

Smith, George

From: Bayne, Bradley J <Bradley.Bayne@atkinsglobal.com>
Sent: Thursday, March 09, 2017 9:50 AM
To: SWD_Waste (Shared Mailbox)
Cc: Morris, John R.; Tafuni, Steven; Anthony Detweiler; Lynette Falkowski; Bryan White; Mopps, Charles L; Cronyn, Edward
Subject: 0810055-012-AV / Manatee County -Lena Road Landfill Monthly Report_February 2017
Attachments: 0810055-12-AV_Manatee County-Lena Road Landfill Monthly Report_FDEP February 2017.pdf

Mr. Morris,

Attached is the Manatee County Lena Road Landfill Monthly Report (for February 2017) which includes the following:

- Monthly Water Balance Report (Exhibit A)
- Monthly Leachate Tracking Summary – 2017 (Exhibit B)
- Monthly Leachate Readings
- Monthly Rainfall
- Monthly Groundwater Gradient Report

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

Thanks,

Brad Bayne, P.G.

Senior Scientist II, GeoSciences Group

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March 9, 2017

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 –February 2017**

Dear Mr. Morris:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2017 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, Monthly Groundwater Gradient Report. 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 D. Bayne". The signature is written over a circular, faint background stamp that appears to be a professional seal for a geologist in the state of Florida.

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 February-17

A	B	C	D	E	F	G	H	I
DATE	LEACHATE STAGE I Lift Station 1 (gallons)	LEACHATE STAGE I Lift Station 2 (gallons)	LEACHATE STAGE I TOTAL (gallons)	LEACHATE STAGE II TOTAL (gallons)	LEACHATE STAGE III TOTAL (gallons)	TOTAL LEACHATE PUMPED (gallons)	RAINFALL (inches)	RAINFALL (gallons)
01-Feb-17	13,945	198	14,143	99,912	13,917	127,972	0.00	0
02-Feb-17	16,517	7,330	23,847	96,984	13,663	134,494	0.00	0
03-Feb-17	17,665	118	17,783	104,768	13,984	136,535	0.00	0
04-Feb-17	0	0	0	0	0	0	0.00	0
05-Feb-17	0	0	0	0	0	0	0.00	0
06-Feb-17	51,082	7,517	58,599	292,872	37,835	389,306	0.00	0
07-Feb-17	19,843	7,108	26,951	98,360	14,108	139,419	0.00	0
08-Feb-17	21,670	53	21,723	97,488	14,136	133,347	1.00	7,766,625
09-Feb-17	16,087	84	16,171	99,840	14,117	130,128	0.00	0
10-Feb-17	12,371	65	12,436	91,168	9,754	113,358	0.00	0
11-Feb-17	0	0	0	0	0	0	0.00	0
12-Feb-17	0	0	0	0	0	0	0.00	0
13-Feb-17	52,098	15,075	67,173	309,152	41,042	417,367	0.00	0
14-Feb-17	22,134	83	22,217	93,520	13,727	129,464	0.00	0
15-Feb-17	27,104	142	27,246	94,840	13,999	136,085	0.00	0
16-Feb-17	26,200	7,282	33,482	101,288	14,337	149,107	0.10	776,662
17-Feb-17	19,363	35	19,398	93,240	9,620	122,258	0.00	0
18-Feb-17	0	0	0	0	0	0	0.09	698,996
19-Feb-17	0	0	0	0	0	0	0.00	0
20-Feb-17	0	0	0	0	0	0	0.00	0
21-Feb-17	118,409	14,384	132,793	378,882	50,420	562,095	0.00	0
22-Feb-17	12,026	34	12,060	95,318	17,770	125,148	0.50	3,883,312
23-Feb-17	45,386	7,270	52,656	95,112	17,331	165,099	0.00	0
24-Feb-17	38,937	33	38,970	96,452	13,445	148,867	0.00	0
25-Feb-17	0	0	0	0	0	0	0.00	0
26-Feb-17	0	0	0	0	0	0	0.00	0
27-Feb-17	60,899	7,494	68,393	269,756	33,364	371,513	0.00	0
28-Feb-17	33,878	349	34,227	92,672	16,508	143,407	0.80	6,213,300
01-Mar-17	0	0	0	0	0	0	0.00	0
02-Mar-17	0	0	0	0	0	0	0.00	0
03-Mar-17	0	0	0	0	0	0	0.00	0
TOTAL	625,614	74,654	700,268	2,701,624	373,077	3,774,969	2.49	19,338,895
Leachate Pumped as Percentage of Rainfall			10.2%	33.9%	8.4%			

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 II.
- F - Leachate pumped (gallons) from Stage III.
- G - Total leachate pumped to WWTP storage tank (D+E+F).
- H - Rainfall (inches) recorded on this date.
- I - Rainfall (gallons) calculated based on open area (H x Area x 27,156 gal/acre-in).

Comments

	Stage I (acres)	Stage II (acres)	Stage III (acres)	TOTAL (acres)
Initial Cover	102.0	113.0	66.0	281.0
Interm. Cover	0.0	5.0	--	5.0
Closed	30.0	0.0	--	30.0
TOTAL	132.0	118.0	66.0	316.0
Open Area	102.0	118.0	66.0	286.0

"0" = no data recorded

EXHIBIT B

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL

MONTHLY LEACHATE TRACKING SUMMARY -- 2017

	B	C	D	E	F	G	H	I	J
MONTH	STAGE I LEACHATE (gallons)	STAGE II LEACHATE (gallons)	STAGE III LEACHATE (gallons)	TOTAL LEACHATE (gallons)	RAINFALL (inches)	RAINFALL (gallons)	STAGE I LEACHATE/ RAINFALL (%)	STAGE II LEACHATE/ RAINFALL (%)	STAGE III LEACHATE /RAINFALL (%)
JANUARY	638,719	3,558,368	468,096	4,665,183	1.82	14,135,257	12.7%	61.0%	14.4%
FEBRUARY	700,268	2,701,624	373,077	3,774,969	2.49	19,338,895	10.2%	33.9%	8.4%
MARCH									
APRIL									
MAY									
JUNE									
JULY									
AUGUST									
SEPTEMBER									
OCTOBER									
NOVEMBER									
DECEMBER									
TOTAL	1,338,987	6,259,992	841,173	8,440,152	4.31	33,474,152	11.2%	45.3%	10.9%

Notes:

1. (B) Total leachate pumped from Stage I.
2. (C) Total leachate pumped from Stage II.
3. (D) Total leachate pumped from Stage III.
4. (E) Total leachate (Column B+C+D) pumped to the WWTP storage tank.
5. (F) Total rainfall in inches.
6. (G) Total rainfall in gallons (Stage I, II, and III Open Area of 286-acres x Rainfall)
7. (H) Stage I leachate pumped as a percentage of rainfall.
8. (I) Stage II leachate pumped as a percentage of rainfall.
9. (J) Stage III leachate pumped as a percentage of rainfall.

Landfill Stage Land Areas

	Stage I (acres)	Stage II (acres)	Stage III (acres)	TOTAL (acres)
Initial Cover	102.0	113.0	66.0	281.0
Intermed. Cover	0.0	5.0	--	5.0
Closed	30.0	0.0	--	30.0
TOTAL	132.0	118.0	66.0	316.0
Open Area	102.0	118.0	66.0	286.0

LEACHATE METER READINGS

DATE	LEACHATE METERS				STORMWATER S.G.		COMMENTS	NAME (Initials)
	#1	#2	#3	#4	#1	#2		
2/1/17	6787221	942239	8880257	99965688	33.44	Dry	OK	R.B
2/2/17	6803738	949569	8673900	10002672	33.44	Dry	OK	R.B
2/3/17	6621403	949687	8887884	10016740	33.43	Dry	OK	R.B
2/4/17								
2/5/17								
2/6/17	6872465	957204	8925719	10046052	33.41	Dry	OK	R.B
2/7/17	6892328	964312	8939627	10055867	33.41	Dry	OK	R.B
2/8/17	6913998	964364.56	8953963	10065636	34.50	DRY	OK	CM
2/9/17	6930085	964449.6	8968080	100756200	34.50	DRY	OK	CM
2/10/17	6942456	964514	8977631	10084786	34.49	Dry	OK	R.B
2/11/17								
2/12/17								
2/13/17	6994554	979569	9018676	10118520	33.45	Dry	OK	R.B
2/14/17	7016688	979672	9032603	101280040	33.45	Dry	OK	R.B
2/15/17	7043792	979614	9046608	101344880	33.45	Dry	OK	R.B
2/16/17	7062992	987096	9060939	10144166	33.44	Dry	OK	R.B
2/17/17	7089355	987131	9070559	10153408	33.42	Dry	OK	R.B
2/18/17								
2/19/17								
2/20/17								
2/21/17	7207764	1001515	9120971	10191842	33.40	Dry	OK	R.B
2/22/17	7219790	1001549	9136749	10201806	33.40	Dry	OK	R.B
2/23/17	7218576	1000819	9156080	10210820	33.43	Dry	OK	R.B
2/24/17	7304113	1008652	9169525	10220572	33.43	Dry	OK	R.B
2/25/17								
2/26/17								
2/27/17	7365012	1016346	9202889	10247426	33.40	Dry	OK	R.B
2/28/17	7398590	1016695	9219397	10256760	33.38	Dry	OK	R.B

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2017 Feb	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.031	42.30	32.10
2	0.00	0.032	41.90	32.00
3	0.00	0.030	41.90	32.00
4	0.00	0.031	41.90	31.90
5	0.00	0.030	41.90	31.80
6	0.00	0.031	41.40	31.80
7	0.00	0.033	41.40	32.10
8	1.00	0.030	41.40	32.10
9	0.00	0.030	41.40	32.10
10	0.00	0.029	41.40	32.60
11	0.00	0.029	41.30	32.70
12	0.00	0.030	41.20	32.80
13	0.00	0.034	41.20	32.80
14	0.00	0.032	41.20	32.90
15	0.00	0.033	41.10	32.80
16	0.10	0.029	41.10	32.80
17	0.00	0.029	41.10	32.70
18	0.09	0.032	41.00	32.80
19	0.00	0.030	41.00	32.80
20	0.00	0.032	41.00	32.70
21	0.00	0.028	41.00	32.70
22	0.50	0.032	41.10	32.70
23	0.00	0.034	41.10	32.60
24	0.00	0.029	41.10	32.70
25	0.00	0.024	41.10	32.60
26	0.00	0.028	41.20	32.50
27	0.00	0.026	41.10	32.50
28	0.80	0.025	41.20	32.40
29				
30				
31				
TOTAL	2.49	0.843		
AVG		0.030		
MIN				
MAX	1.00	0.034		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

Monthly Groundwater Gradient Report

Month and Year: FEBRUARY 2017

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	24.95	inward	GW-3	39.40	31.15
P-4	40.78	23.74	inward	GW-4	40.53	30.49
P-5	40.73	23.78	inward	GW-5	39.90	29.95
P-6	40.74	23.71	inward	GW-6	38.95	29.19
P-7	40.60	23.67	inward	GW-7	39.49	26.98
P-8	40.21	23.58	inward	GW-8	39.75	25.80
P-9	39.97	23.68	inward	GW-9	39.65	26.61
P-10	39.86	22.68	inward	GW-10	38.34	26.58
P-11	40.52	23.93	inward	GW-11	38.26	28.55
P-12	43.28	29.62	inward	GW-12	42.09	31.30
P-13	44.78	30.73	inward	GW-13	44.79	33.54
P-14	45.09	30.01	inward	GW-14	39.63	33.39
P-15	45.57	30.96	inward	GW-15	42.33	34.19
P-16	44.67	31.06	inward	GW-16	44.41	33.80
P-17	44.28	30.19	inward	GW-17	42.19	33.36
P-18	43.16	24.04	inward	GW-18	41.76	30.62
P-19	42.91	22.97	inward	GW-19	41.20	28.62
P-20	42.54	25.40	inward	GW-20	41.00	27.53
P-21	42.23	24.69	inward	GW-21	40.94	25.13
P-22	42.06	23.79	inward	GW-22	41.53	25.30
P-23	42.08	22.41	inward	GW-23	40.91	26.78
P-24	42.03	19.92	inward	GW-24	41.37	27.18
P-25	42.16	19.20	inward	GW-25	41.11	28.66
P-26	42.50	19.19	inward	GW-26	41.44	30.90
P-27R	42.73	19.60	inward	GW-27R	40.90	30.88

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: FEBRUARY 23, 2017

Form Revised December 6, 2004