FINAL

QUARTERLY SUMMARY REPORT
THIRD QUARTER 2013 SAMPLING EVENTS

OPERABLE UNIT No. 2 (GROUNDWATER)
FORMER NEBRASKA ORDNANCE PLANT
MEAD, NEBRASKA

Prepared for

United States Army Corps of Engineers
Northwestern Division, Kansas City District

December 2013

This page intentionally left blank

FINAL
QUARTERLY SUMMARY REPORT
THIRD QUARTER 2013 SAMPLING EVENTS

OPERABLE UNIT No. 2 (GROUNDWATER)
FORMER NEBRASKA ORDNANCE PLANT
MEAD, NEBRASKA

December 2013

I hereby certify that the enclosed *Quarterly Summary Report Third Quarter 2013 Sampling Events*, shown and marked in this submittal, is in compliance with the contract specifications and is submitted for government approval for the former Nebraska Ordnance Plant near Mead, Nebraska.

Reviewed by:

12/3/13

ECC Project Manager Date

Accepted as a submittal:

USACE Contracting Officer Date

This page intentionally left blank

TABLE OF CONTENTS

1.0 INTRODUCTION 1
1.1 Objectives 1
2.0 SUMMARY OF THIRD QUARTER 2013 GROUNDWATER MONITORING WELL SAMPLING EVENT 2
2.1 Field Sampling 2
2.2 Analytical Results 2
2.3 Groundwater Monitoring Well Summary 3
3.0 SUMMARY OF THIRD QUARTER 2013 WATER SUPPLY WELL SAMPLING EVENT 4
3.1 Field Sampling 4
3.2 Analytical Results 4
3.3 Water Supply Well Summary 4
4.0 SUMMARY OF THIRD QUARTER 2013 OPERATIONS AND MAINTENANCE SAMPLING EVENTS 5
4.1 Field Sampling 5
4.2 Analytical Results 5
4.3 Operations and Maintenance Summary 6
5.0 DATA VALIDATION RESULTS 6
6.0 THIRD QUARTER 2013 SAMPLING EVENTS SUMMARY 6
7.0 REFERENCES 7

LIST OF TABLES

Table 1-1 Final Target Groundwater Cleanup Goals
Table 2-1 Perimeter Monitoring Wells Results for Third Quarter 2013 Sampling Event
Table 2-2 Compliance Monitoring Wells Results for Third Quarter 2013 Sampling Event
Table 2-3 LL1 Interior Plume Monitoring Wells Results for Third Quarter 2013 Sampling Event
Table 2-4 LL2 and LL3 Interior Plume Monitoring Wells Results for Third Quarter 2013 Sampling Event
Table 2-5 LL4, AMA, and Landfill Interior Plume Monitoring Wells Results for Third Quarter 2013 Sampling Event
Table 2-6 Upgradient, Sidegradient and Downgradient Monitoring Wells Results for Third Quarter 2013 Sampling Event
Table 3-1 Water Supply Well Results for Third Quarter 2013 Sampling Event
Table 4-1 Operations and Maintenance Results for Third Quarter 2013 Sampling Events

LIST OF FIGURES

Figure 2-1 Monitoring Well Third Quarter 2013 Sampling Locations
Figure 3-1 Water Supply Well Third Quarter 2013 Sampling Locations
Figure 4-1 Operations and Maintenance Third Quarter 2013 Sampling Locations

LIST OF APPENDICES

Appendix A Concentration Trend Charts for Select Monitoring Wells

Appendix B Concentration Trend Charts for Select Water Supply Wells

Appendix C Quality Control Summary Report Third Quarter 2013 Groundwater Monitoring Program Sampling Events, Former Nebraska Ordnance Plant (on CD)

Appendix D Quality Control Summary Report Third Quarter 2013 Water Supply Well Sampling Event, Former Nebraska Ordnance Plant (on CD)

Appendix E Quality Control Summary Report Third Quarter 2013 Operations and Maintenance Sampling Events, Former Nebraska Ordnance Plant (on CD)

Appendix F Historical Detections spreadsheet of TCE and RDX for Monitoring Wells, Water Supply Wells and Surface Water Locations (on CD)

LIST OF ACRONYMS AND ABBREVIATIONS

AMA	Atlas Missile Area
AOP	Advanced Oxidation Process
CD	compact disc
COC	contaminant of concern
EW	extraction well
FEW	focused extraction well
GAC	granular activated carbon
GMP	Groundwater Monitoring Program
GTP	Groundwater Treatment Plant
LL	Load Line
MS/MSD	matrix spike/matrix spike duplicate
NDEQ	Nebraska Department of Environmental Quality
NOP	Nebraska Ordnance Plant
O&M	operations and maintenance
QC	quality control
RDX	hexahydro-1,3,5-trinitro-1,3,5-triazine
TCE	trichloroethene
UNFL	University of Nebraska-Lincoln Field Laboratory
VOC	volatile organic compound
WSW	water supply well

This page intentionally left blank

1.0 INTRODUCTION

This report summarizes and discusses the results of the groundwater monitoring wells, water supply wells, and operations and maintenance (O&M) locations sampled during the Third Quarter 2013 at the former Nebraska Ordnance Plant (NOP). Historical data and information prior to 2013 are presented in various documents including the *Supplemental Remedial Investigation/Feasibility Study, Operable Unit No. 1* (SEC Donohue, 1992), the *Remedial Investigation Report, Operable Unit No. 2 (Groundwater)* (Woodward-Clyde, 1993a), the *Draft Additional Field Investigation Report Operable Unit No. 2 (Groundwater)* (Woodward-Clyde, 1993b), and a series of Groundwater Monitoring Program (GMP) and O&M Annual Reports from 2000 through 2012.

This report contains the following Appendices:

- Appendix A contains the Concentration Trend Charts for Select Monitoring Wells;
- Appendix B contains the Concentration Trend Charts for Select Water Supply Wells;
- Appendix C contains the Quality Control Summary Report Third Quarter 2013 Groundwater Monitoring Program Sampling Events (on a compact disk [CD]);
- Appendix D contains the Quality Control Summary Report Third Quarter 2013 Water Supply Well Sampling Event (on a CD);
- Appendix E contains the Quality Control Summary Report Third Quarter 2013 Operations and Maintenance Sampling Events (on a CD); and
- Appendix F contains the historical spreadsheet of all trichloroethene (TCE) and hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) results for the groundwater sampling program sampling events (on a CD).

The following sections 2.0, 3.0, and 4.0 contain a summary of results for the Third Quarter 2013 sampling event for the Operable Unit 2 Record of Decision contaminants of concern (COCs) and other site specific compounds.

1.1 Objectives

The objectives of the GMP and O&M activities were established in the *Site-Wide Work Plan, Revision 01, Support Services, Former Nebraska Ordnance Plant, Mead, Nebraska* (ECC, 2013), which includes the Field Sampling Plan. The objectives consist of the following:

- To monitor and evaluate potential changes in the concentrations of COCs, as shown on Table 1-1 and defined in the *Record of Decision, Operable Unit No. 2, Former Nebraska Ordnance Plant, Mead, Nebraska* (Woodward-Clyde, 1996);
- To monitor and evaluate the concentration of groundwater plumes;
- To provide data for evaluating whether plume(s) are being contained by the groundwater extraction well network; and
- Treat and discharge extracted groundwater to meet applicable standards.

2.0 SUMMARY OF THIRD QUARTER 2013 GROUNDWATER MONITORING WELL SAMPLING EVENT

The following sections are a summary of the groundwater monitoring well sampling event.

2.1 Field Sampling

Samples from 94 groundwater monitoring wells were collected during the Third Quarter 2013 monitoring well sampling event and are summarized below:

- Fifty-two groundwater monitoring wells were sampled for volatile organic compounds (VOCs);
- Eighty-seven groundwater monitoring wells were sampled for explosives;
- Nine field duplicate samples were collected;
- Four matrix spike (MS)/matrix spike duplicate (MSD) pairs were collected; and
- Three trip blanks were included with the volatile shipments.

2.2 Analytical Results

The Third Quarter 2013 groundwater monitoring well validated analytical results for all site specific compounds are presented in Tables 2-1 through 2-6. Figure 2-1 illustrates all groundwater monitoring wells sampled during this sampling event. Groundwater monitoring well results are presented based on the following well categories defined in the 2013 GMP Plan included in Attachment 1 Field Sampling Plan, Appendix L of the *Site-Wide Work Plan, Revision 01* (ECC, 2013):

- Perimeter groundwater monitoring wells;
- Compliance groundwater monitoring wells;
- Interior Plume groundwater monitoring wells in the Load Line (LL)1 contaminant plume;
- Interior Plume groundwater monitoring wells in the LL2 and LL3 contaminant plumes;
- Interior Plume groundwater monitoring wells in LL4 contaminant plume, which includes the landfill and Atlas Missile Area (AMA) areas;
- Focused Extraction groundwater monitoring wells at the focused extraction well (FEW)-11, FEW-14, and FEW-15 sites; and
- Upgradient, Sidegradient and Downgradient groundwater monitoring wells.

The following is a summary of the former NOP groundwater monitoring well categories sampled during the Third Quarter 2013 sampling event:

- Fifty-two Perimeter groundwater monitoring wells were sampled (detected results for site-specific compounds are presented in Table 2-1);
- Six Compliance groundwater monitoring wells were sampled (detected results for site-specific compounds are presented in Table 2-2);
- Six LL1 Interior Plume groundwater monitoring wells were sampled (detected results for site-specific compounds are presented in Table 2-3);

- Twenty-four LL2 and LL3 Interior Plume groundwater monitoring wells were sampled (detected results for site-specific compounds are presented in Table 2-4);
- Four LL4/landfill/AMA Interior Plume groundwater monitoring wells were sampled (detected results for site-specific compounds are presented in Table 2-5); and
- Two Upgradient, Sidegradient, and Downgradient groundwater monitoring wells were sampled (detected results for site-specific compounds are presented in Table 2-6).

No Focused Extraction groundwater monitoring wells were sampled during the Third Quarter 2013 sampling event.

2.3 Groundwater Monitoring Well Summary

The following is a summary of the groundwater monitoring well results for the Third Quarter 2013 sampling event:

- Explosives COCs were detected in 11 Perimeter groundwater monitoring wells. All explosives detections were below the Final Target Groundwater Cleanup Goals. VOCs were detected in one Perimeter groundwater monitoring well sampled and were below the Final Target Groundwater Cleanup Goals. Results for all Perimeter groundwater monitoring wells are presented in Table 2-1.
- VOCs and explosives were non-detect in the six Compliance groundwater monitoring wells sampled. Results for all Compliance groundwater monitoring wells are presented in Table 2-2
- TCE exceeded the Final Target Groundwater Cleanup Goals in four of the six LL1 Interior Plume groundwater monitoring well locations and RDX exceeded the goals in one location. Additional site specific compounds were detected including COCs detected below the Final Target Groundwater Cleanup Goals in the LL1 Interior Plume monitoring wells. Results for all LL1 Interior Plume monitoring wells are presented in Table 2-3.
- RDX exceeded the Final Target Groundwater Cleanup Goals in 18 LL2 and LL3 Interior Plume groundwater monitoring well locations and 2,4-dinitrotoluene was exceeded at one location. No VOCs were detected in the two LL2 and LL3 Interior Plume groundwater monitoring wells sampled. Additional site specific explosive compounds were detected including COCs detected below the Final Target Groundwater Cleanup Goals in the LL2 and LL3 Interior Plume monitoring wells. Results for all LL2 and LL3 Interior Plume monitoring wells are presented in Table 2-4.
- TCE exceeded the Final Target Groundwater Cleanup Goals in all four LL4, AMA and landfill Interior Plume groundwater monitoring well locations sampled. RDX was detected below the Final Target Groundwater Cleanup Goals in the all four locations. Additional site specific compounds were detected below the Final Target Groundwater Cleanup Goals in the LL4, AMA and landfill Interior Plume monitoring wells. Results for all LL4, AMA, and landfill Interior Plume monitoring wells are presented in Table 2-5.

- Two Upgradient, Sidegradient, and Downgradient groundwater monitoring well locations were sampled for VOCs only. VOCs were non-detect in both sample locations. Results for all Upgradient, Sidegradient, and Downgradient groundwater monitoring well locations are presented in Table 2-6.

Historical results are presented for all sampling locations in Appendix F. Appendix A contains trending charts for groundwater monitoring wells sampled during the Third Quarter 2013 sampling event. All trending charts require four or more data points are included in this report.

3.0 SUMMARY OF THIRD QUARTER 2013 WATER SUPPLY WELL SAMPLING EVENT

The following sections are a summary of the water supply well sampling event.

3.1 Field Sampling

During the water supply well sampling event, 74 water supply well locations were sampled. In addition, the following samples were collected:

- Nine field duplicate samples;
- Four MS/MSD samples; and
- Six trip blanks.

The sampling locations at water supply well (WSW)-116, University of Nebraska-Lincoln Field Laboratory (UNFL)-12, and UNFL-23, were listed on the sampling schedule but were not collected as planned. The water was turned off at the UNFL-12, and UNFL-23 sampling locations, and the WSW-116 sampling location was not accessible to the field crew and a sample compliant with work plan requirements could not be obtained.

3.2 Analytical Results

The water supply well validated analytical results for site-specific compounds are presented in Table 3-1. Figure 3-1 illustrates the water supply wells sampled during the Third Quarter 2013 sampling event.

3.3 Water Supply Well Summary

During the water supply well sampling event, there were multiple detections of COCs and other site specific compounds. There were no detections of TCE and/or RDX exceeding the Final Target Groundwater Cleanup Goal in any post granular activated carbon (GAC) treatment system samples or any other samples collected during the water supply well sampling event. TCE and/or RDX exceeded the Final Target Groundwater Cleanup Goal in pretreatment GAC system samples at two locations (WSW-52C-B and WSW-53-B). Results for the water supply well sampling event are presented in Tables 3-1. Historical results are presented for all sampling locations in Appendix F. Appendix B contains trending charts for water supply wells sampled during the Third Quarter 2013 sampling event.

4.0 SUMMARY OF THIRD QUARTER 2013 OPERATIONS AND MAINTENANCE SAMPLING EVENTS

The following sections are a summary of the O&M sampling events.

4.1 Field Sampling

During the O&M sampling events, the following field samples were collected:

- One water sample from each of the following extraction wells (EW) and focused extraction wells: EW-1R, EW-4, EW-7, EW-9, and FEW-14.
- One water sample from EW-12 and EW-17 during each month of this quarter.
- One influent and one effluent water sample from EW-4 for ultraviolet photolysis study in September 2013.
- One water sample from each of the following GAC units during each month of this quarter: 310, 330, and 350.
- One influent water sample and one effluent water sample from the Main Groundwater Treatment Plant (GTP) during each month of this quarter.
- One influent water sample in September 2013 and one effluent water sample in July and September 2013 from groundwater circulation well 1.
- One influent water sample and one effluent water sample from the LL1 GTP during each month of this quarter.
- One influent air sample and one effluent air sample from the LL1 GTP.
- One influent water sample and one effluent water sample from the LL4 GTP in July and September 2013. Only effluent water sample was collected in August 2013.
- One effluent air sample from the LL4 GTP in July and August 2013.
- One influent and one effluent water from the Advanced Oxidation Process (AOP) GTP in July and September 2013. Only the effluent water sample was collected in August because the associated influent water sample was collected at FEW-11 as part of the alternative pilot study for focused extraction well cycling.

A trip blank was included in each shipment that contained field samples scheduled for analysis of VOCs. Five quality control (QC) field duplicate samples and MS/MSD for each parameter was collected for the Main GTP and LL1 GTP sampling events. Field duplicates and MS/MSD samples were not collected for the AOP GTP or LL4 GTP sampling events. However, the laboratory performed MS/MSD for nitrates analysis on the sample collected from LL4 GTP. The required field QC frequency was met overall for the Third Quarter 2013 O&M sampling events.

4.2 Analytical Results

The O&M validated analytical results for site-specific compounds are presented in Table 4-1. Figure 4-1 illustrates all O&M locations sampled during the Third Quarter 2013.

4.3 Operations and Maintenance Summary

All extracted groundwater was treated on-site using GAC adsorption, AOP, or air stripping. Treated groundwater was properly disposed of through surface discharge or beneficial re-use. During the Third Quarter 2013 O&M sampling events, there were no detections of TCE or RDX that exceeded the National Pollutant Discharge Elimination System limits in any treatment plant effluent water sample. The TCE results for air samples are compared to anticipated TCE concentrations in the influent of the treatment system. Effluent air standards are monitored to ensure the amount of TCE emitted per year remains below the Nebraska Department of Environmental Quality (NDEQ) permitted threshold of 5 tons/year. All air effluent sample results are presented in Table 4-1.

5.0 DATA VALIDATION RESULTS

Data from the Third Quarter 2013 GMP and O&M sampling events were validated in accordance with project required criteria and appropriate qualifiers were assigned to data. Data validation for the former NOP was performed in accordance with the *Mead Validation Guidelines* (ECC, 2007), which includes an evaluation of holding times, a comparison of both field and laboratory duplicate results, a review of trip blank results, and an evaluation of other quality control measurements reported by the laboratory.

The *Quality Control Summary Report Third Quarter 2013 Groundwater Monitoring Program Sampling Events* is included as Appendix C, *Quality Control Summary Report Third Quarter 2013 Water Supply Well Sampling Event,* is included as Appendix D, and the *Quality Control Summary Report Third Quarter 2013 Operations and Maintenance Sampling Events,* is included as Appendix E. All of these reports are included on a CD. These Quality Control Summary Reports present the following information: locations sampled, planned and actual sample collection and analyses, detailed results of the data validation for all sampling events; including sample collection summaries, QC outliers, data qualifiers, and completeness calculations. Each Quality Control Summary Report contains appendices which include sample chain-of-custody records; field sampling documents consisting of water quality parameter forms, daily chemical quality control reports, and daily field logbook pages; data validation qualifiers reference sheet; and the complete analytical laboratory report for the associated sampling event.

6.0 THIRD QUARTER 2013 SAMPLING EVENTS SUMMARY

Based on the results of the Third Quarter 2013 GMP and O&M sampling events, the 2013 Sampling Plans that were previously developed are sufficient and meet the following objectives:

- To monitor and evaluate potential changes in the concentrations of COCs defined in the *Record of Decision* (Woodward-Clyde, 1996);
- To monitor and evaluate the concentration of groundwater plumes;
- To provide data for evaluating whether the plume(s) are being contained by the groundwater extraction well network; and
- Treat and discharge extracted groundwater to meet applicable standards.

GMP and O&M sampling programs will continue as planned for the remaining 2013 quarterly sampling events.

7.0 REFERENCES

ECC, 2007. *Mead Validation Guidelines.* 2007

ECC, 2013. *Final Site-Wide Work Plan, Revision 01, Support Services, Former Nebraska Ordnance Plant, Mead, Nebraska*. April.

NDEQ, 1998. Final Effluent Limitations Monitoring Requirements. October.

NDEQ, 2009. Nebraska Administrative Code, Title 117 - Nebraska Department of Environmental Quality, Chapter 4 – Standards for Water Quality, Section 003 – Aquatic Life, Part 003.01 – General Criteria for Aquatic Life, Subpart 003.01C – Toxic Substances. March.

SEC Donohue, 1992. *Supplemental Remedial Investigation/Feasibility Study, Operable Unit No. 1 Former Nebraska Ordnance Plant, Mead, Nebraska.* September.

Woodward-Clyde, 1993a. *Remedial Investigation Report, Operable Unit No. 2 (Groundwater) for Former Nebraska Ordnance Plant, Mead, Nebraska.* May.

Woodward-Clyde, 1993b. *Draft Additional Field Investigation Report, Operable Unit No. 2 (Groundwater) for Former Nebraska Ordnance Plant, Mead, Nebraska.* October.

Woodward-Clyde, 1996. *Record of Decision, Operable Unit No. 2, Former Nebraska Ordnance Plant, Mead, Nebraska*. Contract No. DACA41-92-C-0023. April.

This page intentionally left blank

TABLES

This page intentionally left blank

List of Acronyms for Tables

Term	Definition
µg/L	micrograms per liter
1,2-DCP	1,2-dichloropropane
2,4-DNT	2,4-dinitrotoluene
2ADNT	2-amino-4,6-dinitrotoluene
4ADNT	4-amino-2,6-dinitrotoluene
AOP	Advanced Oxidation Process
CIS-1,2-DCE	cis-1,2-dichloroethene
EFF	effluent
EW	extraction well
GCW	groundwater extraction well
INF	influent
J	estimated
LL	Load Line
MW	monitoring well
ppbv	parts per billion by volume
RDX	hexahydro-1,3,5-trinitro-1,3,5-triazine
TCE	trichloroethene
TNB	1,3,5-trinitrobenzene
TNT	2,4,6-trinitrotoluene
Trans-1,2-DCE	trans-1,2-dichloroethene
TSS	total suspended solids
U	not detected at laboratory limit of detection
UJ	qualified as estimated and not detected at laboratory limit of detection
VOC	volatile organic compound
WSW	water supply well

All results are reported in µg/L

All air results are reported in ppbv

This page intentionally left blank

Table 1-1
Final Target Groundwater Cleanup Goals
Groundwater Monitoring Program
Former Nebraska Ordnance Plant, Mead, Nebraska

Contaminant of Concern (COC)	Final Target Groundwater Cleanup Goal (μg/L)
Volatile Organic Compounds	
Methylene chloride	5
1,2-Dichloropropane	5
TCE	5
Explosive Compounds	
Trinitrobenzene (TNB)	0.778
2,4-Dinitrotoluene (2,4-DNT)	1.24
RDX	2
2,4,6-Trinitrotoluene (TNT)	2

Notes: *Source: Woodward-Clyde, Mead ROD, 1996*
Italics = Indicator compounds used to define groundwater contamination at the former Nebraska Ordnance Plant

This page intentionally left blank

Table 2-1 Perimeter Monitoring Wells

Results for Third Quarter 2013 Sampling Event

Groundwater Monitoring Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Explosives

	Sampling Date	2,4-DNT	2A-DNT	4A-DNT	RDX	TNB	TNT
MW-106A	08/13/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-106B	08/13/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-107A	08/13/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-107B	08/13/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-107D	08/13/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-110A	08/12/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-110B	08/12/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-110D	08/12/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-112A	08/12/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-112B	08/12/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-113A	08/12/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-113B	08/12/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-113D	08/12/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-114A	08/12/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-114B	08/12/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-114D	08/12/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-115A	08/09/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
MW-115B	08/09/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
MW-115D	08/09/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
MW-116A	08/09/2013	0.096 U	**0.082 J**	0.048 U	0.048 U	0.048 U	0.096 U
MW-116B	08/09/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
MW-116D	08/09/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
MW-118A	08/08/2013	0.096 U	0.096 U	**0.048 J**	**0.59 J**	0.048 U	0.096 U
MW-118B	08/08/2013	0.096 U	0.096 U	**0.10 J**	**0.78**	0.048 U	0.096 U
MW-147A	08/08/2013	0.096 U	0.096 U	0.048 U	**0.48**	0.048 U	0.096 U
MW-147B	08/08/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter

Table 2-1 Perimeter Monitoring Wells

Results for Third Quarter 2013 Sampling Event

Groundwater Monitoring Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Explosives

	Sampling Date	2,4-DNT	2A-DNT	4A-DNT	RDX	TNB	TNT
MW-147D	08/08/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
MW-159A	08/13/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-159B	08/13/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-35A	08/09/2013	0.096 U	0.096 U	**0.086 J**	**0.56**	0.048 U	0.096 U
MW-35B	08/09/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-35D	08/09/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-38A	08/12/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-38D	08/12/2013	0.11 U	0.11 U	0.053 U	0.11 U	0.053 U	0.11 U
MW-46A	08/12/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-46B	08/12/2013	0.11 U	0.11 U	0.053 U	0.11 U	0.053 U	0.11 U
MW-46D	08/12/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-83A	08/08/2013	0.096 U	0.096 U	0.048 U	**0.29 J**	0.048 U	0.096 U
MW-83B	08/08/2013	0.096 U	0.096 U	0.048 U	**0.12 J**	0.048 U	0.096 U
MW-83D	08/08/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-84A	08/08/2013	0.096 U	0.096 U	0.048 U	**0.22 J**	0.048 U	0.096 U
MW-84B	08/08/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-84D	08/08/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-85A	08/09/2013	0.096 U	0.096 U	0.048 U	**0.67**	0.048 U	0.096 U
MW-85B	08/09/2013	0.096 U	0.096 U	0.048 U	**1.0**	0.048 U	0.096 U
MW-85D	08/09/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-95A	08/08/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-95B	08/08/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-95D	08/08/2013	0.096 U	0.096 U	0.048 U	**0.16 J**	0.048 U	0.096 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter

Table 2-1 Perimeter Monitoring Wells

Results for Third Quarter 2013 Sampling Event

Groundwater Monitoring Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Volatile Organic Compounds							
	Sampling Date	1,2-DCP	CIS-1,2-DCE	Methylene Chloride	TCE	TRANS-1,2-DCE	Vinyl Chloride
MW-106A	08/13/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-106B	08/13/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-107A	08/13/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-107B	08/13/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-107D	08/13/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-110A	08/12/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-110B	08/12/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-110D	08/12/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-112A	08/12/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-112B	08/12/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-113A	08/12/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-113B	08/12/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-113D	08/12/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-114A	08/12/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-114B	08/12/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-114D	08/12/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-115A	08/09/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-115B	08/09/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-115D	08/09/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-116A	08/09/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-116B	08/09/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-116D	08/09/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-159A	08/13/2013	0.25 U	0.25 U	0.25 U	**0.16 J**	0.25 U	**0.77 J**
MW-159B	08/13/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-38A	08/12/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-38D	08/12/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter

Table 2-1 Perimeter Monitoring Wells

Results for Third Quarter 2013 Sampling Event

Groundwater Monitoring Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Volatile Organic Compounds							
	Sampling Date	1,2-DCP	CIS-1,2-DCE	Methylene Chloride	TCE	TRANS-1,2-DCE	Vinyl Chloride
MW-46A	08/12/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-46B	08/12/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-46D	08/12/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-80A	08/13/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-80B	08/13/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-80D	08/13/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter

Table 2-2 Compliance Monitoring Wells

Results for Third Quarter 2013 Sampling Event

Groundwater Monitoring Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Explosives

	Sampling Date	2,4-DNT	2A-DNT	4A-DNT	RDX	TNB	TNT
MW-158A	08/09/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
MW-158B	08/09/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
MW-158D	08/09/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
MW-88A	08/09/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-88B	08/09/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
MW-88D	08/09/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter

Table 2-2 Compliance Monitoring Wells

Results for Third Quarter 2013 Sampling Event

Groundwater Monitoring Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Volatile Organic Compounds							
	Sampling Date	**1,2-DCP**	**CIS-1,2-DCE**	**Methylene Chloride**	**TCE**	**TRANS-1,2-DCE**	**Vinyl Chloride**
MW-158A	08/09/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-158B	08/09/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-158D	08/09/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-88A	08/09/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-88B	08/09/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-88D	08/09/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter

Table 2-3 LL1 Interior Plume Monitoring Wells

Results for Third Quarter 2013 Sampling Event

Groundwater Monitoring Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Explosives							
	Sampling Date	**2,4-DNT**	**2A-DNT**	**4A-DNT**	**RDX**	**TNB**	**TNT**
MW-160A	08/07/2013	0.096 U	0.096 U	**0.44 J**	**1.9**	0.048 U	0.096 U
MW-160B	08/07/2013	0.096 U	0.096 U	**0.076 J**	**0.65 J**	0.048 U	0.096 U
MW-161A	08/07/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
MW-161B	08/07/2013	0.096 U	**0.095 J**	**4.0 J**	**6.9**	0.048 U	0.096 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter

Table 2-3 LL1 Interior Plume Monitoring Wells

Results for Third Quarter 2013 Sampling Event

Groundwater Monitoring Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Volatile Organic Compounds							
	Sampling Date	**1,2-DCP**	**CIS-1,2-DCE**	**Methylene Chloride**	**TCE**	**TRANS-1,2-DCE**	**Vinyl Chloride**
MW-160A	08/07/2013	1.3 U	**3.0 J**	1.3 U	**1400**	1.3 U	1.3 U
MW-160B	08/07/2013	1.3 U	1.3 U	1.3 U	**270**	1.3 U	1.3 U
MW-161A	08/07/2013	2.8 U	**38.0**	2.8 U	**13000**	**2.1 J**	2.8 U
MW-161B	08/07/2013	2.2 U	**18.0**	2.2 U	**7200**	**2.7 J**	2.2 U
MW-179A	08/13/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-179B	08/13/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter

Table 2-4 LL2 and LL3 Interior Plume Monitoring Wells

Results for Third Quarter 2013 Sampling Event

Groundwater Monitoring Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Explosives

	Sampling Date	2,4-DNT	2A-DNT	4A-DNT	RDX	TNB	TNT
MW-145B	08/08/2013	0.096 U	0.096 U	**1.2**	**61.0**	0.048 U	0.096 U
MW-148A	08/08/2013	0.096 U	0.096 U	0.048 U	**0.91**	0.048 U	0.096 U
MW-162A	08/07/2013	0.096 U	0.096 U	**0.61**	**72.0**	0.048 U	0.096 U
MW-163A	08/07/2013	0.096 U	0.096 U	**0.52**	**15.0**	0.048 U	0.096 U
MW-164A	08/07/2013	0.096 U	0.096 U	**1.1**	**80.0**	0.048 U	0.096 U
MW-165B	08/07/2013	0.096 U	0.096 U	**3.2**	**170**	0.048 U	0.096 U
MW-166A	08/07/2013	0.096 U	0.096 U	**0.56**	**76.0**	0.048 U	0.096 U
MW-166B	08/07/2013	0.096 U	0.096 U	0.048 U	**0.12 J**	0.048 U	0.096 U
MW-167A	08/07/2013	0.096 U	0.096 U	**1.0**	**34.0**	0.048 U	0.096 U
MW-167B	08/07/2013	0.096 U	0.096 U	**0.24 J**	**15.0**	0.048 U	0.096 U
MW-168A	08/07/2013	0.096 U	0.096 U	**0.064 J**	**7.7**	0.048 U	0.096 U
MW-168B	08/07/2013	0.096 U	0.096 U	0.048 U	**0.15 J**	0.048 U	0.096 U
MW-169A	08/07/2013	0.096 U	0.096 U	**0.083 J**	**13.0**	0.048 U	0.096 U
MW-169B	08/07/2013	0.096 U	0.096 U	**0.28 J**	**48.0**	0.048 U	0.096 U
MW-170A	08/07/2013	0.096 U	0.096 U	0.048 U	**6.1**	0.048 U	0.096 U
MW-171A	08/08/2013	**0.59**	**0.89**	**0.90**	**62.0**	0.048 U	**0.56**
MW-171B	08/08/2013	**3.8**	**5.8**	**3.0**	**84.0**	0.048 U	0.096 U
MW-172A	08/08/2013	0.096 U	0.096 U	**0.74**	**3.2**	0.048 U	0.096 U
MW-172B	08/08/2013	0.096 U	0.096 U	**0.28 J**	**1.6**	0.048 U	0.096 U
MW-173A	08/08/2013	0.096 U	0.096 U	**0.68**	**6.6**	0.048 U	0.096 U
MW-174A	08/07/2013	0.096 U	0.096 U	**0.20 J**	**0.72**	0.048 U	0.096 U
MW-174B	08/07/2013	0.096 U	0.096 U	**0.25 J**	**1.0**	0.048 U	0.096 U
MW-175A	08/07/2013	0.096 U	**0.53**	**2.2**	**8.6**	0.048 U	0.096 U
MW-175B	08/07/2013	0.096 U	**0.068 J**	**1.1**	**2.3**	0.048 U	0.096 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter

Table 2-4 LL2 and LL3 Interior Plume Monitoring Wells

Results for Third Quarter 2013 Sampling Event

Groundwater Monitoring Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Volatile Organic Compounds							
	Sampling Date	**1,2-DCP**	**CIS-1,2-DCE**	**Methylene Chloride**	**TCE**	**TRANS-1,2-DCE**	**Vinyl Chloride**
MW-175A	08/07/2013	0.25 U	0.25 U	0.25 U	0.37 U	0.25 U	0.25 U
MW-175B	08/07/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter

Table 2-5 LL4, AMA, and Landfill Interior Plume Monitoring Wells

Results for Third Quarter 2013 Sampling Event

Groundwater Monitoring Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Explosives

	Sampling Date	2,4-DNT	2A-DNT	4A-DNT	RDX	TNB	TNT
MW-155B	08/13/2013	0.096 U	0.096 U	0.048 U	**0.15 J**	0.048 U	0.096 U
MW-176A	08/12/2013	0.096 U	0.096 U	**0.056 J**	**0.45**	0.048 U	0.096 U
MW-176B	08/12/2013	0.096 U	0.096 U	0.048 U	**0.16 J**	0.048 U	0.096 U
MW-178B	08/13/2013	0.096 U	0.096 U	0.048 U	**1.9**	0.048 U	0.096 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter

Table 2-5 LL4, AMA, and Landfill Interior Plume Monitoring Wells

Results for Third Quarter 2013 Sampling Event

Groundwater Monitoring Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Volatile Organic Compounds							
	Sampling Date	**1,2-DCP**	**CIS-1,2-DCE**	**Methylene Chloride**	**TCE**	**TRANS-1,2-DCE**	**Vinyl Chloride**
MW-155B	08/13/2013	0.45 U	**0.54 J**	0.45 U	**120**	0.45 U	0.45 U
MW-176A	08/12/2013	1.3 U	**3.2 J**	1.3 U	**810**	1.3 U	1.3 U
MW-176B	08/12/2013	0.45 U	0.45 U	0.45 U	**100**	0.45 U	0.45 U
MW-178B	08/13/2013	0.25 U	**1.0**	0.25 U	**39.0**	0.25 U	0.25 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter

Table 2-6 Upgradient, Sidegradient and Downgradient Monitoring Wells

Results for Third Quarter 2013 Sampling Event

Groundwater Monitoring Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Volatile Organic Compounds							
	Sampling Date	**1,2-DCP**	**CIS-1,2-DCE**	**Methylene Chloride**	**TCE**	**TRANS-1,2-DCE**	**Vinyl Chloride**
MW-177A	08/13/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
MW-177B	08/13/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter

This page intentionally left blank

Table 3-1 Water Supply Well

Results for Third Quarter 2013 Sampling Event

Groundwater Monitoring Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Explosives

	Sampling Date	2,4-DNT	2A-DNT	4A-DNT	RDX	TNB	TNT
UNFL-09A	08/05/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
UNFL-10A	08/05/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
UNFL-27	08/05/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-100	07/30/2013	0.096 U	0.096 U	0.048 U	**0.12 J**	0.048 U	0.096 U
WSW-101	07/30/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-102	07/31/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-103	07/30/2013	0.10 U	0.10 U	0.052 U	0.052 U	0.052 U	0.10 U
WSW-104	07/30/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-105	07/30/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-106	07/31/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-107	07/30/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-108	08/01/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-109	07/30/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-110	07/31/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-111	07/31/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-112	08/01/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-113	07/30/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-114	08/01/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-115	08/01/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-117	07/31/2013	0.10 U	0.10 U	0.050 U	0.050 U	0.050 U	0.10 U
WSW-27	07/30/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-29	07/30/2013	0.096 U	0.096 U	0.048 U	**0.11 J**	0.048 U	0.096 U
WSW-29A	07/30/2013	0.096 U	0.096 U	0.048 U	**0.32 J**	0.048 U	0.096 U
WSW-32	07/30/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-34	07/30/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-36	07/30/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter

Table 3-1 Water Supply Well

Results for Third Quarter 2013 Sampling Event

Groundwater Monitoring Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Explosives

	Sampling Date	2,4-DNT	2A-DNT	4A-DNT	RDX	TNB	TNT
WSW-50A	07/30/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-50B	07/30/2013	0.096 U	0.096 U	0.048 U	**1.7**	**0.060 J**	0.096 U
WSW-51	07/30/2013	0.10 U	0.10 U	0.052 U	**0.43**	0.052 U	0.10 U
WSW-51A	07/30/2013	0.096 U	0.096 U	**0.060 J**	**1.4**	0.048 U	0.096 U
WSW-52A	08/02/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-52A-B	08/02/2013	0.096 U	0.096 U	0.048 U	**0.54**	0.048 U	0.096 U
WSW-52B	07/30/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-52C	08/07/2013	0.11 UJ	0.11 UJ	0.055 UJ	0.055 UJ	0.055 UJ	0.11 UJ
WSW-52C-B	08/07/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-53	08/06/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-53-B	08/06/2013	0.096 U	0.096 U	**0.22 J**	**6.0**	0.048 U	0.096 U
WSW-54	08/13/2013	0.096 U	0.096 U	0.048 U	0.096 U	0.048 U	0.096 U
WSW-54-B	08/13/2013	0.096 U	**0.064 J**	**0.17 J**	**2.0**	0.048 U	0.096 U
WSW-55	07/30/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-56	07/31/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-57	08/01/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-58	08/01/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-59	07/31/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-60	08/06/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-61	08/06/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-62	08/06/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-63	07/31/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-64	07/31/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-65	07/30/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-66	07/30/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-67	07/30/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-68	07/30/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter

Table 3-1 Water Supply Well

Results for Third Quarter 2013 Sampling Event

Groundwater Monitoring Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Explosives

	Sampling Date	2,4-DNT	2A-DNT	4A-DNT	RDX	TNB	TNT
WSW-73	07/31/2013	0.10 U	0.10 U	0.051 U	0.051 U	0.051 U	0.10 U
WSW-74	07/31/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-75	07/31/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-76	07/31/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-77	07/31/2013	0.096 UJ	0.096 UJ	0.048 UJ	0.048 UJ	0.048 UJ	0.096 UJ
WSW-79	07/31/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-80	08/01/2013	0.11 U	0.11 U	0.053 U	0.053 U	0.053 U	0.11 U
WSW-81	08/01/2013	0.10 U	0.10 U	0.052 U	0.052 U	0.052 U	0.10 U
WSW-82	08/01/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-86	07/31/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-87	07/30/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-89	08/01/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-90	07/31/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-91	07/31/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-92	07/31/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-93	07/31/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-94	07/31/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-95	07/30/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-96	07/30/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-97	07/31/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U
WSW-99	07/31/2013	0.096 U	0.096 U	0.048 U	0.048 U	0.048 U	0.096 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter

Table 3-1 Water Supply Well

Results for Third Quarter 2013 Sampling Event

Groundwater Monitoring Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Volatile Organic Compounds							
	Sampling Date	1,2-DCP	CIS-1,2-DCE	Methylene Chloride	TCE	TRANS-1,2-DCE	Vinyl Chloride
UNFL-09A	08/05/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
UNFL-10A	08/05/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
UNFL-27	08/05/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-100	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-101	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-102	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-103	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-104	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-105	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-106	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-107	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-108	08/01/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-109	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-110	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-111	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-112	08/01/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-113	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-114	08/01/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-115	08/01/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-117	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-27	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-29	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-29A	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-32	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-34	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-36	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter

Table 3-1 Water Supply Well

Results for Third Quarter 2013 Sampling Event

Groundwater Monitoring Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Volatile Organic Compounds							
	Sampling Date	1,2-DCP	CIS-1,2-DCE	Methylene Chloride	TCE	TRANS-1,2-DCE	Vinyl Chloride
WSW-50A	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-50B	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-51	07/30/2013	0.45 U	0.37 U	0.36 U	**0.38 J**	0.24 U	0.33 U
WSW-51A	07/30/2013	0.45 U	0.37 U	0.36 U	**4.7**	0.24 U	0.33 U
WSW-52A	08/02/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-52A-B	08/02/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-52B	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-52C	08/07/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-52C-B	08/07/2013	0.45 U	**2.5**	0.36 U	**160**	0.24 U	0.33 U
WSW-53	08/06/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-53-B	08/06/2013	0.45 U	0.37 U	0.36 U	**2.1**	0.24 U	0.33 U
WSW-54	08/13/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-54-B	08/13/2013	0.45 U	0.37 U	0.36 U	**4.3**	0.24 U	0.33 U
WSW-55	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-56	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-57	08/01/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-58	08/01/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-59	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-60	08/06/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-61	08/06/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-62	08/06/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-63	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-64	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-65	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-66	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-67	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter

Table 3-1 Water Supply Well

Results for Third Quarter 2013 Sampling Event

Groundwater Monitoring Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Volatile Organic Compounds							
	Sampling Date	1,2-DCP	CIS-1,2-DCE	Methylene Chloride	TCE	TRANS-1,2-DCE	Vinyl Chloride
WSW-68	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-73	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-74	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-75	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-76	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-77	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-79	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-80	08/01/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-81	08/01/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-82	08/01/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-86	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-87	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-89	08/01/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-90	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-91	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-92	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-93	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-94	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-95	08/08/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-96	07/30/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-97	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U
WSW-99	07/31/2013	0.45 U	0.37 U	0.36 U	0.37 U	0.24 U	0.33 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter

Table 4-1 Operations and Maintenance

Results for Third Quarter 2013 Sampling Event

Operations and Maintenance Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Explosives

	Sampling Date	2,4-DNT	2A-DNT	4A-DNT	RDX	TNB	TNT
AOP-EFF	07/01/2013	0.048 U	0.048 U	**0.029 J**	**3.1**	**0.052 J**	**0.098 J**
AOP-EFF	08/05/2013	0.048 U	0.048 U	**0.030 J**	**3.2**	0.024 U	**0.099 J**
AOP-EFF	09/03/2013	0.048 U	0.048 U	0.024 U	**3.1**	**0.043 J**	**0.084 J**
AOP-INF	09/03/2013	0.048 U	**0.043 J**	**0.90 J**	**4.1**	0.024 U	0.048 U
EW-12	08/05/2013	0.048 U	0.048 U	0.024 U	**0.081 J**	0.024 U	0.048 U
EW-17	08/05/2013	0.048 U	0.048 U	0.024 U	**0.069 J**	0.024 U	0.048 U
EW-4	08/05/2013	0.048 U	0.048 U	**0.48**	**3.6**	0.024 U	0.048 U
EW-4	08/05/2013	0.048 U	0.048 U	**0.22**	**1.5**	0.024 U	0.048 U
EW-4	09/03/2013	0.048 U	0.048 U	**0.22**	**1.4**	0.024 U	0.048 U
EW-4	09/03/2013	0.048 U	0.048 U	**0.49**	**3.6**	0.024 U	0.048 U
EW-7	08/05/2013	0.048 U	0.048 U	**0.067 J**	**7.8**	0.024 U	0.048 U
EW-9	08/05/2013	0.048 U	0.048 U	**0.13 J**	**18.0**	0.024 U	0.048 U
FEW-14	08/05/2013	0.048 U	**0.065 J**	**0.69**	**4.7**	0.024 U	0.048 U
GTP-310	07/01/2013	0.048 U	0.048 U	0.024 U	0.024 U	0.024 U	0.048 U
GTP-310	08/05/2013	0.048 U	0.048 U	0.024 U	**0.075 J**	0.024 U	0.048 U
GTP-310	09/03/2013	0.048 U	0.048 U	0.024 U	**0.10 J**	0.024 U	0.048 U
GTP-330	07/01/2013	0.048 U	0.048 U	0.024 U	0.024 U	0.024 U	0.048 U
GTP-330	08/05/2013	0.048 U	0.048 U	0.024 U	**0.044 J**	0.024 U	0.048 U
GTP-330	09/03/2013	0.048 U	0.048 U	0.024 U	**0.18 J**	0.024 U	0.048 U
GTP-350	07/01/2013	0.048 U	0.048 U	0.024 U	0.024 U	0.024 U	0.048 U
GTP-350	08/05/2013	0.048 U	0.048 U	0.024 U	**0.055 J**	0.024 U	0.048 U
GTP-350	09/03/2013	0.048 U	0.048 U	0.024 U	**0.081 J**	0.024 U	0.048 U
GTP-EFF	07/01/2013	0.048 U	0.048 U	0.024 U	0.024 U	0.024 U	0.048 U
GTP-EFF	08/05/2013	0.048 U	0.048 U	0.024 U	**0.059 J**	0.024 U	0.048 U
GTP-EFF	09/03/2013	0.048 U	0.048 U	0.024 U	**0.12 J**	0.024 U	0.048 U
GTP-INF	07/01/2013	0.048 U	0.048 U	**0.17 J**	**4.2**	0.024 U	0.048 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter
Air results in ppbv = parts per billion per volume

Table 4-1 Operations and Maintenance

Results for Third Quarter 2013 Sampling Event

Operations and Maintenance Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Explosives

	Sampling Date	2,4-DNT	2A-DNT	4A-DNT	RDX	TNB	TNT
GTP-INF	08/05/2013	0.048 U	0.048 U	**0.15 J**	**6.0**	0.024 U	0.048 U
GTP-INF	09/03/2013	0.049 U	0.049 U	**0.19 J**	**6.7**	0.025 U	0.049 U
LL1-EFF	08/05/2013	0.048 U	0.048 U	0.024 U	**0.069 J**	0.024 U	0.048 U
LL1-INF	08/05/2013	0.048 U	0.048 U	0.024 U	**0.075 J**	0.024 U	0.048 U
LL4-EFF	08/12/2013	0.048 U	0.048 U	0.024 U	0.048 U	0.024 U	0.048 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter
Air results in ppbv = parts per billion per volume

Table 4-1 Operations and Maintenance

Results for Third Quarter 2013 Sampling Event

Operations and Maintenance Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Volatile Organic Compounds							
	Sampling Date	1,2-DCP	CIS-1,2-DCE	Methylene Chloride	TCE	TRANS-1,2-DCE	Vinyl Chloride
AOP-EFF	07/01/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
AOP-EFF	08/05/2013	0.25 U	0.25 U	0.25 U	**0.21 J**	0.25 U	0.25 U
AOP-EFF	09/03/2013	0.25 U	0.25 U	0.25 U	**0.20 J**	0.25 U	0.25 U
AOP-INF	07/01/2013	1.3 U	**4.7 J**	1.3 U	**1600**	1.3 U	1.3 U
AOP-INF	09/03/2013	2.2 U	**5.4 J**	2.2 U	**1800**	2.2 U	2.2 U
EW-12	07/01/2013	0.50 U	0.50 U	0.50 U	**130**	0.50 U	0.50 U
EW-12	08/05/2013	0.50 U	0.50 U	0.50 U	**110**	0.50 U	0.50 U
EW-12	09/03/2013	0.55 U	0.55 U	0.55 U	**85.0 J**	0.55 U	0.55 U
EW-17	07/01/2013	0.25 U	0.25 U	0.25 U	**82.0**	0.25 U	0.25 U
EW-17	08/05/2013	0.50 U	0.50 U	0.50 U	**100**	0.50 U	0.50 U
EW-17	09/03/2013	0.50 U	0.50 U	0.50 U	**120**	0.50 U	0.50 U
EW-1R	08/05/2013	0.25 U	**0.17 J**	0.25 U	**3.5**	0.25 U	0.25 U
EW-4	08/05/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
EW-4	08/05/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
GCW1-EFF	07/01/2013	0.25 U	0.25 U	0.25 U	**0.67 J**	0.25 U	0.25 U
GCW1-EFF	09/03/2013	0.25 U	0.25 U	0.25 U	**0.14 J**	0.25 U	0.25 U
GCW1-INF	09/03/2013	1.3 U	**3.5 J**	1.3 U	**480**	1.3 U	1.3 U
GTP-310	07/01/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
GTP-310	08/05/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
GTP-310	09/03/2013	0.25 U	0.25 U	0.25 U	**0.27 J**	0.25 U	0.25 U
GTP-330	07/01/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
GTP-330	08/05/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
GTP-330	09/03/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
GTP-350	07/01/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
GTP-350	08/05/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
GTP-350	09/03/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter
Air results in ppbv = parts per billion per volume

Table 4-1 Operations and Maintenance

Results for Third Quarter 2013 Sampling Event

Operations and Maintenance Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Volatile Organic Compounds							
	Sampling Date	**1,2-DCP**	**CIS-1,2-DCE**	**Methylene Chloride**	**TCE**	**TRANS-1,2-DCE**	**Vinyl Chloride**
GTP-EFF	07/01/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
GTP-EFF	08/05/2013	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
GTP-EFF	09/03/2013	0.25 U	0.25 U	0.25 U	**0.14 J**	0.25 U	0.25 U
GTP-INF	07/01/2013	0.25 U	0.25 U	0.25 U	**0.93 J**	0.25 U	0.25 U
GTP-INF	08/05/2013	0.25 U	0.25 U	0.25 U	**0.92 J**	0.25 U	0.25 U
GTP-INF	09/03/2013	0.25 U	0.25 U	0.25 U	**0.47 J**	0.25 U	0.25 U
LL1_AIR_EF	07/01/2013	-	-	-	**2.9**	-	-
LL1_AIR_IN	07/01/2013	-	-	-	**390**	-	-
LL1-EFF	07/01/2013	0.25 U	0.25 U	0.25 U	**0.21 J**	0.25 U	0.25 U
LL1-EFF	08/05/2013	0.25 U	0.25 U	0.25 U	**0.36 J**	0.25 U	0.25 U
LL1-EFF	09/03/2013	0.25 U	0.25 U	0.25 U	**0.36 J**	0.25 U	0.25 U
LL1-INF	07/01/2013	0.50 U	0.50 U	0.50 U	**100**	0.50 U	0.50 U
LL1-INF	08/05/2013	0.50 U	0.50 U	0.50 U	**110**	0.50 U	0.50 U
LL1-INF	09/03/2013	0.50 U	0.50 U	**0.64 J**	**100**	0.50 U	0.50 U
LL4_AIR_EF	07/01/2013	-	-	-	**240**	-	-
LL4_AIR_EF	08/12/2013	-	-	-	**230**	-	-
LL4-EFF	07/01/2013	0.25 U	0.25 U	0.25 U	**0.21 J**	0.25 U	0.25 U
LL4-EFF	08/12/2013	0.25 U	0.25 U	0.25 U	**0.52 J**	0.25 U	0.25 U
LL4-EFF	09/03/2013	0.25 U	0.25 U	0.25 U	**0.62 J**	0.25 U	0.25 U
LL4-INF	07/01/2013	1.0 U	**1.7 J**	1.0 U	**310**	1.0 U	1.0 U
LL4-INF	09/03/2013	0.25 U	**1.8**	0.25 U	**310**	0.25 U	0.25 U

Detects are displayed in bold font

Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in µg/L = micrograms per liter
Air results in ppbv = parts per billion per volume

Table 4-1 Operations and Maintenance

Results for Third Quarter 2013 Sampling Event

Operations and Maintenance Program

Former Nebraska Ordnance Plant, Mead, Nebraska

Wet Chemistry						
	Sampling Date	**Nitrogen, Nitrate**	**Iron**	**Manganese**	**TSS**	**Total Organic Carbon**
EW-4	08/08/2013	**5.0**	-	-	-	-
GTP-EFF	07/01/2013	**3.8**	-	-	-	-
GTP-EFF	08/08/2013	**3.8**	-	-	-	-
GTP-EFF	09/03/2013	**4.3**	-	-	-	-
LL1-EFF	07/01/2013	**11.0**	-	-	-	-
LL1-EFF	08/08/2013	**11.0**	-	-	-	-
LL1-EFF	09/03/2013	**11.0**	-	-	-	-
LL1-INF	07/01/2013	-	150 U	8.5 U	0.50 U	**1.9**
LL4-EFF	07/01/2013	**7.0**	-	-	-	-
LL4-EFF	08/12/2013	**7.8**	-	-	-	-
LL4-EFF	09/03/2013	**6.9**	-	-	-	-

Detects are displayed in bold font

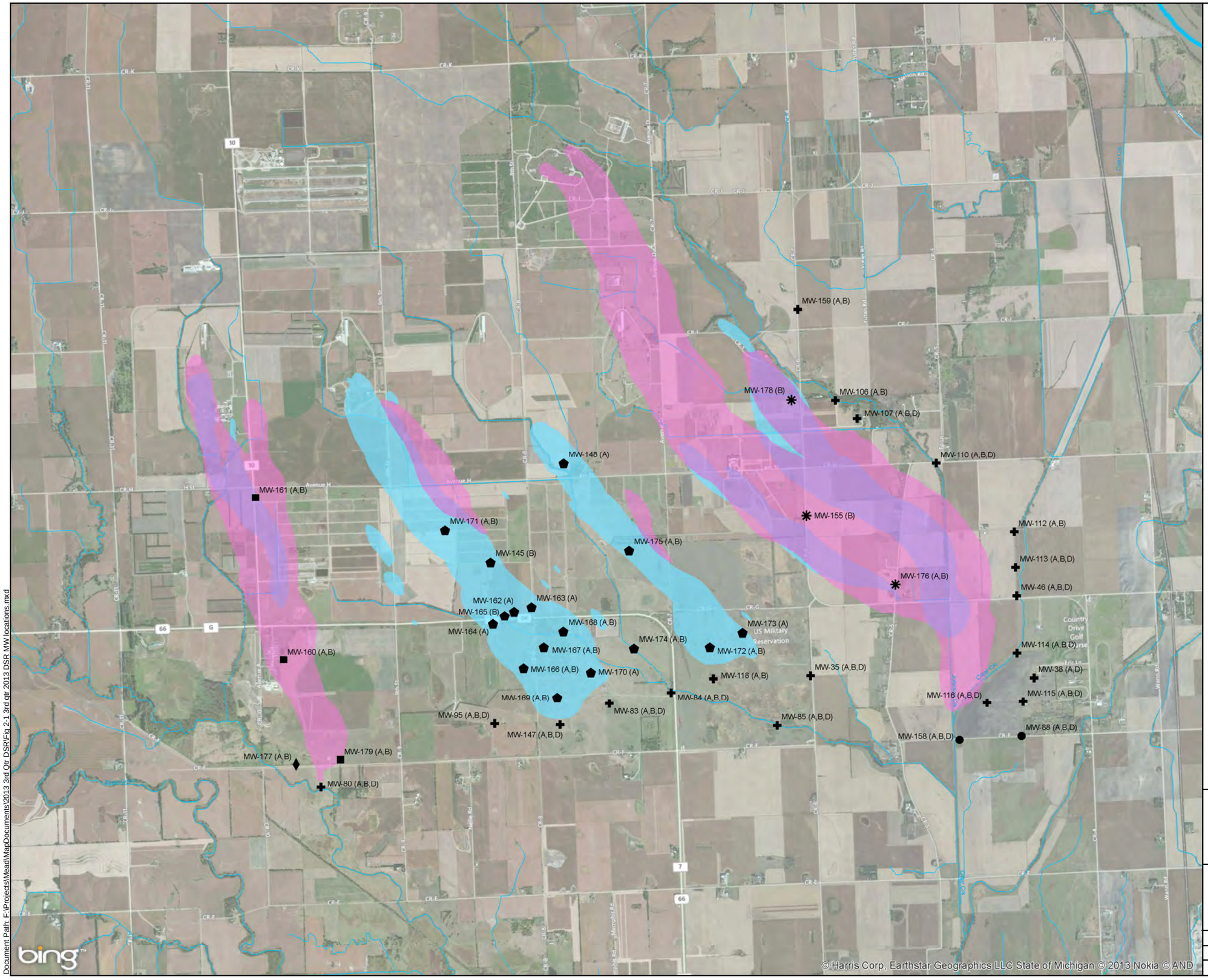
Indicates that result exceeds Final Target Groundwater Cleanup Goals

All results in mg/L = milligrams per liter

This page intentionally left blank

FIGURES

This page intentionally left blank



EXPLANATION

- ● Compliance Monitoring Well
- ■ Load Line 1 Interior Plume Monitoring Well
- ⬟ Load Line 2 and Load Line 3 Interior Plume Monitoring Well
- ✱ Load Line 4, Atlas Missile Area, and Landfill Interior Plume Monitoring Well
- ✚ Perimeter Monitoring Well
- ♦ Upgradient/Sidegradient/Downgradient Monitoring Well

Approximate Area of TCE at a concentration of 5 ug/L or greater (2012)

Approximate Area of RDX at a concentration of 2 ug/L or greater (2012)

Approximate Area of both TCE at a concentration of 5 ug/L or greater and RDX at a concentration of 2 ug/L or greater (2012)

NOTE:

TCE and RDX plume delineations are based on Groundwater Monitoring Program data, direct-push data, and other data. The plume delineations represent a combination of the shallow zone data and the intermediate zone data.

TCE - trichloroethene

RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine

ug/L - micrograms per liter

N

0 1,250 2,500 5,000 7,500 10,000 Feet

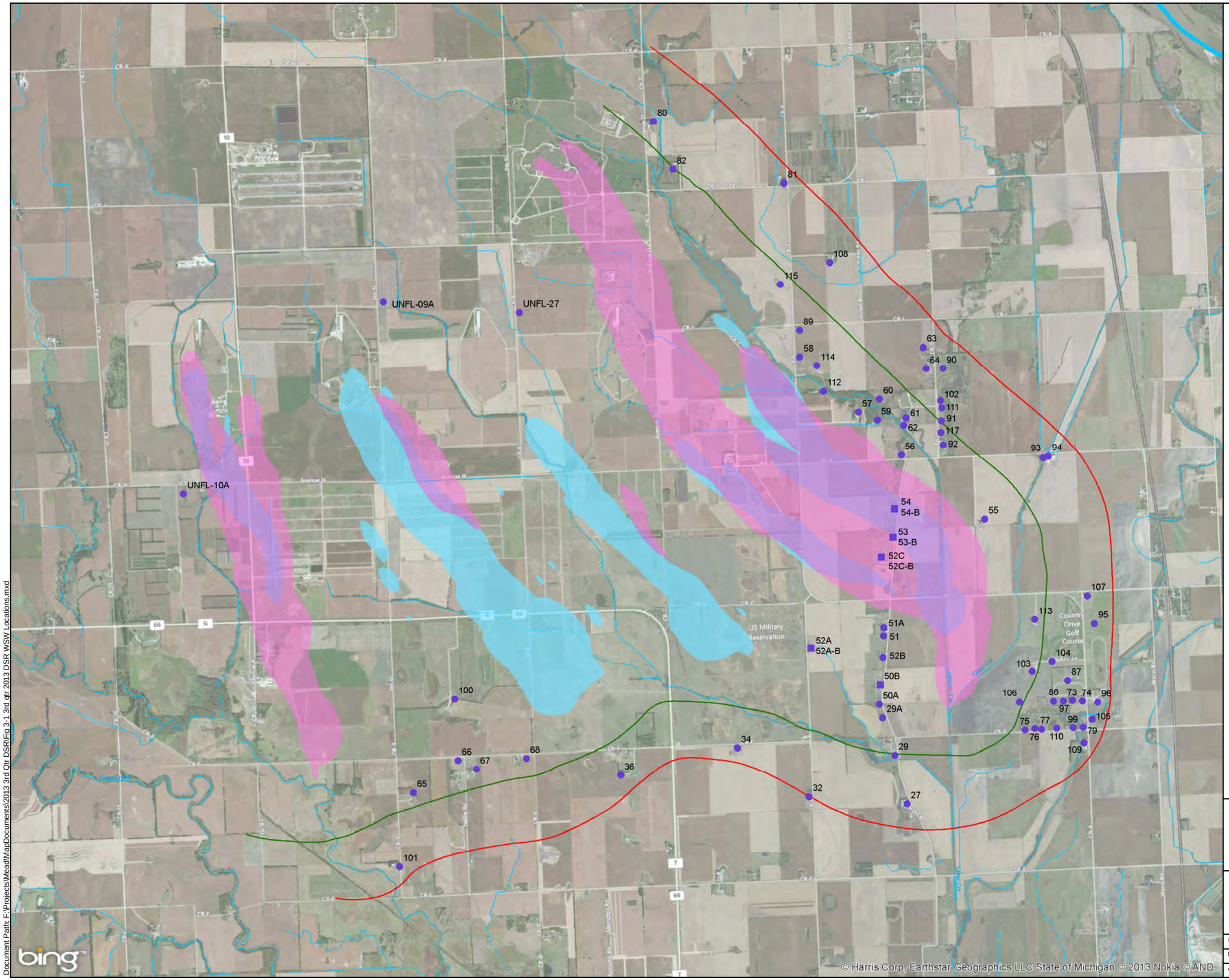
US Army Corps of Engineers
Kansas City District

Figure 2-1
Monitoring Wells
Third Quarter 2013 Sampling Locations

Drawn by:	M Johanson	Reviewed by:	S Carter	Notes and Sources Projection: North American Datum 1983 Nebraska State Plane Units: Feet
Date:	10/08/2013	Date:	10/24/2013	
Version:		Revision Date / Initials:	10/24/2013 MGJ	

Document Path: F:\Projects\Mead\MapDocuments\2013 3rd Qtr DSR\Fig 2-1 3rd qtr 2013 DSR MW locations.mxd

This Page Intentionally Left Blank



EXPLANATION

- Water Supply Well
- Alternate Water Supply Well
- Half-Mile Buffer Zone
- One-Mile Buffer Zone
- Approximate Area of TCE at a concentration of 5 ug/L or greater (2012)
- Approximate Area of RDX at a concentration of 2 ug/L or greater (2012)
- Approximate Area of both TCE at a concentration of 5 ug/L or greater and RDX at a concentration of 2 ug/L or greater (2012)

NOTE:

TCE and RDX plume delineations are based on Groundwater Monitoring Program data, direct-push data, and other data. The plume delineations represent a combination of the shallow zone data and the intermediate zone data.

TCE - trichloroethene

RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine

ug/L - micrograms per liter

N

0 1,250 2,500 5,000 7,500 10,000 Feet

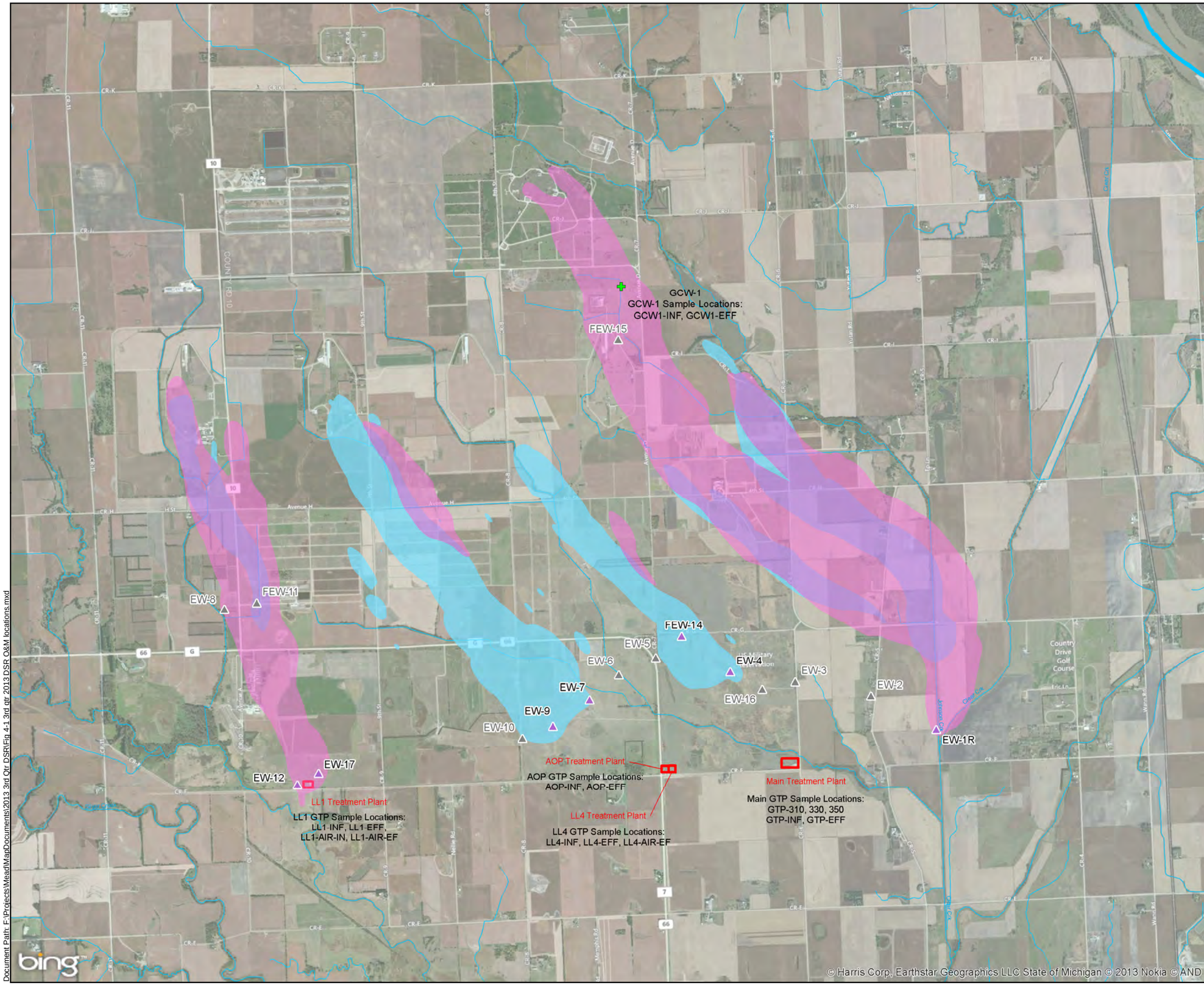
US Army Corps of Engineers
Kansas City District

Figure 3-1
Water Supply Well
Third Quarter 2013 Sampling Locations

Drawn by: M Johanson	Reviewed by: S Carter	Notes and Sources Projection: North American Datum 1983 Nebraska State Plane Units: Feet	
Date: 10/08/2013	Date: 10/24/2013		
Version:	Revision Date / Initials: 10/24/2013 MGJ		

Document Path: F:\Projects\Mead\MapDocuments\2013 3rd Qtr DSR\Fig 3-1 3rd qtr 2013 DSR WSW Locations.mxd

This Page Intentionally Left Blank



EXPLANATION

- Groundwater Circulation Well
- Groundwater Extraction Well (Sampled)
- Groundwater Extraction Well (Not Sampled)
- Water Treatment Plant
- Approximate Area of TCE at a concentration of 5 ug/L or greater (2012)
- Approximate Area of RDX at a concentration of 2 ug/L or greater (2012)
- Approximate Area of both TCE at a concentration of 5 ug/L or greater and RDX at a concentration of 2 ug/L or greater (2012)

NOTES:

TCE and RDX plume delineations are based on Groundwater Monitoring Program data, direct-push data, and other data. The plume delineations represent a combination of the shallow zone data and the intermediate zone data.

AOP - Advanced Oxidation Process
EFF - Effluent
EW - Extraction Well
FEW - Focused Extraction Well
GCW - Groundwater Circulation Well
GTP - Groundwater Treatment Plant
INF - Influent
LL1 - Load Line 1
LL4 - Load Line 4
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
TCE - trichloroethene
ug/L - micrograms per liter

N

0 1,250 2,500 5,000 7,500 10,000 Feet

US Army Corps of Engineers
Kansas City District

Figure 4-1
Operations and Maintenance
Third Quarter 2013 Sampling Locations

Drawn by:	M Johanson	Reviewed by:	S Carter	Notes and Sources Projection: North American Datum 1983 Nebraska State Plane Units: Feet
Date:	10/24/2013	Date:	11/4/2013	
Version:		Revision Date / Initials:	11/4/2013 MGJ	

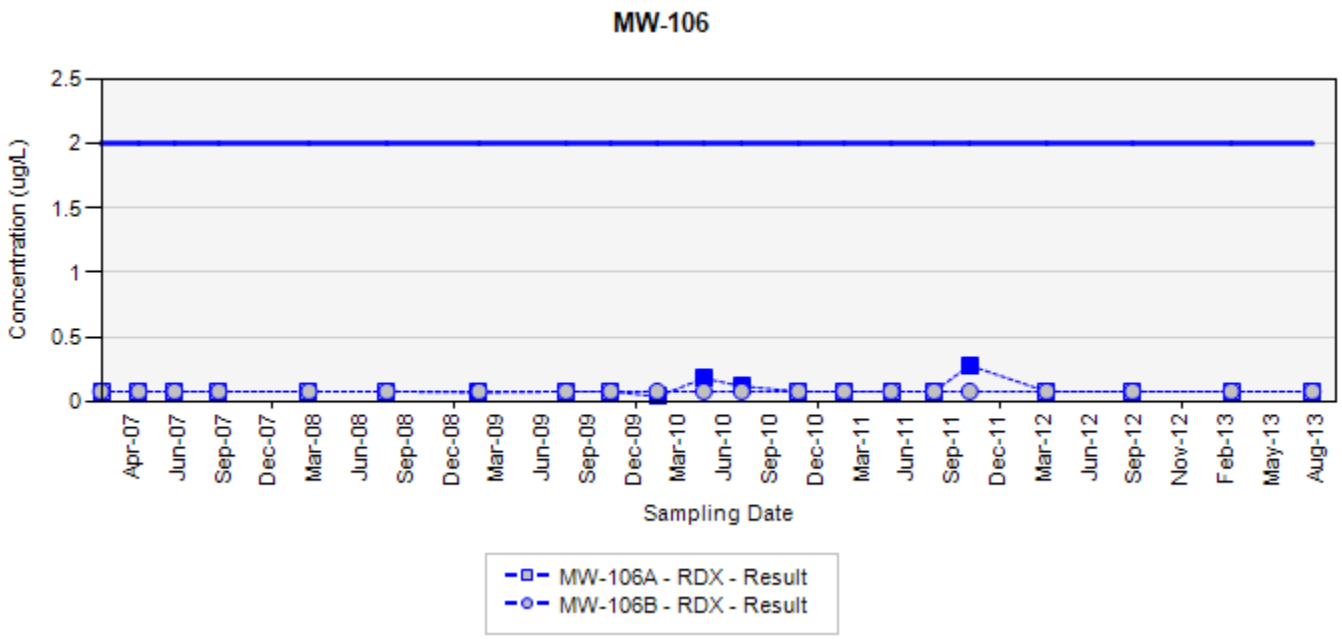
Document Path: F:\Projects\Mead\MapDocuments\2013 3rd Qtr DSR\Fig 4-1 3rd qtr 2013 DSR O&M locations.mxd

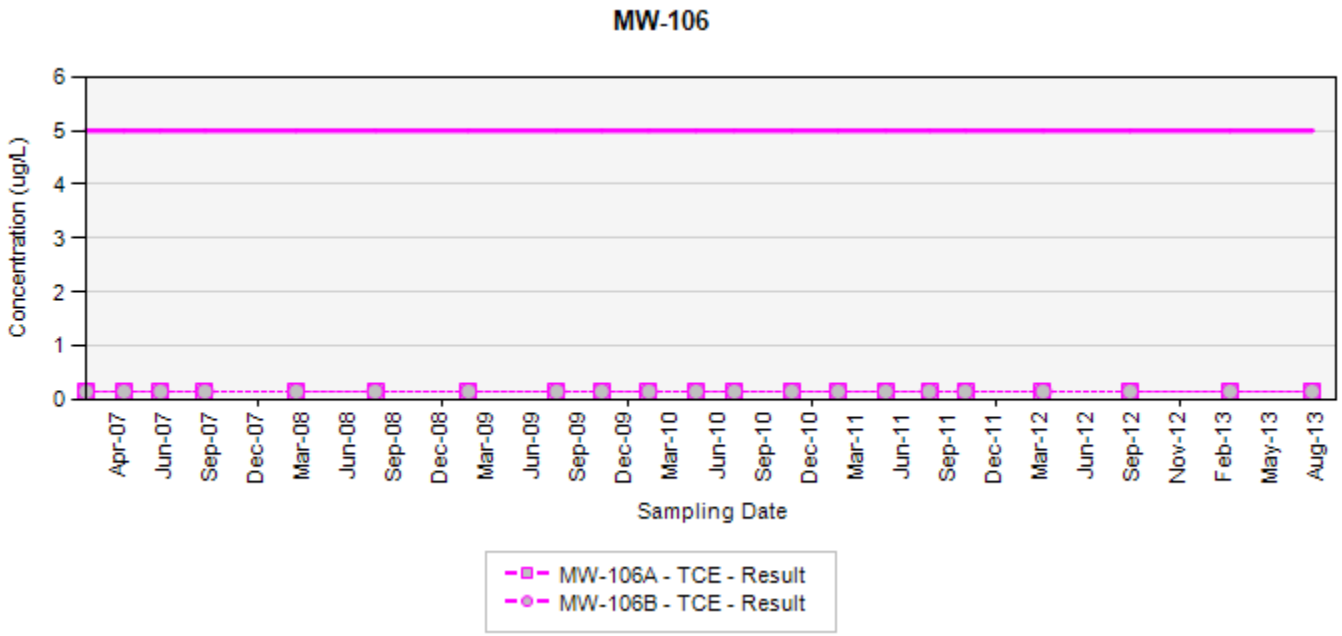
This Page Intentionally Left Blank

Appendix A
Concentration Trend Charts for Select Monitoring Wells

This page intentionally left blank

Appendix A
Concentration Trend Charts for Monitoring Wells



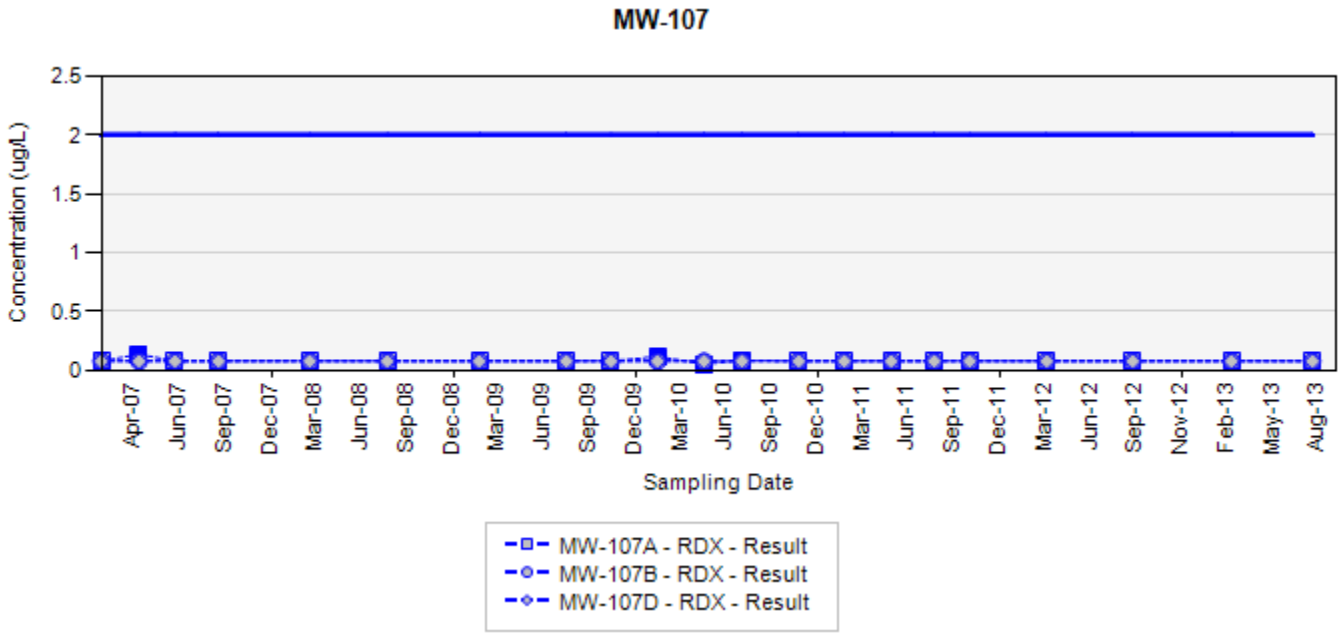


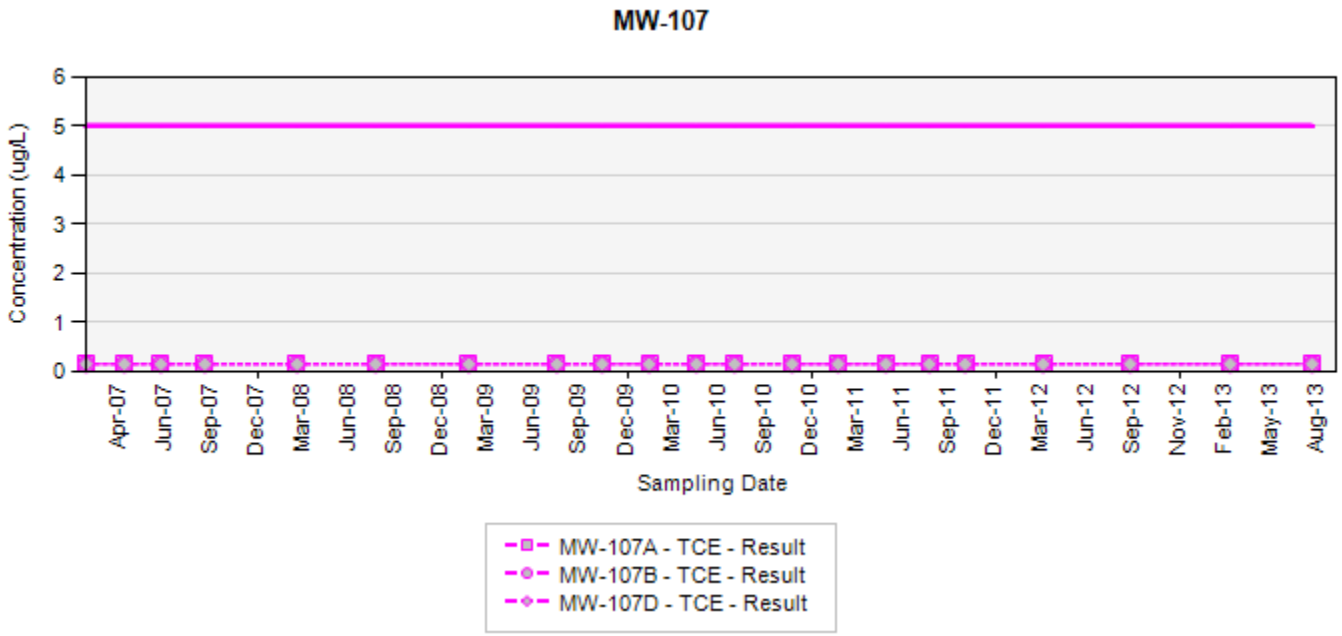
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



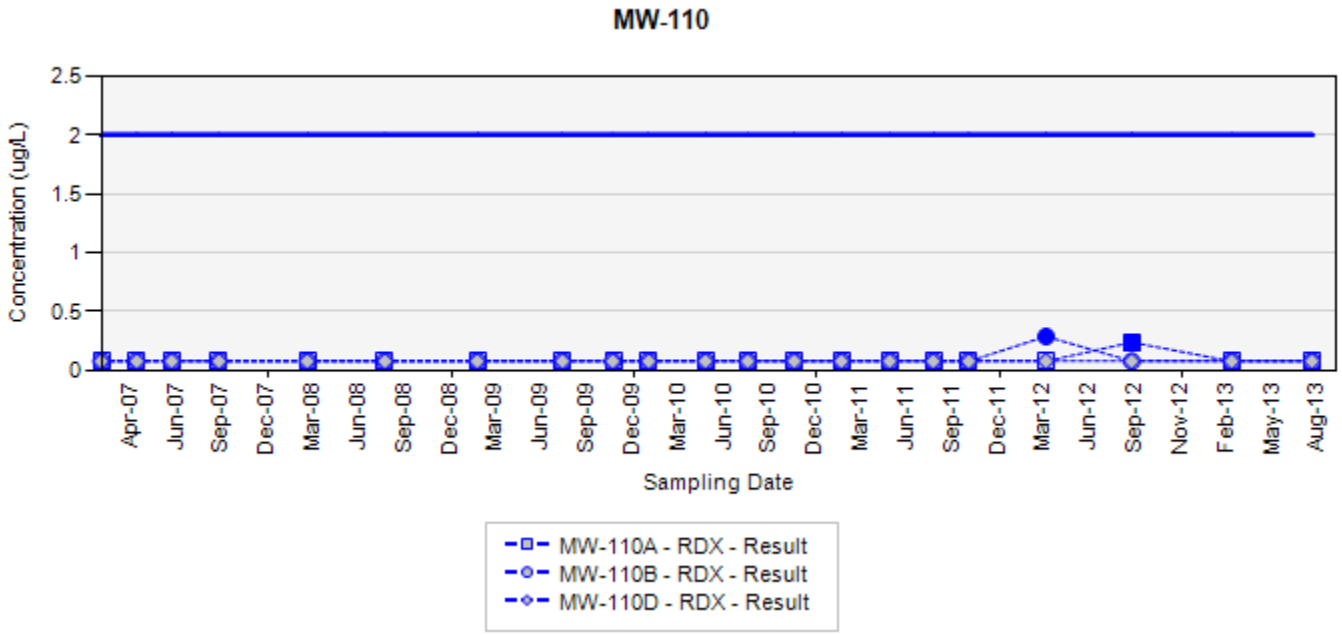


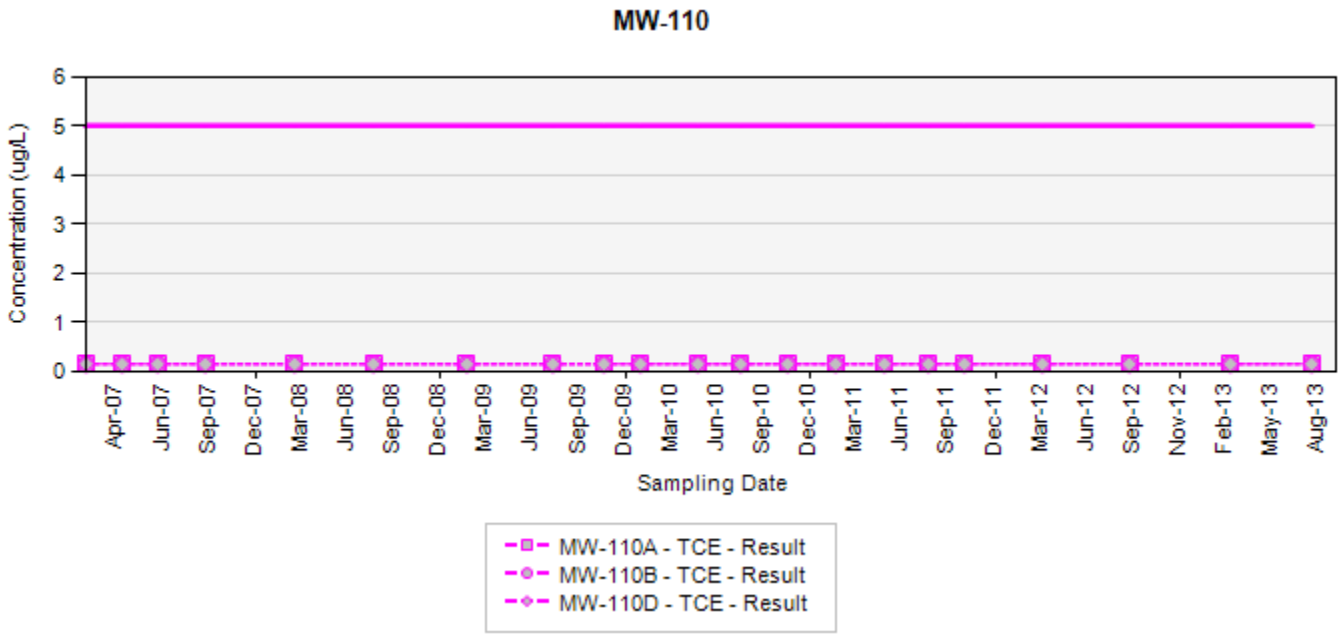
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



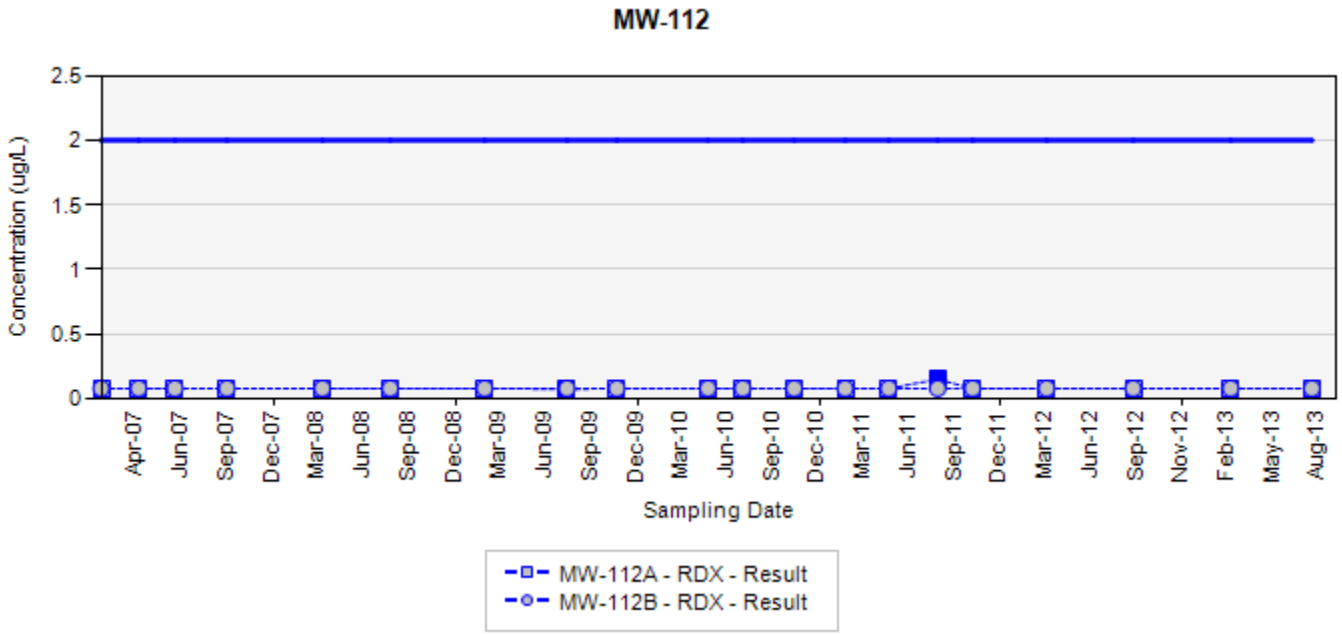


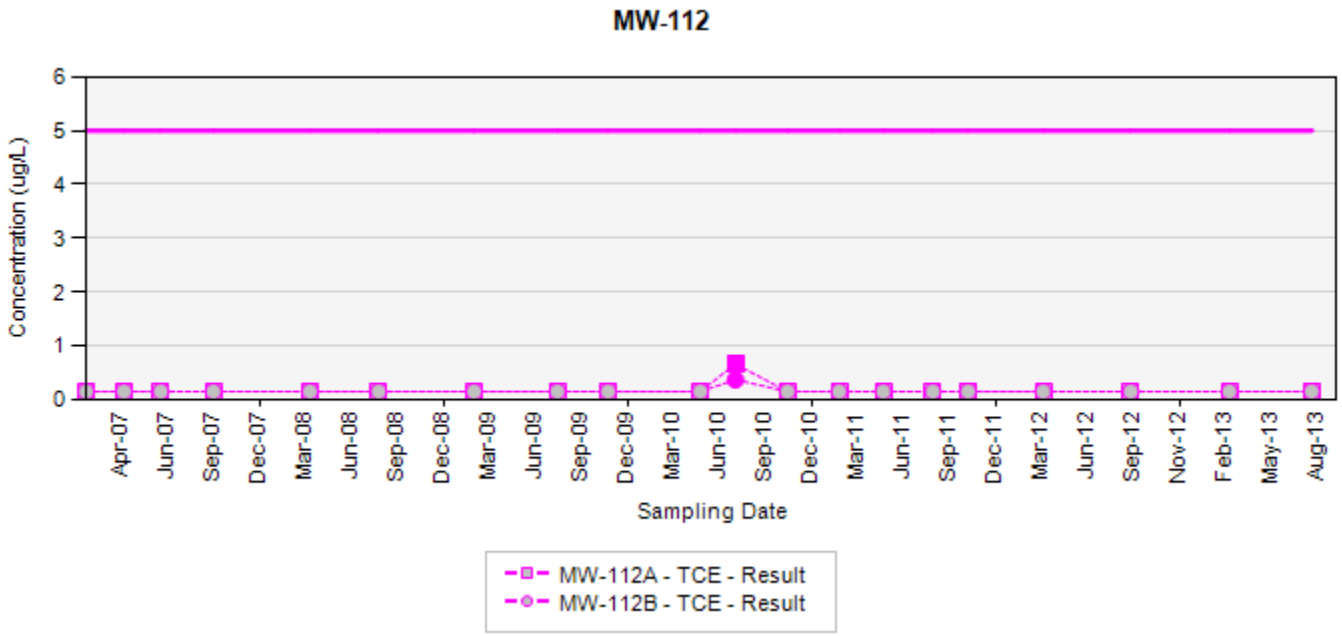
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



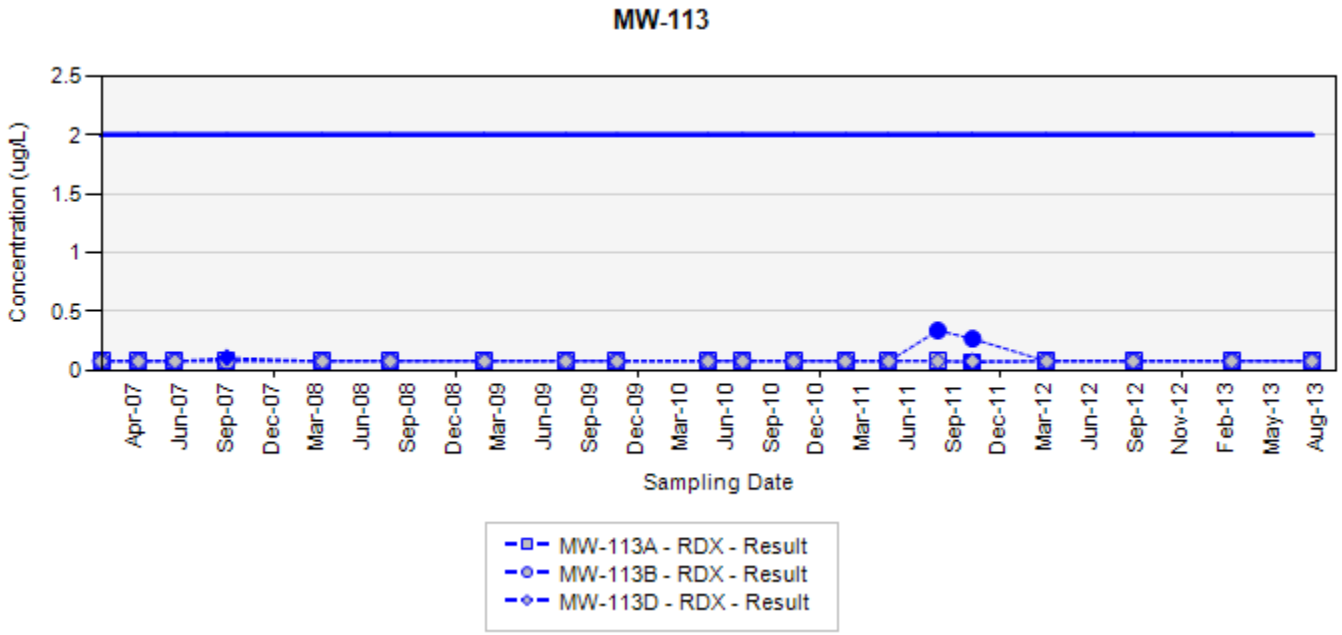


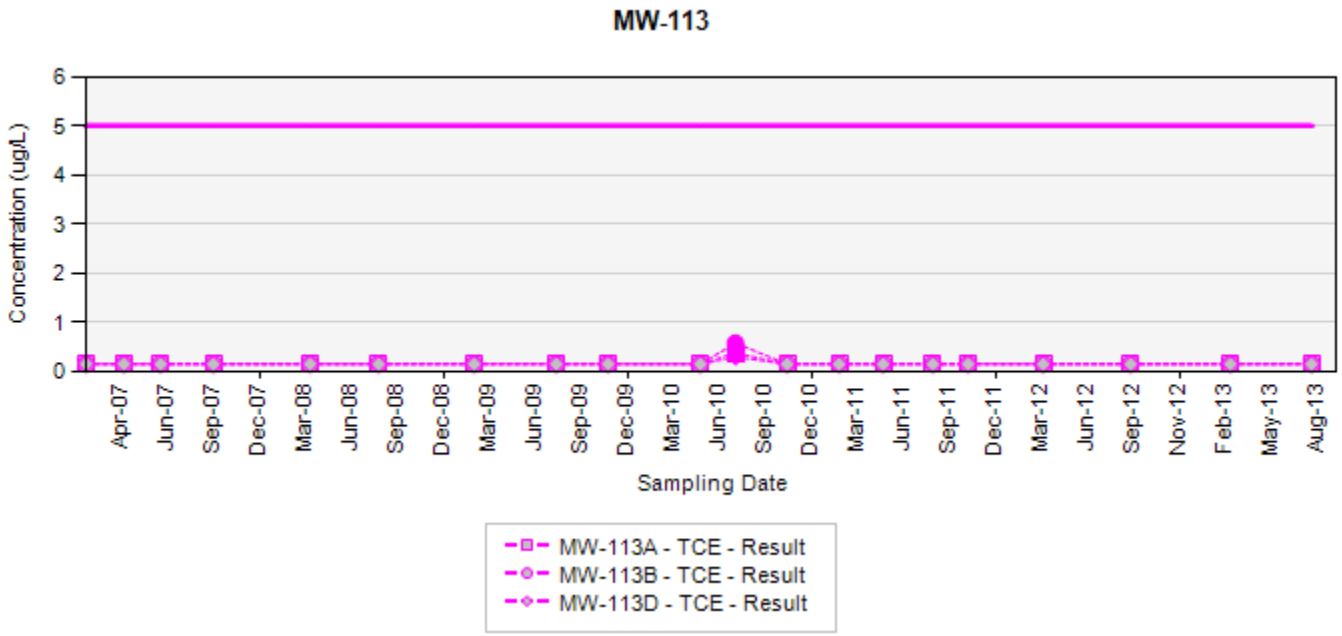
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



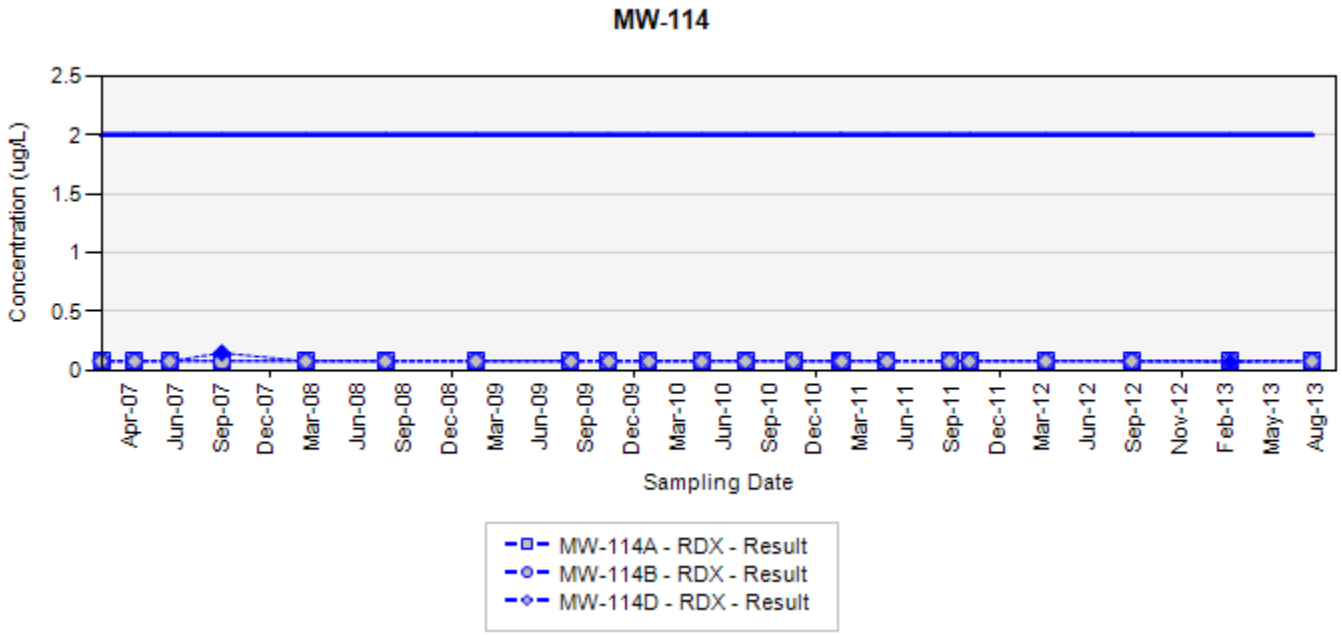


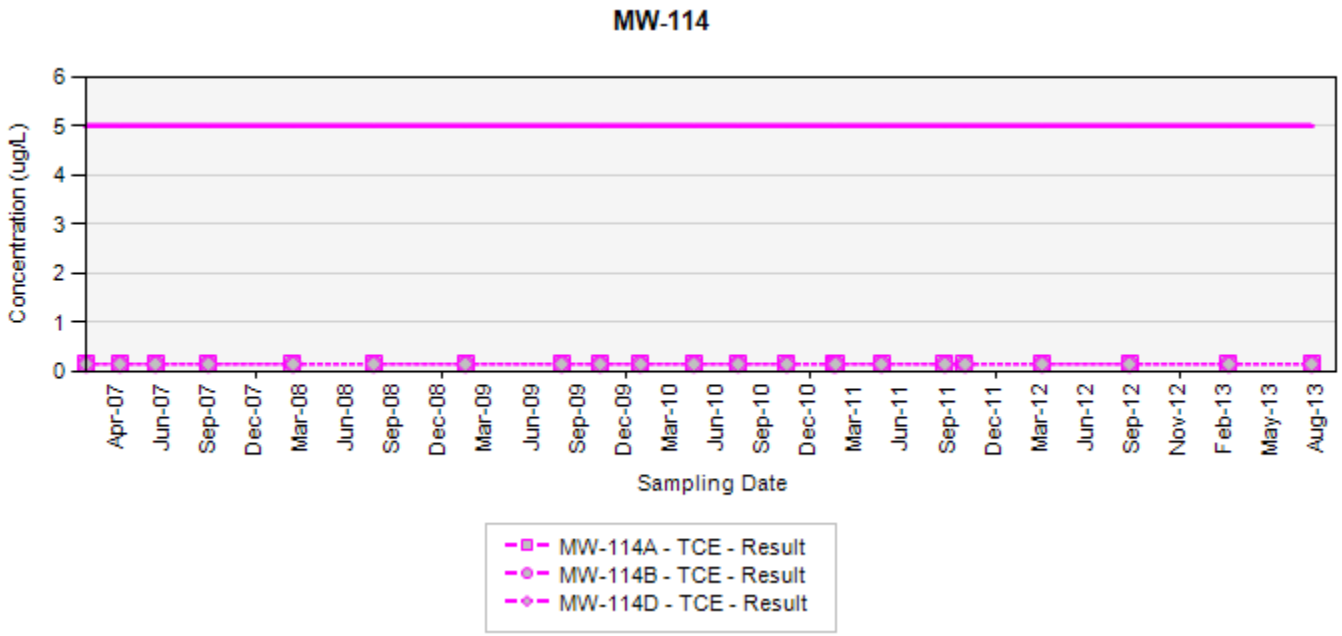
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



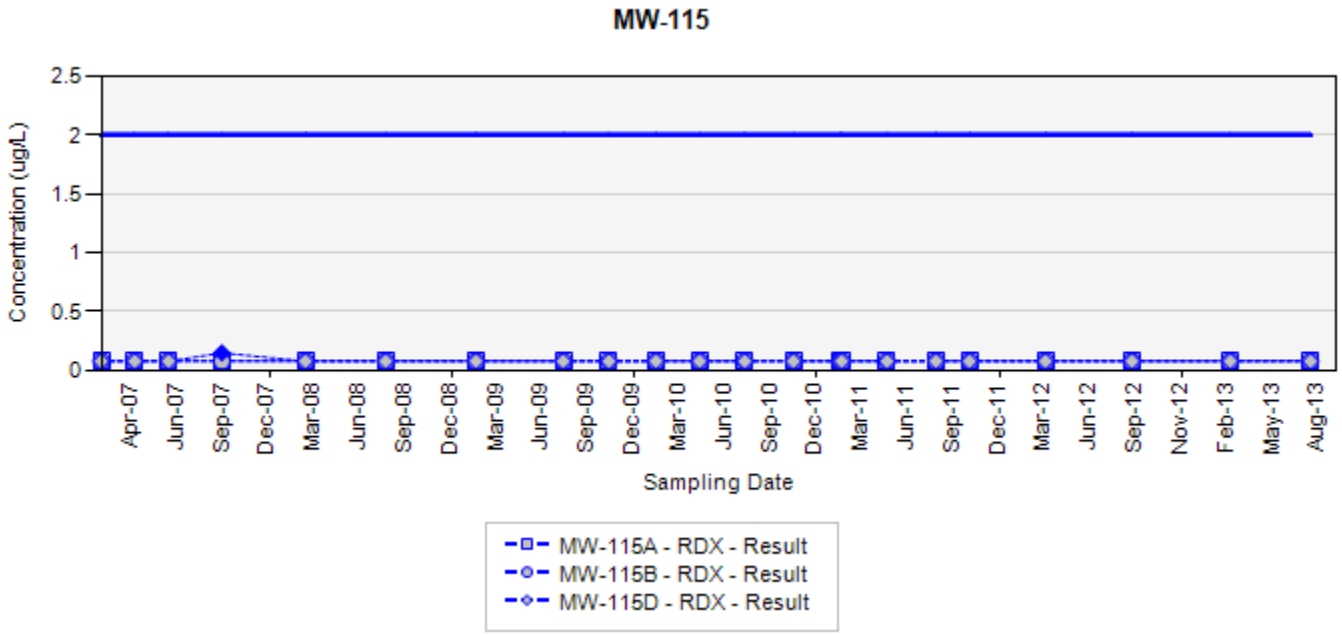


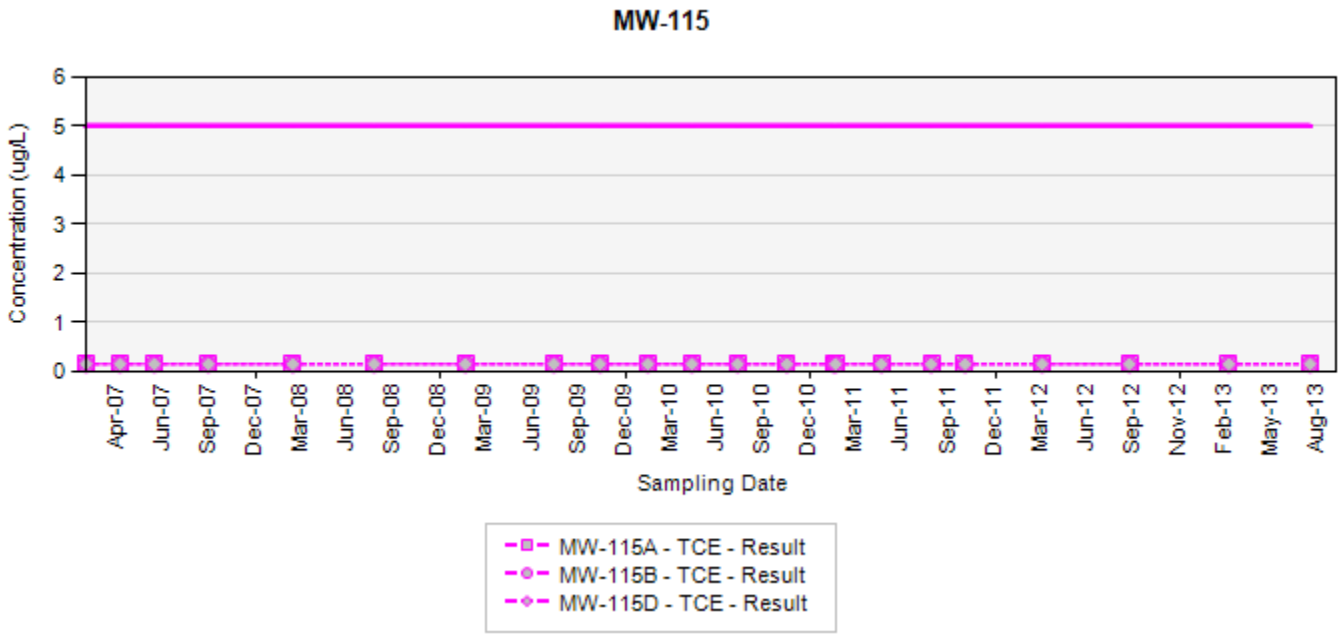
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



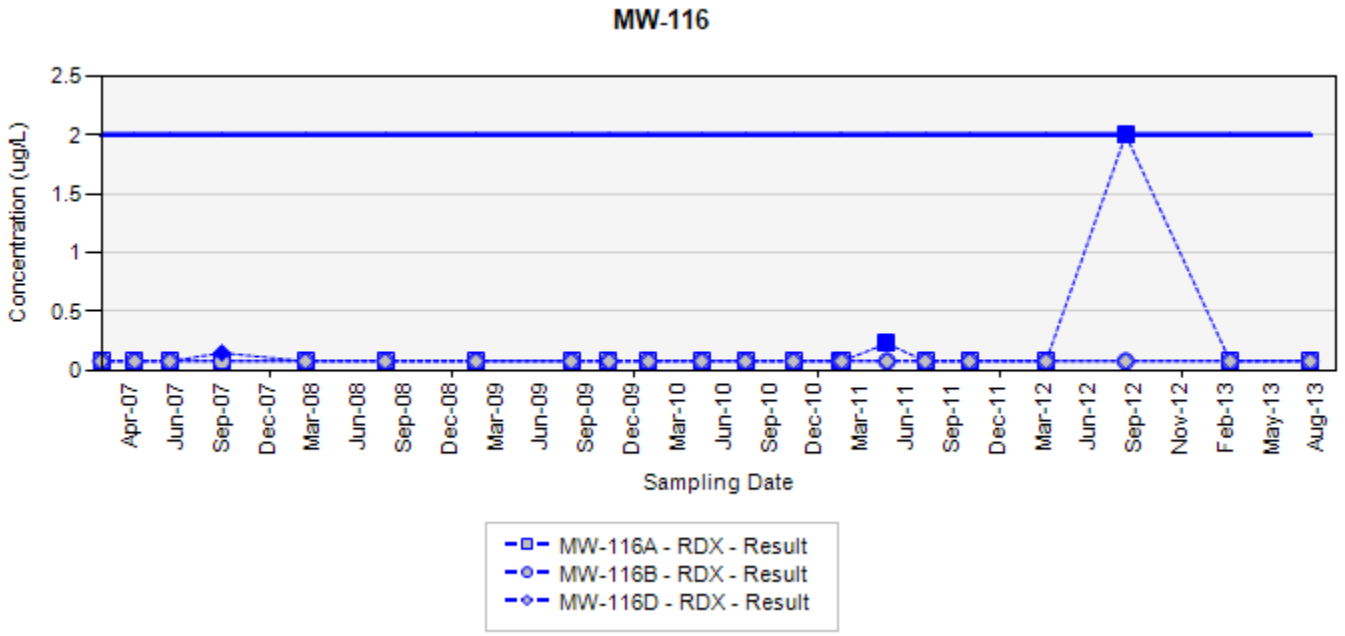


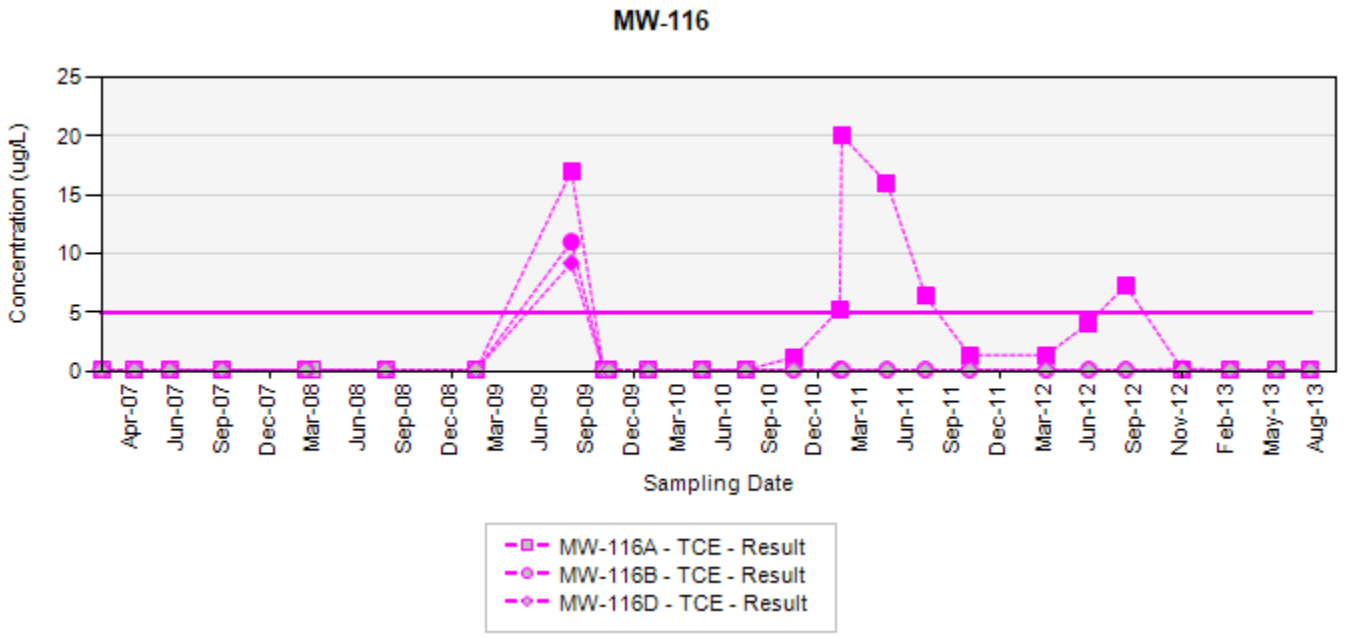
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



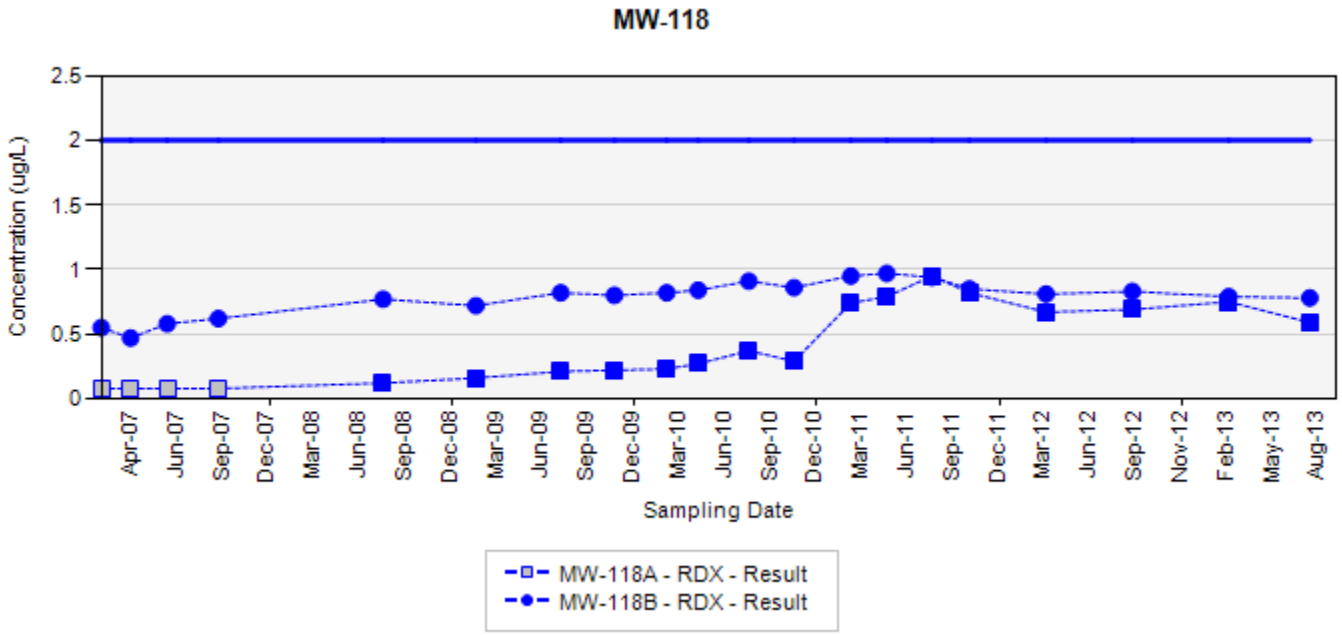


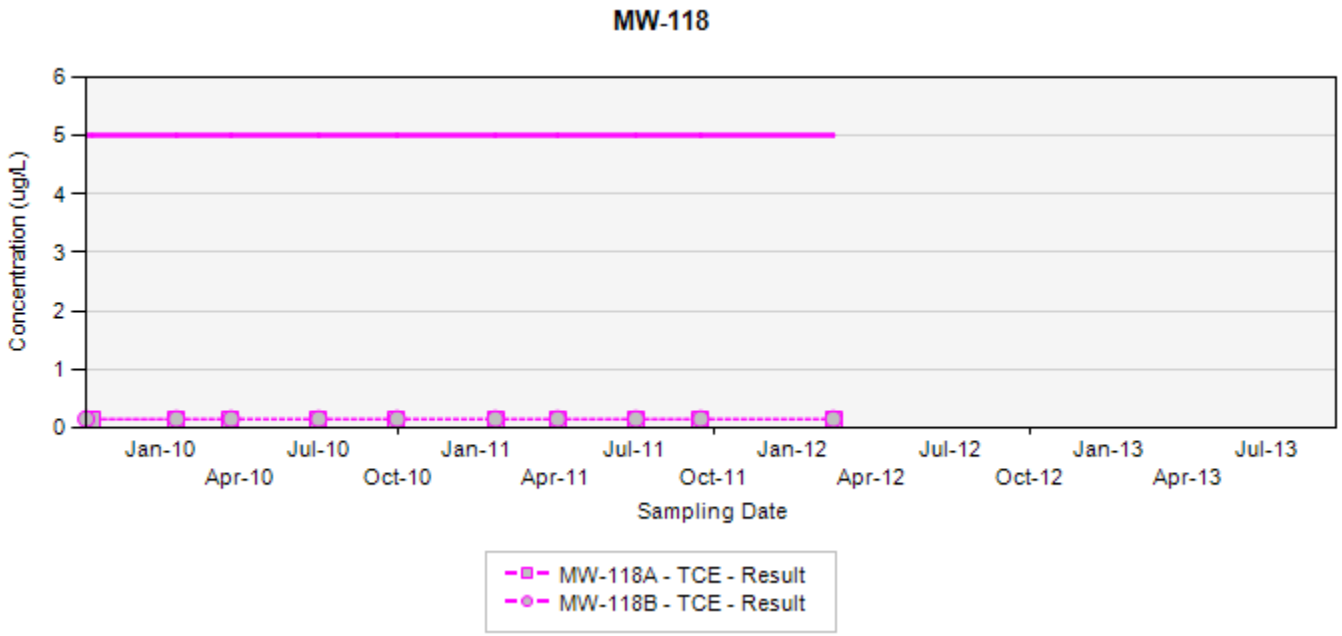
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



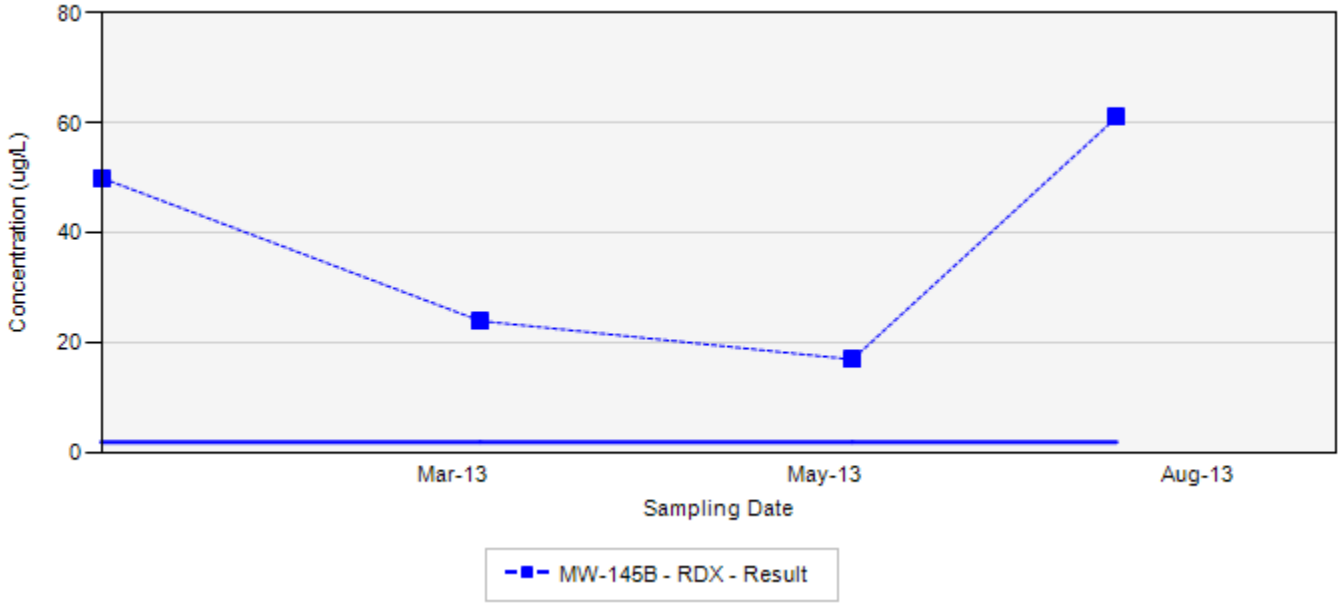


TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells

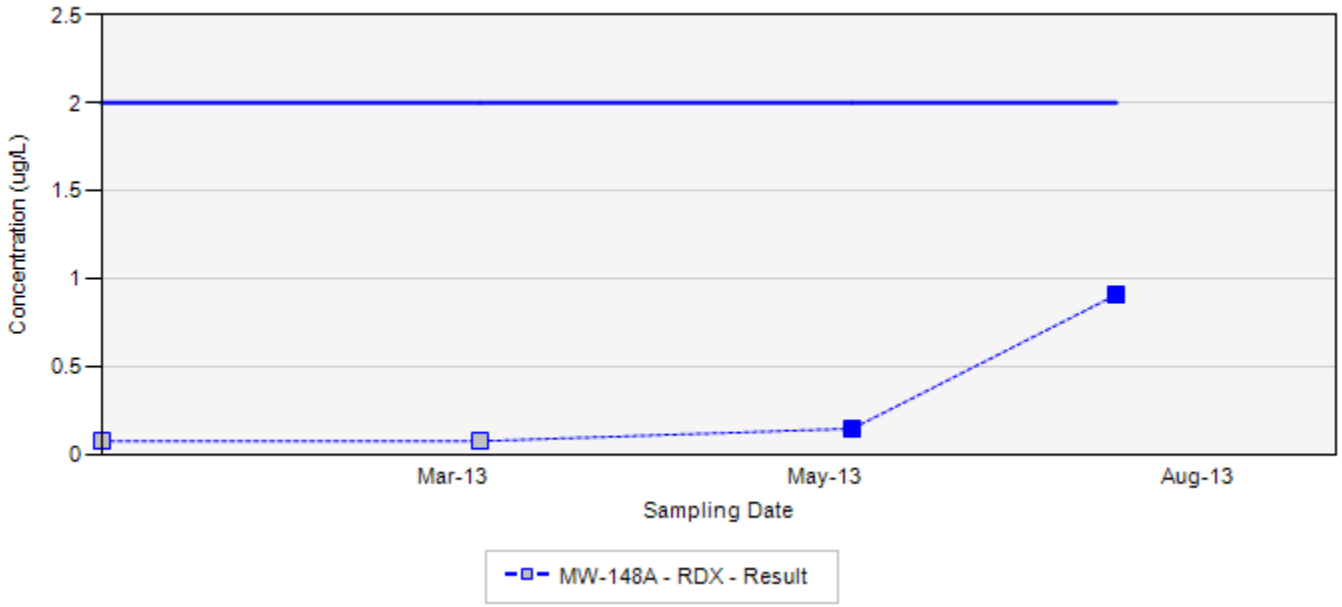


RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells

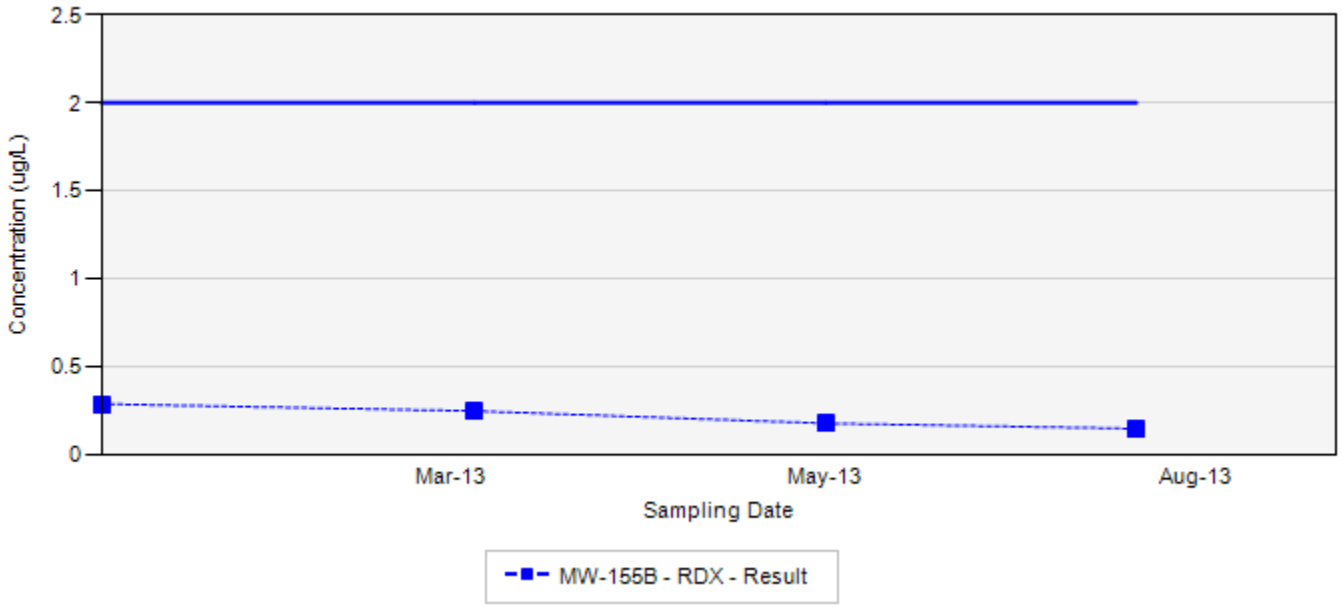


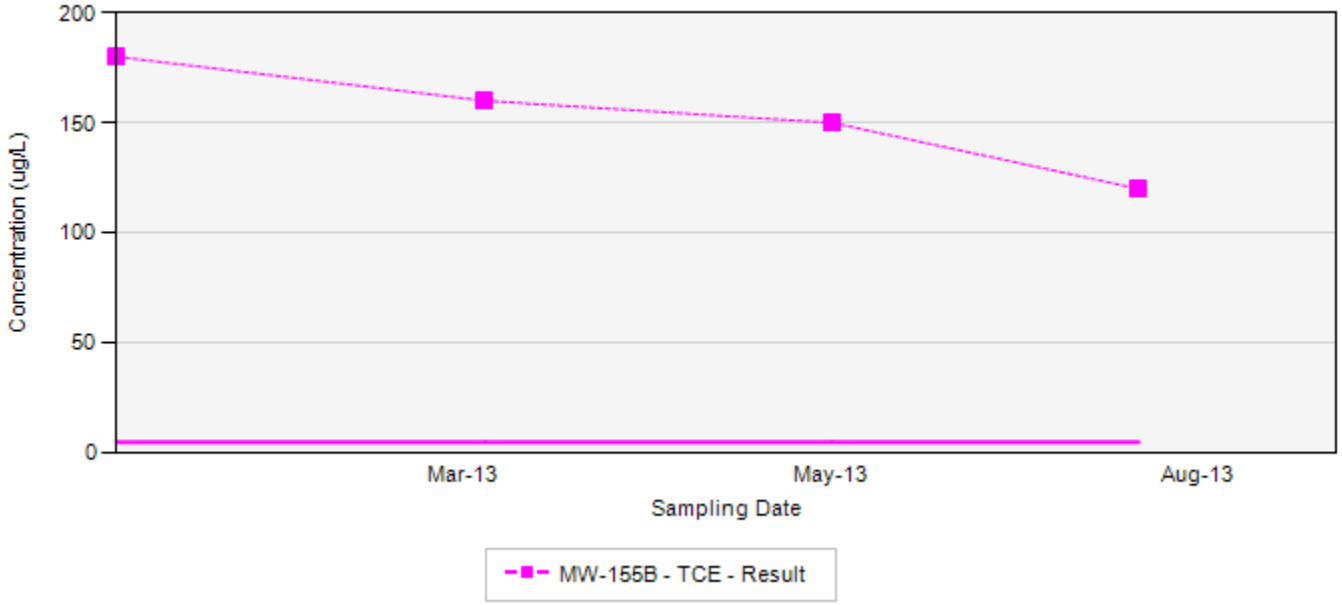
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



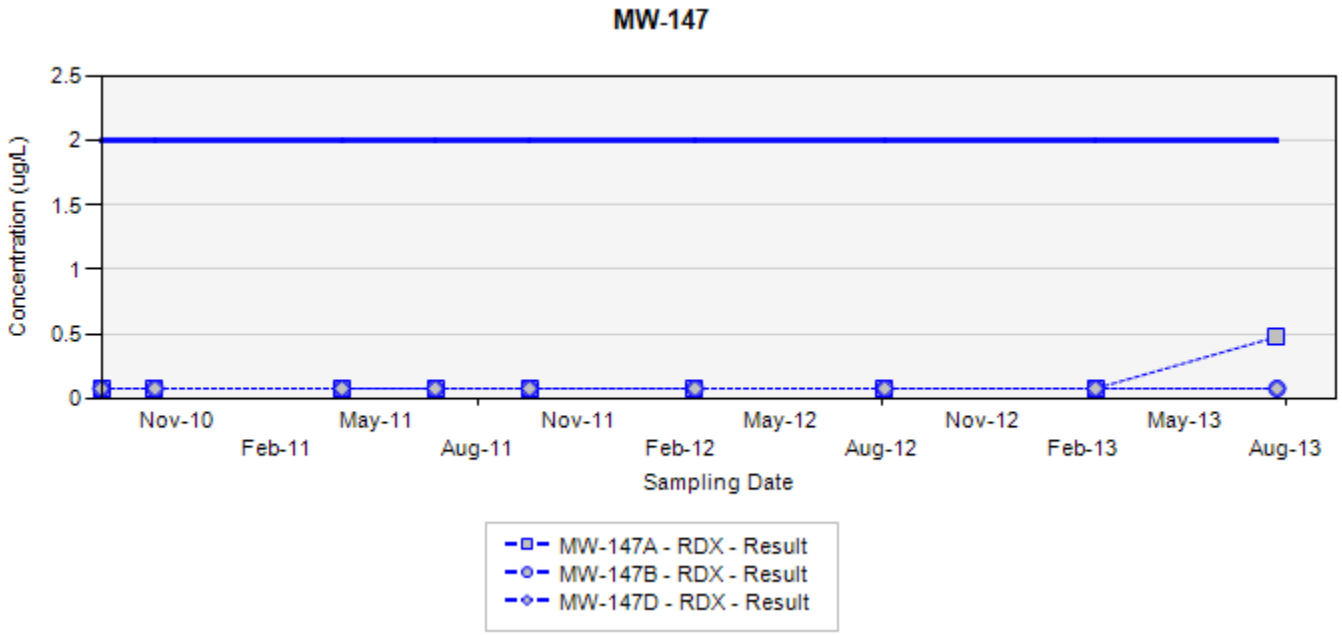


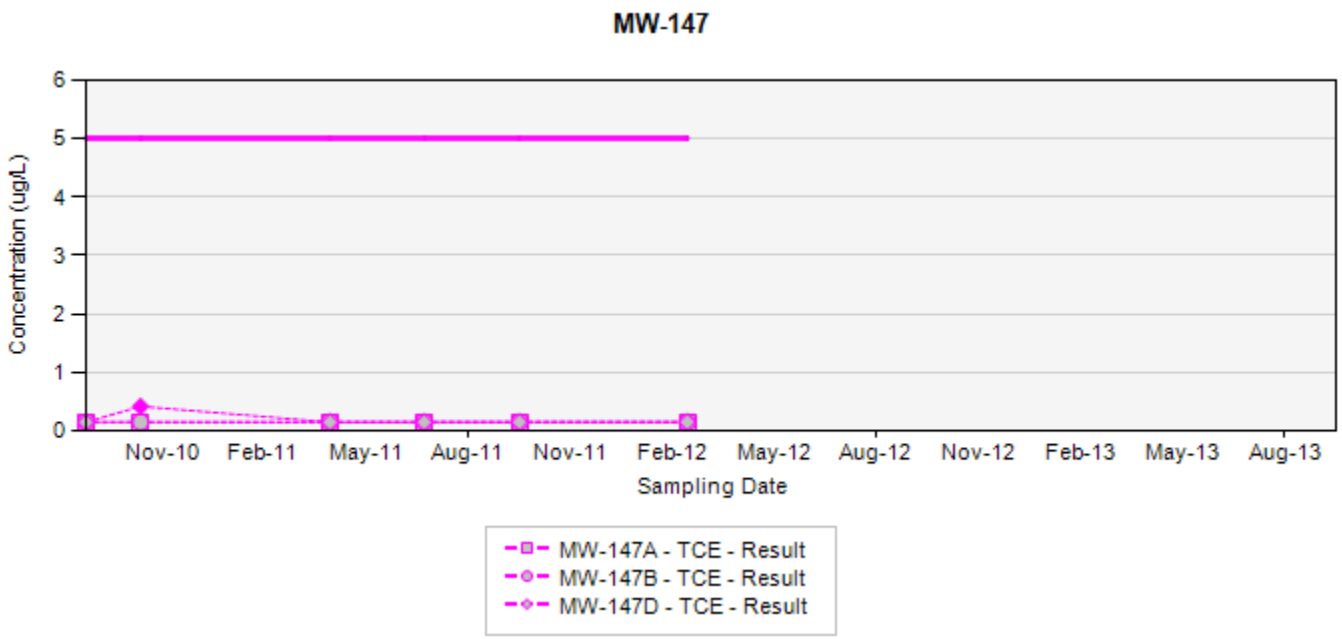
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



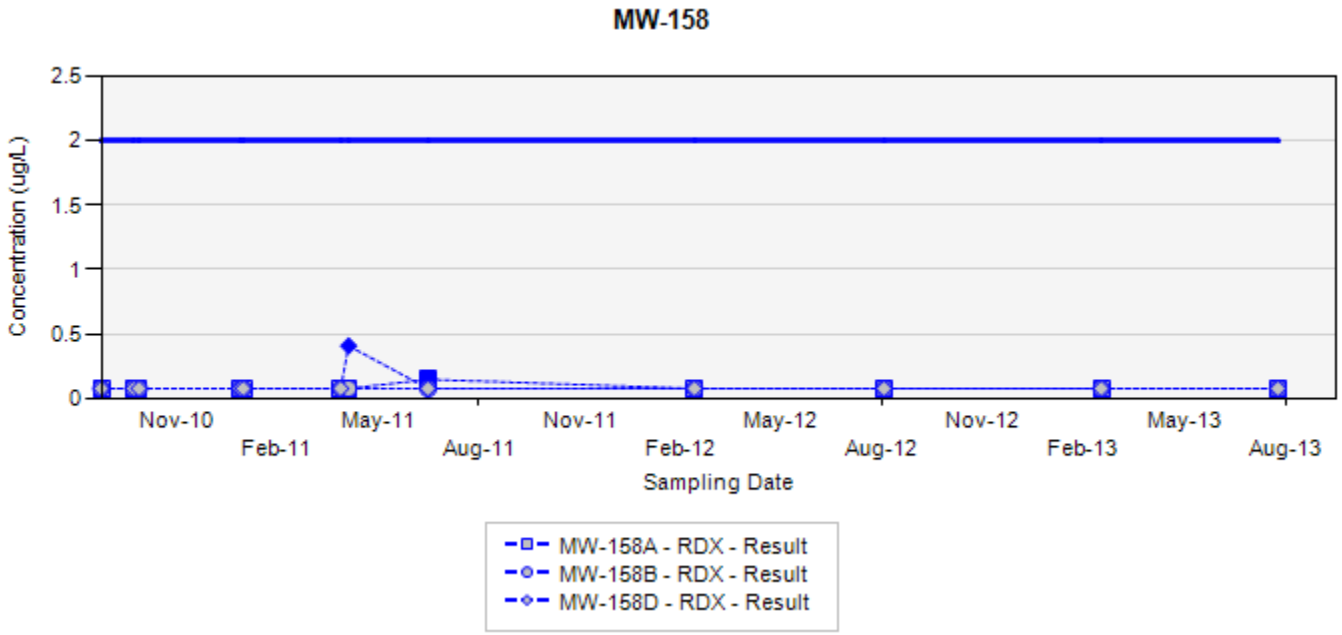


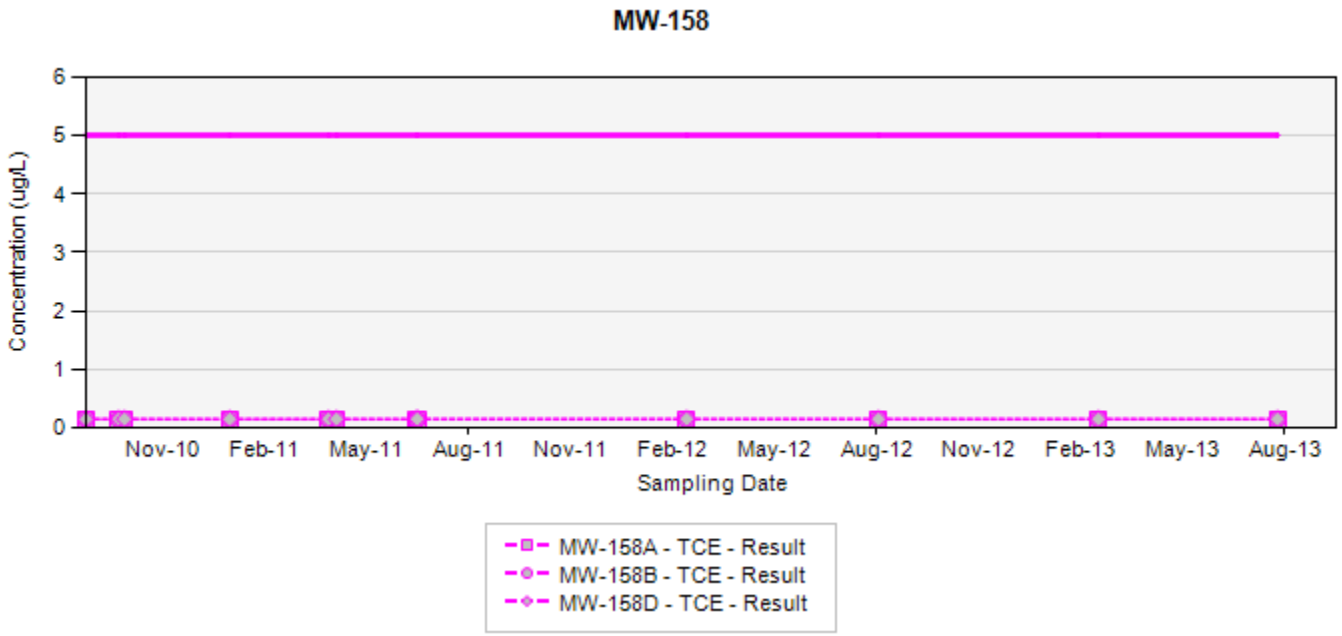
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



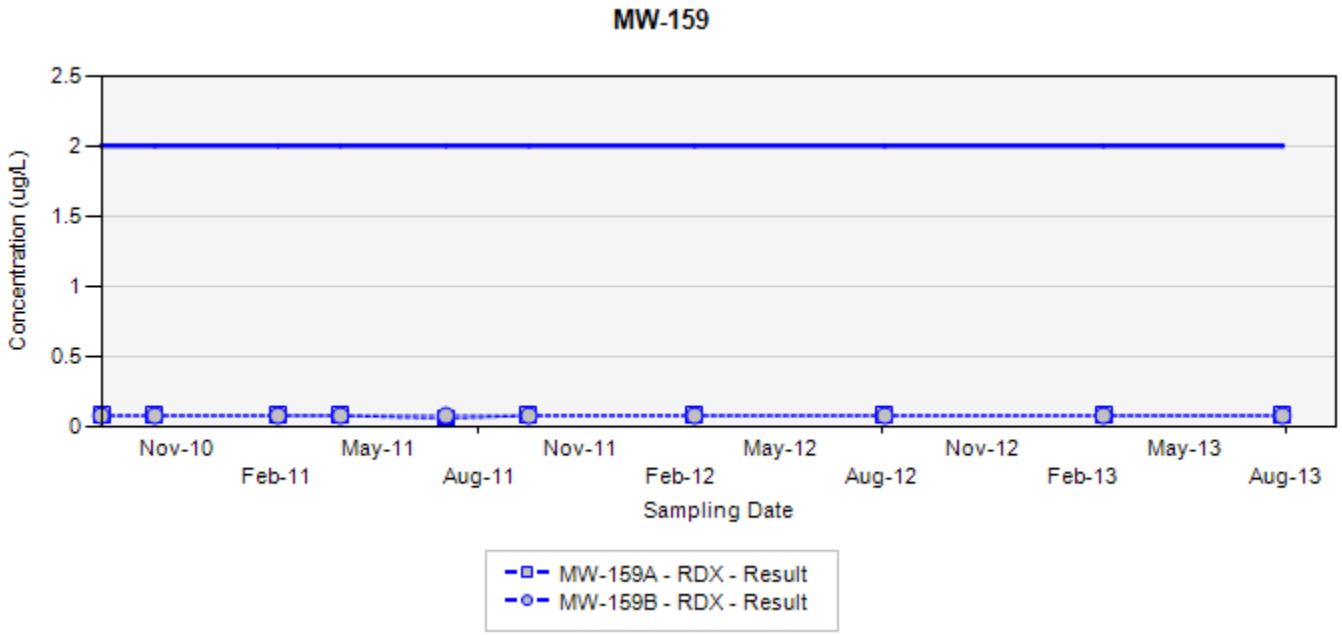


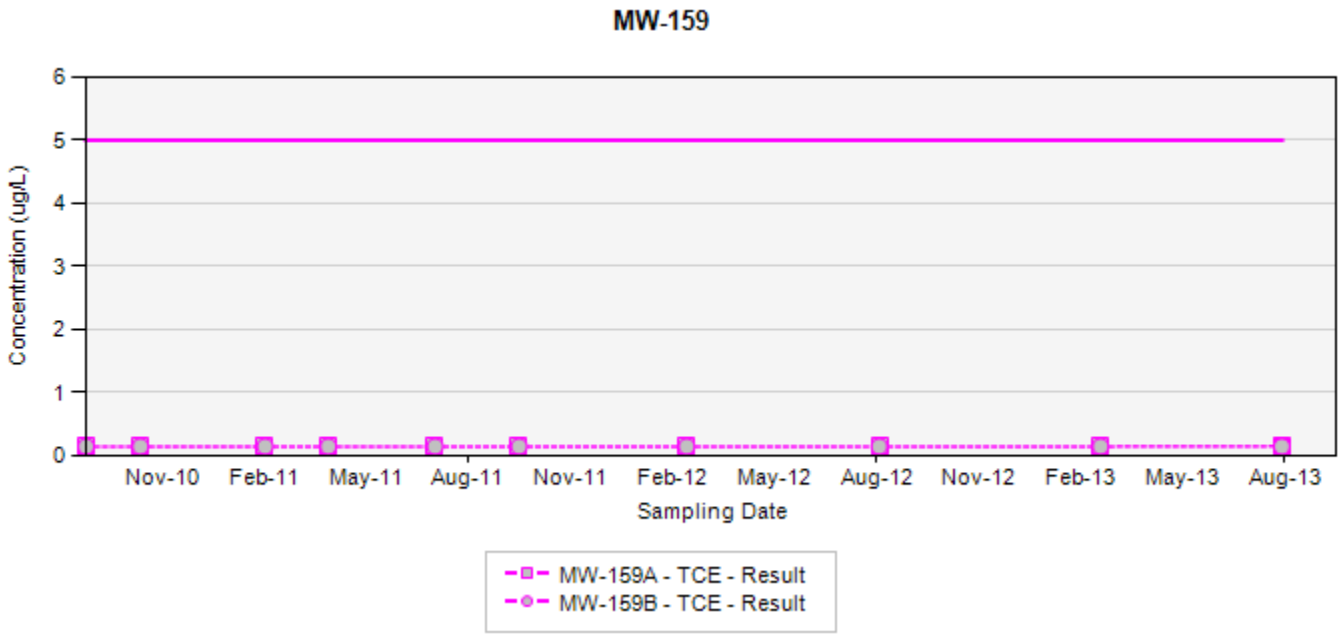
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



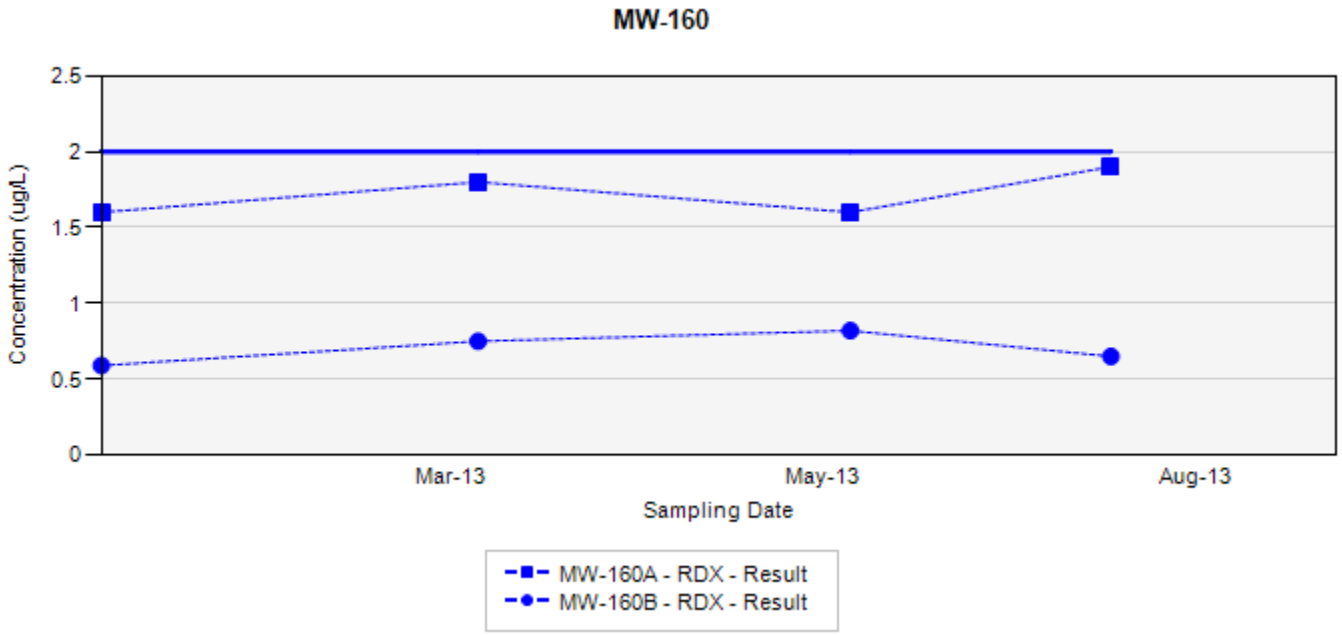


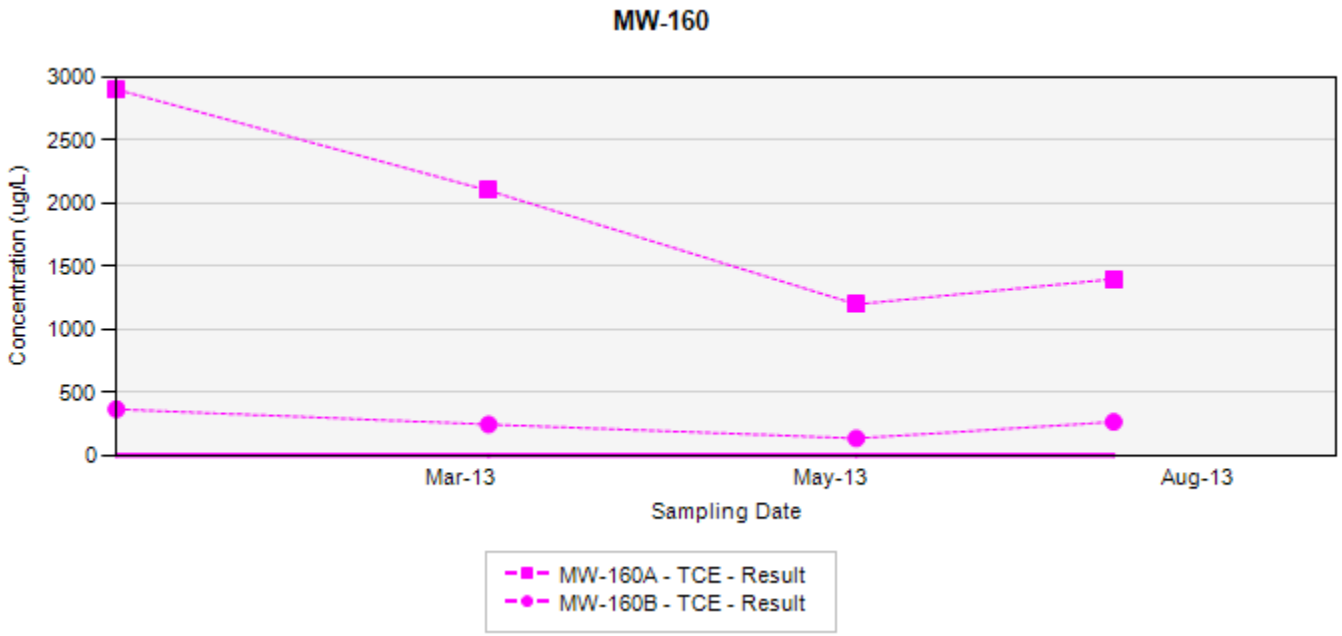
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



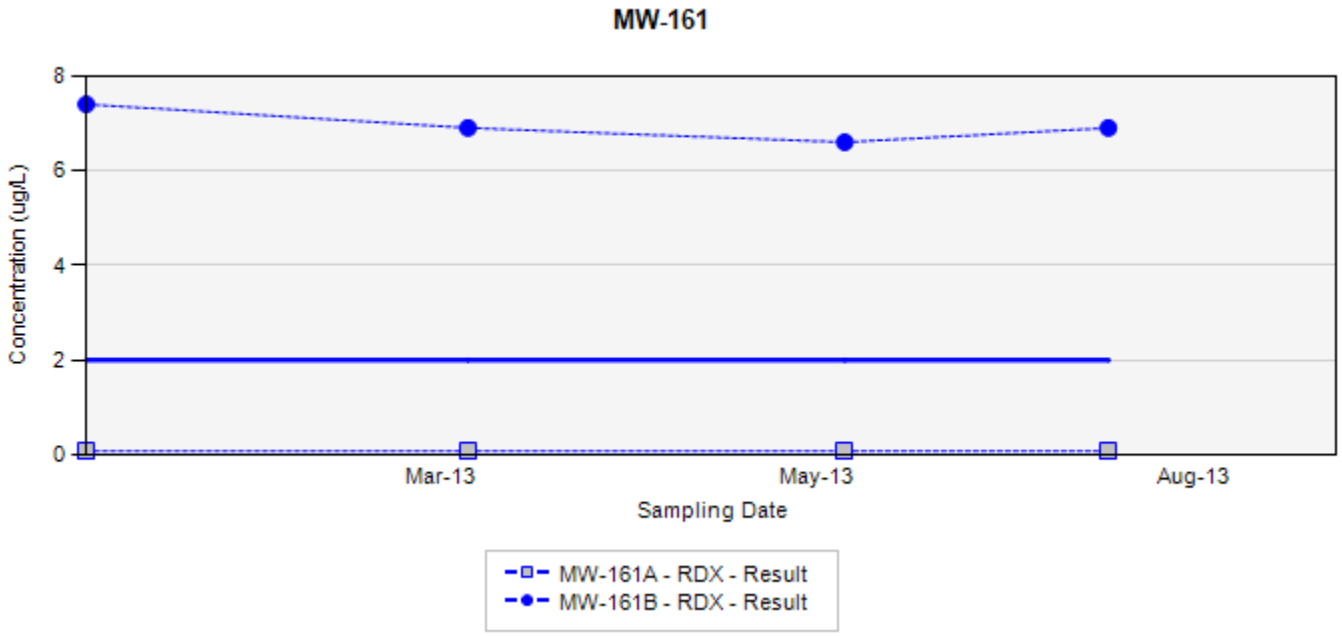


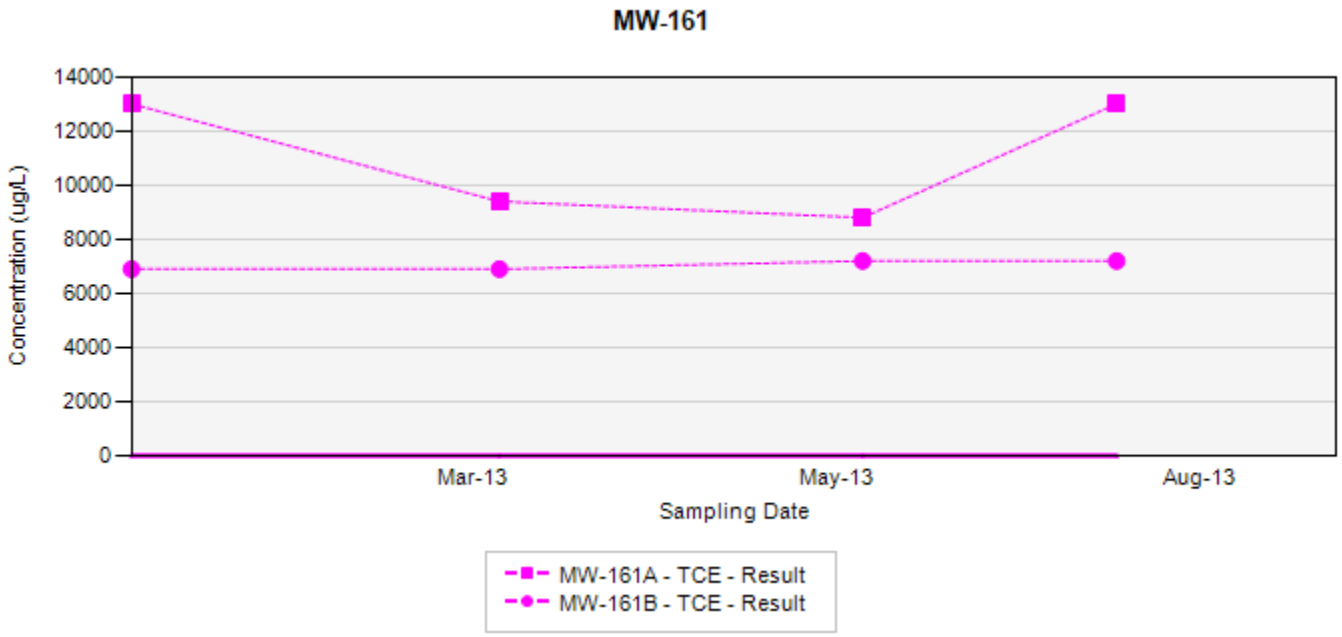
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



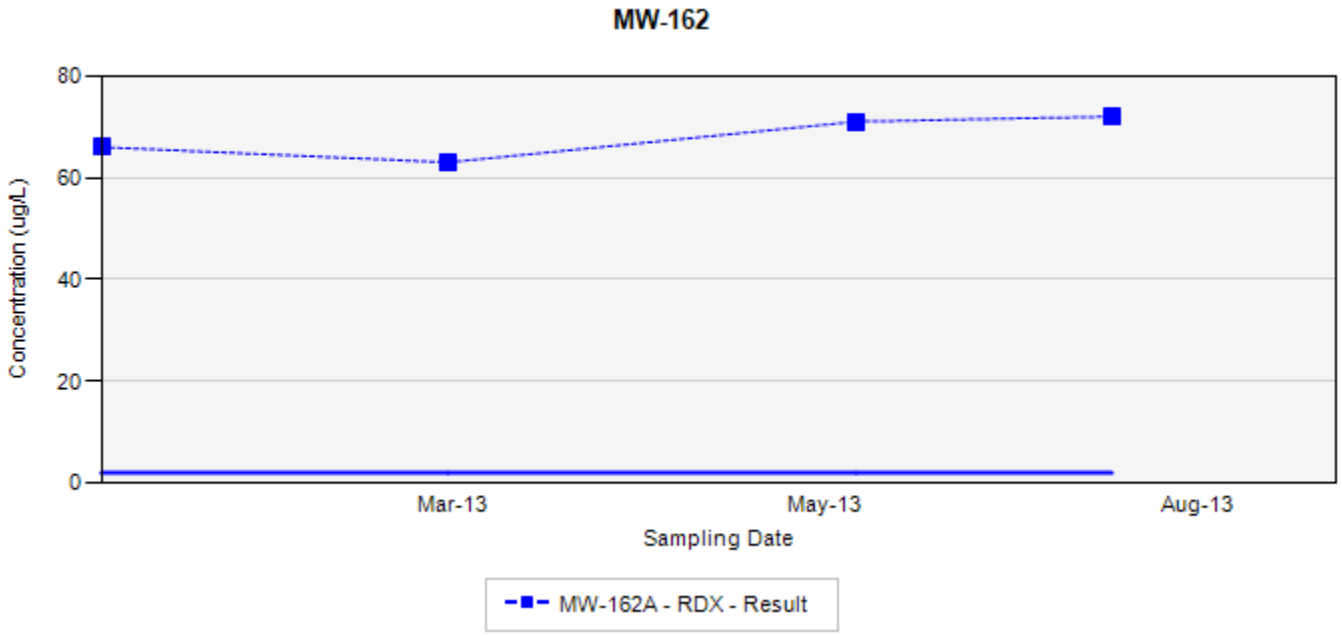


TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells

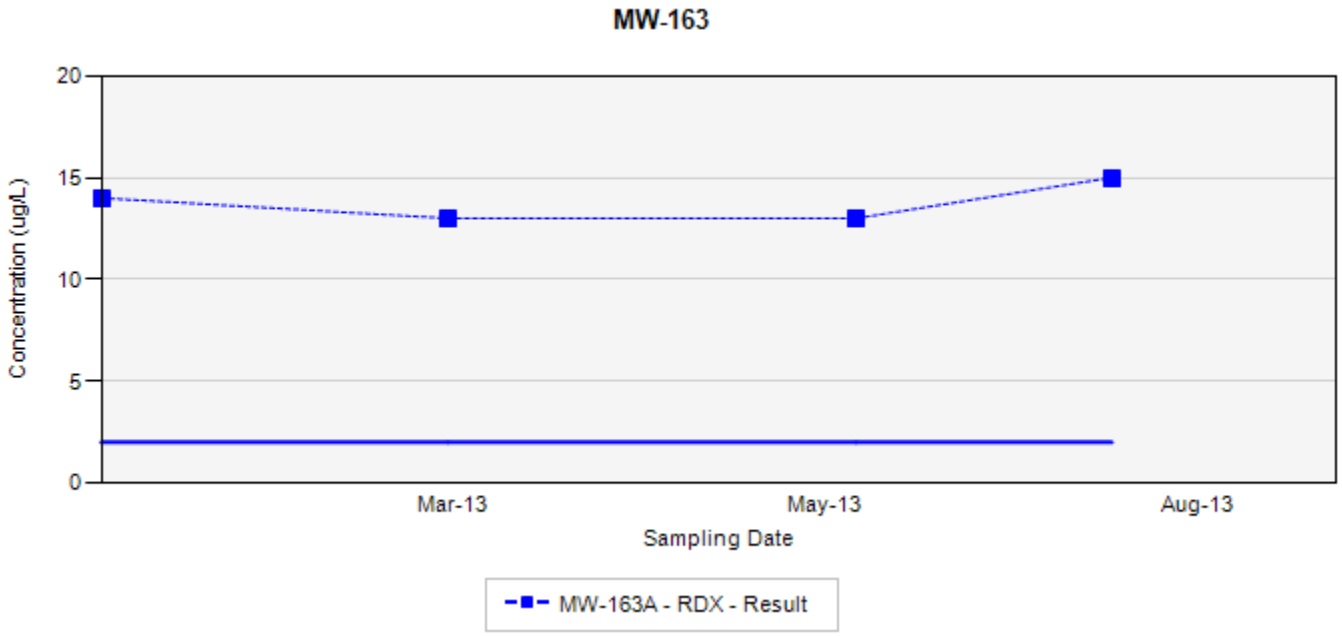


RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells

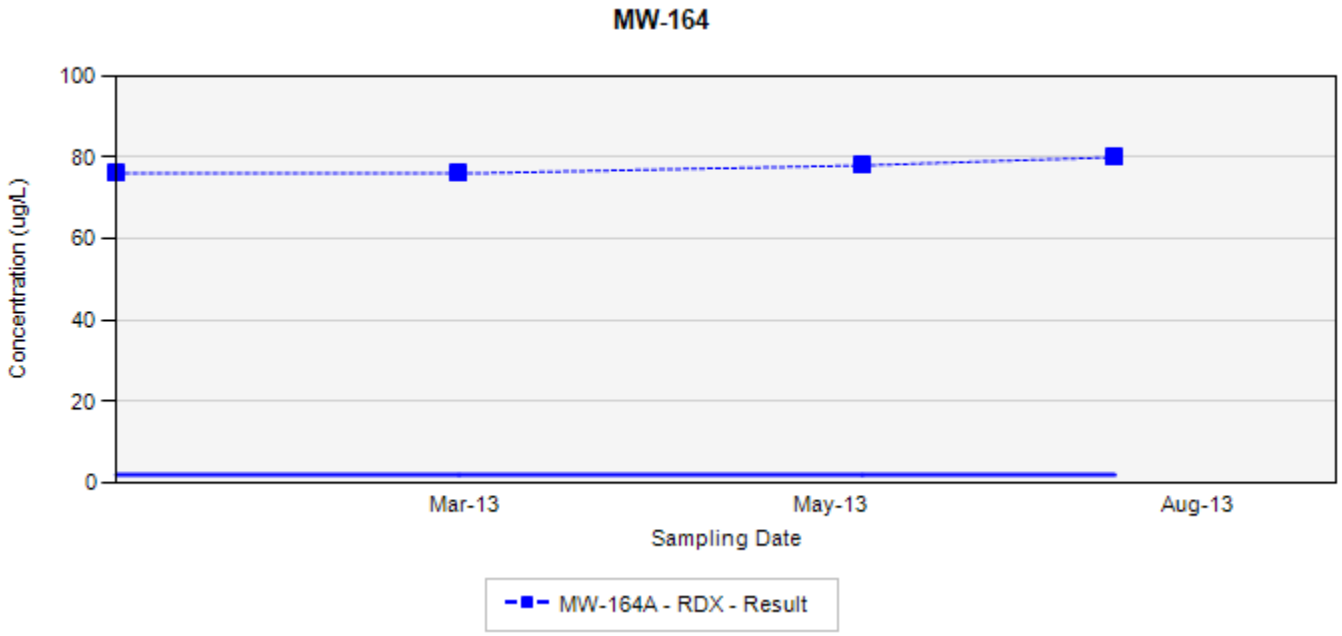


RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells

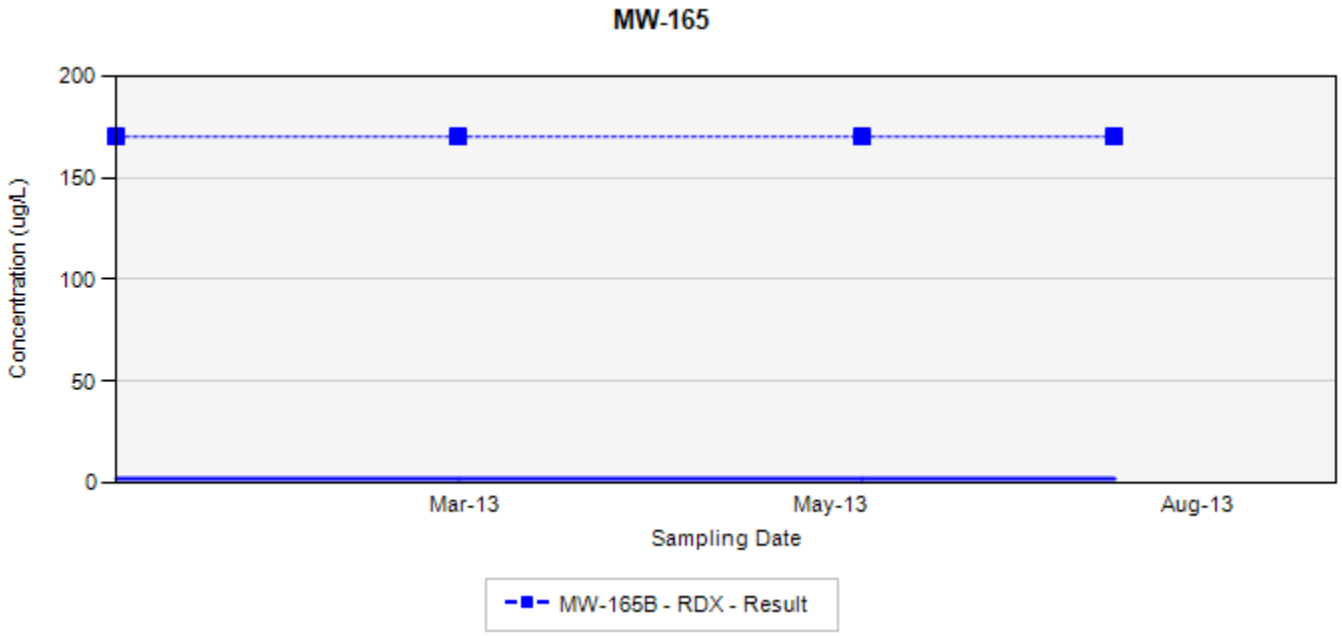


RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells

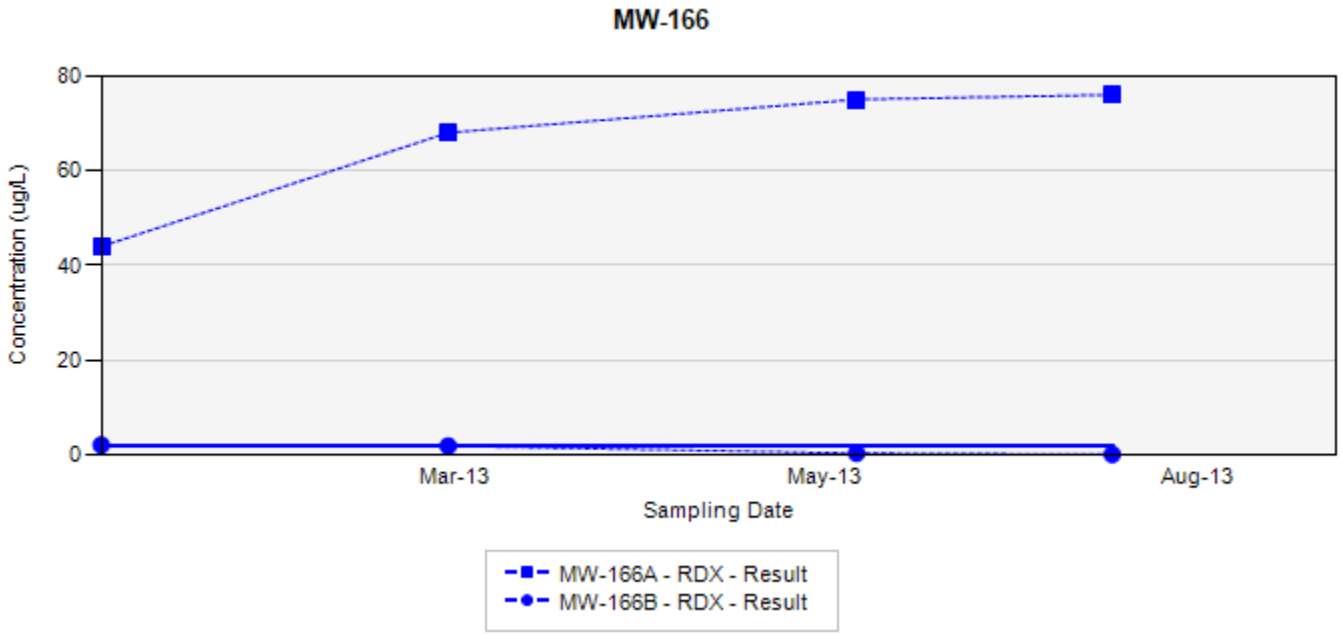


RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells

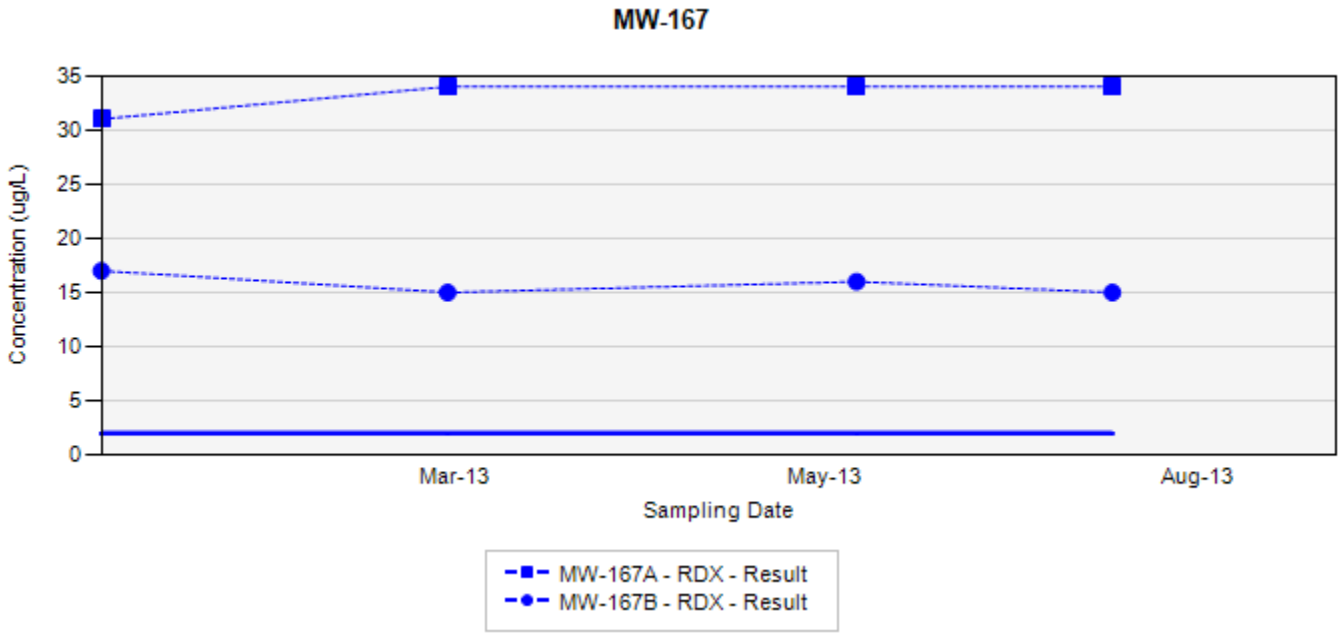


RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells

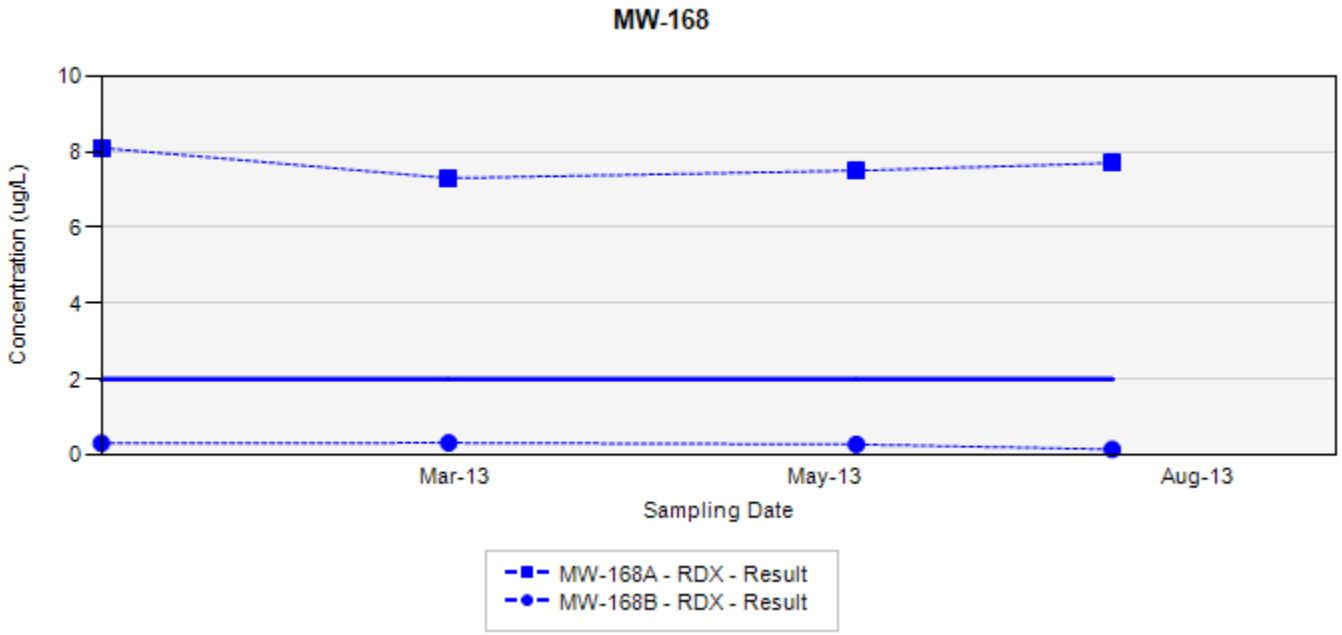


RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells

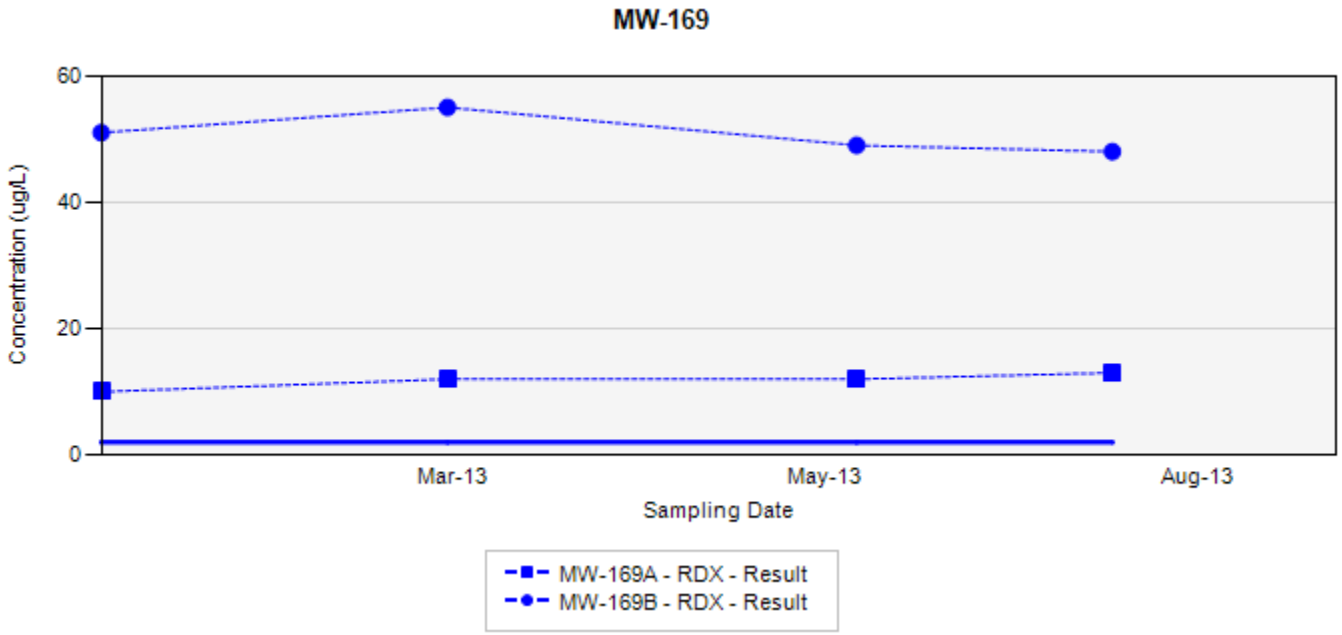


RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells

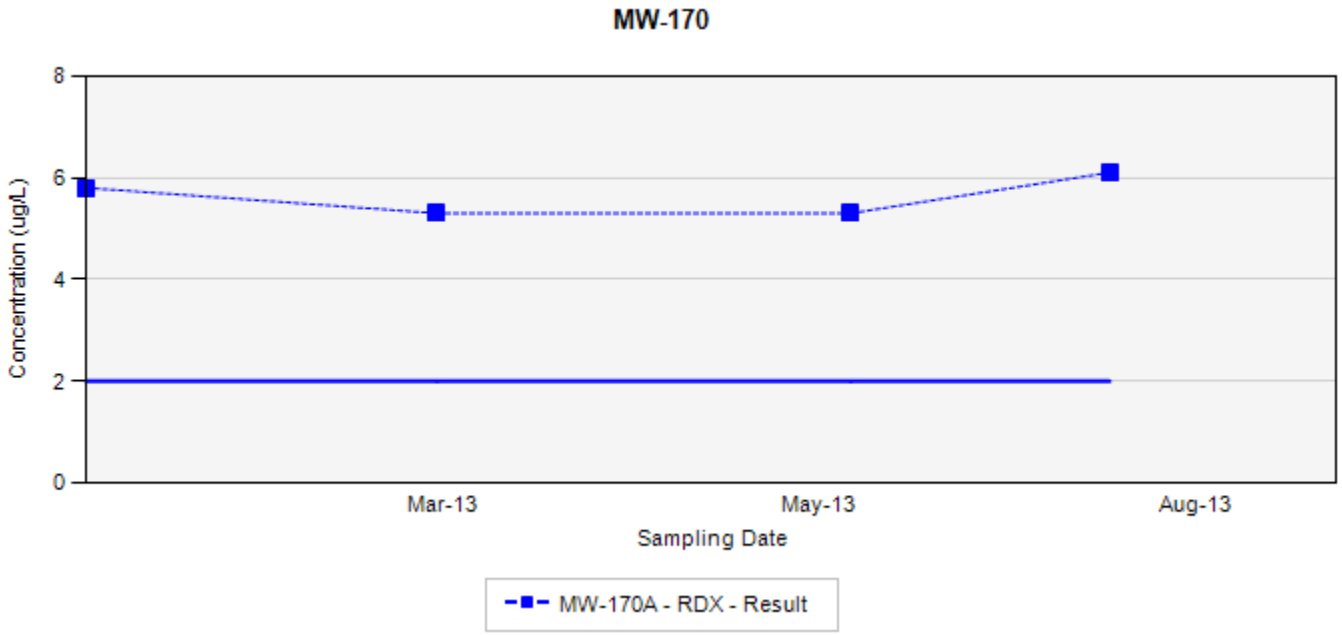


RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells

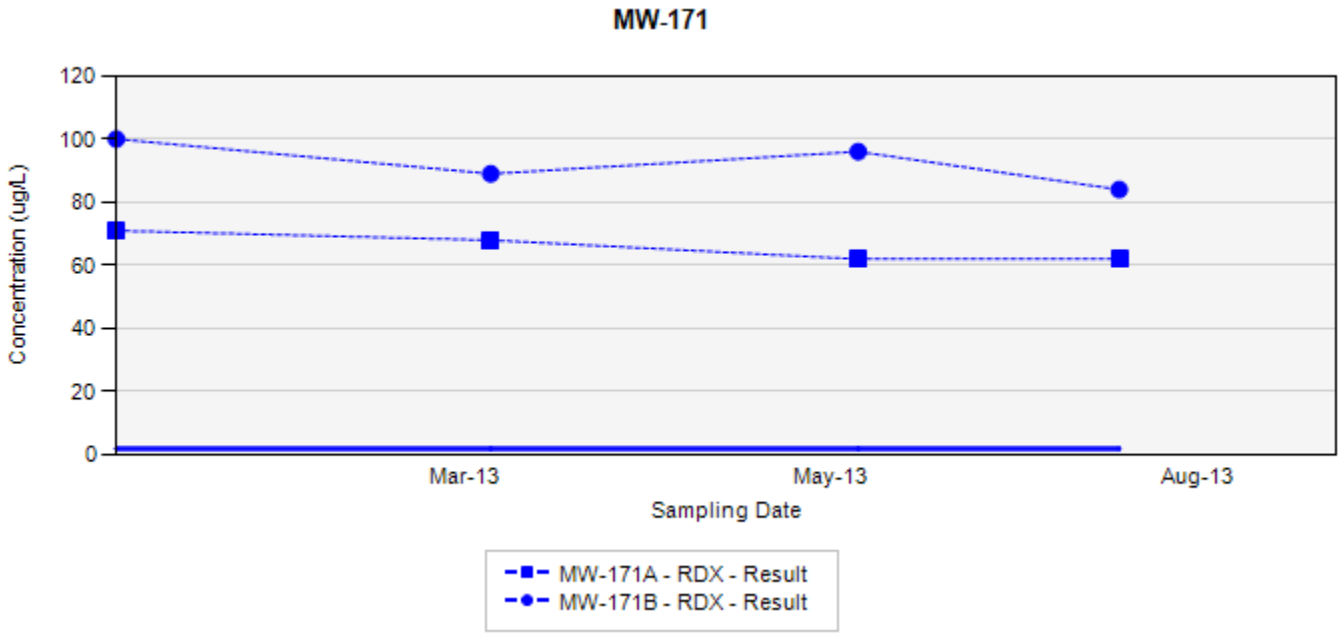


RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells

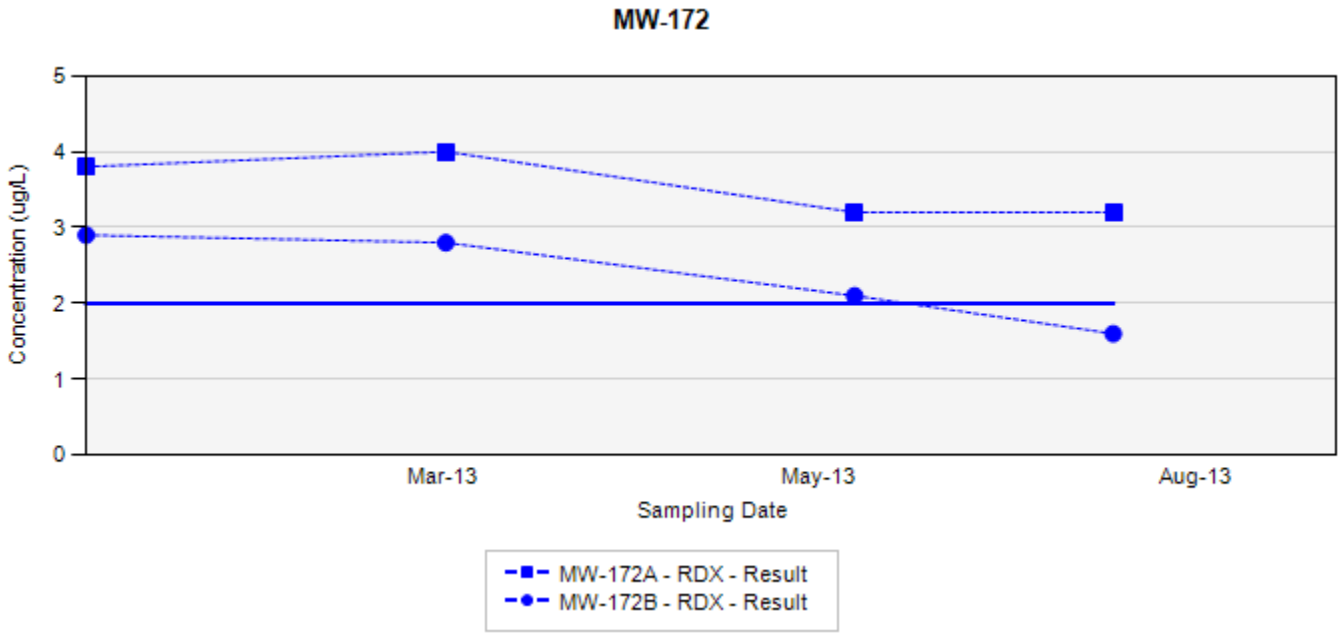


RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells

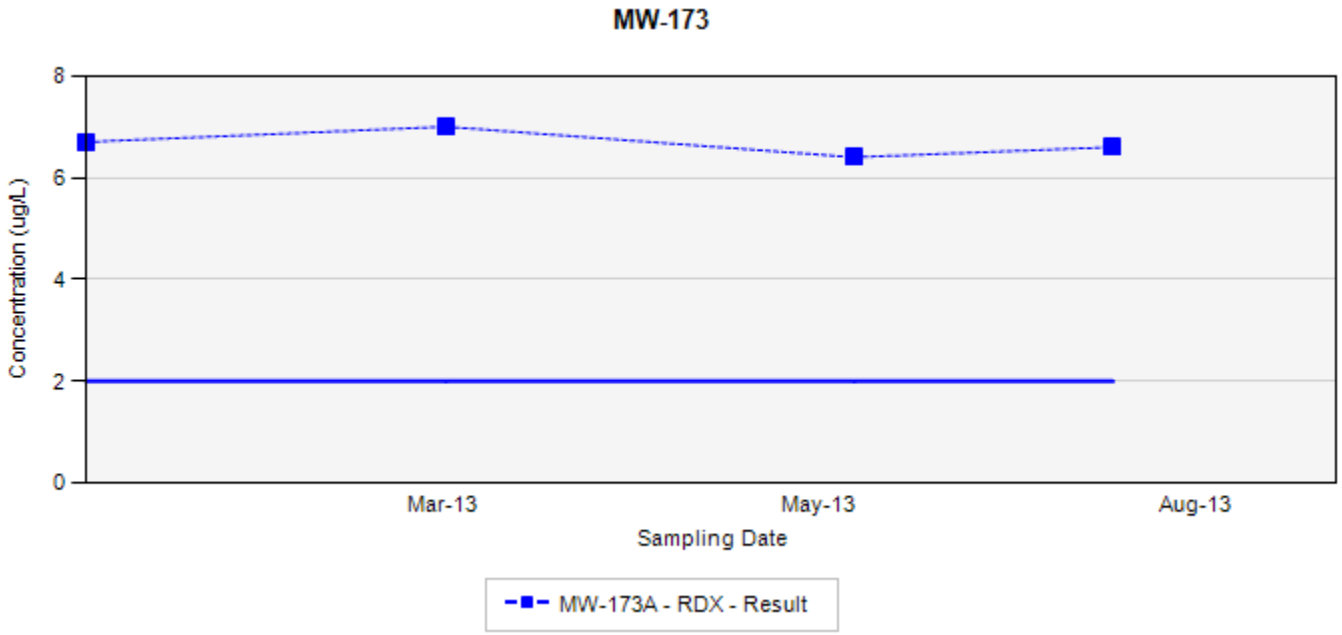


RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells

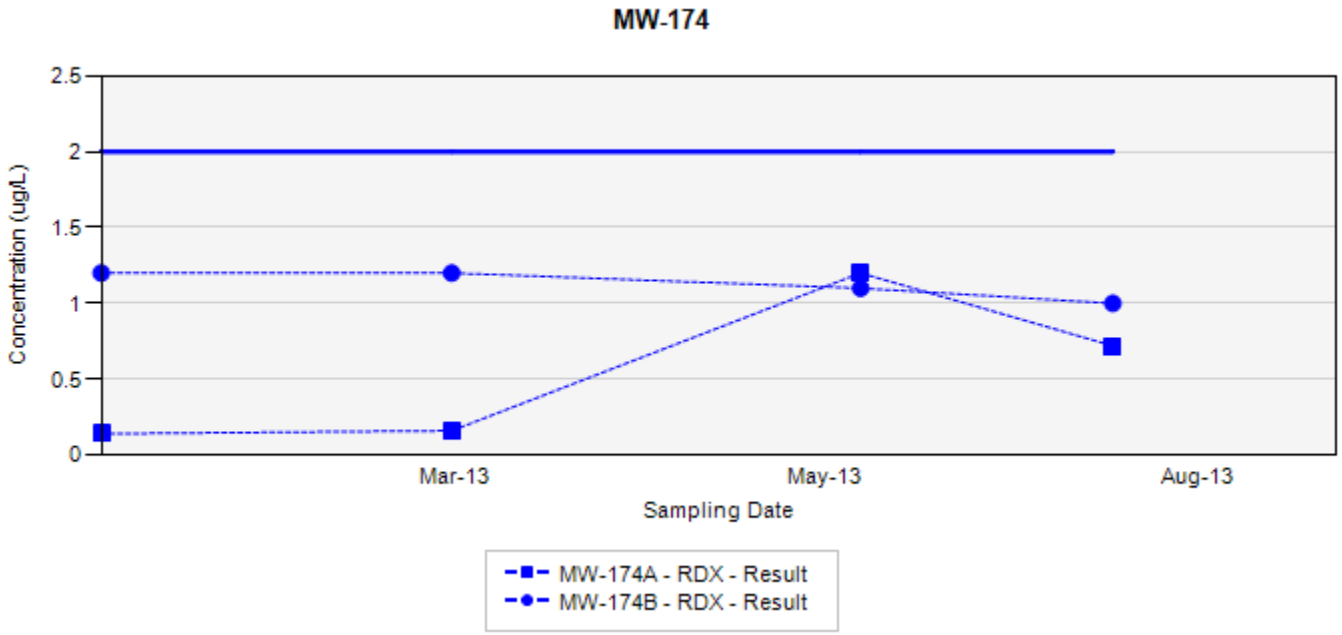


RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells

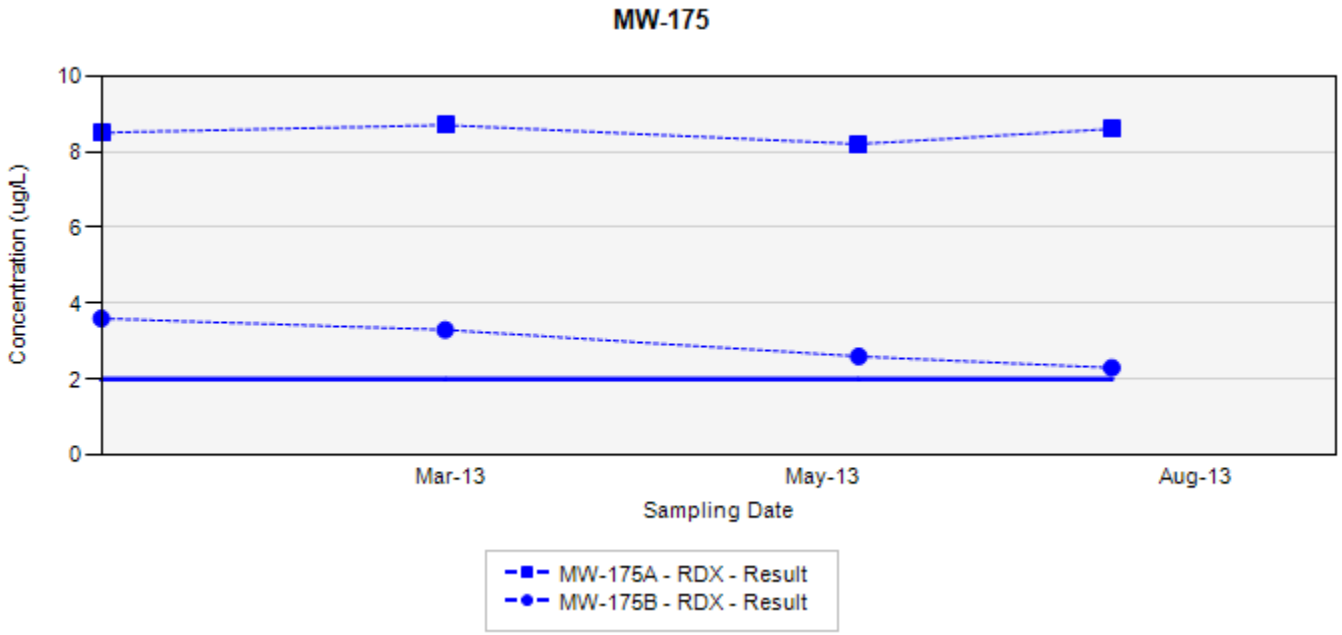


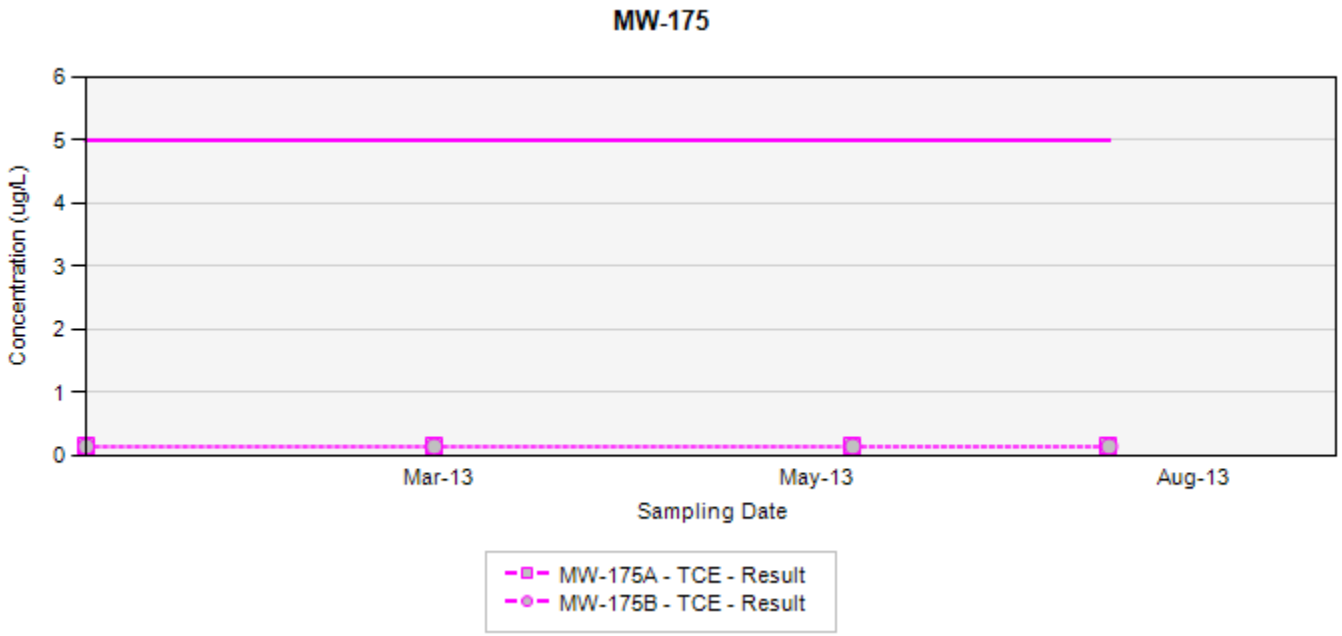
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



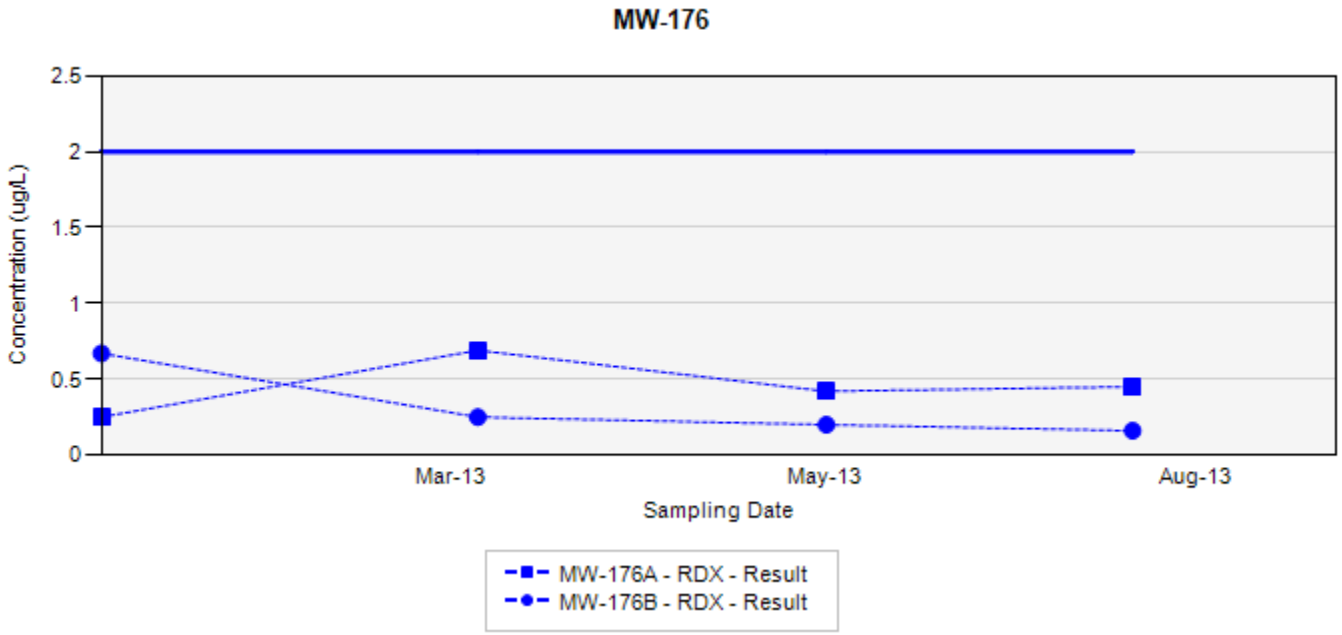


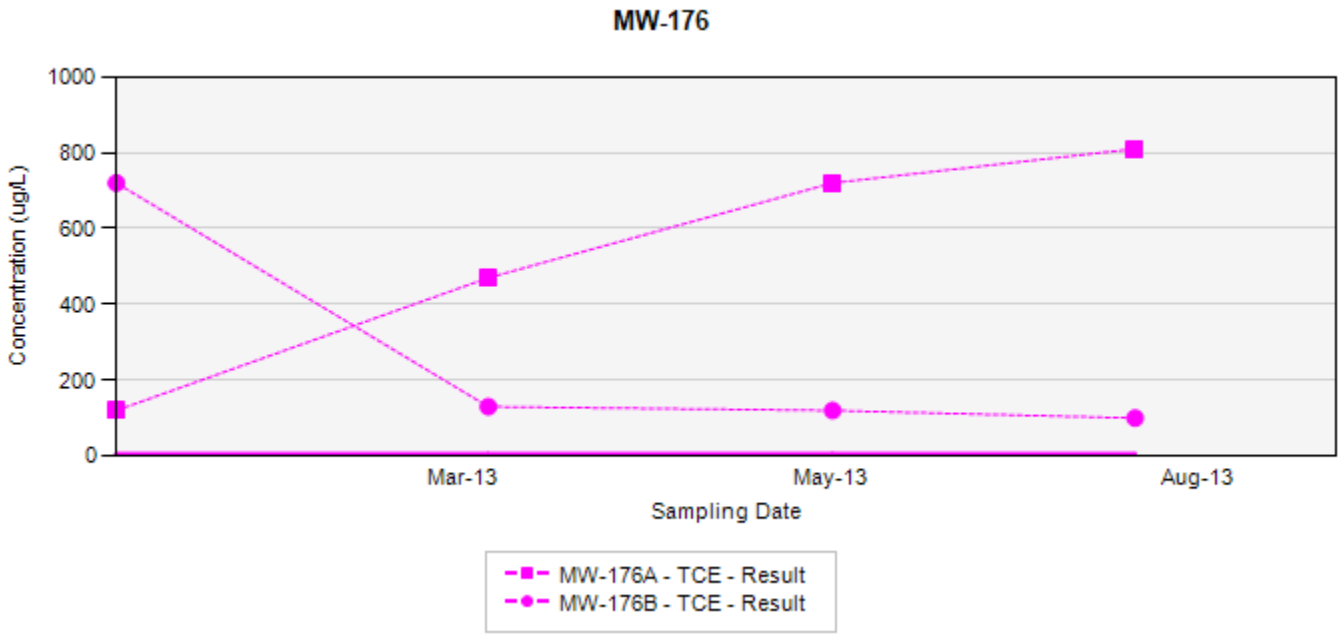
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



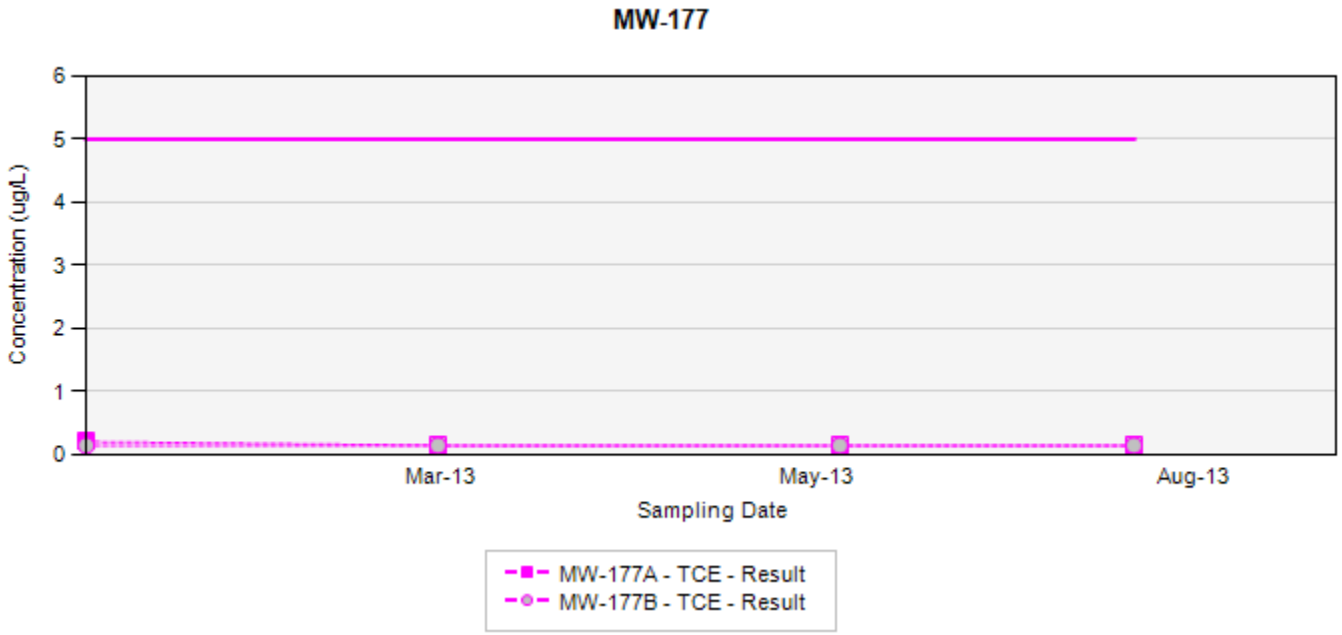


TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



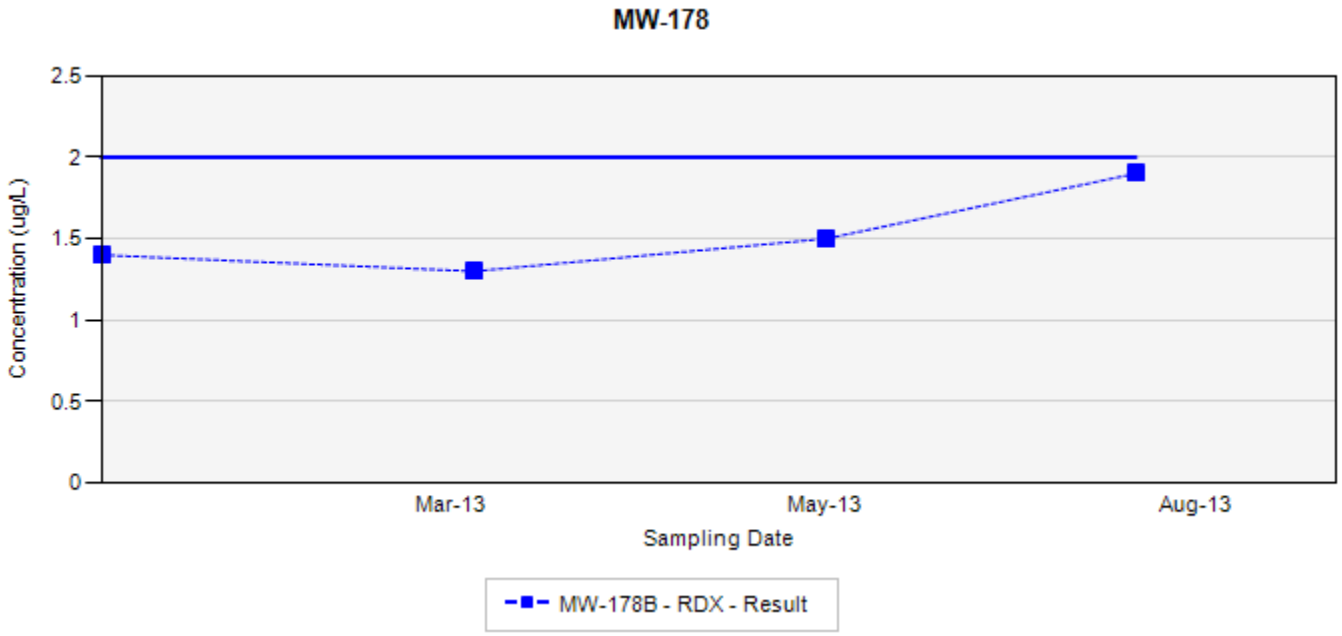
TCE - trichloroethene

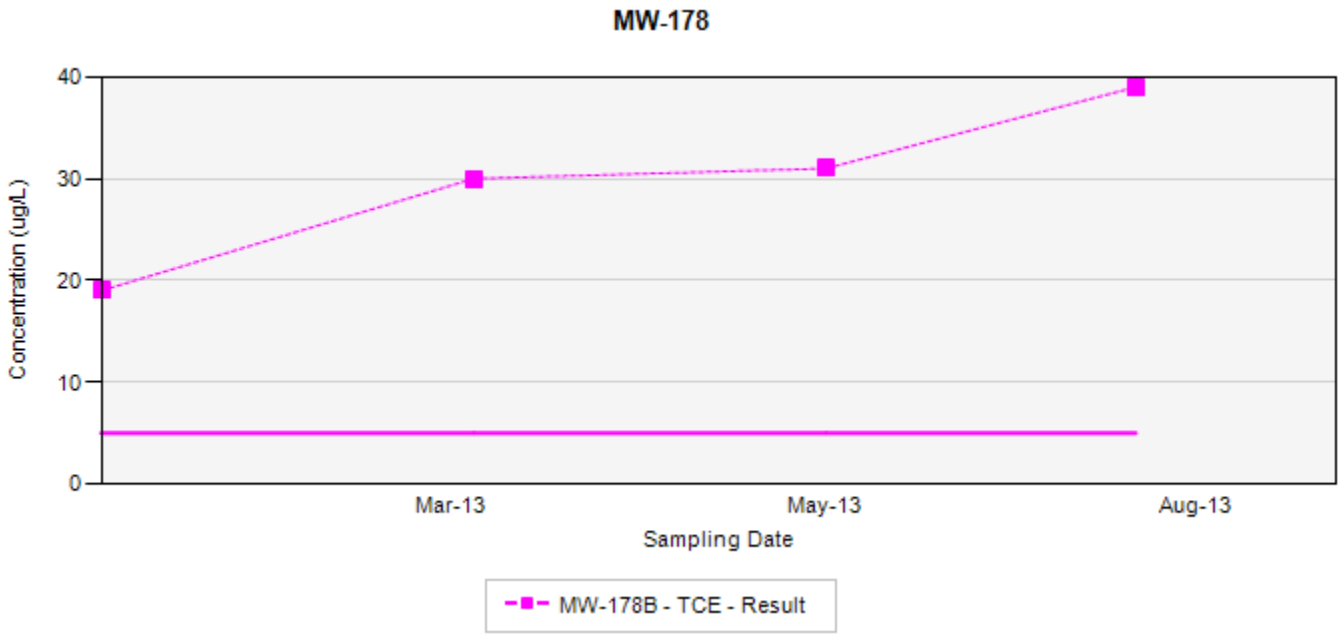
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



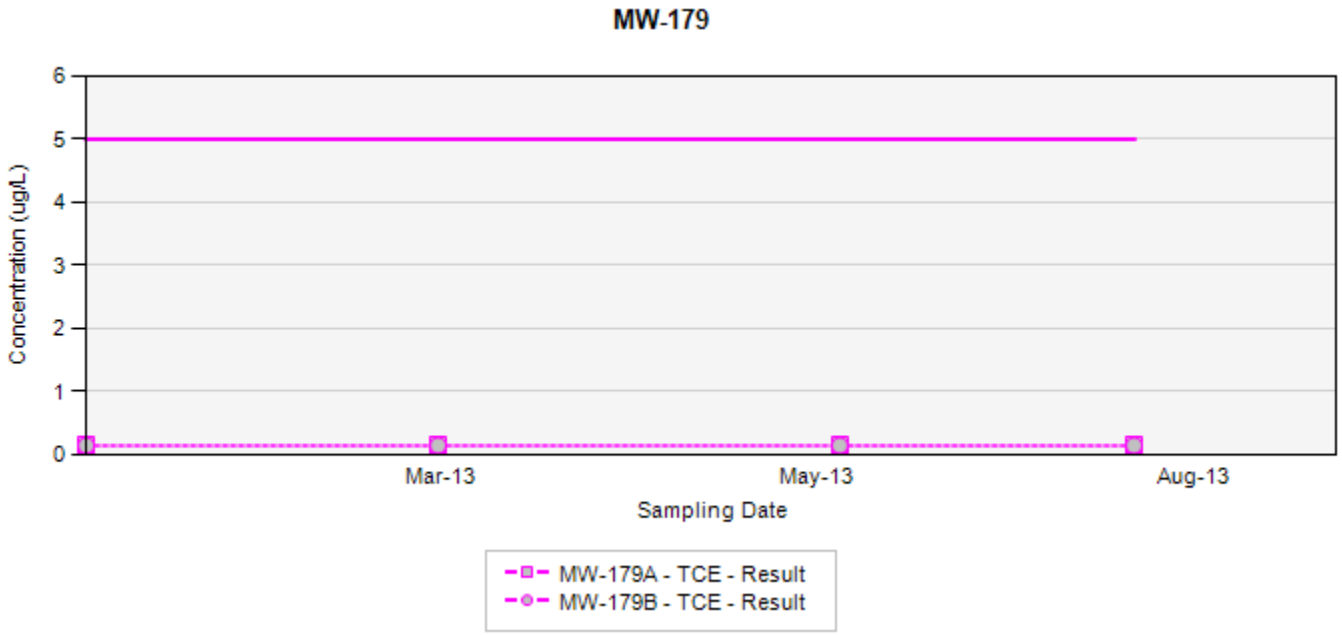


TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



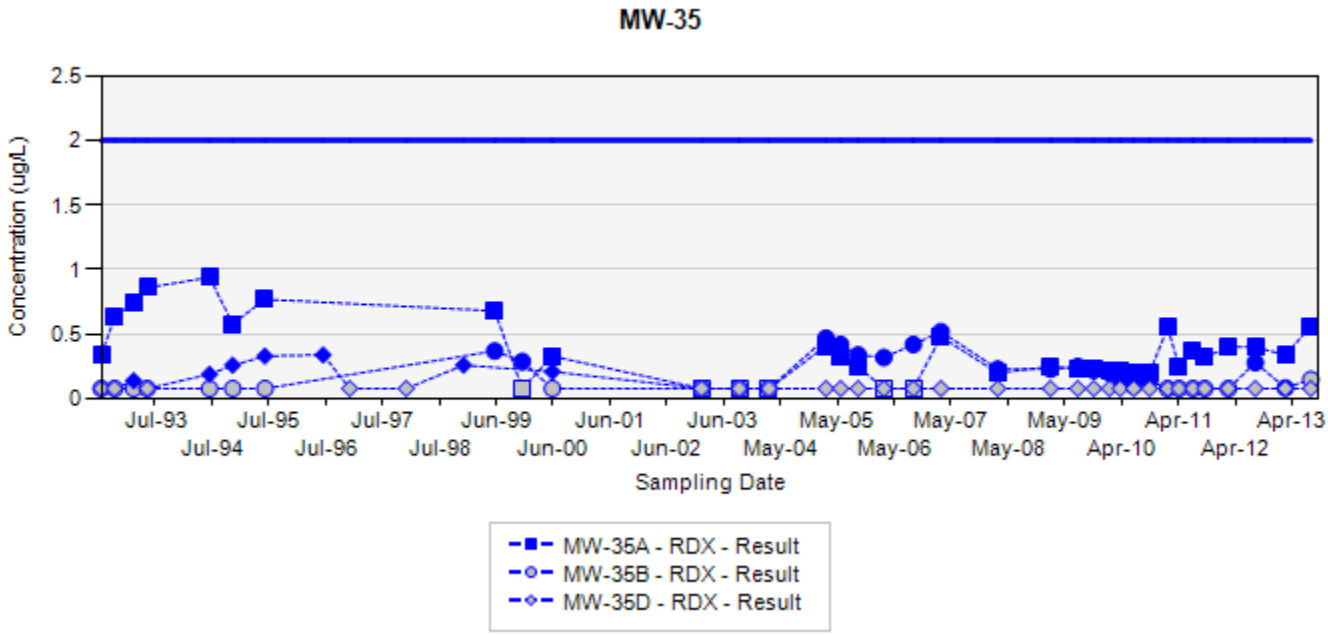
TCE - trichloroethene

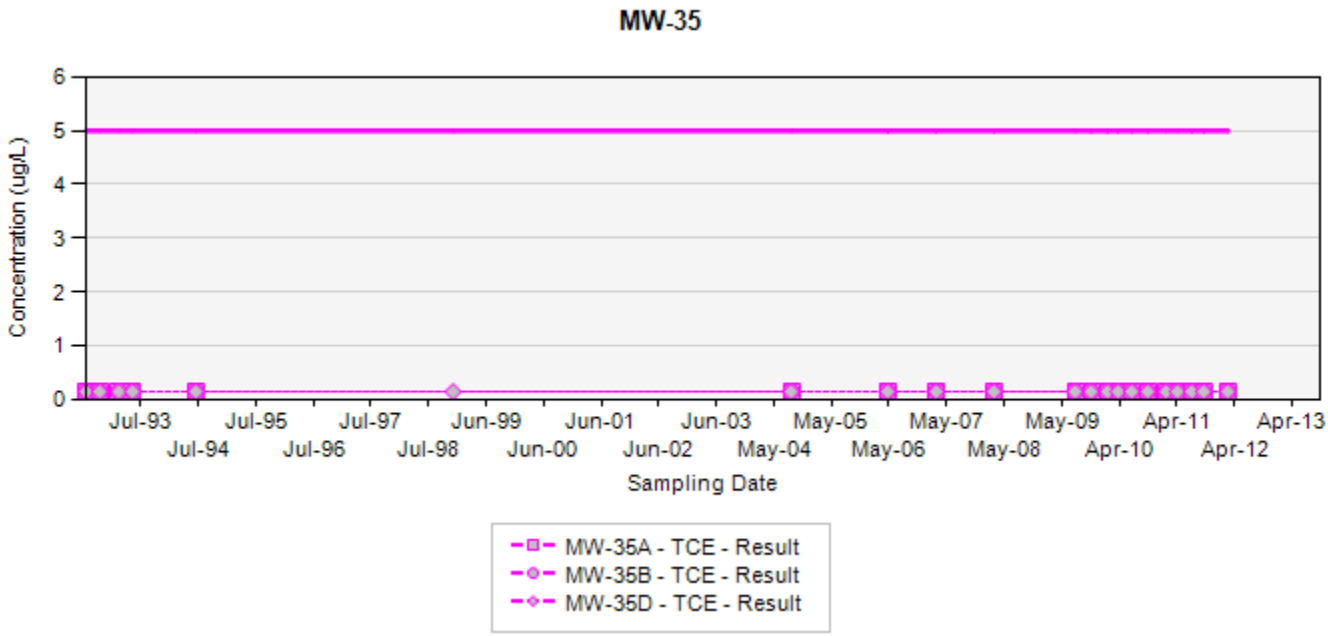
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



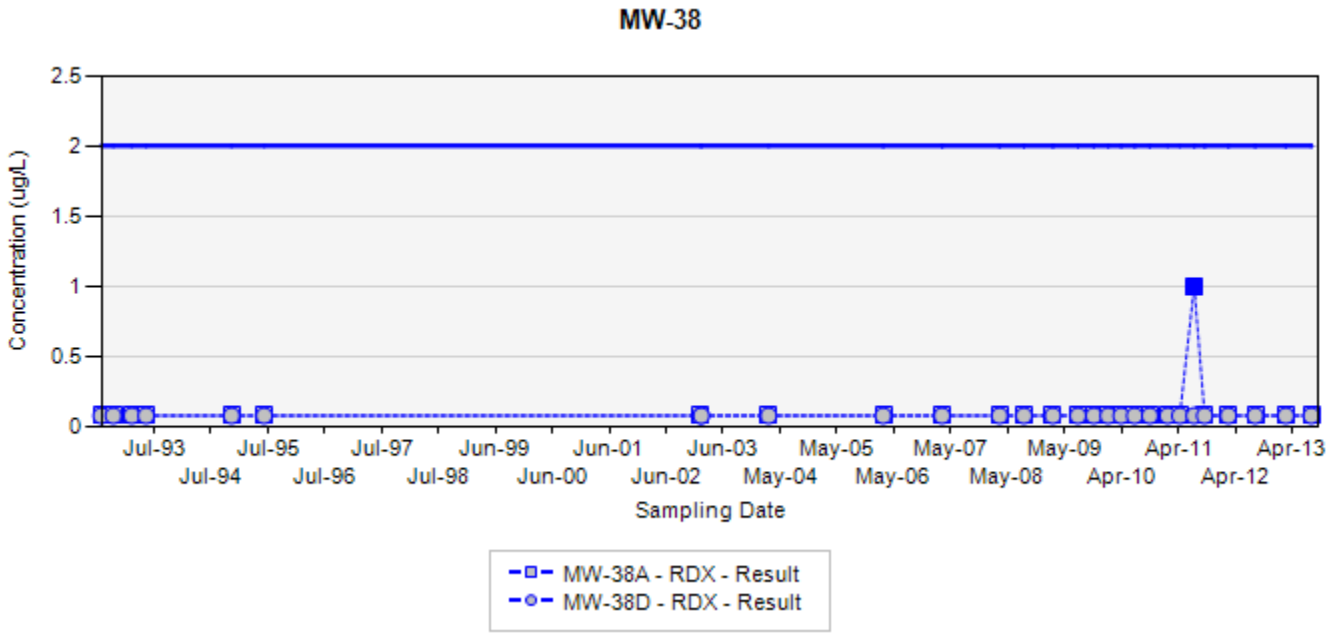


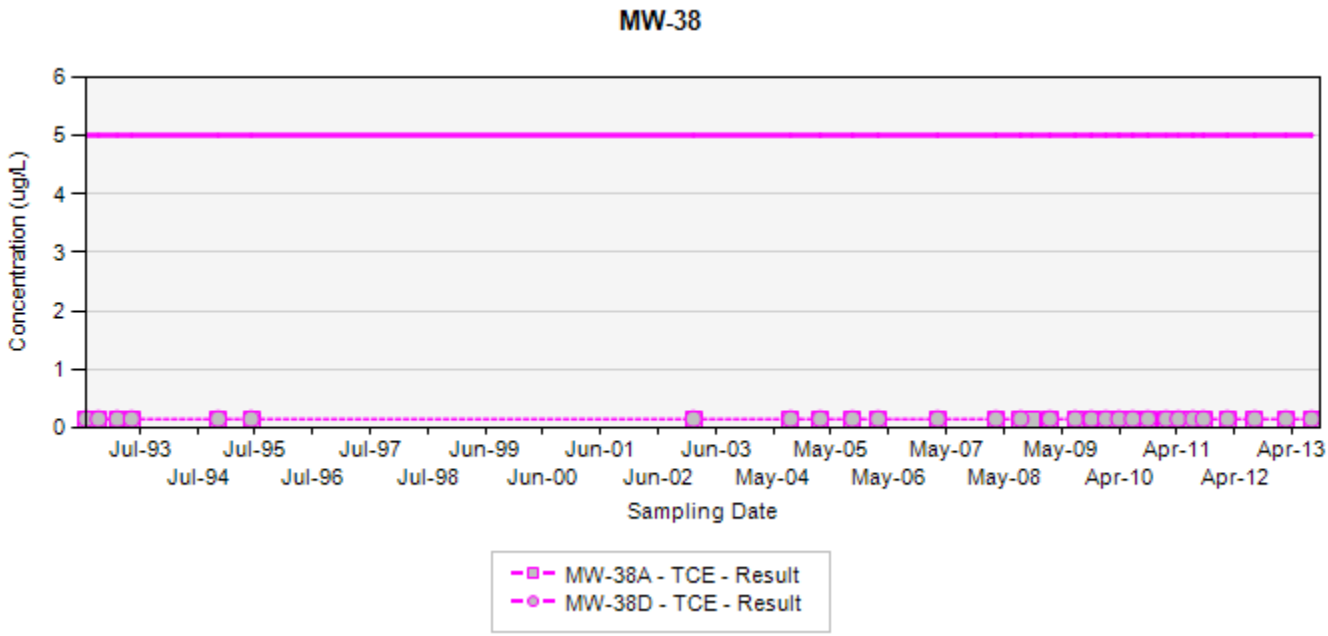
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



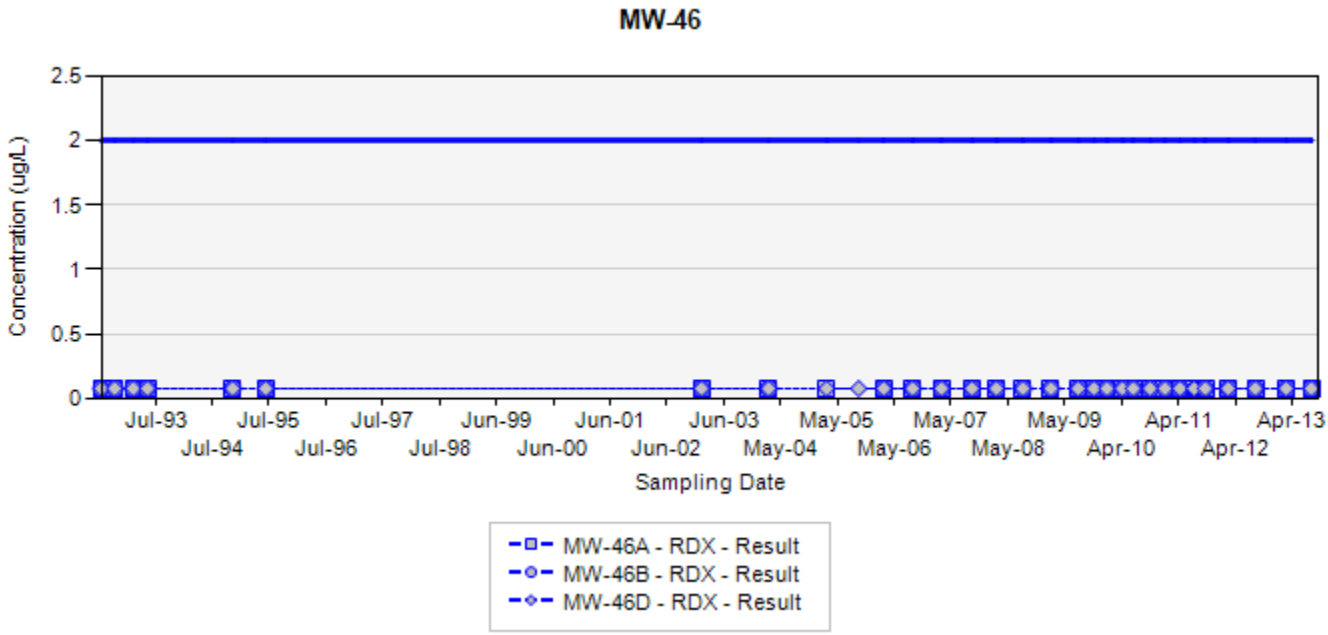


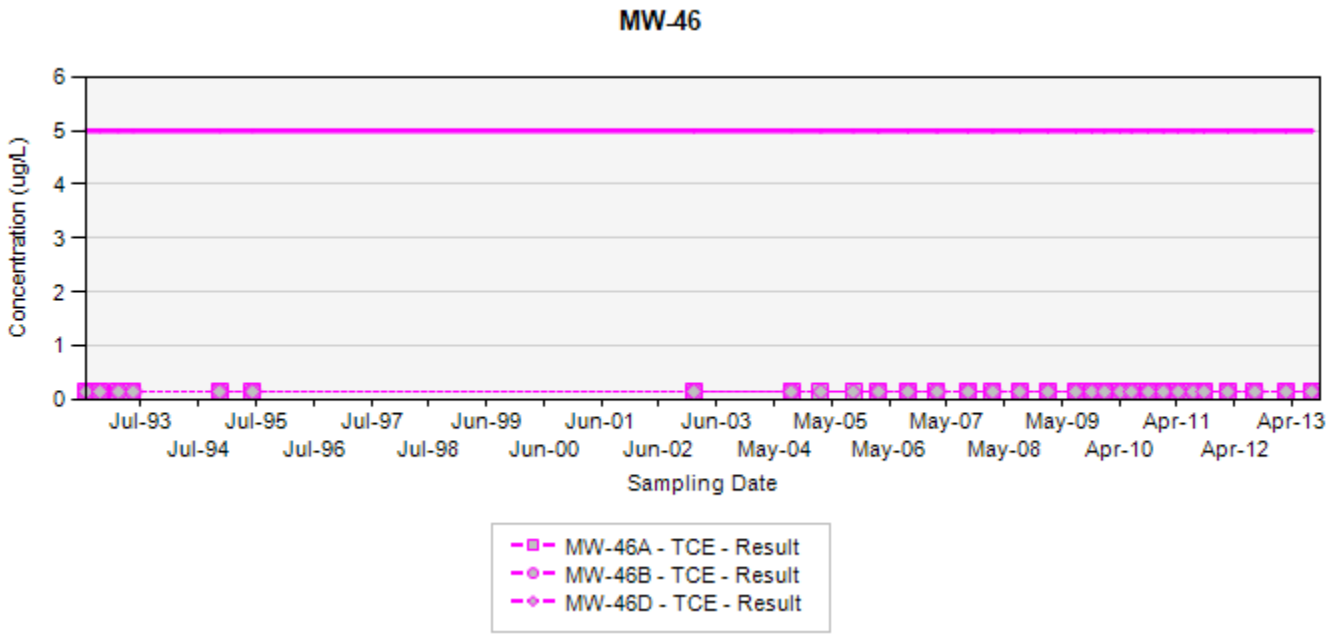
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



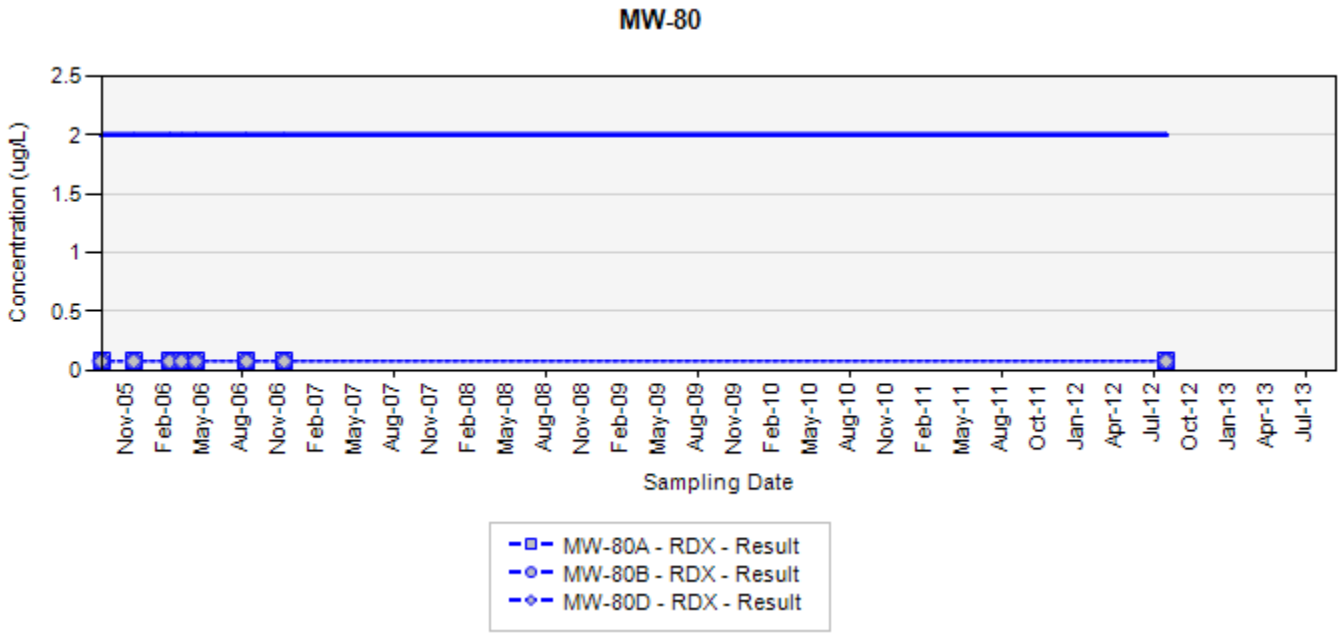


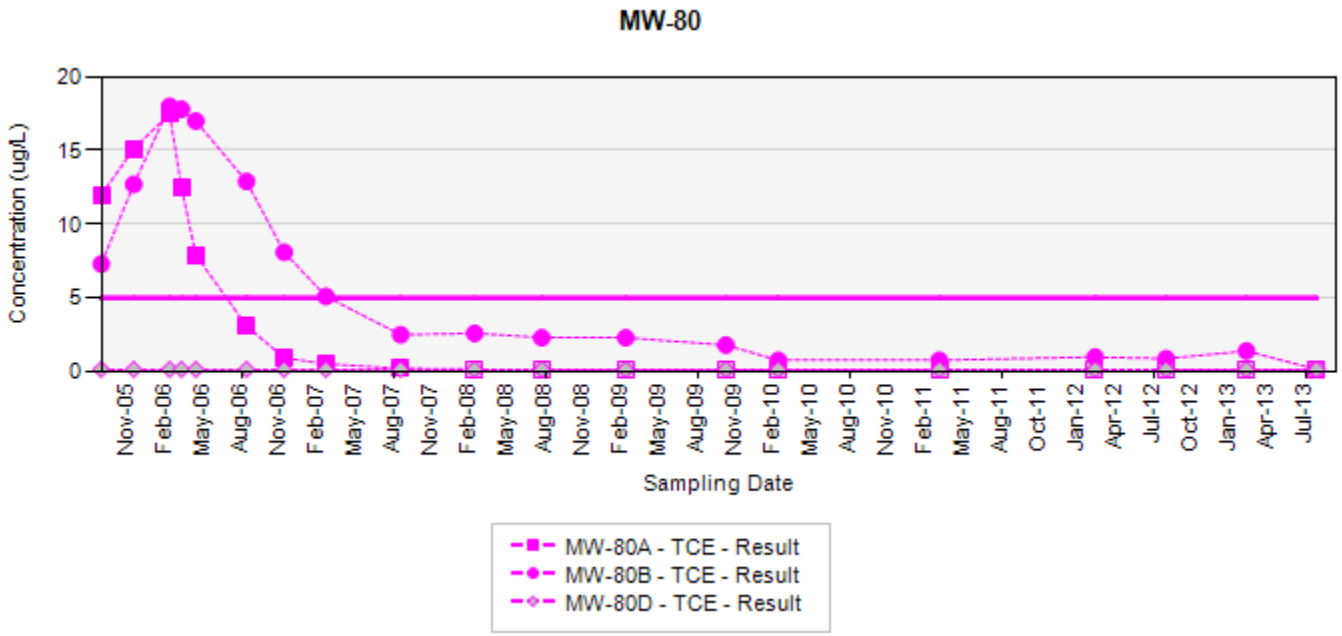
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



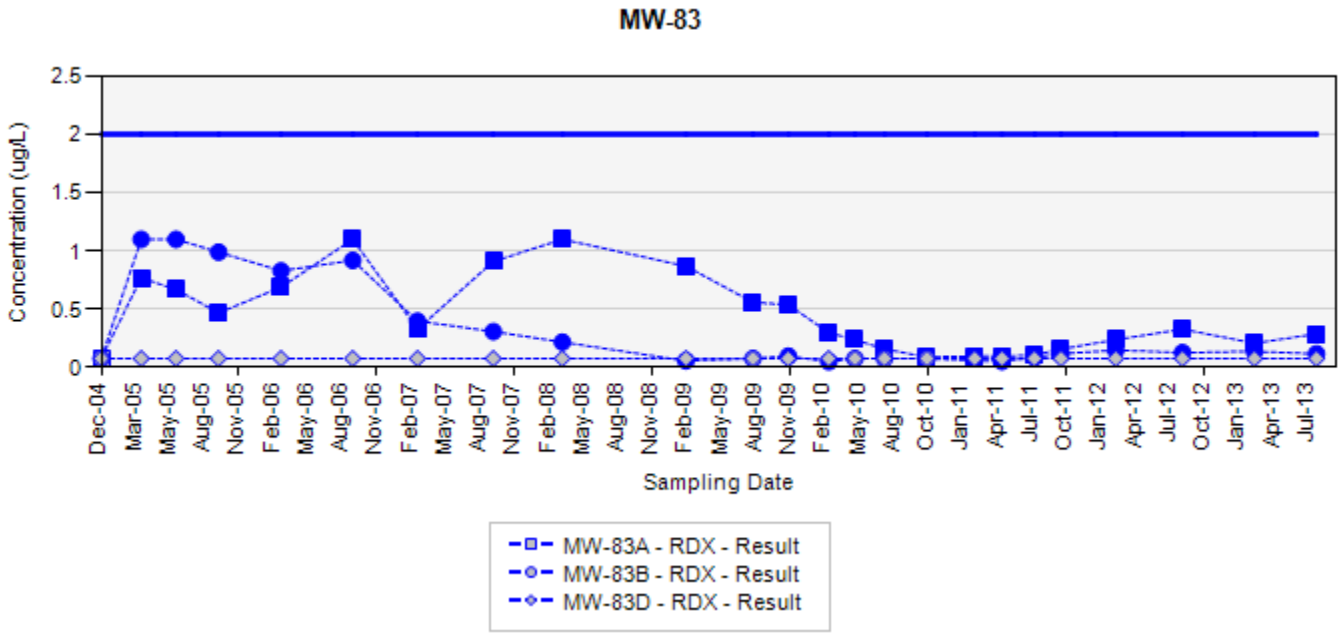


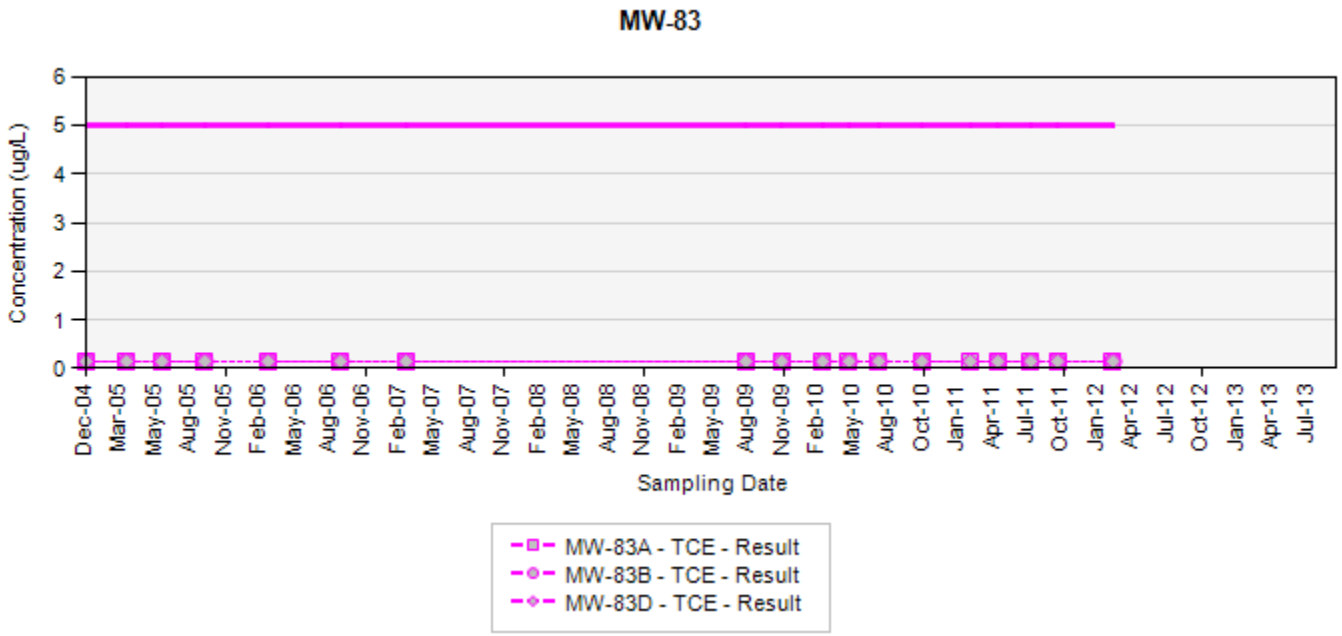
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



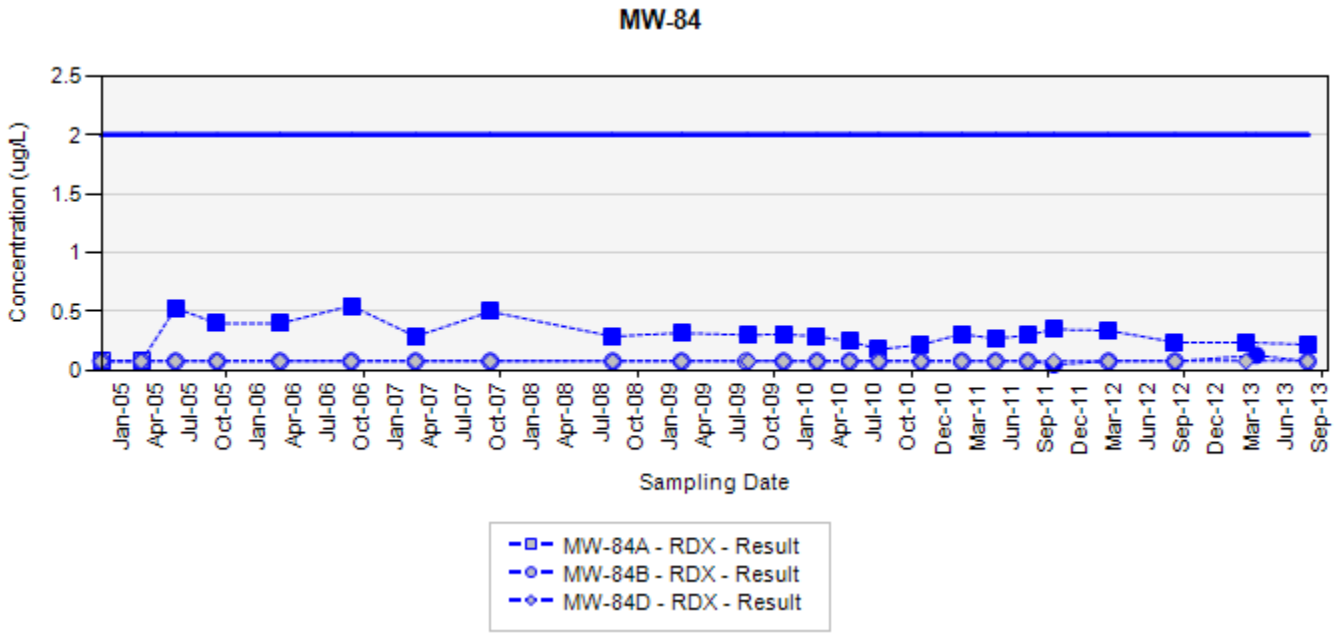


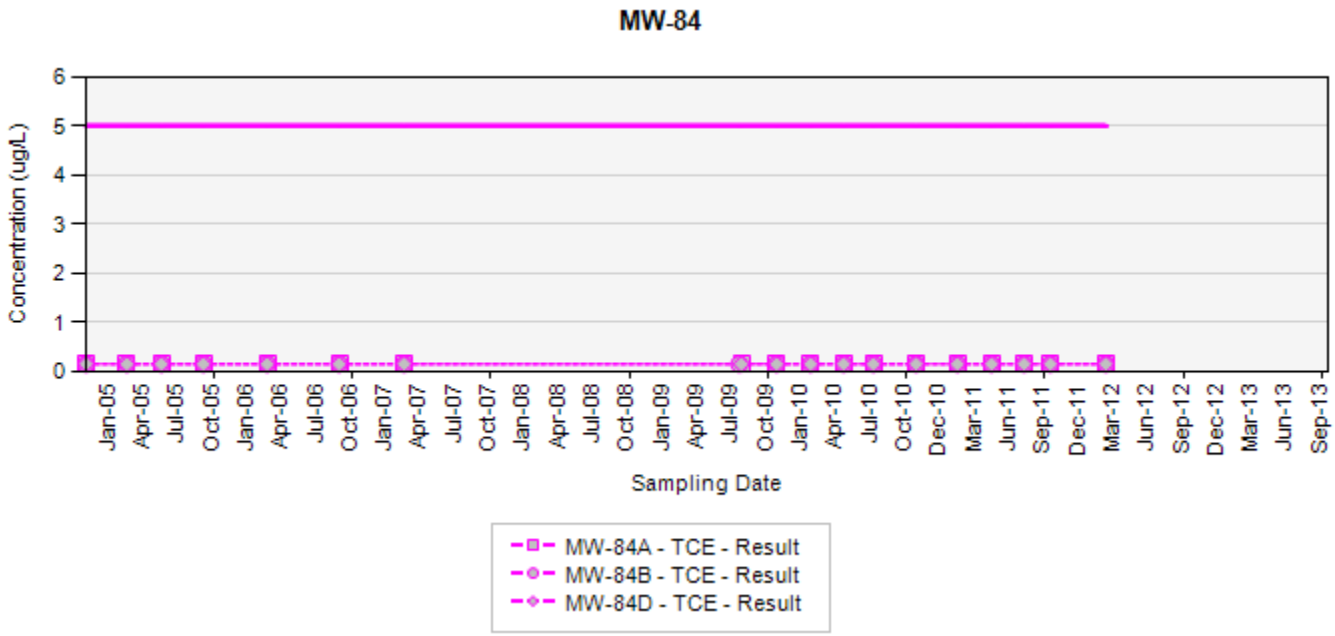
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



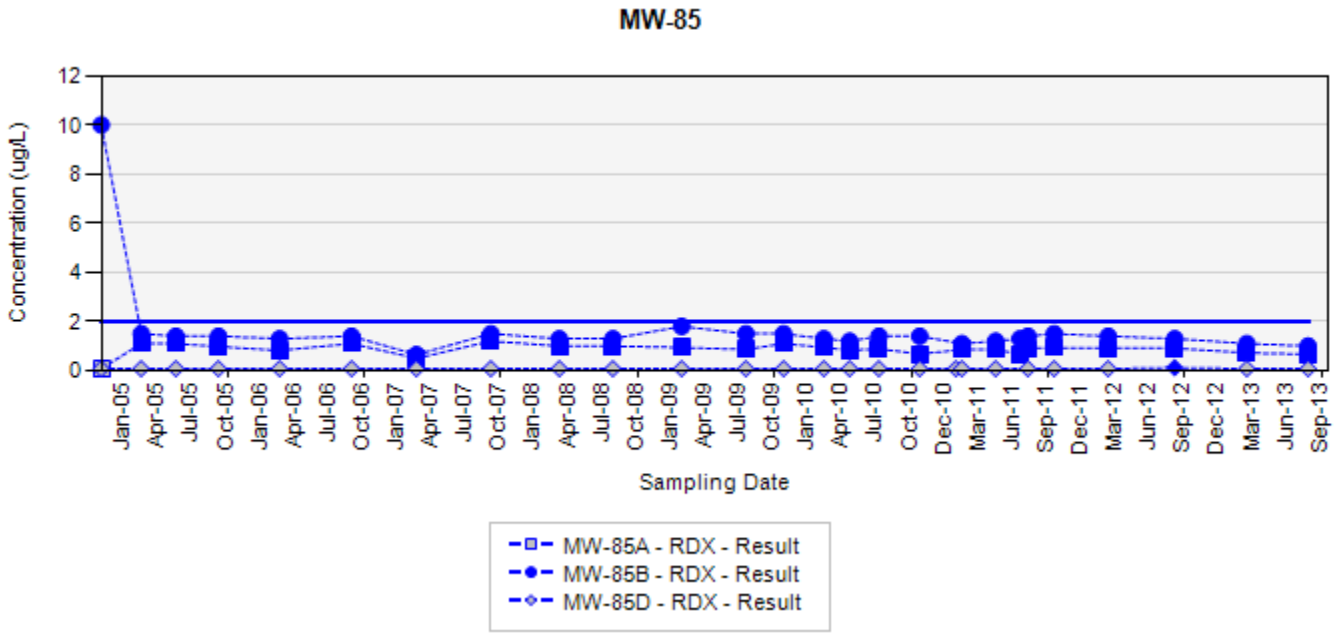


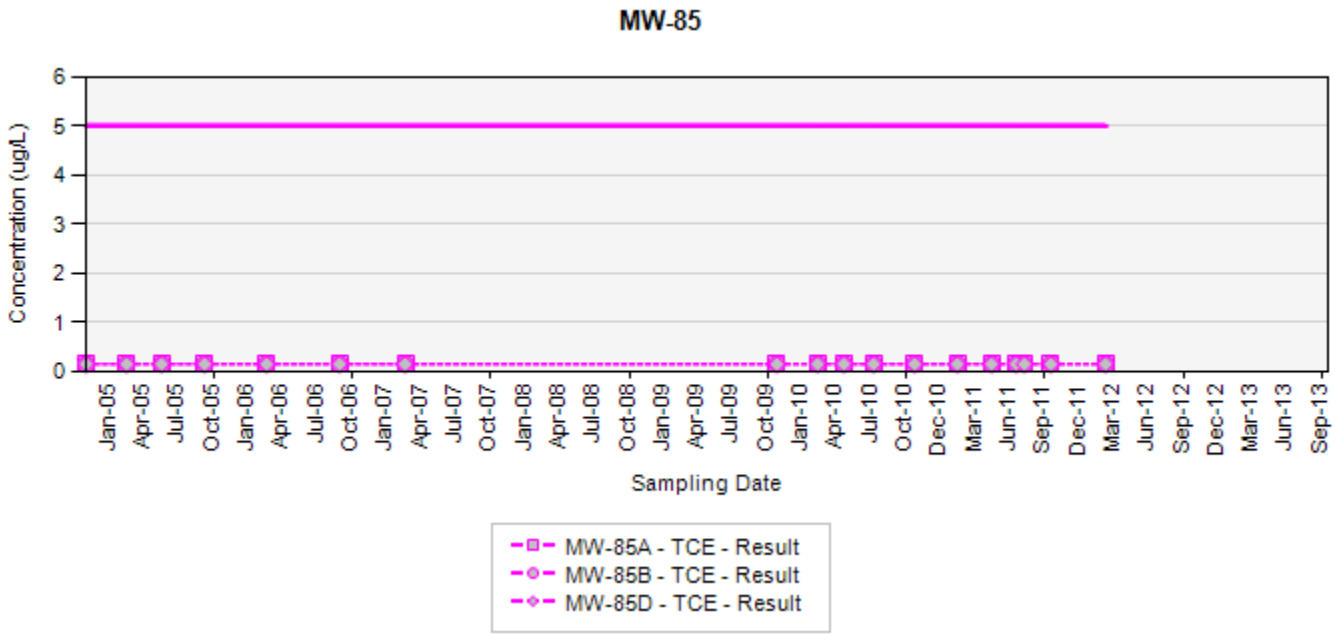
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



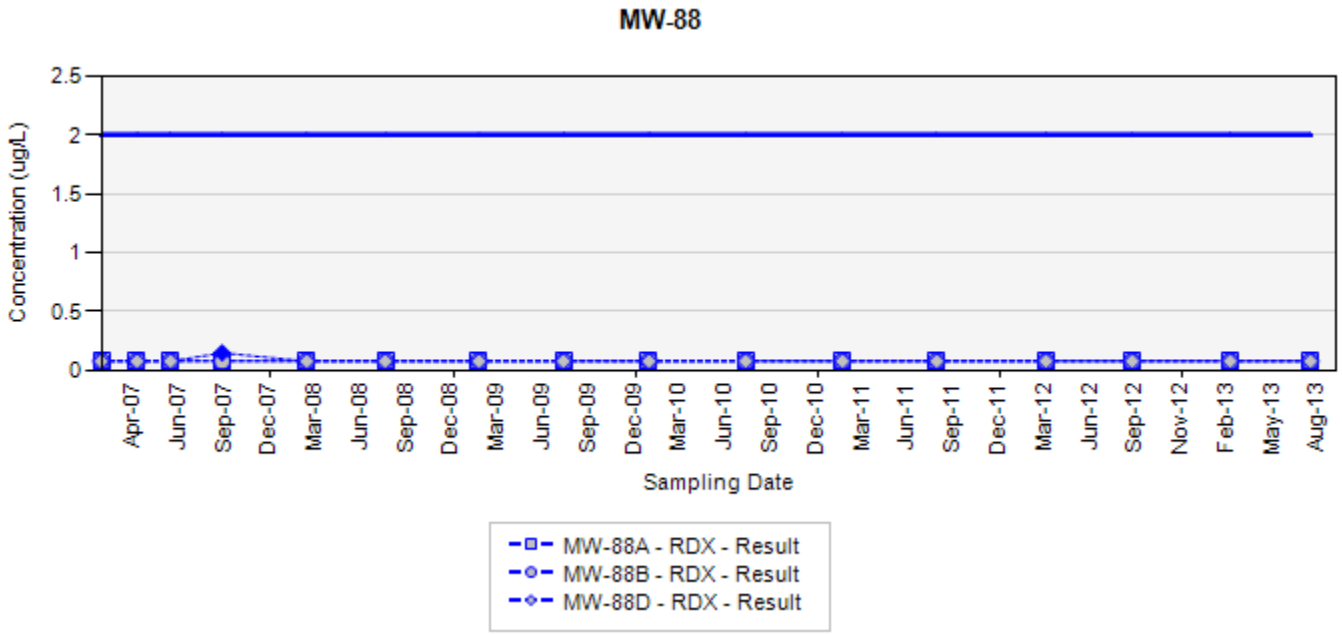


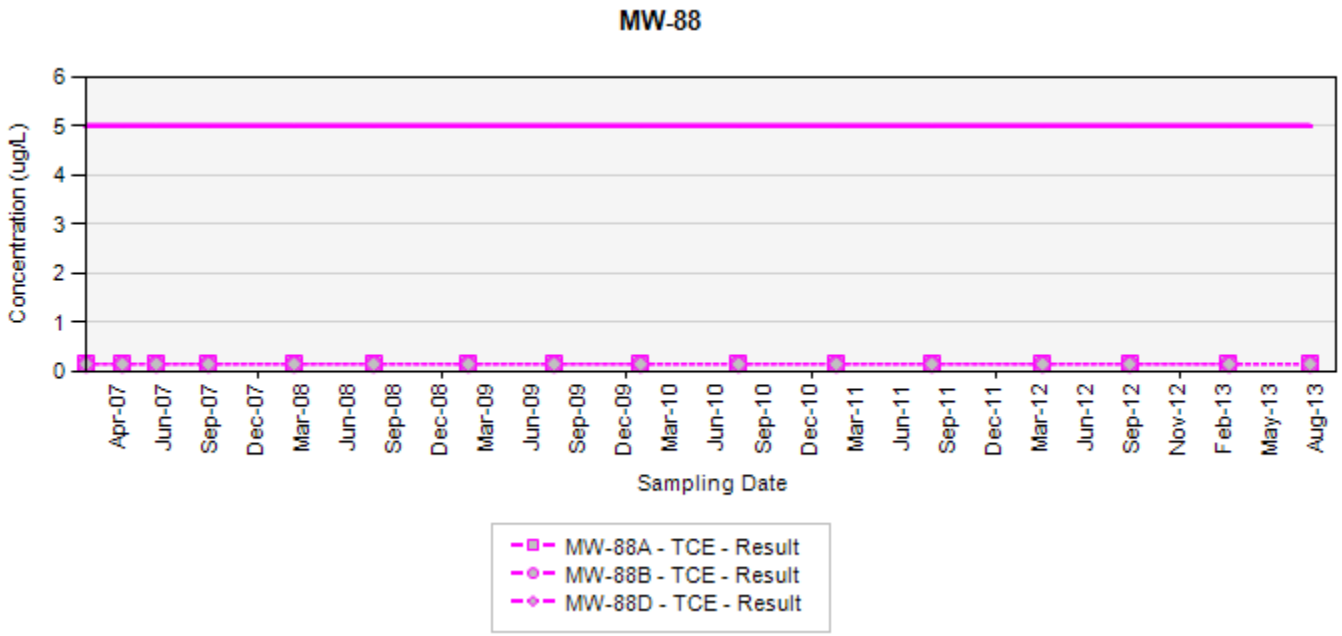
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells



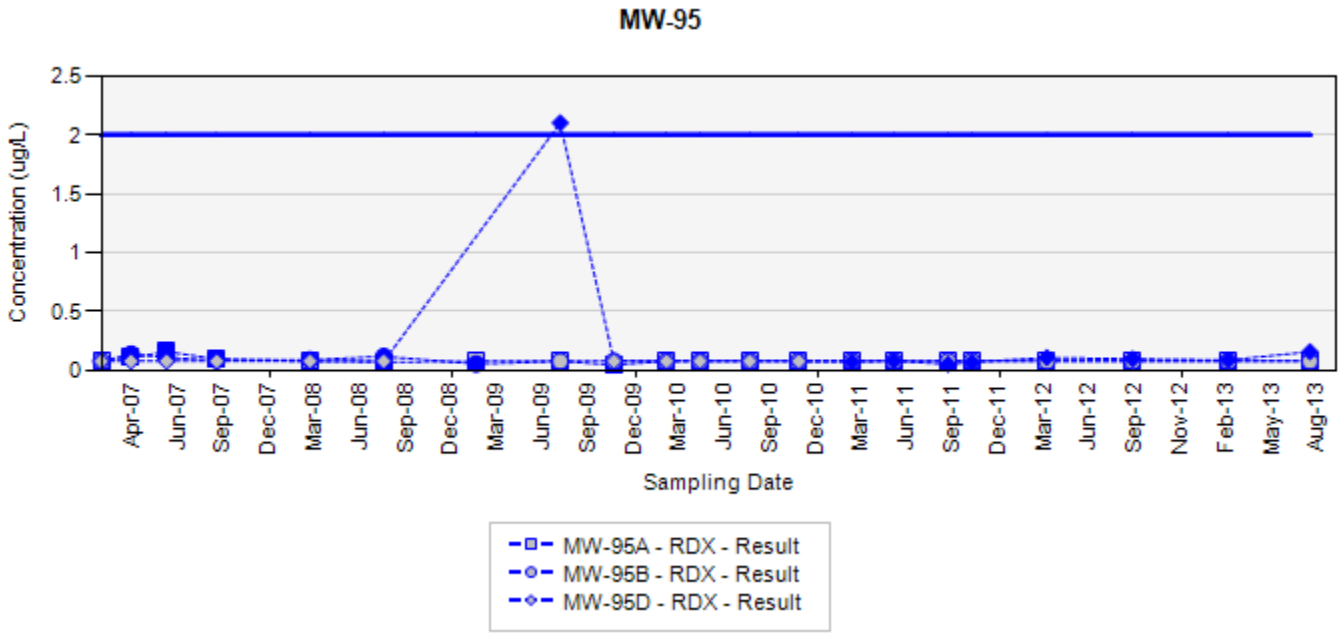


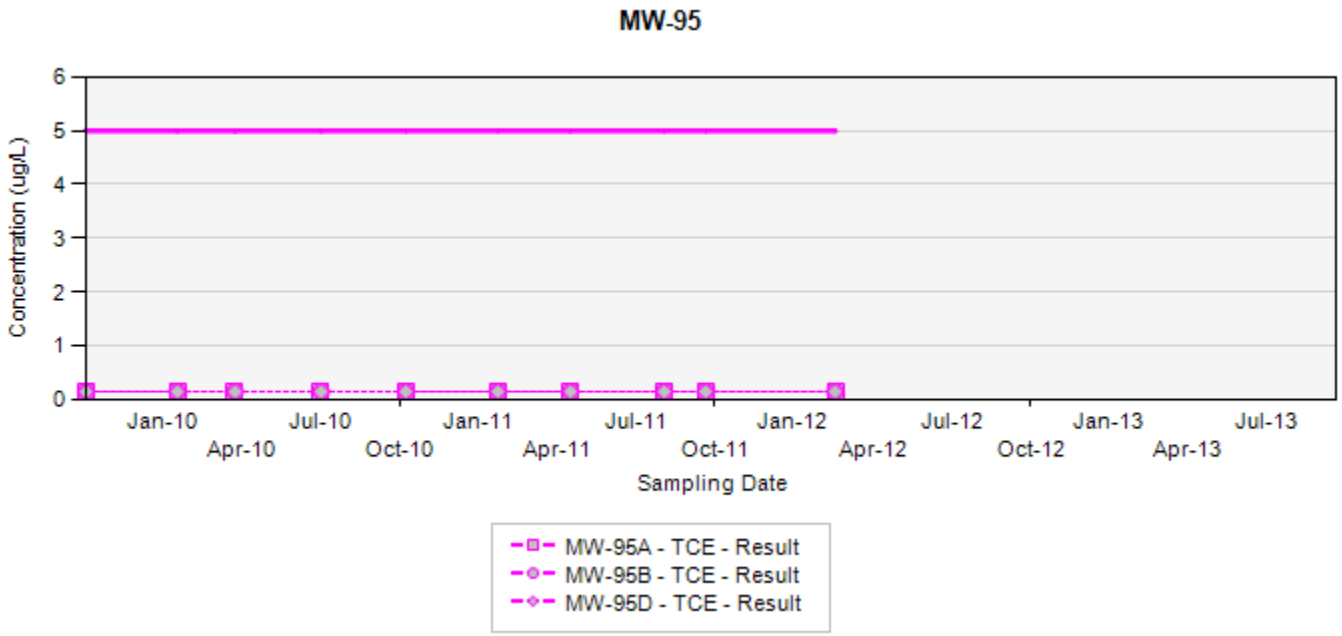
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix A
Concentration Trend Charts for Monitoring Wells





TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

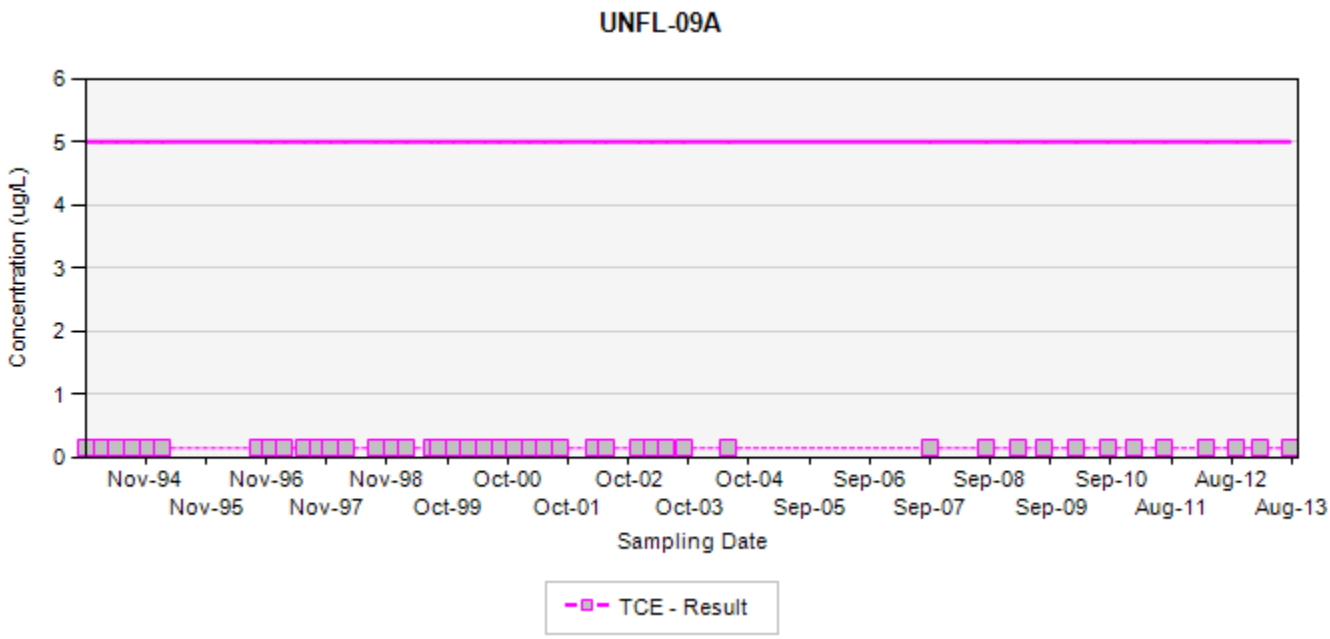
In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

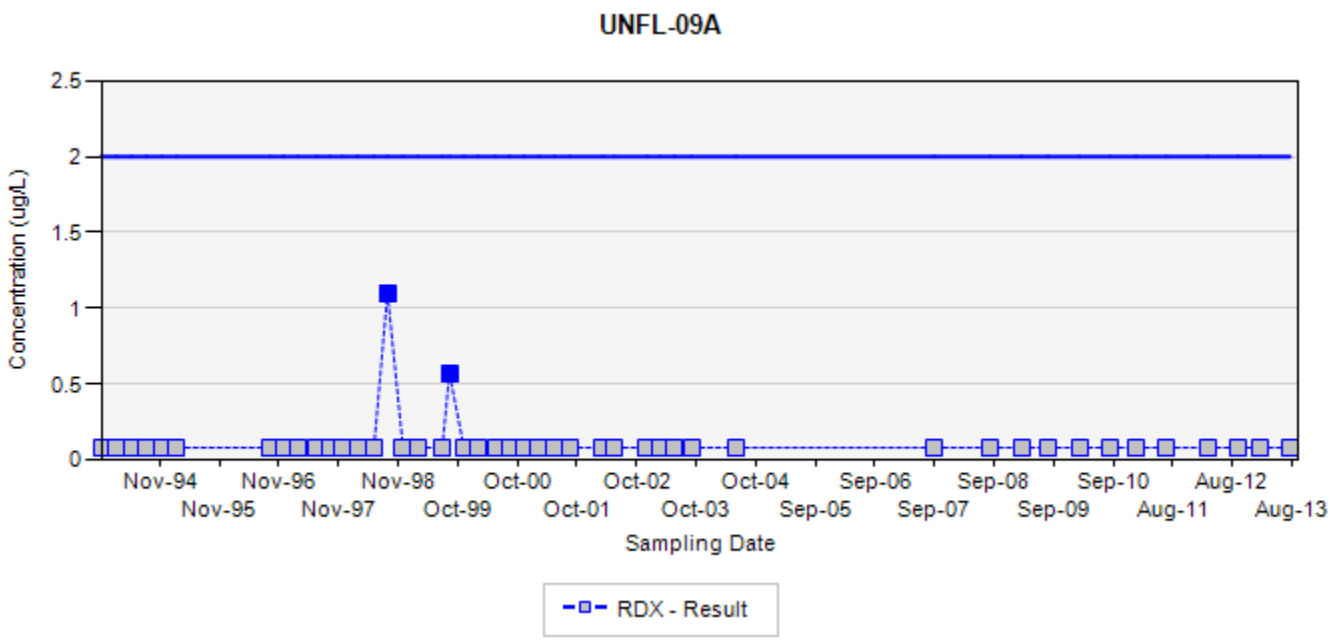
ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Select Water Supply Wells

This page intentionally left blank

Appendix B
Concentration Trend Charts for Water Supply Wells



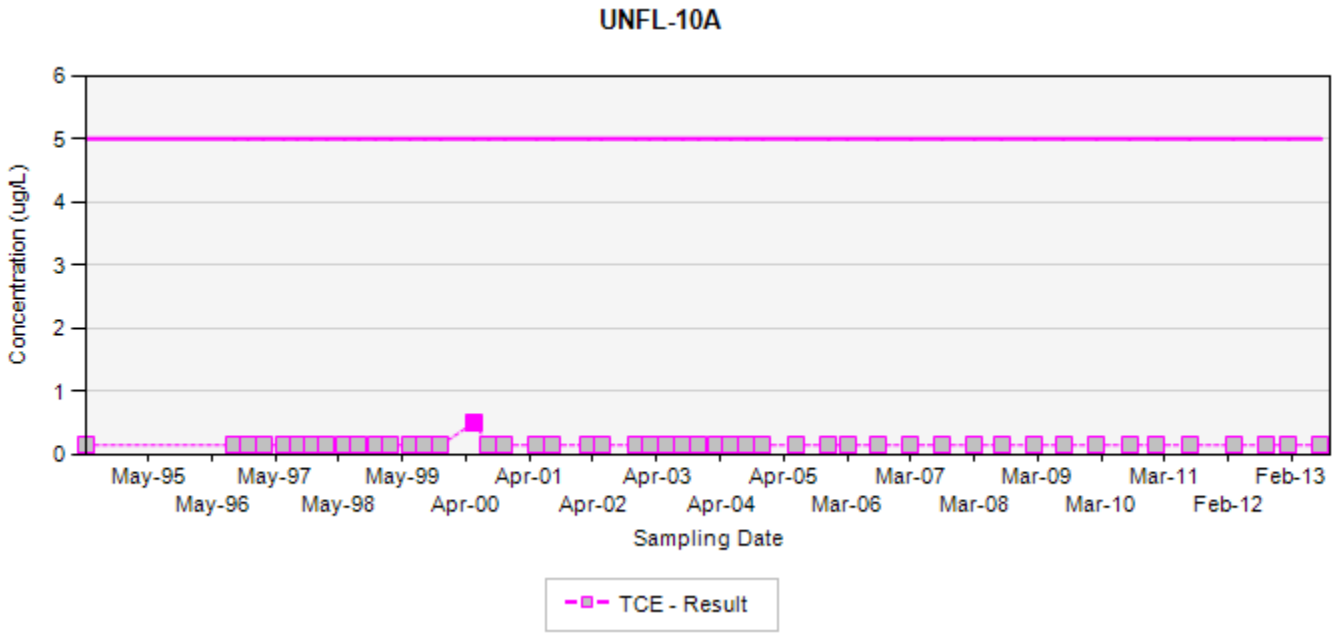


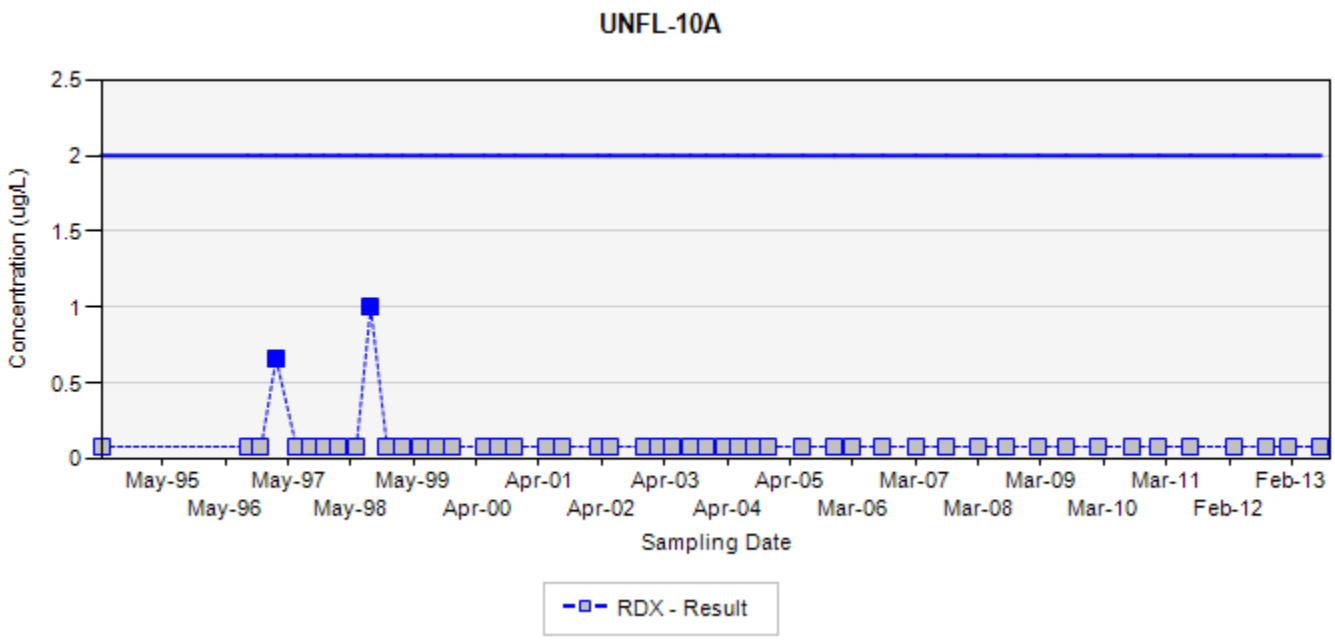
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



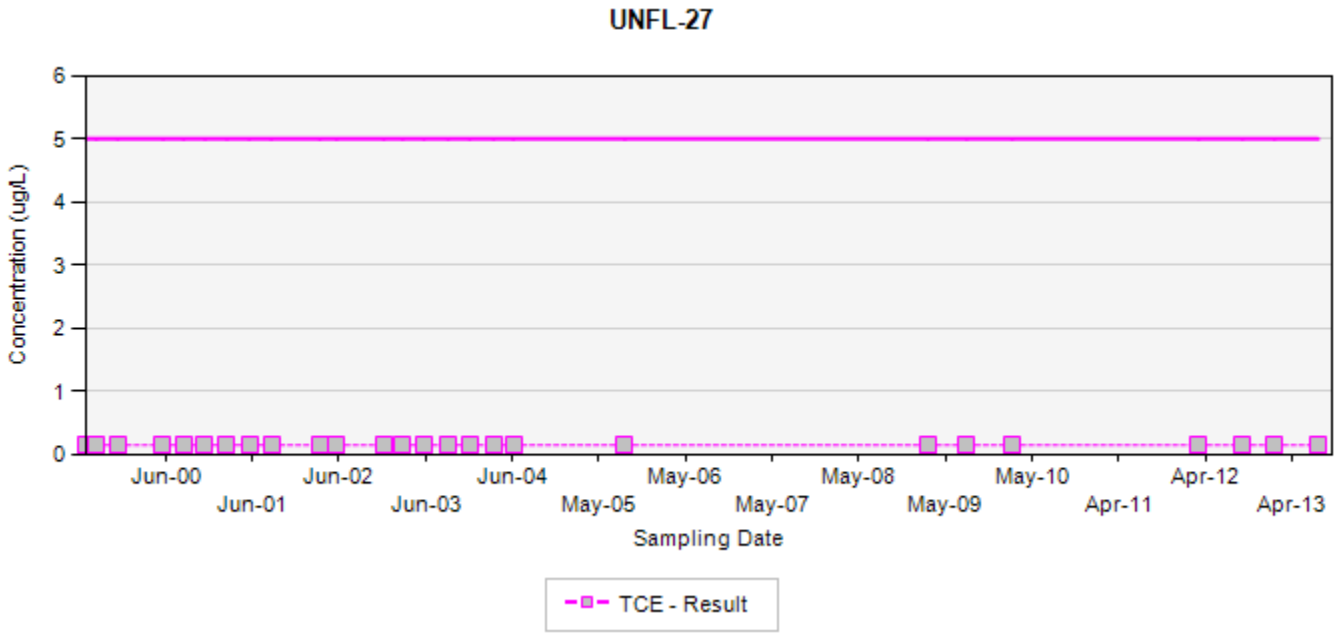


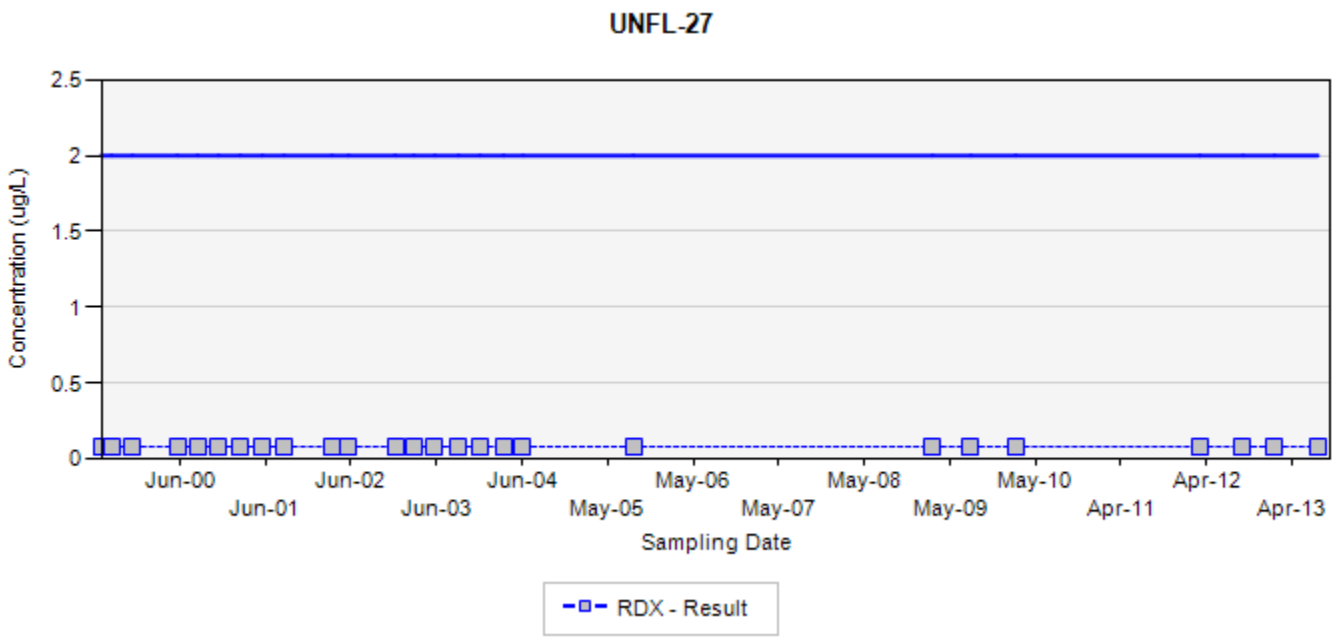
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



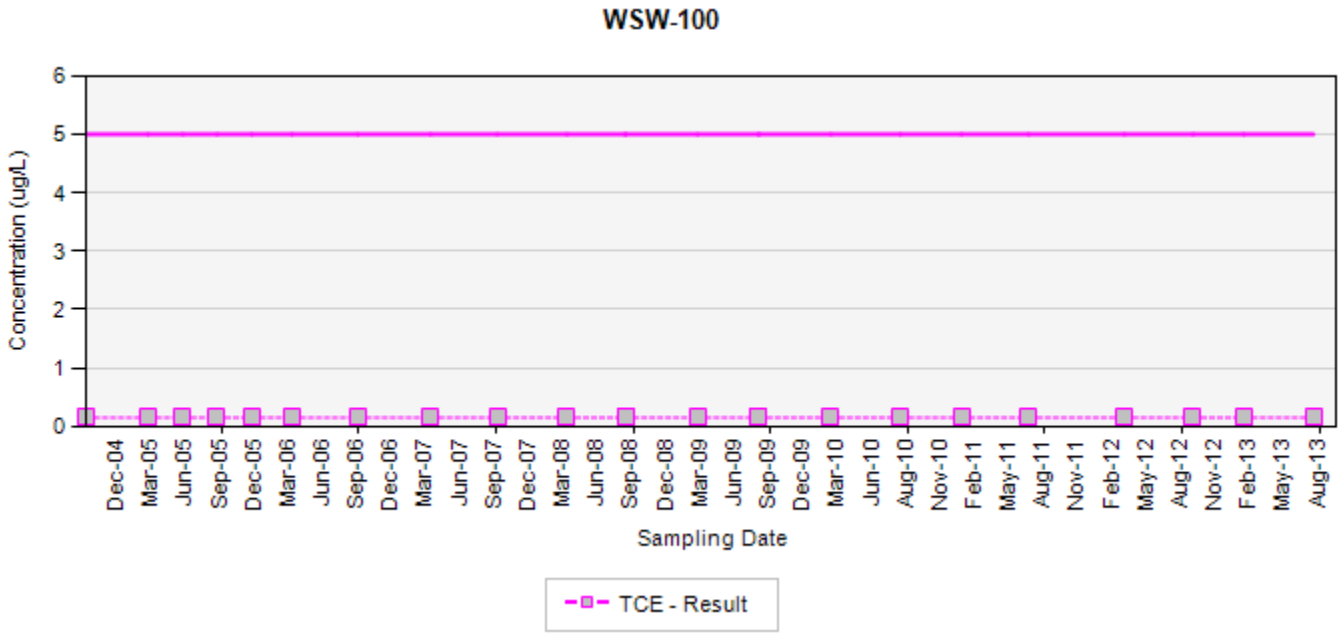


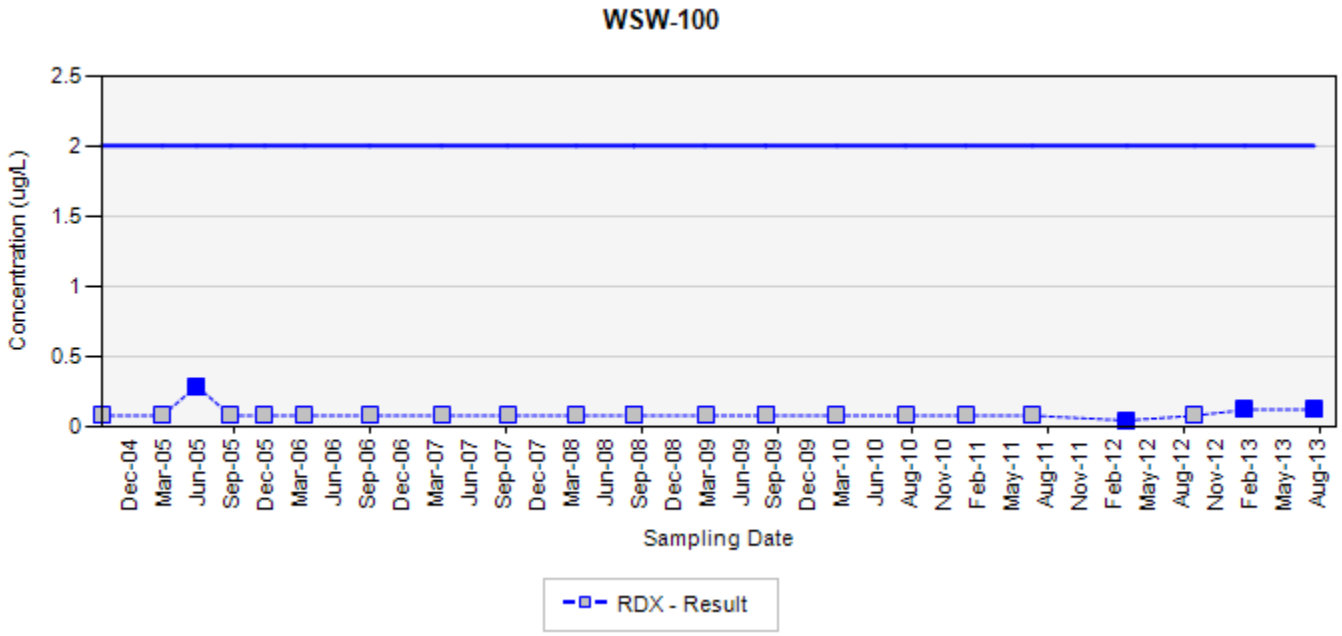
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



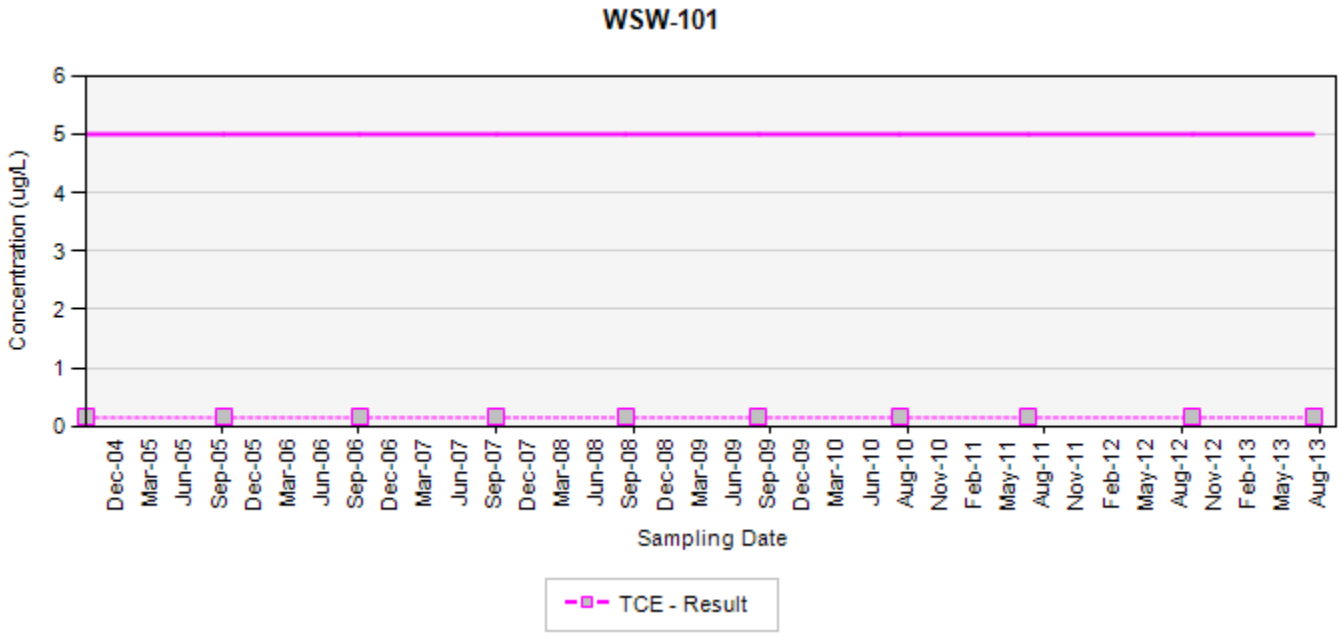


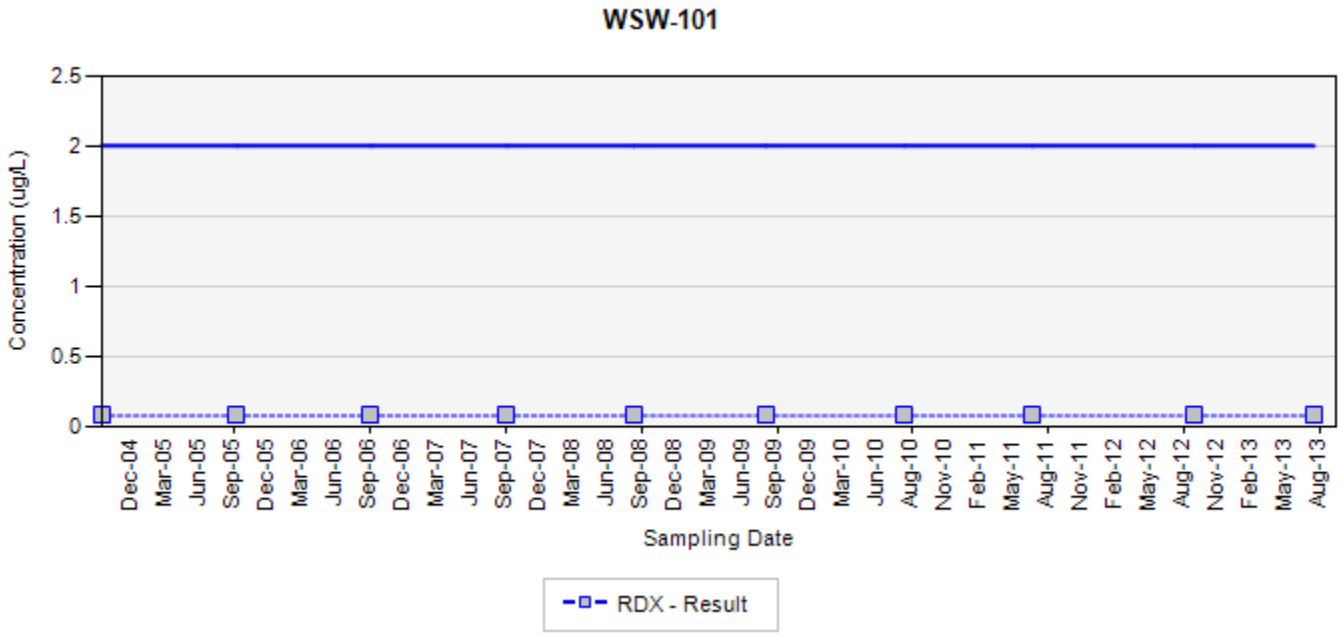
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



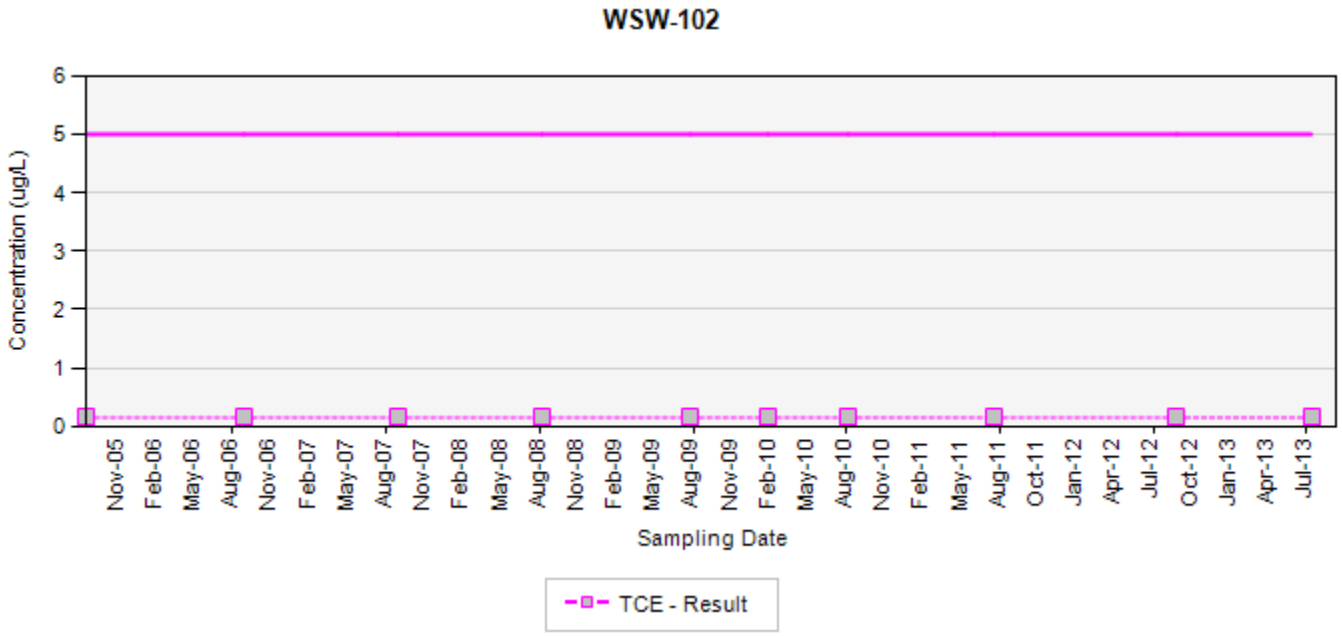


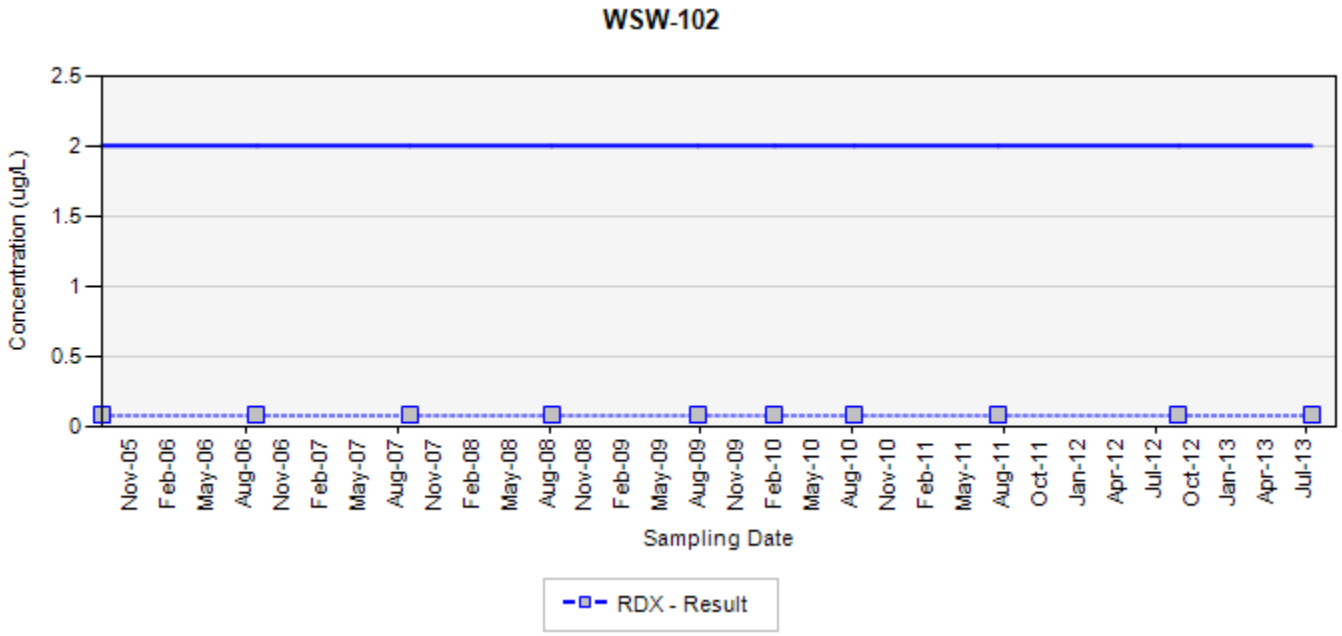
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



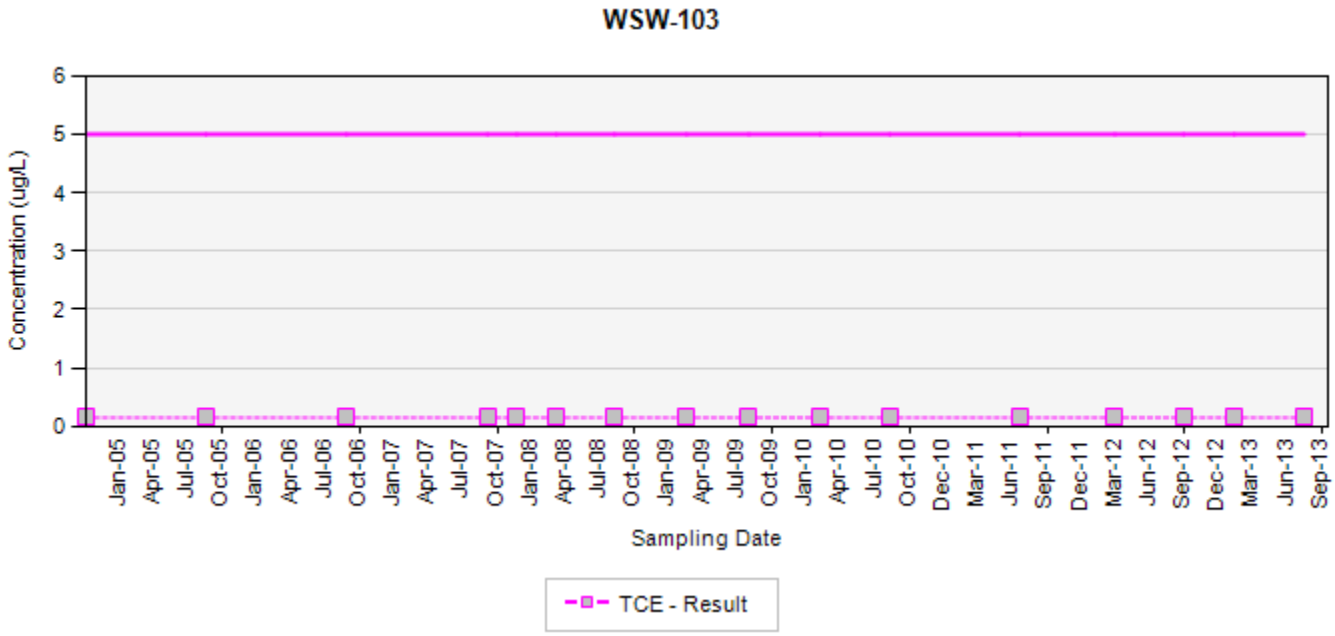


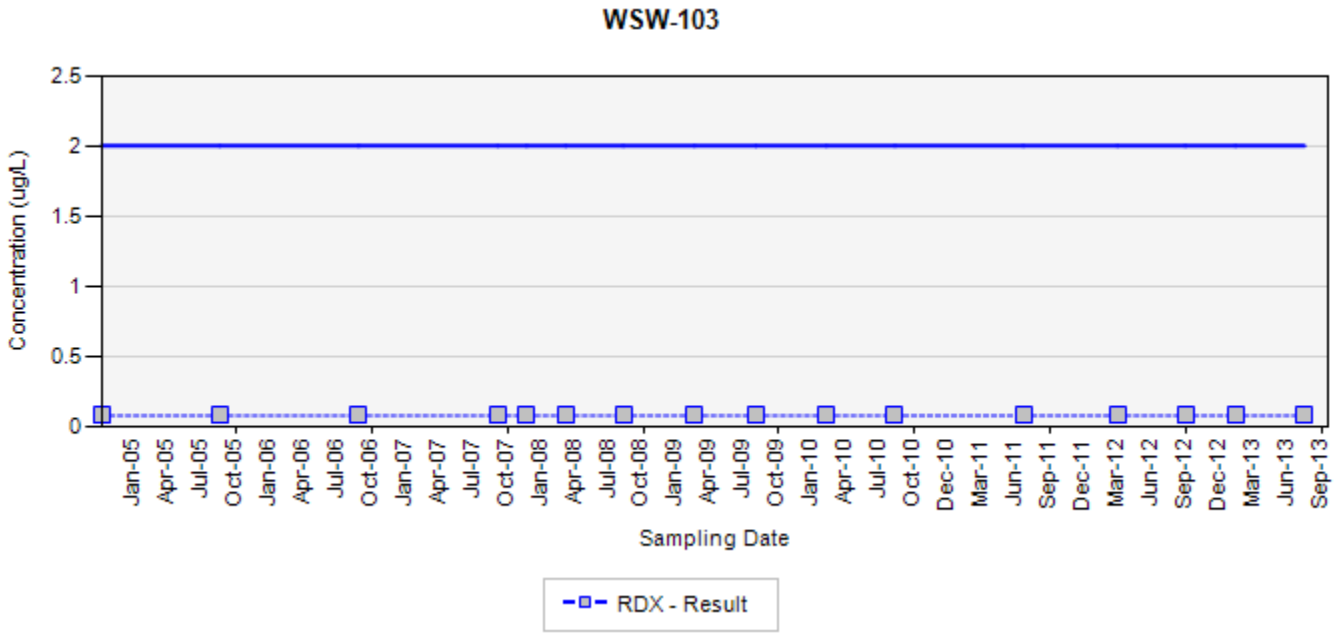
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



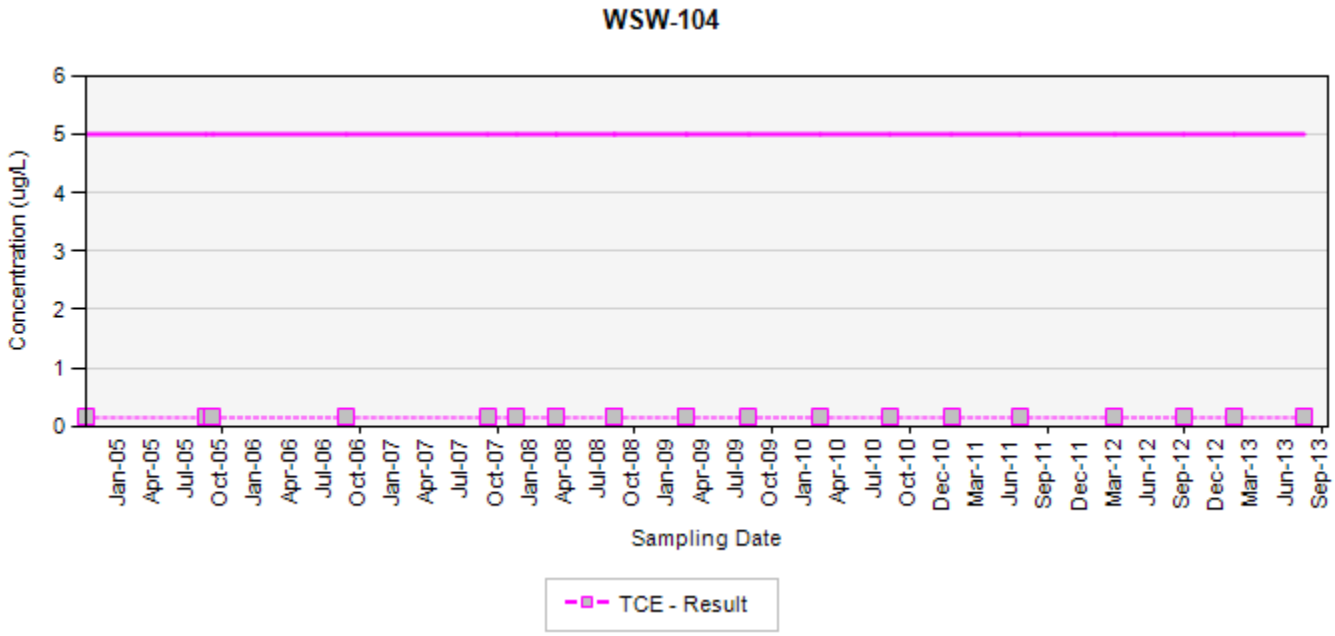


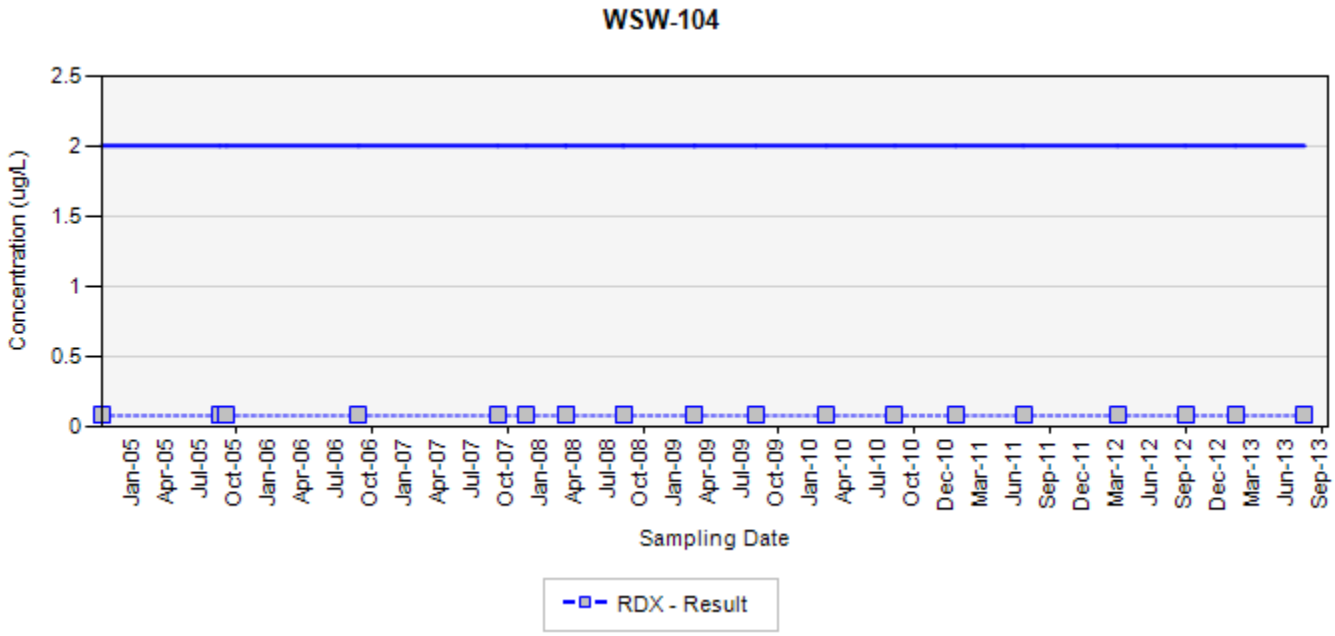
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



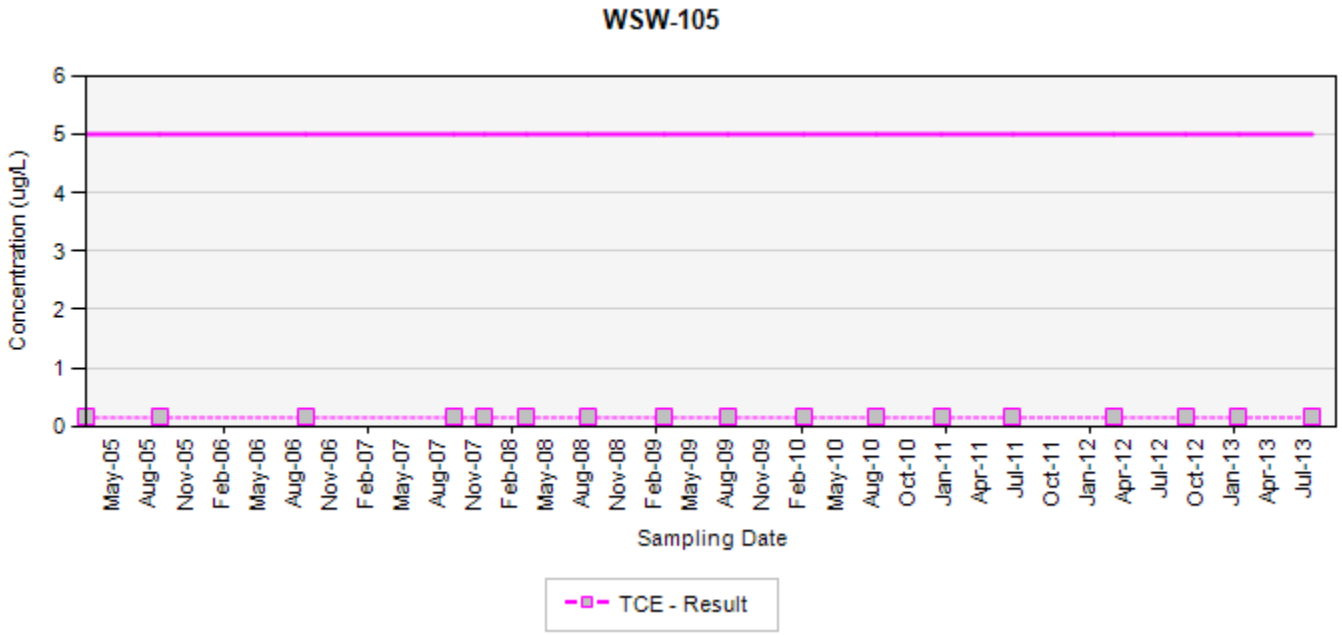


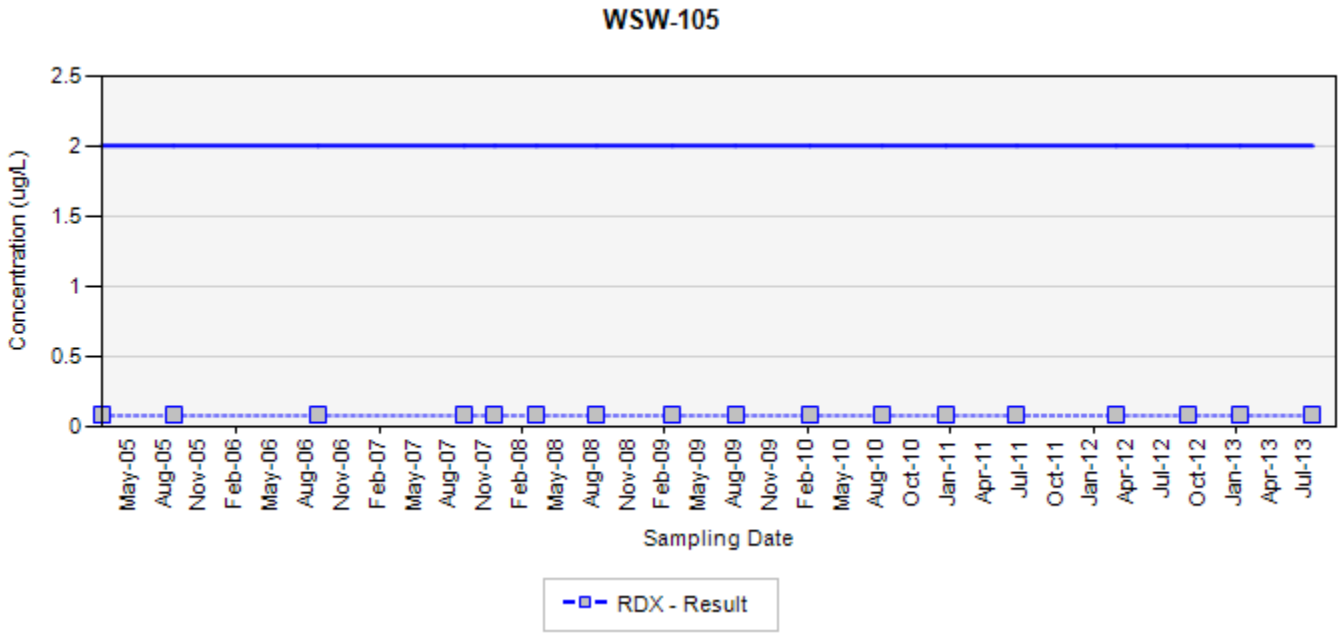
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



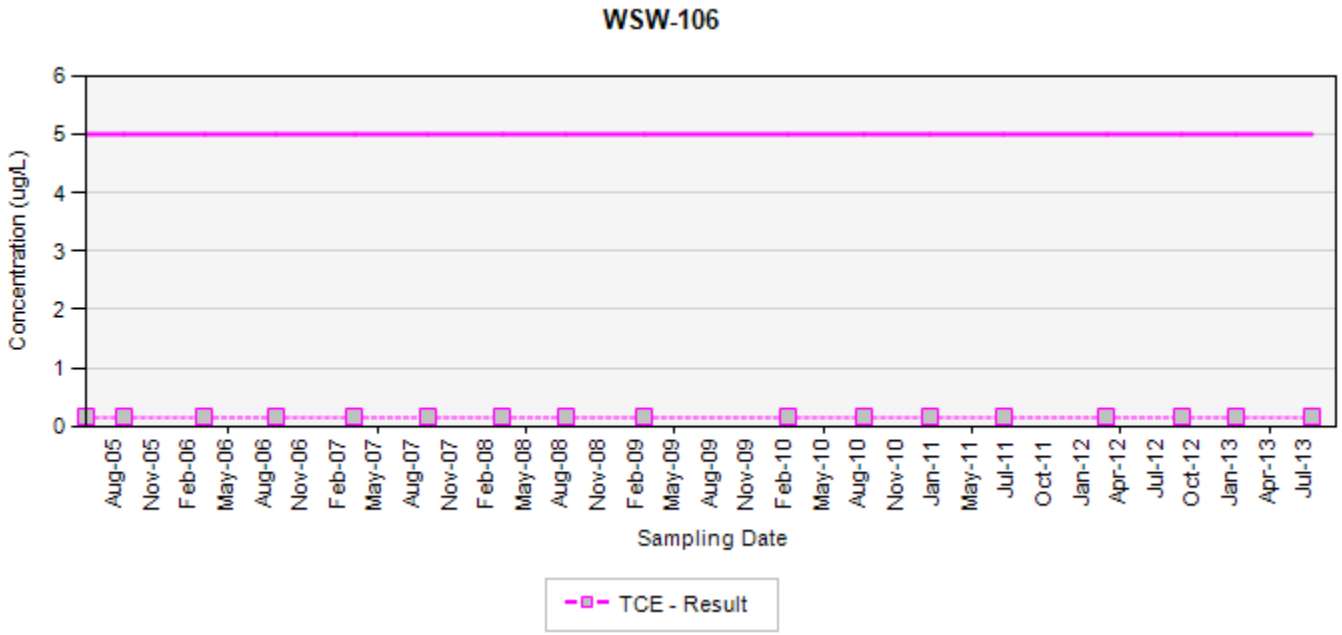


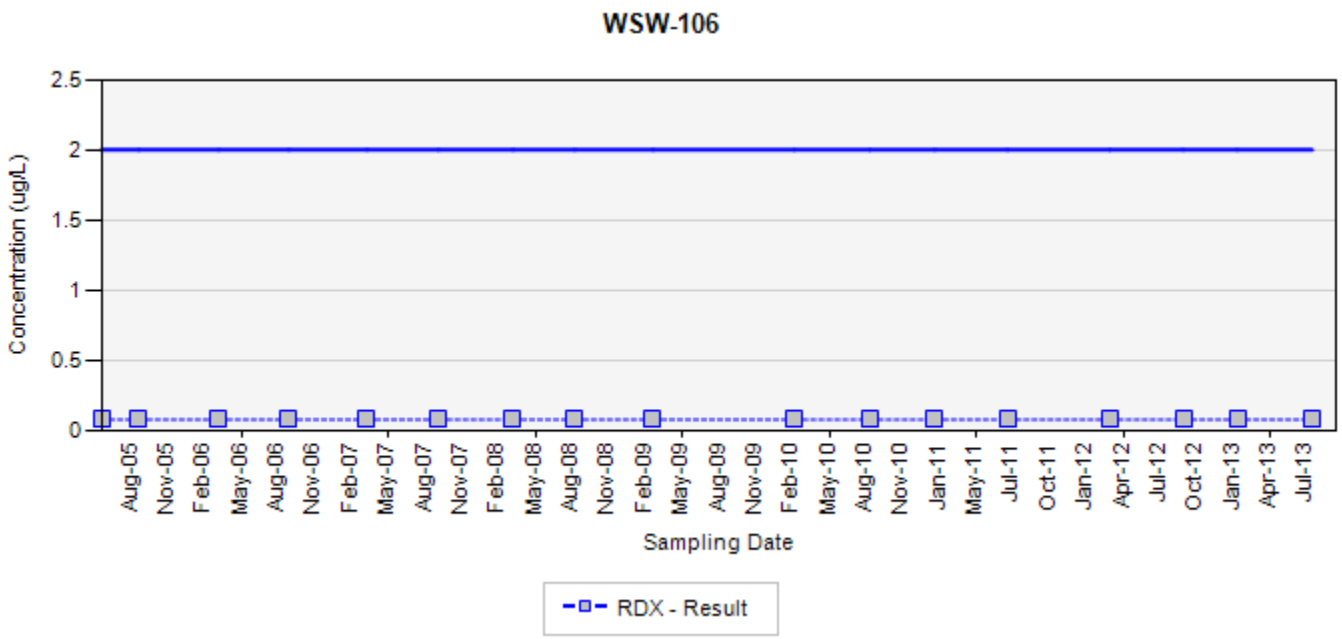
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



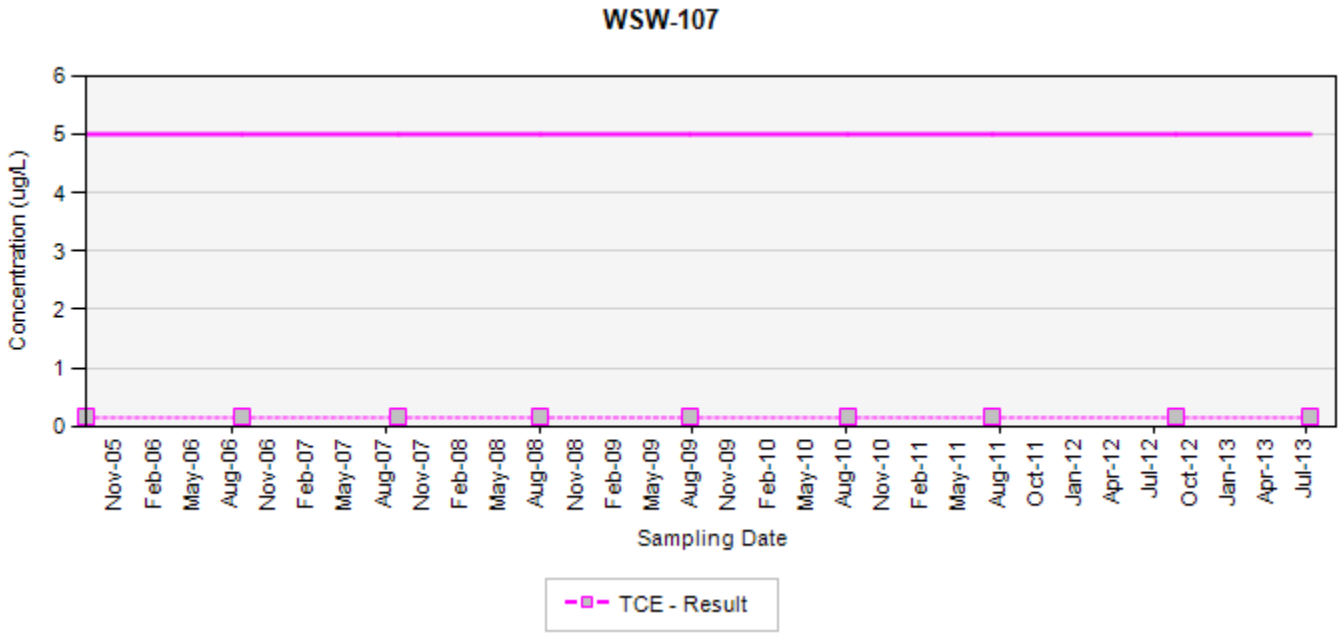


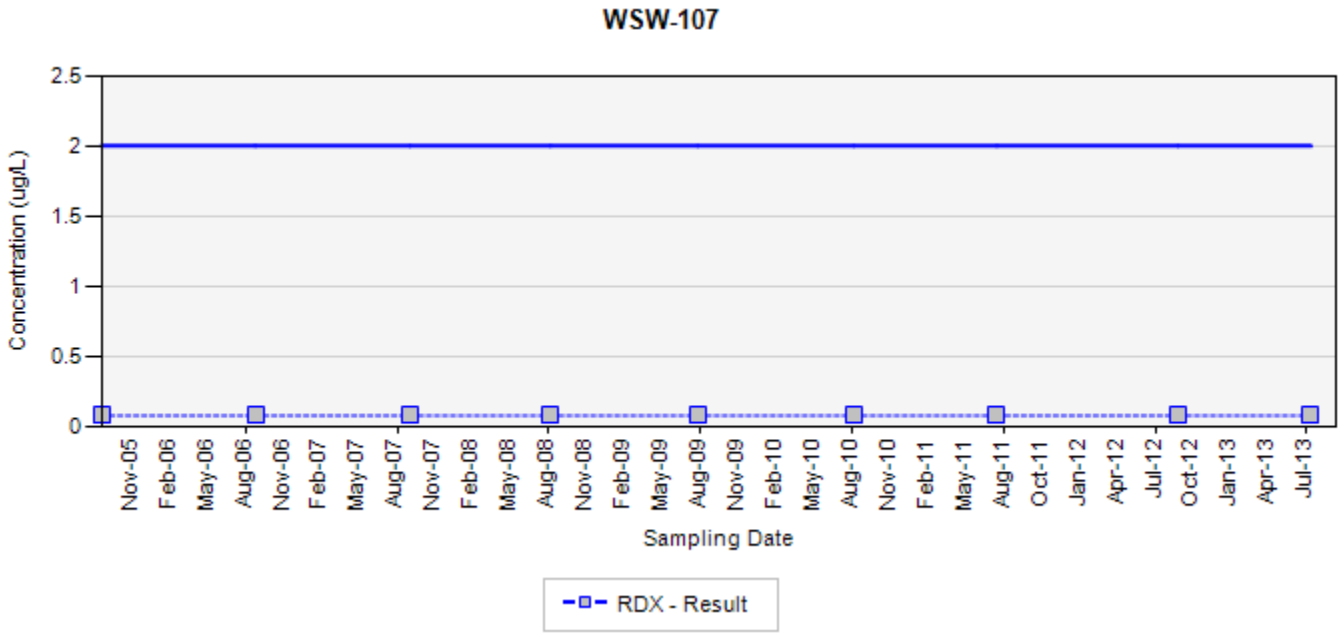
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



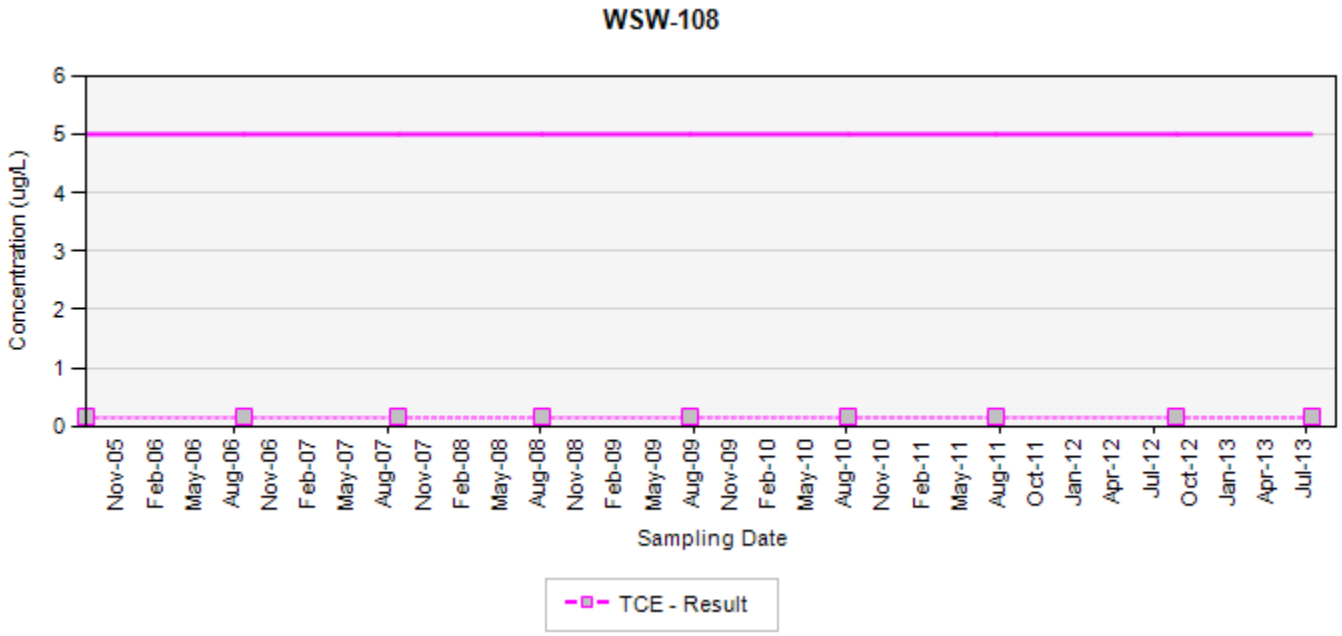


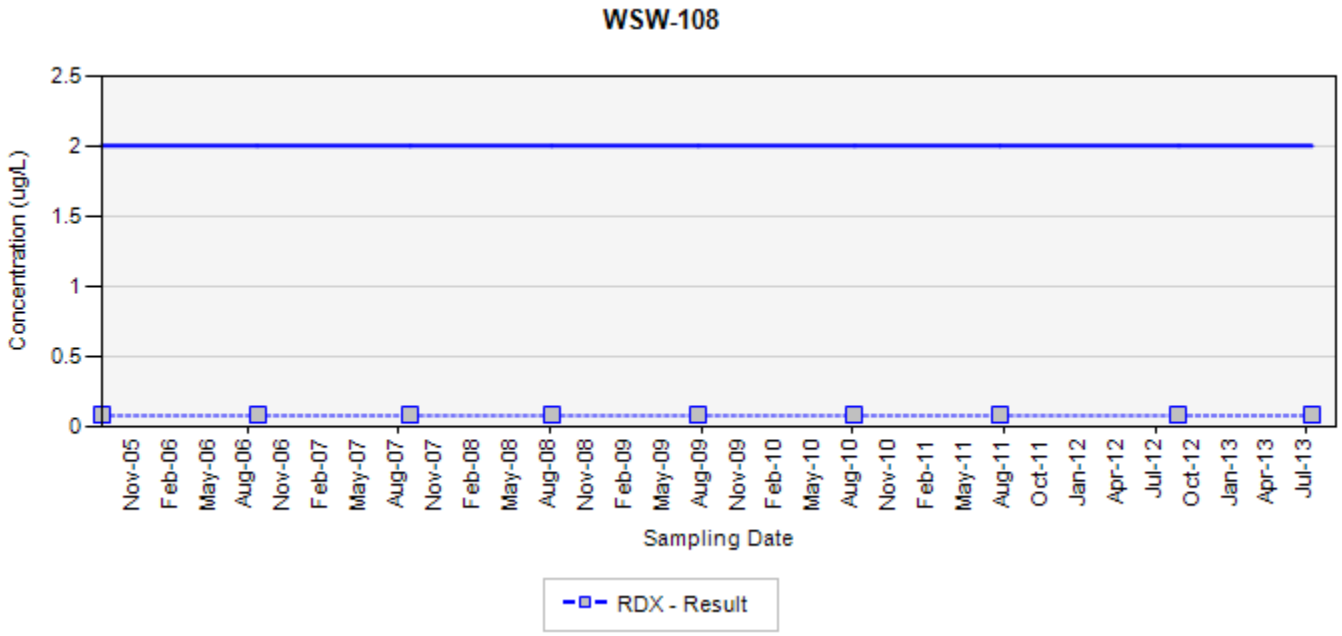
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



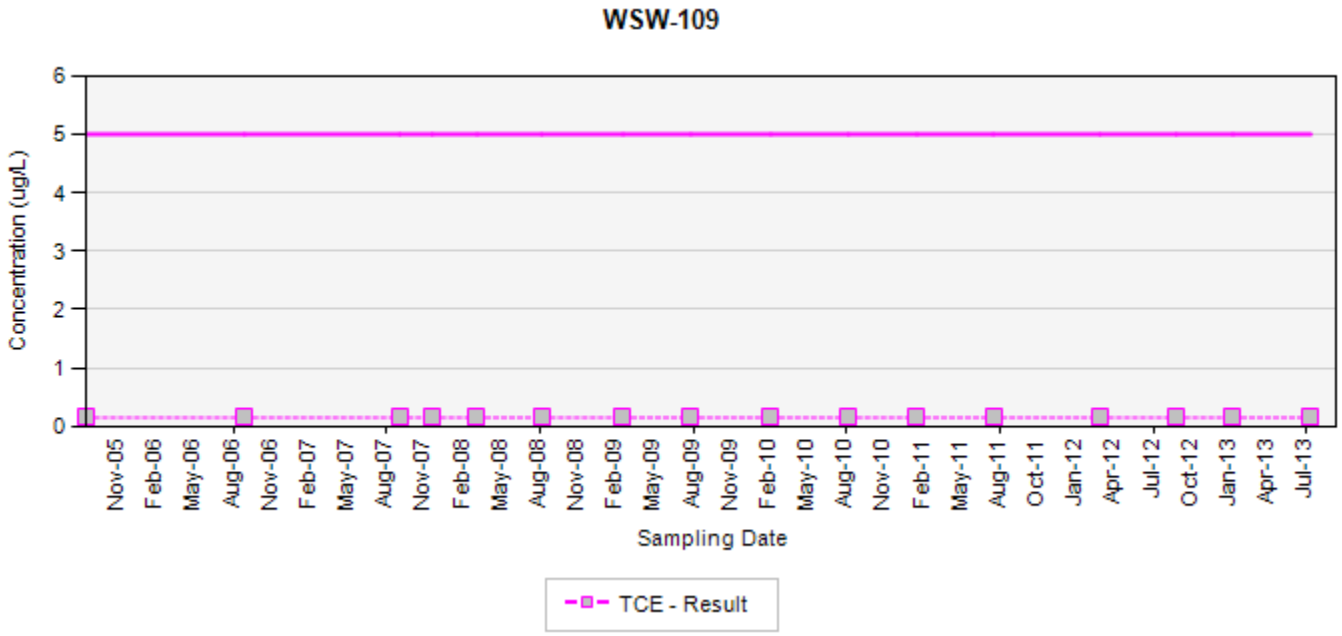


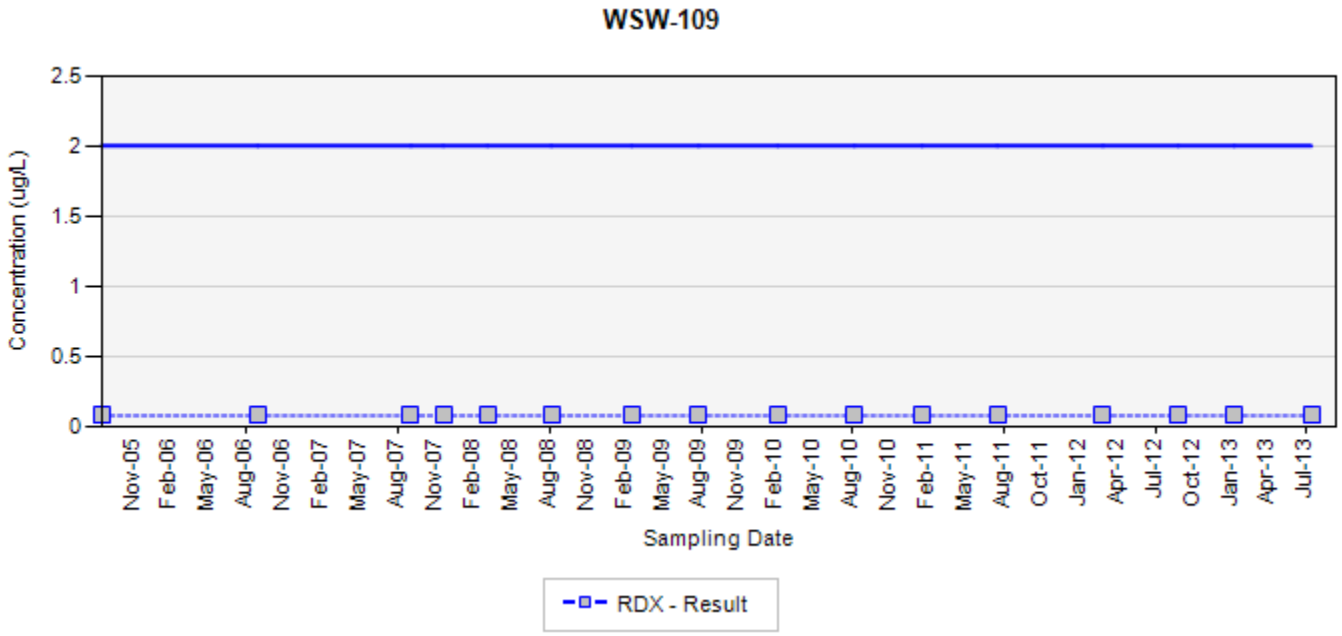
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



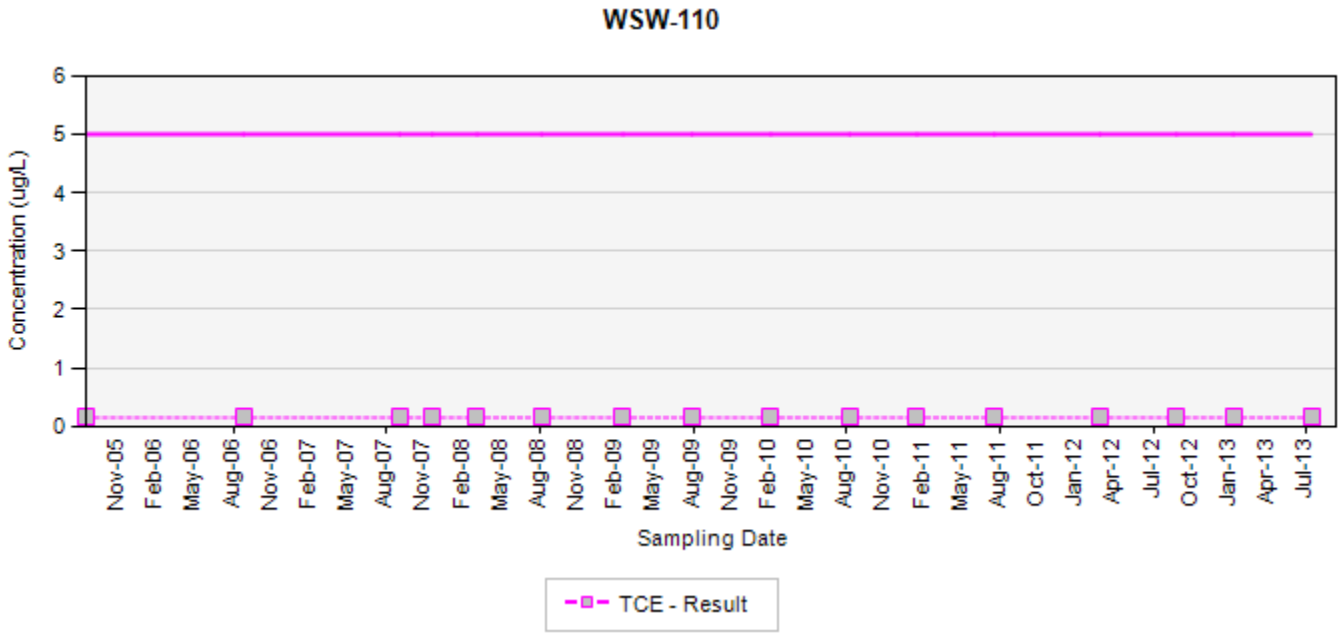


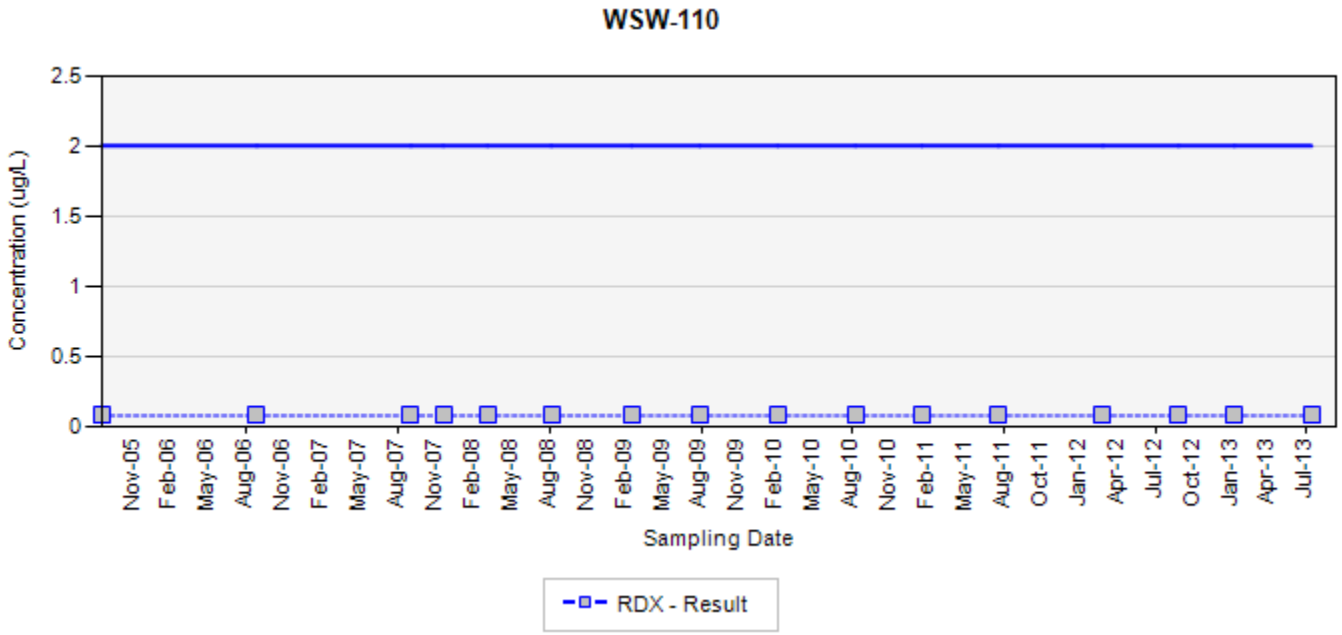
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



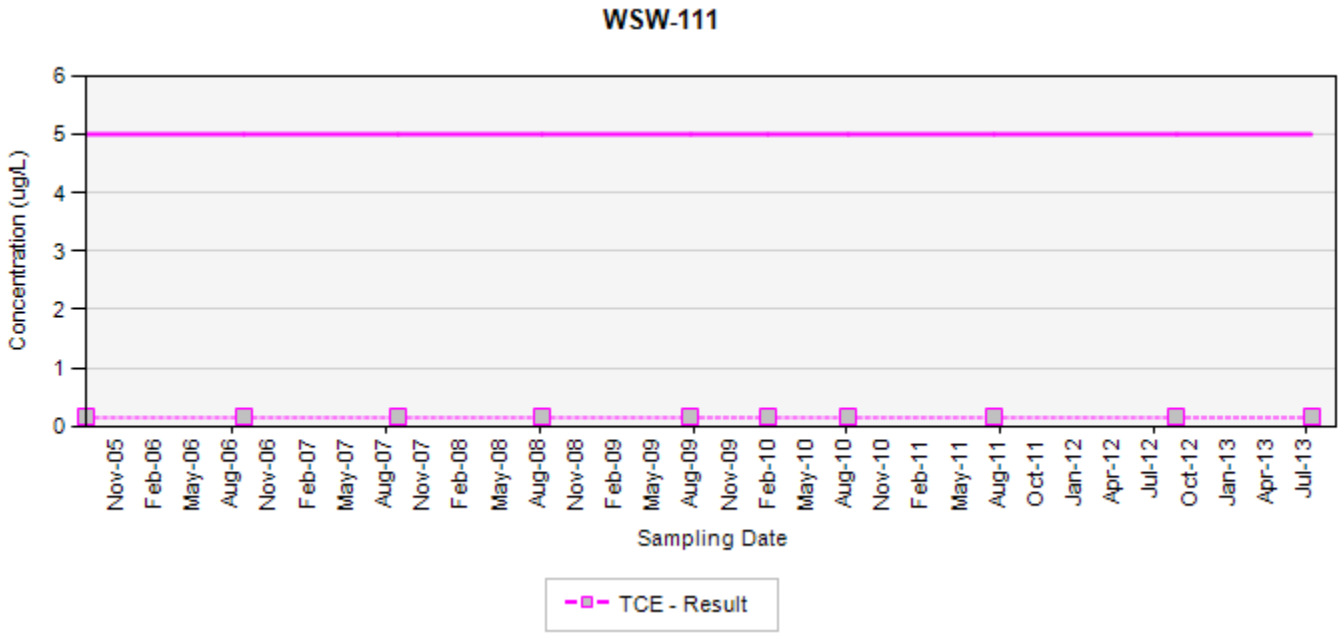


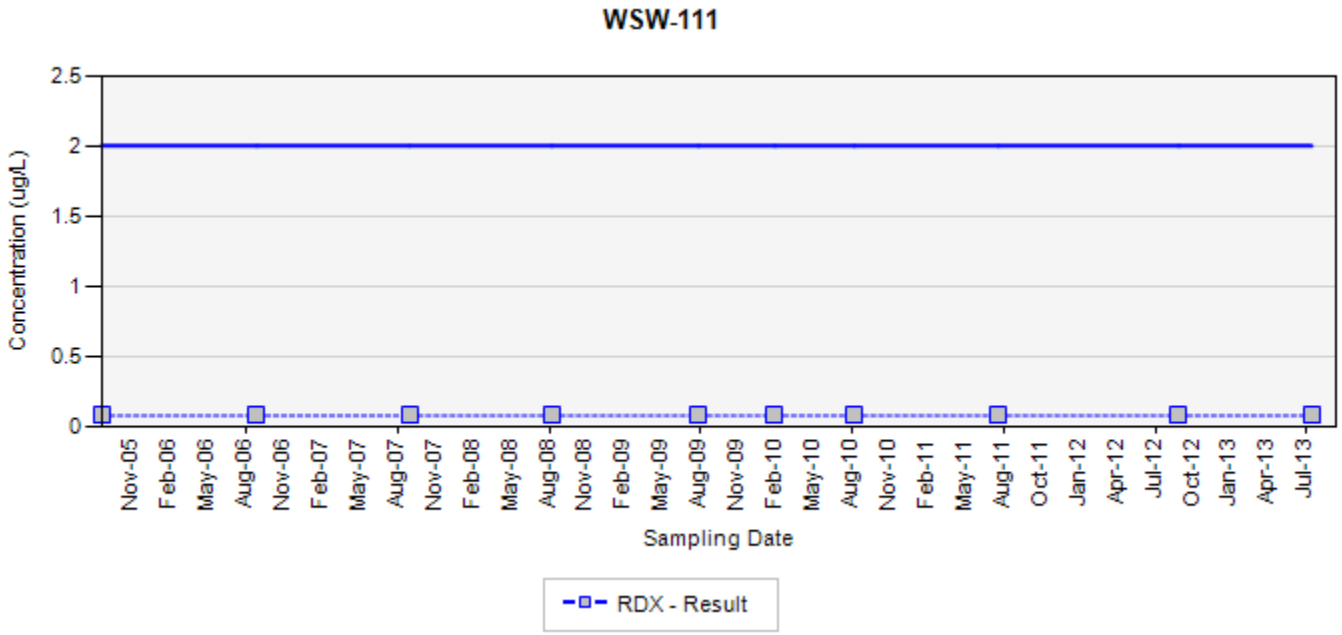
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



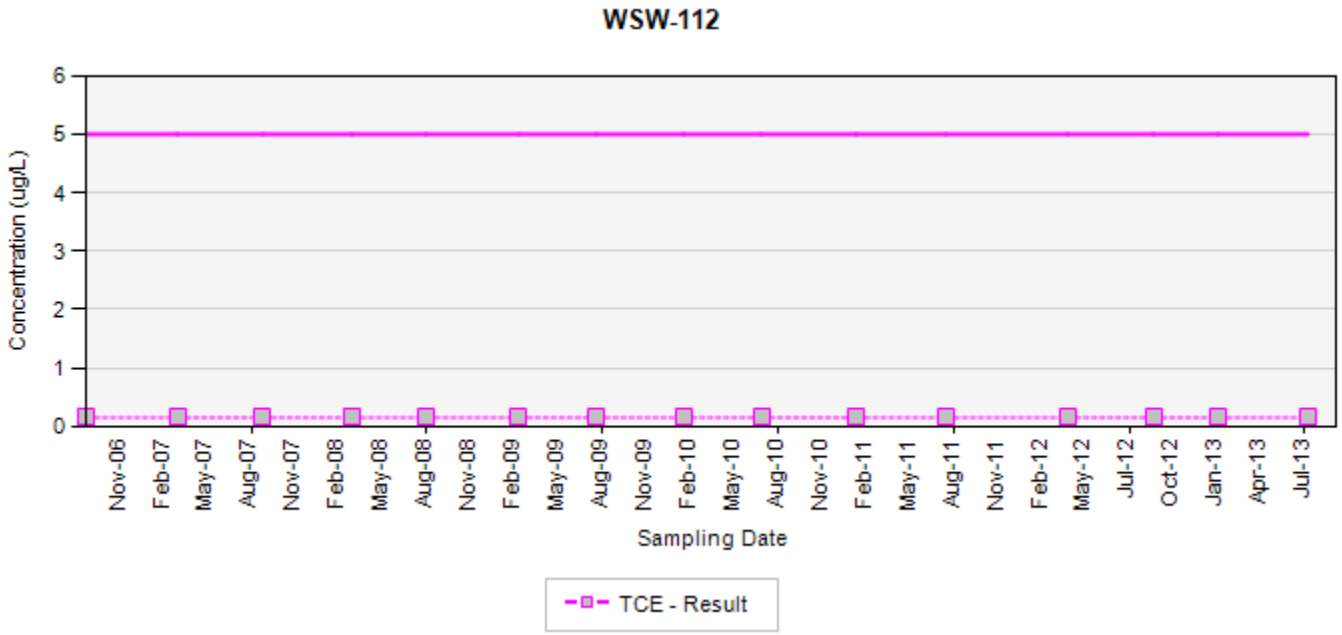


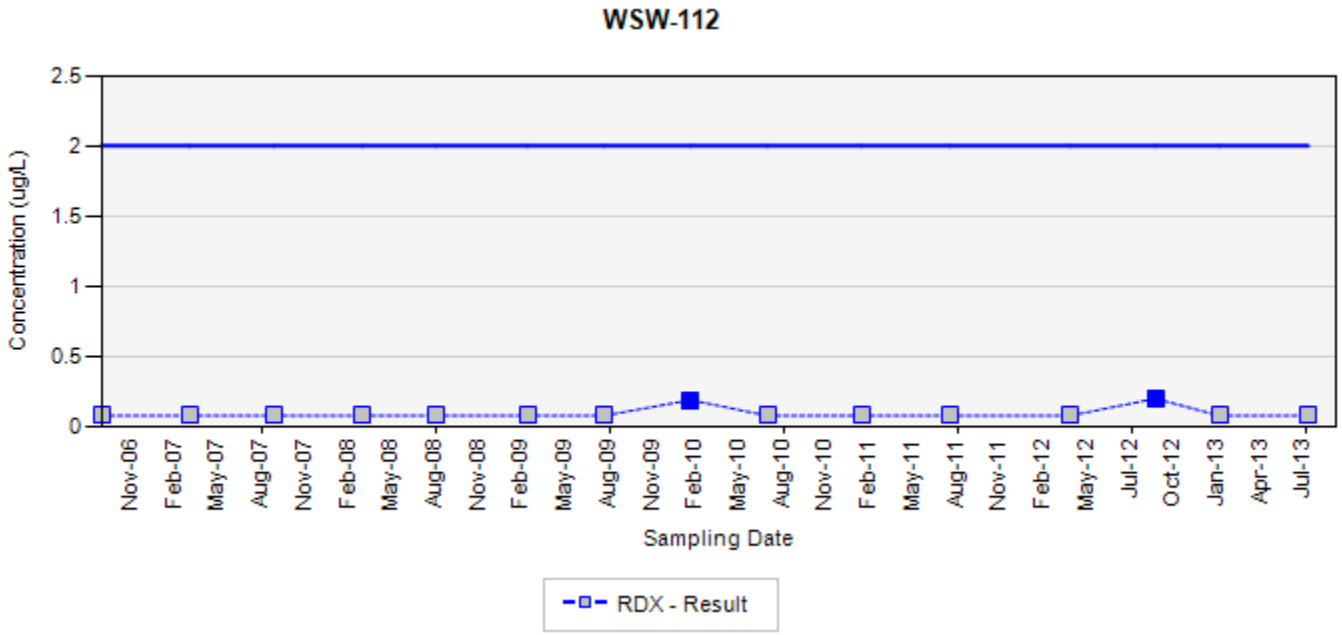
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



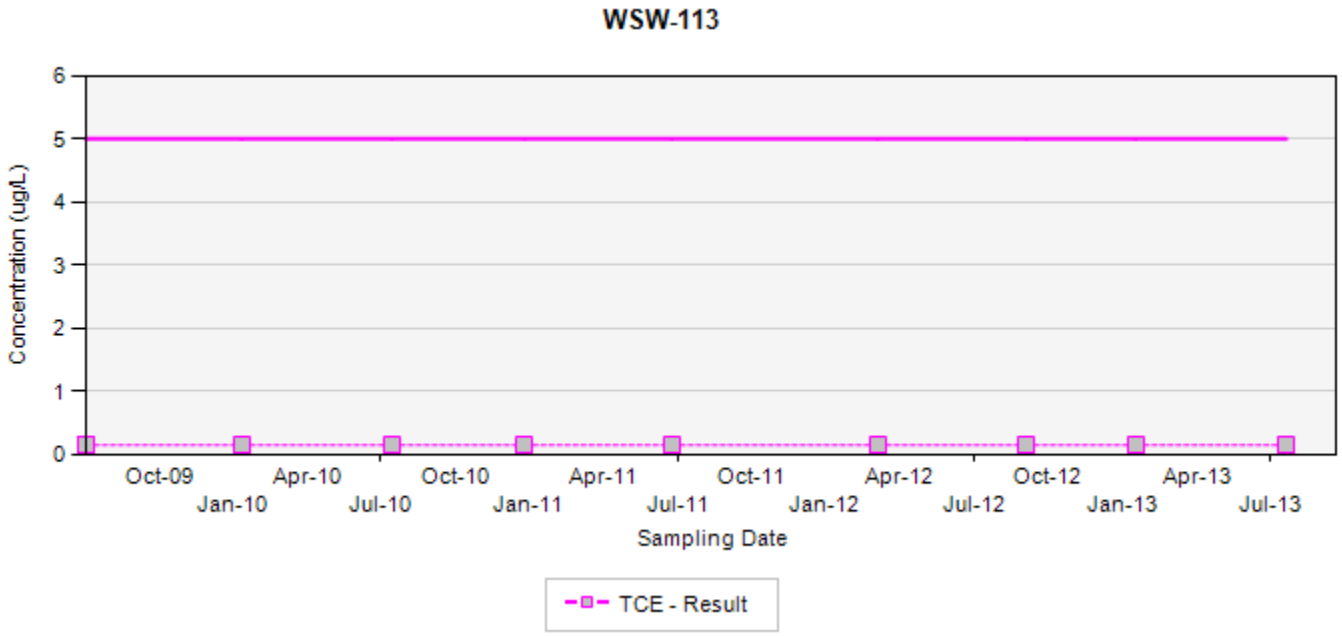


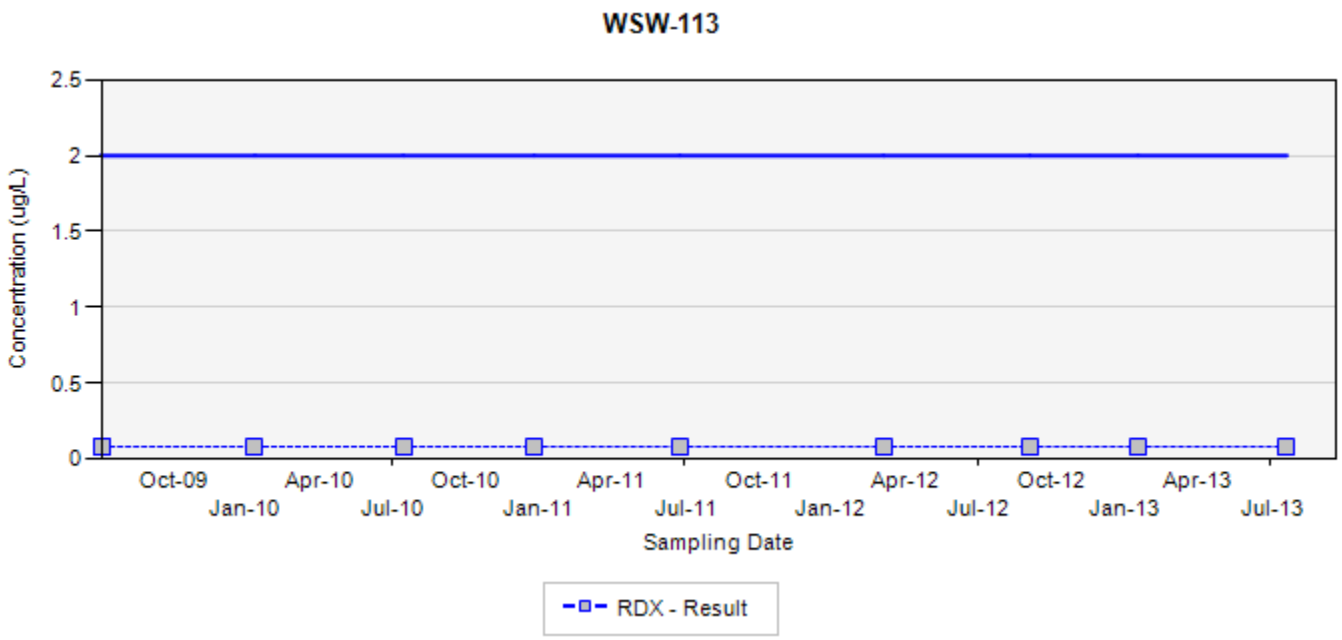
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



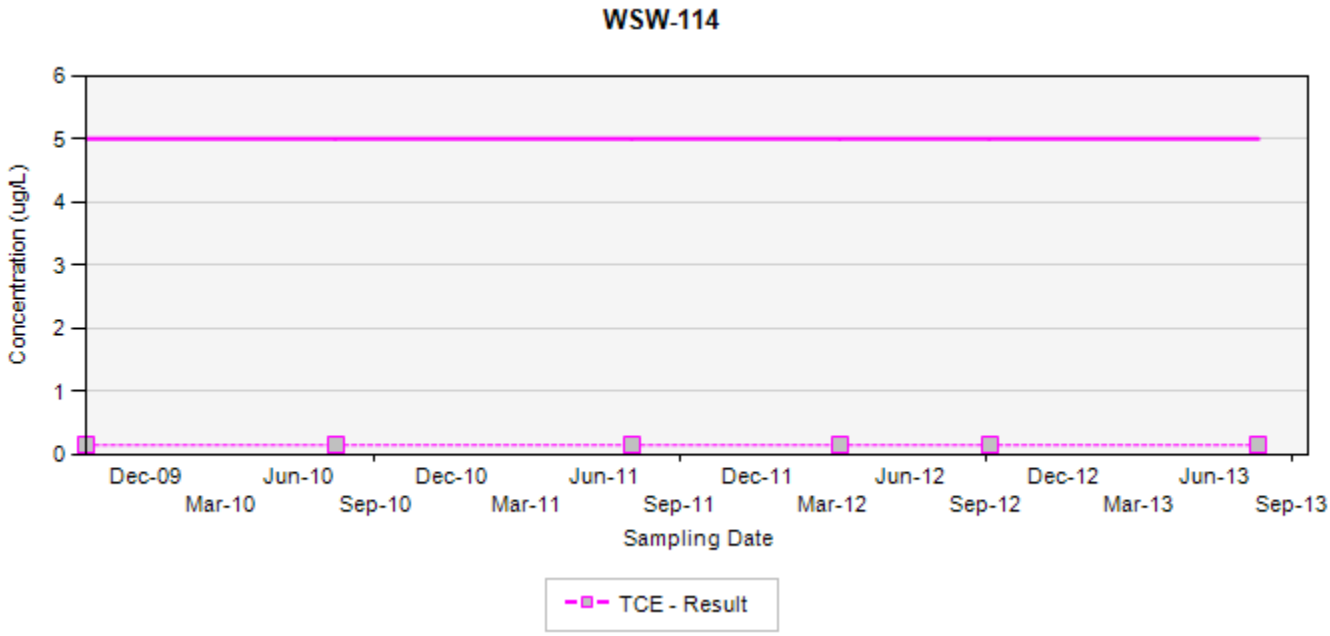


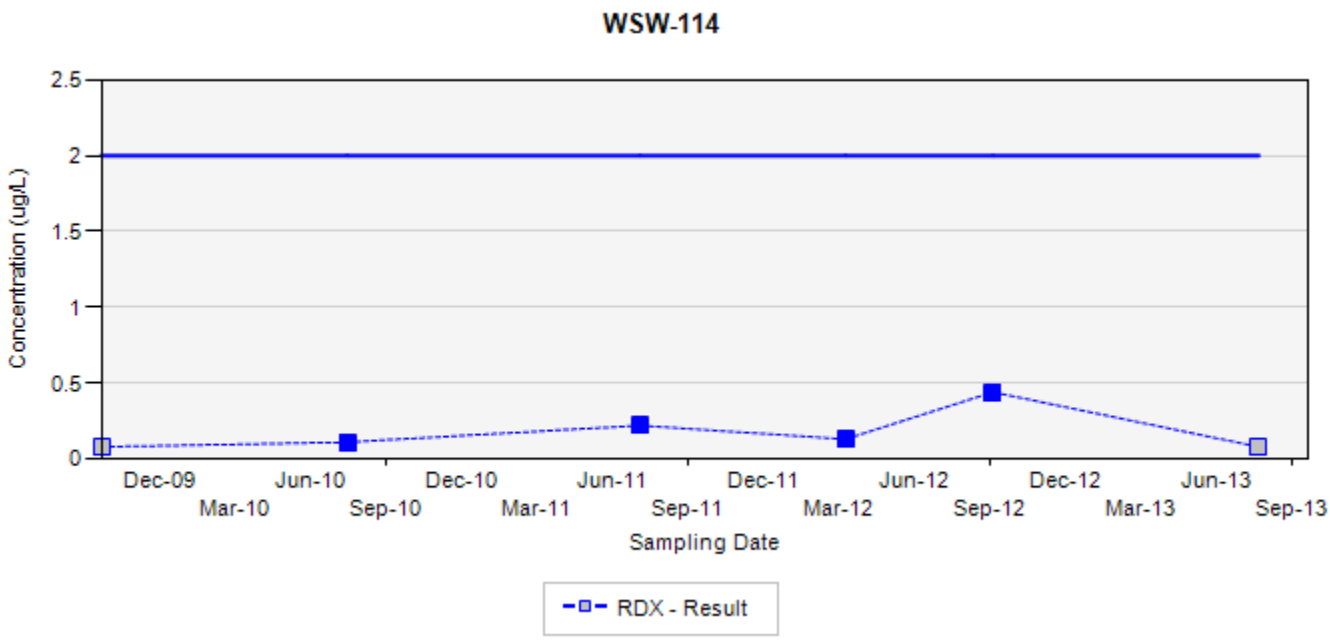
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



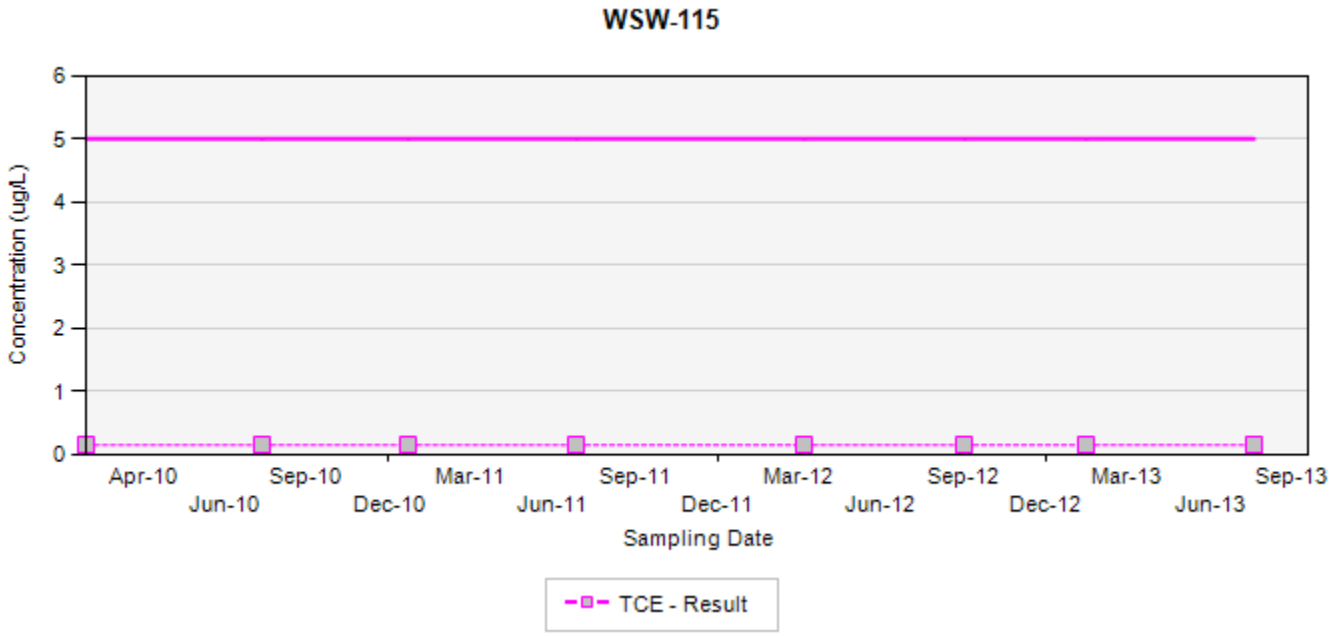


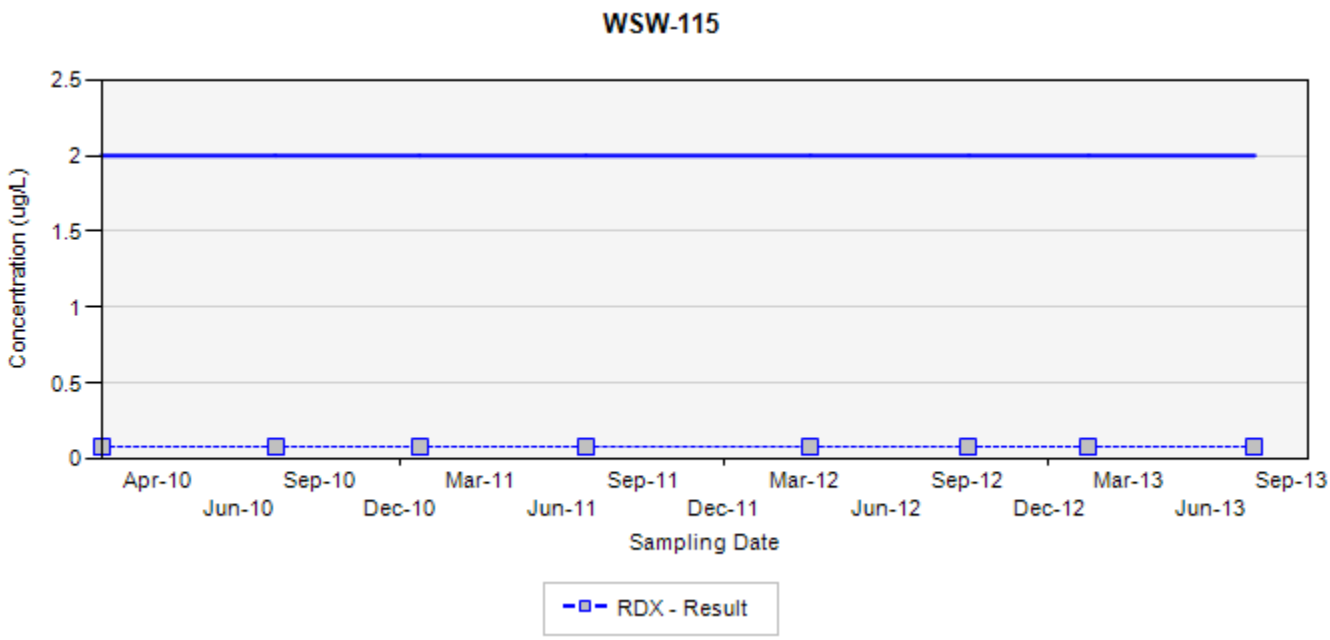
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



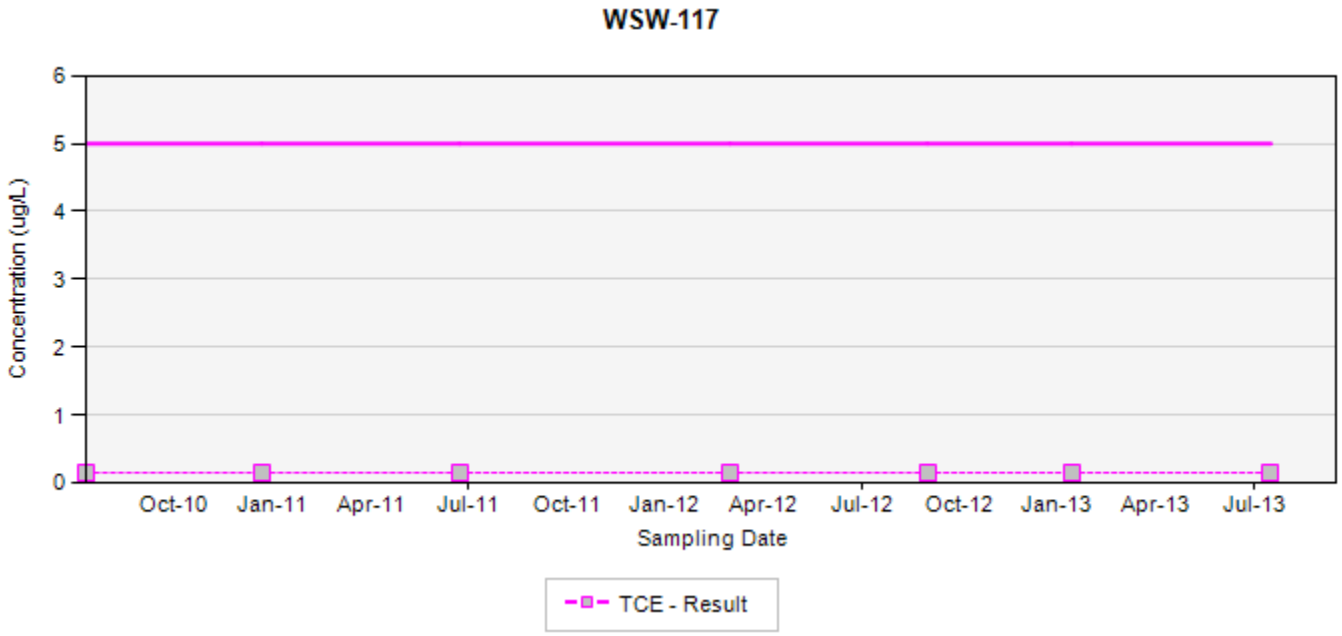


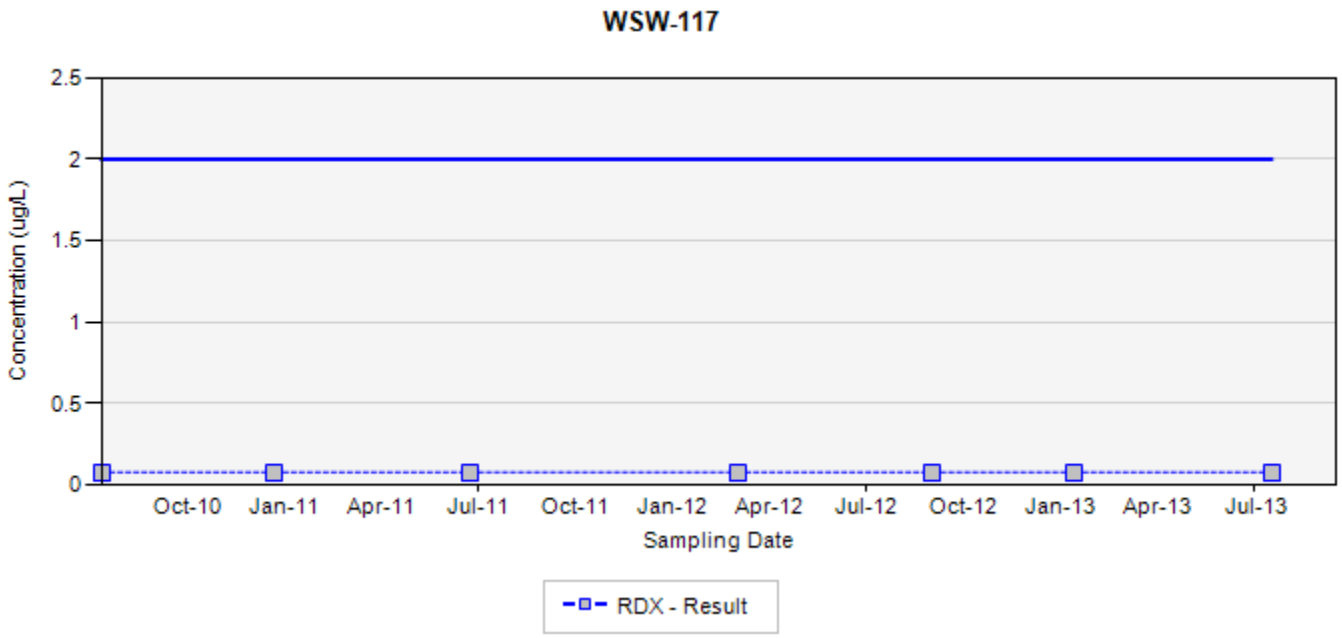
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



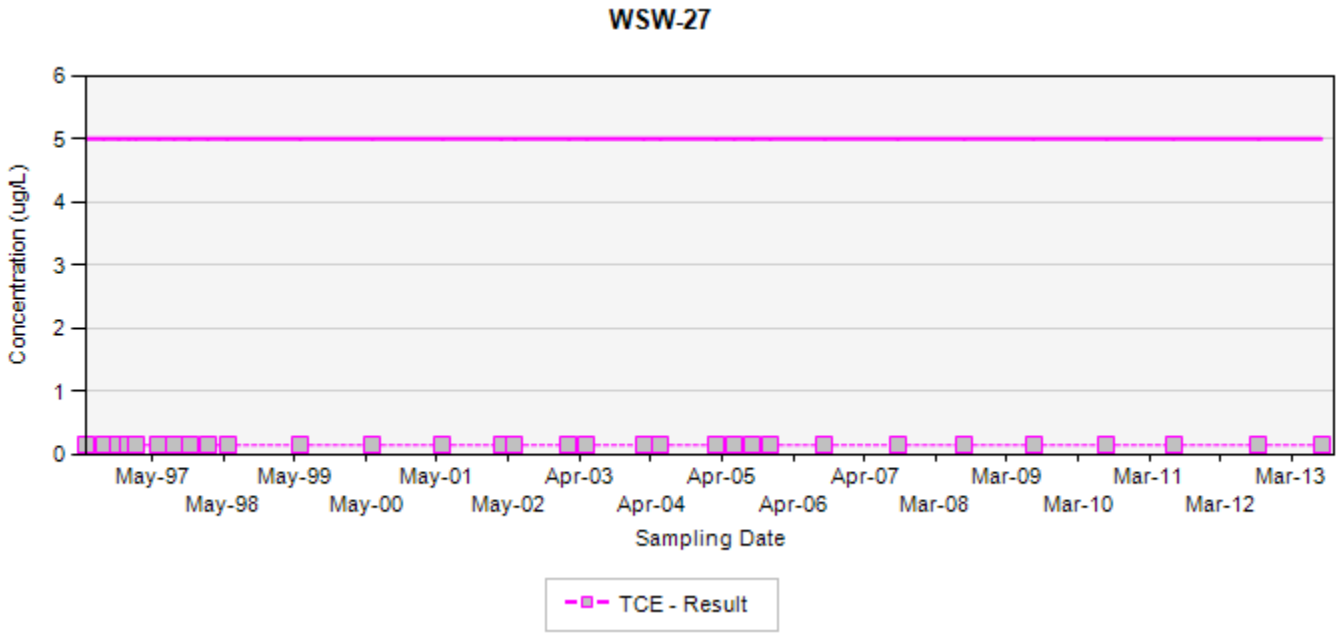


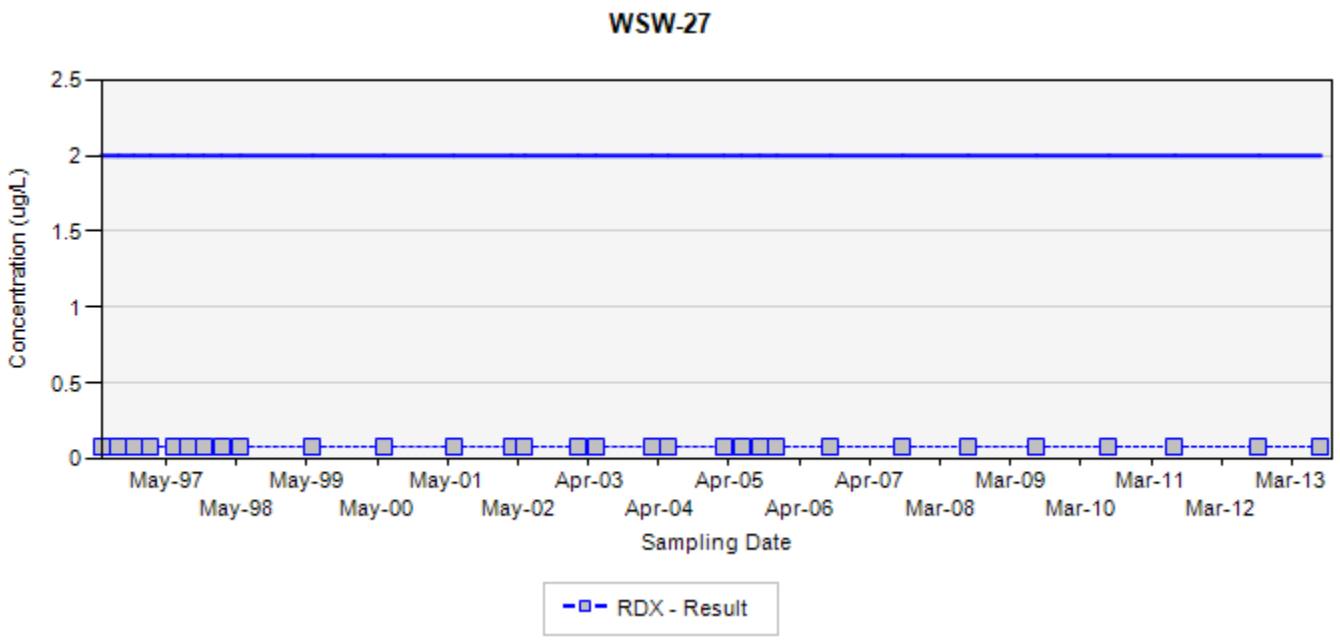
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



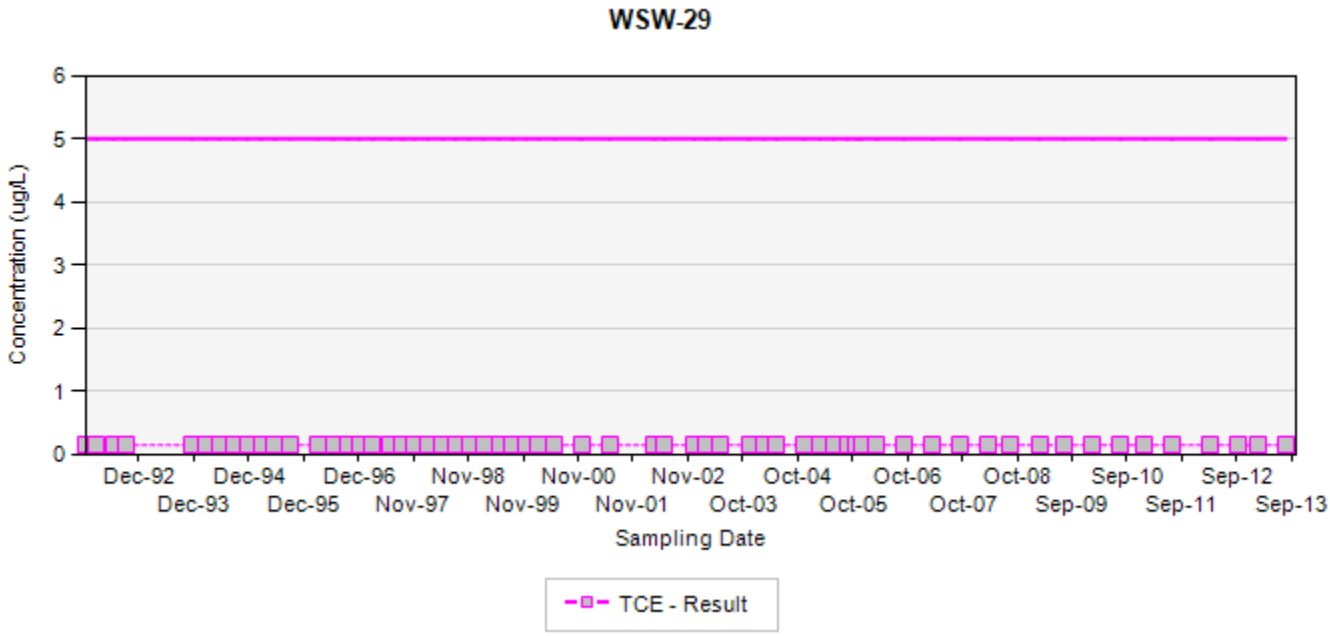


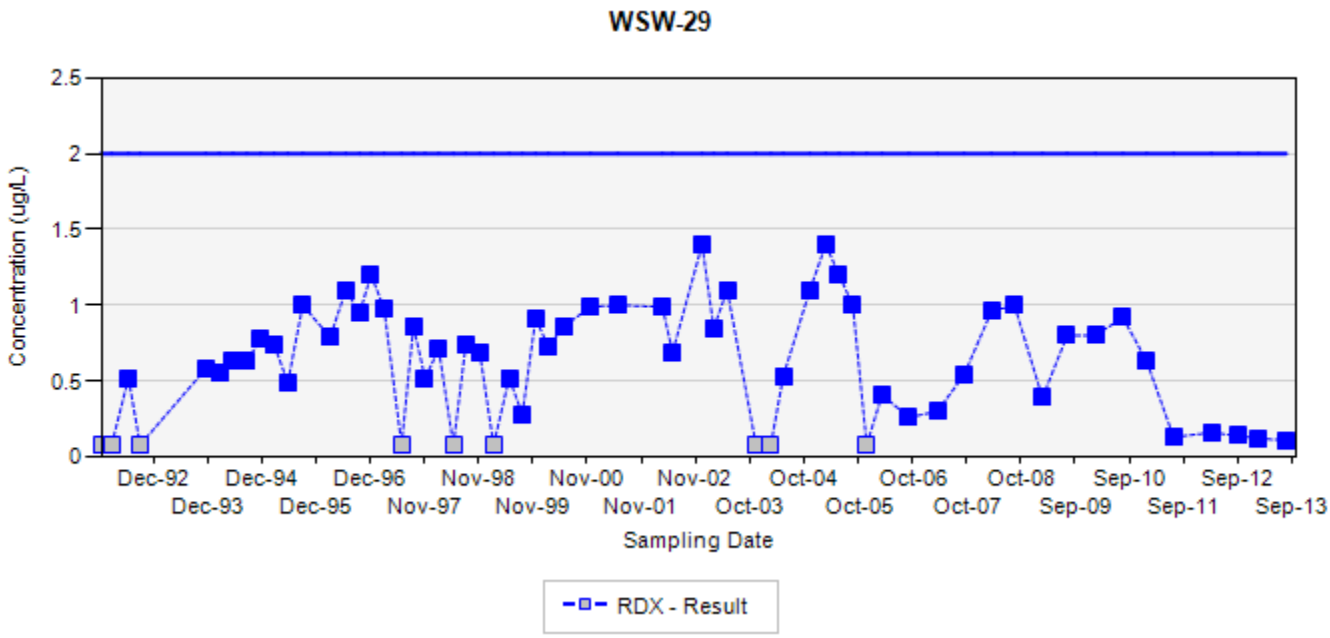
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



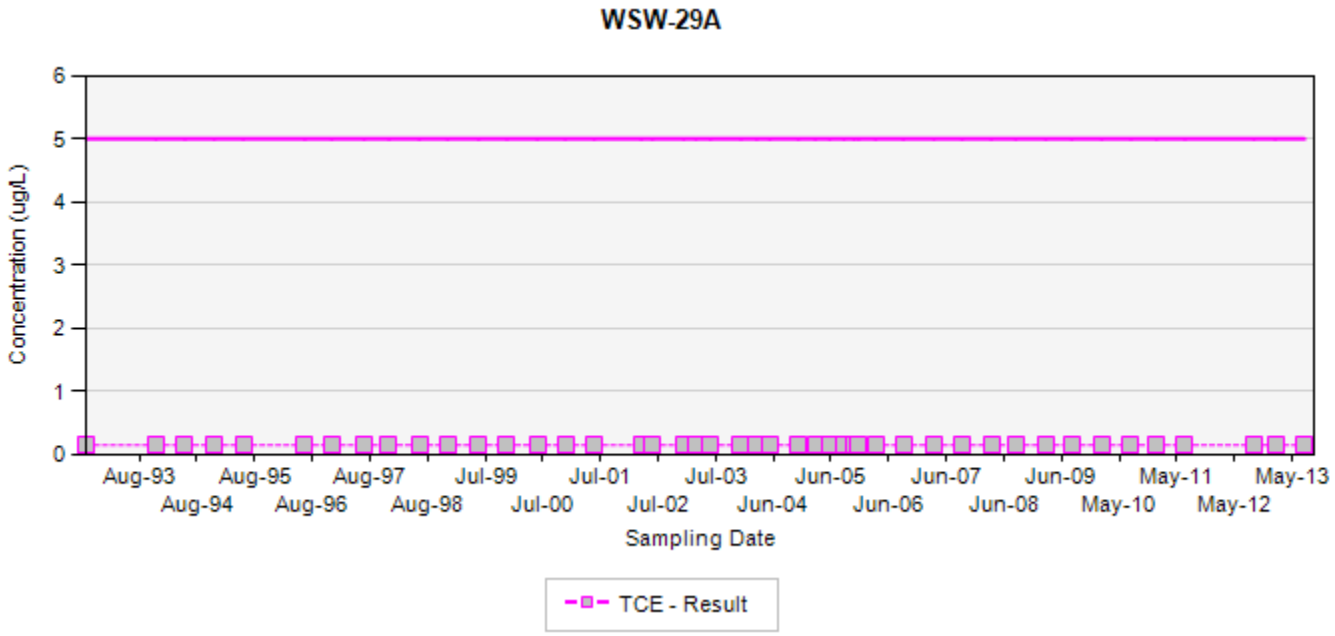


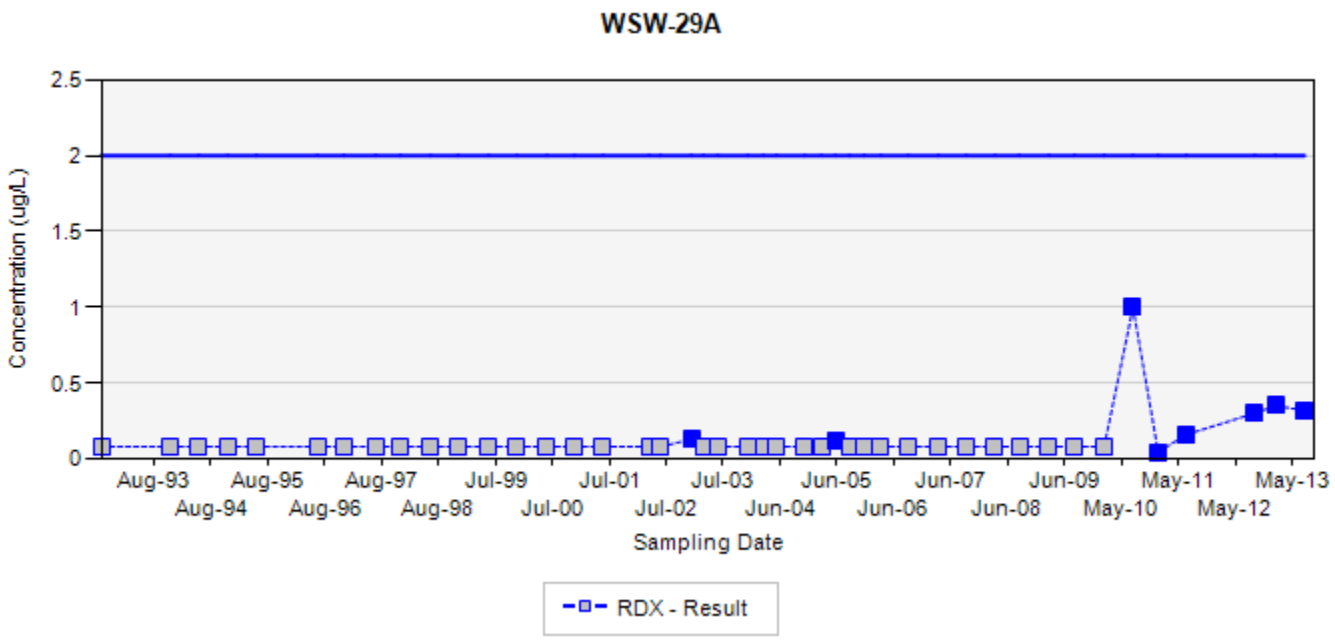
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



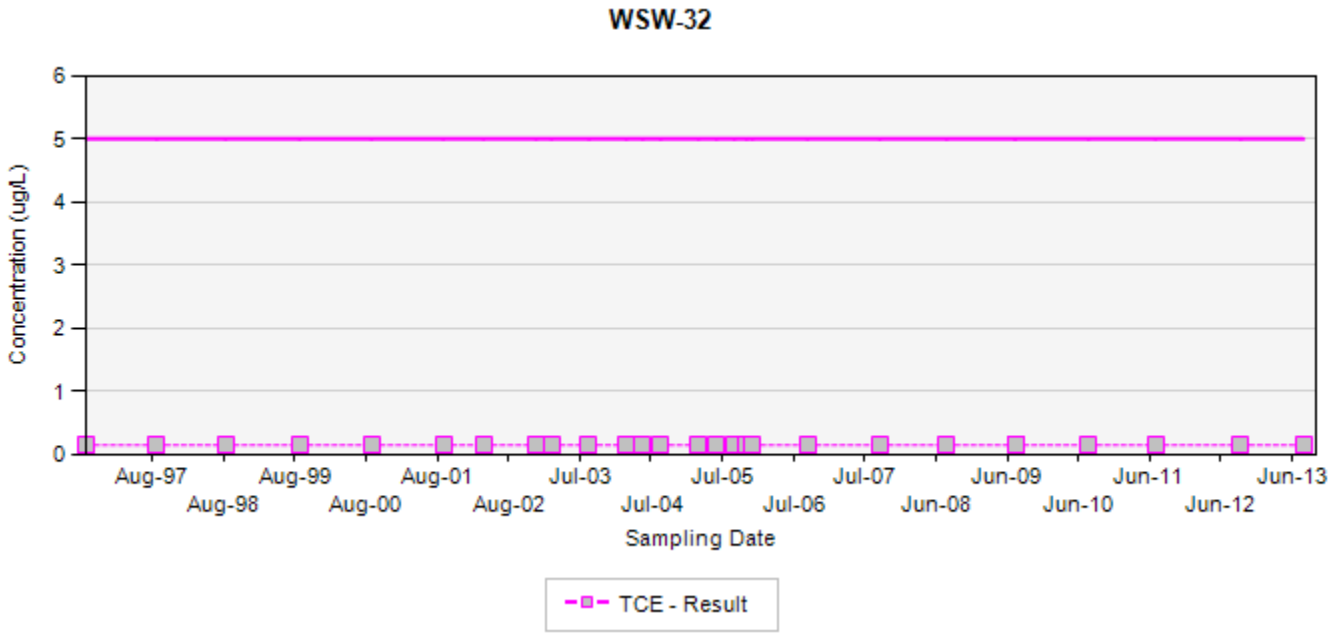


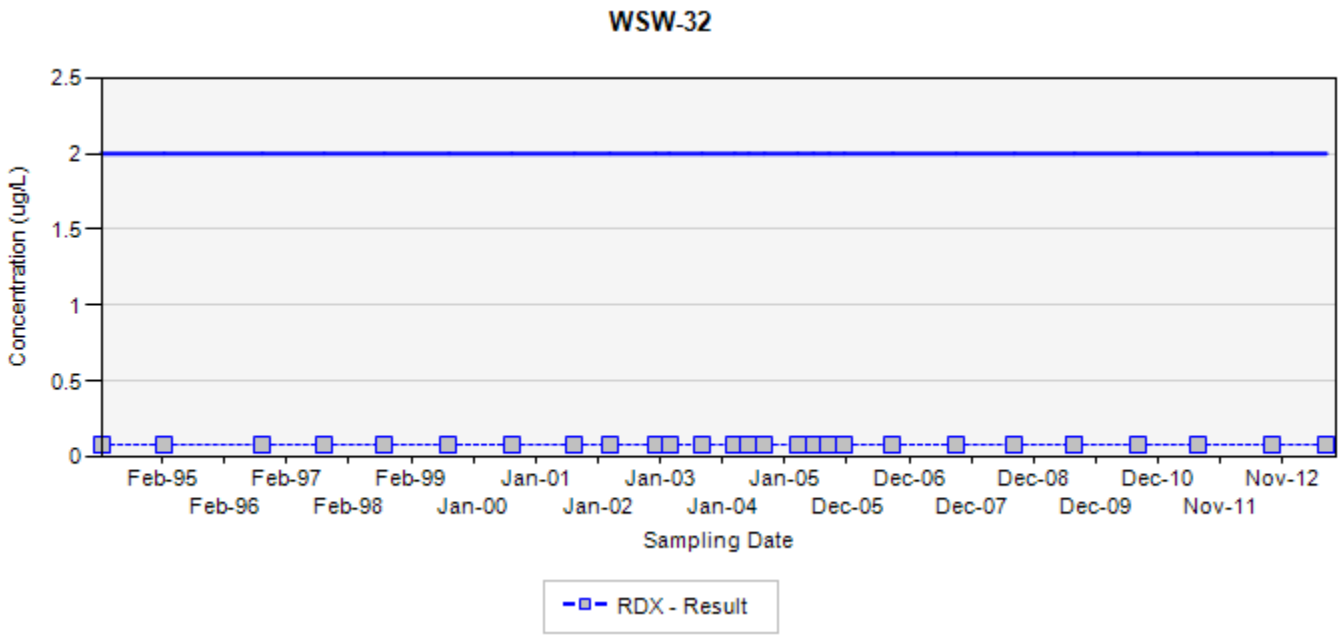
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



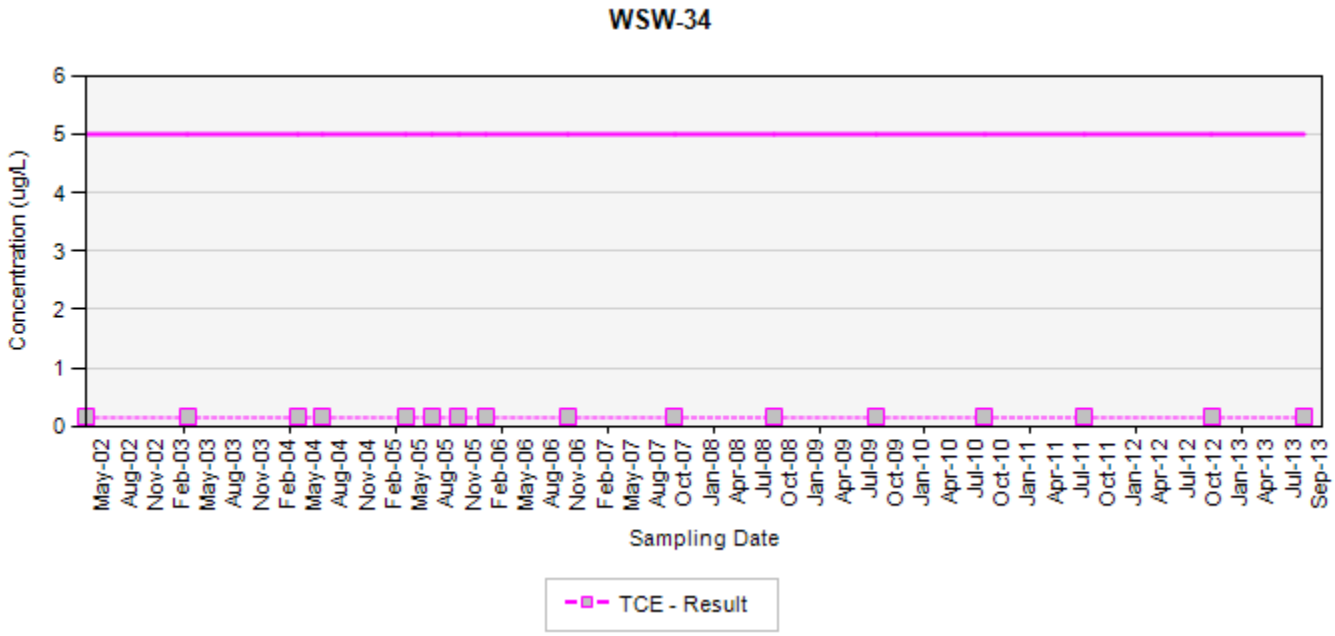


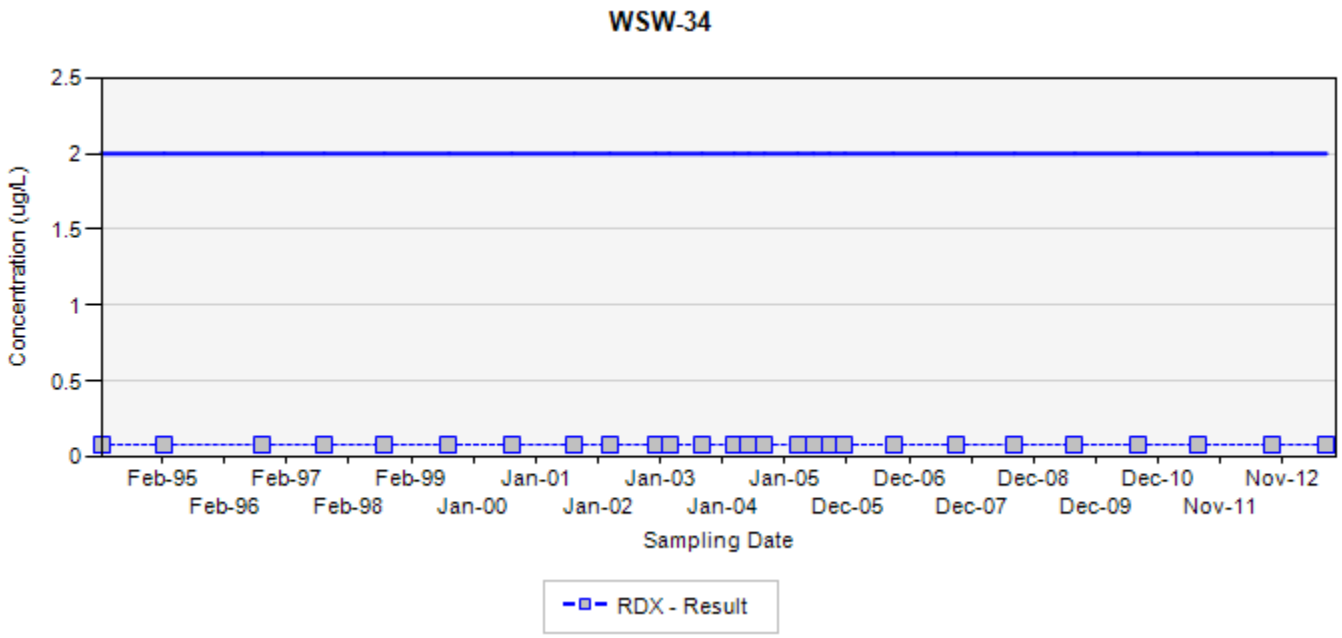
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



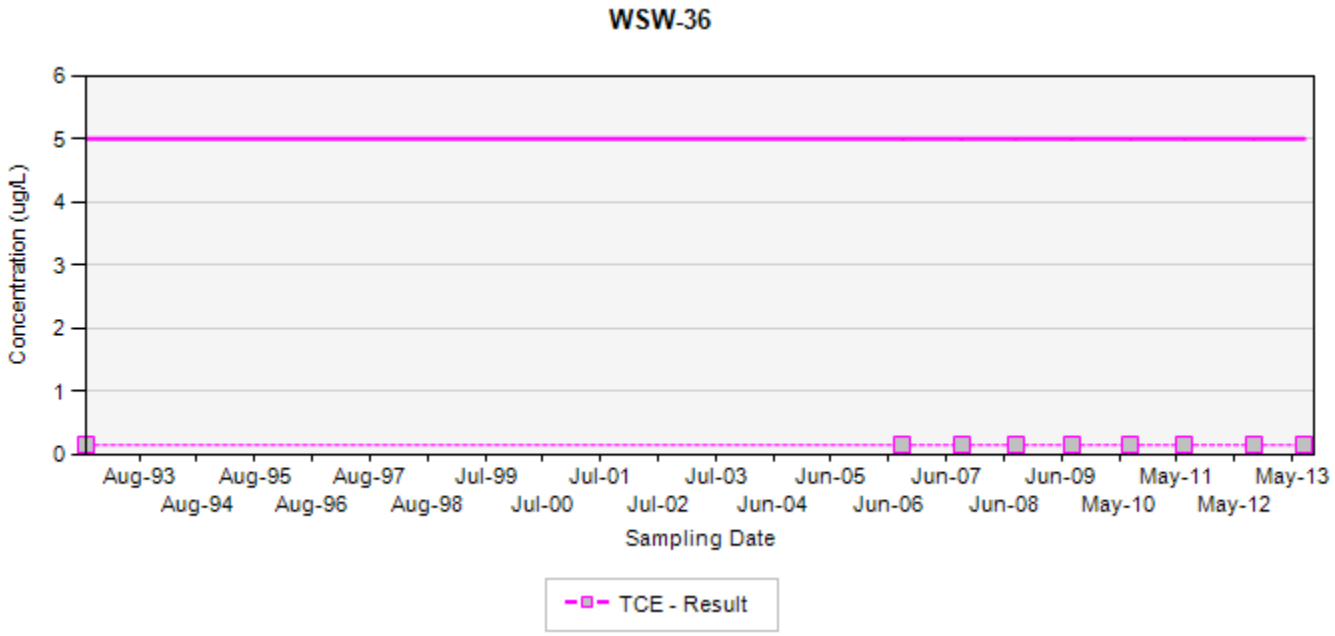


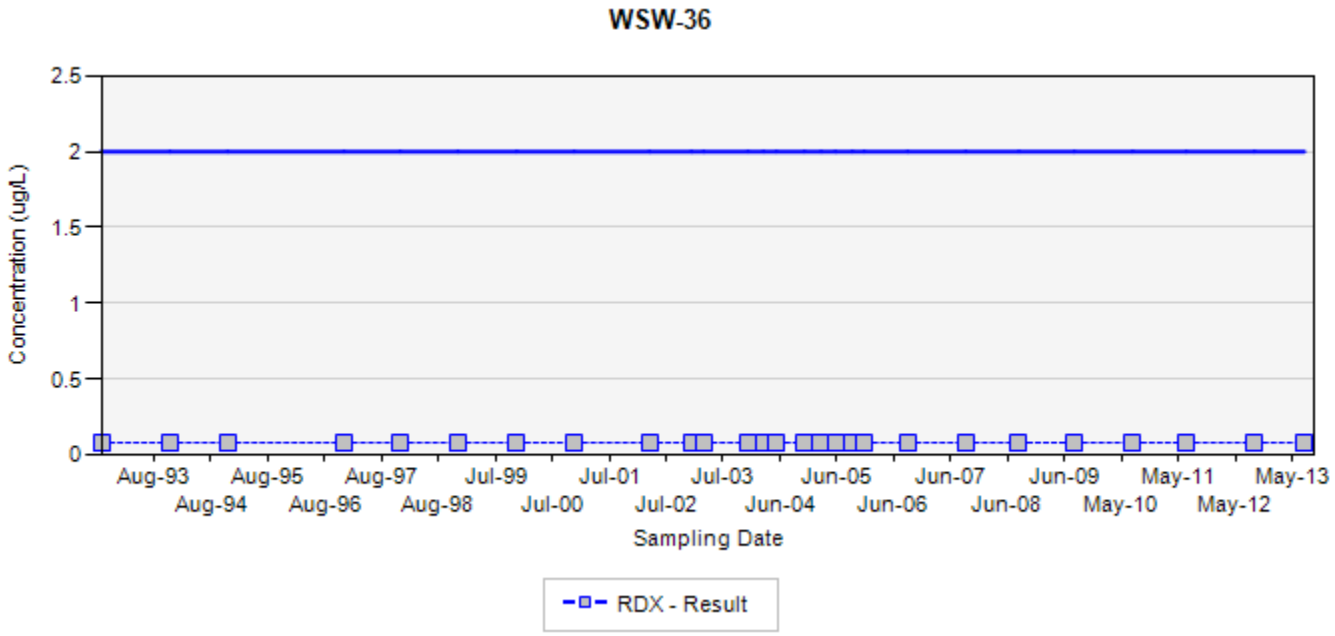
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



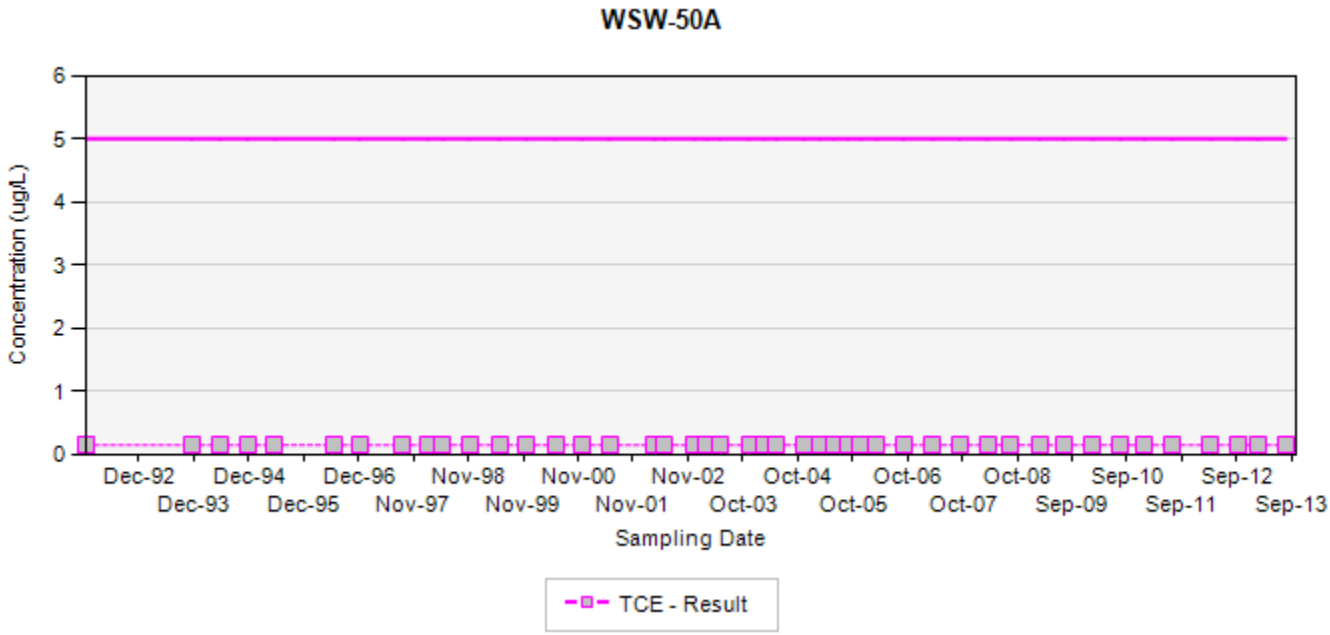


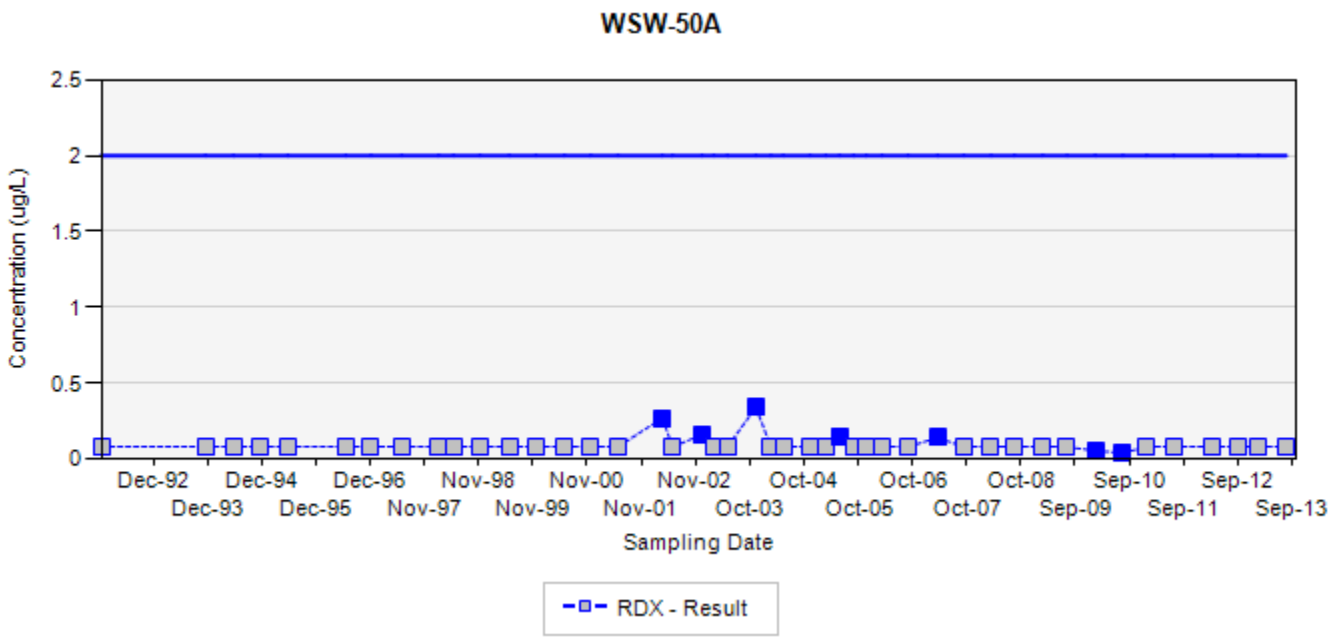
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



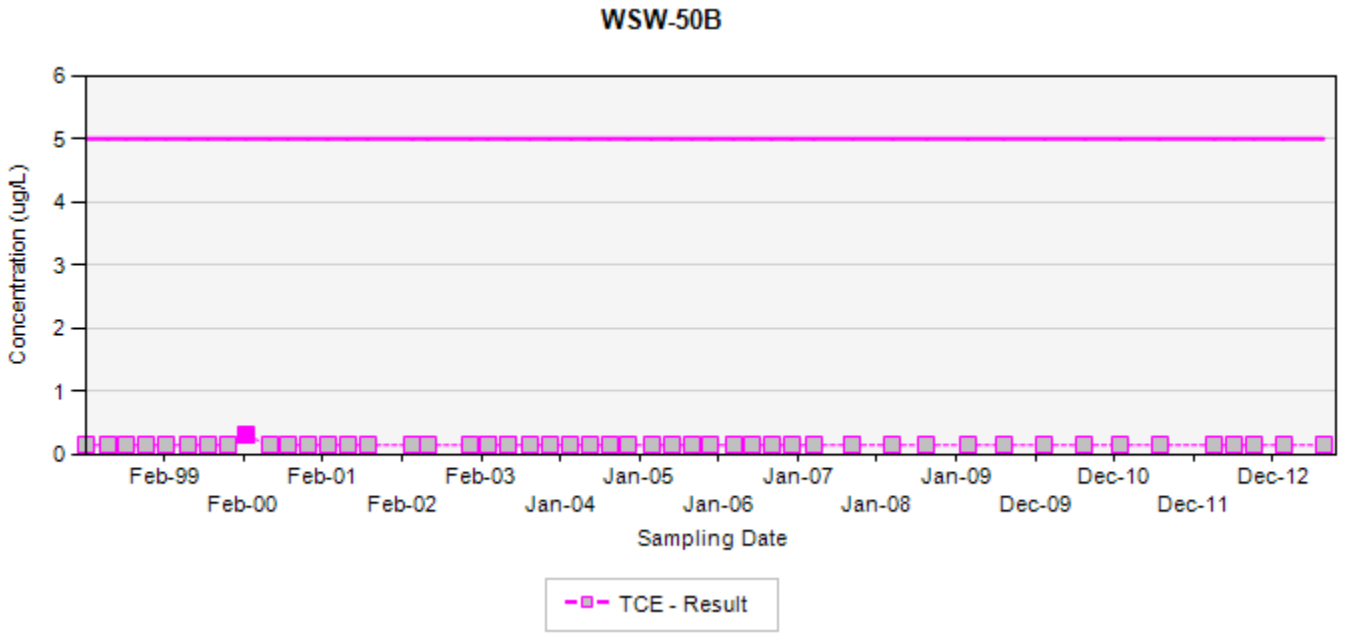


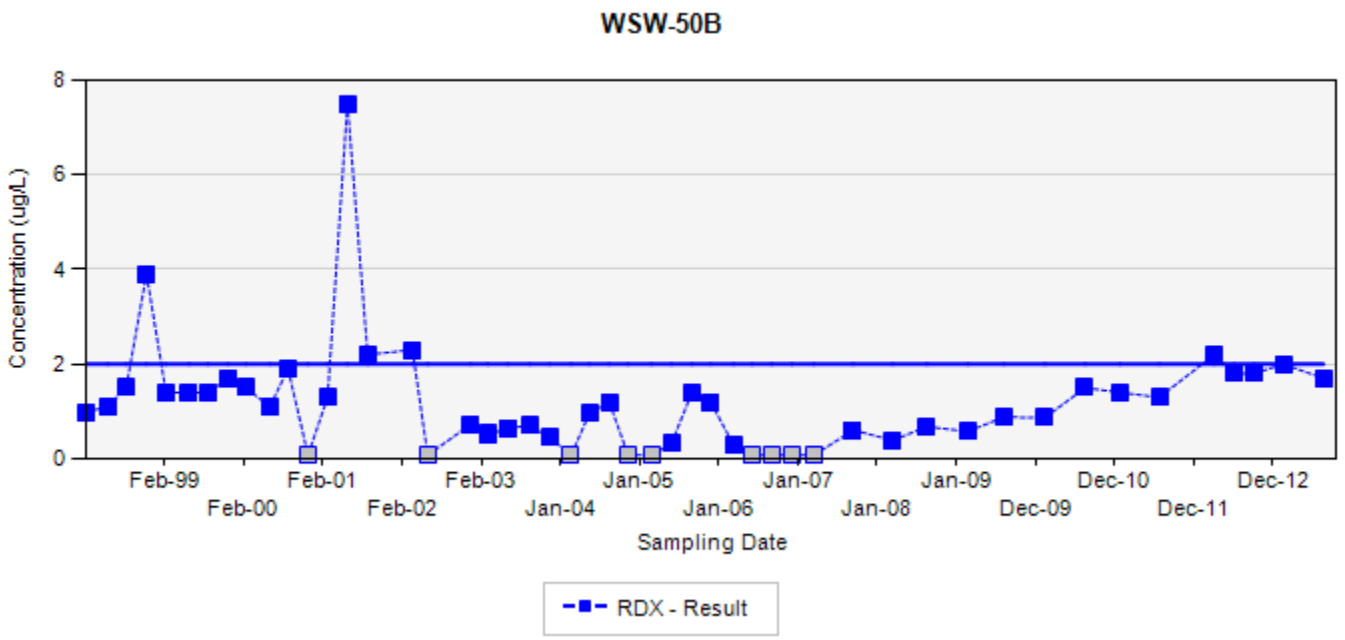
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



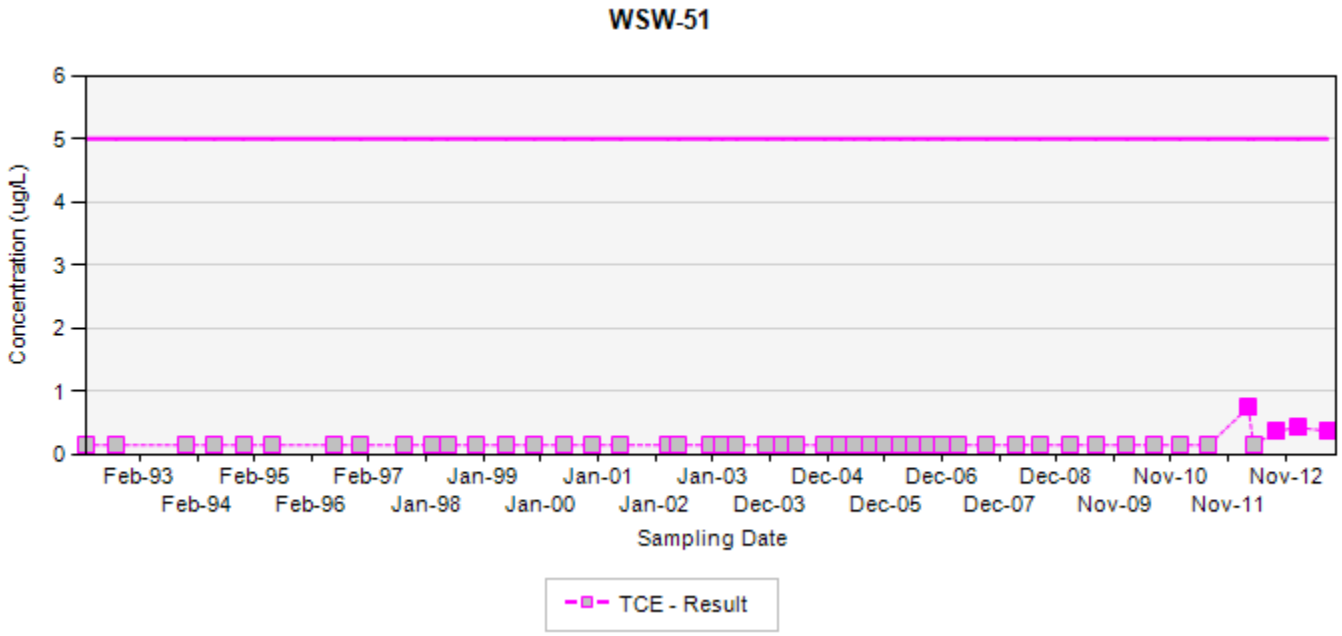


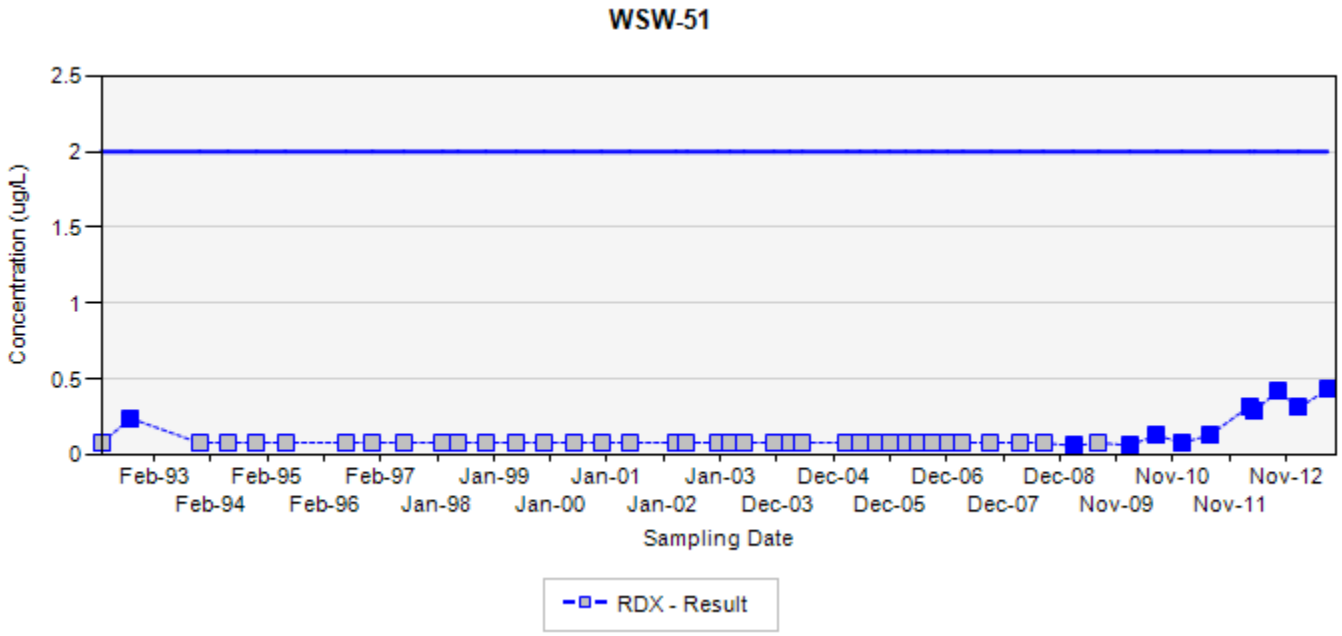
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



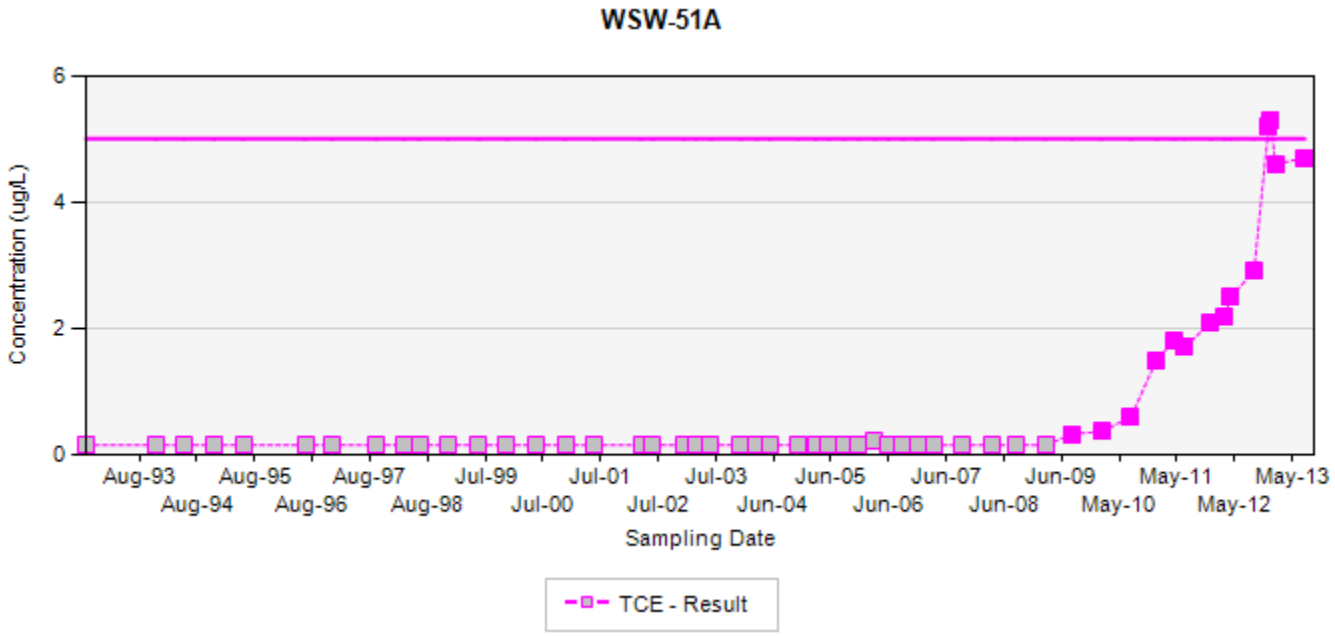


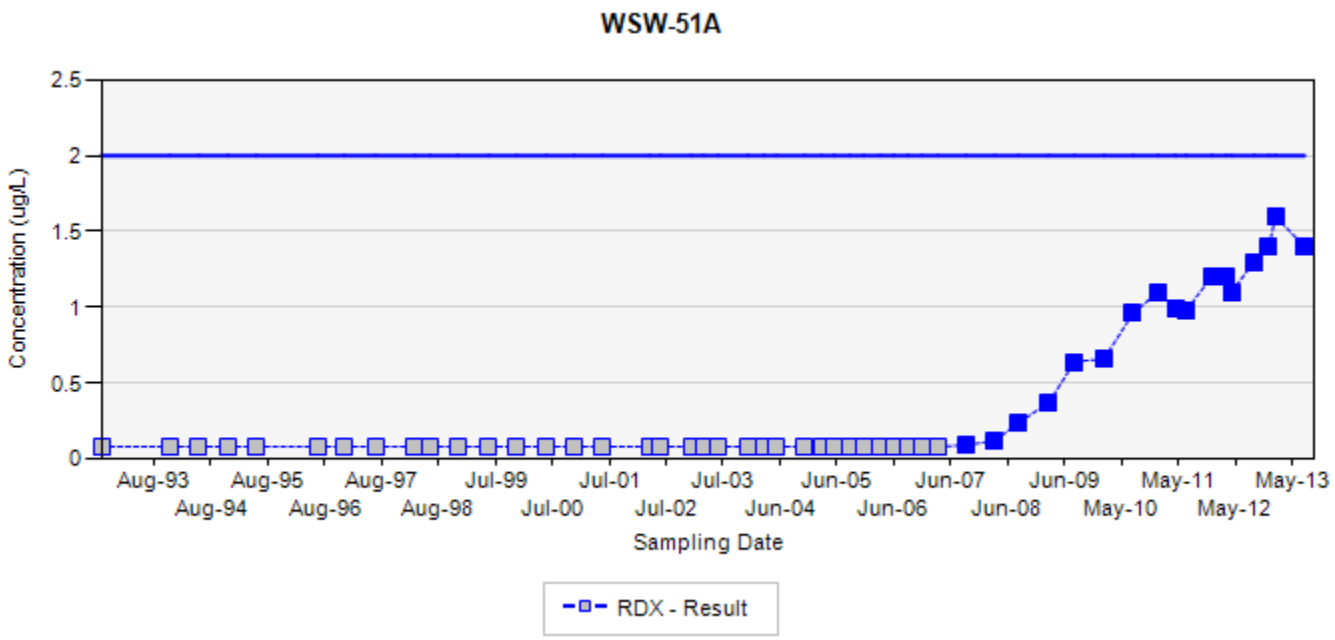
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



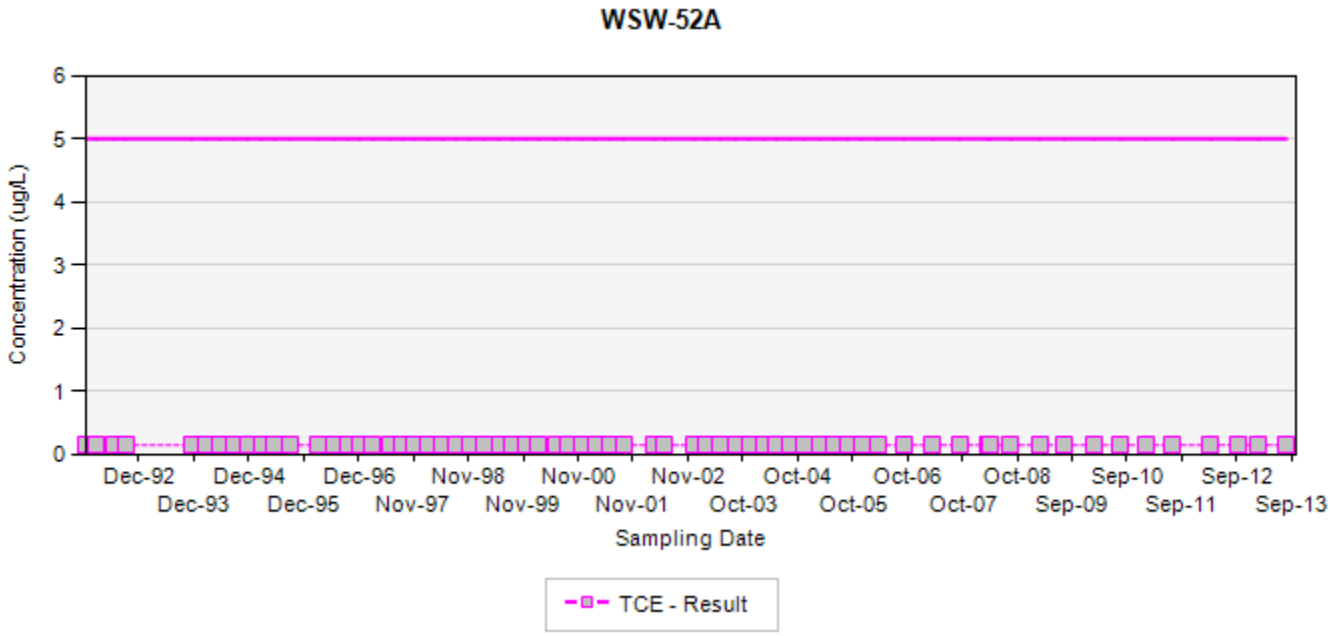


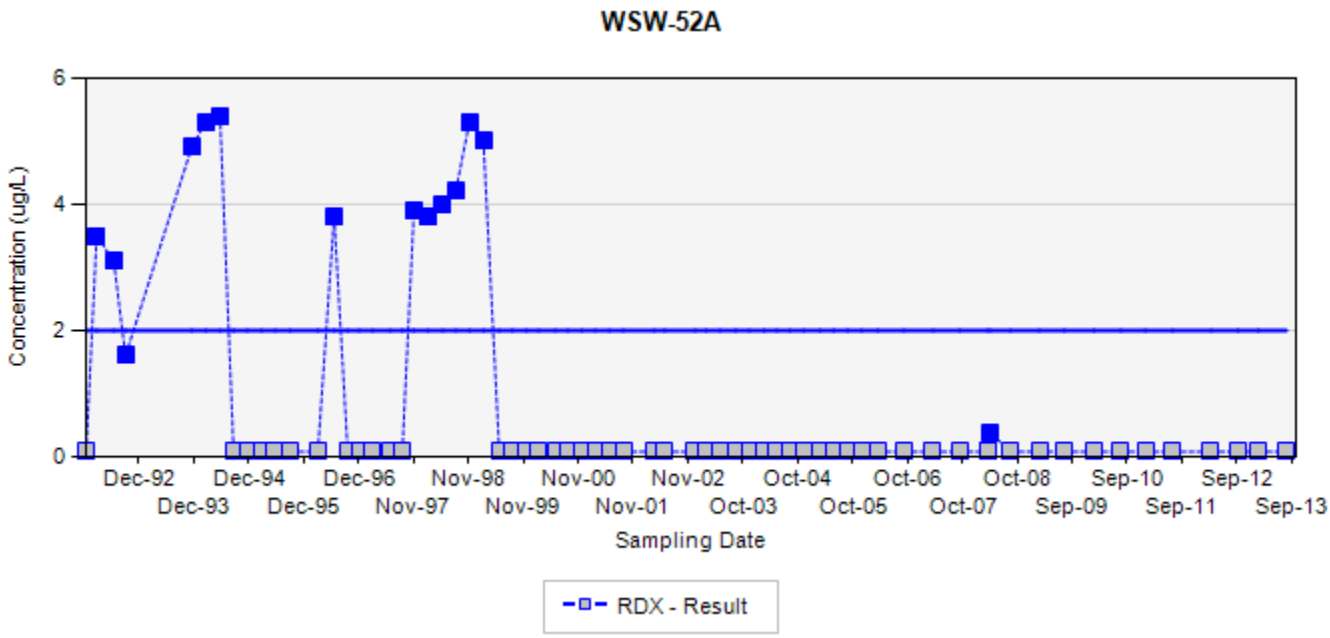
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



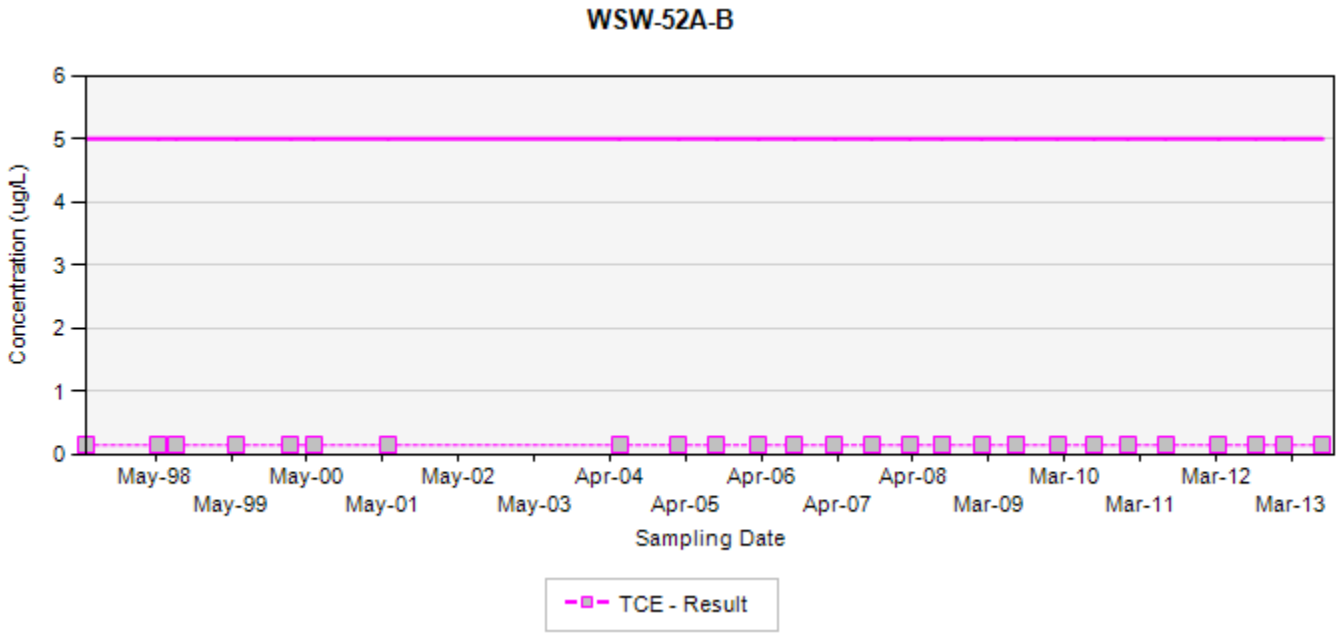


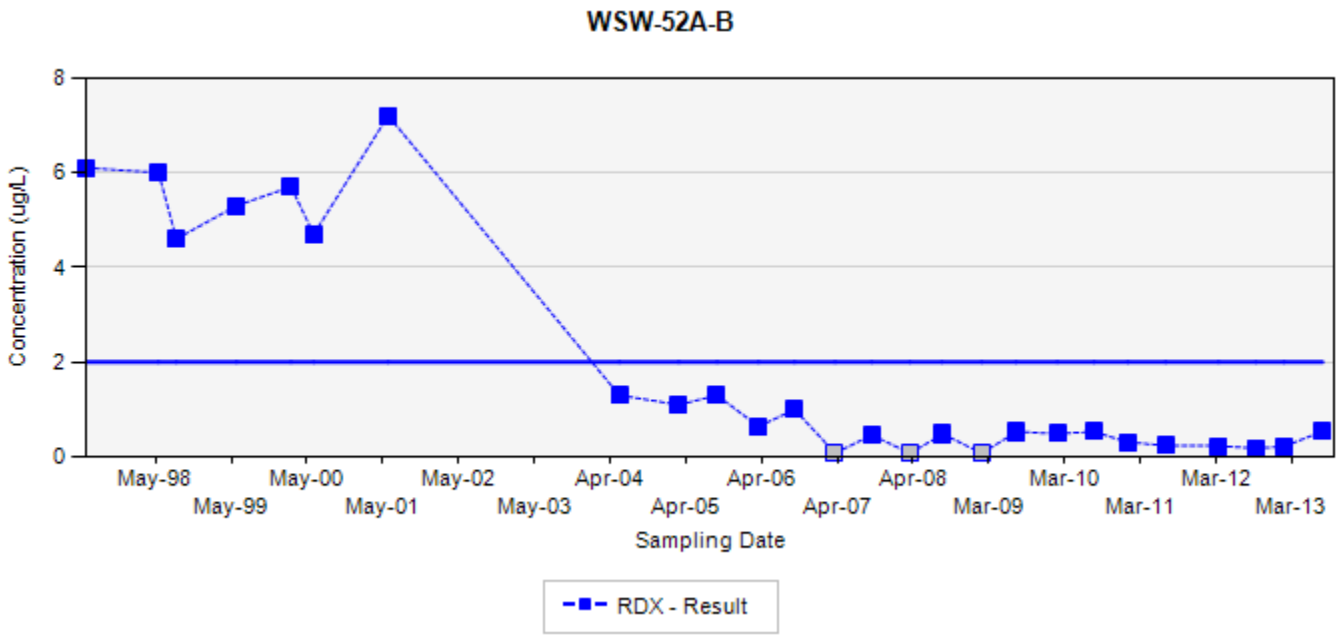
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



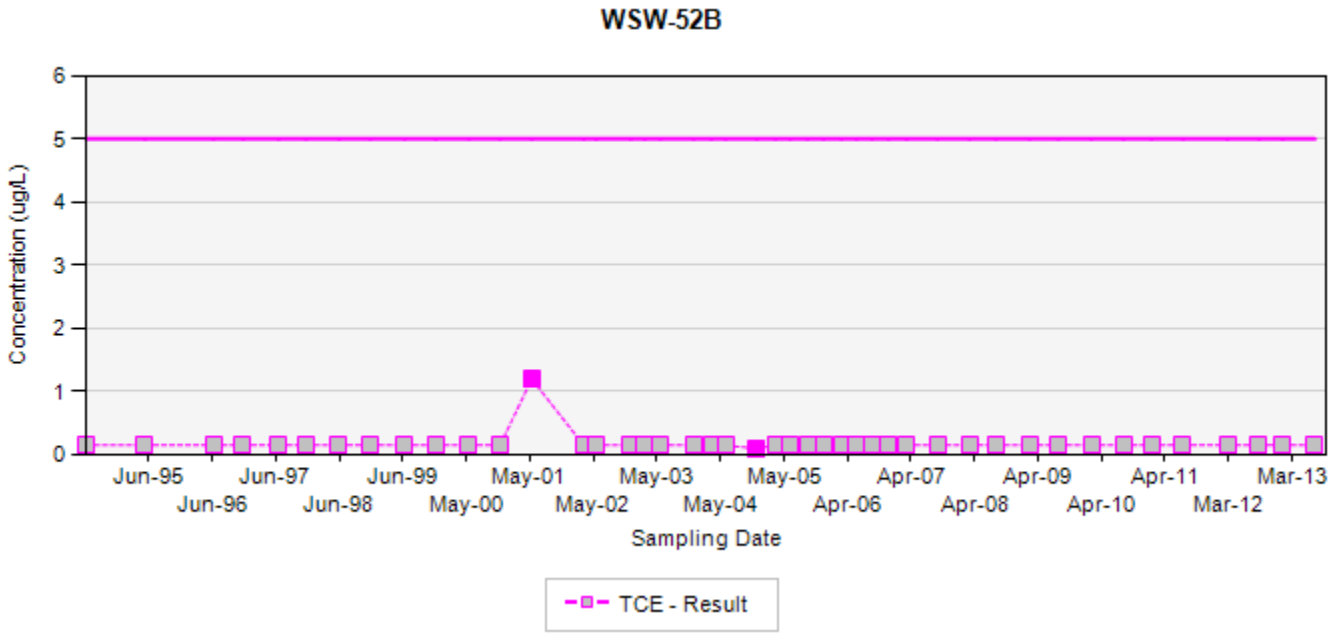


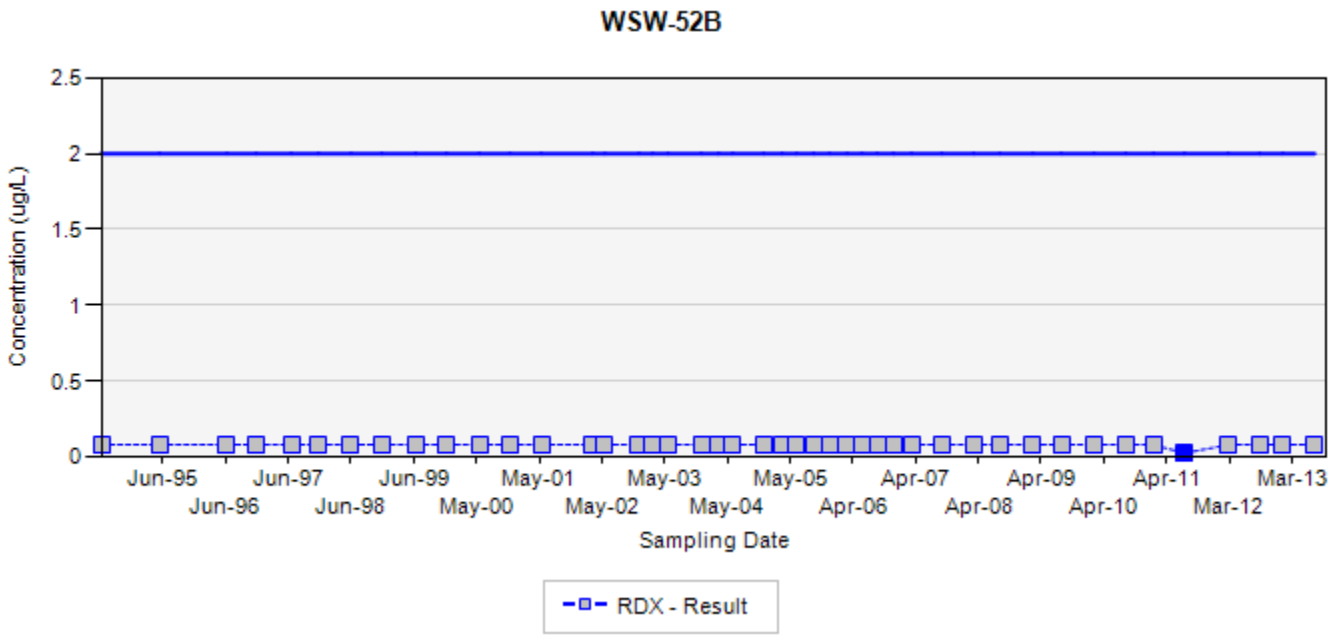
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



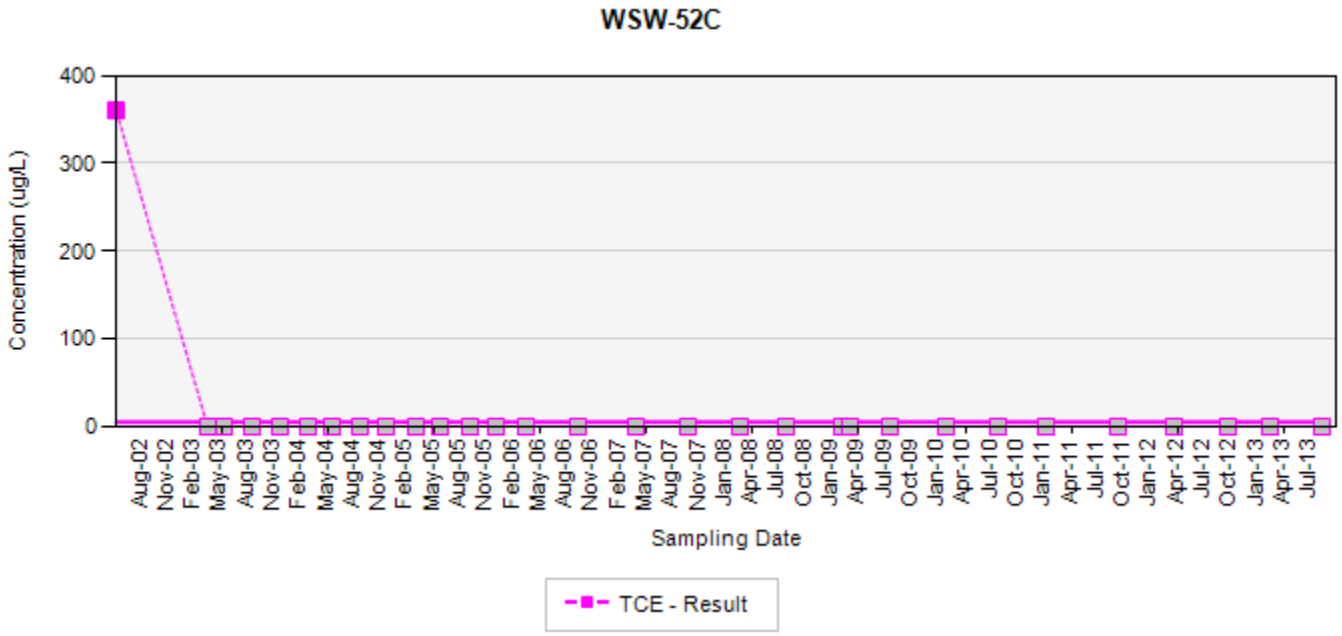


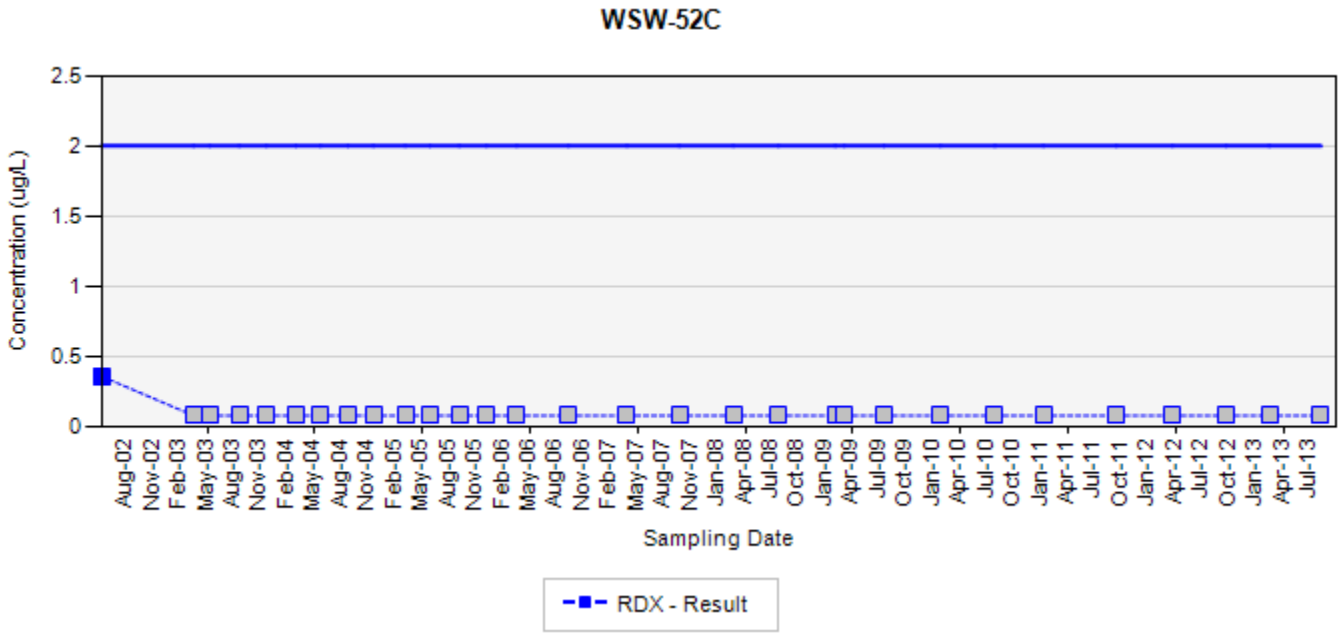
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



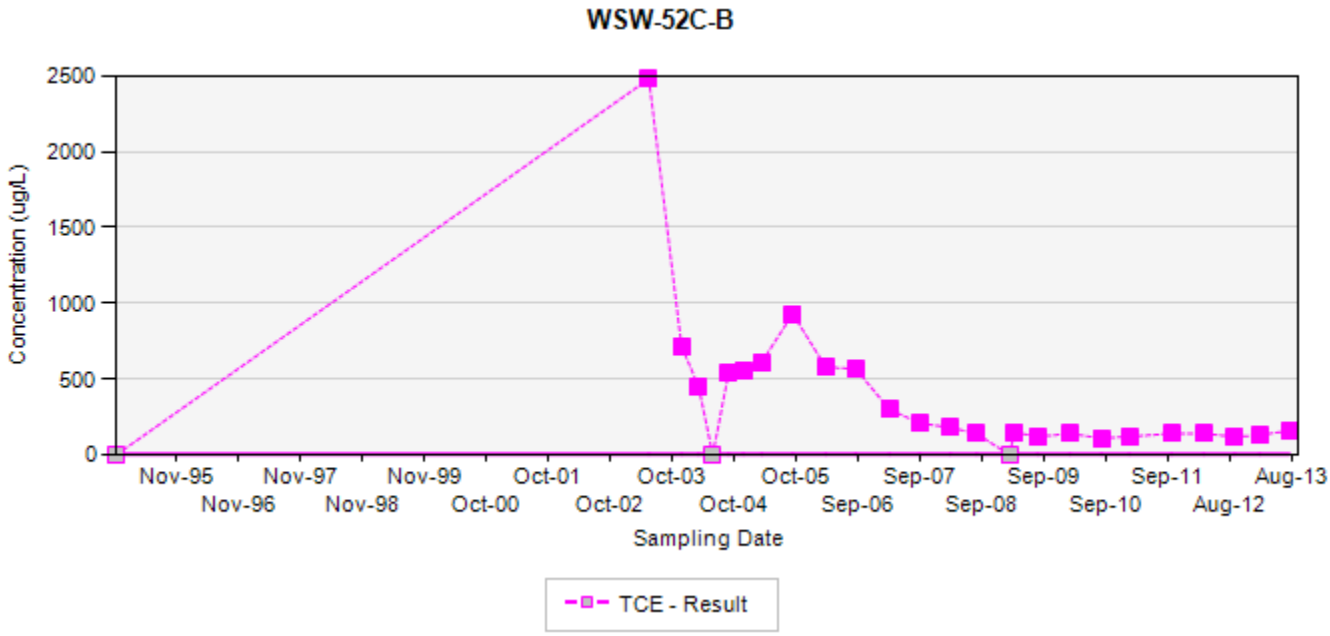


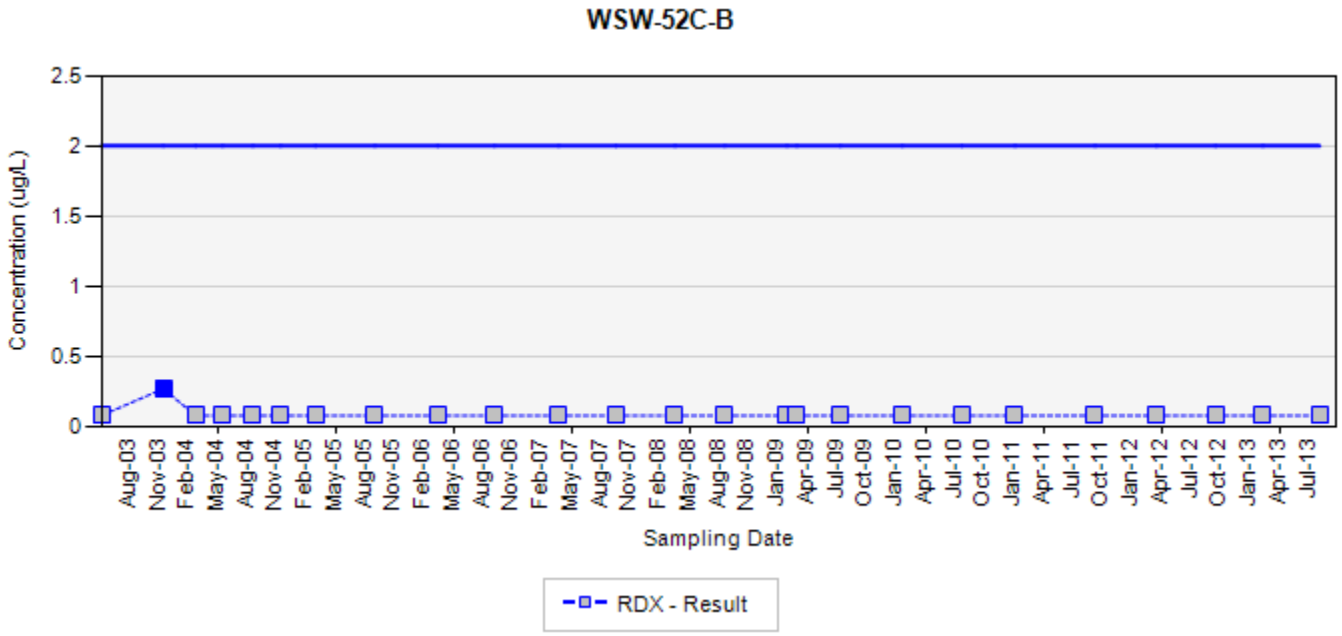
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



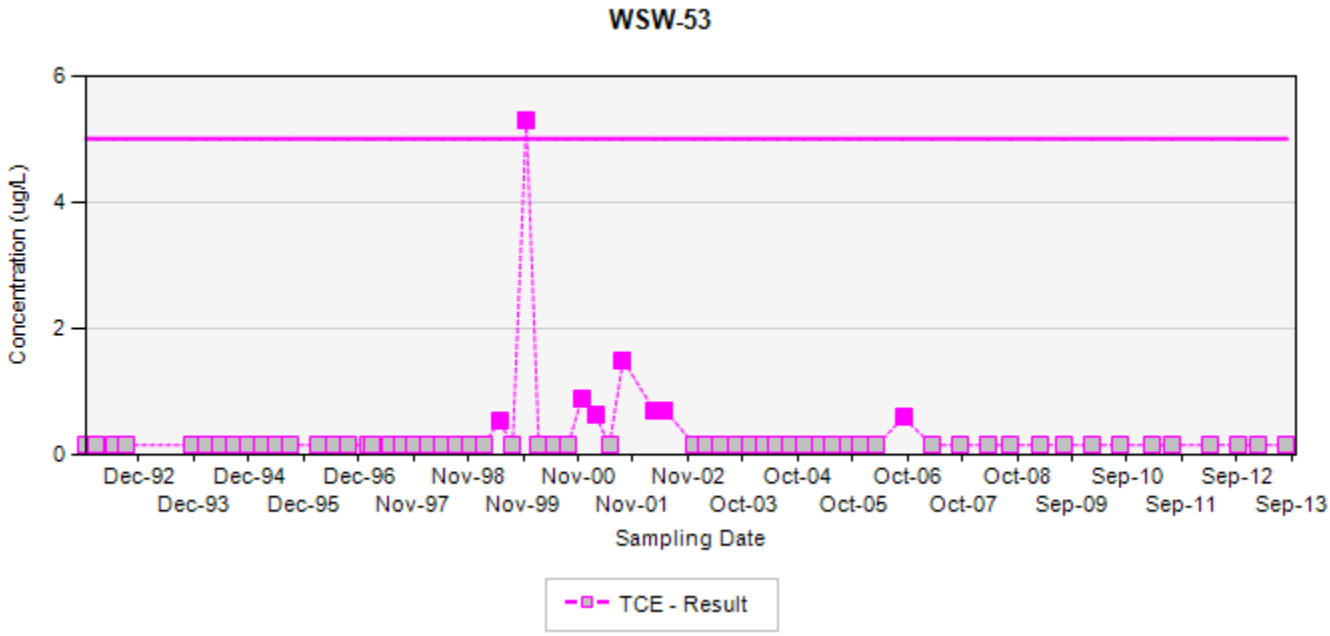


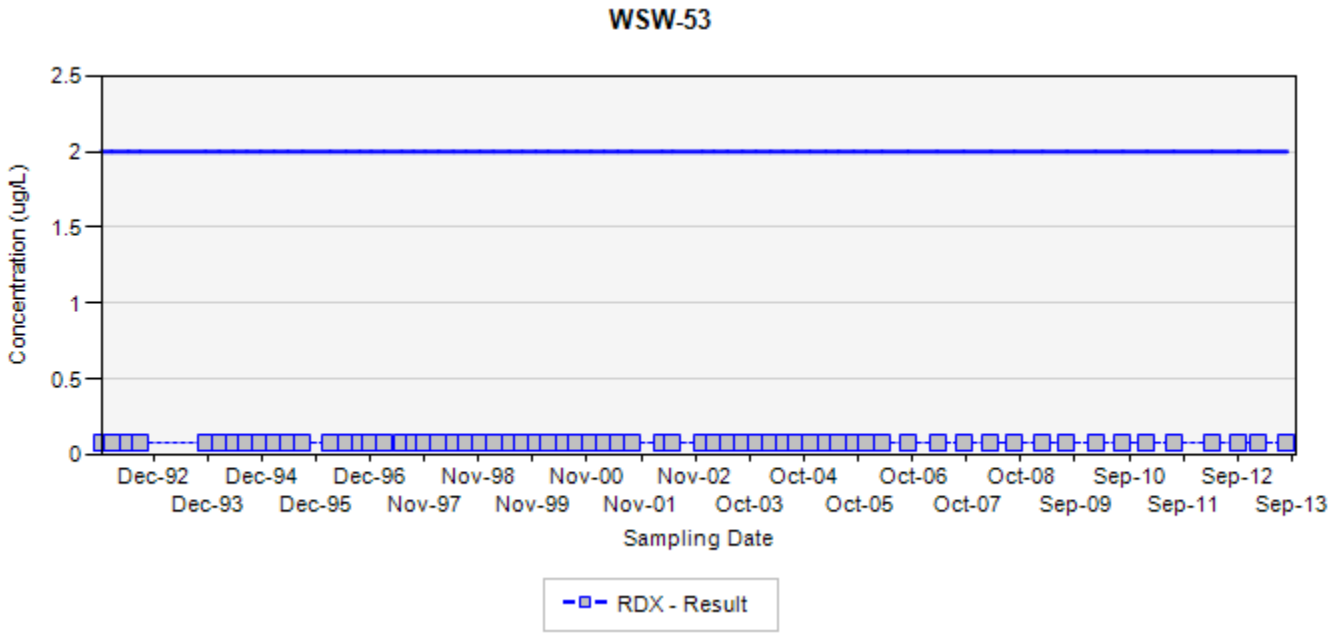
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



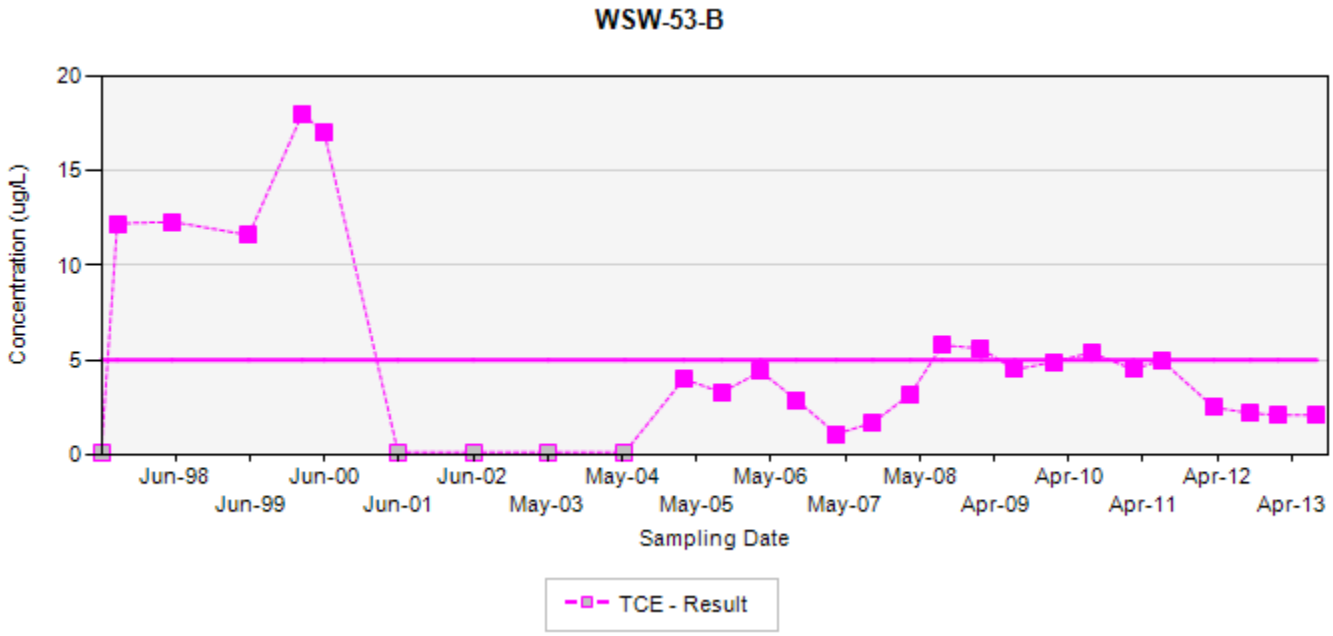


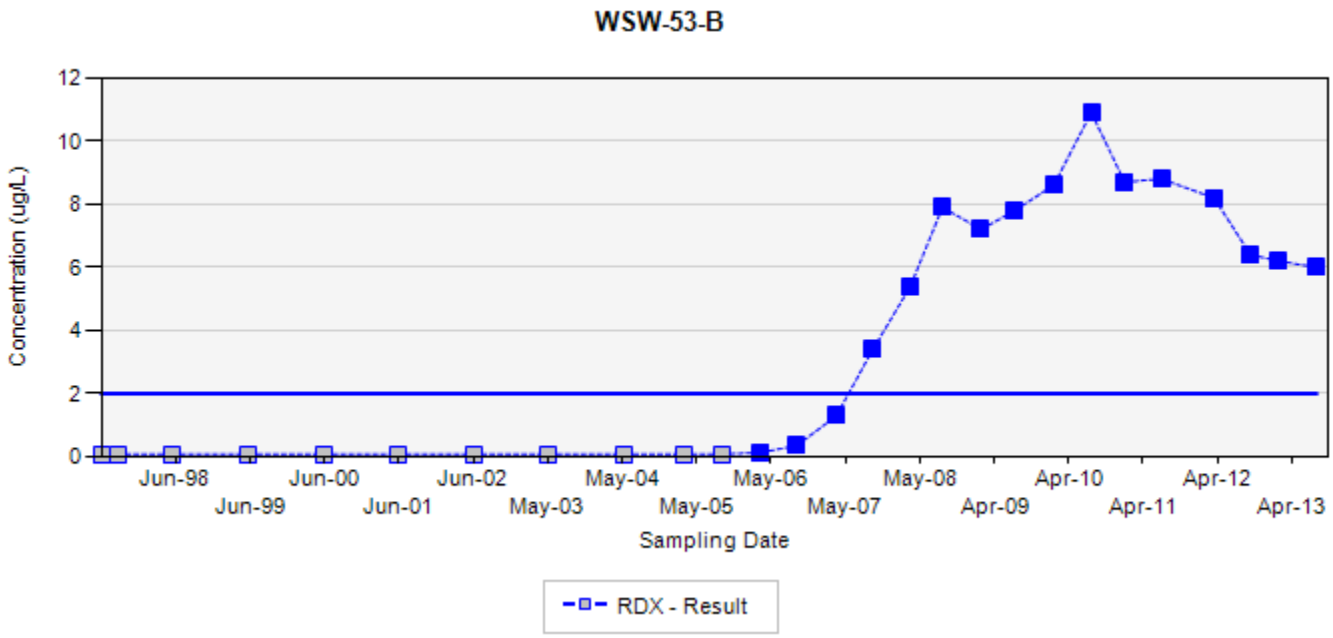
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



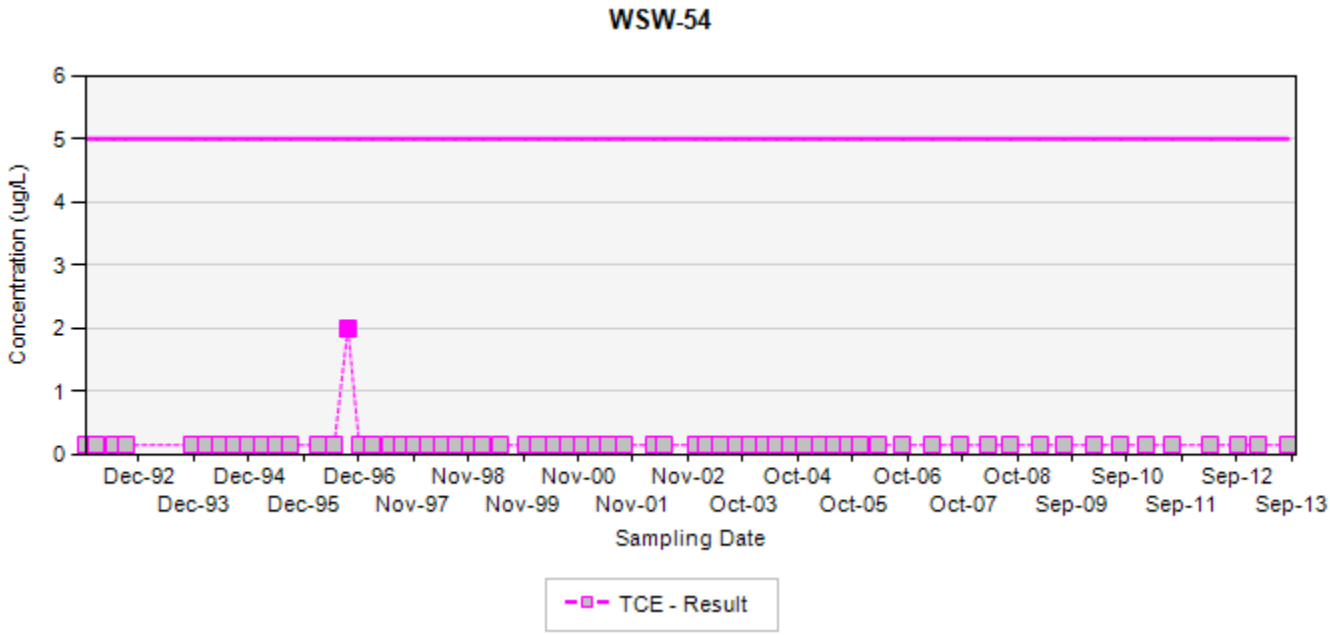


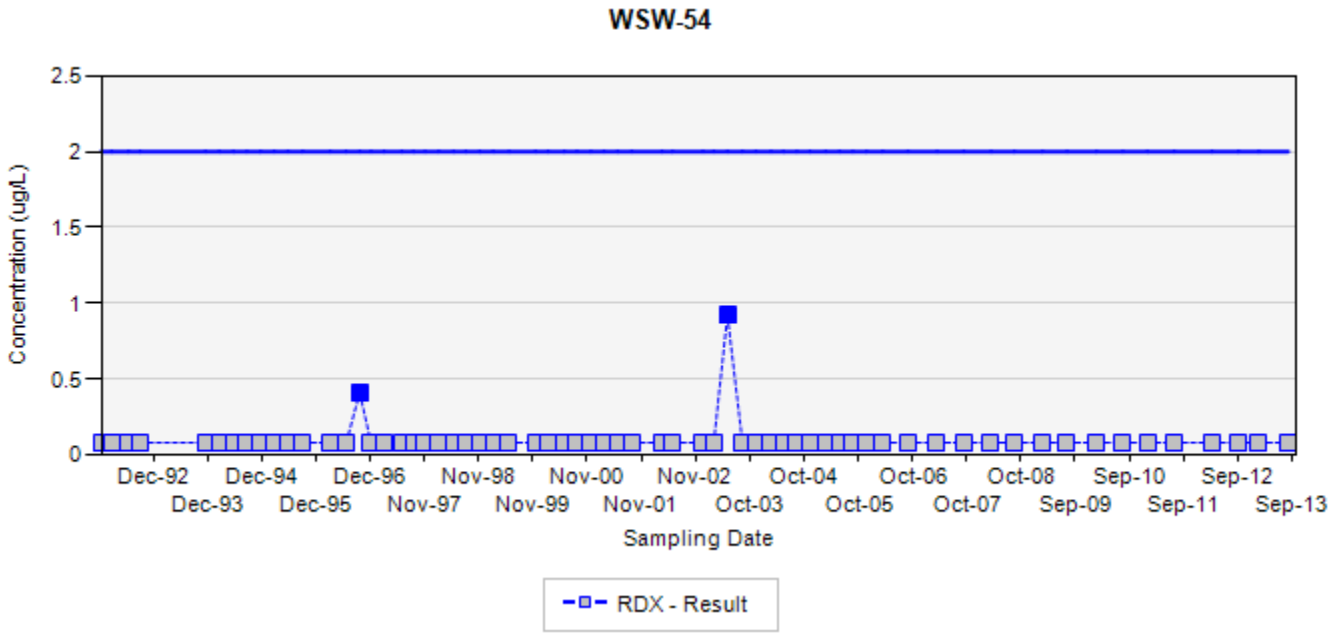
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



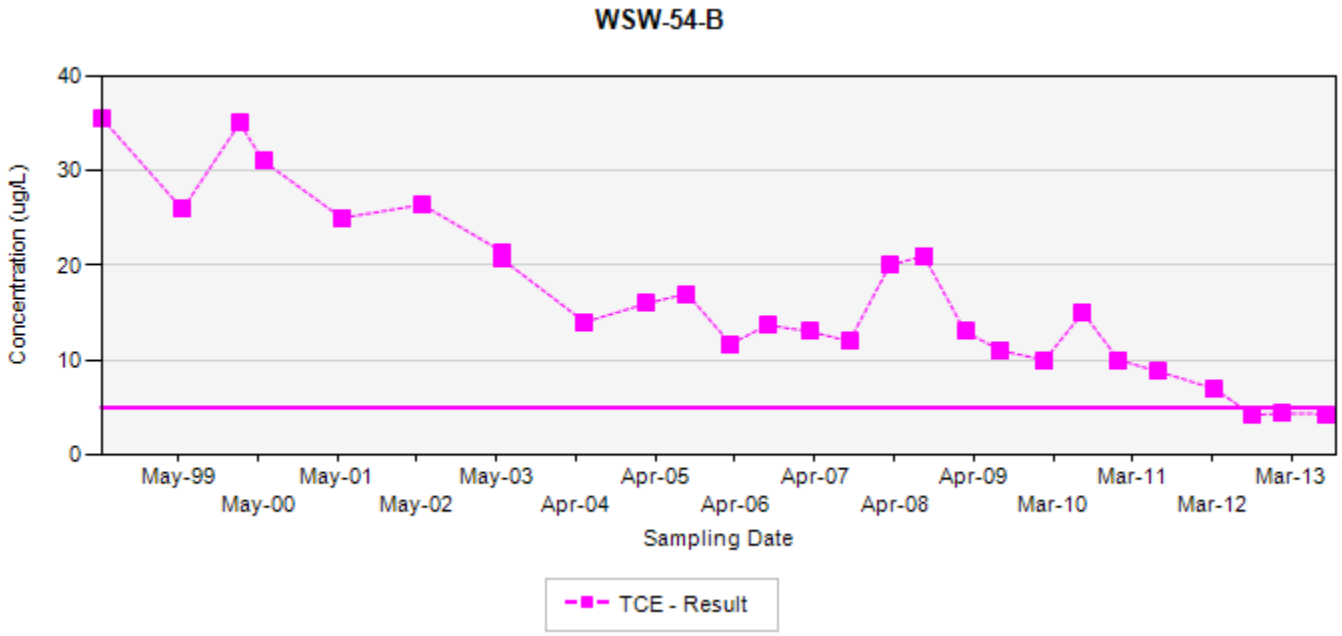


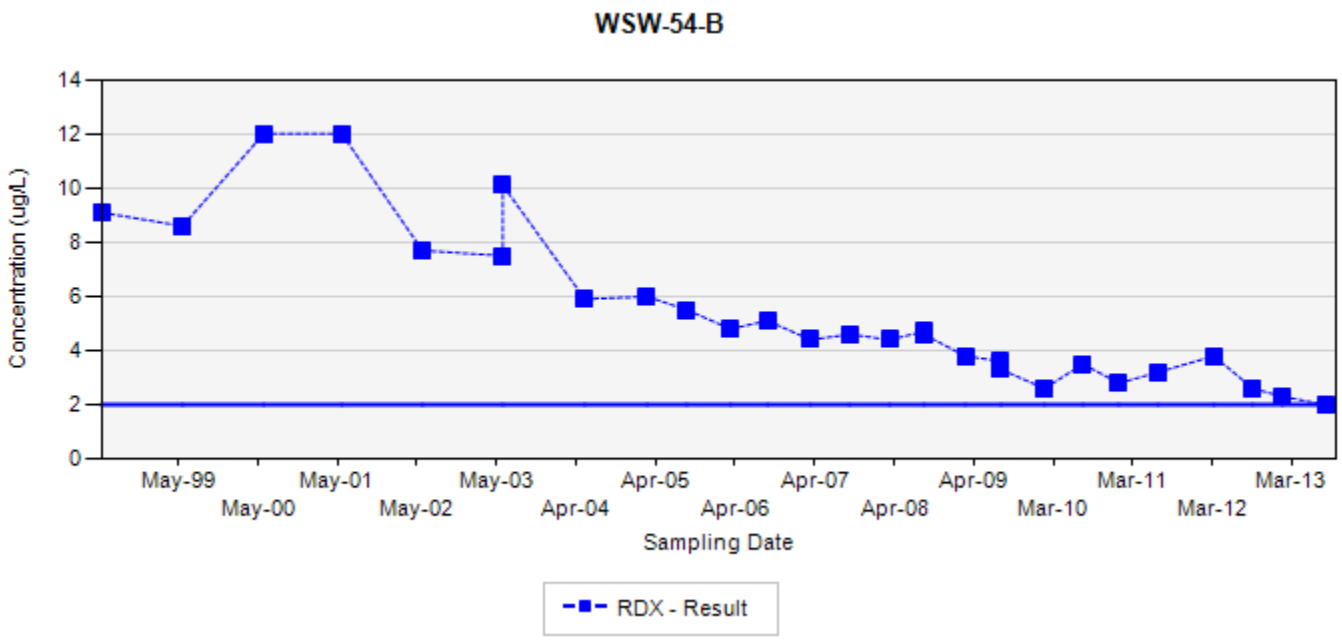
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



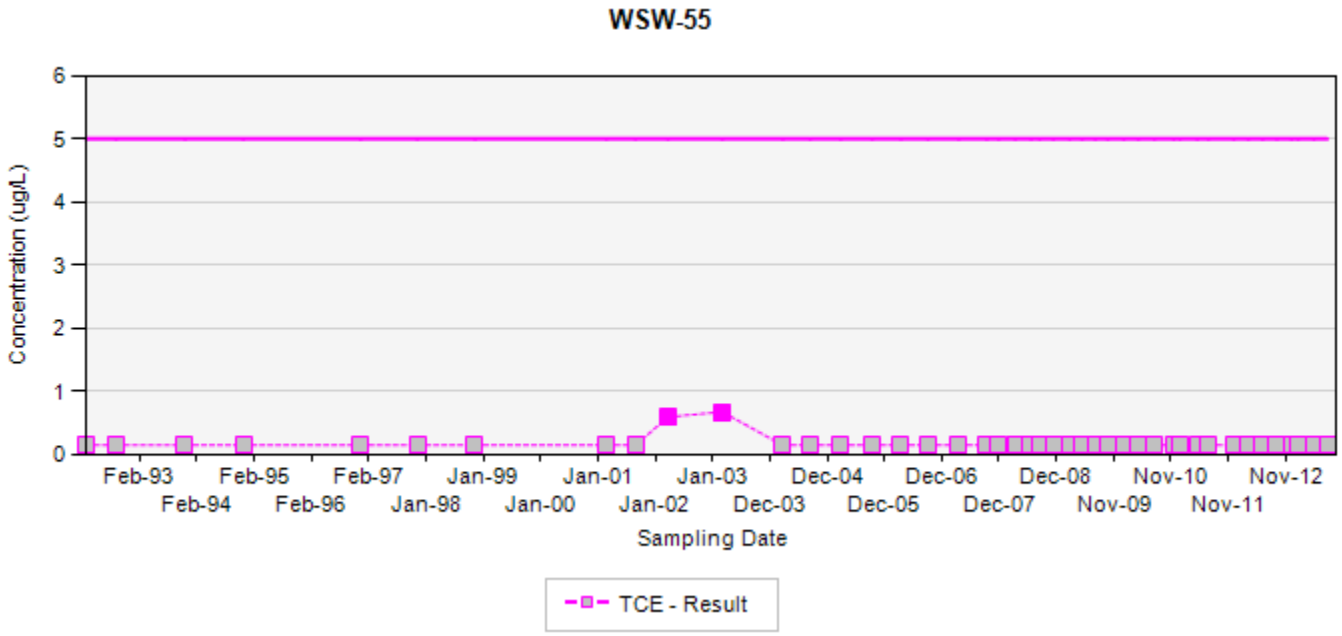


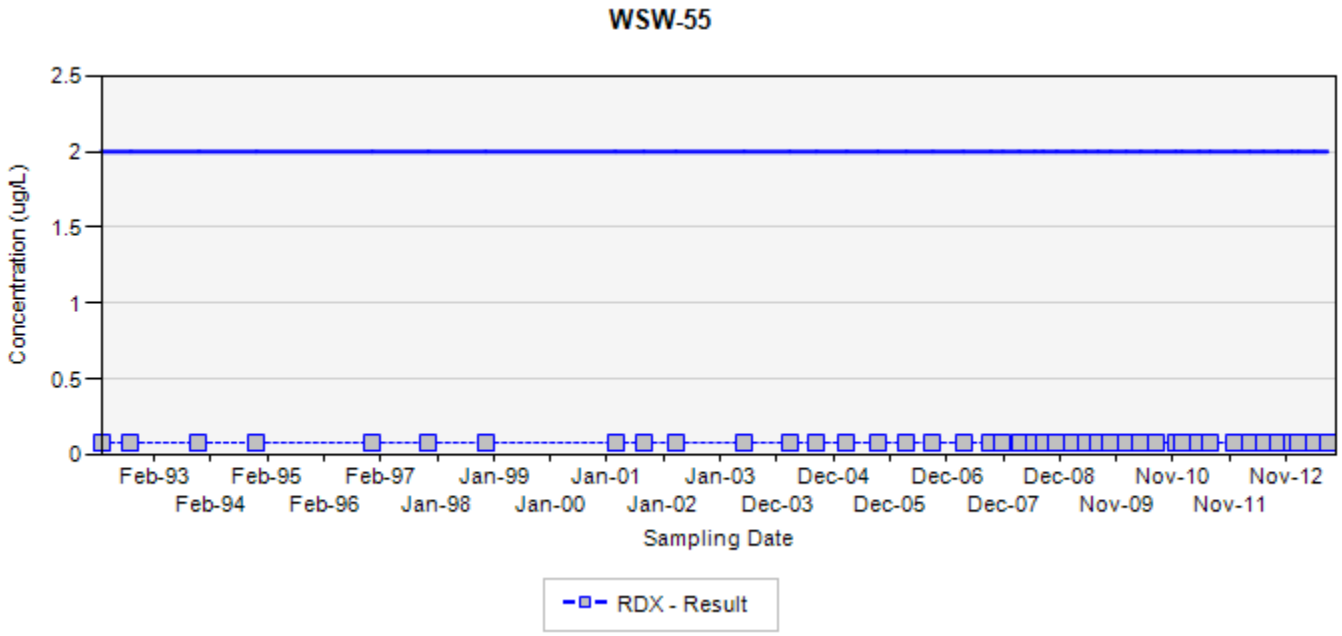
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



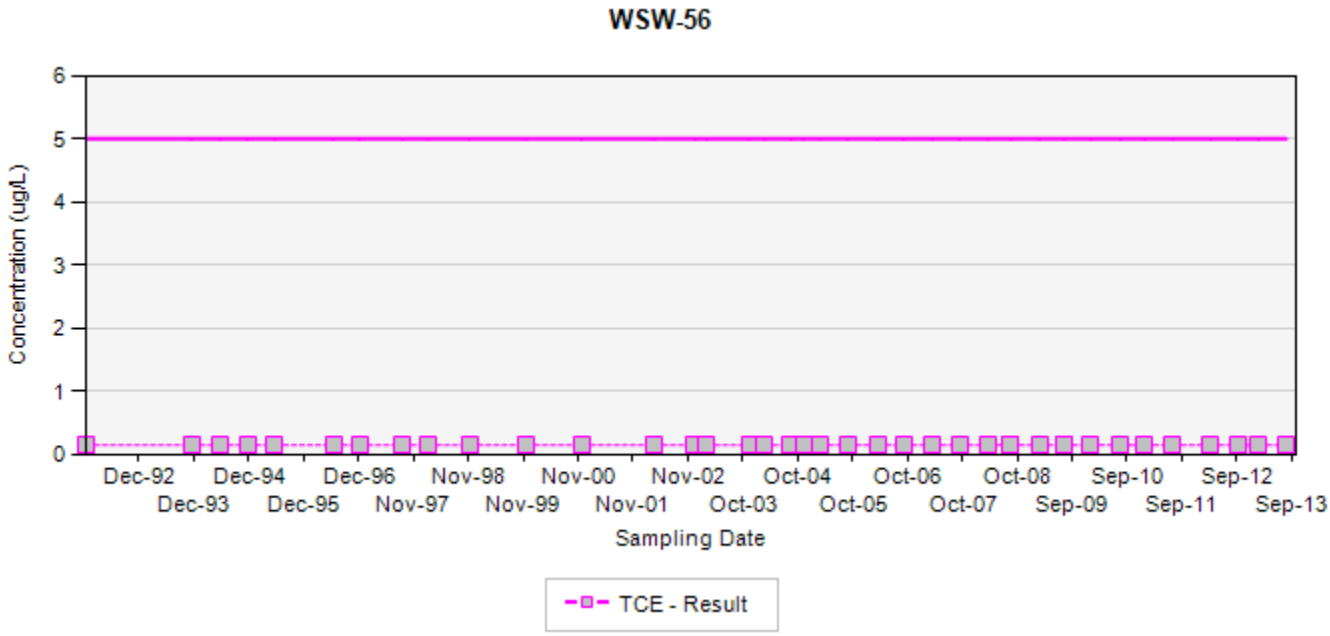


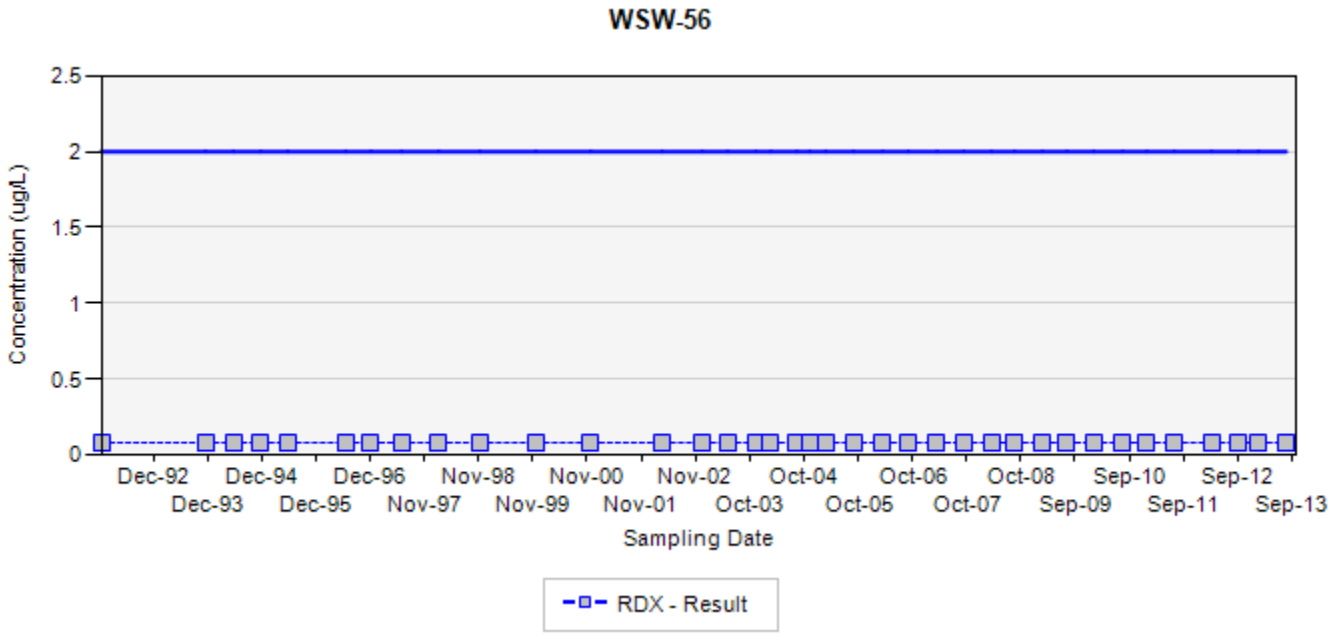
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



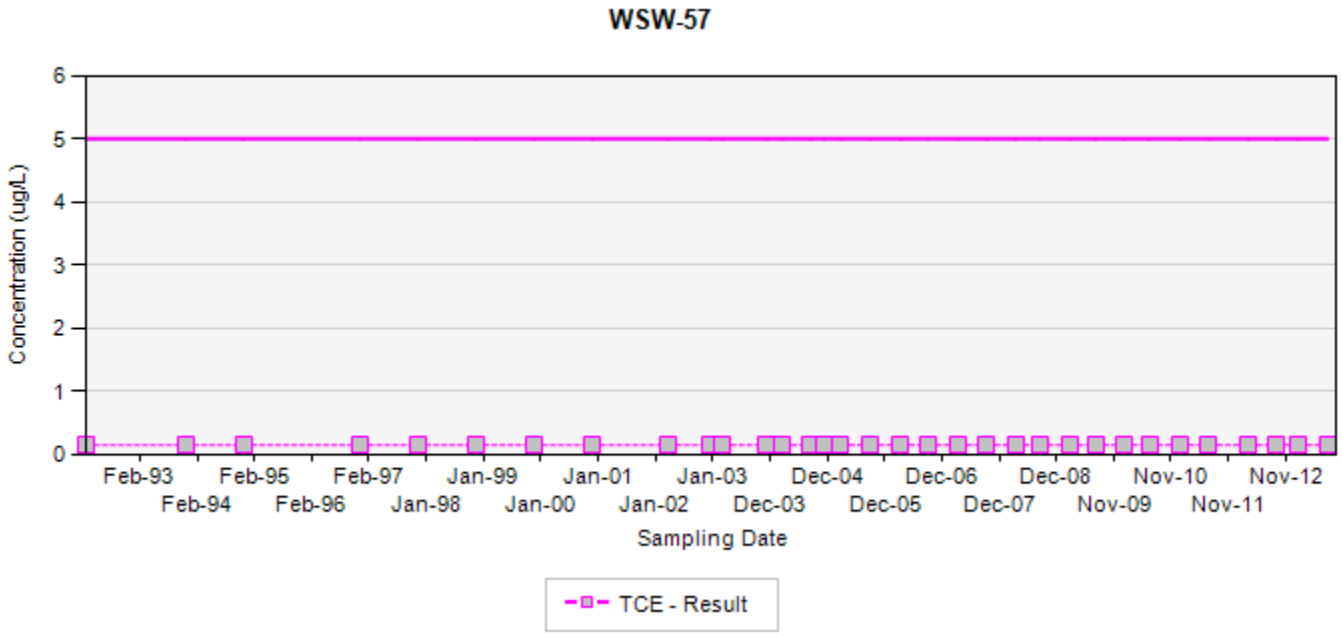


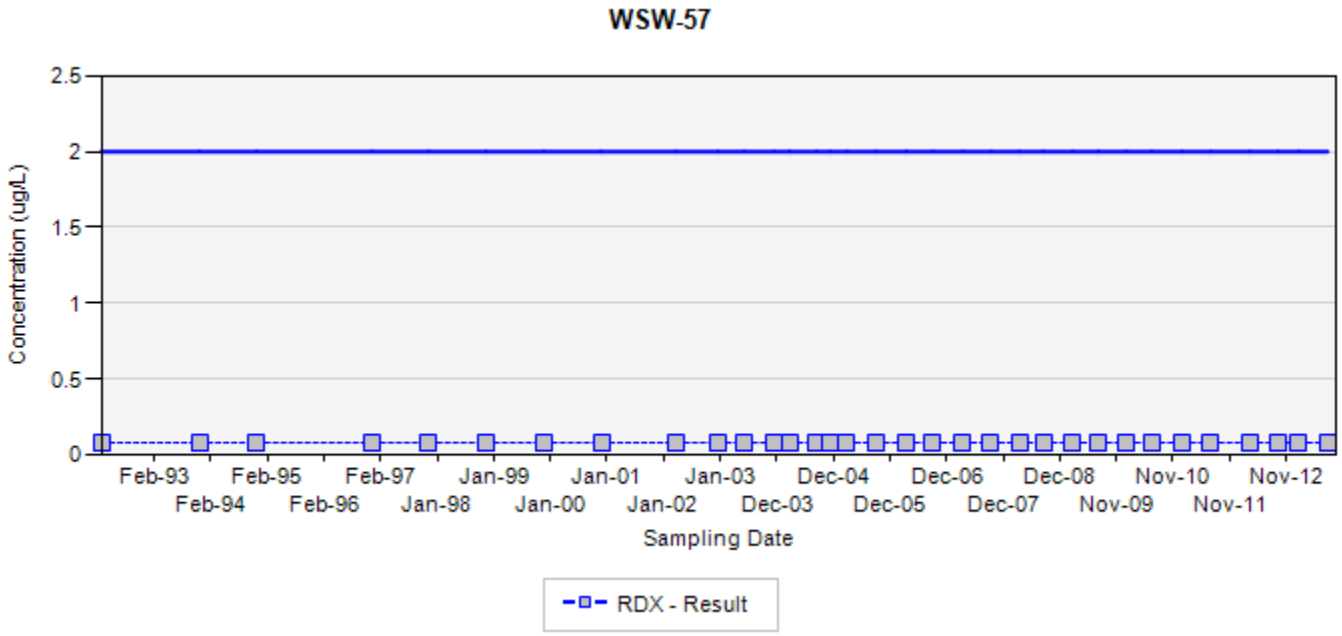
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



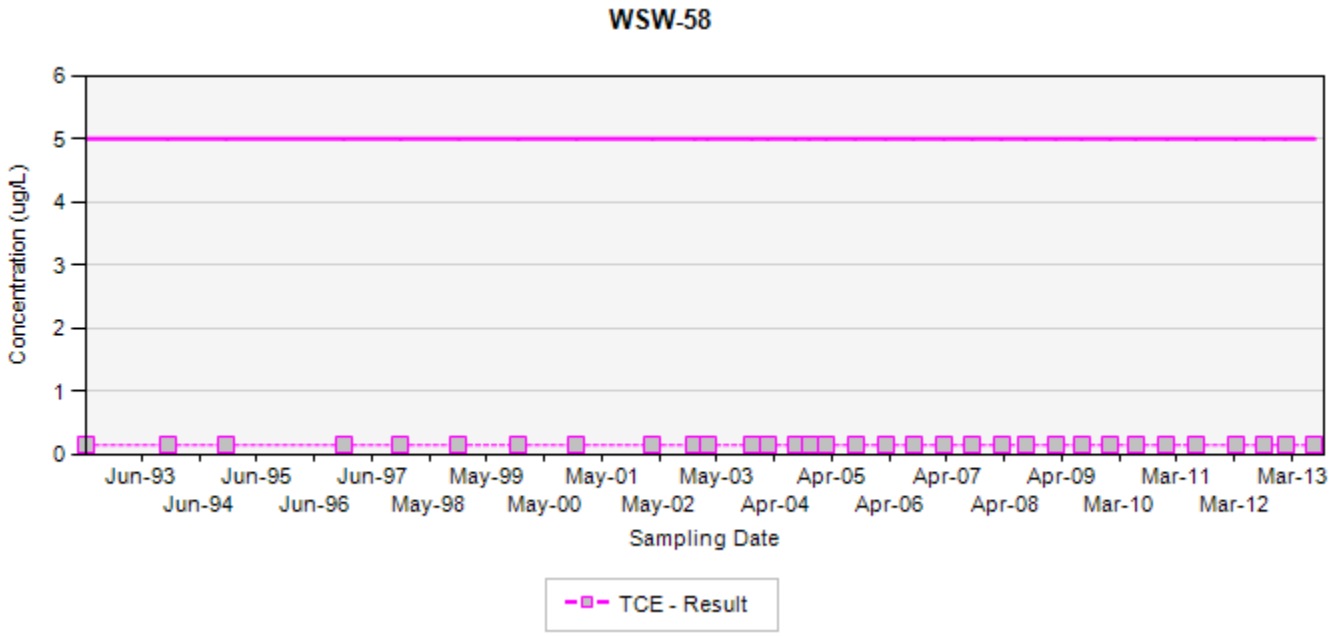


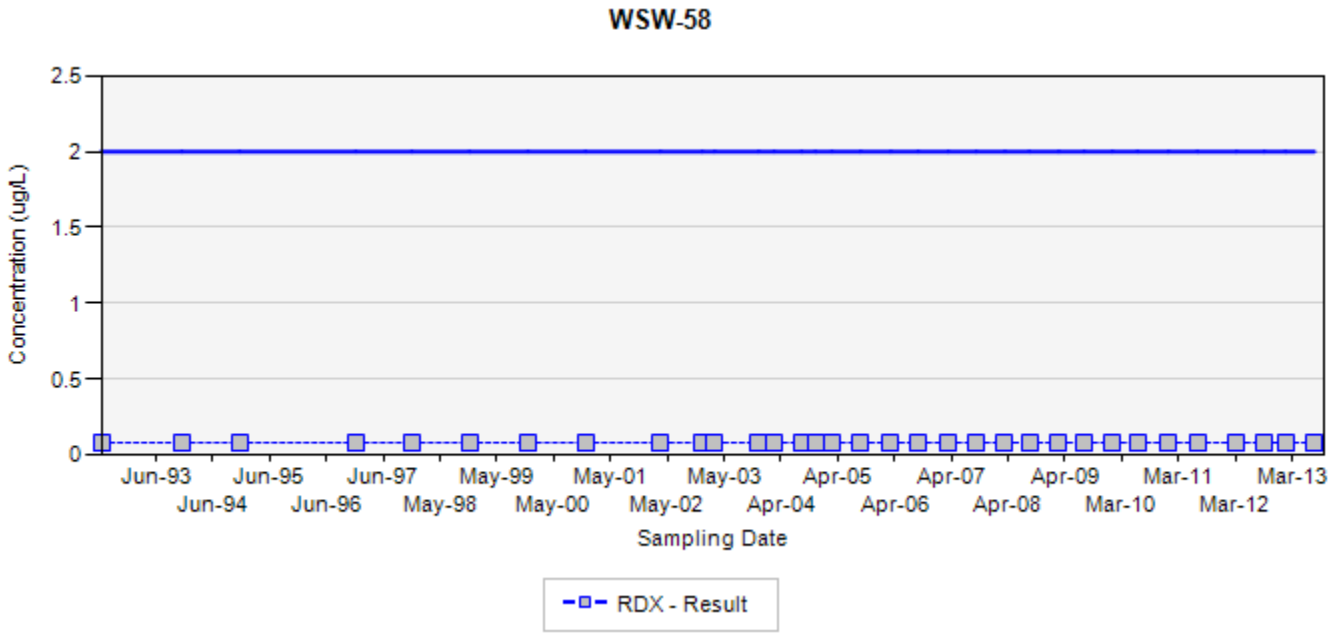
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



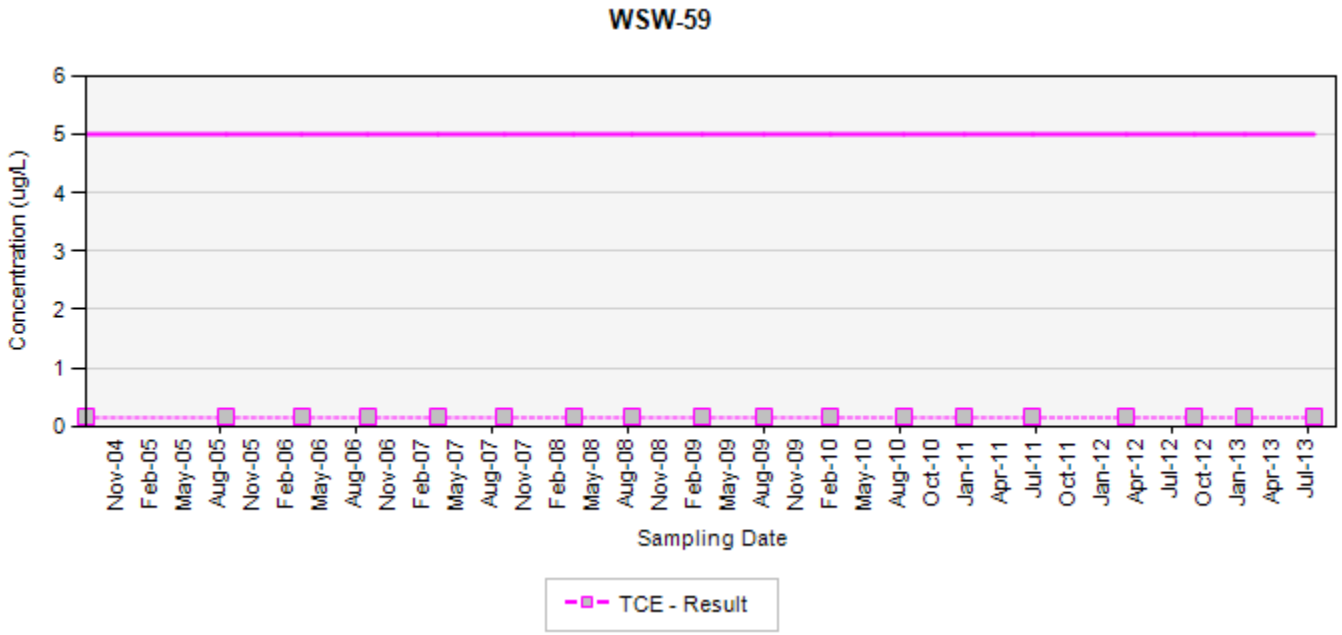


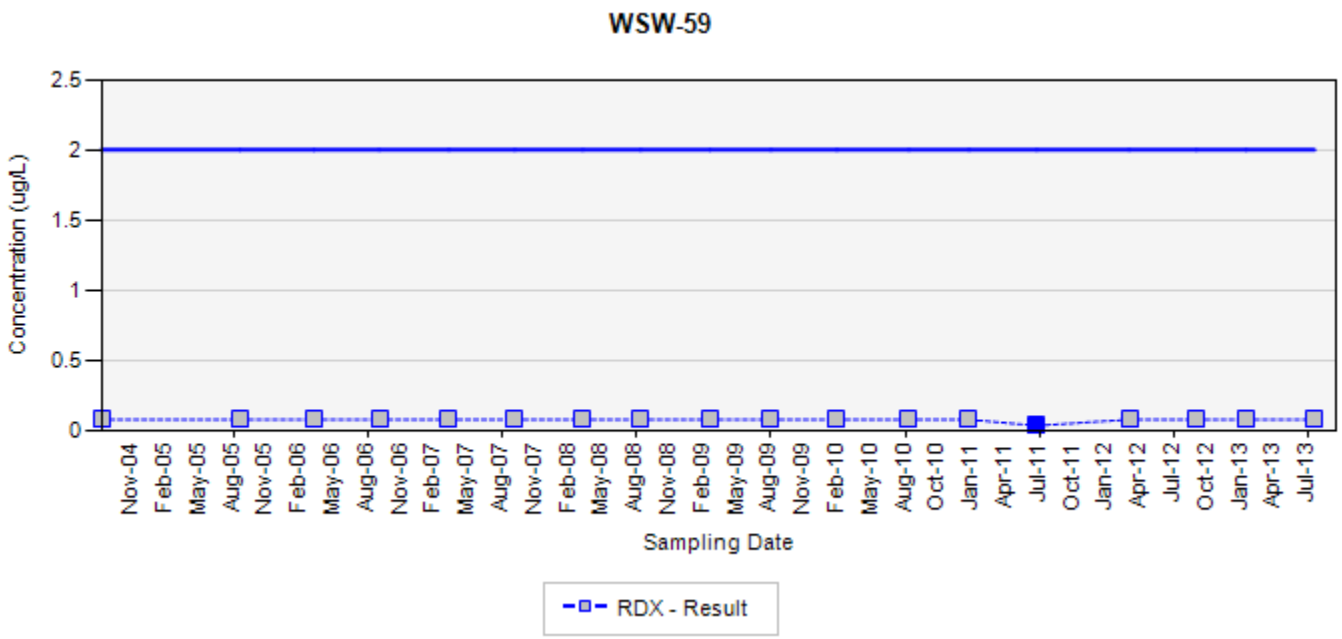
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



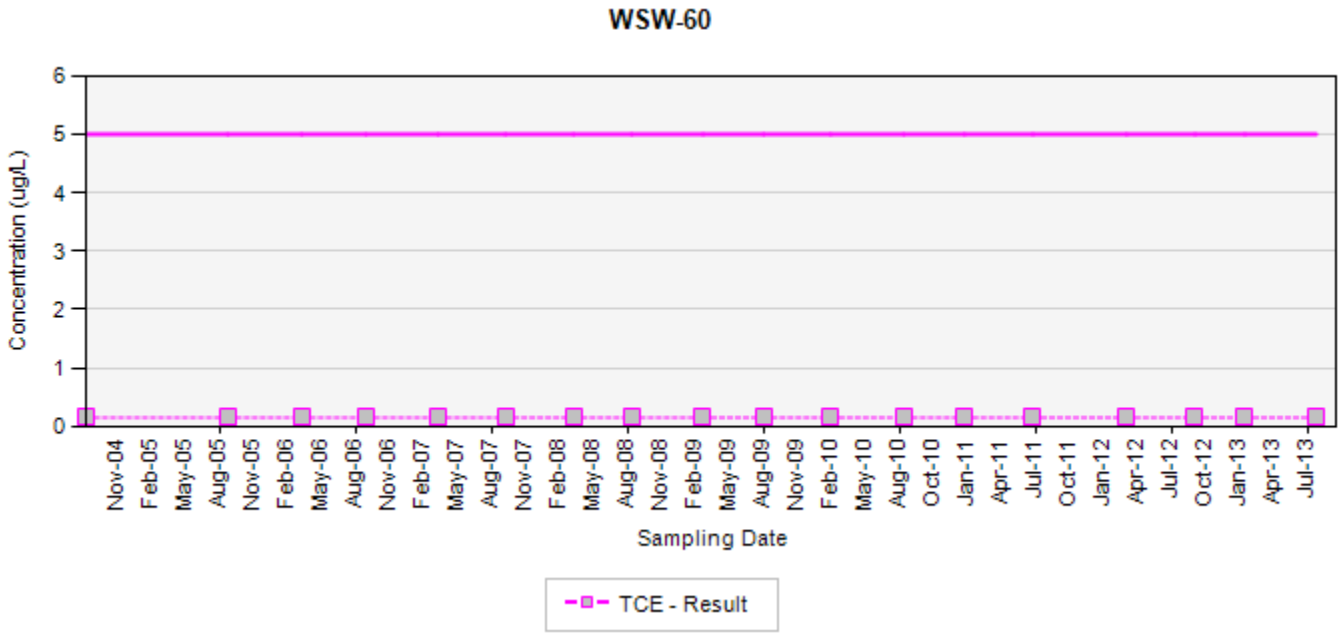


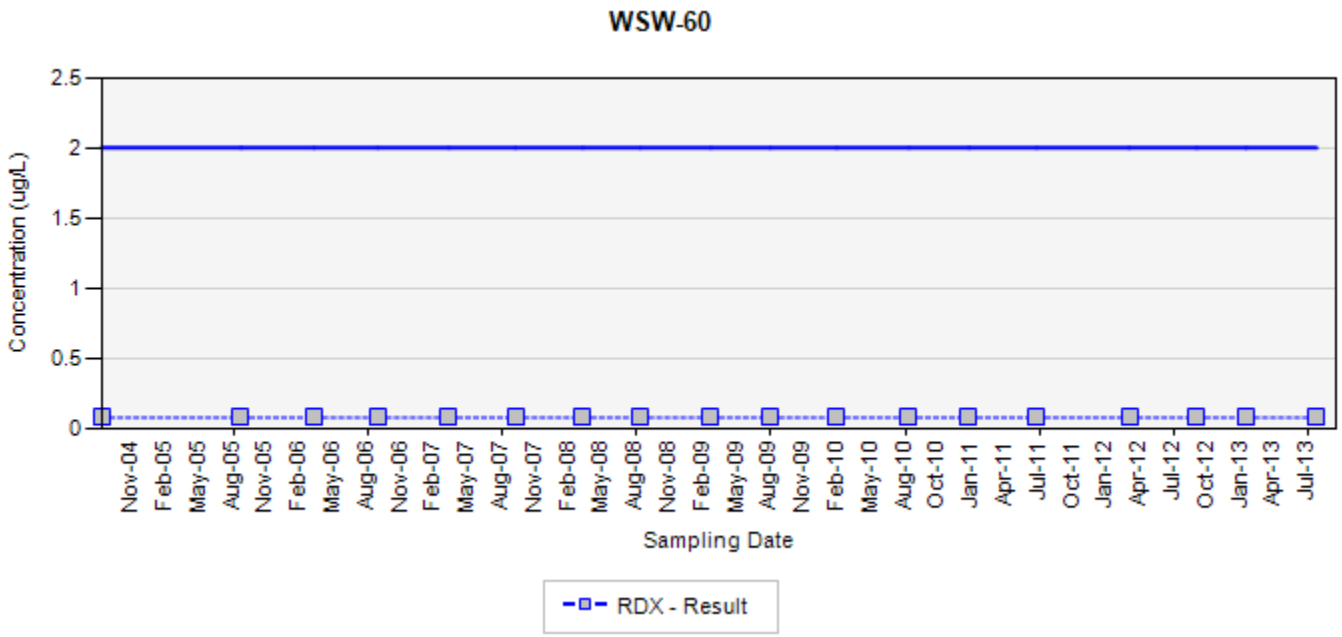
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



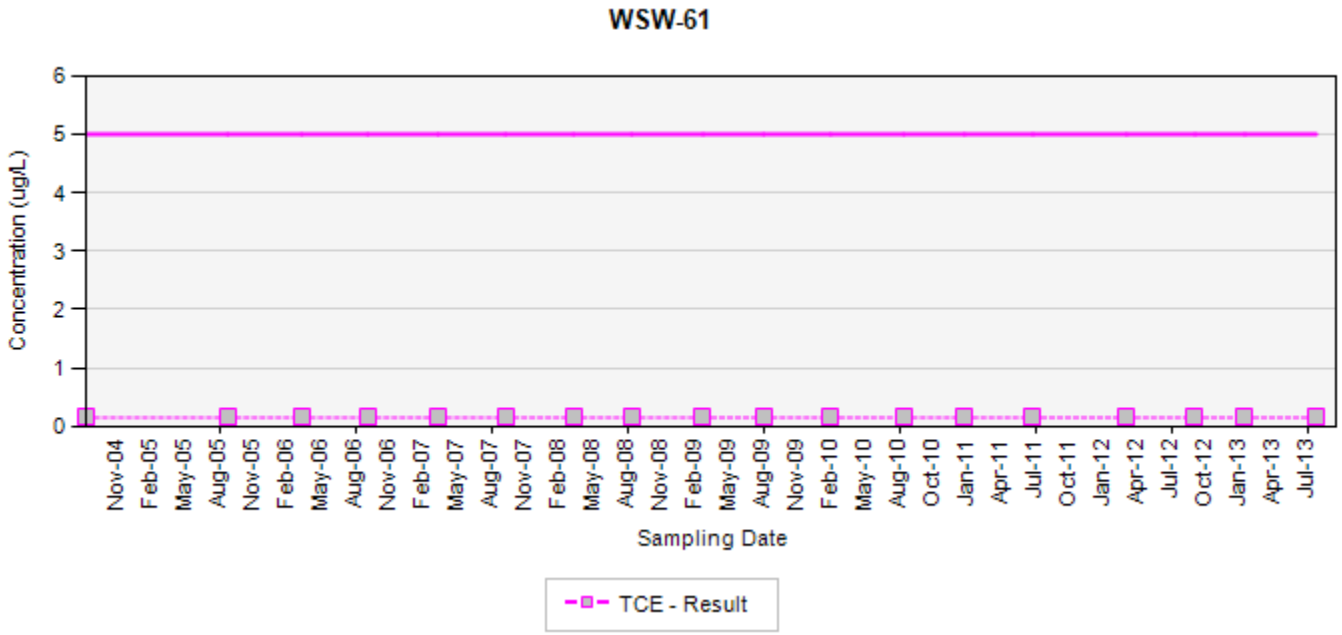


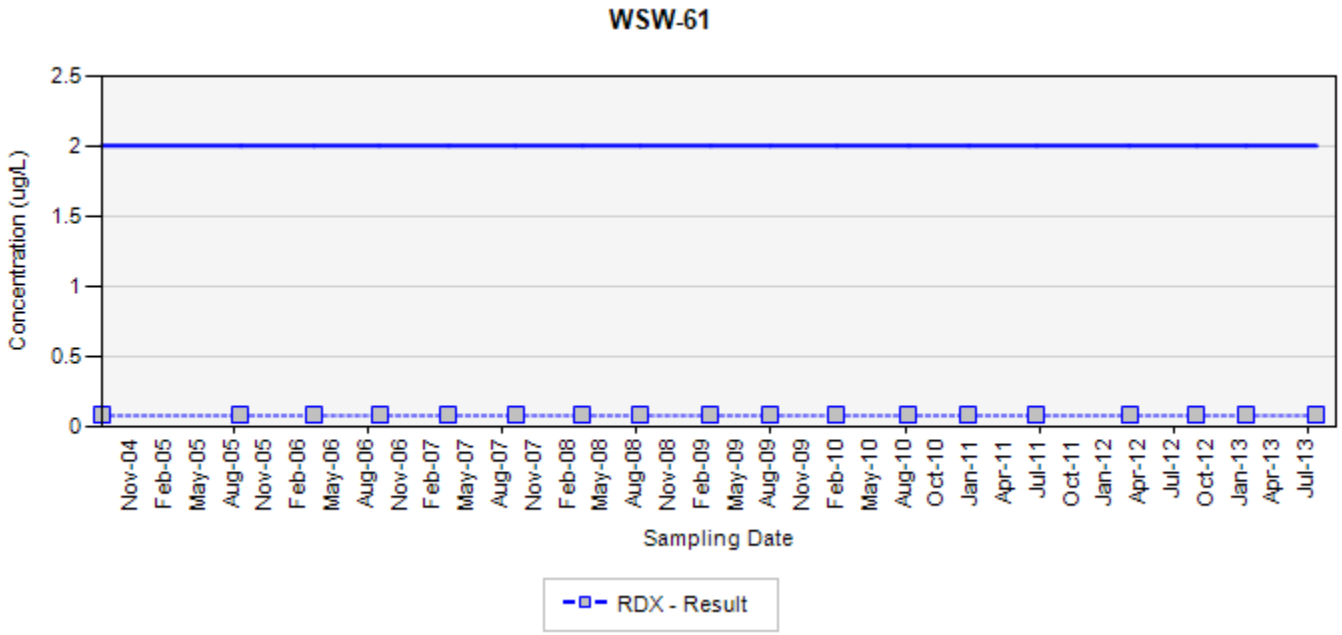
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



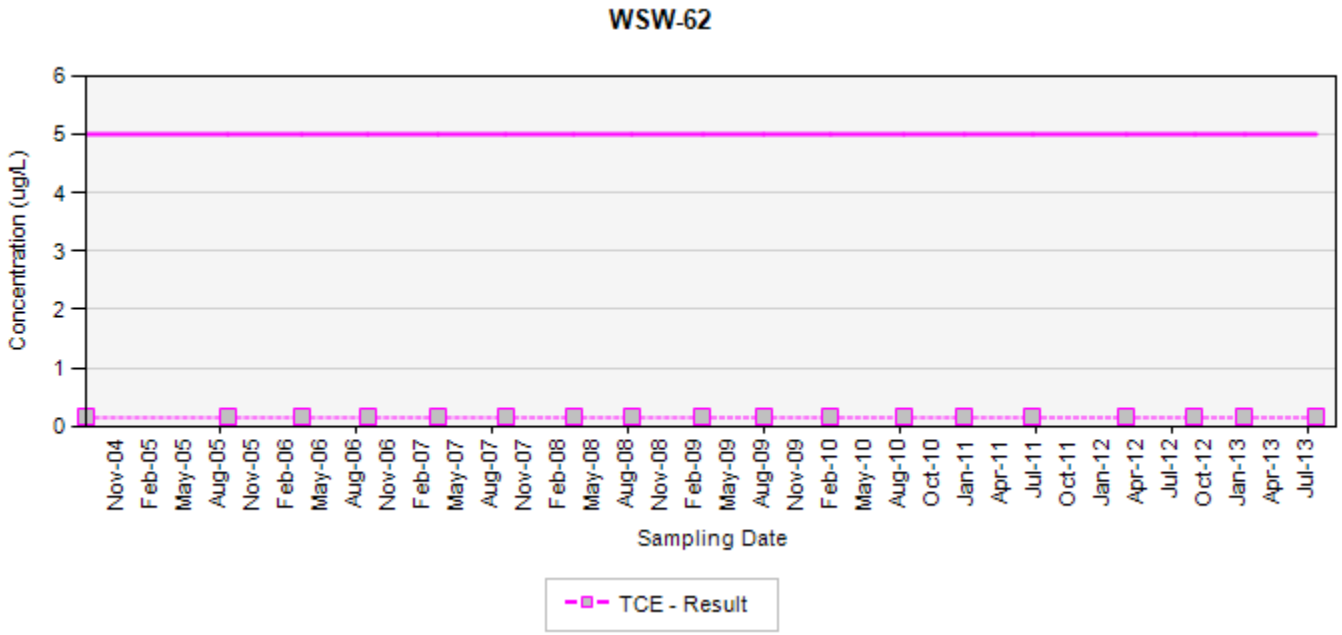


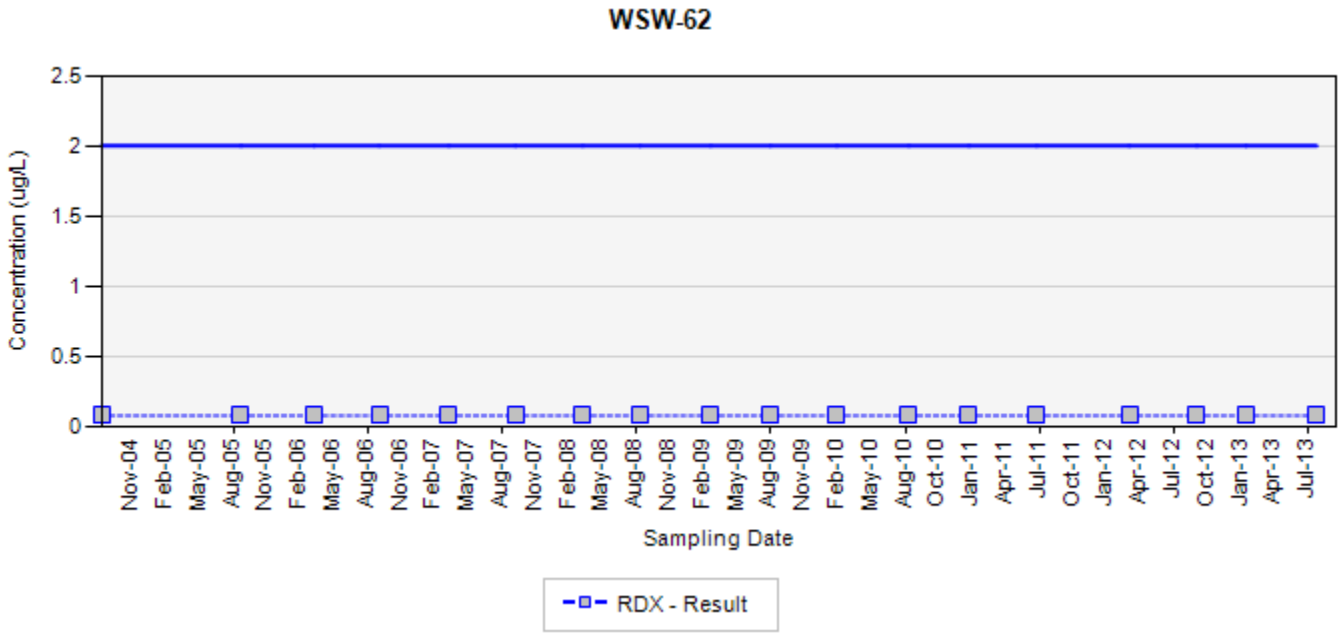
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



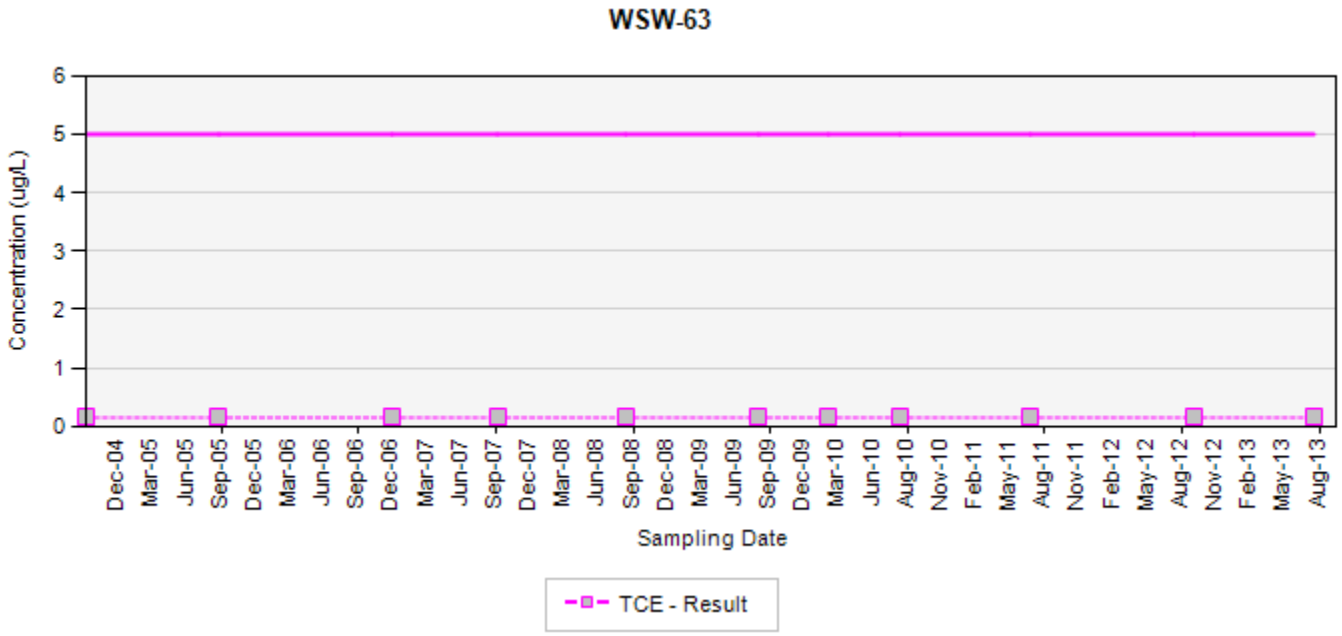


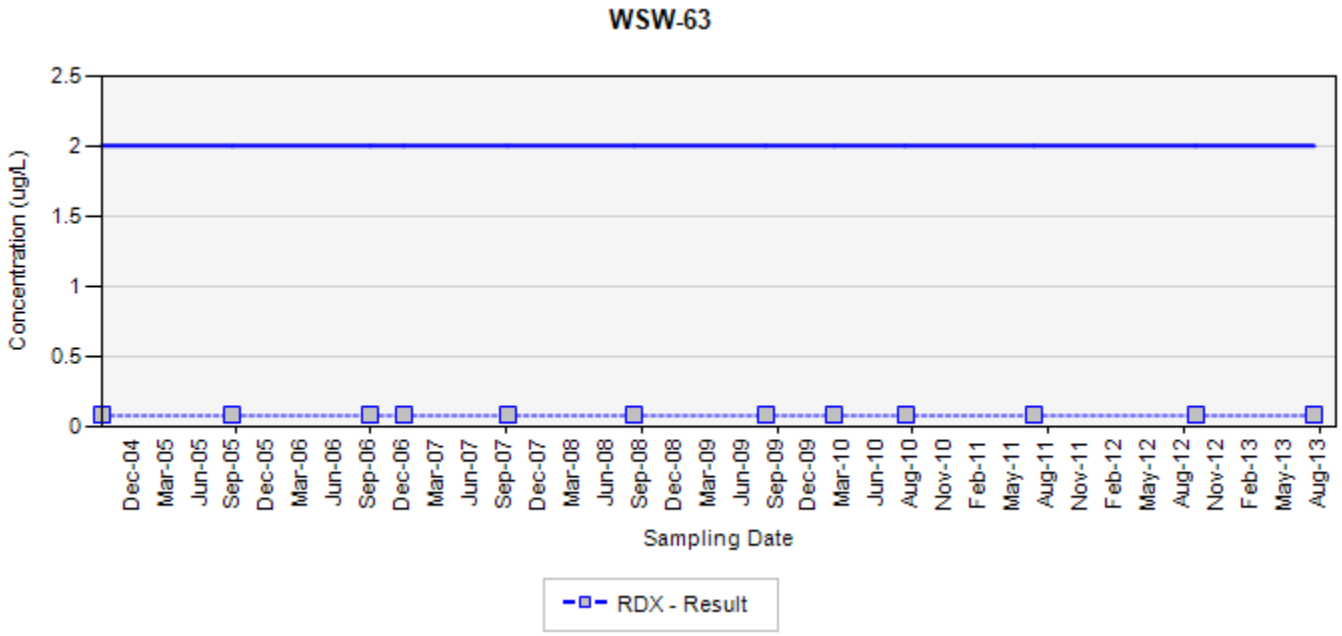
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



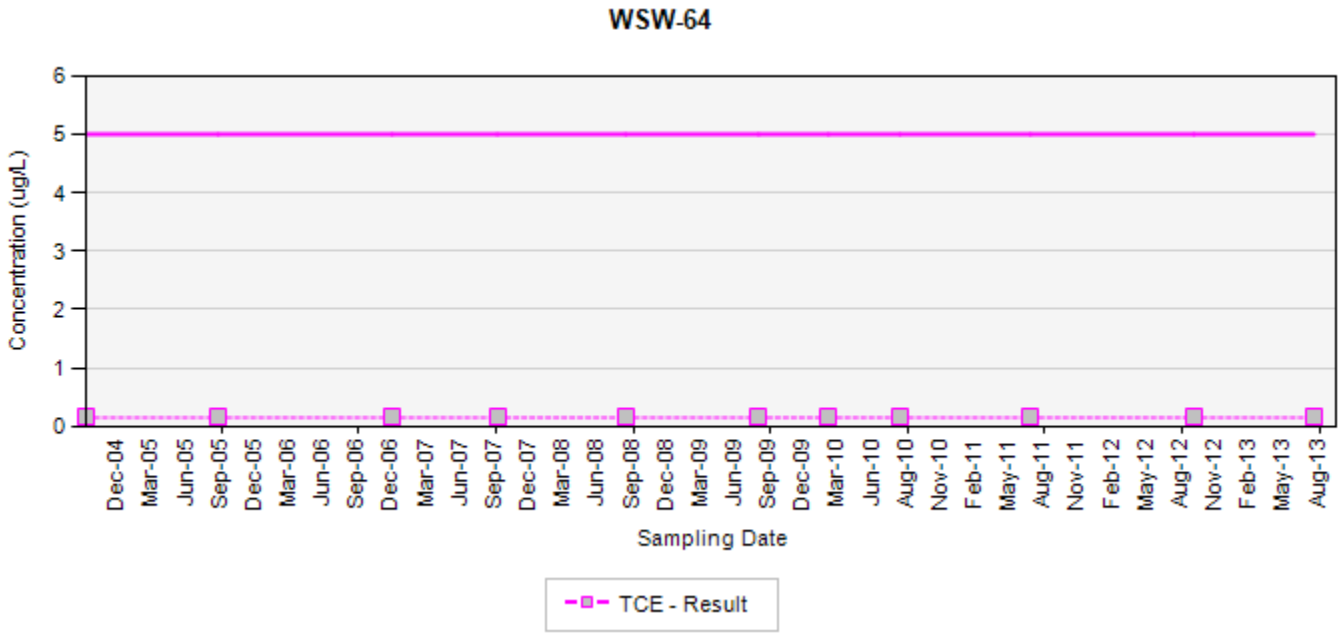


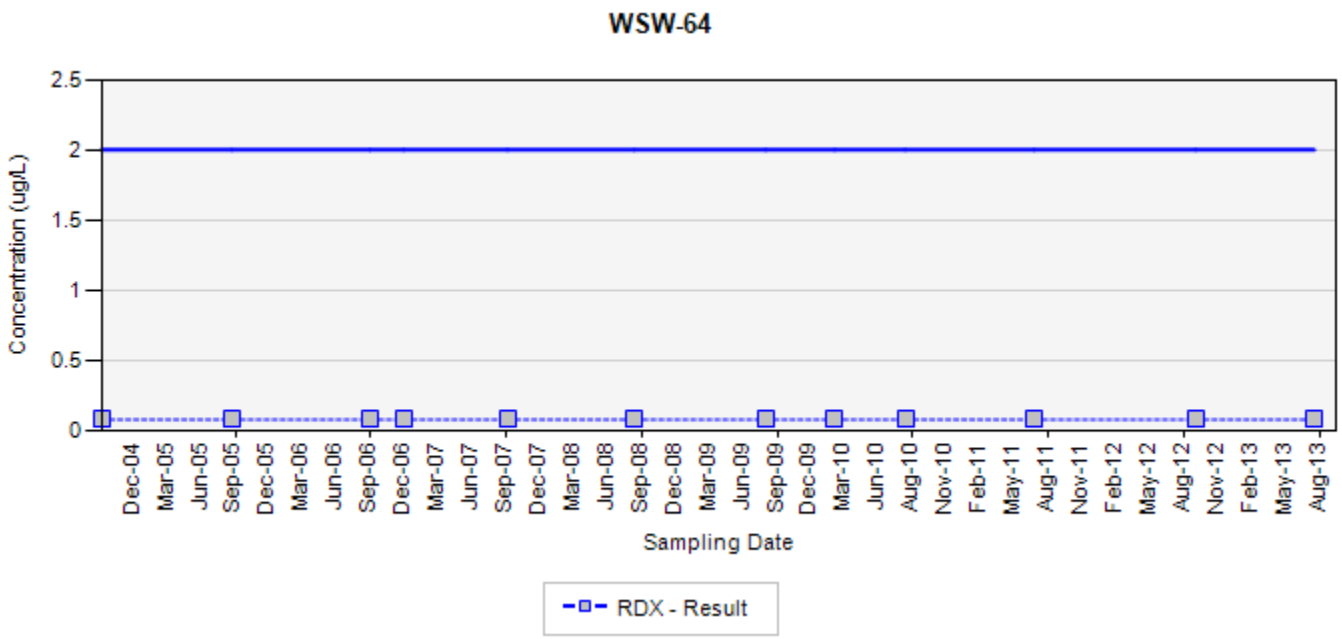
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



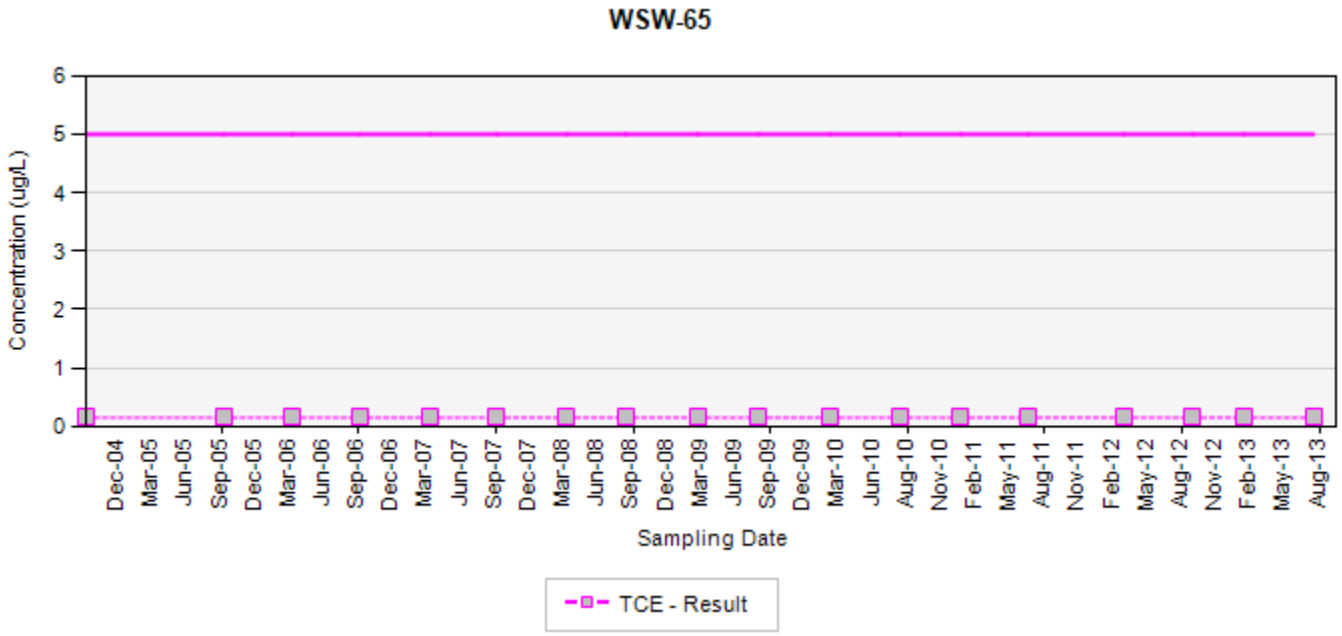


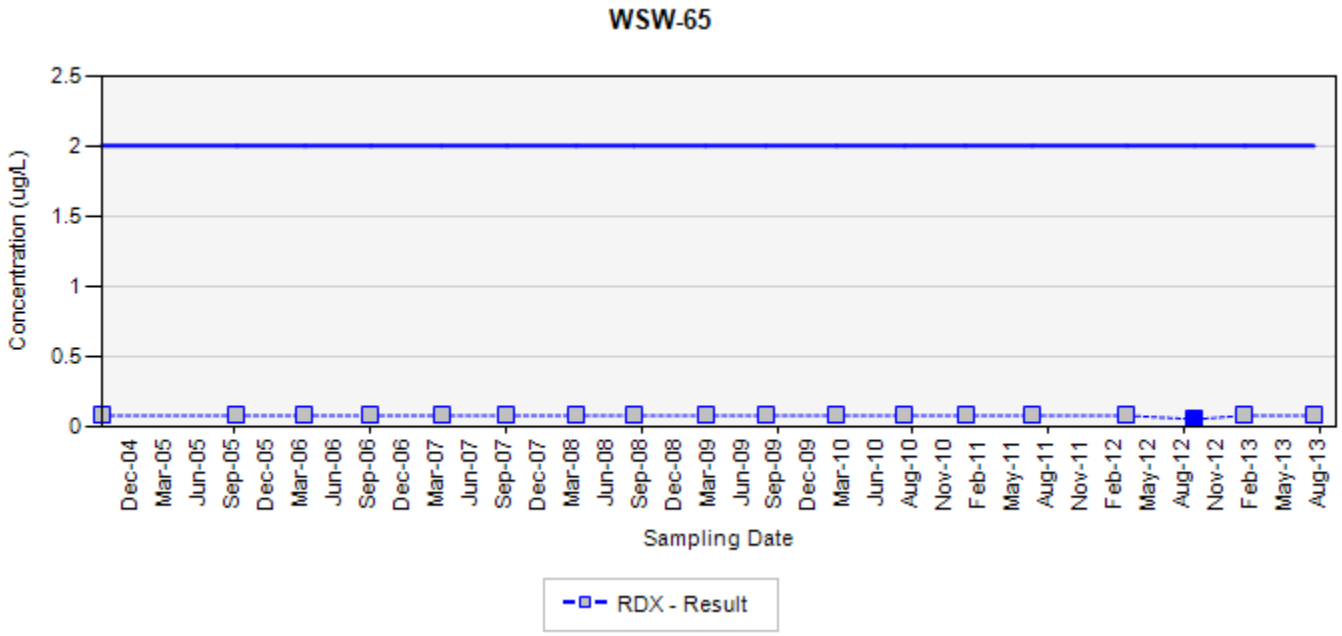
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



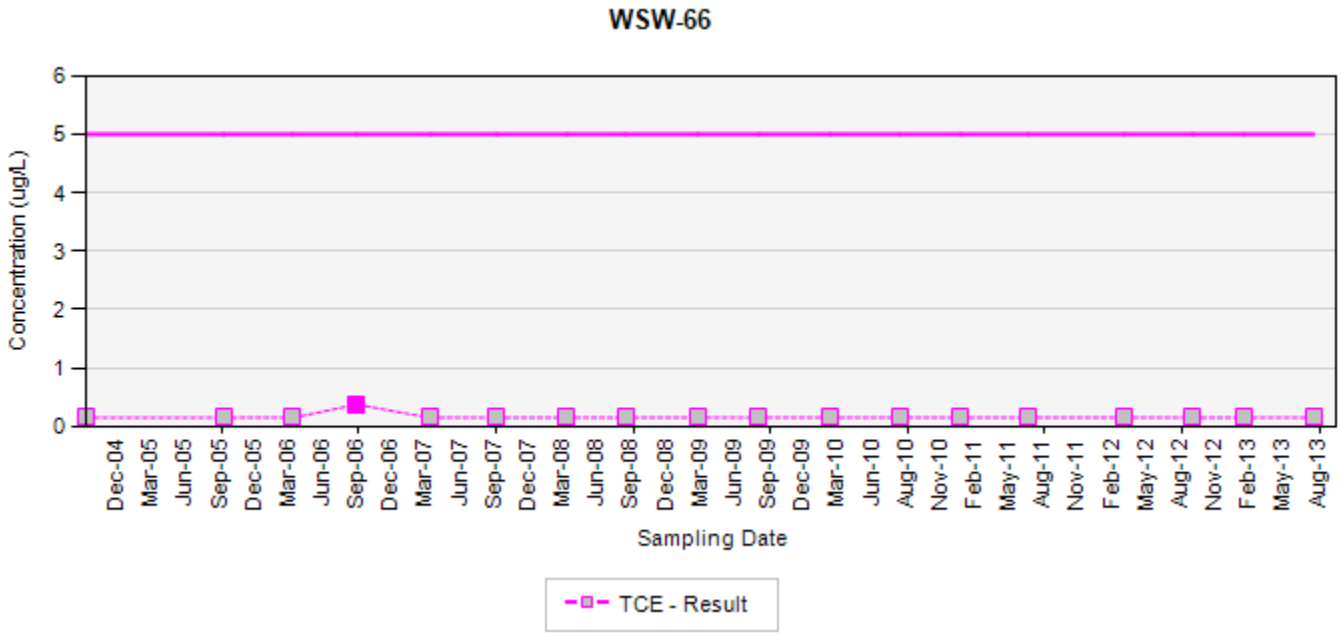


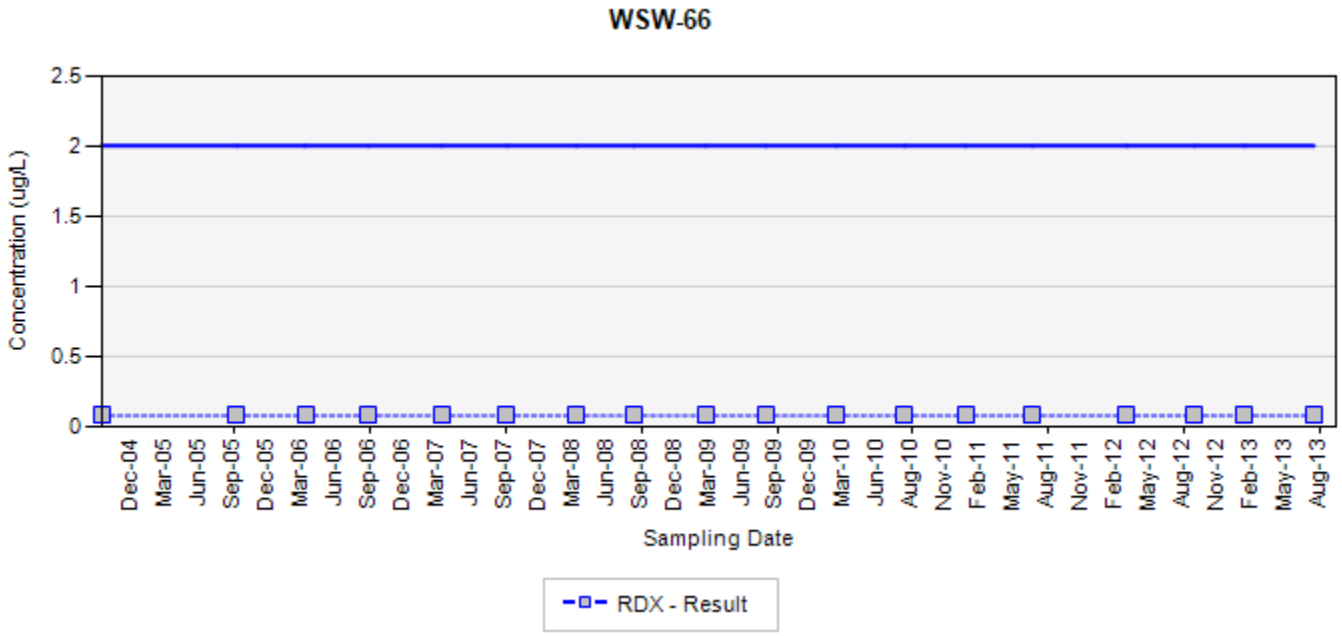
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



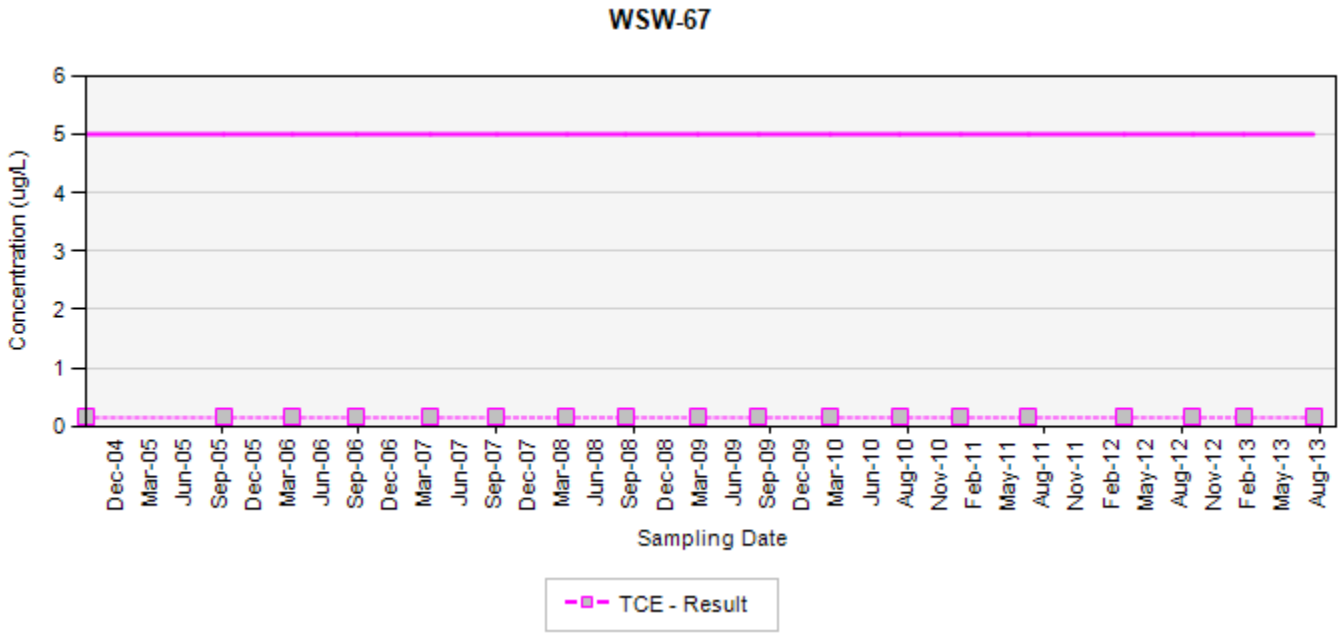


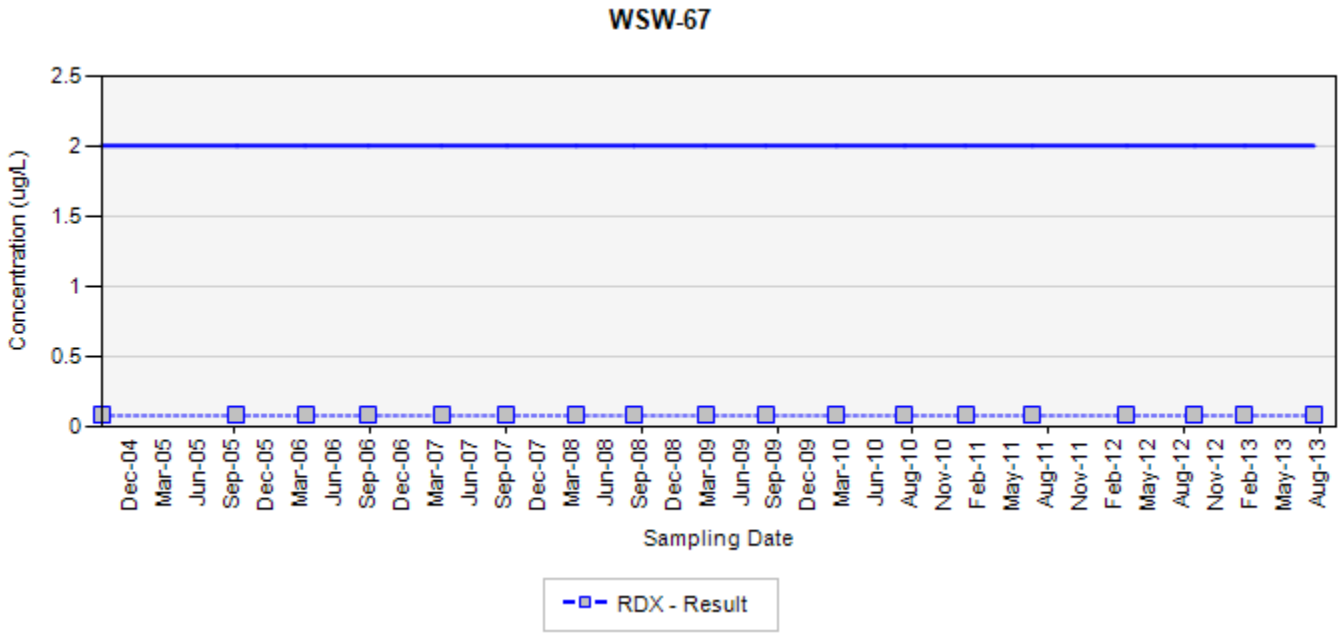
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



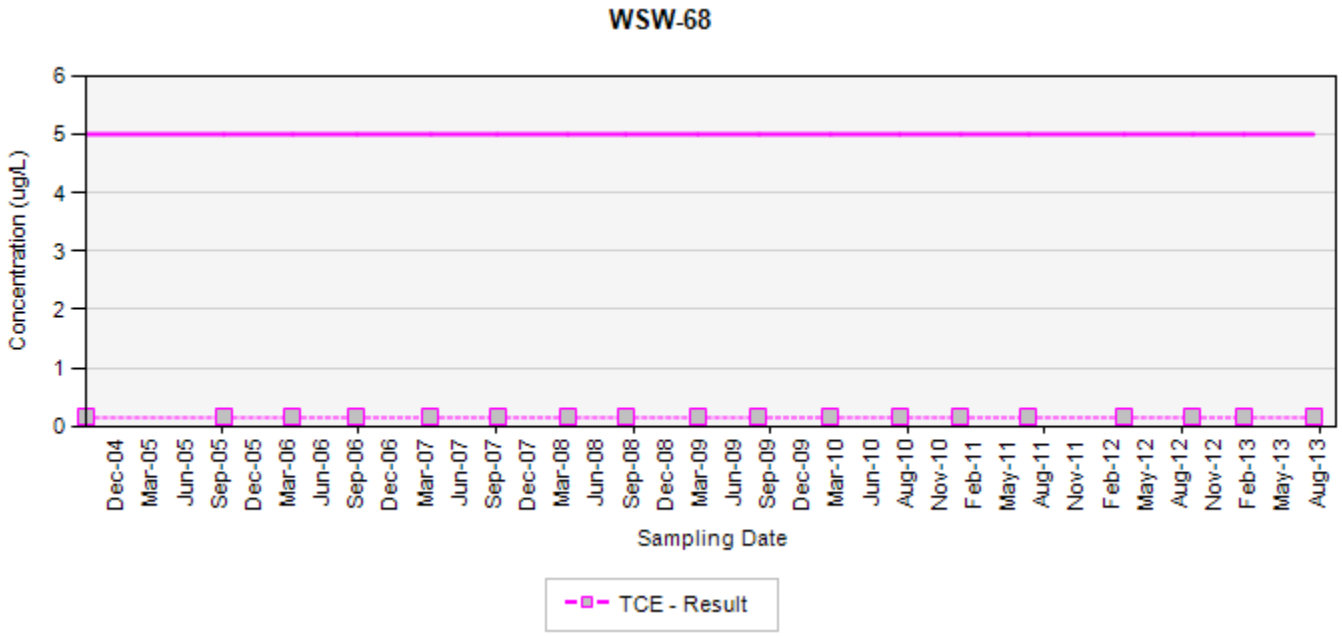


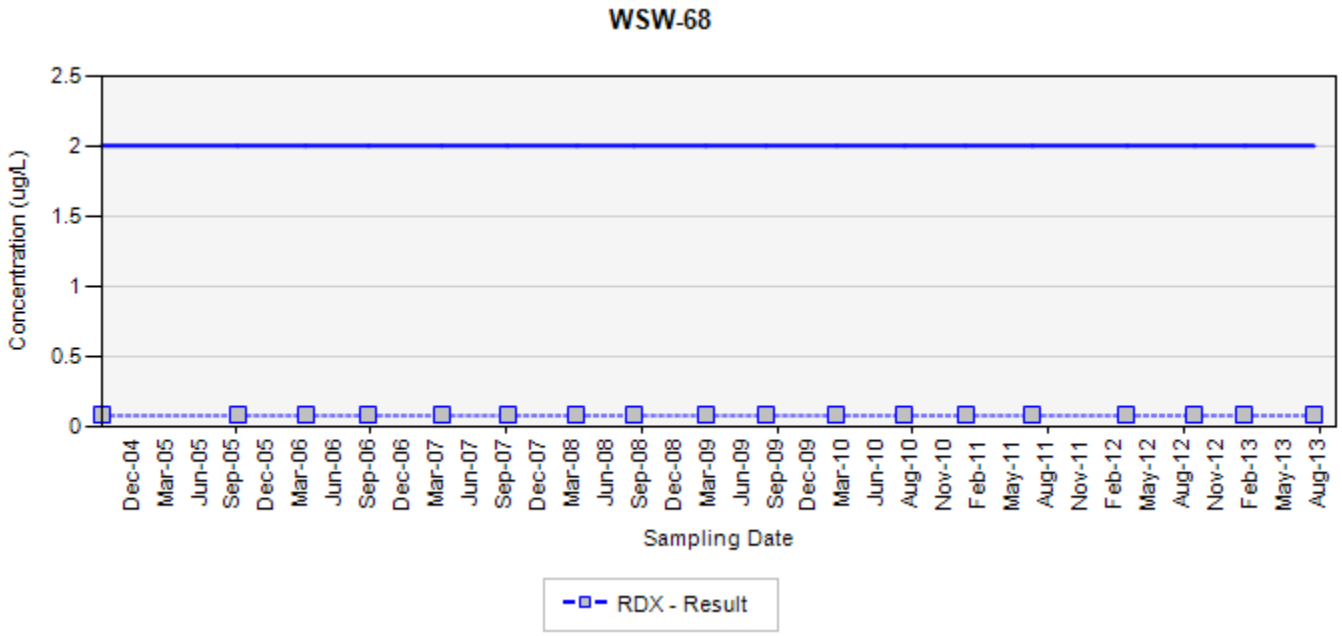
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



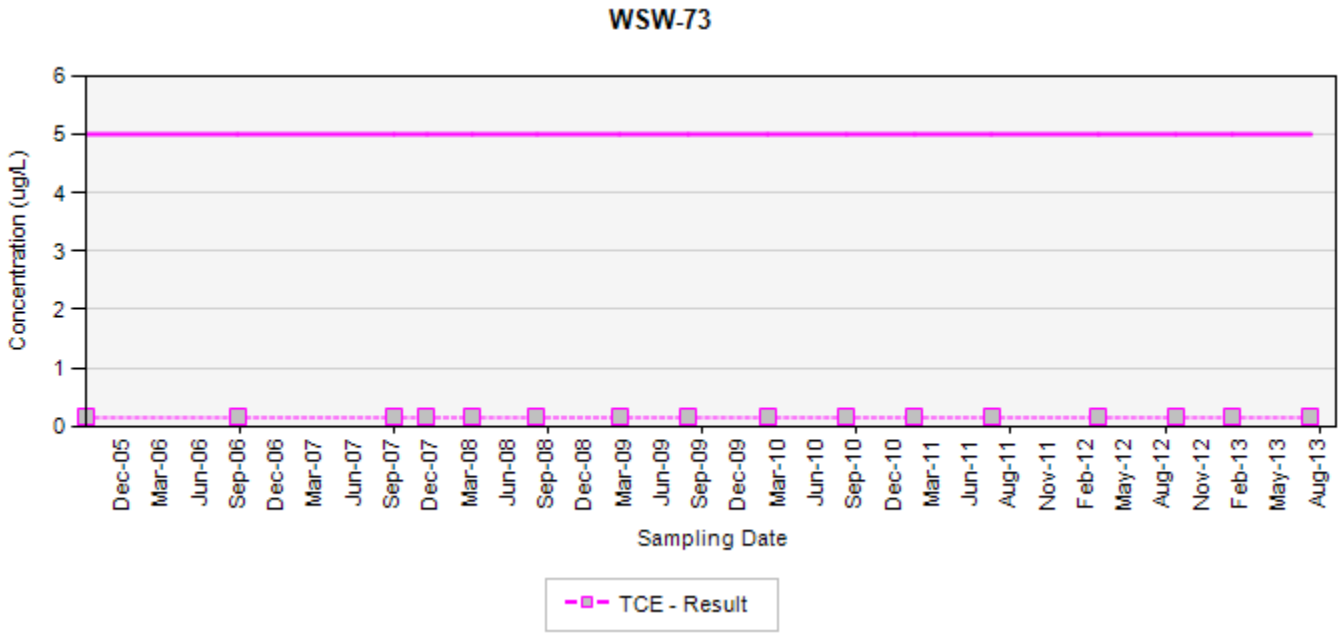


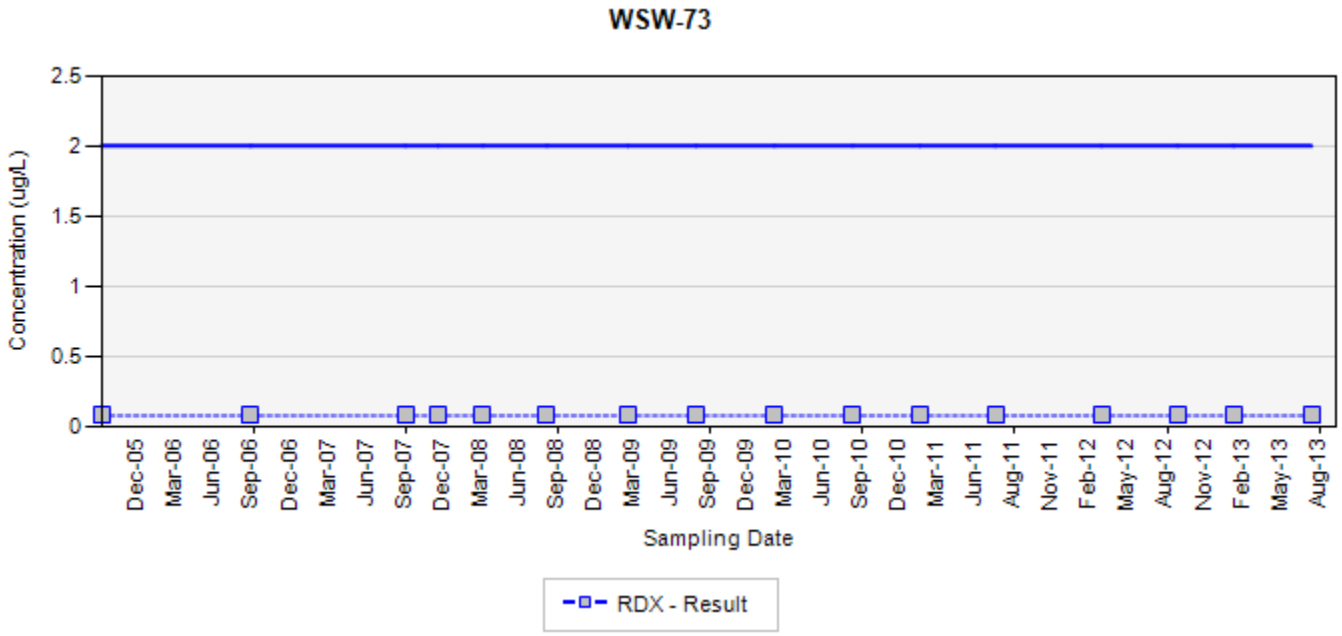
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



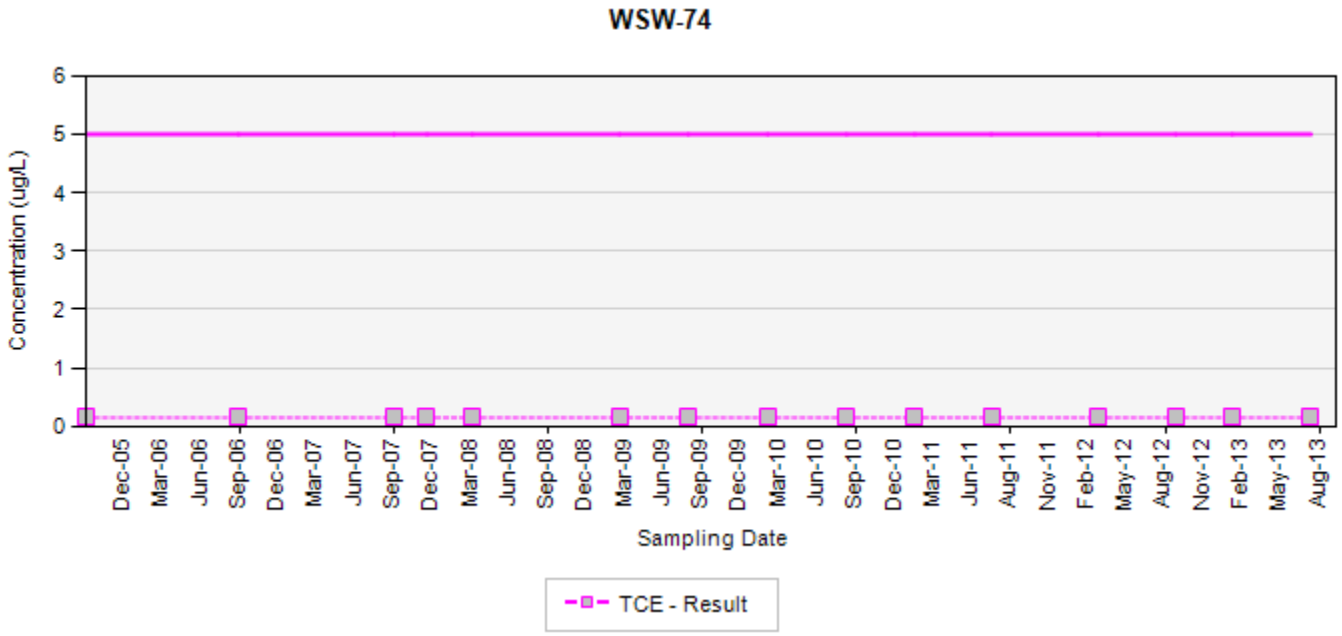


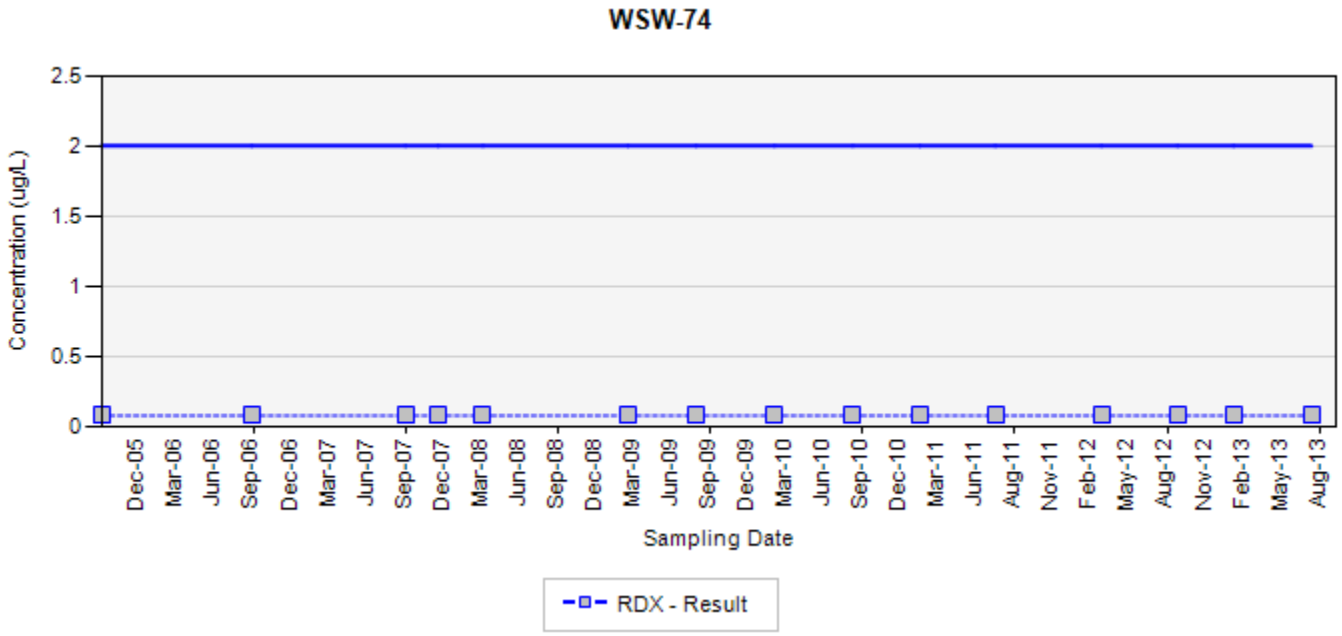
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



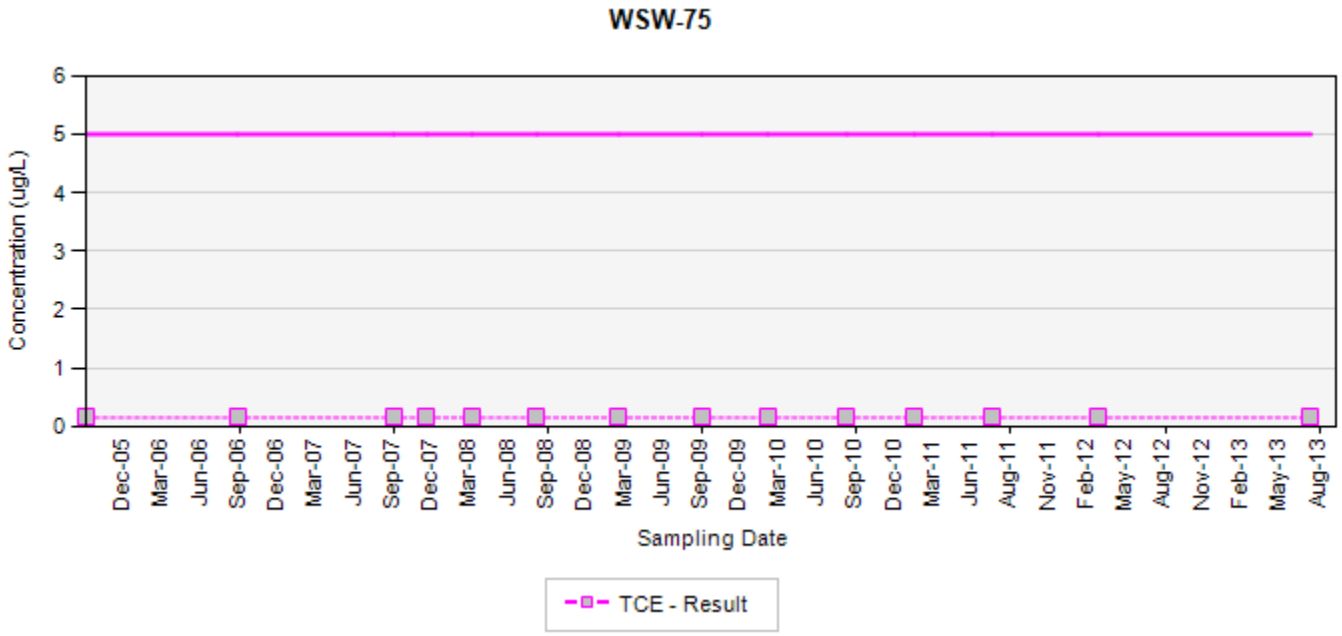


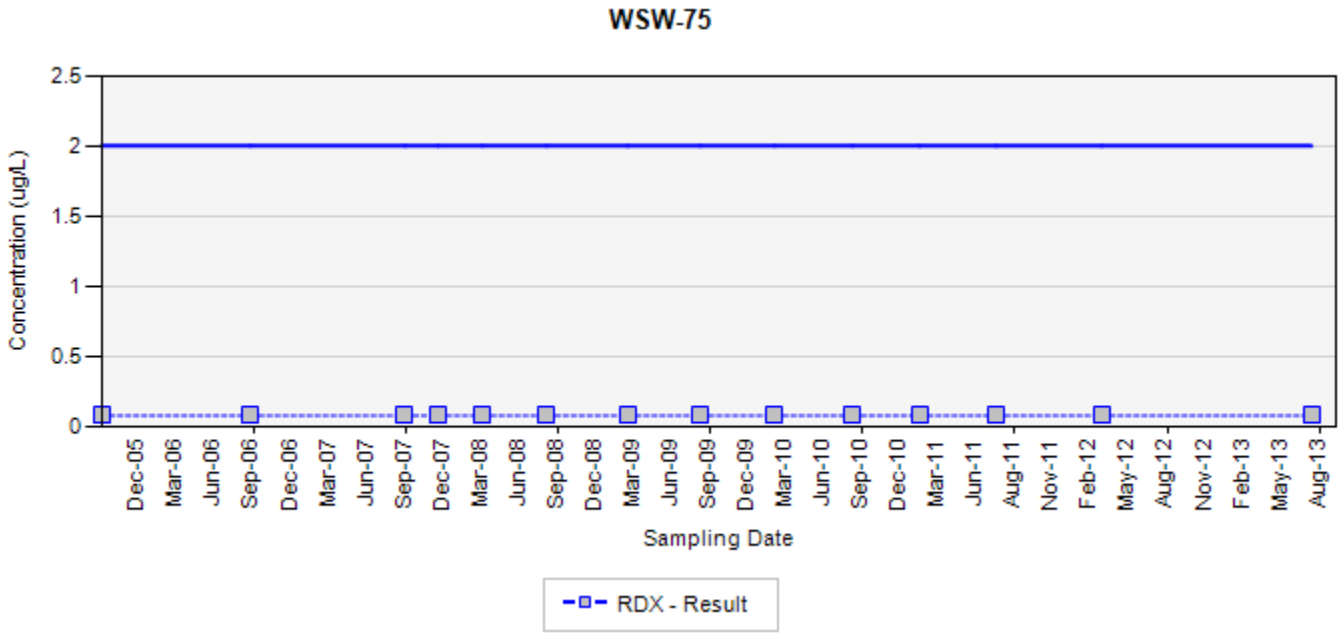
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



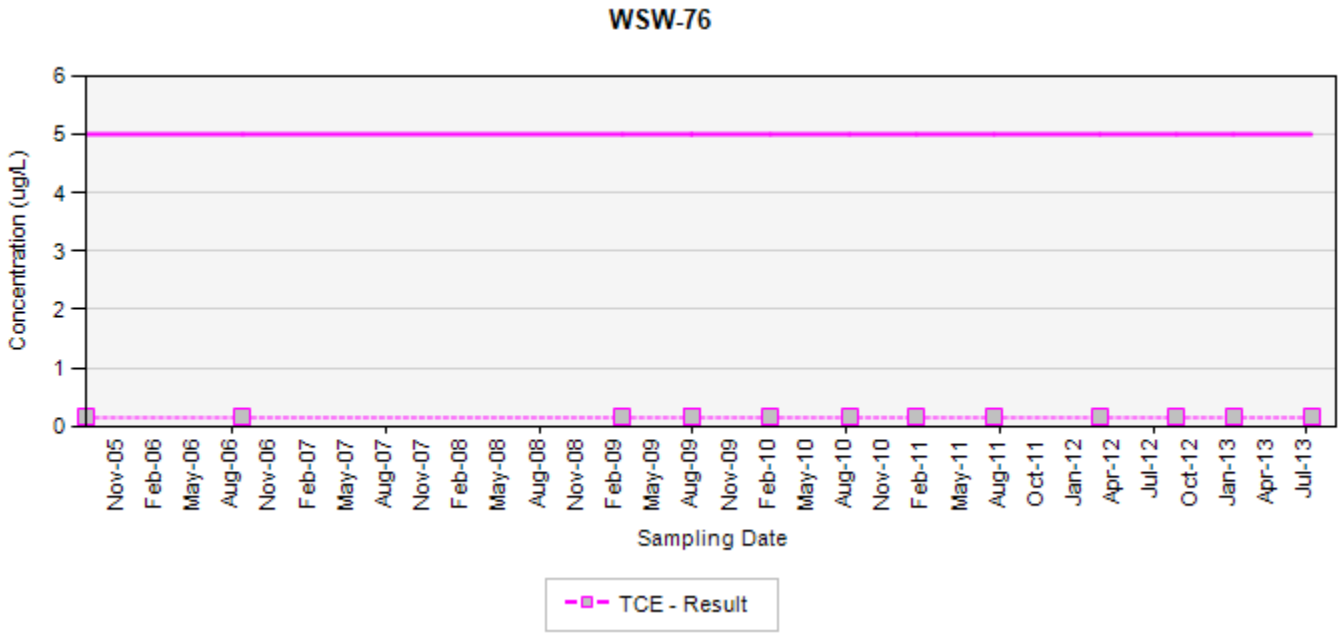


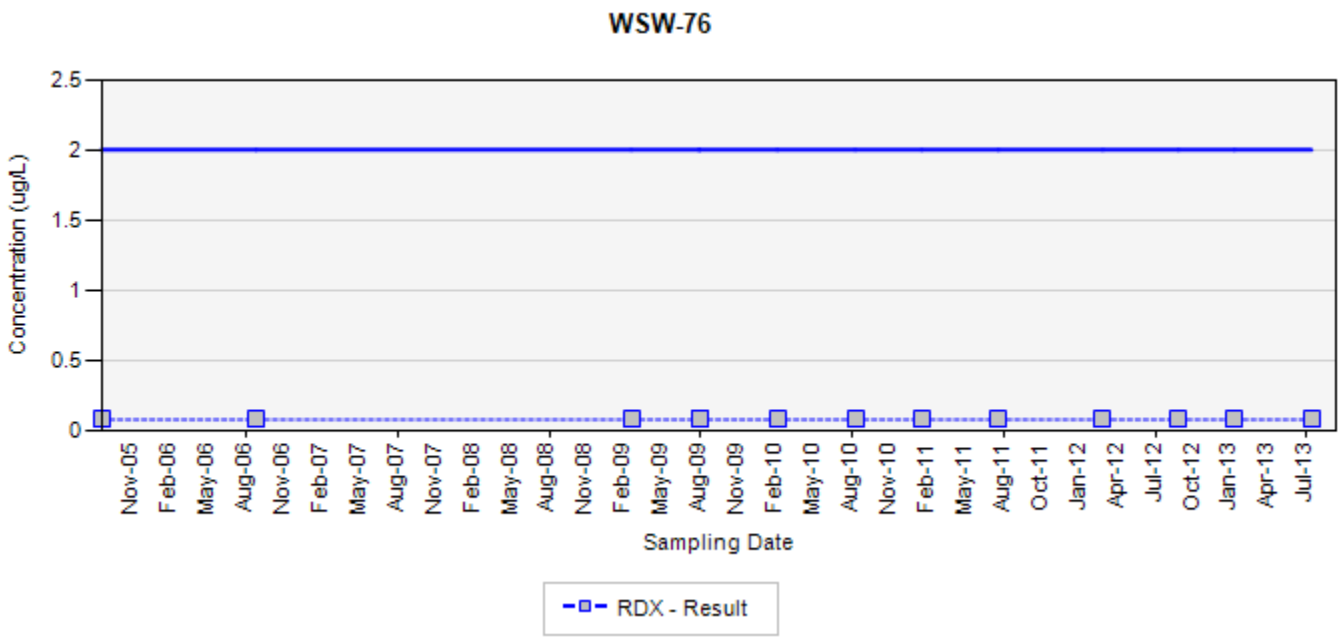
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



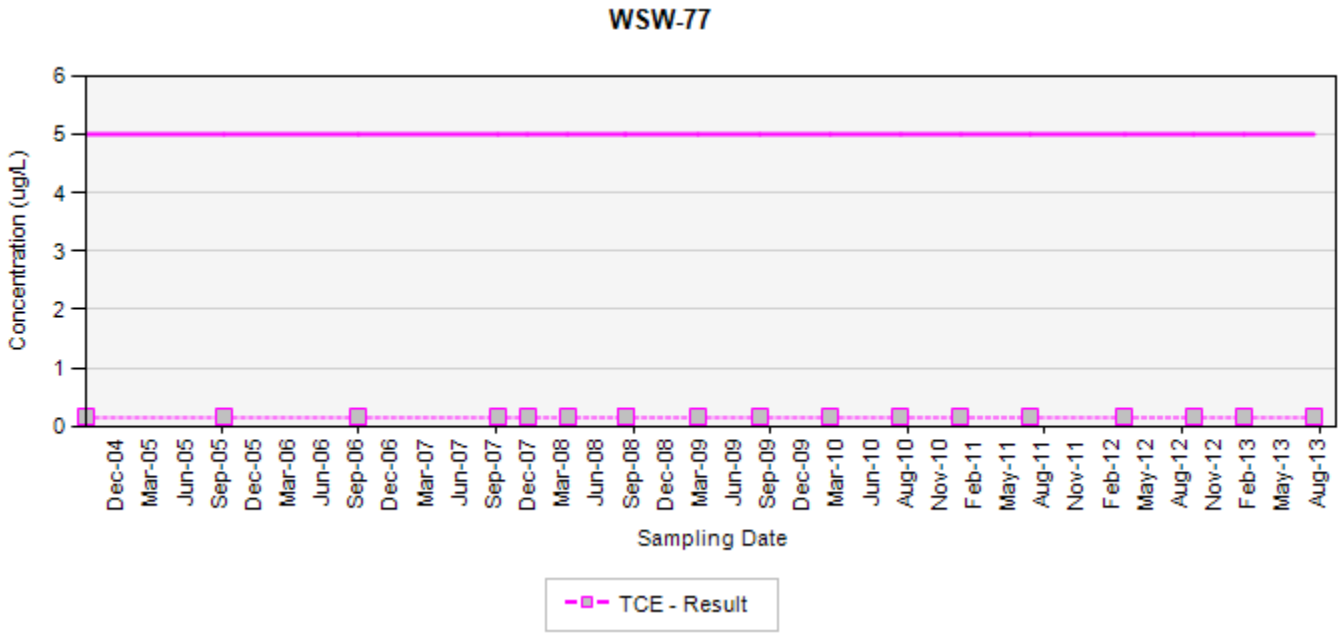


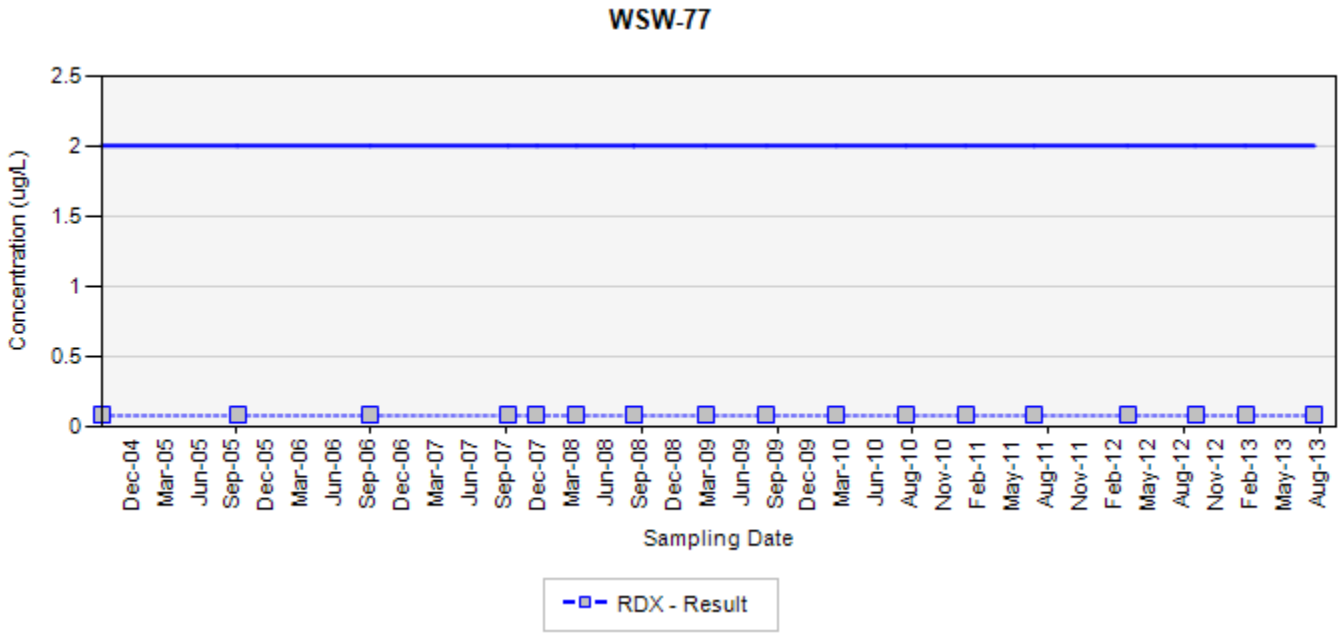
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



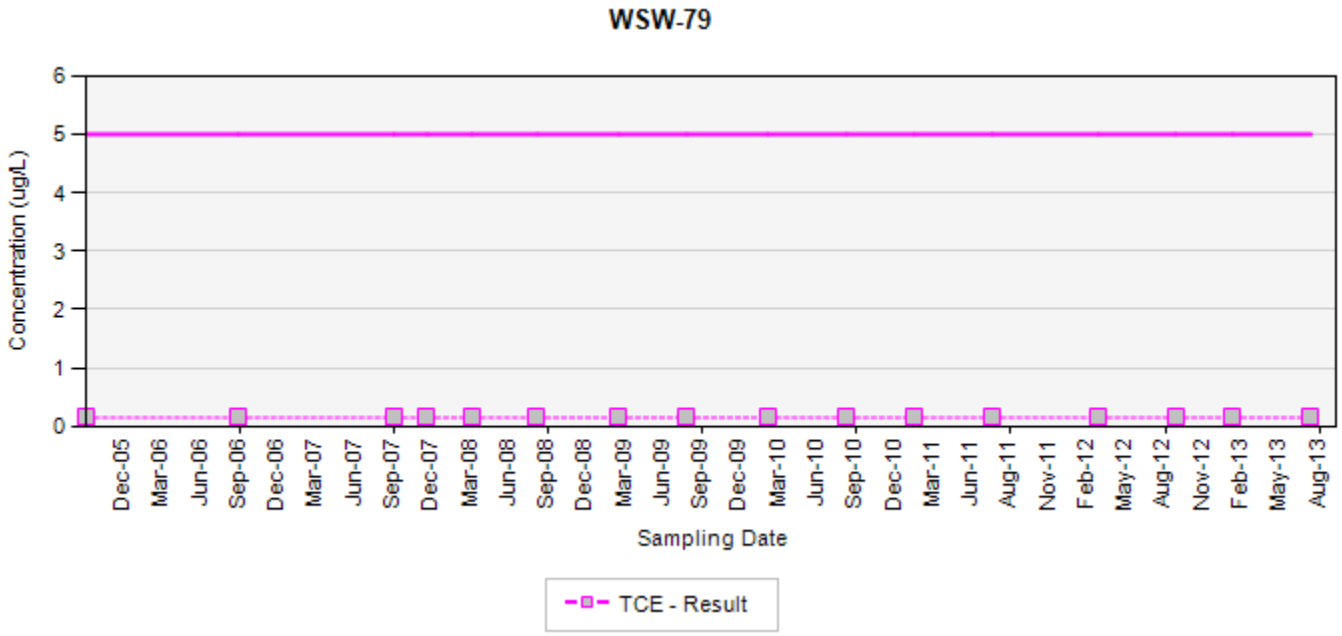


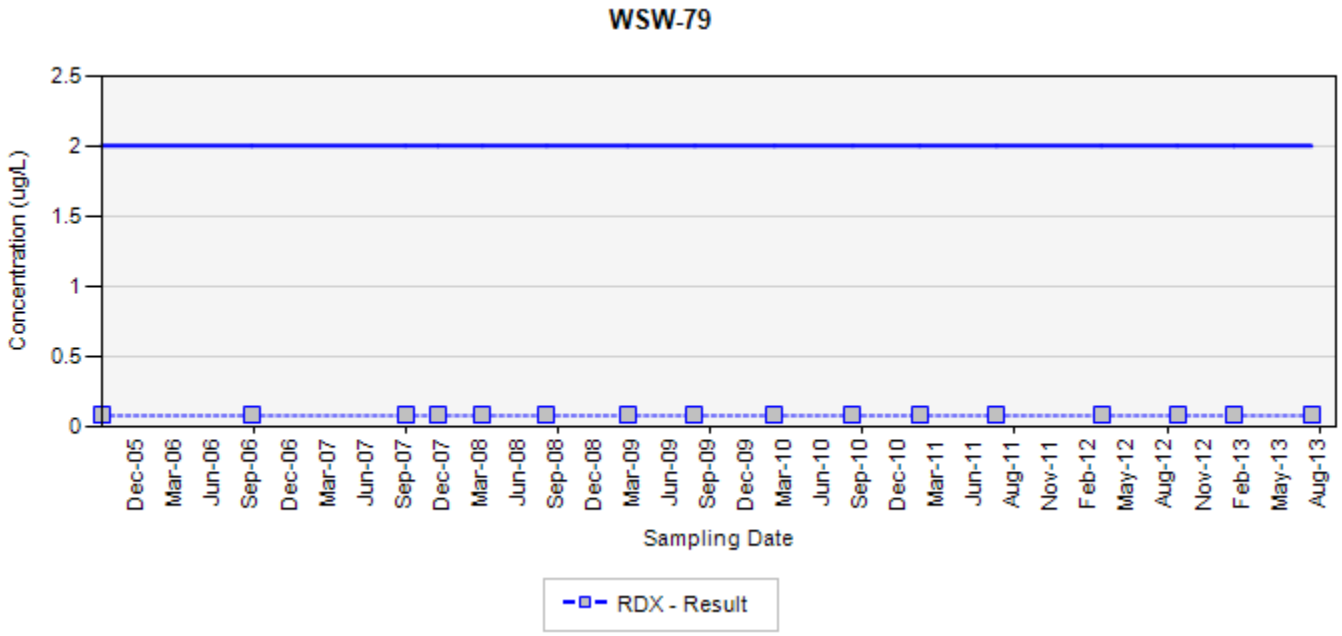
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



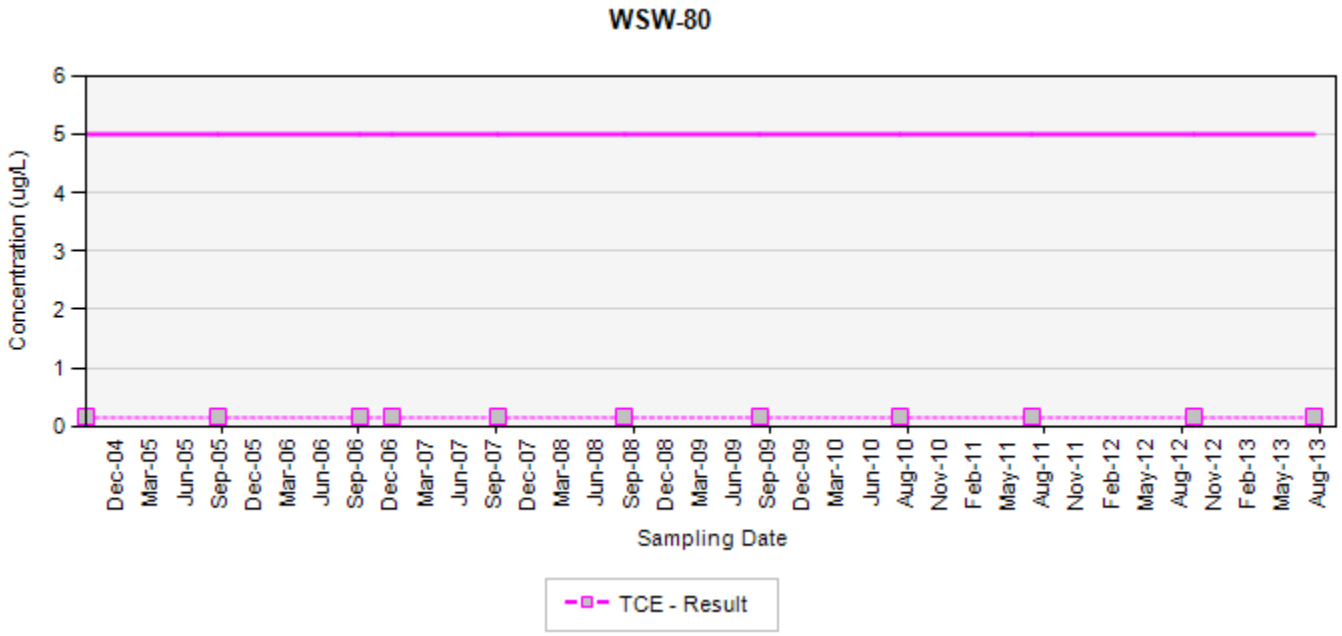


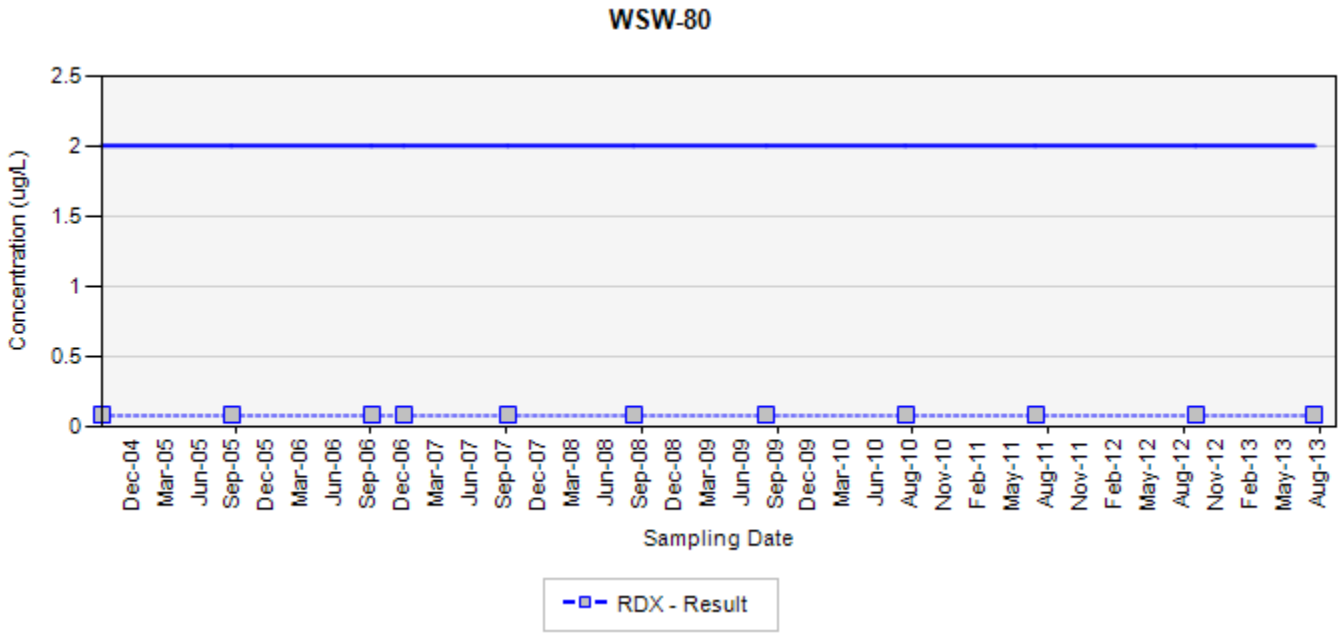
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



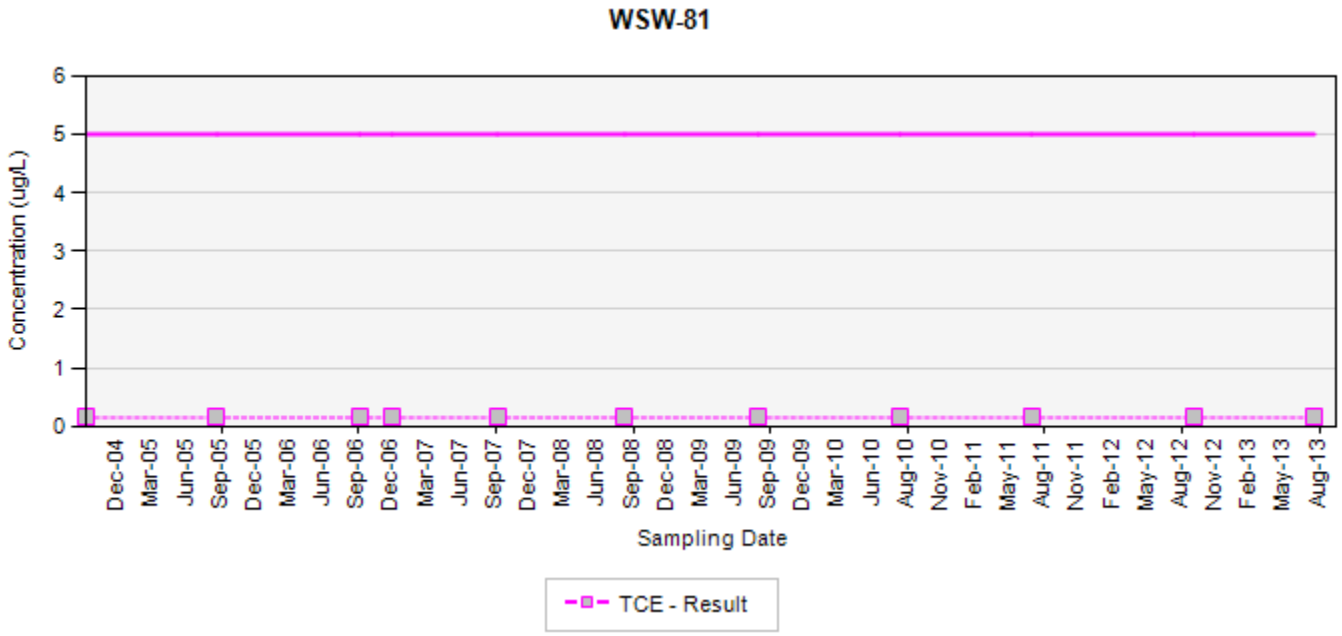


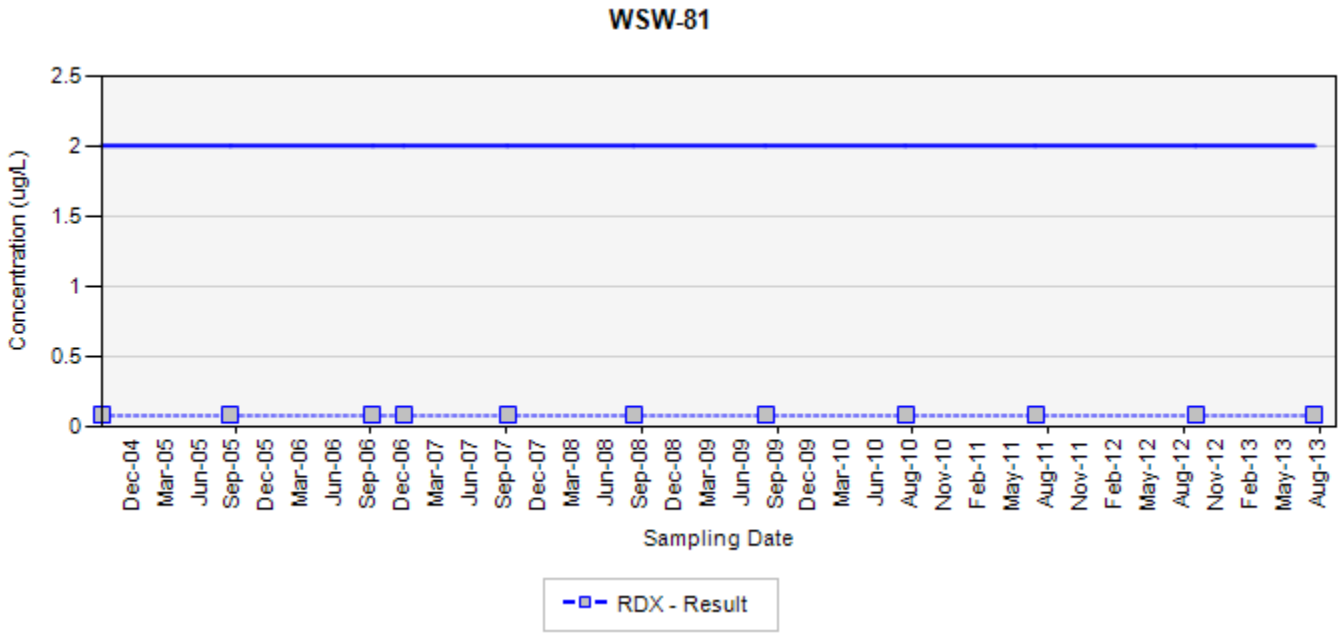
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



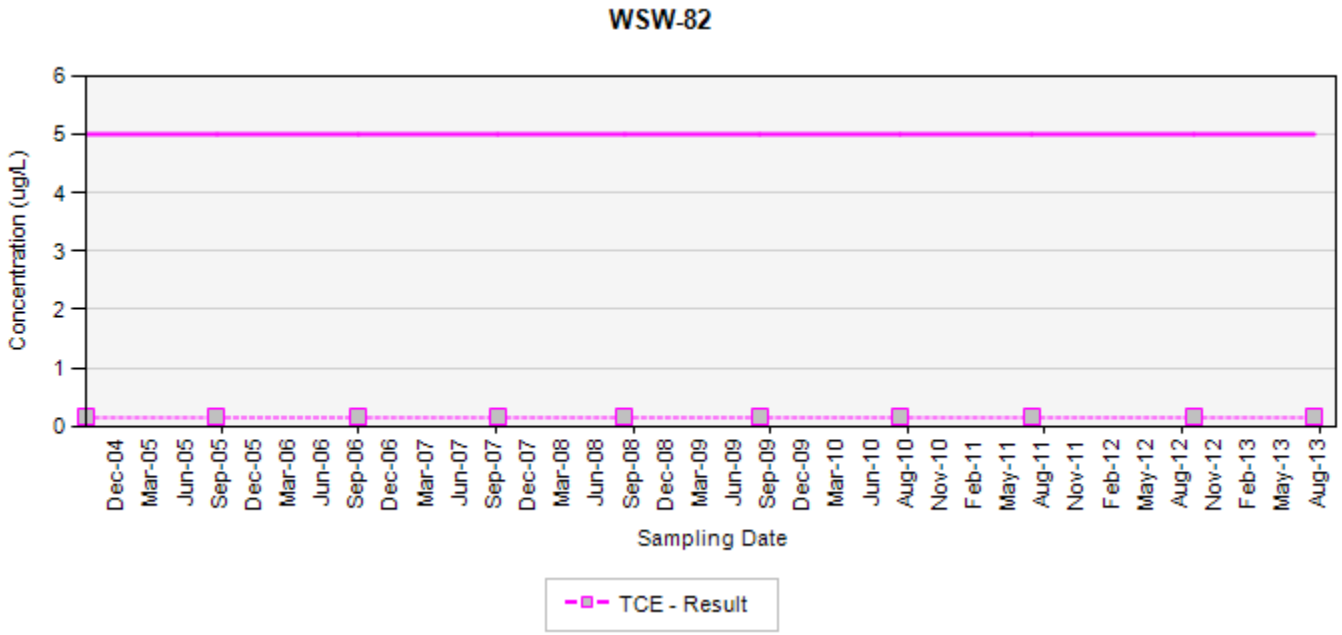


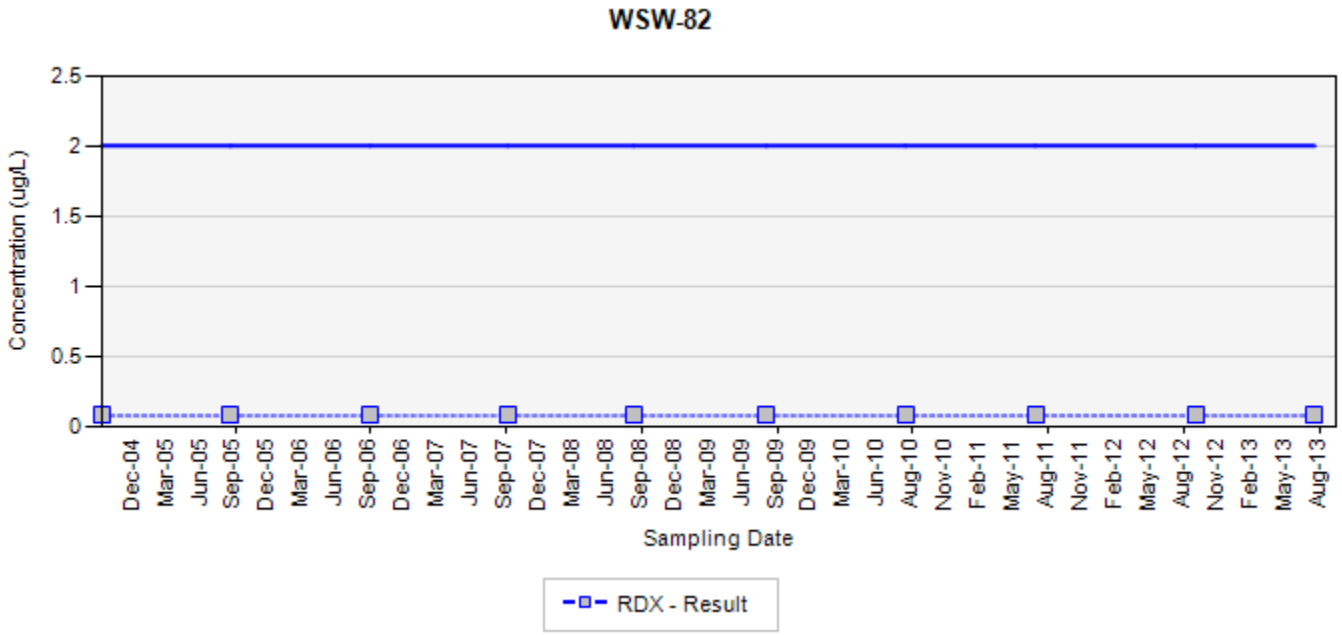
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



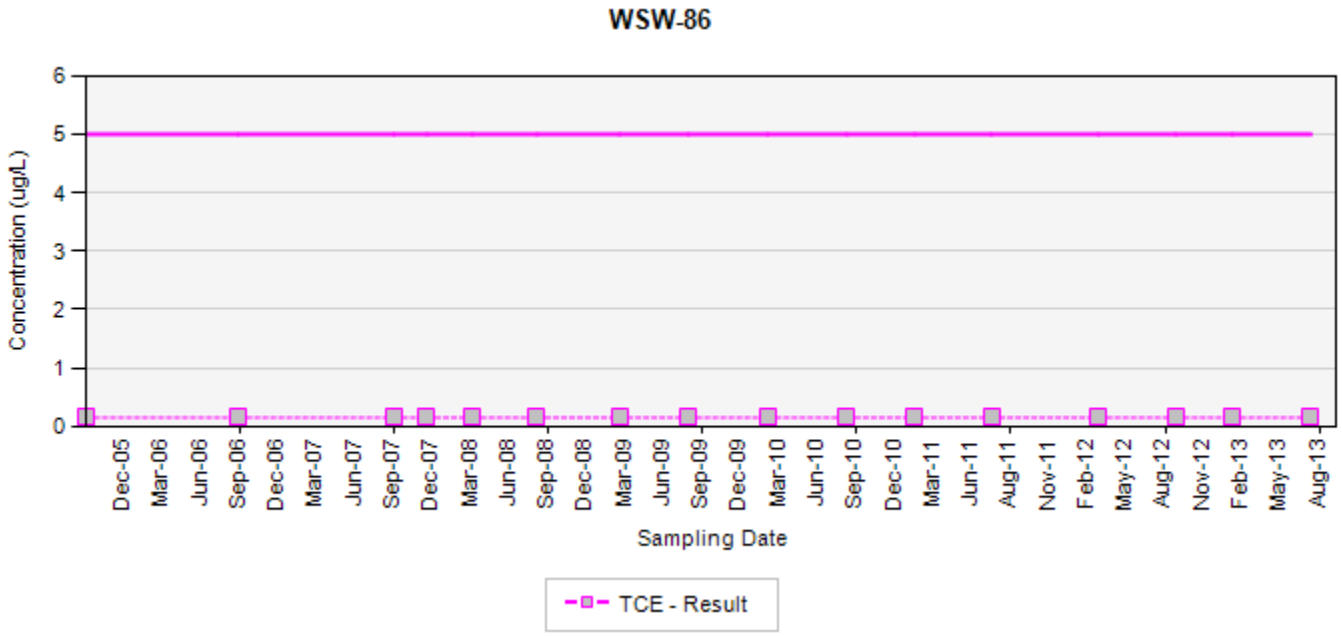


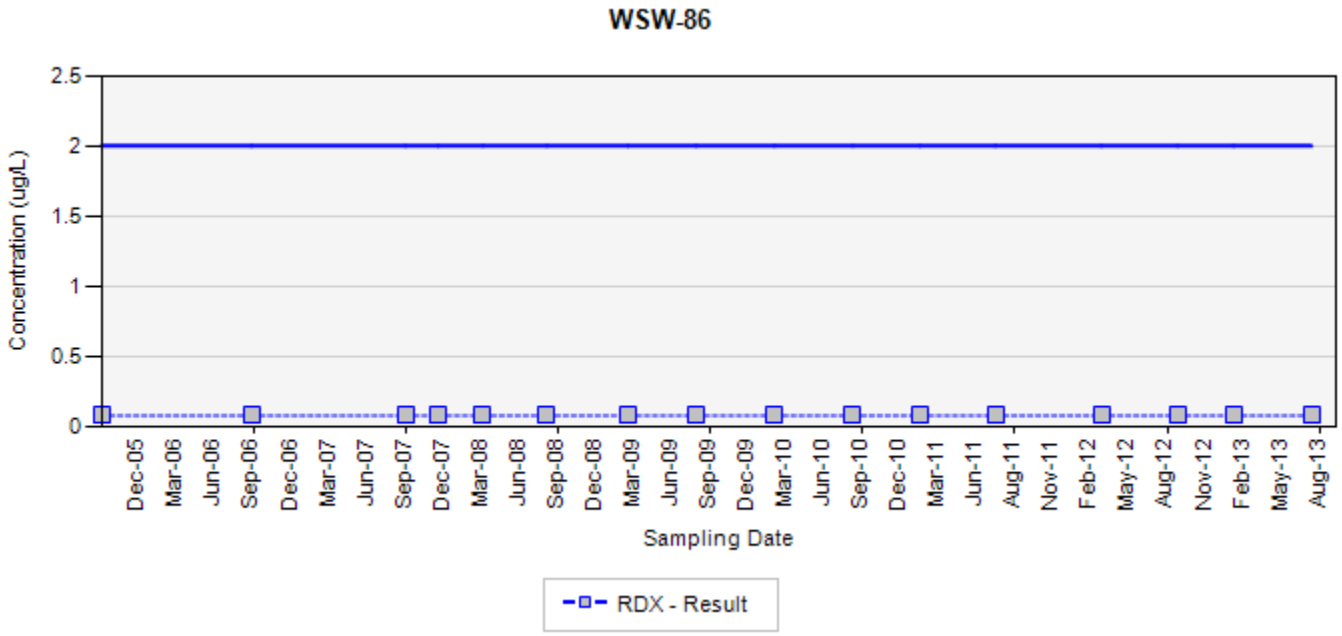
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



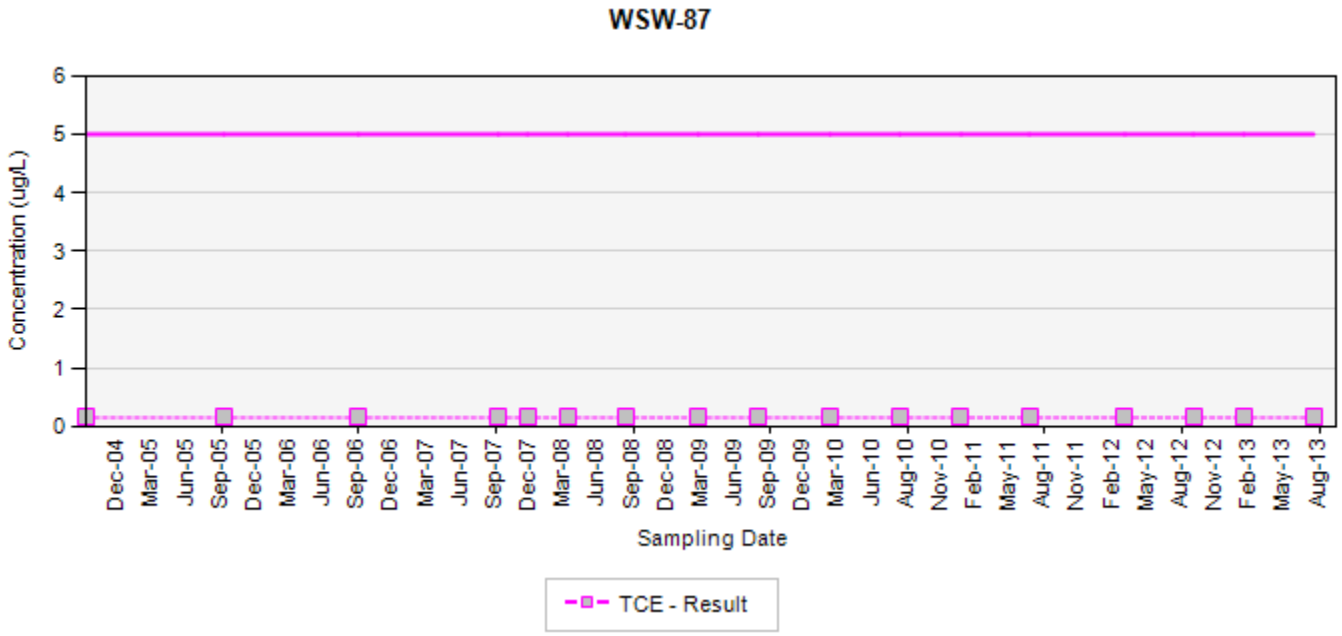


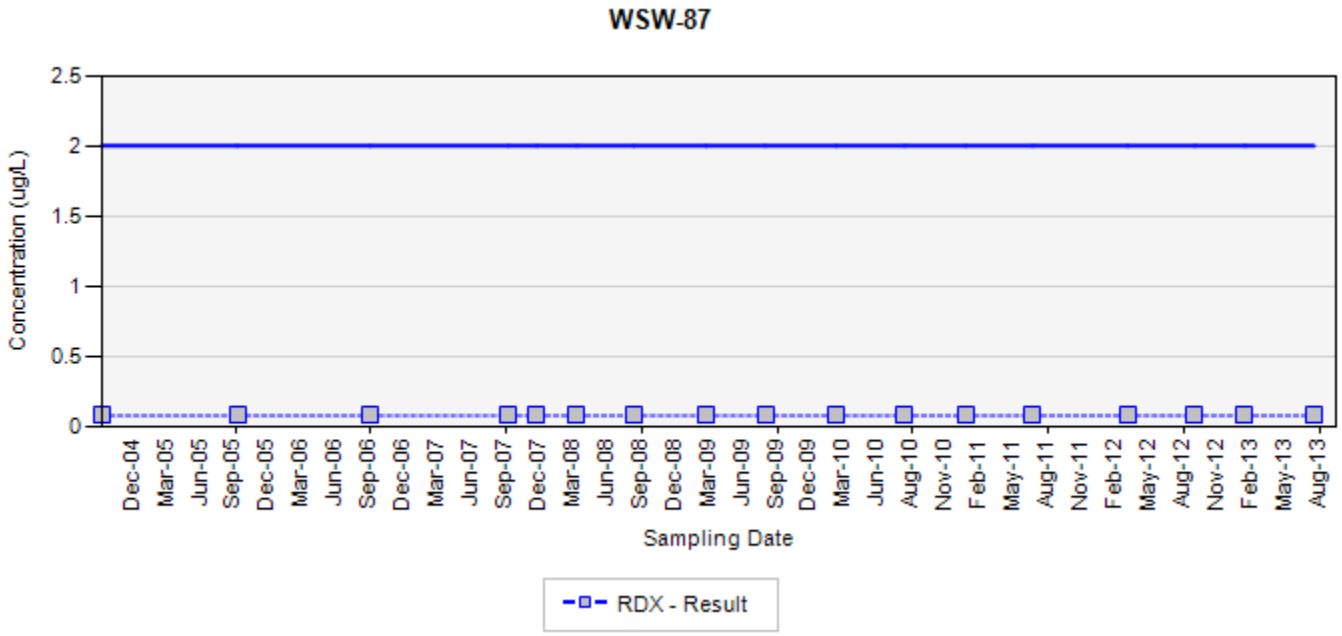
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



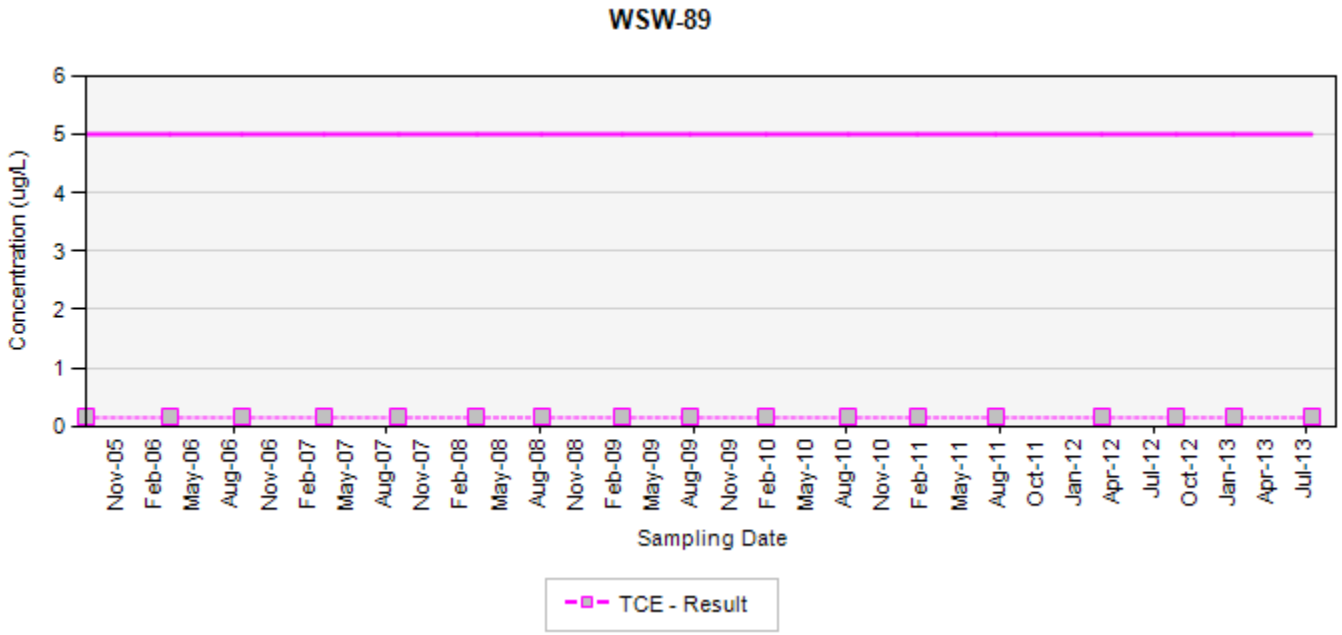


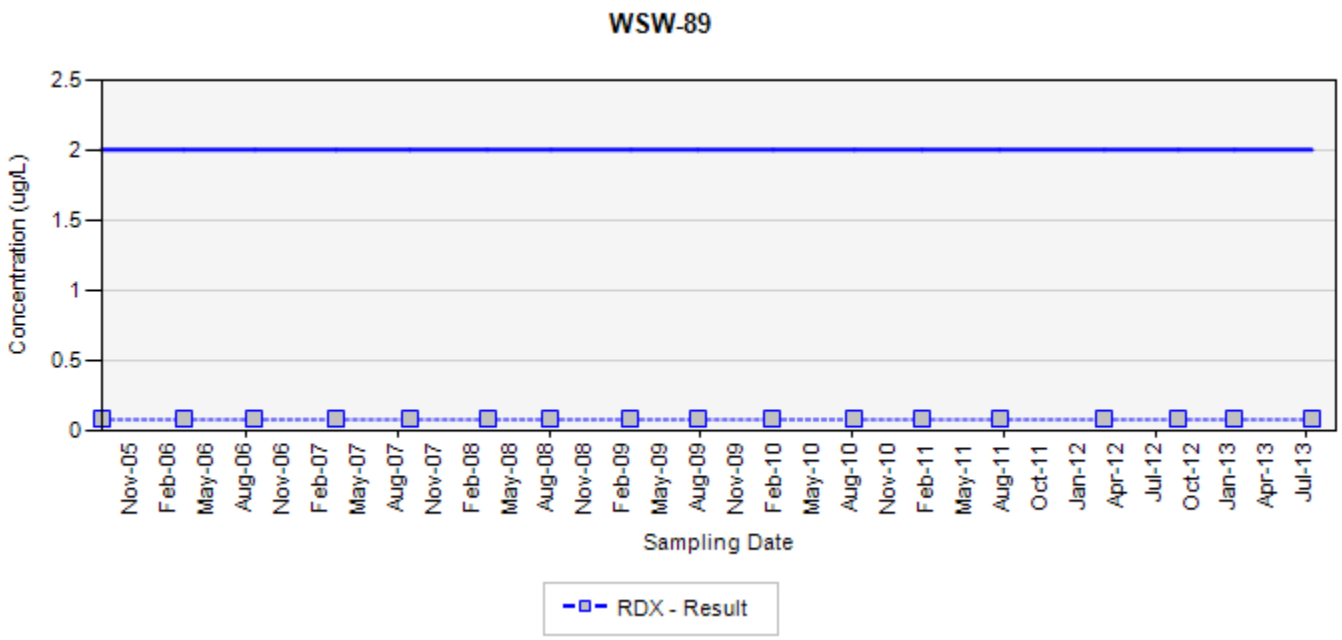
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



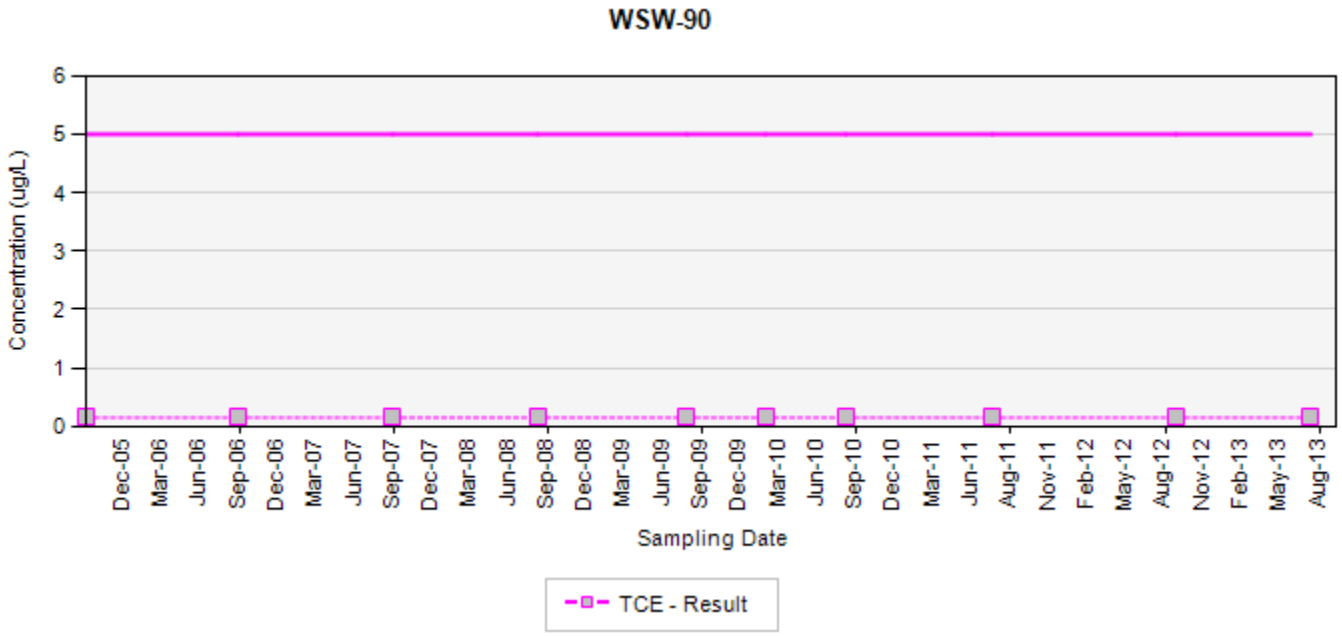


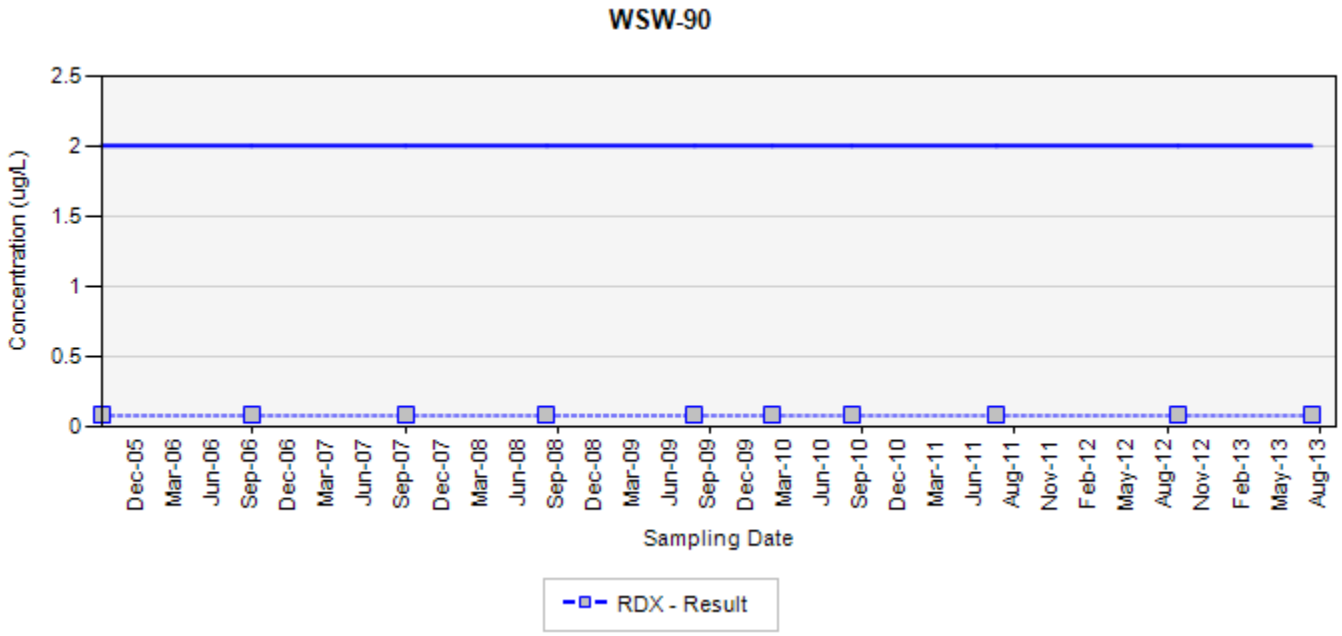
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



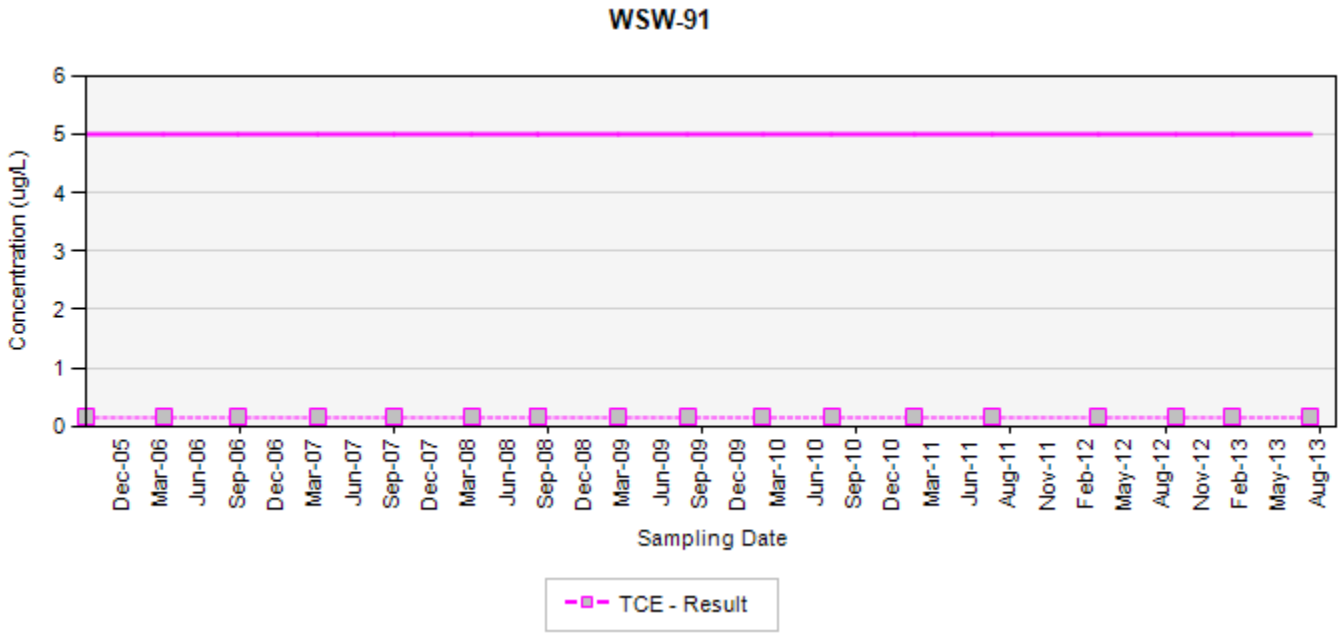


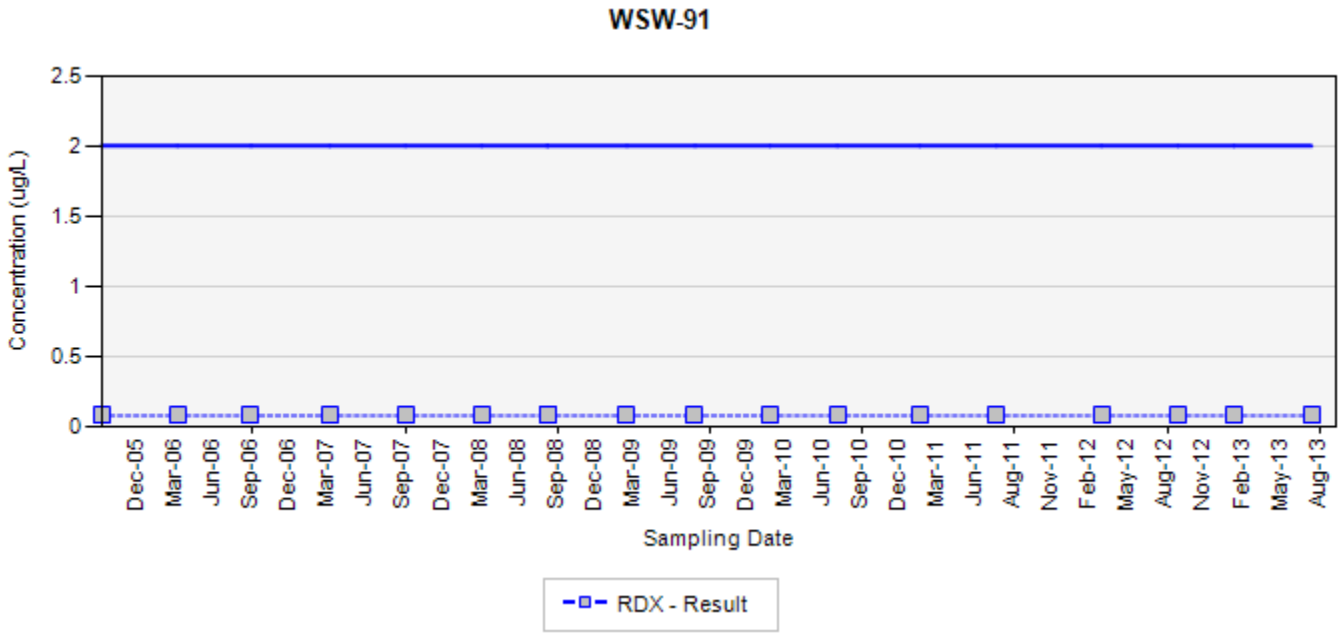
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



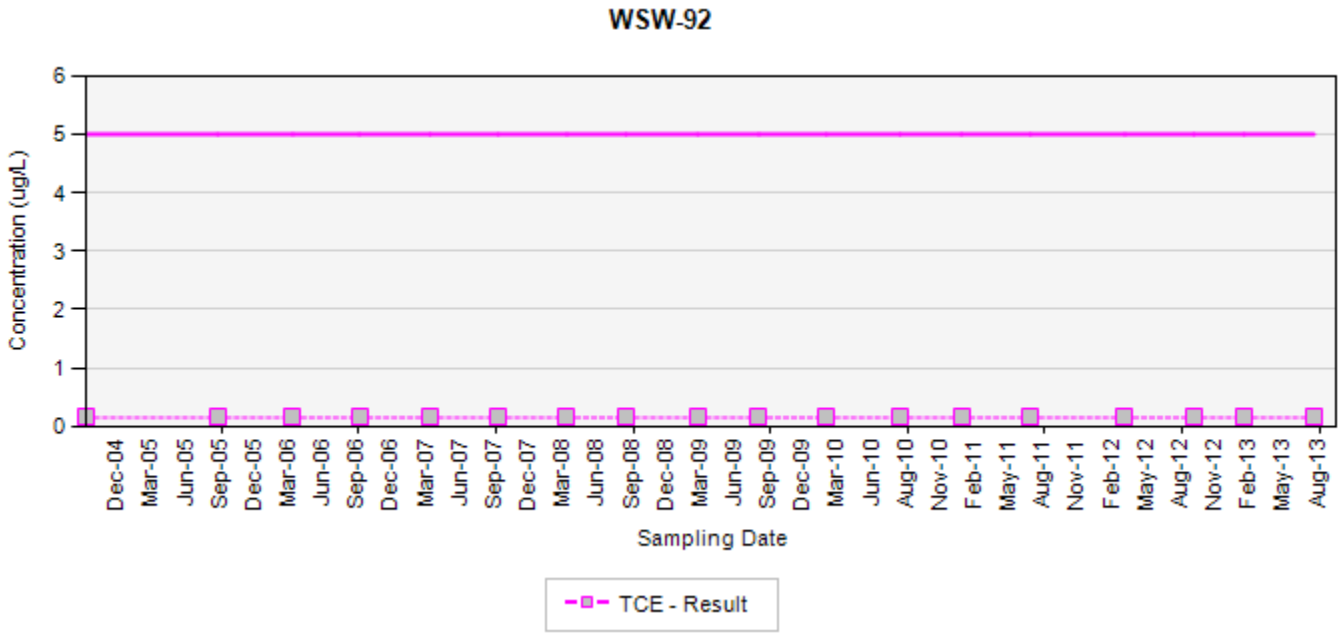


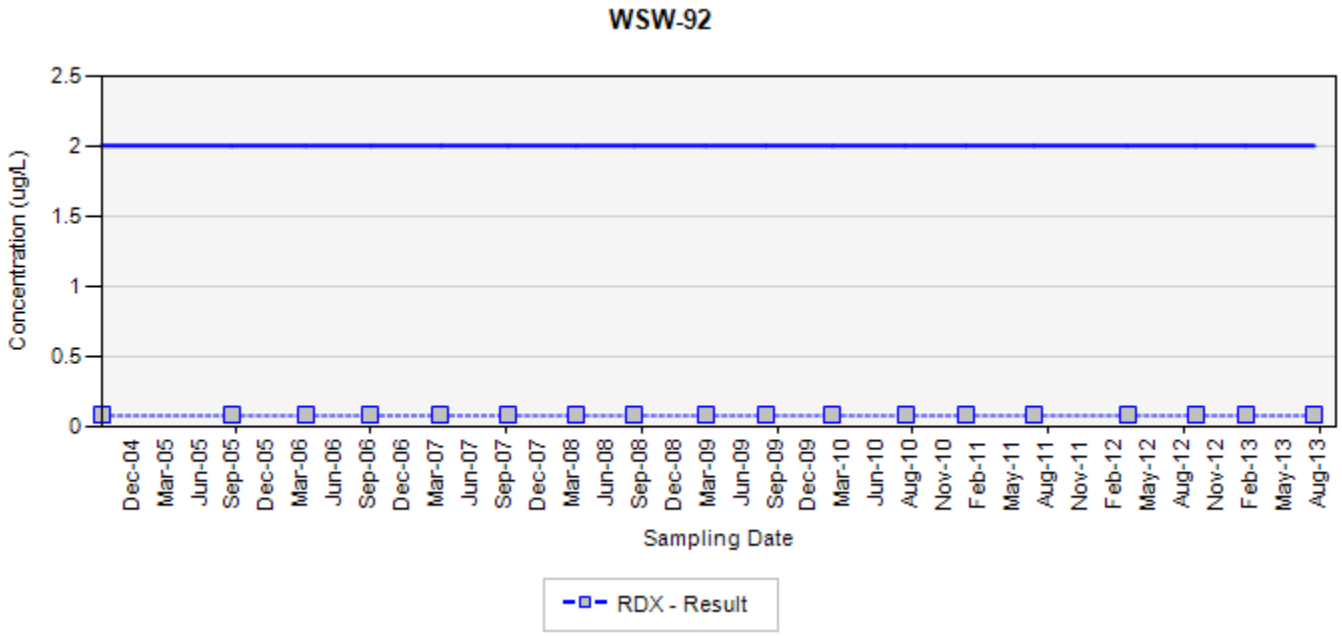
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



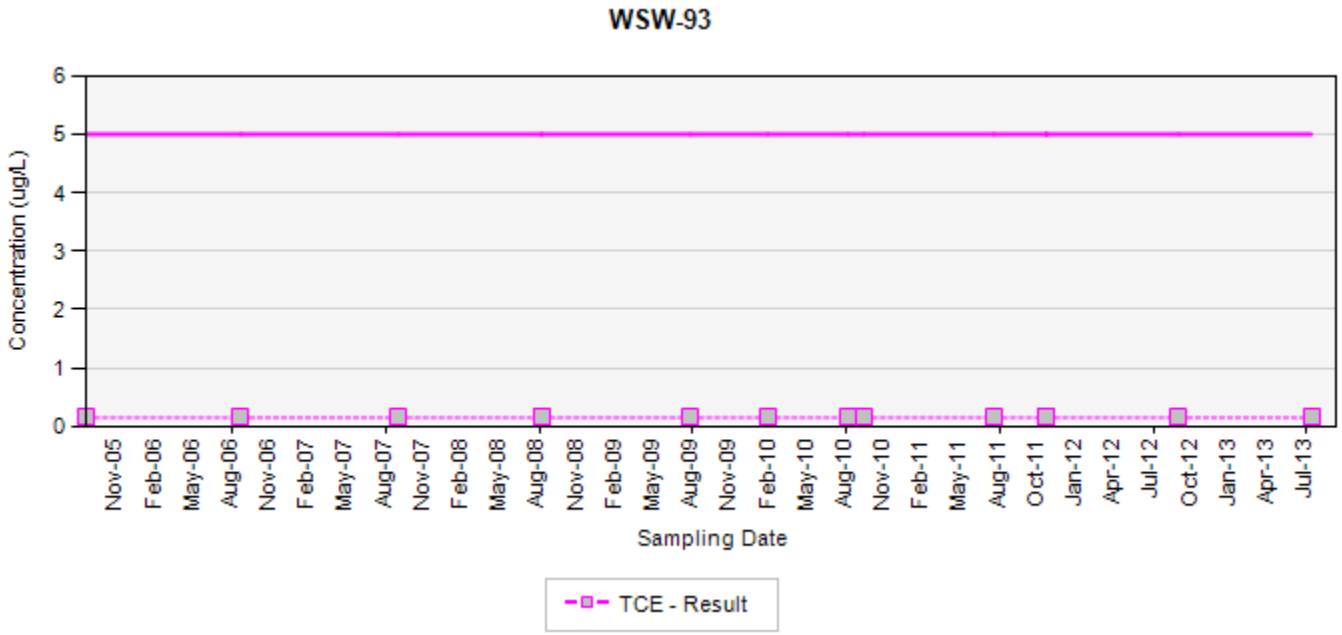


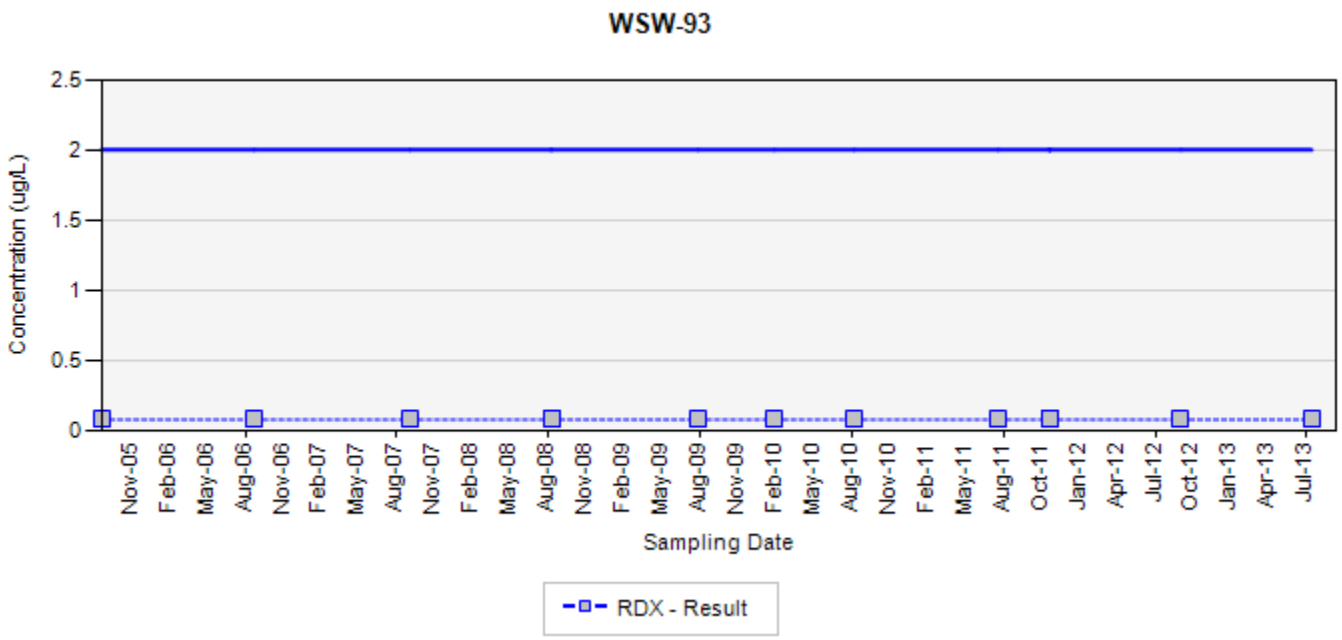
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



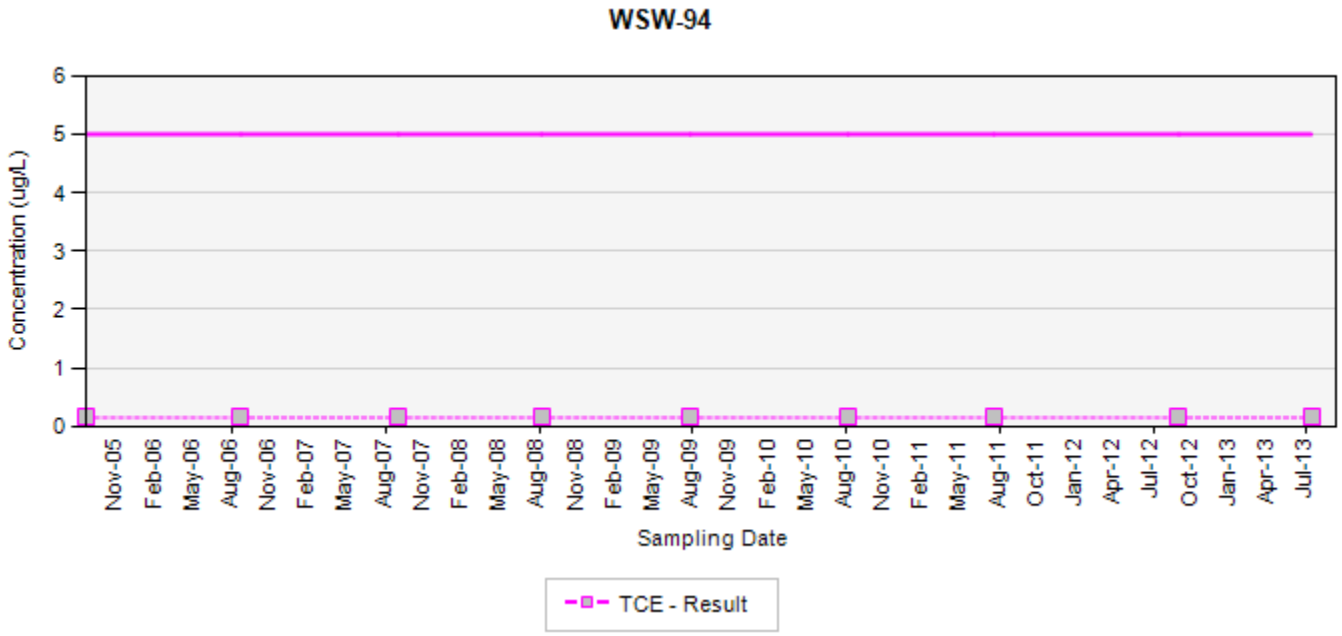


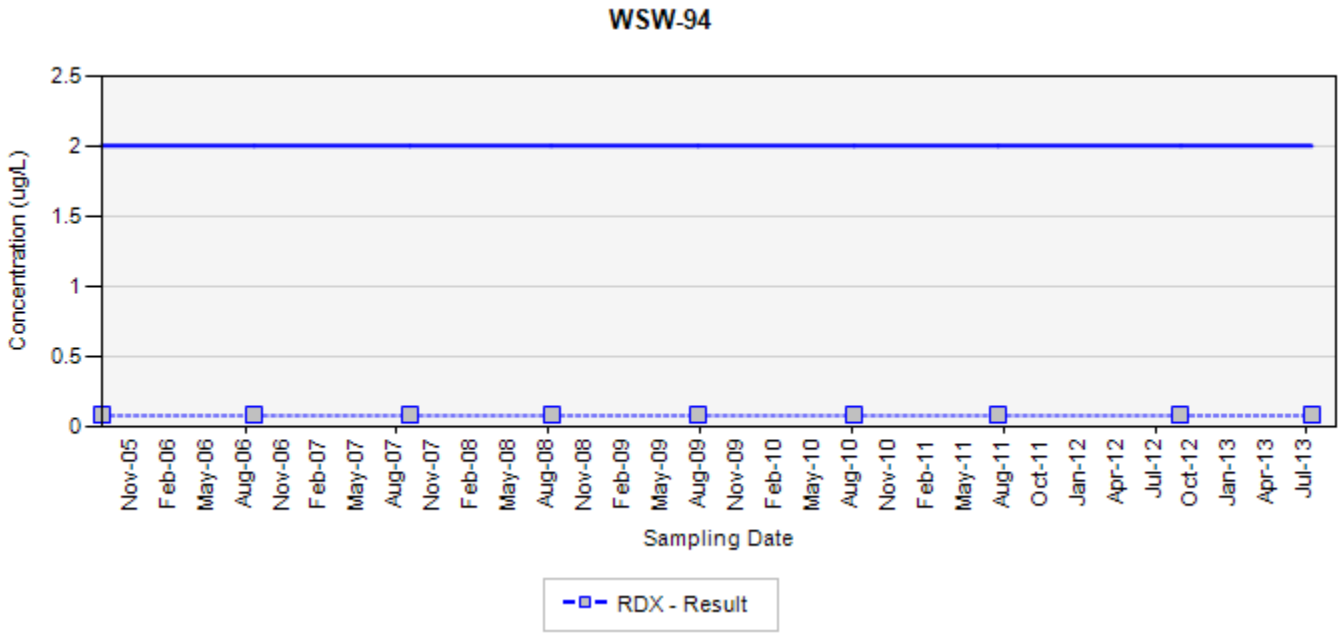
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



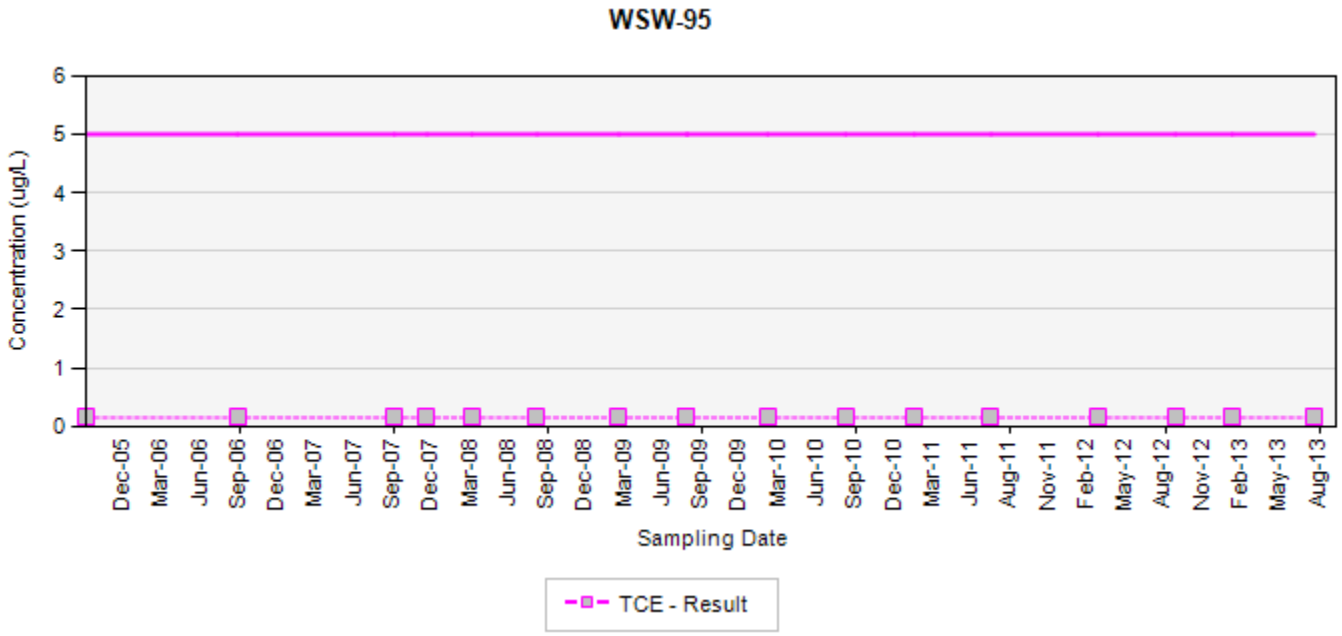


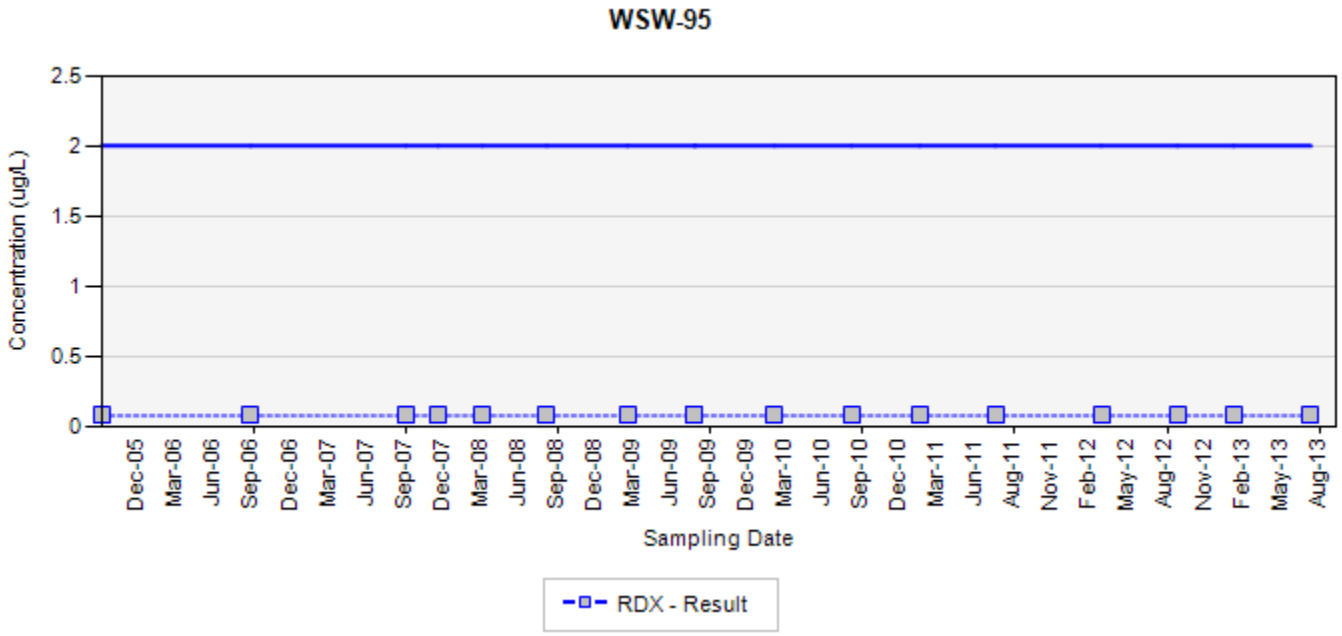
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



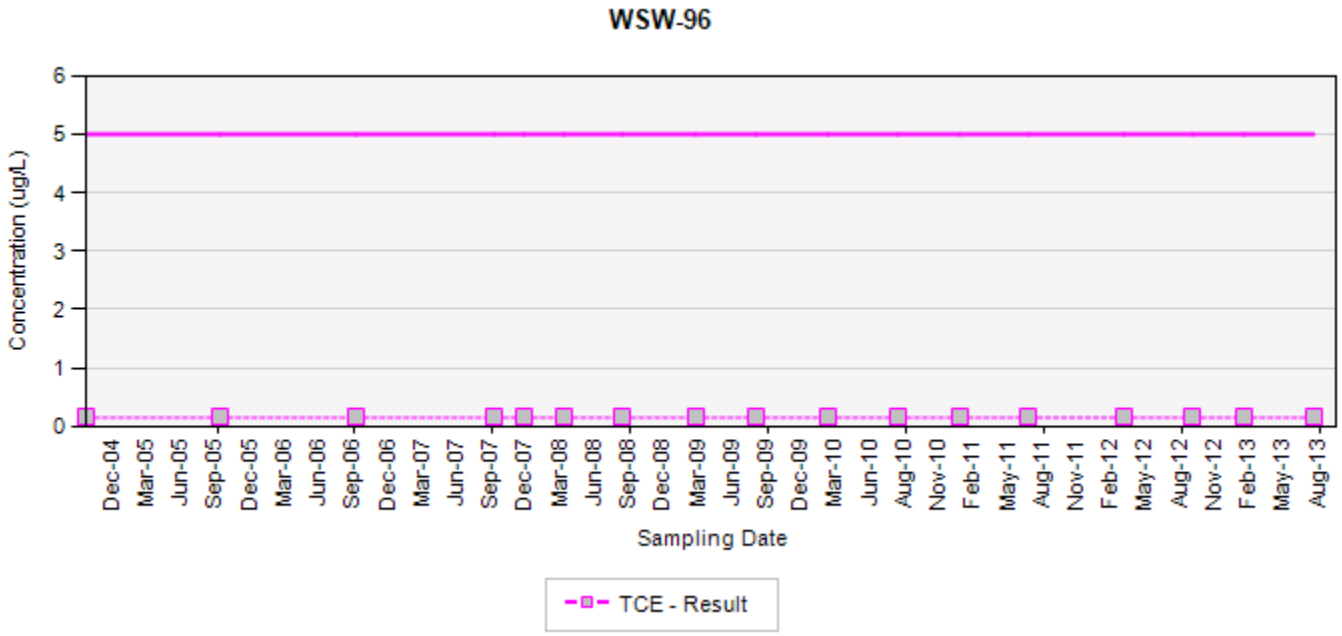


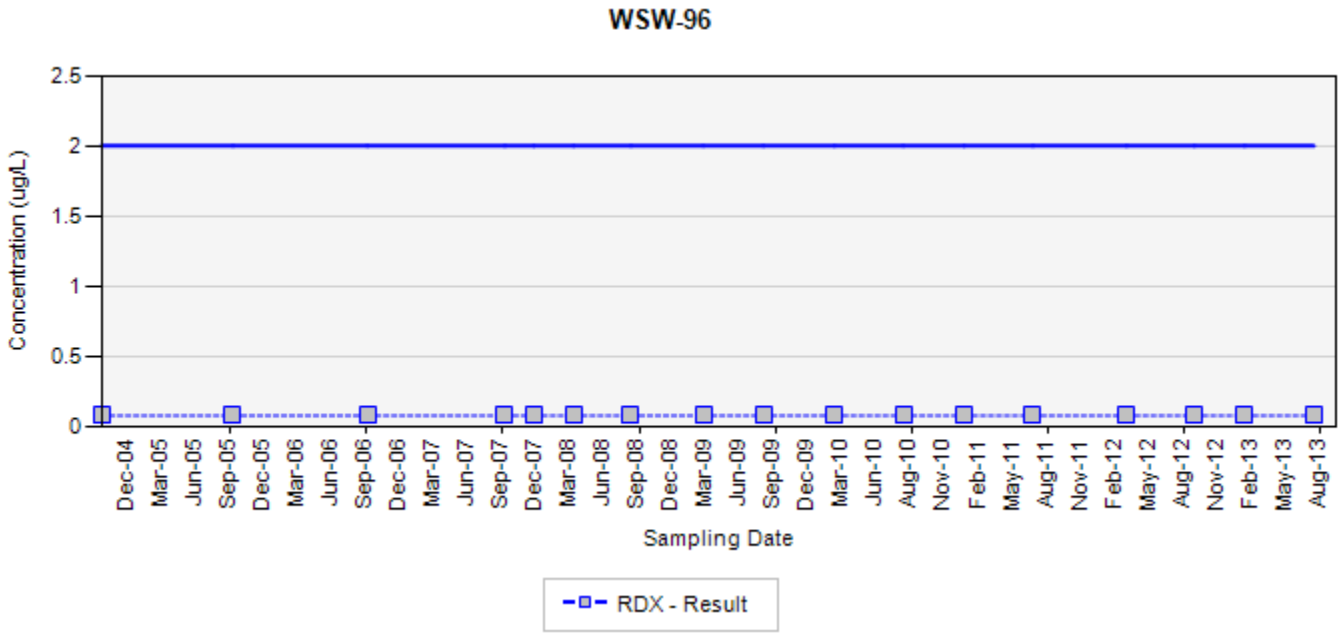
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



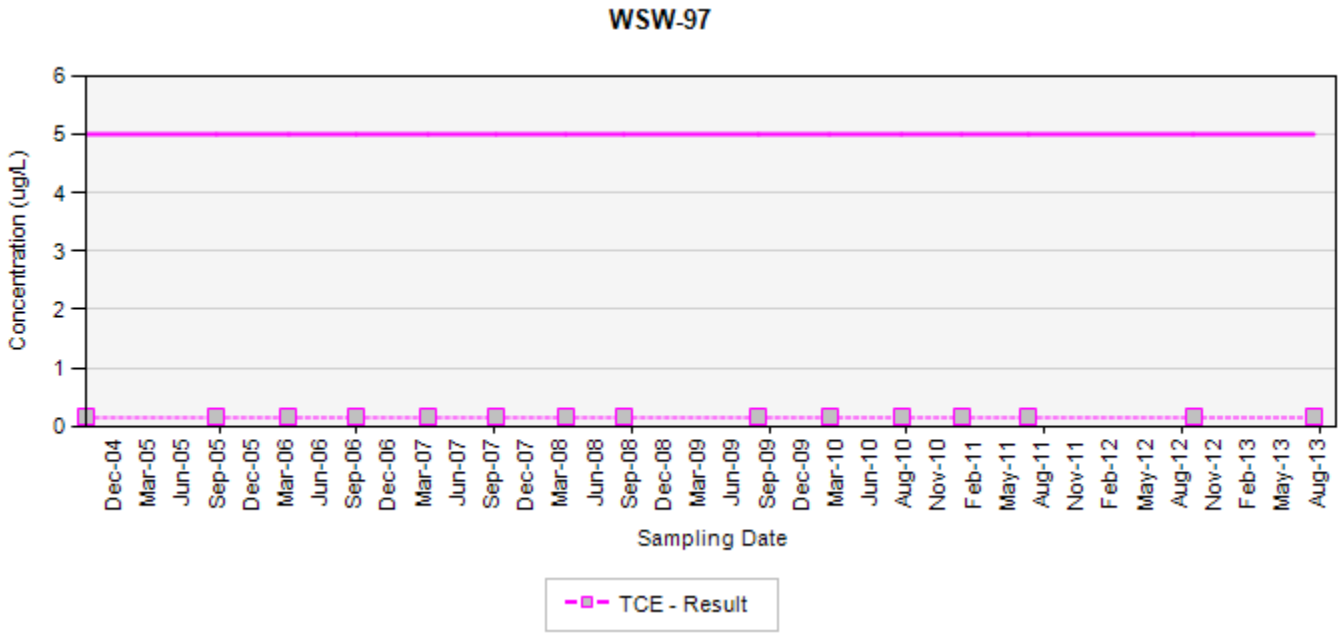


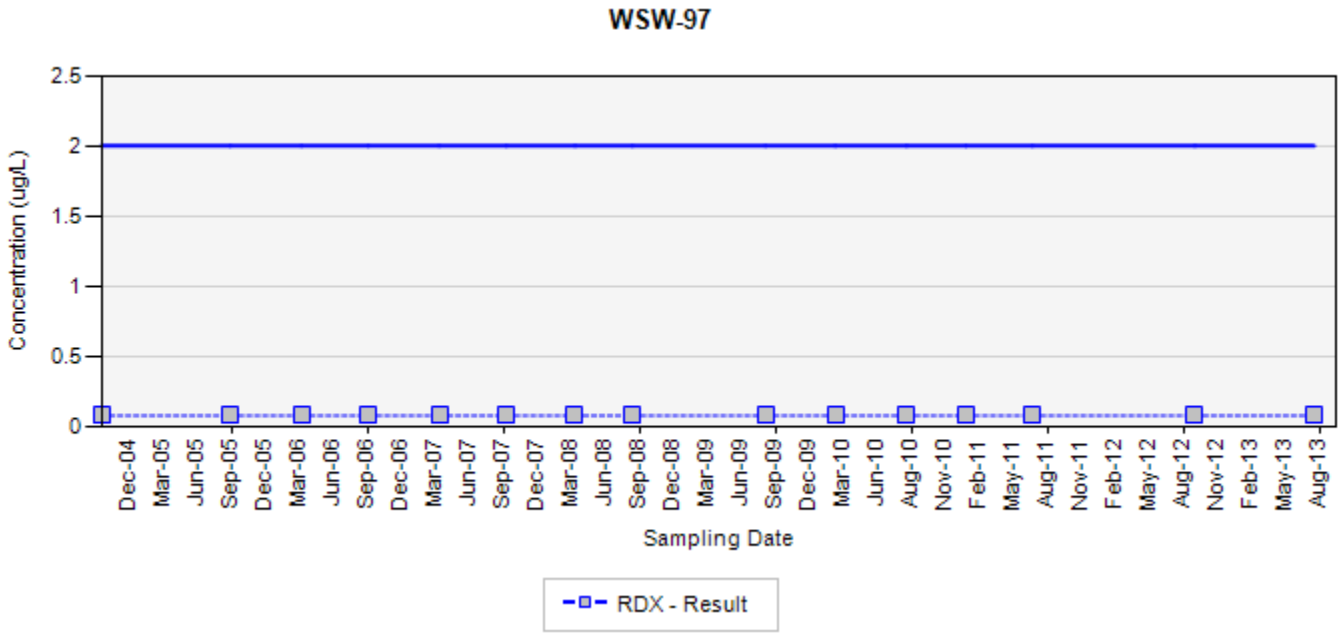
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells



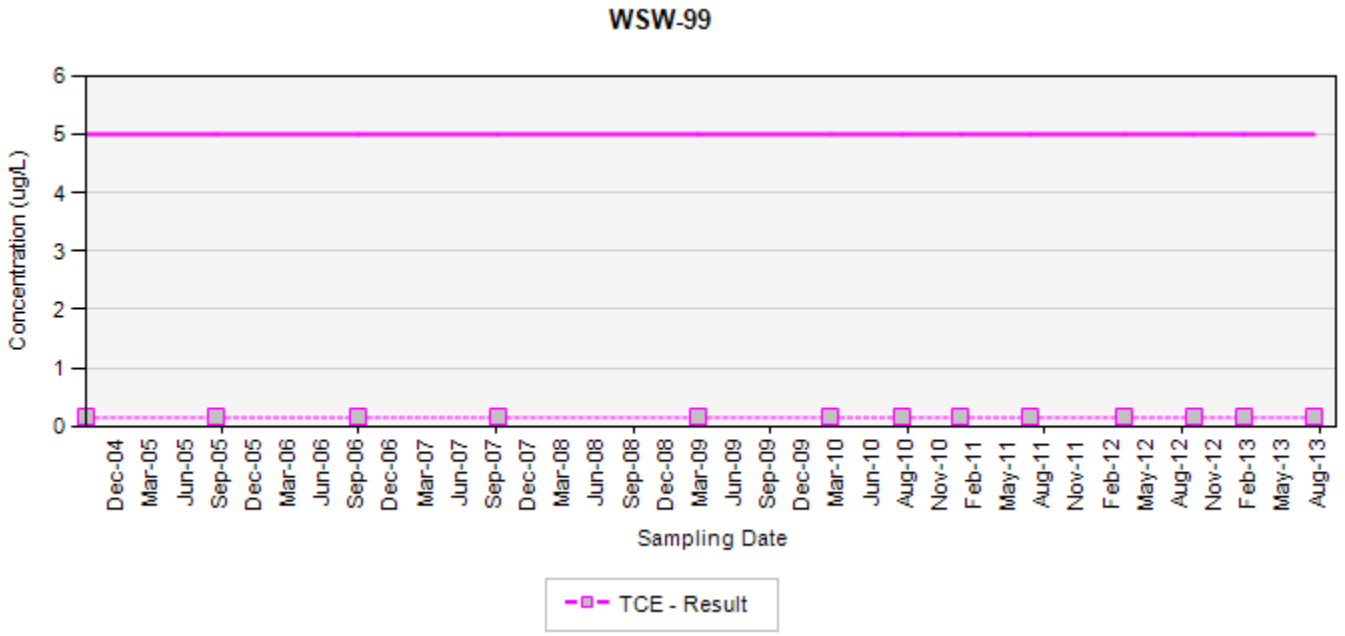


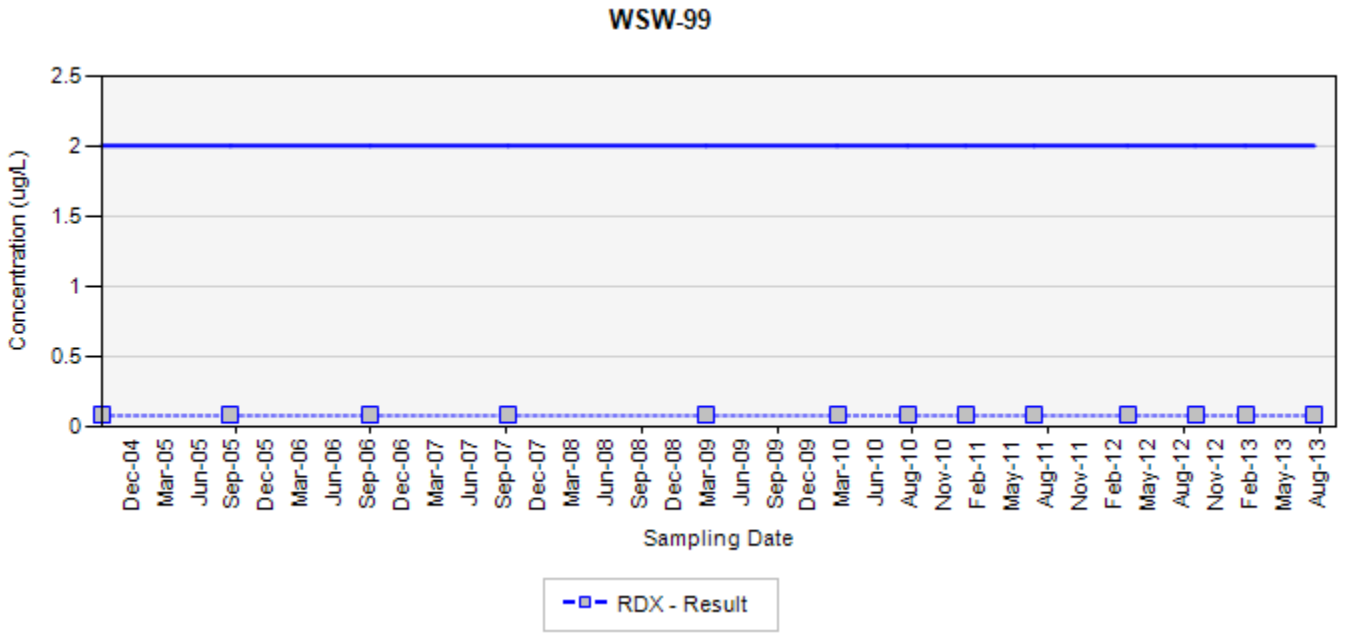
TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix B
Concentration Trend Charts for Water Supply Wells





TCE - trichloroethene
RDX - hexahydro-1,3,5-trinitro-1,3,5-triazine
Final Target Groundwater Cleanup Goals for TCE is 5 UG/L
Final Target Groundwater Cleanup Goals for RDX is 2 UG/L

In the event that both a normal sample and a field duplicate were collected, the higher of the two results will be displayed on the chart

ug/L: micrograms per liter
Silver markers indicate non-detected results

Appendix C

Quality Control Summary Report Third Quarter 2013 Groundwater Monitoring Program Sampling Events, Former Nebraska Ordnance Plant

(on CD)

Regional Office

1746 Cole Boulevard
Building 21, Suite 350
Lakewood, CO 80401

Phone: 303.298.7607
Fax: 303.298.7837

October 22, 2013

U.S. Army Corps of Engineers, Kansas City District
Attn: Jacqy Frazier
601 East 12th Street
Kansas City, MO 64106-2896

Re: Transmittal of the Final Quality Control Summary Report
Third Quarter 2013 Groundwater Monitoring Program Sampling Events
Former Nebraska Ordnance Plant, Mead, Nebraska
Contract No. W912DQ-08-D-0001, Task Order No. 0002

Dear Ms. Frazier:

ECC is hereby transmitting one electronic copy of the Final Quality Control Summary Report for the Third Quarter 2013 Groundwater Monitoring Program Sampling Events at the former Nebraska Ordnance Plant, Mead, Nebraska.

Please contact Mr. Brady Bigelow or me if you require additional information.

Sincerely,

John Ryder
Project Chemist
ECC

Enclosures
cc: Ms. Kristine Stein (USACE)
Mr. Jason L'Ecuyer (USACE)
Mr. Bradley Brink (USACE)
Mr. Kirk Boese (USACE)

Corporate Office

1240 Bayshore Highway
Burlingame, CA 94010

Phone: 650.347.1555
Fax: 650.347.8789
www.ecc.net

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE *(Read instructions on the reverse side prior to initiating this form)*	DATE: October 22, 2013	TRANSMITTAL NO. 2013-085

SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (This section will be initiated by contractor)

Attn: Jacqy Frazier USACE, Kansas City District 601 E. 12th St. Kansas City, MO 64106-2896	FROM: John Ryder ECC 1746 Cole Blvd, Bldg 21, Lakewood, CO 80401	CONTRACT NO. W912DQ-08-D-0001, Task Order 0002	CHECK ONE: __X__ THIS IS A NEW TRANSMITTAL ____ THIS IS A RESUBMITTAL OF TRANSMITTAL _____
SPECIFICATION SECTION NO. (cover only one section with each transmittal)	PROJECT TITLE AND LOCATION: Groundwater Monitoring Program, Former Nebraska Ordnance Plant, Mead, Nebraska		CHECK ONE: ___ FIO __X__ For Govt. Approval

ITEM NO. *a.*	DESCRIPTION OF ITEM SUBMITTED *(Type, size, model number, etc.)* *b.*	MFG. OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. *(See instruction No. 8)* *c.*	NO. OF COPIES *d.*	CONTRACT REFERENCE DOCUMENT SPEC. PARA. NO. *e.*	DRAWING SHEET NO. *f.*	FOR CONTRACTOR USE CODE *g.*	VARIATION *(See instruc. no. 6)* *h.*	FOR C E USE CODE *i.*
1	Quality Control Summary Report - Final		1 electronic					
	Third Quarter 2013 Groundwater Monitoring Program Sampling Events							

REMARKS
Kristine Stein (USACE)
Jason L'Ecuyer (USACE)
Bradley Brink (USACE)
Kirk Boese (USACE)
Mead Library

I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as otherwise stated.
John Ryder, Denver Operations Group

NAME AND SIGNATURE OF CONTRACTOR

SECTION II - APPROVAL ACTION

ENCLOSURES RETURNED (List by Item No.)	NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY	DATE

FINAL
QUALITY CONTROL SUMMARY REPORT
THIRD QUARTER 2013

GROUNDWATER MONITORING PROGRAM
SAMPLING EVENTS

FORMER NEBRASKA ORDNANCE PLANT
MEAD, NEBRASKA

Prepared for

United States Army Corps of Engineers
Kansas City District

October 2013

Quality Control Summary Report
Third Quarter 2013 Groundwater Monitoring Sampling Events
Former Nebraska Ordnance Plant, Mead, Nebraska

1.0 INTRODUCTION

Monitoring well sampling was conducted between August 7 and 13, 2013 at the former Nebraska Ordnance Plant, near Mead, Nebraska. All sampling activities were performed in accordance with the *Site-Wide Work Plan, Revision 01, Support Services, Former Nebraska Ordnance Plant, Mead, Nebraska* (ECC, 2013). This Quality Control Summary Report presents a summary of the chemical data quality review for the Third Quarter 2013 monitoring well sampling event.

TestAmerica of South Burlington, Vermont analyzed the samples for one or more of the following constituents:

- Volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) Solid Waste (SW)-846 Method 8260B; and
- Explosives by EPA SW-846 Method 8330.

Table 1-1 presents a complete list of the monitoring wells planned for sample collection, the corresponding sample identifications (IDs), and the requested analyses for the Third Quarter 2013 monitoring well sampling event.

The chain-of-custody and field notes are included as Appendices A and B, respectively. Appendix C presents an explanation of data validation qualifiers and drinking water standards. Appendix D contains a compact disc (CD) with all analytical data.

2.0 FIELD SAMPLING ACTIVITIES

The field sampling team collected samples for chemical analyses from 94 monitoring wells during the Third Quarter 2013 monitoring well sampling event. VOCs were sampled in 52 of the wells and 87 wells were sampled for explosives. The team also collected nine field duplicate samples and four matrix spike (MS)/matrix spike duplicate (MSD) pairs with the monitoring well samples. Additionally, three trip blanks were included with the VOC sample shipments.

Table 2-1 summarizes the following information listed for the Third Quarter 2013 Monitoring Well sampling event:

- Field Sample IDs:
- MS/MSD sample information;
- Quality control (QC) split sample information;
- Dates of sample collection and sample receipt by the laboratory;
- Laboratory Sample IDs;
- Laboratory sample delivery group (SDG) numbers; and
- Requested analyses.

3.0 DATA QUALITY EVALUATION PROCEDURES

The following subsections present results of the data quality evaluation. This evaluation was performed in accordance with the *Mead Validation Guidelines*, (ECC, 2007, approved by United States Army Corps of Engineers [USACE] 2007). Qualifiers were assigned based on laboratory QC criteria. Data quality evaluation results are presented in Table 3-1, and the QC outliers for the explosives and VOCs analyses are presented in Table 3-2 and Table 3-3.

3.1 Sample Receipt at the Laboratory

The laboratories received all samples in good condition and within the recommended temperature range of 4 ± 2 degrees Celsius (°C) or just below 2° C, but not frozen.

3.2 Holding Times

The laboratories performed extractions and analyses of all samples within required method-specific holding times.

3.3 Tuning and Calibration

According to the *Mead Validation Guidelines* (ECC, 2007), tune and calibration information is assessed using the laboratory case-narrative or summary forms. The laboratory did not report any deviations for the calibration and tuning of pertinent instrumentation in the case narratives. The evaluation of the calibration summary forms indicated that all project criteria were met.

3.4 Laboratory Method Blanks

A laboratory method blank is an analyte-free matrix that is carried through the entire preparation and analysis sequence for the purpose of identifying potential contamination introduced during preparation and analysis. Method blanks were analyzed for each sample batch for all analyses.

In accordance with the *Mead Validation Guidelines* (ECC, 2007), detections are qualified as non-detect (U) if the concentration in the sample is less than 5 times the concentration in the associated blank. For common laboratory contaminants, detections are qualified as non-detect (U) if the concentration in the sample is less than 10 times the concentration in the associated blank. Sample results that are either non-detect (U), or greater than 5 or 10 times the blank result do not require qualification.

There were no detections of target analytes in the laboratory method blanks.

3.5 Trip Blanks

A trip blank is an analyte-free matrix that accompanies samples through the sample collection and transportation process to identify potential VOC contamination. In accordance with the *Mead Validation Guidelines* (ECC, 2007), detections are qualified as non-detect (U) if the concentration in the sample is less than 5 times the concentration in the associated blank (10 times for common laboratory contaminants). Sample results that are either non-detect (U), or greater than 5 or 10 times the blank result do not require qualification.

There was a trichloroethene (TCE) detection in one trip blank which resulted in a qualification of a sample. Table 3-1 presents data quality evaluation results and associated qualified samples. Table 3-3 presents the VOC QC outliers and associated sample for the assigned qualifier. This qualifier was not used to determine analytical completeness or project completeness.

3.6 Surrogates

Surrogates are compounds not normally found in the environment that are added (spiked) into samples prior to extraction (for extractable methods) or prior to analysis (for non-extractable methods). The percent recovery (% REC) of each surrogate is used to assess the success of the sample preparation process for an individual sample.

In accordance with the *Mead Validation Guidelines* (ECC, 2007), results for associated analytes in the affected samples are J-coded for detects and UJ-coded for non-detects if the surrogate % RECs are below the laboratory QC limits, but greater than 10%. Non-detects are R-coded (rejected) if % RECs are less than 10%. Also in accordance with the *Mead Validation Guidelines* (ECC, 2007), results for associated analytes in the affected samples are J-coded for detects if the % RECs are greater than the QC limits. No action is required for non-detects.

The % REC for surrogate 1,2-dinitrobenzene on the confirmation column in the explosive analysis of one sample exceeded the laboratory QC limits. However, no qualification was required because all associated results were reported from the primary column, which met all surrogate % REC criteria for the sample.

The % REC for 1,2-dichloroethane in the VOC analysis of one sample exceeded the laboratory QC limits. However, no qualifications was required since there were no detections for target analytes in the sample.

3.7 Laboratory Control Sample / Laboratory Control Sample Duplicate

A laboratory control sample (LCS) consists of a matrix similar to that of the field sample which is spiked with known concentrations of analytes. The LCS % REC is a measure of the accuracy of the preparation and analytical methods. The laboratory control sample duplicate (LCSD) is a duplicate preparation and analysis of the LCS. The differences between the LCS and LCSD recoveries are used to calculate the relative percent differences (RPD), which is a measure of the

precision of the preparation and analytical methods. LCS was analyzed for each sample batch for all analyses.

In accordance with the *Mead Validation Guidelines* (ECC, 2007), results for the affected analyte in the associated samples are J-coded for detects and UJ-coded for non-detects if the LCS % RECs are below the laboratory QC limits, but greater than 10%. Non-detects are R-coded if the % RECs are less than 10%. Also in accordance with the *Mead Validation Guidelines* (ECC, 2007), results for the affected analyte in the associated samples are J-coded for detects if the % RECs are greater than the QC limits. No action is required for non-detects. Additionally, results for the affected analyte in the associated samples are J-coded for detects and UJ-coded for non-detects if the RPD exceeds 30%.

All LCS/LCSD % RECs and RPDs were within laboratory QC limits.

3.8 Matrix Spike / Matrix Spike Duplicate

MS and MSD samples were analyzed for both VOCs and explosives. A field sample is split into three portions (original, MS, and MSD) and known amounts of analytes are added (spiked) into the MS and MSD portions of the sample. The analytical results of these two portions are compared to each other for reproducibility using the RPD. These results are also compared against the un-spiked portion of the sample for % REC of the spiked analytes. MS/MSD analyses were performed on the appropriate samples as listed on Table 2-1 Several additional explosive MS/MSD analyses were performed by the laboratory.

In accordance with the *Mead Validation Guidelines* (ECC, 2007), results for the affected analyte in the parent sample are J-coded for detects and UJ-coded for non-detects if the MS/MSD % RECs are below the laboratory QC limits, but greater than 10%. Non-detects are R-coded if % RECs are less than 10%. Also in accordance with the *Mead Validation Guidelines* (ECC, 2007), results for the affected analyte in the parent sample are J-coded for detects if the MS/MSD % RECs are greater than the QC limits. No action is required for non-detects. Additionally, results for the affected analyte in the associated parent samples are J-coded for detects and UJ-coded for non-detects if the RPD exceeds QC limits.

All % RECs and all RPDs were within QC limits.

3.9 Field Duplicates

Field duplicates provide information regarding the reproducibility of analytical results and account for error introduced from handling, shipping, preparing, and analyzing field samples.

The following field duplicate pairs were collected during the Third Quarter 2013 monitoring well sampling event:

- BMW-035-072013 / BMW-235-072013 (Explosives);
- AMW-038-072013 / AMW-238-072013 (VOCs and Explosives);
- AMW-046-072013 / AMW-246-072013 (VOCs and Explosives);

- AMW-0106-072013 / AMW-2106-072013 (VOCs and Explosives);
- AMW-0107-072013 / AMW-2107-072013 (VOCs and Explosives);
- AMW-0118-072013 / AMW-27118-072013 (Explosives);
- AMW-0147-072013 / AMW-2147-072013 (Explosives);
- AMW-0160-072013 / AMW-2160-072013 (VOCs and Explosives); and
- AMW-0161-072013 / AMW-2161-072013 (VOCs and Explosives).

The field duplicate precision criteria (RPD of < 50%) was met in the all other duplicate pairs. Field duplicate results are considered acceptable when one result is not detected and the other result is detected below the limit of quantitation (LOQ) or if both results are less than the LOQ.

3.10 Dilutions and Re-analyses

Qualifiers assigned as a result of calibration range exceedance are not used in the calculation of analytical data completeness percentages if there are acceptable results from diluted sample analyses.

Eight samples required a dilution analysis because the concentration of RDX was above the calibration range. Nine water samples were initially analyzed at a dilution due to high levels of TCE. Six samples required further dilution. According to the *Mead Validation Guidelines* (ECC, 2007) results exceeding the calibrations range are not used for reporting or project decisions when acceptable results from dilutions are available. The final dilution analysis results were used for RDX and TCE, and the more concentrated analysis results were reported for all other sample results. Reporting limits were raised as appropriate. [Note: Only the appropriately diluted results were reported by the laboratory.]

3.11 Other Quality Control Parameters

All detected explosive results were confirmed on a second column. A column comparison between the detected explosive results was made using explosive identification summary forms. The validator confirmed all reported explosive detections for both columns and the inter-column RPDs.

Detected results with the inter-column RPDs exceeding 40% are qualified as estimated (J). Table 3-1 presents data quality evaluation results and associated qualified samples. Table 3-2 presents the explosive QC outliers and associated samples for all assigned qualifiers. These qualifiers were not used to determine analytical completeness or project completeness.

3.12 Laboratory Qualifiers

Analytes detected below the LOQ, but above the detection limit were quantified and results were assigned an estimated (J) qualifier by the laboratory. These qualifiers were carried over by the validator and were not used to determine analytical completeness or project completeness (Section 4.0).

4.0 OVERALL ASSESSMENT

The following subsections present the field completeness, analytical completeness, and project completeness determinations for the Third Quarter 2013 monitoring well sampling event.

4.1 Field Completeness

Field completeness for sample collection is assessed by comparing the number of samples collected to the number of samples planned for collection. Field completeness for the monitoring well sampling event was 100% for both VOCs and explosives. The overall field completeness percentage is 100% for the Third Quarter 2013 monitoring well sampling event. All field completeness percentages exceed the field completeness goal of 95%. Section 2.0 presents the field sampling activities, including any deviations from planned sampling if applicable. Table 4-1 presents field completeness values for the monitoring well sampling event.

4.2 Analytical Completeness

Analytical completeness is calculated as both acceptable data completeness and quality data completeness.

Acceptable data is a measure of laboratory contract compliance. Acceptable data includes data that have not been rejected (R) or qualified as estimated (J or UJ). Qualified data are considered acceptable if corrective actions were taken by the laboratory. Acceptable data completeness percentages for both VOCs and explosives are 100% which exceeds the acceptable data completeness goals for each analytical method of 90% and the overall acceptable data completeness goal of 95%.

Quality data is a measure of the percentage of usable data points. Usable data points include all non-rejected data. Rejected data points with replacement data do not count against the quality data completeness. No data were rejected for the Third Quarter 2013 monitoring well sampling event based on analytical data evaluation. The quality data completeness percentage for both VOCs and explosives is 100%. Overall quality data completeness is therefore 100%, which exceeds the quality data completeness goal of 80%. Table 4-2 presents analytical data completeness.

4.3 Project Completeness

Project completeness combines sampling and analytical protocols to assess the project as a whole. Project completeness is assessed by comparing the percentage of samples/measurements that are determined to be usable to the total number of samples/measurements planned. Project completeness is calculated using field completeness and analytical completeness (quality data) percentages. The project completeness percentage of 100% exceeded the project completeness goal of 90%. Table 4-3 presents project completeness percentage.

5.0 CONCLUSIONS

Data are valid for use, as qualified. Overall field completeness is 100%, acceptable data completeness is 100%, quality data completeness is 100%, and the overall project completeness is 100% for the Third Quarter 2013 monitoring well sampling event.

Nine sample results for TCE and eight sample results for RDX were reported from a dilution due to calibration range exceedance. These results do not affect analytical or project completeness. Detected results qualified as estimated for inter-column RPD exceedances do not affect analytical or project completeness.

6.0 REFERENCES

ECC, 2007 *Mead Validation Guidelines*, (approved by USACE 2007).

ECC, 2013, *Site Wide Work Plan, Revision 01, Support Services, Former Nebraska Ordnance Plant, Mead, Nebraska*. April.

Tables

List of Acronyms for Tables

Term	Definition
µg/L	micrograms per liter
BLK	blank
CCB	continuing calibration blank
C-RPD	column relative percent difference
GC/MS	gas chromatography–mass spectrometry
HPLC	high-performance liquid chromatography
ID	identification/identifier
J	estimated
Lab	laboratory
MDL	minimum detection limit
MS/MSD	matrix spike/matrix spike duplicate
MS	mass-spectrometry
MW	monitoring well
QC	quality control
RL	reporting limit
RPD	relative percent difference
SDG	sample delivery group
U	not detected at laboratory limit of detection
UCL	upper control limit
UJ	qualified as estimated and not detected at laboratory limit of detection

Table 1-1
Sample Locations, Sample IDs, and Analyses
Third Quarter 2013 Monitoring Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Groundwater Locations	Sample IDs	Analyses
MW-106A	AMW-0106-072013	Explosives, Volatiles
MW-106B	BMW-0106-072013	Explosives, Volatiles
MW-107A	AMW-0107-072013	Explosives, Volatiles
MW-107B	BMW-0107-072013	Explosives, Volatiles
MW-107D	DMW-0107-072013	Explosives, Volatiles
MW-110A	AMW-0110-072013	Explosives, Volatiles
MW-110B	BMW-0110-072013	Explosives, Volatiles
MW-110D	DMW-0110-072013	Explosives, Volatiles
MW-112A	AMW-0112-072013	Explosives, Volatiles
MW-112B	BMW-0112-072013	Explosives, Volatiles
MW-113A	AMW-0113-072013	Explosives, Volatiles
MW-113B	BMW-0113-072013	Explosives, Volatiles
MW-113D	DMW-0113-072013	Explosives, Volatiles
MW-114A	AMW-0114-072013	Explosives, Volatiles
MW-114B	BMW-0114-072013	Explosives, Volatiles
MW-114D	DMW-0114-072013	Explosives, Volatiles
MW-115A	AMW-0115-072013	Explosives, Volatiles
MW-115B	BMW-0115-072013	Explosives, Volatiles
MW-115D	DMW-0115-072013	Explosives, Volatiles
MW-116A	AMW-0116-072013	Explosives, Volatiles
MW-116B	BMW-0116-072013	Explosives, Volatiles
MW-116D	DMW-0116-072013	Explosives, Volatiles
MW-118A	AMW-0118-072013	Explosives
MW-118B	BMW-0118-072013	Explosives
MW-145B	BMW-0145-072013	Explosives
MW-147A	AMW-0147-072013	Explosives
MW-147B	BMW-0147-072013	Explosives
MW-147D	DMW-0147-072013	Explosives
MW-148A	AMW-0148-072013	Explosives
MW-155B	BMW-0155-072013	Explosives, Volatiles
MW-158A	AMW-0158-072013	Explosives, Volatiles
MW-158B	BMW-0158-072013	Explosives, Volatiles
MW-158D	DMW-0158-072013	Explosives, Volatiles
MW-159A	AMW-0159-072013	Explosives, Volatiles
MW-159B	BMW-0159-072013	Explosives, Volatiles
MW-160A	AMW-0160-072013	Explosives, Volatiles
MW-160B	BMW-0160-072013	Explosives, Volatiles
MW-161A	AMW-0161-072013	Explosives, Volatiles
MW-161B	BMW-0161-072013	Explosives, Volatiles
MW-162A	AMW-0162-072013	Explosives
MW-163A	AMW-0163-072013	Explosives
MW-164A	AMW-0164-072013	Explosives
MW-165B	BMW-0165-072013	Explosives
MW-166A	AMW-0166-072013	Explosives
MW-166B	BMW-0166-072013	Explosives
MW-167A	AMW-0167-072013	Explosives
MW-167B	BMW-0167-072013	Explosives
MW-168A	AMW-0168-072013	Explosives
MW-168B	BMW-0168-072013	Explosives
MW-169A	AMW-0169-072013	Explosives
MW-169B	BMW-0169-072013	Explosives

Table 1-1
Sample Locations, Sample IDs, and Analyses
Third Quarter 2013 Monitoring Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Groundwater Locations	Sample IDs	Analyses
MW-170A	AMW-0170-072013	Explosives
MW-171A	AMW-0171-072013	Explosives
MW-171B	BMW-0171-072013	Explosives
MW-172A	AMW-0172-072013	Explosives
MW-172B	BMW-0172-072013	Explosives
MW-173A	AMW-0173-072013	Explosives
MW-174A	AMW-0174-072013	Explosives
MW-174B	BMW-0174-072013	Explosives
MW-175A	AMW-0175-072013	Explosives, Volatiles
MW-175B	BMW-0175-072013	Explosives, Volatiles
MW-176A	AMW-0176-072013	Explosives, Volatiles
MW-176B	BMW-0176-072013	Explosives, Volatiles
MW-177A	AMW-0177-072013	Volatiles
MW-177B	BMW-0177-072013	Volatiles
MW-178B	BMW-0178-072013	Explosives, Volatiles
MW-179A	AMW-0179-072013	Volatiles
MW-179B	BMW-0179-072013	Volatiles
MW-35A	AMW-035-072013	Explosives
MW-35B	BMW-035-072013	Explosives
MW-35D	DMW-035-072013	Explosives
MW-38A	AMW-038-072013	Explosives, Volatiles
MW-38D	DMW-038-072013	Explosives, Volatiles
MW-46A	AMW-046-072013	Explosives, Volatiles
MW-46B	BMW-046-072013	Explosives, Volatiles
MW-46D	DMW-046-072013	Explosives, Volatiles
MW-80A	AMW-080-072013	Volatiles
MW-80B	BMW-080-072013	Volatiles
MW-80D	DMW-080-072013	Volatiles
MW-83A	AMW-083-072013	Explosives
MW-83B	BMW-083-072013	Explosives
MW-83D	DMW-083-072013	Explosives
MW-84A	AMW-084-072013	Explosives
MW-84B	BMW-084-072013	Explosives
MW-84D	DMW-084-072013	Explosives
MW-85A	AMW-085-072013	Explosives
MW-85B	BMW-085-072013	Explosives
MW-85D	DMW-085-072013	Explosives
MW-88A	AMW-088-072013	Explosives, Volatiles
MW-88B	BMW-088-072013	Explosives, Volatiles
MW-88D	DMW-088-072013	Explosives, Volatiles
MW-95A	AMW-095-072013	Explosives
MW-95B	BMW-095-072013	Explosives
MW-95D	DMW-095-072013	Explosives

Notes:

Volatiles	SW8260B	Volatile Organic Compounds by Capillary GC/MS
Explosives	SW8330	Nitroaromatics and Nitramines by HPLC

Table 2-1
Sample Collection Summary
Third Quarter 2013 Monitoring Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Field Samples	MS/MSD Samples	Field Duplicate Samples	Date Sampled	Date Received by Lab	Lab ID	SDG	Explosives	Volatiles
Field Samples								
AMW-0160-072013			8/7/2013	8/9/2013	200-17861-2	17861	•	•
		AMW-2160-072013	8/7/2013	8/9/2013	200-17861-3	17861	•	•
BMW-0160-072013			8/7/2013	8/9/2013	200-17861-4	17861	•	•
AMW-0161-072013			8/7/2013	8/9/2013	200-17861-5	17861	•	•
		AMW-2161-072013	8/7/2013	8/9/2013	200-17861-6	17861	•	•
BMW-0161-072013			8/7/2013	8/9/2013	200-17861-7	17861	•	•
AMW-0163-072013			8/7/2013	8/9/2013	200-17861-9	17861	•	
BMW-0165-072013			8/7/2013	8/9/2013	200-17861-11	17861	•	
AMW-0162-072013			8/7/2013	8/9/2013	200-17861-8	17861	•	
AMW-0164-072013			8/7/2013	8/9/2013	200-17861-10	17861	•	
AMW-0168-072013			8/7/2013	8/9/2013	200-17861-16	17861	•	
BMW-0168-072013			8/7/2013	8/9/2013	200-17861-17	17861	•	
AMW-0166-072013			8/7/2013	8/9/2013	200-17861-12	17861	•	
BMW-0166-072013			8/7/2013	8/9/2013	200-17861-13	17861	•	
AMW-0167-072013			8/7/2013	8/9/2013	200-17861-14	17861	•	
BMW-0167-072013			8/7/2013	8/9/2013	200-17861-15	17861	•	
AMW-0169-072013			8/7/2013	8/9/2013	200-17861-18	17861	•	
BMW-0169-072013			8/7/2013	8/9/2013	200-17861-19	17861	•	
AMW-0170-072013			8/7/2013	8/9/2013	200-17861-20	17861	•	
AMW-0175-072013			8/7/2013	8/9/2013	200-17861-23	17861	•	•
BMW-0175-072013			8/7/2013	8/9/2013	200-17861-24	17861	•	•
AMW-0174-072013			8/7/2013	8/9/2013	200-17861-21	17861	•	
BMW-0174-072013			8/7/2013	8/9/2013	200-17861-22	17861	•	
AMW-0173-072013			8/8/2013	8/10/2013	200-17871-24	17871-2	•	
AMW-0172-072013			8/8/2013	8/10/2013	200-17871-22	17871-2	•	
BMW-0172-072013			8/8/2013	8/10/2013	200-17871-23	17871-2	•	
AMW-0118-072013			8/8/2013	8/10/2013	200-17871-8	17871-1	•	
		AMW-2118-072013	8/8/2013	8/10/2013	200-17871-9	17871-1	•	
BMW-0118-072013	BMW-0118-072013		8/8/2013	8/10/2013	200-17871-10	17871-1	•	
AMW-084-072013			8/8/2013	8/10/2013	200-17871-32	17871-2	•	
BMW-084-072013			8/8/2013	8/10/2013	200-17871-33	17871-2	•	
DMW-084-072013			8/8/2013	8/10/2013	200-17871-34	17871-2	•	
AMW-083-072013			8/8/2013	8/10/2013	200-17871-29	17871-2	•	

Table 2-1
Sample Collection Summary
Third Quarter 2013 Monitoring Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Field Samples	MS/MSD Samples	Field Duplicate Samples	Date Sampled	Date Received by Lab	Lab ID	SDG	Explosives	Volatiles
BMW-083-072013			8/8/2013	8/10/2013	200-17871-30	17871-2	•	
DMW-083-072013			8/8/2013	8/10/2013	200-17871-31	17871-2	•	
AMW-0147-072013			8/8/2013	8/10/2013	200-17871-12	17871-1	•	
		AMW-2147-072013	8/8/2013	8/10/2013	200-17871-13	17871-1	•	
BMW-0147-072013			8/8/2013	8/10/2013	200-17871-14	17871-1	•	
DMW-0147-072013			8/8/2013	8/10/2013	200-17871-15	17871-1	•	
AMW-095-072013			8/8/2013	8/10/2013	200-17871-41	17871-2	•	
BMW-095-072013			8/8/2013	8/10/2013	200-17871-42	17871-2	•	
DMW-095-072013			8/8/2013	8/10/2013	200-17871-43	17871-2	•	
AMW-0148-072013			8/8/2013	8/10/2013	200-17871-16	17871-1	•	
AMW-0171-072013			8/8/2013	8/10/2013	200-17871-20	17871-1	•	
BMW-0171-072013			8/8/2013	8/10/2013	200-17871-21	17871-1	•	
BMW-0145-072013			8/8/2013	8/10/2013	200-17871-11	17871-1	•	
AMW-085-072013			8/9/2013	8/10/2013	200-17871-35	17871-2	•	
BMW-085-072013			8/9/2013	8/10/2013	200-17871-36	17871-2	•	
DMW-085-072013			8/9/2013	8/10/2013	200-17871-37	17871-2	•	
AMW-035-072013			8/9/2013	8/10/2013	200-17871-25	17871-2	•	
BMW-035-072013			8/9/2013	8/10/2013	200-17871-26	17871-2	•	
		BMW-235-072013	8/9/2013	8/10/2013	200-17871-27	17871-2	•	
DMW-035-072013			8/9/2013	8/10/2013	200-17871-28	17871-2	•	
AMW-0158-072013			8/9/2013	8/10/2013	200-17871-17	17871-1	•	•
BMW-0158-072013			8/9/2013	8/10/2013	200-17871-18	17871-1	•	•
DMW-0158-072013			8/9/2013	8/10/2013	200-17871-19	17871-1	•	•
AMW-088-072013			8/9/2013	8/10/2013	200-17871-38	17871-2	•	•
BMW-088-072013			8/9/2013	8/10/2013	200-17871-39	17871-2	•	•
DMW-088-072013			8/9/2013	8/10/2013	200-17871-40	17871-2	•	•
AMW-0116-072013			8/9/2013	8/10/2013	200-17871-5	17871-1	•	•
BMW-0116-072013			8/9/2013	8/10/2013	200-17871-6	17871-1	•	•
DMW-0116-072013			8/9/2013	8/10/2013	200-17871-7	17871-1	•	•
AMW-0115-072013			8/9/2013	8/10/2013	200-17871-2	17871-1	•	•
BMW-0115-072013			8/9/2013	8/10/2013	200-17871-3	17871-1	•	•
DMW-0115-072013			8/9/2013	8/10/2013	200-17871-4	17871-1	•	•
AMW-038-072013			8/12/2013	8/14/2013	200-17925-30	17925-2	•	•
		AMW-238-072013	8/12/2013	8/14/2013	200-17925-31	17925-2	•	•

Table 2-1
Sample Collection Summary
Third Quarter 2013 Monitoring Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Field Samples	MS/MSD Samples	Field Duplicate Samples	Date Sampled	Date Received by Lab	Lab ID	SDG	Explosives	Volatiles
DMW-038-072013	DMW-038-072013		8/12/2013	8/14/2013	200-17925-32	17925-2	•	•
AMW-0112-072013			8/12/2013	8/14/2013	200-17925-12	17925-1	•	•
BMW-0112-072013			8/12/2013	8/14/2013	200-17925-13	17925-1	•	•
AMW-0113-072013			8/12/2013	8/14/2013	200-17925-14	17925-1	•	•
BMW-0113-072013			8/12/2013	8/14/2013	200-17925-15	17925-1	•	•
DMW-0113-072013			8/12/2013	8/14/2013	200-17925-16	17925-1	•	•
AMW-046-072013			8/12/2013	8/14/2013	200-17925-33	17925-2	•	•
		AMW-246-072013	8/12/2013	8/14/2013	200-17925-34	17925-2	•	•
BMW-046-072013	BMW-046-072013		8/12/2013	8/14/2013	200-17925-35	17925-2	•	•
DMW-046-072013			8/12/2013	8/14/2013	200-17925-36	17925-2	•	•
AMW-0114-072013			8/12/2013	8/14/2013	200-17925-17	17925-1	•	•
BMW-0114-072013			8/12/2013	8/14/2013	200-17925-18	17925-1	•	•
DMW-0114-072013			8/12/2013	8/14/2013	200-17925-19	17925-2	•	•
AMW-0176-072013			8/12/2013	8/14/2013	200-17925-23	17925-2	•	•
BMW-0176-072013			8/12/2013	8/14/2013	200-17925-24	17925-2	•	•
AMW-0110-072013			8/12/2013	8/14/2013	200-17925-9	17925-1	•	•
BMW-0110-072013			8/12/2013	8/14/2013	200-17925-10	17925-1	•	•
DMW-0110-072013			8/12/2013	8/14/2013	200-17925-11	17925-1	•	•
AMW-0159-072013			8/13/2013	8/14/2013	200-17925-21	17925-2	•	•
BMW-0159-072013			8/13/2013	8/14/2013	200-17925-22	17925-2	•	•
BMW-0178-072013			8/13/2013	8/14/2013	200-17925-27	17925-2	•	•
AMW-0106-072013			8/13/2013	8/14/2013	200-17925-2	17925-1	•	•
		AMW-2106-072013	8/13/2013	8/14/2013	200-17925-3	17925-1	•	•
BMW-0106-072013	BMW-0106-072013		8/13/2013	8/14/2013	200-17925-4	17925-1	•	•
AMW-0107-072013			8/13/2013	8/14/2013	200-17925-5	17925-1	•	•
		AMW-2107-072013	8/13/2013	8/14/2013	200-17925-6	17925-1	•	•
BMW-0107-072013			8/13/2013	8/14/2013	200-17925-7	17925-1	•	•
DMW-0107-072013			8/13/2013	8/14/2013	200-17925-8	17925-1	•	•
BMW-0155-072013			8/13/2013	8/14/2013	200-17925-20	17925-2	•	•
AMW-080-072013			8/13/2013	8/14/2013	200-17925-37	17925-2		•
BMW-080-072013			8/13/2013	8/14/2013	200-17925-38	17925-2		•
DMW-080-072013			8/13/2013	8/14/2013	200-17925-39	17925-2		•
AMW-0177-072013			8/13/2013	8/14/2013	200-17925-25	17925-2		•
BMW-0177-072013			8/13/2013	8/14/2013	200-17925-26	17925-2		•

Table 2-1
Sample Collection Summary
Third Quarter 2013 Monitoring Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Field Samples	MS/MSD Samples	Field Duplicate Samples	Date Sampled	Date Received by Lab	Lab ID	SDG	Explosives	Volatiles
AMW-0179-072013			8/13/2013	8/14/2013	200-17925-28	17925-2		•
BMW-0179-072013			8/13/2013	8/14/2013	200-17925-29	17925-2		•
Trip Blanks								
TRB-0160-072013			8/7/2013	8/9/2013	200-17861-1	17861		•
TRB-2158-072013			8/9/2013	8/10/2013	200-17871-1	17871-1		•
TRB-038-072013			8/12/2013	8/14/2013	200-17925-1	17925-1		•

Notes:

Volatiles SW8260B Volatile Organic Compounds by Capillary GC/MS

Explosives SW8330 Nitroaromatics and Nitramines by HPLC

• = Requested for the indicated analyses

Table 3-1
Data Quality Evaluation Results
Third Quarter 2013 Monitoring Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sample Identification	Date Sampled	SDG	Lab Number	Analysis	Parameter	Units	Lab Result	Data Review Qualifier	BLK	C_RPD	Comments	Final Result
AMW-0160-072013	8/7/2013	17861	200-17861-2	Explosives	4-amino-2,6-dinitrotoluene	µg/L	0.41	J		X	Column RPD	0.41 J
AMW-0175-072013	8/7/2013	17861	200-17861-23	Volatiles	trichloroethene	µg/L	1.0	U	X		Trip Blank	1.0 U
AMW-0176-072013	8/12/2013	17925-2	200-17925-23	Explosives	4-amino-2,6-dinitrotoluene	µg/L	0.056	J		X	Column RPD	0.056 J
AMW-2160-072013	8/7/2013	17861	200-17861-3	Explosives	4-amino-2,6-dinitrotoluene	µg/L	0.44	J		X	Column RPD	0.44 J
BMW-0160-072013	8/7/2013	17861	200-17861-4	Explosives	4-amino-2,6-dinitrotoluene	µg/L	0.076	J		X	Column RPD	0.076 J
BMW-0160-072013	8/7/2013	17861	200-17861-4	Explosives	hexahydro-1,3,5-trinitro-1,3,5-triazine	µg/L	0.65	J		X	Column RPD	0.65 J
BMW-0161-072013	8/7/2013	17861	200-17861-7	Explosives	2-amino-4,6-dinitrotoluene	µg/L	0.095	J		X	Column RPD	0.095 J
BMW-0161-072013	8/7/2013	17861	200-17861-7	Explosives	4-amino-2,6-dinitrotoluene	µg/L	4.0	J		X	Column RPD	4.0 J
BMW-0175-072013	8/7/2013	17861	200-17861-24	Explosives	2-amino-4,6-dinitrotoluene	µg/L	0.068	J		X	Column RPD	0.068 J
BMW-235-072013	8/9/2013	17871-2	200-17871-27	Explosives	hexahydro-1,3,5-trinitro-1,3,5-triazine	µg/L	0.15	J		X	Column RPD	0.15 J

Note: The RL values were used to display non detected lab results.

Reason for Qualification

BLK	Ambient Blank, Lab Blank, CCB, CCB - Neg, Trip Blank, Equipment Blank, Field Blank, Material Blank, Lab Blank - Neg
C_RPD	Column RPD

Table 3-2
Explosives Quality Control Outliers
Third Quarter 2013 Monitoring Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sample ID(s) Requiring Qualification	SDG	Compound(s)	QC Outlier	QC Parameter Control Limit	QC Result
Confirmation Column Difference					
AMW-0160-072013	17861	4-amino-2,6-dinitrotoluene	Confirmation Column Difference exceeds UCL	< 40 RPD	164 RPD
AMW-0176-072013	17925-2	4-amino-2,6-dinitrotoluene	Confirmation Column Difference exceeds UCL	< 40 RPD	198 RPD
AMW-2160-072013	17861	4-amino-2,6-dinitrotoluene	Confirmation Column Difference exceeds UCL	< 40 RPD	155 RPD
BMW-0160-072013	17861	4-amino-2,6-dinitrotoluene	Confirmation Column Difference exceeds UCL	< 40 RPD	193 RPD
BMW-0160-072013	17861	hexahydro-1,3,5-trinitro-1,3,5-triazine	Confirmation Column Difference exceeds UCL	< 40 RPD	57.4 RPD
BMW-0161-072013	17861	2-amino-4,6-dinitrotoluene	Confirmation Column Difference exceeds UCL	< 40 RPD	196 RPD
BMW-0161-072013	17861	4-amino-2,6-dinitrotoluene	Confirmation Column Difference exceeds UCL	< 40 RPD	133 RPD
BMW-0175-072013	17861	2-amino-4,6-dinitrotoluene	Confirmation Column Difference exceeds UCL	< 40 RPD	114 RPD
BMW-235-072013	17871-2	hexahydro-1,3,5-trinitro-1,3,5-triazine	Confirmation Column Difference exceeds UCL	< 40 RPD	53.7 RPD

Table 3-3
Volatile Organic Compounds Quality Control Outliers
Third Quarter 2013 Monitoring Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sample ID(s) Requiring Qualification	SDG	Compound(s)	QC Outlier	QC Parameter Control Limit	QC Result
			Trip Blank		
AMW-0175-072013	17861	trichloroethene	Field Blank > MDL	< 0.14 µg/L	0.17 µg/L

Table 4-1
Field Completeness
Third Quarter 2013 Monitoring Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Analysis	Number of Samples Planned	Number of Samples Collected	Field Completeness
Explosives	96	96	100%
Volatiles	58	58	100%
Totals =	154	154	100.0%
Goal =			95%

Notes:
Number of Samples Planned includes field samples and field duplicate samples.

Table 4-2
Analytical Completeness
Third Quarter 2013 Monitoring Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Analysis	Total Number of Parameters	Acceptable Data	Acceptable Data Completeness	Acceptable Data Completeness Goals	Quality Data	Quality Data Completeness	Quality Data Completeness Goals
Explosives (Analyte Count - 6)	576	576	100%	90%	576	100%	80%
Volatiles (Analyte Count - 6)	348	348	100%	90%	348	100%	80%
Totals =	924	924	100.0%	95%	924	100.0%	80%

Notes:

Total number of parameters includes field samples (includes data points from dilutions and/or reanalyses to be used in place of original data) and field duplicates (does not include field blanks or trip blanks).
Acceptable data includes data that has not been rejected or qualified as estimated (J/UJ). Data points for which the required corrective actions were taken or do not require corrective action do not count against the acceptable data completeness goal calculation (i.e., results exceeding the calibration range that were reanalyzed at dilutions within the calibration range).
Quality data is defined as all non-rejected data.

Table 4-3
Project Completeness
Third Quarter 2013 Monitoring Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Field	Analytical	Project Completeness
100.0%	100.0%	100.0%
Project Completeness Goal =		90%

Notes:

Analytical Completeness is the percentage of usable data (i.e. quality data completeness).
Project Completeness combines sampling and analytical protocols to assess the expectations of the project as a whole. Project completeness is determined by comparing the percentage of samples / measurements that are determined to be usable to the total number of samples / measurements planned.

Appendix A
Chain of Custody Records

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081213

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

Analytical Test Method: SW8260B/SW5030B/NONE-6 Compounds; SW8330/METHOD/NONE-Explosives - 6 Compounds

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	TRB-038-072013	WQ	8/12/2013	0845		X		FIELDQC	TB1	0.00	0.00
2	AMW-0106-072013	WG	8/13/2013	1000		X	X	MW-106A	N1	57.00	67.00
3	AMW-2106-072013	WG	8/13/2013	1000		X	X	MW-106A	FD1	57.00	67.00
4	BMW-0106-072013	WG	8/13/2013	1025		X	X	MW-106B	N1	25.00	35.00
5	BMW-0106-072013MS	WG	8/13/2013	1025		X	X	MW-106B	MS1	25.00	35.00
6	BMW-0106-072013MSD	WG	8/13/2013	1025		X	X	MW-106B	SD1	25.00	35.00
7	AMW-0107-072013	WG	8/13/2013	1100		X	X	MW-107A	N1	78.00	88.00
8	AMW-2107-072013	WG	8/13/2013	1100		X	X	MW-107A	FD1	78.00	88.00
9	BMW-0107-072013	WG	8/13/2013	1120		X	X	MW-107B	N1	45.00	55.00
10	DMW-0107-072013	WG	8/13/2013	1135		X	X	MW-107D	N1	95.50	100.50
Cooler # 1		**Turnaround Time:**									

200-17925 COC

Relinquished by: *(Signature)*	Date	Time
[illegible]	8-13-13	1730

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-Ex 7764 5504 8589

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/14/13 1015

[illegible] TRACER

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081213

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013						1				
11	AMW-0110-072013	WG	8/12/2013	1445		X	X	MW-110A	N1	39.50	44.50
12	BMW-0110-072013	WG	8/12/2013	1500		X	X	MW-110B	N1	23.00	28.00
13	DMW-0110-072013	WG	8/12/2013	1515		X	X	MW-110D	N1	50.00	55.00
14	AMW-0112-072013	WG	8/12/2013	1000		X	X	MW-112A	N1	42.50	47.50
15	BMW-0112-072013	WG	8/12/2013	1015		X	X	MW-112B	N1	21.00	26.00
16	AMW-0113-072013	WG	8/12/2013	1030		X	X	MW-113A	N1	36.00	41.00
17	BMW-0113-072013	WG	8/12/2013	1045		X	X	MW-113B	N1	26.00	31.00
18	DMW-0113-072013	WG	8/12/2013	1100		X	X	MW-113D	N1	48.70	53.70
19	AMW-0114-072013	WG	8/12/2013	1315		X	X	MW-114A	N1	37.00	47.00
20	BMW-0114-072013	WG	8/12/2013	1330		X	X	MW-114B	N1	20.00	30.00
Cooler # 1		Turnaround Time:									

Relinquished by: *(Signature)*	Date	Time
[illegible]	8-13-13	1730

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7964 5504 8589

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/14/13 1015

[illegible]

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081213

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace,
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

					Analytical Test Method	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds				
	Event: Third Quarter 2013						1				
	Sample ID	Matrix	Date	Time	Samp Init.			Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
21	DMW-0114-072013	WG	8/12/2013	1345		X	X	MW-114D	N1	52.44	58.00
22	BMW-0155-072013	WG	8/13/2013	1200		X	X	MW-155B	N1	0.00	0.00
23	AMW-0159-072013	WG	8/13/2013	0900		X	X	MW-159A	N1	120.00	127.00
24	BMW-0159-072013	WG	8/13/2013	0915		X	X	MW-159B	N1	85.00	85.00
25	AMW-0176-072013	WG	8/12/2013	1415		X	X	MW-176A	N1	0.00	0.00
26	BMW-0176-072013	WG	8/12/2013	1430		X	X	MW-176B	N1	0.00	0.00
27	AMW-0177-072013	WG	8/13/2013	1325		X		MW-177A	N1	0.00	0.00
28	BMW-0177-072013	WG	8/13/2013	1335		X		MW-177B	N1	0.00	0.00
29	BMW-0178-072013	WG	8/13/2013	0930		X	X	MW-178B	N1	0.00	0.00
30	AMW-0179-072013	WG	8/13/2013	1355		X		MW-179A	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	Date	Time
Toby [illegible]	8-17-13	1730

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7964 5504 8589

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/14/13 1015
[illegible] TAB

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081213

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Analytical Test Method

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
31	BMW-0179-072013	WG	8/13/2013	1405		X		MW-179B	N1	0.00	0.00
32	AMW-038-072013	WG	8/12/2013	0845		X	X	MW-38A	N1	44.70	49.20
33	AMW-238-072013	WG	8/12/2013	0845		X	X	MW-38A	FD1	44.70	49.20
34	DMW-038-072013	WG	8/12/2013	0915		X	X	MW-38D	N1	58.50	63.50
35	DMW-038-072013MS	WG	8/12/2013	0915		X	X	MW-38D	MS1	58.50	63.50
36	DMW-038-072013MSD	WG	8/12/2013	0915		X	X	MW-38D	SD1	58.50	63.50
37	AMW-046-072013	WG	8/12/2013	1130		X	X	MW-46A	N1	33.20	43.20
38	AMW-246-072013	WG	8/12/2013	1130		X	X	MW-46A	FD1	33.20	43.20
39	BMW-046-072013	WG	8/12/2013	1200		X	X	MW-46B	N1	21.00	31.00
40	BMW-046-072013MS	WG	8/12/2013	1200		X	X	MW-46B	MS1	21.00	31.00
Cooler # 1		Turnaround Time:									

Relinquished by: *(Signature)*	Date	Time
Toby [illegible]	8-13-13	1730

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7464 5504 8589

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/14/13 1015
[illegible] TABUR

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081213

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013						1				
41	BMW-046-072013MSD	WG	8/12/2013	1200		X	X	MW-46B	SD1	21.00	31.00
42	DMW-046-072013	WG	8/12/2013	1230		X	X	MW-46D	N1	52.50	57.50
43	AMW-080-072013	WG	8/13/2013	1235		X		MW-80A	N1	69.17	79.17
44	BMW-080-072013	WG	8/13/2013	1250		X		MW-80B	N1	30.00	40.00
45	DMW-080-072013	WG	8/13/2013	1300		X		MW-80D	N1	87.70	92.70
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	Date	Time
Toby [illegible]	8-13-13	1730

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7964 5704 8589

Received by Laboratory: *(Signature, Date, Time)* **& condition**

8/14/13 1015
[illegible] [illegible]

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081213

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

Analytical Test Method: SW8260B/SW5030B/NONE-6 Compounds; SW8330/METHOD/NONE-Explosives - 6 Compounds

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	TRB-038-072013	WQ	8/12/2013	0845		X		FIELDQC	TB1	0.00	0.00
2	AMW-0106-072013	WG	8/13/2013	1000		X	X	MW-106A	N1	57.00	67.00
3	AMW-2106-072013	WG	8/13/2013	1000		X	X	MW-106A	FD1	57.00	67.00
4	BMW-0106-072013	WG	8/13/2013	1025		X	X	MW-106B	N1	25.00	35.00
5	BMW-0106-072013MS	WG	8/13/2013	1025		X	X	MW-106B	MS1	25.00	35.00
6	BMW-0106-072013MSD	WG	8/13/2013	1025		X	X	MW-106B	SD1	25.00	35.00
7	AMW-0107-072013	WG	8/13/2013	1100		X	X	MW-107A	N1	78.00	88.00
8	AMW-2107-072013	WG	8/13/2013	1100		X	X	MW-107A	FD1	78.00	88.00
9	BMW-0107-072013	WG	8/13/2013	1120		X	X	MW-107B	N1	45.00	55.00
10	DMW-0107-072013	WG	8/13/2013	1135		X	X	MW-107D	N1	95.50	100.50
Cooler # 1		**Turnaround Time:**									

200-17925 COC

Relinquished by: *(Signature)*	Date	Time
[illegible]	8-13-13	1730

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-Ex 7764 5504 8589

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/14/13 1015

[illegible] TRACER

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081213

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013						1				
11	AMW-0110-072013	WG	8/12/2013	1445		X	X	MW-110A	N1	39.50	44.50
12	BMW-0110-072013	WG	8/12/2013	1500		X	X	MW-110B	N1	23.00	28.00
13	DMW-0110-072013	WG	8/12/2013	1515		X	X	MW-110D	N1	50.00	55.00
14	AMW-0112-072013	WG	8/12/2013	1000		X	X	MW-112A	N1	42.50	47.50
15	BMW-0112-072013	WG	8/12/2013	1015		X	X	MW-112B	N1	21.00	26.00
16	AMW-0113-072013	WG	8/12/2013	1030		X	X	MW-113A	N1	36.00	41.00
17	BMW-0113-072013	WG	8/12/2013	1045		X	X	MW-113B	N1	26.00	31.00
18	DMW-0113-072013	WG	8/12/2013	1100		X	X	MW-113D	N1	48.70	53.70
19	AMW-0114-072013	WG	8/12/2013	1315		X	X	MW-114A	N1	37.00	47.00
20	BMW-0114-072013	WG	8/12/2013	1330		X	X	MW-114B	N1	20.00	30.00
Cooler # 1		Turnaround Time:									

Relinquished by: *(Signature)*	Date	Time
[illegible]	8-13-13	1730

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7964 5504 8589

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/14/13 1015

[illegible]

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081213

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace,
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013						1				
21	DMW-0114-072013	WG	8/12/2013	1345		X	X	MW-114D	N1	52.44	58.00
22	BMW-0155-072013	WG	8/13/2013	1200		X	X	MW-155B	N1	0.00	0.00
23	AMW-0159-072013	WG	8/13/2013	0900		X	X	MW-159A	N1	120.00	127.00
24	BMW-0159-072013	WG	8/13/2013	0915		X	X	MW-159B	N1	85.00	85.00
25	AMW-0176-072013	WG	8/12/2013	1415		X	X	MW-176A	N1	0.00	0.00
26	BMW-0176-072013	WG	8/12/2013	1430		X	X	MW-176B	N1	0.00	0.00
27	AMW-0177-072013	WG	8/13/2013	1325		X		MW-177A	N1	0.00	0.00
28	BMW-0177-072013	WG	8/13/2013	1335		X		MW-177B	N1	0.00	0.00
29	BMW-0178-072013	WG	8/13/2013	0930		X	X	MW-178B	N1	0.00	0.00
30	AMW-0179-072013	WG	8/13/2013	1355		X		MW-179A	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	Date	Time
Toby [illegible]	8-17-13	1730

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7964 5504 8589

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/14/13 1015
[illegible] TAB

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081213

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Analytical Test Method

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
							1				
31	BMW-0179-072013	WG	8/13/2013	1405		X		MW-179B	N1	0.00	0.00
32	AMW-038-072013	WG	8/12/2013	0845		X	X	MW-38A	N1	44.70	49.20
33	AMW-238-072013	WG	8/12/2013	0845		X	X	MW-38A	FD1	44.70	49.20
34	DMW-038-072013	WG	8/12/2013	0915		X	X	MW-38D	N1	58.50	63.50
35	DMW-038-072013MS	WG	8/12/2013	0915		X	X	MW-38D	MS1	58.50	63.50
36	DMW-038-072013MSD	WG	8/12/2013	0915		X	X	MW-38D	SD1	58.50	63.50
37	AMW-046-072013	WG	8/12/2013	1130		X	X	MW-46A	N1	33.20	43.20
38	AMW-246-072013	WG	8/12/2013	1130		X	X	MW-46A	FD1	33.20	43.20
39	BMW-046-072013	WG	8/12/2013	1200		X	X	MW-46B	N1	21.00	31.00
40	BMW-046-072013MS	WG	8/12/2013	1200		X	X	MW-46B	MS1	21.00	31.00
Cooler # 1		Turnaround Time:									

Relinquished by: *(Signature)*	Date	Time
Toby [illegible]	8-13-13	1730

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7464 5504 8589

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/14/13 1015
[illegible] TABUR

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081213

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013				Analytical Test Method		1				
41	BMW-046-072013MSD	WG	8/12/2013	1200		X	X	MW-46B	SD1	21.00	31.00
42	DMW-046-072013	WG	8/12/2013	1230		X	X	MW-46D	N1	52.50	57.50
43	AMW-080-072013	WG	8/13/2013	1235		X		MW-80A	N1	69.17	79.17
44	BMW-080-072013	WG	8/13/2013	1250		X		MW-80B	N1	30.00	40.00
45	DMW-080-072013	WG	8/13/2013	1300		X		MW-80D	N1	87.70	92.70
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	Date	Time
Toby [illegible]	8-13-13	1730

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7964 5704 8589

Received by Laboratory: *(Signature, Date, Time)* **& condition**

8/14/13 1015
[illegible] [illegible]

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080913

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace,
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013						1				
1	TRB-2158-072013	WQ	8/9/2013	1005		X		FIELDQC	TB1	0.00	0.00
2	AMW-0115-072013	WG	8/9/2013	1315		X	X	MW-115A	N1	43.00	48.00
3	BMW-0115-072013	WG	8/9/2013	1330		X	X	MW-115B	N1	28.00	33.00
4	DMW-0115-072013	WG	8/9/2013	1340		X	X	MW-115D	N1	53.89	59.40
5	AMW-0116-072013	WG	8/9/2013	1215		X	X	MW-116A	N1	37.50	42.50
6	BMW-0116-072013	WG	8/9/2013	1230		X	X	MW-116B	N1	27.00	32.00
7	DMW-0116-072013	WG	8/9/2013	1245		X	X	MW-116D	N1	47.98	53.50
8	AMW-0118-072013	WG	8/8/2013	0935			X	MW-118A	N1	84.75	95.25
9	AMW-2118-072013	WG	8/8/2013	0935			X	MW-118A	FD1	84.75	95.25
10	BMW-0118-072013	WG	8/8/2013	0950			X	MW-118B	N1	70.00	75.00
Cooler # 1		**Turnaround Time:**									

200-17871 COC

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby B. [illegible]	8-9-13	1700	[illegible]	8/9/13	1654

Shipping Date / Carrier / Airbill Number
Fed-ex 7964 3395 6657

Recevied by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080913

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace,
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
					Analytical Test Method		1				
11	BMW-0118-072013MS	WG	8/8/2013	0950			X	MW-118B	MS1	70.00	75.00
12	BMW-0118-072013MSD	WG	8/8/2013	0950			X	MW-118B	SD1	70.00	75.00
13	BMW-0145-072013	WG	8/8/2013	1430			X	MW-145B	N1	0.00	0.00
14	AMW-0147-072013	WG	8/8/2013	1145			X	MW-147A	N1	100.00	100.00
15	AMW-2147-072013	WG	8/8/2013	1145			X	MW-147A	FD1	100.00	100.00
16	BMW-0147-072013	WG	8/8/2013	1155			X	MW-147B	N1	77.00	77.00
17	DMW-0147-072013	WG	8/8/2013	1205			X	MW-147D	N1	125.00	132.00
18	AMW-0148-072013	WG	8/8/2013	1330			X	MW-148A	N1	0.00	0.00
19	AMW-0158-072013	WG	8/9/2013	1005		X	X	MW-158A	N1	37.00	37.00
20	BMW-0158-072013	WG	8/9/2013	1020		X	X	MW-158B	N1	24.00	24.00

Cooler # 1 **Turnaround Time:**

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[illegible]	8-9-13	1700	[illegible]	8/9/13	0950

Shipping Date / Carrier / Airbill Number

Fed-ex 7964 3395 6657

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080913

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3" 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2" 2 X 250 mL Amber Glass Bottles, 4 Degrees C

Analytical Test Method: SW8260B/SW5030B/NONE-6 Compounds; SW8330/METHOD/NONE-Explosives - 6 Compounds

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
							1				
21	DMW-0158-072013	WG	8/9/2013	1035		X	X	MW-158D	N1	49.00	50.00
22	AMW-0171-072013	WG	8/8/2013	1400			X	MW-171A	N1	0.00	0.00
23	BMW-0171-072013	WG	8/8/2013	1410			X	MW-171B	N1	0.00	0.00
24	AMW-0172-072013	WG	8/8/2013	0910			X	MW-172A	N1	0.00	0.00
25	BMW-0172-072013	WG	8/8/2013	0920			X	MW-172B	N1	0.00	0.00
26	AMW-0173-072013	WG	8/8/2013	0850			X	MW-173A	N1	0.00	0.00
27	AMW-035-072013	WG	8/9/2013	0915			X	MW-35A	N1	81.50	91.50
28	BMW-035-072013	WG	8/9/2013	0925			X	MW-35B	N1	57.00	67.00
29	BMW-235-072013	WG	8/9/2013	0925			X	MW-35B	FD1	57.00	67.00
30	DMW-035-072013	WG	8/9/2013	0935			X	MW-35D	N1	100.50	105.50
Cooler # 1		Turnaround Time:									

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time	Shipping Date / Carrier / Airbill Number
Toby [illegible]	8-9-13	1700	[illegible]	8/9/13	0950	Fed-ex 7964 3395 6657
						Recevied by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080913

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013						1				
31	AMW-083-072013	WG	8/8/2013	1100			X	MW-83A	N1	103.50	108.50
32	BMW-083-072013	WG	8/8/2013	1110			X	MW-83B	N1	75.00	80.00
33	DMW-083-072013	WG	8/8/2013	1120			X	MW-83D	N1	116.00	121.00
34	AMW-084-072013	WG	8/8/2013	1015			X	MW-84A	N1	87.13	91.13
35	BMW-084-072013	WG	8/8/2013	1025			X	MW-84B	N1	66.50	71.50
36	DMW-084-072013	WG	8/8/2013	1035			X	MW-84D	N1	103.50	108.50
37	AMW-085-072013	WG	8/9/2013	0830			X	MW-85A	N1	81.00	86.00
38	BMW-085-072013	WG	8/9/2013	0840			X	MW-85B	N1	62.00	67.00
39	DMW-085-072013	WG	8/9/2013	0850			X	MW-85D	N1	90.00	95.00
40	AMW-088-072013	WG	8/9/2013	1100		X	X	MW-88A	N1	35.00	45.00
Cooler # 1		Turnaround Time:									

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby B. [illegible]	8-9-13	1700	[illegible]	8/9/13	0900

Shipping Date / Carrier / Airbill Number

Fed-ex 7964 3395 6657

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080913

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamerical
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace,
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013						1				
41	BMW-088-072013	WG	8/9/2013	1120		X	X	MW-88B	N1	20.00	30.00
42	DMW-088-072013	WG	8/9/2013	1135		X	X	MW-88D	N1	50.50	55.50
43	AMW-095-072013	WG	8/8/2013	1235			X	MW-95A	N1	93.00	103.00
44	BMW-095-072013	WG	8/8/2013	1245			X	MW-95B	N1	65.00	75.00
45	DMW-095-072013	WG	8/8/2013	1305			X	MW-95D	N1	124.50	129.50
Cooler # 1		Turnaround Time:									

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby O Li	8-9-13	1700	[illegible] FEDEX	8/10/13	0950

Shipping Date / Carrier / Airbill Number
Fed-ex 7964 3395 6657

Recevied by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080913

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace,
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	TRB-2158-072013	WQ	8/9/2013	1005		X		FIELDQC	TB1	0.00	0.00
2	AMW-0115-072013	WG	8/9/2013	1315		X	X	MW-115A	N1	43.00	48.00
3	BMW-0115-072013	WG	8/9/2013	1330		X	X	MW-115B	N1	28.00	33.00
4	DMW-0115-072013	WG	8/9/2013	1340		X	X	MW-115D	N1	53.89	59.40
5	AMW-0116-072013	WG	8/9/2013	1215		X	X	MW-116A	N1	37.50	42.50
6	BMW-0116-072013	WG	8/9/2013	1230		X	X	MW-116B	N1	27.00	32.00
7	DMW-0116-072013	WG	8/9/2013	1245		X	X	MW-116D	N1	47.98	53.50
8	AMW-0118-072013	WG	8/8/2013	0935			X	MW-118A	N1	84.75	95.25
9	AMW-2118-072013	WG	8/8/2013	0935			X	MW-118A	FD1	84.75	95.25
10	BMW-0118-072013	WG	8/8/2013	0950			X	MW-118B	N1	70.00	75.00
Cooler # 1		Turnaround Time:									

200-17871 COC

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby B. [illegible]	8-9-13	1700	[illegible]	8/9/13	1654

Shipping Date / Carrier / Airbill Number
Fed-Ex 7964 3395 6657

Recevied by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080913

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace,
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013						1				
11	BMW-0118-072013MS	WG	8/8/2013	0950			X	MW-118B	MS1	70.00	75.00
12	BMW-0118-072013MSD	WG	8/8/2013	0950			X	MW-118B	SD1	70.00	75.00
13	BMW-0145-072013	WG	8/8/2013	1430			X	MW-145B	N1	0.00	0.00
14	AMW-0147-072013	WG	8/8/2013	1145			X	MW-147A	N1	100.00	100.00
15	AMW-2147-072013	WG	8/8/2013	1145			X	MW-147A	FD1	100.00	100.00
16	BMW-0147-072013	WG	8/8/2013	1155			X	MW-147B	N1	77.00	77.00
17	DMW-0147-072013	WG	8/8/2013	1205			X	MW-147D	N1	125.00	132.00
18	AMW-0148-072013	WG	8/8/2013	1330			X	MW-148A	N1	0.00	0.00
19	AMW-0158-072013	WG	8/9/2013	1005		X	X	MW-158A	N1	37.00	37.00
20	BMW-0158-072013	WG	8/9/2013	1020		X	X	MW-158B	N1	24.00	24.00
Cooler # 1		Turnaround Time:									

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby [illegible]	8-9-13	1700	[illegible]	8/9/13	0950

Shipping Date / Carrier / Airbill Number

Fed-ex 7964 3395 6657

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080913

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3" 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2" 2 X 250 mL Amber Glass Bottles, 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
21	DMW-0158-072013	WG	8/9/2013	1035		X	X	MW-158D	N1	49.00	50.00
22	AMW-0171-072013	WG	8/8/2013	1400			X	MW-171A	N1	0.00	0.00
23	BMW-0171-072013	WG	8/8/2013	1410			X	MW-171B	N1	0.00	0.00
24	AMW-0172-072013	WG	8/8/2013	0910			X	MW-172A	N1	0.00	0.00
25	BMW-0172-072013	WG	8/8/2013	0920			X	MW-172B	N1	0.00	0.00
26	AMW-0173-072013	WG	8/8/2013	0850			X	MW-173A	N1	0.00	0.00
27	AMW-035-072013	WG	8/9/2013	0915			X	MW-35A	N1	81.50	91.50
28	BMW-035-072013	WG	8/9/2013	0925			X	MW-35B	N1	57.00	67.00
29	BMW-235-072013	WG	8/9/2013	0925			X	MW-35B	FD1	57.00	67.00
30	DMW-035-072013	WG	8/9/2013	0935			X	MW-35D	N1	100.50	105.50
Cooler # 1		Turnaround Time:									

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time	Shipping Date / Carrier / Airbill Number
Toby [illegible]	8-9-13	1700	[illegible]	8/9/13	0950	Fed-ex 7964 3395 6657
						Recevied by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080913

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013						1				
31	AMW-083-072013	WG	8/8/2013	1100			X	MW-83A	N1	103.50	108.50
32	BMW-083-072013	WG	8/8/2013	1110			X	MW-83B	N1	75.00	80.00
33	DMW-083-072013	WG	8/8/2013	1120			X	MW-83D	N1	116.00	121.00
34	AMW-084-072013	WG	8/8/2013	1015			X	MW-84A	N1	87.13	91.13
35	BMW-084-072013	WG	8/8/2013	1025			X	MW-84B	N1	66.50	71.50
36	DMW-084-072013	WG	8/8/2013	1035			X	MW-84D	N1	103.50	108.50
37	AMW-085-072013	WG	8/9/2013	0830			X	MW-85A	N1	81.00	86.00
38	BMW-085-072013	WG	8/9/2013	0840			X	MW-85B	N1	62.00	67.00
39	DMW-085-072013	WG	8/9/2013	0850			X	MW-85D	N1	90.00	95.00
40	AMW-088-072013	WG	8/9/2013	1100		X	X	MW-88A	N1	35.00	45.00
Cooler # 1		Turnaround Time:									

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time	Shipping Date / Carrier / Airbill Number
Toby B. [illegible]	8-9-13	1700	[illegible]	8/9/13	[illegible]	Fed-Ex 7964 3395 6657
						Recevied by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080913

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamerical
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace,
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013						1				
41	BMW-088-072013	WG	8/9/2013	1120		X	X	MW-88B	N1	20.00	30.00
42	DMW-088-072013	WG	8/9/2013	1135		X	X	MW-88D	N1	50.50	55.50
43	AMW-095-072013	WG	8/8/2013	1235			X	MW-95A	N1	93.00	103.00
44	BMW-095-072013	WG	8/8/2013	1245			X	MW-95B	N1	65.00	75.00
45	DMW-095-072013	WG	8/8/2013	1305			X	MW-95D	N1	124.50	129.50
Cooler # 1		Turnaround Time:									

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby D Li	8-9-13	1700	[illegible] FEDEX	8/10/13	0950

Shipping Date / Carrier / Airbill Number
Fed-ex 7964 3395 6657

Recevied by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080713

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace,
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013						1				
1	TRB-0160-072013	WQ	8/7/2013	0855		X		FIELDQC	TB1	0.00	0.00
2	AMW-0160-072013	WG	8/7/2013	0900		X	X	MW-160A	N1	0.00	0.00
3	AMW-2160-072013	WG	8/7/2013	0900		X	X	MW-160A	FD1	0.00	0.00
4	BMW-0160-072013	WG	8/7/2013	0920		X	X	MW-160B	N1	0.00	0.00
5	AMW-0161-072013	WG	8/7/2013	0955		X	X	MW-161A	N1	0.00	0.00
6	AMW-2161-072013	WG	8/7/2013	0955		X	X	MW-161A	FD1	0.00	0.00
7	MW-0161-072013	WG	8/7/2013	1015		X	X	MW-161B	N1	0.00	0.00
8	AMW-0162-072013	WG	8/7/2013	1120			X	MW-162A	N1	0.00	0.00
9	AMW-0163-072013	WG	8/7/2013	1045			X	MW-163A	N1	0.00	0.00
10	AMW-0164-072013	WG	8/7/2013	1130			X	MW-164A	N1	0.00	0.00
Cooler # 1		Turnaround Time:									

200-17861 COC

Relinquished by: *(Signature)*	Date	Time
[illegible]	8-8-13	1700

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number
Fed-ex 7964-1936-8205

Received by Laboratory: *(Signature, Date, Time)* & condition
Steph Pouchen 8/9/13 1000 TOTAL

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080713

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

Analytical Test Method

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW6330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
							1				
11	BMW-0165-072013	WG	8/7/2013	1100			X	MW-165B	N1	0.00	0.00
12	AMW-0166-072013	WG	8/7/2013	1220			X	MW-166A	N1	0.00	0.00
13	BMW-0166-072013	WG	8/7/2013	1230			X	MW-166B	N1	0.00	0.00
14	AMW-0167-072013	WG	8/7/2013	1245			X	MW-167A	N1	0.00	0.00
15	BMW-0167-072013	WG	8/7/2013	1255			X	MW-167B	N1	0.00	0.00
16	AMW-0168-072013	WG	8/7/2013	1150			X	MW-168A	N1	0.00	0.00
17	BMW-0168-072013	WG	8/7/2013	1200			X	MW-168B	N1	0.00	0.00
18	AMW-0169-072013	WG	8/7/2013	1315			X	MW-169A	N1	0.00	0.00
19	BMW-0169-072013	WG	8/7/2013	1330			X	MW-169B	N1	0.00	0.00
20	AMW-0170-072013	WG	8/7/2013	1355			X	MW-170A	N1	0.00	0.00
Cooler # 1		Turnaround Time:									

Relinquished by: *(Signature)*	Date	Time
Toby Rain	8-8-13	1700

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7964-1936-8205

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

Steph Rucker TAGel 8/9/13 1000

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080713

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace,
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
						Analytical Test Method					
							1				
21	AMW-0174-072013	WG	8/7/2013	1530			X	MW-174A	N1	0.00	0.00
22	BMW-0174-072013	WG	8/7/2013	1540			X	MW-174B	N1	0.00	0.00
23	AMW-0175-072013	WG	8/7/2013	1445		X	X	MW-175A	N1	0.00	0.00
24	BMW-0175-072013	WG	8/7/2013	1505		X	X	MW-175B	N1	0.00	0.00

Cooler # 1 — Turnaround Time:

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby Bin	8-8-13	1700			

Shipping Date / Carrier / Airbill Number: Fed-Ex 7964-1936-8205

Recevied by Laboratory: *(Signature, Date, Time)* & condition: Stish Rucker 8/9/13 1000 TA-BUR

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081213

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Analytical Test Method

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
							1				
1	TRB-038-072013	WQ	8/12/2013	0845		X		FIELDQC	TB1	0.00	0.00
2	AMW-0106-072013	WG	8/13/2013	1000		X	X	MW-106A	N1	57.00	67.00
3	AMW-2106-072013	WG	8/13/2013	1000		X	X	MW-106A	FD1	57.00	67.00
4	BMW-0106-072013	WG	8/13/2013	1025		X	X	MW-106B	N1	25.00	35.00
5	BMW-0106-072013MS	WG	8/13/2013	1025		X	X	MW-106B	MS1	25.00	35.00
6	BMW-0106-072013MSD	WG	8/13/2013	1025		X	X	MW-106B	SD1	25.00	35.00
7	AMW-0107-072013	WG	8/13/2013	1100		X	X	MW-107A	N1	78.00	88.00
8	AMW-2107-072013	WG	8/13/2013	1100		X	X	MW-107A	FD1	78.00	88.00
9	BMW-0107-072013	WG	8/13/2013	1120		X	X	MW-107B	N1	45.00	55.00
10	DMW-0107-072013	WG	8/13/2013	1135		X	X	MW-107D	N1	95.50	100.50
Cooler # 1		**Turnaround Time:**									

200-17925 COC

Relinquished by: *(Signature)*	Date	Time
[illegible]	8-13-13	1730

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-Ex 7764 5504 8589

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/14/13 1015

[illegible] TRACER

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081213

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013						1				
11	AMW-0110-072013	WG	8/12/2013	1445		X	X	MW-110A	N1	39.50	44.50
12	BMW-0110-072013	WG	8/12/2013	1500		X	X	MW-110B	N1	23.00	28.00
13	DMW-0110-072013	WG	8/12/2013	1515		X	X	MW-110D	N1	50.00	55.00
14	AMW-0112-072013	WG	8/12/2013	1000		X	X	MW-112A	N1	42.50	47.50
15	BMW-0112-072013	WG	8/12/2013	1015		X	X	MW-112B	N1	21.00	26.00
16	AMW-0113-072013	WG	8/12/2013	1030		X	X	MW-113A	N1	36.00	41.00
17	BMW-0113-072013	WG	8/12/2013	1045		X	X	MW-113B	N1	26.00	31.00
18	DMW-0113-072013	WG	8/12/2013	1100		X	X	MW-113D	N1	48.70	53.70
19	AMW-0114-072013	WG	8/12/2013	1315		X	X	MW-114A	N1	37.00	47.00
20	BMW-0114-072013	WG	8/12/2013	1330		X	X	MW-114B	N1	20.00	30.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[illegible]	8-13-13	1730			

Shipping Date / Carrier / Airbill Number

Fed-ex 7964 5504 8589

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/14/13 1015

[illegible]

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081213

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace,
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013						1				
21	DMW-0114-072013	WG	8/12/2013	1345		X	X	MW-114D	N1	52.44	58.00
22	BMW-0155-072013	WG	8/13/2013	1200		X	X	MW-155B	N1	0.00	0.00
23	AMW-0159-072013	WG	8/13/2013	0900		X	X	MW-159A	N1	120.00	127.00
24	BMW-0159-072013	WG	8/13/2013	0915		X	X	MW-159B	N1	85.00	85.00
25	AMW-0176-072013	WG	8/12/2013	1415		X	X	MW-176A	N1	0.00	0.00
26	BMW-0176-072013	WG	8/12/2013	1430		X	X	MW-176B	N1	0.00	0.00
27	AMW-0177-072013	WG	8/13/2013	1325		X		MW-177A	N1	0.00	0.00
28	BMW-0177-072013	WG	8/13/2013	1335		X		MW-177B	N1	0.00	0.00
29	BMW-0178-072013	WG	8/13/2013	0930		X	X	MW-178B	N1	0.00	0.00
30	AMW-0179-072013	WG	8/13/2013	1355		X		MW-179A	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	Date	Time
Toby [illegible]	8-17-13	1730

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7964 5504 8589

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/14/13 1015

[illegible] TAB

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081213

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Analytical Test Method

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
							1				
31	BMW-0179-072013	WG	8/13/2013	1405		X		MW-179B	N1	0.00	0.00
32	AMW-038-072013	WG	8/12/2013	0845		X	X	MW-38A	N1	44.70	49.20
33	AMW-238-072013	WG	8/12/2013	0845		X	X	MW-38A	FD1	44.70	49.20
34	DMW-038-072013	WG	8/12/2013	0915		X	X	MW-38D	N1	58.50	63.50
35	DMW-038-072013MS	WG	8/12/2013	0915		X	X	MW-38D	MS1	58.50	63.50
36	DMW-038-072013MSD	WG	8/12/2013	0915		X	X	MW-38D	SD1	58.50	63.50
37	AMW-046-072013	WG	8/12/2013	1130		X	X	MW-46A	N1	33.20	43.20
38	AMW-246-072013	WG	8/12/2013	1130		X	X	MW-46A	FD1	33.20	43.20
39	BMW-046-072013	WG	8/12/2013	1200		X	X	MW-46B	N1	21.00	31.00
40	BMW-046-072013MS	WG	8/12/2013	1200		X	X	MW-46B	MS1	21.00	31.00
Cooler # 1		Turnaround Time:									

Relinquished by: *(Signature)*	Date	Time
Toby [illegible]	8-13-13	1730

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7464 5504 8589

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/14/13 1015
[illegible] TABUR

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081213

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013				Analytical Test Method		1				
41	BMW-046-072013MSD	WG	8/12/2013	1200		X	X	MW-46B	SD1	21.00	31.00
42	DMW-046-072013	WG	8/12/2013	1230		X	X	MW-46D	N1	52.50	57.50
43	AMW-080-072013	WG	8/13/2013	1235		X		MW-80A	N1	69.17	79.17
44	BMW-080-072013	WG	8/13/2013	1250		X		MW-80B	N1	30.00	40.00
45	DMW-080-072013	WG	8/13/2013	1300		X		MW-80D	N1	87.70	92.70
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	Date	Time
Toby [illegible]	8-13-13	1730

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7964 5704 8589

Received by Laboratory: *(Signature, Date, Time)* **& condition**

8/14/13 1015
[illegible] TAB [illegible]

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081213

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Analytical Test Method

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
							1				
1	TRB-038-072013	WQ	8/12/2013	0845		X		FIELDQC	TB1	0.00	0.00
2	AMW-0106-072013	WG	8/13/2013	1000		X	X	MW-106A	N1	57.00	67.00
3	AMW-2106-072013	WG	8/13/2013	1000		X	X	MW-106A	FD1	57.00	67.00
4	BMW-0106-072013	WG	8/13/2013	1025		X	X	MW-106B	N1	25.00	35.00
5	BMW-0106-072013MS	WG	8/13/2013	1025		X	X	MW-106B	MS1	25.00	35.00
6	BMW-0106-072013MSD	WG	8/13/2013	1025		X	X	MW-106B	SD1	25.00	35.00
7	AMW-0107-072013	WG	8/13/2013	1100		X	X	MW-107A	N1	78.00	88.00
8	AMW-2107-072013	WG	8/13/2013	1100		X	X	MW-107A	FD1	78.00	88.00
9	BMW-0107-072013	WG	8/13/2013	1120		X	X	MW-107B	N1	45.00	55.00
10	DMW-0107-072013	WG	8/13/2013	1135		X	X	MW-107D	N1	95.50	100.50
Cooler # 1		**Turnaround Time:**									

200-17925 COC

Relinquished by: *(Signature)*	Date	Time
[illegible]	8-13-13	1730

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-Ex 7764 5504 8589

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/14/13 1015

[illegible] TRACER

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081213

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013						1				
11	AMW-0110-072013	WG	8/12/2013	1445		X	X	MW-110A	N1	39.50	44.50
12	BMW-0110-072013	WG	8/12/2013	1500		X	X	MW-110B	N1	23.00	28.00
13	DMW-0110-072013	WG	8/12/2013	1515		X	X	MW-110D	N1	50.00	55.00
14	AMW-0112-072013	WG	8/12/2013	1000		X	X	MW-112A	N1	42.50	47.50
15	BMW-0112-072013	WG	8/12/2013	1015		X	X	MW-112B	N1	21.00	26.00
16	AMW-0113-072013	WG	8/12/2013	1030		X	X	MW-113A	N1	36.00	41.00
17	BMW-0113-072013	WG	8/12/2013	1045		X	X	MW-113B	N1	26.00	31.00
18	DMW-0113-072013	WG	8/12/2013	1100		X	X	MW-113D	N1	48.70	53.70
19	AMW-0114-072013	WG	8/12/2013	1315		X	X	MW-114A	N1	37.00	47.00
20	BMW-0114-072013	WG	8/12/2013	1330		X	X	MW-114B	N1	20.00	30.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[illegible]	8-13-13	1730			

Shipping Date / Carrier / Airbill Number

Fed-ex 7964 5504 8589

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/14/13 1015

[illegible]

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081213

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace,
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013						1				
21	DMW-0114-072013	WG	8/12/2013	1345		X	X	MW-114D	N1	52.44	58.00
22	BMW-0155-072013	WG	8/13/2013	1200		X	X	MW-155B	N1	0.00	0.00
23	AMW-0159-072013	WG	8/13/2013	0900		X	X	MW-159A	N1	120.00	127.00
24	BMW-0159-072013	WG	8/13/2013	0915		X	X	MW-159B	N1	85.00	85.00
25	AMW-0176-072013	WG	8/12/2013	1415		X	X	MW-176A	N1	0.00	0.00
26	BMW-0176-072013	WG	8/12/2013	1430		X	X	MW-176B	N1	0.00	0.00
27	AMW-0177-072013	WG	8/13/2013	1325		X		MW-177A	N1	0.00	0.00
28	BMW-0177-072013	WG	8/13/2013	1335		X		MW-177B	N1	0.00	0.00
29	BMW-0178-072013	WG	8/13/2013	0930		X	X	MW-178B	N1	0.00	0.00
30	AMW-0179-072013	WG	8/13/2013	1355		X		MW-179A	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	Date	Time
Toby [illegible]	8-17-13	1730

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7964 5504 8589

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/14/13 1015

[illegible] TAB

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081213

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Analytical Test Method

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
							1				
31	BMW-0179-072013	WG	8/13/2013	1405		X		MW-179B	N1	0.00	0.00
32	AMW-038-072013	WG	8/12/2013	0845		X	X	MW-38A	N1	44.70	49.20
33	AMW-238-072013	WG	8/12/2013	0845		X	X	MW-38A	FD1	44.70	49.20
34	DMW-038-072013	WG	8/12/2013	0915		X	X	MW-38D	N1	58.50	63.50
35	DMW-038-072013MS	WG	8/12/2013	0915		X	X	MW-38D	MS1	58.50	63.50
36	DMW-038-072013MSD	WG	8/12/2013	0915		X	X	MW-38D	SD1	58.50	63.50
37	AMW-046-072013	WG	8/12/2013	1130		X	X	MW-46A	N1	33.20	43.20
38	AMW-246-072013	WG	8/12/2013	1130		X	X	MW-46A	FD1	33.20	43.20
39	BMW-046-072013	WG	8/12/2013	1200		X	X	MW-46B	N1	21.00	31.00
40	BMW-046-072013MS	WG	8/12/2013	1200		X	X	MW-46B	MS1	21.00	31.00
Cooler # 1		Turnaround Time:									

Relinquished by: *(Signature)*	Date	Time
Toby [illegible]	8-13-13	1730

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7464 5504 8589

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/14/13 1015
[illegible] TABUR

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081213

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericai
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace.
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8260B/SW5030B/NONE-6 Compounds	SW8330/METHOD/NONE-Explosives - 6 Compounds	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013				Analytical Test Method		1				
41	BMW-046-072013MSD	WG	8/12/2013	1200		X	X	MW-46B	SD1	21.00	31.00
42	DMW-046-072013	WG	8/12/2013	1230		X	X	MW-46D	N1	52.50	57.50
43	AMW-080-072013	WG	8/13/2013	1235		X		MW-80A	N1	69.17	79.17
44	BMW-080-072013	WG	8/13/2013	1250		X		MW-80B	N1	30.00	40.00
45	DMW-080-072013	WG	8/13/2013	1300		X		MW-80D	N1	87.70	92.70
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	Date	Time
Toby [illegible]	8-13-13	1730

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7964 5704 8589

Received by Laboratory: *(Signature, Date, Time)* **& condition**

8/14/13 1015
[illegible] TAB [illegible]

Appendix B
Field Forms

Location Mead Date 8-7-13

Project / Client FNOP 3rd Quarter Sampling

Ronnie Fiscus

0800 Arrived at Treatment
0800 Loaded Material for Sampling
0815 Bag ice
0830 Left Treatment Plant
0855 TRB-160A-072013 Voc-2
0900 MW-160A WL- 49.50
~~0900~~ ~~AA~~MW-0160-072013 Voc-3 Exp-2
AMW-2160-072013 Voc-3 Exp-2
0920 MW-160B WL-49.41
BMW-0160-072013 Voc-3 Exp-2
0955 MW-161A WL-44.19
AMW-0161-072013 Voc-3 Exp-2
AMW-2161-072013 Voc-3 Exp-2
1015 MW-161B WL- 44.34
BMW-0161-072013 Voc-3 Exp-2
1045 MW-163A WL- 56.86
AMW-0163-072013 Exp-2
1100 MW-165B WL-45.87
BMW-0165-072013 Exp-2
1120 MW-162A WL-45.89
AMW-0162-072013 Exp-2
1130 MW-164A WL- 47.03
AMW-0164-072013 Exp-2

RF

Location Mead Date 8-7-13

Project / Client FNOP 3rd Quarter Sampling

Ronnie Fiscus

1150 MW-168A WL-53.65
AMW-0168-072013 Exp-2
1200 MW-168B WL-53.49
BMW-0168-072013 Exp-2
1220 MW-166A WL- 51.03
AMW-0166-072013 Exp-2
1230 MW-166B WL- 50.96
BMW-0166-072013 Exp-2
1245 MW-167A WL- 47.69
AMW-0167-072013 Exp-2
1255 MW-167B WL-47.87
BMW-0167-072013 Exp.-2
1315 MW-169A WL-50.40
AMW-0169-072013 Exp-2
1330 MW-169B WL- 50.39
BMW-0167-072013 Exp.-2
1355 MW-170A WL- 51.41
AMW-0170-072013 Exp-2
1415 Returned to Treatment Plant for more supplies.
1445 MW-175A WL- 51.38
AMW-0175-072013 Voc-3 Exp.-2
1505 MW-175B WL- 51.58
BMW-0175-072013 Voc-3 Exp-2

Location Mead Date 8-7-13

Project / Client FNOP 3rd Quarter Sampling

Ronnie Fiscus

1530 MW-174A WL-48.96

AMW-0174-072013 Exp-2

1540 MW-174B WL-49.11

BMW-0174-072013 Exp.-2

1600 Returned to Treatment Plant

Unload ~~mat~~ samples.

1630 Left for the day.

RF

Location Mead Date 8-8-13

Project / Client FNOP 3rd Quarter Sampling

Ronnie Fiscus

0800 Arrived at Treatment Plant

Bag Ice, and loaded supplies

0830 Left Treatment Plant

0850 MW-173A WL-60.80

AMW-0173-072013 Exp-2

0910 MW-172A WL-58.15

AMW-0172-072013 Exp-2

0920 MW-172B WL-57.73

BMW-0172-072013 Exp.-2

0935 MW-118A WL-52.02

AMW-0118-072013 Exp-2

AMW-2118-072013 Exp-2

0950 MW-118B WL-52.06

BMW-0118-072013 Exp-2

BMW-0118-072013MS Exp-2

BMW-0118-072013MSD Exp-2

1015 MW-84A WL-51.59

AMW-084-072013 Exp-2

1025 MW-84B WL-51.61

BMW-084-072013 Exp-2

1035 MW-84D WL-51.75

DMW-084-072013 Exp-2

1100 MW-83A WL-56.79

AMW-083-072013 Exp-2

Location Mead Date 8-8-13

Project / Client FNOP 3rd Quarter Sampling

Ronnie Fiscus

1110 MW-83B WL- ~~56.76~~ 56.62

BMW-083-072013 Exp-2

1120 MW-83D WL- 56.76

DMW-083-072013 Exp-2

1145 MW-147A WL- 51.37

AMW-0147-072013 Exp-2

AMW-2147-072013 Exp-2

1155 MW-147B WL- 51.17

BMW-0147-072013 Exp-2

1205 MW-147D WL- 50.91

DMW-0147-072013 Exp-2

1235 MW-95A WL- 55.00

AMW-095-072013 Exp-2

1245 MW-95B WL- 54.64

BMW-095-072013 Exp-2

1305 MW-95D WL- 56.75

DMW-095-072013 Exp-2

1330 MW-148A WL- 44.94

AMW-0148-072013 Exp-2

1400 MW-171A WL- 45.30

AMW-0171-072013 Exp-2

1410 MW-171B WL- 45.11

BMW-0171-072013 Exp-2

RF

Location Mead Date 8-8-13

Project / Client FNOP 3rd Quarter Sampling

Ronnie Fiscus

1430 MW-145B WL- 48.33

BMW-0145-072013 Exp.-2

1445 Returned to Treatment Plant Unload samples. Put material away.

1530 Left for the day.

RF

Location Mead Date 8-9-13

Project / Client FNOP 3rd Quarter Sampling

Ronnie Fiscus

0800 Arrived at Treatment Plant
0830 MW-85A WL-45.53
AMW-085-072013 Exp-2
0840 MW-85B WL-45.27
BMW-085-072013 Exp.-2
0850 MW-85D WL-45.54
DMW-085-072013 Exp-2
0915 MW-35A WL-54.03
AMW-035-072013 Exp.-2
0925 MW-35B WL-53.86
BMW-035-072013 Exp-2
BMW-235-072013 Exp-2
0935 MW-35D WL-53.83
DMW-035-072013 Exp-2
1005 MW-158A WL-4.63
AMW-0158-072013 Voc-3 Exp-2
TRB-2158-072013 Voc-2
1020 MW-158B WL-4.31
BMW-0158-072013 Voc-3 Exp-2
1035 MW-158D WL-4.63
DMW-0158-072013 Voc-3 Exp-2
1100 MW-88A WL-8.87
AMW-088-072013 Voc-3 Exp-2

RF

Location Mead Date 8-9-13

Project / Client FNOP 3rd Quarter Sampling

Ronnie Fiscus

1120 MW-88B WL-8.95
BMW-088-072013 Voc-3 Exp.-2
1135 MW-88D WL-9.03
DMW-088-072013 Voc-3 Exp-2
1215 MW-116A WL-7.74
AMW-0116-072013 Voc-3 Exp-2
1230 MW-116B WL-7.69
BMW-0116-072013 Voc-3 Exp-2
1245 MW-116D WL-7.70
DMW-0116-072013 Voc-3 Exp-2
1315 MW-115A WL-8.54
AMW-0115-072013 Voc-3 Exp-2
1330 MW-115B WL-8.63
BMW-0115-072013 Voc-3 Exp-2
1340 MW-115D WL-8.53
DMW-0115-072013 Voc-3 Exp-2
1410 Returned ~~to~~ to Treatment Plant put supplies away. Bagged ice up.
1500 Left Treatment Plant.

RF

Location Mead Date 8-12-13

Project / Client FNOP 3rd Quarter Sampling

Ronnie Fiscus

0800 Arrived at Treatment Plant loaded supplies, and bagged ice.

0845 MW-38A WL-8.81

AMW-038-072013 Voc-3 Exp-2

AMW-238-072013 Voc-3 Exp-2

TRB-038-072013 Voc-2

0915 MW-38D WL-8.33

DMW-038-072013 Voc-3 Exp-2

DMW-038-072013MS Voc-3 Exp-2

DMW-038-072013MSD Voc-3 Exp-2

1000 MW-112A WL-3.15

AMW-0112-072013 Voc-3 Exp-2

1015 MW-112B WL-3.07

BMW-0112-072013 Voc-3 Exp-2

1030 MW-113A WL-2.88

AMW-0113-072013 Voc-3 Exp-2

1045 MW-113B WL-2.86

BMW-0113-072013 Voc-3 Exp-2

1100 MW-113D WL-2.90

DMW-0113-072013 Voc-3 Exp-2

1130 MW-46A WL-6.40

AMW-046-072013 Voc-3 Exp-2

AMW-246-072013 Voc-3 Exp-2

RF S

Location Mead Date 8-12-13

Project / Client FNOP 3rd Quarter Sampling

Ronnie Fiscus

1200 MW-46B WL-6.50

BMW-046-072013 Voc-3 Exp-2

BMW-046-072013MS Voc-3 Exp-2

BMW-046-072013MSD Voc-3 Exp-2

1230 MW-46D WL-6.34

DMW-046-072013 Voc-3 Exp-2

1315 MW-114A WL-5.93

AMW-0114-072013 Voc-3 Exp-2

1330 MW-114B WL-6.05

BMW-0114-072013 Voc-3 Exp-2

1345 MW-114D WL-5.77

DMW-0114-072013 Voc-3 Exp-2

1415 MW-176A WL-10.41

AMW-0176-072013 Voc-3 Exp-2

1430 MW-176B WL-10.43

BMW-0176-072013 Voc-3 Exp-2

1445 MW-110A WL-9.30

AMW-0110-072013 Voc-3 Exp-2

1500 MW-110B WL-9.62

BMW-0110-072013 Voc-3 Exp-2

1515 MW-110D WL-9.55

DMW-0110-072013 Voc-3 Exp-2

1545 Unloaded material.

RF S

Location Mead Date 8-13-13

Project / Client FNOP 3rd Quarter Sampling

Ronnie Fiscus

0800 Loaded materials for water sampling, bagged ice, and put tethers away.

0900 MW-159A WL-51.96

TRB-2159-072013 Voc-2

AMW-0159-072013 Voc-3 Exp-2

0915 MW-159B WL-51.93

BMW-0159-072013 Voc-3 Exp-2

0930 MW-178B WL-49.99

BMW-0178-072013 Voc-3 Exp-2

1000 MW-106A WL-26.41

AMW-0106-072013 Voc-3 Exp-2

AMW-2106-072013 Voc-3 Exp-2

1025 MW-106B WL-22.46

BMW-0106-072013 Voc-3 Exp-2

BMW-0106-072013MS Voc-3 Exp-2

BMW-0106-072013 MSD Voc-3 Exp-2

1100 MW-107A WL-46.08

AMW-0107-072013 Voc-3 Exp-2

AMW-2107-072013 Voc-3 Exp-2

1120 MW-107B WL-43.09

BMW-0107-072013 Voc-3 Exp-2

1135 MW-107D WL-46.68

DMW-0107-072013 Voc-3 Exp-2

RF §

Location Mead Date 8-13-13

Project / Client FNOP 3rd Quarter Sampling

Ronnie Fiscus

1200 MW-155B WL-46.40

BMW-0155-072013 Voc-3 Exp-2

1235 MW-80A WL-9.26

AMW-080-072013 Voc-3

1250 MW-80B WL-9.51

BMW-080-072013 Voc-3

1300 MW-80D WL-9.19

DMW-080-072013 Voc-3

1325 MW-177A WL-8.79

AMW-0177-072013 Voc-3

1335 MW-177B WL-8.40

BMW-0177-072013 Voc-3

1355 MW-179A WL-12.28

AMW-0179-072013 Voc-3

1405 MW-179B WL-13.09

BMW-0179-072013 Voc-3

1425 Returned to Treatment Plant

1500 Left Treatment Plant after putting away materials.

RF

Appendix C
Reference Sheet
Data Validation Qualifiers
Drinking Water Standards

Data Qualifiers and Drinking Water Standards Reference Sheet
Former Nebraska Ordnance Plant, Mead, Nebraska

Any qualifiers (i.e., U, J, or R) listed after a result are assigned during the data validation process. Data validation is a procedure which involves the review of quality control data provided by the laboratory. This review is followed by the assignment of data qualifiers (if necessary) which indicate the reliability of a result to the reader. Data validation is performed by a chemist employed outside of the laboratory or associated government installations to ensure accuracy in data reporting. A description of qualifiers is provided below.

No qualifier

- If a result has no assigned qualifier, the contaminant was detected, and the reader can be confident that the concentration is exact.

"U"

- A result followed by a "U" qualifier means that the contaminant was undetected, or not detected by the instrument.

"UJ"

- A result followed by a "UJ" qualifier means that the contaminant was not detected, but the associated detection level is not certain (estimated). For example, if a value is followed by a "UJ", the contaminant was not detected, but the associated detection level is in question. The detection level is in question because one or more of the laboratory quality control indicators do not meet acceptance criteria. The amount that the indicator fell outside of the criteria may be used as a rough estimate of how much the actual detection level differs from the stated one. Typically, this is a 10-30% difference.

"UR"

- A result followed by a "UR" qualifier means that the contaminant was not detected, but there is strong doubt that the associated detection level is accurate. For example, if a value is followed by a "UR", the contaminant was not detected, but the associated detection level is in strong doubt. The detection level is in doubt because results are unacceptable for a quality control indicator. In this case, the detection level cannot be estimated.

"J"

- A result followed by only a "J" qualifier means that the contaminant was detected, but there is some question that the stated concentration is exact. For example, if a result is "0.5 J", the contaminant was detected, but there is some question that the concentration is exactly 0.5. A "J" qualifier may be applied for two reasons: (1) the contaminant was detected below the reporting limit; or (2) the contaminant was detected, but one or more quality control indicators did not meet acceptance criteria. The reporting limit is equal to the concentration of the lowest standard used by the laboratory to calibrate the instrument. The reporting limit is the minimum concentration that can be stated with complete confidence.

“R”

- A result followed by only an “R” qualifier means that the contaminant was detected, but there is strong doubt that the concentration is exact. For example, if a result is “0.5 R”, the contaminant was detected, but there is strong doubt that the concentration is exactly 0.5. The concentration is in doubt because results are unacceptable for a quality control indicator. In this case, the detected concentration cannot be estimated. For comparison purposes, detected results are reported in the results letters with available Environmental Protection Agency drinking water standards. These standards include the maximum contaminant level (MCL) and various health advisories (HA). A description of the drinking water standards is provided below.

“MCL”

- The maximum contaminant level is the highest concentration of a contaminant that is allowed in drinking water. Maximum contaminant levels are enforceable Federal standards.

“HA”

- Health advisories provide estimates of acceptable drinking water concentrations for a chemical substance based on health effects information. Health advisories are not enforceable Federal standards, but serve as a technical guidance to assist Federal, State, and local officials.

Appendix D
Analytical Results on Compact Disc Summary Forms and Raw Data

Appendix D

Quality Control Summary Report Third Quarter 2013 Water Supply Well Sampling Event, Former Nebraska Ordnance Plant (on CD)

Regional Office

1746 Cole Boulevard
Building 21, Suite 350
Lakewood, CO 80401

Phone: 303.298.7607
Fax: 303.298.7837

September 27, 2013

U.S. Army Corps of Engineers, Kansas City District
Attn: Jacqy Frazier
601 East 12th Street
Kansas City, MO 64106-2896

Re: Transmittal of Final Quality Control Summary Report
Third Quarter 2013 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska
Contract No. W912DQ-08-D-0001, Task Order No. 0002

Dear Ms. Frazier:

ECC is hereby transmitting one electronic copy of the Final Quality Control Summary Report for the Third Quarter 2013 Water Supply Well Sampling Event at the former Nebraska Ordnance Plant, Mead, Nebraska.

Please contact Mr. Brady Bigelow or me if you require additional information.

Sincerely,

John Ryder
Project Chemist
ECC

Enclosures
cc: Ms. Kristine Stein (USACE)
Mr. Jason L'Ecuyer (USACE)
Mr. Bradley Brink (USACE)
Mr. Kirk Boese (USACE)

Corporate Office

1240 Bayshore Highway
Burlingame, CA 94010

Phone: 650.347.1555
Fax: 650.347.8789
www.ecc.net

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE *(Read instructions on the reverse side prior to initiating this form)*	DATE: September 27, 2013	TRANSMITTAL NO. 2013-078

SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (This section will be initiated by contractor)

Attn: Jacqy Frazier USACE, Kansas City District 601 E. 12th St. Kansas City, MO 64106-2896	FROM: John Ryder ECC 1746 Cole Blvd, Bldg 21, Lakewood, CO 80401	CONTRACT NO. W912DQ-08-D-0001, Task Order 0002	CHECK ONE: __X__ THIS IS A NEW TRANSMITTAL ____ THIS IS A RESUBMITTAL OF TRANSMITTAL _____
SPECIFICATION SECTION NO. (cover only one section with each transmittal)	PROJECT TITLE AND LOCATION: Groundwater Monitoring Program, Former Nebraska Ordnance Plant, Mead, Nebraska		CHECK ONE: ____ FIO __X__ For Govt. Approval

ITEM NO. *a.*	DESCRIPTION OF ITEM SUBMITTED *(Type, size, model number, etc.)* *b.*	MFG. OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. *(See instruction No. 8)* *c.*	NO. OF COPIES *d.*	CONTRACT REFERENCE DOCUMENT SPEC. PARA. NO. *e.*	 DRAWING SHEET NO. *f.*	FOR CONTRACTOR USE CODE *g.*	VARIATION *(See instruc. no. 6)* *h.*	FOR C E USE CODE *i.*
1	Quality Control Summary Report - Final		1 electronic					
	Third Quarter 2013 Water Supply Well Sampling Event							

REMARKS
Kristine Stein (USACE)
Jason L'Ecuyer (USACE)
Bradley Brink (USACE)
Kirk Boese (USACE)
Mead Library

I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as otherwise stated.
John Ryder, Denver Operations Group

NAME AND SIGNATURE OF CONTRACTOR

SECTION II - APPROVAL ACTION

ENCLOSURES RETURNED (List by Item No.)	NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY	DATE

FINAL
QUALITY CONTROL SUMMARY REPORT
THIRD QUARTER 2013

WATER SUPPLY WELL PROGRAM SAMPLING EVENT

FORMER NEBRASKA ORDNANCE PLANT
MEAD, NEBRASKA

Prepared for

United States Army Corps of Engineers
Kansas City District

Contract W912DQ-08-D-0001
Task Order 0002

September 2013

1.0 INTRODUCTION

Water supply well sampling was conducted between July 30 and August 13, 2013 at the former Nebraska Ordnance Plant, Mead, Nebraska. All sampling activities were performed in accordance with the *Site-Wide Work Plan, Revision 01, Support Services, Former Nebraska Ordnance Plant, Mead, Nebraska* (ECC, 2013). This report presents a summary of the chemical data quality review for the Third Quarter 2013 Water Supply Well sampling event.

TestAmerica analyzed the samples for one or more of the following constituents:

- Selected volatile organic compounds (VOCs) by United States Environmental Protection Agency (EPA) Drinking Water Method 524.2
- Selected explosives by EPA Method 8330
- Total suspended solids (TSS) by Method SM 2540D.

TestAmerica of South Burlington, Vermont performed analyses for the explosives and TSS and TestAmerica of Savannah, Georgia performed analysis for the VOCs. Table 1-1 lists the water supply wells planned for sample collection, the corresponding sample identification (ID) numbers, and the requested analyses for each sampled well. Appendix A includes associated chain of custody records. Appendix B presents an explanation of data validation qualifiers and drinking water standards and Appendix C contains a compact disk with all analytical data, including summary forms and raw data, for the Third Quarter 2013 Water Supply Well sampling event.

2.0 SAMPLING ACTIVITIES

The field sampling team collected samples for chemical analyses from 74 locations during the Third Quarter 2013 Water Supply Well sampling event. The team also collected nine field duplicate samples, four matrix spike (MS) / matrix spike duplicate (MSD) sample pairs, and six trip blanks.

The sampling locations water supply well (WSW)-116, University of Nebraska-Lincoln Field Laboratory (UNFL)-12, and UNFL-23 were listed on the sampling schedule but were not collected as planned. The water was turned off at the UNFL-12, and UNFL-23 sampling locations, and the WSW-116 sampling locations was not accessible to the field crew and a sample compliant with work plan requirements could not be obtained.

Table 2-1 summarizes the following information listed for the Third Quarter 2013 Water Supply Well sampling event:

- Field Sample IDs;
- MS/MSD sample information;
- Quality control (QC) split (Field Duplicate) sample information;
- Dates of sample collection and sample receipt by the laboratory;
- Laboratory Sample IDs;

- Laboratory sample delivery group (SDG) numbers; and
- Requested analyses.

3.0 DATA QUALITY EVALUATION PROCEDURES

The following subsections present the data quality evaluation procedures performed in accordance with the *Mead Validation Guidelines*, (ECC, 2007), approved by USACE 2007. Both project specified limits and laboratory control limits were used to assess data quality. Data quality evaluation results and results qualifications are presented in Table 3-1 according to field sample ID. QC outliers and associated limits are presented in Tables 3-2 and 3-3.

3.1 Sample Receipt at the Laboratory

The laboratories received all samples in good condition and within the recommended temperature range of 4 ± 2 °C. Although volatile organic analysis (VOA) vials for two samples were initially received broken, the field crew resampled the locations and the resampled VOA vials were received at the laboratory in good condition. The laboratory did not provide a receipt checklist for one SDG. The sample receipt condition was evaluated based on the case narrative and the temperature noted on the chain of custody; however, the sample login preservation was not indicated on the chain of custody records. The VOC pH logs indicate that the field team properly preserved the samples to a pH less than 2.

3.2 Holding Times

Explosives analysis for sample 052C-072013 was originally extracted within the required holding times; however, due to a problem with surrogate compounds in the initial analysis, the sample required re-analysis and was re-extracted two days outside the holding times. All explosives results for this sample were reported from the re-extraction outside of hold time and are qualified as estimated non-detect (UJ). TSS analysis for sample 054-B-072013 was performed one day outside the required holding times due to laboratory scheduling error. The TSS result was qualified UJ in this sample. The laboratories performed extractions and analyses of all other samples within required method-specific holding times.

3.3 Tuning and Calibration

The laboratory did not report any deviations for the calibration and tuning of pertinent instrumentation in the case narratives. The evaluation of the calibration summary forms indicated that all project criteria were met.

3.4 Laboratory Method Blanks

A laboratory method blank is an analyte-free matrix that is carried through the entire preparation and analysis sequence for the purpose of identifying potential contamination introduced during preparation and analysis. Method blanks were analyzed for each sample batch for all analyses.

In accordance with the *Mead Validation Guidelines* (ECC, 2007), detections are qualified as non-detect (U) if the concentration in the sample is less than 5 times the concentration in the associated blank. For common laboratory contaminants, detections are qualified as non-detect (U) if the concentration in the sample is less than 10 times the concentration in the associated blank. Sample results that are either non-detect (U), or greater than 5 or 10 times the blank result do not require qualification.

There were no detections of target analytes in the laboratory method blanks.

3.5 Trip Blanks

A trip blank is an analyte-free matrix that accompanies samples through the sample collection and transportation process to identify potential VOC contamination. In accordance with the *Mead Validation Guidelines* (ECC, 2007), detections are qualified as non-detect (U) if the concentration in the sample is less than 5 times the concentration in the associated blank (10 times for common laboratory contaminants). Sample results that are either non-detect (U), or greater than 5 times the blank result do not require qualification.

There were no detections of target analytes in the volatile trip blanks.

3.6 Surrogates

Surrogates are compounds not normally found in the environment that are added (spiked) into samples prior to extraction (for extractable methods) or prior to analysis (for non-extractable methods). The percent recovery (% REC) of each surrogate is used to assess the success of the sample preparation process for an individual sample. Surrogates were analyzed for each sample batch for VOCs and explosives.

In accordance with the *Mead Validation Guidelines* (ECC, 2007), results for associated analytes in the affected samples are J-coded for detects and UJ-coded for non-detects if the surrogate % RECs are below the laboratory QC limits, but greater than 10%. Non-detects are R-coded if % RECs are less than 10%. Also, results for associated analytes in the affected samples are J-coded for detects if the % RECs are greater than the QC limits. No action is required for non-detects.

The surrogate % RECs were within laboratory QC limits with one exception. The surrogate % REC in sample 077-072013 for the explosives analysis was below the QC limits. The sample was re-extracted and analyzed with acceptable %REC; however, the re-extraction was performed 2 days outside the holding times. All explosive results in the sample were qualified as estimated non-detect (UJ). Refer to Table 3-1 for data quality evaluation results and qualified samples. Table 3-2 presents the explosive QC outlier and associated sample for all assigned qualifiers.

3.7 Laboratory Control Samples and Laboratory Control Sample Duplicates

A laboratory control sample (LCS) consists of a matrix, similar to that of the field sample, which is spiked with known concentrations of analytes. The LCS % REC is a measure of the accuracy of the preparation and analytical methods. The laboratory control sample duplicate (LCSD) is a duplicate preparation and analysis of the LCS. The differences between the LCS and LCSD recoveries are used to calculate the relative percent difference (RPD), which is a measure of the precision of the preparation and analytical methods. LCS samples were analyzed for each sample batch for all analyses.

In accordance with the *Mead Validation Guidelines* (ECC, 2007), results for the affected analyte in the associated samples are J-coded for detects and UJ-coded for non-detects if the LCS % RECs are below the laboratory QC limits, but greater than 10%. Non-detects are R-coded if % RECs are less than 10%. Also, results for the affected analyte in the associated samples are J-coded for detects if the % RECs are greater than the QC limits. No action is required for non-detects. Additionally, results for the affected analyte in the associated samples are J-coded for detects and UJ-coded for non-detects if the LCS/LCSD RPD exceeds 30%.

All LCS/LCSD % RECs were within laboratory QC limits and all RPDs were less than 30%.

3.8 Matrix Spikes and Matrix Spike Duplicates

MS/MSD analyses measure method accuracy and precision for a project-specific matrix. A field sample is split into three portions (original, MS, and MSD) and known amounts of analytes are added (spiked) into the MS and MSD portions of the sample. The analytical results of these two portions are compared to each other for reproducibility using the RPD. These results are also compared against the unspiked portion of the sample for % REC of the spiked analytes. MS/MSD samples were analyzed for each SDG for all analyses. MS/MSD results were provided for all analyses.

In accordance with the *Mead Validation Guidelines* (ECC, 2007), results for the affected analyte in the parent sample are J-coded for detects and UJ-coded for non-detects if the MS/MSD % RECs are below the laboratory QC limits but greater than 10%. Non-detects are R-coded if % RECs are less than 10%. Also, results for the affected analyte in the parent sample are J-coded for detects if the MS/MSD % RECs are greater than the QC limits. No action is required for non-detects.

All % RECs were within laboratory QC limits and all RPDs were less than 30%.

3.9 Field Duplicates

The field sampling team collected nine field duplicate pairs, eight pairs for VOCs and explosives and one pair for TSS, during the Third Quarter 2013 Water Supply Well sampling event. The field duplicate pairs are listed below:

- 034-072013 / 234-072013 (VOCs and Explosives);
- 052C-B-072013 / 252C-B-072013 (TSS);
- 056-072013 / 256-072013 (VOCs and Explosives);
- 068-072013 / 268-072013 (VOCs and Explosives);
- 087-072013 / 287-072013 (VOCs and Explosives);
- 096-072013 / 296-072013 (VOCs and Explosives);
- 0104-072013 / 2104-072013 (VOCs and Explosives);
- 0113-072013 / 2113-072013 (VOCs and Explosives); and
- 0115-072013 / 2115-072013 (VOCs and Explosives).

The field duplicate pair for TSS (052C-B-072013/252C-B-072013) had an RPD of 117%. All other field duplicate pairs met the precision criteria of 30% RPD. However, in accordance with the *Mead Validation Guidelines* (ECC, 2007), data are not qualified based on field duplicate sample results alone.

Note: Field duplicate results are also considered acceptable when one result is not detected and the other result is detected below the limit of quantitation (LOQ).

3.10 Dilutions and Reanalyses

Qualifiers assigned as a result of calibration range exceedances are not used in the calculation of analytical data completeness percentages if there are acceptable results from diluted sample analyses.

The VOC sample from well WSW-52C-B required a 10x dilution analysis due to high levels of trichloroethene (TCE) in the sample above the calibration range. TCE is reported from the dilution analysis. The remaining results are reported from undiluted analyses.

3.11 Other QC Parameters

All detected explosive results were confirmed on a second column. A column comparison between the detected explosive results was made using explosive identification summary forms. The validator confirmed all reported explosive detections for both columns and the inter-column RPDs.

One detected explosive result with an inter-column RPD exceeding 40% was qualified as estimated (J). Refer to Table 3-1 for the data quality evaluation results and qualified samples. Table 3-2 presents the explosive QC outlier and associated sample for the assigned qualifier.

This qualifier was not used to determine analytical completeness or project completeness in the Overall Assessment in Section 4.0.

3.12 Laboratory Qualifiers

Analytes detected below the LOQ, but above the detection limit were quantified and results were assigned an estimated (J) qualifier by the laboratory. These qualifiers were carried over by the validator and were not used to determine analytical or project completeness in the Overall Assessment in Section 4.0.

4.0 OVERALL ASSESSMENT

The following subsections present the field completeness, analytical completeness, and project completeness determinations for the Third Quarter 2013 Water Supply Well sampling event. An evaluation of field, analytical, and project completeness is presented in Tables 4-1 through 4-3.

4.1 Field Completeness

Field completeness for sample collection was assessed by comparing the number of samples properly collected to the number of samples planned for collection. Three sample locations (UNFL-12, UNFL-23, and WSW-116) scheduled for VOCs and explosives analyses sampling this quarter could not be sampled. As a result, the field completeness for the VOCs and explosives was determined to be 96.5%. TSS analysis was not affected and the field completeness for TSS was 100%. The overall field completeness percentage is 96.6%, which exceeds the field completeness goal of 95%.

Section 2.0 presents the field sampling activities. Table 4-1 presents the field completeness.

4.2 Analytical Completeness

Analytical completeness was calculated as both acceptable data completeness and quality data completeness. Analytical completeness is presented in Table 4-2. The overall acceptable data completeness percentage goal is 95% (90% for each method), and the overall quality data completeness percentage goal is 80%.

Acceptable data completeness is a measure of laboratory contract compliance. Acceptable data includes data that has not been rejected or qualified as estimated (J). Qualified data is considered acceptable if appropriate corrective actions were taken by the laboratory. The acceptable data completeness percentage was 97.6% for explosives and 100% for VOCs which exceed the acceptable data completeness goals of 90% for each analytical method. The acceptable data completeness is 80% for TSS which did not meet the goal. Overall acceptable data completeness is 98.7%, which exceeds the overall acceptable data completeness goal of 95%.

Quality data is a measure of the percentage of usable data. Quality data includes all data except rejected data points, and does not include analyses for which replacement data points are available. Quality data completeness percentages for the VOCs, explosives, and TSS are 100%, as no sample results were rejected. These exceed the quality data completeness goals of 80% for each analytical method. Overall quality data completeness is also 100%, which exceeds the overall quality data completeness goal of 80%.

Table 4-2 presents acceptable and quality data completeness.

4.3 Project Completeness

Project completeness combines sampling and analytical protocols to assess the expectations of the project as a whole. Project completeness is determined by comparing the percentage of samples/measurements that are determined to be usable to the total number of samples/ measurements planned. Project completeness is calculated using the field completeness and analytical completeness (quality data) completeness percentages. The overall project completeness is 96.7%, which exceeds the project completeness goal of 90%.

Table 4-3 presents the project completeness percentages.

5.0 CONCLUSIONS

The data are acceptable. Six explosives results were UJ-coded due to low surrogate %REC, six explosives results were UJ-coded due to a holding time exceedance, and one explosives result was J-coded due to a high column RPD. One TSS result was UJ-coded due to a holding time exceedance. Qualified sample results are presented in Table 3-1. Overall quality data completeness is 100%. Overall acceptable data completeness is 98.7% and overall field completeness is 96.6%, both of which meet project goals. The overall project completeness at 96.7% meets the project goal of 90%.

6.0 REFERENCES

ECC, 2007 *Mead Validation Guidelines*, (approved by USACE 2007)

ECC, 2013. *Site-Wide Work Plan, Revision 01, Support Services, Former Nebraska Ordnance Plant, Mead, Nebraska*. April.

Tables

List of Acronyms for Tables

Term	Definition
µg/L	micrograms per liter
C-RPD	column relative percent difference
GC/MS	Gas chromatography–mass spectrometry
HPLC	high-performance liquid chromatography
ID	identification/identifier
Is_Surr	Internal standard-surrogate
J	estimated
Lab	laboratory
LWL	lower warning limit
MS/MSD	matrix spike/matrix spike duplicate
QC	Quality Control
RPD	relative percent difference
SDG	sample delivery group
TSS	total suspended solids
U	not detected at laboratory limit of detection
UCL	upper control limit
UNFL	University of Nebraska-Lincoln Field Laboratory
UWL	upper warning limit
WSW	water supply well

Table 1-1
Planned Sample Locations, Sample IDs, and Analyses
Third Quarter 2013 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sampling Locations	Sample IDs	Analyses
UNFL-09A	UNFL-09A-072013	Explosives, Volatiles
UNFL-10A	UNFL-010A-072013	Explosives, Volatiles
UNFL-12	*	Explosives, Volatiles
UNFL-23	*	Explosives, Volatiles
UNFL-27	UNFL-027-072013	Explosives, Volatiles
WSW-100	0100-072013	Explosives, Volatiles
WSW-101	0101-072013	Explosives, Volatiles
WSW-102	0102-072013	Explosives, Volatiles
WSW-103	0103-072013	Explosives, Volatiles
WSW-104	0104-072013	Explosives, Volatiles
WSW-105	0105-072013	Explosives, Volatiles
WSW-106	0106-072013	Explosives, Volatiles
WSW-107	0107-072013	Explosives, Volatiles
WSW-108	0108-072013	Explosives, Volatiles
WSW-109	0109-072013	Explosives, Volatiles
WSW-110	0110-072013	Explosives, Volatiles
WSW-111	0111-072013	Explosives, Volatiles
WSW-112	0112-072013	Explosives, Volatiles
WSW-113	0113-072013	Explosives, Volatiles
WSW-114	0114-072013	Explosives, Volatiles
WSW-115	0115-072013	Explosives, Volatiles
WSW-116	*	Explosives, Volatiles
WSW-117	0117-072013	Explosives, Volatiles
WSW-27	027-072013	Explosives, Volatiles
WSW-29	029-072013	Explosives, Volatiles
WSW-29A	029A-072013	Explosives, Volatiles
WSW-32	032-072013	Explosives, Volatiles
WSW-34	034-072013	Explosives, Volatiles
WSW-36	036-072013	Explosives, Volatiles
WSW-50A	050A-072013	Explosives, Volatiles
WSW-50B	050B-072013	Explosives, Volatiles
WSW-51	051-072013	Explosives, Volatiles
WSW-51A	051A-072013	Explosives, Volatiles
WSW-52A	052A-072013	Explosives, Volatiles
WSW-52A-B	052A-B-072013	Explosives, TSS, Volatiles
WSW-52B	052B-072013	Explosives, Volatiles
WSW-52C	052C-072013	Explosives, Volatiles
WSW-52C-B	052C-B-072013	Explosives, TSS, Volatiles
WSW-53	053-072013	Explosives, Volatiles
WSW-53-B	053-B-072013	Explosives, TSS, Volatiles
WSW-54	054-072013	Explosives, Volatiles
WSW-54-B	054-B-072013	Explosives, TSS, Volatiles
WSW-55	055-072013	Explosives, Volatiles
WSW-56	056-072013	Explosives, Volatiles
WSW-57	057-072013	Explosives, Volatiles
WSW-58	058-072013	Explosives, Volatiles
WSW-59	059-072013	Explosives, Volatiles
WSW-60	060-072013	Explosives, Volatiles
WSW-61	061-072013	Explosives, Volatiles
WSW-62	062-072013	Explosives, Volatiles
WSW-63	063-072013	Explosives, Volatiles
WSW-64	064-072013	Explosives, Volatiles

Table 1-1
Planned Sample Locations, Sample IDs, and Analyses
Third Quarter 2013 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sampling Locations	Sample IDs	Analyses
WSW-65	065-072013	Explosives, Volatiles
WSW-66	066-072013	Explosives, Volatiles
WSW-67	067-072013	Explosives, Volatiles
WSW-68	068-072013	Explosives, Volatiles
WSW-73	073-072013	Explosives, Volatiles
WSW-74	074-072013	Explosives, Volatiles
WSW-75	075-072013	Explosives, Volatiles
WSW-76	076-072013	Explosives, Volatiles
WSW-77	077-072013	Explosives, Volatiles
WSW-79	079-072013	Explosives, Volatiles
WSW-80	080-072013	Explosives, Volatiles
WSW-81	081-072013	Explosives, Volatiles
WSW-82	082-072013	Explosives, Volatiles
WSW-86	086-072013	Explosives, Volatiles
WSW-87	087-072013	Explosives, Volatiles
WSW-89	089-072013	Explosives, Volatiles
WSW-90	090-072013	Explosives, Volatiles
WSW-91	091-072013	Explosives, Volatiles
WSW-92	092-072013	Explosives, Volatiles
WSW-93	093-072013	Explosives, Volatiles
WSW-94	094-072013	Explosives, Volatiles
WSW-95	095-072013	Explosives, Volatiles
WSW-96	096-072013	Explosives, Volatiles
WSW-97	097-072013	Explosives, Volatiles
WSW-99	099-072013	Explosives, Volatiles

Notes:

*	Samples planned but not collected.	
TSS	A2540D	Total Suspended Solids Dried at 103-105 C
Volatiles	E524.2	Volatile Organic Compounds by Purge & Trap Capillary Column GC/MS
Explosives	SW8330	Nitroaromatics and Nitramines by HPLC

Table 2-1
Sample Collection Summary
Third Quarter 2013 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Field Samples	MS/MSD Samples	Field Duplicate Samples	Date Sampled	Date Received by Lab	Lab ID	SDG	Explosives	TSS	Volatiles
Field Samples									
0101-072013			7/30/2013	8/1/2013	200-17738-3	17738	•		•
065-072013			7/30/2013	8/1/2013	200-17739-14	17739	•		•
0100-072013			7/30/2013	8/1/2013	200-17738-2	17738	•		•
066-072013			7/30/2013	8/1/2013	200-17739-15	17739	•		•
067-072013			7/30/2013	8/1/2013	200-17739-16	17739	•		•
068-072013			7/30/2013	8/1/2013	200-17739-17	17739	•		•
		268-072013	7/30/2013	8/1/2013	200-17739-18	17739	•		•
036-072013			7/30/2013	8/1/2013	200-17739-2	17739	•		•
034-072013			7/30/2013	8/1/2013	200-17738-21	17738	•		•
		234-072013	7/30/2013	8/1/2013	200-17739-1	17739	•		•
032-072013			7/30/2013	8/1/2013	200-17738-20	17738	•		•
027-072013			7/30/2013	8/1/2013	200-17738-17	17738	•		•
029-072013			7/30/2013	8/1/2013	200-17738-18	17738	•		•
029A-072013			7/30/2013	8/1/2013	200-17738-19	17738	•		•
050A-072013			7/30/2013	8/1/2013	200-17739-3	17739	•		•
050B-072013			7/30/2013	8/1/2013	200-17739-4	17739	•		•
052B-072013			7/30/2013	8/1/2013	200-17739-7	17739	•		•
051A-072013			7/30/2013	8/1/2013	200-17739-6	17739	•		•
051-072013			7/30/2013	8/1/2013	200-17739-5	17739	•		
051-072013			7/30/2013	8/3/2013	200-17779-15	17779			•
055-072013			7/30/2013	8/1/2013	200-17739-8	17739	•		•
0113-072013	0113-072013		7/30/2013	8/1/2013	200-17738-14	17738	•		•
		2113-072013	7/30/2013	8/1/2013	200-17738-15	17738	•		•
0107-072013			7/30/2013	8/1/2013	200-17738-10	17738	•		•
095-072013			7/30/2013	8/1/2013	200-17741-13	17741	•		
095-072013			8/8/2013	8/9/2013	200-17853-5	17853			•
0104-072013			7/30/2013	8/1/2013	200-17738-6	17738	•		•
		2104-072013	7/30/2013	8/1/2013	200-17738-7	17738	•		•
0103-072013			7/30/2013	8/1/2013	200-17738-5	17738	•		•
087-072013	087-072013		7/30/2013	8/1/2013	200-17739-20	17739	•		•
		287-072013	7/30/2013	8/1/2013	200-17741-7	17741	•		•
096-072013	096-072013		7/30/2013	8/1/2013	200-17741-14	17741	•		•

Table 2-1
Sample Collection Summary
Third Quarter 2013 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Field Samples	MS/MSD Samples	Field Duplicate Samples	Date Sampled	Date Received by Lab	Lab ID	SDG	Explosives	TSS	Volatiles
		296-072013	7/30/2013	8/1/2013	200-17741-15	17741	•		•
0105-072013			7/30/2013	8/1/2013	200-17738-8	17738	•		•
0109-072013			7/30/2013	8/1/2013	200-17738-11	17738	•		•
074-072013			7/31/2013	8/1/2013	200-17741-1	17741	•		•
073-072013			7/31/2013	8/1/2013	200-17739-19	17739	•		•
097-072013			7/31/2013	8/1/2013	200-17741-16	17741	•		•
086-072013			7/31/2013	8/1/2013	200-17741-6	17741	•		•
0106-072013			7/31/2013	8/1/2013	200-17738-9	17738	•		•
079-072013			7/31/2013	8/1/2013	200-17741-5	17741	•		•
099-072013			7/31/2013	8/1/2013	200-17741-17	17741	•		•
0110-072013			7/31/2013	8/1/2013	200-17738-12	17738	•		•
077-072013			7/31/2013	8/1/2013	200-17741-4	17741	•		•
076-072013			7/31/2013	8/1/2013	200-17741-3	17741	•		•
075-072013			7/31/2013	8/1/2013	200-17741-2	17741	•		•
092-072013			7/31/2013	8/1/2013	200-17741-10	17741	•		•
0117-072013			7/31/2013	8/1/2013	200-17738-16	17738	•		•
091-072013			7/31/2013	8/1/2013	200-17741-9	17741	•		•
0111-072013			7/31/2013	8/1/2013	200-17738-13	17738	•		•
0102-072013			7/31/2013	8/1/2013	200-17738-4	17738	•		•
090-072013			7/31/2013	8/1/2013	200-17741-8	17741	•		•
064-072013			7/31/2013	8/1/2013	200-17739-13	17739	•		•
063-072013			7/31/2013	8/1/2013	200-17739-12	17739	•		•
093-072013			7/31/2013	8/1/2013	200-17741-11	17741	•		•
094-072013			7/31/2013	8/1/2013	200-17741-12	17741	•		•
056-072013			7/31/2013	8/1/2013	200-17739-9	17739	•		•
		256-072013	7/31/2013	8/1/2013	200-17739-10	17739	•		•
059-072013			7/31/2013	8/1/2013	200-17739-11	17739	•		•
057-072013			8/1/2013	8/3/2013	200-17779-9	17779	•		•
0112-072013			8/1/2013	8/3/2013	200-17779-3	17779	•		•
0114-072013			8/1/2013	8/3/2013	200-17779-4	17779	•		•
058-072013			8/1/2013	8/3/2013	200-17779-10	17779	•		•
089-072013			8/1/2013	8/3/2013	200-17779-14	17779	•		•
0115-072013	0115-072013		8/1/2013	8/3/2013	200-17779-5	17779	•		•

Table 2-1
Sample Collection Summary
Third Quarter 2013 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Field Samples	MS/MSD Samples	Field Duplicate Samples	Date Sampled	Date Received by Lab	Lab ID	SDG	Explosives	TSS	Volatiles
		2115-072013	8/1/2013	8/3/2013	200-17779-6	17779	•		•
0108-072013			8/1/2013	8/3/2013	200-17779-2	17779	•		•
081-072013			8/1/2013	8/3/2013	200-17779-12	17779	•		•
082-072013			8/1/2013	8/3/2013	200-17779-13	17779	•		•
080-072013			8/1/2013	8/3/2013	200-17779-11	17779	•		•
052A-072013			8/2/2013	8/3/2013	200-17779-7	17779	•		•
052A-B-072013			8/2/2013	8/3/2013	200-17779-8	17779	•	•	•
UNFL-09A-072013			8/5/2013	8/6/2013	200-17802-2	17802	•		•
UNFL-027-072013			8/5/2013	8/6/2013	200-17802-4	17802	•		•
UNFL-010A-072013			8/5/2013	8/6/2013	200-17802-3	17802	•		•
062-072013			8/6/2013	8/6/2013	200-17837-6	17837	•		•
061-072013			8/6/2013	8/6/2013	200-17837-5	17837	•		•
053-072013			8/6/2013	8/6/2013	200-17837-2	17837	•		•
053-B-072013			8/6/2013	8/6/2013	200-17837-3	17837	•	•	•
060-072013			8/6/2013	8/6/2013	200-17837-4	17837	•		•
052C-072013			8/7/2013	8/9/2013	200-17853-2	17853	•		•
052C-B-072013			8/7/2013	8/9/2013	200-17853-3	17853	•	•	•
		252C-B-072013	8/7/2013	8/9/2013	200-17853-4	17853		•	
054-072013			8/13/2013	8/15/2013	200-17941-2	17941	•		•
054-B-072013			8/13/2013	8/15/2013	200-17941-3	17941	•	•	•
Trip Blanks									
TRB-2101-072013			7/30/2013	8/1/2013	200-17738-1	17738			•
TRB-257-072013			8/1/2013	8/3/2013	200-17779-1	17779			•
TRB-UNFL-29A-072013			8/5/2013	8/6/2013	200-17802-1	17802			•
TRB-262-072013			8/6/2013	8/6/2013	200-17837-1	17837			•
TRB-252C-072013			8/7/2013	8/9/2013	200-17853-1	17853			•
TRB-254-072013			8/13/2013	8/15/2013	200-17941-1	17941			•

Notes:

TSS	A2540D	Total Suspended Solids Dried at 103-105 C
Volatiles	E524.2	Volatile Organic Compounds by Purge & Trap Capillary Column GC/MS
Explosives	SW8330	Nitroaromatics and Nitramines by HPLC

• = Requested for the indicated analyses

Table 3-1
Data Quality Evaluation Results
Third Quarter 2013 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sample Identification	Date Sampled	SDG	Lab Number	Analysis	Parameter	Units	Lab Result	Data Review Qualifier	C_RPD	IS_Surr	OTHER	Comments	Final Result
052C-072013	8/7/2013	17853	200-17853-2	Explosives	1,3,5-trinitrobenzene	µg/L	0.055	UJ			X	Prep Hold Time	0.055 UJ
052C-072013	8/7/2013	17853	200-17853-2	Explosives	2,4,6-trinitrotoluene	µg/L	0.11	UJ			X	Prep Hold Time	0.11 UJ
052C-072013	8/7/2013	17853	200-17853-2	Explosives	2,4-dinitrotoluene	µg/L	0.11	UJ			X	Prep Hold Time	0.11 UJ
052C-072013	8/7/2013	17853	200-17853-2	Explosives	2-amino-4,6-dinitrotoluene	µg/L	0.11	UJ			X	Prep Hold Time	0.11 UJ
052C-072013	8/7/2013	17853	200-17853-2	Explosives	4-amino-2,6-dinitrotoluene	µg/L	0.055	UJ			X	Prep Hold Time	0.055 UJ
052C-072013	8/7/2013	17853	200-17853-2	Explosives	hexahydro-1,3,5-trinitro-1,3,5-triazine	µg/L	0.055	UJ			X	Prep Hold Time	0.055 UJ
054-B-072013	8/13/2013	17941	200-17941-3	Explosives	2-amino-4,6-dinitrotoluene	µg/L	0.064	J	X			Column RPD	0.064 J
054-B-072013	8/13/2013	17941	200-17941-3	TSS	Suspended Solids (Residue, Non-Filterable)	µg/L	0.50	UJ			X	Test Hold Time	0.50 UJ
077-072013	7/31/2013	17741	200-17741-4	Explosives	1,3,5-trinitrobenzene	µg/L	0.048	UJ		X		Surrogate recovery outside project limits.	0.048 UJ
077-072013	7/31/2013	17741	200-17741-4	Explosives	2,4,6-trinitrotoluene	µg/L	0.096	UJ		X		Surrogate recovery outside project limits.	0.096 UJ
077-072013	7/31/2013	17741	200-17741-4	Explosives	2,4-dinitrotoluene	µg/L	0.096	UJ		X		Surrogate recovery outside project limits.	0.096 UJ
077-072013	7/31/2013	17741	200-17741-4	Explosives	2-amino-4,6-dinitrotoluene	µg/L	0.096	UJ		X		Surrogate recovery outside project limits.	0.096 UJ
077-072013	7/31/2013	17741	200-17741-4	Explosives	4-amino-2,6-dinitrotoluene	µg/L	0.048	UJ		X		Surrogate recovery outside project limits.	0.048 UJ
077-072013	7/31/2013	17741	200-17741-4	Explosives	hexahydro-1,3,5-trinitro-1,3,5-triazine	µg/L	0.048	UJ		X		Surrogate recovery outside project limits.	0.048 UJ

Note: The LOD values were used to display non detected lab results.

Reason for Qualification

C_RPD	Column RPD
IS_Surr	Internal standard, Surrogate recovery outside project limits.

Table 3-2
Explosives Quality Control Outliers
Third Quarter 2013 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sample ID(s) Requiring Qualification	SDG	Compound(s)	QC Outlier	QC Parameter Control Limit	QC Result
Confirmation Column Difference					
054-B-072013	17941	2-Amino-4,6-dinitrotoluene	Confirmation Column Difference exceeds UCL	< 40 RPD	52.9 RPD
Prep Hold Time					
052C-072013	17853	1,3,5-Trinitrobenzene	Prep Exceeds UWL	< 7 Days	8.9 Days
052C-072013	17853	2,4,6-Trinitrotoluene	Prep Exceeds UWL	< 7 Days	8.9 Days
052C-072013	17853	2,4-Dinitrotoluene	Prep Exceeds UWL	< 7 Days	8.9 Days
052C-072013	17853	2-Amino-4,6-dinitrotoluene	Prep Exceeds UWL	< 7 Days	8.9 Days
052C-072013	17853	4-Amino-2,6-Dinitrotoluene	Prep Exceeds UWL	< 7 Days	8.9 Days
052C-072013	17853	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	Prep Exceeds UWL	< 7 Days	8.9 Days
Surrogate					
077-072013	17741	1,3,5-Trinitrobenzene	Surrogate < minimum LWL	1,2-Dinitrobenzene 70 - 115 %	65.0 %
077-072013	17741	2,4,6-Trinitrotoluene	Surrogate < minimum LWL	1,2-Dinitrobenzene 70 - 115 %	65.0 %
077-072013	17741	2,4-Dinitrotoluene	Surrogate < minimum LWL	1,2-Dinitrobenzene 70 - 115 %	65.0 %
077-072013	17741	2-Amino-4,6-dinitrotoluene	Surrogate < minimum LWL	1,2-Dinitrobenzene 70 - 115 %	65.0 %
077-072013	17741	4-Amino-2,6-Dinitrotoluene	Surrogate < minimum LWL	1,2-Dinitrobenzene 70 - 115 %	65.0 %
077-072013	17741	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	Surrogate < minimum LWL	1,2-Dinitrobenzene 70 - 115 %	65.0 %

Table 3-3
TSS Quality Control Outliers
Third Quarter 2013 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sample ID(s) Requiring Qualification	SDG	Compound(s)	QC Outlier	QC Parameter Control Limit	QC Result
Field Duplicate RPD					
052C-B-072013	17853	Suspended Solids (Non-Filterable Residue)	Field Duplicate exceeds UCL	< 30 RPD	117 RPD
252C-B-072013	17853	Suspended Solids (Non-Filterable Residue)	Field Duplicate exceeds UCL	< 30 RPD	117 RPD
Test Hold Time					
054-B-072013	17941	Suspended Solids (Non-Filterable Residue)	Test Exceeds UWL	< 7 Days	8.2 Days

Table 4-1
Field Completeness
Third Quarter 2013 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Analysis	Number of Samples Planned	Number of Samples Collected	Field Completeness
Explosives	85	82	96.5%
TSS	5	5	100%
Volatiles	85	82	96.5%
Totals =	175	169	96.6%
Goal =			95%

Notes:
Number of Samples Planned includes field samples and field duplicate samples.

Table 4-2
Analytical Completeness
Third Quarter 2013 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Analysis	Total Number of Parameters	Acceptable Data	Acceptable Data Completeness	Acceptable Data Completeness Goals	Quality Data	Quality Data Completeness	Quality Data Completeness Goals
Explosives (Analyte Count - 6)	492	480	97.6%	90%	492	100%	80%
Volatiles (Analyte Count - 6)	492	492	100%	90%	492	100%	80%
TSS (Analyte Count - 1)	5	4	80%	90%	5	100%	80%
Totals =	989	976	98.7%	95%	989	100.0%	80%

Notes:

Total number of parameters includes field samples (includes data points from dilutions and/or reanalyses to be used in place of original data) and field duplicates (does not include field blanks or trip blanks).
Acceptable data includes data that has not been rejected or qualified as estimated (J/UJ). Data points for which the required corrective actions were taken or do not require corrective action do not count against the acceptable data completeness goal calculation (i.e., results exceeding the calibration range that were reanalyzed at dilutions within the calibration range).
Quality data is defined as all non-rejected data.

Table 4-3
Project Completeness
Third Quarter 2013 Water Supply Well Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Field	Analytical	Project Completeness
96.7%	100.0%	96.7%
Project Completeness Goal =		90%

Notes:

Analytical Completeness is the percentage of usable data (i.e. quality data completeness).
Project Completeness combines sampling and analytical protocols to assess the expectations of the project as a whole. Project completeness is determined by comparing the percentage of samples / measurements that are determined to be usable to the total number of samples / measurements planned.

Appendix A
Chain of Custody Records

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Analytical Test Method

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8330/METHOD/NONE-Explosives - 6 Compounds (1)	E524.2/SW5030/NONE-VOC DW (2)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
[redacted]								FIELDQC	TB1	0.00	0.00
2	0100-072013	WG	7/30/2013	0825		X	[redacted]	WSW-100	N1	0.00	0.00
3	0101-072013	WG	7/30/2013	0755		X	[redacted]	WSW-101	N1	0.00	0.00
4	0102-072013	WG	7/31/2013	1215		X	[redacted]	WSW-102	N1	0.00	0.00
5	0103-072013	WG	7/30/2013	1430		X	[redacted]	WSW-103	N1	0.00	0.00
6	0104-072013	WG	7/30/2013	1415		X	[redacted]	WSW-104	N1	0.00	0.00
7	2104-072013	WG	7/30/2013	1415		X	[redacted]	WSW-104	FD1	0.00	0.00
8	0105-072013	WG	7/30/2013	1600		X	[redacted]	WSW-105	N1	0.00	0.00
9	0106-072013	WG	7/31/2013	0925		X	[redacted]	WSW-106	N1	0.00	0.00
10	0107-072013	WG	7/30/2013	1340		X	[redacted]	WSW-107	N1	0.00	0.00

Cooler # 1 **Turnaround Time:**

200-17738 COC

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time	Shipping Date / Carrier / Airbill Number
Toby [illegible]	7-31-13	1800	Steph [illegible] TMBUK	8/1/13	1015	Fed-ex 7863-6434-3418
						Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., ~~South Burlington, VT~~ Savannah, GA
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8330/METHOD/NONE-Explosives - 6 Compounds (1)	E524.2/SW5030/NONE-VOC DW (2)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013					1	2				
1	TRB-2101-072013	WQ	7/30/2013	0755			X	FIELDQC	TB1	0.00	0.00
2	0100-072013	WG	7/30/2013	0825			X	WSW-100	N1	0.00	0.00
3	0101-072013	WG	7/30/2013	0755			X	WSW-101	N1	0.00	0.00
4	0102-072013	WG	7/31/2013	1215			X	WSW-102	N1	0.00	0.00
5	0103-072013	WG	7/30/2013	1430			X	WSW-103	N1	0.00	0.00
6	0104-072013	WG	7/30/2013	1415			X	WSW-104	N1	0.00	0.00
7	2104-072013	WG	7/30/2013	1415			X	WSW-104	FD1	0.00	0.00
8	0105-072013	WG	7/30/2013	1600			X	WSW-105	N1	0.00	0.00
9	0106-072013	WG	7/31/2013	0925			X	WSW-106	N1	0.00	0.00
10	0107-072013	WG	7/30/2013	1340			X	WSW-107	N1	0.00	0.00
Cooler # 1		Turnaround Time:									

4.2°C

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby A [illegible]	7-31-13	1800	[illegible]	08/01/13	0930

Shipping Date / Carrier / Airbill Number
Fed-ex 7963 6476 7313

Recevied by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8330/METHOD/NONE-Explosives - 6 Compounds (1)	E524.2/SW5030/NONE-VOC DW (2)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
11	0109-072013	WG	7/30/2013	1620		X	[redacted]	WSW-109	N1	0.00	0.00
12	0110-072013	WG	7/31/2013	1015		X	[redacted]	WSW-110	N1	0.00	0.00
13	0111-072013	WG	7/31/2013	1200		X	[redacted]	WSW-111	N1	0.00	0.00
14	0113-072013	WG	7/30/2013	1320		X	[redacted]	WSW-113	N1	0.00	0.00
15	0113-072013MS	WG	7/30/2013	1320		X	[redacted]	WSW-113	MS1	0.00	0.00
16	0113-072013MSD	WG	7/30/2013	1320		X	[redacted]	WSW-113	SD1	0.00	0.00
17	2113-072013	WG	7/30/2013	1320		X	[redacted]	WSW-113	FD1	0.00	0.00
18	0117-072013	WG	7/31/2013	1130		X	[redacted]	WSW-117	N1	0.00	0.00
19	027-072013	WG	7/30/2013	1055		X	[redacted]	WSW-27	N1	0.00	0.00
20	029-072013	WG	7/30/2013	1110		X	[redacted]	WSW-29	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	Date	Time
Toby G. [illegible]	7-31-13	1800

Received by: *(Signature)*	Date	Time
Steph Fowler TARSUK	8/1/13	1015

Shipping Date / Carrier / Airbill Number
Fed-Ex 2963 6434 3418

Recevied by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013					1	2				
11	0109-072013	WG	7/30/2013	1620		X	X	WSW-109	N1	0.00	0.00
12	0110-072013	WG	7/31/2013	1015		X	X	WSW-110	N1	0.00	0.00
13	0111-072013	WG	7/31/2013	1200		X	X	WSW-111	N1	0.00	0.00
14	0113-072013	WG	7/30/2013	1320		X	X	WSW-113	N1	0.00	0.00
15	0113-072013MS	WG	7/30/2013	1320		X	X	WSW-113	MS1	0.00	0.00
16	0113-072013MSD	WG	7/30/2013	1320		X	X	WSW-113	SD1	0.00	0.00
17	2113-072013	WG	7/30/2013	1320		X	X	WSW-113	FD1	0.00	0.00
18	0117-072013	WG	7/31/2013	1130		X	X	WSW-117	N1	0.00	0.00
19	027-072013	WG	7/30/2013	1055		X	X	WSW-27	N1	0.00	0.00
20	029-072013	WG	7/30/2013	1110		X	X	WSW-29	N1	0.00	0.00
Cooler # 1		Turnaround Time:									

4.2°C

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time	Shipping Date / Carrier / Airbill Number
Toby Oki	7-31-13	1800	[illegible]	08/01/13	0930	Fed-Ex 7963 6476 7313
						Recevied by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8330/METHOD/NONE-Explosives - 6 Compounds (1)	E524.2/SW5030/NONE-VOC DW (2)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
21	029A-072013	WG	7/30/2013	1125		X	[redacted]	WSW-29A	N1	0.00	0.00
22	032-072013	WG	7/30/2013	1040		X	[redacted]	WSW-32	N1	0.00	0.00
23	034-072013	WG	7/30/2013	1025		X	[redacted]	WSW-34	N1	0.00	0.00
24	234-072013	WG	7/30/2013	1025		X	[redacted]	WSW-34	FD1	0.00	0.00
25	036-072013	WG	7/30/2013	1010		X	[redacted]	WSW-36	N1	0.00	0.00
26	050A-072013	WG	7/30/2013	1140		X	[redacted]	WSW-50A	N1	0.00	0.00
27	050B-072013	WG	7/30/2013	1155		X	[redacted]	WSW-50B	N1	0.00	0.00
28	051-072013	WG	7/30/2013	1255		X	[redacted]	WSW-51	N1	0.00	0.00
29	051A-072013	WG	7/30/2013	1240		X	[redacted]	WSW-51A	N1	0.00	0.00
30	052B-072013	WG	7/30/2013	1210		X	[redacted]	WSW-52B	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	Date	Time
Toby [illegible]	7-31-13	18

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7963 6434 348

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/1/13 1015
Steph [illegible] TAGUE

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Analytical Test Method

	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW
	1	2

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	1	2	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
21	029A-072013	WG	7/30/2013	1125			X	WSW-29A	N1	0.00	0.00
22	032-072013	WG	7/30/2013	1040			X	WSW-32	N1	0.00	0.00
23	034-072013	WG	7/30/2013	1025			X	WSW-34	N1	0.00	0.00
24	234-072013	WG	7/30/2013	1025			X	WSW-34	FD1	0.00	0.00
25	036-072013	WG	7/30/2013	1010			X	WSW-36	N1	0.00	0.00
26	050A-072013	WG	7/30/2013	1140			X	WSW-50A	N1	0.00	0.00
27	050B-072013	WG	7/30/2013	1155			X	WSW-50B	N1	0.00	0.00
28	051-072013	WG	7/30/2013	1255			X	WSW-51	N1	0.00	0.00
29	051A-072013	WG	7/30/2013	1240			X	WSW-51A	N1	0.00	0.00
30	052B-072013	WG	7/30/2013	1210			X	WSW-52B	N1	0.00	0.00

4.2°C

Cooler # 1 **Turnaround Time:**

Relinquished by: *(Signature)*	Date	Time
Toby R [illegible]	7-31-13	1800

Received by: *(Signature)*	Date	Time
[illegible]	08/01/13	0930

Shipping Date / Carrier / Airbill Number

Fed-ex 7963 6476 7313

Received by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Analytical Test Method

1	SW8330/METHOD/NONE-Explosives - 6 Compounds
2	E524.2/SW5030/NONE-VOC DW

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	1	2	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
31	055-072013	WG	7/30/2013	1255		X	[redacted]	WSW-55	N1	0.00	0.00
32	056-072013	WG	7/31/2013	1355		X	[redacted]	WSW-56	N1	0.00	0.00
33	256-072013	WG	7/31/2013	1355		X	[redacted]	WSW-56	FD1	0.00	0.00
34	059-072013	WG	7/31/2013	1415		X	[redacted]	WSW-59	N1	0.00	0.00
35	063-072013	WG	7/31/2013	1300		X	[redacted]	WSW-63	N1	0.00	0.00
36	064-072013	WG	7/31/2013	1245		X	[redacted]	WSW-64	N1	0.00	0.00
37	065-072013	WG	7/30/2013	0810		X	[redacted]	WSW-65	N1	0.00	0.00
38	066-072013	WG	7/30/2013	0840		X	[redacted]	WSW-66	N1	0.00	0.00
39	067-072013	WG	7/30/2013	0855		X	[redacted]	WSW-67	N1	0.00	0.00
40	068-072013	WG	7/30/2013	0910		X	[redacted]	WSW-68	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	Date	Time
Toby D. K	7-31-13	1800

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7963 6434 3418

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/1/13 1015
Steph Fowler MOUR

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Analytical Test Method

1	SW8330/METHOD/NONE-Explosives - 6 Compounds
2	E524.2/SW5030/NONE-VOC DW

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	1	2	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
31	055-072013	WG	7/30/2013	1255		[redacted]	X	WSW-55	N1	0.00	0.00
32	056-072013	WG	7/31/2013	1355		[redacted]	X	WSW-56	N1	0.00	0.00
33	256-072013	WG	7/31/2013	1355		[redacted]	X	WSW-56	FD1	0.00	0.00
34	059-072013	WG	7/31/2013	1415		[redacted]	X	WSW-59	N1	0.00	0.00
35	063-072013	WG	7/31/2013	1300		[redacted]	X	WSW-63	N1	0.00	0.00
36	064-072013	WG	7/31/2013	1245		[redacted]	X	WSW-64	N1	0.00	0.00
37	065-072013	WG	7/30/2013	0810		[redacted]	X	WSW-65	N1	0.00	0.00
38	066-072013	WG	7/30/2013	0840		[redacted]	X	WSW-66	N1	0.00	0.00
39	067-072013	WG	7/30/2013	0855		[redacted]	X	WSW-67	N1	0.00	0.00
40	068-072013	WG	7/30/2013	0910		[redacted]	X	WSW-68	N1	0.00	0.00

4.2°C

Cooler # 1 **Turnaround Time:**

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby O. [illegible]	7-31-13	1800	[illegible]	08/01/13	0430

Shipping Date / Carrier / Airbill Number

Fed-Ex 7963 6476 7312

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8330/METHOD/NONE-Explosives - 6 Compounds (1)	E524.2/SW5030/NONE-VOC DW (2)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
41	268-072013	WG	7/30/2013	0910		X	[redacted]	WSW-68	FD1	0.00	0.00
42	073-072013	WG	7/31/2013	0840		X	[redacted]	WSW-73	N1	0.00	0.00
43	074-072013	WG	7/31/2013	0825		X	[redacted]	WSW-74	N1	0.00	0.00
44	075-072013	WG	7/31/2013	1100		X	[redacted]	WSW-75	N1	0.00	0.00
45	076-072013	WG	7/31/2013	1045		X	[redacted]	WSW-76	N1	0.00	0.00
46	077-072013	WG	7/31/2013	1030		X	[redacted]	WSW-77	N1	0.00	0.00
47	079-072013	WG	7/31/2013	0940		X	[redacted]	WSW-79	N1	0.00	0.00
48	086-072013	WG	7/31/2013	0910		X	[redacted]	WSW-86	N1	0.00	0.00
49	087-072013	WG	7/30/2013	1445		X	[redacted]	WSW-87	N1	0.00	0.00
50	087-072013MS	WG	7/30/2013	1445		X	[redacted]	WSW-87	MS1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	Date	Time
Toby D. [illegible]	7-31-13	1800

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7963 6434 3418

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/1/13 1015
Steph Bucher [illegible]

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL, 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: SW8330/METHOD/NONE-Explosives - 6 Compounds (1)	Analytical Test Method: E524.2/SW5030/NONE-VOC DW (2)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
41	268-072013	WG	7/30/2013	0910		[redacted]	X	WSW-68	FD1	0.00	0.00
42	073-072013	WG	7/31/2013	0840		[redacted]	X	WSW-73	N1	0.00	0.00
43	074-072013	WG	7/31/2013	0825		[redacted]	X	WSW-74	N1	0.00	0.00
44	075-072013	WG	7/31/2013	1100		[redacted]	X	WSW-75	N1	0.00	0.00
45	076-072013	WG	7/31/2013	1045		[redacted]	X	WSW-76	N1	0.00	0.00
46	077-072013	WG	7/31/2013	1030		[redacted]	X	WSW-77	N1	0.00	0.00
47	079-072013	WG	7/31/2013	0940		[redacted]	X	WSW-79	N1	0.00	0.00
48	086-072013	WG	7/31/2013	0910		[redacted]	X	WSW-86	N1	0.00	0.00
49	087-072013	WG	7/30/2013	1445		[redacted]	X	WSW-87	N1	0.00	0.00
50	087-072013MS	WG	7/30/2013	1445		[redacted]	X	WSW-87	MS1	0.00	0.00

Cooler # 1 **Turnaround Time:**

4.20c

Relinquished by: *(Signature)*	Date	Time
Toby [illegible]	7-31-13	1800

Received by: *(Signature)*	Date	Time
[illegible]	08/01/13	0930

Shipping Date / Carrier / Airbill Number

Fed-Ex 7967 6476 7313

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

					Analytical Test Method	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW				
Event: Third Quarter 2013						1	2				
	Sample ID	Matrix	Date	Time	Samp Init.			Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
51	087-072013MSD	WG	7/30/2013	1445		X	[redacted]	WSW-87	SD1	0.00	0.00
52	287-072013	WG	7/30/2013	1445		X	[redacted]	WSW-87	FD1	0.00	0.00
53	090-072013	WG	7/31/2013	1230		X	[redacted]	WSW-90	N1	0.00	0.00
54	091-072013	WG	7/31/2013	1145		X	[redacted]	WSW-91	N1	0.00	0.00
55	092-072013	WG	7/31/2013	1115		X	[redacted]	WSW-92	N1	0.00	0.00
56	093-072013	WG	7/31/2013	1315		X	[redacted]	WSW-93	N1	0.00	0.00
57	094-072013	WG	7/31/2013	1330		X	[redacted]	WSW-94	N1	0.00	0.00
58	095-072013	WG	7/30/2013	1355		X	[redacted]	WSW-95	N1	0.00	0.00
59	096-072013	WG	7/30/2013	1515		X	[redacted]	WSW-96	N1	0.00	0.00
60	096-072013MS	WG	7/30/2013	1515		X	[redacted]	WSW-96	MS1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	**Date**	**Time**
Toby R [illegible]	7-31-13	1800

Received by: *(Signature)*	**Date**	**Time**

Shipping Date / Carrier / Airbill Number

Fed-Ex 7963 6434 3478

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

Steph Rouker 8/1/13 1015 [illegible]

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: SW8330/METHOD/NONE-Explosives - 6 Compounds (1)	Analytical Test Method: E524.2/SW5030/NONE-VOC DW (2)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
51	087-072013MSD	WG	7/30/2013	1445		[redacted]	X	WSW-87	SD1	0.00	0.00
52	287-072013	WG	7/30/2013	1445		[redacted]	X	WSW-87	FD1	0.00	0.00
53	090-072013	WG	7/31/2013	1230		[redacted]	X	WSW-90	N1	0.00	0.00
54	091-072013	WG	7/31/2013	1145		[redacted]	X	WSW-91	N1	0.00	0.00
55	092-072013	WG	7/31/2013	1115		[redacted]	X	WSW-92	N1	0.00	0.00
56	093-072013	WG	7/31/2013	1315		[redacted]	X	WSW-93	N1	0.00	0.00
57	094-072013	WG	7/31/2013	1330		[redacted]	X	WSW-94	N1	0.00	0.00
58	095-072013	WG	7/30/2013	1355		[redacted]	X	WSW-95	N1	0.00	0.00
59	096-072013	WG	7/30/2013	1515		[redacted]	X	WSW-96	N1	0.00	0.00
60	096-072013MS	WG	7/30/2013	1515		[redacted]	X	WSW-96	MS1	0.00	0.00

Cooler # 1 | Turnaround Time:

4.2°C

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby R. [illegible]	7-31-13	1800	[illegible]	08/01/13	0930

Shipping Date / Carrier / Airbill Number: Fed-Ex 7963 6476 7351

Received by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

					Analytical Test Method	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW				
Event: Third Quarter 2013						**1**	**2**				
	Sample ID	Matrix	Date	Time	Samp Init.			Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
61	096-072013MSD	WG	7/30/2013	1515		X	[redacted]	WSW-96	SD1	0.00	0.00
62	296-072013	WG	7/30/2013	1515		X	[redacted]	WSW-96	FD1	0.00	0.00
63	097-072013	WG	7/31/2013	0855		X	[redacted]	WSW-97	N1	0.00	0.00
64	099-072013	WG	7/31/2013	0955		X	[redacted]	WSW-99	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	**Date**	**Time**
Toby [illegible]	7-31-13	1800

Received by: *(Signature)*	**Date**	**Time**

Shipping Date / Carrier / Airbill Number

Fed-Ex 7963 6434 3418

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

Steph Fowler TA Burl 8/1/13 1015

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC Vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: SW8330/METHOD/NONE-Explosives - 6 Compounds (1)	Analytical Test Method: E524.2/SW5030/NONE-VOC DW (2)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
61	096-072013MSD	WG	7/30/2013	1515		[redacted]	X	WSW-96	SD1	0.00	0.00
62	296-072013	WG	7/30/2013	1515		[redacted]	X	WSW-96	FD1	0.00	0.00
63	097-072013	WG	7/31/2013	0855		[redacted]	X	WSW-97	N1	0.00	0.00
64	099-072013	WG	7/31/2013	0955		[redacted]	X	WSW-99	N1	0.00	0.00

Cooler # 1 **Turnaround Time:**

4.2°C

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby [illegible]	7-31-13	1800	[illegible]	08/01/13	0930

Shipping Date / Carrier / Airbill Number: Fed-ex 7963 6476 7313

Received by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013				Analytical Test Method	1	2				
[redacted]								FIELDQC	TB1	0.00	0.00
2	0100-072013	WG	7/30/2013	0825		X	[redacted]	WSW-100	N1	0.00	0.00
3	0101-072013	WG	7/30/2013	0755		X	[redacted]	WSW-101	N1	0.00	0.00
4	0102-072013	WG	7/31/2013	1215		X	[redacted]	WSW-102	N1	0.00	0.00
5	0103-072013	WG	7/30/2013	1430		X	[redacted]	WSW-103	N1	0.00	0.00
6	0104-072013	WG	7/30/2013	1415		X	[redacted]	WSW-104	N1	0.00	0.00
7	2104-072013	WG	7/30/2013	1415		X	[redacted]	WSW-104	FD1	0.00	0.00
8	0105-072013	WG	7/30/2013	1600		X	[redacted]	WSW-105	N1	0.00	0.00
9	0106-072013	WG	7/31/2013	0925		X	[redacted]	WSW-106	N1	0.00	0.00
10	0107-072013	WG	7/30/2013	1340		X	[redacted]	WSW-107	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

200-17738 COC

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time	Shipping Date / Carrier / Airbill Number
Toby [illegible]	7-31-13	1800	Steph [illegible] TMBUK	8/1/13	1015	Fed-ex 7863-6434-3418
						Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., ~~South Burlington, VT~~ Savannah, GA
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8330/METHOD/NONE-Explosives - 6 Compounds (1)	E524.2/SW5030/NONE-VOC DW (2)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013					1	2				
1	TRB-2101-072013	WQ	7/30/2013	0755		[redacted]	X	FIELDQC	TB1	0.00	0.00
2	0100-072013	WG	7/30/2013	0825		[redacted]	X	WSW-100	N1	0.00	0.00
3	0101-072013	WG	7/30/2013	0755		[redacted]	X	WSW-101	N1	0.00	0.00
4	0102-072013	WG	7/31/2013	1215		[redacted]	X	WSW-102	N1	0.00	0.00
5	0103-072013	WG	7/30/2013	1430		[redacted]	X	WSW-103	N1	0.00	0.00
6	0104-072013	WG	7/30/2013	1415		[redacted]	X	WSW-104	N1	0.00	0.00
7	2104-072013	WG	7/30/2013	1415		[redacted]	X	WSW-104	FD1	0.00	0.00
8	0105-072013	WG	7/30/2013	1600		[redacted]	X	WSW-105	N1	0.00	0.00
9	0106-072013	WG	7/31/2013	0925		[redacted]	X	WSW-106	N1	0.00	0.00
10	0107-072013	WG	7/30/2013	1340		[redacted]	X	WSW-107	N1	0.00	0.00
Cooler # 1		Turnaround Time:									

4.2°C

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby A [illegible]	7-31-13	1800	[illegible]	08/01/13	0930

Shipping Date / Carrier / Airbill Number
Fed-ex 7963 6476 7313

Recevied by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8330/METHOD/NONE-Explosives - 6 Compounds (1)	E524.2/SW5030/NONE-VOC DW (2)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
11	0109-072013	WG	7/30/2013	1620		X	[redacted]	WSW-109	N1	0.00	0.00
12	0110-072013	WG	7/31/2013	1015		X	[redacted]	WSW-110	N1	0.00	0.00
13	0111-072013	WG	7/31/2013	1200		X	[redacted]	WSW-111	N1	0.00	0.00
14	0113-072013	WG	7/30/2013	1320		X	[redacted]	WSW-113	N1	0.00	0.00
15	0113-072013MS	WG	7/30/2013	1320		X	[redacted]	WSW-113	MS1	0.00	0.00
16	0113-072013MSD	WG	7/30/2013	1320		X	[redacted]	WSW-113	SD1	0.00	0.00
17	2113-072013	WG	7/30/2013	1320		X	[redacted]	WSW-113	FD1	0.00	0.00
18	0117-072013	WG	7/31/2013	1130		X	[redacted]	WSW-117	N1	0.00	0.00
19	027-072013	WG	7/30/2013	1055		X	[redacted]	WSW-27	N1	0.00	0.00
20	029-072013	WG	7/30/2013	1110		X	[redacted]	WSW-29	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	Date	Time
Toby G. [illegible]	7-31-13	1800

Received by: *(Signature)*	Date	Time
Steph Fischer TARSUK	8/1/13	1015

Shipping Date / Carrier / Airbill Number

Fed-Ex 2963 6434 3418

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013					1	2				
11	0109-072013	WG	7/30/2013	1620		X	X	WSW-109	N1	0.00	0.00
12	0110-072013	WG	7/31/2013	1015		X	X	WSW-110	N1	0.00	0.00
13	0111-072013	WG	7/31/2013	1200		X	X	WSW-111	N1	0.00	0.00
14	0113-072013	WG	7/30/2013	1320		X	X	WSW-113	N1	0.00	0.00
15	0113-072013MS	WG	7/30/2013	1320		X	X	WSW-113	MS1	0.00	0.00
16	0113-072013MSD	WG	7/30/2013	1320		X	X	WSW-113	SD1	0.00	0.00
17	2113-072013	WG	7/30/2013	1320		X	X	WSW-113	FD1	0.00	0.00
18	0117-072013	WG	7/31/2013	1130		X	X	WSW-117	N1	0.00	0.00
19	027-072013	WG	7/30/2013	1055		X	X	WSW-27	N1	0.00	0.00
20	029-072013	WG	7/30/2013	1110		X	X	WSW-29	N1	0.00	0.00
Cooler # 1		Turnaround Time:									

4.2°C

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time	Shipping Date / Carrier / Airbill Number
Toby Oki	7-31-13	1800	[illegible]	08/01/13	0930	Fed-ex 7963 6476 7313
						Recevied by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8330/METHOD/NONE-Explosives - 6 Compounds (1)	E524.2/SW5030/NONE-VOC DW (2)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
21	029A-072013	WG	7/30/2013	1125		X	[redacted]	WSW-29A	N1	0.00	0.00
22	032-072013	WG	7/30/2013	1040		X	[redacted]	WSW-32	N1	0.00	0.00
23	034-072013	WG	7/30/2013	1025		X	[redacted]	WSW-34	N1	0.00	0.00
24	234-072013	WG	7/30/2013	1025		X	[redacted]	WSW-34	FD1	0.00	0.00
25	036-072013	WG	7/30/2013	1010		X	[redacted]	WSW-36	N1	0.00	0.00
26	050A-072013	WG	7/30/2013	1140		X	[redacted]	WSW-50A	N1	0.00	0.00
27	050B-072013	WG	7/30/2013	1155		X	[redacted]	WSW-50B	N1	0.00	0.00
28	051-072013	WG	7/30/2013	1255		X	[redacted]	WSW-51	N1	0.00	0.00
29	051A-072013	WG	7/30/2013	1240		X	[redacted]	WSW-51A	N1	0.00	0.00
30	052B-072013	WG	7/30/2013	1210		X	[redacted]	WSW-52B	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	Date	Time
Toby [illegible]	7-31-13	18

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7963 6434 348

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/1/13 1015
Steph [illegible] TAGUE

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Analytical Test Method

	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW
	1	2

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	1	2	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
21	029A-072013	WG	7/30/2013	1125			X	WSW-29A	N1	0.00	0.00
22	032-072013	WG	7/30/2013	1040			X	WSW-32	N1	0.00	0.00
23	034-072013	WG	7/30/2013	1025			X	WSW-34	N1	0.00	0.00
24	234-072013	WG	7/30/2013	1025			X	WSW-34	FD1	0.00	0.00
25	036-072013	WG	7/30/2013	1010			X	WSW-36	N1	0.00	0.00
26	050A-072013	WG	7/30/2013	1140			X	WSW-50A	N1	0.00	0.00
27	050B-072013	WG	7/30/2013	1155			X	WSW-50B	N1	0.00	0.00
28	051-072013	WG	7/30/2013	1255			X	WSW-51	N1	0.00	0.00
29	051A-072013	WG	7/30/2013	1240			X	WSW-51A	N1	0.00	0.00
30	052B-072013	WG	7/30/2013	1210			X	WSW-52B	N1	0.00	0.00

4.2°C

Cooler # 1 **Turnaround Time:**

Relinquished by: *(Signature)*	Date	Time
Toby R [illegible]	7-31-13	1800

Received by: *(Signature)*	Date	Time
[illegible]	08/01/13	0930

Shipping Date / Carrier / Airbill Number

Fed-ex 7963 6476 7313

Received by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8330/METHOD/NONE-Explosives - 6 Compounds (1)	E524.2/SW5030/NONE-VOC DW (2)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
31	055-072013	WG	7/30/2013	1255		X	[redacted]	WSW-55	N1	0.00	0.00
32	056-072013	WG	7/31/2013	1355		X	[redacted]	WSW-56	N1	0.00	0.00
33	256-072013	WG	7/31/2013	1355		X	[redacted]	WSW-56	FD1	0.00	0.00
34	059-072013	WG	7/31/2013	1415		X	[redacted]	WSW-59	N1	0.00	0.00
35	063-072013	WG	7/31/2013	1300		X	[redacted]	WSW-63	N1	0.00	0.00
36	064-072013	WG	7/31/2013	1245		X	[redacted]	WSW-64	N1	0.00	0.00
37	065-072013	WG	7/30/2013	0810		X	[redacted]	WSW-65	N1	0.00	0.00
38	066-072013	WG	7/30/2013	0840		X	[redacted]	WSW-66	N1	0.00	0.00
39	067-072013	WG	7/30/2013	0855		X	[redacted]	WSW-67	N1	0.00	0.00
40	068-072013	WG	7/30/2013	0910		X	[redacted]	WSW-68	N1	0.00	0.00

Cooler # 1 **Turnaround Time:**

Relinquished by: *(Signature)*	Date	Time
Toby D. K	7-31-13	1800

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7963 6434 3418

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/1/13 1015
Steph Fowler MOUR

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Analytical Test Method

1	SW8330/METHOD/NONE-Explosives - 6 Compounds
2	E524.2/SW5030/NONE-VOC DW

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	1	2	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
31	055-072013	WG	7/30/2013	1255		[redacted]	X	WSW-55	N1	0.00	0.00
32	056-072013	WG	7/31/2013	1355		[redacted]	X	WSW-56	N1	0.00	0.00
33	256-072013	WG	7/31/2013	1355		[redacted]	X	WSW-56	FD1	0.00	0.00
34	059-072013	WG	7/31/2013	1415		[redacted]	X	WSW-59	N1	0.00	0.00
35	063-072013	WG	7/31/2013	1300		[redacted]	X	WSW-63	N1	0.00	0.00
36	064-072013	WG	7/31/2013	1245		[redacted]	X	WSW-64	N1	0.00	0.00
37	065-072013	WG	7/30/2013	0810		[redacted]	X	WSW-65	N1	0.00	0.00
38	066-072013	WG	7/30/2013	0840		[redacted]	X	WSW-66	N1	0.00	0.00
39	067-072013	WG	7/30/2013	0855		[redacted]	X	WSW-67	N1	0.00	0.00
40	068-072013	WG	7/30/2013	0910		[redacted]	X	WSW-68	N1	0.00	0.00

4.2°C

Cooler # 1 **Turnaround Time:**

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby [illegible]	7-31-13	1800	[illegible]	08/01/13	0430

Shipping Date / Carrier / Airbill Number

Fed-Ex 7963 6476 7312

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

					Analytical Test Method	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW				
Event: Third Quarter 2013						**1**	**2**				
	Sample ID	Matrix	Date	Time	Samp Init.			Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
41	268-072013	WG	7/30/2013	0910		X	[redacted]	WSW-68	FD1	0.00	0.00
42	073-072013	WG	7/31/2013	0840		X	[redacted]	WSW-73	N1	0.00	0.00
43	074-072013	WG	7/31/2013	0825		X	[redacted]	WSW-74	N1	0.00	0.00
44	075-072013	WG	7/31/2013	1100		X	[redacted]	WSW-75	N1	0.00	0.00
45	076-072013	WG	7/31/2013	1045		X	[redacted]	WSW-76	N1	0.00	0.00
46	077-072013	WG	7/31/2013	1030		X	[redacted]	WSW-77	N1	0.00	0.00
47	079-072013	WG	7/31/2013	0940		X	[redacted]	WSW-79	N1	0.00	0.00
48	086-072013	WG	7/31/2013	0910		X	[redacted]	WSW-86	N1	0.00	0.00
49	087-072013	WG	7/30/2013	1445		X	[redacted]	WSW-87	N1	0.00	0.00
50	087-072013MS	WG	7/30/2013	1445		X	[redacted]	WSW-87	MS1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	**Date**	**Time**
Toby D. [illegible]	7-31-13	1800

Received by: *(Signature)*	**Date**	**Time**

Shipping Date / Carrier / Airbill Number

Fed-ex 7963 6434 3418

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/1/13 1015
Steph Bucher TMBUCK

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Analytical Test Method

1	SW8330/METHOD/NONE-Explosives - 6 Compounds
2	E524.2/SW5030/NONE-VOC DW

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL, 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	1	2	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
41	268-072013	WG	7/30/2013	0910		[redacted]	X	WSW-68	FD1	0.00	0.00
42	073-072013	WG	7/31/2013	0840		[redacted]	X	WSW-73	N1	0.00	0.00
43	074-072013	WG	7/31/2013	0825		[redacted]	X	WSW-74	N1	0.00	0.00
44	075-072013	WG	7/31/2013	1100		[redacted]	X	WSW-75	N1	0.00	0.00
45	076-072013	WG	7/31/2013	1045		[redacted]	X	WSW-76	N1	0.00	0.00
46	077-072013	WG	7/31/2013	1030		[redacted]	X	WSW-77	N1	0.00	0.00
47	079-072013	WG	7/31/2013	0940		[redacted]	X	WSW-79	N1	0.00	0.00
48	086-072013	WG	7/31/2013	0910		[redacted]	X	WSW-86	N1	0.00	0.00
49	087-072013	WG	7/30/2013	1445		[redacted]	X	WSW-87	N1	0.00	0.00
50	087-072013MS	WG	7/30/2013	1445		[redacted]	X	WSW-87	MS1	0.00	0.00

Cooler # 1 **Turnaround Time:**

4.20c

Relinquished by: *(Signature)*	Date	Time
Toby [illegible]	7-31-13	1800

Received by: *(Signature)*	Date	Time
[illegible]	08/01/13	0930

Shipping Date / Carrier / Airbill Number

Fed-Ex 7967 6476 7313

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013				**Analytical Test Method**	1	2				
51	087-072013MSD	WG	7/30/2013	1445		X	[redacted]	WSW-87	SD1	0.00	0.00
52	287-072013	WG	7/30/2013	1445		X	[redacted]	WSW-87	FD1	0.00	0.00
53	090-072013	WG	7/31/2013	1230		X	[redacted]	WSW-90	N1	0.00	0.00
54	091-072013	WG	7/31/2013	1145		X	[redacted]	WSW-91	N1	0.00	0.00
55	092-072013	WG	7/31/2013	1115		X	[redacted]	WSW-92	N1	0.00	0.00
56	093-072013	WG	7/31/2013	1315		X	[redacted]	WSW-93	N1	0.00	0.00
57	094-072013	WG	7/31/2013	1330		X	[redacted]	WSW-94	N1	0.00	0.00
58	095-072013	WG	7/30/2013	1355		X	[redacted]	WSW-95	N1	0.00	0.00
59	096-072013	WG	7/30/2013	1515		X	[redacted]	WSW-96	N1	0.00	0.00
60	096-072013MS	WG	7/30/2013	1515		X	[redacted]	WSW-96	MS1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby R [illegible]	7-31-13	1800			

Shipping Date / Carrier / Airbill Number

Fed-Ex 7963 6434 3478

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/1/13 1015
Steph Rouker [illegible]

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: SW8330/METHOD/NONE-Explosives - 6 Compounds (1)	Analytical Test Method: E524.2/SW5030/NONE-VOC DW (2)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
51	087-072013MSD	WG	7/30/2013	1445		[redacted]	X	WSW-87	SD1	0.00	0.00
52	287-072013	WG	7/30/2013	1445		[redacted]	X	WSW-87	FD1	0.00	0.00
53	090-072013	WG	7/31/2013	1230		[redacted]	X	WSW-90	N1	0.00	0.00
54	091-072013	WG	7/31/2013	1145		[redacted]	X	WSW-91	N1	0.00	0.00
55	092-072013	WG	7/31/2013	1115		[redacted]	X	WSW-92	N1	0.00	0.00
56	093-072013	WG	7/31/2013	1315		[redacted]	X	WSW-93	N1	0.00	0.00
57	094-072013	WG	7/31/2013	1330		[redacted]	X	WSW-94	N1	0.00	0.00
58	095-072013	WG	7/30/2013	1355		[redacted]	X	WSW-95	N1	0.00	0.00
59	096-072013	WG	7/30/2013	1515		[redacted]	X	WSW-96	N1	0.00	0.00
60	096-072013MS	WG	7/30/2013	1515		[redacted]	X	WSW-96	MS1	0.00	0.00

Cooler # 1 | Turnaround Time:

4.2°C

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby R. [illegible]	7-31-13	1800	[illegible]	08/01/13	0930

Shipping Date / Carrier / Airbill Number: Fed-Ex 7963 6476 7351

Received by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

					Analytical Test Method	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW			Depth (ft bgs)	
Event: Third Quarter 2013						**1**	**2**				
	Sample ID	Matrix	Date	Time	Samp Init.			Location ID	Sample Type	Top	Bottom
61	096-072013MSD	WG	7/30/2013	1515		X	[redacted]	WSW-96	SD1	0.00	0.00
62	296-072013	WG	7/30/2013	1515		X	[redacted]	WSW-96	FD1	0.00	0.00
63	097-072013	WG	7/31/2013	0855		X	[redacted]	WSW-97	N1	0.00	0.00
64	099-072013	WG	7/31/2013	0955		X	[redacted]	WSW-99	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	**Date**	**Time**
Toby [illegible]	7-31-13	1800

Received by: *(Signature)*	**Date**	**Time**

Shipping Date / Carrier / Airbill Number

Fed-Ex 7963 6434 3418

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

Steph Fowler TA Burl 8/1/13 1015

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC Vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: SW8330/METHOD/NONE-Explosives - 6 Compounds (1)	Analytical Test Method: E524.2/SW5030/NONE-VOC DW (2)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
61	096-072013MSD	WG	7/30/2013	1515		[redacted]	X	WSW-96	SD1	0.00	0.00
62	296-072013	WG	7/30/2013	1515		[redacted]	X	WSW-96	FD1	0.00	0.00
63	097-072013	WG	7/31/2013	0855		[redacted]	X	WSW-97	N1	0.00	0.00
64	099-072013	WG	7/31/2013	0955		[redacted]	X	WSW-99	N1	0.00	0.00

Cooler # 1 **Turnaround Time:**

4.2°C

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby [illegible]	7-31-13	1800	[illegible]	08/01/13	0930

Shipping Date / Carrier / Airbill Number: Fed-ex 7963 6476 7313

Received by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013				Analytical Test Method	1	2				
[redacted]								FIELDQC	TB1	0.00	0.00
2	0100-072013	WG	7/30/2013	0825		X	[redacted]	WSW-100	N1	0.00	0.00
3	0101-072013	WG	7/30/2013	0755		X	[redacted]	WSW-101	N1	0.00	0.00
4	0102-072013	WG	7/31/2013	1215		X	[redacted]	WSW-102	N1	0.00	0.00
5	0103-072013	WG	7/30/2013	1430		X	[redacted]	WSW-103	N1	0.00	0.00
6	0104-072013	WG	7/30/2013	1415		X	[redacted]	WSW-104	N1	0.00	0.00
7	2104-072013	WG	7/30/2013	1415		X	[redacted]	WSW-104	FD1	0.00	0.00
8	0105-072013	WG	7/30/2013	1600		X	[redacted]	WSW-105	N1	0.00	0.00
9	0106-072013	WG	7/31/2013	0925		X	[redacted]	WSW-106	N1	0.00	0.00
10	0107-072013	WG	7/30/2013	1340		X	[redacted]	WSW-107	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

200-17738 COC

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time	Shipping Date / Carrier / Airbill Number
Toby [illegible]	7-31-13	1800	Steph [illegible] TMBUK	8/1/13	1015	Fed-ex 7863-6434-3418
						Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., ~~South Burlington, VT~~ Savannah, GA
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8330/METHOD/NONE-Explosives - 6 Compounds (Analytical Test Method)	E524.2/SW5030/NONE-VOC DW (Analytical Test Method)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
						1	2				
1	TRB-2101-072013	WQ	7/30/2013	0755		[redacted]	X	FIELDQC	TB1	0.00	0.00
2	0100-072013	WG	7/30/2013	0825		[redacted]	X	WSW-100	N1	0.00	0.00
3	0101-072013	WG	7/30/2013	0755		[redacted]	X	WSW-101	N1	0.00	0.00
4	0102-072013	WG	7/31/2013	1215		[redacted]	X	WSW-102	N1	0.00	0.00
5	0103-072013	WG	7/30/2013	1430		[redacted]	X	WSW-103	N1	0.00	0.00
6	0104-072013	WG	7/30/2013	1415		[redacted]	X	WSW-104	N1	0.00	0.00
7	2104-072013	WG	7/30/2013	1415		[redacted]	X	WSW-104	FD1	0.00	0.00
8	0105-072013	WG	7/30/2013	1600		[redacted]	X	WSW-105	N1	0.00	0.00
9	0106-072013	WG	7/31/2013	0925		[redacted]	X	WSW-106	N1	0.00	0.00
10	0107-072013	WG	7/30/2013	1340		[redacted]	X	WSW-107	N1	0.00	0.00
Cooler # 1		Turnaround Time:									

4.2°C

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby A [illegible]	7-31-13	1800	[illegible]	08/01/13	0930

Shipping Date / Carrier / Airbill Number
Fed-ex 7963 6476 7313

Recevied by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8330/METHOD/NONE-Explosives - 6 Compounds (1)	E524.2/SW5030/NONE-VOC DW (2)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
11	0109-072013	WG	7/30/2013	1620		X	[redacted]	WSW-109	N1	0.00	0.00
12	0110-072013	WG	7/31/2013	1015		X	[redacted]	WSW-110	N1	0.00	0.00
13	0111-072013	WG	7/31/2013	1200		X	[redacted]	WSW-111	N1	0.00	0.00
14	0113-072013	WG	7/30/2013	1320		X	[redacted]	WSW-113	N1	0.00	0.00
15	0113-072013MS	WG	7/30/2013	1320		X	[redacted]	WSW-113	MS1	0.00	0.00
16	0113-072013MSD	WG	7/30/2013	1320		X	[redacted]	WSW-113	SD1	0.00	0.00
17	2113-072013	WG	7/30/2013	1320		X	[redacted]	WSW-113	FD1	0.00	0.00
18	0117-072013	WG	7/31/2013	1130		X	[redacted]	WSW-117	N1	0.00	0.00
19	027-072013	WG	7/30/2013	1055		X	[redacted]	WSW-27	N1	0.00	0.00
20	029-072013	WG	7/30/2013	1110		X	[redacted]	WSW-29	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	Date	Time
Toby G. [illegible]	7-31-13	1800

Received by: *(Signature)*	Date	Time
Steph Fowler TARSUK	8/1/13	1015

Shipping Date / Carrier / Airbill Number

Fed-Ex 2963 6434 3418

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

					Analytical Test Method	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW				
Event: Third Quarter 2013						1	2				
	Sample ID	Matrix	Date	Time	Samp Init.			Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
11	0109-072013	WG	7/30/2013	1620		X	X	WSW-109	N1	0.00	0.00
12	0110-072013	WG	7/31/2013	1015		X	X	WSW-110	N1	0.00	0.00
13	0111-072013	WG	7/31/2013	1200		X	X	WSW-111	N1	0.00	0.00
14	0113-072013	WG	7/30/2013	1320		X	X	WSW-113	N1	0.00	0.00
15	0113-072013MS	WG	7/30/2013	1320		X	X	WSW-113	MS1	0.00	0.00
16	0113-072013MSD	WG	7/30/2013	1320		X	X	WSW-113	SD1	0.00	0.00
17	2113-072013	WG	7/30/2013	1320		X	X	WSW-113	FD1	0.00	0.00
18	0117-072013	WG	7/31/2013	1130		X	X	WSW-117	N1	0.00	0.00
19	027-072013	WG	7/30/2013	1055		X	X	WSW-27	N1	0.00	0.00
20	029-072013	WG	7/30/2013	1110		X	X	WSW-29	N1	0.00	0.00
Cooler # 1		Turnaround Time:									

4.2°C

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time	Shipping Date / Carrier / Airbill Number
Toby Olk	7-31-13	1800	[illegible]	08/01/13	0930	Fed-ex 7963 6476 7313
						Recevied by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

					Analytical Test Method	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW				
Event: Third Quarter 2013						**1**	**2**				
	Sample ID	Matrix	Date	Time	Samp Init.			Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
21	029A-072013	WG	7/30/2013	1125		X	[redacted]	WSW-29A	N1	0.00	0.00
22	032-072013	WG	7/30/2013	1040		X	[redacted]	WSW-32	N1	0.00	0.00
23	034-072013	WG	7/30/2013	1025		X	[redacted]	WSW-34	N1	0.00	0.00
24	234-072013	WG	7/30/2013	1025		X	[redacted]	WSW-34	FD1	0.00	0.00
25	036-072013	WG	7/30/2013	1010		X	[redacted]	WSW-36	N1	0.00	0.00
26	050A-072013	WG	7/30/2013	1140		X	[redacted]	WSW-50A	N1	0.00	0.00
27	050B-072013	WG	7/30/2013	1155		X	[redacted]	WSW-50B	N1	0.00	0.00
28	051-072013	WG	7/30/2013	1255		X	[redacted]	WSW-51	N1	0.00	0.00
29	051A-072013	WG	7/30/2013	1240		X	[redacted]	WSW-51A	N1	0.00	0.00
30	052B-072013	WG	7/30/2013	1210		X	[redacted]	WSW-52B	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	**Date**	**Time**
Toby [illegible]	7-31-13	18

Received by: *(Signature)*	**Date**	**Time**

Shipping Date / Carrier / Airbill Number

Fed-ex 7963 6434 348

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/1/13 1015
Steph [illegible] TAGUE

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Analytical Test Method

	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW
	1	2

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	1	2	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
21	029A-072013	WG	7/30/2013	1125			X	WSW-29A	N1	0.00	0.00
22	032-072013	WG	7/30/2013	1040			X	WSW-32	N1	0.00	0.00
23	034-072013	WG	7/30/2013	1025			X	WSW-34	N1	0.00	0.00
24	234-072013	WG	7/30/2013	1025			X	WSW-34	FD1	0.00	0.00
25	036-072013	WG	7/30/2013	1010			X	WSW-36	N1	0.00	0.00
26	050A-072013	WG	7/30/2013	1140			X	WSW-50A	N1	0.00	0.00
27	050B-072013	WG	7/30/2013	1155			X	WSW-50B	N1	0.00	0.00
28	051-072013	WG	7/30/2013	1255			X	WSW-51	N1	0.00	0.00
29	051A-072013	WG	7/30/2013	1240			X	WSW-51A	N1	0.00	0.00
30	052B-072013	WG	7/30/2013	1210			X	WSW-52B	N1	0.00	0.00

4.2°C

Cooler # 1 **Turnaround Time:**

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby R K	7-31-13	1800	[illegible]	08/01/13	0930

Shipping Date / Carrier / Airbill Number

Fed-ex 7963 6476 7313

Received by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

						Analytical Test Method	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW				
Event: Third Quarter 2013							1	2				
	Sample ID	Matrix	Date	Time	Samp Init.				Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
31	055-072013	WG	7/30/2013	1255			X	[redacted]	WSW-55	N1	0.00	0.00
32	056-072013	WG	7/31/2013	1355			X	[redacted]	WSW-56	N1	0.00	0.00
33	256-072013	WG	7/31/2013	1355			X	[redacted]	WSW-56	FD1	0.00	0.00
34	059-072013	WG	7/31/2013	1415			X	[redacted]	WSW-59	N1	0.00	0.00
35	063-072013	WG	7/31/2013	1300			X	[redacted]	WSW-63	N1	0.00	0.00
36	064-072013	WG	7/31/2013	1245			X	[redacted]	WSW-64	N1	0.00	0.00
37	065-072013	WG	7/30/2013	0810			X	[redacted]	WSW-65	N1	0.00	0.00
38	066-072013	WG	7/30/2013	0840			X	[redacted]	WSW-66	N1	0.00	0.00
39	067-072013	WG	7/30/2013	0855			X	[redacted]	WSW-67	N1	0.00	0.00
40	068-072013	WG	7/30/2013	0910			X	[redacted]	WSW-68	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**										

Relinquished by: *(Signature)*	**Date**	**Time**
Toby D. K	7-31-13	1800

Received by: *(Signature)*	**Date**	**Time**

Shipping Date / Carrier / Airbill Number

Fed-ex 7963 6434 3418

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

8/1/13 1015
Steph Fowler MOUR

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Analytical Test Method

1	SW8330/METHOD/NONE-Explosives - 6 Compounds
2	E524.2/SW5030/NONE-VOC DW

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	1	2	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
31	055-072013	WG	7/30/2013	1255		[redacted]	X	WSW-55	N1	0.00	0.00
32	056-072013	WG	7/31/2013	1355		[redacted]	X	WSW-56	N1	0.00	0.00
33	256-072013	WG	7/31/2013	1355		[redacted]	X	WSW-56	FD1	0.00	0.00
34	059-072013	WG	7/31/2013	1415		[redacted]	X	WSW-59	N1	0.00	0.00
35	063-072013	WG	7/31/2013	1300		[redacted]	X	WSW-63	N1	0.00	0.00
36	064-072013	WG	7/31/2013	1245		[redacted]	X	WSW-64	N1	0.00	0.00
37	065-072013	WG	7/30/2013	0810		[redacted]	X	WSW-65	N1	0.00	0.00
38	066-072013	WG	7/30/2013	0840		[redacted]	X	WSW-66	N1	0.00	0.00
39	067-072013	WG	7/30/2013	0855		[redacted]	X	WSW-67	N1	0.00	0.00
40	068-072013	WG	7/30/2013	0910		[redacted]	X	WSW-68	N1	0.00	0.00

4.2°C

Cooler # 1 **Turnaround Time:**

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby O. [illegible]	7-31-13	1800	[illegible]	08/01/13	0430

Shipping Date / Carrier / Airbill Number

Fed-Ex 7963 6476 7312

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

					Analytical Test Method	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW				
Event: Third Quarter 2013						**1**	**2**				
	Sample ID	Matrix	Date	Time	Samp Init.			Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
41	268-072013	WG	7/30/2013	0910		X	[redacted]	WSW-68	FD1	0.00	0.00
42	073-072013	WG	7/31/2013	0840		X	[redacted]	WSW-73	N1	0.00	0.00
43	074-072013	WG	7/31/2013	0825		X	[redacted]	WSW-74	N1	0.00	0.00
44	075-072013	WG	7/31/2013	1100		X	[redacted]	WSW-75	N1	0.00	0.00
45	076-072013	WG	7/31/2013	1045		X	[redacted]	WSW-76	N1	0.00	0.00
46	077-072013	WG	7/31/2013	1030		X	[redacted]	WSW-77	N1	0.00	0.00
47	079-072013	WG	7/31/2013	0940		X	[redacted]	WSW-79	N1	0.00	0.00
48	086-072013	WG	7/31/2013	0910		X	[redacted]	WSW-86	N1	0.00	0.00
49	087-072013	WG	7/30/2013	1445		X	[redacted]	WSW-87	N1	0.00	0.00
50	087-072013MS	WG	7/30/2013	1445		X	[redacted]	WSW-87	MS1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	**Date**	**Time**
Toby D. [illegible]	7-31-13	1800

Received by: *(Signature)*	**Date**	**Time**

Shipping Date / Carrier / Airbill Number
Fed-ex 7963 6434 3418

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**
8/1/13 1015 Steph Bucher TMBUCK

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL, 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: SW8330/METHOD/NONE-Explosives - 6 Compounds (1)	Analytical Test Method: E524.2/SW5030/NONE-VOC DW (2)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
41	268-072013	WG	7/30/2013	0910		[redacted]	X	WSW-68	FD1	0.00	0.00
42	073-072013	WG	7/31/2013	0840		[redacted]	X	WSW-73	N1	0.00	0.00
43	074-072013	WG	7/31/2013	0825		[redacted]	X	WSW-74	N1	0.00	0.00
44	075-072013	WG	7/31/2013	1100		[redacted]	X	WSW-75	N1	0.00	0.00
45	076-072013	WG	7/31/2013	1045		[redacted]	X	WSW-76	N1	0.00	0.00
46	077-072013	WG	7/31/2013	1030		[redacted]	X	WSW-77	N1	0.00	0.00
47	079-072013	WG	7/31/2013	0940		[redacted]	X	WSW-79	N1	0.00	0.00
48	086-072013	WG	7/31/2013	0910		[redacted]	X	WSW-86	N1	0.00	0.00
49	087-072013	WG	7/30/2013	1445		[redacted]	X	WSW-87	N1	0.00	0.00
50	087-072013MS	WG	7/30/2013	1445		[redacted]	X	WSW-87	MS1	0.00	0.00

Cooler # 1 **Turnaround Time:**

4.20c

Relinquished by: *(Signature)*	Date	Time
Toby [illegible]	7-31-13	1800

Received by: *(Signature)*	Date	Time
[illegible]	08/01/13	0930

Shipping Date / Carrier / Airbill Number

Fed-Ex 7967 6476 7313

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	SW8330/METHOD/NONE-Explosives - 6 Compounds (1)	E524.2/SW5030/NONE-VOC DW (2)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013				**Analytical Test Method**	1	2				
51	087-072013MSD	WG	7/30/2013	1445		X	[redacted]	WSW-87	SD1	0.00	0.00
52	287-072013	WG	7/30/2013	1445		X	[redacted]	WSW-87	FD1	0.00	0.00
53	090-072013	WG	7/31/2013	1230		X	[redacted]	WSW-90	N1	0.00	0.00
54	091-072013	WG	7/31/2013	1145		X	[redacted]	WSW-91	N1	0.00	0.00
55	092-072013	WG	7/31/2013	1115		X	[redacted]	WSW-92	N1	0.00	0.00
56	093-072013	WG	7/31/2013	1315		X	[redacted]	WSW-93	N1	0.00	0.00
57	094-072013	WG	7/31/2013	1330		X	[redacted]	WSW-94	N1	0.00	0.00
58	095-072013	WG	7/30/2013	1355		X	[redacted]	WSW-95	N1	0.00	0.00
59	096-072013	WG	7/30/2013	1515		X	[redacted]	WSW-96	N1	0.00	0.00
60	096-072013MS	WG	7/30/2013	1515		X	[redacted]	WSW-96	MS1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	Date	Time
Toby R [illegible]	7-31-13	1800

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-Ex 7963 6434 3478

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

Steph Rouker 8/1/13 1015 TMBUR

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: SW8330/METHOD/NONE-Explosives - 6 Compounds (1)	Analytical Test Method: E524.2/SW5030/NONE-VOC DW (2)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
51	087-072013MSD	WG	7/30/2013	1445		[redacted]	X	WSW-87	SD1	0.00	0.00
52	287-072013	WG	7/30/2013	1445		[redacted]	X	WSW-87	FD1	0.00	0.00
53	090-072013	WG	7/31/2013	1230		[redacted]	X	WSW-90	N1	0.00	0.00
54	091-072013	WG	7/31/2013	1145		[redacted]	X	WSW-91	N1	0.00	0.00
55	092-072013	WG	7/31/2013	1115		[redacted]	X	WSW-92	N1	0.00	0.00
56	093-072013	WG	7/31/2013	1315		[redacted]	X	WSW-93	N1	0.00	0.00
57	094-072013	WG	7/31/2013	1330		[redacted]	X	WSW-94	N1	0.00	0.00
58	095-072013	WG	7/30/2013	1355		[redacted]	X	WSW-95	N1	0.00	0.00
59	096-072013	WG	7/30/2013	1515		[redacted]	X	WSW-96	N1	0.00	0.00
60	096-072013MS	WG	7/30/2013	1515		[redacted]	X	WSW-96	MS1	0.00	0.00

Cooler # 1 | Turnaround Time:

4.2°C

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby P. [illegible]	7-31-13	1800	[illegible]	08/01/13	0930

Shipping Date / Carrier / Airbill Number: Fed-Ex 7963 6476 7351

Received by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

					Analytical Test Method	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW				
Event: Third Quarter 2013						**1**	**2**				
	Sample ID	Matrix	Date	Time	Samp Init.			Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
61	096-072013MSD	WG	7/30/2013	1515		X	[redacted]	WSW-96	SD1	0.00	0.00
62	296-072013	WG	7/30/2013	1515		X	[redacted]	WSW-96	FD1	0.00	0.00
63	097-072013	WG	7/31/2013	0855		X	[redacted]	WSW-97	N1	0.00	0.00
64	099-072013	WG	7/31/2013	0955		X	[redacted]	WSW-99	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**									

Relinquished by: *(Signature)*	**Date**	**Time**
Toby [illegible]	7-31-13	1800

Received by: *(Signature)*	**Date**	**Time**

Shipping Date / Carrier / Airbill Number

Fed-Ex 7963 6434 3418

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

Steph Fowler TA Burl 8/1/13 1015

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 073013

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC Vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: SW8330/METHOD/NONE-Explosives - 6 Compounds (1)	Analytical Test Method: E524.2/SW5030/NONE-VOC DW (2)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
61	096-072013MSD	WG	7/30/2013	1515		[redacted]	X	WSW-96	SD1	0.00	0.00
62	296-072013	WG	7/30/2013	1515		[redacted]	X	WSW-96	FD1	0.00	0.00
63	097-072013	WG	7/31/2013	0855		[redacted]	X	WSW-97	N1	0.00	0.00
64	099-072013	WG	7/31/2013	0955		[redacted]	X	WSW-99	N1	0.00	0.00

Cooler # 1 **Turnaround Time:**

4.2°C

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby [illegible]	7-31-13	1800	[illegible]	08/01/13	0930

Shipping Date / Carrier / Airbill Number: Fed-ex 7963 6476 7313

Received by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080113

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	A2540D/METHOD/NONE-TSS	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013				**Analytical Test Method**	1	1	2				
1	TRB-257-072013	WQ	8/1/2013	0930				[redacted]	FIELDQC	TB1	0.00	0.00
2	0108-072013	WG	8/1/2013	1115			X	[redacted]	WSW-108	N1	0.00	0.00
3	0112-072013	WG	8/1/2013	0945			X	[redacted]	WSW-112	N1	0.00	0.00
4	0114-072013	WG	8/1/2013	1000			X	[redacted]	WSW-114	N1	0.00	0.00
5	0115-072013	WG	8/1/2013	1045			X	[redacted]	WSW-115	N1	0.00	0.00
6	0115-072013MS	WG	8/1/2013	1045			X	[redacted]	WSW-115	MS1	0.00	0.00
7	0115-072013MSD	WG	8/1/2013	1045			X	[redacted]	WSW-115	SD1	0.00	0.00
8	2115-072013	WG	8/1/2013	1045			X	[redacted]	WSW-115	FD1	0.00	0.00
9	052A-072013	WG	8/2/2013	0920			X	[redacted]	WSW-52A	N1	0.00	0.00
10	052A-B-072013	WG	8/2/2013	0930		X	X	[redacted]	WSW-52A-B	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**										

200-17779 COC

Relinquished by: *(Signature)*	Date	Time
Toby [illegible]	8-2-13	1700

Received by: *(Signature)*	Date	Time
[illegible] TXBUD	8/3/13	1030

Shipping Date / Carrier / Airbill Number
Fed-Ex 7963-8037-5730

Recevied by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080113

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., ~~South Burlington, VT~~ Savannah, GA
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

					Analytical Test Method	A2540D/METHOD/NONE-TSS	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW				
Event: Third Quarter 2013						1	1	2				
	Sample ID	Matrix	Date	Time	Samp Init.				Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	TRB-257-072013	WQ	8/1/2013	0930				X	FIELDQC	TB1	0.00	0.00
2	0108-072013	WG	8/1/2013	1115			[redacted]	X	WSW-108	N1	0.00	0.00
3	0112-072013	WG	8/1/2013	0945			[redacted]	X	WSW-112	N1	0.00	0.00
4	0114-072013	WG	8/1/2013	1000			[redacted]	X	WSW-114	N1	0.00	0.00
5	0115-072013	WG	8/1/2013	1045			[redacted]	X	WSW-115	N1	0.00	0.00
6	0115-072013MS	WG	8/1/2013	1045			[redacted]	X	WSW-115	MS1	0.00	0.00
7	0115-072013MSD	WG	8/1/2013	1045			[redacted]	X	WSW-115	SD1	0.00	0.00
8	2115-072013	WG	8/1/2013	1045			[redacted]	X	WSW-115	FD1	0.00	0.00
9	052A-072013	WG	8/2/2013	0920			[redacted]	X	WSW-52A	N1	0.00	0.00
10	052A-B-072013	WG	8/2/2013	0930		[redacted]	[redacted]	X	WSW-52A-B	N1	0.00	0.00
Cooler # 1		Turnaround Time:										

5.4°C
200-

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time	Shipping Date / Carrier / Airbill Number
Toby Olt	8-2-13	1700	Georgeh Cu	08/02/13	0929	Fed-ex
						Recevied by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080113

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

					Analytical Test Method	A2540D/METHOD/NONE-TSS	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW				
Event: Third Quarter 2013						**1**	**1**	**2**				
	Sample ID	Matrix	Date	Time	Samp Init.				Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
11	057-072013	WG	8/1/2013	0930			X	[redacted]	WSW-57	N1	0.00	0.00
12	058-072013	WG	8/1/2013	1015			X	[redacted]	WSW-58	N1	0.00	0.00
13	080-072013	WG	8/1/2013	1200			X	[redacted]	WSW-80	N1	0.00	0.00
14	081-072013	WG	8/1/2013	1130			X	[redacted]	WSW-81	N1	0.00	0.00
15	082-072013	WG	8/1/2013	1145			X	[redacted]	WSW-82	N1	0.00	0.00
16	089-072013	WG	8/1/2013	1030			X	[redacted]	WSW-89	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**										

Relinquished by: *(Signature)*	**Date**	**Time**
Toby R	8-2-13	1700

Received by: *(Signature)*	**Date**	**Time**
TABUR	8/3/13	1030

Shipping Date / Carrier / Airbill Number
Fed-ex 7963 8077 5730

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080113

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	A2540D/METHOD/NONE-TSS	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013				Analytical Test Method	1	1	2				
11	057-072013	WG	8/1/2013	0930			[redacted]	X	WSW-57	N1	0.00	0.00
12	058-072013	WG	8/1/2013	1015			[redacted]	X	WSW-58	N1	0.00	0.00
13	080-072013	WG	8/1/2013	1200			[redacted]	X	WSW-80	N1	0.00	0.00
14	081-072013	WG	8/1/2013	1130			[redacted]	X	WSW-81	N1	0.00	0.00
15	082-072013	WG	8/1/2013	1145			[redacted]	X	WSW-82	N1	0.00	0.00
16	089-072013	WG	8/1/2013	1030			[redacted]	X	WSW-89	N1	0.00	0.00
Cooler # 1		Turnaround Time:										
17	051-072013	WG	8/1/13	1300				X	WSW-51	N1	0	0

5.4°C
200-

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby [illegible]	8-2-13	1700	[illegible]	08/03/13	0929

Shipping Date / Carrier / Airbill Number
Fed-Ex

Recevied by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080513

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL, 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	SW8330/METHOD/NONE-Explosives - 6 Compounds (1)	E524.2/SW5030/NONE-VOC DW (2)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	[redacted]										
2	UNFL-09A-072013	WG	8/5/2013	0855		X	[redacted]	UNFL-09A	N1	0.00	0.00
3	UNFL-010A-072013	WG	8/5/2013	1010		X	[redacted]	UNFL-10A	N1	0.00	0.00
4	UNFL-027-072013	WG	8/5/2013	0925		X	[redacted]	UNFL-27	N1	0.00	0.00

Cooler # 1 **Turnaround Time:**

200-17802 COC

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Toby O [illegible]	8-5-13	1600	[illegible] TMBill	8/6/13	1000

Shipping Date / Carrier / Airbill Number
7963 9376 7011

Recevied by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080613

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL, 4 Degrees C

					Analytical Test Method	A2540D/METHOD/NONE-TSS	SW8330/METHOD/NONE-Explosives - 6 Compounds	[redacted] VOC DW				
Event: Third Quarter 2013						1	1					
	Sample ID	Matrix	Date	Time	Samp Init.				Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
[redacted]									FIELDQC	TB1	0.00	0.00
2	053-072013	WG	8/6/2013	0955			X		WSW-53	N1	0.00	0.00
3	053-B-072013	WG	8/6/2013	1000		X	X		WSW-53-B	N1	0.00	0.00
4	060-072013	WG	8/6/2013	1015			X		WSW-60	N1	0.00	0.00
5	061-072013	WG	8/6/2013	0840			X		WSW-61	N1	0.00	0.00
6	062-072013	WG	8/6/2013	0825			X		WSW-62	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**										

200-17837 COC

Relinquished by: *(Signature)*	Date	Time
[signature]	8-7-13	1600

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number
Fed-ex 7944 1113 1782

Recevied by Laboratory: *(Signature, Date, Time)* & condition
8/8/13 1030 [signature]

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080613

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., ~~South Burlington, VT~~ Savannah, GA
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

Event: Third Quarter 2013

	Sample ID	Matrix	Date	Time	Samp Init.	[redacted]	[redacted]	E524.2/SW5030/NONE-VOC DW	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
					Analytical Test Method			2				
1	TRB-262-072013	WQ	8/6/2013	0810				X	FIELDQC	TB1	0.00	0.00
2	053-072013	WG	8/6/2013	0955				X	WSW-53	N1	0.00	0.00
3	053-B-072013	WG	8/6/2013	1000				X	WSW-53-B	N1	0.00	0.00
4	060-072013	WG	8/6/2013	1015				X	WSW-60	N1	0.00	0.00
5	061-072013	WG	8/6/2013	0840				X	WSW-61	N1	0.00	0.00
6	062-072013	WG	8/6/2013	0825				X	WSW-62	N1	0.00	0.00

Cooler # 1 **Turnaround Time:**

200-17837
2.3°C

Loc: 200
17837

200-17837 Chain of Custody

Relinquished by: *(Signature)*	Date	Time
Toy [illegible]	8-7-13	1600

Received by: *(Signature)*	Date	Time
[illegible]	08/08/13	0932

Shipping Date / Carrier / Airbill Number
Fed-ex 7964 1117 3642

Recevied by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080813

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

					Analytical Test Method	A2540D/METHOD/NONE-TSS	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW				
Event: Third Quarter 2013						1	1	2				
	Sample ID	Matrix	Date	Time	Samp Init.				Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
1	[redacted]								FIELDQC	TB1	0.00	0.00
2	052C-072013	WG	8/7/2013	1200			X		WSW-52C	N1	0.00	0.00
3	052C-B-072013	WG	8/7/2013	1210		X	X		WSW-52C-B	N1	0.00	0.00
4	252C-B-072013	WG	8/7/2013	1210		X			WSW-52C-B	FD1	0.00	0.00
Cooler # 1		**Turnaround Time:**										

200-17853 COC

Relinquished by: *(Signature)*	Date	Time
Toby [illegible]	8-8-13	1700

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7964 2185 0160

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

Steph Poucher 8/9/13 1000 TABLE

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 080813

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., ~~South Burlington, VT~~ Savannah, GA
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL; 4 Degrees C

	Sample ID	Matrix	Date	Time	Samp Init.	A2540D/METHOD/NONE-TSS	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom
	Event: Third Quarter 2013				Analytical Test Method	1	1	2				
1	252C-072013	WQ	8/7/2013	1200				X	FIELDQC	TB1	0.00	0.00
2	052C-072013	WG	8/7/2013	1200				X	WSW-52C	N1	0.00	0.00
3	052C-B-072013	WG	8/7/2013	1210				X	WSW-52C-B	N1	0.00	0.00
4	252C-B-072013	WG	8/7/2013	1210					WSW-52C-B	FD1	0.00	0.00
Cooler # 1		Turnaround Time:										
5	095-072013	WG	8-8-13	1130				X	WSW-95	N1		

4.4°C
200-17853

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time	Shipping Date / Carrier / Airbill Number
Toby A [illegible]	8-8-13	1200	[illegible]	08/09/13	0948	Fed-Ex 7964 2186 6824
						Received by Laboratory: *(Signature, Date, Time)* & condition

CHAIN-OF-CUSTODY RECORD

Environmental Chemical Corporation
John Ryder
1746 Cole Boulevard, Building 21, Suite 350, Lakewood, CO 80401
(303) 590-1157, add extension jryder@ecc.net

COC # 081313

Project Name: Former Nebraska Ordnance Plant	Laboratory: TestAmerica, Inc., South Burlington, VT
Project Number: FNOP01	Point of contact: Jim Madison (802) 660-1990 jim.madison@testamericainc.com
WBS Code: Please add WBS Code	Ship to: 30 Community Drive, Suite 11, South Burlington, VT 05403

Comments:

Equipment:

Code	Matrix
WG	Ground Water
WQ	WATER QUALITY CONTROL MATRIX

Code	Container/Preservative
1	2* 2 X 250 mL Amber Glass Bottles, 4 Degrees C
2	3* 3 X 40 mL glass VOC vials w/Teflon-lined septa cap with no headspace, HCL, 4 Degrees C

					Analytical Test Method	A2540D/METHOD/NONE-TSS	SW8330/METHOD/NONE-Explosives - 6 Compounds	E524.2/SW5030/NONE-VOC DW			Depth (ft bgs)	
	Event: Third Quarter 2013					1	1	2				
	Sample ID	Matrix	Date	Time	Samp Init.				Location ID	Sample Type	Top	Bottom
1	[redacted]							[redacted]	FIELDQC	TB1	0.00	0.00
2	054-072013	WG	8/13/2013	1530			X	[redacted]	WSW-54	N1	0.00	0.00
3	054-B-072013	WG	8/13/2013	1540		X	X	[redacted]	WSW-54-B	N1	0.00	0.00
Cooler # 1		**Turnaround Time:**										

200-17941 COC

Relinquished by: *(Signature)*	Date	Time
Toby R. [illegible]	8-14-13	1530

Received by: *(Signature)*	Date	Time

Shipping Date / Carrier / Airbill Number

Fed-ex 7964 6120 0379

Recevied by Laboratory: *(Signature, Date, Time)* **& condition**

Steph Pauch 8/15/13 1000 TAB

Appendix B
Reference Sheet
Data Validation Qualifiers
Drinking Water Standards

Data Qualifiers and Drinking Water Standards Reference Sheet
Former Nebraska Ordnance Plant, Mead, Nebraska

Any qualifiers (i.e. U, J, or R) listed after a result are assigned during the data validation process. Data validation is a procedure which involves the review of quality control data provided by the laboratory. This review is followed by the assignment of data qualifiers (if necessary) which indicate the reliability of a result to the reader. Data validation is performed by a chemist employed outside of the laboratory or associated government installations to ensure accuracy in data reporting. A description of qualifiers is provided below.

No qualifier

- If a result has no assigned qualifier, the contaminant was detected, and the reader can be confident that the concentration is exact.

"U"

- A result followed by a "U" qualifier means that the contaminant was undetected, or not detected by the instrument.

"UJ"

- A result followed by a "UJ" qualifier means that the contaminant was not detected, but the associated detection level is not certain (estimated). For example, if a value is followed by a "UJ", the contaminant was not detected, but the associated detection level is in question. The detection level is in question because one or more of the laboratory quality control indicators do not meet acceptance criteria. The amount that the indicator fell outside of the criteria may be used as a rough estimate of how much the actual detection level differs from the stated one. Typically, this is a 10-30% difference.

"UR"

- A result followed by a "UR" qualifier means that the contaminant was not detected, but there is strong doubt that the associated detection level is accurate. For example, if a value is followed by a "UR", the contaminant was not detected, but the associated detection level is in strong doubt. The detection level is in doubt because results are unacceptable for a quality control indicator. In this case, the detection level cannot be estimated.

"J"

- A result followed by only a "J" qualifier means that the contaminant was detected, but there is some question that the stated concentration is exact. For example, if a result is "0.5 J", the contaminant was detected, but there is some question that the concentration is exactly 0.5. A "J" qualifier may be applied for two reasons: (1) the contaminant was detected below the reporting limit; or (2) the contaminant was detected, but one or more quality control indicators did not meet acceptance criteria. The reporting limit is equal to the concentration of the lowest standard used by the laboratory to calibrate the instrument. The reporting limit is the minimum concentration that can be stated with complete confidence.

“R”

- A result followed by only an “R” qualifier means that the contaminant was detected, but there is strong doubt that the concentration is exact. For example, if a result is “0.5 R”, the contaminant was detected, but there is strong doubt that the concentration is exactly 0.5. The concentration is in doubt because results are unacceptable for a quality control indicator. In this case, the detected concentration cannot be estimated. For comparison purposes, detected results are reported in the results letters with available Environmental Protection Agency drinking water standards. These standards include the maximum contaminant level (MCL) and various health advisories (HA). A description of the drinking water standards is provided below.

“MCL”

- The maximum contaminant level is the highest concentration of a contaminant that is allowed in drinking water. Maximum contaminant levels are enforceable Federal standards.

“HA”

- Health advisories provide estimates of acceptable drinking water concentrations for a chemical substance based on health effects information. Health advisories are not enforceable Federal standards, but serve as a technical guidance to assist Federal, State, and local officials.

Appendix C
Analytical Results on Compact Disc Summary Forms and Raw Data

Appendix E

Quality Control Summary Report Third Quarter 2013 Operations and Maintenance Sampling Events, Former Nebraska Ordnance Plant (on CD)

Regional Office

1746 Cole Boulevard
Building 21, Suite 350
Lakewood, CO 80401

Phone: 303.298.7607
Fax: 303.298.7837

November 5, 2013

U.S. Army Corps of Engineers, Kansas City District
Attn: Jacqy Frazier
601 East 12th Street
Kansas City, MO 64106-2896

Re: Transmittal of the Final Quality Control Summary Report
Third Quarter 2013 Operations and Maintenance Sampling Events
Former Nebraska Ordnance Plant, Mead, Nebraska
Contract No. W912DQ-08-D-0001, Task Order No. 0002

Dear Ms. Frazier:

ECC is hereby transmitting one electronic copy of the Final Quality Control Summary Report for the Third Quarter 2013 Operations and Maintenance Sampling Events at the former Nebraska Ordnance Plant, Mead, Nebraska.

Please contact Mr. Brady Bigelow or me if you require additional information.

Sincerely,

John Ryder
Project Chemist
ECC

Enclosures
cc: Ms. Kristine Stein (USACE)
Mr. Jason L'Ecuyer (USACE)
Mr. Bradley Brink (USACE)
Mr. Kirk Boese (USACE)

Corporate Office

1240 Bayshore Highway
Burlingame, CA 94010

Phone: 650.347.1555
Fax: 650.347.8789
www.ecc.net

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE *(Read instructions on the reverse side prior to initiating this form)*	DATE: November 5, 2013]	TRANSMITTAL NO. 2013-088

SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (This section will be initiated by contractor)

Attn: Jacqy Frazier USACE, Kansas City District 601 E. 12th St. Kansas City, MO 64106-2896	FROM: John Ryder ECC 1746 Cole Blvd, Bldg 21, Lakewood, CO 80401	CONTRACT NO. W912DQ-08-D-0001, Task Order 0002	CHECK ONE: __X__ THIS IS A NEW TRANSMITTAL ____ THIS IS A RESUBMITTAL OF TRANSMITTAL _____
SPECIFICATION SECTION NO. (cover only one section with each transmittal)	PROJECT TITLE AND LOCATION: Groundwater Monitoring Program, Former Nebraska Ordnance Plant, Mead, Nebraska		CHECK ONE: ___ FIO __X__ For Govt. Approval

ITEM NO. *a.*	DESCRIPTION OF ITEM SUBMITTED *(Type, size, model number, etc.)* *b.*	MFG. OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. *(See instruction No. 8)* *c.*	NO. OF COPIES *d.*	CONTRACT REFERENCE DOCUMENT SPEC. PARA. NO. *e.*	DRAWING SHEET NO. *f.*	FOR CONTRACTOR USE CODE *g.*	VARIATION *(See instruc. no. 6)* *h.*	FOR C E USE CODE *i.*
1	Quality Control Summary Report -Final		1 electronic					
	Third Quarter 2013 Operations and Maintenance Sampling Events							

REMARKS
Kristine Stein (USACE)
Jason L'Ecuyer (USACE)
Bradley Brink (USACE)
Kirk Boese (USACE)
Mead Library

I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as otherwise stated.
John Ryder, Denver Operations Group

NAME AND SIGNATURE OF CONTRACTOR

SECTION II - APPROVAL ACTION

ENCLOSURES RETURNED (List by Item No.)	NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY	DATE

FINAL
QUALITY CONTROL SUMMARY REPORT
THIRD QUARTER 2013

OPERATIONS AND MAINTENANCE PROGRAM
SAMPLING EVENTS

FORMER NEBRASKA ORDNANCE PLANT
MEAD, NEBRASKA

Prepared for

United States Army Corps of Engineers
Kansas City District

November 2013

Quality Control Summary Report
Third Quarter 2013 Operations and Maintenance Sampling Events
Former Nebraska Ordnance Plant
Mead, Nebraska

1.0 INTRODUCTION

Sampling was conducted at the Main Groundwater Treatment Plant (GTP), Load Line (LL) 1 GTP, LL4 GTP, Groundwater Circulation Well (GCW) 1, and the Advanced Oxidation Process (AOP) GTP for the Operations and Maintenance (O&M) program at the former Nebraska Ordnance Plant, near Mead, Nebraska. Sampling activities were performed in accordance with the *Site Wide Work Plan, Revision 01, Support Services, Operable Unit No. 2 (Groundwater), Former Nebraska Ordnance Plant, Mead, Nebraska* (ECC, 2013). This Quality Control Summary Report is a summary of the chemical data quality review for the Third Quarter 2013 O&M monthly sampling events.

TestAmerica analyzed the samples for one or more of the following constituents:

- Total Suspended Solids (TSS) by Standard Method 2540D;
- Metals (iron and manganese) by U.S. Environmental Protection Agency (EPA) Solid Waste (SW)-846 Method 6010C;
- Volatile organic compounds (VOCs) by EPA SW-846 Method 8260B;
- Trichloroethene (TCE) by EPA Compendium Method Toxic Organic (TO)-15;
- Explosives by EPA SW-846 Method 8330;
- Nitrate by SW-846 Method 9056; and
- Total Organic Carbon (TOC) by SW-846 Method 9060

TestAmerica of South Burlington, Vermont performed the VOCs, explosives, metals, TSS, and TOC analyses. TestAmerica of Denver, Colorado performed the nitrate analyses.

Table 1-1 lists the sample locations, the corresponding sample identifications (IDs), and the requested analyses for the Third Quarter 2013 O&M sampling event.

The chain-of-custody and field notes are included as Appendices A and B, respectively. Appendix C presents an explanation of data validation qualifiers and drinking water standards. Appendix D contains a compact disk with all analytical data.

2.0 FIELD SAMPLING ACTIVITIES

The field sampling team collected the following field samples during the Third Quarter 2013 O&M sampling events:

- One water sample from each of the following extraction wells (EW) and focused extraction wells (FEW): EW-1R, EW-4, EW-7, EW-9, and FEW-14.
- One water sample from EW-12 and EW-17 during each month of this quarter.
- One influent and one effluent water sample from EW-4 for ultraviolet (UV) photolysis study in September 2013.
- One water sample from each of the following granular activated carbon (GAC) units during each month of this quarter: 310, 330, and 350.
- One influent water sample and one effluent water sample from the Main GTP during each month of this quarter.
- One influent water sample in September 2013 and one effluent water sample in July and September 2013 from GCW-1.
- One influent water sample and one effluent water sample from the LL1 GTP during each month of this quarter.
- One influent air sample and one effluent air sample from the LL1 GTP.
- One influent water sample and one effluent water sample from the LL4 GTP in July and September 2013. Only effluent water sample was collected in August 2013.
- One effluent air sample from the LL4 GTP in July and August 2013.
- One influent and one effluent water from the AOP GTP in July and September 2013. Only the effluent water sample was collected in August because the associated influent water sample was collected at FEW-11 as part of the focused extraction well cycling study.

A trip blank was included in each shipment that contained field samples scheduled for analysis of VOCs. The required frequency of collection for quality control (QC) samples (field duplicate and matrix spike/matrix spike duplicate [MS/MSD]) is 10% and 5%, respectively. Four QC field duplicate samples and MS/MSD samples for each parameter were collected for the Main GTP and LL1 GTP sampling events. Field duplicate samples were not collected for the AOP GTP or LL4 GTP sampling events. However, the laboratory performed MS/MSD for nitrates analysis on the sample collected from LL4 GTP. The required field QC frequency was met overall for the Third Quarter 2013 O&M sampling events.

Table 2-1 summarizes the following data for the Third Quarter 2013 sampling events:

- Field sample IDs;
- MS/MSD sample information;
- QC (field duplicate) sample information;
- Dates of sample collection and sample receipt by the laboratory;

- Laboratory sample IDs;
- Laboratory sample delivery group numbers; and
- Requested analyses.

3.0 DATA QUALITY EVALUATION PROCEDURES

The following subsections present the results of the data quality evaluation. This evaluation was performed in accordance with *Mead Validation Guidelines* (ECC, 2007). Qualifiers were assigned based on project QC limits and laboratory QC criteria. The data quality evaluation results are presented in Table 3-1. The QC outliers are presented in Tables 3-2 and 3-3.

3.1 Sample Receipt at the Laboratory

The laboratory received all samples in good condition, with proper preservatives, and within the recommended temperature range of 4 ± 2 °C or just below 2° C, but not frozen.

The sample collection date recorded on the chain of custody did not match the collection date on the sample labels for the samples collected on July 1, 2013. The laboratory used the correct sample collection date noted on the sample labels.

3.2 Holding Times

The laboratory prepared and analyzed all samples within the required holding times.

3.3 Tuning and Calibration

The laboratory did not report any deviations for the calibration and tuning of instrumentations in the case narratives. The evaluation of the calibration summary forms indicated that all calibrations met the project criteria.

3.4 Laboratory Blanks

A laboratory method blank is an analyte-free matrix that is carried through the entire preparation and analysis sequence for the purpose of identifying potential contamination introduced during preparation and analysis. Method blanks were analyzed for each sample batch for all analyses.

In accordance with the *Mead Validation Guidelines* (ECC, 2007), detections were qualified as non-detect (U) if the concentration in the sample was less than 5 times the concentration in the associated blank. For common laboratory contaminants, results were qualified as described above if the concentration in the sample was less than 10 times the concentration in the associated blank. Sample results that were either non-detect (U), or greater than 5 or 10 times the blank result did not require qualification.

TOC was detected in a method blank below the limit of quantitation (LOQ); however, the TOC concentration in the associated sample was greater than 5 times the concentration in the blank and did not require qualifications.

3.5 Trip Blanks

A trip blank is an analyte-free matrix that accompanies samples through the sample collection and transportation process to identify potential VOC contamination. In accordance with the *Mead Validation Guidelines* (ECC, 2007), detections were qualified as non-detect (U) if the concentration in the sample was less than 5 times the concentration in the associated blank. Sample results that were either non-detect (U), or greater than 5 times the blank result did not require qualification.

There were no detects for target analytes in the trip blanks.

3.6 Surrogates

Surrogates are compounds not normally found in the environment that are added (spiked) into samples prior to extraction (for extractable methods) and prior to analysis (for non-extractable methods). The percent recovery (% REC) of each surrogate is used to assess the success of the sample preparation process for an individual sample. Samples spiked with surrogate compounds were analyzed for VOCs and explosives.

In accordance with the *Mead Validation Guidelines* (ECC, 2007), results for associated analytes in the affected samples are J-coded for detects and UJ-coded for non-detects if the surrogate % RECs are below the laboratory QC limits, but greater than 10%. Non-detects are R-coded if % RECs are less than 10%. Also in accordance with the *Mead Validation Guidelines* (ECC, 2007), results for associated analytes in the affected samples are J-coded for detects if the % RECs are greater than the QC limits. No action is required for non-detects.

The % REC for surrogate 1,2-dichloroethane-d4 in the VOC analysis was above the laboratory QC limit in one sample. Table 3-1 presents data quality evaluation results and associated qualified samples. Table 3-3 presents the VOC QC outliers and associated samples for all assigned qualifiers. All other surrogate % RECs were within QC limits.

3.7 Laboratory Control Sample / Laboratory Control Sample Duplicate

A laboratory control sample (LCS) consists of a matrix, similar to that of the field sample, which is spiked with known concentrations of analytes. The LCS % REC is a measure of the accuracy of the preparation and analytical methods. The laboratory control sample duplicate (LCSD) is a duplicate preparation and analysis of the LCS. The differences between the LCS and LCSD recoveries are used to calculate the relative percent difference (RPD), which is a measure of the precision of the preparation and analytical methods. LCS samples were analyzed for each sample batch for all analyses. LCSD samples were requested for analysis with each analytical batch that did not contain an MS/MSD.

In accordance with the *Mead Validation Guidelines* (ECC, 2007), results for the affected analyte in the associated samples are J-coded for detects and UJ-coded for non-detects if the LCS % RECs are below the laboratory QC limits, but greater than 10%. Non-detects are R-coded if % RECs are less than 10%. Also in accordance with the *Mead Validation Guidelines* (ECC, 2007), results for the affected analyte in the associated samples are J-coded for detects if the % RECs are greater than the QC limits. No action is required for non-detects. Additionally, results for the affected analyte in the associated samples are J-coded for detects and UJ-coded for non-detects if the RPD exceeds 30%.

LCS %RECs for iron and TSS were above the QC limits; however, no qualifications were required since they were not detected in the associated sample. All other LCS and LCSD % RECs were within laboratory QC limits. All RPDs, if applicable, were less than 30%. No qualifications were required.

3.8 Matrix Spike / Matrix Spike Duplicate Analyses

MS and MSD samples are analyzed for organic and inorganic analyses. A field sample is split into three portions (original, MS, and MSD) and known amounts of analytes are added (spiked) into the MS and MSD portions of the sample. The analytical results of these two portions are compared to each other for reproducibility using the RPD. These results are also compared against the un-spiked portion of the sample for % REC of the spiked analytes. MS/MSD samples were analyzed for anions, VOCs, and explosives.

For organic analyses:
In accordance with the *Mead Validation Guidelines* (ECC, 2007), results for the affected analyte in the parent sample are J-coded for detects and UJ-coded for non-detects if the MS/MSD % RECs are below the laboratory QC limits, but greater than 10%. Non-detects are R-coded if % RECs are less than 10%. Also in accordance with the *Mead Validation Guidelines* (ECC, 2007), results for the affected analyte in the parent sample are J-coded for detects if the MS/MSD % RECs are greater than the QC limits. No action is required for non-detects. Additionally, results for the affected analyte in the associated parent samples are J-coded for detects and UJ-coded for non-detects if the RPD exceeds the QC limit.

For inorganic analyses:
In accordance with the *Mead Validation Guidelines* (ECC, 2007), results for the affected analyte in the associated parent samples are J-coded for detects and UJ-coded for non-detects if the MS/MSD % RECs are below the laboratory limits, but greater than 30%. Non-detects are R-coded if % RECs are less than 30%. Also in accordance with the *Mead Validation Guidelines* (ECC, 2007), results for the affected analyte in the associated parent samples are J-coded for detects if the MS/MSD % RECs are greater than the laboratory QC limits. No action is required for non-detects. Additionally, results for the affected analyte in the associated parent samples are J-coded for detects and UJ-coded for non-detects if the RPD exceeds the laboratory QC limit.

All % RECs and RPDs were within QC limits.

3.9 Field Duplicate Results

Field duplicate results provide information on the ability to reproduce field sample results and account for error introduced from handling, shipping, storage, preparation, and analysis of field samples. The team collected four field duplicate pairs during the Third Quarter 2013 monthly O&M sampling events. The field duplicate pairs are listed below:

- 5447-0813-INF-150 / 5447-0813-2INF-150 (Explosives, VOCs);
- 5447-0813-EFF-150 / 5447-0813-2EFF-150 (Nitrate);
- 5447-0813-LL1-INF-094 / 5447-0813-LL1-2INF-094 (Explosives, VOCs);
- 5447-0813-LL1-EFF-094 / 5447-0813-LL1-2EFF-094 (Nitrate);

All field duplicate pairs met the precision criteria. No qualification is required for the field duplicate findings.

Note: Field duplicate results are considered acceptable when one result is a non-detect and the other result is a detection at a concentration below the LOQ.

3.10 Dilutions and Reanalyses

Qualifiers assigned as a result of calibration range exceedances are not used in the calculation of analytical data completeness percentages if there are acceptable results from diluted sample analyses.

Fourteen water samples for VOCs were initially analyzed at a dilution due to high levels of TCE. One sample was reanalyzed undiluted to achieve lower reporting limits for the nondetect compounds. Two of these samples required a secondary dilution analysis. According to the *Mead Validation Guidelines* (ECC, 2007) results exceeding the calibrations range are not used for reporting or project decisions when acceptable results from dilutions are available.

Four air samples were analyzed at a dilution because the concentrations of TCE were above the calibration range. Only the dilution analyses were reported for the air samples. No qualifiers were assigned because acceptable results from diluted sample analyses were provided.

Four nitrate samples were analyzed at a dilution because the concentrations were above the calibration range. Only the dilution analyses were reported for the samples. No qualifiers were assigned because acceptable results from diluted sample analyses were provided.

3.11 Other Quality Control Parameters

All detected explosive results were confirmed on a second column. A column comparison between the detected explosive results was made using explosive identification summary forms. The validator verified that the laboratory performed confirmation for all reported explosive detections and the reported inter-column RPDs.

Detected results with the inter-column RPDs exceeding 40% are qualified as estimated (J). Table 3-1 presents the data quality evaluation results and qualified samples. Table 3-2 presents the explosive QC outliers and associated samples for all assigned qualifiers. These qualifiers were not used to determine analytical completeness or project completeness in the Overall Assessment in Section 4.0.

3.12 Laboratory Qualifiers

The laboratory quantified and assigned an estimated (J) qualifiers for analytes detected below the LOQ, but above the detection limit. The validator carried over these qualifiers but were not used to determine analytical or project completeness in the Overall Assessment in Section 4.0.

4.0 OVERALL ASSESSMENT

The following subsections discuss the field completeness, analytical completeness, and project completeness determinations for the Third Quarter 2013 O&M sampling events. An evaluation of field, analytical, and project completeness is presented in Tables 4-1, 4-2, and 4-3.

4.1 Field Completeness

Field completeness is assessed by comparing the number of samples properly collected to the number of samples planned for collection. Field completeness is presented in Table 4-1 for the O&M sampling events.

Field completeness for the Third Quarter 2013 O&M sampling events was 100% for each analysis which exceeds the field completeness goal of 95%.

4.2 Analytical Completeness

Analytical completeness was calculated as both acceptable data completeness and quality data completeness. Analytical completeness is presented in Table 4-2. The overall acceptable data completeness percentage goal is 95% (90% for each method), and the overall quality data completeness percentage goal is 80%.

Acceptable data completeness is a measure of laboratory contract compliance. Acceptable data includes data that have not been rejected or qualified as estimated (J). Qualified data are considered acceptable if appropriate corrective actions were taken by the laboratory. Acceptable data completeness percentages for the O&M sampling events are as follows:

- Nitrate: 100%
- Explosives: 100%
- Metals: 100%
- TOC: 100%
- TSS: 100%
- VOCs: 99.6%
- VOC-Air: 100%

All analyses exceed the 90% criteria for the individual methods. The overall acceptable data completeness is 99.8% which exceeds the 95% criteria.

Quality data is a measure of the percentage of usable data points. Usable data points include all non-rejected data. Rejected data points with replacement data do not count against the quality data completeness. No data were rejected for the Third Quarter 2013 O&M sampling events. The quality data completeness percentages for nitrate, explosives, metals, TOC, TSS, and VOCs 100% and overall quality data completeness is 100% for the Third Quarter 2013 O&M sampling events.

4.3 Project Completeness

Project completeness combines sampling and analytical protocols to assess the expectations of the project as a whole. Project completeness is determined by comparing the percentage of samples/measurements that are determined to be usable to the total number of samples/ measurements planned. Project completeness is calculated using the field completeness and analytical completeness (quality data) completeness percentages.

The O&M project completeness percentage is 100%, which exceed the project completeness goal of 90%. Table 4-3 presents project completeness values.

5.0 CONCLUSIONS

No data points were qualified as rejected (R). Data are valid for use, as qualified. Overall field completeness is 100%. Overall quality data completeness is 100% which is above the quality data completeness goal of 80%. Project completeness is 100% which exceeds the project completeness goal of 90%.

A surrogate recovery outlier was present in one volatile analysis, which resulted in a qualification of a compound in one sample. Eight explosive results were qualified as estimated for inter-column RPDs exceedances. The qualifiers as a result of inter-column RPDs were not used to determine analytical completeness or project completeness.

6.0 REFERENCES

ECC, 2007, *Mead Validation Guidelines*, (approved by United States Army Corps of Engineers 2007).

ECC, 2013, *Site Wide Work Plan, Revision 01, Support Services, Operable Unit No. 2 (Groundwater), Former Nebraska Ordnance Plant, Mead, Nebraska*. April.

Tables

List of Acronyms for Tables

Term	Definition
µg/L	micrograms per liter
AOP	Advanced Oxidation Process
C-RPD	column relative percent difference
EFF	effluent
EW	extraction well
FEW	focused extraction well
GC/MS	gas chromatography–mass spectrometry
GCW	groundwater circulation well
GTP	groundwater treatment plant
HPLC	high-performance liquid chromatography
ID	identification/identifier
INF	influent
IS	Internal standard
J	estimated
Lab	laboratory
LOD	limit of detection
LL	Load Line
MS/MSD	matrix spike/matrix spike duplicate
MS	mass-spectrometry
QC	quality control
RPD	relative percent difference
SDG	sample delivery group
Surr	surrogate
SW	solid waste
TO	toxic organic
TOC	total organic compound
TSS	total suspended solids
U	not detected at laboratory limit of detection
UCL	upper control limit

Table 1-1
Sample Locations, Sample IDs, and Analyses
Third Quarter 2013 Operations and Maintenance Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sample Locations	Sample IDs	Analyses
AOP-EFF	5447-0713-AOP-EFF2-149	Explosives, Volatiles
AOP-EFF	5447-0813-AOP-EFF2-150	Explosives, Volatiles
AOP-EFF	5447-0913-AOP-EFF2-151	Explosives, Volatiles
AOP-INF	5447-0713-AOP-INF-149	Volatiles
AOP-INF	5447-0913-AOP-INF-151	Explosives, Volatiles
EW-12	5447-0713-LL1-EW12-93	Volatiles
EW-12	5447-0813-EW12-094	Explosives, Volatiles
EW-12	5447-0913-LL1-EW12-095	Volatiles
EW-17	5447-0713-LL1-EW17-93	Volatiles
EW-17	5447-0813-EW17-094	Explosives, Volatiles
EW-17	5447-0913-LL1-EW17-095	Volatiles
EW-1R	5447-0813-EW1R-150	Volatiles
EW-4	5447-0813-EFF-EW4-UV	Anions
EW-4	5447-0813-EW4-150	Explosives, Volatiles
EW-4	5447-0813-EW4-150A	Explosives, Volatiles
EW-4	5447-092013-EW4-UV-EFF4	Explosives
EW-4	5447-092013-EW4-UV-INF4	Explosives
EW-7	5447-0813-EW7-150	Explosives
EW-9	5447-0813-EW9-150	Explosives
FEW-14	5447-0813-EW14-150	Explosives
GCW1-EFF	GCW-1EFF-072013	Volatiles
GCW1-EFF	GCW-1-EFF-092013	Volatiles
GCW1-INF	GCW-1-INF-092013	Volatiles
GTP-310	5447-0713-310-149	Explosives, Volatiles
GTP-310	5447-0813-310-150	Explosives, Volatiles
GTP-310	5447-0913-310-151	Explosives, Volatiles
GTP-330	5447-0713-330-149	Explosives, Volatiles
GTP-330	5447-0813-330-150	Explosives, Volatiles
GTP-330	5447-0913-330-151	Explosives, Volatiles
GTP-350	5447-0713-350-149	Explosives, Volatiles
GTP-350	5447-0813-350-150	Explosives, Volatiles
GTP-350	5447-0913-350-151	Explosives, Volatiles
GTP-EFF	5447-0713-EFF-149	Anions, Explosives, Volatiles
GTP-EFF	5447-0813-EFF-150	Anions, Explosives, Volatiles
GTP-EFF	5447-0913-EFF-151	Anions, Explosives, Volatiles
GTP-INF	5447-0713-INF-149	Explosives, Volatiles
GTP-INF	5447-0813-INF-150	Explosives, Volatiles
GTP-INF	5447-0913-INF-151	Explosives, Volatiles
LL1_AIR_EF	5447-0713-LL1-AIR-EFF93	Volatiles-Air
LL1_AIR_IN	5447-0713-LL1-AIR-INF93	Volatiles-Air
LL1-EFF	5447-0713-LL1-EFF-93	Anions, Volatiles
LL1-EFF	5447-0813-LL1-EFF-094	Anions, Explosives, Volatiles
LL1-EFF	5447-0913-LL1-EFF-095	Anions, Volatiles
LL1-INF	5447-0713-LL1-INF-93	Metals, TOC, TSS, Volatiles
LL1-INF	5447-0813-LL1-INF-094	Explosives, Volatiles
LL1-INF	5447-0913-LL1-INF-095	Volatiles
LL4_AIR_EF	5447-0713-LL4-AIR-EFF	Volatiles-Air
LL4_AIR_EF	5447-0813-LL4-AIR-EFF	Volatiles-Air
LL4-EFF	5447-0713-LL4-EFF	Anions, Volatiles
LL4-EFF	5447-0813-LL4-EFF	Anions, Explosives, Volatiles

Table 1-1
Sample Locations, Sample IDs, and Analyses
Third Quarter 2013 Operations and Maintenance Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sample Locations	Sample IDs	Analyses
LL4-EFF	5447-0913-LL4-EFF	Anions, Volatiles
LL4-INF	5447-0713-LL4-INF	Volatiles
LL4-INF	5447-0913-LL4-INF	Volatiles

Notes:

TSS	A2540D	Total Suspended Solids Dried at 103-105 C
Metals	SW6010C	Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry
Volatiles	SW8260B	Volatile Organic Compounds by Capillary GC/MS
Explosives	SW8330	Nitroaromatics and Nitramines by HPLC
Anions	SW9056	Anion Chromatography
TOC	SW9060	Total Organic Carbon
Volatiles-Air	TO15	Determination of Volatile Organic Compounds in Air Collected in Specially-Prepared Canisters and Analyzed by GC/MS

Table 2-1
Sample Collection Summary
Third Quarter 2013 Operations and Maintenance Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Field Samples	MS/MSD Samples	Field Duplicate Samples	Date Sampled	Date Received by Lab	Lab ID	SDG	Anions	Explosives	Metals	TOC	TSS	Volatiles	Volatiles-Air
Field Samples													
5447-0713-330-149			7/1/2013	7/2/2013	200-17310-3	17310		•				•	
5447-0813-330-150			8/5/2013	8/6/2013	200-17807-4	17807		•				•	
5447-0913-330-151			9/3/2013	9/4/2013	200-18267-3	18267		•				•	
5447-0713-LL1-EW12-93			7/1/2013	7/2/2013	200-17307-4	17307						•	
5447-0813-EW12-094			8/5/2013	8/6/2013	200-17805-1	17805		•				•	
5447-0913-LL1-EW12-095			9/3/2013	9/4/2013	200-18265-2	18265						•	
5447-0713-LL1-EW17-93			7/1/2013	7/2/2013	200-17307-3	17307						•	
5447-0813-EW17-094			8/5/2013	8/6/2013	200-17805-2	17805		•				•	
5447-0913-LL1-EW17-095			9/3/2013	9/4/2013	200-18265-3	18265						•	
5447-0713-LL1-INF-93			7/1/2013	7/2/2013	200-17307-1	17307			•	•	•	•	
		5447-0813-LL1-2INF-094	8/5/2013	8/6/2013	200-17805-4	17805		•				•	
5447-0813-LL1-INF-094	5447-0813-LL1-INF-094		8/5/2013	8/6/2013	200-17805-3	17805		•				•	
5447-0913-LL1-INF-095			9/3/2013	9/4/2013	200-18265-1	18265						•	
5447-0713-LL1-EFF-93			7/1/2013	7/2/2013	200-17307-2	17307						•	
5447-0713-LL1-EFF-93			7/1/2013	7/2/2013	200-17310-10	17310	•						
5447-0813-LL1-EFF-094			8/5/2013	8/6/2013	200-17805-5	17805		•				•	
5447-0813-LL1-EFF-094	5447-0813-LL1-EFF-094		8/8/2013	8/6/2013	200-17858-1	17805	•						
		5447-0813-LL1-2EFF-094	8/8/2013	8/6/2013	200-17858-2	17805	•						
5447-0913-LL1-EFF-095			9/3/2013	9/4/2013	200-18265-4	18265	•					•	
5447-0713-LL1-AIR-INF93			7/1/2013	7/2/2013	200-17335-2	17335							•
5447-0713-LL1-AIR-EFF93			7/1/2013	7/2/2013	200-17335-3	17335							•
5447-0713-AOP-EFF2-149			7/1/2013	7/2/2013	200-17310-7	17310		•				•	
5447-0813-AOP-EFF2-150			8/5/2013	8/6/2013	200-17807-7	17807		•				•	
5447-0913-AOP-EFF2-151			9/3/2013	9/4/2013	200-18267-7	18267		•				•	
5447-0713-AOP-INF-149			7/1/2013	7/2/2013	200-17310-6	17310						•	
5447-0913-AOP-INF-151			9/3/2013	9/4/2013	200-18267-6	18267		•				•	
5447-0713-LL4-INF			7/1/2013	7/2/2013	200-17308-1	17308						•	
5447-0913-LL4-INF			9/3/2013	9/4/2013	200-18266-1	18266						•	
5447-0713-LL4-EFF	5447-0713-LL4-EFF		7/1/2013	7/2/2013	200-17308-2	17308	•					•	
5447-0813-LL4-EFF			8/12/2013	8/13/2013	200-17904-1	17904	•	•				•	
5447-0913-LL4-EFF			9/3/2013	9/4/2013	200-18266-2	18266	•					•	

Table 2-1
Sample Collection Summary
Third Quarter 2013 Operations and Maintenance Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Field Samples	MS/MSD Samples	Field Duplicate Samples	Date Sampled	Date Received by Lab	Lab ID	SDG	Anions	Explosives	Metals	TOC	TSS	Volatiles	Volatiles-Air
5447-0713-LL4-AIR-EFF			7/1/2013	7/2/2013	200-17335-1	17335							•
5447-0813-LL4-AIR-EFF			8/12/2013	8/13/2013	200-17909-1	17909							•
5447-0713-INF-149			7/1/2013	7/2/2013	200-17310-1	17310		•				•	
		5447-0813-2INF-150	8/5/2013	8/6/2013	200-17807-2	17807		•				•	
5447-0813-INF-150	5447-0813-INF-150		8/5/2013	8/6/2013	200-17807-1	17807		•				•	
5447-0913-INF-151			9/3/2013	9/4/2013	200-18267-1	18267		•				•	
5447-0713-310-149			7/1/2013	7/2/2013	200-17310-2	17310		•				•	
5447-0813-310-150			8/5/2013	8/6/2013	200-17807-3	17807		•				•	
5447-0913-310-151			9/3/2013	9/4/2013	200-18267-2	18267		•				•	
5447-0713-350-149			7/1/2013	7/2/2013	200-17310-4	17310		•				•	
5447-0813-350-150			8/5/2013	8/6/2013	200-17807-5	17807		•				•	
5447-0913-350-151			9/3/2013	9/4/2013	200-18267-4	18267		•				•	
5447-0713-EFF-149			7/1/2013	7/2/2013	200-17310-5	17310	•	•				•	
5447-0813-EFF-150			8/5/2013	8/6/2013	200-17807-6	17807		•				•	
5447-0813-EFF-150	5447-0813-EFF-150		8/8/2013	8/6/2013	200-17857-1	17807	•						
		5447-0813-2EFF-150	8/8/2013	8/6/2013	200-17857-2	17807	•						
5447-0913-EFF-151			9/3/2013	9/4/2013	200-18267-5	18267	•	•				•	
GCW-1EFF-072013			7/1/2013	7/2/2013	200-17310-9	17310						•	
GCW-1-EFF-092013			9/3/2013	9/4/2013	200-18267-9	18267						•	
5447-0813-EW1R-150			8/5/2013	8/6/2013	200-17807-8	17807						•	
5447-0813-EW14-150			8/5/2013	8/6/2013	200-17807-13	17807		•					
5447-0813-EW9-150			8/5/2013	8/6/2013	200-17807-12	17807		•					
5447-0813-EW7-150			8/5/2013	8/6/2013	200-17807-11	17807		•					
5447-0813-EW4-150			8/5/2013	8/6/2013	200-17807-9	17807		•				•	
5447-0813-EW4-150A			8/5/2013	8/6/2013	200-17807-10	17807		•				•	
5447-0813-EFF-EW4-UV			8/8/2013	8/9/2013	200-17856-1	17856	•						
5447-092013-EW4-UV-EFF4			9/3/2013	9/4/2013	200-18267-11	18267		•					
5447-092013-EW4-UV-INF4			9/3/2013	9/4/2013	200-18267-10	18267		•					
GCW-1-INF-092013			9/3/2013	9/4/2013	200-18267-8	18267						•	
			Trip Blanks										
TRB-LL1-2INF-072013			7/1/2013	7/2/2013	200-17307-5	17307						•	
TRB-2INF-072013			7/1/2013	7/2/2013	200-17310-8	17310						•	
TRB-LL4-2INF-072013			7/1/2013	7/2/2013	200-17308-3	17308						•	

Table 2-1
Sample Collection Summary
Third Quarter 2013 Operations and Maintenance Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Field Samples	MS/MSD Samples	Field Duplicate Samples	Date Sampled	Date Received by Lab	Lab ID	SDG	Anions	Explosives	Metals	TOC	TSS	Volatiles	Volatiles-Air
TRB-2EW01-082013			8/5/2013	8/6/2013	200-17807-14	17807						•	
TRB-LL1-2INF-082013			8/5/2013	8/6/2013	200-17805-6	17805						•	
TRB-2INF-082013			8/5/2013	8/6/2013	200-17807-15	17807						•	
TRB-2EW04-082013			8/5/2013	8/6/2013	200-17807-16	17807						•	
TRB-LL4-2INF-082013			8/12/2013	8/13/2013	200-17904-2	17904						•	
TRB-LL1-2INF-092013			9/3/2013	9/4/2013	200-18265-5	18265						•	

Notes:

TSS	A2540D	Total Suspended Solids Dried at 103-105 C
Metals	SW6010C	Trace Metals by Inductively Coupled Plasma/Atomic Emission Spectrometry
Volatiles	SW8260B	Volatile Organic Compounds by Capillary GC/MS
Explosives	SW8330	Nitroaromatics and Nitramines by HPLC
Anions	SW9056	Anion Chromatography
TOC	SW9060	Total Organic Carbon
Volatiles-Air	TO15	Determination of Volatile Organic Compounds in Air Collected in Specially-Prepared Canisters and Analyzed by GC/MS

• = Requested for the indicated analyses

Table 3-1
Data Quality Evaluation Results
Third Quarter 2013 Operations and Maintenance Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sample Identification	Date Sampled	SDG	Lab Number	Analysis	Parameter	Units	Lab Result	Data Review Qualifier	C_RPD	IS_Surr	Comments	Final Result
5447-0713-AOP-EFF2-149	7/1/2013	17310	200-17310-7	Explosives	2,4,6-trinitrotoluene	µg/L	0.098	J	X		Column RPD	0.098 J
5447-0813-AOP-EFF2-150	8/5/2013	17807	200-17807-7	Explosives	2,4,6-trinitrotoluene	µg/L	0.099	J	X		Column RPD	0.099 J
5447-0813-EW14-150	8/5/2013	17807	200-17807-13	Explosives	2-amino-4,6-dinitrotoluene	µg/L	0.065	J	X		Column RPD	0.065 J
5447-0813-LL1-EFF-094	8/5/2013	17805	200-17805-5	Explosives	hexahydro-1,3,5-trinitro-1,3,5-triazine	µg/L	0.069	J	X		Column RPD	0.069 J
5447-0913-AOP-EFF2-151	9/3/2013	18267	200-18267-7	Explosives	2,4,6-trinitrotoluene	µg/L	0.084	J	X		Column RPD	0.084 J
5447-0913-AOP-INF-151	9/3/2013	18267	200-18267-6	Explosives	2-amino-4,6-dinitrotoluene	µg/L	0.043	J	X		Column RPD	0.043 J
5447-0913-AOP-INF-151	9/3/2013	18267	200-18267-6	Explosives	4-amino-2,6-dinitrotoluene	µg/L	0.90	J	X		Column RPD	0.90 J
5447-0913-LL1-EW12-095	9/3/2013	18265	200-18265-2	Volatiles	trichloroethene	µg/L	85	J		X	Surrogate recovery outside project limits.	85 J

Note: The LOD values were used to display non detected lab results.

Reason for Qualification

C_RPD	Column RPD
IS_Surr	Internal standard, Surrogate recovery outside project limits.

Table 3-2
Explosives Quality Control Outliers
Third Quarter 2013 Operations and Maintenance Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sample ID(s) Requiring Qualification	SDG	Compound(s)	QC Outlier	QC Parameter Control Limit	QC Result
Confirmation Column Difference					
5447-0713-AOP-EFF2-149	17310	2,4,6-Trinitrotoluene	Confirmation Column Difference exceeds UCL	< 40 RPD	84.1 RPD
5447-0813-AOP-EFF2-150	17807	2,4,6-Trinitrotoluene	Confirmation Column Difference exceeds UCL	< 40 RPD	87.0 RPD
5447-0813-EW14-150	17807	2-Amino-4,6-dinitrotoluene	Confirmation Column Difference exceeds UCL	< 40 RPD	66.7 RPD
5447-0813-LL1-EFF-094	17805	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	Confirmation Column Difference exceeds UCL	< 40 RPD	45.8 RPD
5447-0913-AOP-EFF2-151	18267	2,4,6-Trinitrotoluene	Confirmation Column Difference exceeds UCL	< 40 RPD	87.2 RPD
5447-0913-AOP-INF-151	18267	2-Amino-4,6-dinitrotoluene	Confirmation Column Difference exceeds UCL	< 40 RPD	185 RPD
5447-0913-AOP-INF-151	18267	4-Amino-2,6-Dinitrotoluene	Confirmation Column Difference exceeds UCL	< 40 RPD	128 RPD

Table 3-3
Volatile Organic Compounds Quality Control Outliers
Third Quarter 2013 Operations and Maintenance Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Sample ID(s) Requiring Qualification	SDG	Compound(s)	QC Outlier	QC Parameter Control Limit	QC Result
		Surrogate			
5447-0913-LL1-EW12-095	18265	Trichloroethene	Surrogate exceeds UCL	1,2-Dichloroethane-d4 80 - 115 %	116 %

Table 4-1
Field Completeness
Third Quarter 2013 Operations and Maintenance Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Analysis	Number of Samples Planned	Number of Samples Collected	Field Completeness
Anions	12	12	100%
Explosives	33	33	100%
Metals	1	1	100%
TOC	1	1	100%
TSS	1	1	100%
Volatiles	45	45	100%
Volatiles-Air	4	4	100%
Totals =	97	97	100%
Goal =			95%

Notes:
Number of Samples Planned includes field samples and field duplicate samples.

Table 4-2
Analytical Completeness
Third Quarter 2013 Operations and Maintenance Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Analysis	Total Number of Parameters	Acceptable Data	Acceptable Data Completeness	Acceptable Data Completeness Goals	Quality Data	Quality Data Completeness	Quality Data Completeness Goals
Anions (Analyte Count - 1)	12	12	100%	90%	12	100%	80%
Explosives (Analyte Count - 6)	198	198	100%	90%	198	100%	80%
Metals (Analyte Count - 2)	2	2	100%	90%	2	100%	80%
TOC (Analyte Count - 1)	1	1	100%	90%	1	100%	80%
TSS (Analyte Count - 1)	1	1	100%	90%	1	100%	80%
Volatiles (Analyte Count - 6)	270	269	99.6%	90%	270	100%	80%
Volatiles-Air (Analyte Count - 1)	4	4	100%	90%	4	100%	80%
Totals =	488	487	99.8%	90%	488	100.0%	80%

Notes:

Total number of parameters includes field samples (includes data points from dilutions and/or reanalyses to be used in place of original data) and field duplicates (does not include field blanks or trip blanks).
Acceptable data includes data that has not been rejected or qualified as estimated (J/UJ). Data points for which the required corrective actions were taken or do not require corrective action do not count against the acceptable data completeness goal calculation (i.e., results exceeding the calibration range that were reanalyzed at dilutions within the calibration range).
Quality data is defined as all non-rejected data.

Table 4-3
Project Completeness
Third Quarter 2013 Operations and Maintenance Sampling Event
Former Nebraska Ordnance Plant, Mead, Nebraska

Field	Analytical	Project Completeness
100.0%	100.0%	100.0%
Project Completeness Goal =		90%

Notes:

Analytical Completeness is the percentage of usable data (i.e. quality data completeness).
Project Completeness combines sampling and analytical protocols to assess the expectations of the project as a whole. Project completeness is determined by comparing the percentage of samples / measurements that are determined to be usable to the total number of samples / measurements planned.

Appendix A
Chain of Custody Records

TestAmerica Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403
Phone:(802)660-1990

LLI

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information

Client Contact: John Ryder
Company: ECC
Address: 1746 Cole Blvd. Bld 21 Suite 350
City: Lakewood
State, Zip: Co. 80401
Phone: 303-298-7607
Email: 303-298-7837
Project Name: FNOP Mead
Site:

Sampler: Vincent Stallbaumer
Phone:
Lab PM:
E-Mail:
Carrier Tracking No(s):
COC No:
Page:
Job #:
Due Date Requested:
TAT Requested (days):
PO #:
WO #:
Project #: 5447-002
SSOW#:

Analysis Requested

Sample Identification - Client ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	VOC's 8260B	TSS SM2540D	TOC 9060	Metals 6010B	Total Number of Containers
			Preservation Code:								
5447-0713-LLI-INF-93	1/7/13	0920	G	W			3	1	1	1	
5447-0713-LLI-EFF-93	1/7/13	0926	G	W			3				
5447-0713-LLI-EW17-93	1/7/13	0920	G	W			3				
5447-0713-LLI-EW12-93	1/7/13	0920	G	W			3				
TRB-LLI-2INF-072013	1/7/13	0920	G	W			2				
	Last Item										

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2SO3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - ph 4-5
Z - other (specify)
Other:

Special Instructions/Note:

200-17307 COC

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Special Instructions/QC Requirements:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	7/1/13 1500	ECC	Fed ex 867536154580	1500 7/1/13	
Relinquished by:	Date/Time:	Company	Received by: [signature]	Date/Time: 7/2/13 1035	Company TABER
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

TestAmerica Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403
Phone:(802)660-1990

LL4

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information

Client Contact: John Ryder
Company: ECC
Address: 1746 Cole Blvd. Bld 21 Suite 350
City: Lakewood
State, Zip: Co. 80401
Phone: 303-298-7607
Email: 303-298-7837
Project Name: FNOP Mead
Site:

Sampler: Vincent Stallbaumer
Phone:
Lab PM:
E-Mail:
Carrier Tracking No(s):
COC No:
Page:
Job #:

Due Date Requested:
TAT Requested (days):
PO #:
WO #:
Project #: 5447-002
SSOW#:

Analysis Requested

Sample Identification - Client ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	VOC's 8260B	Total Number of containers
			Preservation Code					
5447-0713-LL4-INF	7/1/13	1022	G	W			3	
5447-0713-LL4-EFF	7/1/13	1025	G	W			3	
TRB-LL4-2INF-072013	7/1/13	1022	G	W			2	
last Liter								

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2SO3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - ph 4-5
Z - other (specify)
Other:

Special Instructions/Note:

200-17308 COC

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Special Instructions/QC Requirements:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	7/1/13 / 1500	ECC	Fedex 867536154550	7/1/13 / 1500	
Relinquished by:	Date/Time:	Company	Received by: [signature]	Date/Time: 7/2/13 1055	Company TASUB
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

MP

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

CHAIN OF CUSTODY RECORD

Report to:
Company: ECC
Address: 1746 Cole Blvd. Bld 21 Suite 350
Lakewood, CO 80401
Contact: John Ryder
Phone: 303-298-7607
Fax: 303-298-7837
Contract/ Quote:

Invoice to:
Company:
Address:
Contact:
Phone:
Fax:

Sampler's Name: [signature]
Sampler's Signature: Vincent Stadlbauer

Proj. No.
Project Name: 5447-002 Mead

Analysis Requested: VOCs 8260B; Explosives 8330

Lab Use Only
Due Date:
Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5
Custody Seal N / Y
Intact N / Y
Screened For Radioactivity ☐

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	VOA	A/G 1 Lt.	250 ml	P/O	VOCs 8260B	Explosives 8330	Lab/Sample ID (Lab Use Only)
W	7/1/13	1045		X	5447-0713-INF-149					3	2	
W	7/1/13	1047		X	5447-0713-310-149					3	2	
W	7/1/13	1053		X	5447-0713-330-149					3	2	
W	7/1/13	1057		X	5447-0713-350-149					3	2	
W	7/1/13	1105		X	5447-0713-EFF-149					3	2	
W	7/1/13	1015		X	5447-0713-AOP-INF-149					3	2	
W	7/1/13	1005		X	5447-0713-AOP-EFF2-149					3	2	
W	7/1/13	2005		X	TRB-2INF-072013					2		
W	7/1/13	1210		X	GCW-1EFF-072013					3		

200-17310 COC

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	7/1/2013	1500	Fedex 867536154550	7/2/13	1500
Relinquished by: (Signature)	Date	Time	Received by: (Signature) TA Bur	Date	Time
			[signature]	7/2/13	1035
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Remarks

Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule.

[1]Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil
[2]Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

TestAmerica Cannot accept verbal changes. Please Fax written changes to (802) 660-1919

TAL-8234(1007)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

S.1 JK
IR 7/2/13

CHAIN OF CUSTODY RECORD

Report to:
Company: ECC
Address: 1746 Cole Blvd. Bld 21 Suite 350
Lakewood, CO 80401
Contact: John Ryder
Phone: 303-298-7607
Fax: 303-298-7837
Contract/ Quote:

Invoice to:
Company:
Address:
Contact:
Phone:
Fax:

Sampler's Name: Vincent Stallbrunner
Sampler's Signature:
Proj. No.: 5447-002
Project Name: Mead ENVIP

ANALYSIS REQUESTED: Nitrates 9056

Lab Use Only
Due Date:
Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5
Custody Seal N / Y
Intact N / Y.
Screened For Radioactivity ☐

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	VOA	A/G 1 Lt.	250 ml	P/O	Nitrates 9056	Lab/Sample ID (Lab Use Only)
W	7/1/13	1105		X	5447-0713-EFF-149					2	
W	7/1/13	1025		X	5447-0713-LL4-EFF					2	
W	7/1/13	0926		X	5447-0713-EFF-93					2	

Last Item

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	7/1/13	1500	Fedex 867536154591	7/1/13	1500
Relinquished by: (Signature)	Date	Time	Received by: (Signature) GW500C	7/2/13	0945
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Remarks

Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule.

TestAmerica Cannot accept verbal changes. Please Fax written changes to (802) 660-1919

[1]Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil
[2]Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

TAL-8234(1007)

TestAmerica Burlington
30 Community Drive
Suite 11
South Burlington, VT 05403
phone 802-660-1990 fax 802-660-1919

Canister Samples Chain of Custody Record

TestAmerica Analytical Testing Corp. assumes no liability with respect to the collection and shipment of these samples.

Client Contact Information	Project Manager: John Ryder	Samples Collected By: TI / VS	1 of 1 COCs
Company: ECC	Phone:		
Address: 1746 Cole Blvd Bld 2 / Suite 300	Email:		
City/State/Zip Lakewood CO 80401			
Phone: 303-298-7600	Site Contact: Tim Thera		
FAX: 303-298-7627	TA Contact:		
Project Name: FNOP Mass	**Analysis Turnaround Time**		
Site: 5447 002	Standard (Specify)		
PO #	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
5447-0713-LL4-AIR-EFF	7/1/13	1036		-30	0		1870	1											
5447-0713-LL1-AIR-INF93	7/1/13	0935		-30	0		1727	1											
5447-0713-LL1-AIR-AFF93	7/1/13	0941		-30	0		1848	1											
Last Item																			

Temperature (Fahrenheit)			
	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)			
	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Samples Shipped by:	Date/Time: 7/7/13 / 1500 hrs	Samples Received by: Fed ex 8675 3615 4606
Samples Relinquished by:	Date/Time:	Received by: TA Burl Noah Burlington 7/2/13 1035
Relinquished by:	Date/Time:	Received by:

200-17335 COC

Lab Use Only **Shipper Name:** **Opened by:** **Condition:**

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

CHAIN OF CUSTODY RECORD

Report to:
Company: ECC
Address: 1746 Cole Blvd. Bld 21 Suite 350
Lakewood, CO 80401
Contact: John Ryder
Phone: 303-298-7607
Fax: 303-298-7837
Contract/ Quote:

Invoice to:
Company:
Address:
Contact:
Phone:
Fax:

Sampler's Name: Vincent Stallhammer
Sampler's Signature:

Proj. No.: 2013
Project Name:
No/Type of Containers[2]

ANALYSIS REQUESTED: Explosives 5330

Lab Use Only
Due Date:
Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5
Custody Seal N / Y
Intact N / Y
Screened For Radioactivity ☐

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	VOA	A/G 1 Lt.	250 ml	P/O	Explosives 5330	Lab/Sample ID (Lab Use Only)
W	7/15	0955		X	5447-072013-EW4-UV-INF-1					2	
W	7/15	0957		X	5447-072013-EW4-UV-EFF-1					2	
W	7/15	1200		X	5447-072013-EW4-UV-INF-2					2	
W	7/15	1205		X	5447-072013-EW4-UV-EFF-2					2	
W	7/15	1410		X	5447-072013-EW4-UV-INF-3					2	
W	7/15	1415		X	5447-072013-EW4-UV-EFF-3					2	

Last Trip

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	7/15/13	1500	Fedex 867536154640	7/15/13	1500
Relinquished by: (Signature)	Date	Time	Received by: (Signature) TABER	Date	Time
			Steph Fowler	7/16/13	935
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Remarks

200-17464 Chain of Custody

Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule.

[1]Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil
[2]Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

TestAmerica Cannot accept verbal changes. Please Fax written changes to (802) 660-1919

TAL-8234(1007)

TestAmerica Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403
Phone:(802)660-1990

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information

Client Contact: John Ryder
Company: Ecc
Address: 1746 Cole Blvd. Bld 21 Suite 350
City: Lakewood
State, Zip: Co. 80401
Phone: 303-298-7607
Email: 303-298-7837
Project Name: FNOP Mead
Site:

Sampler: Jesse Phillips
Phone:
Lab PM:
E-Mail:
Carrier Tracking No(s):
COC No:
Page:
Job #:

Due Date Requested:
TAT Requested (days):
PO #:
WO #:
Project #: 5447-002
SSOW#:

Analysis Requested

Sample Identification - Client ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Explosives 8330	Total Number of containers
			Preservation Code:					
5447-072013-EW4-UV-EFF-5	7-31-13	1322	G	W			2	

LAST ITEM

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2SO3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - ph 4-5
Z - other (specify)
Other:

Special Instructions/Note:

48hr TAT

200-17736 COC

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Jesse Phillips	7-31-13 / 15:00		FedEx 867536154709	7-31-13 1500	
Relinquished by:	Date/Time:	Company	Received by: Steph Parker	8/1/13 1015	TARUR
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No:
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

LL-1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

CHAIN OF CUSTODY RECORD

Report to:
Company: ECC
Address: 1746 Cole Blvd. Bld 21 Suite 80
Lakewood, CO 80401
Contact: John Ryder
Phone: 303-298-7607
Fax: 303-298-7837
Contract/ Quote:

Invoice to:
Company:
Address:
Contact:
Phone:
Fax:

ANALYSIS REQUESTED: 8260B; VOC's; Explosives 8330

Lab Use Only
Due Date:
Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5
Custody Seal N / Y
Intact N / Y
Screened For Radioactivity ☐

Sampler's Name: Vincent Stallbaumer
Sampler's Signature:
Proj. No.
Project Name
No/Type of Containers²

Matrix¹	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	VOA	A/G 1 Lt.	250 ml	P/O	8260B	VOC's	Explosives 8330	Lab/Sample ID (Lab Use Only)
W	8/5/13	0957		X	5447-0813-EW12-094					3	2		
W	8/5/13	0957		X	5447-0813-EW17-094					3	2		
W	8/5/13	0945		X	5447-0813-LLI-INF-094					3	2		
W	8/5/13	0945		X	5447-0813-LLI-2INF-094					3	2		
W	8/5/13	0945		X	5447-0813-LLI-MS					3	2		
W	8/5/13	0945		X	5447-0813-LLI-MSD					3	2		
W	8/5/13	1000		X	5447-0813-LLI-EFF-094					3	2		
W	8/5/13	0945		X	TRB-LLI-2INF-082013					2			

Last Item

200-17805 Chain of Custody

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	8/5/13	1500	Fedex 8675 3615 4210	8/5/13	1500
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
			Steph Rucker	8/6/13	1000
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Remarks

Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule.

¹Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil
²Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

TestAmerica Cannot accept verbal changes. Please Fax written changes to (802) 660-1919

TAL-8234(1007)

LL1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

CHAIN OF CUSTODY RECORD

Report to:
Company: ECC
Address: 1746 Cole Blvd. Bld 21 Suite 80
Lakewood, CO 80401
Contact: John Ryder
Phone: 303-298-7607
Fax: 303-298-7837
Contract/ Quote:

Invoice to:
Company:
Address:
Contact:
Phone:
Fax:

Sampler's Name
Sampler's Signature

Proj. No.
Project Name

ANALYSIS REQUESTED: Nitrate 9056

Lab Use Only
Due Date:

Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5

Custody Seal N / Y
Intact N / Y

Screened For Radioactivity ☐

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	No/Type of Containers[2] VOA	A/G 1 Lt.	250 ml	P/O	Nitrate 9056	Lab/Sample ID (Lab Use Only)
W	8/8/13	1105		X	5447-0813-LL1-EFF-094					2	
W	8/8/13	1105		X	5447-0813-LL1-2EFF-094					2	
W	8/8/13	1105		X	5447-0813-LL1-EFF-MS					2	
W	8/8/13	1105		X	5447-0813-LL1-EFF-MSD					2	

Last Item

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
			[signature]	8/9/13	0900
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Remarks

Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule.

[1]Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil
[2]Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

TestAmerica Cannot accept verbal changes. Please Fax written changes to (802) 660-1919

TAL-8234(1007)

Main Plant / EW 1 of 2

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

CHAIN OF CUSTODY RECORD

Report to:
Company: Ecc
Address: 1746 Cole Blvd Bld 21 Suite 350
Contact: John Ryder
Phone: 303-298-7607
Fax: 303-298-7837
Contract/ Quote:

Invoice to:
Company:
Address:
Contact:
Phone:
Fax:

Lab Use Only
Due Date:

Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5

Custody Seal N / Y
Intact N / Y

Screened For Radioactivity ☐

Sampler's Name: Vincent Stallkamper
Sampler's Signature:

Proj. No.
Project Name

ANALYSIS REQUESTED: VOCs 8260B; Explosives 8330

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	VOA	A/G 1 Lt.	250 ml	P/O	VOCs 8260B	Explosives 8330	Lab/Sample ID (Lab Use Only)
W	8/5/13	1142		X	5447-0813-INF-150					3	2	
W	8/5/13	1142		X	5447-0813-2INF-150					3	2	
W	8/5/13	1142		X	5447-0813-INF-MS					3	2	
W	8/5/13	1142		X	5447-0813-INF-MSD					3	2	
W	8/5/13	1150		X	5447-0813-310-150					3	2	
W	8/5/13	1155		X	5447-0813-330-150					3	2	
W	8/5/13	1200		X	5447-0813-350-150					3	2	
W	8/5/13	1215		X	5447-0813-EFF-150					3	2	
W	8/5/13	0958		X	5447-0813-AOP-EFF2-150					3	2	
W	8/5/13	0918		X	5447-0813-EWIR-150					3		

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	8/5/13	1500	Fedex 867536154710	8/5/13	1500
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
				8/6/13	1000
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Remarks

200-17807 Chain of Custody

Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule.

[1]Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil
[2]Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

TestAmerica Cannot accept verbal changes. Please Fax written changes to (802) 660-1919

TAL-8234(1007)

Non Plant/EW's 2 of 2.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

CHAIN OF CUSTODY RECORD

Report to:
Company: FCC
Address: 1746 Cole Blvd. Bld 21 Suite 350
Contact: John Ryder
Phone: 303-298-7607
Fax: 303-298-7837
Contract/ Quote:

Invoice to:
Company:
Address:
Contact:
Phone:
Fax:

Lab Use Only
Due Date:

Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5

Custody Seal N / Y
Intact N / Y

Screened For Radioactivity ☐

Sampler's Name: Vincent Stallbaumer
Sampler's Signature:

Proj. No.
Project Name

ANALYSIS REQUESTED: VOC's 8260B; Explosives 8330

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	VOA	A/G 1 Lt.	250 ml	P/O	VOC's 8260B	Explosives 8330	Lab/Sample ID (Lab Use Only)
W	8/5/13	1300		X	5447-0813-EW4-150					3	2	
W	8/5/13	1305		X	5447-0813-EW4-150A					3	2	Explosives 7 day TAT
W	8/5/13	0849		X	5447-0813-EW7-150						2	
W	8/5/13	0835		X	5447-0813-EW9-150						2	
W	8/5/13	0827		X	5447-0813-EW14-150						2	
W	8/5/13	0813		X	TRB-2EW01-082013					2		
W	8/5/13	1142		X	TRB-2INF-082013					2		
W	8/5/13	1300		X	TRB-2EW04-082013					2		

Lost Item

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	8/5/13	1500	Fedex 8625361547110	8/5/13	2500
Relinquished by: (Signature)	Date	Time	Received by: (Signature) MBAK	Date	Time
			Steph Bruckner	8/6/13	1000
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Remarks: 5447-0813-EW4-150A - 7 day TAT

Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule.

[1]Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil
[2]Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

TestAmerica Cannot accept verbal changes. Please Fax written changes to (802) 660-1919

TAL-9234(1007)

Main Plant

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

CHAIN OF CUSTODY RECORD

Report to:
Company: ECC
Address: 1746 Cole Blvd. Bld 21 Suite 350
Lakewood, CO 80401
Contact: John Ryder
Phone: 303-298-7607
Fax: 303-298-7837
Contract/ Quote:

Invoice to:
Company:
Address:
Contact:
Phone:
Fax:

Sampler's Name: Vincent Stallbaumer
Sampler's Signature:

Proj. No.
Project Name

ANALYSIS REQUESTED: Nitrate 9054

Lab Use Only
Due Date:
Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5
Custody Seal N / Y
Intact N / Y
Screened For Radioactivity ☐

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	No/Type of Containers[2] VOA	A/G 1 Lt.	250 ml	P/O	Lab/Sample ID (Lab Use Only)
W	8/8/13	1217		X	5447-0813-EFF-150				2	
W	8/8/13	1217		X	5447-0813-2EFF-150				2	
W	8/8/13	1217		X	5447-0813-EFF-MS				2	
W	8/8/13	1217		X	5447-0813-EFF-MSD				2	

Last Item

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	8/8/13	1500	Fedex 867536151857	8/8/13	1500
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
			Yascoe	8/9/13	0900
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Remarks

Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule:

[1]Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil
[2]Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

TestAmerica Cannot accept verbal changes. Please Fax written changes to (802) 660-1919

TAL-8234(1007)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

1.9 1R3 8/9/13 50 EW-4

CHAIN OF CUSTODY RECORD

Report to:
Company: ECC
Address: 1746 Cole Blvd. Bld 21 Suite 350
Lakewood, CO 80401
Contact: John Ryder
Phone: 303-298-7607
Fax: 303-298-7837
Contract/ Quote:

Invoice to:
Company:
Address:
Contact:
Phone:
Fax:

Sampler's Name: Vincent Stallbaumer
Sampler's Signature:

Proj. No.
Project Name

ANALYSIS REQUESTED: Nitrates 9056

Lab Use Only
Due Date:
Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5.
Custody Seal N / Y
Intact N / Y
Screened For Radioactivity ☐

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	No/Type of Containers[2] VOA	A/G 1 Lt.	250 ml	P/O	Lab/Sample ID (Lab Use Only)
W	8/8/13	1205		X	5447-0813-EFF-EW4-WW				2	

Last Item

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	8/8/13	1500	Fedex 8512-8577-9	8/8/13	1500
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
			[illegible]	8/9/13	0900
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Remarks

Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule.

TestAmerica Cannot accept verbal changes. Please Fax written changes to (802) 660-1919

[1]Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil
[2]Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

TAL-8234(1007)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

CHAIN OF CUSTODY RECORD

Report to:
Company: ECC
Address: 1746 Cole Blvd, Bld 21 Suite 350
Lakewood, CO 80401
Contact: John Ryder
Phone: 303-298-7607
Fax: 303-298-7837
Contract/ Quote:

Invoice to:
Company:
Address:
Contact:
Phone:
Fax:

Sampler's Name: Vincent Stallbaumer
Sampler's Signature:
Proj. No.
Project Name

Lab Use Only
Due Date:
Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5
Custody Seal N / Y
Intact N / Y
Screened For Radioactivity ☐

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	No/Type of Containers[2] VOA	A/G 1 Lt.	250 ml	P/O	ANALYSIS REQUESTED: VOC's 8260B	Explosives 8330	Lab/Sample ID (Lab Use Only)
W	8/12/13	09:15		X	5447-0813-LL4-EFF					3	2	
W	W	09:15		X	TRB-LL4-2INF-08.2013					2		

Last Item

200-17904 COC

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	8/12/2013	1500	Fedex 5675 3451 890	8/12/13	1500
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
				8/13/13	1000
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Remarks

[1]Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil
[2]Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule:

TestAmerica Cannot accept verbal changes. Please Fax written changes to (802) 660-1919

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

2.5 IR3 8/13/13 JO

CHAIN OF CUSTODY RECORD

Report to:
Company: ECC
Address: 1746 Cole Blvd. Bld 21 Suite 350
Lakewood, CO 80401
Contact: John Ryder
Phone: 303-298-7607
Fax: 303-298-7837
Contract/ Quote:

Invoice to:
Company:
Address:
Contact:
Phone:
Fax:

Sampler's Name
Sampler's Signature

Proj. No.
Project Name

ANALYSIS REQUESTED: Nitrate 9056

Lab Use Only
Due Date:

Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5

Custody Seal N / Y
Intact N / Y

Screened For Radioactivity ☐

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	No/Type of Containers[2] VOA	A/G 1 Lt.	250 ml	P/O	Lab/Sample ID (Lab Use Only)
W	8/12/13	0945		X	5447-0813-LL4-EFF				2	

Last Item

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	8/12/13	1500	Fedex	8/12/13	1500
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Remarks

[1]Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil
[2]Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule.

TestAmerica Cannot accept verbal changes. Please Fax written changes to (802) 660-1919

TAL-8234(1007)

TestAmerica Burlington
30 Community Drive
Suite 11
South Burlington, VT 05403
phone 802-660-1990 fax 802-660-1919

Canister Samples Chain of Custody Record

TestAmerica Analytical Testing Corp. assumes no liability with respect to the collection and shipment of these samples.

Client Contact Information	Project Manager: John Ryder	Samples Collected By: TT / VS	1 of 1 COCs
Company: ECC	Phone:		
Address: 1946 Cole Blvd Bld 21 Suite 300	Email:		
City/State/Zip Lakewood Co 80401			
Phone: 303-298-7647	Site Contact: Tim Theas		
FAX: 303-298-7820	TA Contact:		
Project Name: FNUP Mead	**Analysis Turnaround Time**		
Site: 5447 002	Standard (Specify)		
PO #	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
5447-0813-2L4-AIR-EFF	8/12/13	0926	0926	-29	0	~~748~~	4481	1											
	Last Item																		

	Temperature (Fahrenheit)		
	Interior	Ambient	
Start			
Stop			

	Pressure (inches of Hg)		
	Interior	Ambient	
Start			
Stop			

200-17909 COC

Special Instructions/QC Requirements & Comments:

Samples Shipped by:	Date/Time: 8/12/13 1500 hrs	Samples Received by: Fedex 8675-3615-1880
Samples Relinquished by:	Date/Time:	Received by: 8/13/13 1000
Relinquished by:	Date/Time:	Received by:

Lab Use Only **Shipper Name:** **Opened by:** **Condition:**

LL1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

CHAIN OF CUSTODY RECORD

Report to:
Company: ECC
Address: 1746 Cole Blvd. Building 21, Suite 350
Contact: John Ryder
Phone: 303-298-7607
Fax: 303-298-7837
Contract/ Quote:

Invoice to:
Company:
Address:
Contact:
Phone:
Fax:

Lab Use Only
Due Date:

Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5

Custody Seal N / Y
Intact N / Y

Screened For Radioactivity ☐

Sampler's Name: Vincent Stallbaumer
Sampler's Signature:

Proj. No.
Project Name
No/Type of Containers[2]

ANALYSIS REQUESTED: VOC's 8260B; Explosives 8330; NA

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	VOA	A/G 1 Lt.	250 ml	P/O	VOC's 8260B	Explosives 8330	NA	Lab/Sample ID (Lab Use Only)
W	9/3/13	0826		X	5447-0913-LL1-INF-095					3			
W	9/3/13	0822		X	5447-0913-LL1-EW12-095					3			
W	9/3/13	0824		X	5447-0913-LL1-EW17-095					3			
W	9/3/13	0828		X	5447-0913-LL1-EFF-095					3			
W	9/3/13	0822		X	TRB-LL1-2INF-92013					2			

Last Item

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	9/3/2013	1500	Fedex 867536151950	9/3/13	1500
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
			TABLER	9/4/13	1020
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Remarks

200-18265 COC

Client's delivery of samples constitutes ... terms and conditions contained in the Price Schedule.

[1]Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil
[2]Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

TestAmerica Cannot accept verbal changes. Please Fax written changes to (802) 660-1919

TAL-8234(1007)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

5.1 IR
9/4/13 AB

CHAIN OF CUSTODY RECORD

Report to:
Company: ECC
Address: 1746 Cole Blvd. Building 21, Suite 350
Contact: John Ryder
Phone: 303-298-7607
Fax: 303-298-7837
Contract/ Quote:

Invoice to:
Company:
Address:
Contact:
Phone:
Fax:

Lab Use Only
Due Date:

Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5

Custody Seal N / Y
Intact N / Y

Screened For Radioactivity ☐

Sampler's Name: Vincent Stallbaumer
Sampler's Signature:

Proj. No.
Project Name

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	VOA	A/G 1 Lt.	250 ml	P/O	Nitrates 9056	Lab/Sample ID (Lab Use Only)
W	9/3/13	0838		X	5447-0913-LL1-EFF-095					2	
W	9/3/13	0852		X	5447-0913-LL4-EFF					2	
W	9/3/13	0956		X	5447-0913-EFF-151					2	

Last Items

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	9/3/2013	1500	Fedex 8675 3615 1960	9/3/13	1500
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
				9/4/13	9:00
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Remarks

Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule:

[1]Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil
[2]Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

TestAmerica Cannot accept verbal changes. Please Fax written changes to (802) 660-1919

TAL-8234(1007)

LL-4

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

CHAIN OF CUSTODY RECORD

Report to:
Company: ECC
Address: 1746 Cole Blvd. Building 21, Suite 350
Contact: John Ryder
Phone: 303-298-7607
Fax: 303-298-7837
Contract/ Quote:

Invoice to:
Company:
Address:
Contact:
Phone:
Fax:

Lab Use Only
Due Date:

Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5

Custody Seal N / Y
Intact N / Y

Screened For Radioactivity ☐

Sampler's Name: Vincent Stallbaumer
Sampler's Signature:

Proj. No.
Project Name
No/Type of Containers[2]

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	VOA	A/G 1 Lt.	250 ml	P/O	ANALYSIS REQUESTED: VOCs 8260B	Lab/Sample ID (Lab Use Only)
W	9/3/13	0850		X	5447-0913-LL4-INF					3	
W	9/3/13	0852		X	5447-0913-LL4-Eff					3	

Last Item

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	9/5/13	1500	Fedex 867536151950	1500	9/3/13
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
			TNBull	9/4/13	1030
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Remarks

200-18266 COC

Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule.

[1]Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil
[2]Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

TestAmerica Cannot accept verbal changes. Please Fax written changes to (802) 660-1919

TAL-8234(1007)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

5.1 ER
9/4/13 AB

CHAIN OF CUSTODY RECORD

Report to:
Company: Ecc
Address: 1746 Cole Blvd. Building 21, Suite 350
Contact: John Ryder
Phone: 303-298-7607
Fax: 303-298-7837
Contract/ Quote:

Invoice to:
Company:
Address:
Contact:
Phone:
Fax:

Lab Use Only
Due Date:

Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5

Custody Seal N / Y
Intact N / Y

Screened For Radioactivity ☐

Sampler's Name: Vincent Stallbaumer
Sampler's Signature:

Proj. No.:
Project Name:

ANALYSIS REQUESTED: Nitrates 9056

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	VOA	A/G 1 Lt.	250 ml	P/O	No/Type of Containers[2]	Lab/Sample ID (Lab Use Only)
W	9/3/13	0838		X	5447-0913-LL1-EFF-095					2	
W	9/3/13	0852		X	5447-0913-LL4-EFF					2	
W	9/3/13	0956		X	5447-0913-EFF-151					2	

Last Items

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	9/3/2013	1500	Fedex 8675 3615 1960	9/3/13	1500
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
			[signature]	9/4/13	9:00
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Remarks

Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule:

[1]Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil
[2]Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

TestAmerica Cannot accept verbal changes. Please Fax written changes to (802) 660-1919

TAL-8234(1007)

Non Plant EW-4
GCW-1
AOP

Page 1 of 2

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

CHAIN OF CUSTODY RECORD

Report to:
Company: ECC
Address: 1746 Cole Blvd. Building 21, Suite 350
Contact: John Ryder
Phone: 303-298-7607
Fax: 303-298-7837
Contract/ Quote:

Invoice to:
Company:
Address:
Contact:
Phone:
Fax:

Sampler's Name: Vincent Stallbaumer
Sampler's Signature:
Proj. No.
Project Name
No/Type of Containers[2]

Lab Use Only
Due Date:
Temp. of coolers when received (C°): 1 2 3 4 5
Custody Seal N / Y
Intact N / Y
Screened For Radioactivity ☐

ANALYSIS REQUESTED: VOC's 8260B; Explosives 8330

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	VOA	A/G 1 Lt.	250 ml	P/O	VOC's 8260B	Explosives 8330	Lab/Sample ID (Lab Use Only)
W	9/3/13	0945		X	5447-0913-INF-151					3	2	
W	9/3/13	0947		X	5447-0913-310-151					3	2	
W	9/3/13	0950		X	5447-0913-330-151					3	2	
W	9/3/13	0953		X	5447-0913-350-151					3	2	
W	9/3/13	0956		X	5447-0913-EFF-151					3	2	
W	9/3/13	0845		X	5447-0913-AOP-INF-151					3	2	
W	9/3/13	0840		X	5447-0913-AOP-EFF2-151					3	2	
W	9/3/13	0915		X	GCW-1-INF-092013					3		
W	9/3/13	0912		X	GCW-1-EFF-092013					3		
W	9/3/13	0940		X	5447-092013-EW4-WW-INF4						2	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	9/3/13	1500	Fedex 867536151950	1500	9/3/13
Relinquished by: (Signature)	Date	Time	Received by: (Signature) TMBUR	Date	Time
				9/4/13	1020
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Remarks

200-18267 COC

Client's delivery of samples constitutes acceptance of terms and conditions contained in the Price Schedule.

[1]Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil
[2]Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

TestAmerica Cannot accept verbal changes. Please Fax written changes to (802) 660-1919

TAL-8234(1007)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

CHAIN OF CUSTODY RECORD

Report to:
Company: ECC
Address: 1746 Cole Blvd. Building 21, Suite 350
Contact: John Ryder
Phone: 303-298-7607
Fax: 303-298-7837
Contract/ Quote:

Invoice to:
Company:
Address:
Contact:
Phone:
Fax:

Sampler's Name
Sampler's Signature

Proj. No.
Project Name
No/Type of Containers[2]

ANALYSIS REQUESTED: VOC's 8260B; Explosives 8330

Lab Use Only
Due Date:
Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5
Custody Seal N / Y
Intact N / Y
Screened For Radioactivity ☐

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	VOA	A/G 1 Lt.	250 ml	P/O	VOC's 8260B	Explosives 8330	Lab/Sample ID (Lab Use Only)
W	9/3/13	0745		X	5447-092013-EW4-UV-EFF4					2		

Last Item

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	9/3/13	1500	Fedex 867536151950	9/3/13	1500
Relinquished by: (Signature)	Date	Time	Received by: (Signature) TMBUCK	Date	Time
			Steph Buck	9/4/13	1020
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Remarks

Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule.

[1]Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil
[2]Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

TestAmerica Cannot accept verbal changes. Please Fax written changes to (802) 660-1919

TAL-8234(1007)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403 Tel: 802 660 1990

5.1 IR
9/4/13 AB

CHAIN OF CUSTODY RECORD

Report to:
Company: ECC
Address: 1746 Cole Blvd. Building 21, Suite 350
Contact: John Ryder
Phone: 303-298-7607
Fax: 303-298-7837
Contract/ Quote:

Invoice to:
Company:
Address:
Contact:
Phone:
Fax:

Sampler's Name: Vincent Stallbaumer
Sampler's Signature:

Proj. No.:
Project Name:

ANALYSIS REQUESTED: Nitrates 9056

Lab Use Only
Due Date:
Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5
Custody Seal N / Y
Intact N / Y
Screened For Radioactivity ☐

Matrix[1]	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	VOA	A/G 1 Lt.	250 ml	P/O	Nitrates 9056	Lab/Sample ID (Lab Use Only)
W	9/3/13	0838		X	5447-0913-LL1-EFF-095					2	
W	9/3/13	0852		X	5447-0913-LL4-EFF					2	
W	9/3/13	0956		X	5447-0913-EFF-151					2	

Lost Items

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	9/5/2013	1500	Fedex 8675 3605 1960	9/5/13	1500
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
				9/4/13	9:00
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Remarks

Client's delivery of samples constitutes acceptance of TestAmerica terms and conditions contained in the Price Schedule:

TestAmerica Cannot accept verbal changes. Please Fax written changes to (802) 660-1919

[1]Matrix WW - Wastewater W - Water S - Soil L - Liquid A - Air bag C - Charcoal Tube SL - Sludge O - Oil
[2]Container VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

TAL-8234(1007)

Appendix B
Field Notes

Time
0805 Calibrate pH + Sond meters.
pH 7.0 = 7.0 Sond 1409 = 1438/1409

Sample plant Influent 5447-0513-LL4-INF
Sample plant Effluent 5447-0513-LL4-EFF

Sampling Summary Bottles Filled

ID	Time	pH	Sond	Temp	VOCs	Explosives	Nitrates
INF	1244	7.1	604	11.6	3	2	-
EFF	1248	8.2	598	11.9	3	2	2

Samples shipped overnight to Test America Burlington via Fed Ex Air Bill # 8675-3615-1721

Nitrate samples shipped overnight to Test America Denver via Fed Ex Air Bill # 8675-3615-1710

46° Cloudy
NNE @ 20 mph
81% Humidity

Sample 224

Time calibrate pH & Sond meters

pH 7.0 = Sond 1408 =

Sample plant Influent 5447-0613-224-INF

Sample plant Effluent 5447-0613-224-EFF

Sampling Summary BaHCl, Filed

ID	Time	pH	Sond	Temp	Jars	Metals	TSS	TOC	Nitrate
INF	0942	7.1	653	13.2	3	1	1	1	–
EFF	0948	8.2	616	13.0	3	–	–	–	2

Samples shipped overnight to Test America Burlington via FedEx Air Bill # 8675-3615-4525

Nitrate samples shipped overnight to Test America Denver via FedEx Air Bill # 8675-3615-4514

52° F Sunny
86% humidity
S @ 6 mph

Sample Event 148

Time | Calibrate pH & Cond meters

0740 | pH 7.0 = 7.06/7.00 Cond - 1409 = 1389/

Sample plant Influent 5447-0613-INF-1

Sample GAC 320 5447-0613-320-2

Sample GAC 340 5447-0613-340-1

Sample GAC 360 5447-0613-360-2

Sample plant Effluent 5447-0613-EFF-1

Sample ~~plant~~ AOP Influent 5447-0613-AOP-INF

Sample AOP-Effluent 5447-0613-AOP-EFF2

Sample GCW1 Influent GCW1-INF-062013

Sample GCW1 Effluent GCW1-EFF-062013

52° F Sunny

86% humidity

5 @ 6mph

6-3-2013 Sample Event #148

Sampling Summary Bottles Filled

ID	Time	pH	Scond	Temp	VOCs	Explosives	TOC	TSS	Metals	Water Tox
INF	0815	7.1	610	14.4	3	2	1	1	1	–
310	0818	7.1	611	12.9	3	2	–	–	–	–
330	0823	7.1	614	12.9	3	2	–	–	–	–
350	0830	7.1	610	12.9	3	2	–	–	–	–
EFF	0835	7.0	610	12.8	3	2	–	–	–	2
AOP-INF	0937	7.2	679	15.2	3	2	–	–	–	–
AOP-EFF	0930	7.1	691	14.3	3	2	–	–	–	–
CWI-INF	0910	7.2	476	14.0	3	–	–	–	–	–
CWI-EFF	0915	8.1	471	13.8	3	–	–	–	–	–

Samples shipped overnight to Test America Burlington via Fed Ex Air, Bill # 8625 3615 - 4525

Nitrate samples shipped overnight to Test America Denver via Fed Ex Air Bill # 8625 3615 - 4514

Sample Event #149

Time
0900

Calibrated PH + Scond meters
PH-7.0. = 7.0/7.0 Scond = 1409 - 1358/1407

Sampled Plant Influent - 5447-0713-INF-149
Sampled GAC 310 - 5447-0713-310-149
Sampled GAC 330 - 5447-0713-330-149
Sampled GAC 350 5447-0713-350-149
Sampled Effluent - 5447-0713-EFF-149
Sampled AOP Influent - 5447-0713-AOP-INF-149
Sampled AOP Effluent - 5447-0713-AOP-EFF-149
Sampled GCW-Effluent ~~5447~~-GCW-1-Eff-071

Temp: 66°

Humidity: 66%

Wind: N @ 4mph

Sample Event #14.4

Sample Summary

Bottles Filled

ID	Time	PH	Scond	Temp	VOCs	Explosives	TOC	Metals	Nitrates	
Inf	1045	7.16	600	13.3	3	2				
310	1047	7.15	603	13.4	3	2				
330	1053	7.18	604	13.5	3	2				
350	1057	7.20	607	13.4	3	2				
EFF	1105	7.08	607	13.8	3	2			2	
AOP INF	1015	7.12	583	14.1	3	2				
AOP EFF	1005	7.08	639	16.1	3	2				
~~NCW-1 EFF~~	~~1015~~	~~7.12~~	~~583~~	~~14.1~~	~~3~~					
CW-1EF	1210	8.31	491	16.1	3					

Sampled shipped overnight via Fed ex
Air Bill # 867536154580 to Burlingto VA

Nitrates shipped overnight ~~via~~ TEst America
Denver Via Fedex Air Bill #

7- -2013 LL-4 Sampling

Time

Calibrated PH + Scond. Meters

PH - 7.0 - 7.0/7.0 Scond. = 1409 = 1358/1419

Sampled Plant Influent - 5447-0713-LL4-Inf
Sampled Plant Effluent 5447-0713-LL4-Eff
Sampled Plant Air 5447-0713-LL4-AIR-Eff

Sample Summary Bottles Filled

ID	Time	PH	Scond	Temp	VOC's	Explosives	Nitrates	
INF	1022	7.16	615	13.9	3			
EFF	1025	8.25	617	13.4	3		2	
AIR	1036	—	—	—	1			

Samples Shipped overnight to test America Burlington Via Fedex Air Bill #

Nitrates Shipped Overnight to Test America Denver via Fedex Air Bill #

Air Samples Shipped overnight to test America Burlington VA via Fedex Air Bill #

Time 0900 Calibrate pH meters 1358/1407

pH 2.0 = 7.20 Scond 1408 =

Sampled Plant Air Inf. - 5447-0713-LLI-AIR-INF-93

Sampled Plant Air Eff - 5447-0713-LLI-AIR-EFF-93

Sample plant Influent - 5447-0713-LLI-INF-93

Sample plant Effluent - 5447-0713-LLI-Eff-93

Sampled EW-12 - 5447-0713-LLI-EW-12-93

Sampled EW-17 - 5447-0713-LLI-EW-17-93

Sampling Summary Bottles Filled

ID	Time	pH	Scond	Temp	500ml	125ml	40ml	Metals	Nitrates
INF	0920	7.02	541	14.2	3	1	1	1	-
EFF	0924	8.15	546	13.3	3	-	-	-	2
EW-12	0920	7.09	577	13.2	3				
EW-17	0920	7.10	527	12.7	3				
AIR INF	0935	—	—	—	1				
AIR EFF	0941	—	—	—	1				

Samples shipped overnight to Test America Burlington via Fed Ex Air Bill # ~~8675-3615-4525~~

Nitrate samples shipped overnight to Test America Denver via Fed Ex Air Bill # ~~8675-3615-4514~~
8675-3615-4580

Air samples Shipped overnight to test America Burlington via Fed ex Bill #

Temp = 66°

Humidity: 66 %

Sample Event #150

Time	Calibrated PH + Cond. Meters
0740	PH = 7.0 - 7.0/7.0 Scond = 1408 - 1358
1142	Sampled Plant Influent - 5447-0813-INF-150
1142	Sampled Plant Influent 5447-0813-2INF-150
1142	Sampled Plant Influent 5447-0813-INF-MS
1142	Sampled Plant Influent 5447-0813-INF-MSD
1150	Sampled GAC 310 5447-0813-310-150
1155	Sampled GAC 330 5447-0813-330-150
1200	Sampled GAC 350 5447-0813-350-150
1205	Sampled Plant Effluent 5447-0813-Eff-150
1205	Sampled Plant Effluent 5447-0813-2Eff-150
1205	Sampled Plant Effluent 5447-0813-EFF-MS
1205	Sampled Plant Effluent 5447-0813-EFF-MSD
0908	Sampled AOP Effluent2 5447-0813-AOP-EFF2-150
1205	Sampled Plant Effluent 5447-0813-2Eff-150

Temp - 69°

Humidity - 99%

Wind 5 MPH

Sample Event # 150

Sample Summary

ID	Time	PH	Scond	Temp	Bottles Filled: VOCs	Explosives	Nitrates
INF	1142	7.32	607	15.2	3	2	
RINF	1142	7.32	607	15.2	3	2	
INFMS	1142	7.32	607	15.2	3	2	
INFMSD	1142	7.32	607	15.2	3	2	
310	1150	7.34	614	13.6	3	2	
330	1155	7.29	615	13.4	3	2	
350	1200	7.14	613	13.7	3	2	
EFF	1205	7.11	615	13.3	3	2	2
EFFMS	1205	7.11	615	13.3			2
EFFMSD	1205	7.11	615	13.3			2
DUP EFF2	0805	7.34	608	14.7	3	2	
EFF	1205	7.11	615	13.3			2

Shipped Samples overnight to Test America Burlington Via Fedex Air Bill #
8675361547 10

Nitrates sample's Shipped overnight to Test America Denver Via Fedex Air Bill #
867536154731

Sample event #150 cont'

Time	Calibrated PH & Scond meters	
0740	PH=7.0-7.0=7.0/7.0	Scond=1408-1359/1409
0813	Sampled EW1R	5447-0813-EW1R-150
1500	Sampled EW4	5447-0813-EW4-150
1505	Sampled EW-04 UV	5447-0813-EW4-150A
0849	Sampled EW-07	5447-0813-EW07-150
0827	Sampled EW-14	5447-0813-EW-14-150
0838	Sampled EW-09	5447-0813-EW-09-150

Temp - 69°

Winds - S. 6 mph

Humidity - 99%

Sample Event #150 cont'd

Sample Summary

ID	Time	PH	Cond	Temp	Bottles Filled VOCs	Explosives
EW-1R	0813	7.06	806	16.1	3	
EW-4	1300	7.00	225	14.5	3	2
EW-1/EW	1305	7.06	496	14.8	3	2
EW-7	0849	7.32	519	14.7		2
EW-14	0827	7.19	487	14.04		2
EW-9	0838	7.12	452	14.6		2

Shipped Samples to test America Burlingame
Via Fedex # 8675 3615 4710

8-5-2013 Sample Event #94

[illegible] Calibrated Ph + Scond Meter

[illegible]30 PH = 7.0 = 7.0/7.0 Scond = 1409 - 1354/1409
Temp - 69° Humidity - 99% wind - 5 @ 6mph

[illegible] Sampled EW-12 5447-0813-EW12-094
[illegible] Sampled EW-17 5447-0813-EW17-094
[illegible] Sampled Influent 5447-0813-LL1-INF-094
[illegible] Sample Influent 5447-0813-LL12INF-094
[illegible] Sampled Influent 5447-0813-LL1-INF-MS
[illegible] Sampled Influent 5447-0813-LL1-INF-MSD
[illegible] Sampled Effluent 5447-0813-LL1-~~INF~~ 094
[illegible] Sampled Effluent 5447-0813-LL12EFF-094
[illegible] Sampled Effluent 5447-0813-LL1-Eff-MS
[illegible] Sample Effluent 5447-0813-LL1-EFF-MSD
[illegible] ~~Sampled Air 5447-0813-LL1-AIR-EFF-094~~

Sample Summary Bottles Filled

	Time	PH	Temp	Scond	VOC	EXP	Nitrates
[illegible]12	0954	7.02	14.0	581	3	2	
[illegible]7	0957	7.01	13.8	549	3	2	
[illegible]	0945	7.13	14.5	552	3	2	
[illegible]12	0945	7.13	14.5	552	3	2	
[illegible]MS	0945	7.13	14.5	552	3	2	
[illegible]MSD	0945	7.13	14.5	552	3	2	
[illegible]	1000	8.19	14.9	574	3	2	2
[illegible]12	1000	8.19	14.9	574			2
[illegible]MS	1000	8.19	14.9	574			2
[illegible]MSD	1000	8.19	14.9	574			2
[illegible]							1 bottle

8-12-2013 LL-4 Sampling

Calibrated PH + Scond Meters

PH - 7.0 = 6.8/7.0 Scond - 1409 = 1213/1409

Sampled Plant Effluent 5447-0813-LL4-EFF
Sampled Plant Air 5447-0813-LL4-AIR-Eff

Sample Summary

Time	PH	Scond	Temp	Bottles Filled VOC's	Bottles Filled Exp	Bottles Filled Nitrates
0915	7.21	612	13.8	3	2	2
0926				1		

Samples Shipped to Test American Burlington via FEDEX Air Bill # 8675 3615 1890

Nitrates Shipped to Test America Denver Via Fedex Air Bill # 8675 3415 1879

Air Sample Shipped overnight to test America Burlington VA via Fedex # 8675 3651880

Sample Event #151

Main Plant (1 of 2)

Time Calibrated PH & Cond Meters

0455 PH-7.0 = 6.9/7.0 Cond-1409 = 1544/1409

Sampled Plant Influent - 5447-0913-INF-151
Sampled GAC 310 - 5447-0913-310-151
Sampled GAC 330 - 5447-0913-330-151
Sampled GAC 350 - 5447-0913-350-151
Sampled Plant Effluent - 5447-0913-Eff-151
Sampled AOP Influent - 5447-0913-AOP-INF-151
Sampled AOP Effluent - 5447-0913-AOP-Eff2-151
Sampled GCW-1 Influent - ~~5447~~-GCW-1-INF-09201
Sampled GCW-1 Effluent - GCW-1-Eff-092013
Sampled EW-4 befor UV - 5447-092013-EW4-UV-I
Sampled EW-4 after UV - 5447-09201B-EW4-UV-EF

Temp - 56°

Humidity - 97°

Wind - Calm

Main Plant

Sample Event #151 con't (2 of 2)

ID	Time	PH	Scond	Temp	VOC's 5260B	Pesticides	Nitrates 9056
INF	0945	7.1	530	14.6	3	2	
310	0947	7.1	532	14.0	3	2	
330	0950	7.1	532	13.9	3	2	
350	0953	7.2	530	14.0	3	2	
Eff	0956	7.0	528	13.5	3	2	2
AOP INF	0845	7.00	649	14.4	3	2	
AOP Eff2	0840	7.19	658	15.5	3	2	
GCW-1 INF	0915	7.15	448	15.5	3		
GCW-1 Eff	0917	8.3	439	15.7	3		
EW4 Inf	0740	6.97	485	15.5		2	
EW4 Eff	0742	7.0	466	13.6		2	

Shipped Samples overnight to test America Burlington via Fedex #
8675 3615 1950

Nitrates Shipped overnight to test America Denver via Fedex #
8675 3615 1960

Sample Event #95

Time 0655 Calibrate PH + Scond Meter
PH= 7.0 - 6.9/7.0 Scond= 1409 - 1514/1407

Sampled Plant Inf. 5447-0913-LL1-INF-095
Sampled EW-12 5447-0913-EW-12-095
Sampled EW-17 5447-0913-EW17-095
Sampled ~~Plant~~ Eff - 5447-0913-~~Eff~~ Eff-095

ID	Time	PH	Scond	Temp	VOC's	Explosives	Nitrates
INF	826	6.96	513	13.1	3		
EW12	0822	6.97	526	15.0	3		
EW17	0824	6.99	501	13.6	3		
Eff	0828	8.12	513	13.7	3		2

Samples Sent to Test America Burlington Via Fedex # 8675 3615-1950

Nitrate Samples Sent to Test America Denver Via Fedex # - 8675 3615 1960

Temp - 56°

Wind - 97%

Humidity Calm

9-3-2013 Sample Event LL-4

Time 0655 Calibrated PH + Scond Meters

PH = 7.0 - 6.9/7.0 Scond = 1469 1544/1407

Sampled Plant Inf 5447-0913-LL4-INF
Sampled Plant Eff 5447-0913-LL4-Eff

ID	Time	PH	Scond	Temp	VOC's	Explosives	Nitrates
INF	0850	7.19	578	14.1	3		
Eff	0852	8.13	702	13.7	3		2

Sampled Sent to Test America Burlington
via Fedex # 8675 3615 1950

Nitrates Sent to Test America Denver
VIA Fedex # 8675 3615 1960

Temp - 56°

Humidity - 98%

Wind - Calm

Appendix C
Reference Sheet
Data Validation Qualifiers
Drinking Water Standards

Data Qualifiers and Drinking Water Standards Reference Sheet
Former Nebraska Ordnance Plant, Mead, Nebraska

Any qualifiers (i.e. U, J, or R) listed after a result are assigned during the data validation process. Data validation is a procedure which involves the review of quality control data provided by the laboratory. This review is followed by the assignment of data qualifiers (if necessary) which indicate the reliability of a result to the reader. Data validation is performed by a chemist employed outside of the laboratory or associated government installations to ensure accuracy in data reporting. A description of qualifiers is provided below.

No qualifier

- If a result has no assigned qualifier, the contaminant was detected, and the reader can be confident that the concentration is exact.

"U"

- A result followed by a "U" qualifier means that the contaminant was undetected, or not detected by the instrument.

"UJ"

- A result followed by a "UJ" qualifier means that the contaminant was not detected, but the associated detection level is not certain (estimated). For example, if a value is followed by a "UJ", the contaminant was not detected, but the associated detection level is in question. The detection level is in question because one or more of the laboratory quality control indicators do not meet acceptance criteria. The amount that the indicator fell outside of the criteria may be used as a rough estimate of how much the actual detection level differs from the stated one. Typically, this is a 10-30% difference.

"UR"

- A result followed by a "UR" qualifier means that the contaminant was not detected, but there is strong doubt that the associated detection level is accurate. For example, if a value is followed by a "UR", the contaminant was not detected, but the associated detection level is in strong doubt. The detection level is in doubt because results are unacceptable for a quality control indicator. In this case, the detection level cannot be estimated.

"J"

- A result followed by only a "J" qualifier means that the contaminant was detected, but there is some question that the stated concentration is exact. For example, if a result is "0.5 J", the contaminant was detected, but there is some question that the concentration is exactly 0.5. A "J" qualifier may be applied for two reasons: (1) the contaminant was detected below the reporting limit; or (2) the contaminant was detected, but one or more quality control indicators did not meet acceptance criteria. The reporting limit is equal to the concentration of the lowest standard used by the laboratory to calibrate the instrument. The reporting limit is the minimum concentration that can be stated with complete confidence.

“R”

- A result followed by only an “R” qualifier means that the contaminant was detected, but there is strong doubt that the concentration is exact. For example, if a result is “0.5 R”, the contaminant was detected, but there is strong doubt that the concentration is exactly 0.5. The concentration is in doubt because results are unacceptable for a quality control indicator. In this case, the detected concentration cannot be estimated. For comparison purposes, detected results are reported in the results letters with available Environmental Protection Agency drinking water standards. These standards include the maximum contaminant level (MCL) and various health advisories (HA). A description of the drinking water standards is provided below.

“MCL”

- The maximum contaminant level is the highest concentration of a contaminant that is allowed in drinking water. Maximum contaminant levels are enforceable Federal standards.

“HA”

- Health advisories provide estimates of acceptable drinking water concentrations for a chemical substance based on health effects information. Health advisories are not enforceable Federal standards, but serve as a technical guidance to assist Federal, State, and local officials.

Appendix D

Analytical Results on Compact Disc Summary Forms and Raw Data

Appendix F

Historical Detections spreadsheet of TCE and RDX for Monitoring Wells, Water Supply Wells and Surface Water Locations (on CD)