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31 July 2014

Mr. F. Thomas Lubozynski, P.E.
Waste Program Administrator
Solid and Hazardous Waste Program
Florida Department of Environmental Protection, Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Re: 5th Technical Report on Water Quality
J.E.D. Solid Waste Management Facility, Osceola County, Florida
Permit No. SO49-0199726-024
WACS Facility ID #89544

Dear Mr. Lubozynski:

Submitted herewith is the subject report documenting the 5th technical report on water quality (TRWQ) conducted at the J.E.D. Solid Waste Management (JED) Facility located in Osceola County, Florida. This report is being submitted as required for compliance with the conditions contained within the Monitoring Plan Implementation Schedule (MPIS) for the above referenced permit. In accordance with the permit conditions, this TRWQ summarizes analytical results from the semi-annual monitoring events conducted November 2011 through May 2014. This report is being submitted in July 2014 as described in the MIPS. This report satisfies the MPIS technical report compliance requirements as described in the MPIS.

As noted in the revised MPIS, one electronic copy (Adobe pdf format) of the 5th TRWQ is being submitted to FDEP via email.

If you have any questions or need additional information, please do not hesitate to contact Matthew Wissler at (813) 792-4820.

Sincerely,

Matthew P. Wissler
Senior Hydrogeologist

Attachments

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5th TECHNICAL REPORT ON WATER QUALITY

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Project No. FR2220A
July 31, 2014

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TABLE OF CONTENTS

1. INTRODUCTION 1
   1.1 Terms of Reference 1
   1.2 Overview 1
   1.3 Project Background 2
   1.4 Objective of Report 4
   1.5 Report Organization 4

2. MONITORING WELL DETAILS 6
   2.1 Well Layout and Construction 6

3. WATER QUALITY MONITORING 8
   3.1 Groundwater Sampling 8
      3.1.1 Sampling Locations and Procedures 8
      3.1.2 Sample Analyses 10
   3.2 Surface Water Sampling 10
      3.2.1 Sampling Locations and Procedures 10
      3.2.2 Sample Analyses 11
   3.3 Leachate Sampling 11
      3.3.1 Sampling Locations and Procedures 11
      3.3.2 Sample Analyses 11

4. FIELD-MEASURED PARAMETERS 13
   4.1 Overview 13
   4.2 Groundwater 13
   4.3 Surface Water 13
   4.4 Leachate 13

5. DETECTED PARAMETERS 14
   5.1 Overview 14
   5.2 Groundwater 14
   5.3 Surface Water 14
   5.4 Leachate 15

6. TREND ANALYSIS 16
   6.1 Overview 16

6.2 Groundwater 16
6.2.1 Arsenic 16
6.2.2 Ammonia 17
6.2.3 Chloride 18
6.2.4 Iron 19
6.2.5 Sodium 19
6.2.6 Total Dissolved Solids (TDS) 19
6.2.7 Benzene 20
6.2.8 Total Xylenes 21
6.2.9 pH 21
6.2.10 Turbidity 21
6.3 Surface Water 22
6.3.1 pH 22
6.3.2 Dissolved Oxygen 22
6.3.3 Iron 22
6.4 Leachate 23

7. COMPARISON AMOUNG WELLS IN DIFFERENT HYDROLOGIC ZONES. 24
7.1 Overview 24
7.2 Field-Measured Parameters 24
7.3 Detected Parameters 24

8. COMPARISON BETWEEN BACKGROUND AND DETECTION WELLS 26
8.1 Overview 26
8.2 Statistical Analysis 26

9. CORRELATIONS BETWEEN RELATED PARAMETERS 28
9.1 Overview 28

10. DISCUSSION OF ERRATIC OF POORLY CORRELATED DATA 29
10.1 Overview 29
10.2 Detected Analytes 29
10.2.1 1,4-Dichlorobenzene 29
10.2.2 Barium 29
10.2.3 Beryllium 29
10.2.4 Cadmium 30

10.2.5 Carbon Disulfide 30
10.2.6 Chlorobenzene 30
10.2.7 Chromium 30
10.2.8 Cobalt 30
10.2.9 Copper 30
10.2.10 Ethylbenzene 31
10.2.11 Lead 31
10.2.12 Mercury 31
10.2.13 Nickel 31
10.2.14 Nitrate 31
10.2.15 Selenium 31
10.2.16 Toluene 32
10.2.17 Vanadium 32
10.2.18 Zinc 32
10.3 Trace Analytes 32

11. GROUNDWATER CONTOUR MAP EVALUATION 33
11.1 Groundwater Level Contour Map 33
11.2 Groundwater Flow Rate Calculations 34

12. EVALUATION OF ADEQUACY OF MONITORING FREQUENCY AND SAMPLING LOCATIONS 36

13. REFERENCES 38

TABLES

2-1 Summary of Monitoring Well Construction Details

3-1 Surface Water Monitoring Geographic Locations
3-2 Leachate Sampling Sites Geographic Locations

4-1 Groundwater Field-Measured Parameters - pH
4-2 Groundwater Field-Measured Parameters - Temperature
4-3 Groundwater Field-Measured Parameters - Specific Conductance
4-4 Groundwater Field-Measured Parameters - Turbidity

4-5 Groundwater Field-Measured Parameters – Dissolved Oxygen
4-6 Surface Water Field-Measured Parameters
4-7 Leachate Field Measured Parameters

5-1 Arsenic Concentrations in Monitoring Wells
5-2 Ammonia Concentrations in Monitoring Wells
5-3 Chloride Concentrations in Monitoring Wells
5-4 Iron Concentrations in Monitoring Wells
5-5 Sodium Concentrations in Monitoring Wells
5-6 Total Dissolved Solids Concentrations in Monitoring Wells
5-7 Benzene Concentrations in Monitoring Wells
5-8 Total Xylene Concentrations in Monitoring Wells
5-9 Surface Water Detections (SW-3)
5-10 Surface Water Detections (SW-4)
5-11 Leachate Detections (L-1 through L-7)

11-1 Groundwater Elevation Measurements

FIGURES

2-1 Monitoring Point Location Map

6-1 Groundwater Trends – Arsenic
6-2 Groundwater Trends – Ammonia (as N)
6-3 Groundwater Trends – Chloride
6-4 Groundwater Trends – Iron
6-5 Groundwater Trends – Sodium
6-6 Groundwater Trends – Total Dissolved Solids (TDS)
6-7 Groundwater Trends – Benzene
6-8 Groundwater Trends – Total Xylenes
6-9 Groundwater Trends – pH
6-10 Groundwater Trends –Turbidity
6-11 Surface Water Trends – pH, DO, and Iron

9-1 Correlation Plot for TDS and Specific Conductance
9-2 Correlation Plot for Ammonia and Benzene
9-3 Correlation Plot for Sodium and Chloride

11-1 Hydrographs for A zone Wells
11-2 Hydrographs for B zone Wells
11-3 Hydrographs for C zone Wells
11-4 Hydrographs for Piezometers
11-5 Hydrographs of Vertical Gradients

APPENDICES

Appendix A CD Containing Laboratory Reports for the 15th – 20th Semi-Annual Monitoring Events (Not included in electronic submittal)
Appendix B Detected Parameters with No Regulatory Levels Exceeded
Appendix C Groundwater Contour Maps for 15th – 20th Semi-Annual Monitoring Events

1. INTRODUCTION

1.1 Terms of Reference

This fifth technical report on water quality (TRWQ) was prepared by Geosyntec on behalf of Omni, a Progressive Waste Solutions Company, owner and operator of the J.E.D. Solid Waste Management (JED) facility. This TRWQ summarizes and interprets the water quality monitoring performed in accordance with the Water Quality Monitoring Plan (Plan) prepared as part of the JED facility permit application. The requirements for executing the Plan were presented in Appendix 3 - Monitoring Plan Implementation Schedule (MPIS) of the current Permit (Permit Number SO49-0199726-024) that authorizes the development of Phases 1 through 4 at the JED facility issued by the Florida Department of Environmental Protection (FDEP) on 12 July 2012 and renewed on 23 January 2014.

This fifth TRWQ was prepared by Matt Wissler of Geosyntec Consultants.

1.2 Overview

The MPIS describes a water quality monitoring program at the JED facility that has as its intent to: (i) measure and report groundwater and surface water conditions for the monitoring network; (ii) monitor the groundwater flow direction; (iii) monitor the groundwater and surface water quality on a semi-annual basis; and (iv) monitor leachate on an annual basis. To date, in addition to the initial background (baseline) events for Phase 1, 2, and 3 monitoring well networks, twenty semi-annual water quality monitoring events have been completed. This report includes the summary and interpretation of water quality data collected from the following water quality monitoring events;

(i) 15th Semi-Annual event performed in November 2011,
(ii) 16th Semi-Annual event performed in May 2012,
(iii) 17th Semi-Annual event performed in November 2012,
(iv) 18th Semi-Annual event performed in May 2013,
(v) 19th Semi-Annual event performed in November 2013,
(vi) 20th Semi-Annual event performed in May 2014,
(vii) 1st Quarterly Compliance event performed in December 2013,
(viii) 2nd Quarterly Compliance event performed in February 2014, and
(ix) 3rd Quarterly Compliance event performed in May 2014

The first TRWQ was submitted to the FDEP in November 2006 after completion of the fourth semi-annual monitoring event. The second TRWQ was submitted to the FDEP in September 2008 after completion of the eighth semi-annual monitoring event. The third TRWQ was submitted to the FDEP in December 2010 after completion of the twelfth semi-annual monitoring event. The fourth TRWQ was submitted to the FDEP in November 2011 after completion of the 14th semi-annual monitoring event. The format of this fifth TRWQ is consistent with the previously submitted TRWQs with the addition of the compliance monitoring events. This report contains a summary for semi-annual monitoring events 15 through 20 and compliance monitoring events one through three.

1.3 Project Background

The JED facility is located in eastern Osceola County, Florida, west of highway U.S. 441, and approximately 6.5 miles south of Holopaw. The facility includes a Class I landfill which is linked to highway U.S. 441 by a 2.86-mile access road. The JED facility comprises a total of approximately 2,179 acres. The landfill footprint at build-out will be approximately 360 acres and consist of 23 landfill cells that will provide available waste capacity for a period of approximately 30 years. The FDEP issued a permit to construct and operate the Phase 1 development of the JED facility in October 2003. Phase 1 development includes four landfill cells (Cells 1 through 4) located in the northern part of the landfill and covering approximately 54 acres. As part of Phase 1, forty-five (45) groundwater monitoring wells were installed in fifteen (15) clusters (MW-1 through MW-15) around the perimeter of the Phase 1 development area. The baseline water quality report for the Phase 1 monitoring well network was submitted to FDEP in May 2004. All components of the Phase 1 development have been constructed.

The FDEP issued a permit to construct and operate Phases 2 and 3 at the JED facility in March 2007. The development of Phases 2 and 3 includes six cells (Cells 5 through 10) with a total footprint of approximately 72 acres. As part of Phases 2 and 3 development, and as approved by FDEP, six (6) existing Phase 1 monitoring wells (MW-14 A, B, and C, and MW-15 A, B, and C), and ten (10) piezometers were decommissioned. The wells and piezometers were decommissioned for construction of future cells and a storm water retention basin located within Phases 2 and 3. The decommissioning of the monitoring wells and piezometers was discussed in the Phase 2 and 3 baseline water quality report. For the development of Phases 2 and 3, twenty four (24) additional groundwater monitoring wells were installed in eight (8) well clusters (MW-16 through MW-23) around the perimeter of the Phase 2 and 3 development areas in September 2007. The baseline water quality report for the Phase 2 and 3 monitoring well network was submitted to FDEP in January 2008.

The FDEP issued a permit to construct and operate Phases 1 through 3 with vertical expansion at the JED facility in April 2008. In April 2009, the MPIS for the semi-annual water quality monitoring well network and sampling schedule were updated for Phases 1, 2 and 3. The modification included a reduction of the Phase 3 monitoring wells required to be sampled semi-annually until such time that waste placement commences in one of the Phase 3 cells (i.e., Cells 8, 9 and 10) and the sampling schedule was modified for the B-zone (intermediate) and C-zone (deep). These monitoring wells were sampled on an alternating annual basis. The C-zone monitoring wells MW-1 through MW-13, MW-16, MW-19 through MW-23 and B-zone monitoring well MW-16B were sampled in November and reported in January; B-zone monitoring wells MW-1 through MW-13, MW-16, MW-19 through MW-23 and C-zone monitoring well MW-16C were sampled in May and reported in July.

Cell 1 was completed in January 2004, Cell 4 was completed in May 2005, Cell 2 was completed in April 2006, Cell 3 was completed in October 2006, Cell 5 was completed in October 2007, Cell 6 was completed in July 2008 and Cell 7 was completed in August 2010. Monitoring wells MW-24A, MW-25A, MW-26A and MW-27C were installed in August 2010. The FDEP issued a permit to construct a lateral expansion of the facility on 8 August 2011, which authorizes construction of Phases 3-8, Cells 8-23. Cell 8 was completed in April 2012. During construction startup of Cell 8 in November 2011, monitoring well cluster MW-22 (A, B and C) was decommissioned to accommodate the perimeter road access to Cell 8. The MW-22 cluster abandonment report was submitted to the FDEP in April 2012. The well cluster was replaced in March 2012 and located on the perimeter access road approximately 800 feet south of well cluster MW-23. The shallow, intermediate and deep monitoring wells were designated MW-22RA, MW-22RB and MW-22RC, respectively. The baseline water quality report for cluster MW-22R was submitted to the FDEP in July 2012.

The Cell 9 disposal area construction was completed in October 2013 and approved by the FDEP in November 2013. As with previous construction and expansion efforts (i.e., Cell 8 disposal area) well cluster MW-20 was installed in a temporary location on the Phase 3 stormwater berm. Cell 9 construction activities included substantial modifications to the berm and as such, a request was made to abandon the well cluster. In addition, MW-16 cluster was abandon at its temporary location and replaced in a permanent location on the backside of the perimeter berm near the Cell 9 sump. Monitoring well clusters MW-16 and MW-20 were abandoned on 24 June 2013. Replacement monitoring wells MW-16AR, MW-16BR and MW-16CR were installed in October 2013. The monitoring well abandonment and installation report was submitted to the FDEP in November 2013.

A permit minor modification application was submitted to the FDEP on 24 December 2013. The minor modification application was a request to modify the MPIS prior to the initiation of construction of Cell 10 of Phase 3 and Cells 11-13 of Phase 4 as discussed with the FDEP during the 19 November 2013 meeting. The minor modification was approved by the FDEP in January 2014. The major changes include the

- Installation and sampling schedule of monitoring wells for the Phase 4 construction (includes Cells 10, 11, 12 and 13),
- Removal of the C zone wells from the semi-annual sampling schedule, and
- Installation of only A and B zone wells at the new monitoring well cluster locations.

Construction of the Cell 10 disposal area began in March 2014 which necessitated the abandonment of temporary groundwater monitoring well clusters MW-17, 18, 19 and 21. The wells were located on the Phase 3 interim storm water berm and were abandoned during Cell 10 construction on 5 March 2014. The monitoring well abandonment report was submitted to the FDEP on 13 March 2014.

The January 2014 MPIS revision was implemented during the 20th semi-annual groundwater sampling event in May 2014. In an email dated 14 May 2014, the FDEP, based on review of past semi-annual water quality monitoring reports, removed total phenols analysis from the laboratory parameters list in requirement 9 of the MPIS. For monitoring purposes, the JED facility was assigned Water Assurance Compliance System (WACS) facility identification number 89544.

1.4 Objective of Report

The objective of this fifth TRWQ is to summarize and interpret the water quality monitoring results and water level measurements collected at the JED facility, as required by the MPIS of the current FDEP permit.

1.5 Report Organization

To facilitate review, the remainder of this fifth TRWQ is organized in accordance with the requirements presented in the MPIS, which are as follows:

- Section 2 presents a summary of the monitoring well construction details;

- Section 3 describes the water quality monitoring sampling and analysis procedures;

- Section 4 presents tabular displays of the field measured parameters;
- Section 5 includes tabular displays of water quality data of detected monitoring parameters exceeding regulatory levels;
- Section 6 presents trend analyses and graphical displays of monitoring parameters exceeding regulatory levels;
- Section 7 addresses the requirement for comparison of wells completed in different hydrologic zones;
- Section 8 provides comparisons of water quality between background wells and detection wells;
- Section 9 presents correlations between related parameters (i.e. total dissolved solids and specific conductance);
- Section 10 presents a discussion of erratic and/or poorly correlated data;
- Section 11 presents an interpretation of groundwater contour maps and an evaluation of groundwater flow rates including hydrographs for all monitoring wells; and
- Section 12 provides a discussion on the adequacy of water quality monitoring frequency and sampling locations based on site conditions and the available data.

2. MONITORING WELL DETAILS

2.1 Well Layout and Construction

For the Phase 1 development, 45 groundwater monitoring wells were installed in 15 clusters (MW-1 through MW-15) around the perimeter of the Phase 1 development area. Monitoring well clusters were located such that the spacing between well clusters was no greater than 500 ft, in accordance with the FDEP permit requirements. For development of Phases 2 and 3, 4 groundwater monitoring wells were installed in eight clusters (MW-16 through MW-23) around the perimeter of the Phase 2 and 3 development areas. In accordance with the FDEP permit requirements, the monitoring well clusters were located such that the spacing between detection well clusters (MW-16 through MW-21) was approximately 500 feet, and the spacing between background well clusters (MW-22 and MW-23) was approximately 800 feet. Each monitoring well cluster consisted of three groundwater monitoring wells installed (i) across the water table to monitor the upper limit of the surficial aquifer (identified as A-zone [shallow] wells); (ii) within the lower limit of the upper surficial aquifer above the intermediate clay layer (identified as C-zone [deep] wells); and (iii) at an intermediate depth between the shallow and deep wells (identified as B-zone [intermediate] wells).

A layout depicting the location of groundwater monitoring wells installed for Phases 1, 2 and 3, and the piezometers installed as part of the hydrogeologic investigation are shown on Figure 2-1. As shown, groundwater monitoring well clusters MW-1 through MW-13 and MW-23 were installed along the top outer edge of the landfill perimeter berm. The ground surface at the location of the wells in the perimeter berm is at approximately Elevation 92 feet with respect to National Geodetic Vertical Datum of 1929 (NGVD, 1929). Groundwater monitoring well clusters MW-16 and MW-17 were installed along the outer edge of the landfill perimeter berm that serves as the initial storm water berm. The ground surface at these two well locations is at approximately Elevation 85 feet (NGVD, 1929). Groundwater monitoring well clusters MW-18 through MW-22 were installed along the interim Phase 3 storm water berm at the southern limit of the Phase 3 development at approximately Elevation 84 feet (NGVD, 1929).

The compliance wells (CW-1A, CW-2A and CW-3A) were installed within the A zone in the vicinity of the three monitoring wells of interest (MW-3A, MW10A and MW-11A, respectively). The location of each well (latitude and longitude, and elevation [NGVD, 1929]) was surveyed by professional land surveyors licensed in the State of Florida.

Wells were constructed with 2-in diameter threaded schedule 40 PVC casing. The well screens were 10-ft in length with #6-slot (0.006-in.) machine slotted PVC screen. A

30/45 graded silica sand was placed around the screen to a height of 2 to 3 ft above the top of the screen. A seal of 30/65 graded fine silica sand was placed above the sand filter around the screen. The remaining annular space from the top of the fine sand filter seal to the existing ground surface was grouted using a tremie pipe with a cement/bentonite mixture containing no more than 5 percent bentonite by dry weight. The PVC well casings were extended approximately 2.5 to 3 ft above the existing ground surface. Surface completion consisted of a protective steel or aluminum casing with a lockable cover set in a concrete pad. Each well was provided with a well cap, padlock, and an identification label. A summary of the monitoring well construction details are presented in Table 2-1.

3. WATER QUALITY MONITORING

3.1 Groundwater Sampling

3.1.1 Sampling Locations and Procedures

Starting with the 15th semi-annual monitoring event, each of the 13 well clusters of the Phase 1 development area wells and three to seven of the Phase 2 and 3 development area well clusters were sampled (total of 33 to 43 wells) in accordance with the current MPIS. FDEP approved a sampling schedule to include alternate annual sampling of the B and C zones during semi-annual sampling where the B zone wells were sampled during the May semi-annual event and the C zone wells were sampled in November semi-annual event. At monitoring well cluster MW-16, all three zones were sampled on an semi-annual schedule. As noted in section 1.3, the FDEP removed the C zone wells from the sampling schedule. Each event going forward will include the sampling of the A and B zone wells. The compliance monitoring event only includes the quarterly sampling of the three compliance wells. Specifically groundwater sample collection performed during this reporting period was completed in accordance with the following;

- 15th Semi-Annual Monitoring Event - MW-1A through MW-13A, MW-16A, MW-19A, MW-23A, MW-16B, MW-1C through MW-13C, MW-16C, MW-19C and MW-23C,

- 16th Semi-Annual Monitoring Event - MW-1A, MW-7A through MW-9A, MW11A through MW-13A, MW-16A, MW-19A, MW-23A, MW-1B through MW-13B, MW-16B, MW-19B, MW-23B and MW-16C (monitoring wells MW-2A, MW-3A, MW-4A, MW-5A, MW-6A, and MW-10A were effectively dry and were not sampled),

- 17th Semi-Annual Monitoring Event - MW-1A through MW-13A, MW-16A, MW-19A through MW-23A, MW-16B, MW-1C through MW-13C, MW-16C, and MW-19C through MW-23C (the MW-22 monitoring well cluster was abandoned and reinstalled as MW-22R prior to this event),

- 18th Semi-Annual Monitoring Event - MW-1A through MW-13A, MW-16A, MW-19A through MW-23A, MW-1B through MW-13B, MW-16B, MW-19B through MW-23B, and MW-16C,

- 19th Semi-Annual Monitoring Event - MW-1A through MW-13A, MW-16AR through MW-19A, MW-21A through MW-23A, MW-16BR through MW-18B, MW-1C through MW-13C, MW-16CR through MW-19C, and MW-21C through

MW-23C (the MW-16 monitoring well cluster was abandoned and reinstalled as MW-16R prior to this event),

- 20th Semi-Annual Monitoring Event - MW-1A through MW-13A, MW-16AR, MW-22AR, MW-23A, MW-1B through MW-13B, MW-16BR, MW-22BR, and MW-23B, and

- 1st through 3rd Quarterly Compliance Monitoring Events – CW-1A, CW-2A and CW-3A

Low-flow sampling techniques were used for groundwater sample collection. Except for the turbidity considerations as described in Section 6.2.10, all groundwater sampling was performed in accordance with the current applicable FDEP Standard Operating Procedures (SOP's, December 2008) for groundwater sampling. Additionally for quality control (QC) purposes, sample duplicates and equipment blanks were collected and analyzed for each event.

In general, peristaltic pumps were used to purge and sample the A zone, some of B zone, and some of the C zone groundwater monitoring wells. A stainless steel submersible pump was used to purge and sample the remainder of the wells, primarily the B zone and C zone groundwater wells. New tubing (silicone and/or polyethylene) was used at each monitoring well.

During the purging process, a multi-parameter water quality meter with flow-through cell was used to monitor the following field parameters: pH; temperature; specific conductance; oxidation-reduction potential (ORP); and dissolved oxygen (DO). Turbidity levels were measured using a separate turbidity meter. Field parameters were recorded on sample collection forms. When the field parameters stabilized within the acceptable tolerances required by the FDEP SOP, well purging was considered complete and groundwater samples were collected. For wells where the turbidity was not less than 20 nephelometric turbidity units (NTU), turbidity stability was established by purging at least five well volumes and observing variations in the turbidity measurements. For these wells, once the turbidity had stabilized and all other parameters conformed to the guidance set forth in the FDEP SOP's, samples were collected. A non-filtered and field-filtered (1-micron) metals sample was collected for each monitoring well where turbidity measurements exceeded 20 NTUs.

For monitoring wells where peristaltic pumps were used, volatile organic compound (VOC) sample vials were filled by removing the down well sample tubing, disconnecting the tubing from the water quality meter flow through cell, and reversing the flow direction on the peristaltic pump. For the monitoring wells that were purged and sampled

with a submersible pump, all sample aliquots were filled directly from the down-well tubing.

The calibration of the water quality monitoring instruments was checked on a daily basis, and re-calibrated as necessary. Samples were placed in coolers and packed with bagged ice for transport to the analytical laboratory. Chain-of-Custody forms were completed and accompanied the samples to the analytical laboratory. Trip blank samples accompanied all sample coolers with VOC samples. Temperature blanks were packed in each sample cooler. Security seals were affixed to every cooler shipped.

3.1.2 Sample Analyses

ALS Environmental (ALS), formerly Columbia Analytical Services, Inc. (CAS) Jacksonville, Florida performed the laboratory analyses for all monitoring events completed during the reporting period. All laboratory analyses were performed in accordance with the National Environmental Laboratory Accreditation Conference (NELAC) standards. ALS holds certification from the Florida Department of Health (FDOH) for the analytical test methods used for this project and is certified in the State of Florida for analysis of environmental samples.

Groundwater samples were analyzed for total ammonia as nitrogen (N), chlorides, nitrate, total dissolved solids (TDS), iron, mercury, sodium, and the 40 CFR, Part 258 Appendix I parameters. The same analyses were performed for each of the semi-annual monitoring and compliance monitoring events. Other required parameters (i.e., pH; temperature; specific conductance; turbidity; ORP; and dissolved oxygen) were field measured during collection of the groundwater samples during each monitoring event.

3.2 Surface Water Sampling

3.2.1 Sampling Locations and Procedures

Two surface water sampling locations established during the initial hydrogeological investigation were selected by FDEP for routine water quality monitoring. As stated in the Permit, surface water samples are collected only when there is flow in Bull Creek. The latitude and longitude of the two surface water monitoring locations (SW-3 and SW-4) is included in Table 3-1, and the locations are shown in Figure 2-1.

Collection of surface water samples commenced at the downstream monitoring location (SW-3) followed by the upstream monitoring location (SW-4). Bull Creek was visually observed to be flowing only during the 15th and 20th semi-annual monitoring events.

Surface water samples were collected from the approximate center of Bull Creek. A multi-parameter water quality meter was used to measure field parameters including temperature, pH, DO, specific conductance, and ORP at each sampling location. Turbidity levels were measured using a separate turbidity meter. Surface water samples were collected in accordance with the applicable FDEP surface water sampling SOP's.

3.2.2 Sample Analyses

Surface water samples were analyzed by ALS. For the semi-annual monitoring events, surface water samples were analyzed for unionized ammonia, total hardness as $CaCO_3$, total organic carbon, chloride, nitrate, TDS, total suspended solids (TSS), biological oxygen demand (BOD), chemical oxygen demand (COD), total nitrogen as N, nitrate as N, total phosphates as P, chlorophyll-A, iron, mercury, fecal coliform, and the 40 CFR, Part 258 Appendix I parameters. Other required parameters (pH; temperature; specific conductance; turbidity; ORP; and dissolved oxygen) were measured in the field during collection of the surface water samples.

3.3 Leachate Sampling

3.3.1 Sampling Locations and Procedures

In accordance with the previous 2007 Permit requirements (SC49-0199726-004 and SC49-0199726-005), a leachate sample was to be collected from each active disposal cell on an annual basis. The current Permit (Permit Number SO49-0199726-024 approved on 23 January 2014) does not require the collection of leachate samples. Prior to the new permit approval, Cells 1 through 7 had been constructed and had received waste. Leachate samples were collected from locations L-1 through L-7 during the 15th (November 2011) semi-annual monitoring event. The latitude and longitude of the leachate monitoring sites (L-1 through L-7) is included in Table 3-2 and the locations are shown on Figure 2-1.

The new 2011 leachate samples were collected from a sampling port on the primary leachate sump piping using the dedicated leachate sump pump. A multi-parameter water quality meter was used to measure field parameters including: temperature; pH; dissolved oxygen; specific conductance; and ORP. A separate meter was used to measure turbidity. The leachate samples were collected in accordance with the applicable FDEP SOPs.

3.3.2 Sample Analyses

Leachate samples were analyzed by ALS. The laboratory analyses for leachate samples collected from each disposal cell were performed in accordance with the NELAC standards for total ammonia-N, bicarbonate, chlorides, nitrate, TDS, iron, mercury,

sodium and the 40 CFR, Part 258 Appendix II parameters. Other required parameters (i.e., pH; temperature; specific conductance; turbidity; ORP; and DO) were field measured during collection of the leachate samples.

4. FIELD-MEASURED PARAMETERS

4.1 Overview

As discussed previously in Section 3 of this report, field parameters; pH, turbidity, specific conductance, temperature, ORP, and DO were measured and recorded for each water quality (groundwater, surface water, and leachate) sample collected during the various monitoring events.

4.2 Groundwater

A summary of the final field-measured parameters for groundwater collected during the 15th through 20th semi-annual monitoring events are presented in Tables 4-1 through 4-5. Field-measured parameters exceeding or not within the acceptable levels of the secondary drinking water standard (SDWS) for that parameter have been highlighted in orange. The two field-measured parameters with SDWS criteria are pH (between 6.5 and 8.5 standard units) and turbidity (< 20 NTU). The field-measured parameters exceeding the SDWS are discussed in Section 6 of this report.

4.3 Surface Water

A summary of the field-measured parameters collected at the two surface water locations during the 15th and 20th monitoring events are presented in Table 4-6. Field-measured parameters exceeding or not within the acceptable levels of the Class III surface water standards for that parameter have been highlighted in orange. Table 4-6 also includes the Class III standard criteria for each field measured parameter. The field-measured parameters exceeding the Class III surface water standards are discussed in Section 6 of this report.

4.4 Leachate

A summary of the field-measured parameters for leachate samples collected November 2011 are presented in Table 4-7. There are no regulatory requirements for field measured parameters for the leachate samples.

5. DETECTED PARAMETERS

5.1 Overview

In accordance with the MPIS of the current FDEP permit and Rule 62-701.510(9)(b) F.A.C., the technical report is to include: (i) tabular displays of any monitoring parameter that has been detected; and (ii) graphical displays of any key leachate indicator parameter detected such as; pH, specific conductance, TDS, sulfate, chloride, sodium, and iron. The laboratory analytical test results for 15th through 20th semi-annual monitoring events (i.e., Phases 1, 2 and 3 wells) and the three quarterly compliance monitoring events were used to create the tabular and graphical displays. Copies of the analytical laboratory reports have been provided on a compact disk (CD) included in Appendix A.

5.2 Groundwater

Analytical laboratory results have been summarized to show all parameters reported above the practical quantitative limit (PQL). The tables showing all parameters detected above the PQL's but below the Groundwater Cleanup Target Levels (GCTL's) are included in Appendix B. Sample data for parameters detected above the method detection limit (MDL) but below the PQL and within the regulatory guidelines are shaded blue. Sample data for parameters detected above the PQL, but within the regulatory guidelines are shaded green. Tables showing detected parameters exceeding GCTL's as provided in Chapter 62-777 F.A.C. are presented in the orange shaded cells and are included in this Section. These parameters are discussed further in Section 6 of this report. Parameters which exceeded the GCTL's at a minimum of one sample for the period of interest are; arsenic, ammonia-N, chloride, iron, sodium, TDS, benzene, and total xylenes. The tables summarizing these analytes are provided as Tables 5-1 through 5-8.

5.3 Surface Water

Table 5-9 (SW-3) and Table 5-10 (SW-4) summarize the parameters that have been detected in the surface water samples collected during performance of the 15th and 20th semi-annual monitoring events and compares them to the Class III surface water quality standards (SWQS) contained in Rule 62-302.530 F.A.C. Graphical displays of the surface water data for pH, dissolved oxygen and iron are shown on Figure 6-14.

Iron was the only parameter reported above the Class III SWQS. As shown in Tables 5-9 and 5-10, the reported iron concentrations in SW-3 and SW-4 are comparable. The iron exceedances at the up-gradient monitoring station, SW-4 were encountered during the 20th semi-annual monitoring event performed in May 2014. The iron exceedances in the down-gradient monitoring station, SW-3 were also encountered during the performance of the 20th semi-annual monitoring event in. The iron concentrations detected for these exceedances are of the same magnitude as the baseline iron concentration detected during the background sampling event for Phase 1. Based on this historical data, it doesn't appear as though the operation of the JED facility is the cause of the iron concentrations exceeding the SWQS.

5.4 Leachate

The leachate analytical laboratory results have been summarized in Table 5-11 and show all parameters reported above the MDL for the samples collected in November 2011. No parameters were detected in the leachate samples that exceeded the regulatory levels established in 40 Code of Federal Regulations (CFR) Part 261.24 (Hazardous Waste Toxicity Characteristic).

6. TREND ANALYSIS

6.1 Overview

Section 4 presented a summary of the field-measured parameters and Section 5 provided a summary of the detected parameters as compared to the regulatory criteria for groundwater, surface water, and leachate samples collected during this technical reporting period. The Permit requires that a trend analyses be completed for any monitoring parameters detected. For this report, only those field measured or detected parameters exceeding the regulatory criteria are addressed. The tables for all parameters detected but at concentrations below the regulatory criteria have been included in Appendix B. The subsequent sections present discussions of the visual trends for the parameters detected exceeding regulatory criteria for groundwater, surface water, and leachate samples.

6.2 Groundwater

Trend analyses have been completed for parameters that exceeded the GCTL at a minimum of one sample for the technical report period of interest. These parameters include; arsenic, ammonia, chloride, iron, sodium, TDS, benzene, and total xylenes. The results are discussed below for each parameter with respect to either the GCTL or secondary drinking water standards (SDWS), whichever is applicable.

6.2.1 Arsenic

Figure 6-1 shows that the GCTL for arsenic (10 micrograms per liter [µg/L]) was exceeded in samples collected from MW-12A, MW-13A and CW-1. Arsenic has been detected consistently in MW-13A since the second semi-annual monitoring event performed in November 2005. The reported concentrations of arsenic in samples from MW-13A have ranged from 10.4 to 17.8 µg/L during this technical reporting period and are consistent with the period of record. Arsenic was detected in MW-12A above the GCTL during the 16th semi-annual monitoring event (10.1 µg/L) but was below the GCTL (ranging from 0.6 to 2.6 µg/L) in all other monitoring events. Review of the data indicates a slight downward trend is evident at MW-13A as indicated by most recent results (10.5 ug/L [November 2013] and 10.4 ug/L [May 2014]).

The highest concentrations of arsenic were detected in compliance well CW-1 at concentrations ranging from 278 to 77.6 µg/L, however a sharply decreasing trend is

evident. It should be noted this compliance well was installed to monitor groundwater conditions adjacent to MW-3A. A review of arsenic results at MW-3A indicates a range of arsenic values between 0.5 and 1.5 ug/L during the reporting period thus indicates the arsenic detected at CW-1 is not sourced from the landfill and is likely attributable to naturally occurring iron oxy-hydroxides present in the shallow A zone aquifer or a secondary source such as a nearby electrical power pole that may have been treated by an arsenic compound such as chromated copper arsenate (CCA). These oxy-hydroxides have a strong affinity for arsenic and, even at relatively low levels, serve to render arsenic insoluble in groundwater systems. However, under low oxygen (reducing) conditions (most pronounced in the A zone wells), the oxidized (ferric) form is reduced to the soluble ferrous form. Arsenic levels go up because arsenic is solubilized and liberated during the iron reduction process and are quickly converted back to the insoluble form once geochemical conditions revert from reducing conditions.

6.2.2 Ammonia

Figure 6-2 shows the monitoring wells where the GCTL for ammonia (2.8 milligrams per liter [mg/L]) was exceeded in samples collected during at least one monitoring event for 16 A zone monitoring wells (MW-1A, MW-3A through MW-12A MW-19A, MW-22AR, MW-23A, CW-2 and CW-3), and one B zone monitoring well (MW-10B). Ammonia was detected in all of the Phase 1 wells during the baseline sampling event. The concentrations of ammonia detected during the reporting period appear to be highly variable and do not correlate with other parameters.

It is suspected that a primary source of ammonia reported in groundwater is related to previous activity at the site and or land use in the adjacent area. Prior to construction of the landfill, the property was used as a sod farm. Nitrogen-based compounds that can easily be converted to ammonia or can be applied in an ammonia form were likely used to fertilize the grass to achieve optimum growth. Though nitrate has not been consistently detected in groundwater, the use of nitrate fertilizer is likely masked by the reducing groundwater conditions at and in the vicinity of the landfill. Under reducing conditions, nitrate undergoes a de-nitrification process whereby nitrogen gas is released to the atmosphere. In addition to the sod farming activities discussed above, the adjacent property was and continues to be used for cattle grazing, which may provide an additional ammonia source. Cattle manure contains between 2 and 2.5 percent organic nitrogen (Singer and Munns, 1991), which if converted to an inorganic form may serve as another potential groundwater ammonia source.

Other geochemical parameters that are currently monitored in groundwater were evaluated to determine if other constituent levels in groundwater provide evidence of a landfill operations-derived release. Leachate generated in landfills can generally be characterized as reducing, with a high concentration of organic material, and various ions. The following four groups of constituents are generally found in landfill leachate, and if present at elevated levels, may be indicative of leachate migration to groundwater (Christensen, et al, 2001). The four groups include:

- dissolved organic matter
- inorganic macro-components – Ca, Mg, Na, K, ammonia, Fe, Mn, Cl, sulfate, and bicarbonate;
- heavy metals – Cd, Cr, Cu, Pb, Ni, and Zn; and
- xenobiotic organic compounds – aromatic hydrocarbons, phenols, and chlorinated aliphatics.

Although other constituents may be present in leachate from landfills, they are likely to be present at very low concentrations and are generally viewed as having a secondary importance (Christensen, et al 2001). Select metals have been infrequently detected previously in A zone groundwater. However; subsequent groundwater monitoring events indicated that these detections were not representative of groundwater conditions and/or not associated with landfill operations.

The increase in the number of wells where ammonia has been detected above the GCTL and the increase in concentrations may be attributable to the migration of landfill gas as seen with the detections of several volatile organic compounds. The ammonia detections will be addressed as part of the gas migration investigation mentioned in Section 6.2.7.

6.2.3 Chloride

Chloride was detected above the GCTL (250 mg/L) in monitoring well MW-1A consistently after the first exceedance recorded during the 17th semi-annual monitoring event with concentrations ranging from 358 to 617 mg/L. The trend of chloride concentrations in MW-1A until November 2013 were upward, however the recent sampling results from May 2014 indicate a decrease. This decrease is attributed to stormwater improvements in the area of the landfill near MW-1A which have improved drainage and reduced the potential for washouts and leachate seeps into the stormwater management areas. The trend of chloride detections at other wells appear to be stable and well below the GCTL.

Chloride levels in A zone groundwater were evaluated for evidence of landfill impacts to groundwater. Chloride and sodium are inorganic constituents that are generally present at elevated levels in leachate and have been widely used as tracers for landfill impacts to groundwater. The average reported concentrations of chloride for the A zone monitoring wells has increased gradually since the completion of the Phase 1 baseline monitoring event and the reported chloride concentrations during this reporting period have ranged from 1.59 to 617 mg/L. If leachate were impacting groundwater, the chloride concentrations would be expected to increase proportionally with the increased chloride levels detected in the leachate samples. The reported chloride concentrations in leachate samples collected this reporting period ranged from 2,310 to 4,580 mg/L (99.9 mg/L at new leachate sump 7).

6.2.4 Iron

As shown in Figure 6-4, the GCTL for iron (0.3 mg/L) was exceeded in almost every sample collected during the reporting period. The reported concentrations in the A and C zones are consistent with period of record data and appear to be relatively stable. B zone monitoring wells appear to have a slight upward trend in iron concentration. The source of the iron is likely naturally occurring. There was a significant reduction in iron concentrations between the total and dissolved for samples collected during the 19th semi-annual monitoring event with turbidity levels greater than 20 NTU.

6.2.5 Sodium

Sodium was detected above the GCTL (160 mg/L) in monitoring well MW-1A consistently after the first exceedance recorded during the 17th semi-annual monitoring event with concentrations ranging from 198 to 336 mg/L as indicated in Figure 6-5. The trend of sodium concentrations in MW-1A until November 2013 were upward, however the recent sampling results from May 2014 indicate a decrease. This decrease is attributed to stormwater improvements in the area of the landfill near MW-1A which have improved drainage and reduced the potential for washouts and leachate seeps into the stormwater management areas. The trend of sodium detections at other wells appear to be stable and well below the GCTL.

6.2.6 Total Dissolved Solids (TDS)

Review of Figure 6-6 indicates sporadic results for a number of wells in the A and B zones. The A zone contained seven wells which exceeded the GCTL for TDS (500 mg/L) during the reporting period (MW-1A, MW-4A, MW-5A, MW-8A, MW-19A,

CW-2 and CW-3). Of these seven A zone wells, MW-5A shows a decreasing trend, MW-19A shows erratic results, and the remaining five wells show generally increasing trends. All other A zone wells show stable TDS concentrations. Within the B zone, monitoring wells MW-3B, MW-4B, MW-5B, MW-7B, MW-9B and MW-10B were observed to exceed the GCTL between the 18th and 20th semi-annual sampling event. Within the C zone, no wells exceeded the GCTL. The majority of the increased TDS concentrations were observed in the vicinity of the MW-7, MW-8 and MW-9 clusters. It is possible that the change in western flow directly to eastern after the dewatering pumps were shut down has caused a change in the geochemical characteristic of the groundwater. This is supported by the field parameters collected during sampling showing a decrease in pH and increase in conductivity (see tables 4-2 and 4-3).

6.2.7 Benzene

Figure 6-7 shows the monitoring wells where the GCTL for benzene (1 µg/L) was exceeded in at least one monitoring event for eleven A zone monitoring wells (MW-1A, 3A through MW-6A, MW-8A through MW-13A) and one B zone well (MW-3B). The number of wells where benzene has been detected at levels exceeding the GCTL has increased since the 4th technical report on water quality. The benzene results have been erratic during the period of interest with concentrations changing as much as 7 mg/L between sampling events. However, these concentration changes are almost equally increasing and decreasing yielding in an overall stable or slightly increasing concentration trend. As indicated in correspondence by HDR (Class I Permit Renewal Request for Additional Information – January 2012) and by Geosyntec (Groundwater Contamination and Landfill Gas Migration Investigation and Assessment – December 2013) the source of benzene in groundwater is likely attributed to landfill gas. As noted in the previous discussion for detections of Ammonia-N, neither the constituents nor the concentrations of VOC's detected in groundwater appear to correlate well with leachate results.

As discussed in the 4th Technical Report, if detections in groundwater were due to a direct leachate release, the concentrations of various indicator constituents (such as chloride, sodium etc.) found in groundwater should be relatively proportional to those found in leachate samples, particularly given the close proximity of the groundwater wells to the leachate sumps, however this is not the case with the exception of at MW-1A (results at MW-1A are attributable to washouts into nearby stormwater pond which has now been repaired). The VOC's (and concentrations) detected in leachate are markedly different than the VOC fingerprint at individual wells (which further supports landfill gas as the source of the benzene in groundwater).

6.2.8 Total Xylenes

Total xylenes were detected above the GCTL of 20 µg/L in well MW-1A during the 15th semi-annual monitoring event. Figure 6-8 shows that the overall total xylene concentrations are stable or decreasing over the reporting period. These xylene detections have been attributed to potential landfill gas migration.

6.2.9 pH

A plot of the final field measured pH for each groundwater monitoring well in the network for each sampling event compared with the secondary drinking water standard (SDWS) for pH (between 6.5 and 8.5 standard units [SU]) is presented in Figure 6-9. The pH values have been relatively consistent over the monitoring period within the A and C zones, but slightly decreasing in the B zone. Figure 6-9 shows that the measured pH typically ranges between 4 and 6 SU. All pH measurements are below the lower limit of the SDWS of 6.5 SU. These results can be attributable to the shallow nature of some monitoring wells and groundwater levels. The average pH for precipitation in Florida is 4.77 (Florida Geological Survey, 1992). The data obtained from the monitoring wells appear to be consistent with what would be expected in shallow groundwater from this environment.

6.2.10 Turbidity

Overall, the turbidity levels have improved since the background (Baseline) events for Phase 1 (MW-1 thorough MW-15) and the Phase 2 and 3 monitoring well networks (MW-16 thorough MW-23). The turbidity was above the secondary drinking water standard (SDWS) for turbidity (below 20 NTUs) in wells MW-19A, MW-16B/BR, MW-20B, MW-19C, MW-22CR, and CW-3 during various monitoring events. Filtered samples were collected from samples exceeding the SDWS during the 15th, 16th, and 17th semi-annual monitoring events. Filtered samples were not collected from the 18th semi-annual sampling event. All wells sampled during the 20th semi-annual monitoring event were below the SDWS. .

A plot of the final field-measured turbidity for each monitoring well sampled this reporting period is compared to the secondary drinking water standard (SDWS) for turbidity (below 20 NTUs) on Figure 6-10. With the previously noted exceptions all results are below 20 NTUs.

6.3 Surface Water

Trend analyses have been completed for parameters that exceeded the Class III surface water quality standard (SWQS) at a minimum of one well location for the period of interest. These parameters include; pH, DO and iron. The results are discussed below:

6.3.1 pH

A plot of the field-measured pH at both surface water monitoring locations for each sampling event compared with the SWQS for pH (between 6.5 and 8.5 standard units) is presented in Figure 6-11. The pH values have been relatively consistent over the monitoring period. Figure 6-11 shows that the measured pH values ranged from 3.79 and 5.76 standard units. The pH values have been below the SWQS acceptable pH range of approximately 6.5 to 8.5 standard units since the January 2004 baseline event. The average pH for precipitation in Florida is 4.77 (Florida Geological Survey, 1992). The pH data obtained from the monitoring wells appears to be consistent with that of the surface water samples. The low pH values detected from the surface water samples are consistent with the environmental conditions in the region.

6.3.2 Dissolved Oxygen

A plot of the field measured DO levels are presented on Figure 6-11. The DO concentrations in the surface water samples collected at the two monitoring stations (SW-3 and SW-4) were below the SWQS of 5 mg/L during the 15th semi-annual monitoring event. During the 20th semi-annual monitoring event, only SW-3 was below the SWQS. Potential explanation for the low DO is algal blooms consuming DO in greater amounts during the summer months. It is highly unlikely that these are the reflection of any landfill impacts.

6.3.3 Iron

Figure 6-14 shows the iron concentrations in the two surface water locations for this reporting period. The SWQS for iron of 1 mg/L was exceeded in the samples collected during the 20th semi-annual monitoring event. The reported concentrations exceeding the SWQS ranged from 1.33 to 1.78 mg/L with the higher value reported at SW-4 which is the background (upstream) sample location. It is important to note that the concentration of iron reported for sample SW-4 collected during the January 2004 baseline event was reported at 1.100 mg/L. As only two samples were collected from Bull Creek during the period of interest, a trend cannot be determined.

6.4 Leachate

No parameter detected in the leachate samples has exceeded the regulatory levels established in 40 Code of Federal Regulations (CFR) Part 261.24 (Hazardous Waste Toxicity Characteristic).

7. COMPARISON AMOUNG WELLS IN DIFFERENT HYDROLOGIC ZONES

7.1 Overview

Rule 62-701.510(9)(b)3, F.A.C. requires comparisons among shallow, intermediate, and deep zone wells. The well construction and layout details were described previously in Section 2 of this report. As discussed in Section 5, analytical laboratory results have been summarized to show all parameters reported above the PQL. The tables generated which show all parameters detected above the PQL's have been included in Appendix B. These detection summary tables and the groundwater field measured parameters tables (Tables 4-1 through 4-5) were used to compare water quality among the wells in the different zones at the JED facility.

7.2 Field-Measured Parameters

Based on a review of the field measured parameters recorded during each monitoring event (Tables 4-1 through 4-5) there appears to be no discernable differences between the A, B and C zones. For the three zones, the pH is relatively consistent and ranges between 3.5 and 6 standard units. Temperature levels are slightly higher in the A zone wells, but this is expected due to the shallow nature of these wells. As a site wide average, the conductivity levels are highest in the A zones wells and lowest in the C zone wells, although there are specific well clusters during some semi-annual monitoring events where this does not apply. For example, the conductivity trend observed at the MW-16R cluster during the 15th through 17th semi-annual monitoring events is reversed with the highest conductivity values observed in the C zone and lowest in the A zone. Also, during the 20th semi-annual monitoring event, the B zone well conductivity exceeded the A zone at six well clusters (MW-3, MW-4, MW-5, MW-7, MW-9 and MW-10). Turbidity levels have been historically higher in the B and C zones than the A zone. These higher turbidities can be attributed to the subsurface formation properties. Dissolved oxygen levels are consistent throughout the formation.

7.3 Detected Parameters

Overall, based on a review of the detections above the PQL during the reporting period, there are higher concentrations of a few detected analytes in the A zone compared to the B and C zones. The analytes which show the largest discrepancy between the A zone and the lower units are arsenic, ammonia, benzene, chloride, sodium and xylenes. An explanation for the discrepancies is provided below.

- The elevated detections of arsenic in the A zone can be attributed to the liberation of arsenic due to reducing conditions observed in the A zone wells (lower ORP values). This is discussed in further detail in Section 6.2.1.
- The elevated detections of benzene and xylenes in the A zone can be attributed to landfill gas migration as discussed in Sections 6.2.7 and 6.2.8.
- The elevated ammonia detections in the A zone can be attributed to the reduction of organic material associated with former land practices in the area as noted in Section 6.2.2.
- The elevated detections of chloride and sodium in the A zone are likely associated with stormwater drainage issues that have been addressed over the past year as discussed in Sections 6.2.3 and 6.2.5.

8. COMPARISON BETWEEN BACKGROUND AND DETECTION WELLS

8.1 Overview

Rule 62-701.510(9)(b)4, F.A.C. requires comparisons between background water quality and the water quality in detection wells. For the Phases 1 through 3 monitoring network at the JED facility, monitoring well clusters MW-1 through MW-6, and MW-22 and MW-23 have been designated as the background wells and monitoring well clusters MW-7 through MW-21 have been designated as detection wells. The configuration of the monitoring well clusters was discussed in Section 2. It should be mentioned the flow direction was diverted in the northern side of the landfill due to dewatering activities on the neighboring property up through 2012. During this time period, the background wells MW-1 through MW-6 were downgradient of the landfill.

8.2 Statistical Analysis

Four parameters were selected to compare water quality between background wells and detection monitoring wells:

- Chloride
- Iron
- Total Dissolved Solids (TDS)
- pH

These parameters have all been used to document water quality impacts at landfill sites and have the added advantage (from a statistical analysis standpoint) of being "detectable" – that is, each analysis is a quantifiable detection.

The data were tested using the Mann-Whitney test. The Mann-Whitney is a non-parametrical statistical procedure that evaluates whether two populations of data are similar or not. It is the non-parametric "equivalent" of the t-test; a very common statistical procedure. Mann-Whitney is frequently used in water quality applications due to its ability to handle non-normally distributed data (such as most water quality data) (Gibbons, 1994 and Gilbert, 1987). In this case, the two populations are the background monitoring wells and the detection monitoring wells.

The analysis involves ranking all of the data from both populations and then summing up the ranks of each. If the populations are similar, the ranks should be very close. A statistic known as the "U" statistic is calculated for each population. If this statistic is greater than 0.05, then it can be stated that the water quality parameter is from the same population in both the background and detection monitoring wells. In other words, there

is no statistically significant difference between the background wells and the detection monitoring wells. The calculated "U" statistic for the current data set for each of the parameters tested is:

- Chloride – $P>0.05$
- Iron – $P<0.001$
- Total Dissolved Solids – $P>0.05$
- pH – $P>0.05$

Of these parameters only iron indicate a statistically significant difference between the background monitoring wells and the detection monitoring wells. Note that this analysis has a very high "power" due to the large sample size in both populations. This means that the probability of a significant finding that the test may have missed is very low.

9. CORRELATIONS BETWEEN RELATED PARAMETERS

9.1 Overview

Rule 62-701.510(9)(b)5, F.A.C. requires correlations between related parameters such as total dissolved solids and specific conductance. Based upon a technical review of the data and previous biennial technical reports, four sets of parameters were identified that might provide meaningful data when correlated responses are evaluated. These are discussed below.

Figure 9-1 contains a correlation plot for specific conductance versus TDS. This is provided because it is recommended in the rule cited above. The R-squared (R^2) value of 0.89 indicates a strong positive correlation between these two analytes. This correlation has been well-documented.

Figure 9-2 is a correlation plot between ammonia and benzene. The R^2 value of 0.09 indicates a weak correlation between these two analytes. It is apparent by the weak correlation that ammonia is no due to landfill gas migration but rather due to nitrogen compounds present from land use practices before the landfill was cited.

Figure 9-3 is a correlation plot between sodium and chloride. The R^2 value of 0.94 indicates a strong, positive correlation between these two analytes which are the primary anion and cation monitored.

10. DISCUSSION OF ERRATIC OF POORLY CORRELATED DATA

10.1 Overview

Rule 62-701.510(9)(b)5, F.A.C. requires a discussion of erratic and/or poorly correlated data. In an effort to understand the sources of variability in sample data, a limited analysis was conducted to investigate the relationship between contaminant concentrations and sample event parameters, such as seasonal influences or turbidity. While there was some correlation of results within individual sampling events no seasonal influence was noted (i.e. samples collected in the summer were not systematically higher or lower than other seasons). A relationship was noted between turbidity and contaminant concentrations, where the turbidity levels exceeded the SDWS of 20 NTU.

Several parameters have been reported sporadically or in an erratic manner. Erratic data associated with parameters that exceeded the GCTL during any one monitoring event where reviewed in Section 6. Parameters detected above the PQL but below the GCTL are discussed below.

10.2 Detected Analytes

10.2.1 1,4-Dichlorobenzene

1,4-Dichlorobenzene was detected above the PQL consistently in wells MW-1A and MW-3A and sporadically in wells MW-8A, MW-9A and MW-11A in groundwater samples collected during this reporting period. The concentrations ranged from 1.1 to 4.6 µg/L. These concentrations are considered insignificant as they are an order of magnitude below the GCTL of 75 µg/L and are likely attributable to landfill gas migration.

10.2.2 Barium

Barium was detected above the PQL in every groundwater samples collected in the A, B and C zones. The reported concentrations ranged from 3.3 to 186 µg/L. These concentrations are considered insignificant as they are below the GCTL of 2,000 µg/L and stable.

10.2.3 Beryllium

Beryllium was detected above the PQL sporadically in groundwater samples collected in the A, B and C zones. The reported concentrations ranged from 0.51 to 2.32 µg/L.

These concentrations are considered insignificant as they are below the GCTL of 4 µg/L and stable.

10.2.4 Cadmium

Cadmium was detected above the PQL in groundwater samples collected from wells MW-20A and MW-21A. The reported concentrations ranged from 0.2 to 1.5 µg/L. These concentrations are considered insignificant as they are below the GCTL of 5 µg/L and stable.

10.2.5 Carbon Disulfide

Carbon Disulfide was detected above the PQL in one groundwater sample collected from well MW-11A. The reported concentration is 11.5 µg/L and is significantly below the GCTL of 700 µg/L. This detection is considered anomalous.

10.2.6 Chlorobenzene

Chlorobenzene was detected above the PQL in one groundwater sample from well MW-3A. The reported concentration is 1.0 µg/L and is significantly below the GCTL of 100 µg/L. .

10.2.7 Chromium

Chromium was detected above the PQL in the majority of the groundwater samples collected in the A, B and C zones. The reported concentrations ranged from 1.0 to 21.0 µg/L. These concentrations are considered insignificant as they are below the GCTL of 100 µg/L and stable.

10.2.8 Cobalt

Cobalt was detected above the PQL in the samples taken from the majority of the wells in A and B zones, and one well in the C zone. The reported concentrations ranged from 1.1 to 46.1 µg/L which are more than an order of magnitude below the GCTL of 420 µg/L.

10.2.9 Copper

Copper was detected sporadically above the PQL in the samples taken from the majority of the wells in the A zone and three wells in the C zone. The reported concentrations ranged from 1.0 to 4.7 µg/L. These concentrations are considered insignificant as they are below the GCTL of 1,000 µg/L.

10.2.10 Ethylbenzene

Ethylbenzene was detected above the PQL in the samples taken from four of the wells in the A zone and three wells in the C zone. The reported concentrations ranged from 1.05 to 11.1 µg/L. These concentrations are considered insignificant as they are below the GCTL of 30 µg/L and are likely attributable to landfill gas migration.

10.2.11 Lead

Lead was detected sporadically above the PQL in the samples taken from the ten of the wells in the A zone, six of the wells in the B zone, and four wells in the C zone. The reported concentrations ranged from 0.68 to 12.0 µg/L. These concentrations are below the GCTL of 15 µg/L.

10.2.12 Mercury

Mercury was detected above the PQL twice in the samples taken from well MW-19A. The reported concentrations ranged from 0.17 to 0.29 µg/L. These concentrations are considered insignificant as they are below the GCTL of 2 µg/L.

10.2.13 Nickel

Nickel was detected sporadically above the PQL in the samples taken from the 15 of the wells in the A zone, seven of the wells in the B zone, and two wells in the C zone. The reported concentrations ranged from 2.0 to 11.7 µg/L which are an order of magnitude below the GCTL of 100 µg/L.

10.2.14 Nitrate

Nitrate was detected above the PQL in the samples taken from four of the wells in the A zone. The reported concentrations ranged from 0.26 to 1.18 mg/L. These concentrations are considered insignificant as they are below the GCTL of 10 mg/L.

10.2.15 Selenium

Selenium was detected above the PQL sporadically in groundwater samples collected from the A zone and in one sample from the C zone. The reported concentrations ranged from 2.0 to 8.2 µg/L. These concentrations are considered insignificant as they are below the GCTL of 50 µg/L.

10.2.16 Toluene

Selenium was detected above the PQL in two groundwater samples collected from the A zone. The reported concentrations ranged from 1.2 to 1.5 µg/L. These concentrations are considered insignificant as they are below the GCTL of 40 µg/L and are likely attributable to landfill gas migration.

10.2.17 Vanadium

Vanadium was detected above the PQL in every well in the A zone, ten wells in the B zone, and seven wells in the C zone. The reported concentrations ranged from 2.0 to 28.8 µg/L. These concentrations are considered insignificant as they are below the GCTL of 49 µg/L.

10.2.18 Zinc

Zinc was detected above the PQL sporadically in seven wells in the A zone, two wells in the B zone, and nine wells in the C zone. The reported concentrations ranged from 5.5 to 45.0 µg/L. These concentrations are considered insignificant as they are more than two orders of magnitude below the GCTL of 5,000 µg/L.

10.3 Trace Analytes

Acetone, antimony, and cis-1,2-dichloroethene were detected sporadically during the period of interest within the A, B, and C zones. However, these detections were below the PQL and are not considered significant.

11. GROUNDWATER CONTOUR MAP EVALUATION

11.1 Groundwater Level Contour Map

The depth to water in each monitoring well was measured using a water level meter during sampling activities. Additionally, water level measurements were recorded for site piezometers (installed during previous hydrogeological investigation, but not part of the water quality monitoring network), and staff gauges located at surface water monitoring locations SW-3 and SW-4 (if water is present) during each monitoring event. The water level measurements were used to calculate the groundwater level elevations for each monitoring well, piezometer and staff gauge. The groundwater and surface water level elevation data from 15th through 20th semi-annual monitoring events are summarized in Table 11-1.

The groundwater level elevations for all monitoring wells and piezometers were plotted for the reporting period. These hydrographs are shown on Figures 11-1 (A zone wells), Figure 11-2 (B zone wells), Figure 11-3 (C zone wells), and Figure 11-4 (piezometers). The hydrographs indicate that, while the water level elevations fluctuate, the relationship between water levels in the monitoring wells is generally consistent and the potentiometric surface has remained relatively constant throughout the period of record. The exception would be for monitoring well clusters MW-1 through MW-4, MW-22, and MW-23 during the 15th and 16th semi-annual sampling events. A borrow area was permitted on the property adjacent to the western limit of development of Phases 1 through 3 at the JED facility. Dewatering of the borrow area has created a temporary change in the ground water flow direction as shown on the ground water contour maps which are provided in Appendix C. Dewatering was discontinued between the 16th and 17th semiannual sampling events, resulting in groundwater elevations returning to historic conditions.

To further assess groundwater flow dynamics at the JED facility, water level elevations from the A, B and C zones were plotted together to assess the vertical hydraulic gradient of the site. Monitoring well clusters MW-1, MW-5, MW-9, and MW-13 were plotted from November 2011 to May 2014. These plots are presented in Figures 11-5 and 11-6 and show a consistent downward migration of groundwater between the three hydrogeological zones. These plots provide further indication of a consistent flow system with little change in flow direction under normal conditions.

Copies of groundwater surface maps for the 15th through 20th semi-annual monitoring events have been included in Appendix C. The A zone groundwater contours figures

were used to determine three well pairs during each semi-annual monitoring event to calculate an average horizontal hydraulic gradient. The groundwater flow of the site has been variable due to construction and dewatering activates over the past six semi-annual monitoring events. As a result, the same well pairs could not be used throughout all of the monitoring events. To maintain a site wide average, well pairs was chosen from the northern, central and southern portion of the site for each monitoring event. Using this method, the average horizontal hydraulic gradient in the A zone over the past six semi-annual monitoring events was calculated to be approximately 0.0013 feet per foot (ft/ft).

To determine an average vertical hydraulic gradient across the site, the well clusters MW-1, MW-5, MW-9 and MW-13 (plotted on Figure 11-5) were assessed. The hydraulic gradient was calculated by dividing the head difference in the wells by the difference in the elevation of the well screen centers. A comparison of water levels between the A and B zone wells shows a slight downward vertical gradient of 0.0011 ft/ft while a comparison of water levels between the B and C zone wells show a marginally larger downward vertical gradient of 0.0069 ft/ft. These gradients are consistent with the regional gradients in the upper surficial aquifer which indicates an interconnected, sluggish flow regime in the saturated zone above the intermediate confining unit.

11.2 Groundwater Flow Rate Calculations

Groundwater flow rates were estimated using site-specific data. To estimate the groundwater flow rate, the average linear velocity of the groundwater unit was calculated using the following equation:

$$\bar{v} = \frac{Ki}{n}$$

where:

$\bar{v}$ = average linear groundwater velocity
K = hydraulic conductivity
i = hydraulic gradient
n = effective porosity (assumed)

The average hydraulic gradient was obtained from the water elevation maps prepared for the 15th through 20th semi-annual monitoring events (0.0013 ft/ft), and an effective porosity of 0.30 was estimated for the soil types found in the shallow aquifer (Freeze and Cherry, 1979). The hydraulic conductivity value was obtained from the slug tests that were reported in "Hydrogeologic Investigation Report and Water Quality Monitoring Plan" submitted to FDEP in April 2002. The average hydraulic conductivity for the upper surficial aquifer "A" and "C" zones was calculated to be approximately 5.8 feet per day (ft/day). The resultant estimated average annual horizontal flow velocity for

groundwater flowing north and northeast from the landfill (predominant flow path) was 9.23 feet per year (ft/yr).

12. EVALUATION OF ADEQUACY OF MONITORING FREQUENCY AND SAMPLING LOCATIONS

For the Phase 1 development, 45 groundwater monitoring wells were installed in 15 clusters (MW-1 through MW-15) around the perimeter of the Phase 1 development area. For development of Phases 2 and 3, 24 additional groundwater monitoring wells were installed in eight clusters (MW-16 through MW-23) around the perimeter of the Phases 2 and 3 development areas. Monitoring well clusters were located such that a well cluster was installed adjacent to each cell sump area and between cell sump areas, so that the spacing between well clusters was no greater than 500 ft for detection wells and 800 ft for background wells, in accordance with the FDEP permit requirements. As part of Phases 2 and 3 development, and as approved by FDEP, two existing Phase 1 monitoring well clusters (MW-14 and MW-15), one Phase 2/3 monitoring well cluster (MW-20), and ten piezometers were decommissioned. As part of Phases 4 development, and as approved by FDEP, four existing Phase 2 and 3 monitoring well clusters (MW-17, 18, 19 and 21) were decommissioned. The wells and piezometers were decommissioned for construction of future cells, construction of a storm water retention basin located within Phases 2 and 3, and due to the proximity of piezometers to the new network wells installed.

For all currently installed well nests, three groundwater monitoring wells were installed to provide analytical data from: (i) the upper limit of the surficial aquifer below the ground surface identified as A zone wells; (ii) the lower limit of the upper surficial aquifer above the intermediate clay layer identified as C zone wells; and (iii) an intermediate depth between the shallow and deep wells identified as B zone wells. According to the MPIS approved on 23 January 2014, only the A and B zone wells will be installed at each new monitoring location.

Of the 16 remaining monitoring well clusters, eight are classified as background wells (clusters MW-1 through 6, 22, and 23), and eight are classified as detection wells (clusters MW-7 through MW-13 and MW-16). Additionally, at the request of FDEP, three compliance wells were installed within the A zone. Compliance well CW-1 was installed west of monitoring well cluster MW-3 and compliance wells CW-2 and CW-3 were installed east of MW-10 and MW-11 respectively.

Per the MPIS approved on 23 January 2014, the A and B zone monitoring wells in clusters MW-1 through MW-13, 16, 22, and 23 are sampled on a semi-annual basis. As of the 20th semi-annual monitoring event, the C zone monitoring wells have been removed for the semi-annual monitoring schedule. This monitoring well network encompasses the Phase 1, 2 and 3 development areas where waste placement has

commenced and is adequate for monitoring of the groundwater at the JED facility. Additional wells will be installed as outlined in the MPIS to monitor the Phase 4 development area. Monitoring well clusters MW-17R, MW-24, MW-25 and MW-26 have already been installed. Once Cell 10 of Phase 4 is completed, these new monitoring well clusters will be added to the semi-annual monitoring schedule.

The semi-annual monitoring frequency is considered to be adequate for the JED facility. Groundwater flow rates are on the order of 10 feet per year (Section 11) as there is a shallow hydraulic gradient across the site. A semi-annual monitoring frequency is more than sufficient to provide maximum detection efficiency at the site.

13. REFERENCES

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TABLES

Table 2-1

Summary of Monitoring Well Construction Details - A Zone Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well Designation	Latitude (NAD83)	Longitude (NAD83)	WACS ID	Date Installed	TOC Elevation, (feet NGVD29)	Total Depth (feet BTOC)	Screen Setting				Sand Pack (feet BTOC)	Fine-Grained Sand Seal (feet BTOC)
							(feet BTOC)		(feet Elevation NGVD29)			
							Top	Bottom	Top	Bottom		
MW-1A	28 03 48.55	81 05 59.88	19900	9-Dec-03	95.12	23.0	13.0	23.0	82.1	72.1	10.6	8.2
MW-2A	28 03 51.99	81 05 59.90	19903	10-Dec-03	95.21	22.6	12.6	22.6	82.6	72.6	10.3	8.9
MW-3A	28 03 55.34	81 05 59.91	19906	11-Dec-03	94.64	22.8	12.8	22.8	81.9	71.9	10.4	9.0
MW-4A	28 03 58.97	81 05 59.92	19909	12-Dec-03	95.48	23.1	13.1	23.1	82.4	72.4	10.8	9.4
MW-5A	28 04 02.92	81 05 59.95	19912	24-Nov-03	95.32	22.5	12.5	22.5	82.8	72.8	10.1	9.1
MW-6A	28 04 06.50	81 05 59.15	19915	25-Nov-03	94.72	22.6	12.6	22.6	82.2	72.2	10.6	8.6
MW-7A	28 04 07.13	81 05 54.78	19918	26-Nov-03	95.48	23.3	13.3	23.3	82.2	72.2	10.3	9.3
MW-8A	28 04 06.20	81 05 50.64	19921	5-Dec-03	94.67	22.5	12.5	22.5	82.2	72.2	10.2	8.6
MW-9A	28 04 04.34	81 05 46.60	19924	4-Dec-03	94.66	22.4	12.4	22.4	82.3	72.3	10.0	8.6
MW-10A	28 04 00.07	81 05 44.77	19927	3-Dec-03	96.25	22.1	12.1	22.1	84.1	74.1	9.8	7.6
MW-11A	28 03 55.43	81 05 43.27	19930	3-Dec-03	93.56	22.8	12.8	22.8	80.7	70.7	10.5	9.1
MW-12A	28 03 52.08	81 05 43.26	19933	2-Dec-03	95.10	23.0	13.0	23.0	82.1	72.1	10.7	9.3
MW-13A	28 03 48.67	81 05 43.25	19936	8-Dec-03	95.19	22.5	12.5	22.5	82.7	72.7	10.2	7.7
MW-14A	Monitoring Well Abandoned 10 July 2007											
MW-15A	Monitoring Well Abandoned 10 July 2007											
MW-16A	Monitoring Well Abandoned 24 June 2013											
MW-16AR	28 03 44.56	81 05 40.18	22342	15-Oct-13	95.01	23.9	13.5	23.5	81.5	71.5	9.0	8.0
MW-17A	Monitoring Well Abandoned 5 March 2014											
MW-18A	Monitoring Well Abandoned 5 March 2014											
MW-19A	Monitoring Well Abandoned 5 March 2014											
MW-20A	Monitoring Well Abandoned 24 June 2013											
MW-21A	Monitoring Well Abandoned 5 March 2014											
MW-22A	Monitoring Well Abandoned 11 November 2011											
MW-22AR	28 03 34.703	81 06 0.622	28685	14-Mar-12	95.00	23.7	13.0	23.0	82.0	72.0	10.5	9.5
MW-23A	28 03 42.41	81 05 59.79	22363	25-Sep-07	97.90	27.8	17.3	27.3	80.7	70.7	15.3	14.3
MW-24A	28 03 10.54	81 05 30.92	27860	26-Aug-10	86.97	23.34	12.8	22.8	74.1	64.1	10.8	9.8
MW-25A	28 03 26.45	81 05 30.47	27861	26-Aug-10	82.36	23.49	13.0	23.0	69.4	59.4	11.0	10.0
MW-26A	28 03 20.38	81 05 21.22	27862	26-Aug-10	82.01	23.83	13.3	23.3	68.7	58.7	11.3	10.3
CW-1A	28 03 55.76	81 06 00.93	29157	14-Nov-13	84.53	18.0	8.0	18.0	76.5	76.5	6.0	4.0
CW-2A	28 04 00.51	81 05 43.63	29158	14-Nov-13	82.81	18.0	8.0	18.0	74.8	74.8	6.0	4.0
CW-3A	28 03 56.07	81 05 41.93	29159	14-Nov-13	81.89	18.0	8.0	18.0	73.9	73.9	6.0	4.0

Notes:

NAD83 indicates the North American Datum of 1983

NGVD29 indicates the National Geodetic Vertical Datum of 1929

TOC indicates top of casing

BTOC indicates below top of casing

Table 2-1

Summary of Monitoring Well Construction Details - B Zone Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well Designation	Latitude (NAD83)	Longitude (NAD83)	WACS ID	Date Installed	TOC Elevation, (feet NGVD29)	Total Depth (feet BTOC)	Screen Setting				Sand Pack (feet BTOC)	Fine-Grained Sand Seal (feet BTOC)
							(feet BTOC)		(feet Elevation NGVD29)			
							Top	Bottom	Top	Bottom		
MW-1B	28 03 48.59	81 05 59.89	19901	9-Dec-03	95.00	47.9	37.9	47.9	57.1	47.1	35.6	33.1
MW-2B	28 03 51.94	81 05 59.90	19904	10-Dec-03	95.17	48.3	38.3	48.3	56.9	46.9	36.0	34.6
MW-3B	28 03 55.31	81 05 59.91	19907	11-Dec-03	94.68	47.6	37.6	47.6	57.1	47.1	35.3	33.9
MW-4B	28 03 59.01	81 05 59.92	19910	12-Dec-03	95.18	47.4	37.4	47.4	57.8	47.8	35.1	33.5
MW-5B	28 04 02.88	81 05 59.95	19913	24-Nov-03	95.30	47.1	37.1	47.1	58.2	48.2	34.4	32.7
MW-6B	28 04 06.48	81 05 59.18	19916	25-Nov-03	94.60	47.4	37.4	47.4	57.2	47.2	34.9	33.5
MW-7B	28 04 07.13	81 05 54.81	19919	26-Nov-03	95.27	47.5	37.5	47.5	57.8	47.8	34.5	33.5
MW-8B	28 04 06.19	81 05 50.60	19922	5-Dec-03	94.58	49.6	39.6	49.6	55.0	45.0	37.1	35.6
MW-9B	28 04 04.31	81 05 46.56	19925	4-Dec-03	94.63	49.1	39.1	49.1	55.5	45.5	36.8	35.3
MW-10B	28 04 00.04	81 05 44.75	19928	3-Dec-03	96.23	48.3	38.3	48.3	58.0	48.0	35.9	33.9
MW-11B	28 03 55.40	81 05 43.27	19931	2-Dec-03	93.59	47.9	37.9	47.9	55.7	45.7	35.5	34.0
MW-12B	28 03 52.05	81 05 43.27	19934	1-Dec-03	95.01	49.0	39.0	49.0	56.1	46.1	36.6	35.1
MW-13B	28 03 48.64	81 05 43.24	19937	8-Dec-03	95.12	47.2	37.2	47.2	58.0	48.0	34.8	33.4
MW-14B	Monitoring Well Abandoned 10 July 2007											
MW-15B	Monitoring Well Abandoned 10 July 2007											
MW-16B	Monitoring Well Abandoned 24 June 2013											
MW-16RBR	28 03 44.54	81 05 40.14	22343	15-Oct-13	94.97	46.6	36.5	46.5	58.5	48.5	33.0	31.0
MW-17B	Monitoring Well Abandoned 5 March 2014											
MW-18B	Monitoring Well Abandoned 5 March 2014											
MW-19B	Monitoring Well Abandoned 5 March 2014											
MW-20B	Monitoring Well Abandoned 24 June 2013											
MW-21B	Monitoring Well Abandoned 5 March 2014											
MW-22B	Monitoring Well Abandoned 11 November 2011											
MW-22BR	28 03 34.665	81 05 59.850	28686	15-Mar-12	94.86	46.1	35.5	45.5	59.4	49.4	33.0	28.0
MW-23B	28 03 42.46	81 05 59.79	22364	25-Sep-07	97.91	42.75	32.3	42.3	65.7	55.7	30.3	29.3

Notes:
NAD83 indicates the North American Datum of 1983
NGVD29 indicates the National Geodetic Vertical Datum of 1929
TOC indicates top of casing
BTOC indicates below top of casing

Table 2-1

Summary of Monitoring Well Construction Details - C Zone Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well Designation	Latitude (NAD83)	Longitude (NAD83)	WACS ID	Date Installed	TOC Elevation, (feet NGVD29)	Total Depth (feet BTOC)	Screen Setting				Sand Pack (feet BTOC)	Fine-Grained Sand Seal (feet BTOC)
							(feet BTOC)		(feet Elevation NGVD29)			
							Top	Bottom	Top	Bottom		
MW-1C	28 03 48.63	81 05 59.88	19902	9-Dec-03	95.18	75.2	65.2	75.2	30.0	20.0	62.9	61.4
MW-2C	28 03 51.90	81 05 59.89	19905	10-Dec-03	95.32	68.4	58.4	68.4	36.9	26.9	56.1	53.7
MW-3C	28 03 55.28	81 05 59.91	19908	11-Dec-03	94.66	68.7	58.7	68.7	36.0	26.0	56.3	54.8
MW-4C	28 03 59.04	81 05 59.92	19911	12-Dec-03	95.39	72.5	62.5	72.5	32.9	22.9	61.2	59.6
MW-5C	28 04 02.83	81 05 59.95	19914	24-Nov-03	95.39	73.0	63.0	73.0	32.4	22.4	60.7	58.7
MW-6C	28 04 06.46	81 05 59.22	19917	25-Nov-03	94.58	73.2	63.2	73.2	31.4	21.4	60.2	57.7
MW-7C	28 04 07.13	81 05 54.86	19920	25-Nov-03	94.93	73.3	63.3	73.3	31.6	21.6	60.3	59.3
MW-8C	28 04 06.17	81 05 50.55	19923	5-Dec-03	94.50	73.9	63.9	73.9	30.6	20.6	61.6	59.8
MW-9C	28 04 04.29	81 05 46.53	19926	4-Dec-03	94.54	73.8	63.8	73.8	30.8	20.8	61.4	59.4
MW-10C	28 04 00.01	81 05 44.74	19929	3-Dec-03	96.36	73.7	63.7	73.7	32.7	22.7	61.4	60.0
MW-11C	28 03 55.36	81 05 43.26	19932	2-Dec-03	93.65	73.4	63.4	73.4	30.3	20.3	61.0	59.6
MW-12C	28 03 52.01	81 05 43.26	19935	1-Dec-03	95.10	73.6	63.6	73.6	31.5	21.5	60.2	58.7
MW-13C	28 03 48.60	81 05 43.25	19938	8-Dec-03	95.04	73.0	63.0	73.0	32.1	22.1	60.7	58.2
MW-14C	Monitoring Well Abandoned 10 July 2007											
MW-15C	Monitoring Well Abandoned 10 July 2007											
MW-16C	Monitoring Well Abandoned 24 June 2013											
MW-16CR	28 03 44.52	81 05 40.11	22344	16-Oct-13	95.03	75.3	65.0	75.0	30.0	20.0	60.0	59.0
MW-17C	Monitoring Well Abandoned 5 March 2014											
MW-18C	Monitoring Well Abandoned 5 March 2014											
MW-19C	Monitoring Well Abandoned 5 March 2014											
MW-20C	Monitoring Well Abandoned 24 June 2013											
MW-21C	Monitoring Well Abandoned 5 March 2014											
MW-22C	Monitoring Well Abandoned 11 November 2011											
MW-22CR	28 03 34.629	81 05 59.854	28687	15-Mar-12	95.13	66.6	56.0	66.0	39.1	29.1	50.0	49.0
MW-23C	28 03 42.51	81 05 59.80	22365	24-Sep-07	97.93	67.1	56.6	66.6	41.4	31.4	54.6	53.6
MW-27C	28 03 12.45	81 05 17.15	27863	27-Aug-10	81.66	58.3	48.3	58.3	33.4	23.4	46.3	45.3

Notes:
NAD83 indicates the North American Datum of 1983
NGVD29 indicates the National Geodetic Vertical Datum of 1929
TOC indicates top of casing
BTOC indicates below top of casing

Table 3-1
Surface Water Monitoring Geographic Locations
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J.E.D. Solid Waste Management Facility

Surface Water Monitoring Location	WACS ID	Latitude (NAD 1983)	Longitude (NAD 1983)
SW - 3	19945	28 03 20.63973	81 04 33.16311
SW - 4	19946	28 04 11.71727	81 06 01.16679

Notes:
WACS ID indicates Water Assurance Compliance System Identification
NAD83 indicates the North American Datum of 1983

Table 3-2
Leachate Sampling Sites Geographic Locations
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Leachate Sampling Site Location	WACS ID	Latitude (NAD83)	Longitude (NAD83)
L - 1	19947	28 04 06.29227	81 05 40.08305
L - 2	19948	28 04 04.14722	81 05 46.75141
L - 3	19949	28 03 55.34894	81 05 43.54716
L - 4	19950	28 03 55.33060	81 05 59.59289
L - 5	22369	28 03 48.63809	81 05 59.56476
L - 6	22370	28 03 47.07045	81 05 43.48708
L - 7	22371	28 03 40.28341	81 05 59.50623

Notes:

WACS ID indicates Water Assurance Compliance System Identification

NAD83 indicates the North American Datum of 1983

Table 4-1
Groundwater Field Measured Parameter - pH
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Event Nov-11 (SU)	16th Event May-12 (SU)	17th Event Nov-12 (SU)	18th Event May-13 (SU)	19th Event Nov-13 (SU)	1st Cmp Dec-13 (SU)	2nd Cmp Feb-14 (SU)	20th Event / 3rd Cmp May-14 (SU)
MW-1A	B	5.09	4.83	4.75	4.74	4.77	--	--	4.66
MW-2A	B	5.25	--	5.01	5.19	4.80	--	--	3.80
MW-3A	B	4.94	--	5.08	5.02	5.24	--	--	5.25
MW-4A	B	4.75	--	4.73	4.51	5.15	--	--	5.07
MW-5A	B	5.74	--	3.86	3.70	5.18	--	--	5.20
MW-6A	B	5.21	--	5.10	4.94	4.89	--	--	4.89
MW-7A	D	5.25	5.43	5.28	5.06	4.94	--	--	4.67
MW-8A	D	4.41	4.82	4.23	4.17	4.09	--	--	4.29
MW-9A	D	4.85	4.89	4.16	4.45	4.89	--	--	4.99
MW-10A	D	4.83	--	4.78	4.84	4.93	--	--	4.81
MW-11A	D	5.13	5.38	5.33	5.24	4.66	--	--	4.88
MW-12A	D	4.50	5.85	4.55	5.13	4.24	--	--	4.29
MW-13A	D	5.21	5.33	5.31	5.18	4.79	--	--	5.08
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	4.93	4.92	5.06	4.83	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				5.04	--	--	5.37
MW-17A	D	--	--	--	--	4.13	--	--	AB
MW-18A	D	--	--	--	--	4.67	--	--	AB
MW-19A	D	5.84	5.98	5.53	5.98	4.64	--	--	AB
MW-20A	D	--	--	4.74	4.80	MW-20A abandoned in July 2013			
MW-21A	D	--	--	4.35	4.32	3.82	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	5.62	5.46	5.18	--	--	5.15
MW-23A	B	6.19	5.35	5.14	5.13	5.32	--	--	5.26
CW-1A	C	CW-1A installed in November 2013					5.00	5.01	4.78
CW-2A	C	CW-2A installed in November 2013					4.49	4.34	3.96
CW-3A	C	CW-3A installed in November 2013					4.74	4.60	4.34
MW-1B	B	--	5.73	--	5.16	--	--	--	4.42
MW-2B	B	--	4.75	--	4.63	--	--	--	4.34
MW-3B	B	--	4.82	--	5.02	--	--	--	4.09
MW-4B	B	--	4.81	--	4.51	--	--	--	3.73
MW-5B	B	--	4.37	--	4.12	--	--	--	3.81
MW-6B	B	--	4.93	--	4.73	--	--	--	4.79
MW-7B	D	--	4.54	--	4.36	--	--	--	4.30
MW-8B	D	--	4.89	--	4.71	--	--	--	4.43
MW-9B	D	--	4.73	--	4.14	--	--	--	4.10
MW-10B	D	--	4.55	--	4.21	--	--	--	4.10
MW-11B	D	--	4.92	--	4.85	--	--	--	4.62
MW-12B	D	--	4.94	--	4.79	--	--	--	4.38
MW-13B	D	--	4.86	--	4.65	--	--	--	4.42
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	4.96	4.97	4.94	4.88	MW-16B abandoned in July 2013			
MW-16BR	D	MW-16BR installed October 2013				4.89	--	--	4.88
MW-17B	D	--	--	--	--	4.46	--	--	AB
MW-18B	D	--	--	--	--	4.42	--	--	AB
MW-19B	D	--	4.97	--	4.85	--	--	--	AB
MW-20B	D	--	--	--	5.03	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	4.99	--	--	--	AB
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR	B	NI	--	--	4.78	--	--	--	4.40
MW-23B	B	--	4.43	--	4.23	--	--	--	4.09

Table 4-1
Groundwater Field Measured Parameter - pH
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Event Nov-11 (SU)	16th Event May-12 (SU)	17th Event Nov-12 (SU)	18th Event May-13 (SU)	19th Event Nov-13 (SU)	1st Cmp Dec-13 (SU)	2nd Cmp Feb-14 (SU)	20th Event / 3rd Cmp May-14 (SU)
MW-1C	B	5.24	--	5.38	--	5.04	--	--	--
MW-2C	B	4.45	--	4.77	--	4.47	--	--	--
MW-3C	B	5.17	--	5.27	--	4.52	--	--	--
MW-4C	B	5.78	--	5.93	--	5.47	--	--	--
MW-5C	B	5.04	--	5.01	--	4.75	--	--	--
MW-6C	B	5.00	--	4.78	--	4.46	--	--	--
MW-7C	D	5.18	--	5.15	--	4.92	--	--	--
MW-8C	D	4.87	--	4.62	--	4.31	--	--	--
MW-9C	D	5.46	--	5.57	--	5.41	--	--	--
MW-10C	D	5.15	--	4.80	--	4.76	--	--	--
MW-11C	D	5.42	--	5.31	--	5.13	--	--	--
MW-12C	D	5.05	--	4.97	--	4.68	--	--	--
MW-13C	D	5.04	--	4.97	--	4.44	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	5.11	5.12	5.19	5.05	MW-16C abandoned in July 2013			
MW-16CR	D	MW-16CR installed October 2013				5.32	--	--	--
MW-17C	D	--	--	--	--	4.81	--	--	AB
MW-18C	D	--	--	--	--	4.45	--	--	AB
MW-19C	D	5.25	--	5.41	--	4.99	--	--	AB
MW-20C	D	--	--	5.24	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	5.26	--	4.98	--	--	AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR	B	NI	--	5.32	--	4.77	--	--	--
MW-23C	B	5.72	--	5.56	--	5.30	--	--	--

Notes:

Semi indicates semi-annual monitoring event

Cmp indicages compliance monitoring event

SU indicates Standard Units

-- indicates well was not sampled

Well type: (B) Background well (D) Detection well (C) Compliance well

Highlighted values exceed Secondary Drinking Water Standard for pH (>8.5 or <6.5 SU)

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table 4-2
Groundwater Field Measured Parameter - Temperature
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Event Nov-11 (°C)	16th Event May-12 (°C)	17th Event Nov-12 (°C)	18th Event May-13 (°C)	19th Event Nov-13 (°C)	1st Cmp Dec-13 (°C)	2nd Cmp Feb-14 (°C)	20th Event / 3rd Cmp May-14 (°C)
MW-1A	B	27.41	25.60	25.54	23.66	27.32	--	--	25.92
MW-2A	B	26.67	--	24.42	25.69	28.02	--	--	24.14
MW-3A	B	27.47	--	26.55	27.71	27.57	--	--	28.89
MW-4A	B	28.13	--	28.10	28.12	28.10	--	--	28.83
MW-5A	B	28.71	--	25.16	24.60	26.79	--	--	25.30
MW-6A	B	27.21	--	25.10	24.15	25.47	--	--	26.05
MW-7A	D	26.04	23.80	25.43	21.98	24.64	--	--	25.85
MW-8A	D	25.62	24.12	25.71	25.87	25.30	--	--	24.89
MW-9A	D	27.19	25.18	27.14	27.90	27.29	--	--	25.83
MW-10A	D	27.04	--	25.09	25.51	24.65	--	--	25.04
MW-11A	D	27.39	27.86	28.09	26.78	26.95	--	--	26.07
MW-12A	D	26.97	26.31	26.90	24.24	26.68	--	--	26.92
MW-13A	D	27.47	26.81	26.97	23.92	27.33	--	--	27.10
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	25.52	24.36	24.48	23.28	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				25.85	--	--	25.15
MW-17A	D	--	--	--	--	24.49	--	--	AB
MW-18A	D	--	--	--	--	26.00	--	--	AB
MW-19A	D	25.88	25.68	25.24	22.58	25.67	--	--	AB
MW-20A	D	--	--	24.73	24.84	MW-20A abandoned in July 2013			
MW-21A	D	--	--	25.36	24.70	25.72	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B		--	23.69	23.89	26.21	--	--	22.68
MW-23A	B	25.75	24.87	24.71	24.76	26.22	--	--	25.64
CW-1A	C	CW-1A installed in November 2013					5.00	23.72	25.59
CW-2A	C	CW-2A installed in November 2013					23.80	23.30	24.98
CW-3A	C	CW-3A installed in November 2013					23.58	23.05	25.21
MW-1B	B	--	25.49	--	24.65	--	--	--	25.84
MW-2B	B	--	26.17	--	25.89	--	--	--	24.93
MW-3B	B	--	28.55	--	28.36	--	--	--	27.78
MW-4B	B	--	31.26	--	29.31	--	--	--	28.92
MW-5B	B	--	24.67	--	24.86	--	--	--	25.54
MW-6B	B	--	24.98	--	24.30	--	--	--	26.40
MW-7B	D	--	24.18	--	22.90	--	--	--	24.91
MW-8B	D	--	24.28	--	24.66	--	--	--	24.47
MW-9B	D	--	25.05	--	26.91	--	--	--	25.92
MW-10B	D	--	26.62	--	25.05	--	--	--	25.38
MW-11B	D	--	26.64	--	26.52	--	--	--	25.80
MW-12B	D	--	26.00	--	24.90	--	--	--	26.74
MW-13B	D	--	26.21	--	24.02	--	--	--	26.11
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	25.29	24.00	24.58	23.69	MW-16B abandoned in July 2013			
MW-16BR	D	MW-16BR installed October 2013				24.64	--	--	24.71
MW-17B	D	--	--	--	--	24.33	--	--	AB
MW-18B	D	--	--	--	--	25.00	--	--	AB
MW-19B	D	--	24.50	--	23.66	--	--	--	AB
MW-20B	D	--	--	--	24.20	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	24.49	--	--	--	AB
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR	B		--	--	23.69	--	--	--	22.91
MW-23B	B	--	24.75	--	24.70	--	--	--	25.04

Table 4-2
Groundwater Field Measured Parameter - Temperature
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Event Nov-11 (°C)	16th Event May-12 (°C)	17th Event Nov-12 (°C)	18th Event May-13 (°C)	19th Event Nov-13 (°C)	1st Cmp Dec-13 (°C)	2nd Cmp Feb-14 (°C)	20th Event / 3rd Cmp May-14 (°C)
MW-1C	B	26.42	--	25.11	--	26.30	--	--	--
MW-2C	B	25.50	--	23.48	--	26.21	--	--	--
MW-3C	B	26.44	--	26.13	--	26.93	--	--	--
MW-4C	B	28.20	--	26.84	--	28.30	--	--	--
MW-5C	B	26.65	--	24.54	--	25.99	--	--	--
MW-6C	B	26.16	--	24.60	--	24.74	--	--	--
MW-7C	D	24.80	--	24.56	--	23.94	--	--	--
MW-8C	D	24.59	--	24.60	--	24.56	--	--	--
MW-9C	D	25.45	--	25.04	--	25.90	--	--	--
MW-10C	D	25.98	--	23.92	--	24.04	--	--	--
MW-11C	D	26.55	--	26.07	--	25.91	--	--	--
MW-12C	D	25.61	--	25.80	--	25.91	--	--	--
MW-13C	D	25.75	--	25.48	--	26.21	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	25.52	24.03	23.86	23.62	MW-16C abandoned in July 2013			
MW-16CR	D	MW-16CR installed October 2013				24.06	--	--	--
MW-17C	D	--	--	--	--	23.69	--	--	AB
MW-18C	D	--	--	--	--	23.82	--	--	AB
MW-19C	D	24.96	--	24.68	--	25.18	--	--	AB
MW-20C	D	--	--	23.60	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	23.64	--	24.12	--	--	AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR	B		--	23.32	--	24.19	--	--	--
MW-23C	B	24.16	--	24.15	--	25.01	--	--	--

Notes:

Semi indicates semi-annual monitoring event

Cmp indicages compliance monitoring event

°C indicates degrees Celcius

-- indicates well was not sampled

Well type: (B) Background well (D) Detection well (C) Compliance well

Highlighted values exceed Secondary Drinking Water Standard for pH (>8.5 or <6.5 SU)

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table 4-3
Groundwater Field Measured Parameter - Specific Conductance
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Event Nov-11 (µS/cm)	16th Event May-12 (µS/cm)	17th Event Nov-12 (µS/cm)	18th Event May-13 (µS/cm)	19th Event Nov-13 (µS/cm)	1st Cmp Dec-13 (µS/cm)	2nd Cmp Feb-14 (µS/cm)	20th Event / 3rd Cmp May-14 (µS/cm)
MW-1A	B	191	173	1,887	1,795	2,655	--	--	2,344
MW-2A	B	235	--	228	253	311	--	--	398
MW-3A	B	250	--	337	389	654	--	--	768
MW-4A	B	88	--	376	413	756	--	--	1,054
MW-5A	B	1578	--	941	743	487	--	--	370
MW-6A	B	375	--	525	540	429	--	--	473
MW-7A	D	262	309	502	431	339	--	--	284
MW-8A	D	291	307	1,415	919	1,447	--	--	1,698
MW-9A	D	169	532	814	821	244	--	--	310
MW-10A	D	530	--	329	464	174	--	--	249
MW-11A	D	410	283	432	371	399	--	--	428
MW-12A	D	148	476	158	216	153	--	--	180
MW-13A	D	212	189	317	229	601	--	--	545
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	36	39	58	54	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				187	--	--	164
MW-17A	D	--	--	--	--	123	--	--	AB
MW-18A	D	--	--	--	--	161	--	--	AB
MW-19A	D	520	551	170	482	121	--	--	AB
MW-20A	D	--	--	1,358	500	MW-20A abandoned in July 2013			
MW-21A	D	--	--	668	487	745	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	434	246	635	--	--	357
MW-23A	B	389	247	335	344	668	--	--	651
CW-1A	C	CW-1A installed in November 2013					5	427	382
CW-2A	C	CW-2A installed in November 2013					1,222	1,254	1,340
CW-3A	C	CW-3A installed in November 2013					1,417	1,406	1,572
MW-1B	B	--	163	--	78	--	--	--	106
MW-2B	B	--	46	--	57	--	--	--	66
MW-3B	B	--	75	--	65	--	--	--	1,395
MW-4B	B	--	135	--	134	--	--	--	1,844
MW-5B	B	--	68	--	265	--	--	--	945
MW-6B	B	--	81	--	89	--	--	--	95
MW-7B	D	--	313	--	425	--	--	--	827
MW-8B	D	--	83	--	174	--	--	--	465
MW-9B	D	--	206	--	930	--	--	--	1,435
MW-10B	D	--	402	--	544	--	--	--	869
MW-11B	D	--	218	--	201	--	--	--	117
MW-12B	D	--	128	--	122	--	--	--	120
MW-13B	D	--	131	--	141	--	--	--	140
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	45	44	42	39	MW-16B abandoned in July 2013			
MW-16BR	D	MW-16BR installed October 2013				74	--	--	93
MW-17B	D	--	--	--	--	258	--	--	AB
MW-18B	D	--	--	--	--	112	--	--	AB
MW-19B	D	--	153	--	136	--	--	--	AB
MW-20B	D	--	--	--	107	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	112	--	--	--	AB
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR	B	NI	--	--	113	--	--	--	106
MW-23B	B	--	473	--	441	--	--	--	407

Table 4-3
Groundwater Field Measured Parameter - Specific Conductance
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Event Nov-11 (µS/cm)	16th Event May-12 (µS/cm)	17th Event Nov-12 (µS/cm)	18th Event May-13 (µS/cm)	19th Event Nov-13 (µS/cm)	1st Cmp Dec-13 (µS/cm)	2nd Cmp Feb-14 (µS/cm)	20th Event / 3rd Cmp May-14 (µS/cm)
MW-1C	B	68	--	95	--	67	--	--	--
MW-2C	B	51	--	52	--	56	--	--	--
MW-3C	B	87	--	84	--	67	--	--	--
MW-4C	B	156	--	210	--	143	--	--	--
MW-5C	B	73	--	89	--	79	--	--	--
MW-6C	B	53	--	59	--	54	--	--	--
MW-7C	D	68	--	79	--	62	--	--	--
MW-8C	D	83	--	262	--	431	--	--	--
MW-9C	D	121	--	182	--	348	--	--	--
MW-10C	D	100	--	112	--	152	--	--	--
MW-11C	D	118	--	126	--	115	--	--	--
MW-12C	D	56	--	62	--	58	--	--	--
MW-13C	D	75	--	90	--	78	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	113	106	108	103	MW-16C abandoned in July 2013			
MW-16CR	D	MW-16CR installed October 2013				164	--	--	--
MW-17C	D	--	--	--	--	96	--	--	AB
MW-18C	D	--	--	--	--	117	--	--	AB
MW-19C	D	114	--	112	--	113	--	--	AB
MW-20C	D	--	--	110	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	111	--	117	--	--	AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR	B	NI	--	88	--	84	--	--	--
MW-23C	B	115	--	103	--	102	--	--	--

Notes:

Semi indicates semi-annual monitoring event

Cmp indicages compliance monitoring event

µS/cm indicates micro siemens per centimeter

-- indicates well was not sampled

Well type: (B) Background well (D) Detection well (C) Compliance well

Highlighted values exceed Secondary Drinking Water Standard for pH (>8.5 or <6.5 SU)

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table 4-4
Groundwater Field Measured Parameter - Turbidity
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Event Nov-11 (NTU)	16th Event May-12 (NTU)	17th Event Nov-12 (NTU)	18th Event May-13 (NTU)	19th Event Nov-13 (NTU)	1st Cmp Dec-13 (NTU)	2nd Cmp Feb-14 (NTU)	20th Event / 3rd Cmp May-14 (NTU)
MW-1A	B	3.3	0.0	0.0	1.1	1.2	--	--	1.3
MW-2A	B	2.1	--	0.3	1.6	0.8	--	--	0.8
MW-3A	B	1.2	--	2.7	2.7	2.1	--	--	2.3
MW-4A	B	0.0	--	0.4	1.8	6.3	--	--	7.2
MW-5A	B	18.7	--	1.1	2.2	11.6	--	--	18.7
MW-6A	B	1.1	--	3.1	2.4	1.2	--	--	0.5
MW-7A	D	0.2	0.0	0.4	0.5	0.7	--	--	0.7
MW-8A	D	1.4	0.9	0.8	0.8	1.5	--	--	0.3
MW-9A	D	5.5	1.7	4.9	2.2	17.8	--	--	8.8
MW-10A	D	2.5	--	1.9	1.5	4.6	--	--	1.7
MW-11A	D	6.9	6.6	5.0	3.4	4.6	--	--	4.4
MW-12A	D	0.8	0.0	0.0	0.6	0.9	--	--	0.0
MW-13A	D	1.2	1.2	0.0	1.2	1.1	--	--	0.0
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	10.5	2.6	10.5	2.4	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				5.1	--	--	2.3
MW-17A	D	--	--	--	--	2.1	--	--	AB
MW-18A	D	--	--	--	--	5.3	--	--	AB
MW-19A	D	54.7	46.2	17.0	63.0	4.4	--	--	AB
MW-20A	D	--	--	12.9	12.4	MW-20A abandoned in July 2013			
MW-21A	D	--	--	6.5	2.2	2.8	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	0.0	0.9	1.9	--	--	0.6
MW-23A	B	42.0	17.0	5.2	13.5	3.0	--	--	1.5
CW-1A	C	CW-1A installed in November 2013					5.0	0.7	0.9
CW-2A	C	CW-2A installed in November 2013					0.6	0.0	0.5
CW-3A	C	CW-3A installed in November 2013					35	0.0	1.1
MW-1B	B	--	0.0	--	1.9	--	--	--	1.5
MW-2B	B	--	1.8	--	4.4	--	--	--	0.6
MW-3B	B	--	3.4	--	5.0	--	--	--	0.6
MW-4B	B	--	0.0	--	1.0	--	--	--	2.5
MW-5B	B	--	0.0	--	0.6	--	--	--	2.1
MW-6B	B	--	0.0	--	0.4	--	--	--	0.0
MW-7B	D	--	0.0	--	0.5	--	--	--	0.0
MW-8B	D	--	4.6	--	18.0	--	--	--	1.8
MW-9B	D	--	0.0	--	0.6	--	--	--	0.0
MW-10B	D	--	0.7	--	1.0	--	--	--	0.3
MW-11B	D	--	0.0	--	0.5	--	--	--	2.1
MW-12B	D	--	0.9	--	0.8	--	--	--	0.2
MW-13B	D	--	0.5	--	0.8	--	--	--	0.4
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	16.2	18.2	9.3	36.0	MW-16B abandoned in July 2013			
MW-16BR	D	MW-16BR installed October 2013				350	--	--	12.0
MW-17B	D	--	--	--	--	1.9	--	--	AB
MW-18B	D	--	--	--	--	2.1	--	--	AB
MW-19B	D	--	4.8	--	17.0	--	--	--	AB
MW-20B	D	--	--	--	63.5	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	6.7	--	--	--	AB
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR	B	NI	--	--	19.2	--	--	--	2.1
MW-23B	B	--	0.0	--	0.4	--	--	--	0.4

Table 4-4
Groundwater Field Measured Parameter - Turbidity
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Event Nov-11 (NTU)	16th Event May-12 (NTU)	17th Event Nov-12 (NTU)	18th Event May-13 (NTU)	19th Event Nov-13 (NTU)	1st Cmp Dec-13 (NTU)	2nd Cmp Feb-14 (NTU)	20th Event / 3rd Cmp May-14 (NTU)
MW-1C	B	5.0	--	0.9	--	7.2	--	--	--
MW-2C	B	0.4	--	0.1	--	1.9	--	--	--
MW-3C	B	0.7	--	2.3	--	3.8	--	--	--
MW-4C	B	0.8	--	0.6	--	2.8	--	--	--
MW-5C	B	0.8	--	1.0	--	1.8	--	--	--
MW-6C	B	1.7	--	1.8	--	1.6	--	--	--
MW-7C	D	1.0	--	0.8	--	1.2	--	--	--
MW-8C	D	0.7	--	0.0	--	1.3	--	--	--
MW-9C	D	1.0	--	1.8	--	3.2	--	--	--
MW-10C	D	4.0	--	2.2	--	2.6	--	--	--
MW-11C	D	1.6	--	1.1	--	1.4	--	--	--
MW-12C	D	2.1	--	1.5	--	2.2	--	--	--
MW-13C	D	3.5	--	1.6	--	2.4	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	1.0	0.3	1.4	1.4	MW-16C abandoned in July 2013			
MW-16CR	D	MW-16CR installed October 2013				10.0	--	--	--
MW-17C	D	--	--	--	--	7.0	--	--	AB
MW-18C	D	--	--	--	--	12.7	--	--	AB
MW-19C	D	17.9	--	72.1	--	61.6	--	--	AB
MW-20C	D	--	--	16.0	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	19.2	--	16.9	--	--	AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR	B	NI	--	208	--	101	--	--	--
MW-23C	B	9.9	--	5.7	--	10.0	--	--	--

Notes:

Semi indicates semi-annual monitoring event

Cmp indicages compliance monitoring event

NTU = Nephalometric Turbidity Units

-- indicates well was not sampled

Well type: (B) Background well (D) Detection well (C) Compliance well

Highlighted values exceed Secondary Drinking Water Standard for pH (>8.5 or <6.5 SU)

AB indicates wells were abandoned in March 2014

Table 4-5
Groundwater Field Measured Parameter - Dissolved Oxygen
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Event Nov-11 (mg/L)	16th Event May-12 (mg/L)	17th Event Nov-12 (mg/L)	18th Event May-13 (mg/L)	19th Event Nov-13 (mg/L)	1st Cmp Dec-13 (mg/L)	2nd Cmp Feb-14 (mg/L)	20th Event / 3rd Cmp May-14 (mg/L)
MW-1A	B	0.59	0.27	0.46	0.49	0.32	--	--	0.54
MW-2A	B	0.58	--	0.48	0.48	0.27	--	--	0.74
MW-3A	B	0.79	--	0.36	0.30	0.42	--	--	0.51
MW-4A	B	0.82	--	0.40	0.39	0.37	--	--	0.51
MW-5A	B	0.30	--	0.49	0.40	0.39	--	--	0.74
MW-6A	B	0.57	--	0.42	0.37	0.38	--	--	1.06
MW-7A	D	0.54	0.19	0.40	0.47	0.42	--	--	0.63
MW-8A	D	0.67	0.22	0.29	0.30	0.46	--	--	0.69
MW-9A	D	0.39	0.19	0.37	0.39	0.49	--	--	0.66
MW-10A	D	1.12	--	0.34	0.33	0.62	--	--	0.83
MW-11A	D	1.08	0.08	0.25	0.17	0.49	--	--	0.60
MW-12A	D	1.21	0.15	0.61	0.47	0.57	--	--	0.78
MW-13A	D	0.89	0.15	0.37	0.38	0.48	--	--	0.60
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	1.35	0.15	0.51	0.33	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				0.99	--	--	1.18
MW-17A	D	--	--	--	--	1.03	--	--	AB
MW-18A	D	--	--	--	--	0.59	--	--	AB
MW-19A	D	0.25	0.06	0.25	0.40	0.48	--	--	AB
MW-20A	D	--	--	3.84	1.07	MW-20A abandoned in July 2013			
MW-21A	D	--	--	1.45	0.53	0.79	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	0.86	0.26	0.55	--	--	0.67
MW-23A	B	0.32	0.13	0.36	0.32	0.45	--	--	0.66
CW-1A	C	CW-1A installed in November 2013					5.00	0.69	0.98
CW-2A	C	CW-2A installed in November 2013					0.78	0.73	1.25
CW-3A	C	CW-3A installed in November 2013					1.24	0.67	0.73
MW-1B	B	--	0.29	--	0.65	--	--	--	0.67
MW-2B	B	--	0.21	--	0.50	--	--	--	0.71
MW-3B	B	--	0.22	--	1.30	--	--	--	0.56
MW-4B	B	--	0.21	--	0.44	--	--	--	0.65
MW-5B	B	--	0.29	--	0.56	--	--	--	1.37
MW-6B	B	--	0.40	--	0.45	--	--	--	0.78
MW-7B	D	--	0.40	--	0.76	--	--	--	1.52
MW-8B	D	--	0.09	--	0.92	--	--	--	1.34
MW-9B	D	--	0.22	--	0.50	--	--	--	0.80
MW-10B	D	--	0.31	--	0.61	--	--	--	1.17
MW-11B	D	--	0.20	--	0.50	--	--	--	1.05
MW-12B	D	--	0.33	--	0.28	--	--	--	0.82
MW-13B	D	--	0.34	--	0.50	--	--	--	0.58
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	0.23	0.05	0.17	0.14	MW-16B abandoned in July 2013			
MW-16BR	D	MW-16BR installed October 2013				0.41	--	--	1.28
MW-17B	D	--	--	--	--	0.65	--	--	AB
MW-18B	D	--	--	--	--	0.44	--	--	AB
MW-19B	D	--	0.06	--	0.41	--	--	--	AB
MW-20B	D	--	--	--	0.23	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	0.32	--	--	--	AB
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR	B	NI	--	--	0.23	--	--	--	1.05
MW-23B	B	--	0.22	--	0.54	--	--	--	0.89

Table 4-5
Groundwater Field Measured Parameter - Dissolved Oxygen
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Event Nov-11 (mg/L)	16th Event May-12 (mg/L)	17th Event Nov-12 (mg/L)	18th Event May-13 (mg/L)	19th Event Nov-13 (mg/L)	1st Cmp Dec-13 (mg/L)	2nd Cmp Feb-14 (mg/L)	20th Event / 3rd Cmp May-14 (mg/L)
MW-1C	B	0.45	--	0.68	--	0.63	--	--	--
MW-2C	B	0.39	--	0.79	--	0.47	--	--	--
MW-3C	B	0.48	--	0.53	--	0.53	--	--	--
MW-4C	B	0.57	--	0.48	--	0.57	--	--	--
MW-5C	B	0.47	--	0.46	--	0.56	--	--	--
MW-6C	B	0.47	--	0.53	--	0.63	--	--	--
MW-7C	D	0.55	--	0.53	--	0.63	--	--	--
MW-8C	D	0.60	--	0.45	--	0.59	--	--	--
MW-9C	D	0.44	--	0.73	--	0.56	--	--	--
MW-10C	D	0.93	--	0.63	--	0.95	--	--	--
MW-11C	D	0.95	--	0.41	--	0.60	--	--	--
MW-12C	D	0.70	--	0.97	--	1.09	--	--	--
MW-13C	D	0.82	--	0.80	--	0.69	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	1.49	0.24	0.61	0.44	MW-16C abandoned in July 2013			
MW-16CR	D	MW-16CR installed October 2013				0.69	--	--	--
MW-17C	D	--	--	--	--	0.62	--	--	AB
MW-18C	D	--	--	--	--	0.35	--	--	AB
MW-19C	D	0.29	--	0.21	--	0.76	--	--	AB
MW-20C	D	--	--	0.18	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	0.18	--	0.32	--	--	AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR	B		--	0.83	--	0.35	--	--	--
MW-23C	B	0.70	--	0.40	--	0.49	--	--	--

Notes:

Semi indicates semi-annual monitoring event

Cmp indicages compliance monitoring event

mg/L = milligram per liter

-- indicates well was not sampled

Well type: (B) Background well (D) Detection well (C) Compliance well

Highlighted values exceed Secondary Drinking Water Standard for pH (>8.5 or <6.5 SU)

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table 4-6
Surface Water Field Measured Parameters
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J.E.D. Solid Waste Management Facility

Parameter Monitored	Class III Standard Criteria	Units	15th Event Nov-11	16th Event May-12	17th Event Nov-12	18th Event May-13	19th Event Nov-13	20th Event May-14
SW-3								
Dissolved Oxygen	>5	mg/L	4.13	NS	NS	NS	NS	2.65
pH	6.0 - 8.5	pH units	5.35	NS	NS	NS	NS	5.76
Temperature	--	degrees C	17.11	NS	NS	NS	NS	23.31
Specific Conductance	not 50% above background or 1275	µS/cm	68	NS	NS	NS	NS	196
Turbidity	< 29 plus background	NTU	0.1	NS	NS	NS	NS	1.0
SW-4								
Dissolved Oxygen	>5	mg/L	4.44	NS	NS	NS	NS	6.67
pH	6.0 - 8.5	pH units	4.30	NS	NS	NS	NS	3.79
Temperature	--	degrees C	17.33	NS	NS	NS	NS	21.19
Specific Conductance	not 50% above background or 1275	µS/cm	65	NS	NS	NS	NS	171
Turbidity	< 29 plus background	NTU	0.0	NS	NS	NS	NS	1.1

Notes:

Red shaded values exceed Class III Standard Criteria

-- indicates that no criteria has been established.

Per the Permit requirements, surface water samples are to be collected only of flow is observed in Bull Creek.

NS indicates no samples were collected as no flow was observed

Table 4-7
Leachate Field Measured Parameters
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J.E.D Solid Waste Management Facility

Parameter	Regulatory Level	Unit	15th Semi-annual Monitoring Event - Nov 2011					
			L-1	L-2	L-3	L-4	L-5	L-7
Temperature	-	^{o}C	31.23	29.98	31.03	38.86	39.09	31.7
pH	-	Std Units	7.2	6.6	6.6	6.8	6.4	6.4
Conductivity	-	mS/cm	23.4	13.4	12	17.3	9.8	7.8
Turbidity	-	NTU	0.8	1.6	37	0.9	22.8	68.8
Oxidation/Reduction Potential (ORP)	-	mV	-34.7	-260.6	-168.5	-255.8	-161.7	-238.3
Dissolved Oxygen (DO)	-	mg/L	2.2	0.17	0.56	0.13	0.33	0.4

Notes:
^{o}C = Degrees Celsius
Std Units = Standard Units
mS/cm = milliSiemens per centimeter
NTU = Nephalometric Turbidity Units
mV = Millivolts
mg/L = milligram per liter

Table 5-1
Arsenic Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi/ 3rd Cmp May-14 (µg/L)
MW-1A	B	0.7 i	1.3	0.5 u	1.4	3.3	--	--	3.2
MW-2A	B	0.7 i	--	1.8	1.4	0.5 u	--	--	0.5 u
MW-3A	B	1.2	--	1.0	0.5 i	0.9 i	--	--	1.5
MW-4A	B	0.5 u	--	1.0	1.7	2.2	--	--	1.8
MW-5A	B	1.4	--	0.5 u	1.2	1.8	--	--	2.8
MW-6A	B	0.5 u	--	1.5	1.9	1.6	--	--	1.5
MW-7A	D	0.7 i	0.8 i	0.7 i	1.3	1.8	--	--	1.1
MW-8A	D	0.7 i	1.1	0.8 i	0.8 i	1.3	--	--	0.7 i
MW-9A	D	1.1	1.7	1.8	0.9 i	3.7	--	--	2.7
MW-10A	D	1.1	--	1.2	2.2	1.5	--	--	0.8 i
MW-11A	D	8.2	8.2	4.7	3.6	2.0	--	--	2.1
MW-12A	D	2.6	10.1	1.4	0.6 i	1.0	--	--	1.4
MW-13A	D	16.8	16.8	17.8	12.9	10.5	--	--	10.4
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	0.5 u	1.2	0.5 u	0.8 i	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				0.5 u	--	--	0.7 i
MW-17A	D	--	--	--	--	0.5 u	--	--	AB
MW-18A	D	--	--	--	--	0.7 i	--	--	AB
MW-19A	D	7.7	7.1	2.1	5.6	1.8	--	--	AB
MW-20A	D	--	--	0.8 i	0.5 u	MW-20A abandoned in July 2013			
MW-21A	D	--	--	0.5 u	0.5 u	0.5 u	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	1.4	0.6 i	1.0	--	--	0.9 i
MW-23A	B	1.2	0.9 i	0.5 u	0.5 u	0.7 i	--	--	1.1
CW-1A	C	CW-1A installed in November 2013					278	166	77.6
CW-2A	C	CW-2A installed in November 2013					1.0 i	2.2	1.3
CW-3A	C	CW-3A installed in November 2013					2.1	2.0	1.7
MW-1B	B	--	0.5 u	--	0.5 u	--	--	--	0.6 i
MW-2B	B	--	0.5 u	--	0.5 u	--	--	--	0.5 u
MW-3B	B	--	0.5 u	--	0.5 u	--	--	--	0.8 i
MW-4B	B	--	0.5 u	--	0.7 i	--	--	--	0.5 u
MW-5B	B	--	0.5 u	--	0.7 i	--	--	--	0.5 i
MW-6B	B	--	0.5 u	--	0.5 u	--	--	--	0.5 u
MW-7B	D	--	0.7 i	--	0.7 i	--	--	--	0.5 u
MW-8B	D	--	0.5 u	--	0.5 u	--	--	--	0.7 i
MW-9B	D	--	0.8 i	--	0.7 i	--	--	--	0.6 i
MW-10B	D	--	0.7 i	--	0.8 i	--	--	--	0.8 i
MW-11B	D	--	0.9 i	--	0.7 i	--	--	--	1.4
MW-12B	D	--	0.5 u	--	0.5 u	--	--	--	0.5 u
MW-13B	D	--	0.5 u	--	0.5 u	--	--	--	0.5 u
MW-14B	D	MW-14A abandoned in July 2007							
MW-15B	D	MW-15A abandoned in July 2007							
MW-16B	D	0.5 u	1.2	0.6 i	0.6 i	MW-16A abandoned in July 2013			
MW-16BR	D	MW-16AR installed October 2013				0.5 u	--	--	0.5 u
MW-17B	D	--	--	--	--	0.5 i	--	--	AB
MW-18B	D	--	--	--	--	0.5 u	--	--	AB
MW-19B	D	--	0.5 u		0.7 i	--	--	--	AB
MW-20B	D	--	--	--	0.5 u	MW-20A abandoned in July 2013			
MW-21B	D	--	--	--	0.5 u	--	--	--	AB
MW-22B	B	--	MW-22A abandoned in November 2011						
MW-22BR	B	NI	--	--	0.5 u	--	--	--	0.6 i
MW-23B	B	--	0.5 u	--	0.6 i	--	--	--	0.5 u

Table 5-1
Arsenic Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi/ 3rd Cmp May-14 (µg/L)
MW-1C	B	0.5 u	--	0.5 u	--	0.5 u	--	--	--
MW-2C	B	0.5 u	--	0.7 i	--	0.5 u	--	--	--
MW-3C	B	0.5 u	--	0.5 u	--	0.5 u	--	--	--
MW-4C	B	0.5 u	--	0.5 u	--	0.5 u	--	--	--
MW-5C	B	0.5 u	--	0.5 u	--	0.5 u	--	--	--
MW-6C	B	0.5 u	--	0.5 u	--	0.5 u	--	--	--
MW-7C	D	0.5 u	--	0.5 u	--	0.5 u	--	--	--
MW-8C	D	0.5 u	--	0.5 u	--	0.5 u	--	--	--
MW-9C	D	0.5 u	--	0.5 u	--	0.5 u	--	--	--
MW-10C	D	0.5 u	--	0.5 u	--	0.6 i	--	--	--
MW-11C	D	0.5 u	--	0.5 u	--	0.5 u	--	--	--
MW-12C	D	0.5 u	--	0.5 u	--	0.5 u	--	--	--
MW-13C	D	0.5 u	--	0.5 u	--	0.5 u	--	--	--
MW-14C	D	MW-14A abandoned in July 2007							
MW-15C	D	MW-15A abandoned in July 2007							
MW-16C	D	0.5 u	0.5 u	0.5 u	0.5 u	MW-16A abandoned in July 2013			
MW-16CR	D	MW-16AR installed October 2013				3.4	--	--	--
MW-17C	D	--	--	--	--	0.5 u	--	--	AB
MW-18C	D	--	--	--	--	0.5 u	--	--	AB
MW-19C	D	0.5 u	--	0.5 u	--	0.5 u	--	--	AB
MW-20C	D	--	--	0.7 i	--	MW-20A abandoned in July 2013			
MW-21C	D	--	--	0.5 u	--	0.5 u	--	--	AB
MW-22C	B	--	MW-22A abandoned in November 2011						
MW-22CR	B	NI	--	1.5	--	0.5 u	--	--	--
MW-23C	B	0.5 u	--	0.5 u	--	0.5 u	--	--	--

Notes:

Semi indicates semi-annual monitoring event
Cmp indicates compliance monitoring event
mg/L indicates micrograms per liter
u indicages not detected at value represented
i indicates value is estimated to be between method detection limit and practical quantitation limit.
-- indicates monitoring well was not sampled
Well type: (B) Background well (D) Detection well (C) Compliance well
Constituent detections are shown in shaded cells (green color)
Constituent detections exceeding the GCTL are shown in shaded cells (orange color)
GCTL indicates groundwater cleanup target level (10 µg/L)
AB indicates wells were abandoned in March 2014
NI indicates wells were installed in March 2012

Table 5-2
Ammonia (as N) Concentrations in Monitoring Wells
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J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (mg/L)	16th Semi May-12 (mg/L)	17th Semi Nov-12 (mg/L)	18th Semi May-13 (mg/L)	19th Semi Nov-13 (mg/L)	1st Cmp Dec-13 (mg/L)	2nd Cmp Feb-14 (mg/L)	20th Semi/ 3rd Cmp May-14 (mg/L)
MW-1A	B	7.31	4.44	9.73	8.38	16.4	--	--	19.6
MW-2A	B	1.87	--	1.29	0.711	2.30	--	--	1.92
MW-3A	B	4.41	--	6.41	8.75	11.5	--	--	7.89
MW-4A	B	1.3	--	9.6	11.7	10.9	--	--	8.33
MW-5A	B	5.95	--	3.66	7.79	9.87	--	--	12.1
MW-6A	B	2.95	--	7.11	4.88	6.01	--	--	6.93
MW-7A	D	3.89	3.63	6.18	5.15	6.86	--	--	6.8
MW-8A	D	3.66	7.51	15.8	5.59	5.74	--	--	0.231
MW-9A	D	5.58	20.9	22.4	21.6	5.06	--	--	5.57
MW-10A	D	4.69	--	11.5	11.6	4.96	--	--	5.10
MW-11A	D	4.17	5.14	5.07	5.67	4.19	--	--	3.62
MW-12A	D	0.377	3.05	1.78	0.213	9.03	--	--	0.499
MW-13A	D	1.25	1.31	1.65	1.47	1.38	--	--	1.56
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	0.018	0.307	0.191	0.57	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				0.934	--	--	1.41
MW-17A	D	--	--	--	--	0.717	--	--	AB
MW-18A	D	--	--	--	--	1.38	--	--	AB
MW-19A	D	13.6	16.6	2.59	11.8	0.377	--	--	AB
MW-20A	D	--	--	0.007	0.007	MW-20A abandoned in July 2013			
MW-21A	D	--	--	0.029	0.148	0.541	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	1.78	0.213	9.03	--	--	5.00
MW-23A	B	3.77	4.78	6.09	4.90	5.6	--	--	4.74
CW-1A	C	CW-1A installed in November 2013					1.05	0.783	0.575
CW-2A	C	CW-2A installed in November 2013					6.72	6.83	7.19
CW-3A	C	CW-3A installed in November 2013					11.1	8.17	7.80
MW-1B	B	--	0.306	--	0.344	--	--	--	0.462
MW-2B	B	--	0.094	--	0.094	--	--	--	0.106
MW-3B	B	--	0.11	--	0.091	--	--	--	0.703
MW-4B	B	--	0.095	--	0.285	--	--	--	1.76
MW-5B	B	--	0.152	--	0.471	--	--	--	2.94
MW-6B	B	--	0.008	--	0.192	--	--	--	0.103
MW-7B	D	--	0.254	--	0.317	--	--	--	0.546
MW-8B	D	--	0.121	--	0.211	--	--	--	0.35
MW-9B	D	--	0.218	--	0.762	--	--	--	1.92
MW-10B	D	--	0.333	--	1.43	--	--	--	4.64
MW-11B	D	--	0.077	--	0.086	--	--	--	0.042
MW-12B	D	--	0.132	--	0.146	--	--	--	0.102
MW-13B	D	--	0.149	--	0.174	--	--	--	0.156
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	0.124	0.143	0.16	0.123	MW-16B abandoned in July 2013			
MW-16BR	D	MW-16BR installed in October 2013				0.173	--	--	0.141
MW-17B	D	--	--	--	--	0.435	--	--	AB
MW-18B	D	--	--	--	--	0.033	--	--	AB
MW-19B	D	--	0.104	--	0.106	--	--	--	AB
MW-20B	D	--	--	--	0.157	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	0.147	--	--	--	AB
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR	B	NI	--	--	0.122	--	--	--	0.107
MW-23B	B	--	1.76	--	2.1	--	--	--	2.23

Table 5-2
Ammonia (as N) Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (mg/L)	16th Semi May-12 (mg/L)	17th Semi Nov-12 (mg/L)	18th Semi May-13 (mg/L)	19th Semi Nov-13 (mg/L)	1st Cmp Dec-13 (mg/L)	2nd Cmp Feb-14 (mg/L)	20th Semi/ 3rd Cmp May-14 (mg/L)
MW-1C	B	0.077	--	0.084	--	0.078	--	--	--
MW-2C	B	0.092	--	0.099	--	0.092	--	--	--
MW-3C	B	0.086	--	0.095	--	0.13	--	--	--
MW-4C	B	0.091	--	0.108	--	0.099	--	--	--
MW-5C	B	0.081	--	0.087	--	0.087	--	--	--
MW-6C	B	0.128	--	0.137	--	0.132	--	--	--
MW-7C	D	0.094	--	0.119	--	0.086	--	--	--
MW-8C	D	0.140	--	0.308	--	0.408	--	--	--
MW-9C	D	0.258	--	0.459	--	0.734	--	--	--
MW-10C	D	0.165	--	0.175	--	0.193	--	--	--
MW-11C	D	0.078	--	0.084	--	0.071	--	--	--
MW-12C	D	0.101	--	0.109	--	0.089	--	--	--
MW-13C	D	0.121	--	0.136	--	0.108	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	0.123	0.123	0.150	0.125	MW-16C abandoned in July 2013			
MW-16CR	D	MW-16CR installed in October 2013				0.141	--	--	--
MW-17C	D	--	--	--	--	0.146	--	--	AB
MW-18C	D	--	--	--	--	0.110	--	--	AB
MW-19C	D	0.064	--	0.158	--	0.065	--	--	AB
MW-20C	D	--	--	0.219	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	0.245	--	0.23	--	--	AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR	B	NI	--	0.124	--	0.111	--	--	--
MW-23C	B	0.094	--	0.117	--	0.102	--	--	--

Notes:

Semi indicates semi-annual monitoring event

Cmp indicates compliance monitoring event

mg/L indicates micrograms per liter

u indicages not detected at value represented

i indicates value is estimated to be between method detection limit and practical quantitation limit.

-- indicates monitoring well was not sampled

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections are shown in shaded cells (green color)

Constituent detections exceeding the GCTL are shown in shaded cells (orange color)

GCTL indicates groundwater cleanup target level (2.8 mg/L)

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table 5-3
Chloride Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (mg/L)	16th Semi May-12 (mg/L)	17th Semi Nov-12 (mg/L)	18th Semi May-13 (mg/L)	19th Semi Nov-13 (mg/L)	1st Cmp Dec-13 (mg/L)	2nd Cmp Feb-14 (mg/L)	20th Semi/ 3rd Cmp May-14 (mg/L)
MW-1A	B	21.8	30.6	358	412	617	--	--	544
MW-2A	B	27.8	--	18.3	25.9	25.4	--	--	39.2
MW-3A	B	71.8	--	60.2	79.5	127	--	--	98.0
MW-4A	B	9.75	--	54.8	73.7	71.6	--	--	57.8
MW-5A	B	23.1	--	42.2	65.9	25.3	--	--	24.6
MW-6A	B	51.4	--	91.1	111	81.9	--	--	97.5
MW-7A	D	26.9	30.1	30.9	33.7	34.2	--	--	34.8
MW-8A	D	53.8	62.4	28.7	32.1	19.2	--	--	17.1
MW-9A	D	18.8	24.8	23.6	25.8	14.2	--	--	20.5
MW-10A	D	13.8	--	14.9	19.1	14.1	--	--	24.0
MW-11A	D	22.6	20.1	40.9	57.3	46.7	--	--	29.8
MW-12A	D	16.1	21.0	42.5	38	31.8	--	--	28.5
MW-13A	D	11.5	18.1	37.2	26.8	103	--	--	104
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	1.59	2.25	3.09	2.76	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				9.37	--	--	9.70
MW-17A	D	--	--	--	--	8.46	--	--	AB
MW-18A	D	--	--	--	--	22.9	--	--	AB
MW-19A	D	22.0	22.7	8.21	15.9	18.5	--	--	AB
MW-20A	D	--	--	18.1	4.95	MW-20A abandoned in July 2013			
MW-21A	D	--	--	14.2	10.3	21.7	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	42.5	38.0	31.8	--	--	27.5
MW-23A	B	24.6	23.9	19.6	22.0	21.9	--	--	23.1
CW-1A	C	CW-1A installed in November 2013					21.7	21.2	17.6
CW-2A	C	CW-2A installed in November 2013					76.3	92.1	106
CW-3A	C	CW-3A installed in November 2013					62.0	63.0	59.6
MW-1B	B	--	15.6	--	9.85	--	--	--	21.8
MW-2B	B	--	7.04	--	8.78	--	--	--	11.5
MW-3B	B	--	12.0	--	9.21	--	--	--	26.2
MW-4B	B	--	27.6	--	19.2	--	--	--	32.2
MW-5B	B	--	10.8	--	66.4	--	--	--	33.3
MW-6B	B	--	14.6	--	17.3	--	--	--	14.5
MW-7B	D	--	83.7	--	64.8	--	--	--	42.9
MW-8B	D	--	17.0	--	43.5	--	--	--	58.0
MW-9B	D	--	31.9	--	37.8	--	--	--	40.4
MW-10B	D	--	38.5	--	46.8	--	--	--	44.2
MW-11B	D	--	36.9	--	25.7	--	--	--	17.9
MW-12B	D	--	28.7	--	27.1	--	--	--	24.2
MW-13B	D	--	28.6	--	33.9	--	--	--	32.2
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	2.57	5.71	5.13	4.18	MW-16B abandoned in July 2013			
MW-16BR	D	MW-16BR installed October 2013				8.44	--	--	8.90
MW-17B	D	--	--	--	--	36.6	--	--	AB
MW-18B	D	--	--	--	--	26.1	--	--	AB
MW-19B	D	--	39.0	--	33.9	--	--	--	AB
MW-20B	D	--	--	--	24.9	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	26.0	--	--	--	AB
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR	B	NI	--	--	27.5	--	--	--	24.9
MW-23B	B	--	85.1	--	56.3	--	--	--	43.3

Table 5-3
Chloride Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (mg/L)	16th Semi May-12 (mg/L)	17th Semi Nov-12 (mg/L)	18th Semi May-13 (mg/L)	19th Semi Nov-13 (mg/L)	1st Cmp Dec-13 (mg/L)	2nd Cmp Feb-14 (mg/L)	20th Semi/ 3rd Cmp May-14 (mg/L)
MW-1C	B	5.82	--	7.53	--	6.28	--	--	--
MW-2C	B	6.00	--	6.29	--	6.28	--	--	--
MW-3C	B	7.57	--	7.34	--	7.52	--	--	--
MW-4C	B	9.58	--	9.99	--	11.3	--	--	--
MW-5C	B	11.0	--	12.1	--	11.7	--	--	--
MW-6C	B	5.48	--	5.61	--	6.41	--	--	--
MW-7C	D	7.01	--	7.30	--	8.16	--	--	--
MW-8C	D	13.2	--	62.9	--	127	--	--	--
MW-9C	D	14.1	--	15.3	--	27.3	--	--	--
MW-10C	D	15.7	--	16.9	--	25.6	--	--	--
MW-11C	D	17.1	--	17.1	--	18.1	--	--	--
MW-12C	D	7.61	--	7.73	--	8.50	--	--	--
MW-13C	D	12.6	--	14.1	--	14.2	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	20.5	20.9	19.8	20.0	MW-16C abandoned in July 2013			
MW-16CR	D	MW-16CR installed October 2013				22.9	--	--	--
MW-17C	D	--	--	--	--	15.2	--	--	AB
MW-18C	D	--	--	--	--	20.2	--	--	AB
MW-19C	D	17.0	--	17.3	--	18.1	--	--	AB
MW-20C	D	--	--	19.6	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	20.0	--	22.0	--	--	AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR	B	NI	--	8.52	--	9.16	--	--	--
MW-23C	B	7.40	--	7.34	--	7.87	--	--	--

Notes:

Semi indicates semi-annual monitoring event

Cmp indicates compliance monitoring event

mg/L indicates micrograms per liter

u indicages not detected at value represented

i indicates value is estimated to be between method detection limit and practical quantitation limit.

-- indicates monitoring well was not sampled

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections are shown in shaded cells (green color)

Constituent detections exceeding the GCTL are shown in shaded cells (orange color)

GCTL indicates groundwater cleanup target level (250 mg/L)

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table 5-4
Iron Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi/ 3rd Cmp May-14 (µg/L)
MW-1A	B	2,450	2,020	7,360	7,980	20,100	--	--	16,200
MW-2A	B	5,290	--	12,900	22,800	6,280	--	--	6,900
MW-3A	B	4,210	--	6,310	8,140	9,210	--	--	6,580
MW-4A	B	810	--	2,830	2,630	5,840	--	--	4,440
MW-5A	B	2,600	--	1,670	2,380	1,250	--	--	690
MW-6A	B	18,300	--	41,300	40,200	21,500	--	--	18,600
MW-7A	D	12,100	13,100	15,100	19,800	13,300	--	--	12,000
MW-8A	D	2,290	5,820	17,700	10,000	6,690	--	--	11,700
MW-9A	D	620	5,480	9,090	11,100	880	--	--	1,820
MW-10A	D	5,460	--	2,260	6,070	830	--	--	960
MW-11A	D	5,910	8,740	6,030	9,320	2,690	--	--	4,660
MW-12A	D	2,910	56,200	3,990	1,830	8,960	--	--	2,520
MW-13A	D	20,400	19,000	27,100	19,800	28,500	--	--	24,200
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	90 i	650	80 i	620	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				360	--	--	770
MW-17A	D	--	--	--	--	970	--	--	AB
MW-18A	D	--	--	--	--	620	--	--	AB
MW-19A	D	8,280	6,440	2,390	6,220	2,870	--	--	AB
MW-20A	D	--	--	140	250	MW-20A abandoned in July 2013			
MW-21A	D	--	--	470	650	2,660	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	3,990	1,830	3,220	--	--	7,600
MW-23A	B	970	980	1,100	1,630	8,960	--	--	930
CW-1A	C	CW-1A installed in November 2013					11,900	9,870	6,390
CW-2A	C	CW-2A installed in November 2013					8,070	4,050	3,270
CW-3A	C	CW-3A installed in November 2013					126,000	115,000	123,000
MW-1B	B	--	90 i	--	200	--	--	--	330
MW-2B	B	--	490	--	730	--	--	--	870
MW-3B	B	--	680	--	530	--	--	--	32,700
MW-4B	B	--	930	--	1,360	--	--	--	17,900
MW-5B	B	--	320	--	1,740	--	--	--	6,060
MW-6B	B	--	900	--	1,220	--	--	--	920
MW-7B	D	--	6,030	--	8,560	--	--	--	23,100
MW-8B	D	--	1,240	--	3,130	--	--	--	9,860
MW-9B	D	--	2,600	--	26,600	--	--	--	50,600
MW-10B	D	--	3,430	--	6,650	--	--	--	17,500
MW-11B	D	--	1,180	--	1,030	--	--	--	460
MW-12B	D	--	1,240	--	1,390	--	--	--	1,210
MW-13B	D	--	1,530	--	1,940	--	--	--	1,790
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	890	1,090	870	1,310	MW-16B abandoned in July 2013			
MW-16BR	D	MW-16BR installed in October 2013				960	--	--	870
MW-17B	D	--	--	--	--	2,930	--	--	AB
MW-18B	D	--	--	--	--	520	--	--	AB
MW-19B	D	--	770	--	840	--	--	--	AB
MW-20B	D	--	--	--	1,440	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	1,960	--	--	--	AB
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR	B	NI	--	--	2,110	--	--	--	1,270
MW-23B	B	--	2,750	--	2,350	--	--	--	1,860

Table 5-4
Iron Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi/ 3rd Cmp May-14 (µg/L)
MW-1C	B	500	--	400	--	500	--	--	--
MW-2C	B	460	--	470	--	490	--	--	--
MW-3C	B	620	--	620	--	750	--	--	--
MW-4C	B	440	--	430	--	680	--	--	--
MW-5C	B	620	--	830	--	680	--	--	--
MW-6C	B	620	--	500	--	520	--	--	--
MW-7C	D	690	--	730	--	740	--	--	--
MW-8C	D	1,150	--	5,730	--	11,000	--	--	--
MW-9C	D	660	--	700	--	2,830	--	--	--
MW-10C	D	980	--	1,020	--	1,500	--	--	--
MW-11C	D	610	--	640	--	510	--	--	--
MW-12C	D	650	--	640	--	620	--	--	--
MW-13C	D	590	--	600	--	560	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	910	770	810	810	MW-16C abandoned in July 2013			
MW-16CR	D	MW-16CR installed in October 2013				1,300	--	--	--
MW-17C	D	--	--	--	--	750	--	--	AB
MW-18C	D	--	--	--	--	800	--	--	AB
MW-19C	D	940	--	1,270	--	1,250	--	--	AB
MW-20C	D	--	--	1,920	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	2,370	--	2,650	--	--	AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR	B	NI	--	4,800	--	830	--	--	--
MW-23C	B	460	--	440	--	520	--	--	--

Notes:

Semi indicates semi-annual monitoring event

Cmp indicates compliance monitoring event

mg/L indicates micrograms per liter

u indicages not detected at value represented

i indicates value is estimated to be between method detection limit and practical quantitation limit.

-- indicates monitoring well was not sampled

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections are shown in shaded cells (green color)

Constituent detections exceeding the GCTL are shown in shaded cells (orange color)

GCTL indicates groundwater cleanup target level (300 µg/L)

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table 5-5
Sodium Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (mg/L)	16th Semi May-12 (mg/L)	17th Semi Nov-12 (mg/L)	18th Semi May-13 (mg/L)	19th Semi Nov-13 (mg/L)	1st Cmp Dec-13 (mg/L)	2nd Cmp Feb-14 (mg/L)	3rd Cmp May-14 (mg/L)
MW-1A	B	14.6	12.4	198	201	336	--	--	297
MW-2A	B	16.7	--	19.5	19.7	17.4	--	--	20.7
MW-3A	B	29.1	--	26.4	26.2	62.7	--	--	60.1
MW-4A	B	3.91	--	23.2	25	42.3	--	--	38.4
MW-5A	B	24.2	--	30.9	27	17.6	--	--	15.4
MW-6A	B	29.6	--	43.9	55.1	41.0	--	--	40.7
MW-7A	D	22.4	20.2	20.2	21.8	20.3	--	--	16.8
MW-8A	D	30.2	25.6	31.5	27.9	24.2	--	--	26.8
MW-9A	D	15.3	29.3	33.6	29.7	29.4	--	--	26.8
MW-10A	D	12.4	--	14.8	17.0	10.8	--	--	12.9
MW-11A	D	43.5	29.3	39.2	37.6	35.5	--	--	34.5
MW-12A	D	10.8	12.7	29.0	27.5	26.5	--	--	13.6
MW-13A	D	12.5	12.3	20.1	16.1	50.6	--	--	50.8
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	1.73	1.71	2.16	2.04	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				8.16	--	--	5.90
MW-17A	D	--	--	--	--	4.75	--	--	AB
MW-18A	D	--	--	--	--	13.1	--	--	AB
MW-19A	D	19.5	21.6	7.06	21.6	7.58	--	--	AB
MW-20A	D	--	--	10.3	3.9	MW-20A abandoned in July 2013			
MW-21A	D	--	--	12.3	9.45	15.8	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	29.0	27.5	26.5	--	--	21.2
MW-23A	B	19.7	16.3	17.2	15.4	25.3	--	--	23.9
CW-1A	C	CW-1A installed in November 2013					20.4	17.1	15.1
CW-2A	C	CW-2A installed in November 2013					50.4	59.4	66.8
CW-3A	C	CW-3A installed in November 2013					65.5	68.5	57.9
MW-1B	B	--	9.40	--	8.02	--	--	--	12.0
MW-2B	B	--	5.04	--	5.50	--	--	--	6.26
MW-3B	B	--	6.57	--	6.51	--	--	--	41.9
MW-4B	B	--	14.5	--	9.08	--	--	--	28.3
MW-5B	B	--	6.21	--	20.7	--	--	--	33.1
MW-6B	B	--	8.00	--	9.08	--	--	--	7.80
MW-7B	D	--	20.6	--	35.0	--	--	--	54.8
MW-8B	D	--	7.97	--	12.7	--	--	--	28.3
MW-9B	D	--	21.2	--	53.1	--	--	--	49.1
MW-10B	D	--	51.9	--	56.6	--	--	--	47.7
MW-11B	D	--	26.1	--	27.7	--	--	--	16.9
MW-12B	D	--	10.6	--	10.2	--	--	--	9.76
MW-13B	D	--	13.2	--	14.6	--	--	--	14.4
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	5.73	5.33	4.82	4.82	MW-16B abandoned in July 2013			
MW-16BR	D	MW-16BR installed October 2013				8.61	--	--	7.52
MW-17B	D	--	--	--	--	26.3	--	--	AB
MW-18B	D	--	--	--	--	17.3	--	--	AB
MW-19B	D	--	18.9	--	18.2	--	--	--	AB
MW-20B	D	--	--	--	15.8	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	15.5	--	--	--	AB
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR	B	NI	--	--	16.6	--	--	--	15.3
MW-23B	B	--	61.3	--	54.5	--	--	--	40.4

Table 5-5
Sodium Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (mg/L)	16th Semi May-12 (mg/L)	17th Semi Nov-12 (mg/L)	18th Semi May-13 (mg/L)	19th Semi Nov-13 (mg/L)	1st Cmp Dec-13 (mg/L)	2nd Cmp Feb-14 (mg/L)	3rd Cmp May-14 (mg/L)
MW-1C	B	4.62	--	5.01	--	4.76	--	--	--
MW-2C	B	4.83	--	4.84	--	5.28	--	--	--
MW-3C	B	5.26	--	5.05	--	5.12	--	--	--
MW-4C	B	6.63	--	6.76	--	7.40	--	--	--
MW-5C	B	7.46	--	8.06	--	7.86	--	--	--
MW-6C	B	5.11	--	5.01	--	5.23	--	--	--
MW-7C	D	5.88	--	5.88	--	5.83	--	--	--
MW-8C	D	7.35	--	16.5	--	26.4	--	--	--
MW-9C	D	7.94	--	8.11	--	18.6	--	--	--
MW-10C	D	9.37	--	9.79	--	14.9	--	--	--
MW-11C	D	11.6	--	11.6	--	11.3	--	--	--
MW-12C	D	5.94	--	5.86	--	5.82	--	--	--
MW-13C	D	8.55	--	9.20	--	8.72	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	12.9	11.7	11.8	12.0	MW-16C abandoned in July 2013			
MW-16CR	D	MW-16CR installed October 2013				15.8	--	--	--
MW-17C	D	--	--	--	--	10.9	--	--	AB
MW-18C	D	--	--	--	--	12.6	--	--	AB
MW-19C	D	9.93	--	9.77	--	9.83	--	--	AB
MW-20C	D	--	--	9.86	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	9.99	--	10.7	--	--	AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR	B	NI	--	8.29	--	6.85	--	--	--
MW-23C	B	5.32	--	5.08	--	5.40	--	--	--

Notes:

Semi indicates semi-annual monitoring event

Cmp indicates compliance monitoring event

mg/L indicates micrograms per liter

u indicages not detected at value represented

i indicates value is estimated to be between method detection limit and practical quantitation limit.

-- indicates monitoring well was not sampled

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections are shown in shaded cells (green color)

Constituent detections exceeding the GCTL are shown in shaded cells (orange color)

GCTL indicates groundwater cleanup target level (160 mg/L)

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table 5-6
Total Dissolved Solids Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (mg/L)	16th Semi May-12 (mg/L)	17th Semi Nov-12 (mg/L)	18th Semi May-13 (mg/L)	19th Semi Nov-13 (mg/L)	1st Cmp Dec-13 (mg/L)	2nd Cmp Feb-14 (mg/L)	20th Semi/ 3rd Cmp May-14 (mg/L)
MW-1A	B	97	88	800	1,160	1,460	--	--	1,200
MW-2A	B	148	--	140	145	198	--	--	255
MW-3A	B	192	--	151	175	369	--	--	382
MW-4A	B	40	--	161	160	475	--	--	678
MW-5A	B	1,230	--	684	490	369	--	--	294
MW-6A	B	192	--	250	271	197	--	--	200
MW-7A	D	161	179	309	266	191	--	--	155
MW-8A	D	185	166	1,200	769	1,210	--	--	1,570
MW-9A	D	124	279	494	489	188	--	--	205
MW-10A	D	349	--	212	286	126	--	--	136
MW-11A	D	268	217	259	237	223	--	--	271
MW-12A	D	77	240	274	158	399	--	--	108
MW-13A	D	143	119	181	147	336	--	--	309
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	32	39	45	44	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				128	--	--	114
MW-17A	D	--	--	--	--	75	--	--	--
MW-18A	D	--	--	--	--	133	--	--	--
MW-19A	D	632	731	175	760	68	--	--	--
MW-20A	D	--	--	1,320	368	MW-20A abandoned in July 2013			
MW-21A	D	--	--	483	344	597	--	--	--
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	274	158	399	--	--	231
MW-23A	B	249	174	219	245	444	--	--	433
CW-1A	C	CW-1A installed in November 2013					445	268	237
CW-2A	C	CW-2A installed in November 2013					918	952	958
CW-3A	C	CW-3A installed in November 2013					1,190	1,230	1,360
MW-1B	B	--	111	--	66	--	--	--	73
MW-2B	B	--	35	--	34	--	--	--	40
MW-3B	B	--	55	--	48	--	--	--	1,090
MW-4B	B	--	80	--	72	--	--	--	1,520
MW-5B	B	--	49	--	126	--	--	--	736
MW-6B	B	--	56	--	58	--	--	--	57
MW-7B	D	--	184	--	247	--	--	--	600
MW-8B	D	--	67	--	116	--	--	--	283
MW-9B	D	--	128	--	681	--	--	--	1,240
MW-10B	D	--	247	--	333	--	--	--	627
MW-11B	D	--	120	--	131	--	--	--	80
MW-12B	D	--	65	--	86	--	--	--	79
MW-13B	D	--	65	--	94	--	--	--	86
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	22	62	42	81	MW-16B abandoned in July 2013			
MW-16BR	D	MW-16BR installed October 2013				496	--	--	61
MW-17B	D	--	--	--	--	158	--	--	--
MW-18B	D	--	--	--	--	66	--	--	--
MW-19B	D	--	105	--	105	--	--	--	--
MW-20B	D	--	--	--	131	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	86	--	--	--	--
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR	B	NI	--	--	141	--	--	--	74
MW-23B	B	--	250	--	258	--	--	--	234

Table 5-6
Total Dissolved Solids Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (mg/L)	16th Semi May-12 (mg/L)	17th Semi Nov-12 (mg/L)	18th Semi May-13 (mg/L)	19th Semi Nov-13 (mg/L)	1st Cmp Dec-13 (mg/L)	2nd Cmp Feb-14 (mg/L)	20th Semi/ 3rd Cmp May-14 (mg/L)
MW-1C	B	41	--	63	--	51	--	--	--
MW-2C	B	35	--	31	--	43	--	--	--
MW-3C	B	51	--	57	--	48	--	--	--
MW-4C	B	76	--	123	--	98	--	--	--
MW-5C	B	48	--	54	--	65	--	--	--
MW-6C	B	27	--	41	--	43	--	--	--
MW-7C	D	48	--	53	--	38	--	--	--
MW-8C	D	60	--	134	--	235	--	--	--
MW-9C	D	88	--	93	--	176	--	--	--
MW-10C	D	57	--	78	--	101	--	--	--
MW-11C	D	68	--	75	--	76	--	--	--
MW-12C	D	42	--	48	--	46	--	--	--
MW-13C	D	46	--	53	--	58	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	73	75	78	79	MW-16C abandoned in July 2013			
MW-16CR	D	MW-16CR installed October 2013				101			
MW-17C	D	--	--	--	--	72	--	--	--
MW-18C	D	--	--	--	--	83	--	--	--
MW-19C	D	66	--	103	--	78	--	--	--
MW-20C	D	--	--	96	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	98	--	90	--	--	--
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR	B	NI	--	188	--	117	--	--	--
MW-23C	B	67	--	68	--	68	--	--	--

Notes:

Semi indicates semi-annual monitoring event
Cmp indicates compliance monitoring event
mg/L indicates micrograms per liter
u indicages not detected at value represented
i indicates value is estimated to be between method detection limit and practical quantitation limit.
-- indicates monitoring well was not sampled
Well type: (B) Background well (D) Detection well (C) Compliance well
Constituent detections are shown in shaded cells (green color)
Constituent detections exceeding the GCTL are shown in shaded cells (orange color)
GCTL indicates groundwater cleanup target level (500 mg/L)
AB indicates wells were abandoned in March 2014
NI indicates wells were installed in March 2012

Table 5-7
Benzene Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi/ 3rd Cmp May-14 (µg/L)
MW-1A	B	11.1	3.35	2.3	5.1	8.6	--	--	7.8
MW-2A	B	0.21 u	--	0.26 i	0.21 u	0.21 u	--	--	0.21 u
MW-3A	B	4.46	--	7.7	8.8	7.2	--	--	6.5
MW-4A	B	1.11	--	3.8	4.0	4.1	--	--	2.9
MW-5A	B	0.21 u	--	1.3	2.0	1.3	--	--	1.2
MW-6A	B	0.75 i	--	1.3	3.1	2.6	--	--	2.3
MW-7A	D	0.21 u	0.21 u	0.21 u	0.21 u	0.21 u	--	--	0.21 u
MW-8A	D	4.96	1.62	6.0	2.2	4.1	--	--	4.4
MW-9A	D	10.3	5.24	1.4	2.3	3.7	--	--	6.6
MW-10A	D	0.89 i		6.5	4.7	5.1	--	--	7.7
MW-11A	D	2.95	3.84	8.6	8.1	5.7	--	--	6.3
MW-12A	D	3.5	2.83	4.7	3.8	4.2	--	--	4.3
MW-13A	D	1.14	1.98	2.1	3.4	1.6	--	--	1.7
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	0.21 u	0.21 u	0.21 u	0.21 u	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				0.21 u	--	--	0.21 u
MW-17A	D	--	--	--	--	0.21 u	--	--	AB
MW-18A	D	--	--	--	--	0.21 u	--	--	AB
MW-19A	D	0.21 u	0.21 u	0.21 u	0.21 u	0.21 u	--	--	AB
MW-20A	D	--	--	0.21 u	0.21 u	MW-20A abandoned in July 2013			
MW-21A	D	--	--	0.21 u	0.21 u	0.21 u	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI		0.21 u	0.21 u	0.21 u	--	--	0.21 u
MW-23A	B	0.41 i	0.21 u	0.33 i	0.41 i	0.21 u	--	--	0.32 i
CW-1A	C	CW-1A installed in November 2013					0.21 u	0.21 u	0.21 u
CW-2A	C	CW-2A installed in November 2013					0.21 u	0.21 u	0.21 u
CW-3A	C	CW-3A installed in November 2013					0.21 u	0.21 u	0.21 u
MW-1B	B	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-2B	B	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-3B	B	--	0.21 u	--	0.21 u	--	--	--	1.1
MW-4B	B	--	0.21 u	--	0.21 u	--	--	--	0.41 i
MW-5B	B	--	0.21 u	--	0.21 u	--	--	--	0.32 i
MW-6B	B	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-7B	D	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-8B	D	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-9B	D	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-10B	D	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-11B	D	--	4.96	--	3.7	--	--	--	0.90 i
MW-12B	D	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-13B	D	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	0.21 u	0.21 u	0.21 u	0.21 u	MW-16B abandoned in July 2013			
MW-16BR	D	MW-16BR installed October 2013				0.21 u	--	--	0.21 u
MW-17B	D	--	--	--	--	0.21 u	--	--	AB
MW-18B	D	--	--	--	--	0.21 u	--	--	AB
MW-19B	D	--	0.21 u	--	0.21 u	--	--	--	AB
MW-20B	D	--	--	--	0.21 u	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	0.21 u	--	--	--	AB
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR	B	NI	--	--	0.21 u	--	--	--	0.21 u
MW-23B	B	--	0.21 u	--	0.21 u	--	--	--	0.21 u

Table 5-7
Benzene Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi/ 3rd Cmp May-14 (µg/L)
MW-1C	B	0.21 u	--	0.21 u	--	0.21 u	--	--	--
MW-2C	B	0.21 u	--	0.21 u	--	0.21 u	--	--	--
MW-3C	B	0.21 u	--	0.21 u	--	0.21 u	--	--	--
MW-4C	B	0.21 u	--	0.21 u	--	0.21 u	--	--	--
MW-5C	B	0.21 u	--	0.21 u	--	0.21 u	--	--	--
MW-6C	B	0.21 u	--	0.21 u	--	0.21 u	--	--	--
MW-7C	D	0.21 u	--	0.21 u	--	0.21 u	--	--	--
MW-8C	D	0.21 u	--	0.21 u	--	0.21 u	--	--	--
MW-9C	D	0.22 i	--	0.31 i	--	0.21 u	--	--	--
MW-10C	D	0.21 u	--	0.21 u	--	0.21 u	--	--	--
MW-11C	D	0.21 u	--	0.21 u	--	0.21 u	--	--	--
MW-12C	D	0.21 u	--	0.21 u	--	0.21 u	--	--	--
MW-13C	D	0.21 u	--	0.21 u	--	0.21 u	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	0.21 u	0.21 u	0.21 u	0.21 u	MW-16C abandoned in July 2013			
MW-16CR	D	MW-16CR installed October 2013				0.21 u	--	--	AB
MW-17C	D	--	--	--	--	0.21 u	--	--	AB
MW-18C	D	--	--	--	--	0.21 u	--	--	AB
MW-19C	D	0.21 u	--	0.21 u	--	0.21 u	--	--	AB
MW-20C	D	--	--	0.21 u	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	0.21 u	--	0.21 u	--	--	AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR	B	NI	--	0.21 u	--	0.21 u	--	--	--
MW-23C	B	0.21 u	--	0.21 u	--	0.21 u	--	--	--

Notes:

Semi indicates semi-annual monitoring event

Cmp indicates compliance monitoring event

mg/L indicates micrograms per liter

u indicages not detected at value represented

i indicates value is estimated to be between method detection limit and practical quantitation limit.

-- indicates monitoring well was not sampled

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections are shown in shaded cells (green color)

Constituent detections exceeding the GCTL are shown in shaded cells (orange color)

GCTL indicates groundwater cleanup target level (1.0 µg/L)

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table 5-8
Total Xylenes Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi/ 3rd Cmp May-14 (µg/L)
MW-1A	B	25.48	2.36	0.35 i	2.11	4.10	--	--	2.20 i
MW-2A	B	0.31 u	--	0.31 u	0.31 u	0.31 u	--	--	0.31 u
MW-3A	B	0.31 u	--	0.26 i	0.40 i	0.31 u	--	--	0.19 i
MW-4A	B	0.31 u	--	0.31 u	0.31 u	0.31 u	--	--	0.31 u
MW-5A	B	0.31 u	--	0.31 u	0.31 u	0.31 u	--	--	0.31 u
MW-6A	B	0.31 u	--	0.31 u	0.31 u	0.31 u	--	--	0.31 u
MW-7A	D	0.31 u	0.31 u	0.31 u	0.31 u	0.31 u	--	--	0.31 u
MW-8A	D	0.91 i	0.40 i	0.85 i	0.27 i	0.31 u	--	--	0.22 i
MW-9A	D	4.16	0.71	0.31 u	0.21 i	0.31 u	--	--	0.35 i
MW-10A	D	0.41 i	--	2.95	2.88	0.40 i	--	--	2.57 i
MW-11A	D	0.31 u	0.31 u	1.99	1.04 i	0.44 i	--	--	0.61 i
MW-12A	D	0.31 u	0.31 u	0.31 u	0.31 u	0.31 u	--	--	0.56 i
MW-13A	D	0.31 u	0.31 u	0.31 u	0.52 i	0.31 u	--	--	0.31 u
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	0.31 u	0.31 u	0.31 u	0.31 u	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				0.31 u	--	--	0.31 u
MW-17A	D	--	--	--	--	0.31 u	--	--	AB
MW-18A	D	--	--	--	--	0.31 u	--	--	AB
MW-19A	D	0.31 u	0.31 u	0.31 u	0.31 u	0.31 u	--	--	AB
MW-20A	D	--	--	0.31 u	0.31 u	MW-20A abandoned in July 2013			
MW-21A	D	--	--	0.31 u	0.31 u	0.31 u	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	0.31 u	0.31 u	0.31 u	--	--	0.31 u
MW-23A	B	0.31 u	0.31 u	0.31 u	0.31 u	0.31 u	--	--	0.31 u
CW-1A	C	CW-1A installed in November 2013					0.31 u	0.31 u	0.31 u
CW-2A	C	CW-2A installed in November 2013					0.31 u	0.31 u	0.31 u
CW-3A	C	CW-3A installed in November 2013					0.31 u	0.31 u	0.31 u
MW-1B	B	--	0.31 u	--	0.31 u	--	--	--	0.31 u
MW-2B	B	--	0.31 u	--	0.31 u	--	--	--	0.31 u
MW-3B	B	--	0.31 u	--	0.31 u	--	--	--	0.31 u
MW-4B	B	--	0.31 u	--	0.31 u	--	--	--	0.31 u
MW-5B	B	--	0.31 u	--	0.31 u	--	--	--	0.31 u
MW-6B	B	--	0.31 u	--	0.31 u	--	--	--	0.31 u
MW-7B	D	--	0.31 u	--	0.31 u	--	--	--	0.31 u
MW-8B	D	--	0.31 u	--	0.31 u	--	--	--	0.31 u
MW-9B	D	--	0.31 u	--	0.31 u	--	--	--	0.31 u
MW-10B	D	--	0.31 u	--	0.31 u	--	--	--	0.31 u
MW-11B	D	--	0.24 i	--	0.14 i	--	--	--	0.31 u
MW-12B	D	--	0.31 u	--	0.31 u	--	--	--	0.31 u
MW-13B	D	--	0.31 u	--	0.31 u	--	--	--	0.31 u
MW-14B	D	MW-14A abandoned in July 2007							
MW-15B	D	MW-15A abandoned in July 2007							
MW-16B	D	0.31 u	0.31 u	0.31 u	0.31 u	MW-16A abandoned in July 2013			
MW-16BR	D	MW-16AR installed October 2013				0.31 u	--	--	0.31 u
MW-17B	D	--	--	--	--	0.31 u	--	--	AB
MW-18B	D	--	--	--	--	0.31 u	--	--	AB
MW-19B	D	--	0.31 u	--	0.31 u	--	--	--	AB
MW-20B	D	--	--	--	0.31 u	MW-20A abandoned in July 2013			
MW-21B	D	--	--	--	0.31 u	--	--	--	AB
MW-22B	B	--	MW-22A abandoned in November 2011						
MW-22BR	B	NI	--	--	0.31 u	--	--	--	0.31 u
MW-23B	B	--	0.31 u	--	0.31 u	--	--	--	0.31 u

Table 5-8
Total Xylenes Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi/ 3rd Cmp May-14 (µg/L)
MW-1C	B	0.31 u	--	0.31 u	--	0.31 u	--	--	--
MW-2C	B	0.31 u	--	0.31 u	--	0.31 u	--	--	--
MW-3C	B	0.31 u	--	0.31 u	--	0.31 u	--	--	--
MW-4C	B	0.31 u	--	0.31 u	--	0.31 u	--	--	--
MW-5C	B	0.31 u	--	0.31 u	--	0.31 u	--	--	--
MW-6C	B	0.31 u	--	0.31 u	--	0.31 u	--	--	--
MW-7C	D	0.31 u	--	0.31 u	--	0.31 u	--	--	--
MW-8C	D	0.31 u	--	0.31 u	--	0.31 u	--	--	--
MW-9C	D	0.31 u	--	0.31 u	--	0.31 u	--	--	--
MW-10C	D	0.31 u	--	0.31 u	--	0.31 u	--	--	--
MW-11C	D	0.31 u	--	0.31 u	--	0.31 u	--	--	--
MW-12C	D	0.31 u	--	0.31 u	--	0.31 u	--	--	--
MW-13C	D	0.31 u	--	0.31 u	--	0.31 u	--	--	--
MW-14C	D	MW-14A abandoned in July 2007							
MW-15C	D	MW-15A abandoned in July 2007							
MW-16C	D	0.31 u	0.31 u	0.31 u	0.31 u	MW-16A abandoned in July 2013			
MW-16CR	D	MW-16AR installed October 2013				0.31 u	--	--	--
MW-17C	D	--	--	--	--	0.31 u	--	--	AB
MW-18C	D	--	--	--	--	0.31 u	--	--	AB
MW-19C	D	0.31 u	--	0.31 u	--	0.31 u	--	--	AB
MW-20C	D	--	--	0.31 u	--	MW-20A abandoned in July 2013			
MW-21C	D	--	--	0.31 u	--	0.31 u	--	--	AB
MW-22C	B	--	MW-22A abandoned in November 2011						
MW-22CR	B	NI	--	0.31 u	--	0.31 u	--	--	--
MW-23C	B	0.31 u	--	0.31 u	--	0.31 u	--	--	--

Notes:

Semi indicates semi-annual monitoring event

Cmp indicates compliance monitoring event

mg/L indicates micrograms per liter

u indicages not detected at value represented

i indicates value is estimated to be between method detection limit and practical quantitation limit.

-- indicates monitoring well was not sampled

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections are shown in shaded cells (green color)

Constituent detections exceeding the GCTL are shown in shaded cells (orange color)

GCTL indicates groundwater cleanup target level (1.0 µg/L)

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table 5-9
Surface Water Detections (SW - 3)
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Parameter Monitored	Class III Standard Criteria	Units	15th Event Nov-11	16th Event May-12	17th Event Nov-12	18th Event May-13	19th Event Nov-13	20th Event May-14
Barium	--	ug/L	9.1	NS	NS	NS	NS	27.2
Chlorophyll-a	--	mg/m^3	3.8	NS	NS	NS	NS	12.9
Chromium	--	ug/L	1.0 i	NS	NS	NS	NS	0.8 i
COD	--	mg/L	66	NS	NS	NS	NS	77
Fecal Coliform	800	#/100mL	25 B	NS	NS	NS	NS	340
Hardness as $CaCO_3$	--	mg/L	14.6	NS	NS	NS	NS	58.5
Iron	1000	ug/L	580	NS	NS	NS	NS	1330
Lead	--	ug/L	0.23 i	NS	NS	NS	NS	0.15 i
Nitrate-N	--	mg/L	0.3 u	NS	NS	NS	NS	0.3 u
Nitrogen, Total as N	--	mg/L	0.92	NS	NS	NS	NS	1.61
Organic Carbon, Total	--	mg/L	18.3	NS	NS	NS	NS	27.1
Phosphates, Total	--	mg/L	0.0302	NS	NS	NS	NS	0.137
Total Dissolved Solids	--	mg/L	81	NS	NS	NS	NS	167
Total Suspended Solids	--	mg/L	5.0 u	NS	NS	NS	NS	5.0 u
Vanadium	--	ug/L	0.7 i	NS	NS	NS	NS	1.0 i
Zinc	--	ug/L	5.9	NS	NS	NS	NS	3.6 i

Notes:

Shaded values exceed Class III Standard Criteria

"--" indicates that no criteria has been established

NS indicates surface water sample was not collected

i indicates the reported value is between the laboratory method detection limit (MDL) and the laboratory practical quantitation limit (PQL)

u indicates that the compound was analyzed for but not detected

B indicates results based upon colony counts outside the acceptable range

Table 5-10
Surface Water Detections (SW - 4)
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Parameter Monitored	Class III Standard Criteria	Units	15th Event Nov-11	16th Event May-12	17th Event Nov-12	18th Event May-13	19th Event Nov-13	20th Event May-14
Barium	--	ug/L	9.1	NS	NS	NS	NS	26.6
Chlorophyll-a	--	mg/m^3	3.0	NS	NS	NS	NS	8.2 u
Chromium	--	ug/L	1.1	NS	NS	NS	NS	0.8 i
COD	--	mg/L	59	NS	NS	NS	NS	87
Fecal Coliform	800	#/100mL	10 Z	NS	NS	NS	NS	430
Hardness as $CaCO_3$	--	mg/L	9.7	NS	NS	NS	NS	39.9
Iron	1000	ug/L	500	NS	NS	NS	NS	1780
Lead	--	ug/L	0.15 i	NS	NS	NS	NS	0.32 i
Nitrate-N	--	mg/L	0.3 u	NS	NS	NS	NS	0.3 u
Nitrogen, Total as N	--	mg/L	0.79	NS	NS	NS	NS	2.24
Organic Carbon, Total	--	mg/L	15.5	NS	NS	NS	NS	26.1
Phosphates, Total	--	mg/L	0.0276	NS	NS	NS	NS	0.159
Total Dissolved Solids	--	mg/L	62	NS	NS	NS	NS	138
Total Suspended Solids	--	mg/L	6.7 u	NS	NS	NS	NS	5.5
Vanadium	--	ug/L	0.8 i	NS	NS	NS	NS	1.1 i
Zinc	--	ug/L	4.4 i	NS	NS	NS	NS	18.0

Notes:
Shaded values exceed Class III Standard Criteria
"--" indicates that no criteria has been established
NS indicates surface water sample was not collected
i indicates the reported value is between the laboratory method detection limit (MDL) and the laboratory practical quantitation limit (PQL)
u indicates that the compound was analyzed for but not detected
Z indicates too many colonies were present, the numerica value represents the filtration volume

Table 5-11
Leachate Detections
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Parameter	Unit	Regulatory Level	15th Semi-Annual Monitoring Event - November 2011						
			L-1	L-2	L-3	L-4	L-5	L-6	L-7
2-Butanone (MEK)	µg/L	200,000	190 u	727	190 u	906	190 u	190 u	7.6 u
Acetone	µg/L	--	280 u	753	280 u	945 i	280 u	280 u	11.2 u
Toluene	µg/L	--	9.5 u	33 i	9.5 u	21 i	23 i	61	0.38 u
2-Methylphenol	µg/L	--	1.7 i	1.37 u	1.46 u	9.98	2.9 i	15.5	1.35 u
4-Methylphenol	µg/L	200,000	1.07 u	23.4	1.12 u	106	1.04 u	1.06 u	1.04 u
Naphthalene	µg/L	--	2.3 i	1.13 i	1.51 i	7.81	3.44 i	2.20 i	0.55 u
o-Toluidine	µg/L	--	137	16.5	2.88 i	1.94 u	39.4	8.85	1.86 u
Phenol	µg/L	--	9.74	25.5	0.66 u	136	0.609 u	0.622 u	0.609 u
Antimony	µg/L	--	76.3	101	33.9	57.4	24.0	25.4	0.8 i
Arsenic	µg/L	5,000	126	234	62	97.6	44	96	1.3
Barium	µg/L	100,000	562	426	341	254	188	420	116
Chromium	µg/L	5,000	536	743	463	660	320	504	1.4
Cobalt	µg/L	--	37.5	24.1	38.3	48.0	27.3	36.5	1.6
Copper	µg/L	--	18.7	22.0	14.7	29.1	16.1	41.0	38.0
Iron	µg/L	--	7,460	5,100	4,550	2,510	3,370	3,610	3,610
Lead	µg/L	5,000	36.9	21.4	15.1	16.7	12.7	25.6	0.71
Nickel	µg/L	--	616	223	284	326	237	320	6.4
Selenium	µg/L	1,000	79	116	113	154	60	155	1.1 u
Sodium	mg/L	--	2,480	2,350	2,490	1,980	1,460	2,090	72.2
Vanadium	µg/L	--	507	990	642	731	372	810	13.3
Zinc	µg/L	--	46	38	39	35	37	104	15.8
Alkalinity (Total as $CaCO_3$)	mg/L	--	4,860 Q	2,830 Q	4,080 Q	4,060 Q	3,180 Q	4,410	10 Q
Ammonia-N	mg/L	--	1,250	996	946	1,280	723	990	9.36
Biochemical Oxygen Demand (BOD)	mg/L	--	152	199	120	151	97.6	186	42
Chemical Oxygen Demand (COD)	mg/L	--	7,400	10,300	8,700	9,700	4,500	6,800	55
Chloride	mg/L	--	4,000	4,580	3,950	3,220	2,310	3,000	99.9
Cyanide, Total	µg/L	--	28	39	35	26	20	37	7 u
Total Dissolved Solids (TDS)	mg/L	--	14,200	13,700	12,300	13,000	7,720	10,400	614
Sulfide	mg/L	--	0.7 i	0.5 i	0.4 u	0.4 u	0.4 u	0.4 u	2.1

Notes:
Maximum concentration of contaminants for the toxicity characteristic listed in 40 CFR 261.24.
u indicates the analyte was not detected above minimum detection limit (MDL) listed.
i indicates the analyte concentration is between the MDL and practical quantitation limit (PQL).
Q indicates samples were held beyond the accaptable holding times.
Only thise parameters with detections above the Method Reporting Limit are shown.

Table 11-1
Groundwater Elevation Measurements
Third Biennial Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	15th Event Nov-11 (ft, NGVD)	16th Event May-12 (ft, NGVD)	17th Event Nov-12 (ft, NGVD)	18th Event May-13 (ft, NGVD)	19th Event Nov-13 (ft, NGVD)	20th Event May-14 (ft, NGVD)
MW-1A	79.38	74.71	77.41	76.94	79.11	80.70
MW-2A	77.78	--	77.55	76.88	78.96	80.92
MW-3A	75.57	--	77.37	76.73	79.03	80.91
MW-4A	73.90	--	77.54	76.67	79.13	80.93
MW-5A	79.34	--	77.55	76.57	78.73	80.71
MW-6A	78.58	--	77.42	76.35	77.76	79.37
MW-7A	78.95	73.04	77.67	76.55	77.78	79.59
MW-8A	79.83	73.77	77.81	76.60	77.81	79.91
MW-9A	80.16	74.20	77.63	76.51	77.66	79.47
MW-10A	79.45	--	77.72	76.65	77.75	78.93
MW-11A	78.87	74.54	77.43	76.51	77.61	78.76
MW-12A	78.92	75.00	77.82	76.73	77.90	78.80
MW-13A	79.09	75.28	77.91	76.79	78.23	78.79
MW-14A	MW-14A abandoned in July 2007					
MW-15A	MW-15A abandoned in July 2007					
MW-16A	82.09	75.50	78.18	76.91	MW-16A abandoned in June 2013	
MW-16RA	MW-16AR installed in October 2013				78.81	79.06
MW-17A	80.76	75.04	78.08	76.75	79.83	AB
MW-18A	79.32	75.58	77.89	77.36	80.05	AB
MW-19A	79.74	76.18	78.52	77.77	79.87	AB
MW-20A	80.93	76.91	79.37	78.16	MW-20A abandoned in June 2013	
MW-21A	80.32	77.60	78.91	78.11	78.99	AB
MW-22A	80.29	MW-22A abandoned in November 2011				
MW-22RA	NI	78.63	78.42	77.67	78.96	80.22
MW-23A	80.68	78.11	77.79	77.02	79.30	80.49
MW-24A	80.92	76.86	78.40	78.14	79.66	79.53
MW-25A	78.57	75.09	77.47	77.03	--	79.10
MW-26A	77.81	74.59	76.68	76.61	--	--
CW-1A	CW-1A installed in November 2013					80.98
CW-2A	CW-2A installed in November 2013					78.51
CW-3A	CW-3A installed in November 2013					78.31

Table 11-1
Groundwater Elevation Measurements
Third Biennial Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	15th Event Nov-11 (ft, NGVD)	16th Event May-12 (ft, NGVD)	17th Event Nov-12 (ft, NGVD)	18th Event May-13 (ft, NGVD)	19th Event Nov-13 (ft, NGVD)	20th Event May-14 (ft, NGVD)
MW-1B	79.37	74.74	77.64	76.93	79.05	80.70
MW-2B	77.78	71.76	77.55	76.88	78.95	80.89
MW-3B	75.53	68.75	77.51	76.79	79.05	80.93
MW-4B	74.16	67.64	77.47	76.67	79.12	80.89
MW-5B	77.38	69.26	77.49	76.50	78.65	80.53
MW-6B	78.58	71.78	77.45	76.35	77.78	79.40
MW-7B	78.91	73.03	77.68	76.56	77.80	79.56
MW-8B	79.69	73.77	77.70	76.59	77.75	79.83
MW-9B	79.94	74.18	77.63	76.48	77.60	79.41
MW-10B	79.37	74.28	77.72	76.63	77.73	78.92
MW-11B	78.66	74.57	77.61	76.51	77.49	78.59
MW-12B	78.74	74.91	77.72	76.64	77.78	78.69
MW-13B	79.08	75.28	77.92	76.79	78.23	78.80
MW-14B	MW-14B abandoned in July 2007					
MW-15B	MW-15B abandoned in July 2007					
MW-16B	80.46	75.48	77.88	76.89	MW-16B abandoned in June 2013	
MW-16RB	MW-16BR installed in October 2013				78.78	79.02
MW-17B	80.42	75.00	77.46	76.70	79.48	AB
MW-18B	79.32	75.56	77.86	77.31	79.97	AB
MW-19B	79.76	76.19	78.49	77.77	79.89	AB
MW-20B	80.49	76.90	79.07	78.07	MW-20B abandoned in June 2013	
MW-21B	79.77	77.63	78.92	78.08	79.06	AB
MW-22B	78.73	MW-22B abandoned in November 2011				
MW-22RB	NI	78.60	78.42	77.65	79.01	80.21
MW-23B	80.62	78.11	77.81	77.03	79.32	80.58

Table 11-1
Groundwater Elevation Measurements
Third Biennial Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

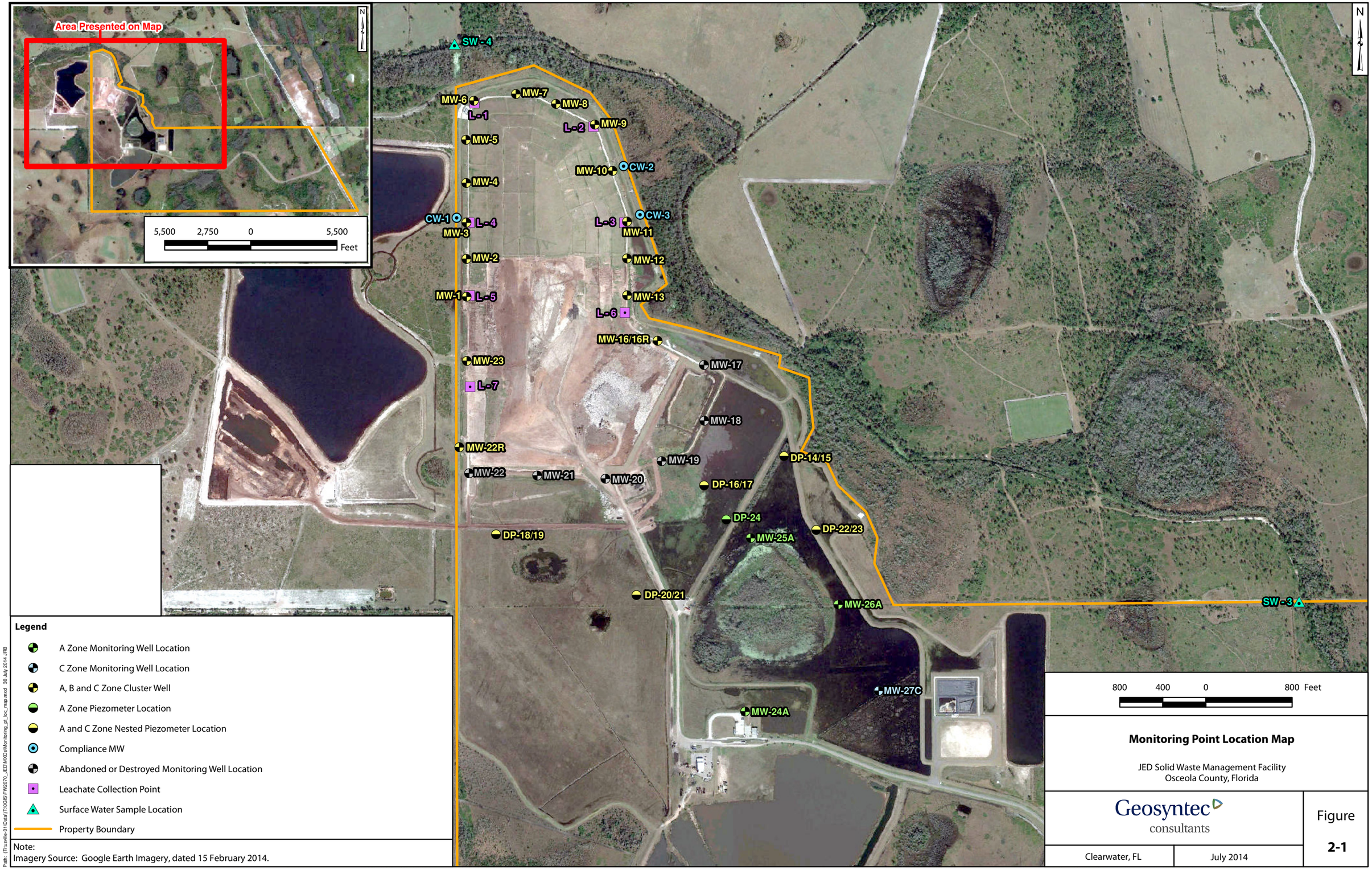
Well ID	15th Event Nov-11 (ft, NGVD)	16th Event May-12 (ft, NGVD)	17th Event Nov-12 (ft, NGVD)	18th Event May-13 (ft, NGVD)	19th Event Nov-13 (ft, NGVD)	20th Event May-14 (ft, NGVD)
MW-1C	79.24	74.63	77.60	76.91	78.99	80.63
MW-2C	77.59	71.68	77.52	76.82	78.90	80.71
MW-3C	75.41	68.85	77.48	76.75	78.99	80.81
MW-4C	74.43	67.94	77.50	76.66	78.98	80.64
MW-5C	76.69	69.88	77.45	76.47	78.34	79.99
MW-6C	78.00	71.83	77.38	76.33	77.67	79.16
MW-7C	78.54	72.98	77.57	76.47	77.66	79.23
MW-8C	79.18	73.76	77.57	76.49	77.57	78.39
MW-9C	79.12	74.07	77.49	76.42	77.44	79.02
MW-10C	78.80	74.21	77.58	76.50	77.53	78.76
MW-11C	78.61	74.56	77.57	76.49	77.47	78.57
MW-12C	78.69	74.86	77.68	76.61	77.73	78.65
MW-13C	79.00	75.22	77.84	76.74	78.15	78.74
MW-14C	MW-14C abandoned in July 2007					
MW-15C	MW-15C abandoned in July 2007					
MW-16C	79.87	75.40	77.79	76.82	MW-16C abandoned in June 2013	
MW-16RC	MW-16CR installed in October 2013				78.69	78.99
MW-17C	80.09	74.98	77.42	76.64	79.26	AB
MW-18C	79.31	75.52	77.84	77.27	79.97	AB
MW-19C	79.69	76.11	78.40	77.62	79.87	AB
MW-20C	80.17	76.68	78.85	77.89	MW-20C abandoned in June 2013	
MW-21C	79.79	77.57	78.82	78.02	78.88	AB
MW-22C	78.93	MW-22C abandoned in November 2011				
MW-22RC	NI	78.62	78.46	77.66	78.98	80.18
MW-23C	80.53	78.06	77.80	77.02	79.27	80.53
MW-27C	78.15	74.68	76.60	75.99	--	78.31

Table 11-1
Groundwater Elevation Measurements
Third Biennial Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	15th Event Nov-11 (ft, NGVD)	16th Event May-12 (ft, NGVD)	17th Event Nov-12 (ft, NGVD)	18th Event May-13 (ft, NGVD)	19th Event Nov-13 (ft, NGVD)	20th Event May-14 (ft, NGVD)
DP-1	Pizometer Abandoned 03 October 2003					
DP-2	Pizometer Abandoned 03 October 2003					
DP-3	Piezometer Abandoned 16 January 2006					
DP-4	Piezometer Abandoned 16 January 2006					
DP-5	Piezometer Abandoned 10 July 2007					
DP-6	Piezometer Abandoned 10 July 2007					
DP-7	Piezometer Abandoned 10 July 2007					
DP-8	Piezometer Abandoned 10 July 2007					
DP-9	Piezometer Abandoned 10 July 2007					
DP-10	Piezometer Abandoned 10 July 2007					
DP-11	Piezometer Abandoned 10 July 2007					
DP-12	Piezometer Abandoned 10 July 2007					
DP-13	Piezometer Abandoned 10 July 2007					
DP-14	77.80	74.52	76.87	76.57	--	79.06
DP-15	77.87	74.52	76.90	76.51	--	78.86
DP-16	78.97	75.56	77.79	77.39	--	79.46
DP-17	78.93	75.51	77.77	77.37	--	79.44
DP-18	81.04	77.53	78.82	78.19	78.61	80.28
DP-19	81.11	77.59	78.87	78.25	78.64	80.37
DP-20	--	--	78.72	77.87	79.36	79.81
DP-21	--	--	78.60	77.84	79.35	79.71
DP-22	77.81	74.39	76.53	76.67	78.63	78.64
DP-23	77.90	74.70	76.98	76.76	78.56	78.82
DP-24	78.72	75.31	77.62	77.30	--	--
SZ-1	Piezometer Abandoned 10 July 2007					
SZ-2	--	75.04	77.31	76.48	77.22	78.04
SZ-3	77.43	74.24	76.49	75.51	76.47	77.48

Notes:
NGVD = National Geodetic Vertical Datum of 1929
-- indicates water level elevation not measured
AB indicates wells were abandoned in March 2014
NI indicates wells were installed in March 2012

FIGURES



Legend

- A Zone Monitoring Well Location
- C Zone Monitoring Well Location
- A, B and C Zone Cluster Well
- A Zone Piezometer Location
- A and C Zone Nested Piezometer Location
- Compliance MW
- Abandoned or Destroyed Monitoring Well Location
- Leachate Collection Point
- Surface Water Sample Location
- Property Boundary

Note:
Imagery Source: Google Earth Imagery, dated 15 February 2014.

Path: (Tlusville-01\Data)\T:\GIS\FW2070_JED\MXDs\Monitoring_pt_loc_map.mxd 30 July 2014 JRB

Monitoring Point Location Map

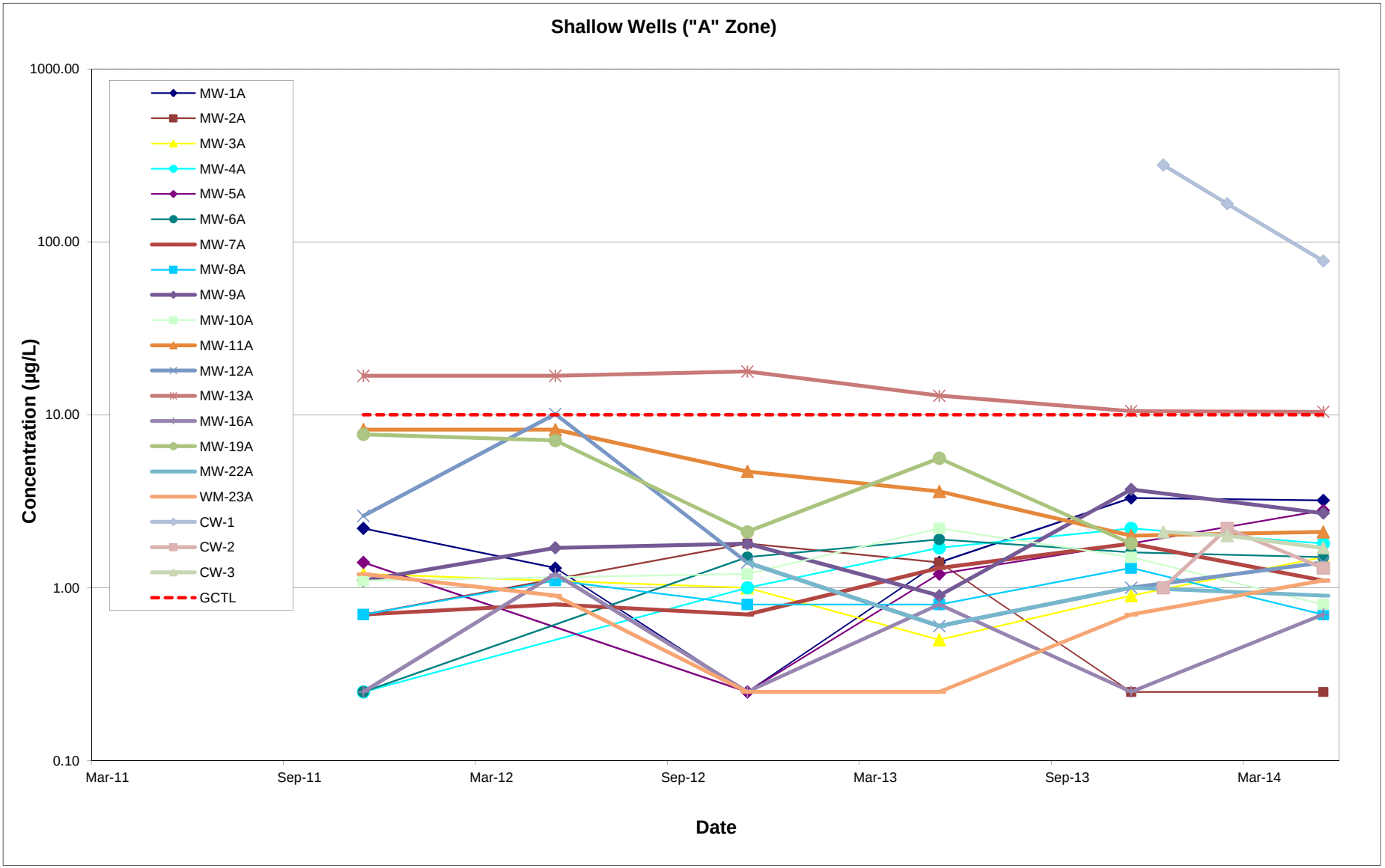
JED Solid Waste Management Facility
Osceola County, Florida

Geosyntec consultants

Clearwater, FL | July 2014

Figure **2-1**

Figure 6-1
Groundwater Trends - Arsenic
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

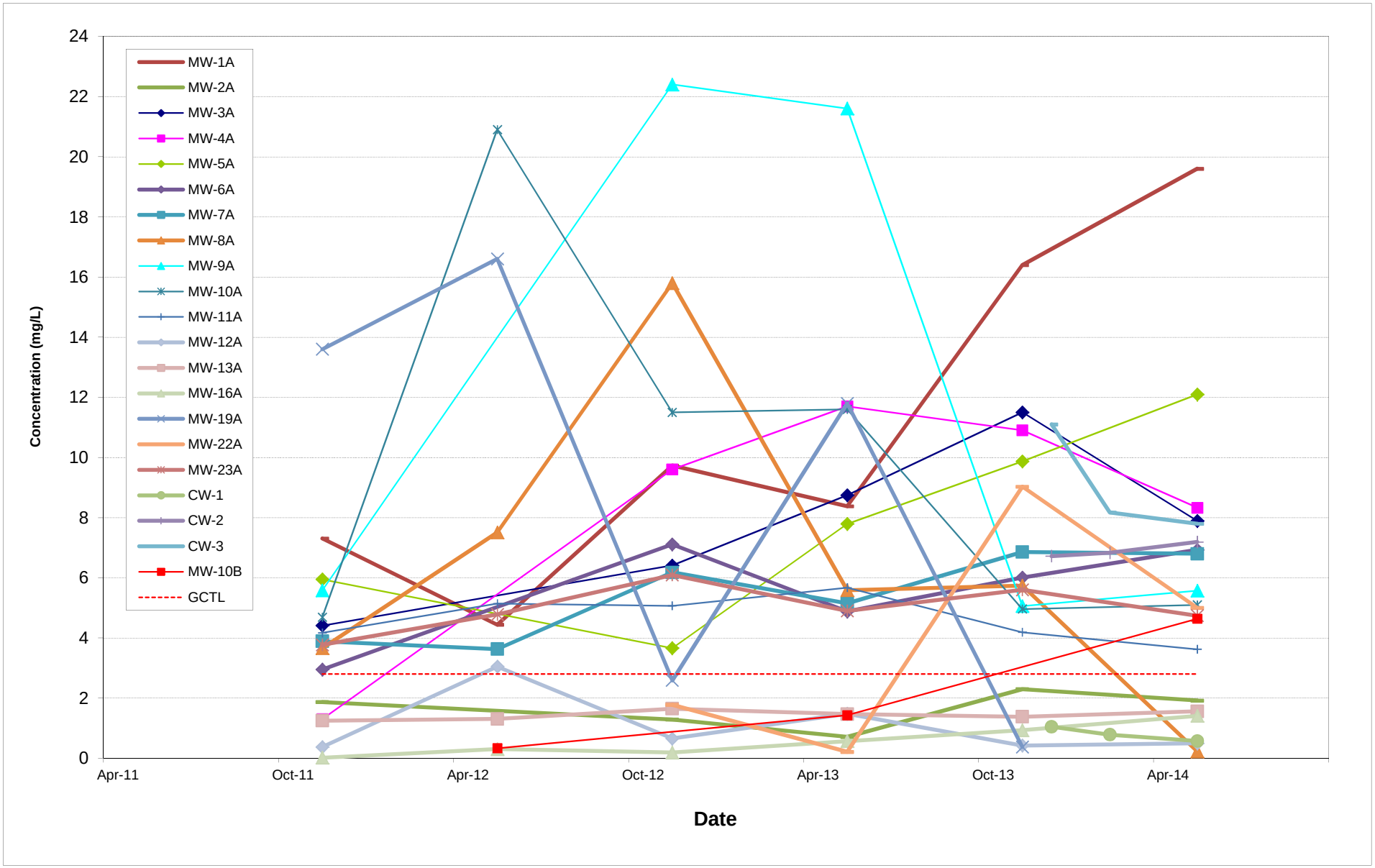


Notes

GCTL = Groundwater Cleanup Target Level (10 µg/L)

Detections below the laboratory MDL are plotted at one half of the MDL

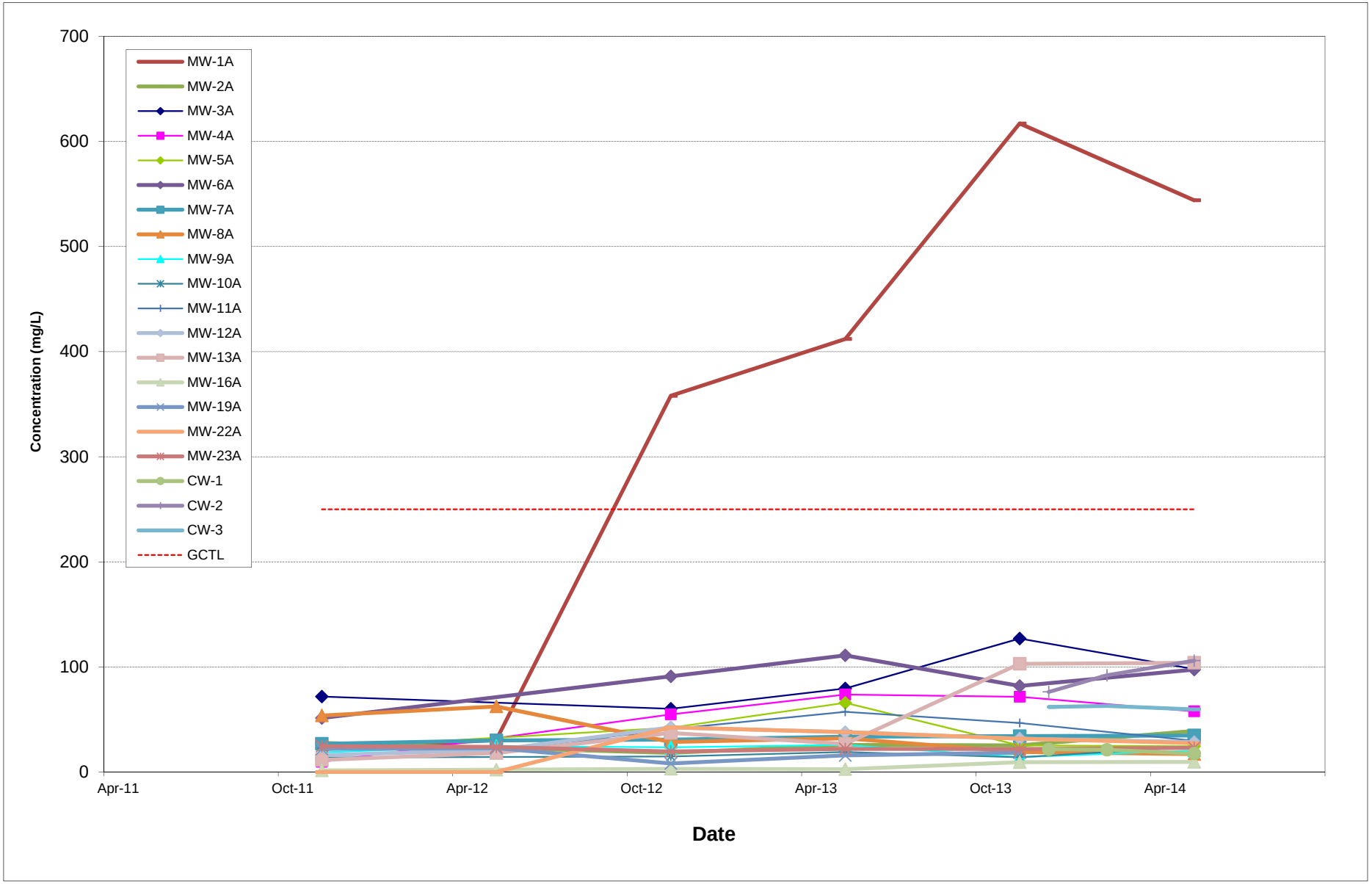
Figure 6-2
Groundwater Trends - Ammonia-N
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility



Notes:

GCTL = Groundwater Cleanup Target Level (2.8 mg/L)

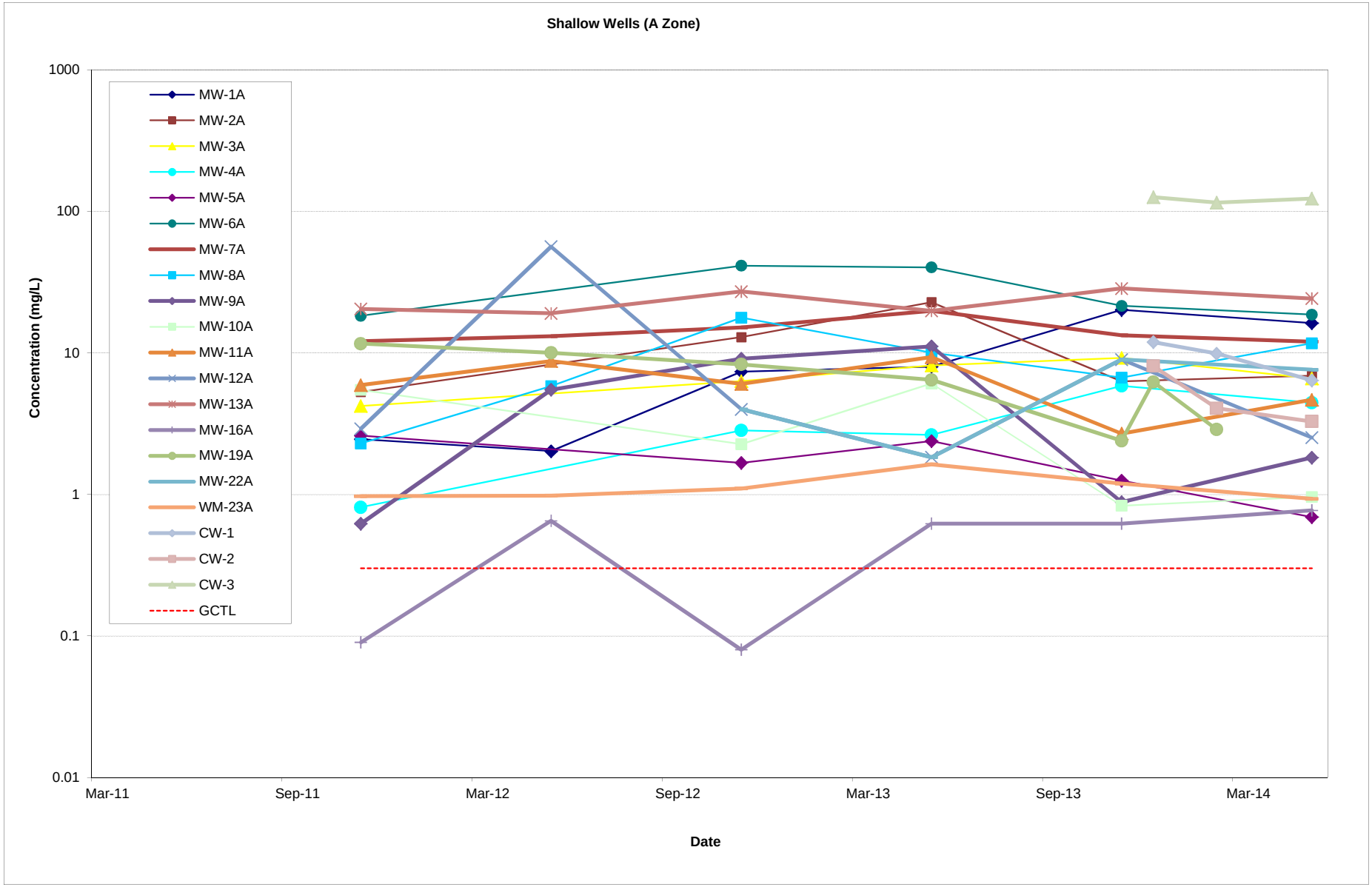
Figure 6-3
Groundwater Trends - Chloride
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility



Notes:

GCTL = Groundwater Cleanup Target Level (250 mg/L)

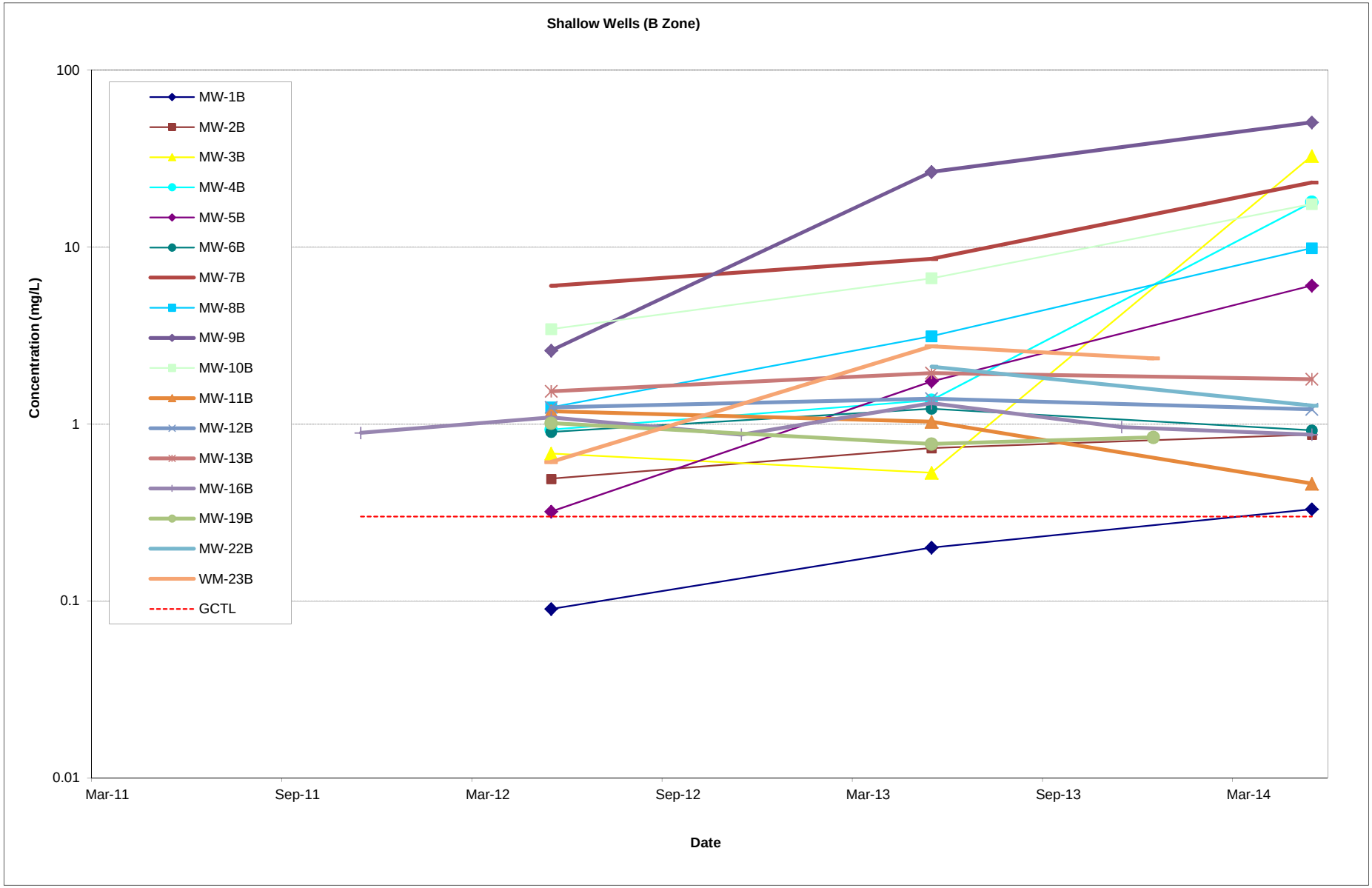
Figure 6-4
Groundwater Trends - Iron
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility



Notes:

GCTL = Groundwater Cleanup Target Level (0.3 mg/L)

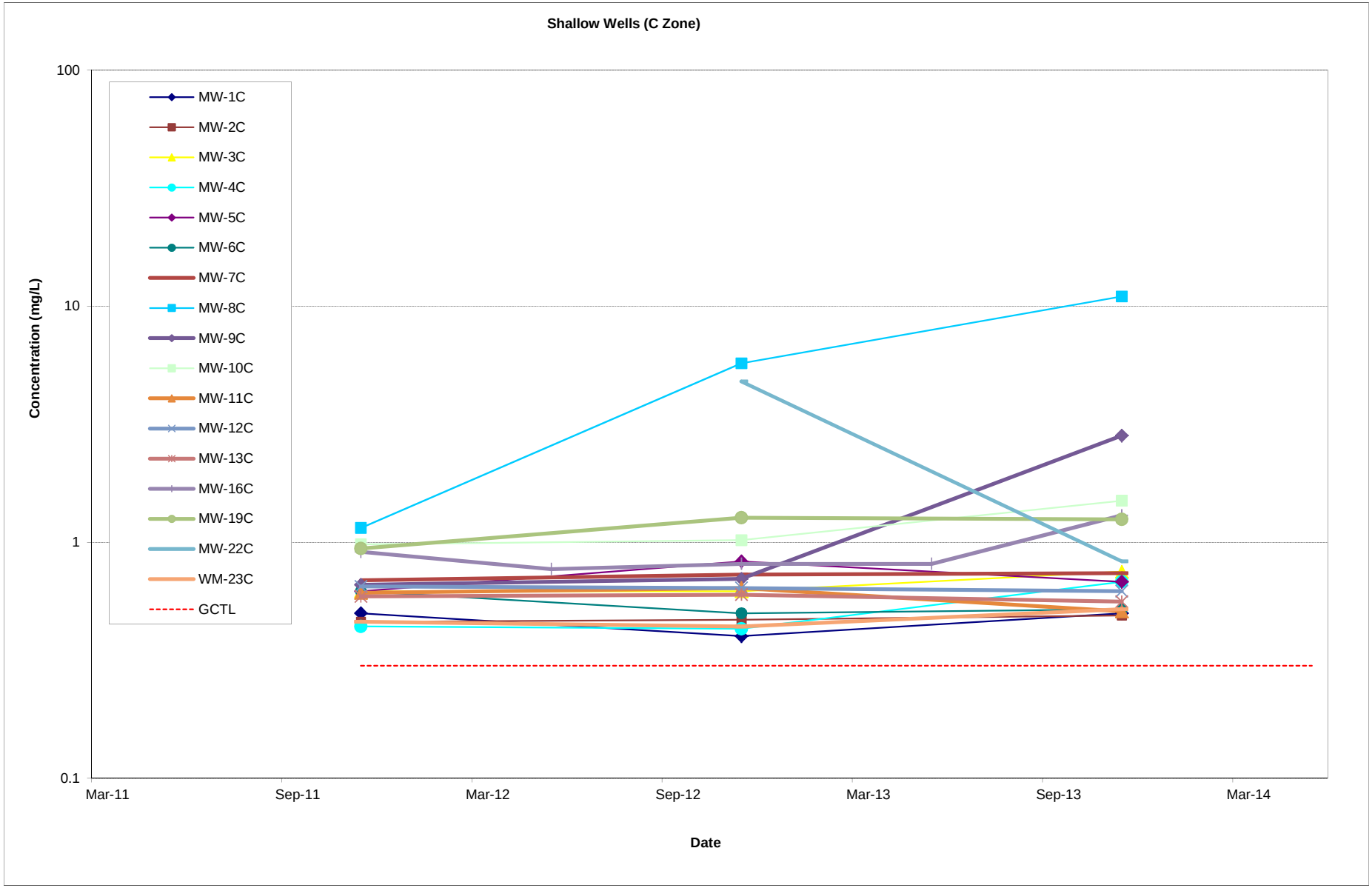
Figure 6-4
Groundwater Trends - Iron
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility



Notes:

GCTL = Groundwater Cleanup Target Level (0.3 mg/L)

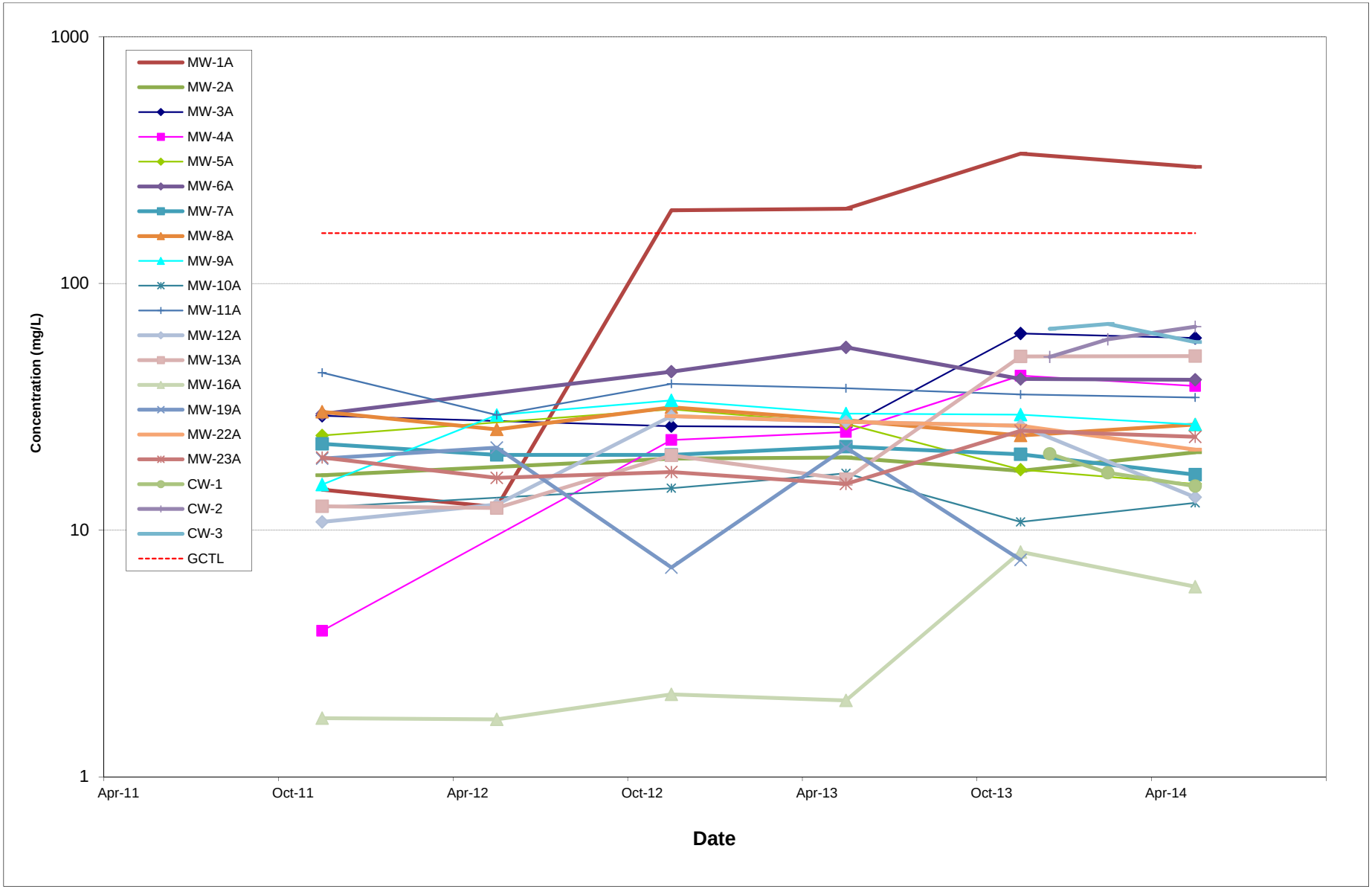
Figure 6-4
Groundwater Trends - Iron
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility



Notes:

GCTL = Groundwater Cleanup Target Level (0.3 mg/L)

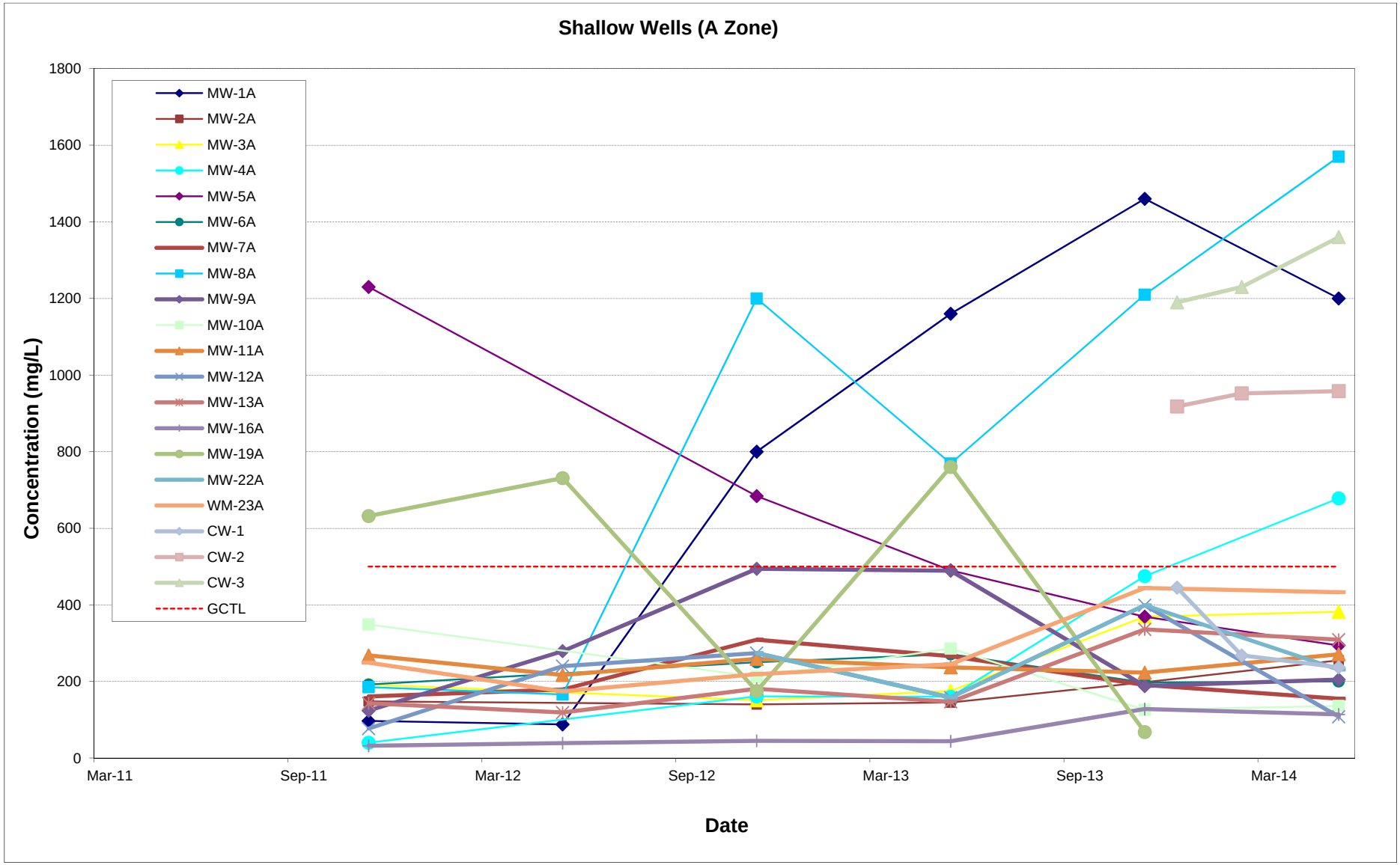
Figure 6-5
Groundwater Trends - Sodium
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility



Notes:

GCTL = Groundwater Cleanup Target Level (160 mg/L)

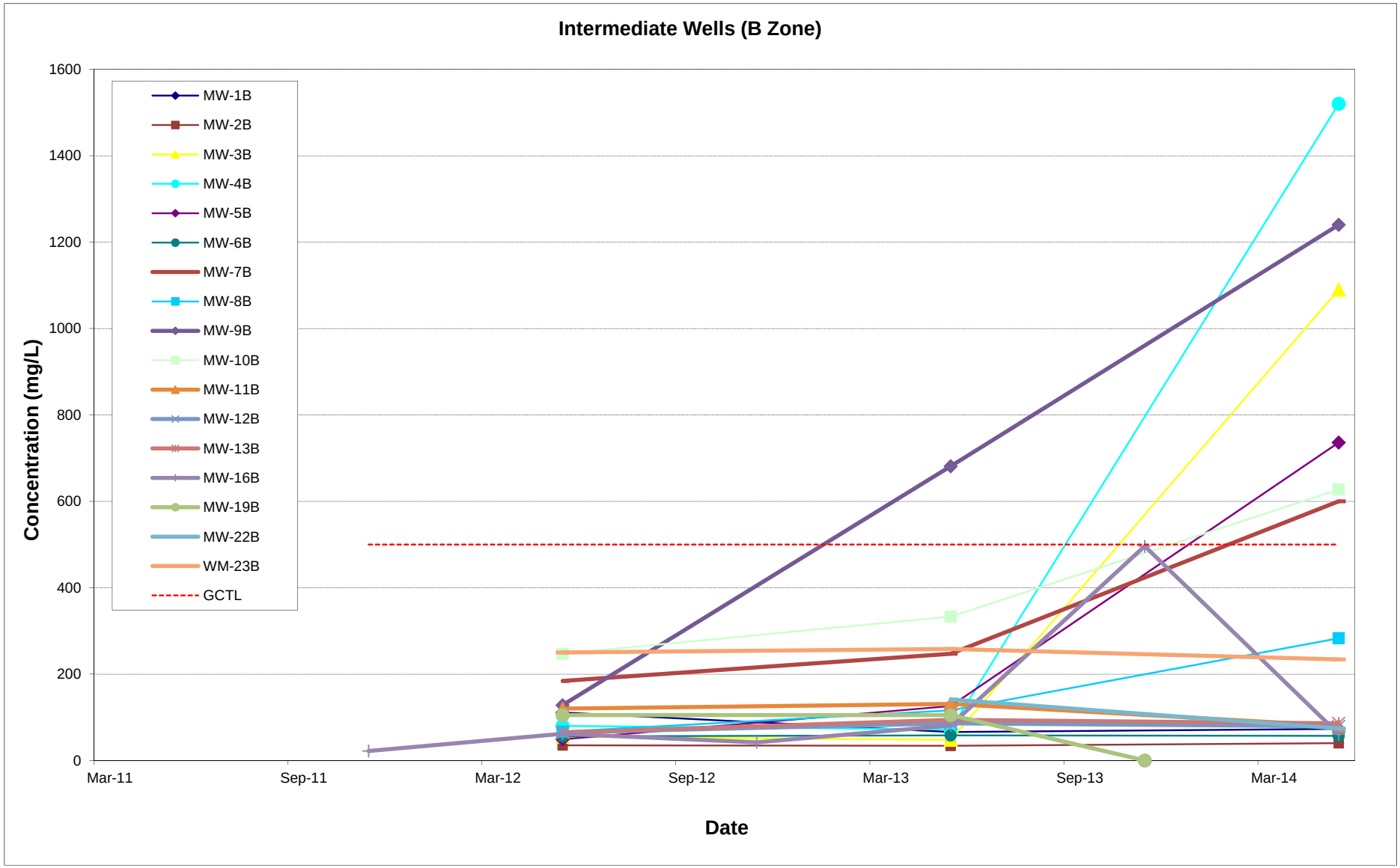
Figure 6-6
Groundwater Trends - Total Dissolved Solids
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility



Notes:

GCTL = Groundwater Cleanup Target Level (500 mg/L)

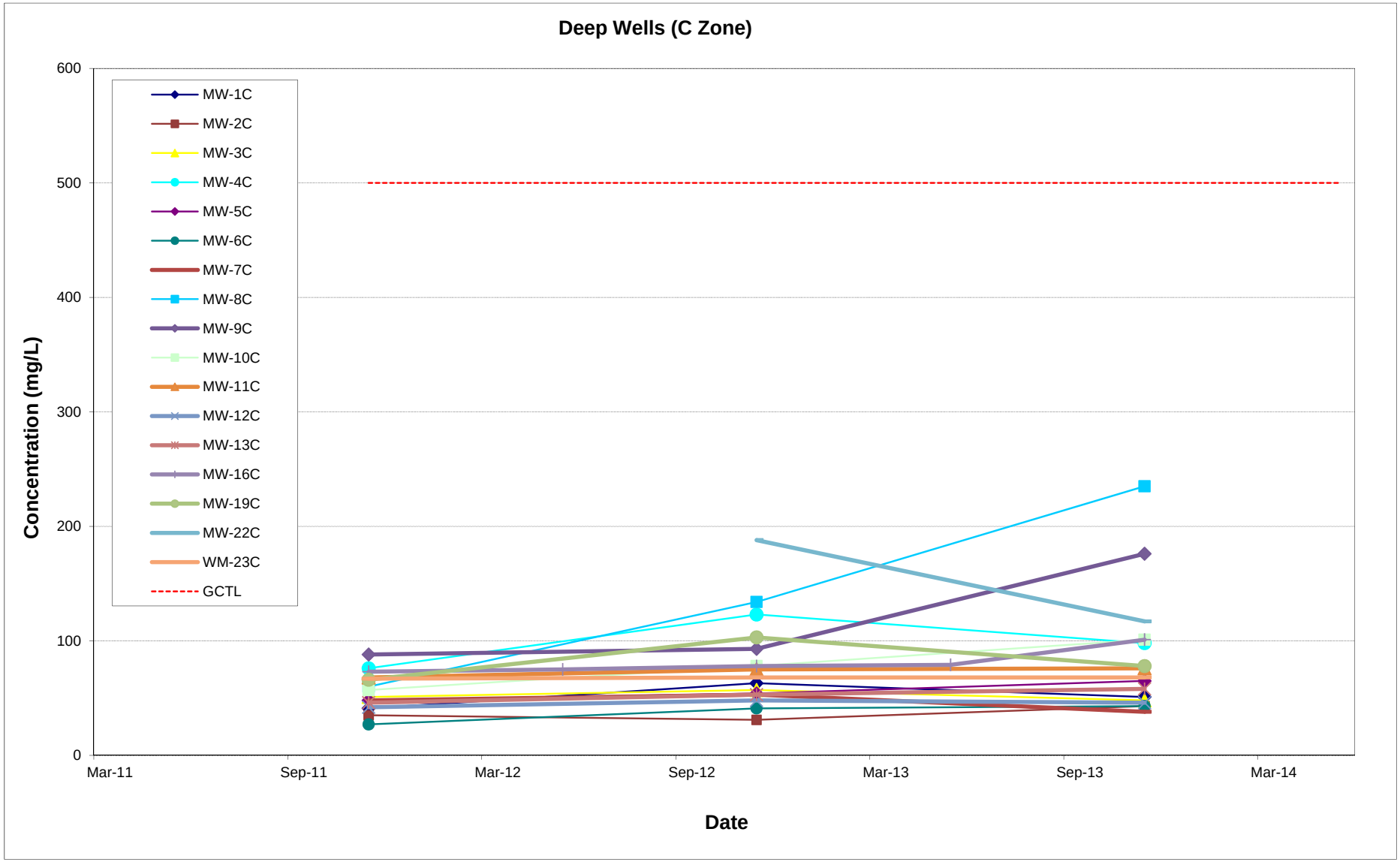
Figure 6-6
Groundwater Trends - Total Dissolved Solids
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility



Notes:

GCTL = Groundwater Cleanup Target Level (500 mg/L)

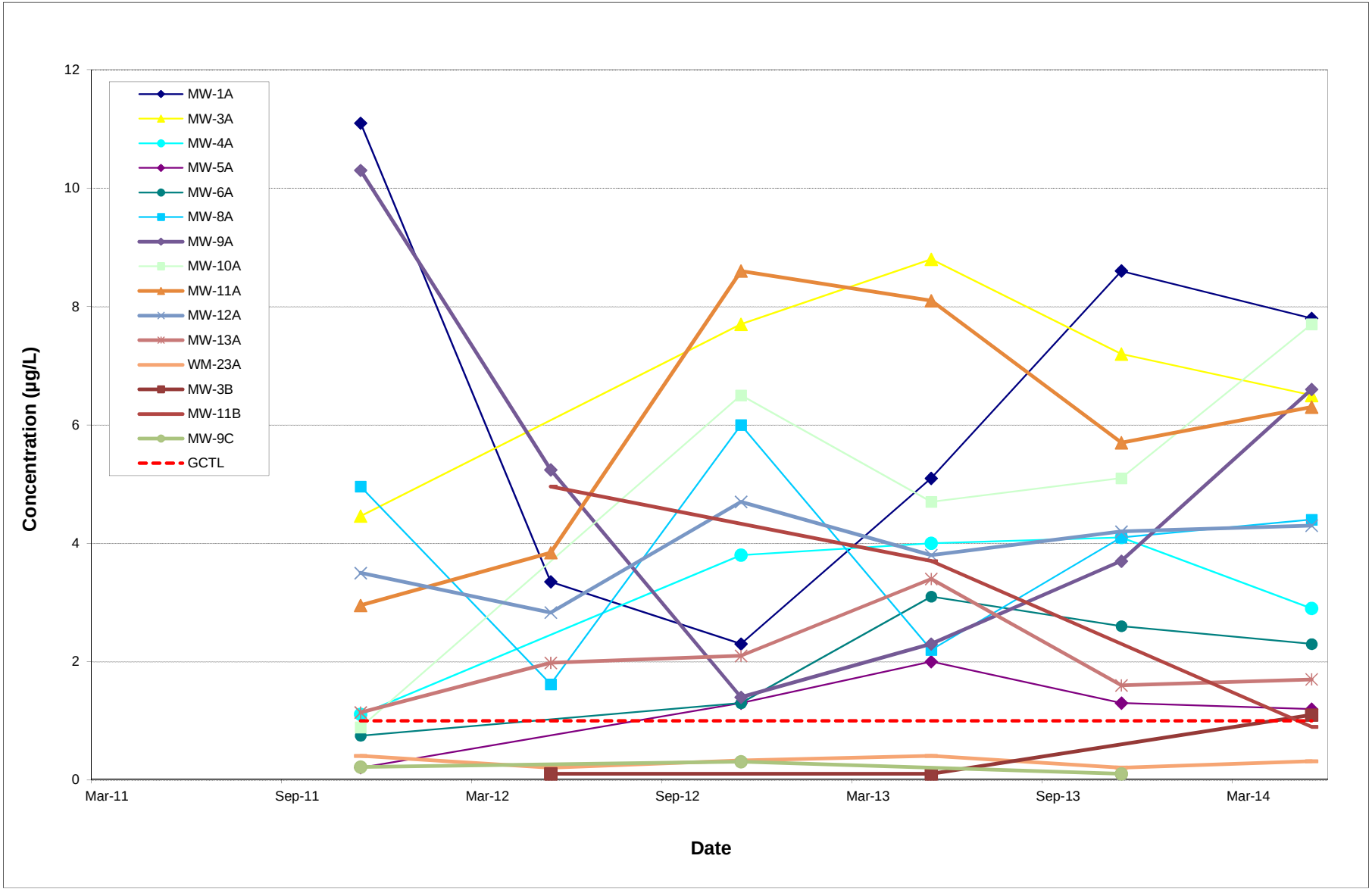
Figure 6-6
Groundwater Trends - Total Dissolved Solids
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility



Notes:

GCTL = Groundwater Cleanup Target Level (500 mg/L)

Figure 6-7
Groundwater Trends - Benzene
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

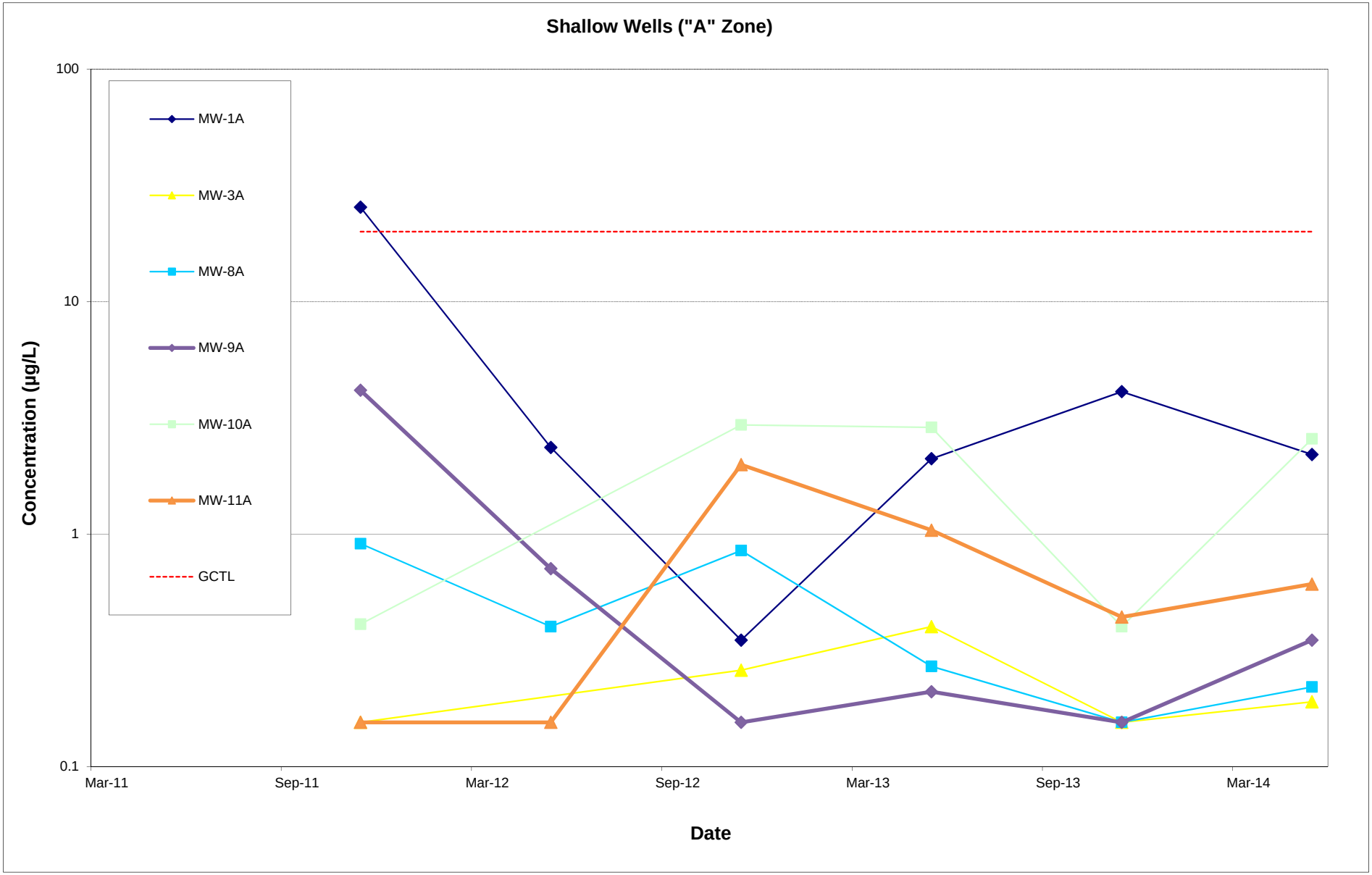


Notes:

GCTL = Groundwater Cleanup Target Level (1 ug/L)

Detections below the MDL are plotted at one half of the MDL

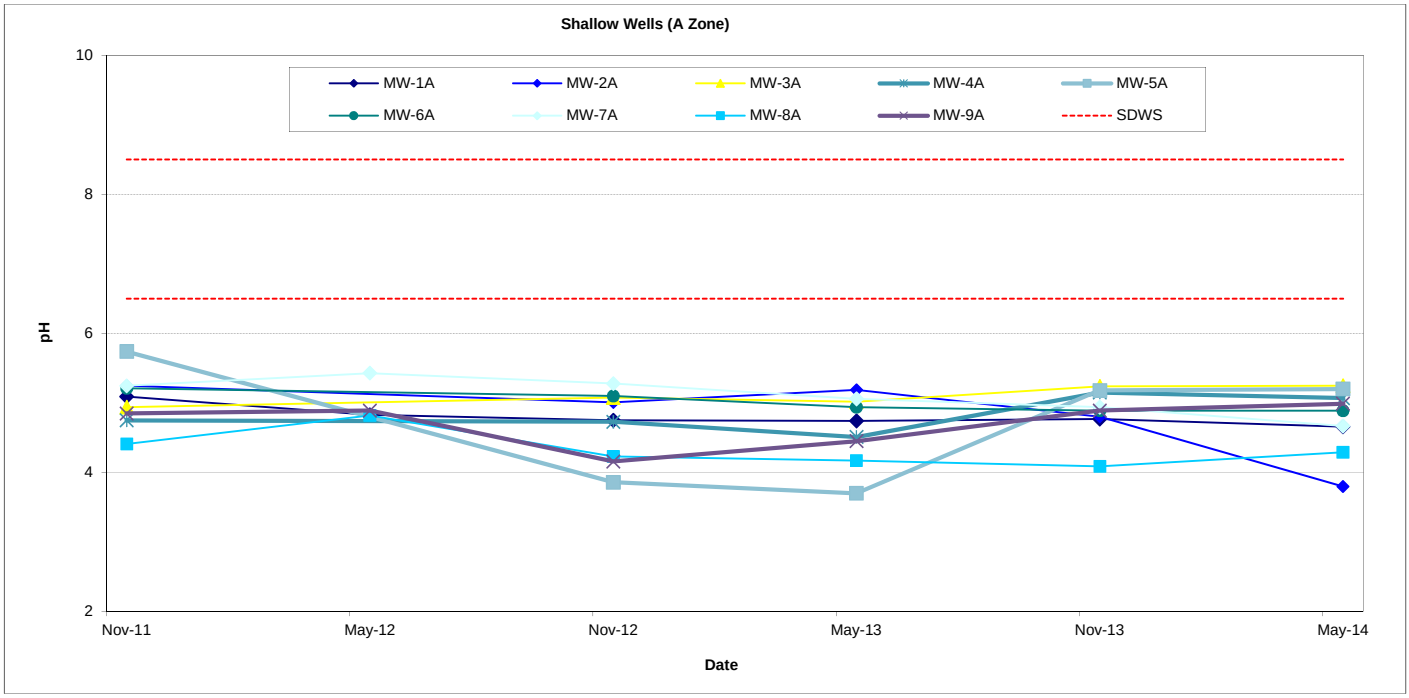
Figure 6-8
Groundwater Trends - Total Xylenes
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

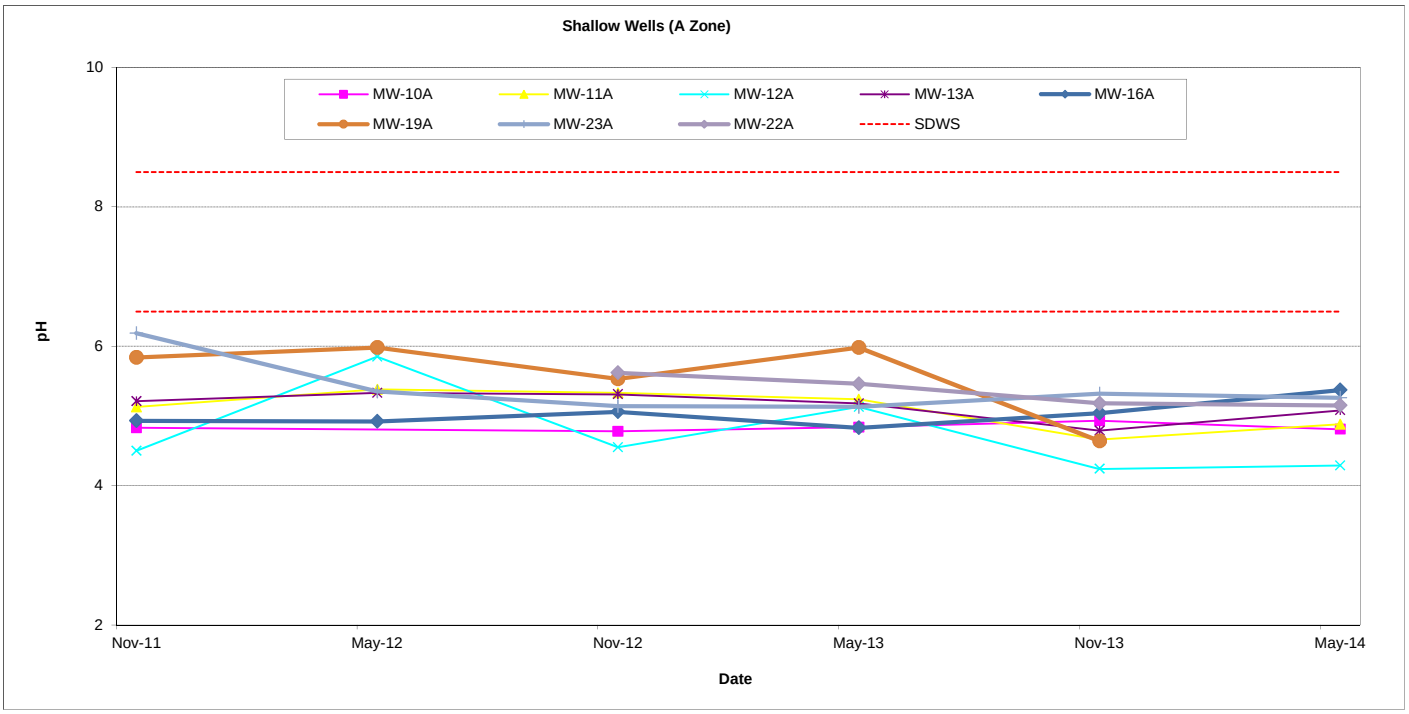


Notes:

GCTL = groundwater target cleanup level (20 µg/L)

Figure 6-9
Groundwater Trends - pH
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

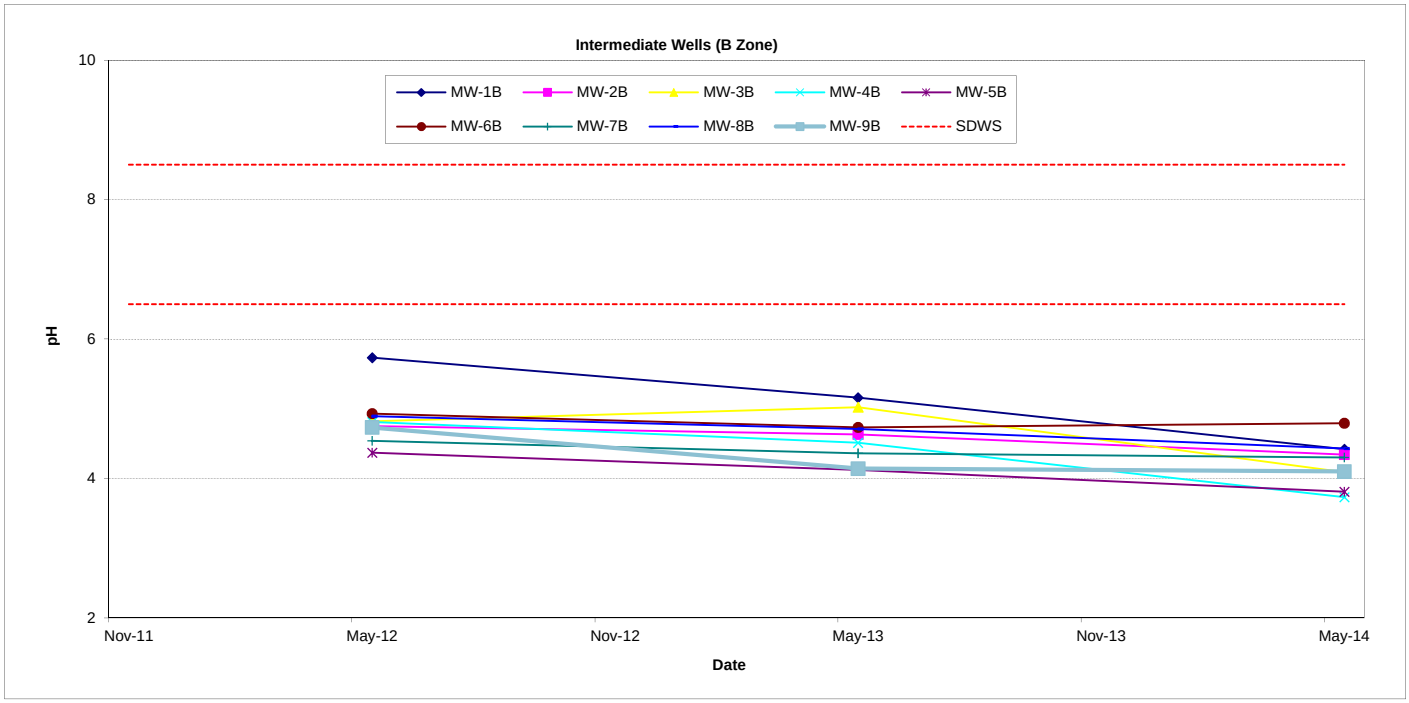


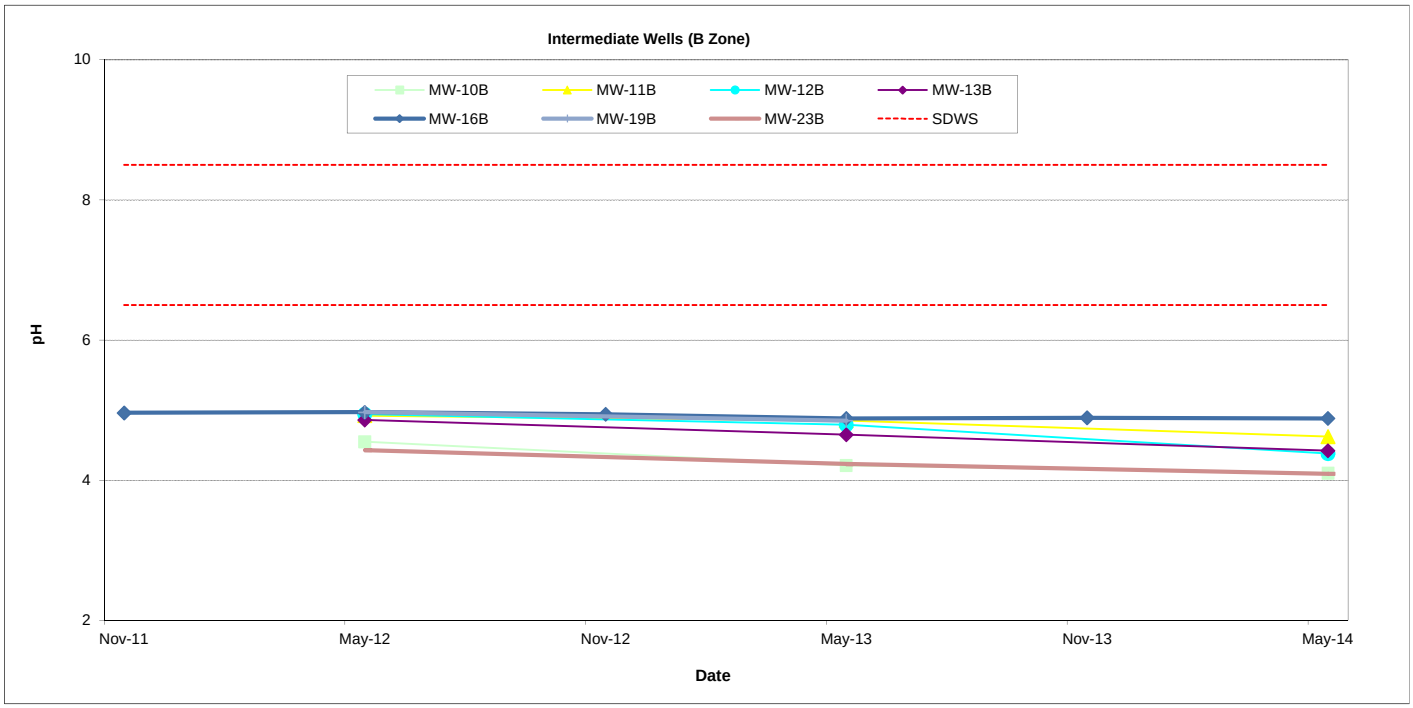


Notes:

SDWS = groundwater target cleanup level (6.5-8.5)

Figure 6-9
Groundwater Trends - pH
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

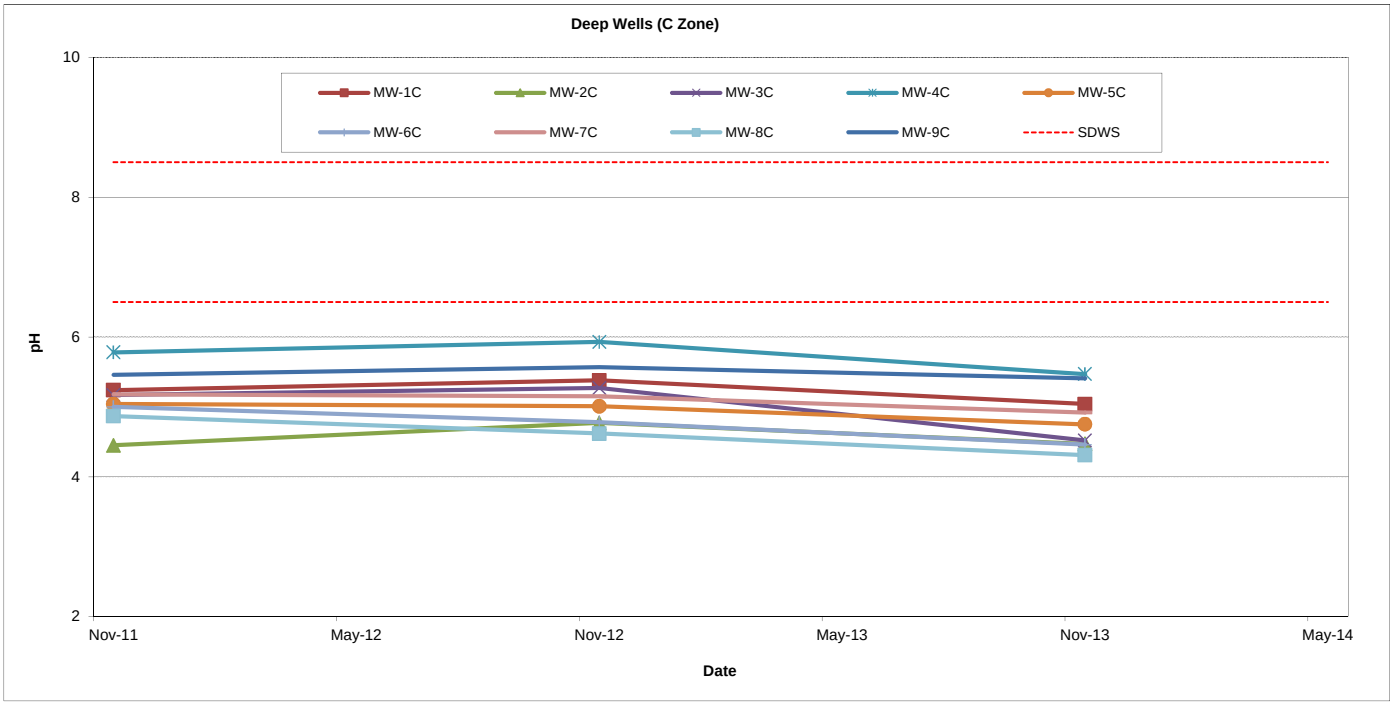


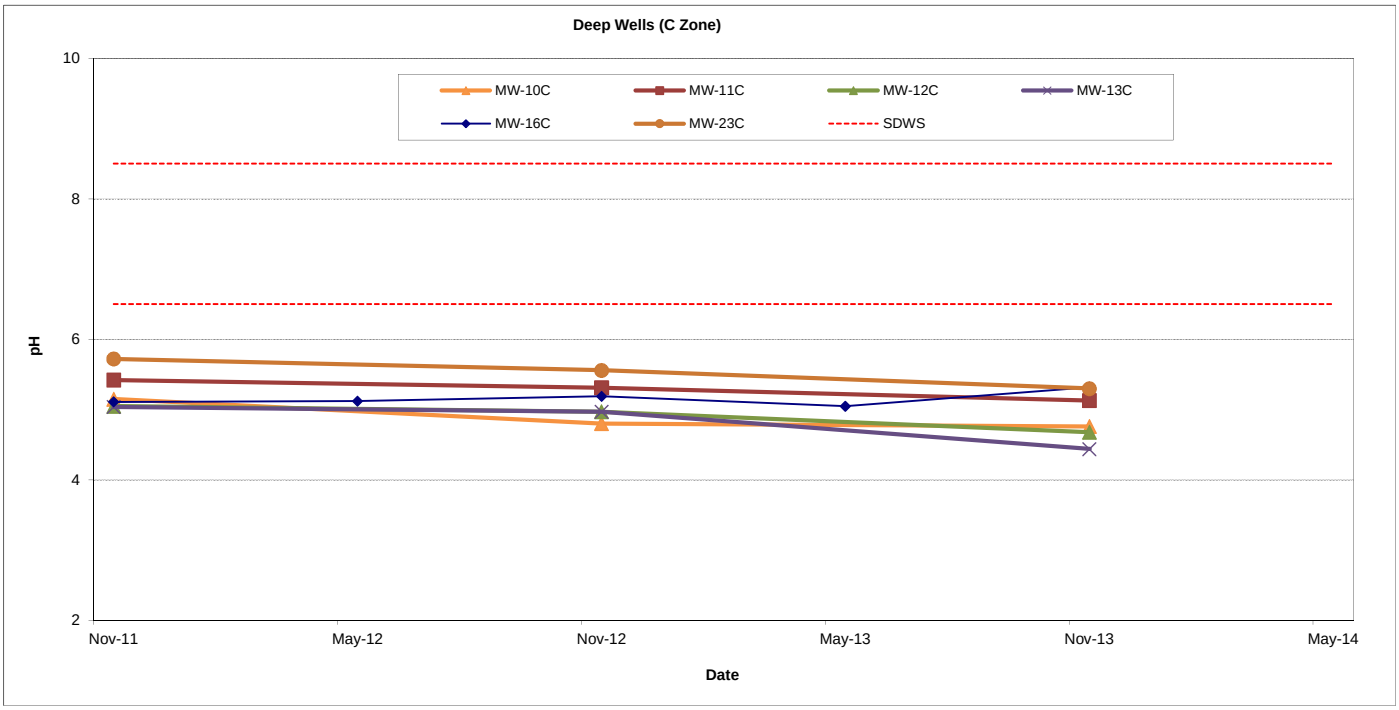


Notes:

SDWS = groundwater target cleanup level (6.5-8.5)

Figure 6-9
Groundwater Trends - pH
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility





Notes:
SDWS = groundwater target cleanup level (6.5-8.5)

Figure 6-10
Groundwater Trends - Turbidity
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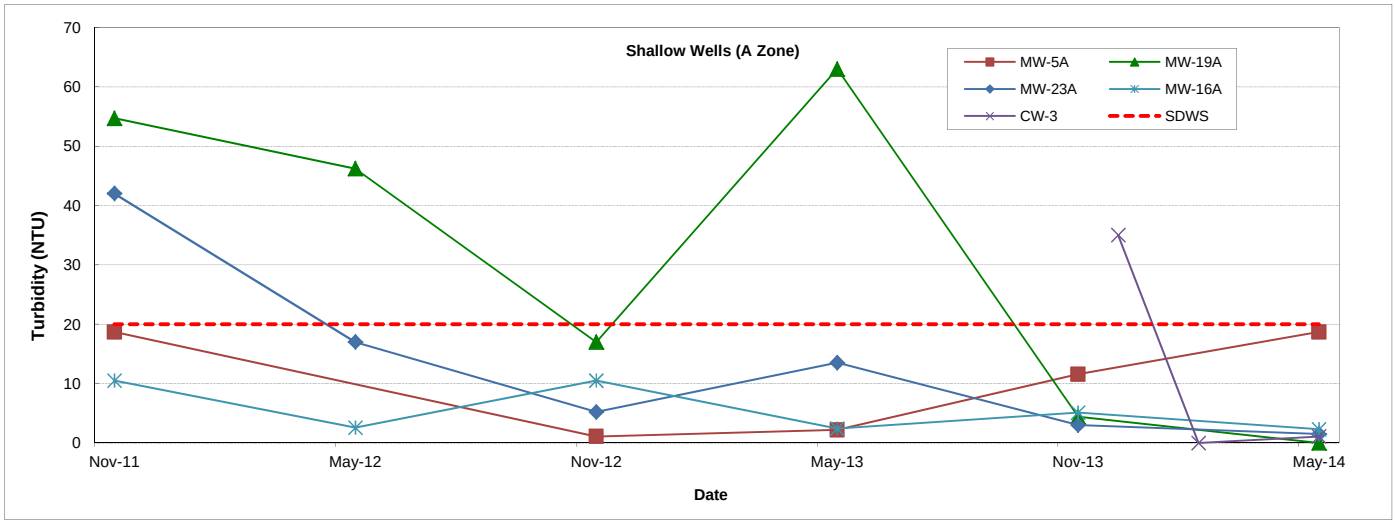
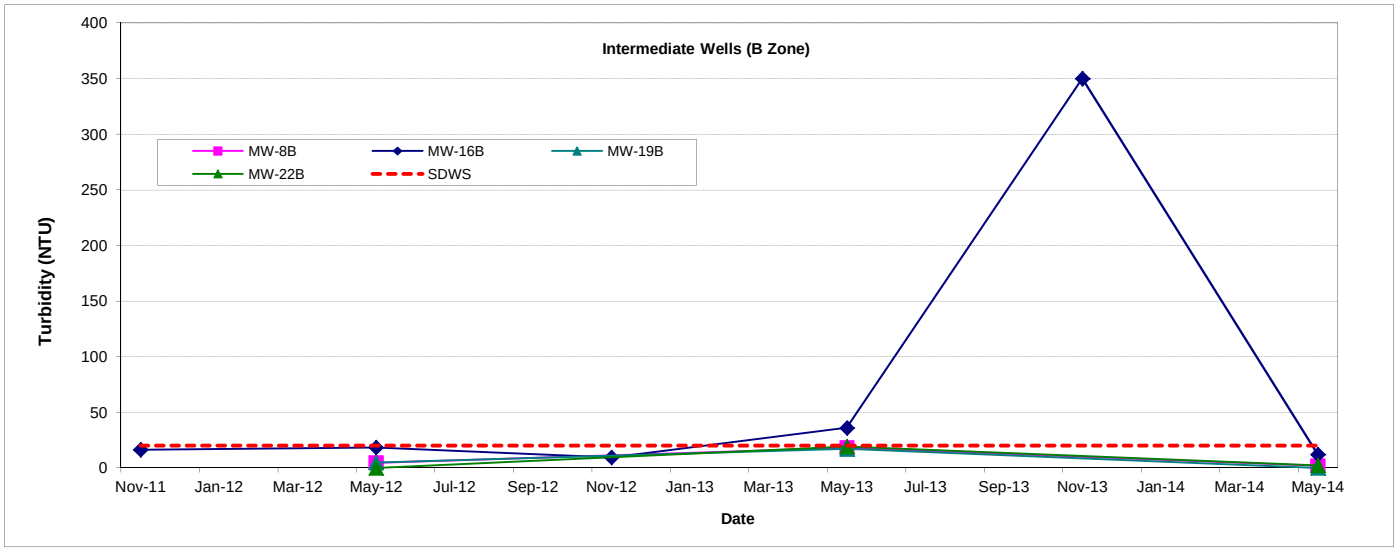
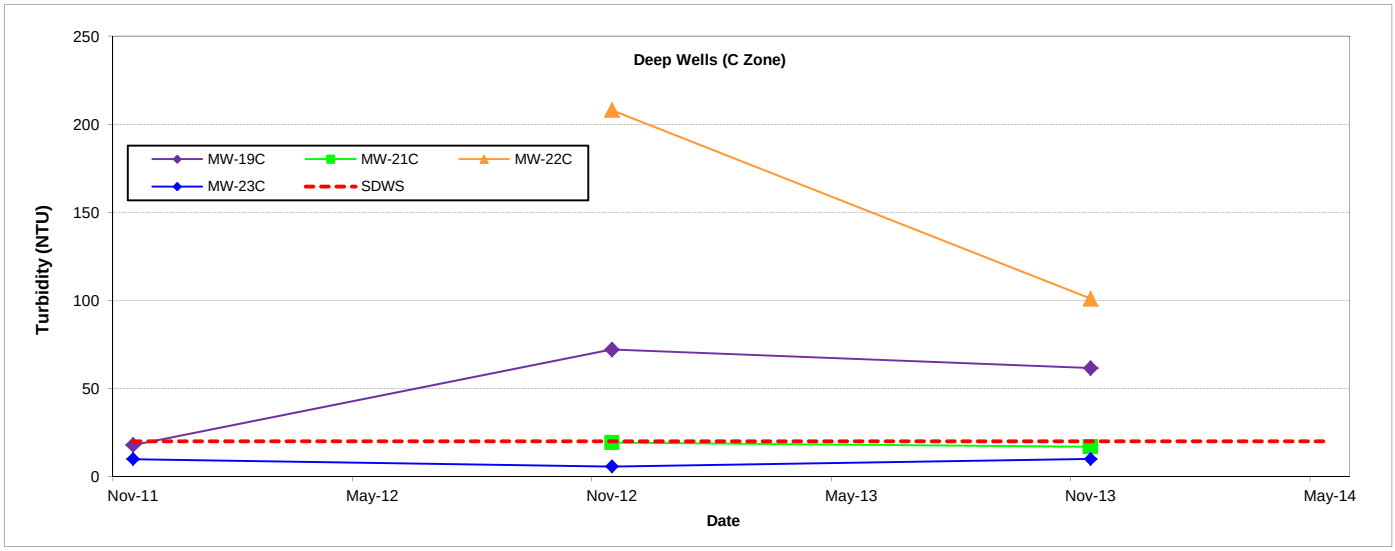
J.E.D. Solid Waste Management Facility



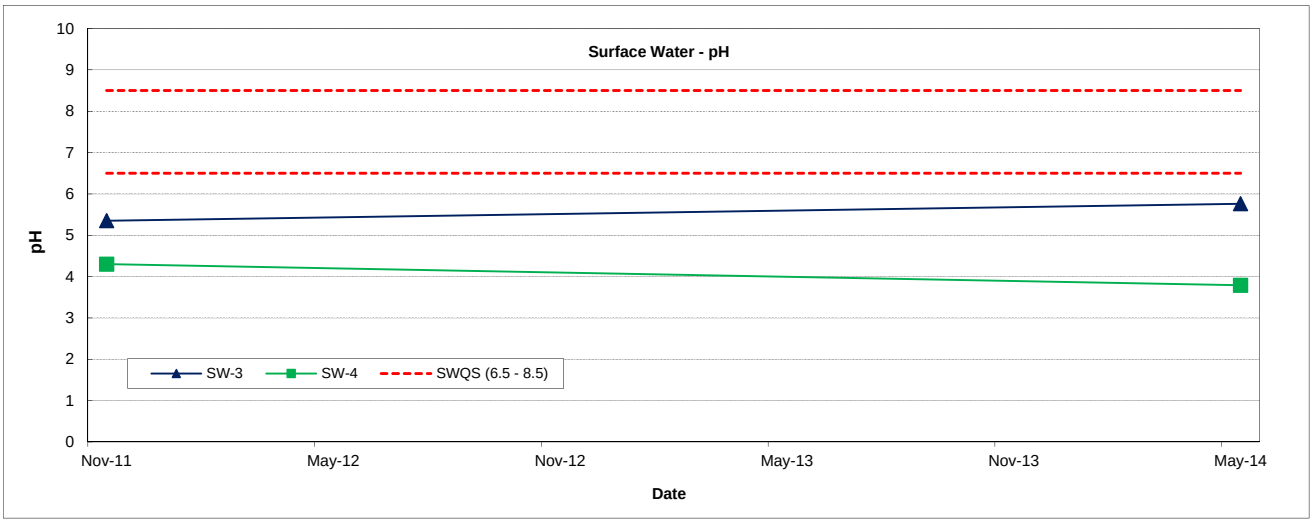


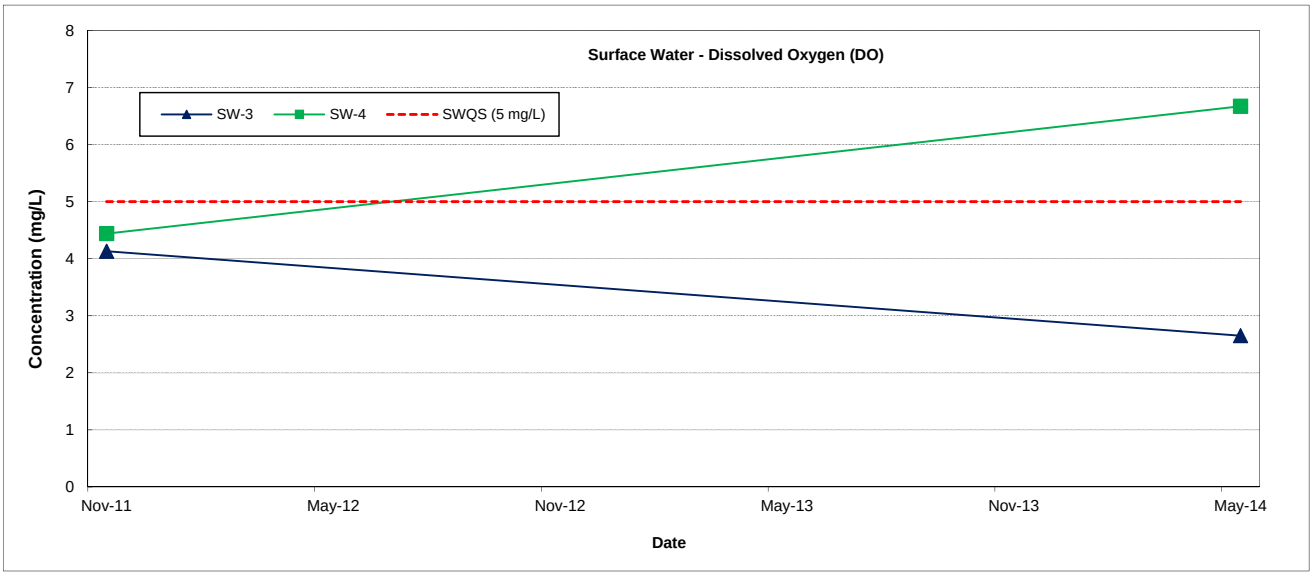


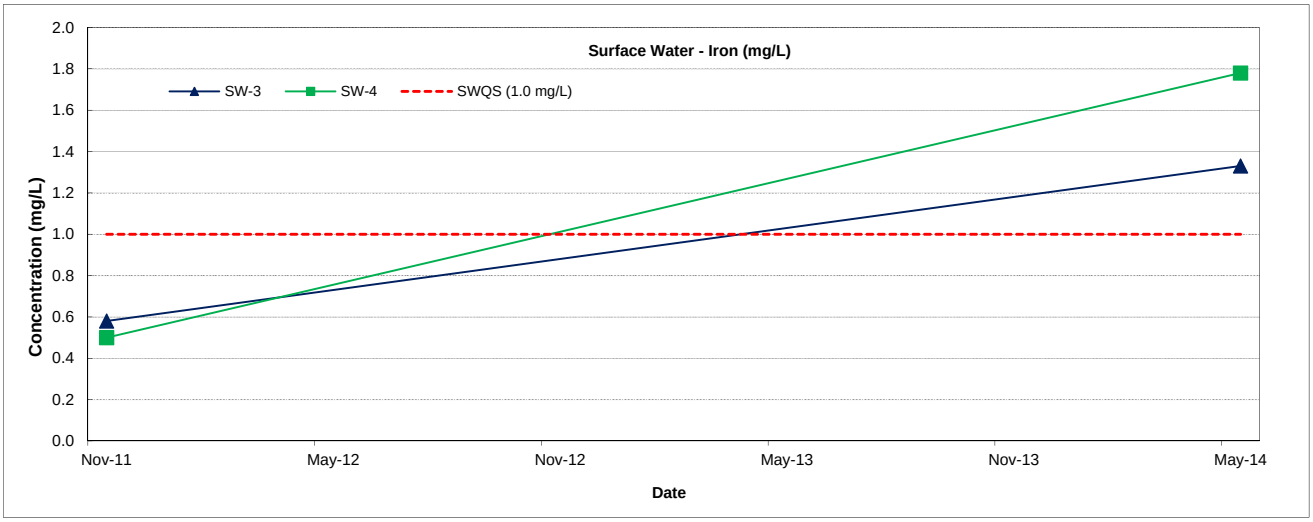
Notes:

SDWS = Secondary Drinking Water Standard (Below 20 NTUs)
NTU indicates nephelometric turbidity units

Figure 6-11
Surface Water Summary Data - DO, pH, and Iron
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility







Note:

SWQS = Secondary Water Quality Standard

Figure 9-1
Correlation Between TDS and Specific Conductance
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

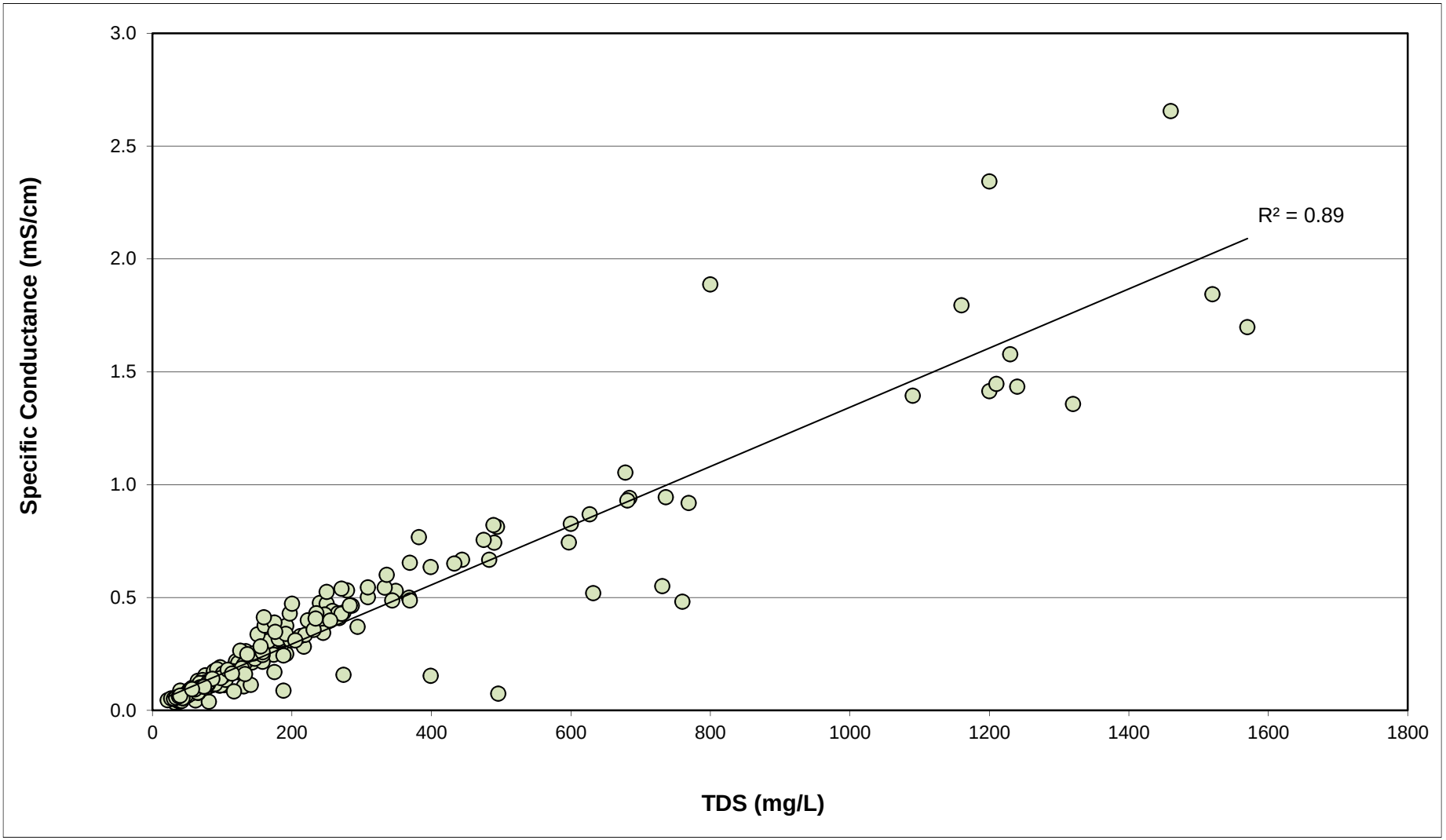


Figure 9-2
Correlation Between Ammonia and Benzene
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

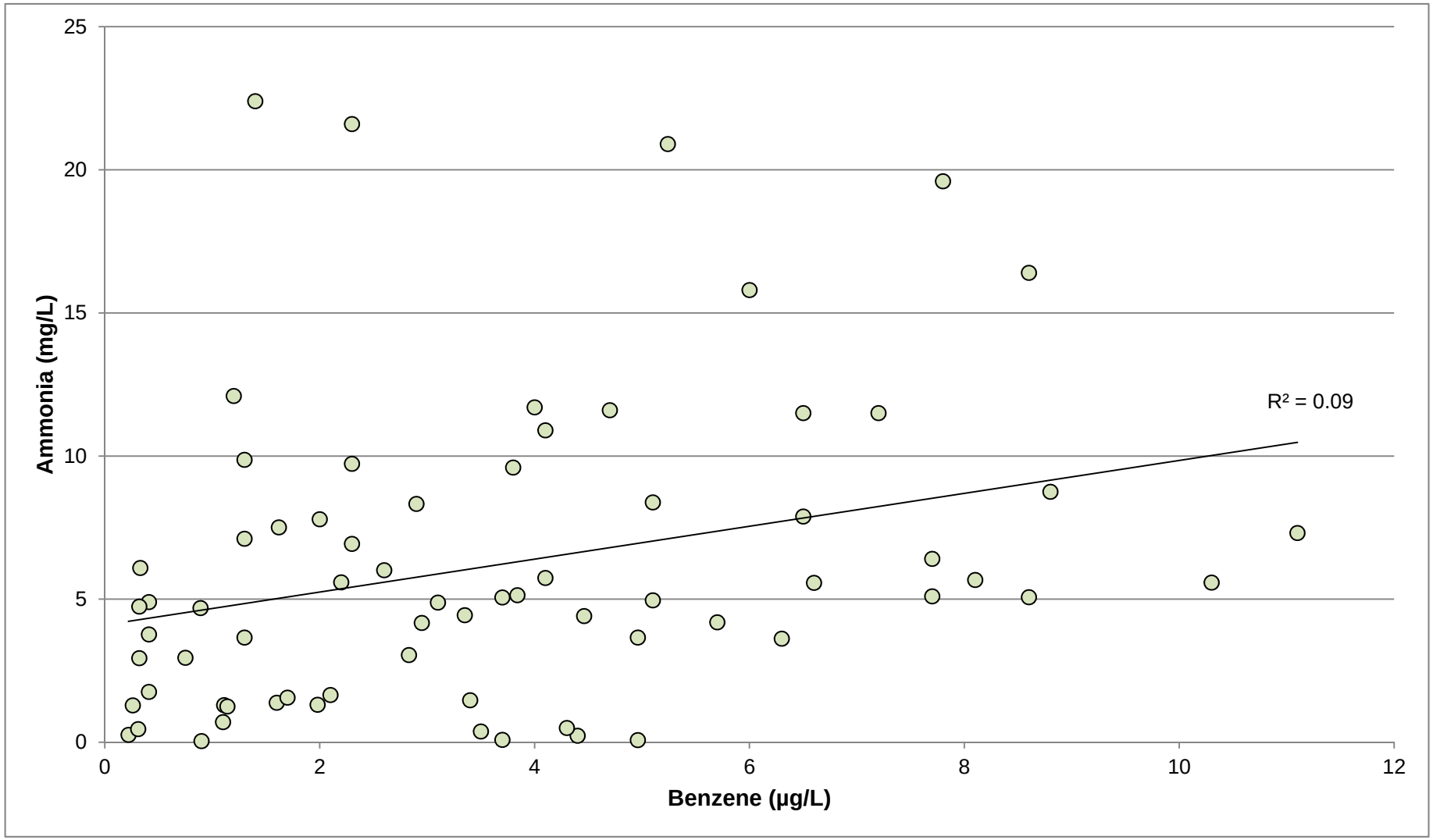


Figure 9-3
Correlation Between Sodium and Chloride
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

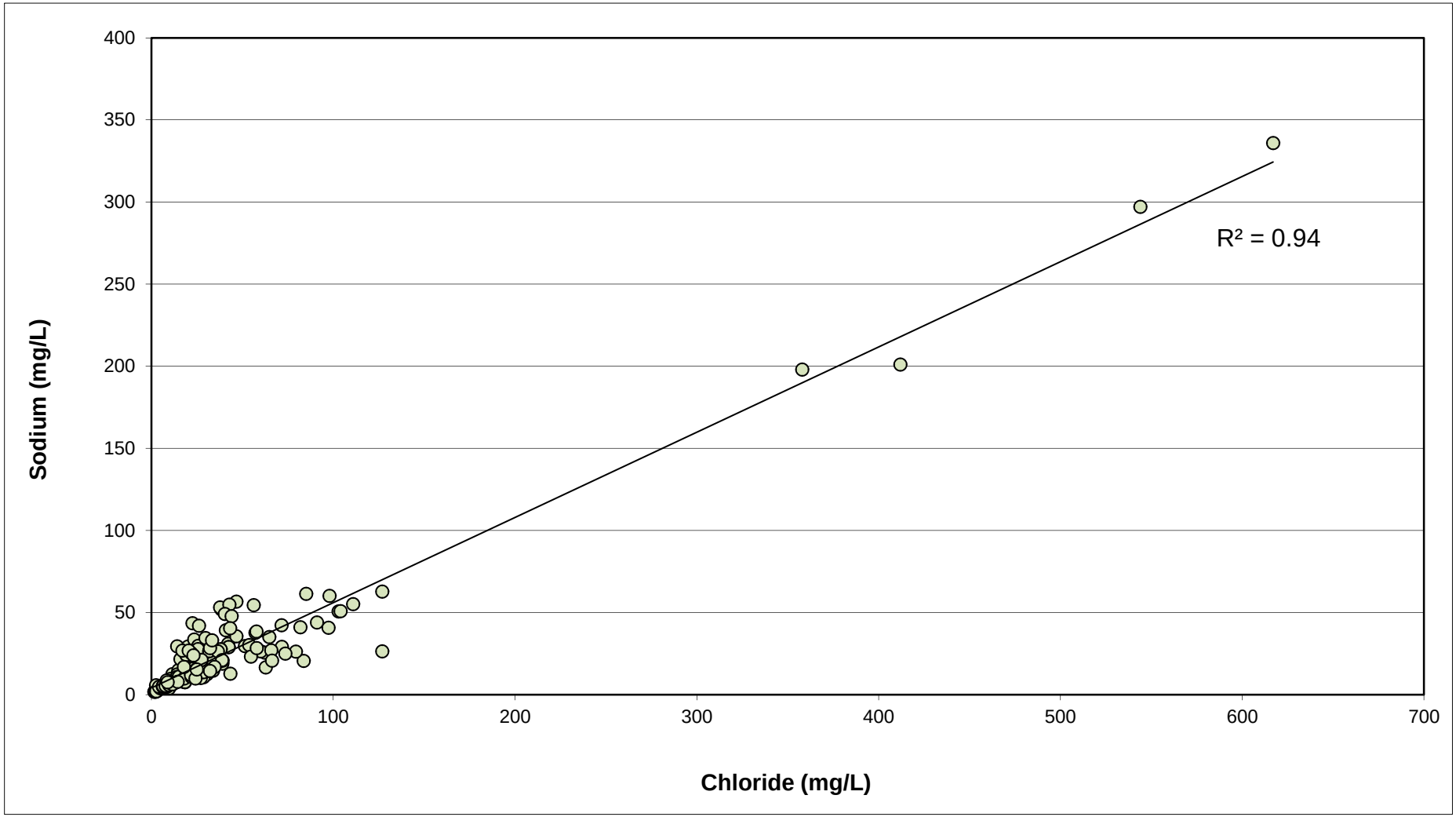
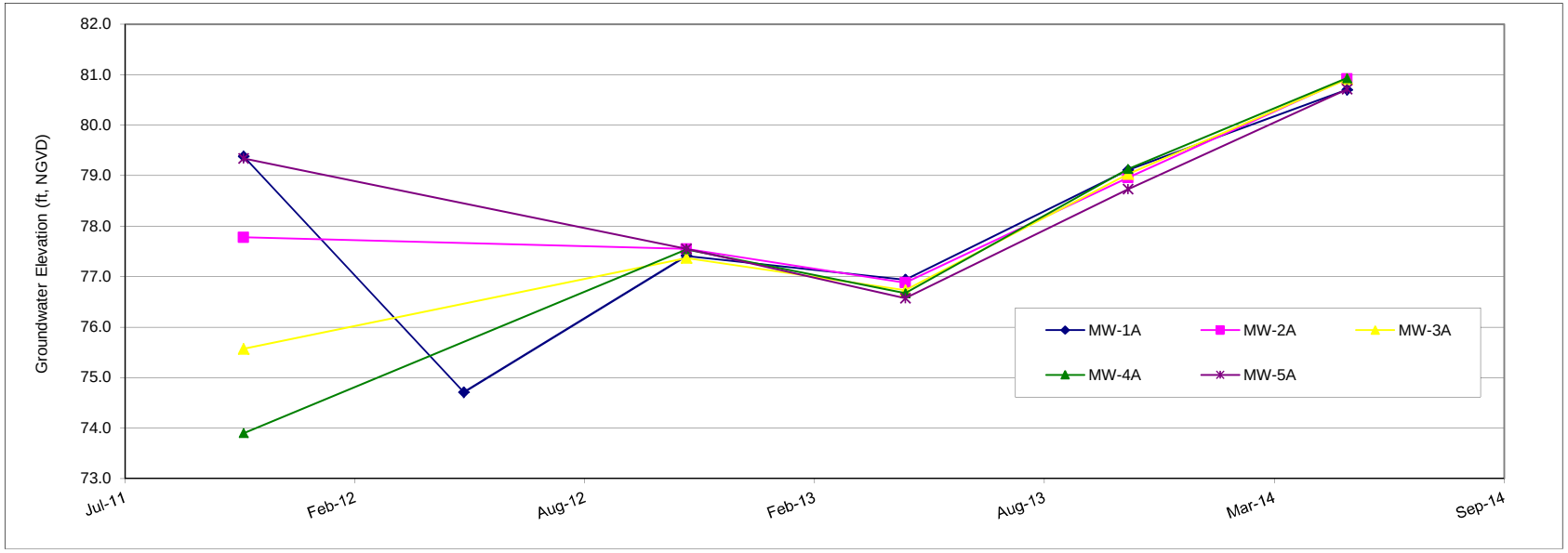


Figure 11-1
Hydrograph of "A" Groundwater Zone (Shallow) Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility



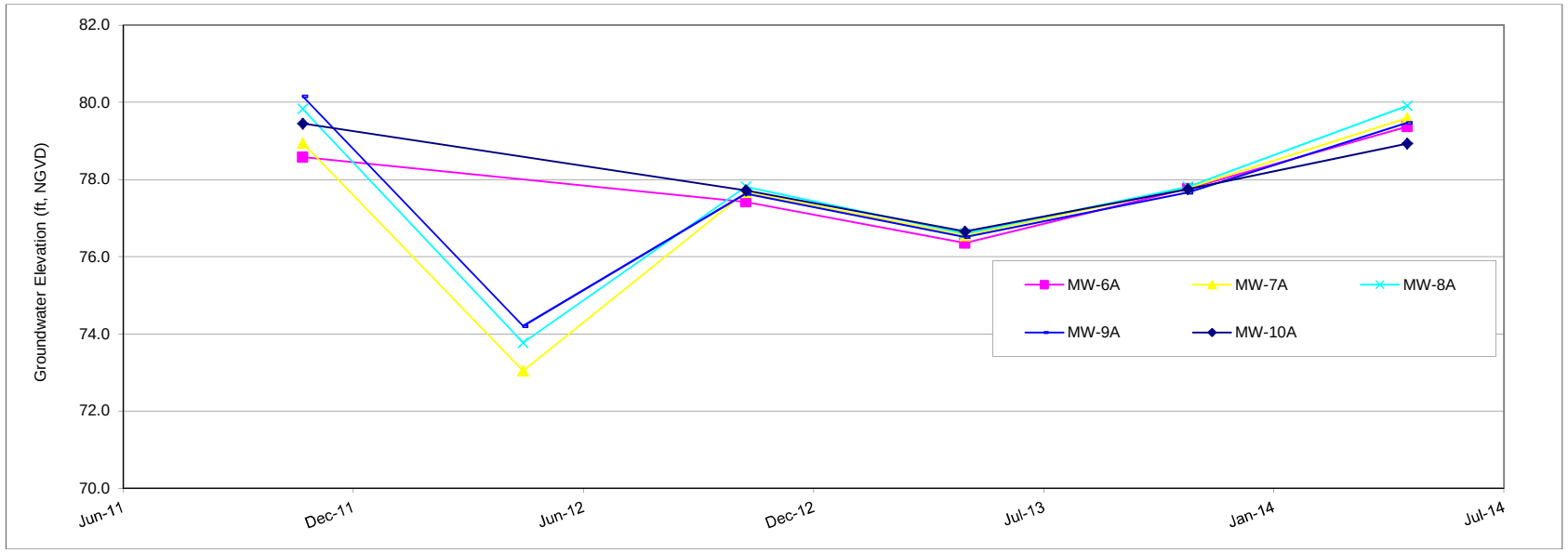
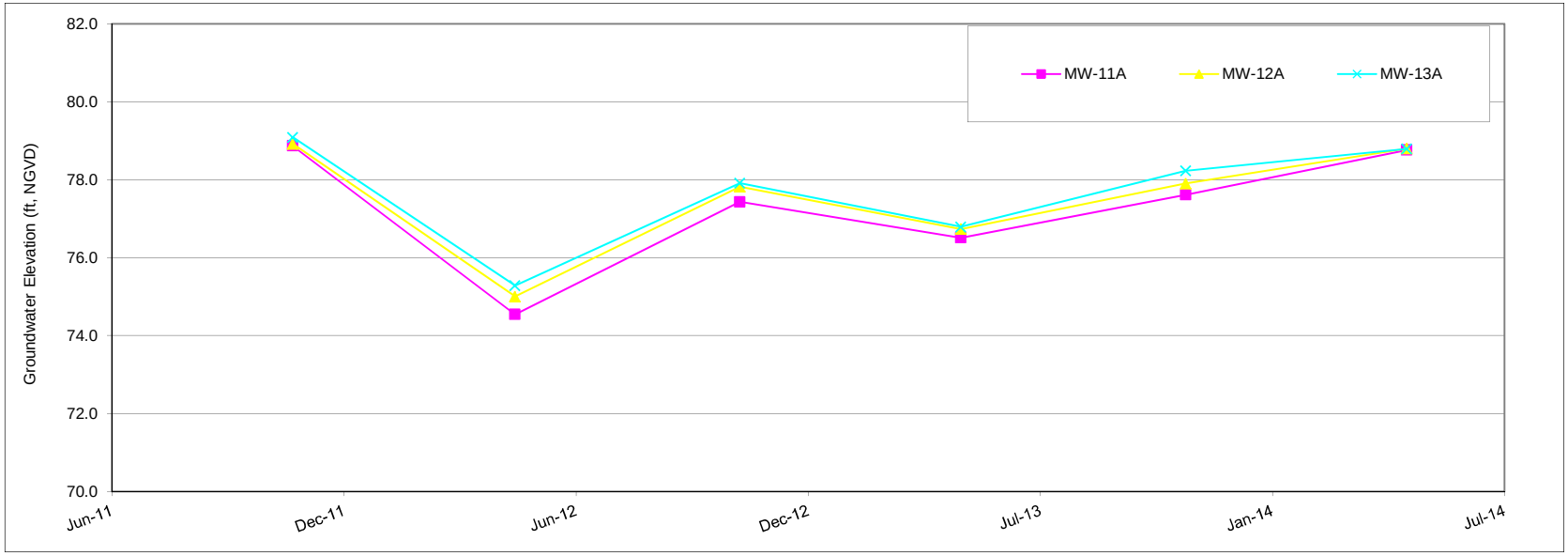


Figure 11-1
Hydrograph of "A" Groundwater Zone (Shallow) Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility



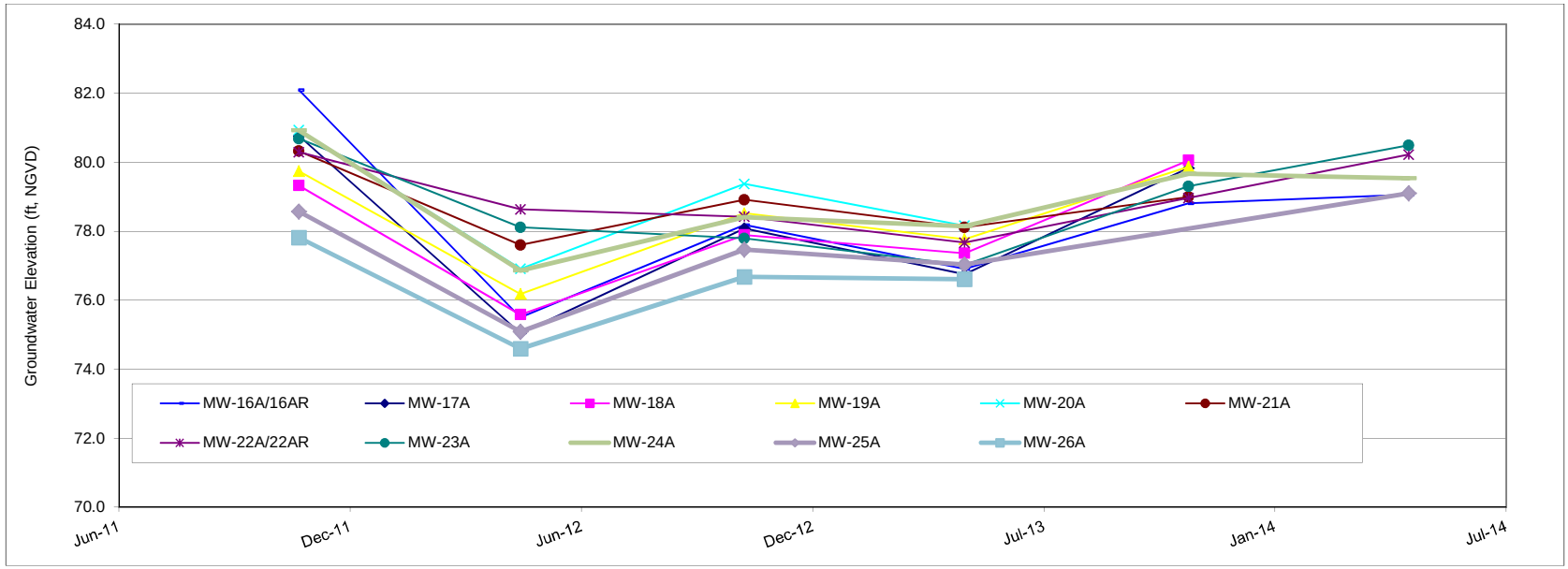
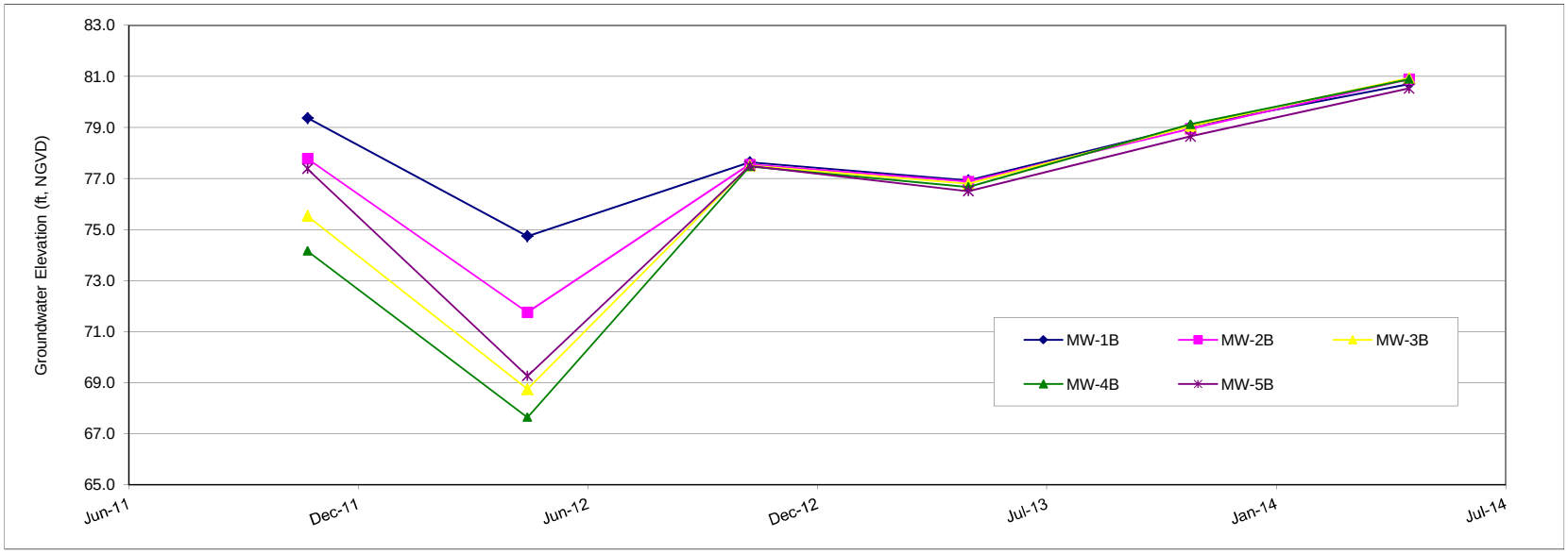


Figure 11-2
Hydrograph of "B" Groundwater Zone (Intermediate) Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility



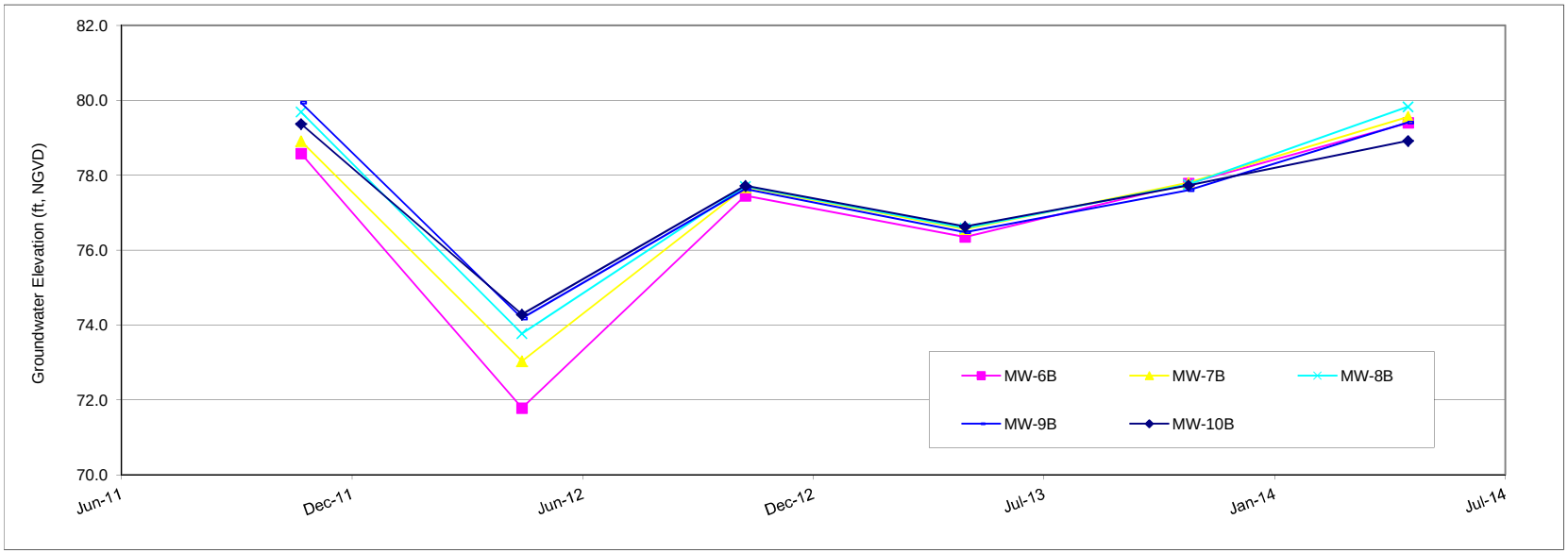
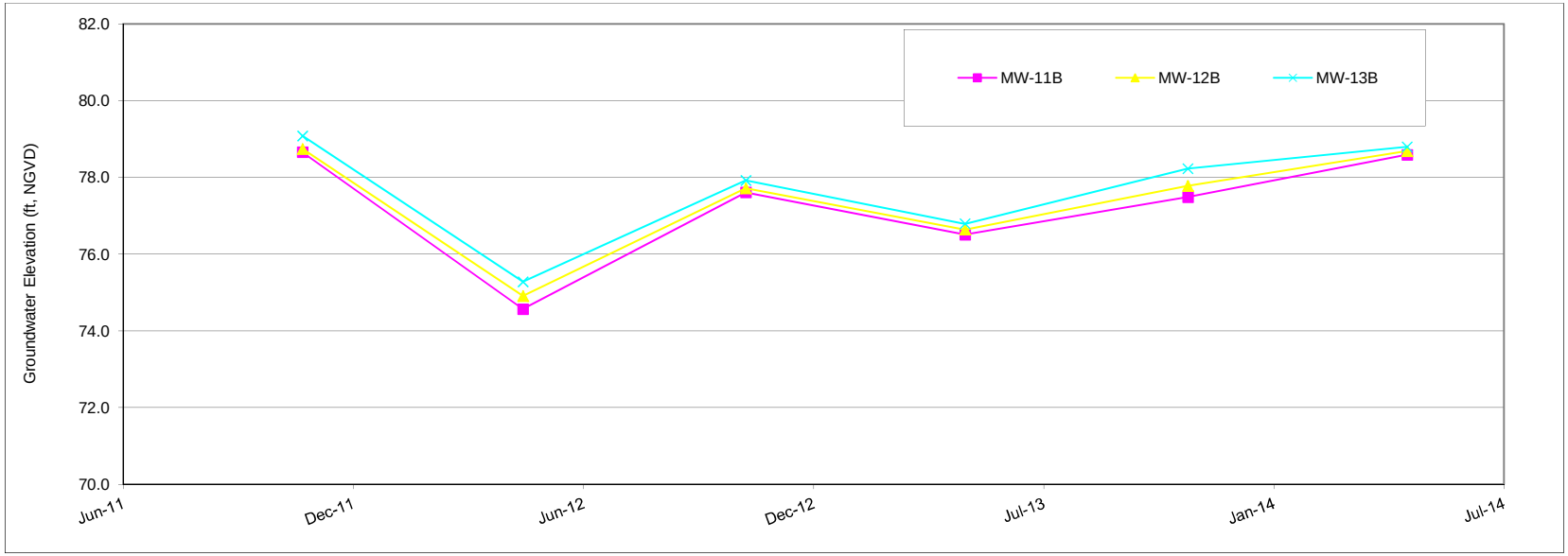


Figure 11-2
Hydrograph of "B" Groundwater Zone (Intermediate) Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility



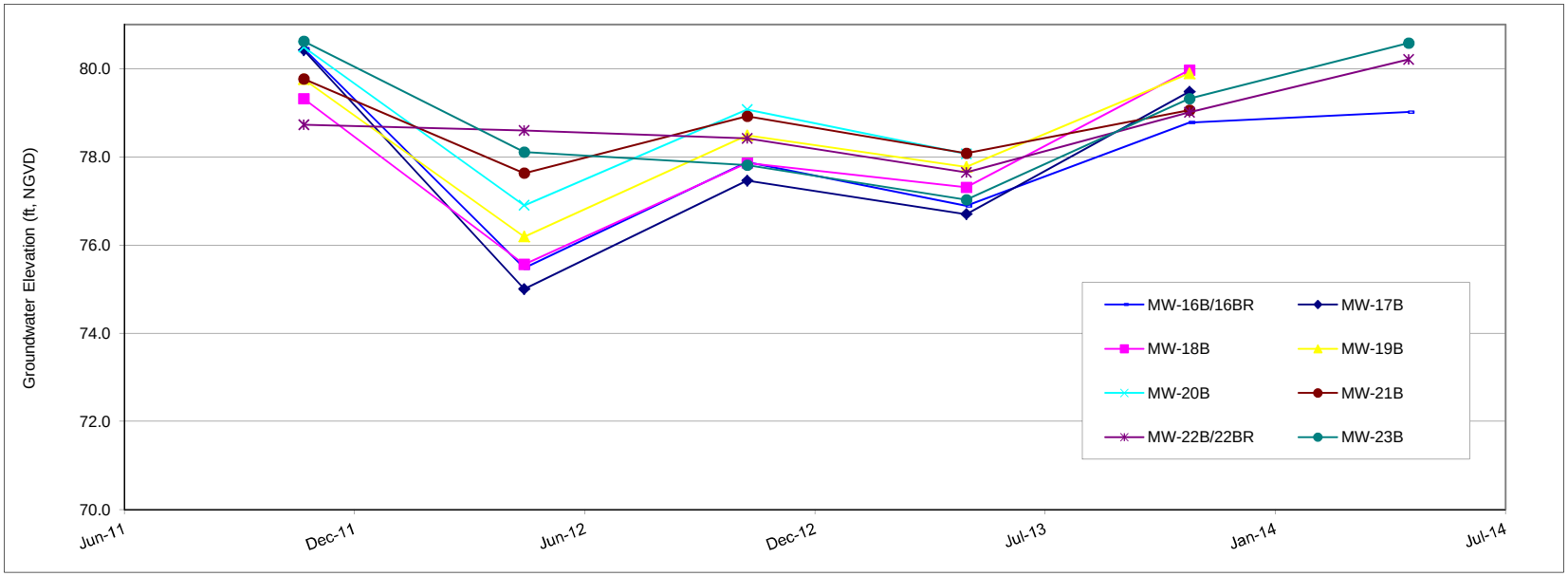
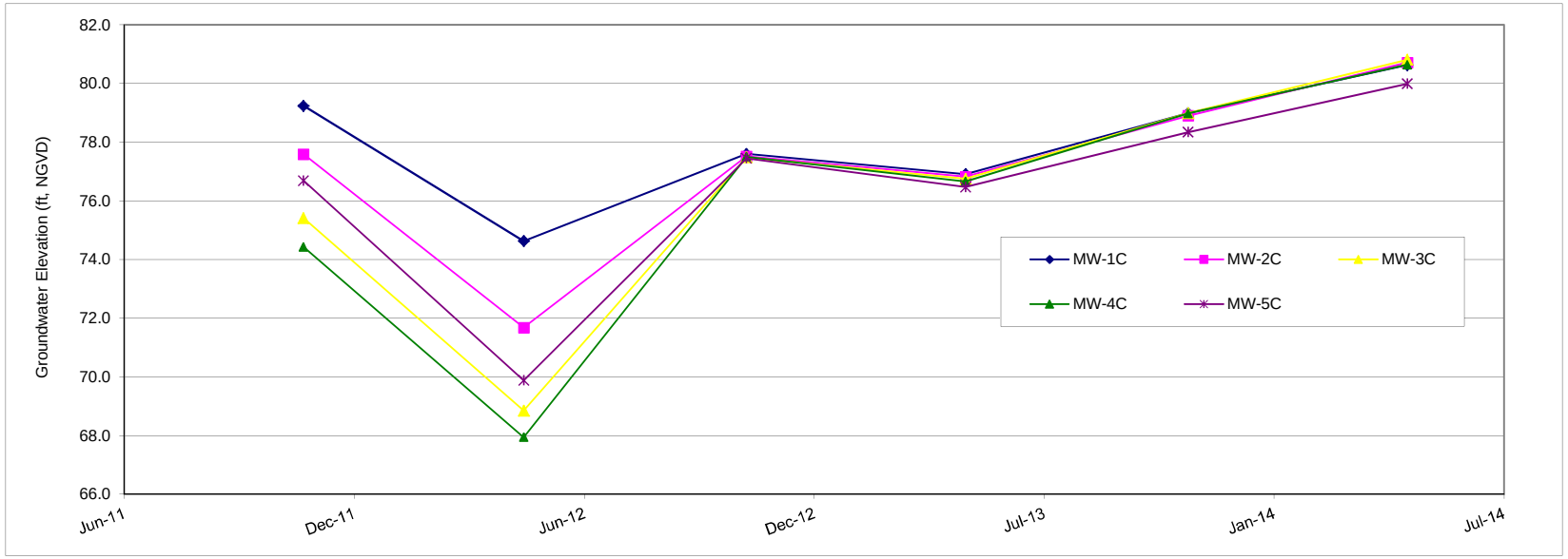


Figure 11-3
Hydrograph of "C" Groundwater Zone (Deep) Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility



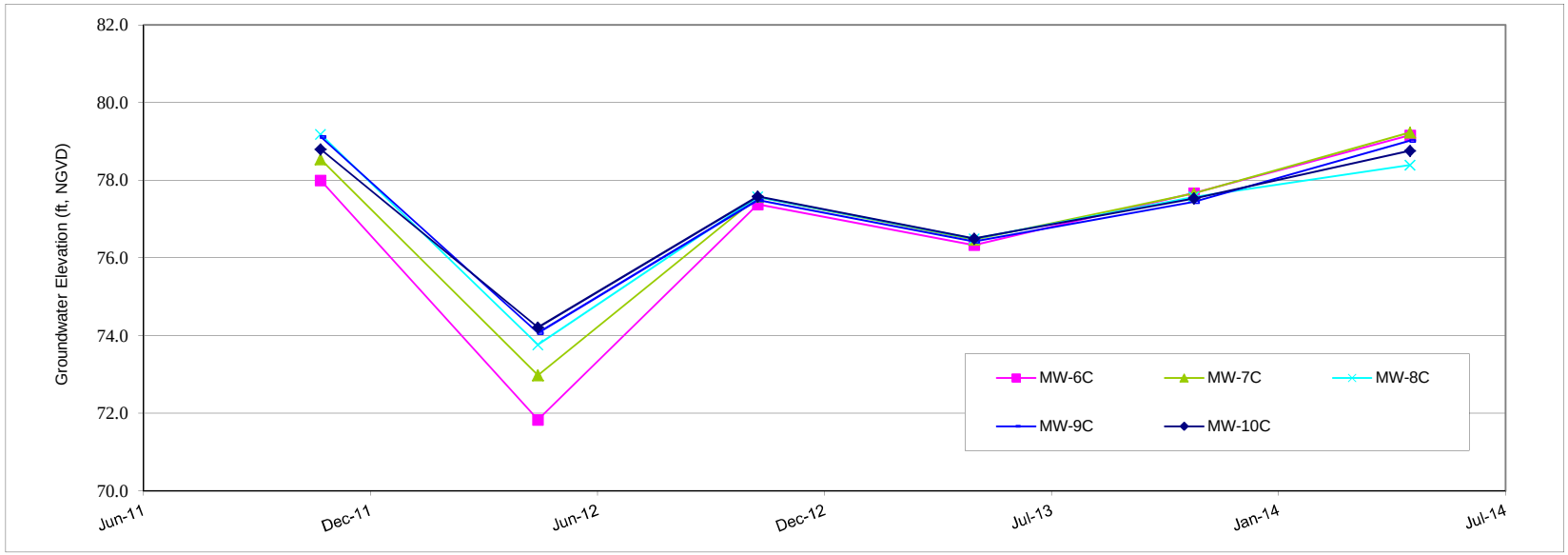
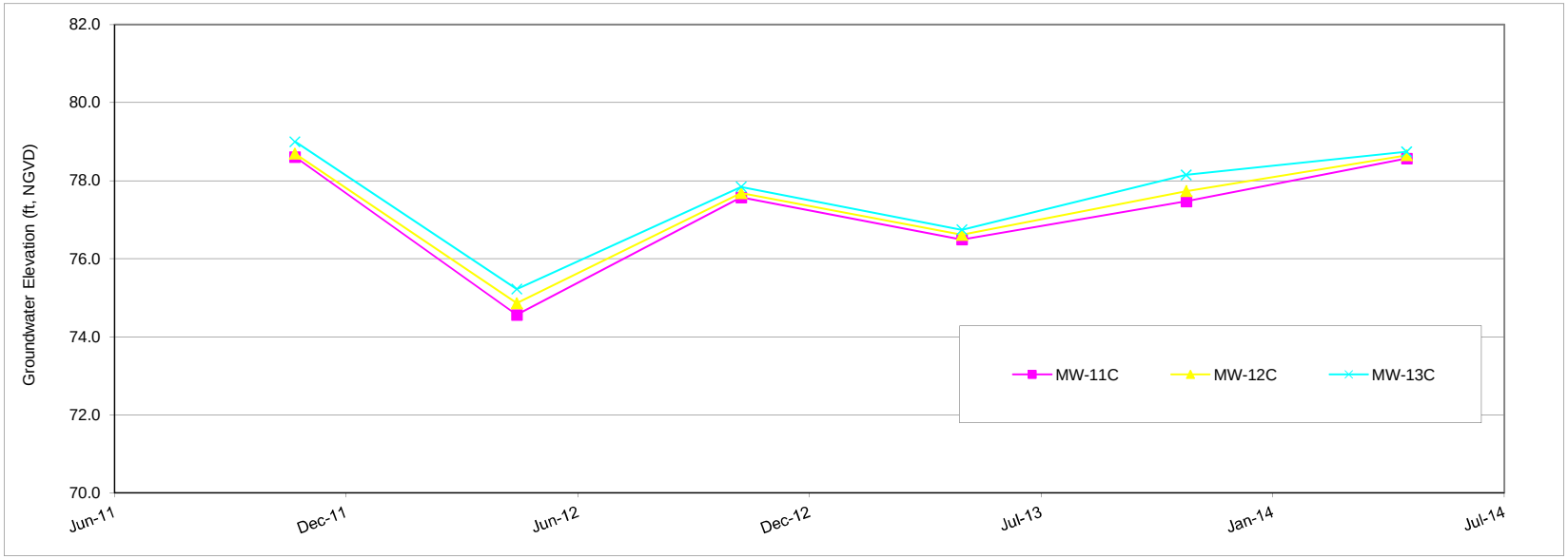


Figure 11-3
Hydrograph of "C" Groundwater Zone (Deep) Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility



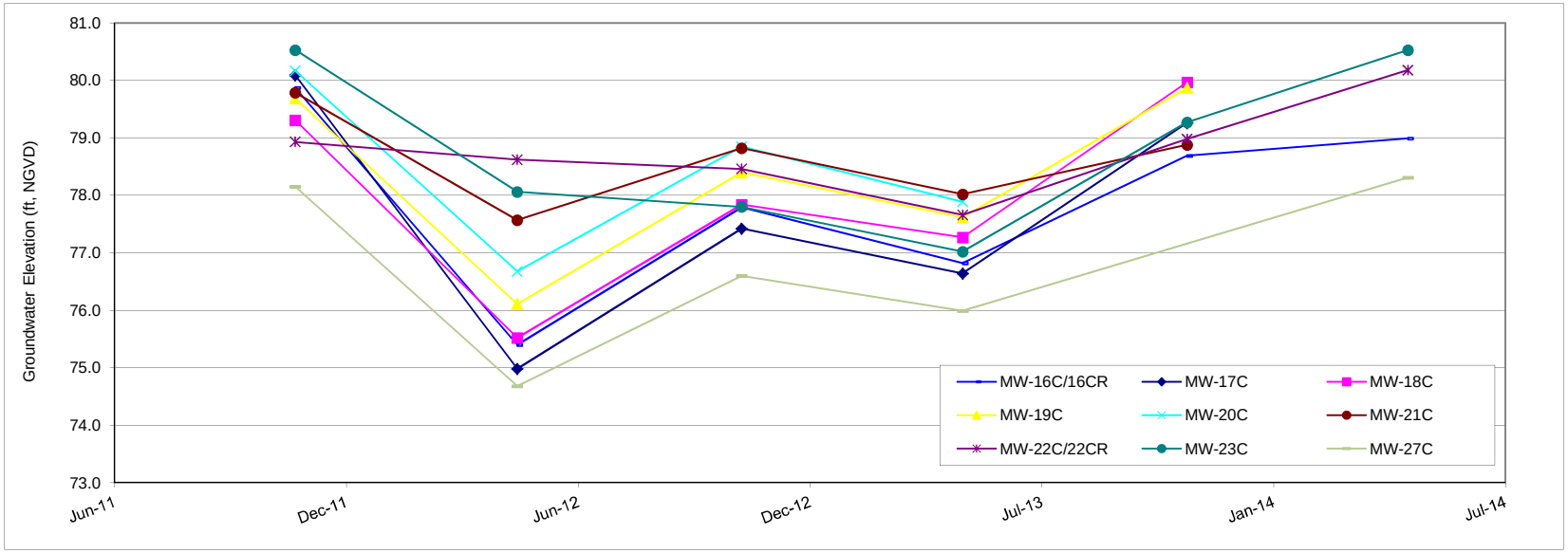
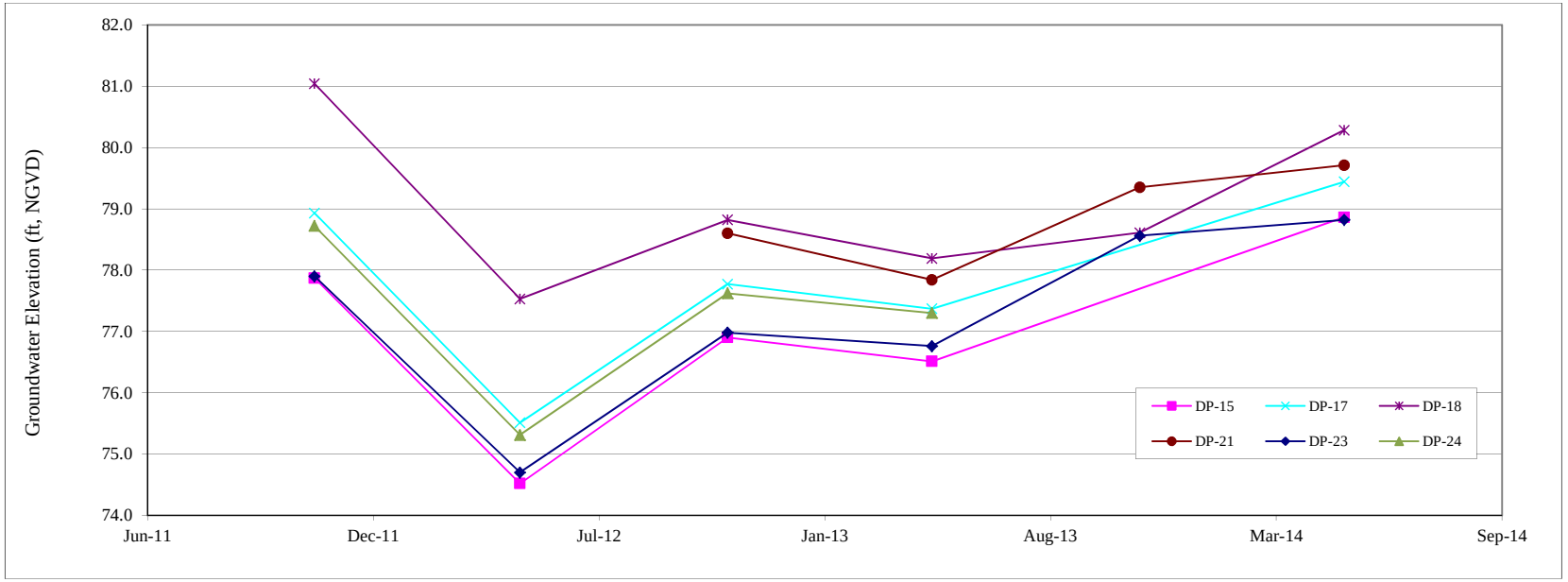


Figure 11-4
Hydrograph for Piezometers
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility



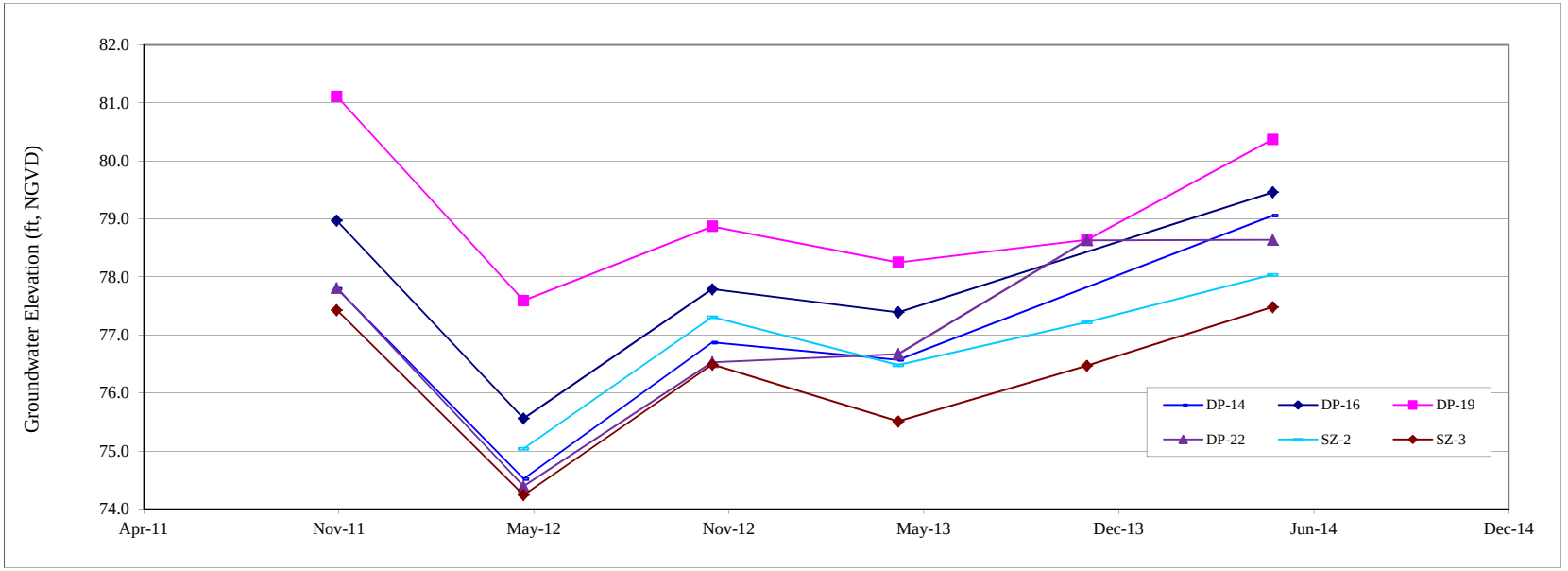
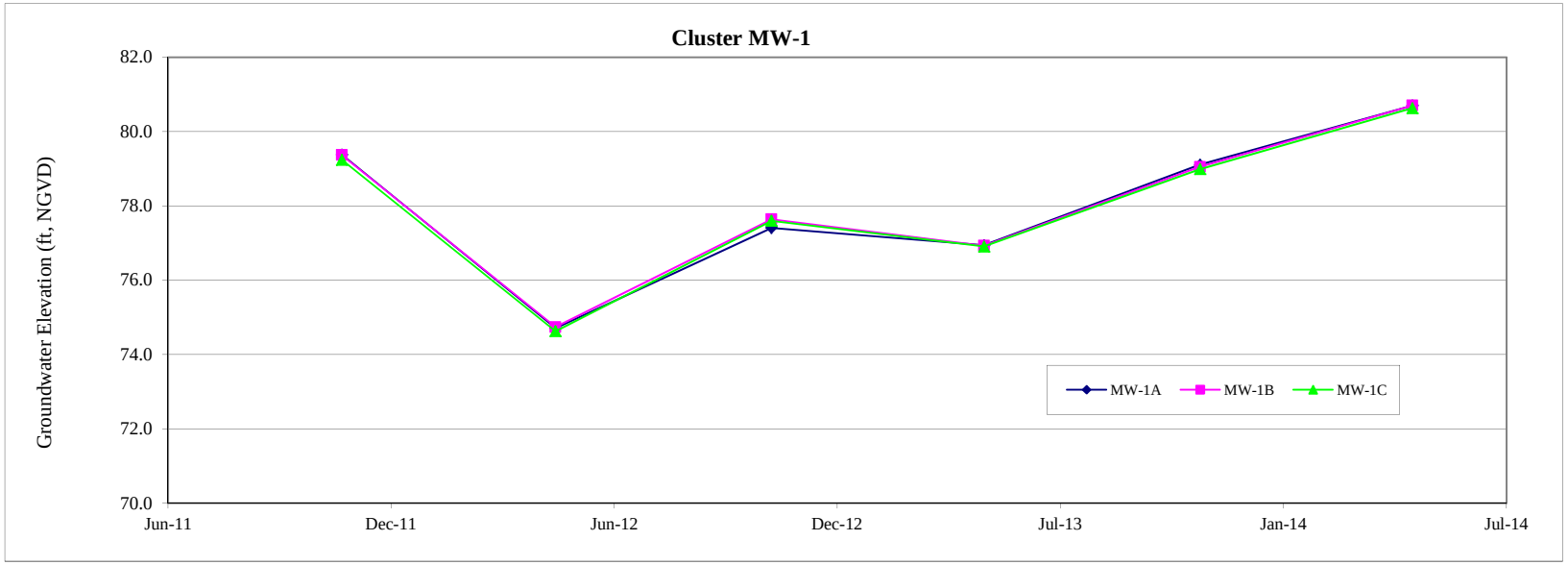


Figure 11-5
Hydrographs of Vertical Gradient
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility



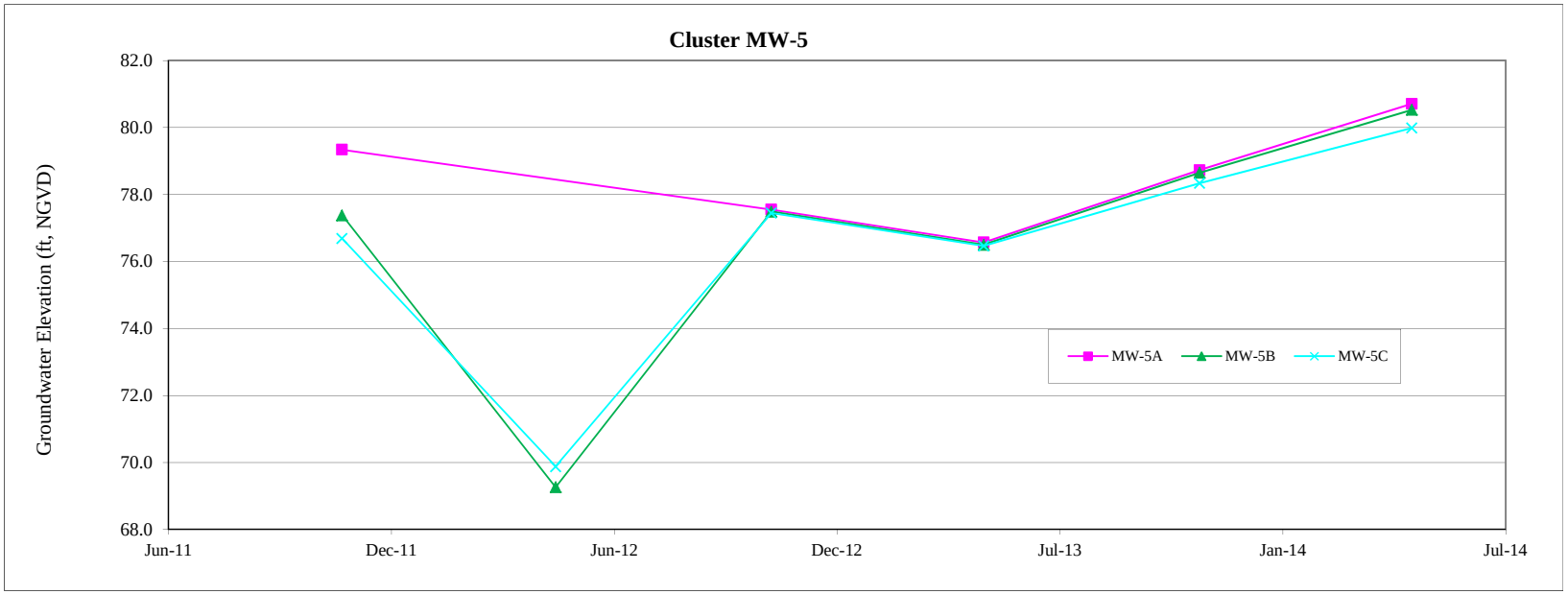
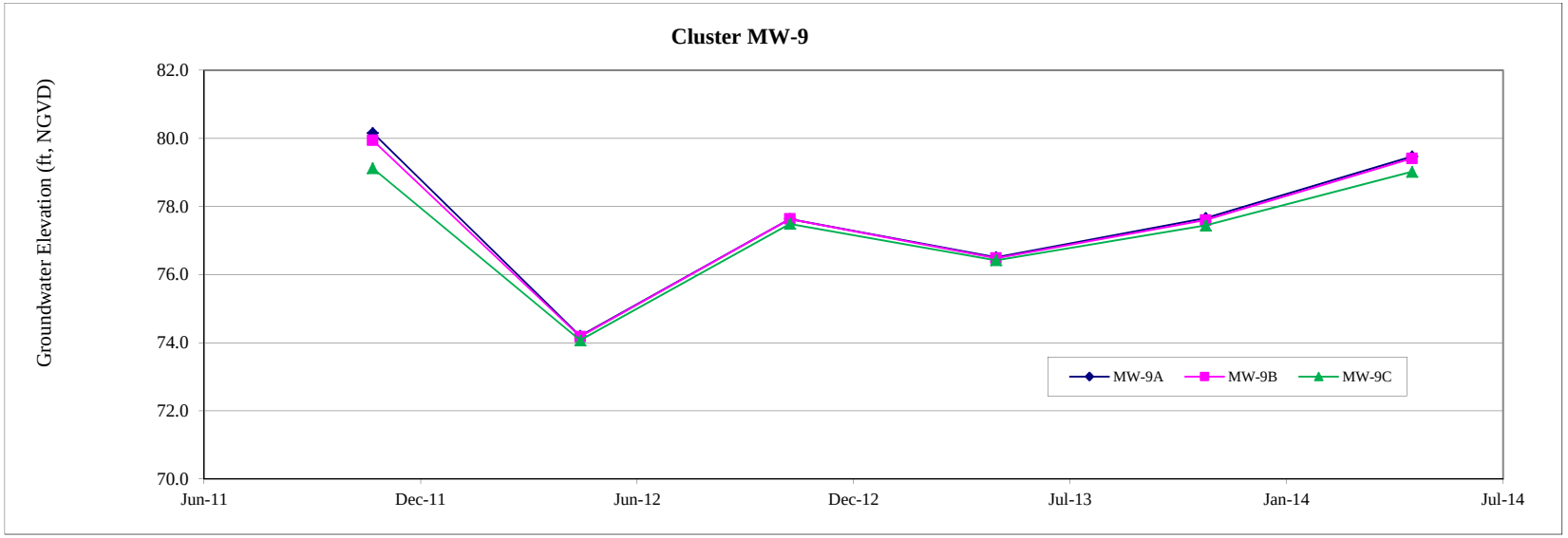
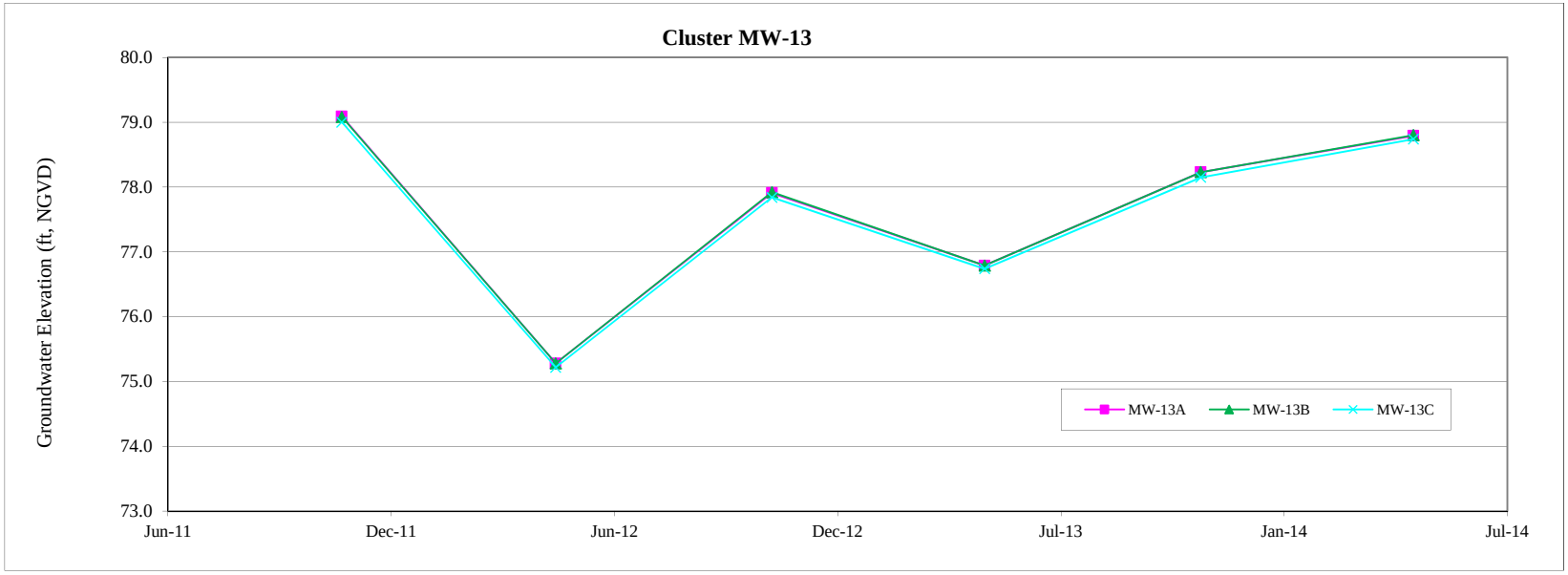


Figure 11-5
Hydrographs of Vertical Gradient
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility





APPENDIX A

CD CONTAINING LABORATORY REPORTS FOR 15TH – 20TH SEMI-ANNUAL MONITORING EVENTS

(NOT INCLUDED IN ELECTRONIC SUBMITAL)

APPENDIX B

TABLES SHOWING DETECTED PARAMETERS WITH NO REGULATORY LEVEL EXCEEDANCES

Table B-1
1,4-Dichlorobenzene Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1A	B	2.97	0.16 u	1.2	2.0	3.3	--	--	2.6
MW-2A	B	0.16 u	--	0.2 u	0.16 u	0.16 u	--	--	0.16 u
MW-3A	B	0.16 u	--	3.4	4.6	2.1	--	--	1.2
MW-4A	B	0.16 u	--	0.2 u	0.16 u	0.16 u	--	--	0.16 u
MW-5A	B	0.16 u	--	0.2 u	0.16 u	0.16 u	--	--	0.16 u
MW-6A	B	0.16 u	--	0.2 u	0.16 u	0.16 u	--	--	0.16 u
MW-7A	D	0.16 u	0.16 u	0.2 u	0.16 u	0.16 u	--	--	0.16 u
MW-8A	D	0.16 u	0.16 u	1.1	0.65 i	0.16 u	--	--	1.3
MW-9A	D	1.46	--	0.2 u	0.26 i	0.16 u	--	--	1.5
MW-10A	D	0.16 u	0.16 u	0.2 u	0.16 u	0.16 u	--	--	0.16 u
MW-11A	D	0.32 i	0.16 u	0.3 i	0.16 u	1.5	--	--	1.5
MW-12A	D	0.16 u	0.16 u	0.2 u	0.16 u	0.16 u	--	--	0.16 u
MW-13A	D	0.16 u	0.16 u	0.2 u	0.16 u	0.16 u	--	--	0.16 u
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	0.16 u	0.16 u	0.16 u	0.16 u	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				0.16 u	--	--	0.16 u
MW-17A	D	--	--	--	--	0.16 u	--	--	AB
MW-18A	D	--	--	--	--	0.16 u	--	--	AB
MW-19A	D	0.16 u	--	0.16 u	0.16 u	0.16 u	--	--	AB
MW-20A	D	--	--	0.16 u	0.16 u	MW-20A abandoned in July 2013			
MW-21A	D	--	--	0.16 u	0.16 u	0.16 u	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	0.16 u	0.16 u	0.16 u	--	--	0.16 u
MW-23A	B	0.16 u	--	0.16 u	0.16 u	0.16 u	--	--	0.16 u
CW-1A	C	CW-1A installed in November 2013					0.16 u	0.16 u	0.16 u
CW-2A	C	CW-2A installed in November 2013					0.16 u	0.16 u	0.16 u
CW-3A	C	CW-3A installed in November 2013					0.16 u	0.16 u	0.16 u
MW-1B	B	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-2B	B	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-3B	B	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-4B	B	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-5B	B	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-6B	B	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-7B	D	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-8B	D	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-9B	D	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-10B	D	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-11B	D	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-12B	D	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-13B	D	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	0.16 u	0.16 u	0.16 u	0.16 u	MW-16B abandoned in July 2013			
MW-16BR	D	MW-16BR installed October 2013				0.16 u	--	--	0.16 u
MW-17B	D	--	--	--	--	0.16 u	--	--	AB
MW-18B	D	--	--	--	--	0.16 u	--	--	AB
MW-19B	D	--	0.16 u	--	0.16 u	--	--	--	AB
MW-20B	D	--	--	--	0.16 u	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	0.16 u	--	--	--	AB
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR	B	NI	--	--	0.16 u	--	--	--	0.16 u
MW-23B	B	--	0.16 u	--	0.16 u	--	--	--	0.16 u

Table B-1
1,4-Dichlorobenzene Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1C	B	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-2C	B	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-3C	B	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-4C	B	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-5C	B	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-6C	B	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-7C	D	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-8C	D	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-9C	D	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-10C	D	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-11C	D	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-12C	D	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-13C	D	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	0.16 u	0.16 u	0.16 u	0.16 u	MW-16C abandoned in July 2013			
MW-16CR	D	MW-16CR installed October 2013				0.16 u	--	--	--
MW-17C	D	--	--	--	--	0.16 u	--	--	AB
MW-18C	D	--	--	--	--	0.16 u	--	--	AB
MW-19C	D	0.16 u	--	0.16 u	--	0.16 u	--	--	AB
MW-20C	D	--	--	0.16 u	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	0.16 u	--	0.16 u	--	--	AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR	B	NI	--	0.16 u	--	0.16 u	--	--	--
MW-23C	B	0.16 u	--	0.16 u	--	0.16 u	--	--	--

Notes:

Semi = semi-annual monitoring event

Cmp = compliance monitoring event

µg/L=micrograms per liter

-- = Not Sampled

u = Not detected at value represented

i = Value is estimated to be between method detection limit and practical quantitation limit.

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections above the PQL are shown in shaded cells (green color)

Constituent detections reported between the MDL and PQL are shown in shaded cells (blue color)

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

Groundwater cleanup target level = 75 µg/L

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table B-2
Barium Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1A	B	3.3	21.6	93.1	115	92.2	--	--	71.9
MW-2A	B	15.0	--	11.7	12.0	32.6	--	--	43.0
MW-3A	B	41.7	--	29.9	31.7	19.5	--	--	22.1
MW-4A	B	24.8	--	37.1	39.1	45.6	--	--	54.4
MW-5A	B	64.2	--	47.4	34.7	12.1	--	--	7.9
MW-6A	B	8.2	--	7.1	6.1	6.6	--	--	11.0
MW-7A	D	18.7	18.3	33.9	31.1	21.2	--	--	17.0
MW-8A	D	30.7	31.5	95.7	39.3	35.6	--	--	49.7
MW-9A	D	3.9	15.2	75.0	82.0	5.9	--	--	8.4
MW-10A	D	47.8	--	22.5	46.7	8.2	--	--	8.2
MW-11A	D	44.8	15.2	45.3	15.8	49.2	--	--	53.2
MW-12A	D	15.6	20.2	14.3	7.5	61.7	--	--	20.7
MW-13A	D	13.3	10.9	19.2	13.4	47.8	--	--	36.0
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	11.6	8.6	13.6	10.8	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				27.2	--	--	15.4
MW-17A	D	--	--	--	--	57.4	--	--	AB
MW-18A	D	--	--	--	--	16.0	--	--	AB
MW-19A	D	35.2	22.1	36.0	35.8	53.9	--	--	AB
MW-20A	D	--	--	65.1	22.0	MW-20A abandoned in July 2013			
MW-21A	D	--	--	92.8	107	41.4	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	14.3	7.5	61.7	--	--	27.0
MW-23A	B	17.9	8.4	9.7	13.7	21.1	--	--	15.2
CW-1A	C	CW-1A installed in November 2013					55.2	46.4	33.3
CW-2A	C	CW-2A installed in November 2013					54.0	54.1	54.2
CW-3A	C	CW-3A installed in November 2013					173	108	121
MW-1B	B	--	5.5	--	6.6	--	--	--	12.0
MW-2B	B	--	6.8	--	8.1	--	--	--	9.0
MW-3B	B	--	26.8	--	26.5	--	--	--	181
MW-4B	B	--	16.6	--	18.3	--	--	--	94.0
MW-5B	B	--	14.9	--	77.6	--	--	--	186
MW-6B	B	--	20.4	--	26.1	--	--	--	20.9
MW-7B	D	--	136	--	210	--	--	--	87.6
MW-8B	D	--	31.2	--	76.9	--	--	--	137
MW-9B	D	--	71.2	--	105	--	--	--	41.0
MW-10B	D	--	69.2	--	104	--	--	--	38.9
MW-11B	D	--	36.5	--	32.6	--	--	--	18.0
MW-12B	D	--	37.7	--	38.1	--	--	--	32.5
MW-13B	D	--	18.3	--	20.7	--	--	--	19.2
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	17.0	19.9	13.4	24.9	MW-16B abandoned in July 2013			
MW-16BR		MW----16BR installed October 2013				20.2	--	--	14.3
MW-17B	D	--	--	--	--	43.7	--	--	AB
MW-18B	D	--	--	--	--	7.7	--	--	AB
MW-19B	D	--	28.0	--	30.8	--	--	--	AB
MW-20B	D	--	--	--	58.2	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	12.1	--	--	--	AB
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR		NI	--	--	53.9	--	--	--	14.3
MW-23B	B	--	92.1	--	103	--	--	--	114

Table B-2
Barium Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1C	B	12.7	--	8.2	--	14.2	--	--	--
MW-2C	B	11.9	--	12.7	--	13.4	--	--	--
MW-3C	B	8.4	--	8.8	--	11.2	--	--	--
MW-4C	B	6.9	--	8.3	--	9.0	--	--	--
MW-5C	B	16.7	--	18.5	--	16.5	--	--	--
MW-6C	B	26.5	--	26.0	--	25.0	--	--	--
MW-7C	D	23.3	--	21.9	--	21.9	--	--	--
MW-8C	D	17.4	--	62.5	--	140.0	--	--	--
MW-9C	D	25.2	--	30.6	--	81.1	--	--	--
MW-10C	D	23.7	--	24.3	--	39.1	--	--	--
MW-11C	D	12.6	--	12.6	--	10.6	--	--	--
MW-12C	D	19	--	20.1	--	19.4	--	--	--
MW-13C	D	21.5	--	21.6	--	21.6	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	14.1	12.7	13.1	13.1	MW-16C abandoned in July 2013			
MW-16CR		MW----16CR installed October 2013				42.3	--	--	--
MW-17C	D	--	--	--	--	15.2	--	--	AB
MW-18C	D	--	--	--	--	30.6	--	--	AB
MW-19C	D	47.9	--	59.1	--	59.9	--	--	AB
MW-20C	D	--	--	72.0	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	69.6	--	78.5	--	--	AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR		NI	--	159	--	11.1	--	--	--
MW-23C	B	8.4	--	8.7	--	8.8	--	--	--

Notes:

Semi = semi-annual monitoring event

Cmp = compliance monitoring event

µg/L=micrograms per liter

-- = Not Sampled

u = Not detected at value represented

i = Value is estimated to be between method detection limit and practical quantitation limit.

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections above the PQL are shown in shaded cells (green color)

Constituent detections reported between the MDL and PQL are shown in shaded cells (blue color)

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

Groundwater cleanup target level = 2,000 µg/L

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table B-3
Beryllium Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1A	B	0.04 u	0.04 u	0.04 u	0.04 u	0.06 i	--	--	0.04 i
MW-2A	B	0.08 i	--	0.04 u	0.04 u	0.08 i	--	--	0.12 i
MW-3A	B	0.04 u	--	0.04 u	0.04 u	0.05 i	--	--	0.04 u
MW-4A	B	0.04 i	--	0.04 u	0.04 u	0.05 i	--	--	0.04 u
MW-5A	B	0.06 i	--	0.04 u	0.04 u	0.04 u	--	--	0.04 u
MW-6A	B	0.04 u	--	0.04 u	0.04 u	0.04 u	--	--	0.04 u
MW-7A	D	0.04 u	0.04 u	0.04 u	0.04 u	0.04 u	--	--	0.04 u
MW-8A	D	0.11 i	0.05 i	0.51	0.36 i	0.33 i	--	--	0.26 i
MW-9A	D	0.04 u	0.04 u	0.04 u	0.04 i	0.04 u	--	--	0.04 u
MW-10A	D	0.04 u	--	0.04 u	0.04 u	0.04 u	--	--	0.04 u
MW-11A	D	0.13 i	0.04 i	0.04 u	0.04 i	0.18 i	--	--	0.10 i
MW-12A	D	0.07 i	0.04 u	0.04 u	0.04 u	0.04 u	--	--	0.11 i
MW-13A	D	0.06 i i	0.04 u	0.06 i	0.07 i	0.07 i	--	--	0.06 i
MW-14A	D	MW--14A abandoned in July 2007							
MW-15A	D	MW--15A abandoned in July 2007							
MW-16A	D	0.05 i	0.04 u	0.04 u	0.04 u	MW--16A abandoned in July 2013			
MW-16AR	D	MW--16AR installed October 2013				0.04 u	--	--	0.04 u
MW-17A	D	--	--	--	--	0.14 i	--	--	AB
MW-18A	D	--	--	--	--	0.04 u	--	--	AB
MW-19A	D	0.65	0.53	0.04 u	0.56	0.06 i	--	--	AB
MW-20A	D	--	--	0.04 u	0.04 u	MW--20A abandoned in July 2013			
MW-21A	D	--	--	0.21 i	0.17 i	0.64	--	--	AB
MW-22A	B	--	MW--22A abandoned in November 2011						
MW-22AR	B	NI	--	0.04 u	0.04 u	0.04 u	--	--	0.04 u
MW-23A	B	0.05 i	0.04 u	0.04 u	0.04 u	0.04 u	--	--	0.04 u
CW-1A	C	CW-1A installed in November 2013					0.15 i	0.06 i	0.05 i
CW-2A	C	CW-2A installed in November 2013					0.54	0.38 i	0.36 i
CW-3A	C	CW-3A installed in November 2013					0.63	0.67	0.61
MW-1B	B	--	0.04 u	--	0.04 u	--	--	--	0.04 u
MW-2B	B	--	0.04 u	--	0.04 u	--	--	--	0.04 i
MW-3B	B	--	0.07 i	--	0.04 u	--	--	--	0.69
MW-4B	B	--	0.06 i	--	0.10 i	--	--	--	1.26
MW-5B	B	--	0.09 i	--	0.39 i	--	--	--	0.89
MW-6B	B	--	0.06 i	--	0.04 u	--	--	--	0.07 i
MW-7B	D	--	0.14 i	--	0.14 i	--	--	--	0.44 i
MW-8B	D	--	0.04 u	--	0.10 i	--	--	--	0.12 i
MW-9B	D	--	0.11 i	--	1.04	--	--	--	2.32
MW-10B	D	--	0.21 i	--	0.36 i	--	--	--	0.91
MW-11B	D	--	0.05 i	--	0.07 i	--	--	--	0.04 u
MW-12B	D	--	0.04 u	--	0.05 i	--	--	--	0.04 u
MW-13B	D	--	0.04 u	--	0.06 i	--	--	--	0.04 i
MW-14B	D	MW--14B abandoned in July 2007							
MW-15B	D	MW--15B abandoned in July 2007							
MW-16B	D	0.04 i	0.04 u	0.04 u	0.04 u	MW--16B abandoned in July 2013			
MW-16BR	D	MW--16BR installed October 2013				0.04 u	--	--	0.04 u
MW-17B	D	--	--	--	--	0.05 i	--	--	AB
MW-18B	D	--	--	--	--	0.04 u	--	--	AB
MW-19B	D	--	0.04 u	--	0.04 u	--	--	--	AB
MW-20B	D	--	--	--	0.17 i	MW--20B abandoned in July 2013			
MW-21B	D	--	--	--	0.04 u	--	--	--	AB
MW-22B	B	--	MW--22B abandoned in November 2011						
MW-22BR	B	NI	--	--	0.18 i	--	--	--	0.04 u
MW-23B	B	--	0.15 i	--	0.18 i	--	--	--	0.15 i

Table B-3
Beryllium Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1C	B	0.06 i	--	0.04 u	--	0.07 i	--	--	--
MW-2C	B	0.15 i	--	0.08 i	--	0.17 i	--	--	--
MW-3C	B	0.04 u	--	0.04 u	--	0.06 i	--	--	--
MW-4C	B	0.04 u	--	0.04 u	--	0.04 u	--	--	--
MW-5C	B	0.05 i	--	0.04 u	--	0.05 i	--	--	--
MW-6C	B	0.09 i	--	0.04 u	--	0.09 i	--	--	--
MW-7C	D	0.06 i	--	0.04 u	--	0.09 i	--	--	--
MW-8C	D	0.05 i	--	0.08 i	--	0.31 i	--	--	--
MW-9C	D	0.07 i	--	0.04 i	--	0.13 i	--	--	--
MW-10C	D	0.06 i	--	0.04 u	--	0.06 i	--	--	--
MW-11C	D	0.04 u	--	0.04 u	--	0.04 u	--	--	--
MW-12C	D	0.13 i	--	0.14 i	--	0.13 i	--	--	--
MW-13C	D	0.08 i	--	0.06 i	--	0.07 i	--	--	--
MW-14C	D	MW--14C abandoned in July 2007							
MW-15C	D	MW--15C abandoned in July 2007							
MW-16C	D	0.07 i	0.04 u	0.04 u	0.0 u	MW--16C abandoned in July 2013			
MW-16CR	D	MW--16CR installed October 2013				0.07 i	--	--	--
MW-17C	D	--	--	--	--	0.04 i	--	--	AB
MW-18C	D	--	--	--	--	0.09 i	--	--	AB
MW-19C	D	0.28 i	--	0.27 i	--	0.40 i	--	--	AB
MW-20C	D	--	--	0.05 i	--	MW--20C abandoned in July 2013			
MW-21C	D	--	--	0.09 i	--	0.32 i	--	--	AB
MW-22C	B	--	MW--22C abandoned in November 2011						
MW-22CR	B	NI	--	0.71	--	0.04 u	--	--	--
MW-23C	B	0.04 u	--	0.04 u	--	0.04 u	--	--	--

Notes:

Semi = semi-annual monitoring event

Cmp = compliance monitoring event

µg/L=micrograms per liter

-- = Not Sampled

u = Not detected at value represented

i = Value is estimated to be between method detection limit and practical quantitation limit.

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections above the PQL are shown in shaded cells (green color)

Constituent detections reported between the MDL and PQL are shown in shaded cells (blue color)

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

Groundwater cleanup target level = 4 µg/L

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table B-4
Cadmium Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1A	B	0.12 u	0.1 u	0.1 u	0.1 u	0.1 u	--	--	--
MW-2A	B	0.12 u	--	0.1 u	0.1 u	0.1 u	--	--	--
MW-3A	B	0.12 u	--	0.1 u	0.1 u	0.10 u	--	--	--
MW-4A	B	0.12 u	--	0.1 u	0.1 u	0.10 u	--	--	--
MW-5A	B	0.12 u	--	0.1 u	0.1 u	0.10 u	--	--	--
MW-6A	B	0.12 u	--	0.1 u	0.1 u	0.1 u	--	--	--
MW-7A	D	0.12 u	0.1 u	0.1 u	0.1 u	0.1 u	--	--	--
MW-8A	D	0.12 u	0.1 u	0.1 u	0.1 u	0.1 u	--	--	--
MW-9A	D	0.12 u	0.1 u	0.1 u	0.1 u	0.1 u	--	--	--
MW-10A	D	0.12 u	--	0.1 u	0.1 u	0.1 u	--	--	--
MW-11A	D	0.12 u	0.1 u	0.1 u	0.1 u	0.1 u	--	--	--
MW-12A	D	0.12 i	0.1 u	0.1 u	0.1 u	0.1 u	--	--	--
MW-13A	D	0.12 u	0.1 u	0.1 u	0.1 u	0.1 u	--	--	--
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	0.12 u	0.13 i	0.1 u	0.1 u	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				0.1 u	--	--	--
MW-17A	D	--	--	--	--	0.2 i	--	--	AB
MW-18A	D	--	--	--	--	0.1 u	--	--	AB
MW-19A	D	0.12 u	0.1 u	0.1 u	0.1 u	0.1 u	--	--	AB
MW-20A	D	--	--	0.2	0.1 u	MW-20A abandoned in July 2013			
MW-21A	D	--	--	1.5	0.41	1.3	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	0.1 u	0.1 u	0.1 u	--	--	--
MW-23A	B	0.12 u	0.1 u	0.1 u	0.1 u	0.1 u	--	--	--
CW-1A	C	CW-1A installed in November 2013					0.87	0.1 u	0.1 u
CW-2A	C	CW-2A installed in November 2013					0.1 u	0.1 u	0.1 u
CW-3A	C	CW-3A installed in November 2013					0.1 u	0.1 u	0.1 u
MW-1B	B	--	0.1 u	--	0.1 u	--	--	--	--
MW-2B	B	--	0.1 u	--	0.1 u	--	--	--	--
MW-3B	B	--	0.1 u	--	0.1 u	--	--	--	--
MW-4B	B	--	0.1 u	--	0.1 u	--	--	--	--
MW-5B	B	--	0.1 u	--	0.1 u	--	--	--	--
MW-6B	B	--	0.1 u	--	0.1 u	--	--	--	--
MW-7B	D	--	0.1 u	--	0.1 u	--	--	--	--
MW-8B	D	--	0.1 u	--	0.1 u	--	--	--	--
MW-9B	D	--	0.1 u	--	0.1 u	--	--	--	--
MW-10B	D	--	0.1 u	--	0.1 u	--	--	--	--
MW-11B	D	--	0.1 u	--	0.1 u	--	--	--	--
MW-12B	D	--	0.1 u	--	0.1 u	--	--	--	--
MW-13B	D	--	0.1 u	--	0.1 u	--	--	--	--
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	0.12 u	0.1 u	0.1 u	0.1 u	MW-16B abandoned in July 2013			
MW-16BR		MW-16BR installed October 2013				0.1 u	--	--	--
MW-17B	D	--	--	--	--	0.1 u	--	--	AB
MW-18B	D	--	--	--	--	0.1 u	--	--	AB
MW-19B	D	--	0.1 u	--	0.1 u	--	--	--	AB
MW-20B	D	--	--	--	0.1 u	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	0.1 u	--	--	--	AB
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR		NI	--	--	0.1 u	--	--	--	--
MW-23B	B	--	0.1 u	--	0.1 u	--	--	--	--

Table B-4
Cadmium Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1C	B	0.12 u	--	0.1 u	--	0.1 u	--	--	--
MW-2C	B	0.12 u	--	0.1 u	--	0.1 u	--	--	--
MW-3C	B	0.12 u	--	0.1 u	--	0.1 u	--	--	--
MW-4C	B	0.12 u	--	0.1 u	--	0.1 u	--	--	--
MW-5C	B	0.12 u	--	0.1 u	--	0.1 u	--	--	--
MW-6C	B	0.12 u	--	0.1 u	--	0.1 u	--	--	--
MW-7C	D	0.12 u	--	0.1 u	--	0.1 u	--	--	--
MW-8C	D	0.12 u	--	0.1 u	--	0.1 u	--	--	--
MW-9C	D	0.12 u	--	0.1 u	--	0.1 u	--	--	--
MW-10C	D	0.12 u	--	0.1 u	--	0.1 u	--	--	--
MW-11C	D	0.12 u	--	0.1 u	--	0.1 u	--	--	--
MW-12C	D	0.12 u	--	0.1 u	--	0.1 u	--	--	--
MW-13C	D	0.12 u	--	0.1 u	--	0.1 u	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	0.12 u	0.1 u	0.1 u	0.1 u	MW-16C abandoned in July 2013			
MW-16CR		MW-16CR installed October 2013				0.1 u	--	--	--
MW-17C	D	--	--	--	--	0.1 u	--	--	AB
MW-18C	D	--	--	--	--	0.1 u	--	--	AB
MW-19C	D	0.12 u	--	0.1 u	--	0.1 u	--	--	AB
MW-20C	D	--	--	0.1 u	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	0.1 u	--	0.1 u	--	--	AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR		NI	--	0.1 u	--	0.1 u	--	--	--
MW-23C	B	0.12 u	--	0.1 u	--	0.1 u	--	--	--

Notes:

Semi = semi-annual monitoring event

Cmp = compliance monitoring event

µg/L=micrograms per liter

-- = Not Sampled

u = Not detected at value represented

i = Value is estimated to be between method detection limit and practical quantitation limit.

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections above the PQL are shown in shaded cells (green color)

Constituent detections reported between the MDL and PQL are shown in shaded cells (blue color)

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

Groundwater cleanup target level = 5 µg/L

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table B-5
Carbon Disulfide Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1A	B	2.4 u	2.4 u	2.4 u	2.4 u	2.4 u	--	--	2.4 u
MW-2A	B	2.4 u	--	2.4 u	2.4 u	2.4 u	--	--	2.4 u
MW-3A	B	2.4 u	--	2.4 u	2.4 u	2.4 u	--	--	2.4 u
MW-4A	B	2.4 u	--	2.4 u	2.4 u	2.4 u	--	--	2.4 u
MW-5A	B	2.4 u	--	2.4 u	2.4 u	2.4 u	--	--	2.4 u
MW-6A	B	2.4 u	--	2.4 u	2.4 u	2.4 u	--	--	2.4 u
MW-7A	D	2.4 u	2.4 u	2.4 u	2.4 u	2.4 u	--	--	2.4 u
MW-8A	D	2.4 u	2.4 u	2.4 u	2.4 u	2.4 u	--	--	2.4 u
MW-9A	D	2.4 u	--	2.4 u	2.4 u	2.4 u	--	--	2.4 u
MW-10A	D	2.4 u	2.4 u	2.4 u	2.4 u	2.4 u	--	--	2.4 u
MW-11A	D	11.5	2.4 u	2.4 u	2.4 u	2.4 u	--	--	2.4 u
MW-12A	D	2.4 u	2.4 u	2.4 u	2.4 u	2.4 u	--	--	2.4 u
MW-13A	D	2.4 u	2.4 u	2.4 u	2.4 u	2.4 u	--	--	2.4 u
MW-14A	D	MW--14A abandoned in July 2007							
MW-15A	D	MW--15A abandoned in July 2007							
MW-16A	D	2.4 u	2.4 u	2.4 u	2.4 u	MW--16A abandoned in July 2013			
MW-16AR	D	MW--16AR installed October 2013				2.4 u	--	--	2.4 u
MW-17A	D	--	--	--	--	2.4 u	--	--	AB
MW-18A	D	--	--	--	--	2.4 u	--	--	AB
MW-19A	D	2.4 u	2.4 u	2.4 u	2.4 u	2.4 u	--	--	AB
MW-20A	D	--	--	--	--	MW--20A abandoned in July 2013			
MW-21A	D	--	--	--	--	--	--	--	AB
MW-22A	B	--	MW--22A abandoned in November 2011						
MW-22AR	B	NI	--	2.4 u	2.4 u	2.4 u	--	--	2.4 u
MW-23A	B	2.4 u	2.4 u	2.4 u	2.4 u	2.4 u	--	--	2.4 u
CW-1A	C	CW-1A installed in November 2013					2.4 u	2.4 u	2.4 u
CW-2A	C	CW-2A installed in November 2013					2.4 u	2.4 u	2.4 u
CW-3A	C	CW-3A installed in November 2013					2.4 u	2.4 u	2.4 u
MW-1B	B	--	2.4 u	--	2.4 u	--	--	--	2.4 u
MW-2B	B	--	2.4 u	--	2.4 u	--	--	--	2.4 u
MW-3B	B	--	2.4 u	--	2.4 u	--	--	--	2.4 u
MW-4B	B	--	2.4 u	--	2.4 u	--	--	--	2.4 u
MW-5B	B	--	2.4 u	--	2.4 u	--	--	--	2.4 u
MW-6B	B	--	2.4 u	--	2.4 u	--	--	--	2.4 u
MW-7B	D	--	2.4 u	--	2.4 u	--	--	--	2.4 u
MW-8B	D	--	2.4 u	--	2.4 u	--	--	--	2.4 u
MW-9B	D	--	2.4 u	--	2.4 u	--	--	--	2.4 u
MW-10B	D	--	2.4 u	--	2.4 u	--	--	--	2.4 u
MW-11B	D	--	2.4 u	--	2.4 u	--	--	--	2.4 u
MW-12B	D	--	2.4 u	--	2.4 u	--	--	--	2.4 u
MW-13B	D	--	2.4 u	--	2.4 u	--	--	--	2.4 u
MW-14B	D	MW--14B abandoned in July 2007							
MW-15B	D	MW--15B abandoned in July 2007							
MW-16B	D	2.4 u	2.4 u	2.4 u	2.4 u	MW--16B abandoned in July 2013			
MW-16BR	D	MW--16BR installed October 2013				2.4 u	--	--	2.4 u
MW-17B	D	--	--	--	--	2.4 u	--	--	AB
MW-18B	D	--	--	--	--	2.4 u	--	--	AB
MW-19B	D	--	2.4 u	--	--	--	--	--	AB
MW-20B	D	--	--	--	--	MW--20B abandoned in July 2013			
MW-21B	D	--	--	--	--	--	--	--	AB
MW-22B	B	--	MW--22B abandoned in November 2011						
MW-22BR	B	NI	--	--	2.4 u	--	--	--	2.4 u
MW-23B	B	--	2.4 u	--	2.4 u	--	--	--	2.4 u

Table B-5
Carbon Disulfide Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1C	B	2.4 u	--	2.4 u	--	2.4 u	--	--	--
MW-2C	B	2.4 u	--	2.4 u	--	2.4 u	--	--	--
MW-3C	B	2.4 u	--	2.4 u	--	2.4 u	--	--	--
MW-4C	B	2.4 u	--	2.4 u	--	2.4 u	--	--	--
MW-5C	B	2.4 u	--	2.4 u	--	2.4 u	--	--	--
MW-6C	B	2.4 u	--	2.4 u	--	2.4 u	--	--	--
MW-7C	D	2.4 u	--	2.4 u	--	2.4 u	--	--	--
MW-8C	D	2.4 u	--	2.4 u	--	2.4 u	--	--	--
MW-9C	D	2.4 u	--	2.4 u	--	2.4 u	--	--	--
MW-10C	D	2.4 u	--	2.4 u	--	2.4 u	--	--	--
MW-11C	D	2.4 u	--	2.4 u	--	2.4 u	--	--	--
MW-12C	D	2.4 u	--	2.4 u	--	2.4 u	--	--	--
MW-13C	D	2.4 u	--	2.4 u	--	2.4 u	--	--	--
MW-14C	D	MW--14C abandoned in July 2007							
MW-15C	D	MW--15C abandoned in July 2007							
MW-16C	D	2.4 u	2.4 u	2.4 u	2.4 u	MW--16C abandoned in July 2013			
MW-16CR	D	MW--16CR installed October 2013				2.40 u	--	--	2.4 u
MW-17C	D	--	--	--	--	2.40 u	--	--	AB
MW-18C	D	--	--	--	--	2.40 u	--	--	AB
MW-19C	D	2.4 u	--	2.4 u	--	2.4 u	--	--	AB
MW-20C	D	--	--	--	--	MW--20C abandoned in July 2013			
MW-21C	D	--	--	--	--	--	--	--	AB
MW-22C	B	--	MW--22C abandoned in November 2011						
MW-22CR	B	NI	--	2.4 u	--	2.4 u	--	--	--
MW-23C	B	2.4 u	--	--	--	--	--	--	--

Notes:

Semi = semi-annual monitoring event

Cmp = compliance monitoring event

µg/L=micrograms per liter

-- = Not Sampled

u = Not detected at value represented

i = Value is estimated to be between method detection limit and practical quantitation limit.

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections above the PQL are shown in shaded cells (green color)

Constituent detections reported between the MDL and PQL are shown in shaded cells (blue color)

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

Groundwater cleanup target level = 700 µg/L

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table B-6
Chlorobenzene Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1A	B	0.50 i	0.16 u	0.16 u	0.26 i	0.59 i	--	--	0.16 u
MW-2A	B	0.16 u	--	0.16 u	0.16 u	0.16 u	--	--	0.16 u
MW-3A	B	0.16 u	--	0.16 u	1.00	0.52 i	--	--	0.16 u
MW-4A	B	0.16 u	--	0.16 u	0.16 u	0.16 u	--	--	0.16 u
MW-5A	B	0.16 u	--	0.16 u	0.16 u	0.16 u	--	--	0.16 u
MW-6A	B	0.16 u	--	0.16 u	0.16 u	0.16 u	--	--	0.16 u
MW-7A	D	0.16 u	0.16 u	0.16 u	0.16 u	0.16 u	--	--	0.16 u
MW-8A	D	0.28 i	0.16 u	0.16 u	0.26 i	0.16 u	--	--	0.16 u
MW-9A	D	0.16 u	--	0.16 u	0.16 u	0.16 u	--	--	0.16 u
MW-10A	D	0.16 u	0.16 u	0.16 u	0.16 u	0.16 u	--	--	0.16 u
MW-11A	D	0.16 u	0.16 u	0.16 u	0.16 u	0.18 i	--	--	0.16 u
MW-12A	D	0.16 u	0.16 u	0.16 u	0.16 u	0.16 u	--	--	0.16 u
MW-13A	D	0.16 u	0.16 u	0.16 u	0.16 u	0.16 u	--	--	0.16 u
MW-14A	D	MW--14A abandoned in July 2007							
MW-15A	D	MW--15A abandoned in July 2007							
MW-16A	D	0.16 u	0.16 u	0.16 u	0.16 u	MW--16A abandoned in July 2013			
MW-16AR	D	MW--16AR installed October 2013				0.16 u	--	--	0.16 u
MW-17A	D	--	--	--	--	0.16 u	--	--	AB
MW-18A	D	--	--	--	--	0.16 u	--	--	AB
MW-19A	D	0.16 u	0.16 u	0.16 u	0.16 u	0.16 u	--	--	AB
MW-20A	D	--	--	0.16 u	0.16 u	MW--20A abandoned in July 2013			
MW-21A	D	--	--	0.16 u	0.16 u	0.16 u	--	--	AB
MW-22A	B	--	MW--22A abandoned in November 2011						
MW-22AR	B	NI	--	0.16 u	0.16 u	0.16 u	--	--	0.16 u
MW-23A	B	0.16 u	0.16 u	0.16 u	0.16 u	0.16 u	--	--	0.16 u
CW-1A	C	CW-1A installed in November 2013					0.16 u	0.16 u	0.16 u
CW-2A	C	CW-2A installed in November 2013					0.16 u	0.16 u	0.16 u
CW-3A	C	CW-3A installed in November 2013					0.16 u	0.16 u	0.16 u
MW-1B	B	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-2B	B	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-3B	B	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-4B	B	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-5B	B	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-6B	B	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-7B	D	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-8B	D	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-9B	D	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-10B	D	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-11B	D	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-12B	D	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-13B	D	--	0.16 u	--	0.16 u	--	--	--	0.16 u
MW-14B	D	MW--14B abandoned in July 2007							
MW-15B	D	MW--15B abandoned in July 2007							
MW-16B	D	0.16 u	0.16 u	0.16 u	0.16 u	MW--16B abandoned in July 2013			
MW-16BR	D	MW--16BR installed October 2013				0.16 u	--	--	0.16 u
MW-17B	D	--	--	--	--	0.16 u	--	--	AB
MW-18B	D	--	--	--	--	0.16 u	--	--	AB
MW-19B	D	--	0.16 u	--	0.16 u	--	--	--	AB
MW-20B	D	--	--	--	0.16 u	MW--20B abandoned in July 2013			
MW-21B	D	--	--	--	0.16 u	--	--	--	AB
MW-22B	B	--	MW--22B abandoned in November 2011						
MW-22BR	B	NI	--	--	0.16 u	--	--	--	0.16 u
MW-23B	B	--	0.16 u	--	0.16 u	--	--	--	0.16 u

Table B-6
Chlorobenzene Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1C	B	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-2C	B	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-3C	B	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-4C	B	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-5C	B	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-6C	B	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-7C	D	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-8C	D	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-9C	D	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-10C	D	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-11C	D	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-12C	D	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-13C	D	0.16 u	--	0.16 u	--	0.16 u	--	--	--
MW-14C	D	MW--14C abandoned in July 2007							
MW-15C	D	MW--15C abandoned in July 2007							
MW-16C	D	0.16 u	0.16 u	0.16 u	0.16 u	MW--16C abandoned in July 2013			
MW-16CR	D	MW--16CR installed October 2013				0.16 u	--	--	--
MW-17C	D	--	--	--	--	0.16 u	--	--	AB
MW-18C	D	--	--	--	--	0.16 u	--	--	AB
MW-19C	D	0.16 u	--	0.16 u	--	0.16 u	--	--	AB
MW-20C	D	--	--	0.16 u	--	MW--20C abandoned in July 2013			
MW-21C	D	--	--	0.16 u	--	0.16 u	--	--	AB
MW-22C	B	--	MW--22C abandoned in November 2011						
MW-22CR	B	NI	--	0.16 u	--	0.16 u	--	--	--
MW-23C	B	0.16 u	--	0.16 u	--	0.16 u	--	--	--

Notes:

Semi = semi-annual monitoring event

Cmp = compliance monitoring event

µg/L=micrograms per liter

-- = Not Sampled

u = Not detected at value represented

i = Value is estimated to be between method detection limit and practical quantitation limit.

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections above the PQL are shown in shaded cells (green color)

Constituent detections reported between the MDL and PQL are shown in shaded cells (blue color)

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

Groundwater cleanup target level = 100 µg/L

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table B-7
Chromium Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1A	B	3.6	1.9	4.2	5.9	3.5	--	--	3.1
MW-2A	B	2.1	--	2.8	1.8	1.6	--	--	2.1
MW-3A	B	0.8 i	--	0.8 i	0.2 u	2.6	--	--	3.1
MW-4A	B	0.9 i	--	1.8	0.9 i	1.8	--	--	1.6
MW-5A	B	1.0	--	1.2	0.8 i	1.3	--	--	2.4
MW-6A	B	1.3	--	0.9 i	0.7 i	0.8 i	--	--	0.9 i
MW-7A	D	1.3	1.0	1.1	0.5 i	1.5	--	--	1.6
MW-8A	D	2.6	3.0	2.8	2.5	2.3	--	--	2.0
MW-9A	D	2.2	2.0	1.4	1.8	3.0	--	--	2.3
MW-10A	D	0.8 i	--	1.9	1.8	1.9	--	--	1.4
MW-11A	D	3.1	6.2	3.2	3.2	2.0	--	--	3.0
MW-12A	D	1.4	1.3	2.0	1.6	2.5	--	--	1.1
MW-13A	D	2.3	3.4	2.8	3.9	1.9	--	--	2.1
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	1.5	1.5	1.7	1.9	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				1.1	--	--	1.4
MW-17A	D	--	--	--	--	1.0 i	--	--	AB
MW-18A	D	--	--	--	--	1.9	--	--	AB
MW-19A	D	26.7	22.8	5.4	28.0	1.0	--	--	AB
MW-20A	D	--	--	0.4 i	0.6 i	MW-20A abandoned in July 2013			
MW-21A	D	--	--	1.2	0.7 i	2.0	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	2.0	1.6	2.5	--	--	2.4
MW-23A	B	3.7	3.8	2.4	2.3	2.1	--	--	2.1
CW-1A	C	CW-1A installed in November 2013					11.1	6.6	3.2
CW-2A	C	CW-2A installed in November 2013					1.5	1.9	1.6
CW-3A	C	CW-3A installed in November 2013					12.5	8.3	9.3
MW-1B	B	--	0.8 i	--	0.5 i	--	--	--	0.5 i
MW-2B	B	--	0.6 i	--	0.2 u	--	--	--	0.3 i
MW-3B	B	--	1.4	--	1.3	--	--	--	0.2 i
MW-4B	B	--	0.3 i	--	0.2 i	--	--	--	1.0
MW-5B	B	--	0.7 i	--	0.2 u	--	--	--	1.1
MW-6B	B	--	0.9 i	--	0.4 i	--	--	--	0.8 i
MW-7B	D	--	0.5 i	--	0.2 u	--	--	--	0.6 i
MW-8B	D	--	1.3	--	1.9	--	--	--	0.3 i
MW-9B	D	--	1.6	--	1.3	--	--	--	1.8
MW-10B	D	--	1.0	--	0.8 i	--	--	--	0.9 i
MW-11B	D	--	1.4	--	1.5	--	--	--	1.4
MW-12B	D	--	0.5 i	--	0.7 i	--	--	--	0.5 i
MW-13B	D	--	0.6 i	--	0.8 i	--	--	--	0.5 i
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	1.5	1.9	1.6	2.6	MW-16B abandoned in July 2013			
MW-16BR	D	MW-16BR installed October 2013				2.3	--	--	1.3
MW-17B	D	--	--	--	--	0.8 i	--	--	AB
MW-18B	D	--	--	--	--	0.9 i	--	--	AB
MW-19B	D	--	0.8 i	--	1.4	--	--	--	AB
MW-20B	D	--	--	--	7.0	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	0.8 i	--	--	--	AB
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR	B	NI	--	--	7.7	--	--	--	0.8 i
MW-23B	B	--	0.5 i	--	0.3 i	--	--	--	0.7 i

Table B-7
Chromium Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1C	B	0.9 i	--	0.9 i	--	0.5 i	--	--	--
MW-2C	B	0.4 i	--	0.6 i	--	0.5 i	--	--	--
MW-3C	B	0.8 i	--	1.2	--	0.4 i	--	--	--
MW-4C	B	0.8 i	--	1.2	--	0.4 i	--	--	--
MW-5C	B	0.4 i	--	0.8 i	--	0.2 u	--	--	--
MW-6C	B	1.1	--	0.7 i	--	0.5 i	--	--	--
MW-7C	D	0.7 i	--	0.5 i	--	0.3 i	--	--	--
MW-8C	D	0.5 i	--	0.4 i	--	0.2 u	--	--	--
MW-9C	D	0.7 i	--	0.9 i	--	0.5 i	--	--	--
MW-10C	D	0.9 i	--	1.3	--	0.9 i	--	--	--
MW-11C	D	0.7 i	--	1.1	--	0.8 i	--	--	--
MW-12C	D	0.8 i	--	1.2	--	0.7 i	--	--	--
MW-13C	D	0.7 i	--	1.1	--	0.5 i	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	0.7 i	0.5 i	1.1	0.4 i	MW-16C abandoned in July 2013			
MW-16CR	D	MW-16CR installed October 2013				2.2	--	--	--
MW-17C	D	--	--	--	--	1.6	--	--	AB
MW-18C	D	--	--	--	--	1.6	--	--	AB
MW-19C	D	2.7	--	5.1	--	4.9	--	--	AB
MW-20C	D	--	--	3.3	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	3.2	--	5.5	--	--	AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR	B	NI	--	21.0	--	1.2	--	--	--
MW-23C	B	1.1	--	1.2	--	1.2	--	--	--

Notes:

Semi = semi-annual monitoring event

Cmp = compliance monitoring event

µg/L=micrograms per liter

-- = Not Sampled

u = Not detected at value represented

i = Value is estimated to be between method detection limit and practical quantitation limit.

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections above the PQL are shown in shaded cells (green color)

Constituent detections reported between the MDL and PQL are shown in shaded cells (blue color)

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

Groundwater cleanup target level = 100 µg/L

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table B-8
Cobalt Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1A	B	0.5 i	0.5 i	1.9	1.9	4.5	--	--	3.0
MW-2A	B	1.2	--	1.7	2.2	1.7	--	--	2.1
MW-3A	B	1.2	--	1.1	1.6	1.8	--	--	1.2
MW-4A	B	0.08 i	--	0.2 i	0.6 i	1.5	--	--	1.3
MW-5A	B	1.3	--	1.0 i	0.9 i	0.3 i	--	--	0.3 i
MW-6A	B	0.8 i	--	0.8 i	0.9 i	0.7 i	--	--	0.9 i
MW-7A	D	1.6	1.4	2.0	2.4	1.7	--	--	1.9
MW-8A	D	1.3	1.6	5.6	3.4	2.6	--	--	3.4
MW-9A	D	0.2 i	1.1	1.9	2.6	0.3 i	--	--	0.5 i
MW-10A	D	0.7 i	--	0.5 i	1.0 i	0.0 u	--	--	0.2 i
MW-11A	D	0.8 i	0.4 i	1.1	0.3 i	0.9 i	--	--	1.0 i
MW-12A	D	1.2	0.9 i	0.4 i	0.3 i	0.1 i	--	--	1.4
MW-13A	D	0.8 i	0.4 i	0.6 i	0.2 i	0.7 i	--	--	0.6 i
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	0.08 i	0.3 i	0.1 i	0.2 i	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				0.03 u	--	--	0.1 i
MW-17A	D	--	--	--	--	0.5 i	--	--	AB
MW-18A	D	--	--	--	--	0.2 i	--	--	AB
MW-19A	D	1.2	1.1	0.3 i	1.4	0.3 i	--	--	AB
MW-20A	D	--	--	0.6 i	0.3 i	MW-20A abandoned in July 2013			
MW-21A	D	--	--	3.5	2.0	46.1	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	0.4 i	0.3 i	0.1 i	--	--	0.1 i
MW-23A	B	0.3 i	0.3 i	0.3 i	0.4 i	0.3 i	--	--	0.3 i
CW-1A	C	CW-1A installed in November 2013					3.2	2.2	1.4
CW-2A	C	CW-2A installed in November 2013					2.6	1.8	1.4
CW-3A	C	CW-3A installed in November 2013					12.9	13.0	12.6
MW-1B	B	--	0.04 i	--	0.05 i	--	--	--	0.07 i
MW-2B	B	--	0.2 i	--	0.2 i	--	--	--	0.3 i
MW-3B	B	--	0.2 i	--	0.2 i	--	--	--	8.3
MW-4B	B	--	0.2 i	--	0.2 i	--	--	--	2.2
MW-5B	B	--	0.2 i	--	0.7 i	--	--	--	2.2
MW-6B	B	--	0.2 i	--	0.2 i	--	--	--	0.2 i
MW-7B	D	--	1.1	--	1.5	--	--	--	4.2
MW-8B	D	--	0.2 i	--	0.5 i	--	--	--	2.0
MW-9B	D	--	0.6 i	--	7.1	--	--	--	16.6
MW-10B	D	--	2.4	--	4.2	--	--	--	11.9
MW-11B	D	--	0.2 i	--	0.2 i	--	--	--	0.07 i
MW-12B	D	--	0.3 i	--	0.2 i	--	--	--	0.2 i
MW-13B	D	--	0.3 i	--	0.4 i	--	--	--	0.4 i
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	0.2 i	0.3 i	0.2 i	0.2 i	MW-16B abandoned in July 2013			
MW-16BR	D	MW-16BR installed October 2013				0.2 i	--	--	0.2 i
MW-17B	D	--	--	--	--	0.4 i	--	--	AB
MW-18B	D	--	--	--	--	0.08 i	--	--	AB
MW-19B	D	--	0.2 i	--	0.2 i	--	--	--	AB
MW-20B	D	--	--	--	0.3 i	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	0.2 i	--	--	--	AB
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR	B	NI	--	--	0.9 i	--	--	--	0.5 i
MW-23B	B	--	0.9 i	--	0.8 i	--	--	--	0.6 i

Table B-8
Cobalt Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1C	B	0.06 u	--	0.03 u	--	0.03 i	--	--	--
MW-2C	B	0.06 u	--	0.03 u	--	0.03 u	--	--	--
MW-3C	B	0.06 u	--	0.03 u	--	0.03 u	--	--	--
MW-4C	B	0.06 u	--	0.03 u	--	0.03 u	--	--	--
MW-5C	B	0.06 u	--	0.03 u	--	0.03 u	--	--	--
MW-6C	B	0.06 u	--	0.03 u	--	0.03 u	--	--	--
MW-7C	D	0.06 u	--	0.03 u	--	0.03 u	--	--	--
MW-8C	D	0.06 u	--	0.03 u	--	0.03 u	--	--	--
MW-9C	D	0.06 u	--	0.03 u	--	0.04 i	--	--	--
MW-10C	D	0.06 u	--	0.05 i	--	0.03 u	--	--	--
MW-11C	D	0.06 u	--	0.04 i	--	0.03 u	--	--	--
MW-12C	D	0.06 u	--	0.03 u	--	0.03 u	--	--	--
MW-13C	D	0.08 i	--	0.05 i	--	0.03 u	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	0.06 u	0.03 u	0.03 u	0.03 u	MW-16C abandoned in July 2013			
MW-16CR	D	MW-16CR installed October 2013				0.10 i	--	--	--
MW-17C	D	--	--	--	--	0.04 i	--	--	AB
MW-18C	D	--	--	--	--	0.05 i	--	--	AB
MW-19C	D	0.07 i	--	0.10 i	--	0.10 i	--	--	AB
MW-20C	D	--	--	0.10 i	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	0.10 i	--	0.20 i	--	--	AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR	B	NI	--	1.9	--	0.03 u	--	--	--
MW-23C	B	0.06 u	--	0.03 u	--	0.03 u	--	--	--

Notes:

Semi = semi-annual monitoring event

Cmp = compliance monitoring event

µg/L=micrograms per liter

-- = Not Sampled

u = Not detected at value represented

i = Value is estimated to be between method detection limit and practical quantitation limit.

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections above the PQL are shown in shaded cells (green color)

Constituent detections reported between the MDL and PQL are shown in shaded cells (blue color)

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

Groundwater cleanup target level = 420 µg/L

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table B-9
Copper Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1A	B	0.7 i	0.3 u	0.3 i	0.4 i	0.5 i	--	--	0.5 i
MW-2A	B	0.8 i	--	0.3 u	0.4 i	0.3 u	--	--	0.3 u
MW-3A	B	0.6 i	--	1.1	0.5 i	0.8 i	--	--	0.8 i
MW-4A	B	0.4 i	--	0.3 u	0.3 u	1.9	--	--	0.7 i
MW-5A	B	1.5	--	0.4 i	0.3 i	1.7	--	--	2.4
MW-6A	B	0.2 u	--	1.0 i	0.6 i	1.1	--	--	0.3 u
MW-7A	D	0.2 u	0.3 u	0.3 u	0.3 u	0.3 u	--	--	0.3 u
MW-8A	D	0.4 i	0.3 u	0.6 i	0.3 u	0.7 i	--	--	0.5 i
MW-9A	D	1.1	0.4 i	1.5	0.6 i	4.7	--	--	2.1
MW-10A	D	0.5 i	--	0.3 u	0.3 u	0.5 i	--	--	0.3 u
MW-11A	D	0.9 i	0.4 i	0.3 i	0.3 u	0.3 u	--	--	1.2
MW-12A	D	0.5 i	0.3 u	0.3 u	0.3 u	0.3 u	--	--	0.3 u
MW-13A	D	0.3 i	0.3 u	0.3 u	0.3 u	0.3 u	--	--	0.3 u
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	0.4 i	0.3 u	0.3 u	0.3 u	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				0.3 u	--	--	0.3 u
MW-17A	D	--	--	--	--	0.3 u	--	--	AB
MW-18A	D	--	--	--	--	0.3 u	--	--	AB
MW-19A	D	1.4	0.7 i	0.5 i	2.5	0.3 u	--	--	AB
MW-20A	D	--	--	1.9	0.3 i	MW-20A abandoned in July 2013			
MW-21A	D	--	--	1.0	0.3 u	0.3 u	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	0.3 u	0.3 u	0.3 u	--	--	0.3 u
MW-23A	B	1.0	1.0 i	0.5 i	0.4 i	0.3 u	--	--	0.3 u
CW-1A	C	CW-1A installed in November 2013					0.8 i	0.3 u	0.3 u
CW-2A	C	CW-2A installed in November 2013					0.4 i	0.4 i	0.3 i
CW-3A	C	CW-3A installed in November 2013					0.6 i	0.4 i	0.5 i
MW-1B	B	--	0.3 u	--	0.3 u	--	--	--	0.3 u
MW-2B	B	--	0.3 u	--	0.3 u	--	--	--	0.3 u
MW-3B	B	--	0.5 i	--	0.3 u	--	--	--	0.3 u
MW-4B	B	--	0.3 u	--	0.3 u	--	--	--	0.4 i
MW-5B	B	--	0.3 u	--	0.3 u	--	--	--	0.3 u
MW-6B	B	--	0.3 u	--	0.3 u	--	--	--	0.3 u
MW-7B	D	--	0.3 u	--	0.3 u	--	--	--	0.3 u
MW-8B	D	--	0.3 u	--	0.4 i	--	--	--	0.3 u
MW-9B	D	--	0.3 u	--	0.3 u	--	--	--	0.3 u
MW-10B	D	--	0.3 u	--	0.3 u	--	--	--	0.3 u
MW-11B	D	--	0.3 u	--	0.3 u	--	--	--	0.3 u
MW-12B	D	--	0.3 u	--	0.3 u	--	--	--	0.3 u
MW-13B	D	--	0.3 u	--	0.3 u	--	--	--	0.3 u
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	0.5 i	0.5 i	0.3 u	0.8 i	MW-16B abandoned in July 2013			
MW-16BR	D	MW-16BR installed October 2013				0.5 i	--	--	0.4 i
MW-17B	D	--	--	--	--	0.9 i	--	--	AB
MW-18B	D	--	--	--	--	--	--	--	AB
MW-19B	D	--	0.3 i	--	0.6 i	--	--	--	AB
MW-20B	D	--	--	--	1.6	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	0.3 u	--	--	--	AB
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR	B	NI	--	--	0.9 i	--	--	--	0.3 u
MW-23B	B	--	0.3 u	--	0.3 u	--	--	--	0.3 u

Table B-9
Copper Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1C	B	0.2 i	--	0.3 u	--	0.4 i	--	--	--
MW-2C	B	0.4 i	--	0.3 u	--	0.3 u	--	--	--
MW-3C	B	0.3 i	--	0.3 u	--	0.3 i	--	--	--
MW-4C	B	0.2 u	--	0.3 u	--	0.3 i	--	--	--
MW-5C	B	0.2 i	--	0.3 u	--	0.3 u	--	--	--
MW-6C	B	0.2 u	--	0.3 u	--	1.5	--	--	--
MW-7C	D	0.2 u	--	0.3 u	--	2.5	--	--	--
MW-8C	D	0.2 u	--	0.3 u	--	0.8 i	--	--	--
MW-9C	D	0.2 i	--	0.3 u	--	1.3	--	--	--
MW-10C	D	0.2 u	--	0.3 u	--	0.3 u	--	--	--
MW-11C	D	0.4 i	--	0.3 u	--	0.3 u	--	--	--
MW-12C	D	0.5 i	--	0.3 u	--	0.3 u	--	--	--
MW-13C	D	0.2 u	--	0.3 u	--	0.3 u	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	0.2 i	0.3 u	0.3 u	0.3 u	MW-16C abandoned in July 2013			
MW-16CR	D	MW-16CR installed October 2013				0.3 u	--	--	--
MW-17C	D	--	--	--	--	0.3 u	--	--	AB
MW-18C	D	--	--	--	--	0.3 u	--	--	AB
MW-19C	D	0.5 i	--	0.3 u	--	0.3 u	--	--	AB
MW-20C	D	--	--	1.0	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	0.8 i	--	0.3 u	--	--	AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR	B	NI	--	2.5	--	0.3 u	--	--	--
MW-23C		0.2 u	--	0.3 u	--	0.3 u	--	--	--

Notes:

Semi = semi-annual monitoring event

Cmp = compliance monitoring event

µg/L=micrograms per liter

-- = Not Sampled

u = Not detected at value represented

i = Value is estimated to be between method detection limit and practical quantitation limit.

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections above the PQL are shown in shaded cells (green color)

Constituent detections reported between the MDL and PQL are shown in shaded cells (blue color)

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

Groundwater cleanup target level = 1,000 µg/L

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table B-10
Ethylbenzene Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1A	B	11.1	2.1	0.2 u	0.6 i	0.9 i	--	--	0.5 i
MW-2A	B	0.21 u	--	0.2 u	0.2 u	0.2 u	--	--	0.21 u
MW-3A	B	0.44 i	--	1.5	1.4	3.0	--	--	1.1
MW-4A	B	0.44 i	--	0.2 u	0.2 u	0.21 u	--	--	0.21 u
MW-5A	B	0.21 u	--	0.2 u	0.2 u	0.21 u	--	--	0.21 u
MW-6A	B	0.21 u	--	0.2 u	0.3 i	0.2 i	--	--	0.21 u
MW-7A	D	0.21 u	0.21 u	0.2 u	0.2 u	0.2 u	--	--	0.21 u
MW-8A	D	0.21 u	0.21 u	0.2 u	0.2 u	0.2 u	--	--	0.21 u
MW-9A	D	1.05	0.21 u	0.2 u	0.2 u	0.2 u	--	--	0.21 u
MW-10A	D	0.21 u	--	0.2 u	0.2 u	0.2 u	--	--	0.21 u
MW-11A	D	0.21 u	0.21 u	2.2	1.0 i	0.5 i	--	--	0.4 i
MW-12A	D	0.21 u	0.21 u	0.2 u	0.2 u	0.2 u	--	--	0.21 u
MW-13A	D	0.21 u	0.21 u	0.2 u	0.2 u	0.2 u	--	--	0.21 u
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	0.21 u	0.21 u	0.2 u	0.2 u	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				0.21 u	--	--	0.21 u
MW-17A	D	--	--	--	--	0.2 u	--	--	AB
MW-18A	D	--	--	--	--	0.2 u	--	--	AB
MW-19A	D	0.21 u	0.21 u	0.2 u	0.21 u	0.2 u	--	--	AB
MW-20A	D	--	--	0.2 u	0.21 u	MW-20A abandoned in July 2013			
MW-21A	D	--	--	0.2 u	0.21 u	0.2 u	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	0.21 u	0.21 u	0.21 u	--	--	0.21 u
MW-23A	B	0.21 u	0.21 u	0.2 u	0.21 u	0.2 u	--	--	0.21 u
CW-1A	C	CW-1A installed in November 2013					0.21 u	0.21 u	0.21 u
CW-2A	C	CW-2A installed in November 2013					0.21 u	0.21 u	0.21 u
CW-3A	C	CW-3A installed in November 2013					0.21 u	0.21 u	0.21 u
MW-1B	B	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-2B	B	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-3B	B	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-4B	B	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-5B	B	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-6B	B	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-7B	D	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-8B	D	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-9B	D	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-10B	D	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-11B	D	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-12B	D	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-13B	D	--	0.21 u	--	0.21 u	--	--	--	0.21 u
MW-14B	D	MW-14A abandoned in July 2007							
MW-15B	D	MW-15A abandoned in July 2007							
MW-16B	D	0.21 u	0.21 u	0.2 u	0.2 u	MW-16A abandoned in July 2013			
MW-16BR	D	MW-16AR installed October 2013				0.21 u	--	--	0.21 u
MW-17B	D	--	--	--	--	0.2 u	--	--	AB
MW-18B	D	--	--	--	--	--	--	--	AB
MW-19B	D	--	0.61 i	--	1.2	--	--	--	AB
MW-20B	D	--	--	--	0.21 u	MW-20A abandoned in July 2013			
MW-21B	D	--	--	--	0.21 u	--	--	--	AB
MW-22B	B	--	MW-22A abandoned in November 2011						
MW-22BR	B	NI	--	--	0.21 u	--	--	--	0.21 u
MW-23B	B	--	0.21 u	--	0.21 u	--	--	--	0.21 u

Table B-10
Ethylbenzene Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1C	B	0.21 u	--	0.2 u	--	0.2 u	--	--	--
MW-2C	B	0.21 u	--	0.2 u	--	0.2 u	--	--	--
MW-3C	B	0.21 u	--	0.2 u	--	0.2 u	--	--	--
MW-4C	B	0.21 u	--	0.2 u	--	0.2 u	--	--	--
MW-5C	B	0.21 u	--	0.2 u	--	0.2 u	--	--	--
MW-6C	B	0.21 u	--	0.2 u	--	0.2 u	--	--	--
MW-7C	D	0.21 u	--	0.2 u	--	0.2 u	--	--	--
MW-8C	D	0.21 u	--	0.2 u	--	0.2 u	--	--	--
MW-9C	D	0.21 u	--	0.2 u	--	0.2 u	--	--	--
MW-10C	D	0.21 u	--	0.2 u	--	0.2 u	--	--	--
MW-11C	D	0.21 u	--	0.2 u	--	0.2 u	--	--	--
MW-12C	D	0.21 u	--	0.2 u	--	0.2 u	--	--	--
MW-13C	D	0.21 u	--	0.2 u	--	0.2 u	--	--	--
MW-14C	D	MW-14A abandoned in July 2007							
MW-15C	D	MW-15A abandoned in July 2007							
MW-16C	D	1.16	0.84 i	0.2 i	0.21 u	MW-16A abandoned in July 2013			
MW-16CR	D	MW-16AR installed October 2013				0.2 u	--	--	--
MW-17C	D	--	--	--	--	0.2 u	--	--	AB
MW-18C	D	--	--	--	--	0.2 u	--	--	AB
MW-19C	D	0.21 u	--	0.2 u	--	0.2 u	--	--	AB
MW-20C	D	--	--	0.2 u	--	MW-20A abandoned in July 2013			
MW-21C	D	--	--	0.2 u	--	0.2 u	--	--	AB
MW-22C	B	--	MW-22A abandoned in November 2011						
MW-22CR	B	NI	--	0.2 u	--	0.2 u	--	--	--
MW-23C	B	0.21 u	--	0.2 u	--	0.2 u	--	--	--

Notes:

Semi = semi-annual monitoring event

Cmp = compliance monitoring event

µg/L=micrograms per liter

-- = Not Sampled

u = Not detected at value represented

i = Value is estimated to be between method detection limit and practical quantitation limit.

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections above the PQL are shown in shaded cells (green color)

Constituent detections reported between the MDL and PQL are shown in shaded cells (blue color)

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

Groundwater cleanup target level = 30 µg/L

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table B-11
Lead Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1A	B	0.15 i	0.12 u	0.12 u	0.17 i	0.12 u	--	--	0.21 i
MW-2A	B	0.15 i	--	0.12 u	0.19 i	0.12 u	--	--	0.12 u
MW-3A	B	0.10 i	--	0.22 i	0.23 i	0.12 u	--	--	0.17 i
MW-4A	B	0.06 u	--	0.12 u	0.12 u	1.29	--	--	0.22 i
MW-5A	B	0.77	--	1.25	1.15	0.70	--	--	0.92
MW-6A	B	0.14 i	--	0.13 i	0.32 i	0.12 u	--	--	0.12 u
MW-7A	D	0.06 u	0.12 u	0.12 u	0.12 u	0.12 u	--	--	0.12 u
MW-8A	D	0.30 i	0.12 u	0.12 u	0.12 u	0.12 u	--	--	0.13 i
MW-9A	D	0.25 i	0.12 u	0.12 u	0.12 u	0.41 i	--	--	0.37 i
MW-10A	D	0.07 i	--	0.12 u	0.12 u	0.12 u	--	--	0.12 u
MW-11A	D	0.47 i	0.44 i	0.25 i	0.20 i	0.12 u	--	--	0.48 i
MW-12A	D	0.07 i	0.12 u	0.12 u	0.12 u	0.12 u	--	--	0.12 u
MW-13A	D	0.06 u	0.12 u	0.12 u	0.12 u	0.12 u	--	--	0.39 i
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	0.43 i	0.25 i	0.50 i	0.18 i	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				0.12 u	--	--	0.18 i
MW-17A	D	--	--	--	--	0.83	--	--	AB
MW-18A	D	--	--	--	--	0.82	--	--	AB
MW-19A	D	7.01	4.95	1.89	12.0	0.12 u	--	--	AB
MW-20A	D	--	--	1.27	0.64	MW-20A abandoned in July 2013			
MW-21A	D	--	--	1.11	0.72	1.01	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	0.12 u	0.12 u	0.12 u	--	--	0.12 u
MW-23A	B	1.41	1.55	0.12 u	0.42 i	0.12 u	--	--	0.12 u
CW-1A	C	CW-1A installed in November 2013					1.05	0.16 i	0.27 i
CW-2A	C	CW-2A installed in November 2013					0.12 u	0.12 u	0.12 u
CW-3A	C	CW-3A installed in November 2013					2.80	0.12 u	0.12 u
MW-1B	B	--	0.12 u	--	0.12 u	--	--	--	0.12 u
MW-2B	B	--	0.23 i	--	0.12 u	--	--	--	0.12 u
MW-3B	B	--	1.68	--	2.09	--	--	--	0.12 u
MW-4B	B	--	0.12 u	--	0.12 u	--	--	--	0.12 u
MW-5B	B	--	0.12 u	--	0.12 u	--	--	--	0.12 u
MW-6B	B	--	0.12 u	--	0.12 u	--	--	--	0.12 u
MW-7B	D	--	0.12 u	--	0.12 u	--	--	--	0.12 u
MW-8B	D	--	0.51	--	1.11	--	--	--	0.25 i
MW-9B	D	--	0.12 u	--	0.12 u	--	--	--	0.12 u
MW-10B	D	--	0.12 u	--	0.12 u	--	--	--	0.12 u
MW-11B	D	--	0.12 u	--	0.12 u	--	--	--	0.39 i
MW-12B	D	--	0.12 u	--	0.12 u	--	--	--	0.12 u
MW-13B	D	--	0.12 u	--	0.12 u	--	--	--	0.12 u
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	1.08	1.32	0.57	2.11	MW-16B abandoned in July 2013			
MW-16BR	D	MW-16BR installed October 2013				0.82	--	--	0.68
MW-17B	D	--	--	--	--	0.12 u	--	--	AB
MW-18B	D	--	--	--	--	0.12 u	--	--	AB
MW-19B	D	--	0.57	--	1.30	--	--	--	AB
MW-20B	D	--	--	--	2.83	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	0.38 i	--	--	--	AB
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR	B	NI	--	--	4.05	--	--	--	0.12 u
MW-23B	B	--	0.12 u	--	0.12 u	--	--	--	0.12 u

Table B-11
Lead Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1C	B	0.12 i	--	0.12 u	--	0.12 u	--	--	--
MW-2C	B	0.06 u	--	0.12 u	--	0.12 u	--	--	--
MW-3C	B	0.06 u	--	0.12 u	--	0.12 u	--	--	--
MW-4C	B	0.06 u	--	0.12 u	--	0.12 u	--	--	--
MW-5C	B	0.06 u	--	0.12 u	--	0.12 u	--	--	--
MW-6C	B	0.06 i	--	0.12 u	--	0.12 u	--	--	--
MW-7C	D	0.12 i	--	0.12 u	--	0.12 u	--	--	--
MW-8C	D	0.06 u	--	0.12 u	--	0.12 u	--	--	--
MW-9C	D	0.06 u	--	0.12 u	--	0.12 u	--	--	--
MW-10C	D	0.10 i	--	0.12 u	--	0.12 u	--	--	--
MW-11C	D	0.06 i	--	0.12 u	--	0.12 u	--	--	--
MW-12C	D	0.06 i	--	0.12 u	--	0.12 u	--	--	--
MW-13C	D	0.10 i	--	0.12 u	--	0.12 u	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	0.06 u	0.12 u	0.12 u	0.12 u	MW-16C abandoned in July 2013			
MW-16CR		MW-16CR installed October 2013				0.12 u	--	--	--
MW-17C	D	--	--	--	--	0.12 u	--	--	AB
MW-18C	D	--	--	--	--	0.13 i	--	--	AB
MW-19C	D	0.36 i	--	0.52	--	0.25 i	--	--	AB
MW-20C	D	--	--	0.79	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	1.01	--	0.96	--	--	AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR		NI		8.68	--	0.12 u	--	--	--
MW-23C	B	0.15 i	--	0.12 u	--	0.12 u	--	--	--

Notes:

Semi = semi-annual monitoring event

Cmp = compliance monitoring event

µg/L=micrograms per liter

-- = Not Sampled

u = Not detected at value represented

i = Value is estimated to be between method detection limit and practical quantitation limit.

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections above the PQL are shown in shaded cells (green color)

Constituent detections reported between the MDL and PQL are shown in shaded cells (blue color)

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

Groundwater cleanup target level = 15 µg/L

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table B-12
Mercury Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1A	B	0.02 u	0.02 u	0.02 u	0.02 u	0.02 u	-	-	0.02 u
MW-2A	B	0.02 u	-	0.02 u	0.02 u	0.02 u	-	-	0.02 u
MW-3A	B	0.02 u	-	0.02 u	0.02 u	0.02 u	-	-	0.02 u
MW-4A	B	0.02 u	-	0.02 u	0.02 u	0.02 i	-	-	0.02 u
MW-5A	B	0.03 i	-	0.02 u	0.02 u	0.02 u	-	-	0.04 i
MW-6A	B	0.02 u	-	0.02 u	0.02 u	0.02 u	-	-	0.02 u
MW-7A	D	0.02 u	0.02 u	0.02 u	0.02 u	0.02 u	-	-	0.02 u
MW-8A	D	0.02 u	0.02 u	0.02 u	0.02 i	0.02 u	-	-	0.02 u
MW-9A	D	0.04 i	0.02 u	0.04 i	0.02 u	0.10 i	-	-	0.04 i
MW-10A	D	0.03 i	-	0.02 u	0.02 u	0.02 i	-	-	0.02 u
MW-11A	D	0.02 u	0.02 u	0.02 u	0.02 u	0.02 u	-	-	0.03 i
MW-12A	D	0.02 u	0.02 u	0.02 u	0.02 u	0.02 u	-	-	0.02 i
MW-13A	D	0.02 u	0.02 u	0.02 u	0.02 u	0.02 u	-	-	0.02 u
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	0.04 i	0.02 u	0.02 i	0.02 u	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				0.02 u	-	-	0.02 i
MW-17A	D	-	-	-	-	0.03 i	-	-	AB
MW-18A	D	-	-	-	-	0.04 i	-	-	AB
MW-19A	D	0.29	0.04 i	0.03 i	0.17	0.03 i	-	-	AB
MW-20A	D	-	-	0.02 u	0.02 u	MW-20A abandoned in July 2013			
MW-21A	D	-	-	0.02 u	0.02 u	0.03 i	-	-	AB
MW-22A	B	-	MW-22A abandoned in November 2011						
MW-22AR	B	NI	-	0.02 u	0.02 u	0.02 u	-	-	0.02 u
MW-23A	B	0.10 i	0.04 i	0.02 u	0.02 u	0.02 u	-	-	0.02 u
CW-1A	C	CW-1A installed in November 2013					0.02 u	0.02 u	0.02 u
CW-2A	C	CW-2A installed in November 2013					0.03 i	0.02 u	0.02 u
CW-3A	C	CW-3A installed in November 2013					0.05 i	0.02 u	0.02 u
MW-1B	B	-	0.02 u	-	0.02 u	-	-	-	0.02 u
MW-2B	B	-	0.02 u	-	0.02 u	-	-	-	0.02 u
MW-3B	B	-	0.02 u	-	0.02 u	-	-	-	0.02 u
MW-4B	B	-	0.02 u	-	0.02 u	-	-	-	0.02 u
MW-5B	B	-	0.02 u	-	0.02 u	-	-	-	0.02 u
MW-6B	B	-	0.02 u	-	0.02 u	-	-	-	0.02 u
MW-7B	D	-	0.02 u	-	0.02 u	-	-	-	0.02 u
MW-8B	D	-	0.02 u	-	0.02 u	-	-	-	0.02 u
MW-9B	D	-	0.02 u	-	0.02 u	-	-	-	0.02 u
MW-10B	D	-	0.02 u	-	0.02 u	-	-	-	0.02 i
MW-11B	D	-	0.02 u	-	0.02 u	-	-	-	0.02 u
MW-12B	D	-	0.02 u	-	0.02 u	-	-	-	0.02 u
MW-13B	D	-	0.02 u	-	0.02 u	-	-	-	0.02 u
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	0.05 i	0.02 u	0.02 u	0.02 u	MW-16B abandoned in July 2013			
MW-16BR	D	MW-16BR installed October 2013				0.02 u	-	-	0.02 i
MW-17B	D	-	-	-	-	0.03 i	-	-	AB
MW-18B	D	-	-	-	-	0.02 u	-	-	AB
MW-19B	D	-	0.02 u	-	0.02 u	-	-	-	AB
MW-20B	D	-	-	-	0.04 i	MW-20B abandoned in July 2013			
MW-21B	D	-	-	-	0.02 u	-	-	-	AB
MW-22B	B	-	MW-22B abandoned in November 2011						
MW-22BR	B	NI	-	-	0.02 u	-	-	-	0.02 u
MW-23B	B	-	0.02 u	-	0.02 u	-	-	-	0.02 u

Table B-12
Mercury Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1C	B	0.02 u	-	0.02 u	-	0.02 u	-	-	-
MW-2C	B	0.02 u	-	0.02 u	-	0.02 u	-	-	-
MW-3C	B	0.02 u	-	0.02 u	-	0.02 u	-	-	-
MW-4C	B	0.02 u	-	0.02 u	-	0.02 u	-	-	-
MW-5C	B	0.02 u	-	0.02 u	-	0.02 u	-	-	-
MW-6C	B	0.02 u	-	0.02 u	-	0.02 u	-	-	-
MW-7C	D	0.02 u	-	0.02 u	-	0.02 u	-	-	-
MW-8C	D	0.02 u	-	0.02 u	-	0.02 u	-	-	-
MW-9C	D	0.02 u	-	0.02 u	-	0.02 u	-	-	-
MW-10C	D	0.02 u	-	0.02 u	-	0.02 u	-	-	-
MW-11C	D	0.02 u	-	0.02 u	-	0.02 u	-	-	-
MW-12C	D	0.02 u	-	0.02 u	-	0.02 u	-	-	-
MW-13C	D	0.02 u	-	0.02 u	-	0.02 u	-	-	-
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	0.02 u	0.02 u	0.02 u	0.02 u	MW-16C abandoned in July 2013			
MW-16CR	D	MW-16CR installed October 2013				0.02 u	-	-	-
MW-17C	D	-	-	-	-	0.02 i	-	-	AB
MW-18C	D	-	-	-	-	0.02 i	-	-	AB
MW-19C	D	0.03 i	-	0.02 u	-	0.03 i	-	-	AB
MW-20C	D	-	-	0.02 u	-	MW-20C abandoned in July 2013			
MW-21C	D	-	-	0.02 u	-	0.03 i	-	-	AB
MW-22C	B	-	MW-22C abandoned in November 2011						
MW-22CR	B	NI	-	0.02 u	-	0.02 u	-	-	-
MW-23C	B	0.02 u	-	0.02 u	-	0.02 u	-	-	-

Notes:

Semi = semi-annual monitoring event

Cmp = compliance monitoring event

µg/L=micrograms per liter

-- = Not Sampled

u = Not detected at value represented

i = Value is estimated to be between method detection limit and practical quantitation limit.

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections above the PQL are shown in shaded cells (green color)

Constituent detections reported between the MDL and PQL are shown in shaded cells (blue color)

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

Groundwater cleanup target level = 2 µg/L

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table B-13
Nickel Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1A	B	0.8 u	0.5 u	2.8	3.4	11.6	--	--	6.6
MW-2A	B	1.7 i	--	0.7 i	0.6 i	2.8	--	--	3.1
MW-3A	B	0.8 u	--	0.5 u	0.5 u	0.7 i	--	--	1.1 i
MW-4A	B	0.8 u	--	0.9 i	1.4 i	2.8	--	--	3.0
MW-5A	B	2.9	--	1.3 i	1.6 i	1.2 i	--	--	1.0 i
MW-6A	B	0.8 u	--	0.5 u	0.6 i	0.5 u	--	--	0.6 i
MW-7A	D	0.8 u	0.5 u	0.8 i	0.5 u	0.9 i	--	--	0.9 i
MW-8A	D	2.8	2.6	11.7	6.6	7.1	--	--	10.3
MW-9A	D	1.0 i	1.8 i	5.2	5.3	1.2 i	--	--	1.7 i
MW-10A	D	2.1	--	1.9 i	3.3	1.0 i	--	--	0.6 i
MW-11A	D	2.0	1.3 i	2.4	1.1 i	2.5	--	--	2.8
MW-12A	D	2.5	1.0 i	0.5 u	0.5 u	0.5 u	--	--	2.6
MW-13A	D	0.8 u	0.5 u	0.5 u	0.5 u	0.8 i	--	--	0.6 i
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	0.8 u	0.5 u	0.5 u	0.5 u	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				0.6 i	--	--	0.7 i
MW-17A	D	--	--	--	--	2.0 i	--	--	AB
MW-18A	D	--	--	--	--	1.2 i	--	--	AB
MW-19A	D	3.9	3.0	0.8 i	4.4	0.5 u	--	--	AB
MW-20A	D	--	--	3.4	1.6 i	MW-20A abandoned in July 2013			
MW-21A	D	--	--	7.2	2.1	26.9	--	--	AB
MW-22A	B	--	MW--2A abandoned in November 2011						
MW-22AR	B	NI	--	0.5 u	0.5 u	0.5 u	--	--	0.5 u
MW-23A	B	1.6 i	1.6 i	0.5 u	1.1 i	1.0 i	--	--	1.1 i
CW-1A	C	CW-1A installed in November 2013					6.1	1.0 i	0.8 i
CW-2A	C	CW-2A installed in November 2013					2.5	2.9	2.5
CW-3A	C	CW-3A installed in November 2013					3.1	2.1	2.5
MW-1B	B	--	0.5 u	--	0.5 u	--	--	--	0.5 u
MW-2B	B	--	0.5 u	--	0.5 u	--	--	--	0.5 u
MW-3B	B	--	0.5 u	--	0.5 u	--	--	--	3.1
MW-4B	B	--	0.5 u	--	0.5 u	--	--	--	3.2
MW-5B	B	--	0.5 u	--	0.8 i	--	--	--	3.6
MW-6B	B	--	0.5 u	--	0.5 u	--	--	--	0.5 u
MW-7B	D	--	0.8 i	--	1.2 i	--	--	--	2.8
MW-8B	D	--	0.5 u	--	0.6 i	--	--	--	1.2 i
MW-9B	D	--	0.5 u	--	2.7	--	--	--	6.4
MW-10B	D	--	1.1 i	--	1.3 i	--	--	--	2.8
MW-11B	D	--	0.5 u	--	0.5 u	--	--	--	0.5 u
MW-12B	D	--	0.5 u	--	0.5 u	--	--	--	0.5 u
MW-13B	D	--	0.5 u	--	0.5 u	--	--	--	0.5 u
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	0.8 u	0.5 u	0.5 u	0.6 i	MW-16B abandoned in July 2013			
MW-16BR	D	MW-16BR installed October 2013				0.5 u	--	--	0.5 u
MW-17B	D	--	--	--	--	0.5 u	--	--	AB
MW-18B	D	--	--	--	--	--	--	--	AB
MW-19B	D	--	0.5 u	--	0.5 u	--	--	--	AB
MW-20B	D	--	--	--	1.7 i	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	0.5 u	--	--	--	AB
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR	B	NI	--	--	2.6	--	--	--	0.6 i
MW-23B	B	--	0.5 u	--	0.5 u	--	--	--	0.5 u

Table B-13
Nickel Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1C	B	0.8 u	--	0.5 u	--	0.5 u	--	--	--
MW-2C	B	1.2 i	--	0.5 u	--	0.5 u	--	--	--
MW-3C	B	0.8 u	--	0.5 u	--	0.5 u	--	--	--
MW-4C	B	1.4 i	--	0.5 u	--	0.5 u	--	--	--
MW-5C	B	0.8 u	--	0.5 u	--	0.5 u	--	--	--
MW-6C	B	0.8 u	--	0.5 u	--	0.5 u	--	--	--
MW-7C	D	0.8 u	--	0.5 u	--	0.5 u	--	--	--
MW-8C	D	0.8 u	--	0.5 u	--	0.5 u	--	--	--
MW-9C	D	2.3	--	3.5	--	4.6	--	--	--
MW-10C	D	0.8 u	--	0.5 u	--	0.5 u	--	--	--
MW-11C	D	0.8 u	--	0.5 u	--	0.5 u	--	--	--
MW-12C	D	0.8 u	--	0.5 u	--	0.5 u	--	--	--
MW-13C	D	0.8 u	--	0.5 u	--	0.5 u	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	0.8 u	0.5 u	0.6 i	0.5 u	MW-16C abandoned in July 2013			
MW-16CR	D	MW-16CR installed October 2013				1.5 i	--	--	--
MW-17C	D	--	--	--	--	0.5 u	--	--	AB
MW-18C	D	--	--	--	--	0.5 u	--	--	AB
MW-19C	D	0.8 u	--	0.5 i	--	0.6 i	--	--	AB
MW-20C	D	--	--	0.8 i	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	0.5 i	--	0.8 i	--	--	AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR	B	NI	--	4.0	--	0.5 u	--	--	--
MW-23C	B	0.8 u	--	0.5 u	--	0.5 u	--	--	--

Notes:

Semi = semi-annual monitoring event

Cmp = compliance monitoring event

µg/L=micrograms per liter

-- = Not Sampled

u = Not detected at value represented

i = Value is estimated to be between method detection limit and practical quantitation limit.

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections above the PQL are shown in shaded cells (green color)

Constituent detections reported between the MDL and PQL are shown in shaded cells (blue color)

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

Groundwater cleanup target level = 100 µg/L

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table B-14
Nitrate Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (mg/L)	16th Semi May-12 (mg/L)	17th Semi Nov-12 (mg/L)	18th Semi May-13 (mg/L)	19th Semi Nov-13 (mg/L)	1st Cmp Dec-13 (mg/L)	2nd Cmp Feb-14 (mg/L)	20th Semi / 3rd Cmp May-14 (mg/L)
MW-1A	B	0.03 u	0.03 u	0.03 u	0.03 u	0.03 u			0.03 u
MW-2A	B	0.03 u	--	0.03 u	0.03 u	0.03 u			0.03 u
MW-3A	B	0.03 u	--	0.03 u	0.03 u	0.03 u			0.03 u
MW-4A	B	0.03 u	--	0.03 u	0.03 u	0.03 u			0.03 u
MW-5A	B	0.03 u	--	0.03 u	0.03 u	0.03 u			0.03 u
MW-6A	B	0.03 u	--	0.03 u	0.03 u	0.03 u			0.03 u
MW-7A	D	0.03 u	0.03 u	0.03 u	0.03 u	0.03 u			0.03 u
MW-8A	D	0.03 u	0.03 u	0.03 u	0.03 u	0.03 u			0.03 u
MW-9A	D	0.03 u	0.03 u	0.03 u	0.03 u	0.03 u			0.03 u
MW-10A	D	0.03 u	--	0.03 u	0.03 u	0.03 u			0.03 u
MW-11A	D	0.03 u	0.03 u	0.03 u	0.03 u	0.03 u			0.03 u
MW-12A	D	0.03 u	0.03 u	0.03 u	0.03 u	0.03 u			0.03 u
MW-13A	D	0.03 u	0.03 u	0.03 u	0.03 u	0.03 u			0.03 u
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	0.17 i	0.03 u	0.19 i	0.03 u	MW-16A abandoned in July 2013			
MW-16AR	D	MW----16AR installed October 2013				0.17 i			0.03 u
MW-17A	D	--	--	--	--	0.45			AB
MW-18A	D	--	--	--	--	0.03 u			AB
MW-19A	D	0.03 u	0.18 i	0.03 u	0.23	0.03 u			AB
MW-20A	D	--	--	0.26	0.23	MW-20A abandoned in July 2013			
MW-21A	D	--	--	1.23	1.18	0.31			AB
MW-22A	B	MW-22A abandoned in November 2011							
MW-22AR	B	NI	--	0.03 u	0.03 u	0.03 u			0.03 u
MW-23A	B	0.03 u	0.03 u	0.03 u	0.14 i	0.03 u			0.03 u
CW-1A	C	CW-1A installed in November 2013					0.03 u	0.03 u	0.03 u
CW-2A	C	CW-2A installed in November 2013					0.03 u	0.03 u	0.03 u
CW-3A	C	CW-3A installed in November 2013					0.03 u	0.03 u	0.03 u
MW-1B	B	--	0.03 u	--	0.03 u	--			0.03 u
MW-2B	B	--	0.03 u	--	0.03 u	--			0.03 u
MW-3B	B	--	0.03 u	--	0.15 i	--			0.03 u
MW-4B	B	--	0.03 u	--	0.03 u	--			0.03 u
MW-5B	B	--	0.03 u	--	0.03 u	--			0.03 u
MW-6B	B	--	0.03 u	--	0.03 u	--			0.03 u
MW-7B	D	--	0.03 u	--	0.03 u	--			0.03 u
MW-8B	D	--	0.03 u	--	0.03 u	--			0.03 u
MW-9B	D	--	0.03 u	--	0.03 u	--			0.03 u
MW-10B	D	--	0.03 u	--	0.03 u	--			0.03 u
MW-11B	D	--	0.03 u	--	0.03 u	--			0.03 u
MW-12B	D	--	0.03 u	--	0.03 u	--			0.03 u
MW-13B	D	--	0.03 u	--	0.03 u	--			0.03 u
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	0.03 u	0.03 u	0.03 u	0.03 u	MW-16B abandoned in July 2013			
MW-16BR	D	MW----16BR installed October 2013				0.03 u			0.03 u
MW-17B	D	--	--	--	--	0.03 u			AB
MW-18B	D	--	--	--	--	0.03 u			AB
MW-19B	D	--	0.03 u	--	0.03 u	--			AB
MW-20B	D	--	--	--	0.03 u	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	0.03 u	--			AB
MW-22B	B	MW-22B abandoned in November 2011							
MW-22BR	B	NI	--	--	0.03 u	--			0.03 u
MW-23B	B	--	0.03 u	--	0.15 i	--			0.03 u

Table B-14
Nitrate Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (mg/L)	16th Semi May-12 (mg/L)	17th Semi Nov-12 (mg/L)	18th Semi May-13 (mg/L)	19th Semi Nov-13 (mg/L)	1st Cmp Dec-13 (mg/L)	2nd Cmp Feb-14 (mg/L)	20th Semi / 3rd Cmp May-14 (mg/L)
MW-1C	B	0.03 u	--	0.03 u	--	0.03 u			--
MW-2C	B	0.03 u	--	0.03 u	--	0.03 u			--
MW-3C	B	0.03 u	--	0.03 u	--	0.03 u			--
MW-4C	B	0.03 u	--	0.03 u	--	0.03 u			--
MW-5C	B	0.03 u	--	0.03 u	--	0.03 u			--
MW-6C	B	0.03 u	--	0.03 u	--	0.03 u			--
MW-7C	D	0.03 u	--	0.03 u	--	0.03 u			--
MW-8C	D	0.03 u	--	0.03 u	--	0.03 u			--
MW-9C	D	0.03 u	--	0.03 u	--	0.03 u			--
MW-10C	D	0.03 u	--	0.03 u	--	0.03 u			--
MW-11C	D	0.03 u	--	0.03 u	--	0.03 u			--
MW-12C	D	0.03 u	--	0.03 u	--	0.03 u			--
MW-13C	D	0.03 u	--	0.03 u	--	0.03 u			--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	0.03 u	0.03 u	0.03 u	0.03 u	MW-16C abandoned in July 2013			
MW-16CR	D	MW----16CR installed October 2013				0.03 u			--
MW-17C	D	--	--	--	--	0.03 u			AB
MW-18C	D	--	--	--	--	0.03 u			AB
MW-19C	D	0.03 u	--	0.03 u	--	0.03 u			AB
MW-20C	D	--	--	0.03 u	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	0.03 u	--	0.03 u			AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR	B	NI	--	0.03 u	--	0.03 u			--
MW-23C	B	0.03 u	--	0.03 u	--	0.03 u			--

Notes:

Semi = semi-annual monitoring event

Cmp = compliance monitoring event

µg/L=micrograms per liter

-- = Not Sampled

u = Not detected at value represented

i = Value is estimated to be between method detection limit and practical quantitation limit.

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections above the PQL are shown in shaded cells (green color)

Constituent detections reported between the MDL and PQL are shown in shaded cells (blue color)

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

Groundwater cleanup target level = 10 mg/L

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table B-15
Selenium Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1A	B	1.1 u	1.1 u	1.1 u	2.0	1.8 i	--	--	2.3
MW-2A	B	1.1 u	--	1.1 u	1.1 u	1.1 u	--	--	1.1 u
MW-3A	B	1.1 u	--	1.1 u	1.1 u	1.1 u	--	--	1.1 u
MW-4A	B	1.1 u	--	1.1 u	1.1 u	1.1 u	--	--	1.1 u
MW-5A	B	1.1 u	--	1.1 u	1.1 u	1.1 u	--	--	1.1 u
MW-6A	B	1.1 u	--	1.1 u	1.1 u	2.3	--	--	1.1 u
MW-7A	D	1.1 u	1.1 u	1.1 u	1.1 u	2.7	--	--	1.1 u
MW-8A	D	1.1 u	1.1 u	1.1 u	1.1 u	2.4	--	--	1.1 u
MW-9A	D	1.1 u	1.1 u	1.1 u	1.1 u	1.6 i	--	--	1.1 u
MW-10A	D	1.1 u	--	1.1 u	1.1 u	1.1 u	--	--	1.1 u
MW-11A	D	1.1 u	1.1 u	1.1 u	1.1 u	1.1 u	--	--	1.1 u
MW-12A	D	1.1 u	1.1 u	1.1 u	1.1 u	1.1 u	--	--	1.1 u
MW-13A	D	1.1 u	1.1 u	1.1 u	1.1 u	1.1 u	--	--	1.1 u
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	1.1 i	1.1 u	1.1 u	1.1 u	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				1.1 u	--	--	1.1 u
MW-17A	D	--	--	--	--	1.1 u	--	--	AB
MW-18A	D	--	--	--	--	1.1 u	--	--	AB
MW-19A	D	4.1	4.1	1.1 u	5.6	1.1 u	--	--	AB
MW-20A	D	--	--	1.1 u	1.8 i	MW-20A abandoned in July 2013			
MW-21A	D	--	--	8.2	1.6 i	1.1 u	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	1.1 u	1.1 u	1.1 u	--	--	1.1 u
MW-23A	B	0.1 i	1.1 u	1.1 u	1.1 u	1.1 u	--	--	1.1 u
CW-1A	C	CW-1A installed in November 2013					2.8	1.1 u	1.1 u
CW-2A	C	CW-2A installed in November 2013					1.1 u	1.1 u	1.1 u
CW-3A	C	CW-3A installed in November 2013					1.8 i	1.1 u	1.1 u
MW-1B	B	--	1.1 u	--	1.1 u	--	--	--	1.1 u
MW-2B	B	--	1.1 u	--	1.1 u	--	--	--	1.1 u
MW-3B	B	--	1.1 u	--	1.1 u	--	--	--	1.1 u
MW-4B	B	--	1.1 u	--	1.1 u	--	--	--	1.1 u
MW-5B	B	--	1.1 u	--	1.1 u	--	--	--	1.1 u
MW-6B	B	--	1.1 u	--	1.1 u	--	--	--	1.1 u
MW-7B	D	--	1.1 u	--	1.1 u	--	--	--	1.1 u
MW-8B	D	--	1.1 u	--	1.1 u	--	--	--	1.1 u
MW-9B	D	--	1.1 u	--	1.1 u	--	--	--	1.1 u
MW-10B	D	--	1.1 u	--	1.1 u	--	--	--	1.1 u
MW-11B	D	--	1.1 u	--	1.1 u	--	--	--	1.1 u
MW-12B	D	--	1.1 u	--	1.1 u	--	--	--	1.1 u
MW-13B	D	--	1.1 u	--	1.1 u	--	--	--	1.1 u
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	1.1 u	1.1 u	1.1 u	1.1 u	MW-16B abandoned in July 2013			
MW-16BR	D	MW-16BR installed October 2013				1.1 u	--	--	1.1 u
MW-17B	D	--	--	--	--	1.1 u	--	--	AB
MW-18B	D	--	--	--	--	1.1 u	--	--	AB
MW-19B	D	--	1.1 u	--	1.1 u	-	--	--	AB
MW-20B	D	--	--	--	2.5	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	1.1 u	--	--	--	AB
MW-22B	B	-	MW-22B abandoned in November 2011						
MW-22BR	B	NI	--	--	1.1 u	--	--	--	1.1 u
MW-23B	B	--	1.1 u	--	1.1 u	--	--	--	1.1 u

Table B-15
Selenium Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1C	B	1.1 u	--	1.1 u	--	1.1 u	--	--	--
MW-2C	B	1.1 u	--	1.1 u	--	1.1 u	--	--	--
MW-3C	B	1.1 u	--	1.1 u	--	1.1 u	--	--	--
MW-4C	B	1.1 u	--	1.1 u	--	1.1 u	--	--	--
MW-5C	B	1.1 u	--	1.1 u	--	1.1 u	--	--	--
MW-6C	B	1.1 u	--	1.1 u	--	1.5 i	--	--	--
MW-7C	D	1.1 u	--	1.1 u	--	1.3 i	--	--	--
MW-8C	D	1.1 u	--	1.1 u	--	1.5 i	--	--	--
MW-9C	D	1.1 u	--	1.1 u	--	1.7 i	--	--	--
MW-10C	D	1.1 u	--	1.1 u	--	1.1 u	--	--	--
MW-11C	D	1.1 u	--	1.1 u	--	1.1 u	--	--	--
MW-12C	D	1.1 u	--	1.1 u	--	1.1 u	--	--	--
MW-13C	D	1.1 u	--	1.1 u	--	1.1 u	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	1.1 u	1.1 u	1.1 u	1.1 u	MW-16C abandoned in July 2013			
MW-16CR	D	MW-16CR installed October 2013				1.1 u	--	--	-
MW-17C	D	-	--	--	--	1.1 u	--	--	AB
MW-18C	D	-	--	--	--	1.1 u	--	--	AB
MW-19C	D	1.1 u	--	1.1 u	--	1.1 u	--	--	AB
MW-20C	D	-	--	1.1 u	--	MW-20C abandoned in July 2013			
MW-21C	D	-	--	1.1 u	--	1.1 u	--	--	AB
MW-22C	B	-	MW-22C abandoned in November 2011						
MW-22CR	B	NI	--	2.0	--	1.1 u	--	--	--
MW-23C	B	1.1 u	--	1.1 u	--	1.1 u	--	--	--

Notes:

Semi = semi-annual monitoring event

Cmp = compliance monitoring event

µg/L=micrograms per liter

-- = Not Sampled

u = Not detected at value represented

i = Value is estimated to be between method detection limit and practical quantitation limit.

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections above the PQL are shown in shaded cells (green color)

Constituent detections reported between the MDL and PQL are shown in shaded cells (blue color)

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

Groundwater cleanup target level = 50 µg/L

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table B-16
Toluene Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1A	B	1.19	0.5 i	0.19 u	0.19 u	0.19 u	--	--	0.19 u
MW-2A	B	0.19 u	--	0.19 u	0.19 u	0.19 u	--	--	0.19 u
MW-3A	B	0.19 u	--	0.19 u	0.19 u	0.19 u	--	--	0.19 u
MW-4A	B	0.19 u	--	0.19 u	0.19 u	0.19 u	--	--	0.19 u
MW-5A	B	0.19 u	--	0.19 u	0.19 u	0.19 u	--	--	1.50
MW-6A	B	0.19 u	--	0.19 u	0.19 u	0.19 u	--	--	0.19 u
MW-7A	D	0.19 u	0.19 u	0.19 u	0.19 u	0.19 u	--	--	0.19 u
MW-8A	D	0.23 i	0.19 u	0.19 u	0.19 u	0.19 u	--	--	0.19 u
MW-9A	D	0.38 i	0.19 u	0.19 u	0.19 u	0.19 u	--	--	0.21 i
MW-10A	D	0.19 u	--	0.19 u	0.19 u	0.19 u	--	--	0.45 i
MW-11A	D	0.19 u	0.19 u	0.19 u	0.19 u	0.19 u	--	--	0.19 u
MW-12A	D	0.19 u	0.19 u	0.19 u	0.19 u	0.19 u	--	--	0.19 u
MW-13A	D	0.19 u	0.19 u	0.19 u	0.19 u	0.19 u	--	--	0.19 u
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	0.19 u	0.19 u	0.19 u	0.19 u	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				0.19 u	--	--	0.43 i
MW-17A	D	--	--	--	--	0.19 u	--	--	AB
MW-18A	D	--	--	--	--	0.19 u	--	--	AB
MW-19A	D	0.9 i	0.62 i	0.19 u	0.19 u	0.19 u	--	--	AB
MW-20A	D	--	--	0.19 u	0.19 u	MW-20A abandoned in July 2013			
MW-21A	D	--	--	0.19 u	0.19 u	0.19 u	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	0.19 u	0.19 u	0.19 u	--	--	0.19 u
MW-23A	B	0.19 u	0.19 u	0.19 u	0.19 u	0.19 u	--	--	0.19 u
CW-1A	C	CW-1A installed in November 2013					0.23 i	0.19 u	0.19 u
CW-2A	C	CW-2A installed in November 2013					0.19 u	0.19 u	0.19 u
CW-3A	C	CW-3A installed in November 2013					0.19 u	0.19 u	0.19 u
MW-1B	B	--	0.19 u	--	0.19 u	--	--	--	0.19 u
MW-2B	B	--	0.19 u	--	0.19 u	--	--	--	0.19 u
MW-3B	B	--	0.19 u	--	0.19 u	--	--	--	0.19 u
MW-4B	B	--	0.19 u	--	0.19 u	--	--	--	0.19 u
MW-5B	B	--	0.19 u	--	0.19 u	--	--	--	0.19 u
MW-6B	B	--	0.19 u	--	0.19 u	--	--	--	0.19 u
MW-7B	D	--	0.19 u	--	0.19 u	--	--	--	0.19 u
MW-8B	D	--	0.19 u	--	0.19 u	--	--	--	0.19 u
MW-9B	D	--	0.19 u	--	0.19 u	--	--	--	0.19 u
MW-10B	D	--	0.19 u	--	0.19 u	--	--	--	0.19 u
MW-11B	D	--	0.19 u	--	0.19 u	--	--	--	0.19 u
MW-12B	D	--	0.19 u	--	0.19 u	--	--	--	0.19 u
MW-13B	D	--	0.19 u	--	0.19 u	--	--	--	0.19 u
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	0.19 u	0.19 u	0.19 u	0.19 u	MW-16B abandoned in July 2013			
MW-16BR	D	MW-16BR installed October 2013				0.19 u	--	--	0.9 i
MW-17B	D	--	--	--	--	0.19 u	--	--	AB
MW-18B	D	--	--	--	--	0.19 u	--	--	AB
MW-19B	D	--	0.19 u	--	0.19 u	--	--	--	AB
MW-20B	D	--	--	--	0.19 u	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	0.19 u	--	--	--	AB
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR	B	NI	--	--	0.19 u	--	--	--	0.19 u
MW-23B	B	--	0.19 u	--	0.19 u	--	--	--	0.19 u

Table B-16
Toluene Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1C	B	0.19 u	--	0.19 u	--	0.19 u	--	--	--
MW-2C	B	0.19 u	--	0.19 u	--	0.19 u	--	--	--
MW-3C	B	0.19 u	--	0.19 u	--	0.19 u	--	--	--
MW-4C	B	0.19 u	--	0.19 u	--	0.19 u	--	--	--
MW-5C	B	0.19 u	--	0.19 u	--	0.19 u	--	--	--
MW-6C	B	0.19 u	--	0.19 u	--	0.19 u	--	--	--
MW-7C	D	0.19 u	--	0.19 u	--	0.19 u	--	--	--
MW-8C	D	0.19 u	--	0.19 u	--	0.19 u	--	--	--
MW-9C	D	0.19 u	--	0.19 u	--	0.19 u	--	--	--
MW-10C	D	0.19 u	--	0.19 u	--	0.19 u	--	--	--
MW-11C	D	0.19 u	--	0.19 u	--	0.19 u	--	--	--
MW-12C	D	0.19 u	--	0.19 u	--	0.19 u	--	--	--
MW-13C	D	0.19 u	--	0.19 u	--	0.19 u	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	0.19 u	0.19 u	0.19 u	0.19 u	MW-16C abandoned in July 2013			
MW-16CR	D	MW-16CR installed October 2013				0.19 u	--	--	--
MW-17C	D	--	--	--	--	--	--	--	AB
MW-18C	D	--	--	--	--	--	--	--	AB
MW-19C	D	0.19 u	--	0.19 u	--	--	--	--	AB
MW-20C	D	--	--	0.19 u	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	0.19 u	--	--	--	--	AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR	B	NI	--	0.19 u	--	0.19 u	--	--	--
MW-23C	B	0.19 u	--	0.19 u	--	0.2 u	--	--	--

Notes:

Semi = semi-annual monitoring event

Cmp = compliance monitoring event

µg/L=micrograms per liter

-- = Not Sampled

u = Not detected at value represented

i = Value is estimated to be between method detection limit and practical quantitation limit.

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections above the PQL are shown in shaded cells (green color)

Constituent detections reported between the MDL and PQL are shown in shaded cells (blue color)

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

Groundwater cleanup target level = 40 µg/L

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table B-17
Vanadium Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1A	B	3.4	0.7 i	6.4	6.9	10.1	--	--	12.2
MW-2A	B	2.7	--	0.8 i	1.8 i	2.1	--	--	2.4
MW-3A	B	1.5 i	--	1.4 i	2.7	10.4	--	--	14.1
MW-4A	B	1.0 i	--	0.3 u	0.5 i	3.5	--	--	2.8
MW-5A	B	1.3 i	--	4.5	1.5 i	1.8 i	--	--	1.9 i
MW-6A	B	2.3	--	4.3	2.8	2.2	--	--	2.2
MW-7A	D	1.5 i	2.1	4.0	2.0	2.1	--	--	2.1
MW-8A	D	5.2	5.2	7.7	6.0	4.2	--	--	4.1
MW-9A	D	2.7	1.7 i	2.6	2.5	1.9 i	--	--	1.6 i
MW-10A	D	0.9 i	--	0.3 u	2.9	0.7 i	--	--	0.3 i
MW-11A	D	5.4	8.9	1.1 i	3.7	3.7	--	--	4.6
MW-12A	D	1.9 i	2.1	4.2	2.6	2.9	--	--	1.2 i
MW-13A	D	3.0	4.0	3.0	4.3	3.0	--	--	3.6
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	9.1	3.6	7.0	3.4	MW-16A abandoned in July 2013			
MW-16AR	D	MW-16AR installed October 2013				3.9	--	--	1.8 i
MW-17A	D	--	--	--	--	3.8	--	--	AB
MW-18A	D	--	--	--	--	3.3	--	--	AB
MW-19A	D	23.3	21	7.0	28.8	2.8	--	--	AB
MW-20A	D	--	--	7.1	6.5	MW-20A abandoned in July 2013			
MW-21A	D	--	--	9.9	5.5	7.2	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	4.2	2.6	2.9	--	--	3.2
MW-23A	B	4.1	4.8	2.0 i	4.0	3.4	--	--	3.3
CW-1A	C	CW-1A installed in November 2013					12.3	3.5	2.9
CW-2A	C	CW-2A installed in November 2013					9.2	8.6	7.8
CW-3A	C	CW-3A installed in November 2013					15	11.3	10.9
MW-1B	B	--	0.8 i	--	0.4 i	--	--	--	0.3 u
MW-2B	B	--	0.3 i	--	0.3 u	--	--	--	0.4 i
MW-3B	B	--	2.7	--	2.6	--	--	--	1.8 i
MW-4B	B	--	0.9 i	--	0.3 u	--	--	--	6.0
MW-5B	B	--	1.0 i	--	1.4 i	--	--	--	2.3
MW-6B	B	--	1.3 i	--	1.0 i	--	--	--	1.3 i
MW-7B	D	--	0.4 i	--	1.0 i	--	--	--	1.9 i
MW-8B	D	--	2.5	--	3.5	--	--	--	2.1
MW-9B	D	--	1.7 i	--	4.5	--	--	--	5.3
MW-10B	D	--	1.5 i	--	1.8 i	--	--	--	1.7 i
MW-11B	D	--	2.5	--	2.5	--	--	--	1.8 i
MW-12B	D	--	0.3 u	--	1.1 i	--	--	--	0.6 i
MW-13B	D	--	0.3 u	--	0.3 u	--	--	--	0.3 u
MW-14B	D	MW-14A abandoned in July 2007							
MW-15B	D	MW-15A abandoned in July 2007							
MW-16B	D	1.7 i	2.1	0.3 u	2.8	MW-16A abandoned in July 2013			
MW-16BR	D	MW-16AR installed October 2013				2.5	--	--	2.0 i
MW-17B	D	--	--	--	--	1.2 i	--	--	AB
MW-18B	D	--	--	--	--	--	--	--	AB
MW-19B	D	--	0.9 i	--	1.8 i	--	--	--	AB
MW-20B	D	--	--	--	10.0	MW-20A abandoned in July 2013			
MW-21B	D	--	--	--	0.4 i	--	--	--	AB
MW-22B	B	--	MW-22A abandoned in November 2011						
MW-22BR	B	NI	--	--	9.8	--	--	--	0.8 i
MW-23B	B	--	0.9 i	--	1.5 i	--	--	--	1.2 i

Table B-17
Vanadium Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1C	B	1.1 i	--	0.5 i	--	0.6 i	--	--	--
MW-2C	B	0.4 u	--	0.3 u	--	1.2 i	--	--	--
MW-3C	B	0.4 i	--	0.3 u	--	1.0 i	--	--	--
MW-4C	B	0.4 i	--	1.2 i	--	0.9 i	--	--	--
MW-5C	B	0.4 i	--	0.5 i	--	0.5 i	--	--	--
MW-6C	B	2.0	--	1.7 i	--	0.5 i	--	--	--
MW-7C	D	1.5 i	--	0.9 i	--	0.6 i	--	--	--
MW-8C	D	1.1 i	--	0.6 i	--	0.6 i	--	--	--
MW-9C	D	1.9 i	--	1.2 i	--	1.6 i	--	--	--
MW-10C	D	1.3 i	--	0.3 u	--	1.0 i	--	--	--
MW-11C	D	1.7 i	--	0.6 i	--	0.6 i	--	--	--
MW-12C	D	1.0 i	--	0.3 u	--	0.3 u	--	--	--
MW-13C	D	1.2 i	--	0.3 u	--	0.6 i	--	--	--
MW-14C	D	MW-14A abandoned in July 2007							
MW-15C	D	MW-15A abandoned in July 2007							
MW-16C	D	0.9 i	1.4 i	0.3 u	0.5 i	MW-16A abandoned in July 2013			
MW-16CR	D	MW-16AR installed October 2013				3.3	--	--	--
MW-17C	D	--	--	--	--	1.6 i	--	--	AB
MW-18C	D	--	--	--	--	1.7 i	--	--	AB
MW-19C	D	3.2	--	3.1	--	4.9	--	--	AB
MW-20C	D	--	--	2.3	--	MW-20A abandoned in July 2013			
MW-21C	D	--	--	2.6	--	5.1	--	--	AB
MW-22C	B	--	MW-22A abandoned in November 2011						
MW-22CR	B	NI	--	20.8	--	0.9 i	--	--	--
MW-23C	B	1.0 i	--	1.0 i	--	0.9 i	--	--	--

Notes:

Semi = semi-annual monitoring event

Cmp = compliance monitoring event

µg/L=micrograms per liter

-- = Not Sampled

u = Not detected at value represented

i = Value is estimated to be between method detection limit and practical quantitation limit.

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections above the PQL are shown in shaded cells (green color)

Constituent detections reported between the MDL and PQL are shown in shaded cells (blue color)

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

Groundwater cleanup target level = 49 µg/L

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

Table B-18
Zinc Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1A	B	0.9 u	1.6 u	4.7 i	6.3	2.5 i	--	--	4.2 i
MW-2A	B	2.1 i	--	2.6 i	2.6 i	2.2 i	--	--	3.2 i
MW-3A	B	1.6 i	--	1.6 u	1.6 u	1.8 i	--	--	1.6 u
MW-4A	B	0.9 u	--	2.5 i	3.4 i	1.8 i	--	--	1.6 u
MW-5A	B	5.7	--	2.4 i	1.6 u	1.6 u	--	--	1.6 u
MW-6A	B	1.5 i	--	2.4 i	1.6 u	2.8 i	--	--	1.6 u
MW-7A	D	1.4 i	1.6 u	1.9 i	1.6 u	1.6 u	--	--	1.7 i
MW-8A	D	2.2 i	1.6 u	3.9 i	1.7 i	3.3 i	--	--	2.2 i
MW-9A	D	2.3 i	1.6 u	5.0 i	3.5 i	2.0 i	--	--	2.9 i
MW-10A	D	4.1 i	--	1.8 i	1.6 u	1.6 u	--	--	1.6 u
MW-11A	D	1.8 i	1.6 u	2.0 i	1.6 u	1.6 u	--	--	2.0 i
MW-12A	D	1.8 i	1.6 u	1.8 i	1.6 u	1.6 u	--	--	2.3 i
MW-13A	D	1.4 i	1.6 u	1.6 u	1.6 u	1.6 u	--	--	2.2 i
MW-14A	D	MW-14A abandoned in July 2007							
MW-15A	D	MW-15A abandoned in July 2007							
MW-16A	D	1.3 i	1.6 u	1.9 i	1.6 u	MW-16A abandoned in July 2013			
MW-16AR	D	MW----16AR installed October 2013				1.6 u	--	--	2.3 i
MW-17A	D	--	--	--	--	1.6 u	--	--	AB
MW-18A	D	--	--	--	--	1.6 u	--	--	AB
MW-19A	D	2.9 i	1.6 u	1.9 i	1.6 u	1.7 i	--	--	AB
MW-20A	D	--	--	5.8	2.1 i	MW-20A abandoned in July 2013			
MW-21A	D	--	--	3.1 i	5.1	16.7	--	--	AB
MW-22A	B	--	MW-22A abandoned in November 2011						
MW-22AR	B	NI	--	1.8 i	1.6 u	1.6 u	--	--	4.1 i
MW-23A	B	1.5 i	1.6 u	2.3 i	1.6 u	1.6 u	--	--	5.1
CW-1A	C	CW-1A installed in November 2013					2.8 i	4.9 i	5.2
CW-2A	C	CW-2A installed in November 2013					3.7 i	3.8 i	4.1 i
CW-3A	C	CW-3A installed in November 2013					3.7 i	6.5	4.5 i
MW-1B	B	--	1.6 u	--	1.6 u	--	--	--	4.3 i
MW-2B	B	--	1.6 u	--	1.6 u	--	--	--	1.6 u
MW-3B	B	--	1.6 u	--	1.6 u	--	--	--	2.7 i
MW-4B	B	--	1.6 u	--	1.6 u	--	--	--	2.2 i
MW-5B	B	--	1.6 u	--	1.6 u	--	--	--	1.6 u
MW-6B	B	--	1.6 u	--	2.0 i	--	--	--	1.6 u
MW-7B	D	--	1.6 u	--	1.9 i	--	--	--	3.3 i
MW-8B	D	--	1.6 u	--	1.6 u	--	--	--	3.1 i
MW-9B	D	--	1.6 u	--	4.8 i	--	--	--	9.3
MW-10B	D	--	1.6 u	--	1.6 u	--	--	--	1.9 i
MW-11B	D	--	1.6 u	--	1.6 u	--	--	--	1.6 u
MW-12B	D	--	1.6 u	--	1.6 u	--	--	--	1.6 u
MW-13B	D	--	1.6 u	--	1.6 u	--	--	--	1.6 u
MW-14B	D	MW-14B abandoned in July 2007							
MW-15B	D	MW-15B abandoned in July 2007							
MW-16B	D	1.5 i	1.6 u	1.6 u	1.6 u	MW-16B abandoned in July 2013			
MW-16BR	C	MW----16BR installed October 2013				1.6 u	--	--	1.6 u
MW-17B	D	--	--	--	--	1.6 u	--	--	AB
MW-18B	D	--	--	--	--	--	--	--	AB
MW-19B	D	--	1.6 u	--	1.6 u	--	--	--	AB
MW-20B	D	--	--	--	4.1 i	MW-20B abandoned in July 2013			
MW-21B	D	--	--	--	1.6 u	--	--	--	AB
MW-22B	B	--	MW-22B abandoned in November 2011						
MW-22BR	B	NI	--	--	5.0 i	--	--	--	4.2 i
MW-23B	B	--	1.6 u	--	5.5	--	--	--	3.2 i

Table B-18
Zinc Concentrations in Monitoring Wells
Fifth Technical Report on Water Quality
J.E.D. Solid Waste Management Facility

Well ID	Type	15th Semi Nov-11 (µg/L)	16th Semi May-12 (µg/L)	17th Semi Nov-12 (µg/L)	18th Semi May-13 (µg/L)	19th Semi Nov-13 (µg/L)	1st Cmp Dec-13 (µg/L)	2nd Cmp Feb-14 (µg/L)	20th Semi / 3rd Cmp May-14 (µg/L)
MW-1C	B	0.9 u	--	1.7 i	--	2.8 i	--	--	--
MW-2C	B	0.9 u	--	2.5 i	--	1.6 u	--	--	--
MW-3C	B	0.9 u	--	1.6 u	--	1.8 i	--	--	--
MW-4C	B	0.9 u	--	1.6 u	--	1.6 u	--	--	--
MW-5C	B	28.2	--	6.7	--	24.3	--	--	--
MW-6C	B	2.1 i	--	21.1	--	1.6 u	--	--	--
MW-7C	D	1.4 i	--	23.7	--	1.8 i	--	--	--
MW-8C	D	1.7 i	--	7.4	--	2.0 i	--	--	--
MW-9C	D	1.7 i	--	1.9 i	--	20.4	--	--	--
MW-10C	D	31.9	--	1.9 i	--	45.0	--	--	--
MW-11C	D	1.9 i	--	22.0	--	1.9 i	--	--	--
MW-12C	D	1.8 i	--	19.8	--	1.6 u	--	--	--
MW-13C	D	1.6 i	--	1.9 i	--	1.6 u	--	--	--
MW-14C	D	MW-14C abandoned in July 2007							
MW-15C	D	MW-15C abandoned in July 2007							
MW-16C	D	1.5 i	1.6 u	2.1 i	1.6 u	MW-16C abandoned in July 2013			
MW-16CR	D	MW----16CR installed October 2013				3.9 i	--	--	--
MW-17C	D	--	--	--	--	1.6 u	--	--	AB
MW-18C	D	--	--	--	--	4.3 i	--	--	AB
MW-19C	D	2.2 i	--	2.9 i	--	1.8 i	--	--	AB
MW-20C	D	--	--	2.8 i	--	MW-20C abandoned in July 2013			
MW-21C	D	--	--	3.3 i	--	2.8 i	--	--	AB
MW-22C	B	--	MW-22C abandoned in November 2011						
MW-22CR	B	NI	--	11.3	--	1.6 u	--	--	--
MW-23C	B	1.6 i	--	2.4 i	--	1.6 u	--	--	--

Notes:

Semi = semi-annual monitoring event

Cmp = compliance monitoring event

µg/L=micrograms per liter

-- = Not Sampled

u = Not detected at value represented

i = Value is estimated to be between method detection limit and practical quantitation limit.

Well type: (B) Background well (D) Detection well (C) Compliance well

Constituent detections above the PQL are shown in shaded cells (green color)

Constituent detections reported between the MDL and PQL are shown in shaded cells (blue color)

MDL = Method Detection Limit

PQL = Practical Quantitation Limit

Groundwater cleanup target level = 5,000 µg/L

AB indicates wells were abandoned in March 2014

NI indicates wells were installed in March 2012

APPENDIX C

GROUNDWATER CONTOUR MAPS FOR THE 15th – 20th SEMI-ANNUAL MONITORING EVENTS

Legend

Monitor Well Location

Water Level Contours

NOTES:

AERIAL PHOTOGRAPH PROVIDED BY BULLSEYE DESIGN (2009).
WATER LEVEL MEASUREMENTS ACQUIRED 16 MAY 2011.
WACS FACILITY ID 89455

200 100 0 200 400 600 800 Feet

1 in = 600 ft

15th SEMI-ANNUAL MONITORING EVENT (NOVEMBER 2011)
"A"-ZONE (SHALLOW) WELLS-WATER LEVEL CONTOURS

WASTE SERVICES OF FLORIDA, INC.
J.E.D. SOLID WASTE
1501 OMNI WAY
ST. CLOUD, FLORIDA

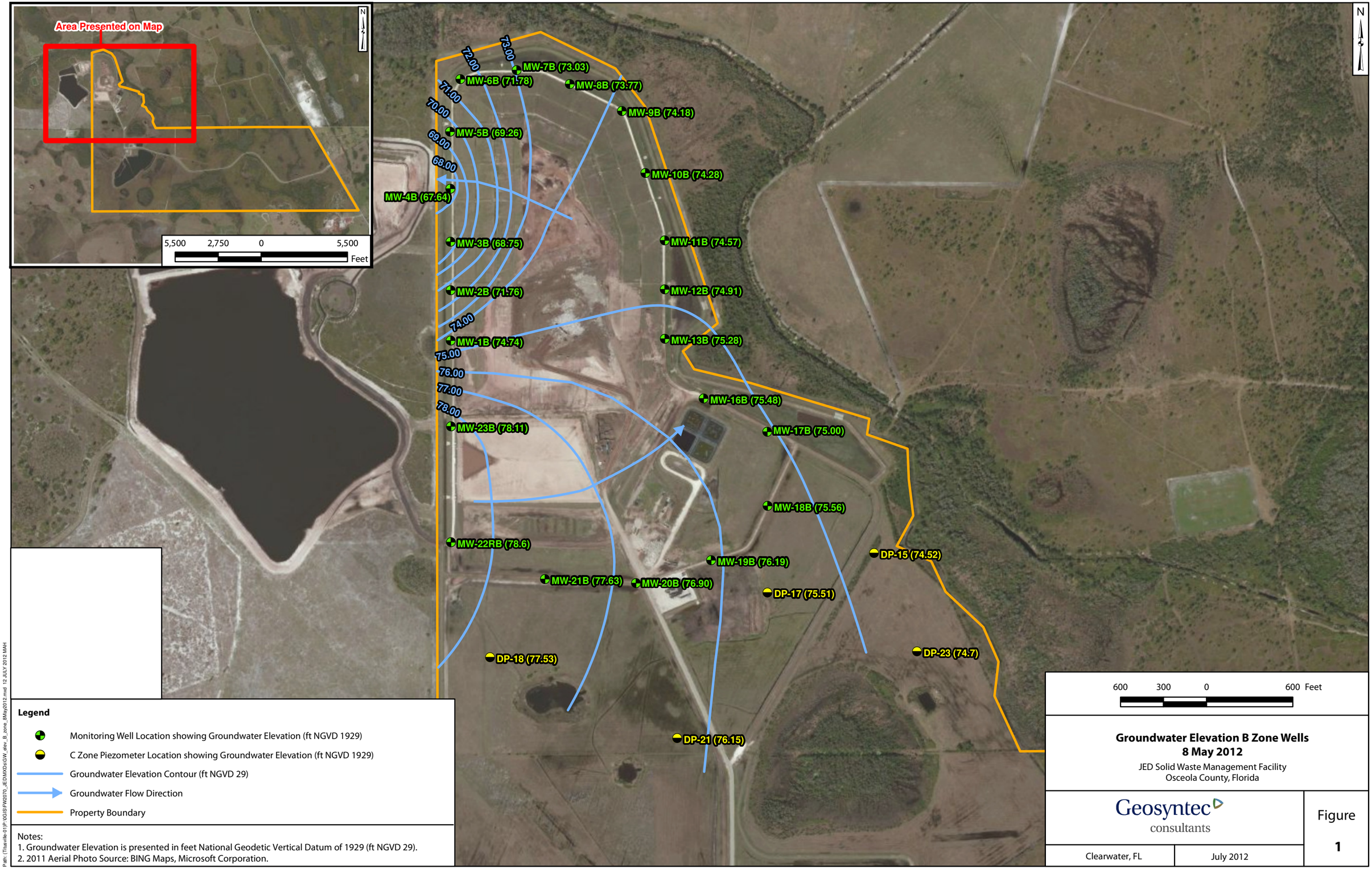
Geo-Services and Consulting, LLC

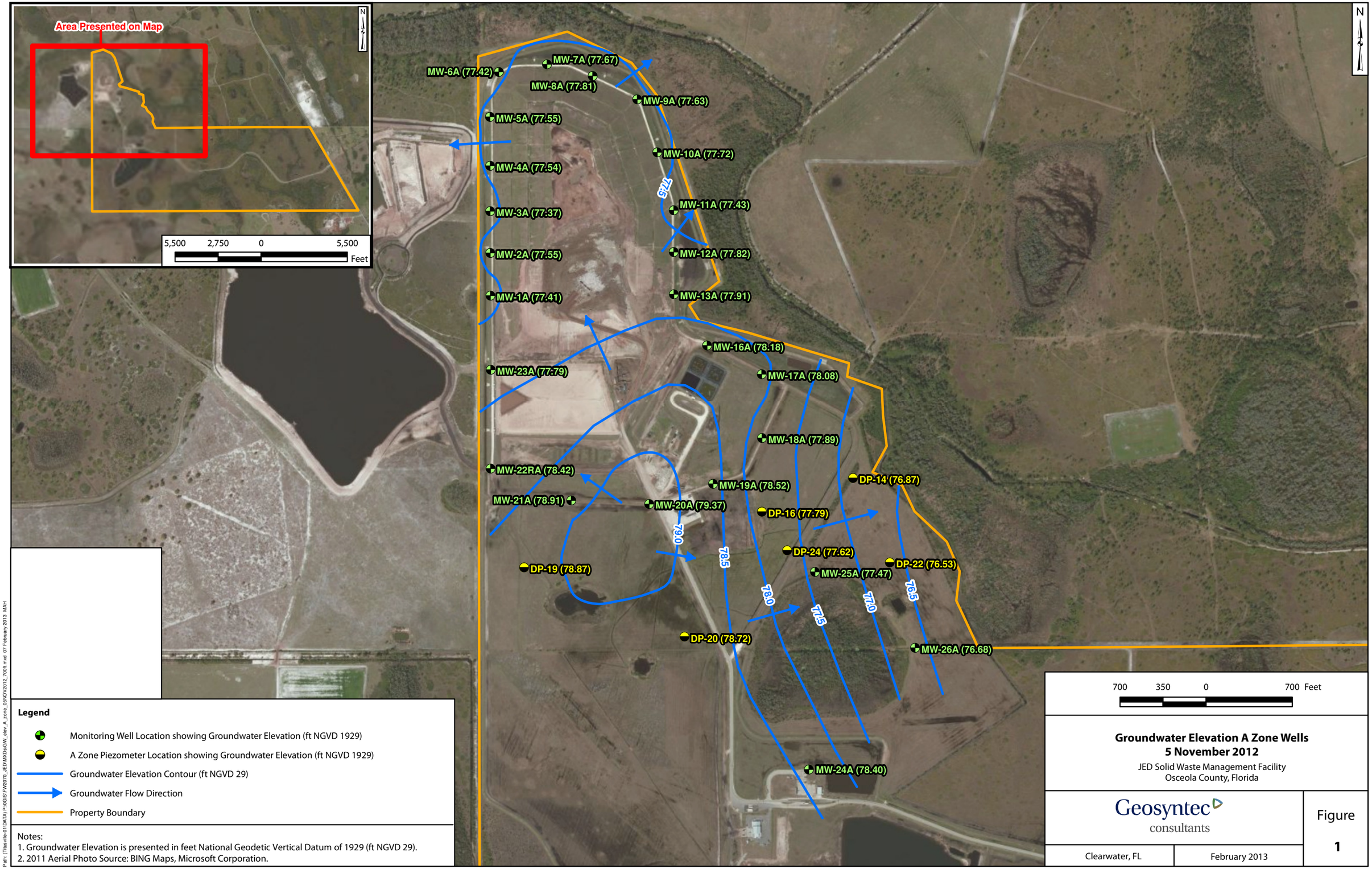
FIGURE
1

TAMPA, FL

JAN 2012

I:\gis\WS\JED\Maps\wq_2010\fig1_11_may_10.mxd


Area Presented on Map
N
5,500 2,750 0 5,500
Feet
72.00
73.00
71.00
70.00
69.00
68.00
74.00
75.00
76.00
77.00
78.00
MW-7B (73.03)
MW-6B (71.78)
MW-8B (73.77)
MW-9B (74.18)
MW-5B (69.26)
MW-10B (74.28)
MW-4B (67.64)
MW-3B (68.75)
MW-11B (74.57)
MW-2B (71.76)
MW-12B (74.91)
MW-1B (74.74)
MW-13B (75.28)
MW-16B (75.48)
MW-23B (78.11)
MW-17B (75.00)
MW-18B (75.56)
MW-22RB (78.6)
MW-19B (76.19)
DP-15 (74.52)
MW-21B (77.63)
MW-20B (76.90)
DP-17 (75.51)
DP-18 (77.53)
DP-23 (74.7)
DP-21 (76.15)
Legend
Monitoring Well Location showing Groundwater Elevation (ft NGVD 1929)
C Zone Piezometer Location showing Groundwater Elevation (ft NGVD 1929)
Groundwater Elevation Contour (ft NGVD 29)
Groundwater Flow Direction
Property Boundary
Notes:
1. Groundwater Elevation is presented in feet National Geodetic Vertical Datum of 1929 (ft NGVD 29).
2. 2011 Aerial Photo Source: BING Maps, Microsoft Corporation.
600 300 0 600 Feet
Groundwater Elevation B Zone Wells
8 May 2012
JED Solid Waste Management Facility
Osceola County, Florida
Geosyntec consultants
Figure
1
Clearwater, FL
July 2012
Path: I:\Tlaxville-01\P:\GIS\PW2070_JED\MXDs\GW_elev_B_zone_8May2012.mxd 12 JULY 2012 MAH



Legend

- Monitoring Well Location showing Groundwater Elevation (ft NGVD 1929)
- A Zone Piezometer Location showing Groundwater Elevation (ft NGVD 1929)
- Groundwater Elevation Contour (ft NGVD 29)
- Groundwater Flow Direction
- Property Boundary

Notes:
1. Groundwater Elevation is presented in feet National Geodetic Vertical Datum of 1929 (ft NGVD 29).
2. 2011 Aerial Photo Source: BING Maps, Microsoft Corporation.

Groundwater Elevation A Zone Wells
5 November 2012
JED Solid Waste Management Facility
Osceola County, Florida

Geosyntec consultants

Clearwater, FL | February 2013

Figure **1**

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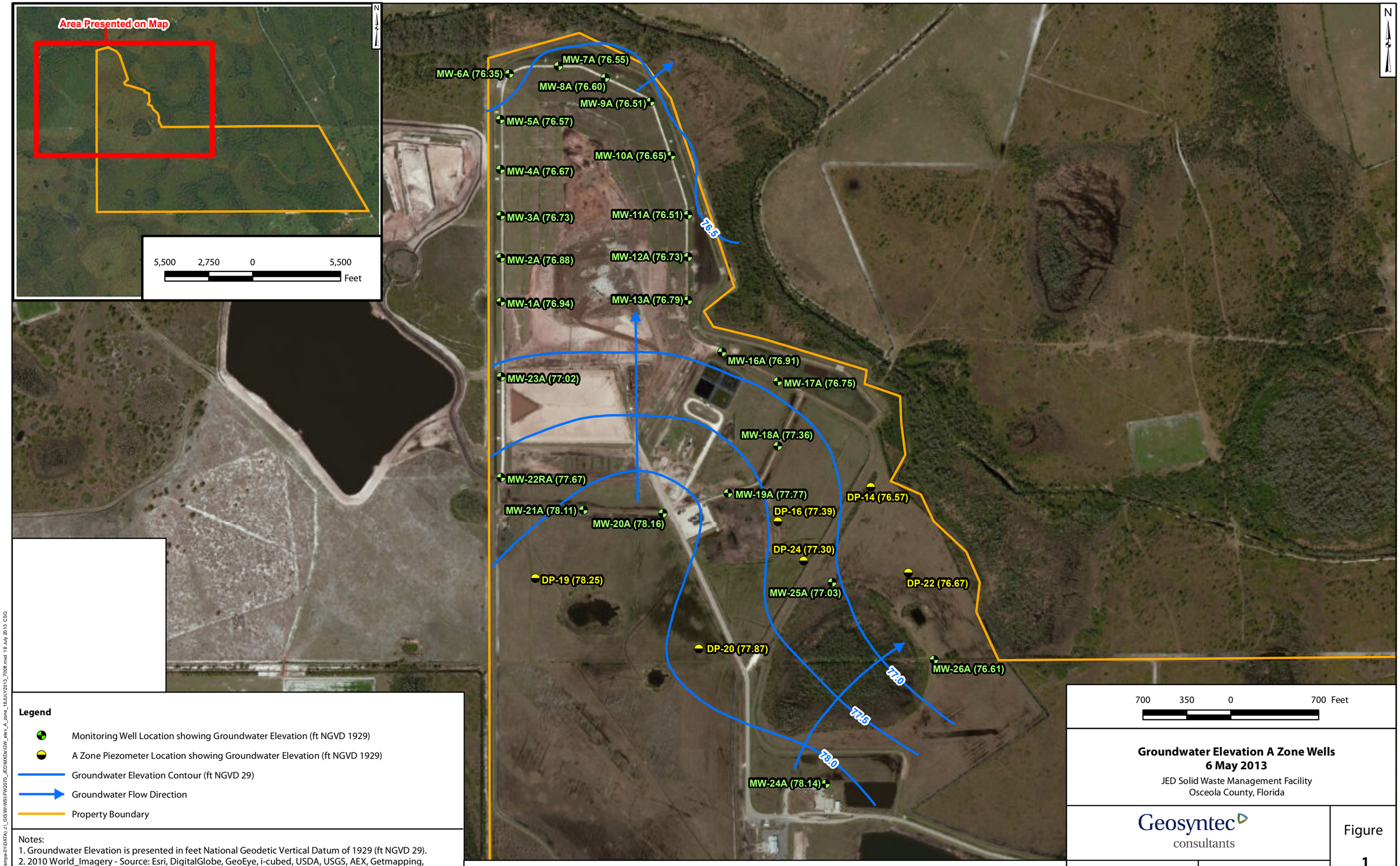
Area Presented on Map
N
5,500 2,750 0 5,500
Feet
MW-6A (76.35)
MW-7A (76.55)
MW-8A (76.60)
MW-9A (76.51)
MW-5A (76.57)
MW-10A (76.65)
MW-4A (76.67)
MW-3A (76.73)
MW-11A (76.51)
76.5
MW-2A (76.88)
MW-12A (76.73)
MW-1A (76.94)
MW-13A (76.79)
MW-16A (76.91)
MW-23A (77.02)
MW-17A (76.75)
MW-18A (77.36)
MW-22RA (77.67)
MW-19A (77.77)
DP-14 (76.57)
MW-21A (78.11)
MW-20A (78.16)
DP-16 (77.39)
DP-24 (77.30)
DP-19 (78.25)
MW-25A (77.03)
DP-22 (76.67)
DP-20 (77.87)
MW-26A (76.61)
77.0
77.5
78.0
MW-24A (78.14)
700 350 0 700 Feet
Legend
Monitoring Well Location showing Groundwater Elevation (ft NGVD 1929)
A Zone Piezometer Location showing Groundwater Elevation (ft NGVD 1929)
Groundwater Elevation Contour (ft NGVD 29)
Groundwater Flow Direction
Property Boundary
Notes:
1. Groundwater Elevation is presented in feet National Geodetic Vertical Datum of 1929 (ft NGVD 29).
2. 2010 World_Imagery - Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Groundwater Elevation A Zone Wells
6 May 2013
JED Solid Waste Management Facility
Osceola County, Florida
Geosyntec consultants
Clearwater, FL
July 2013
Figure
1
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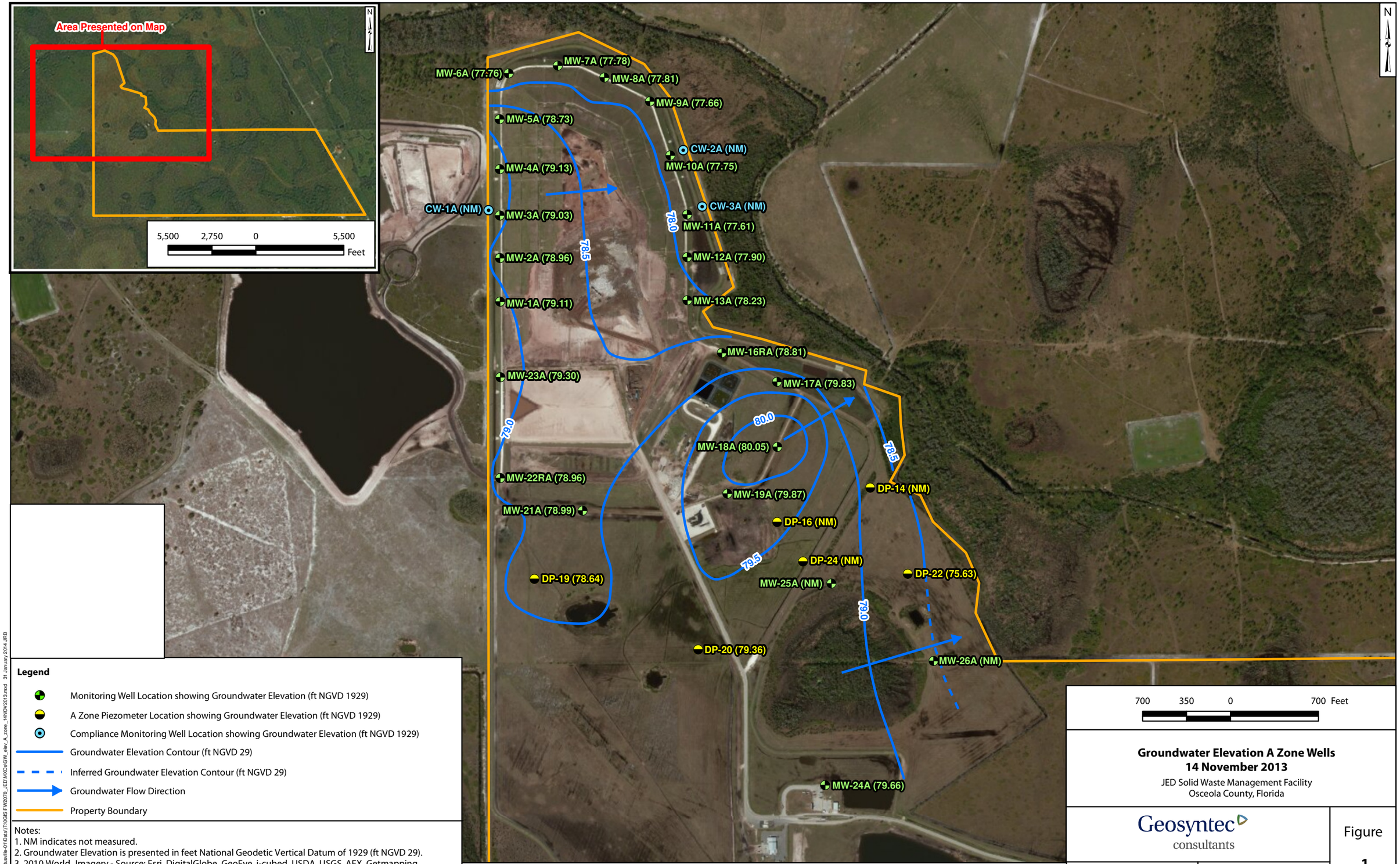

Notes:
1. NM indicates not measured.
2. Groundwater Elevation is presented in feet National Geodetic Vertical Datum of 1929 (ft NGVD 29).
3. 2010 World_Imagery - Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community.

Groundwater Elevation A Zone Wells
14 November 2013
JED Solid Waste Management Facility
Osceola County, Florida

Geosyntec consultants

Clearwater, FL | January 2014 | Figure 1

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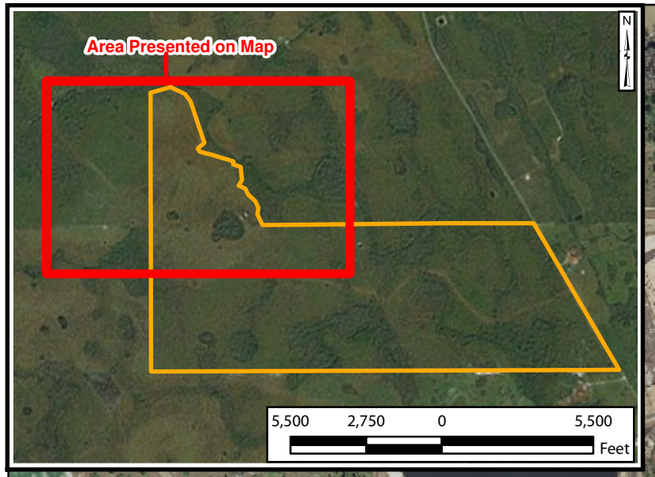

MW-6A (79.37)
MW-7A (79.59)
MW-8A (79.91)
MW-9A (79.47)
MW-5A (80.71)
MW-10A (78.93)
CW-2A (78.51)
MW-4A (80.93)
80.5
CW-1A (80.98)
MW-3A (80.91)
MW-11A (78.76)
CW-3A (78.31)
MW-2A (80.92)
MW-12A (78.80)
MW-1A (80.70)
MW-13A (78.79)
MW-16AR (79.06)
79.0
MW-23A (80.49)
79.5
MW-22AR (80.22)
80.0
DP-14 (79.06)
DP-16 (79.46)
DP-24 (NM)
DP-19 (80.37)
MW-25A (79.10)
DP-22 (78.64)
DP-20 (79.81)
MW-26A (NM)
MW-24A (79.53)

Legend

- Monitoring Well Location showing Groundwater Elevation (ft NGVD 1929)
- A Zone Piezometer Location showing Groundwater Elevation (ft NGVD 1929)
- Compliance Monitoring Well Location showing Groundwater Elevation (ft NGVD 1929)
- Groundwater Elevation Contour (ft NGVD 29)
- Groundwater Flow Direction
- Property Boundary

Notes:
1. NM indicates not measured.
2. Groundwater Elevation is presented in feet National Geodetic Vertical Datum of 1929 (ft NGVD 29).
3. Source of 2011 Imagery: Florida Department of Transportation, Surveying and Mapping Office.
4. Inset Imagery Source: World Imagery 1999 - Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community.

700 350 0 700 Feet

Groundwater Elevation A Zone Wells
5 May 2014

JED Solid Waste Management Facility
Osceola County, Florida

Geosyntec consultants

Clearwater, FL | June 2014

Figure **1**

Path: (Tlusville-01\Data)T:\GIS\FW2070_JED\MXDs\GW_elev_A_zone_05MAY2014.mxd 24 June 2014 JRB