



**Atkins North America, Inc.**  
482 South Keller Road  
Orlando, Florida 32810-6101  
**Telephone: +1.407.647.7275**  
[www.atkinsglobal.com/northamerica](http://www.atkinsglobal.com/northamerica)

September 12, 2011

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  
SEP 12 2011  
Southwest District

**Re: Manatee County Lena Road Landfill  
Monthly Report – August 2011**

Dear Mr. Morris:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2011 (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 407/806-4153.

Sincerely,

Joe Miller, P.E.  
Senior Project Manager

Attachments

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

u:\so\projects\manatee county\sw-05 annual monitoring\2011\august\monthlyltr\_august 2011.docx

# EXHIBIT A

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY  
 LENA ROAD LANDFILL  
 MONTHLY WATER BALANCE REPORT  
**AUGUST, 2011**

FLORIDA DEPARTMENT OF  
 ENVIRONMENTAL PROTECTION  
**SEP 12 2011**  
 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-Aug-11	41,540	5,250	46,790	0	46,790	0.00	0
02-Aug-11	19,050	1,210	20,260	0	20,260	0.00	0
03-Aug-11	18,730	1,190	19,920	0	19,920	0.00	0
04-Aug-11	17,790	1,690	19,480	0	19,480	0.00	0
05-Aug-11	15,190	3,210	18,400	0	18,400	0.00	0
06-Aug-11	0	0	0	0	0	0.00	0
07-Aug-11	0	0	0	0	0	0.00	0
08-Aug-11	46,750	2,730	49,480	0	49,480	0.08	364,977
09-Aug-11	17,070	70	17,140	0	17,140	1.48	6,752,075
10-Aug-11	19,070	0	19,070	0	19,070	0.53	2,417,973
11-Aug-11	24,920	10	24,930	0	24,930	0.30	1,368,664
12-Aug-11	25,300	2,570	27,870	5,900	33,770	0.00	0
13-Aug-11	0	0	0	0	0	0.00	0
14-Aug-11	0	0	0	0	0	0.00	0
15-Aug-11	82,120	3,480	85,600	1,800	87,400	0.02	91,244
16-Aug-11	21,380	1,110	22,490	0	22,490	0.17	775,576
17-Aug-11	21,460	30	21,490	2,000	23,490	0.17	775,576
18-Aug-11	19,220	940	20,160	0	20,160	0.04	182,489
19-Aug-11	22,740	860	23,600	0	23,600	0.40	1,824,885
20-Aug-11	0	0	0	0	0	0.00	0
21-Aug-11	0	0	0	0	0	1.30	5,930,877
22-Aug-11	64,710	5,480	70,190	1,800	71,990	0.00	0
23-Aug-11	24,890	490	25,380	9,300	34,680	2.24	10,219,357
24-Aug-11	29,060	660	29,720	14,700	44,420	0.00	0
25-Aug-11	32,770	1,400	34,170	9,400	43,570	0.00	0
26-Aug-11	32,840	550	33,390	11,000	44,390	0.00	0
27-Aug-11	0	0	0	0	0	0.00	0
28-Aug-11	0	0	0	0	0	0.10	456,221
29-Aug-11	82,910	4,630	87,540	18,700	106,240	0.22	1,003,687
30-Aug-11	23,290	110	23,400	5,700	29,100	0.00	0
31-Aug-11	19,170	710	19,880	3,800	23,680	0.12	547,466
<b>TOTAL</b>	<b>721,970</b>	<b>38,380</b>	<b>760,350</b>	<b>84,100</b>	<b>844,450</b>	<b>7.17</b>	<b>32,711,067</b>
Leachate Pumped as Percentage of Rainfall			3.8%	0.7%			

**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
<b>TOTAL</b>	<b>132.0</b>	<b>66.0</b>	<b>198.0</b>
<b>Open Area</b>	<b>102.0</b>	<b>66.0</b>	<b>168.0</b>

**Comments**

## EXHIBIT B

### MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY LENA ROAD LANDFILL MONTHLY LEACHATE TRACKING SUMMARY -- 2011

	B	C	D	E	F	G	H
MONTH	STAGE I	STAGE III	TOTAL			STAGE I	STAGE III
	LEACHATE (gallons)	LEACHATE (gallons)	LEACHATE (gallons)	RAINFALL (inches)	RAINFALL (gallons)	LEACHATE/ RAINFALL (%)	LEACHATE /RAINFALL (%)
JANUARY	563,230	153,700	716,930	3.67	16,743,322	5.5%	2.3%
FEBRUARY	463,860	61,000	524,860	0.97	4,425,347	17.3%	3.5%
MARCH	522,550	237,300	759,850	8.59	39,189,410	2.2%	1.5%
APRIL	666,280	305,100	971,380	2.93	13,367,284	8.2%	5.8%
MAY	559,070	477,800	1,036,870	1.11	5,064,056	18.2%	24.0%
JUNE	463,120	642,500	1,105,620	5.21	23,769,130	3.2%	6.9%
JULY	333,160	348,300	681,460	6.57	29,973,740	1.8%	3.0%
AUGUST	760,350	84,100	844,450	7.17	32,711,067	3.8%	0.7%
SEPTEMBER							
OCTOBER							
NOVEMBER							
DECEMBER							
<b>TOTAL</b>	<b>4,331,620</b>	<b>2,309,800</b>	<b>6,641,420</b>	<b>36.22</b>	<b>165,243,356</b>	<b>4.3%</b>	<b>3.6%</b>

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
<b>TOTAL</b>	<b>132.0</b>	<b>66.0</b>	<b>198.0</b>
<b>Open Area</b>	<b>102.0</b>	<b>66.0</b>	<b>168.0</b>

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2011 Aug	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.00	0.006	36.70	31.00
2	0.00	0.004	36.90	30.70
3	0.00	0.004	36.90	30.70
4	0.00	0.004	37.00	30.60
5	0.00	0.004	36.70	30.50
6	0.00	0.004	37.00	30.50
7	0.00	0.004	37.00	30.50
8	0.08	0.004	37.10	30.20
9	1.48	0.004	37.30	30.50
10	0.53	0.005	37.30	30.70
11	0.30	0.006	37.30	30.80
12	0.00	0.007	37.50	30.50
13	0.00	0.006	37.70	30.50
14	0.00	0.006	37.90	30.70
15	0.02	0.006	38.00	30.70
16	0.17	0.005	38.10	30.50
17	0.17	0.006	38.10	30.90
18	0.04	0.007	38.10	31.10
19	0.40	0.006	38.10	31.40
20	0.00	0.006	38.10	31.80
21	1.30	0.006	38.10	31.80
22	0.00	0.008	38.20	31.90
23	2.24	0.008	38.50	32.30
24	0.00	0.010	38.40	32.60
25	0.00	0.009	38.40	32.70
26	0.00	0.009	38.40	33.10
27	0.00	0.007	38.40	33.30
28	0.10	0.007	38.50	33.60
29	0.22	0.007	38.60	33.90
30	0.00	0.006	38.40	34.40
31	0.12	0.005	38.50	34.60
<b>TOTAL</b>	<b>7.17</b>	<b>0.186</b>		
<b>AVG</b>		<b>0.006</b>		
<b>MIN</b>				
<b>MAX</b>	<b>2.24</b>	<b>0.010</b>		

Fax # 9-708-5668





## FIGURE L-7

Manatee County Lena Road Landfill

# Monthly Groundwater Gradient Report

Month and Year: AUGUST 2011

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	30.88	<i>inward</i>	GW-1	38.68	33.68
P-2	42.32	30.62	<i>inward</i>	GW-2	40.92	33.62
P-3	40.36	25.73	<i>inward</i>	GW-3	39.40	34.35
P-4	40.78	23.92	<i>inward</i>	GW-4	40.53	33.63
P-5	40.73	23.63	<i>inward</i>	GW-5	39.90	32.80
P-6	40.74	23.54	<i>inward</i>	GW-6	38.95	32.20
P-7	40.60	23.60	<i>inward</i>	GW-7	39.49	31.09
P-8	40.21	23.56	<i>inward</i>	GW-8	39.75	30.15
P-9	39.97	23.26	<i>inward</i>	GW-9	39.65	29.79
P-10	39.86	23.08	<i>inward</i>	GW-10	38.34	29.83
P-11	40.52	24.41	<i>inward</i>	GW-11	38.26	30.96
P-12	43.28	30.81	<i>inward</i>	GW-12	42.09	32.98
P-13	44.78	31.97	<i>inward</i>	GW-13	44.79	33.74
P-14	45.09	31.13	<i>inward</i>	GW-14	39.63	34.43
P-15	45.57	32.46	<i>inward</i>	GW-15	42.33	35.17
P-16	44.67	32.50	<i>inward</i>	GW-16	44.41	34.61
P-17	44.28	32.04	<i>inward</i>	GW-17	42.19	33.57

Comments:

Date Data Collected: August 31, 2011

Form Revised December 6, 2004