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July 14, 2016

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 –June 2016**

Dear Mr. Morris:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2016 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, Monthly Groundwater Gradient Report. Between March 16, 2016 and May 4, 2016, monitoring wells GW-18 through GW-27R and piezometers P-18 through P-27R were installed around the perimeter of Stage II.

If you should have any questions concerning this report, please call me at 813/281-8377.

Sincerely,

A handwritten signature in blue ink that reads "Bradley J. Bayne". To the left of the signature is a circular, faded official seal of the State of Florida, Department of Environmental Protection, Southwest District Office.

Bradley Bayne, P.G.
Senior Geologist
Florida PG #1733

Attachments

cc: C. Mike Gore, Manatee County Utilities Department Director
Bryan White, Manatee County Landfill Superintendent
Anthony Detweiler, Manatee County Landfill Operations Supervisor
File – 100047674-01.01

EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL MONTHLY WATER BALANCE REPORT June-16

A	B	C	D	E	F	G	H
DATE	LEACHATE STAGE I Lift Station 1 (gallons)	LEACHATE STAGE I Lift Station 2 (gallons)	LEACHATE STAGE I TOTAL (gallons)	LEACHATE STAGE III TOTAL (gallons)	TOTAL LEACHATE PUMPED (gallons)	RAINFALL (inches)	RAINFALL (gallons)
01-Jun-16	20,599	85	20,684	17,329	38,013	0.00	0
02-Jun-16	19,474	76	19,550	20,017	39,567	0.00	0
03-Jun-16	19,762	75	19,837	20,055	39,892	0.00	0
04-Jun-16	0	0	0	0	0	0.00	0
05-Jun-16	0	0	0	0	0	1.30	5,930,877
06-Jun-16	67,993	222	68,215	59,281	127,496	3.55	16,195,856
07-Jun-16	24,633	87	24,720	31,673	56,393	1.31	5,976,499
08-Jun-16	22,285	112	22,397	50,985	73,382	0.93	4,242,858
09-Jun-16	19,818	10,948	30,766	45,541	76,307	2.00	9,124,426
10-Jun-16	19,913	6,849	26,762	61,534	88,296	0.38	1,733,641
11-Jun-16	0	0	0	0	0	0.18	821,198
12-Jun-16	0	0	0	0	0	0.00	0
13-Jun-16	66,934	6,950	73,884	169,478	243,362	0.12	547,466
14-Jun-16	26,421	6,593	33,014	44,575	77,589	0.00	0
15-Jun-16	21,975	73	22,048	36,169	58,217	0.00	0
16-Jun-16	24,048	6,863	30,911	36,174	67,085	0.03	136,866
17-Jun-16	24,936	78	25,014	33,591	58,605	0.24	1,094,931
18-Jun-16	0	0	0	0	0	0.10	456,221
19-Jun-16	0	0	0	0	0	0.03	136,866
20-Jun-16	66,907	14,071	80,978	94,018	174,996	0.00	0
21-Jun-16	21,149	72	21,221	27,840	49,061	0.00	0
22-Jun-16	22,054	78	22,132	28,117	50,249	0.00	0
23-Jun-16	21,861	7,194	29,055	27,875	56,930	0.00	0
24-Jun-16	22,249	77	22,326	25,330	47,656	0.00	0
25-Jun-16	0	0	0	0	0	0.00	0
26-Jun-16	0	0	0	0	0	1.64	7,482,029
27-Jun-16	64,961	13,671	78,632	80,496	159,128	0.00	0
28-Jun-16	24,315	82	24,397	33,144	57,541	0.34	1,551,152
29-Jun-16	21,858	6,628	28,486	30,067	58,553	0.00	0
30-Jun-16	22,081	71	22,152	30,221	52,373	0.00	0
01-Jul-16	0	0	0	0	0	0.00	0
TOTAL	666,226	80,955	747,181	1,003,510	1,750,691	12.15	55,430,888
Leachate Pumped as Percentage of Rainfall			2.2%	4.6%			

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

"0" = no data recorded

EXHIBIT B

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL MONTHLY LEACHATE TRACKING SUMMARY -- 2016

	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	785,550	0	785,550	5.67	25,867,748	5.0%	0.0%
FEBRUARY	961,680	0	961,680	1.67	7,618,986	20.8%	0.0%
MARCH	581,148	168,250	749,398	1.58	7,208,297	13.3%	5.9%
APRIL	576,293	509,075	1,085,368	2.56	11,679,265	8.1%	11.1%
MAY	718,675	798,107	1,516,782	8.81	40,193,097	2.9%	5.1%
JUNE	747,181	1,003,510	1,750,691	12.15	55,430,888	2.2%	4.6%
JULY							
AUGUST							
SEPTEMBER							
OCTOBER							
NOVEMBER							
DECEMBER							
TOTAL	4,370,527	2,478,942	6,849,469	32.44	147,998,281	4.9%	4.3%

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

DATE	LEACHATE			METER #3	STORMWATER		COMMENTS	NAME
	METER #1	METER #2	S. G. #1		S. G. #2			
8/1/16	1325108	171312	149276	33.49	30.90	OK	RB	
8/2/16	1344562	171388	151274	33.48	30.83	OK	RB	
8/3/16	1364344	171463	1532833	33.47	30.75	OK	RB	
8/6/16	1432337	171685	1592114	33.57	30.62	OK	RB	
8/7/16	145870	171772	1623787	33.80	32.39	OK	RB	
8/8/16	1479255	171864	1674772	33.85	32.35	OK	RB	
8/9/16	1499073	1828322	172033	34.00	32.40	OK	RB	
8/10/16	1518986	189461	1781847	34.24	32.43	OK	RB	
8/13/16	1585420	196631	1951225	34.00	32.36	OK	RB	
8/14/16	1612341	203224	1995900	33.90	32.35	OK	RB	
8/15/16	1634316	203297	2032069	33.83	32.35	OK	RB	
8/16/16	1658364	210160	2068243	33.78	32.32	OK	RB	
8/17/16	1683300	210238	201834	33.72	32.30	OK	RB	
8/20/16	1750207	224309	2195652	33.66	32.20	OK	RB	
8/21/16	1771356	224381	2223242	33.64	32.16	OK	RB	
8/22/16	1793410	224459	2251809	33.63	32.00	OK	RB	
8/23/16	1815271	231653	2279684	33.61	31.96	OK	RB	
8/24/16	1831520	231730	2308014	33.59	31.96	OK	RB	
8/27/16	1902481	245401	2385510	33.88	32.35	OK	RB	
8/28/16	1926796	245463	2418654	33.84	32.32	OK	RB	
8/28/16	1946654	252111	2446721	33.85	32.31	OK	RB	
8/30/16	1910735	252183	2408742	33.81	32.31	OK	RB	

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2016 Jun	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.079	41.80	31.70
2	0.00	0.076	41.60	31.50
3	0.00	0.075	41.40	31.10
4	0.00	0.076	41.00	31.20
5	1.30	0.075	41.10	31.20
6	3.55	0.078	41.40	31.30
7	1.31	0.091	41.70	31.30
8	0.93	0.100	41.80	31.40
9	2.00	0.105	42.30	31.40
10	0.38	0.110	42.30	31.70
11	0.18	0.111	42.30	32.00
12	0.00	0.106	42.40	32.10
13	0.12	0.104	42.50	32.20
14	0.00	0.097	42.50	32.40
15	0.00	0.095	42.40	32.50
16	0.03	0.089	42.40	32.50
17	0.24	0.089	42.20	32.40
18	0.10	0.085	42.30	32.40
19	0.03	0.083	42.40	32.40
20	0.00	0.081	42.30	32.40
21	0.00	0.080	42.30	32.40
22	0.00	0.080	42.20	32.80
23	0.00	0.077	42.20	33.10
24	0.00	0.077	42.10	33.40
25	0.00	0.075	42.10	33.70
26	1.64	0.075	42.20	34.20
27	0.00	0.080	42.20	34.50
28	0.34	0.083	42.20	34.90
29	0.00	0.079	42.20	35.20
30	0.00	0.080	42.20	35.40
31				
TOTAL	12.15	2.591		
AVG		0.086		
MIN				
MAX	3.55	0.111		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: JUNE 2016

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	NA	NA	GW-1	38.68	NA
P-2	42.32	NA	NA	GW-2	40.92	NA
P-3	40.36	26.56	inward	GW-3	39.40	34.43
P-4	40.78	23.77	inward	GW-4	40.53	33.88
P-5	40.73	23.95	inward	GW-5	39.90	33.03
P-6	40.74	23.70	inward	GW-6	38.95	32.33
P-7	40.60	23.65	inward	GW-7	39.49	31.49
P-8	40.21	23.60	inward	GW-8	39.75	30.60
P-9	39.97	23.70	inward	GW-9	39.65	30.63
P-10	39.86	22.71	inward	GW-10	38.34	30.78
P-11	40.52	23.97	inward	GW-11	38.26	31.90
P-12	43.28	30.00	inward	GW-12	42.09	32.41
P-13	44.78	30.66	inward	GW-13	44.79	33.80
P-14	45.09	30.09	inward	GW-14	39.63	34.41
P-15	45.57	30.96	inward	GW-15	42.33	35.01
P-16	44.67	31.07	inward	GW-16	44.41	34.47
P-17	44.28	30.16	inward	GW-17	42.19	34.55
P-18	43.16	24.37	inward	GW-18	41.76	34.42
P-19	42.91	23.20	inward	GW-19	41.20	33.50
P-20	42.54	26.27	inward	GW-20	41.00	33.29
P-21	42.23	25.28	inward	GW-21	40.94	28.48
P-22	42.06	24.06	inward	GW-22	41.53	29.23
P-23	42.08	22.55	inward	GW-23	40.91	34.48
P-24	42.03	20.24	inward	GW-24	41.37	33.45
P-25	42.16	18.80	inward	GW-25	41.11	34.47
P-26	42.50	19.12	inward	GW-26	41.44	34.84
P-27R	42.73	19.31	inward	GW-27R	40.90	35.02

Comments:

NA = Not Applicable - wells and piezometers abandoned in March 2016

Wells (GW-18 through GW-27R) and piezometers (P-18 through P-27R) installed in April 2016

Date Data Collected: JUNE 27, 2016

Form Revised December 6, 2004