Data Collected: April 21, 2010

Form Revised December 6, 2004