

2014 Leachate Quantity Analysis Report Tomoka Farms Road Landfill Class I North Cell



Presented To:

Florida Department of Environmental Protection

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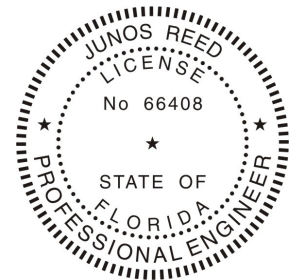
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The following report is provided to satisfy Section 2 – Specific Conditions, (C) (12) (g) of the permit to operate the Tomoka Farms Road Landfill, North Cell Class I disposal area. Permit Number 0078767-030-SO-01.

g. Leachate Quantity Analysis Report. The permittee shall annually provide the Department a graphical representation of the monthly leachate generation rate for each of the 6 pumps and an analysis of the data. Any significant drop in leachate generation shall be explained or the root cause determined. The report must be submitted not later than January 31 following the reporting year.

Summary and Analysis

The leachate generation rates for the North Cell of the Tomoka Farms Road Landfill and the leachate collection system are monitored on a daily basis with flows recorded weekly. Daily inspections consists of a visual inspection looking for any alarm lights, physical damage to the panel or riser, and check the liquid level insuring that the readings are within the set parameters. If any damage is noticed or the system is not operating properly, troubleshooting and repairs are initiated. If the riser will be down for greater than 24 hours for repairs, a temporary pump is set up and leachate is pumped to the closest riser or cleanout.

Weekly readings are gathered in the field, then entered into a spreadsheet, tracked throughout the year, compared to the recent rainfall, and analyzed. If the analysis shows an unusual rise or drop in leachate generation as compared to the rainfall for that period, troubleshooting and subsequent repairs to the system are made and documented. Rainfall is recorded daily directly adjacent to the North Cell at the leachate treatment facility. During the reporting period, January 2014 through December 2014, the leachate generation rates tracked closely with the rainfall trending up with an increase in rain and trending down with a decrease in rainfall. Riser One specifically sees a significant increase in leachate production during rainy periods due to the open toe-drain on the south side, which is connected through a cleanout riser to the leachate collection system for riser one. The toe-drain appears to be working effectively, it is typically dry within two or three days after a heavy rain and there have been limited leachate seeps in the area of the toe-drain. Additionally Riser One and Riser Five have higher leachate flows due to the gas system condensate that is pumped into these two risers. Figure 1 is provided as a graphical representation of leachate generation rates vs. rainfall for the period of January 2014 through December 2014.

Figure 1 (Leachate Flow vs. Rainfall)

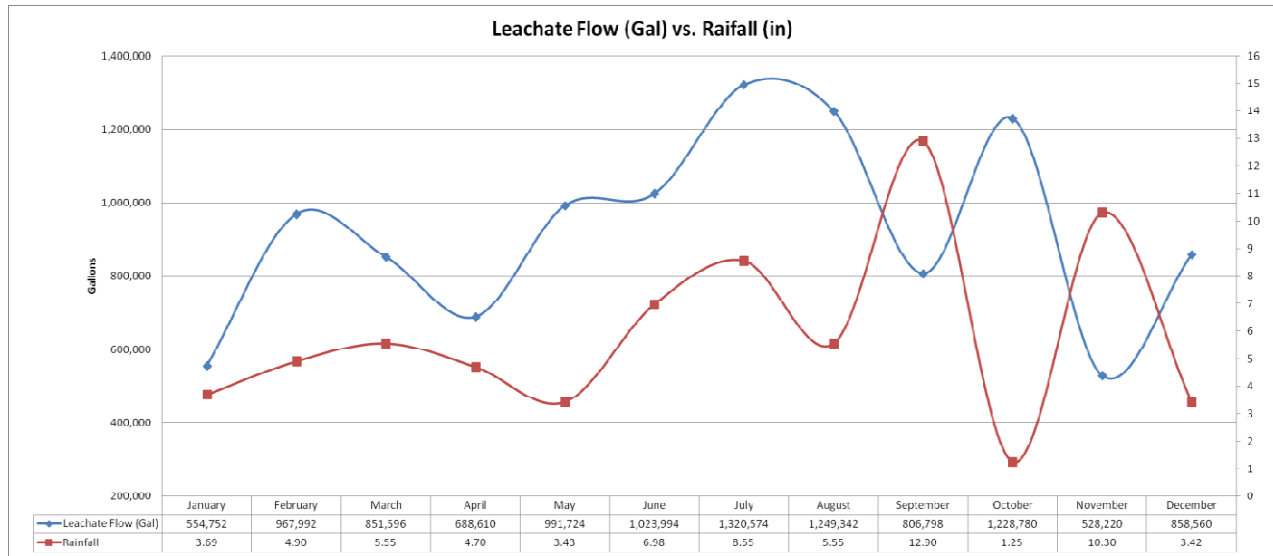


Table 1 (monthly leachate flow)

2014 Leachate Collection Riser Sumps Tomoka Landfill Class I							
	Riser 1	Riser 2	Riser 3	Riser 4	Riser 5	Riser 6	Total
Month	Flow	Flow	Flow	Flow	Flow	Flow	Flow
January	203,760	14,508	66,924	87,850	113,980	67,730	554,752
February	384,200	37,284	162,708	129,490	147,760	106,550	967,992
March	263,000	185,094	91,962	99,110	143,900	68,530	851,596
April	216,660	11,856	150,774	98,000	145,520	65,800	688,610
May	394,890	10,062	190,632	118,530	199,100	78,510	991,724
June	321,550	30,810	277,524	114,550	203,030	76,530	1,023,994
July	245,450	59,280	660,504	127,020	166,270	62,050	1,320,574
August	350,010	0	458,952	145,650	216,030	78,700	1,249,342
September	387,020	0	122,538	76,520	131,420	89,300	806,798
October	392,350	0	390,000	145,810	218,620	82,000	1,228,780
November	258,640	0	0	78,380	136,570	54,630	528,220
December	388,520	0	0	159,350	239,830	70,860	858,560

**Zero flow at Riser 2 from August thru December and Riser 3 for November and December was due the sump riser replacement project*

Riser Two & Three Sump Replacement Project.

As part of ongoing efforts to improve the leachate collection system and to satisfy Section 2 – Specific Conditions, (C) (12) (f) of the permit to operate the Tomoka Farms Road Landfill, North Cell Class I disposal area, Permit Number 0078767-030-SO-01. The sumps for Riser's Two and Three were replaced.

f. Leachate Collection and Detection System Repairs. As described in reference 1, APPENDIX 2, retrofits of leachate sumps 1, 4, 5, and 6 have been completed. Retrofits of sumps 2 and 3 shall be completed within 12 months from the date this permit is issued. If it appears that the project will take longer than 12 months, the permittee must provide the Department advance written notice of the cause for the delay and request an extension for completion of the project.

The project commenced in August 2014 and as of the date of this report is at 95% complete. It is anticipated that the electrical work will be completed and Riser's Two and Three will be started up in early February 2015 then County will begin again tracking flow from these risers. At this time and at all times throughout the project, the sumps are being temporarily pumped down by the Contractor, Southeast Environmental Construction.