



**Review of Initial Sampling Results for New Monitoring Wells
at
J.E.D. Solid Waste Management Facility**

Review Date: 3/2/17	Reviewed By: Allen Rainey, Environmental Specialist III	WACS Facility ID #: 89544
Facility Name: J.E.D. Solid Waste Management Facility		
Monitoring Period: Initial		
Type: Well Installation	Facility Class Types: Class I, Construction & Demolition Debris	
Report Date: 10/5/16	Received Date: 10/5/16	WACS Upload Date: 2/22/17 8:06 pm
Prepared By: Weibu LLC	Submitted By: Weibu LLC	
Report Title: Well Abandonment and Installation Baseline Water Quality Sampling		

Review Details

Summary

- In June 2016, the facility constructed/sampled detection wells MW-31A & MW-31B and abandoned wells MW-26A & MW-26B. See the green circle in the diagram at the end of this review document. Wells MW-31A and MW-31B are the southern-most wells at the facility.
- The vanadium, beryllium, chromium, and lead exceedances are the highest recorded at the facility to date.
- The facility submitted the PDF version of the report on 10/5/16 and the EDD's on 2/22/17. Both of those dates are past the due date of 9/5/16, which is 60 days from the last laboratory analyses date.

Parameter Exceedances

Parameter	Well ID	Regulatory Limit	Concentration
Iron	MW-31A	300 µg/L	4,360 µg/L
Iron	MW-31B	300 µg/L	9,490 µg/L
Arsenic	MW-31B	10 µg/L	15.5 µg/L
Vanadium	MW-31B	49 µg/L	211 µg/L
Beryllium	MW-31B	4 µg/L	6.1 µg/L
Chromium	MW-31B	100 µg/L	131 µg/L
Lead	MW-31B	15 µg/L	130 µg/L
Total Dissolved Solids	MW-31B	500 mg/L	2,710 µg/L

Notations

- Except for iron, arsenic, and total dissolved solids, the parameter exceedances in the above table are the highest recorded for those parameters to date. See "Summary of Parameter Concentration Results..." at the end of this review document.
- The report lists the arsenic, vanadium, beryllium, chromium, and lead concentration exceedances on PDF page 19 and states on PDF page 14 that the exceedances are "likely related to sample integrity" and "the samples (at the time of acquisition) are influenced by entrained sediments." A Notice of Exceedances letter dated 1/29/17 from Environmental Planning Specialist, Inc., states that the lead and vanadium exceedances during the November 2016 semi-annual monitoring event "may likely be due to the high turbidity levels in the sample."
- The report states on PDF pages 10, 11, and 12 that despite well development and over-pumping mechanical surging activities for well MW-31B, turbidity measurements sometimes exceeded the instrument's measurement range. There is a history of high turbidities in newly installed wells.
- This is the first chromium exceedance for this facility.
- pH in both of the wells was below the range of 6.5 to 8.5.
- The laboratory had surrogate recovery issues for several of the Appendix II analytes; MW-31B had more than triple of surrogate recovery issues than MW-31A.
- Kirk Wills, Southeast Region Engineer, certified the report.

Purging Completion

Dissolved oxygen \leq 20% saturation? YES	Turbidity \leq 20 NTUs? *
If no, \pm 0.2 mg/L or readings are within 10%? N/A	If no, \pm 5 NTUs or readings are within 10%? *
Temperature \pm 0.2° C? YES	pH \pm 0.2 standard units? YES
Specific conductance \pm 5% of reading? YES	
* Yes for well MW-31A, not provided for well MW-31B (see notation above)	

Sampling and Analysis		
Sampling date: June 23, 2016		Last lab analysis date: 7/7/16
All analyses performed? YES		
Trip blanks? YES		Field or equipment blanks? YES
Lab certified under National Environmental Laboratory Accreditation Program? YES		
Monitoring Plan Implementation Schedule Reporting Requirements		
Revision Date: N/A	Effective Date: 7/16/15	Permit Mod. No.: 0199726-029-SO-MM
Lab and field EDD files named correctly (89544_201606_swldd.txt & 89544_201606_swfdd.txt)? YES		
File(s) indicate successful data export? YES		

**Summary of Parameter Concentration Results Arranged
from Highest to Lowest – 2010 to 2017**

Arsenic (standard = 10 µg/L)

Testsite	SampleDate	Parameter Name	Result	Measure
CW-1A	12/16/2013	ARSENIC (AS)	278	UG/L
CW-1A	8/20/2014	ARSENIC (AS)	187	UG/L
CW-1A	2/24/2014	ARSENIC (AS)	166	UG/L
CW-1A	8/20/2014	ARSENIC (AS)	161	UG/L
CW-1A	5/5/2014	ARSENIC (AS)	77.6	UG/L
MW-13A	5/17/2011	ARSENIC (AS)	21.3	UG/L
MW-13A	5/17/2011	ARSENIC (AS)	21.3	UG/L
MW-13A	11/2/2010	ARSENIC (AS)	19.7	UG/L
MW-13A	11/12/2012	ARSENIC (AS)	17.8	UG/L
MW-13A	11/14/2011	ARSENIC (AS)	16.8	UG/L
MW-13A	5/15/2012	ARSENIC (AS)	16.8	UG/L
MW-13A	5/11/2010	ARSENIC (AS)	16.1	UG/L
MW-31B	6/23/2016	ARSENIC (AS)	15.5	UG/L
MW-13A	5/7/2013	ARSENIC (AS)	12.9	UG/L
MW-11A	11/2/2010	ARSENIC (AS)	11.2	UG/L
MW-13A	12/3/2013	ARSENIC (AS)	10.5	UG/L

Vanadium (GTCL = 49 µg/L)

Testsite	SampleDate	Parameter Name	Result	Measure
MW-31B	6/23/2016	VANADIUM	211	UG/L
MW-27 B	8/19/2015	VANADIUM	86.8	UG/L
MW-25B	11/6/2014	VANADIUM	43	UG/L
MW-19A	5/19/2010	VANADIUM	39.3	UG/L
MW-26B	11/6/2014	VANADIUM	38.9	UG/L
MW-19A	5/23/2011	VANADIUM	38.7	UG/L
MW-19A	5/23/2011	VANADIUM	38.7	UG/L
MW-25B	7/9/2014	VANADIUM	38.5	UG/L

Beryllium (standard = 4 µg/L)

Testsite	SampleDate	Parameter Name	Result	Measure
MW-31B	6/23/2016	BERYLLIUM (BE)	6.1	UG/L
MW-8B	11/11/2014	BERYLLIUM (BE)	4.54	UG/L
MW-10B	11/11/2014	BERYLLIUM (BE)	3.21	UG/L
MW-10B	5/19/2015	BERYLLIUM (BE)	2.67	UG/L
MW-9B	5/15/2014	BERYLLIUM (BE)	2.32	UG/L
MW-27 B	8/19/2015	BERYLLIUM (BE)	2.19	UG/L
MW-3B	5/12/2016	BERYLLIUM (BE)	1.9	UG/L
MW-3B	11/18/2015	BERYLLIUM (BE)	1.87	UG/L

Chromium (standard = 100 µg/L)

Testsite	SampleDate	Parameter Name	Result	Measure
MW-31B	6/23/2016	CHROMIUM (CR)	131	UG/L
MW-27 B	8/19/2015	CHROMIUM (CR)	72.8	UG/L
MW-19A	5/23/2011	CHROMIUM (CR)	42.4	UG/L
MW-19A	5/23/2011	CHROMIUM (CR)	42.4	UG/L
MW-19A	11/9/2010	CHROMIUM (CR)	39.3	UG/L
MW-19A	5/19/2010	CHROMIUM (CR)	38.8	UG/L
MW-26B	11/6/2014	CHROMIUM (CR)	29.7	UG/L
MW-19A	5/13/2013	CHROMIUM (CR)	28	UG/L

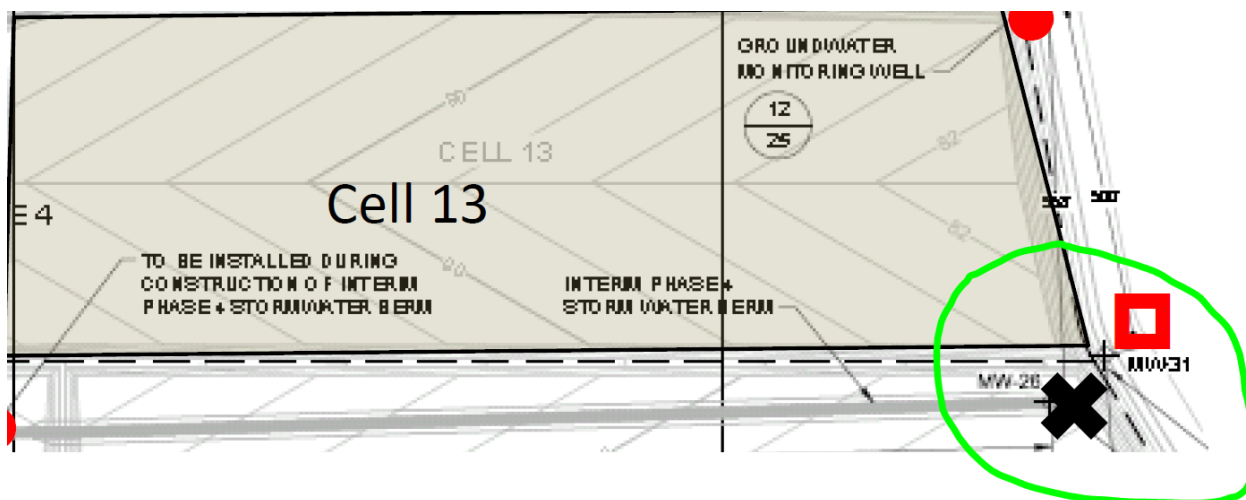
Lead (standard = 15 µg/L)

Testsite	SampleDate	Parameter Name	Result	Measure
MW-31B	6/23/2016	LEAD (PB)	130	UG/L
MW-27 B	8/19/2015	LEAD (PB)	79.2	UG/L
MW-26B	11/6/2014	LEAD (PB)	34.7	UG/L
MW-16BR	12/4/2013	LEAD (PB)	31.4	UG/L
MW-26B	7/9/2014	LEAD (PB)	20.4	UG/L
MW-25B	11/6/2014	LEAD (PB)	18.4	UG/L
MW-19A	5/23/2011	LEAD (PB)	14.8	UG/L
MW-19A	5/23/2011	LEAD (PB)	14.8	UG/L

Total Dissolved Solids (standard = 500 mg/L)

Testsite	SampleDate	Parameter Name	Result	Measure
MW-4B	5/12/2016	TOTAL DISSOLVED	3600	MG/L
MW-31B	6/23/2016	TOTAL DISSOLVED	2710	MG/L
MW-5B	5/16/2016	TOTAL DISSOLVED	1890	MG/L
MW-5B	5/18/2015	TOTAL DISSOLVED	1850	MG/L
MW-4B	5/18/2015	TOTAL DISSOLVED	1800	MG/L
MW-5B	11/19/2015	TOTAL DISSOLVED	1740	MG/L
MW-5B	11/12/2014	TOTAL DISSOLVED	1700	MG/L
MW-4B	11/12/2014	TOTAL DISSOLVED	1670	MG/L
MW-8A	5/16/2016	TOTAL DISSOLVED	1620	MG/L

Green Circle Delineates Wells MW-31A/B (red square) and MW-26A/B (black “X”)



(excerpted from “Attachment B Figure E” within permit modification #0199726-029-SO-MM)