



**Review of 2014 1st Semi-annual Water Quality Monitoring Report
for
Tomoka Farms Road Landfill**

Review Date: 8/28/14	Reviewed By: Allen Rainey, Environmental Specialist III	WACS Facility ID #: 27540
Facility Name: Tomoka Farms Road Landfill	County: Volusia	
Monitoring Period: May 2014		
Type: Routine & Contamination Assessment	Facility Class Types: Class I, Class III	
Report Date: August 2014	Received Date: 8/5/14 (part of report received by Tallahassee office), 8/28/14 (entire report received by Central District)	
Prepared By: HDR	Submitted By: HDR	

Review Details

Summary

Other than the continuation of contamination assessment for all contaminants, there are no actions needed to protect groundwater. The Department is currently incorporating portions of the facility's requests into the facility's solid waste permit renewal: (1) commence routine, annual monitoring events in lieu of semi-annual events, and (2) reduce the number of wells sampled for each event.

Parameter Exceedances

- Benzene standard (1 µg/L) exceeded in the following wells and is being addressed by contamination assessment.

Well ID	Well Type	Concentration (µg/L)
B36	Background	2.5
B37-1	Compliance	11.5
B45-1	Compliance	10.4
B81-4	Contamination Assessment	1.2
B79-1	Contamination Assessment	7.1
B85-6	Contamination Assessment	2.1
B86	Contamination Assessment	11
B79-6	Contamination Assessment	5.4
B76-1	Contamination Assessment	21.2
B76-6	Contamination Assessment	11.8

- Arsenic standard (10 µg/L) exceeded in compliance wells B39 at 13.2 µg/L and B75 at 12.3 µg/L.
- Sulfate standard (250 mg/L) exceeded in background wells B2 at 331 mg/L and B34-2 370 mg/L.
- Sodium standard (160 mg/L) exceeded in compliance wells B37-1 at 258 mg/L and B45-1 at 232 mg/L, and detection well B62-1R at 189 mg/L. The sodium standard has been exceeded in wells B37-1 and B45-1 since the May 2013 monitoring event; at that time, the well concentrations were 227 mg/L and 202 mg/L, respectively. Sodium standard exceedances in wells B79-1, B85-6, B86, B79-6, and B76-1 are being addressed by contamination assessment.
- Chloride standard (250 mg/L) exceeded in intermediate well B8-2 at 335 mg/L. The chloride standard has been exceeded in well B8-2 since the May 2013 monitoring event; at that time, the well concentration was of 288 mg/L. Chloride standard exceedances in wells B79-1, B-76-1, B76-6, and B79-6 are being addressed by contamination assessment.
- Nitrate standard (10 mg/l) exceeded in compliance well B45-2 at 29.8 mg/L.
- Ammonia 62-777 GCTL (2.8 mg/L) exceeded in background well B2, compliance well B41-1, detection wells B61R, B62-1R, and B62-2R, and contamination assessment wells B79-1, B85-6, and B79-6.
- Iron standard (0.3 mg/L) and total dissolved solids standard (500 mg/L) exceeded in a majority of the groundwater monitoring wells except those in the Floridan aquifer.
- pH in nearly half of the groundwater wells is within the range of 6.5 – 8.
- Unionized ammonia concentration of 0.41 mg/L reported in surface water location SW-5 with an 'I' qualifier.

Notations

- Contamination assessment is ongoing.
- There were no surface water exceedances.
- On 10/26/09, the Department issued a letter to the facility for review of the facility's evaluation monitoring plan and related documents. Among other matters, that letter addresses sodium and chloride exceedances in the facility's leachate basin area and stated that standard semi-annual monitoring was sufficient for that area. None of the chloride or sodium exceedances during this monitoring event were in wells within the leachate basin area, except for the chloride exceedance in well B8-2. However, the report cites the 10/26/09 letter as a justification against additional action to protect groundwater.

- On page 7, the report recommends annual monitoring and a reduction of the number of wells requiring sampling. Page 12 of the facility's 'Water Quality Technical Report – August 2014' has the same requests. The Department is currently incorporating portions of the request into the facility's solid waste permit renewal.
- On 8/5/14, the facility's consultant emailed the report in separate parts to 'ADaPT.EDDs.and.Reports@dep.state.fl.us' because Department's Tallahassee staff had trouble opening the report files to download them to Oculus. As of 8/28/14, the complete report was not in Oculus. The Department's Central District received the report in its entirety on 8/28/14.

Purging Completion

Dissolved oxygen > 5 mg/L or ≤ 20% saturation? NO	Turbidity ≤ 20 NTUs? NO
If no, ± 0.2 mg/L or readings are within 10%? NO *	If no, ± 5 NTUs or readings are within 10%? NO *
Temperature ± 0.2° C? YES	pH ± 0.2 standard units? YES
Specific conductance ± 5% of reading? NO ^U	

* did not achieve optional stabilization criteria for 3 wells for DO

^U criteria not achieved for 2 wells

Sampling and Analysis

Sampling dates: May 19, 21, 22, 23, 27, 28, 29	Last lab analysis date: 6/10/14
# of active groundwater monitoring locations: 54	# of active surface water monitoring locations: 7
Initial sampling device: peristaltic pump	Re-sampling device: N/A
All groundwater and surface water sampling points sampled? YES	All analyses performed? YES
Trip blanks? YES	Field or equipment blanks? YES
Lab certified under National Environmental Laboratory Accreditation Program? YES	
Unionized ammonia analysis? N/A	Phenols analysis? N/A
	Unfiltered samples? YES

Monitoring Plan Implementation Schedule Reporting Requirements

Revision Date: N/A	Effective Date: 4/17/14	Permit: 0078767-031-SO-MM
Notification made within 14 days of sampling? YES		
Cover letter? NO		
Ground Water Monitoring Report, DEP Form 62-520.900(2) (or equivalent)? YES		Certification Date: 7/31/14
Summary of exceedances & sampling issues? YES		
Groundwater contour maps? YES	Contour maps signed and sealed? YES	
Water levels & water elevation table? YES	Water level measurements made within one-day period? YES	
Groundwater Sampling Logs, DEP Form FD 9000-24? YES		
Chain of custody forms? YES		
Conclusions and recommendations? YES		
Lab and field EDD files named correctly (27540_201405_swldd.txt & 27540_201405_swfdd.txt)? YES		
Report named correctly (25473_201405_swgwmr.pdf)? YES		
File(s) indicate successful data export? NO		
Report signed and sealed by P.G.? YES	Date signed and sealed: 8/8/14	
Report received within 60 days of completing lab analysis? YES		