

NOV 12 2013

Southwest District

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TO: Mr. John Morris, P.G.
 Florida Department of Environmental Protection
 Southwest District Office - Solid Waste Section

DATE: November 8, 2013

JOB NO.: 100037050

Address/Office: 13051 N. TELECOM PARKWAY
 TEMPLE TERRACE, FL 33637-0926

RE: Manatee County Lena Road Landfill
 Monthly Report _ October 2013

Phone: _____

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REMARKS:

SIGNED Raymundo Castro

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November 5, 2013

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
NOV 12 2013
Southwest District

**Re: Manatee County Lena Road Landfill
Monthly Report – October 2013**

Dear Mr. Morris:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2013 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, and Monthly Groundwater Gradient Report.

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

If you should have any questions concerning this report, please call me at 407/806-4156.

Sincerely,

Raymundo Castro, P.E.
Project Engineer

Attachments

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

EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY

LENA ROAD LANDFILL

MONTHLY WATER BALANCE REPORT

OCTOBER, 2013

A	B	C	D	E	F	G	H
DATE	LEACHATE STAGE I Lift Station 1 (gallons)	LEACHATE STAGE I Lift Station 2 (gallons)	LEACHATE STAGE I TOTAL (gallons)	LEACHATE STAGE III TOTAL (gallons)	TOTAL LEACHATE PUMPED (gallons)	RAINFALL (Inches)	RAINFALL (gallons)
01-Sep-13	34,720	20,720	55,440	28,100	83,540	0.00	0
02-Sep-13	23,710	11,340	35,050	19,800	54,850	0.00	0
03-Sep-13	29,470	22,510	51,980	23,100	75,080	0.00	0
04-Sep-13	28,840	17,150	45,990	22,700	68,690	0.00	0
05-Sep-13	0	0	0	0	0	0.00	0
06-Sep-13	0	0	0	0	0	0.00	0
07-Sep-13	90,060	41,080	131,140	65,000	196,140	0.39	1,779,263
08-Sep-13	30,780	23,620	54,400	21,200	75,600	0.00	0
09-Sep-13	25,950	14,740	40,690	18,000	58,690	0.00	0
10-Sep-13	24,530	11,320	35,850	19,400	55,250	0.00	0
11-Sep-13	26,510	19,710	46,220	19,600	65,820	0.00	0
12-Sep-13	0	0	0	0	0	0.00	0
13-Sep-13	0	0	0	0	0	0.00	0
14-Sep-13	75,740	38,400	114,140	60,100	174,240	0.00	0
15-Sep-13	21,710	21,560	43,270	14,400	57,670	0.00	0
16-Sep-13	26,640	8,520	35,160	20,100	55,260	0.00	0
17-Sep-13	26,430	13,830	40,260	17,900	58,160	0.00	0
18-Sep-13	26,140	10,040	36,180	18,100	54,280	0.00	0
19-Sep-13	0	0	0	0	0	0.00	0
20-Sep-13	0	0	0	0	0	0.00	0
21-Sep-13	76,410	39,960	116,370	50,600	166,970	0.00	0
22-Sep-13	25,100	9,240	34,340	18,200	52,540	0.25	1,140,553
23-Sep-13	27,090	17,080	44,170	19,200	63,370	0.09	410,599
24-Sep-13	20,610	10,970	31,580	13,100	44,680	0.00	0
25-Sep-13	18,510	8,470	26,980	14,900	41,880	0.00	0
26-Sep-13	0	0	0	0	0	0.00	0
27-Sep-13	0	0	0	0	0	0.00	0
28-Sep-13	66,930	51,970	118,900	45,200	164,100	0.00	0
29-Sep-13	21,010	11,680	32,690	14,700	47,390	0.00	0
30-Sep-13	23,000	23,930	46,930	16,300	63,230	0.00	0
	21,710	18,800	40,510	14,400	54,910	0.00	0
TOTAL	791,800	466,640	1,258,440	674,100	1,932,540	0.73	3,330,416
Leachate Pumped as Percentage of Rainfall			62.2%	43.9%			

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 -- 2013

	B	C	D	E	F	G	H
MONTH	STAGE I	STAGE III	TOTAL			STAGE I	STAGE III
	LEACHATE	LEACHATE	LEACHATE	RAINFALL	RAINFALL	LEACHATE/ RAINFALL	LEACHATE /RAINFALL
	(gallons)	(gallons)	(gallons)	(Inches)	(gallons)	(%)	(%)
JANUARY	620,550	296,600	917,150	0.73	3,330,416	30.7%	22.7%
FEBRUARY	544,840	235,500	780,340	1.21	5,520,278	16.3%	10.9%
MARCH	621,720	19,300	641,020	1.47	6,706,453	15.3%	0.7%
APRIL	592,420	0	592,420	4.13	18,841,940	5.2%	0.0%
MAY	513,170	478,700	991,870	3.71	16,925,810	5.0%	7.2%
JUNE	682,480	623,900	1,306,380	19.47	88,826,288	1.3%	1.8%
JULY	1,072,350	706,000	1,778,350	12.61	57,529,506	3.1%	3.1%
AUGUST	1,078,840	690,500	1,769,340	12.21	55,704,621	3.2%	3.2%
SEPTEMBER	1,437,290	724,300	2,161,590	12.67	57,803,239	4.1%	3.2%
OCTOBER	1,258,240	574,100	1,832,340	0.73	3,330,416	62.2%	43.9%
NOVEMBER			0		0		
DECEMBER			0		0		
TOTAL	8,421,900	4,348,900	12,770,800	68.94	314,518,967	4.4%	3.5%

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	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

	METER # 1	METER # 2	METER # 3	S. G. # 1
3	7771905	6478920	2892738	33.83
3	7774276	6490260	2892936	33.79
3	7777223	6512770	2893167	33.79
3	7780107	6529920	2893394	33.81
3	7789113	6571000	2894044	33.89
3	7792191	6594620	2894256	33.93
3	7794786	6609360	2894436	33.94
3	7797239	6620680	2894630	33.96
3	7799890	6640390	2894826	33.96
3	7807464	6678790	2895427	33.99
3	7809635	6700350	2895571	34.00
3	7812299	6708870	2895772	34.01
3	7814942	6722707	2895951	34.02
3	7817556	6732740	2896132	34.03
3	7825197	6772700	2896638	34.06
3	7827707	6781940	2896820	34.07
3	7830416	6799020	2897012	34.10
3	7832477	6809990	2897143	34.08
3	7834328	6818460	2897292	34.09
3	7841021	6870430	2897744	34.10
3	7843122	6882110	2897891	34.10
3	7845422	6906040	2898054	34.10
3	7847593	6924840	2898198	34.11

Oct	FALL	MGD	(86 ACRE)	(63 ACRE)
1	0.00	0.004	51.10	41.10
2	0.00	0.000	51.20	41.00
3	0.00	0.003	51.10	40.90
4	0.00	0.007	51.10	40.90
5	0.00	0.006	51.10	40.90
6	0.00	0.000	51.10	40.80
7	0.39	0.000	51.20	40.80
8	0.00	0.003	51.20	40.80
9	0.00	0.002	51.20	40.80
10	0.00	0.002	51.10	40.70
11	0.00	0.003	51.10	40.60
12	0.00	0.001	51.10	40.60
13	0.00	0.003	51.10	40.60
14	0.00	0.001	51.00	40.50
15	0.00	0.002	51.00	40.40
16	0.00	0.000	51.00	40.40
17	0.00	0.003	50.90	40.30
18	0.00	0.008	50.70	40.30
19	0.00	0.007	50.60	40.30
20	0.00	0.002	50.60	40.30
21	0.00	0.003	50.47	40.14
22	0.25	0.003	50.20	40.10
23	0.09	0.003	50.10	40.10
24	0.00	0.003	50.02	40.03
25	0.00	0.003	49.98	40.01
26	0.00	0.003	49.85	39.89
27	0.00	0.003	49.83	39.85
28	0.00	0.003	49.83	39.85
29	0.00	0.003	49.78	39.85
30	0.00	0.004	49.75	39.75
31	0.00	0.009	49.49	39.71
TOTAL	0.73	0.097		
AVG		0.003		
MIN				

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: OCTOBER 2013

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	30.31	<i>inward</i>	GW-1	38.68	33.77
P-2	42.32	30.18	<i>inward</i>	GW-2	40.92	34.47
P-3	40.36	25.21	<i>inward</i>	GW-3	39.40	34.45
P-4	40.78	23.68	<i>inward</i>	GW-4	40.53	33.25
P-5	40.73	23.61	<i>inward</i>	GW-5	39.90	32.75
P-6	40.74	23.56	<i>inward</i>	GW-6	38.95	32.11
P-7	40.60	23.51	<i>inward</i>	GW-7	39.49	30.94
P-8	40.21	23.51	<i>inward</i>	GW-8	39.75	29.82
P-9	39.97	23.63	<i>inward</i>	GW-9	39.65	29.66
P-10	39.86	22.59	<i>inward</i>	GW-10	38.34	28.15
P-11	40.52	23.90	<i>inward</i>	GW-11	38.26	31.46
P-12	43.28	30.48	<i>inward</i>	GW-12	42.09	31.89
P-13	44.78	30.76	<i>inward</i>	GW-13	44.79	34.11
P-14	45.09	30.67	<i>inward</i>	GW-14	39.63	34.26
P-15	45.57	31.07	<i>inward</i>	GW-15	42.33	35.51
P-16	44.67	31.25	<i>inward</i>	GW-16	44.41	36.16
P-17	44.28	30.10	<i>inward</i>	GW-17	42.19	34.09

Comments:

Date Data Collected: SEPTEMBER 12, 2013

Form Revised December 6, 2004