FINAL Groundwater Monitoring Report

for the October 2005 Sampling Event Contract F41624-03-D-8597 Task Order 0116

Air Force Plant 59

Johnson City, New York

Prepared for:

Air Force Center for Environmental Excellence and Aeronautical Systems Center



Prepared by:

Earth Tech, Inc. 675 North Washington Street, Suite 300 Alexandria, Virginia 22314

January 2006

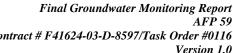


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DISCLAIMER

This Final Groundwater Monitoring Report for the October 2005 Sampling Event has been prepared for the United States Air Force (USAF) by Earth Tech for the purpose of monitoring the effects to groundwater from the soil removal action performed by Earth Tech in July 2005 at Air Force Plant 59 (Earth Tech, 2005). Acceptance of this report in performance of the contract under which it is prepared does not mean that the USAF adopts the conclusions, recommendations, or other views expressed herein, which are those of Earth Tech only and do not necessarily reflect the official position of the USAF.

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PREFACE

This Final Groundwater Monitoring Report for the October 2005 Sampling Event has been prepared by Earth Tech to describe field and laboratory operations conducted as part of the groundwater monitoring at Air Force Plant 59 (AFP 59), Johnson City, New York. Fieldwork followed guidelines set forth in the Final Work Plan for Groundwater Monitoring at AFP 59 (Earth Tech, 1998), the Air Force Center for Environmental Excellence (AFCEE) Model Work Plan (USAF, 1996), and the AFCEE Model Field Sampling Plan, Version 1.1 (USAF, 1997). All work was completed under AFCEE Contract Number F41624-03-D-8597, Task Order 0116. The groundwater monitoring is being conducted to accomplish the following objective:

To monitor the effects to groundwater from the soil removal action performed by Earth Tech in July 2005 (Earth Tech, 2005). The excavation activities were designed to remove soil containing trichloroethene (TCE) from the soil pile located against the western wall of the East Basement (Figure 2-1).

The AFCEE Restoration Team Chief is John Glass. The Air Force Aeronautical Systems Center Integrated Product Team Chief is John Doepker. The Earth Tech Project Manager is Dave Parse.

Approved:

Ken Vinson Vice President Program Manager



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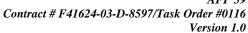






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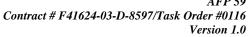
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LIST OF ACRONYMS AND ABBREVIATIONS

AFCEE Air Force Center for Environmental Excellence

AFP 59 Air Force Plant 59

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

COPCs Chemicals of Potential Concern

1,1-DCA 1,1-Dichloroethane
1,1-DCE 1,1-Dichloroethene
cis-1,2-DCE cis-1,2-Dichloroethene
trans-1,2-DCE trans-1,2-Dichloroethene

IRP Installation Restoration Program

LTM Long-Term Monitoring

μg/L Micrograms per Liter
MDL Method Detection Limit

N/A Not Applicable
ND Non-Detect

NYSDEC New York State Department of Environmental Conservation

PCE Tetrachloroethene

QAPP Quality Assurance Project Plan

RI/FS Remedial Investigation/Feasibility Study

RL Reporting Limit

STL Severn Trent Laboratories

1,1,1-TCA 1,1,1-Trichloroethane

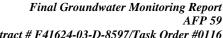
TCE Trichloroethene

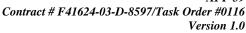
USAF United States Air Force

USEPA United States Environmental Protection Agency

VC Vinyl Chloride

VOC Volatile Organic Compound









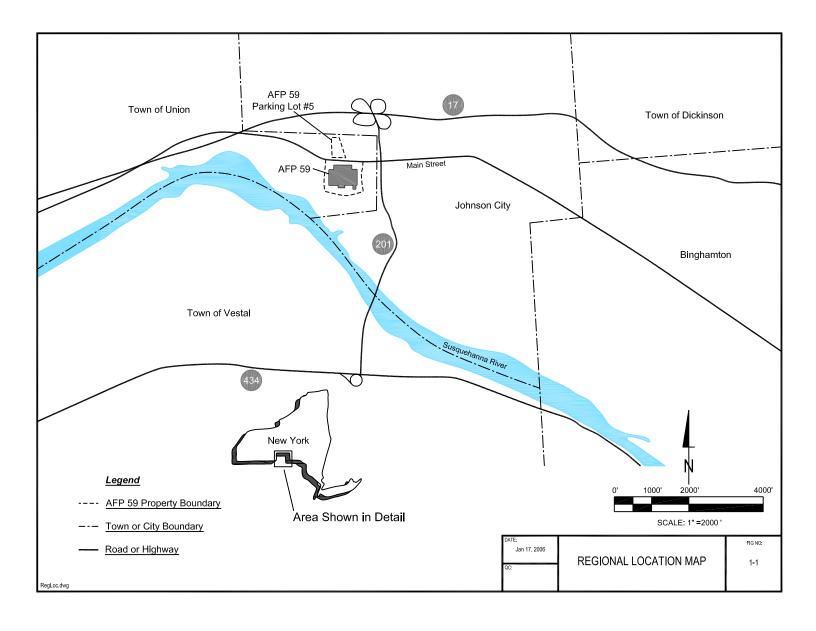
1.0 Introduction

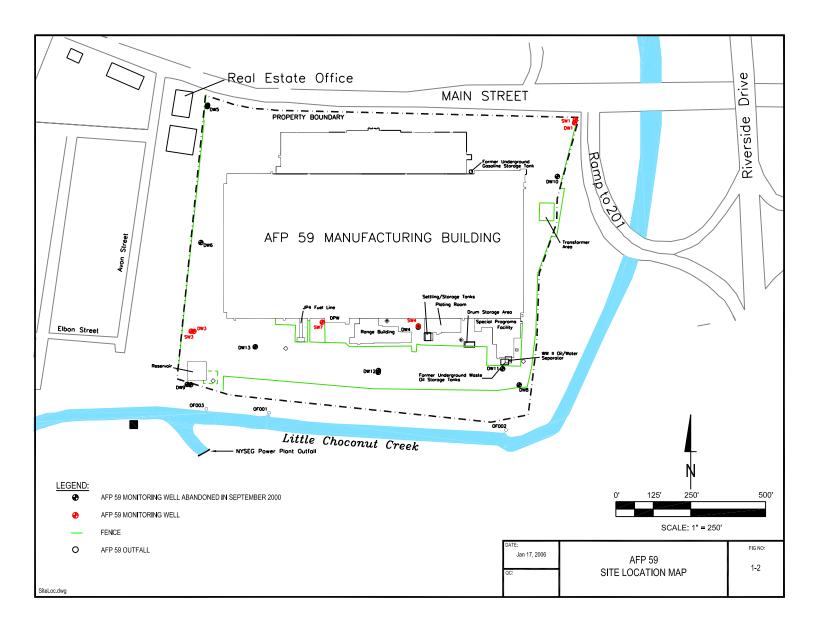
This *Final Groundwater Monitoring Report for the October 2005 Sampling Event* has been prepared by Earth Tech to describe field and laboratory operations during the October 2005 groundwater sampling event. The October 2005 sampling event was conducted as part of the groundwater monitoring at Air Force Plant 59 (AFP 59), Johnson City, New York. Earth Tech was contracted by the Air Force Center for Environmental Excellence (AFCEE) to perform two rounds of groundwater sampling at AFP 59 after the soil removal action that took place in July 2005. This report documents the findings from the first of two groundwater sampling events (the second sampling event will be conducted in October 2006). Figure 1-1 shows the regional location of AFP 59. Figure 1-2 shows the locations of buildings and monitoring wells at AFP 59. The groundwater monitoring is being conducted to accomplish the following objective:

• To monitor the effects to groundwater from the soil removal action performed by Earth Tech in July 2005 (Earth Tech, 2005). The excavation activities were designed to remove soil containing trichloroethene (TCE) from the soil pile located against the western wall of the East Basement (Figure 2-1).

All sampling activities followed protocols presented in the *Final Work Plan for Groundwater Monitoring at AFP 59* (Earth Tech, 1998), the *Final Sampling and Analysis Plan* (Earth Tech, 1994), the AFCEE *Model Work Plan* (USAF, 1996), and the AFCEE *Model Field Sampling Plan, Version 1.1* (USAF, 1997).

This report contains the following four sections: Section 1.0 provides the objectives of the sampling event, Section 2.0 provides a summary of the activities conducted during the sampling event, Section 3.0 summarizes the analytical results, and Section 4.0 presents conclusions from the investigation.







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2.0 Project Activities

The following sections summarize activities conducted during the October 2005 sampling event. Section 2.1 summarizes the rationale for selecting the analyses performed on samples collected during the investigation. Section 2.2 outlines the groundwater sampling procedures.

2.1 Sample Analysis Summary

Based on the conclusions presented in the *Final Remedial Investigation Report* (Earth Tech, 1996) and recommendations made by the NYSDEC, it was determined that volatile organic compounds (VOCs) represent the only chemicals of potential concern (COPCs) in groundwater at AFP 59. As a result, the *Record of Decision* (Earth Tech, 1999b) for AFP 59 describes the remedial alternative (i.e., the upgrade of the Camden Street Well Field groundwater treatment system) chosen as most appropriate for treating the VOCs in groundwater at AFP 59. As part of the requirements defined in the *Record of Decision* (Earth Tech, 1999b), a long-term monitoring (LTM) program was established for AFP 59. The LTM program, which is defined in the April 27, 1999 letter to the NYSDEC (Earth Tech, 1999a), was concluded with the November 2004 sampling event. The LTM included sampling the following monitoring wells: SW1, DW1, SW3, DW3, SW4, and SW7. Monitoring wells SW1 and DW1 represent upgradient (background) wells and monitoring wells SW3 and DW3 represent downgradient wells. Monitoring wells SW4 and SW7 have historically had the highest concentrations of VOCs.

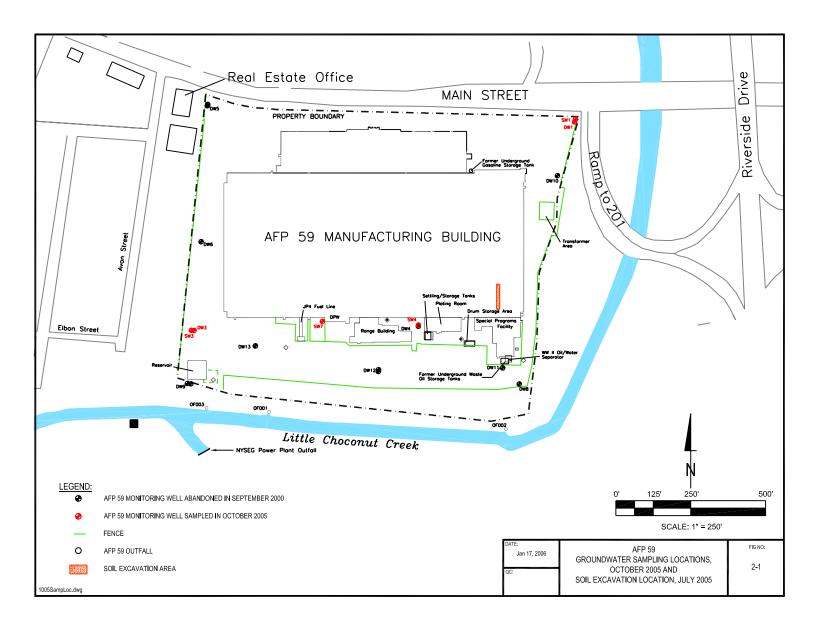
A soil pile containing TCE contamination in the East Basement of the AFP 59 facility was excavated and removed (Figure 2-1) in July 2005, three months prior to this sampling event. The soil pile was upgradient of monitoring wells SW3, DW3, SW4, and SW7. This sampling event was designed to observe what effect this removal action might have to groundwater.

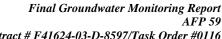
The groundwater samples collected during the October 2005 sampling event were analyzed for VOCs by United States Environmental Protection Agency (USEPA) Method SW8260. Table 2.1-1 lists the total number of groundwater samples collected for each sample type (e.g., environmental sample, duplicate sample) during the October 2005 sampling event, and Figure 2-1 shows the locations of the on-site monitoring wells sampled during the October 2005 sampling event, and the location of the TCE contaminated soil removed in July 2005.

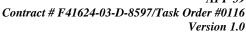
Table 2.1-1 Sample Analysis Summary

Method	Matrix	# Samples	# Equipment Blanks	# MS/MSDs	# Trip Blanks	# Field Duplicates	Total # Samples
SW8260B Volatile Organics	Groundwater	6	0(1)	2 ⁽²⁾	1	1	10

- (1) No equipment blanks were collected because disposable bailers were used during groundwater sampling.
- (2) One matrix spike and one matrix spike duplicate were taken for a total of 2 MS/MSD samples.











2.2 Field Activities

The primary field activity was the sampling of the monitoring wells shown in Figure 2-1. The following is a summary of the field activities:

- Measure the groundwater level in six on-site monitoring wells.
- Collect groundwater samples for VOC analysis from six on-site monitoring wells.

The groundwater sampling methods followed protocols presented in the *Final Work Plan for Groundwater Monitoring at AFP 59* (Earth Tech, 1998) and in the *Final Sampling and Analysis Plan* (Earth Tech, 1994), which was prepared for the remedial investigation conducted at AFP 59. The primary objective of the sampling event was to monitor the effects to groundwater from the soil removal action performed by Earth Tech in July 2005.

Groundwater sampling procedures included the following:

- 1. Measuring groundwater levels in six on-site monitoring wells,
- 2. Purging select on-site monitoring wells prior to sampling,
- 3. Measuring field-derived parameters (including temperature, pH, specific conductance, ORP, and turbidity) during monitoring well purging, and
- 4. Collecting groundwater samples from the purged monitoring wells using a disposable bailer.

Refer to the *Final Work Plan for Groundwater Monitoring at AFP 59* (Earth Tech, 1998) and the *Final Sampling and Analysis Plan* (Earth Tech, 1994) for a detailed description of all sampling activities and protocols.

Water level measurements were taken once within a single 24-hour period in six monitoring wells to determine the elevation of the water table (in the shallow zone of the aquifer) or piezometric surface (in the deep zone of the aquifer). Any conditions that affected water levels were recorded in the field log. Water level measurements were taken with an electric sounder and were measured to the nearest 0.01-foot. All measuring equipment was decontaminated according to the specifications in the *Final Sampling and Analysis Plan* (Earth Tech, 1994).

Static water levels were measured each time a monitoring well was sampled and before any equipment entered the monitoring well. If the casing cap was airtight, the air pressure within the monitoring well was allowed to equilibrate after the cap was removed and prior to measurement of the water level.

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Investigation Results 3.0

The results of the October 2005 sampling event at AFP 59 and the historical trend of contaminants in groundwater are summarized in the following sections. Field data are provided in Appendix B, chain-of-custody forms are provided in Appendix C, analytical data are provided in Appendix D, and trend analysis graphs are provided in Appendix E.

3.1 **Sampling and Analysis Results**

This section summarizes the data collection activities completed during the October 2005 sampling event, presents the laboratory analytical results, and provides a trend analysis of identified VOCs.

3.1.1 **Review of Field and Laboratory Data**

All field procedures, sample handling documentation, and laboratory procedures followed protocols presented in the Final Work Plan for Groundwater Monitoring at AFP 59 (Earth Tech. 1998) and the Final Sampling and Analysis Plan (Earth Tech, 1994). All analytical data generated as a result of the October 2005 sampling event were reported as AFCEE definitive data. Analytical protocols utilized in sample preparation, analysis, and reporting were in accordance with the specific analytical method and the guidelines given in the AFCEE Quality Assurance Project Plan (QAPP), Version 3.1 (USAF, 1998). Laboratory analyses were performed by Severn Trent Laboratories (STL), Arvada, Colorado. Analytical methods and STL's associated method detection limits (MDLs) and reporting limits (RLs) are listed in Table 3.1-1. Data validation was performed by Earth Tech.

Data flags were applied to the analytical data by the laboratory. During the data review process, Earth Tech reviewed the analytical data and associated data flags and assigned data qualifiers as per the guidelines given in the AFCEE OAPP, Version 3.1 (USAF, 1998); the data validation review is provided in Appendix D. The following data qualifiers were assigned to the data as a result of the data validation process and are defined below.

- J The analyte was positively identified, but the quantitation is an estimated value.
- U The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

3.1.2 **Data Summary**

The number and locations of groundwater samples are outlined below. Figure 2-1 shows the locations of the monitoring wells sampled during the October 2005 sampling event.



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Table 3.1-1 Analytical Parameters, Method Detection Limits, and Reporting Limits for Severn Trent Laboratories

			Wa	ter	
Parameter/Method	Analyte	MDL	Unit	RL	Unit
VOCs	1,1,1,2-Tetrachloroethane	0.17	μg/L	0.5	μg/L
SW8260B	1,1,1-TCA	0.15	μg/L	1.0	μg/L
	1,1,2,2-Tetrachloroethane	0.18	μg/L	0.5	μg/L
	1,1,2-TCA	0.30	μg/L	1.0	μg/L
	1,1-DCA	0.16	μg/L	1.0	μg/L
	1,1-DCE	0.17	μg/L	1.0	μg/L
	1,1-Dichloropropene	0.17	μg/L	1.0	μg/L
	1,2,3-Trichlorobenzene	0.24	μg/L	1.0	μg/L
	1,2,3-Trichloropropane	0.18	μg/L	1.0	μg/L
	1,2,4-Trichlorobenzene	0.26	μg/L	1.0	μg/L
	1,2,4-Trimethylbenzene	0.18	μg/L	1.0	μg/L
	1,2-Dichloroethane	0.18	μg/L	0.5	μg/L
	1,2-Dichlorobenzene	0.15	μg/L	1.0	μg/L
	1,2-Dibromo-3-chloropropane	0.28	μg/L	2.0	μg/L
	1,2-Dichloropropane	0.17	μg/L	1.0	μg/L
	1,2-Dibromoethane (EDB)	0.20	μg/L	1.0	μg/L
	1,3,5-Trimethylbenzene	0.19	μg/L	1.0	μg/L
	1,3-Dichlorobenzene	0.26	μg/L	1.0	μg/L
	1,3-Dichloropropane	0.18	μg/L	0.4	μg/L
	1,4-Dichlorobenzene	0.23	μg/L	0.5	μg/L
	1-Chlorohexane	0.20	μg/L	1.0	μg/L
	2,2-Dichloropropane	0.21	μg/L	1.0	μg/L
	2-Chlorotoluene	0.17	μg/L	1.0	μg/L
	4-Chlorotoluene	0.23	μg/L	1.0	μg/L
	Acetone	0.63	μg/L	10	μg/L
	Benzene	0.15	μg/L	0.4	μg/L
	Bromobenzene	0.20	μg/L	1.0	μg/L
	Bromochloromethane	0.18	μg/L	1.0	μg/L
	Bromodichloromethane	0.19	μg/L	0.5	μg/L
	Bromoform	0.20	μg/L	1.0	μg/L
	Bromomethane	0.24	μg/L	3.0	μg/L
	Carbon tetrachloride	0.18	μg/L	1.0	μg/L
	Chlorobenzene	0.15	μg/L	0.5	μg/L
	Chloroethane	0.46	μg/L	1.0	μg/L
	Chloroform	0.15	μg/L	0.3	μg/L
	Chloromethane	0.20	μg/L	1.0	μg/L
	Cis-1,2-DCE	0.20	μg/L	1.0	μg/L
	Cis-1,3-Dichloropropene	0.18	μg/L	0.5	μg/L



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Table 3.1-1 Analytical Parameters, Method Detection Limits, and Reporting Limits for Severn Trent Laboratories (Continued)

D (DE ())			Wa	ter	
Parameter/Method	Analyte	MDL	Unit	RL	Unit
VOCs	Dibromochloromethane	0.19	μg/L	0.5	μg/L
SW8260B	Dibromomethane	0.19	μg/L	1.0	μg/L
	Dichlorodifluoromethane	0.19	μg/L	1.0	μg/L
	Ethylbenzene	0.16	μg/L	1.0	μg/L
	Hexachlorobutadiene	0.26	μg/L	0.6	μg/L
	Isopropylbenzene	0.20	μg/L	1.0	μg/L
	Methylene chloride	0.17	μg/L	2.0	μg/L
	Methyl t-butyl ether (MTBE)	0.42	μg/L	5.0	μg/L
	MEK (2-Butanone)	0.90	μg/L	10	μg/L
	MIBK (methyl isobutyl ketone)	0.54	μg/L	10	μg/L
	n-Butylbenzene	0.22	μg/L	1.0	μg/L
	n-Propylbenzene	0.21	μg/L	1.0	μg/L
	m,p-Xylene	0.37	μg/L	2.0	μg/L
	Naphthalene	0.23	μg/L	1.0	μg/L
	o-Xylene	0.14	μg/L	1.0	μg/L
	p-Isopropyltoluene	0.20	μg/L	1.0	μg/L
	Sec-Butylbenzene	0.22	μg/L	1.0	μg/L
	Styrene	0.17	μg/L	1.0	μg/L
	Trichloroethene	0.16	μg/L	1.0	μg/L
	Tert-Butylbenzene	0.20	μg/L	1.0	μg/L
	Tetrachloroethene	0.17	μg/L	1.0	μg/L
	Toluene	0.17	μg/L	1.0	μg/L
	Trans-1,2-DCE	0.16	μg/L	1.0	μg/L
	Trans-1,3-Dichloropropene	0.21	μg/L	1.0	μg/L
	Trichlorofluoromethane	0.13	μg/L	1.0	μg/L
	Vinyl chloride	0.21	μg/L	1.0	μg/L



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The following monitoring wells were sampled:

- Shallow monitoring wells SW1, SW3, SW4, and SW7, and
- Deep monitoring wells DW1 and DW3.

3.1.3 VOCs Detected in Groundwater Samples

This section discusses the VOCs that were detected in the groundwater samples, including those samples collected from both site and background monitoring wells. The analytical results for groundwater samples collected from monitoring wells installed in the shallow and deep zones of the aquifer are discussed separately below. The analytical results for all groundwater samples collected during the October 2005 sampling event are summarized in Table 3.1-2. Appendix D provides a complete listing of all groundwater analytical results.

Shallow Zone of the Aquifer. VOCs detected in groundwater samples are shown in Figure 3-1. Table 3.1-3 summarizes all VOCs detected in groundwater samples collected from monitoring wells screened in the shallow zone, the number of samples above the laboratory MDL, the minimum and maximum concentrations detected, and the location of the maximum concentration.

VOCs were detected in the groundwater samples collected from monitoring wells SW3, SW4, and SW7 (see Figure 3-1). Chlorinated hydrocarbons were the only detected VOCs in the samples collected from the shallow zone of the aquifer. No VOCs were detected in the groundwater sample collected from monitoring well SW1.

The following maximum concentrations were detected in the groundwater sample collected from monitoring well SW4: 1,1,1-trichloroethane (1,1,1-TCA) at 2.2 μ g/L, 1,1-dichloroethane (1,1-DCA) at 1.7 μ g/L, 1,1-dichloroethene (1,1-DCE) at 1 μ g/L, tetrachloroethene (PCE) at 0.28 J μ g/L, trans-1,2-dichloroethene (trans-1,2-DCE) at 0.43 J μ g/L, trichlorofluoromethane at 1.3 μ g/L, and TCE at 43 μ g/L. The following maximum concentrations were detected in the regular and duplicate groundwater sample collected from monitoring well SW7: cis-1,2-dichloroethene (cis-1,2-DCE) at 12 μ g/L.

Deep Zone of the Aquifer. VOCs detected in groundwater samples are shown in Figure 3-1. Table 3.1-4 summarizes all VOCs detected in groundwater samples collected from monitoring wells screened in the deep zone, the number of samples above the laboratory MDL, the minimum and maximum concentrations detected, and the location of the maximum concentration.

DW3 was the only well in the deep zone of the aquifer where VOCs were detected. The following concentrations of VOCs were detected in DW3: cis-1,2-DCE at 3 μ g/L, naphthalene at 0.27 J μ g/L, and p-isopropyltoluene at 20 μ g/L. Acetone was detected, but this is a common laboratory contaminant. No VOCs were detected in the groundwater sample collected from monitoring well DW1.

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$\begin{tabular}{ll} Table 3.1-2 \\ Groundwater Data Summary for VOCs ($\mu g/L$) \\ \end{tabular}$

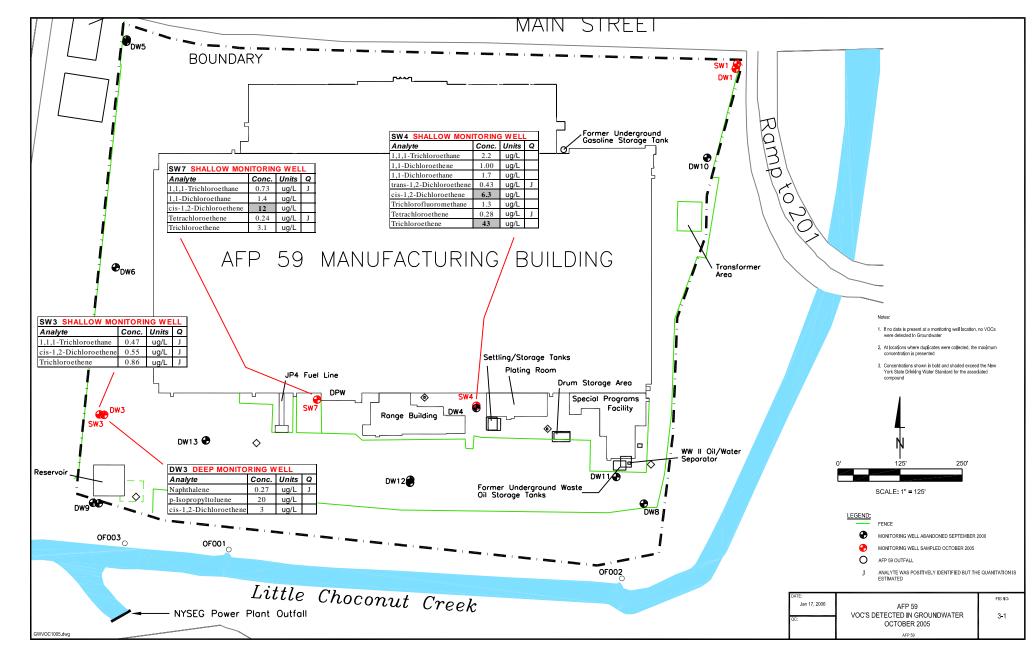
Parameters	Action Levels*	59SW1WG1	59DW1WG1	59SW3WG1	59DW3WG1	59SW4WG1	59SW7WG1	59SW7WG9 (Duplicate Sample)
1,1,1-Trichloroethane	5			0.47 J		2.2	0.69 J	0.73 J
Trichloroethene	5			0.86 J		43	3	3.1
Cis-1,2-Dichloroethene	5			0.55 J	3	6.3	12	12
1,1-Dichloroethane	5					1.7	1.4	1.4
1,1-Dichloroethene	5					1		
Tetrachloroethene	5					0.28 J	0.23 J	0.24 J
Trans-1,2-Dichloroethene	5					0.43 J		
Trichlorofluoromethane	5					1.3		
Naphthalene	10				0.27 J			
p-Isopropyltoluene	-				20			

Key: * = New York State Drinking Water Standard.

-- = Analyte was analyzed for but not detected.

Qualifiers: J = The analyte was positively identified, but the quantitation is an estimation.

Note: Concentrations in bold font and shaded cells exceed the New York State Drinking Water Standard for the associated compound.





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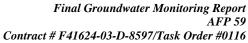
Table 3.1-3 VOCs Detected in Shallow Zone Groundwater Samples

	Number of	Range	Location of		
Analyte	Samples Above MDL	Minimum Detected	Maximum Detected	Maximum Detection	
1,1,1-Trichloroethane	4 of 5	0.69 J	2.2	SW4	
Trichloroethene	4 of 5	0.86 J	43	SW4	
Cis-1,2-Dichloroethene	4 of 5	0.55 J	12	SW7	
Trans-1,2-Dichloroethene	1 of 5	0.43 J	0.43 J	SW4	
1,1-Dichloroethane	3 of 5	1.4	1.7	SW4	
1,1-Dichloroethene	1 of 5	1	1	SW4	
Tetrachloroethene	3 of 5	0.23 J	0.28 J	SW4	
Trichlorofluoromethane	1 of 5	1.3	1.3	SW4	

 $\begin{array}{ccc} \textbf{Key:} & & \mu g/L & = & Micrograms \ per \ liter \\ & MDL & = & Method \ detection \ limit \\ \end{array}$

Qualifiers: J = The analyte was positively identified, but the quantitation is an estimation.

Note: Only analytes detected in one or more of the groundwater samples are included in this summary table.





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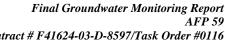
Page 3-8

Table 3.1-4 VOCs Detected in Deep Zone Groundwater Samples

	Number of	Range	Location of		
Analyte	Samples Above MDL	Minimum Detected	Maximum Detected	Maximum Detection	
Cis-1,2-Dichloroethene	1 of 2	2.1	2.1	DW3	
Naphthalene	1 of 2	0.27 J	0.27 J	DW3	
p-Isopropyltoluene	1 of 2	20	20	DW3	

Qualifiers: J = The analyte was positively identified, but the quantitation is an estimation.

Note: Only analytes detected in one or more of the groundwater samples are included in this summary table. Acetone was detected in one of two samples; however, this is a common laboratory contaminant.





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3.1.4 Trend Analysis

Table 3.1-5 presents concentrations of the most commonly detected chlorinated hydrocarbons in groundwater at AFP 59 over time. Only monitoring wells that were sampled as part of the groundwater monitoring program are included in the table. Trend analysis graphs of the wells sampled are provided in Appendix E.

In the groundwater samples collected from the shallow monitoring wells during the October 2005 sampling event, concentrations of the chlorinated hydrocarbons in monitoring well SW3 remained relatively constant (TCE and 1,1,1-trichloroethane [1,1,1-TCA]), decreased (cis-1,2-DCE), or went to non-detect (ND) (vinyl chloride [VC] and 1,1-DCA) when compared to the previous sampling event of November 2004.

The concentrations of the chlorinated hydrocarbons in monitoring well SW4 remained relatively constant, with only a slight variation when compared to the November 2004 sampling event. The concentrations of TCA (3.1 μ g/L to 2.2 μ g/L), TCE (56 μ g/L to 43 μ g/L), and trans-1,2-DCE (0.19 J μ g/L to ND) each decreased during the October 2005 sampling event. The concentration of 1,1-DCE (0.88 J μ g/L to 1 μ g/L), cis-1,2-DCE (4.1 μ g/L to 6.3 μ g/L), and 1,1-DCA (1.4 μ g/L to 1.7 μ g/L) all slightly increased compared to the November 2004 sampling event.

The concentrations of the chlorinated hydrocarbons in monitoring well SW7 had only slight variations when compared to the November 2004 sampling event. The concentrations of TCA (1.5 μ g/L to 0.73 J μ g/L), VC (0.47 J μ g/L to ND), 1,1-DCE (0.25 J μ g/L to ND) and 1,1-DCA (1.5 J μ g/L to 1.4 μ g/L) each decreased during the October 2005 sampling event. The concentrations of TCE (2.1 μ g/L to 3.1 μ g/L) and cis-1,2-DCE (10 J μ g/L to 12 μ g/L) each increased compared to the November 2004 sampling event.

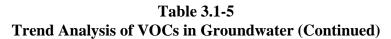
In the groundwater sample collected from deep monitoring well DW3 during the October 2005 sampling event, the concentrations of chlorinated hydrocarbons remained at ND with the exception of cis-1,2-DCE, which increased from 2.1 μ g/L in November 2004 to 3 μ g/L in October 2005. No VOCs were detected in the groundwater sample collected from deep monitoring well DW1 and shallow monitoring well SW1. This is consistent with previous sampling events.



Table 3.1-5 Trend Analysis of VOCs in Groundwater

Wall ID	Date	_	Concentra	tion of Analy	te in Groundv	vater (µg/L)	
Well ID	Sampled	TCA	TCE	VC	1,1-DCE	1,2-DCE	1,1-DCA
SW1	Sept. 1986 ¹						
	Jan. 1992 ²	0.5					
	Dec. 1994 ³						
	Nov. 1999 ³						
	May 2000 ³						
	Nov. 2000 ³						
	May 2001 ³						
	Nov. 2001 ³	0.11 J					
	May 2002 ³						
	May 2003 ³						
	Nov. 2003 ³						
	Jun. 2004 ³						
	Nov. 2004 ³						
	Oct. 2005 ³						
DW1	Jan. 1992 ²	0.6					
	Dec. 1994 ³					1.8 (c)	
	Nov. 1999 ³						
	May 2000 ³						
	Nov. 2000 ³						
	May 2001 ³						
	Nov. 2001 ³						
	May 2002 ³						
	May 2003 ³						
	Nov. 2003 ³						
	Jun. 2004 ³						
	Nov. 2004 ³						
	Oct. 2005 ³						





	Date		Concentrat	ion of Analyt	e in Groundy	vater (µg/L)	
Well ID	Sampled	TCA	TCE	VC	1,1-DCE	1,2-DCE	1,1-DCA
SW3	Sept. 1986 ¹		6				
	Jan. 1992 ²	12	9				5
	Dec. 1994 ³	0.50	1.8				
	Dec. 1995 ³	0.86	2.8			0.44 (c)	
	July 1997 ⁴		1				
	Nov. 1998 ³	0.22	0.81			0.10 (c)	
	Apr. 1999 ³	0.51	0.71			0.17 (c)	
	Nov. 1999 ³	0.29	0.9			0.39 (c)	
	May 2000 ³	0.69	1			1.29 (c)	0.55
	Nov. 2000 ³	0.43	0.9			0.22 (c)	
	May 2001 ³	0.46	0.8			1.29 (c)	0.32
	Nov. 2001 ³	0.32 J	0.5 J				
	May 2002 ³	0.42 J	0.8 J			0.46 J	
	May 2003 ³	0.584 J	0.893 J			1.37 J (c)	0.302 J
	Nov. 2003 ³	0.398 J	0.856 J			0.511 J (c)	
	Jun. 2004 ³	0.9 J	0.94 J			3.7 (c)	0.95 J
	Nov. 2004 ³	0.52 J	1.0	0.26 J		1.5 (c)	0.38 J
	Oct. 2005 ³	0.47 J	0.86 J			0.55 J (c)	
DW3	Jan. 1992 ²	0.3					0.3
	Dec. 1994 ³			0.28		36 (c)	0.26
	Dec. 1995 ³					5.2 (c)	
	April 1997 ⁴					41 (c)	
	July 1997 ⁴					49 (c)	
	Nov. 1998 ³			0.35		66 (c)	0.34
	Apr. 1999 ³			0.28	0.11	67 (c)	0.35
	Nov 1999 ³						0.11
	May 2000 ³					0.25 (t) 24.98 (c)	0.16
	Nov. 2000 ³					16.85 (c)	
	May 2001 ³					13.29 (c)	



Table 3.1-5 Trend Analysis of VOCs in Groundwater (Continued)

W-II ID	Data Cassalad		Concentrat	tion of Analy	te in Groundv	vater (µg/L)	
Well ID	Date Sampled	TCA	TCE	VC	1,1-DCE	1,2-DCE	1,1-DCA
DW3	Nov. 2001 ³					13.58 (c)	
(cont'd)	May 2002 ³					21.08 (c)	0.1 J
	May 2003 ³						
	Nov. 2003 ³					1.18 J (c)	
	Jun. 2004 ³					1.3 (c)	
	Nov. 2004 ³					2.1 (c)	
	Oct. 2005 ³					3 (c)	
SW4	Jan. 1992 ²	2	97		0.3		0.6
	Dec. 1994 ³	20	370		2.1	19 (c)	8.5
	Dec. 1995 ³	34	1200		4.9	2.1 (t) 34 (c)	6.9
	April 1997 ⁴					71 (c)	7.1
	July 1997 ⁴	23	290			15 (c)	
	Nov. 1998 ³	8.0	46	0.42	0.82	10 (c)	9.0
	Apr. 1999 ³	1.9	9.53			1.85 (c)	0.87
	Nov. 1999 ³	2.13	9.5		0.18	7.15·(c)	7.7
	May 2000 ³	2.88	8	0.11	0.21	0.49 (t) 4.3 (c)	1.67
	Nov. 2000 ³	1.14	15.2	1.49	0.29	11.18 (c)	15.25
	May 2001 ³	3.35	34		0.36	0.38 (t) 3.19 (c)	1.3
	Nov. 2001 ³	0.88	5.7	0.43 J	0.12 J	5.27 (c)	7.18
	May 2002 ³	2.54	21.63		0.34 J	2.07 (c)	0.79 J
	May 2003 ³	3.05 J	9.09 J			3.36 J (c)	1.44 J
	Nov. 2003 ³	2.03	4.63			1.93 (c)	0.93
	Jun. 2004 ³	2.8	41		0.57 J	0.11 (t) 3.3 (c)	1.3
	Nov. 2004 ³	3.1	56		0.88 J	0.19 J (t) 4.1 (c)	1.4
	Oct. 2005 ³	2.2	43		1	6.3 (c)	1.7

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Table 3.1-5 Trend Analysis of VOCs in Groundwater (Continued)

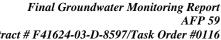
Well ID	Date Sampled		Concentrat	ion of Analyt	e in Groundv	vater (µg/L)	
- Well ID	Date Sampled	TCA	TCE	VC	1,1-DCE	1,2-DCE	1,1-DCA
SW7	Jan. 1992 ²	0.2	0.4				
	Dec. 1994 ³	4.6	15	6.2	1	0.3(t) 150(c)	33
	Dec. 1995 ³	2.2	7.9	6.8	0.80	130 (c)	20
	July 1997 ⁴	-	4			2 (c)	
	Nov. 1998 ³	2.5	11	3.4	0.65	0.28 (t) 82 (c)	12
	Apr. 1999 ³	1.23	3.95			5.25 (c)	1.46
	Nov. 1999 ³	1.01	5.7		0.19	18.8·(c)	3.38
	May 2000 ³	0.67	1.5			0.12 (t) 2.43 (c)	0.71
	Nov. 2000 ³	0.91	3.8	0.52	0.15	16.06 (c)	3.48
	May 2001 ³	1.18	1.9			1.46 (c)	0.47
	Nov. 2001 ³	0.8 J	4.7	0.85 J	0.19 J	0.13 J (t) 25.89 (c)	3.02
	May 2002 ³	0.87 J	1.65			2.79 (c)	0.47 J
	May 2003 ³	1.5 J	1.44 J			1.43 J (c)	0.409 J
	Nov. 2003 ³	0.674 J	1.64			2.76 (c)	0.509
	Jun. 2004 ³	1	1			1.1 (c)	0.3 J
	Nov. 2004 ³	1.5	2.1	0.47 J	0.25 J	10 J (c)	1.5 J
	Oct. 2005 ³	0.73 J	3.1			12 (c)	1.4

Key: Vinyl chloride μg/L Micrograms per liter VC cis-1,2-Dichloroethene (c) 1,1-DCE =1,1-Dichloroethene trans-1,2-Dichloroethene 1,2-DCE = 1,2-Dichloroethene (t) **TCA** 1,1,1-Trichloroethane 1,1-DCA =1,1-Dichloroethane TCE Trichloroethene DPW Deep production well (1) Earth Tech Fred C. Hart Associates (3)

United States Geological Services (2) Argonne National Laboratories (4) **Notes:** 1. At monitoring well locations where a duplicate groundwater sample was collected, the higher

analytical value between the normal and duplicate samples is reported in this table. 2. For 1992 data, the maximum value of either round A or B of sampling was used.

3. Concentrations in bold font exceed the New York State Drinking Water Standard for the associated compound.





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4.0 Conclusions

This section provides conclusions from analytical data generated as a result of the October 2005 sampling event. As defined in Section 1.0, the objective of this groundwater sampling event was to monitor the effects of the TCE contaminated soil removal on the groundwater at Air Force Plant 59.

The VOCs detected in groundwater samples collected from monitoring wells screened in the shallow and deep zones of the aquifer during the October 2005 sampling event are similar to the VOCs that had been detected during previous investigations. TCE, 1,1,1-TCA, 1,1-DCA, 1,1-DCE, PCE, cis-1,2-DCE, and trans-1,2-DCE were the most commonly detected contaminants during this sampling event. No VOCs were detected in background monitoring wells SW1 and DW1.

Historically, the highest concentrations of VOCs in the shallow zone of the aquifer at AFP 59 have been detected in groundwater samples collected from monitoring wells SW4 and SW7, which are located immediately downgradient of the Plating Room (the suspected source of VOCs in groundwater). In October 2005, the highest concentrations of VOCs were again detected in SW4 and SW7. The concentration of TCE detected at monitoring well SW4 was slightly less relative to the November 2004 event. The concentrations of cis-1,2-DCE detected at SW7 and SW4 and TCE at SW7 were slightly increased relative to the November 2004 sampling event. The concentrations of TCE in SW4 (43 μ g/L) and cis-1,2-DCE in SW7 (12 J μ g/L) and SW4 (6.3 μ g/L) were the only VOC detections that exceeded New York State drinking water standards in any of the wells monitored during the October 2005 sampling event.

Three VOCs were detected in the groundwater sample collected from monitoring well SW3, which was the only shallow monitoring well sampled along the western (downgradient) boundary of the site during this event. None of these detections exceeded New York State drinking water standards. Therefore, groundwater in the shallow zone of the aquifer that migrates off site toward the Camden Street Well Field complies with New York State drinking water standards.

Three VOCs were detected in the groundwater samples collected from the deep monitoring wells. Cis-1,2-DCE, naphthalene and p-isopropyltoluene were detected at DW3 below the New York drinking water standards. Therefore, groundwater in the deep zone of the aquifer that migrates off site toward the Camden Street Well Field complies with New York State drinking water standards.

A trend analysis of chlorinated hydrocarbon levels over time at AFP 59 is presented in Section 3.1.4. The October 2005 sampling event was consistent with previous events and indicates that levels of chlorinated hydrocarbons have remained relatively constant or decreased through time (see Table 3.1-5).



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The analytical data generated during the October 2005 sampling event indicate that the July 2005 soil removal action has not impacted groundwater quality at AFP 59. The October 2006 groundwater sampling event will be conducted to validate this conclusion.

APPENDIX A References

APPENDIX A REFERENCES

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- Earth Tech, 1996. Installation Restoration Program Remedial Investigation Final Remedial Investigation Report.
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- United States Air Force (USAF), 2001. Quality Assurance Project Plan, Version 3.1.
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APPENDIX B Field Data

AFP 59

MONITORING WELL SAMPLE COLLECTION FORM

1400	Site: AFP 59	6				LocID: DW	<u>/</u> ~				Date: 10 (Date: 10 (25/05	۷		
LOCATION	Project Nan	Project Name: AFP 59 GW Sampling	Sampling			Project No.: 88987.07	88987.07				Recorded B	Recorded By: Rehecked By:	d By:		
	100000 1000000														
E C	Water Quali	ty Meter Type/ID	Water Quality Meter Type/ID #: (40.: L- 0-22	16.22		Water Level	Water Level Indicator Type/ID #: 5 - 12.5 +		÷ €		PID Type/ID #:	#			
	Explosimete	Explosimeter Type/ID #:	í			Sampling Eq	Sampling Equipment: 134; (1-	زدر			Equipment I	Decon.: 🕻 🕽	Equipment Decon.: ()	Id +	
															\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
	Borehole I.D. (in) [a]:). (in) [a]:	2 jii. 6 "			Unit Borehole	nit Borehole Volume (gal/lin ft) [b]: L. S	ft) [b]: 💪	5		Initial Depth	to Water (ft) [nitial Depth to Water (ft) [c]: 6.95	3	12.59
WELL	Total Well	Total Well Depth (ft) [d]: 64.2	12.79			Water Colum	Water Column Thickness (ft) [d-c]: 47.26	€ ∱ → [o-p]	92		Borehole Vo	olume (gal) {[d	Borehole Volume (gal) {[d-c] x b}: ₹0.813.215	89.3:213	16.25
NFO	Pump Depth	Pump Depth (ff btoc): 62.00	00:			Ground Cond	Ground Condition of Well:								92:66
	Remarks:														
															313
CASING	Borehole I.D. (in) [a]:). (in) [a]:				1.5	2.0	2.2	3.0	4.0	4.3	5.0	0.9	8.0	47.76
INFO	Unit Boreho	Juit Borehole Volume (gal/lin ft) [b]:	n ft) [b]:			60:0	0.16	0.20	0.37	0.65	0.75	1.0	1.5	2.6	x 1.5
															25630
	Time	Water	Volume	Pumping	Temp		Conduc-	Ca	Turb	GRP		Re	Remarks		0 77.64
Date	(24 hr)	Level (FTOC)	Removed (Gal)	Rate (gpm)	0	Ŧ.	tivity (mS/cm)	(mg/L)	(NTU)	(mV)		(odor, c	(odor, clarity, etc.)	•	06806

310	_		_								_	
Remarks (odor, clarity, etc.)												
ORP (mV)	18	₹8	88	28	28	18	28	79	08	83	48	98
Turb. (NTU)	7	3	0	0	0	0	0	0	0	Ó	0	Q
DO (mg/L)	0.0	0.0	00	28.01	7.27	4.90	2.98	1.87	1.04	0.30	, 0'0	0.0
Conduc- tivity (mS/cm)	1.7	8.1	-	1.8	1.8	811	8.1	. s	1.0	1.8	8.1	1.8
Ħ.	6.83	26.7	6.43	86.9	86.9	6.99	6.49	8.18	6.99	6.99	6.39	6.49
Temp.	5.21	2.21			12.5	9.21	12.5 6.99	12.5	2	12.5	12.5	12.5
Pumping Rate (gpm)	~	3	~	~	}	~	3	3	٤	3	3	3
Volume Removed (Gal)	0	15	30	45	99	36	96	105	971	135	051	591
Water Level (FTOC)	13.49	17.52	17.76	17.76	17.36	17.76	17.2	17.76	13.7%	17.36	13.%	9€.€1
Time (24 hr)	5121	12 20	522	12 30	12.35	377	3421	0521	1255	1 300	30° %	1310
Date	r0/25 1215		_									ا خ

Pump Rate: <= 3 GPM Drawdown: < 0.33 ft Measurements: 3-5 min Stabilization: +/- 0.5 C, +/- 0.1 pH, +/- 3% conductivity, +/- 10% DO, +/- 10mv ORP, +/- 10% turb (<= 10 NTU ideal) for 3 consecutive

Sample ID #(s)/Time(s)	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
	3 - 40 mL glass vials	IDH	Z	Bailer	Volatiles (SW8260)
					THE PARTY OF THE P
				→	

MONITORING WELL SAMPLE COLLECTION FORM

Page of

(odor, clarity, etc.) Remarks ₹8 ORP (mV) 8 80 LocID: D C-I Project No: 88987.07 Turb. (NTU) 00 Q DO (mg/L) 00 0.0 0.0 Conduc-tivity (mS/cm) i 8,00 6.99 표 590011681 Temp. (C) 12.5 Pumping Rate (gpm) Volume Removed (Gal) 561 88 210 アノング 592 17.76 17.26 17.76 Water Level (FTOC) Project Name: AFP 59 1340 Time (24 hr) 1315 1220 LOCATION 10/25 Date

Pump Rate: <= 3 GPM Drawdown: < 0.33 ft Measurements: 3-5 min Stabilization: +/- 0.5 C, +/- 0.1 pH, +/- 3% conductivity, +/- 10% DO, +/- 10mv ORP, +/- 10% turb (<= 10 NTU ideal) for 3 consecutive

readings

AFP 59 MONITORING WELL SAMPLE COLLECTION FORM

Project Name: AFP 59 GW Sampling	2707 577	Project No.: 88987.07							
					Recorded By	Recorded By: Rehecked By:	<i>f.</i>		
		/ater Level Indicator Type/ID #: >< (sf)# Sa/, ' _	st	PID Type/ID #:				
	S	Sampling Equipment: B	B=: (c-		Equipment D	econ.: 🛵	Equipment Decon.: しょうこっのキロコ		
	0.8	nit Borehole Volume (gal/lin ft) [b]:	ft) [b]:	2.6	Initial Depth t	Initial Depth to Water (ft) [c]: /6.40	06.31		
	28.57 W	/ater Column Thickness (ft) [d-c]: /	[q-c]: /	11.67	Borehole Vol	ume (gal) {[d-c]	Borehole Volume (gal) {[d-c] x b}: 30.37-5 -9	162	Lt.
INFO Pump Depth (ft btoc):		round Condition of Well:							4.52
Remarks:									16.90
									11.63
CASING Borehole I.D. (in) [a]:		1.5 2.0	2.2	3.0 4.0	4.3	5.0	0.9	8.0	•
INFO Unit Borehole Volume (gal/lin ft) [b]:		0.09 0.16	0.20	0.37 0.65	0.75	1.0	1.5	2.6	

Remarks (odor, clarity, etc.)		and the state of t											
ORP (mV)		115	96	91	કુદ	98	85	85					
Turb.		8	_	0	0	O	Ó	0					
DO		0.0	0.0	0.0	0.0	00	00	0.0					
Conduc- tivity	(mS/cm)	2.0	2.0	2.0	2.0	2.0	2.6	2.0					
둅	i	6.4%	6.05	6.95	96.9	96.9	6.95	46.9			A	- 4	
Temp.	1	(,,)	13.5	13.5	13,5	13,5	13.5	13.5	1201		**		
Pumping Rate	(mdg)	7	2	3	3	3	3	3	1901 7565			346	•
Volume Removed	(Gal)	0	15	30	qr	99	75	40	رادم				
Water Level	(FT0C)	16.90	18.06	1405 18.06	18.06	20.81	16.06	18.06	Jus 5	9			
Time (24 hr)		1355	1400	1405	9151	SILI	1420 16.06	1425	1475				
Date	1	10/25)		

Pump Rate: <= 3 GPM Drawdown? < 0.33 ft • Measurements: 3-5 min Stabilization: +/- 0.5 C, +/- 0.1 pH, +/- 3% conductivity, +/- 10% DO, +/- 10m ORP, +/- 10% turb (<= 10 NTU ideal) for 3 consecutive readings

Section 2					
Sample ID #(s)/Time(s)	No. Containers/Volume/Type	Preserv.	Preserv. Filter (Y/N)	Pump OR Bailer	Parameter(s)
	3 - 40 mL glass vials	모	Z	Bailer	Volatiles (SW8260)
				*	

AFP 59

MONITORING WELL SAMPLE COLLECTION FORM

	Site: AFP 59	LociD: 57.7	アース				Date: (0 /	Date: (0/25/05		
LOCATION	AFP 59 GW Sampling	Project No.: 88987.07	8987.07				Recorded By	Recorded By: Rechecked By:	By:	
	Water Quality Meter Type/ID #: Hith V-Z	Water Level In	Water Level Indicator Type/ID #: 50 - 5	# 50/1-1	د ر		PID Type/ID #:	1		
EQUIPMENT		Sampling Equ	Sampling Equipment: 84://	100			Equipment D	6:7 ∵uo>	Equipment Decon (% cine + DI	Ä
								S	1	
	Borehole I.D. (in) [a]:	Unit Borehole	Unit Borehole Volume (gal/lin ft) [b]: 2.6	m [b]: 2.0	Š		Initial Depth	to Water (ft) [c	initial Depth to Water (ft) [c]: 16.38	
WELL	Total Well Depth (ft) [d]: 2 9.5 %	Water Column	Water Column Thickness (ft) [d-c]: [3.20]	d-c]: 13.	0,		Borehole Vol	lume (gal) {[d-	Borehole Volume (gal) {[d-c] × b} 34.32≻3 =103	23:103
INFO		Ground Condition of Well:	tion of Well:							
-	Remarks:									
CASING	Borehole I.D. (in) [a]:	1.5	2.0	2.2	3.0	4.0	4.3	5.0	6.0	8.0
INFO	Unit Borehole Volume (gal/lin ft) [b]:	60:0	0.16	0.20	0.37	0.65	0.75	1.0	1.5	2.6
	The second secon									

24.58 16.37 13.20

Remarks (odor, clarity, etc.)		A A A A A A A A A A A A A A A A A A A						the control of the co	i a i a a a a a a a a a a a a a a a a a		
ORP (mV)	821	123	721	123	621	125	27 1	£21			
Turb. (NTU)	17	Q	0	0	0	9	Q	Ø			
DO (mg/L)	3,53	3.32	3.26	3.21	5.13	309	30	3.02			
Conduc- tivity (mS/cm)	1.9	1.4	١. ۴	1.9	4.1	1.4	61	1.4			
Hd	7.01	306	7.03	7.03	7.02	201	7.01	7.01	USW PSW		
Temp. (C)	18.6	9.81	9.81	18.6 7.03	9.81	20€ . 9.81	981	18.6			
Pumping Rate (gpm)	W	~	3	~	~	n	ž.	3	59523261		
Volume Removed (Gal)	0	T.	30	45	97	75	90	105	anded 59		
Water Level (FTOC)	64.91	16.53	16.45	16.45	16.48	16.45	16.45	16.45	San		
Time (24 hr)	27 93	5791	£31	1435	93.91	5491	1650	1655	1710		
Date	22 20 20 10 10 10 10 10 10 10 10 10 10 10 10 10									>	

Pump Rate: <= 3 GPM Drawdown: < 0.33 ft Measurements: 3-5 min Stabilization: +/- 0.5 C, +/- 0.1 pH, +/- 3% conductivity, +/- 10% DO, +/- 10mv ORP, +/- 10% turb (<= 10 NTU ideal) for 3 consecutive

		-	7:14 (V/NI)	zolice of amire	(a)sopomosog
Sample ID #(s)/Time(s)	No. Containers/volume/1ype	Preserv.	Preserv. Filter (T/N)	rump on paller	rafalletet(s)
(0)-1 (1C-1) (1C-1)	3 - 40 mL glass vials	IZH	Z	Bailer	Volatiles (SW8260)
1410 2128274 4787622					
	a di			→	

AFP 59 MONITORING WELL SAMPLE COLLECTION FORM

	Site. AFP 50	Locid: DES	2				Date: [0/	Date: 10/27/05	5	
LOCATION	Project Name: AFP 59 GW Sampling	Project No: 88987.07	38987.07				Recorded By	Recorded By: Checked By:	3y:	
	Water Quality Meter Type/ID #: []	Water Level In	Water Level Indicator Type/ID #:	•	201:157		PID Type/ID #:	1		
EQUIPMENT	Explosimeter Type/ID #:	Sampling Equ	Sampling Equipment: 3 .: (.io_			Equipment D	scon.: 6.	Equipment Decon.: Line D I	DI
	Borehole I.D. (in) [a]:	Unit Borehole	Unit Borehole Volume (gal/lin ft) [b]:	t) [b]: C S			Initial Depth t	o Water (ft) [c]	nitial Depth to Water (ft) [c]: [1.9 %	
WELL	Total Well Depth (ft) [d]: 86 26	Water Column	Water Column Thickness (ft) [d-c]: 74,76	1-0]: 74.	9£		Borehole Vol	nme (gal) {[d-c	Borehole Volume (gal) {[d-c] x b}: [12,17%] = 336, [12	13:336
INFO	Pump Depth (ft bloc):	Ground Condition of Well:	ition of Well:							
	Remarks:									
CASING	Borehole I.D. (in) [a]:	1.5	2.0	2.2	3.0	4.0	4.3	5.0	0.0	8.0
INFO	Unit Borehole Volume (gal/lin ft) [b]:	60:0	0.16	0.20	0.37	0.65	0.75	1.0	1.5	2.6

-														
Remarks	(odor clarity etc.)	(San (Same (San))												The second section of the second section of the second section of the second section s
ORP	(\m)	(AIII)	- 4/	-43	0)-	<i>≥9-</i>	89-	-72	56-	92 -	82-	28-	/3-	-83
Turb.	(EN	(0111)	19	15	3	1	0	Q	0	9	0	0	0	0
2	(5m)	(1119/L)	0.0	00	0.0	00	0.0	00	00	0.0	0.0	00	0.0	00
Conduc-	tivity	(mS/cm)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1,5	1.5	1.5
	핊		7.02	2110	7:11	7:1	7.11	7.12	7.12	217	7.13	7.15	7.13	7.13
Temp	<u>.</u> (2	3.00	(3.8)	13.50	13.8	13.8	13.8	13.8	8:21	13.8	13.8	8.81	13.8
Pumping	Rate	(mdb)	~	~	~	~	~	.~	~	, ~	~	~	3	3
Volume	Removed	(Gal)	0	15	26	47	07	75	90	Sal	126	135	156	591
Water	Level	(FTOC)	1.9%	11.96	11.96	11.97	11.97	11.96	76.11	73.11	76:11	11.96	11.96	96.11
- Ti	1116	(24 nr)	1045	1050	5591	100	1105	1110	511	1(20	5211	1130	1135	0411
	Date													

Pump Rate: <= 3 GPM Drawdown: < 0.33 ft Measurements: 3-5 min Stabilization: +/- 0.5 C, +/- 0.1 pH, +/- 3% conductivity, +/- 10% DO, +/- 10mv ORP, +/- 10% turb (<= 10 NTU ideal) for 3 consecutive

readings					*****
Sample ID #(s)/Time(s)	No. Containers/Volume/Type	Preserv.	Preserv. Filter (Y/N)	Pump OR Bailer	Parameter(s)
	3 - 40 mL glass vials	HCI	N	Bailer	Volatiles (SW8260)
	An Arina de Maria				
				→	

Page 2 of 2

AFP 59 MONITORING WELL SAMPLE COLLECTION FORM

	LociD: DC-3	Project No: 88987.07	Volume Pumping Temp. Conduc- DO Turb. ORP	Removed Rate (C) PH (YNTY (mg/L) (NTU) (Gal) (Gal) (gpm) (C) (C)	180 3 13.8 7.13 1.5 0.0 0 -84	0 00 51 812 831 8 561 1	210 3 13.8 7.13 1.6 0.0	0 00 9.1 8.13 8.51 5 225	240 3 13.8 7.13 1.6 0.0 0	255 3 13.8 7.13 1.6 0.0 0	0.0 3.1 81.4 8.51 8	0 00 91 812	300 3 13.8 7.13 1.6 0.0 0	7.13 1.6 0.0 0	138 7.13 1.6 6.0	Sended 590 W3461						
			Pumping	Rate (gpm)	3	8	3	~	3	3 1	1 8 04	81 8	3	3.	3 13	 65 pi						
Site: AFP 57	Project Name: AFP 59		Time Water	(24 hr) Level (FTOC)	96.11 Shil	1150 11.96	1155 11.96	1200 11.96	11.96	 	1215 11.96	1220 11.96	1225 11.96		1235 11.96	 1245						
MOITAGO	200			Date	10/27									=	-							

Pump Rate: <= 3 GPM Drawdown: < 0.33 ft Measurements: 3-5 min Stabilization: +/- 0.5 C, +/- 0.1 pH, +/- 3% conductivity, +/- 10% DO, +/- 10mv ORP, +/- 10% turb (<= 10 NTU ideal) for 3 consecutive

readings

AFP 59 MONITORING WELL SAMPLE COLLECTION FORM

Project Name: AFP 59 GW Sampling Project No.: 88987.07 Project Name: AFP 59 GW Sampling Project No.: 88987.07 Water Quality Meter Type/ID #: ##		Sire: AED 50	1 och 5 74	74			Date	Date: 10/ 34/05	50,	
Project No.: 83987.07 Project No.: 83987.07 Water Quality Meter Type/ID #: \$\insert \cdot \cdo	LOCATION									
Water Quality Meter Type/ID #: Sempling Equipment: Sempling Equip			Project No.: 1	38987.07			Recorde	Recorded By: Canecked By:	d By:	
Water Quality Meter Type/ID #: He.'Se U-22 Water Level Indicator Type/ID #: Sempling Equipment: Remove It is the condition of Well: Remarks: Sempling Equipment: Remove It is the condition of Well: Remarks: Remarks: Remarks: Remarks: Remarks: Remove It is the condition of Well: Remarks: Remark										
Explosimeter Type/ID #: Sampling Equipment: R ** (1.2.6) Borehole I.D. (in) [a]: Afr. 8 ** (1.2.6) Borehole I.D. (in) [a]: Afr. 8 ** (1.2.6) Total Well Depth (ff btoc): Water Column Thickness (ft) [d-c]: Remarks: Ground Condition of Well: Remarks: 1.5 2.0 2.2 3.0	FACTOR	-	Water Level In	ndicator Type/ID	£ 5.1.	1 st	PID Type/ID #:	e/ID #:		
Borehole I.D. (in) [a]: Afr. 8" Unit Borehole Volume (gal/lin ft) [b]: 2.6 Total Well Depth (ft) [d]: 27.52. Water Column Thickness (ft) [d-c]: 16.41 Pump Depth (ft btoc): Ground Condition of Well: Remarks: 1.5 2.0 Borehole I.D. (in) [a]: 2.2 3.0		Explosimeter Type/ID #:	Sampling Equ	ipment: 13 e	.(Equipme	Equipment Decon.: 2.3.	4-1-6	IDI
Borehole I.D. (in) [a]: 27.52 Unit Borehole Volume (gal/lin ft) [b]: 2.6 Total Well Depth (ft) [d]: 27.52 Ground Condition of Well: Ground Condition of Well: Remarks:										
Total Well Depth (ft) [d]: 27.52- Water Column Thickness (ft) [d-c]: I.6.41 Pump Depth (ft btoc): Ground Condition of Well: Remarks: Remarks: Borehole I.D. (in) [a]: 2.0 2.2 3.0		Borehole I.D. (in) [a]:	Unit Borehole	Volume (gal/lin fl	9.2 :[q] (Initial De	initial Depth to Water (ft) [c]:	[c]: [[.,[[
Pump Depth (ff btoc): Ground Condition of Well: Remarks: 1.5 2.0 2.2 3.0	WELL	Total Well Depth (ft) [d]: 27.52	Water Columr	Thickness (ft) [מ	्।: 16.4		Borehole	Borehole Volume (gal) {[d-c] × b}: なんみょう :12	d-c] x b}: 42.4	52.3:12
Remarks: Borehole I.D. (in) [a]: 1.5 2.0 2.2 3.0	INFO		Ground Condi	ition of Well:						
Borehole I.D. (in) [a]: 1.5 2.0 2.2 3.0		Remarks:								
Borehole I.D. (in) [a]: 2.2 3.0 3.0										
	CASING	Borehole I.D. (in) [a]:	1.5	2.0	2.2		4.3	5.0	6.0	8.0
Unit Borehole Volume (gal/lin ft) [b]: 0.20 0.16 0.20	INFO	Unit Borehole Volume (gal/lin ft) [b]:	60:0	0.16	0.20	0.37 0.6	5 0.75	1.0	1.5	2.6

6

Remarks (odor, clarity, etc.)	water scens fouls turbid											
ORP (mV)	100	86	87	€ 01	801	911	٤11	511	911	811		
Turb. (NTU)	-5	2 Σ	051	49	84	94	94	54	94	3 h		
DO (mg/L)	00	0'0	0.0	0.0	00	0.0	0.0	0.0	00	15.0		
Conduc- tivity (mS/cm)	77	7.7	1.1	8.1	81	8.1	5.1	8.1	8.1	8.1	13	
Hd	96.9	6.95	86.9	18.9	28.9	28.9	28.9	28.9	58.9	35.9	12mm	
Temp. (C)	9:61	17.5	5.41	17.6	9:61	13.6	9.21	9.61	9.41	9.21	1565	
Pumping Rate (gpm)	W	٤	ح	3	§	~	٤	\$	8	£	"	
Volume Removed (Gal)	٥	Ē	30	sh.	09	5£	96	SOÏ	120	135	Semple	•
Water Level (FTOC)	13.87	15.62	18.09	88.91	82.91	84.91	86.71	86.91	82.91	16.78		
Time (24 hr)		1320	1325	05 & 1	1335	02 81	1345	1350	1355	1.400	1410	
Date	2151 COXCJON	-		er (Artis)	To Many a	***************************************		-costro	. . .	al al section	6.)

Pump Rate: <= 3 GPM Drawdown: < 0.33 ft Measurements: 3-5 min Stabilization: +/- 0.5 C, +/- 0.1 pH, +/- 3% conductivity, +/- 10% DO, +/- 10m ORP, +/- 10% turb (<= 10 NTU ideal) for 3 consecutive

readings					
Sample ID #(s)∕Time(s)	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
	3 - 40 mL glass vials	모	z	Bailer	Volatiles (SW8260)
					
				→	

AFP 59 MONITORING WELL SAMPLE COLLECTION FORM

	Site: AFP 59	LociD: 50-7	7-7				Date: (0 ,	Date: 10/27/05		
LOCALION	Project Name: AFP 59 GW Sampling	Project No.: 88987.07	87.07				Recorded By	Recorded By: Checked By:	3y:	
i i	Water Quality Meter Type/ID #: # U-22	Water Level Indicator Type/ID #: S-(*: 51	cator Type/ID #:	5-15.	z		PID Type/ID #:	#		
		Sampling Equipment: 84:6	nent: B.c.	10-			Equipment Do	Equipment Decon.: (2)	· · · · · ·	DI
								V		
	Borehole I.D. (in) [a]: 2-in. 8 "	Unit Borehole Vo	Unit Borehole Volume (gal/lin ft) [b]: 🔰 💪	9 2 :[q]			Initial Depth t	Initial Depth to Water (ft) [c]: / 4.4/	14.4	
WELL	Total Well Depth (ft) [d]: 29.85	Water Column T	Water Column Thickness (ft) [d-c]: 4,44	61	44		Borehole Volu	ume (gal) {[d-c	ol x b}: 3 7. 5	Borehole Volume (gal) {[d-c] x b}: 3 子 5
INFO	Pump Depth (ft btoc):	Ground Condition of Well:	n of Well:		0.00					
	Remarks:									
CASING	Borehole I.D. (in) [a]:	1.5	2.0	2.2	3.0	4.0	4.3	5.0	0.9	8.0
INFO	Unit Borehole Volume (gal/lin ft) [b]:	60:0	0.16	0.20	0.37	0.65	0.75	1.0	1.5	2.6

F	_											
Remarks (odor, clarity, etc.)												
ORP (mV)	158	140	137	521	136	881	139	(4)	141			
Turb. (NTU)	140	3.65 200 40	25	6	2	0	0	0	0	6		
DO (mg/L)	3.70	39.8	89′≤	3,73	5.72	3.72	3.70	3.66	3.65	クハモ		
Conduc- tivity (mS/cm)	15	51	5'1	57	1.5	1.5	1.5	1.5	1.5	3n = m5 65		
Hd	16.9	66.9	10.4	7.05	3.04	7.03	7.03	703	7.03	ø 19		
Temp. (C)	16.7	8.91	8.9/		8.71	8.91	8.71	6.91	6.91	りかとつり		
Pumping Rate (gpm)	3	~	2	8	3	~	3	3	3	59		
Volume Removed (Gal)	0	يا	30	4 5	09	36	90	105	120	anoled	*	
Water Level (FTOC)	14.41	94.41	94.41	14.46	14.46	14.41	14.46	17.16	14.46	542		
Time (24 hr)	0241	1725	4430	1435	0441	1445	1450	1455	00\$1	1510		
Date	£7/01							ند شدند. د				>

Pump Rate: <= 3 GPM Drawdown: < 0.33 ft Measurements: 3-5 min Stabilization: +/- 0.5 C, +/- 0.1 pH, +/- 3% conductivity, +/- 10% DO, +/- 10m ORP, +/- 10% turb (<= 10 NTU ideal) for 3 consecutive readings

Sample ID #(s)/Time(s)	No. Containers/Volume/Type	Preserv.	Filter (Y/N)	Pump OR Bailer	Parameter(s)
	3 - 40 mL glass vials	달	Z	Bailer	Volatiles (SW8260)
				→	

APPENDIX C Chain-of-Custody Forms

Chain of Custody

Laboratory	violect 1	ſ	Analysis	Chain of Custody No.
1572		127		1000
Address	Point of	Point of Contact / Phone No.	2	
MESS MARROW STREET		ln	928	
97	60002	7416 Contact / Phone No. 7416 6 7 7 7 7 7 6 7 7 9 9 9 9 9 9 9 9 9 9	3 17	To dans
ERPIMS Information		Other Sample Information	- 5	Service Control of the Control of th
LOCID SBD SED SACODE SAMPNO	Sample I.D.	Date Time Matrix No. of Cooler No.	79N	Comment
DW I	I 3mimabs	10/25 1340 WK 3		10 P P P P P P P P P P P P P P P P P P P
5 7 7 7 7 7 7 7 7	I 70100565	10/25 1435 WE 3	X	
\$ \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1700200565	10/5 1216WE 9	· ×	MS/WS>
Dw 3	I y m 2 m a b 5	1017 1245 WE 3	×	
5 H MS	I 300,005 55	5 70 9141 6401	×	
	APPERIOR DE LA COMPANION DE LA	De la Company	12 (X)	
5007	IBMLMS65	1 10/7 15/0 W. 3	×	
567	63 swtms63	10/21 1510 WE 3	X	
TRIT BLAWA	7210127	10/20 1540 WB 3		September 1
	A THE THE PARTY AND ADDRESS OF THE PARTY AND ADDRESS OF THE PARTY AND ADDRESS OF THE PARTY AD	Half the	004/62/01	
			Control of the Contro	
1. Religiques BY Company	SO/EZ/OZ	Timo 1900 1: Received By Company		Date Timo
2. Relinquished By / Company	Date	Time 2. Received By / Company	THE PROPERTY AND ADDRESS AND A	Date Time
3. Relinquished By / Company	Date	Time 3. Received By / Company		Date Time
4. Relinquished By / Company	Date	Time 4. Rocoived By / Company		Dato Timo.
Comments	-			Shipmant Mothod/Autolil No.

DISTRIBUTION: WHITE - Stays with Sample; CANARY - Returned to Client with Report: PINK - Field Copy

APPENDIX D Data Validation Review Summary and Groundwater Analytical Data

Data Validation Review October 2005 Sampling Event SDG D5J280407 Air Force Plant 59 (AFP-59), New York

Prepared by:

Earth Tech, Inc. 675 N. Washington Street, Suite 600 Alexandria, Virginia 22314

November 2005

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Section		
1.0	INTRO	DUCTION
2.0	VOLA'	TILE ORGANIC CONSTITUENTS
	2.1	Holding Times
	2.2	Calibration
	2.3	Laboratory Control Samples
	2.4	Blanks
	2.5	Matrix Spike / Matrix Spike Duplicates
	2.6	Surrogate Recovery
	2.7	Duplicates
	2.8	Summary

TABLES

1	Data Qualifiers
2	Field Sample ID/Lab Sample ID Cross Reference
3	Duplicate Comparison
4	Summary of Detected VOCs in Monitoring Well Samples

APPENDICES

A Hand-Annotated Data Summary Forms

1.0 INTRODUCTION

This data validation review pertains to groundwater samples collected in October 2005 at Air Force Plant 59 (AFP 59). Parameters evaluated in groundwater samples included the total concentration of volatile organic constituent (VOC). The samples were analyzed by Severn Trent Laboratories (STL) in Arvada, Colorado.

Data validation review is an after-the-fact technical review of analytical data whereby the quality and usability of the data are determined based on a set of predefined criteria. These criteria depend upon the type of data involved and the purpose for which those data were collected. Data validation review assesses whether and to what extent specified criteria were met, and places restrictions on data use based on quality parameters. The data validation review process can range from a cursory review used to detect out-of-control situations to a detailed evaluation, depending on the analytical protocol, the associated quality control samples collected, and the intended data use.

Specific criteria for data quality review may include, but are not limited to: technical holding times, analysis of blanks, surrogate spike recovery, analysis of duplicates, and reported practical quantitation limits (PQLs). Where applicable, the recommendations of USEPA SW-846 Test Methods for Evaluating Solid Waste (Third Edition, December 1996) or USEPA Methods for Chemical Analysis of Water and Wastes (Revised March 1983) analytical method requirements, USEPA CLP National Functional Guidelines for Organic and Inorganic Data Review (February 1994, Functional Guidelines) data review guidance, and professional judgment.

Table 1 presents the data qualifiers applied during this review effort and their meanings.

Table 1
Data Qualifiers

Qualifier	Description
J	This is an estimated value.
U	The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

Table 2 provides a cross-reference list for field sample IDs and lab sample IDs from STL.

Table 2
Field Sample ID/Lab Sample ID Cross Reference
Lot D5J280407

Field Sample ID	Lab Sample ID	Field Sample ID	Lab Sample ID
59DW1WG1	D5J280407-001	59SW4WG1	D5J280407-005
59SW1WG1	D5J280407-002	59SW7WG1	D5J280407-006
59SW3WG1	D5J280407-003	59SW7WG9	D5J280407-007
59SW3WG1-MS	D5J280407-003	TB102705	D5J280407-008
59SW3WG1-MSD	D5J280407-003		
59DW3WG1	D5J280407-004		

During the data validation review process, laboratory qualified and unqualified data are verified against all available supporting documentation. Based on this review, qualifier codes may be added, deleted, or modified by the validator. Final results are therefore either qualified or unqualified. (Note: In those cases where the laboratory added a "U" flag indicated a non-detect result, and the validator agrees with this flag, then it remains intact, as noted on the corresponding Form I.) Changes to the data are reflected on the Form I's in Appendix A.

2.0 VOLATILE ORGANIC CONSTITUENTS

Volatile organic constituents were analyzed using EPA Test Method for Evaluating Solid Waste (SW-846) Method 8260B.

2.1 Holding Times

All samples were extracted and analyzed within prescribed hold times. No qualification is needed.

2.2 Calibration

Initial calibration standards were analyzed at 0.3, 1, 2, 5, 10, 30, 60, and 120 μ g/L. For the Initial Calibration run, target constituent RRF values were all greater than 0.05 and the %RSD values were less than 30% for all target constituents. No qualification is needed based on this information.

Continuing calibration verifications were performed at the required frequency. The %D results were within 20% for all target constituents. Likewise, recoveries were within control limits in the Second Source Calibration Standard and no qualification is needed.

One sample, 59SW4WG1, required a 5-fold dilution in order to bring on-column concentrations within the calibration range of the instrument. Reporting limits were adjusted accordingly.

The hand-annotated data summary sheets (referred to as Form I's) are provided as Appendix A.

It is noted that for those results which were less than the RL but greater than the MDL, the laboratory assigned an "F" flag, indicating an estimated value. Unless qualified otherwise, the validator removes the F flag and replaces it with the "J" qualifier, indicating an estimated value.

2.3 Laboratory Control Samples

The corresponding laboratory control sample exhibited constituent recoveries within the appropriate control range for all target volatile constituents. No qualification is needed.

2.4 Blanks

Methylene chloride was detected in the method blank at 0.35 ug/L. The validator qualifies U any positive methylene chloride result less than or equal to 3.5 ug/L.

Methylene chloride was detected in the trip blank TB102705 at 0.43 ug/L. Since the methylene chloride result was qualified by the validator as noted above, no additional qualification is needed for this constituent.

2.5 Matrix Spike/Matrix Spike Duplicate

Sample 59SW3WG1 served as the MS/MSD sample. Recoveries were within control limits for both the MS and MSD. RPD values also were within control limits. No qualification is needed.

2.6 Surrogate Recovery

Surrogate recoveries were within control limits for all samples. No qualification is needed.

2.7 Internal Standards

All internal standards area counts and retention times were within control limits for all samples. No qualification is needed based on the internal standard information provided.

2.8 Duplicates

A field duplicate was collected for sample SW7. One of two criteria was followed when evaluating field duplicates, depending on the amount detected. If the amount detected was greater than five times the reporting limit (RL), then the relative percent difference (RPD) should have been less than 25 percent. If the amount was less than five times the RL, then the difference between the duplicate and the sample concentrations should have been less than the RL. No qualification is needed based on the criteria. A comparison of field sample and duplicate is presented in Table 3.

Table 3: Duplicate Comparison (µg/L)

Analyte	Reporting Limit (RL)	59SW7WG1	59SW7WG9	Relative Percent Difference (RPD)
1,1,1- Trichloroethane	1.0	0.73	0.69	6%
1,1- Dichloroethane	1.0	1.4	1.4	0%
Cis-1, 2- Dichloroethene	1.0	12	12	0%
Tetrachloroethene	1.0	0.24	0.23	4%
Trichloroethene	1.0	3.1	3.0	33%

2.8 Summary

The data completeness is 100%. All of the data points for the volatile analysis of groundwater samples are useable with the appropriate qualifiers.

Analytical Method: 8260B	Preparatory Method: <u>5030B/8260B</u> AAB #: <u>5312320</u>
Lab Name: STL Denver	Contract #: F41624-00-D-8023
Field Sample ID: 59DW1WG1	Lab Sample ID: D53280407-001 Matrix: WATER
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: <u>28-Oct-05 09:00</u>	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 11:18
Concentration Units (ug/L or mg/kg dr	y weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,1,1,2-Tetrachloroethane	0.17	0.50	0.17	1:1	N/A	U
1,1,1-Trichloroethane	0.15	1.0	0.15	1:1	N/A	U
1,1,2,2-Tetrachloroethane	0.18	0.50	0.18	1:1	N/A	U
1,1,2-Trichloroethane	0.30	1.0	0.30	1:1	N/A	บ
1,1-Dichloroethane	0.16	1.0	0.16	1:1	N/A	U
1,1-Dichloroethene	0.17	1.0	0.17	1:1	N/A	U
1,1-Dichloropropene	0.17	1.0	0.17	1:1	N/A	U
1,2,3-Trichlorobenzene	0.24	1.0	0.24	1:1	N/A	U
1,2,3-Trichloropropane	0.18	1.0	0.18	1:1	N/A	U
1,2,4-Trichlorobenzene	0.26	1.0	0.26	1:1	N/A	U
1,2,4-Trimethylbenzene	0.18	1.0	0.18	1:1	N/A	U
1,2-Dibromo-3-chloropropane (DBCP)	0.28	2.0	0.28	1:1	N/A	U
(DBEF)	. :					

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	93	72 - 119	
4-Bromofluorobenzene	86	76 - 119	
Dibromofluoromethane	105	85 - 115	

Internal Std	Qualifier
Fluorobenzene	

	Fluorobenzene	
Comments: HNXC01AA		2/15/03

Analytical Method: 8260B	Preparatory Method: 5030B/8260B
Lab Name: STL Denver	Contract #: <u>F41624-00-D-8023</u>
Field Sample ID: 59DW1WG1	Lab Sample ID: D5J280407-001 Matrix: WATER
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: <u>28-Oct-05 09:00</u>	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 11:18
Concentration Units (ug/L or mg/kg	dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,2-Dibromoethane (EDB)	0.20	1.0	0.20	1:1	N/A	U
1,2-Dichlorobenzene	0.15	1.0	0.15	1:1	N/A	U
1,2-Dichloroethane	0.18	0.50	0.18	1:1	N/A	U
1,2-Dichloropropane	0.17	1.0	0.17	1:1	N/A	U
1,3,5-Trimethylbenzene	0.19	1.0	0.19	1:1	N/A	U
1,3-Dichlorobenzene	0.26	1.0	0.26	1:1	N/A	U
1,3-Dichloropropane	0.18	0.40	0.18	1:1	N/A	U
1,4-Dichlorobenzene	0.23	0.50	0.23	1:1	N/A	U
1-Chlorohexane	0.20	1.0	0.20	1:1	N/A	U
2,2-Dichloropropane	0.21	1.0	0.21	1:1	N/A	υ
2-Butanone (MEK)	0.90	10	0.90	1:1	N/A	U
2-Chlorotoluene	0.17	1.0	0.17	1:1	N/A	U
4-Chlorotoluene	0.23	1.0	0.23	1:1	N/A	U

Surrogate	Recovery	Control Limits	Qualifier	
Toluene-d8	104	81 - 120		

Internal Std	Qualifier
Chlorobenzene-d5	

20/1/5/05

Comments: HNXC01AA		

Analytical Method: 8260B	Preparatory Method: <u>5030B/8260B</u> AAB #: <u>5312320</u>
Lab Name: STL Denver	Contract #: <u>F41624-00-D-8023</u>
Field Sample ID: 59DW1WG1	Lab Sample ID: D53280407-001 Matrix: WATER
% Solids:	nitial Calibration ID: H.i-1-05-NOV-05
Date Received: <u>28-Oct-05 09:00</u> Da	te Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 11:18
Concentration Units (ug/L or mg/kg dry	weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
Acetone	0.63	10	0.63	1:1	N/A	U
Benzene	0.15	0.40	0.15	1:1	N/A	U
Bromobenzene	0.20	1.0	0.20	1:1	N/A	U
Bromochloromethane	0.18	1.0	0.18	1:1	N/A	U
Bromodichloromethane	0.19	0.50	0.19	1:1	N/A	U
Bromoform	0.20	1.0	0.20	1:1	N/A	υ
Bromomethane	0.24	3.0	0.24	1:1	N/A	υ
Carbon tetrachloride	0.18	1.0	0.18	1:1	N/A	U
Chlorobenzene	0.15	0.50	0.15	1:1	N/A	υ
Chloroethane	0.46	1.0	0.46	1:1	N/A	υ
Chloroform	0.15	0.30	0.15	1:1	N/A	U
Chloromethane	0.20	1.0	0.20	1:1	N/A	υ
cis-1,2-Dichloroethene	0.20	1.0	0.20	1:1	N/A	U

Surrogate	Recovery	Control Limits	Qualifier
	•		

Internal Std	Qualifier
1,4-Dichlorobenzene-d5	

2/1/6/05

Comments: HNXC01AA

Analytical Method: 8260B	Preparatory Method: 5030B/8260B
Lab Name: STL Denver	Contract #: <u>F41624-00-D-8023</u>
Field Sample ID: 59DW1WG1	Lab Sample ID: D53280407-001 Matrix: WATER
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: 28-Oct-05 09:00	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 11:18
Concentration Units (ug/L or mg/kg	dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
cis-1,3-Dichloropropene	0.18	0.50	0.18	1:1	N/A	U
Dibromochloromethane	0.19	0.50	0.19	1:1	N/A	U
Dibromomethane	0.19	1.0	0.19	1:1	N/A	U
Dichlorodifluoromethane	0.19	1.0	0.19	1:1	N/A	U
Ethylbenzene	0.16	1.0	0.16	1:1	N/A	U
Hexachlorobutadiene	0,26	0.60	0.26	1:1	N/A	U
Isopropylbenzene	0.20	1.0	0.20	1:1	N/A	U
m-Xylene & p-Xylene	0.37	2.0	0.37	1:1	N/A	U
Methyl isobutyl ketone (MIBK)	0.54	10	0.54	1:1	N/A	U
Methyl tert-butyl ether	0.42	5.0	0.42	1:1	N/A	U
Methylene chloride	0.17	2.0	0.34	1:1	N/A	Jr U
n-Butylbenzene	0.22	1.0	0.22	1:1	N/A	U
n-Propylbenzene	0.21	1.0	0.21	1:1	N/A	U

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier

01/15/05

Comments: HNXC01AA	
	

Analyte MDL RL Concentration Dilution Confirm Qualifer				Concentration	Dilution	Confirm	Qualifer
STL Denver Contract #: F41624-00-D-8023 ield Sample ID: 59DW1WG1 Lab Sample ID: D5J280407-001 Matrix: WATER 6 Solids:	concentration Units (ug/L or mg	/kg dry weight): <u>ug/L</u>				
ab Name: STL Denver Contract #: F41624-00-D-8023 ield Sample ID: 59DW1WG1 Lab Sample ID: D5J280407-001 Matrix: WATER 6 Solids: Initial Calibration ID: H.i-1-05-NOV-05	ace received. 20-0ct-03 03.00	Date Flep	area. <u>07</u>	1007-03 00.32	Date Allalyze	a. <u>07-NOV-C</u>	13 11.16
ab Name: STL Denver Contract #: F41624-00-D-8023 ield Sample ID: 59DW1WG1 Lab Sample ID: D5J280407-001 Matrix: WATER						- d: 07-Nov-C	NE 11:10
ab Name: STL Denver Contract #: F41624-00-D-8023	Solids:	Initial C	alibration	TD: H i-1-05-NOV-	<u></u>		
	eld Sample ID: 59DW1WG1	L	.ab Sampl	le ID: <u>D5J280407-</u>	001	Matrix: WAT	ΓER_
nalytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 5312320	ab Name: STL Denver		Cont	ract #: <u>F41624-00</u> -	D-8023		
					· ·	TD # . 33123	20

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
Naphthalene	0.23	1.0	0.23	1:1	N/A	U
o-Xylene	0.14	1.0	0.14	1:1	N/A	U
p-Isopropyltoluene	0.20	1.0	0.20	1:1	N/A	U
sec-Butylbenzene	0.22	1.0	0.22	1:1	N/A	U
Styrene	0.17	1.0	0.17	1:1	N/A	U
tert-Butylbenzene	0.20	1.0	0.20	1:1	N/A	U
Tetrachloroethene	0.17	1.0	0.17	1:1	N/A	U
Toluene	0.17	1.0	0.17	1:1	N/A	U
trans-1,2-Dichloroethene	0.16	1.0	0.16	1:1	N/A	U
trans-1,3-Dichloropropene	0.21	1.0	0.21	1:1	N/A	บ
Trichloroethene	0.16	1.0	0.16	1:1	N/A	υ
Trichlorofluoromethane	0.13	1.0	0.13	1:1	N/A	U
Vinyl chloride	0.21	1.0	0.21	1:1	N/A	υ

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier

00,115105

Comments: HNXC01AA		

nalytical N	Method: 8260B	Prepa	ratory Me	thod: 5030B/826	0B AA	NB #: <u>53123</u>	20
ab Name:	STL Denver	···	Contr	act #: <u>F41624-00</u> -	D-8023		
eld Samp	le ID: 59DW1WG1	L	ab Sample	e ID: <u>D5J280407-</u>	001	Matrix: <u>WA</u> T	ER
6 Solids:		Initial Ca	alibration :	ID: <u>H.i-1-05-NOV</u>	-05	_	
	ved: <u>28-Oct-05 09:00</u>					- d: 07-Nov-()5 11:18
	ion Units (ug/L or mg/						
on contrac	dina (ug/c or mg/	rky dry Weight). <u>09/1-</u>				
	Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,2-Dichl	oroethane-d4	· N/A	N/A	9.3	1:1	N/A	
4-Bromot	fluorobenzene	N/A	N/A	8.6	1:1	N/A	
Dibromof	fluoromethane	N/A	N/A	10	1:1	N/A	
Toluene-	d8	N/A	N/A	10	1:1	N/A	1
:							
Ì							
			·				
Ī	Surrogate	e	Rec	overy Co	ntrol Limits	Qualific	er
	W-70-0						
		·					
		In	ternal Std	Qu	alifier		00,10%
							1115105
Comments							
INXC01AA							

Analytical Method: 8260B	Preparatory Method: <u>5030B/8260B</u> AAB #: <u>5312320</u>	
Lab Name: STL Denver	Contract #: F41624-00-D-8023	
Field Sample ID: 59SW1WG1	Lab Sample ID: <u>D5J280407-002</u> Matrix: <u>WATER</u>	
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05	
Date Received: 28-Oct-05 09:00	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 11:39	
Concentration Units (ug/L or mg/kg	dry weight): ug/L	

MDL	RL	Concentration	Dilution	Confirm	Qualifer
0.17	0.50	0.17	1:1	N/A	U ·
0.15	1.0	0.15	1:1	N/A	U
0.18	0.50	0.18	1:1	N/A	.U .
0.30	1.0	0.30	1:1	N/A	U
0.16	1.0	0.16	1:1	N/A	υ
0.17	1.0	0.17	1:1	N/A	U
0.17	1.0	0.17	1:1	N/A	U
0.24	1.0	0.24	1:1	N/A	U
0.18	1.0	0.18	1:1	N/A	U
0.26	1.0	0.26	1:1	N/A	υ
0.18	1.0	0.18	1:1	N/A	U
0.28	2.0	0.28	1:1	N/A	U
	0.17 0.15 0.18 0.30 0.16 0.17 0.17 0.24 0.18 0.26 0.18	0.17 0.50 0.15 1.0 0.18 0.50 0.30 1.0 0.16 1.0 0.17 1.0 0.17 1.0 0.18 1.0 0.18 1.0 0.26 1.0	0.17 0.50 0.17 0.15 1.0 0.15 0.18 0.50 0.18 0.30 1.0 0.30 0.16 1.0 0.16 0.17 1.0 0.17 0.17 1.0 0.17 0.24 1.0 0.24 0.18 1.0 0.18 0.26 1.0 0.26 0.18 1.0 0.18	0.17 0.50 0.17 1:1 0.15 1.0 0.15 1:1 0.18 0.50 0.18 1:1 0.30 1.0 0.30 1:1 0.16 1.0 0.16 1:1 0.17 1.0 0.17 1:1 0.17 1.0 0.17 1:1 0.24 1.0 0.24 1:1 0.18 1.0 0.18 1:1 0.26 1.0 0.26 1:1 0.18 1.0 0.18 1:1	0.17 0.50 0.17 1:1 N/A 0.15 1.0 0.15 1:1 N/A 0.18 0.50 0.18 1:1 N/A 0.30 1.0 0.30 1:1 N/A 0.16 1.0 0.16 1:1 N/A 0.17 1.0 0.17 1:1 N/A 0.17 1.0 0.17 1:1 N/A 0.24 1.0 0.24 1:1 N/A 0.18 1.0 0.18 1:1 N/A 0.18 1.0 0.26 1:1 N/A 0.18 1.0 0.18 1:1 N/A

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	93	72 - 119	
4-Bromofluorobenzene	84	76 - 119	
Dibromofluoromethane	106	85 - 115	

Internal Std	Qualifier
Fluorobenzene	

11150

Comments:			
HNXC61AA			
	······································		

Analytical Method: 8260B	Preparatory Method: 5030B/8260B
Lab Name: STL Denver	Contract #: <u>F41624-00-D-8023</u>
Field Sample ID: 59SW1WG1	Lab Sample ID: D51280407-002 Matrix: WATER
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: 28-Oct-05 09:00	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 11:39
Concentration Units (ug/L or mg/kg	dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,2-Dibromoethane (EDB)	0.20	1.0	0.20	1:1	N/A	U
1,2-Dichlorobenzene	0.15	1.0	0.15	1:1	N/A	U
1,2-Dichloroethane	0.18	0.50	0.18	1:1	N/A	U
1,2-Dichloropropane	0.17	1.0	0.17	1:1	N/A	U
1,3,5-Trimethylbenzene	0.19	1.0	0.19	1:1	N/A	U
1,3-Dichlorobenzene	0.26	1.0	0.26	1:1	N/A	U
1,3-Dichloropropane	0.18	0.40	0.18	1:1	N/A	U
1,4-Dichlorobenzene	0.23	0.50	0.23	1:1	N/A	U
1-Chlorohexane	0.20	1.0	0.20	1:1	N/A	U
2,2-Dichloropropane	0.21	1.0	0.21	1:1	N/A	· U
2-Butanone (MEK)	0.90	10	0.90	1:1	N/A	U
2-Chlorotoluene	0.17	1.0	0.17	1:1	N/A	U
4-Chlorotoluene	0.23	1.0	0.23	1:1	N/A	U
<u> </u>	1	I .	I .	1	1	1

Surrogate	Recovery	Control Limits	Qualifier
Toluene-d8	104	81 - 120	

Internal Std	Qualifier
Chlorobenzene-d5	

7/15/0S

Comments: HNXC61AA			
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Analytical Method: 8260B	Preparatory Method: <u>5030B/8260B</u> AAB #: <u>5312320</u>
Lab Name: STL Denver	Contract #: F41624-00-D-8023
Field Sample ID: 59SW1WG1	Lab Sample ID: D5J280407-002 Matrix: WATER
% Solids:	initial Calibration ID: H.i-1-05-NOV-05
Date Received: 28-Oct-05 09:00 Da	te Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 11:39
Concentration Units (ug/L or mg/kg dry	weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
Acetone	0.63	10	0.63	1:1	N/A	U
Benzene	0.15	0.40	0.15	1:1	N/A	U
Bromobenzene	0.20	1.0	0.20	1:1	N/A	U
Bromochloromethane	0.18	1.0	0.18	1:1	N/A	υ
Bromodichloromethane	0.19	0.50	0.19	1:1	N/A	υ
Bromoform	0.20	1.0	0.20	1:1	N/A	U
Bromomethane	0.24	3.0	0.24	1:1	N/A	U
Carbon tetrachloride	0.18	1.0	0.18	1:1	N/A	U
Chlorobenzene	0.15	0.50	0.15	1:1	N/A	U
Chloroethane	0.46	1.0	0.46	1:1	N/A	U
Chloroform	0.15	0.30	0.15	1:1	N/A	ט
Chloromethane	0.20	1.0	0.20	1:1	N/A	U
cis-1,2-Dichloroethene	0.20	1.0	0.20	1:1	N/A	U .

Surrogate	Recovery	Contro! Limits	Qualifier

Internal Std	Qualifier
1,4-Dichlorobenzene-d5	

DU 6/05

Comments: HNXC61AA	•

Analytical	Method: 8260B	Prepa	aratory Me	ethod: <u>5030B/8</u>	260B A	AB #: <u>53123</u>	20
Lab Name	: STL Denver		Cont	ract #: <u>F41624-</u> 0	00-D-8023		
Field Sam	field Sample ID: 59SW1WG1 Lab Sample ID: D5J280407-002 Matrix: WATER						
% Solids:	Solids: Initial Calibration ID: H.i-1-05-NOV-05						
	eived: <u>28-Oct-05 09:</u> 00					- 	05 11:30
			_		_ bate Analyzo	5d. <u>07-1104 (</u>	15 11.55
oncentra	ition Units (ug/L or mg/			•			
	Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
cis-1,3-l	Dichloropropene	0.18	0.50	0.1	8 1:1	N/A	U
Dibromo	ochloromethane	0.19	0.50	0.1	9 1:1	N/A	U
Dibromo	omethane	0.19	1.0	0.1	9 1:1	N/A	U
Dichloro	difluoromethane	0.19	1.0	0.1	9 1:1	N/A	U
Ethylber	nzene	0.16	1.0	0.1	6 1:1	N/A	U
Hexachi	orobutadiene	0.26	0.60	0.2	6 1:1	N/A	U
Isoprop	ylbenzene	0.20	1.0	0.2	1:1	N/A	Ü
m-Xylen	ne & p-Xylene	0.37	2.0	0.3	7 . 1:1	N/A	U
Methyl i	sobutyl ketone (MIBK)	0.54	10	0.5	54 1:1	N/A	IJ
Methyl t	tert-butyl ether	0.42	5.0	0.4	1:1	N/A	U
Methyle	ne chloride	0.17	2.0	0.3	5 1:1	N/A	PU
n-Butyit	penzene	0.22	1.0	0.2	22 1:1	N/A	U
n-Propy	1benzene	0.21	1.0	0.2	1:1	N/A	U
•	Surrogate		Rec	overy C	ontrol Limits	Qualifie	er
						-	
	<u> </u>	In	ternal Std		Qualifier		
	ŀ						ما الم
Comment	<u>.</u>						PU1519
NXC61AA					- ***		

Namo	CTI Donuer	-	-	thod: <u>5030B/8260</u>			
	: STL Denver			ract #: <u>F41624-00-</u>		<u>-</u>	
eld Sam	ple ID: 59SW1WG1	L	ab Sampi	e ID: <u>D5J280407-</u>	002	Matrix: <u>WA</u> 7	<u>rer</u>
Solids:		Initial C	alibration	ID: <u>H.i-1-05-NOV-</u>	05	-	
ate Rece	eived: <u>28-Oct-05 09:00</u>	Date Prep	ared: <u>07</u>	/-Nov-05 06:32	Date Analyze	d: <u>07-Nov-</u> (05 11:39
ncentra	ition Units (ug/L or mg	/kg dry weight): <u>ug/L</u>				
	Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
Naphtha		0.23	1.0	0.23	1:1	N/A	U
o-Xylene	· · · · · · · · · · · · · · · · · · ·	0.14	1.0	0.14	1:1	N/A	υ
p-Isopro	pyltoluene	0.20	1.0	0.20	1:1	N/A	υ
sec-Buty	/lbenzene	0.22	1.0	0.22	1:1	N/A	U
Styrene		0.17	1.0	0.17	1:1	N/A	U
tert-But	ylbenzene	0.20	1.0	0.20	1:1	N/A	U
Tetrachi	loroethene	0.17	1.0	0.17	1:1	N/A	U
Toluene		0.17	1.0	0.17	1:1	N/A	υ
trans-1,	2-Dichloroethene	0.16	1.0	0.16	1:1	N/A	U
trans-1,	3-Dichloropropene	0.21	1.0	0.21	1:1	N/A	U
Trichlor	oethene	0.16	1.0	0.16	1:1	N/A	U
Trichlon	ofluoromethane	0.13	1.0	0.13	1:1	N/A	U
Vinyl ch	loride	0.21	1.0	0.21	1:1	N/A	V
	Surrogate		Rec	overy Con	trol Limits	Qualifie	er
							

Analytical	Method: 8260B	Prepa	aratory Me	thod: 5030B/820	50B A	AB #: <u>53123</u>	20	
Lab Name	: STL Denver		Conti	ract #: <u>F41624-00</u>)-D-8023			
Field Sam	ple ID: 59SW1WG1	[.ab Sampl	e ID: <u>D5J280407</u>	-002	Matrix: WA	TER_	
% Solids:		Initial C	alibration :	ID: H.i-1-05-NO\	/-05	_		
	eived: <u>28-Oct-05 09:00</u>					ed: 07-Nov-(05 11:39	
	ation Units (ug/L or mg					•		_
								_
	Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer]
1,2-Dict	nloroethane-d4	N/A	N/A	9.3	1:1	N/A]
4-Brom	ofluorobenzene	N/A	'N/A	8.4	1:1	N/A		
Dibromo	ofluoromethane	N/A	N/A	11	1:1	N/A]
Toluene	e-dB	N/A	N/A	.10	1:1	N/A		
<u></u>								
	Surrogat	æ	Rec	overy Co	entro! Limits	Qualific	er	
	1	In	ternal Std	Qı	uallfier			-
		<u> </u>						vá
							''/	,5/0 ⁵
Comment							()	
HNXC61AA				· · · · · · · · · · · · · · · · · · ·				····

Analytical Method: 8260B	Preparatory Method: 5030B/8260B AAB #: 5312320	
Lab Name: STL Denver	Contract #: F41624-00-D-8023	
Field Sample ID: 59SW3WG1	Lab Sample ID: D5J280407-003 Matrix: WATER	
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05	
Date Received: <u>28-Oct-05 09:00</u> D	ate Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 12:00	
Concentration Units (ug/L or mg/kg dr	v weight): ug/i	

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,1,1,2-Tetrachloroethane	0.17	0.50	0.17	1:1	N/A	U
1,1,1-Trichloroethane	0.15	1.0	0.47	1:1	N/A	ل معر
1,1,2,2-Tetrachloroethane	0.18	0.50	0.18	1:1	N/A	U
1,1,2-Trichloroethane	0.30	1.0	0.30	1:1	N/A	U
1,1-Dichloroethane	0.16	1.0	0.16	1:1	N/A	U
1,1-Dichloroethene	0.17	1.0	0.17	1:1	N/A	Ų
1,1-Dichloropropene	0.17	1.0	0.17	1:1	N/A	U
1,2,3-Trichlorobenzene	0.24	1.0	0.24	1:1	N/A	U
1,2,3-Trichloropropane	0.18	1.0	0.18	1:1	N/A	٦
1,2,4-Trichlorobenzene	0.26	1.0	0.26	1:1	N/A	U
1,2,4-Trimethylbenzene	0.18	1.0	0.18	1:1	N/A	U
1,2-Dibromo-3-chloropropane (DBCP)	0.28	2.0	0.28	1:1	N/A	IJ
				1		

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	93	72 - 119	
4-Bromofluorobenzene	90	76 - 119	
Dibromofluoromethane	106	85 - 115	

Internal Std	Qualifier
Fluorobenzene	

	Pidorobenzerie		DV,105
Comments: HNXC81AA			11/051
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Analytical Method: 8260B	Preparatory Method: 5030B/8260B
Lab Name: STL Denver	Contract #: F41624-00-D-8023
Field Sample ID: 59SW3WG1	Lab Sample ID: <u>D5J280407-003</u> Matrix: <u>WATER</u>
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: 28-Oct-05 09:00	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 12:00
Concentration Units (ug/L or mg/kg	dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,2-Dibromoethane (EDB)	0.20	1.0	0.20	1:1	N/A	U
1,2-Dichlorobenzene	0.15	1.0	0.15	1:1	N/A	U
1,2-Dichloroethane	0.18	0.50	0.18	1:1	N/A	U
1,2-Dichloropropane	0.17	1.0	0.17	1:1	N/A	U
1,3,5-Trimethylbenzene	0.19	1.0	0.19	1:1	N/A	U
1,3-Dichlorobenzene	0.26	1.0	0.26	1:1	N/A	U
1,3-Dichloropropane	0.18	0.40	0.18	1:1	N/A	υ
1,4-Dichlorobenzene	0.23	0.50	0.23	1:1	N/A	U
1-Chlorohexane	0.20	1.0	0.20	1:1	N/A	U
2,2-Dichloropropane	0.21	1.0	0.21	1:1	N/A	U
2-Butanone (MEK)	0.90	10	0.90	1:1	N/A	U
2-Chiorotoluene	0.17	1.0	0.17	1:1	N/A	U
4-Chlorotoluene	0.23	1.0	0.23	1:1	N/A	U

Surrogate	Recovery	Control Limits	Qualifier
Toluene-d8	105	81 - 120	

Internal Std	Qualifier
Chlorobenzene-d5	

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Comments: HNXC81AA		11/15/00

nalytical Method: 8260B	Prepa	aratory Me	thod: 5030B/826	<u> </u>	NB #: <u>53123</u>	20			
b Name: STL Denver Contract #: F41624-00-D-8023									
ld Sample ID: 59SW3WG1 Lab Sample ID: D5J280407-003 Matrix: WATER									
Solids:	olids: Initial Calibration ID: H.i-1-05-NOV-05								
ate Received: 28-Oct-05 09:0					d: 07-Nov-0	15 12:0 0			
oncentration Units (ug/L or m				•					
Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer			
Acetone	0.63	10	0.63	1:1	N/A	U			
Benzene	0.15	0.40	0.15	1:1	N/A	U			
Bromobenzene	0.20	1.0	0.20	1:1	N/A	U			
Bromochloromethane	0.18	1.0	0.18	1:1	N/A	U			
Bromodichloromethane	0.19	0.50	0.19	1:1	N/A	U			
Bromoform	0.20	1.0	0.20	1:1	N/A	U			
Bromomethane	0.24	3.0	0.24	1:1	N/A	U			
Carbon tetrachloride	0.18	1.0	0.18	1:1	N/A	U			
Chlorobenzene	0.15	0.50	0.15	1:1	N/A	บ			
Chloroethane	0.46	1.0	0.46	1:1	N/A	U			
Chloroform	0.15	0.30	0.15	1:1	N/A	U			
Chloromethane	0.20	1.0	0.20	1:1	N/A	U			
cis-1,2-Dichloroethene	0.20	1.0	0.5 5	1:1	N/A	R J			
Surroga	te	Rec	overy Cor	itrol Limits	Qualifie	er			
	In	ternal Std	Qua	alifier					
	1,4-Dichlorober	zene-d5				- 1 :			
Comments:	L					11/6/06			

nalytical I	Method: 8260B	Prepa	aratory Me	ethod: <u>5030B/826</u>	<u>0B</u> A/	AB #: <u>53123</u>	20		
ab Name:	STL Denver	i	Cont	ract #: <u>F41624-00</u> -	-D-8023				
ield Samp	le ID: 59SW3WG1		Lab Sampi	le ID: <u>D5J280407-</u>	003	Matrix: WA	ER		
Solids:									
ate Recei	ved: 28-Oct-05 09:00	Date Pren	pared: 07	7-Nov-05 06:32	Date Analyze	d: 07-Nov-0	05 12:0 0		
	don Units (ug/L or mg/				·				
	Analyte	MDì.	RL	Concentration	Dilution	Confirm	Qualifer		
as-1,3-D	ichloropropene	0.18	0.50	0.18	1:1	N/A	U		
Dibromo	chloromethane	0.19	0.50	0.19	1:1	N/A	U		
Dibromo	methane	0.19	1.0	0.19	1:1	N/A	U		
Dichloro	difluoromethane	0.19	1.0	0.19	1:1	N/A	U		
Ethylben	zene	0.16	1.0	0.16	1:1	N/A	U		
Hexachic	probutadiene	0.26	0.60	0.26	1:1	N/A	U		
lsopropy	lbenzene	0.20	1.0	0.20	1:1	N/A	U .		
m-Xylene	e & p-Xylene	0.37	2.0	0.37	1:1	N/A	U		
Methyl is	obutyl ketone (MIBK)	0.54	10	0.54	1:1	N/A	U		
Methyl te	ert-butyl ether	0.42	5.0	0.42	1:1	N/A	U		
Methyler	ne chloride	0.17	2.0	0.35	1:1	N/A	PU		
n-Butylb	enzene	0.22	1.0	0.22	1;1	N/A	·U		
n-Propyll	benzene	0.21	1.0	0.21	1:1	N/A	U		
	Surrogate	•	Rec	covery Cor	ntrol Limits	Qualifie	er		
	<u> </u>	In	ternal Std	Qua	alifier				
							DU.		
omments NXC81AA	:						11/15		
						· · · · · · · · · · · · · · · · · · ·			

Analytical Method: 8260B	Preparatory Method: 5030B/8260B
Lab Name: STL Denver	Contract #: <u>F41624-00-D-8023</u>
Field Sample ID: 59SW3WG1	Lab Sample ID: <u>D5J280407-003</u> Matrix: <u>WATER</u>
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: 28-Oct-05 09:00	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 12:00
Concentration Units (ug/L or mg/kg	dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
Naphthalene	0.23	1.0	0.23	1:1	N/A	U
o-Xylene	0.14	1.0	0.14	1:1	N/A	U
p-Isopropyltoluene	0.20	1.0	0.20	1:1	N/A	U
sec-Butylbenzene	0.22	1.0	0.22	1:1	N/A	U
Styrene	0.17	1.0	0.17	1:1	N/A	U
tert-Butylbenzene	0.20	1.0	0.20	1:1	N/A	U
Tetrachloroethene	0.17	1.0	0.17	1:1	N/A	U
Toluene	0.17	1.0	0.17	1:1	N/A	U
trans-1,2-Dichloroethene	0.16	1.0	0.16	1:1	N/A	U
trans-1,3-Dichloropropene	0.21	1.0	0.21	1:1	N/A	υ
Trichloroethene	0.16	1.0	0.86	1:1	N/A	P)
Trichlorofluoromethane	0.13	1.0	0.13	1:1	N/A	U
Vinyl chloride	0.21	1.0	0.21	1:1	N/A	U

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier

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comments:	
HNXC81AA	

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	Method: <u>8260B</u>						W#: <u>53123</u>	20	_
Lab Name:	STL Denver		Cont	ract #: <u>F4162</u>	4-00-	D-8023	·	•	
Field Samp	ole ID: <u>59SW3WG1</u>	!	.ab Sampi	e ID: <u>D5J280</u>	1407-1	003	Matrix: WA7	ER	
% Solids:	·	Initial C	alibration	ID: <u>H.i-1-05</u> -	NOV-	0 5	-		
Date Recei	ved: <u>28-Oct-05 09:00</u>	Date Prep	oared: <u>07</u>	7-Nov-05 06:3	<u>2</u> [Date Analyze	d: <u>07-Nov-0</u>	5 12:00	-
Concentral	tion Units (ug/L or mg	/kg dry weight	:): <u>ug/L</u>						-
	Analyte	MDL	RL	Concentrati	on	Dilution	Confirm	Qualifer	
1,2-Dichl	oroethane-d4	N/A	N/A		9.3	1:1	N/A		
4-Bromo	fluorobenzene	N/A	N/A		9.0	1:1	N/A		
Dibromo	fluoromethane	N/A	N/A		11	1:1	N/A		
Toluene	d8	N/A	N/A		11	1:1	N/A		
			,						
			!						
					İ				
							-	· · · · · · · · · · · · · · · · · · ·	İ
	Surrogat	<u> </u>	Per	overy	Con	troi Limits	Qualifie	er l	
			100	-					
,									
		In	ternal Sto		Qua	alifier			5 7 g
								0	7/0
	•							90	
Comments HNXC81AA	5:							•	

Analytical Method: 8260B	Preparatory Method: 5030B/8260B
Lab Name: STL Denver	Contract #: F41624-00-D-8023
Field Sample ID: 59DW3WG1	Lab Sample ID: <u>D5J280407-004</u> Matrix: <u>WATER</u>
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: <u>28-Oct-05 09:00</u>	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 12:21
Concentration Units (ug/L or mg/kg dr	y weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,1,1,2-Tetrachloroethane	0.17	0.50	0.17	1:1	N/A	U
1,1,1-Trichloroethane	0.15	1.0	0.15	1:1	N/A	U
1,1,2,2-Tetrachloroethane	0.18	0.50	0.18	1:1	N/A	U
1,1,2-Trichloroethane	0.30	1.0	0.30	1:1	N/A	U
1,1-Dichloroethane	0.16	1.0	0.16	1:1	N/A	U
1,1-Dichloroethene	0.17	1.0	0.17	1:1	N/A	U
1,1-Dichloropropene	0.17	1.0	0.17	1:1	N/A	U
1,2,3-Trichlorobenzene	0.24	1.0	0.24	1:1	N/A	υ
1,2,3-Trichloropropane	0.18	1.0	0.18	1:1	N/A	υ
1,2,4-Trichlorobenzene	0.26	1.0	0.26	1:1	N/A	IJ
1,2,4-Trimethylbenzene	0.18	1.0	0.18	1:1	N/A	υ
1,2-Dibromo-3-chloropropane (DBCP)	0.28	2.0	0.28	1:1	N/A	U

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	101	72 - 119	
4-Bromofluorobenzene	92	76 - 119	
Dibromofluoromethane	111	85 - 115	

Internal Std	Qualifier
Fluorobenzene	

Comments: HNXC91AA	DU OS

Analytical Method: 8260B	Preparatory Method: <u>5030B/8260B</u> AAB #: <u>5312320</u>
Lab Name: STL Denver	Contract #: F41624-00-D-8023
Field Sample ID: 59DW3WG1	Lab Sample ID: D5J280407-004 Matrix: WATER
% Solids:	nitial Calibration ID: H.i-1-05-NOV-05
Date Received: <u>28-Oct-05 09:00</u> Da	te Prepared: <u>07-Nov-05 06:32</u> Date Analyzed: <u>07-Nov-05 12:21</u>
Concentration Units (ug/L or mg/kg dry	weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,2-Dibromoethane (EDB)	0.20	1.0	0.20	1:1	N/A	U
1,2-Dichlorobenzene	0.15	1.0	0.15	1:1	N/A	U
1,2-Dichloroethane	0.18	0.50	0.18	1:1	N/A	U
1,2-Dichloropropane	0.17	1.0	0.17	1:1	N/A	U
1,3,5-Trimethylbenzene	0.19	1.0	0.19	1:1	N/A	U
1,3-Dichlorobenzene	0.26	1.0	0.26	1:1	N/A	U
1,3-Dichloropropane	0.18	0.40	0.18	1:1	N/A	U
1,4-Dichlorobenzene	0.23	0.50	0.23	1:1	N/A	υ
1-Chlorohexane	0.20	1.0	0.20	1:1	N/A	Ü
2,2-Dichloropropane	0.21	1.0	0.21	1:1	N/A	U
2-Butanone (MEK)	0.90	10	0.90	1:1	N/A	U
2-Chlorotoluene	0.17	1.0	0.17	1:1	N/A	U
4-Chlorotoluene	0.23	1.0	0.23	1:1	N/A	U

Surrogate	Recovery	Control Limits	Qualifier
Toluene-d8	110	81 - 120	

Internal Std	Qualifier
Chlorobenzene-d5	

11/5/65

omments: NXC91AA
NXC91AA

Analytical Method: 8260B	Preparatory Method: <u>5030B/8260B</u> AAB #: <u>5312320</u>
Lab Name: STL Denver	Contract #: F41624-00-D-8023
Field Sample ID: 59DW3WG1	Lab Sample ID: D5J280407-004 Matrix: WATER
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: <u>28-Oct-05 09:00</u>	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 12:21
Concentration Units (ug/L or mg/kg dr	ry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
Acetone	0.63	10	14	1:1	N/A	
Benzene	0.15	0.40	0.15	1:1	N/A	U
Bromobenzene	0.20	1.0	0.20	1:1	· N/A	υ
Bromochloromethane	0.18	1.0	0.18	1:1	N/A	U
Bromodichloromethane	0.19	0.50	0.19	1:1	N/A	U
Bromoform	0.20	1.0	0.20	1:1	N/A	U
Bromomethane	0.24	3.0	0.24	1:1	N/A	U
Carbon tetrachloride	0.18	1.0	0.18	1:1	N/A	υ
Chlorobenzene	0.15	0.50	0.15	1:1	N/A	U
Chloroethane	0.46	1.0	0.46	1:1	N/A	U
Chloroform	0.15	0.30	0.15	1:1	N/A	U
Chloromethane	0.20	1.0	0.20	1:1	N/A	U
cis-1,2-Dichloroethene	0.20	1.0	3.0	1:1	N/A	

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier
1,4-Dichlorobenzene-d5	

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Comments: HNXC91AA		•

	ONGAR	RES	SULTS	-		
nalytical Method: 8260B	Prepa	aratory Me	ethod: 5030B/826	OB A	AB #: <u>53123</u>	320
ab Name: STL Denver	Name: STL Denver Contract #: F41624-00-D-8023					
Field Sample ID: 59DW3WG1 Lab Sample ID: D5J280407-004 Matrix: WATER						
% Solids: Initial Calibration ID: H.i-1-05-NOV-05						
ate Received: 28-Oct-05 09:00	Date Pren	ared: 07	7-Nov-05 06:32	Date Analyze	d: 07-Nov-l	05 12:21
oncentration Units (ug/L or mg/k						
Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
cis-1,3-Dichloropropene	0.18	0.50	0.18	1:1	N/A	U
Dibromochloromethane	0.19	0.50	0.19	1:1	N/A	U
Dibromomethane	0.19	1.0	0.19	1:1	N/A	U
Dichlorodifluoromethane	0.19	1.0	0.19	1:1	N/A	U
Ethylbenzene	0.16	1.0	0.16	1:1	N/A	U
Hexachlorobutadiene	0.26	0.60	0.26	1:1	N/A	U
Isopropylbenzene	0.20	1.0	0.20	1:1	N/A	U
m-Xylene & p-Xylene	0.37	2.0	0.37	1:1	N/A	υ
Methyl isobutyl ketone (MIBK)	0.54	10	0.54	1:1	N/A	, U
Methyl tert-butyl ether	0.42	5.0	0.42	1:1	N/A	U
Methylene chloride	0.17	2.0	0.57	1:1	N/A	PU
n-Butylbenzene	0.22	1.0	0.22	1:1	N/A	U
n-Propylbenzene	0.21	1.0	0.21	1:1	N/A	U

Surrogate	Recovery	Control Limits	Qualifier
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	Internal Std	Qualifier
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Comments: HNXC91AA

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
Naphthalene	0.23	1.0	0.27	1:1	- N/A	ل حر
o-Xylene	0.14	1.0	0.14	1:1	N/A	U
p-Isopropyltoluene	0.20	1.0	20	1:1	N/A	
sec-Butylbenzene	0.22	1.0	0.22	1:1	N/A	U
Styrene	0.17	1.0	0.17	1:1	N/A	U
tert-Butylbenzene	0.20	1.0	0.20	1:1	N/A	Ü
Tetrachloroethene	0.17	1.0	0.17	1:1	N/A	υ
Toluene	0.17	1.0	0.17	1:1	N/A	υ
trans-1,2-Dichloroethene	0.16	1.0	0.16	1:1	N/A	U
trans-1,3-Dichloropropene	0.21	1.0	0.21	1:1	N/A	Ü
Trichloroethene	0.16	1.0	0.16	1:1	N/A	υ
Trichlorofluoromethane	0.13	1.0	0.13	1:1	N/A	υ
Vinyl chloride	0.21	1.0	0.21	1:1	N/A	U

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier

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Comments: HNXC91AA

anaiyucai r	4ethod: <u>8260B</u>	Prepa	aratory Me	thod: 5030B/826	<u>OB</u> A4	AB #: <u>53123</u>	20	
.ab Name:	STL Denver		Cont	ract #: <u>F41624-00</u> -	-D-8023			
Field Sampl	le ID: 59DW3WG1	l	Lab Sampl	e ID: <u>D5J280407-</u>	004 !	Matrix: <u>WA7</u>	TER	
% Solids:		Initial C	alibration :	ID: H.i-1-05-NOV-	-05			
	ved: <u>28-Oct-05 09:00</u>					d: 07-Nov-C	15 12:21	
	ion Units (ug/L or mg				<i>(</i>			_
	Analyte	MDL	. RL	Concentration	Dilution	Confirm	Qualifer	7
1,2-Dichlo	oroethane-d4	N/A	N/A	10	1:1	N/A		
4-Bromof	luorobenzene	N/A	N/A	9.2	1:1	N/A		
Dibromofi	luoromethane	N/A	N/A	11	1:1	N/A		
Toluene-c	d8	N/A	N/A	, 11	1:1	N/A		
Γ	Surrogati	e ·	Rec	overy Cor	ntrol Limits	Qualific	er	
		In	ternal Std	Qu	alifier		<u></u>	1/5/0

Analytical Method: 8260B	Preparatory Method: <u>5030B/8260B</u> AAB #: <u>5312320</u>
Lab Name: STL Denver	Contract #: F41624-00-D-8023
Field Sample ID: 59SW4WG1	Lab Sample ID: <u>D5J280407-005</u> Matrix: <u>WATER</u>
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: <u>28-Oct-05 09:00</u>	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 16:33
Concentration Units (ug/L or mg/kg	dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,1,1,2-Tetrachloroethane	0.17	0.50	0.17	. 1:1	N/A	U
1,1,1-Trichloroethane	0.15	1.0	2.2	1:1	N/A	
1,1,2,2-Tetrachloroethane	0.18	0.50	0.18	1:1	N/A	U
1,1,2-Trichloroethane	0.30	1.0	0.30	1:1	N/A	U
1,1-Dichloroethane	0.16	1.0	1.7	1:1	N/A	
1,1-Dichloroethene	0.17	1.0	1.0	1:1	N/A	
1,1-Dichloropropene	0.17	1.0	0.17	1:1	N/A	U
1,2,3-Trichlorobenzene	0.24	1.0	0.24	1:1	N/A	U
1,2,3-Trichloropropane	0.18	1.0	0.18	1:1	N/A	U
1,2,4-Trichlorobenzene	0.26	1.0	0.26	1:1	N/A	υ
1,2,4-Trimethylbenzene	0.18	1.0	0.18	. 1:1	N/A	U
1,2-Dibromo-3-chloropropane (DBCP)	0.28	2.0	0.28	1:1	N/A	U
	1			1		

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	95	72 - 119	
4-Bromofluorobenzene	88	76 - 119	
Dibromofluoromethane	106	85 - 115	

Internal Std	Qualifier
Fluorobenzene	

	Fluorobenzene	
Comments: HNXDC1AA		0,1181

Analytical Method: 8260B	Preparatory Method: <u>5030B/8260B</u> AAB #: <u>5312320</u>
Lab Name: STL Denver	Contract #: F41624-00-D-8023
Field Sample ID: 59SW4WG1	Lab Sample ID: D5J280407-005 Matrix: WATER
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: <u>28-Oct-05 09:00</u>	Date Prepared: <u>07-Nov-05 06:32</u> Date Analyzed: <u>07-Nov-05 16:33</u>
Concentration Units (ug/L or mg/kg o	dry weight): ug/L

Analyte	. MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,2-Dibromoethane (EDB)	0.20	1.0	0.20	1:1	N/A	Ü
1,2-Dichlorobenzene	0.15	1.0	0.15	1:1	N/A	U
1,2-Dichloroethane	0.18	0.50	0.18	1:1	N/A	U
1,2-Dichloropropane	0.17	1.0	0.17	1:1	N/A	U
1,3,5-Trimethylbenzene	0.19	1.0	0.19	1:1	N/A	U
1,3-Dichlorobenzene	0.26	1.0	0.26	1:1	N/A	U
1,3-Dichloropropane	0.18	0.40	0.18	1:1	N/A	υ
1,4-Dichlorobenzene	0.23	0.50	0.23	1:1	N/A	U
1-Chiorohexane	0.20	1.0	0.20	1:1	N/A	U
2,2-Dichloropropane	0.21	1.0	0.21	1:1	N/A	U
2-Butanone (MEK)	0.90	10	0.90	1:1	N/A	U
2-Chiorotoluene	0.17	1.0	0.17	1:1	N/A	U
4-Chlorotoluene	0.23	1.0	0.23	1:1	N/A	U

Surrogate	Recovery	Control Limits	Qualifier
Toluene-d8	106	81 - 120	

0/1/5/05

Comments:	
HNXDC1AA	

Analytical Method: 8260B	Preparatory Method: 5030B/8260B
Lab Name: STL Denver	Contract #: F41624-00-D-8023
Field Sample ID: 59SW4WG1	Lab Sample ID: D5J280407-005 Matrix: WATER
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: 28-Oct-05 09:00	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 16:33
Concentration Units (ug/L or mg/kg	dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
Acetone	0.63	10	0.63	1:1	N/A	U
Benzene	0.15	0.40	0.15	1:1	N/A	· U
Bromobenzene	0.20	1.0	0.20	1:1	N/A	U
Bromochloromethane	0.18	1.0	0.18	1:1	N/A	U
Bromodichloromethane	0.19	0.50	0.19	1:1	N/A	U
Bromoform	0.20	1.0	0.20	1:1	N/A	U
Bromomethane	0.24	3.0	0.24	1:1	N/A	U
Carbon tetrachloride	0.18	1.0	0.18	1:1	N/A	U
Chlorobenzene	0.15	0.50	0.15	1:1	N/A	U
Chloroethane	0.46	1.0	0.46	1:1	N/A	Ü
Chloroform	0.15	0.30	0.15	1:1	N/A	U
Chloromethane	0.20	1.0	0.20	1:1	N/A	U
cis-1,2-Dichloroethene	0.20	1.0	6.3	1:1	N/A	

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier
1,4-Dichlorobenzene-d5	

11/5/05

Comments:	
Comments: HNXDC1AA	
	

Initial C Date Prepose dry weight	Lab Sampli alibration pared: <u>07</u>	ract #: <u>F41624-00-</u> e ID: <u>D53280407-0</u> ID: <u>H.i-1-05-NOV-</u> '-Nov-05 06:32	005 I	-	
Initial C Date Preports G dry weight	alibration of the control of the con	ID: <u>H.i-1-05-NOV-</u> '-Nov-05 06:32	05	-	
Initial C Date Preports G dry weight	alibration of the control of the con	ID: <u>H.i-1-05-NOV-</u> '-Nov-05 06:32	05	-	
Date Prep	pared: <u>07</u>	'-Nov-05 06:32		- d: <u>07-Nov-C</u>	NE 16.77
kg dry weight			Jate Atlalyze	u. <u>07-1404-0</u>	
MP		-			10.33
MDL	RL	Concentration	Dilution	Confirm	Qualifer
0.18	0.50	0.18	1:1	N/A	U
0.19	0.50	0.19	1:1	N/A	U _.
0.19	1.0	0.19	1:1	N/A	υ
0.19	1.0	0.19	1:1	N/A	U
0.16	1.0	0.16	1:1	N/A	U
0.26	0.60	0.26	1:1	N/A	U
0.20	1.0	0.20	1:1	N/A	IJ
0.37	2.0	0.37	1:1	N/A	U
0.54	10	0.54	1:1	N/A	U
0.42	5.0	0.42	1:1	N/A	υ
0.17	2.0	0.30	1:1	N/A	PU.
0.22	1.0	0.22	1:1	N/A	U
0.21	1.0	0.21	1:1	N/A	U
	Per	overy Con	trol Limits	Ouglific	
	Rec	overy con	uoi Enints	Quanne	
In	ternaì Std	Qua	lifier		
					DC 11/5/9
	0.19 0.19 0.19 0.16 0.26 0.20 0.37 0.54 0.42 0.17 0.22 0.21	0.19	0.19 0.50 0.19 0.19 1.0 0.19 0.16 1.0 0.16 0.26 0.60 0.26 0.20 1.0 0.20 0.37 2.0 0.37 0.54 10 0.54 0.42 5.0 0.42 0.17 2.0 0.30 0.22 1.0 0.21 Recovery Con	0.19 0.50 0.19 1:1 0.19 1.0 0.19 1:1 0.19 1.0 0.19 1:1 0.16 1.0 0.16 1:1 0.26 0.60 0.26 1:1 0.20 1.0 0.20 1:1 0.37 2.0 0.37 1:1 0.54 10 0.54 1:1 0.42 5.0 0.42 1:1 0.17 2.0 0.30 1:1 0.22 1.0 0.22 1:1 0.21 1.0 0.21 1:1 Recovery Control Limits	0.19 0.50 0.19 1:1 N/A 0.19 1.0 0.19 1:1 N/A 0.19 1.0 0.19 1:1 N/A 0.16 1.0 0.16 1:1 N/A 0.26 0.60 0.26 1:1 N/A 0.20 1.0 0.20 1:1 N/A 0.37 2.0 0.37 1:1 N/A 0.54 10 0.54 1:1 N/A 0.42 5.0 0.42 1:1 N/A 0.17 2.0 0.30 1:1 N/A 0.21 1.0 0.21 1:1 N/A 0.21 1.0 0.21 1:1 N/A

Analytical Method: 8260B	Preparatory Method: 50308	3/8260B AAB #: 53:	12220
analytical Pictilion. <u>62005</u>	_ rieparatory Metrico: 5030t	702000 AAD # . 33.	12320
ab Name: STL Denver	Contract #: <u>F4162</u>	4-00-D-8023	
Field Sample ID: 59SW4WG1	Lab Sample ID: <u>D5J28</u>	0407-005 Matrix: <u>V</u>	VATER_
% Solids:	Initial Calibration ID: H.i-1-05	-NOV-05	
Date Received: <u>28-Oct-05 09:00</u> D	Date Prepared: <u>07-Nov-05 06:3</u>	2 Date Analyzed: <u>07-No</u>	ov-05 16:33
Concentration Units (ug/L or mg/kg dr	y weight): ug/L		
			- "-
i otulena i	MINI Di Composituat	ion Dilution Confirm	Ounties 1

Analyte	MDL	RL :	Concentration	Dilution	Confirm	Qualifer
Naphthalene	0.23	1.0	0.23	1:1	N/A	υ
o-Xylene	0.14	1.0	0.14	1:1	N/A	U
p-Isopropyltoluene	0.20	1.0	0.20	1:1	N/A	U
sec-Butylbenzene	0.22	1.0	0.22	1:1	N/A	Ū
Styrene	0.17	1.0	0.17	1:1	N/A	υ
tert-Butylbenzene	0.20	1.0	0.20	1:1	N/A	U
Tetrachloroethene	0.17	1.0	0.28	1:1	N/A	ل محر
Toluene	0.17	1.0	0.17	1:1	N/A	U
trans-1,2-Dichloroethene	0.16	1.0	0.43	1:1	N/A	7
trans-1,3-Dichloropropene	0.21	1.0	0.21	1:1	N/A	U
Trichloroethene	0.80 0.46	5 11	43 140	1:1	N/A	X
Trichlorofluoromethane	0.13	1.0	1.3	1:1	N/A	
Vinyl chloride	0.21	1.0	0.21	. 1:1	N/A	U

Surrogate	Recovery	Control Limits	Qualifier

	Internal Std	Qualifier	
Comments: HNXDC1AA		-	DY 15/06

Analytical Method: 8260B Preparatory Method:	5030B/8260B	AAB #: 531232	20
Lab Name: STL Denver Contract #	F41624-00-D-8023		
Field Sample ID: 59SW4WG1 Lab Sample ID:	D53280407-005	Matrix: WAT	<u>ER</u>
% Solids: Initial Calibration ID: _	I.i-1-05-NOV-05		
Date Received: 28-Oct-05 09:00 Date Prepared: 07-Nov-	05 06:32 Date Anal	vzed: 07-Nov-0!	5 16:33
Concentration Units (ug/L or mg/kg dry weight): ug/L			
			0
	centration Dilution		Qualifer
1,2-Dichloroethane-d4 N/A N/A		1:1 N/A	
4-Bromofluorobenzene N/A N/A Dibromofluoromethane N/A N/A		1:1 N/A N/A	
Dibromofluoromethane		L:1 N/A	
Totale up			
			:
Surrogate Recovery	Control Limit	S Qualifie	<u>'</u>
Internal Std	Qualifier		DUNE
	4		Dr 10
· L		İ	111,
Comments: HNXDC1AA			
HINADOJAA			

Analytical Method: 8260B	Preparatory Method: 5030B/8260B
Lab Name: STL-Denver	Contract #: <u>F41624-00-D-8023</u>
Field Sample ID: 59SW4WG1	Lab Sample ID: <u>D5J280407-005</u> Matrix: <u>WATER</u>
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: <u>28-Oct-05 09:00</u>	Date Prepared: <u>07-Nov-05 06:32</u> Date Analyzed: <u>07-Nov-05 16:12</u>
Concentration Units (ug/L or mg/kg o	dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,1,1,2-Tetrachloroethane	0.85	2.5	0.85	1:5	N/A	U
1,1,1-Trichloroethane	0.75	5.0	1.5	1:5	N/A	F
1,1,2,2-Tetrachloroethane	0.90	2.5	0.90	1:5	N/A	υ -
1,1,2-Trichloroethane	1.5	5.0	1.5	1:5	N/A	U
1,1-Dichloroethane	0.80	5.0	1.5	1:5	N/A	F
1,1-Dichloroethene	0.85	5.0	0.85	1:5	N/A	U
1,1-Dichloropropene	0.85	5.0	0.85	1:5	N/A	U
1,2,3-Trichlorobenzene	1,2	5.0	1.2	1:5	N/A	U
1,2,3-Trichloropropane	0.90	5.0	0.90	1:5	N/A	U
1,2,4-Trichlorobenzene	1.3	5.0	1.3	1:5	N/A	U
1,2,4-Trimethylbenzene	0.90	5.0	0.90	1:5	N/A	U
1,2-Dibromo-3-chloropropane (DBCP)	1.4	10	1.4	1:5	N/A	U

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	98	72 - 119	
4-Bromofluorobenzene	89	76 - 119	
Dibromofluoromethane	108	85 - 115	

Internal Std	Qualifier
Fluorobenzene	

BY15/05

Comments: HNXDC2AA

Analytical Method: 8260B	Preparatory Method: 5030B/8260B AAB #: 5312320
Lab Name: STL Denver	Contract #: <u>F41624-00-D-8023</u>
Field Sample ID: 59SW4WG1	Lab Sample ID: D5J280407-005 Matrix: WATER
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: 28-Oct-05 09:00	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 16:12
Concentration Units (ug/L or mg/kg	dry weight): ug/L

Analyte MDL RL Concentration Di 1,2-Dibromoethane (EDB) 1.0 5.0 1.0 1,2-Dichlorobenzene 0.75 5.0 0.75 1,2-Dichloroethane 0.90 2.5 0.90 1,2-Dichloropropane 0.85 5.0 0.85		_	
1,2-Dichlorobenzene 0.75 5.0 0.75 1,2-Dichloroethane 0.90 2.5 0.90	lution	Confirm	Qualifer
1,2-Dichloroethane 0.90 2.5 0.90	1:5	N/A	U
	1:5	N/A	U
1,2-Dichloropropane 0.85 5.0 0.85	1:5	N/A	U
	1:5	N/A	U
1,3,5-Trimethylbenzene 0.95 5.0 0.95	1:5	N/A	U
1,3-Dichlorobenzene 1.3 5.0 1.3	1:5	N/A	υ
1,3-Dichloropropane 0.90 2.0 0.90	1:5	N/A	· U
1,4-Dichlorobenzene 1/2 2.5 1.2	1:5	N/A	U
1-Chlorohexane 1.0 5.0 1.0	1:5	N/A	U
2,2-Dichloropropane 1.0 5.0 1.0	1:5	N/A	U
2-Butanone (MEK) 4.5 50 4.5	1:5	N/A	U
2-Chlorotoluene 0.85 5.0 0.85	1:5	N/A	U
4-Chlorotoluene 1.2 5.0 1.2	1:5	N/A	Ų

ı		<u> </u>		0175
	Surrogate	Recovery	Control Limits	Qualifier
	Toluene-08	107	81 - 120	

Internal Std	Qualifier
Chlorobenzene-d5	

PLISIOS

Comments: HNXDC2AA

l	_ Contr	thod: <u>5030B/8266</u> ract #: <u>F41624-00-</u>		B #: <u>53123</u>	20
		act #: <u>F41624-00</u> -	D-8023		
	ab Sampl			/	
Initial C		e ID: <u>D5J280407</u> -	005 1	4atrix: <u>WAT</u>	ER
	alibration :	ID: <u>H.i-1-05-NOV-</u>	·05		
Date Pren				/ 1- 07-Nov-6	5 16:12
			Date Filalyze	2. <u>07 1407 C</u>	J 10:1L
Kg ary weight): <u>ug/L</u>				
MDL	RL	Concentration	Dilution	Confirm	Qualifer
3.2	50	5,6	1:5	N/A	·F
0.75	2.0	0.75	1:5	N/A	U
1.0	5.0	1.0	1:5	N/A	U
0.90	5.0	0.90	1:5	N/A	U
0.95	2.5	0.95	1:5	N/A	U
1.0	5.0	1.0	1:5	N/A	U
1.2	15	1.2	1:5	N/A	U
0.90	5.0	0.90	1:5	N/A	U
0.75	2.5	0.75	1:5	N/A	U
2.3/	5.0	2.3	1:5	N/A	U
0.75	1.5	0.75	1:5	N/A	U
1.0	5.0	1.0	1:5	N/A	บ
1.0	5.0	3,5	1:5	N/A	F
/	Poo	Con	trol Limite	Qualific	
	Rec	overy Cor		Qualific	
					
In	ternal Std	Qua	alifier		
1,4-Dichlorober	zene-d5				11/18/05
					11/10.
	MDL 3.2 0.75 1.0 0.90 0.95 1.0 1.2 0.90 0.75 2.3 0.75 1.0 1.0	MDL RL 3.2 50 0.75 2.0 1.0 5.0 0.95 2.5 1.0 5.0 0.75 2.5 2.3 5.0 0.75 2.5 2.3 5.0 0.75 1.5 1.0 5.0 5.0 5	MDL	MDL	MDL RL Concentration Dilution Confirm 3.2 50 5,6 1:5 N/A 0.75 2.0 0.75 1:5 N/A 1.0 5.0 1.0 1:5 N/A 0.90 5.0 0.90 1:5 N/A 1.0 5.0 1.0 1:5 N/A 1.0 5.0 1.0 1:5 N/A 1.2 15 1.2 1:5 N/A 0.90 5.0 0.90 1:5 N/A 0.75 2.5 0.75 1:5 N/A 0.75 1.5 0.75 1:5 N/A 0.75 1.5 0.75 1:5 N/A 1.0 5.0 1.0 1:5 N/A 1.0 5.0 3.5 1:5 N/A 1.0 5.0 3.5 1:5 N/A 1.0 5.0 3.5 1:5 N/A 1.0

Analytical Method: 8260B	Preparatory Method: 5030B/8260B
Lab Name: STL Denver	Contract #: <u>F41624-00-D-8023</u>
Field Sample ID: 59SW4WG1	Lab Sample ID: <u>D5J280407-005</u> Matrix: <u>WATER</u>
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: 28-Oct-05 09:00	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 16:12
Concentration Units (ug/L or mg/kg	dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
cis-1,3-Dichloropropene	0.90	2.5	0.90	1:5	N/A	บ
Dibromochloromethane	0.95	2.5	0.95	1:5	N/A	U
Dibromomethane	0.95	5.0	0.95	1:5	N/A	U
Dichlorodifluoromethane	0.95	5.0	0.95	1:5	N/A	U
Ethylbenzene	0.80	5.0	0.80	1:5	N/A	U
Hexachlorobutadiene	1.3	3.0	1.3	1:5	N/A	U
Isopropylbenzene	1.0	5.0	1.0	1:5	N/A	U
m-Xylene & p-Xylene	1.8	10	1.8	1:5	N/A	ប
Methyl isobutyl ketone (MIBK)	2,7	50	2.7	1:5	N/A	υ
Methyl tert-butyl ether	2.1	25	2.1	1:5	N/A	U
Methylene chloride	0.85	10	2.7	1:5	N/A	F
n-Butylbenzene	1.1	5.0	1.1	1:5	N/A	U
n-Propylbenzene	1.0	5.0	1.0	1:5	N/A	U

Surrogate	Recovery	Control Limits	Qualifier

	Internal Std	Qualifier	
			DUNS
mments: XDC2AA			1,11.

Prepa	aratory Me	thod: <u>5030B/826</u>	0B A4	B #:/ <u>53123</u>	20	_
	Cont	ract #: <u>F41624-00</u> -	-D-8023			
!	Lab Sampi	e ID: <u>D5J280407</u> -	<u>005</u> / 1	Matrix: WAT	ER_	
Initial C	alibration	ID: H.i-1-05-NOV-	-05	_		
Date Pren	pared: 07	7-Nov-05 06:32	Date Analyze	d: 07-Nov-0	15 16:12	
		/	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			-
g dry weight	.). <u>ug/L</u>					
MDL	RL	Concentration	Dilution	Confirm	Qualifer]
1.2	5.0	1.2	1:5	N/A	U	1
0.70	5.0	0.70	1:5	N/A	U	
1.0	5.0	1.0	1:5	N/A	U	
1.1	5.0	1.1	1:5	N/A	U	
0.85	5.0	0.85	1:5	N/A	U	
1.0	5.0	1.0	1:5	N/A	U	
9,85	5.0	0.85	1:5	N/A	U	
0.85	5.0	0.85	1:5	N/A	U	
0.80	5.0	0.80	1:5	N/A	U	
1.0	5.0	1.0	1:5	N/A	U	
0.80	5.0	(43)	1:5	N/A]
0.65	5.0	0.66	1:5	N/A	F	
1.0	5.0	1.0	1:5	N/A	Ù	
	Rec	covery Cor	ntrol Limits	Qualifie	er	
In	ternal Sto	Ou	alifier			
						.()
					\mathcal{D}'	آار
					''	()
	Initial Control Date Prepared of the Prepared	Lab Sample Initial Calibration Date Prepared: 07 Office Contract #: F41624-00- Lab Sample ID: D51280407- Initial Calibration ID: H.i-1-05-NOV- Date Prepared: 07-Nov-05 06:32 g dry weight): ug/L MDL RL Concentration 1.2 5.0 1.2 0.70 5.0 0.70 1.0 5.0 1.1 0.85 5.0 0.85 1.0 5.0 0.85 0.85 5.0 0.85 0.80 5.0 0.85 0.80 5.0 0.80 1.0 5.0 1.0 0.80 5.0 0.66 1.0 5.0 1.0 Recovery Con	Lab Sample ID: D5J280407-005	Contract #: F41624-00-D-8023 Lab Sample ID: D5J280407-005 Matrix: WAT Initial Calibration ID: H.i-I-05-NOV-05 Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 Initial Calibration ID: H.i-I-05-NOV-05 Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 Initial Calibration ID: H.i-I-05-NOV-05 Initial Calibration ID: H.i-I-105-NOV-05 Initial Cali	Contract #: F41624-00-D-8023 Matrix: WATER	

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nalytical Method: 8260B	Prepa	aratory Me	thod: <u>5030</u>)B/8260	<u>B</u> A4	NB #: <u>53123</u>	120	
ab Name: STL Denver		Cont	ract #: <u>F416</u>	24-00-	D-8023	/		
eld Sample ID: 59SW4WG1		Lab Sampi	e ID: <u>D5J28</u>	80407-0	005	Matrix: <u>WA</u> T	TER	
Solids:	Initial C	alibration	ID: <u>H.i-1-0</u>	5- NOV -	05			
ate Received: 28-Oct-05 09:00		pared: 07	'-Nov-05 06:	32 [Date Analyze	' d: 07-Nov-(05 16:12	
oncentration Units (ug/L or mg/								_
oneonadion onto (ug/ E or mg/	ng ary meigric	.). <u>ug/c</u>		_				
Analyte	MDL	RL	Concentra	tion /	Dilution	Confirm	Qualifer	1
1,2-Dichloroethane-d4	N/A	N/A		49	1:5	N/A		1
4-Bromofluorobenzene	N/A	N/A	/	45	1:5	N/A		1
Dibromofluoromethane	N/A	N/A		54	1:5	N/A		
Toluene-d8	N/A	N/A		53	1:5	N/A		
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		<i>/</i>						
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Surrogate		Rec	overy	Con	trol Limits	Qualifi	er	
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	. In	ternal Std		Qua	llifier			
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comments:							`	
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Analytical Method: 8260B	Preparatory Method: <u>5030B/8260B</u> AAB #: <u>5312320</u>
ab Name: STL Denver	Contract #: <u>F41624-00-D-8023</u>
Field Sample ID: 59SW7WG1	Lab Sample ID: <u>D53280407-006</u> Matrix: <u>WATER</u>
% Solids:	nitial Calibration ID: H.i-1-05-NOV-05
Date Received: <u>28-Oct-05 09:00</u> Da	te Prepared: <u>07-Nov-05 06:32</u> Date Analyzed: <u>07-Nov-05 13:03</u>
Concentration Units (ug/L or mg/kg dry	weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,1,1,2-Tetrachloroethane	0.17	0.50	0.17	1:1	N/A	U
1,1,1-Trichloroethane	0.15	1.0	0.73	1:1	N/A	75
1,1,2,2-Tetrachloroethane	0.18	0.50	0.18	1:1	N/A	U
1,1,2-Trichloroethane	0.30	1.0	0.30	1:1	N/A	U
1,1-Dichloroethane	0.16	1.0	1.4	1:1	N/A	
1,1-Dichloroethene	0.17	1.0	0.17	1:1	N/A	U
1,1-Dichloropropene	0.17	1.0	0.17	1:1	N/A	U
1,2,3-Trichlorobenzene	0.24	1.0	0.24	1:1	N/A	U
1,2,3-Trichloropropane	0.18	1.0	0.18	1:1	N/A	U
1,2,4-Trichlorobenzene	0.26	1.0	0.26	1:1	N/A	U
1,2,4-Trimethylbenzene	0.18	1.0	0.18	1:1	N/A	U
1,2-Dibromo-3-chloropropane (DBCP)	0.28	2.0	0.28	1:1	N/A	U
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Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	. 96	72 - 119	
4-Bromofluorobenzene	88	76 - 119	
Dibromofluoromethane	107	85 - 115	

Internal Std	Qualifier
Fluorobenzene	

	Fluorobenzene	
Comments: HNXDD1AA	·	CUISIOS IIIISIOS

Analytical Method: 8260B	Preparatory Method: 5030B/8260B AAB #: 5312320
Lab Name: STL Denver	Contract #: F41624-00-D-8023
Field Sample ID: 59SW7WG1	Lab Sample ID: <u>D5J280407-006</u> Matrix: <u>WATER</u>
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: 28-Oct-05 09:00	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 13:03
Concentration Units (ug/L or mg/kg	dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,2-Dibromoethane (EDB)	0.20	1.0	0.20	1:1	N/A	U ·
1,2-Dichlorobenzene	0.15	1.0	0.15	1:1	N/A	U
1,2-Dichloroethane	0.18	0.50	0.18	1:1	N/A	U
1,2-Dichloropropane	0.17	1.0	0.17	1:1	·N/A	U
1,3,5-Trimethylbenzene	0.19	1.0	0.19	1:1	N/A	U
1,3-Dichlorobenzene	0.26	1.0	0.26	1:1	N/A	U
1,3-Dichloropropane	0.18	0.40	0.18	1:1	N/A	U
1,4-Dichlorobenzene	0.23	0.50	0.23	1:1	N/A	U
1-Chiorohexane	0.20	1.0	0.20	1:1	N/A	U
2,2-Dichloropropane	0.21	1.0	0.21	1:1	N/A	υ
2-Butanone (MEK)	0.90	10	0.90	1:1	N/A	. U
2-Chlorotoluene	0.17	1.0	0.17	1:1	N/A	U
4-Chlorotoluene	0.23	- 1.0	0.23	1:1	· N/A	U

Surrogate	Recovery	Control Limits	Qualifier
Toluene-d8	105	81 - 120	

Qualifier

00/5/05

Comments: HNXDD1AA	·		

Analytical Method: 8260B	Preparatory Method: <u>5030B/8260B</u> AAB #: <u>5312320</u>
Lab Name: STL Denver	Contract #: F41624-00-D-8023
Field Sample ID: 595W7WG1	Lab Sample ID: <u>D5J280407-006</u> Matrix: <u>WATER</u>
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: <u>28-Oct-05 09:00</u>	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 13:03
Concentration Units (ug/L or mg/kg d	ry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
Acetone	0.63	10	0.63	1:1	N/A	U
Benzene	0.15	0.40	0.15	1:1	N/A	U
Bromobenzene	0.20	1.0	0.20	1:1	N/A	U
Bromochloromethane	0.18	1.0	0.18	1:1	N/A	U
Bromodichloromethane	0.19	0.50	0.19	1:1	N/A	U
Bromoform	0.20	1.0	0.20	1:1	N/A	U
Bromomethane	0.24	3.0	0.24	1:1	N/A	υ
Carbon tetrachloride	0.18	1.0	0.18	1:1	N/A	υ
Chlorobenzene	0.15	0.50	0.15	1:1	N/A	U
Chloroethane	0.46	1.0	0.46	1:1	N/A	U
Chloroform	0.15	0.30	0.15	1:1	N/A	U
Chloromethane	0.20	1.0	0.20	1:1	N/A	U
cis-1,2-Dichloroethene	0.20	1.0	12	1:1	N/A	

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier
1,4-Dichlorobenzene-d5	

20/5/05

Comments:		•	
HNXDD1AA			
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Anaiyte	MDL RI	Com	centration	Dilution	Confirm	Qualifer
Concentration Units (ug/L or mg/kg d	lry weight): <u>и</u>	g/L				
Pate Received: 28-Oct-05 09:00	Date Prepared:	07-Nov-	05 06:32	Date Analyze	d: <u>07-Nov-</u>	05 13:03
6 Solids:	Initial Calibra	tion ID: <u>I</u>	H.i-1-05-NOV	-05		
ield Sample ID: 59SW7WG1	Lab Sa	ample ID:	D5J280407	-006 1	Matrix: WA	TER
ab Name: STL Denver	(Contract #	: <u>F41624-00</u>	-D-8023		
nalytical Method: 8260B	Preparator	y Method:	5030B/826	OB AA	B#: <u>53123</u>	320

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
cis-1,3-Dichloropropene	0.18	0.50	0.18	1:1	N/A	U
Dibromochloromethane	0.19	0.50	0.19	1:1	N/A	U
Dibromomethane	0.19	1.0	0.19	1:1	N/A	U
Dichlorodifluoromethane	0.19	1.0	0.19	1:1	N/A	υ
Ethylbenzene	0.16	1.0	0.16	1:1	N/A	U
Hexachlorobutadiene	0.26	0.60	0.26	1:1	N/A	U
Isopropylbenzene	0.20	1.0	0.20	1:1	N/A	υ
m-Xylene & p-Xylene	0.37	2.0	0.37	1:1	N/A	υ
Methyl isobutyl ketone (MIBK)	0.54	10	0.54	1:1	N/A	υ
Methyl tert-butyl ether	0.42	5.0	0.42	1:1	N/A	U
Methylene chloride	0.17	2.0	0.34	1:1	N/A	PU
n-Butylbenzene	0.22	1.0	0.22	1:1	N/A	U
n-Propylbenzene	0.21	1.0	0.21	1:1	N/A	U.

Surrogate	Recovery	Control Limits	Qualifier

	Internal Std	Qualifier	
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Comments: HNXDD1AA			

Analytical Method: 8260B	Preparatory Method: 5030B/8260B
Lab Name: STL Denver	Contract #: F41624-00-D-8023
Field Sample ID: 59SW7WG1	Lab Sample ID: D5J280407-006 Matrix: WATER
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: 28-Oct-05 09:00	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 13:03
Concentration Units (ug/L or mg/kg	dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
Naphthalene	0.23	1.0	0.23	1:1	N/A	U
o-Xylene	0.14	1.0	0.14	1:1	N/A	U
p-Isopropyltoluene	0.20	1.0	0.20	1:1	N/A	υ
sec-Butylbenzene	0.22	1.0	0.22	1:1	N/A	U
Styrene	0.17	1.0	0.17	1:1	N/A	U
tert-Butylbenzene	0.20	1.0	0.20	1:1	N/A	U
Tetrachloroethene	0.17	1.0	0.24	1:1	N/A	رمر
Toluene	0.17	1.0	0.17	1:1	N/A	U
trans-1,2-Dichloroethene	0.16	1.0	0.16	1:1	N/A	υ
trans-1,3-Dichloropropene	0.21	1.0	0.21	1:1	N/A	U
Trichloroethene	0.16	1.0	3.1	1:1	N/A	
Trichlorofluoromethane	0.13	1.0	0.13	1:1	N/A	υ
Vinyl chloride	0.21	1.0	0.21	1:1	N/A	υ

Surrogate	Recovery	Control Limits	Qualifier

	Internal Std	Qualifier	
Comments:			PUSI

۱n	alytical !	Method: 8260B	Prepa	ratory Me	thod: <u>503</u> (DB/8260	<u>)B</u> A A	NB #: <u>53123</u>	20	
.a	b Name:	STL Denver		_ Contr	act #: <u>F41</u>	524-00-	D-8023			
ie	eld Samp	le ID: <u>59SW7WG1</u>	L	ab Sample	e ID: <u>D5J2</u>	80 4 07-(006	Matrix: <u>WA</u> T	TER_	
		ved: <u>28-Oct-05 09:00</u>						- :d: 07-Nov-(15 13:03	
							Dute Filldlyze	u. <u>07 1107 (</u>	20,00	
u	ncentrai	tion Units (ug/L or mg/	kg ary weight,): <u>ug/L</u>		- .				
		Analyte	MDL	RL.	Concentra	ation	Dilution	Confirm	Qualifer	
1	1,2-Dichl	oroethane-d4	N/A	N/A		9.6	1:1	N/A]
	4-Bromo	fluorobenzene	N/A	N/A		8.8	1:1	N/A		_
	Dibromo	fluoromethane	N/A	N/A		11	1:1	N/A		_
	Toluene-	d8	N/A	N/A		11	1:1	N/A		
	*									
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		-								
		Company		Doo		Cor	terel I imilia	Qualifi		_
	:	Surrogate		Kec	overy	Cor	ntrol Limits	Qualifi	er	
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			In	ternal Std	l	Qua	alifier			
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	omment NXDD1AA								`	
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Analytical Method: 8260B	Preparatory Method: <u>5030B/8260B</u> AAB #: <u>5312320</u>
Lab Name: STL Denver	Contract #: <u>F41624-00-D-8023</u>
Field Sample ID: 59SW7WG9	Lab Sample ID: D5J280407-007 Matrix: WATER
% Solids:	initial Calibration ID: H.i-1-05-NOV-05
Date Received: 28-Oct-05 09:00 Da	te Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 13:24
Concentration Units (ug/L or mg/kg dry	weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,1,1,2-Tetrachloroethane	0.17	0.50	0.17	1:1	N/A	U
1,1,1-Trichloroethane	0.15	1.0	0.69	1:1	N/A	PJ
1,1,2,2-Tetrachloroethane	0.18	0.50	0.18	1:1	· N/A	U
1,1,2-Trichloroethane	0.30	1.0	0.30	1:1	N/A	U
1,1-Dichloroethane	0.16	1.0	1.4	1:1	N/A	-
1,1-Dichloroethene	0.17	1.0	0.17	1:1	N/A	υ
1,1-Dichloropropene	0.17	1.0	0.17	1:1	N/A	υ
1,2,3-Trichlorobenzene	0.24	1.0	0.24	1:1	N/A	υ
1,2,3-Trichloropropane	0.18	1.0	0.18	1:1	N/A	Ú
1,2,4-Trichlorobenzene	0.26	1.0	0.26	1:1	N/A	U ·
1,2,4-Trimethylbenzene	0.18	1.0	0.18	1:1	N/A	υ
1,2-Dibromo-3-chloropropane (DBCP)	0.28	2.0	0.28	1:1	N/A	U

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	95	72 - 119	
4-Bromofluorobenzene	89	76 - 119	
Dibromofluoromethane	107	85 - 115	

Internal Std	Qualifier
Fluorobenzene	

Comments:	20113
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Analytical Method: 8260B	Preparatory Method: 5030B/8260B
Lab Name: STL Denver	Contract #: F41624-00-D-8023
Field Sample ID: 59SW7WG9	Lab Sample ID: D5J280407-007 Matrix: WATER
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: <u>28-Oct-05 09:00</u>	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 13:24
Concentration Units (ug/L or mg/kg	dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,2-Dibromoethane (EDB)	0.20	1.0	0.20	1:1	N/A	U
1,2-Dichlorobenzene	0.15	1.0	0.15	1:1	N/A	υ
1,2-Dichloroethane	0.18	0.50	0.18	1:1	N/A	U
1,2-Dichloropropane	0.17	1.0	0.17	1:1	N/A	U
1,3,5-Trimethylbenzene	0.19	1.0	0.19	1:1	N/A	υ
1,3-Dichlorobenzene	0.26	1.0	0.26	1:1	N/A	U
1,3-Dichloropropane	0.18	0.40	0.18	1:1	N/A	U
1,4-Dichlorobenzene	0.23	0.50	0.23	1:1	N/A	U
1-Chlorohexane	0.20	1.0	0.20	1:1	N/A	U
2,2-Dichloropropane	0.21	1.0	0.21	1:1	N/A	U
2-Butanone (MEK)	0.90	10	0.90	1:1	N/A	U
2-Chlorotoluene	0.17	1.0	0.17	1:1	N/A	U
4-Chlorotoluene	0.23	1.0	0.23	1:1	N/A	U

Surrogate	Recovery	Control Limits	Qualifier
Toluene-d8	106	81 - 120	

Internal Std	Qualifier
Chlorobenzene-d5	

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Comments: HNXDF1AA		· .	

Analytical Method: 8260B	Preparatory Method: <u>5030B/8260B</u> AAB #: <u>5312320</u>
Lab Name: STL Denver	Contract #: F41624-00-D-8023
Field Sample ID: 59SW7WG9	Lab Sample ID: D5J280407-007 Matrix: WATER
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: <u>28-Oct-05 09:00</u>	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 13:24
Concentration Units (ug/L or mg/kg	dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
Acetone	0.63	10	0.63	1:1	N/A	U
Benzene	0.15	0.40	0.15	i :1	N/A	U
Bromobenzene	0.20	1.0	0.20	1:1	N/A	υ
Bromochloromethane	0.18	1.0	0.18	1:1	N/A	U
Bromodichloromethane	0.19	0.50	0.19	1:1	N/A	U
Bromoform	0.20	1.0	0.20	1:1	N/A	U
Bromomethane	0.24	3.0	0.24	1:1	N/A	U
Carbon tetrachloride	0.18	1.0	0.18	1:1	N/A	U
Chlorobenzene	0.15	0.50	0.15	1:1	N/A	บ
Chloroethane	0.46	1.0	0.46	1:1	N/A	U
Chloroform	0.15	0.30	0.15	1:1	N/A	U
Chloromethane	0.20	1.0	0.20	1:1	N/A	U
cis-1,2-Dichloroethene	0.20	1.0	12	1:1	N/A	

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier
1,4-Dichlorobenzene-d5	

1112/05

Comments: HNXDF1AA			

Analytical Method: 8260B	Preparatory Method: 5030B/8260B
Lab Name: STL Denver	Contract #: F41624-00-D-8023
Field Sample ID: <u>59SW7WG9</u>	Lab Sample ID: <u>D5J280407-007</u> Matrix: <u>WATER</u>
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: 28-Oct-05 09:00	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 13:24
Concentration Units (ug/L or mg/kg	dry weight): ug/L

Analyte	MDL	RL.	Concentration	Dilution	Confirm	Qualifer
cis-1,3-Dichloropropene	0.18	0.50	0.18	1:1	N/A	Ü
Dibromochloromethane	0.19	0.50	0.19	1:1	N/A	U
Dibromomethane	0.19	1.0	0.19	1:1	N/A	U
Dichlorodifluoromethane	0.19	1.0	0.19	1:1	N/A	U
Ethylbenzene	0.16	1.0	0.16	1:1	N/A	U
Hexachlorobutadiene	0.26	0.60	0.26	1:1	N/A	U
Isopropylbenzene	0.20	1.0	0.20	1:1	N/A	U
m-Xylene & p-Xylene	0.37	2.0	0.37	1:1	N/A	U
Methyl isobutyl ketone (MIBK)	0.54	10	0.54	1:1	N/A	U
Methyl tert-butyl ether	0.42	5.0	0.42	1:1	N/A	U
Methylene chloride	0.17	2.0	0.34	1:1	N/A	PU
n-Butylbenzene	0.22	1.0	0.22	1:1	N/A	U
n-Propylbenzene	0.21	1.0	0.21	1:1	N/A	U

	Internal Std	Qualifier	
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omments:			11/10
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lytical Method: 8260B	Prepa	ratory Me	thod: 5030B/82	60B A	NB #: <u>53123</u>	20
Name: STL Denver		_ Conti	act #: <u>F41624-0</u>	0-D-8023		
ld Sample ID: 59SW7WG9	L	ab Sampl	e ID: <u>D5J28040</u>	7-007 I	Matrix: <u>WA</u> T	TER_
Solids:	Initial C	alibration i	ID: <u>H.i-1-05-NO</u>	V-05	_	
te Received: <u>28-Oct-05 09:0</u>	∩ Date Prep	ared: 07	-Nov-05 06:32	Date Analyze	d: 07-Nov-()5 13:24
ncentration Units (ug/L or mo	J/Kg ary weight): <u>ug/L</u>				
Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
Naphthalene	0.23	1.0	0.2	3 1:1	N/A	U
o-Xylene	0.14	1.0	0.1	4 1:1	N/A	U
p-Isopropyltoluene	0.20	1.0	0.2	0 1:1	· N/A	U
sec-Butylbenzene	0.22	1.0	0.2	2 1:1	N/A	U
Styrene	0.17	1.0	0.1	7 1:1	N/A	υ
tert-Butylbenzene	0.20	1.0	0.2	0 1:1	N/A	U
Tetrachloroethene	0.17	1.0	0.2	3 1:1	N/A	7/
Toluene	0.17	1.0	0.1	7 1:1	N/A	υ
trans-1,2-Dichloroethene	0.16	1.0	· 0.1	6 1:1	N/A	U
trans-1,3-Dichloropropene	0.21	1.0	0.2	1 1:1	N/A	υ
Trichloroethene	0.16	1.0	3.	0 1:1	N/A	
Trichlorofluoromethane	0.13	1.0	0.1	3 1:1	N/A	υ
Vinyl chloride	0.21	1.0	0.2	1:1	N/A	U
Surroga	te.	Per	covery C	ontrol Limits	Qualifi	er
Junioga						

Comments: HNXDF1AA

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Analytical I	Method: 8260B	Prepa	ratory Me	thod: <u>5030</u>	B/8260	DB AA	B #: <u>53123</u>	20	
Lab Name:	: STL Denver	···-	_ Contr	act #: <u>F416</u>	24-00-	D-8023	· 		
Field Samp	ole ID: 59SW7WG9	L	ab Sample	e ID: <u>D5J2</u> 8	30407-0	007N	Matrix: WAT	ER	
% Solids:		Initial Ca	libration :	ID: <u>H.i-1-0</u>	5-NOV-	05	_		
	ived: 28-Oct-05 09:00						d: <u>07-Nov-(</u>	5 13:24	
	tion Units (ug/L or mg/	_				. •	•		
	den one (ag/ 2 or mg/	ng ary mengine,	, <u>23/2</u>		_				
	Analyte	MDL	RL	Concentra	tion	Dilution	Confirm	Qualife	
1,2-Dich	loroethane-d4	N/A	N/A		9.5	1:1	N/A		
4-Bromo	ofluorobenzene	N/A	N/A		8.9	1:1	N/A		
Dibromo	ofluoromethane	N/A	N/A		11	1:1	N/A		
Toluene	-d8	N/A	N/A	-	11	1:1	N/A		
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	Surrogate		Rec	overy	Cor	ntrol Limits	Qualifi	er	
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Comment HNXDF1AA									

Analytical Method: 8260B	Preparatory Method: 5030B/8260B AAB #: 5312320
Lab Name: STL Denver	Contract #: F41624-00-D-8023
Field Sample ID: TB102705	Lab Sample ID: <u>D5J280407-008</u> Matrix: <u>WATER</u>
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: <u>28-Oct-05 09:00</u>	Date Prepared: <u>07-Nov-05 06:32</u> Date Analyzed: <u>07-Nov-05 13:45</u>
Concentration Units (ug/L or mg/kg	dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,1,1,2-Tetrachloroethane	0.17	0.50	0.17	1:1	N/A	U
1,1,1-Trichloroethane	0.15	1.0	0.15	1:1	N/A	·U
1,1,2,2-Tetrachloroethane	0.18	0.50	0.18	1:1	N/A	υ
1,1,2-Trichloroethane	0.30	1.0	0.30	1.1	N/A	U
1,1-Dichloroethane	0.16	1.0	0.16	. 1:1	N/A	บ
1,1-Dichloroethene	0.17	1.0	0.17	1:1	N/A	Ü
1,1-Dichloropropene	. 0.17	1.0	0.17	1:1	N/A	υ
1,2,3-Trichlorobenzene	0.24	1.0	0.24	1:1	N/A	U
1,2,3-Trichloropropane	0.18	1.0	0.18	1:1	· N/A	U
1,2,4-Trichlorobenzene	0.26	1.0	0.26	1:1	N/A	U
1,2,4-Trimethylbenzene	0.18	1.0	0.18	1:1	N/A	U
1,2-Dibromo-3-chloropropane (DBCP)	0.28	2.0	0.28	1:1	N/A	U
				*		1

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	94	72 - 119	
4-Bromofluorobenzene	89	76 - 119	
Dibromofluoromethane	106	85 - 115	

Internal Std	Qualifier
Fluorobenzene	

Comments: HNXDG1AA	·.

Analytical Method: 8260B	Preparatory Method: <u>5030B/8260B</u> AAB #: <u>5312320</u>
Lab Name: STL Denver	Contract*#: <u>F41624-00-D-8023</u>
Field Sample ID: TB102705	Lab Sample ID: D5J280407-008 Matrix: WATER
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: 28-Oct-05 09:00	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 13:45
Concentration Units (ug/L or mg/kg	dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,2-Dibromoethane (EDB)	0.20	1.0	0.20	1:1	N/A	υ
1,2-Dichlorobenzene	0.15	1.0	0.15	1:1	N/A	υ
1,2-Dichloroethane	0.18	0.50	0.18	1:1	N/A	U
1,2-Dichloropropane	0.17	1.0	0.17	1:1	N/A	U
1,3,5-Trimethylbenzene	0.19	1.0	0.19	1:1	N/A	υ
1,3-Dichlorobenzene	0.26	1.0	0.26	1:1	N/A	U
1,3-Dichloropropane	0.18	0.40	0.18	1:1	N/A	U
1,4-Dichlorobenzene	0.23	0.50	0.23	1:1	N/A	U
1-Chlorohexane	0.20	1.0	0.20	1:1	N/A	υ
2,2-Dichloropropane	0.21	1.0	0.21	1:1	N/A	U
2-Butanone (MEK)	0.90	10	0.90	1:1	N/A	U
2-Chlorotoluene	0.17	1.0	0.17	1:1	N/A	U
4-Chlorotoluene	0.23	1.0	0.23	1:1	N/A	U

Surrogate	Recovery	Control Limits	Qualifier
Toluene-d8	106	81 - 120	

Internal Std	Qualifier
Chlorobenzene-d5	

Comments: HNXDG1AA		·	
			
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Analytical Method: 8260B	Preparatory Method: 5030B/8260B
Lab Name: STL Denver	Contract #: F41624-00-D-8023
Field Sample ID: TB102705	Lab Sample ID: <u>D5J280407-008</u> Matrix: <u>WATER</u>
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: 28-Oct-05 09:00 D	ate Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 13:45
Concentration Units (ug/L or mg/kg dr	y weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
Acetone	0.63	10	0.63	1:1	N/A	U
Benzene	0.15	0.40	0.15	1:1	N/A	U
Bromobenzene	0.20	1.0	0.20	1:1	N/A	U
Bromochloromethane	0.18	1.0	0.18	1:1	N/A	U
Bromodichioromethane	0.19	0.50	0.19	1:1	N/A	U
Bromoform	0.20	1.0	0.20	1:1	N/A	υ
Bromomethane	0.24	3.0	0.24	1:1	N/A	U
Carbon tetrachloride	0.18	1.0	0.18	1:1	N/A	υ
Chlorobenzene	0.15	0.50	0.15	1:1	N/A	υ
Chloroethane	0.46	1.0	0.46	1:1	N/A	U
Chloroform	0.15	0.30	0.15	1:1	N/A	υ
Chloromethane	0.20	1.0	0.20	1:1	N/A	U
cis-1,2-Dichloroethene	0.20	1.0	0.20	1:1	N/A	Ü

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier
1,4-Dichlorobenzene-d5	

Comments: HNXDG1AA		

Analytical Method: 8260B	Preparatory Method: 5030B/8260B
Lab Name: STL Denver	Contract #: <u>F41624-00-D-8023</u>
Field Sample ID: TB102705	Lab Sample ID: <u>D5J280407-008</u> Matrix: <u>WATER</u>
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: 28-Oct-05 09:00	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 13:45
Concentration Units (ug/L or mg/kg	dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
cis-1,3-Dichloropropene	0.18	0.50	0.18	. 1:1	N/A	υ
Dibromochloromethane	0.19	0.50	0.19	1:1	N/A	U
Dibromomethane	0.19	1.0	0.19	1:1	N/A	υ
Dichlorodifluoromethane	0.19	1.0	1.9	1:1	N/A	
Ethylbenzene	0.16	1.0	0.16	1:1	N/A	U
Hexachlorobutadiene	0.26	0.60	0.26	1:1	N/A	U
Isopropylbenzene	0.20	1.0	0.20	1:1	N/A	Ü
m-Xylene & p-Xylene	0.37	2.0	0.37	1:1	N/A	U
Methyl isobutyl ketone (MIBK)	0.54	10	0.54	1:1	N/A	U
Methyl tert-butyl ether	0.42	5.0	0.42	1:1	N/A	U
Methylene chloride	0.17	2.0	0.43	1:1	N/A	PU
n-Butylbenzene	0.22	1.0	0.22	1:1	N/A	U
n-Propylbenzene	0.21	1.0	0.21	. 1:1	N/A	U

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier

Comments: INXDG1AA

Analytical Method: 8260B	Preparatory Method: 5030B/8260B
Lab Name: STL Denver	Contract #: F41624-00-D-8023
Field Sample ID: TB102705	Lab Sample ID: D53280407-008 Matrix: WATER
% Solids:	Initial Calibration ID: H.i-1-05-NOV-05
Date Received: 28-Oct-05 09:00	Date Prepared: 07-Nov-05 06:32 Date Analyzed: 07-Nov-05 13:45
Concentration Units (ug/L or mg/kg d	ry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
Naphthalene	0.23	1.0	0.23	1:1	N/A	U
o-Xylene	0.14	1.0	0.14	1:1	N/A	U
p-Isopropyltoluene	0.20	1.0	0.20	1:1	N/A	U
sec-Butylbenzene	0.22	1.0	0.22	1:1	N/A	U
Styrene	0.17	1.0	0.17	1:1	N/A	U
tert-Butylbenzene	0.20	1.0	0.20	1:1	N/A	U
Tetrachloroethene	0.17	1.0	0.17	1:1	N/A	U
Toluene	0.17	1.0	0.17	1:1	N/A	U
trans-1,2-Dichloroethene	0.16	1.0	0.16	1:1	N/A	U
trans-1,3-Dichloropropene	0.21	1.0	0.21	1:1	N/A	U
Trichloroethene	0.16	1.0	0.16	1:1	N/A	U
Trichlorofluoromethane	0.13	1.0	0.13	1:1	N/A	Ü
Vinyl chloride	0.21	1.0	0.21	1:1	N/A	U

Surrogate	Recovery	Control Limits	Qualifier

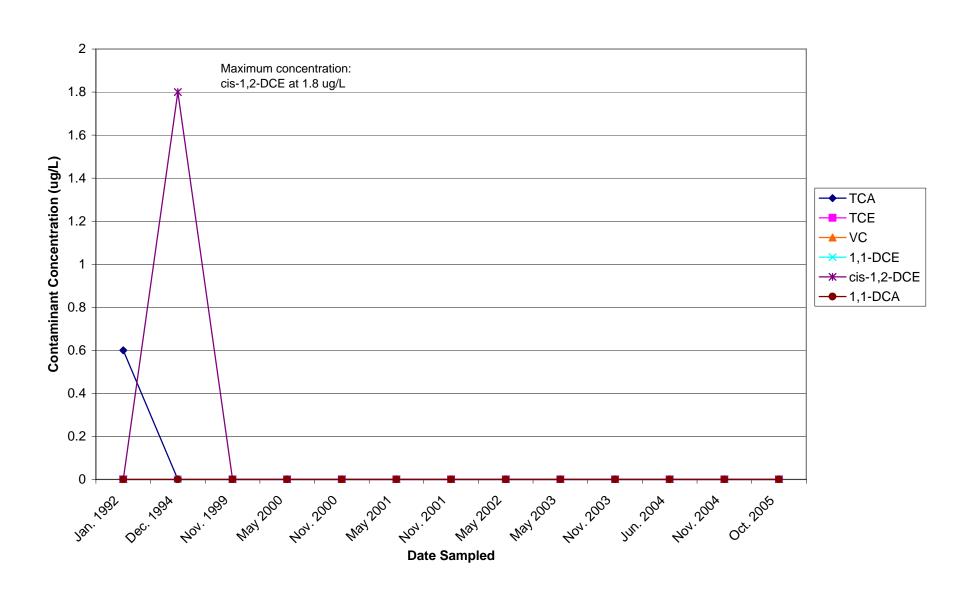
Internal Std	Qualifier			

Comments: HNXDG1AA		

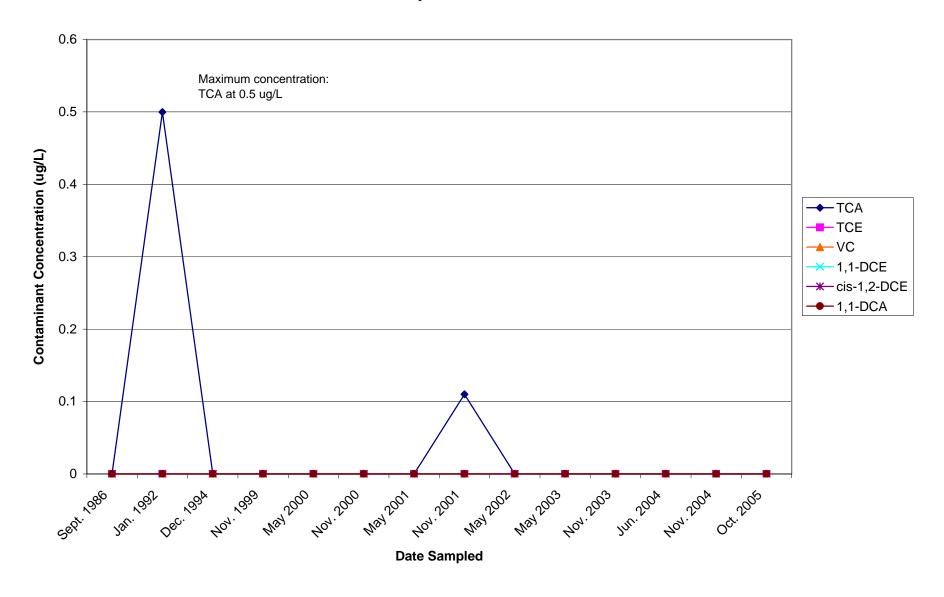
nalytical Me	thod: <u>8260B</u>	Prepa	ratory Me	thod: 5030B/8260	OB AA	AB #: <u>53123</u>	20
ab Name: §	STL Denver		Cont	ract #: <u>F41624-00</u> -	D-8023		
ield Sample	ID: <u>TB102705</u>	1	.ab Sampl	e ID: <u>D5J280407</u> -	008	Matrix: <u>WAT</u>	ER
6 Solids:	-	Initial C	alibration	ID: <u>H.i-1-05-NOV</u> -	05	-	
ate Receive	d: <u>28-Oct-05 09:00</u>	_ Date Prep	ared: <u>07</u>	'-Nov-05 06:32	Date Analyze	d: <u>07-Nov-C</u>)5 13: 4 5
	n Units (ug/L or mg/						
		-					
	Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,2-Dichloro	oethane-d4	N/A	N/A	9.4	1:1	N/A	
4-Bromofluo	orobenzene	N/A	N/A	8.9	1:1	N/A	
Dibromoflu	oromethane	N/A	N/A	11	1:1	N/A	
Toluene-d8		N/A	N/A	11	1:1	N/A	
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	Surrogate	- 1	Per	overy Cor	ntrol Limits	Qualifie	
	Surrogace	<u>`</u>	Rec	overy cor	igoi ciniics	Quantit	-
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		In	ternal Std	Qua	alifier		
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Comments: HNXDG1AA	÷						
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APPENDIX E Trend Analysis of VOCs in Groundwater

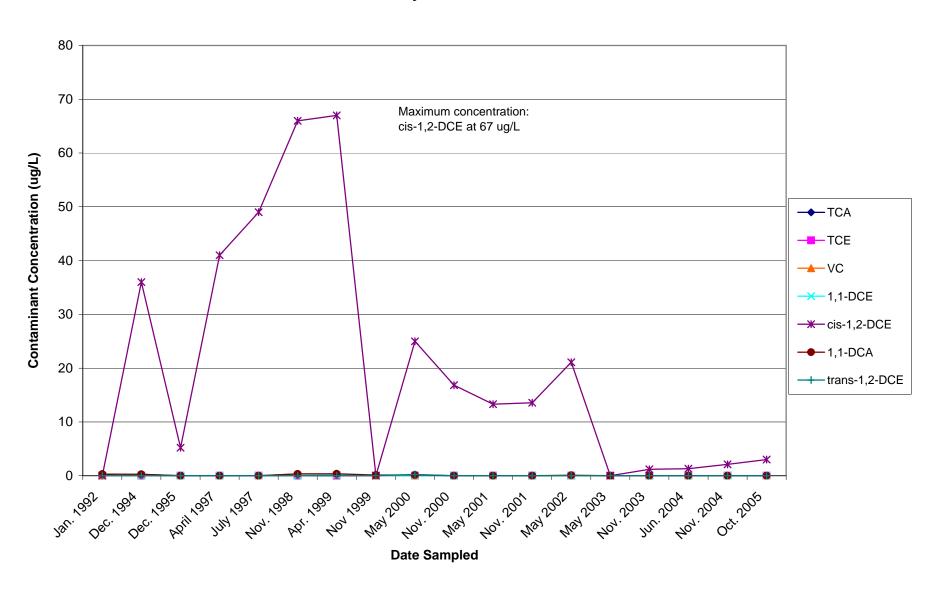
DW1 Trend Analysis of VOCs in Groundwater



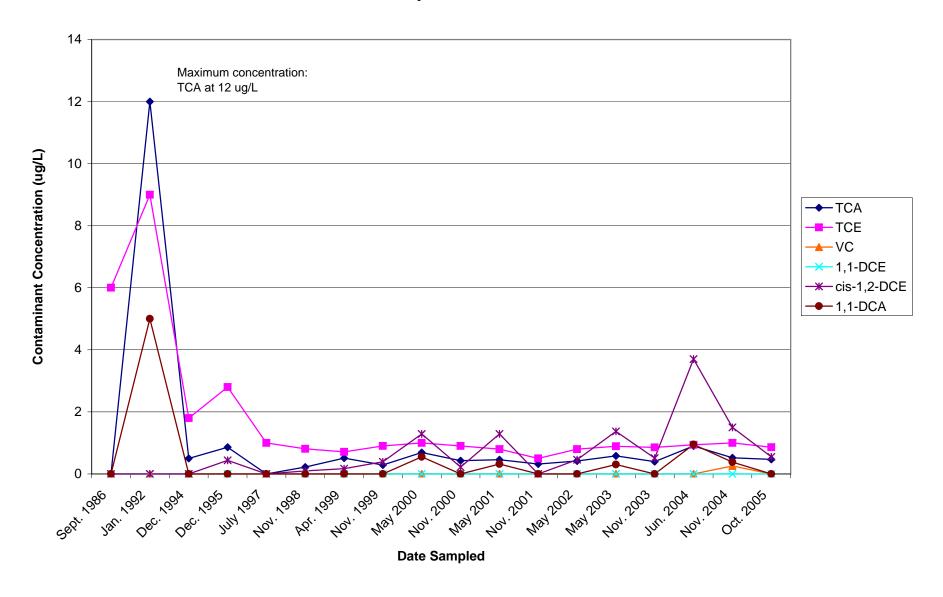
SW1 Trend Analysis of VOCs in Groundwater



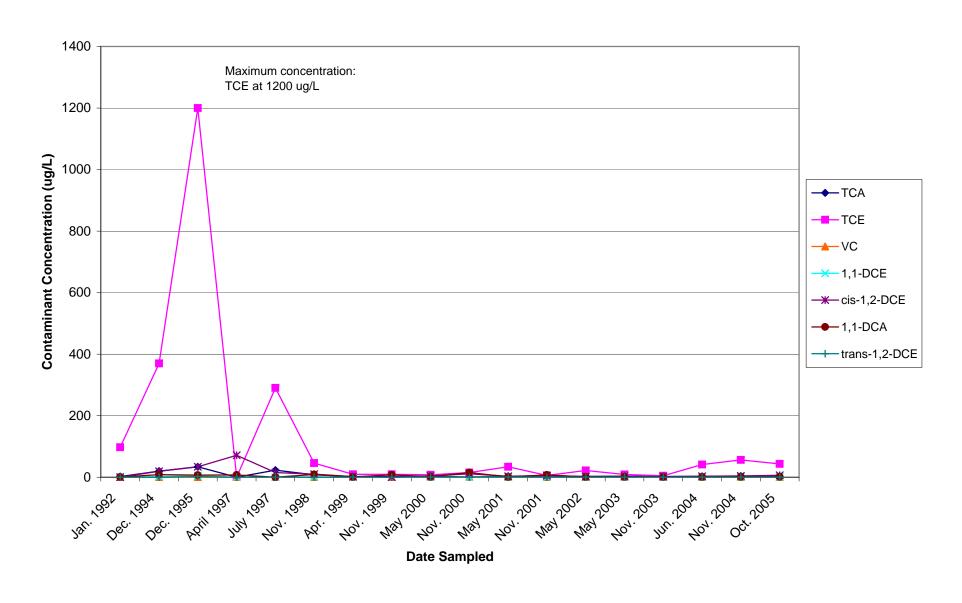
DW3 Trend Analysis of VOCs in Groundwater



SW3 Trend Analysis of VOCs in Groundwater



SW4 Trend Analysis of VOCs in Groundwater



SW7 Trend Analysis of VOCs in Groundwater

