FINAL

GROUNDWATER MONITORING REPORT

for the November 2004 Sampling Event at Air Force Plant 59

Prepared for:

Air Force Center for Environmental Excellence
and
Aeronautical Systems Center

Prepared by:

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

Contract No. F41624-03-D-8597
Task Order No. 0080

February 2005

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DISCLAIMER

This *Final Groundwater Monitoring Report for the November 2004 Sampling Event* has been prepared for the United States Air Force (USAF) by Earth Tech for the purpose of satisfying the groundwater monitoring requirements defined in the April 27, 1999 letter to the New York State Department of Environmental Conservation (Earth Tech, 1999a) and *the Record of Decision* (Earth Tech, 1999b) for Air Force Plant 59. 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 November 2004 Sampling Event* has been prepared by Earth Tech to describe field and laboratory operations conducted as part of the semiannual 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* (United States Air Force [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 0080. The groundwater monitoring is being conducted to accomplish the following objective:

- To satisfy the groundwater monitoring requirements defined in the April 27, 1999 letter to the New York State Department of Environmental Conservation (Earth Tech, 1999a) and the *Record of Decision* (Earth Tech, 1999b) for Air Force Plant 59.

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Brian J. Burgher
Vice President
Program Manager

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. AGENCY USE ONLY *(Leave Blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	January 2005	**Final**

4. TITLE AND SUBTITLE	5. FUNDING NUMBERS
Final Groundwater Monitoring Report for the November 2004 Sampling Event at Air Force Plant 59	**Contract No. F41624-03-D-8597; Task Order 0080**
6. AUTHOR(S) **Earth Tech**	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Earth Tech** **675 N. Washington Street, Suite 300** **Alexandria, VA 22314**	8. PERFORMING ORGANIZATION REPORT NUMBER **N/A**
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) **AFCEE/ERD** **3207 North Road** **Brooks AFB, Texas 78235-5363**	10. SPONSORING/MONITORING AGENCY REPORT NUMBER **N/A**
11. SUPPLEMENTARY NOTES **None**	
12a. DISTRIBUTION/AVAILABILITY STATEMENT **Approved for Public Release; Distribution is Unlimited.**	12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

This document is the *Final Groundwater Monitoring Report for the November 2004 Sampling Event at Air Force Plant 59 (AFP 59)*, Johnson City, New York. It summarizes the fieldwork completed during the semiannual groundwater monitoring. The monitoring was conducted to accomplish the following objective: to satisfy the groundwater monitoring requirements defined in the April 27, 1999 letter to the New York State Department of Environmental Conservation and the *Record of Decision* for Air Force Plant 59.

14. SUBJECT TERMS			15. NUMBER OF PAGES
IRP Groundwater Monitoring, Air Force Plant 59			16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT **Unclassified**	18. SECURITY CLASSIFICATION OF THIS PAGE **Unclassified**	19. SECURITY CLASSIFICATION OF ABSTRACT **Unclassified**	20. LIMITATION OF ABSTRACT **UL**

NSN 7540-01-280-5500 Standard Form 298 (Rev. 2-89)

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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
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
µg/L	Micrograms per Liter
MDL	Method Detection Limit
N/A	Not Applicable
NYSDEC	New York State Department of Environmental Conservation
QAPP	Quality Assurance Project Plan
RI/FS	Remedial Investigation/Feasibility Study
RL	Reporting Limit
1,1,1-TCA	1,1,1-Trichloroethane
TCE	Trichloroethene
USAF	United States Air Force
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound

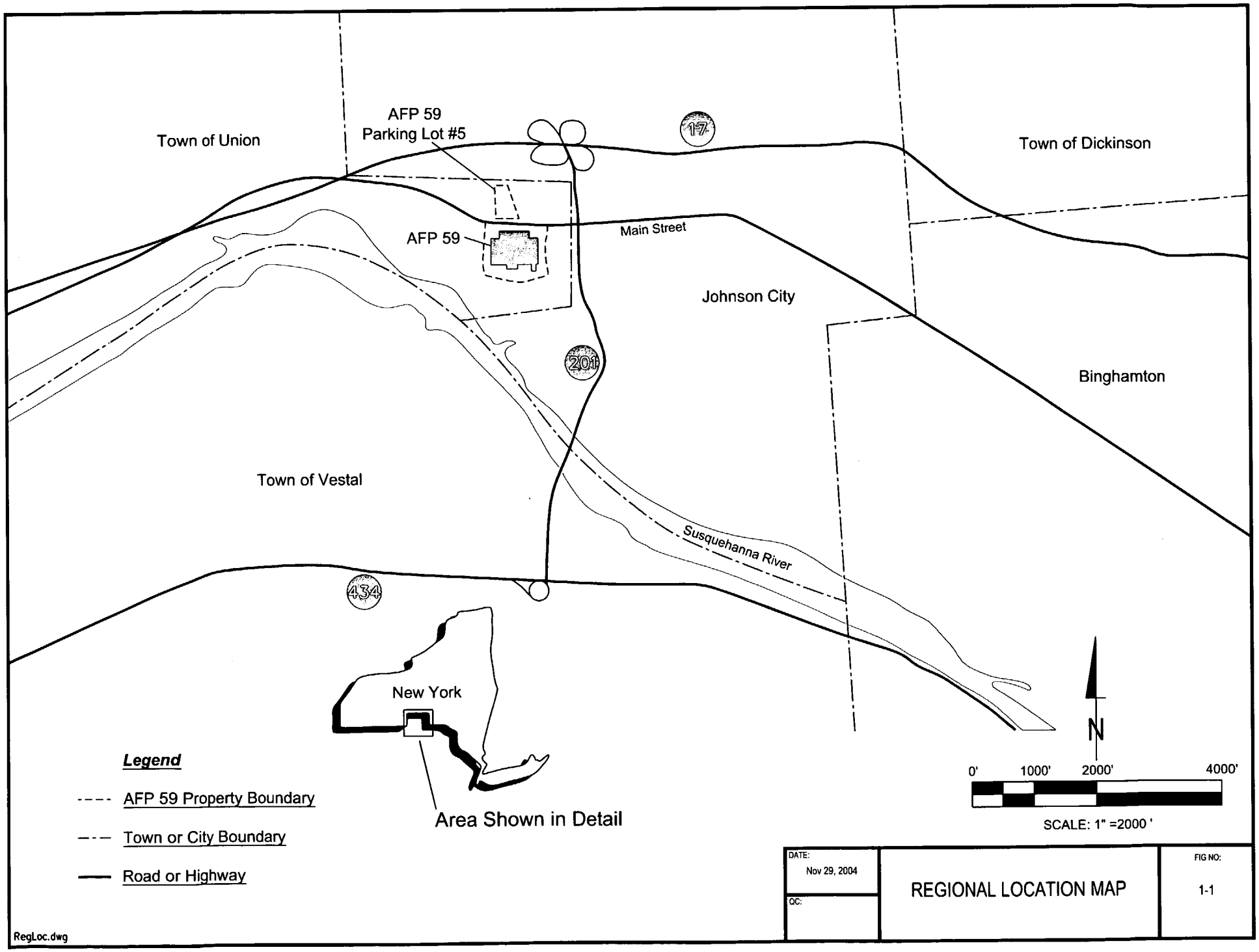
1.0 INTRODUCTION

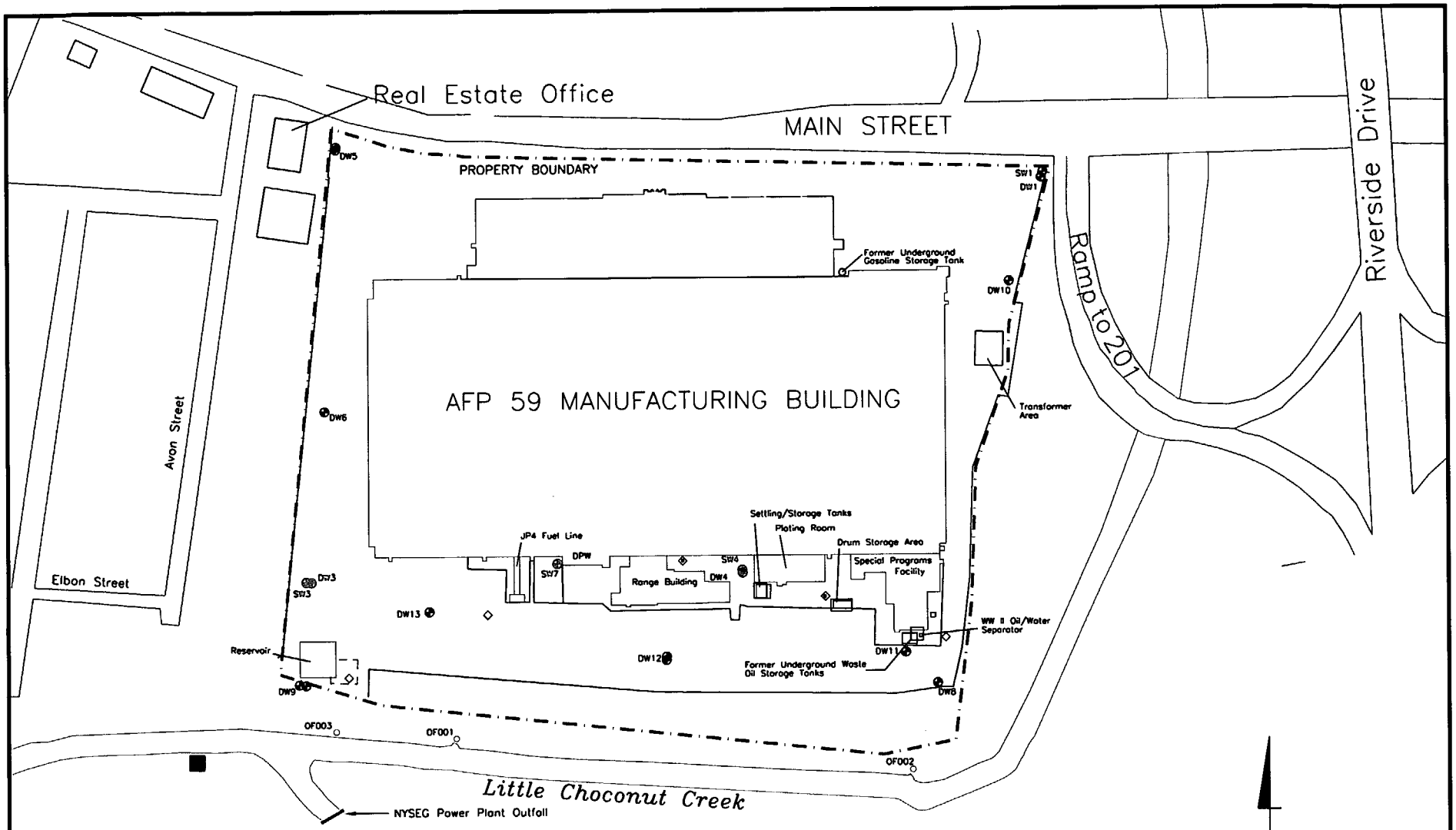
This *Final Groundwater Monitoring Report for the November 2004 Sampling Event* has been prepared by Earth Tech to describe field and laboratory operations during the November 2004 groundwater sampling event. The November 2004 sampling event was conducted as part of the semiannual groundwater monitoring 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 (semiannual sampling) at AFP 59. Figure 1-1 shows the general 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 satisfy the groundwater monitoring requirements defined in the April 27, 1999 letter to the New York State Department of Environmental Conservation (NYSDEC) (Earth Tech, 1999a) and the *Record of Decision* (Earth Tech, 1999b) for Air Force Plant 59.

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 provides the objectives of the semiannual sampling events, Section 2 provides a summary of the activities conducted during the November 2004 sampling event, Section 3 summarizes the analytical results, and Section 4 presents conclusions from the investigation.


Town of Union
AFP 59
Parking Lot #5
17
Town of Dickinson
AFP 59
Main Street
Johnson City
201
Binghamton
Town of Vestal
Susquehanna River
434
New York
Area Shown in Detail
N
0'
1000'
2000'
4000'
SCALE: 1" =2000 '
Legend
AFP 59 Property Boundary
Town or City Boundary
Road or Highway
DATE:
Nov 29, 2004
QC:
REGIONAL LOCATION MAP
FIG NO:
1-1
RegLoc.dwg



LEGEND:

- AFP 59 MONITORING WELL ABANDONED IN SEPTEMBER 2000
- AFP 59 MONITORING WELL
- FENCE
- AFP 59 OUTFALL

DATE: Aug 10, 2004 QC:	AFP 59 SITE LOCATION MAP	FIG NO: 1-2

SiteLoc.dwg

2.0 PROJECT ACTIVITIES

This section summarizes activities conducted during the November 2004 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

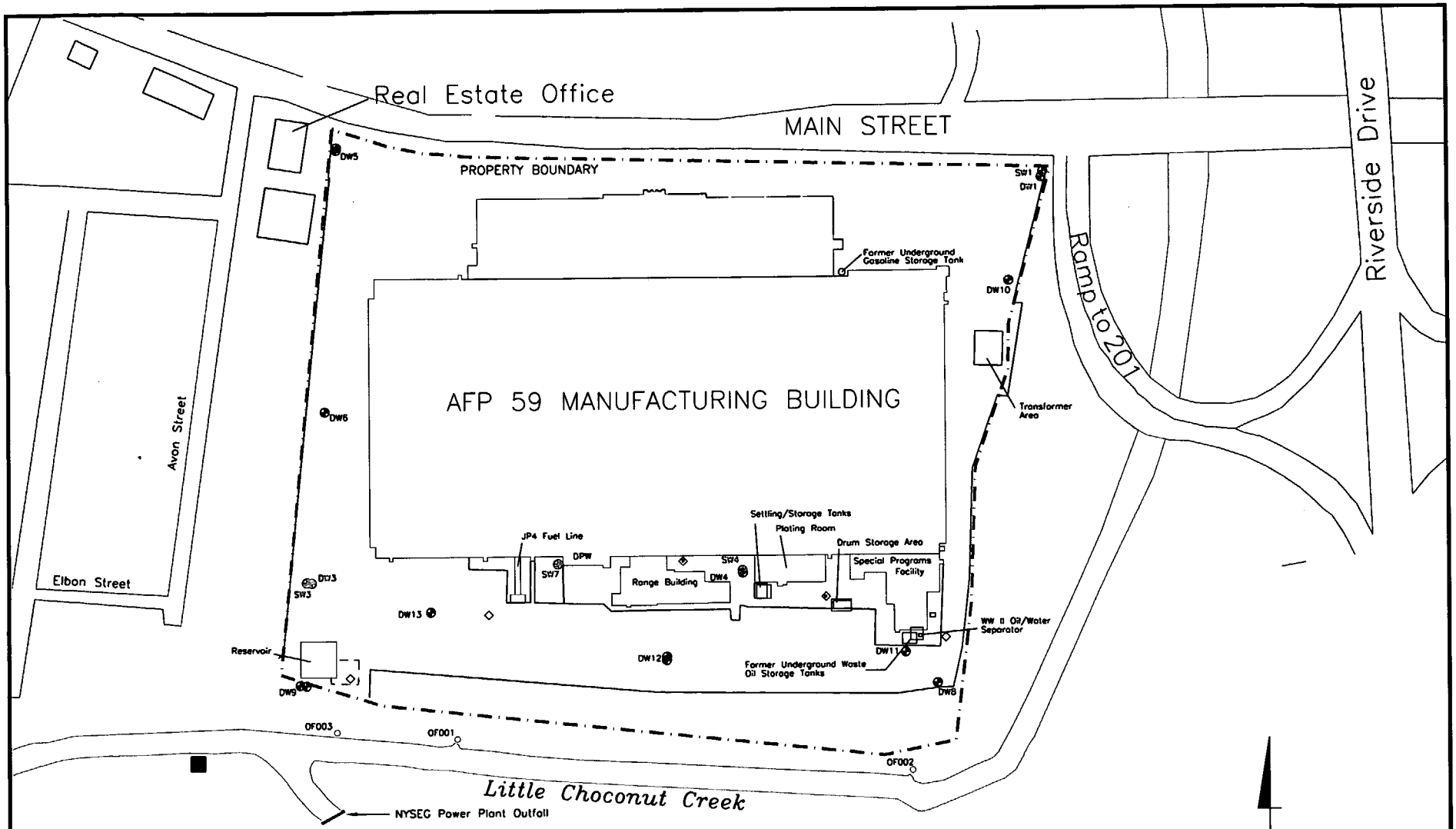
On the basis of conclusions presented in the *Final Remedial Investigation Report* (Earth Tech, 1996) and recommendations made by the NYSDEC, it was determined that VOCs represent the only chemicals of potential concern in groundwater at AFP 59. As a result, the *Record of Decision* (Earth Tech, 1999b) 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 groundwater monitoring program was established for AFP 59. The monitoring program, which is defined in the April 27, 1999 letter to the NYSDEC (Earth Tech, 1999a), is being conducted on a semiannual basis and includes sampling the following monitoring wells: SW1, DW1, SW3, DW3, SW4, and SW7. Monitoring wells SW1 and DW1 represent upgradient (background) wells; monitoring wells SW3 and DW3 represent downgradient wells; monitoring wells SW4 and SW7 have historically had the highest concentrations of VOCs.

The groundwater samples collected during the November 2004 sampling event, which represents the tenth sampling event of the long-term groundwater monitoring program, were analyzed for VOCs by 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 November 2004 sampling event, and Figure 2.1-1 shows the locations of the on-site monitoring wells sampled during the November 2004 sampling event.

Table 2.1-1
Sample Analysis Summary

Method	Matrix	# Samples	# Equipment Blanks	# Ambient Blanks	# Trip Blanks	# Field Duplicates	Total # Samples
SW8260B Volatile Organics	Groundwater	6	0(1)	1	1	1	9

(1) No equipment blanks were collected because disposable bailers were used during groundwater sampling.



LEGEND:

- AFP 59 MONITORING WELL ABANDONED IN SEPTEMBER 2000
- AFP 59 MONITORING WELL SAMPLED IN NOVEMBER 2004
- FENCE
- AFP 59 OUTFALL

DATE: Aug 10, 2004 QC:	AFP 59 GROUNDWATER SAMPLING LOCATIONS NOVEMBER 2004	FIG NO: 2.1-1

1103SampLoc.dwg

2.2 FIELD ACTIVITIES

The primary field activity was sampling of the monitoring wells shown in Figure 2.1-1. The following is a summary of the field activities:

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

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) that was prepared for the remedial investigation conducted at AFP 59. The primary objective of the groundwater sampling event was to satisfy groundwater monitoring requirements defined in the April 27, 1999 letter to the NYSDEC (Earth Tech, 1999a) and the *Record of Decision* (Earth Tech, 1999b) for Air Force Plant 59.

Groundwater sampling procedures included:

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, and turbidity) during monitoring well purging; and
4. Collecting groundwater samples from the purged monitoring wells.

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 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) once within a single 24-hour period. 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.

3.0 INVESTIGATION RESULTS

The results of the November 2004 sampling event at AFP 59 are summarized in this section. Section 3.1 summarizes the analytical results, and Section 3.2 provides conclusions concerning the analytical and hydrogeological data. 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 November 2004 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 November 2004 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 *QAPP, Version 3.1* (USAF, 1998); the data quality review summary is provided in Appendix D. The following data qualifiers were assigned to the data as a result of the data review 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 2.1-1 shows the locations of the monitoring wells sampled during the November 2004 sampling event.

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

Parameter/Method	Analyte	Water			
		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

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

Parameter/Method	Analyte	Water			
		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

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 November 2004 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 3.1-1. 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 3.1-1). Chlorinated hydrocarbons were the only detected VOCs in the samples collected from the shallow zone of the aquifer. Acetone was detected, but this is a common laboratory contaminant. 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 at 3.1 µg/L, 1,1-dichloroethene (1,1-DCE) at 0.88 J µg/L, tetrachloroethene (PCE) at 0.52 J µg/L, trans-1,2-dichloroethene at 0.19 J µg/L, trichlorofluoromethane at 1.4 µg/L, and trichloroethene (TCE) at 56 µg/L. The following maximum concentrations were detected in the groundwater sample collected from monitoring well SW7: 1,1-dichloroethane (DCA) at 1.5 J µg/L, vinyl chloride at 0.47 J µg/L, and is-1,2-dichloroethene (cis-1,2-DCE) at 10 J µg/L.

Deep Zone of the Aquifer. VOCs detected in groundwater samples are shown in Figure 3.1-1. 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 only concentration of VOCs detected was cis-1,2-dichloroethene (cis-1,2-DCE) at 2.1 µg/L. Acetone was detected, but this is a common laboratory contaminant. No VOCs were detected in the groundwater sample collected from monitoring well DW1.

Table 3.1-2
Groundwater Data Summary for VOCs (µg/L)

Parameters	Action Levels*	59SW1WG1	59DW1WG1	59SW3WG1	59DW3WG1
1,1,1-Trichloroethane	5	--	--	0.52 J	--
Trichloroethene	5	--	--	1.0	--
Cis-1,2-Dichloroethene	5	--	--	1.5	2.1
1,1-Dichloroethane	5	--	--	0.38 J	--
1,1-Dichloroethene	5	--	--	--	--
Tetrachloroethene	5	--	--	--	--
Trans-1,2-Dichloroethene	5	--	--	--	--
Trichlorofluoromethane	5	--	--	--	--
Vinyl Chloride	2	--	--	0.26 J	--

Parameters	Action Levels*	59SW4WG1	59SW7WG1	59SW7WG9 (Duplicate Sample)
1,1,1-Trichloroethane	5	3.1	1.5	1.4
Trichloroethene	5	**56**	2.1	1.6
Cis-1,2-Dichloroethene	5	4.1	**10 J**	**6.0 J**
1,1-Dichloroethane	5	1.4	1.5 J	1.0 J
1,1-Dichloroethene	5	0.88 J	0.25 J	0.24 J
Tetrachloroethene	5	0.52 J	0.31 J	0.30 J
Trans-1,2-Dichloroethene	5	0.19 J	--	--
Trichlorofluoromethane	5	1.4	--	--
Vinyl Chloride	2	--	0.47 J	0.26 J

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.

MAIN STREET

BOUNDARY

DW5

DW6

SW1

DW1

DW10

Ramp to 201

Transformer Area

Former Underground Gasoline Storage Tank

SW7 SHALLOW MONITORING WELL

Analyte	Conc.	Units	Q
1,1,1-Trichloroethane	1.5	µg/L	
1,1-Dichloroethane	1.5	µg/L	J
1,1-Dichloroethene	0.25	µg/L	J
cis-1,2-Dichloroethene	**10**	µg/L	J
Vinyl Chloride	0.47	µg/L	J
Tetrachloroethene	0.31	µg/L	J
Trichloroethene	2.1	µg/L	

SW4 SHALLOW MONITORING WELL

Analyte	Conc.	Units	Q
1,1,1-Trichloroethane	3.1	µg/L	
1,1-Dichloroethene	0.88	µg/L	J
1,1-Dichloroethane	1.4	µg/L	
trans-1,2-Dichloroethene	0.19	µg/L	J
cis-1,2-Dichloroethene	4.1	µg/L	
Trichlorofluoromethane	1.4	µg/L	
Tetrachloroethene	0.52	µg/L	J
Trichloroethene	**56**	µg/L	

AFP 59 MANUFACTURING BUILDING

SW3 SHALLOW MONITORING WELL

Analyte	Conc.	Units	Q
1,1,1-Trichloroethane	0.52	µg/L	J
1,1-Dichloroethane	0.38	µg/L	J
cis-1,2-Dichloroethene	1.5	µg/L	
Vinyl Chloride	0.26	µg/L	J
Trichloroethene	1.0	µg/L	

JP4 Fuel Line

DPW

SW7

SW4

Settling/Storage Tanks

Plating Room

Drum Storage Area

Special Programs Facility

Range Building

DW4

DW3

SW3

DW13

WW II Oil/Water Separator

DW3 DEEP MONITORING WELL

Analyte	Conc.	Units	Q
cis-1,2-Dichloroethene	2.1	µg/L	

Reservoir

DW12

DW11

Former Underground Waste Oil Storage Tanks

DW9

DW8

OF003

OF001

OF002

Little Choconut Creek

NYSEG Power Plant Outfall

GWVOC1104.dwg

Notes:

1. If no data is present at a monitoring well location, no VOCs were detected in Groundwater
2. At locations where duplicates were collected, the maximum concentration is presented
3. Concentrations shown in bold and shaded exceed the New York State Drinking Water Standard for the associated compound

N

0' 125' 250'

SCALE: 1" = 125'

LEGEND:

- FENCE
- MONITORING WELL ABANDONED SEPTEMBER 2000
- MONITORING WELL SAMPLED NOVEMBER 2004
- AFP 59 OUTFALL
- J ANALYTE WAS POSITIVELY IDENTIFIED BUT THE QUANITATION IS ESTIMATED

DATE: Nov 29, 2004	AFP 59 VOC'S DETECTED IN GROUNDWATER NOVEMBER 2004	FIG NO: 3.1-1
QC:	AFP 59	

Table 3.1-3
VOCs Detected in Shallow Zone Groundwater Samples

Analyte	Number of Samples Above MDL	Range (µg/L)		Location of Maximum Detection
		Minimum Detected	Maximum Detected	
1,1,1-Trichloroethane	4 of 5	0.52 J	3.1	SW4
Trichloroethene	4 of 5	1.0	56	SW4
Cis-1,2-Dichloroethene	4 of 5	1.5	10 J	SW7
Trans-1,2-Dichloroethene	1 of 5	0.19 J	0.19 J	SW4
1,1-Dichloroethane	4 of 5	0.38 J	1.5 J	SW7
1,1-Dichloroethene	3 of 5	0.24 J	0.88 J	SW4
Tetrachloroethene	3 of 5	0.30 J	0.52 J	SW4
Trichlorofluoromethane	1 of 5	1.4	1.4	SW4
Vinyl Chloride	3 of 5	0.26 J	0.47 J	SW7

Key: µg/L = Micrograms per liter
MDL = Method detection limit

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.

Table 3.1-4
VOCs Detected in Deep Zone Groundwater Samples

Analyte	Number of Samples Above MDL	Range (µg/L)		Location of Maximum Detection
		Minimum Detected	Maximum Detected	
Cis-1,2-Dichloroethene	1 of 2	2.1	2.1	DW3

Key: µg/L = Micrograms per liter
MDL = Method detection limit

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 1 of 2 samples; however, this is a common laboratory contaminant.

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 November 2004 sampling event, concentrations of the chlorinated hydrocarbons in monitoring well SW3 remained relatively constant (TCE), or decreased (cis-1,2-DCE, 1,1-DCA, and 1,1-TCA) when compared to the previous sampling event of June 2004. The vinyl chloride concentration in the sample from SW3 is the one exception, increasing from non-detect during the previous sampling event to 0.26 J µg/L during the November 2004 event.

The concentrations of the chlorinated hydrocarbons in monitoring well SW4 remained relatively constant, but slightly increased when compared to the June 2004 sampling event. The exception is vinyl chloride, which remained at non-detect. The concentrations of TCA (2.8 µg/L to 3.1 µg/L), 1,1-DCE (0.57 J µg/L to 0.88 J µg/L), 1,1-DCA (1.3 µg/L to 1.4 µg/L), trans-1,2-DCE (0.11 µg/L to 0.19 J µg/L), and cis-1,2-DCE (3.3 µg/L to 4.1 µg/L) each increased during the November 2004 sampling event. The concentration of TCE in monitoring well SW4 increased from 41 µg/L to 56 µg/L, and remained above the New York State Drinking Water Standard of 5 µg/L.

The concentrations of the chlorinated hydrocarbons in monitoring well SW7 also increased when compared to the June 2004 sampling event. The concentrations of TCA (1 µg/L to 1.5 µg/L), TCE (1 µg/L to 2.1 µg/L) and 1,1-DCA (0.3 J µg/L to 1.5 J µg/L) each increased during the November 2004 sampling event. The concentrations of vinyl chloride and 1,1-DCE increased from non-detect to 0.47 J µg/L and 0.25 J µg/L, respectively. The concentration of cis-1,2-DCE in monitoring well SW7 increased from 1.1 µg/L to 10 J µg/L, exceeding the New York State Drinking Water Standard of 5 µg/L.

In the groundwater sample collected from deep monitoring well DW3 during the November 2004 sampling event, the concentrations of chlorinated hydrocarbons remained at non-detect with the exception of cis-1,2-DCE, which increased from 1.3 µg/L in June 2004 to 2.1 µg/L in November 2004. 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

Well ID	Date Sampled	Concentration of Analyte in Groundwater (µg/L)					
		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]	--	--	--	--	--	--
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]	--	--	--	--	--	--
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)	--

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

Well ID	Date Sampled	Concentration of Analyte in Groundwater (µg/L)					
		TCA	TCE	VC	1,1-DCE	1,2-DCE	1,1-DCA
SW3 (Cont'd)	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
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	67.00 (c)	0.35
	Nov 1999[3]	--	--	--	--	--	0.11
	May 2000[3]	--	--	--	--	0.25 (t) 24.98 (c)	0.16
	Nov. 2000[3]	--	--	--	--	16.85	--
	May 2001[3]	--	--	--	--	13.29	--
	Nov. 2001[3]	--	--	--	--	13.58	--
	May 2002[3]	--	--	--	--	21.08	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)	--
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

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

Well ID	Date Sampled	Concentration of Analyte in Groundwater (µg/L)					
		TCA	TCE	VC	1,1-DCE	1,2-DCE	1,1-DCA
SW4 (Cont'd)	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
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

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

Well ID	Date Sampled	Concentration of Analyte in Groundwater (µg/L)					
		TCA	TCE	VC	1,1-DCE	1,2-DCE	1,1-DCA
SW7 (Cont'd)	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

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

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.

4.0 CONCLUSIONS

This section provides conclusions from analytical data generated as a result of the November 2004 sampling event. As defined in Section 1.0, the objective of the groundwater sampling event was to satisfy groundwater monitoring requirements defined in the April 27, 1999 letter to the NYSDEC (Earth Tech, 1999a) and the *Record of Decision* (Earth Tech, 1999b) for 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 November 2004 sampling event are similar to the VOCs that have been detected during previous investigations. Chlorinated hydrocarbons were the only VOCs detected in site groundwater, with TCE, 1,1,1-TCA, 1,1-DCA, 1,1-DCE, tetrachloroethene, cis-1,2-DCE, and vinyl chloride being the most commonly detected. 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 November 2004, the highest concentrations of VOCs were again detected at SW4 and SW7. The concentration of TCE detected at monitoring well SW4, and the concentration of cis-1,2-DCE detected at SW7 were slightly increased relative to the June 2004 sampling event. The concentrations of TCE in SW4 (56 µg/L) and cis-1,2-DCE in SW7 (10 J µg/L) were the only VOC detections that exceeded New York State drinking water standards in any of the wells monitored during the November 2004 sampling event.

Five 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.

Only one VOC was detected in the groundwater samples collected from the deep monitoring wells. Cis-1,2-DCE was detected at DW3 below the New York drinking water standards.

A trend analysis of chlorinated hydrocarbon levels over time at AFP 59 is presented in Section 3.1.4. This sampling event was consistent with previous events and indicates that levels of chlorinated hydrocarbons have remained relatively constant or decreased through time with the exception of the increased TCE detection in SW4 and the increased cis-1,2-DCE detection in SW7 (see Table 3.1-5).

Appendix A. References

APPENDIX A. REFERENCES

Earth Tech, 1994. *Installation Restoration Program Investigation – Final Sampling and Analysis Plan.*

Earth Tech, 1996. *Installation Restoration Program Remedial Investigation – Final Remedial Investigation Report.*

Earth Tech, 1998. *Final Work Plan for Groundwater Monitoring at Air Force Plant 59.*

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United States Air Force (USAF), 1996. *Model Work Plan.*

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United States Air Force (USAF), 2001. *Quality Assurance Project Plan, Version 3.1.*

United States Environmental Protection Agency (USEPA), 1988. *Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final, EPA/540/6-89/004.* Office of Emergency and Remedial Response, Washington, D.C.

APPENDIX B. FIELD DATA

EARTH TECH

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: AFP 59	LocID: DW1	Date: 11/1/04
	Project Name: AFP 59 GW Sampling	Project #: 77008.07.09	Recorded By: PG Checked By:
EQUIPMENT	H2O Quality Meter Type/ID #: Horiba U-22 #HQ669	Sampling Equipment: Disposable Bailer	PID Type/ID #: —
	Water Level Indicator Type/ID #: Heron #11602	Equipment Decon.: Alconox, potable, DI rinse	
WELL INFO	Borehole I.D. (in): 6"	Unit Borehole Volume (gal/lin ft)[b]: 1.5	Initial Depth to Water (ft)[c]: 17.07
	Total Well Depth (ft)[d]: 62.56'	Water Column Thickness (ft)[d-c]: 45.49	Borehole Volume (gal){[d-c]xb}: 68.2x3 = 204.
	Ground Condition of Well:		
	Remarks:		

CASING INFO								
Casing I.D. (in):	1.5	2.0	3.0	4.0	5.0	6.0	7.0	8.0
Unit Casing Volume (gal/lin ft)	0.1	0.16	0.37	0.65	1.0	1.5	2.0	2.6

Date (mm/dd/yy)	Time (24 hr)	Water Level (FTOC)	Volume Removed (Gals)	Pumping Rate (gpm)	Temp. (C)	Specific Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mv)	Turb. (NTU)	Notes
11/01/04	0900	17.07						~~7.13~~			
	0928	17.61	5	3	12.5	1.89	1.14	7.13	130	0.0	
	0935	17.60	26	3	12.6	1.89	0.90	7.11	128	0.0	
	0940	17.60	41	3	12.6	1.89	0.86	7.11	127	0.0	
	0945	17.60	56	3	12.6	1.88	0.85	7.11	127	0.0	
	0950	17.60	71	3	12.6	1.88	0.82	7.11	127	0.0	
	0955	17.60	86	3	12.6	1.88	0.82	7.11	126	0.0	
	1000	17.60	101	3	12.6	1.88	0.81	7.11	126	0.0	
	1005	17.60	116	3	12.6	1.88	0.80	7.11	126	0.0	
	1010	17.00	131	3	12.6	1.88	0.81	7.11	126	0.0	
	1015	17.60	146	3	12.6	1.88	0.81	7.12	125	0.0	
	1020	17.60	161	3	12.6	1.88	0.81	7.11	125	0.0	
	1025	17.60	176	3	12.6	1.88	0.80	7.12	125	0.0	
	1030	17.60	191	3	12.6	1.89	0.80	7.12	125	0.0	

Pumping Rate:<=3 gal/min **Drawdown:** -- **Measurements:**3-5 min **Stabilization:**+/- 0.5 C, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, +/- 10% turb (<= 10 NTU ideal) **All for 3 consecutive readings**

Sample ID #(s)/Time(s)	Number of Containers/Vol./Type	Preservative	Parameter(s)
3 40mL VOAs 1045 59DW1WG1	3 / 40 ml VOA	HCL	VOCs

EARTH TECH

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: AFP 59	LocID: DW1
	Project Name: AFP 59 GW Sampling	Project #: 77008.07.09

Date (mm/dd/yy)	Time (24 hr)	Water Level (FTOC)	Volume Removed (Gals)	Pumping Rate (gpm)	Temp. (C)	Specific Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mv)	Turb. (NTU)	Notes
11/11/04	1035	17.60	206	3	12.6	1.89	0.79	7.11	125	0.0	
	1045	Collected	at 59	DW/GW							

Pumping Rate:<=3 gal/min Drawdown: -- Measurements:3-5 min Stabilization:+/- 0.5 C, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, +/- 10% turb (<= 10 NTU ideal) All for 3 consecutive readings

EARTH TECH

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: AFP 59	LocID: SW1	Date: 11/1/04
	Project Name: AFP 59 GW Sampling	Project #: 77008.07.09	Recorded By: PG/JD Checked By:
EQUIPMENT	H2O Quality Meter Type/ID #: Horiba U-22 # 00664	Sampling Equipment: Disposable Bailer	PID Type/ID #: —
	Water Level Indicator Type/ID #: Heron # 11602	Equipment Decon.: Alconox, potable, DI rinse	
WELL INFO	Borehole I.D. (in): 8.0	Unit Borehole Volume (gal/lin ft)[b]: 2.6	Initial Depth to Water (ft)[c]: 17.05
	Total Well Depth (ft)[d]: 28.57	Water Column Thickness (ft)[d-c]: 11.52	Borehole Volume (gal){[d-c]xb}: 29.95x3 = 89
	Ground Condition of Well:		
	Remarks:		

CASING INFO								
Casing I.D. (in):	1.5	2.0	3.0	4.0	5.0	6.0	7.0	8.0
Unit Casing Volume (gal/lin ft)	0.1	0.16	0.37	0.65	1.0	1.5	2.0	2.6

Date (mm/dd/yy)	Time (24 hr)	Water Level (FTOC)	Volume Removed (Gals)	Pumping Rate (gpm)	Temp. (C)	Specific Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mv)	Turb. (NTU)	Notes
11/1/04	1100	17.85	0	3	13.5	2.43	1.12	7.13	122	48.2	
	1105	17.89	15	3	13.5	2.44	0.0	7.08	116	0.0	
	1110	17.90	30	3	13.5	2.48	0.0	7.08	111	0.0	
	1115	17.91	45	3	13.5	2.53	0.0	7.07	107	0.0	
	1120	17.91	60	3	13.5	2.49	0.0	7.07	104	0.0	
	1125	17.91	75	3	13.5	2.47	0.0	7.07	102	0.0	
	1130	17.91	90	3	13.5	2.46	0.0	7.07	100	0.0	
	1145	Collected	595	W1WG1							

Pumping Rate:<=3 gal/min Drawdown: -- Measurements:3-5 min Stabilization:+/- 0.5 C, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, +/- 10% turb (<= 10 NTU ideal) All for 3 consecutive readings

Sample ID #(s)/Time(s)	Number of Containers/Vol./Type	Preservative	Parameter(s)
595W1WG1	3 / 40 ml VOA	HCL	VOCs

EARTH TECH

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: AFP 59	LocID: SW3	Date: 11/1/04
	Project Name: AFP 59 GW Sampling	Project #: 77008.07.09	Recorded By: PG/JD Checked By:
EQUIPMENT	H2O Quality Meter Type/ID #: Horiba U-22 #00664	Sampling Equipment: Disposable Bailer	PID Type/ID #: —
	Water Level Indicator Type/ID #: Heron #11602	Equipment Decon.: Alconox, potable, DI rinse	
WELL INFO	Borehole I.D. (in): 8.0	Unit Borehole Volume (gal/lin ft)[b]: 2.6	Initial Depth to Water (ft)[c]: 17.48
	Total Well Depth (ft)[d]: 29.75	Water Column Thickness (ft)[d-c]: 12.27	Borehole Volume (gal){[d-c]xb}: 31.9x3 = 9
	Ground Condition of Well:		
	Remarks:		

CASING INFO								
Casing I.D. (in):	1.5	2.0	3.0	4.0	5.0	6.0	7.0	8.0
Unit Casing Volume (gal/lin ft)	0.1	0.16	0.37	0.65	1.0	1.5	2.0	2.6

Date (mm/dd/yy)	Time (24 hr)	Water Level (FTOC)	Volume Removed (Gals)	Pumping Rate (gpm)	Temp. (C)	Specific Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mv)	Turb. (NTU)	Notes
11/1/04	1215	17.60	0	3	16.3	1.43	3.71	7.18	111	125	
	1220	17.59	15	3	16.4	1.44	2.15	7.10	110	0.0	
	1225	17.59	30	3	16.4	1.43	2.09	7.10	114	0.0	
	1230	17.59	45	3	16.4	1.43	2.02	7.09	118	0.0	
	1235	17.59	60	3	16.4	1.43	2.00	7.09	123	0.0	
	1240	17.59	75	3	16.4	1.43	1.99	7.09	127	0.0	
	1245	17.59	90	3	16.4	1.43	1.97	7.09	130	0.0	
	1300	Collect	Sample	SW3	WG1	MS/MSD					

Pumping Rate:<=3 gal/min Drawdown: – Measurements:3-5 min Stabilization:+/- 0.5 C, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, +/- 10% turb (<= 10 NTU ideal) All for 3 consecutive readings

Sample ID #(s)/Time(s)	Number of Containers/Vol./Type	Preservative	Parameter(s)
SW3WG1 + MS/MSD	3 / 40 ml VOA + MS/MSD	HCL	VOCs

SW3WG1 AS SW3WG1 MSD

EARTH TECH

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: AFP 59	LocID: DW3	Date: 11/1/04
	Project Name: AFP 59 GW Sampling	Project #: 77008.07.09	Recorded By: PG/SD Checked By:
EQUIPMENT	H2O Quality Meter Type/ID #: Horiba U-22 #08664	Sampling Equipment: Disposable Bailer	PID Type/ID #: —
	Water Level Indicator Type/ID #: Heron #11602	Equipment Decon.: Alconox, potable, DI rinse	
WELL INFO	Borehole I.D. (in): 6"	Unit Borehole Volume (gal/lin ft)[b]: 1.5	Initial Depth to Water (ft)[c]: 15.11
	Total Well Depth (ft)[d]: 86.90	Water Column Thickness (ft)[d-c]: 71.79	Borehole Volume (gal){[d-c]xb}: 107.68 x 3 =
	Ground Condition of Well:		
	Remarks:		

CASING INFO								
Casing I.D. (in):	1.5	2.0	3.0	4.0	5.0	6.0	7.0	8.0
Unit Casing Volume (gal/lin ft)	0.1	0.16	0.37	0.65	1.0	1.5	2.0	2.6

Date (mm/dd/yy)	Time (24 hr)	Water Level (FTOC)	Volume Removed (Gals)	Pumping Rate (gpm)	Temp. (C)	Specific Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mv)	Turb. (NTU)	Notes
11/4/04	1410	15.31	0	3	13.4	0.556	0.23	10.15	73	55.5	
	1415	15.33	15	3	13.6	1.47	0.0	7.55	-96	54.6	
	1420	15.34	35	4	13.6	1.53	0.0	7.22	-99	239.0	
	1425	15.35	55	4	13.6	1.54	0.0	7.21	-102	147.0	
	1430	15.36	75	4	13.6	1.53	0.0	7.22	-104	66.3	
	1435	15.36	PD 100 95	4	13.6	1.53	0.0	7.22	-106	41.3	
	1440	15.36	115	4	13.6	1.53	0.0	7.2	-107	31.3	
	1445	15.36	135	4	13.6	1.53	0.0	7.22	-108	30.1	
	1450	15.37	155	4	13.5	1.53	0.0	7.21	-110	25.8	
	1455	15.37	175	4	13.5	1.54	0.6	7.21	-116	25.0	
	1500	15.37	195	4	13.6	1.53	0.0	7.21	-111	22.5	
	1505	15.37	215	4	13.5	1.54	0.0	7.22	-112	22.9	
	1510	15.37	235	4	13.5	1.53	0.0	7.22	-112	23.7	
	1515	15.37	255	4	13.5	1.53	0.0	7.22	-113	23.6	

Pumping Rate:<=3 gal/min Drawdown: – Measurements:3-5 min Stabilization:+/- 0.5 C, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, +/- 10% turb (<= 10 NTU ideal) All for 3 consecutive readings

Sample ID #(s)/Time(s)	Number of Containers/Vol./Type	Preservative	Parameter(s)
59DW3WG1 VOC@1545	3 / 40 ml VOA	HCL	VOCs

EARTH TECH

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: AFP 59	LocID: DW3
	Project Name: AFP 59 GW Sampling	Project #: 77008.07.09

Date (mm/dd/yy)	Time (24 hr)	Water Level (FTOC)	Volume Removed (Gals)	Pumping Rate (gpm)	Temp. (C)	Specific Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mv)	Turb. (NTU)	Notes
11/1/04	1520	15.37	275	4	13.5	1.53	0.00	7.22	-114	21.0	
↓	1525	15.37	295	4	13.5	1.54	0.00	7.22	-114	20.5	
	1530	15.37	315	4	13.5	1.53	0.00	7.22	-114	20.0	
	1535	15.37	335	4	13.5	1.53	0.00	7.21	-115	20.0	
	1545	Samp	led	59DW	3WG1						

Pumping Rate:<=3 gal/min Drawdown: – Measurements:3-5 min Stabilization:+/- 0.5 C, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, +/- 10% turb (<= 10 NTU ideal) All for 3 consecutive readings

EARTH TECH

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: AFP 59	LocID: SW4	Date: 11/1/04
	Project Name: AFP 59 GW Sampling	Project #: 77008.07.09	Recorded By: PG/JD Checked By:
EQUIPMENT	H2O Quality Meter Type/ID #: Horiba U-22 #00664	Sampling Equipment: Disposable Bailer	PID Type/ID #: —
	Water Level Indicator Type/ID #: Heron #11602	Equipment Decon.: Alconox, potable, DI rinse	
WELL INFO	Borehole I.D. (in): 8"	Unit Borehole Volume (gal/lin ft)[b]: 2.6	Initial Depth to Water (ft)[c]: 12.38
	Total Well Depth (ft)[d]: 27.80	Water Column Thickness (ft)[d-c]: 15.42	Borehole Volume (gal)[(d-c]xb): 40.1 x3=120.3
	Ground Condition of Well:		
	Remarks:		

CASING INFO								
Casing I.D. (in):	1.5	2.0	3.0	4.0	5.0	6.0	7.0	8.0
Unit Casing Volume (gal/lin ft)	0.1	0.16	0.37	0.65	1.0	1.5	2.0	2.6

Date (mm/dd/yy)	Time (24 hr)	Water Level (FTOC)	Volume Removed (Gals)	Pumping Rate (gpm)	Temp. (C)	Specific Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mv)	Turb. (NTU)	Notes
11/1/04	1620	13.99	10	1.5	16.6	2.42	5.06	7.03	115	266	
	1625	13.92	17.5	1.5	16.7	2.42	4.53	7.01	118	41.5	
	1630	13.95	25	1.5	16.7	2.10	4.43	7.00	120	20.8	
	1635	13.98	32.5	1.5	16.7	2.10	4.34	6.99	123	13.5	
	1640	13.99	40.0	1.5	16.7	2.10	4.32	6.99	127	16.4	
	1645	13.99	47.5	1.5	16.7	2.09	4.28	6.99	129	14.3	
	1650	14.00	55.0	1.5	16.7	2.09	4.24	6.99	133	13.5	
	1655	14.01	62.5	1.5	16.7	2.09	4.25	6.99	134	9.9	
	1700	14.01	70.0	1.5	16.7	2.08	4.22	6.99	135	8.2	
	1705	14.01	77.5	1.5	16.7	2.08	4.20	6.99	135	7.2	
	1710	14.00	85.0	1.5	16.7	2.09	4.19	6.99	134	8.1	
	1715	14.01	92.5	1.5	16.7	2.09	4.16	6.99	134	6.4	
	1720	14.01	100.0	1.5	16.7	2.10	4.17	6.98	134	6.2	
	1725	14.01	107.5	1.5	16.7	2.10	4.16	6.99	136	5.7	

Pumping Rate:<=3 gal/min Drawdown: -- Measurements:3-5 min Stabilization:+/- 0.5 C, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, +/- 10% turb (<= 10 NTU ideal) All for 3 consecutive readings

Sample ID #(s)/Time(s)	Number of Containers/Vol./Type	Preservative	Parameter(s)
595W4W61 1750	3 / 40 ml VOA	HCL	VOCs

EARTH TECH

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: AFP 59	LocID: SW4
	Project Name: AFP 59 GW Sampling	Project #: 77008.07.09

Date (mm/dd/yy)	Time (24 hr)	Water Level (FTOC)	Volume Removed (Gals)	Pumping Rate (gpm)	Temp. (C)	Specific Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mv)	Turb. (NTU)	Notes
11/1/04	1730	14.01	115	1.5	16.7	2.05	4.15	6.98	138	5.8	
↓	1735	14.01	122.5	1.5	16.7	2.07	4.12	6.98	138	5.8	
	1750	Collected Sample 59SW4W61									

Pumping Rate:<=3 gal/min Drawdown: – Measurements:3-5 min Stabilization:+/- 0.5 C, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, +/- 10% turb (<= 10 NTU ideal) All for 3 consecutive readings

EARTH TECH

MONITORING WELL SAMPLE COLLECTION FORM

LOCATION	Site: AFP 59	LocID: SW7	Date: 11/1/04
	Project Name: AFP 59 GW Sampling	Project #: 77008.07.09	Recorded By: PG/VD Checked By:
EQUIPMENT	H2O Quality Meter Type/ID #: Horiba U-22 #00664	Sampling Equipment: Disposable Bailer	PID Type/ID #: ———
	Water Level Indicator Type/ID #: Heron #	Equipment Decon.: Alconox, potable, DI rinse	
WELL INFO	Borehole I.D. (in): 8"	Unit Borehole Volume (gal/lin ft)[b]: 2.6	Initial Depth to Water (ft)[c]: 18.14
	Total Well Depth (ft)[d]: 29.08	Water Column Thickness (ft)[d-c]: 10.94	Borehole Volume (gal){[d-c]xb}: 28.44x3=8.
	Ground Condition of Well:		
	Remarks:		

CASING INFO								
Casing I.D. (in):	1.5	2.0	3.0	4.0	5.0	6.0	7.0	8.0
Unit Casing Volume (gal/lin ft)	0.1	0.16	0.37	0.65	1.0	1.5	2.0	2.6

Date (mm/dd/yy)	Time (24 hr)	Water Level (FTOC)	Volume Removed (Gals)	Pumping Rate (gpm)	Temp. (C)	Specific Conduct. (mS/cm)	DO (mg/L)	pH	ORP (mv)	Turb. (NTU)	Notes
11/1/04	1820	18.20	5	3	16.3	2.02	5.95	7.23	126	9.6	
	1825	18.20	20	3	16.3	2.02	5.93	7.05	127	5.2	
	1830	18.20	35	3	16.3	2.00	5.79	7.05	131	3.7	
	1835	18.20	50	3	16.3	1.99	5.61	7.05	134	3.2	
	1840	18.20	65	3	16.3	1.98	5.48	7.05	138	2.9	
	1845	18.20	80	3	16.3	1.97	5.39	7.05	142	2.7	
	1847	18.20	86	3	16.3	1.97	5.32	7.05	144	2.8	
	1900	Collect	Samples	595	W7WG	1.959	SW7WG	9			

Pumping Rate:<=3 gal/min Drawdown: -- Measurements:3-5 min Stabilization:+/- 0.5 C, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, +/- 10% turb (<= 10 NTU ideal) All for 3 consecutive readings

Sample ID #(s)/Time(s)	Number of Containers/Vol./Type	Preservative	Parameter(s)
595W7WG1 - 595W7WG9	3 / 40 ml VOA	HCL	VOCs

APPENDIX C. CHAIN-OF-CUSTODY FORMS

Chain of Custody Record

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

STL Denver
4955 Yarrow Street
Arvada, CO 80002

STL-4124 (0901)

Client: Earth Tech	Project Manager: Phil Granger	Date:	Chain of Custody Number: 308592
Address: 675 N. Washington St. Suite 300	Telephone Number (Area Code)/Fax Number: (703) 549-8728/(703) 549-9134	Lab Number:	Page 1 of 1
City: Alexandria / State: VA / Zip Code: 22314	Site Contact: Phil Granger	Lab Contact:	
Project Name and Location (State): AFP59 New York	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: 77008.07.09			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: VOC 8260B	Special Instructions/ Conditions of Receipt
59DW1GW1	11/1/04	1045		X						X			3	
59SW1WG1		1145		X						X			3	
59SW3WG1		1300		X						X			3	
59SW3WG1MS		1300		X						X			3	
59SW3WG1MSD		1300		X						X			3	
59DW3WG1		1545		X						X			3	
TB110104		1645		X						X			3	
59SW4WG1		1750		X						X			3	
59SW7WG1		1900		X						X			3	
59SW7WG9		1900		X						X			3	
				PAG			11/1/04							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STD

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Phil Granger	11/2/04	1000	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: Shipped Via Fed Ex Priority Overnight

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

APPENDIX D. DATA QUALITY REVIEW SUMMARY AND GROUNDWATER ANALYTICAL DATA

TABLE OF CONTENTS

1.0 INTRODUCTION

This data validation review pertains to groundwater samples collected in November 2004 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 D4K030317

Field Sample ID	Lab Sample ID	Field Sample ID	Lab Sample ID
59DW1WG1	D4K030317-001	TB110104	D4K030317-005
59SW1WG1	D4K030317-002	59SW4WG1	D4K030317-006
59SW3WG1	D4K030317-003	59SW7WG1	D4K030317-007
59SW3WG1-MS	D4K030317-003	59SW7WG9	D4K030317-008
59SW3WG1-MSD	D4K030317-003		
59DW3WG1	D4K030317-004		

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 µg/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.

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 1.4 ug/L. The validator qualifies **U** any positive methylene chloride result less than or equal to 14 ug/L.

Methylene chloride was detected in the trip blank TB110104 at 0.57 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. 1,1-Dichloroethane, and cis-1,2-dichloroethene results for 59SW1WG1 and 59SW1WG9 were qualified **J** because they did not meet the criteria. No further qualification was necessary. 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	1.5	1.4	7%
1,1-Dichloroethane	1.0	1.5	1.0	40%
1,1-Dichloroethene	1.0	0.25	0.24	4%
Cis-1, 2-Dichloroethene	1.0	10	6.0	50%
Tetrachloroethene	1.0	0.31	0.30	3%
Trichloroethene	1.0	2.1	1.6	27%
Vinyl chloride	1.0	0.47	0.26	58%

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.

Table 4
Summary of Detected VOCs in Monitoring Well Samples
November 2004

Location ID / Date Sampled	DW1 11/01/2004	DW3 11/01/2004	SW1 11/01/2004	SW3 11/01/2004	SW4 11/01/2004	SW7 11/01/2004	SW7 (DUP) 11/01/2004
Analyte	**Volatiles by EPA SW-846 Method 8260 (ug/L)**						
1,1,1-Trichloroethane	1 U	1 U	1 U	**0.52 J**	**3.1**	**1.5**	**1.4**
1,1-Dichloroethane	1 U	1 U	1 U	**0.38 J**	**1.4**	**1.5 J**	**1 J**
1,1-Dichloroethene	1 U	1 U	1 U	1 U	**0.88 J**	**0.25 J**	**0.24 J**
Acetone	10 U	**1.9 J**	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	1 U	**2.1**	1 U	**1.5**	**4.1**	**10 J**	**6 J**
Tetrachloroethene	1 U	1 U	1 U	1 U	**0.52 J**	**0.31 J**	**0.3 J**
trans-1,2-Dichloroethene	1 U	1 U	1 U	1 U	**0.19 J**	1 U	1 U
Trichloroethene	1 U	1 U	1 U	**1**	**56**	**2.1**	**1.6**
Trichlorofluoromethane	1 U	1 U	1 U	1 U	**1.4**	1 U	1 U
Vinyl chloride	1 U	1 U	1 U	**0.26 J**	1 U	**0.47 J**	**0.26 J**

Key: J = The analyte was positively identified, but the quantitation is an estimation.
U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the method detection limit (MDL).
(DUP) = Duplicate sample taken in the field.

Notes: Bolded values indicate the analyte was detected above the associated MDL.

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59DW1GW1 Lab Sample ID: D4K030317-001 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 00:20

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	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	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

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	83	72 - 119	
4-Bromofluorobenzene	84	76 - 119	
Dibromofluoromethane	93	85 - 115	

Internal Std	Qualifier
Fluorobenzene	

Comments:
GV6LJ1AA

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59DW1GW1 Lab Sample ID: D4K030317-001 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 00:20

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

Surrogate	Recovery	Control Limits	Qualifier
Toluene-d8	94	81 - 120	

Internal Std	Qualifier
Chlorobenzene-d5	

Comments:
GV6LJ1AA

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59DW1GW1 Lab Sample ID: D4K030317-001 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 00:20

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	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	0.20	1:1	N/A	U

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier
1,4-Dichlorobenzene-d5	

Comments:
GV6LJ1AA

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59DW1GW1 Lab Sample ID: D4K030317-001 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 00:20

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	**0.45**	1:1	N/A	~~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

Comments:
GV6LJ1AA

DC 11/19/04

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59DW1GW1 Lab Sample ID: D4K030317-001 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 00:20

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	U
Trichloroethene	0.16	1.0	0.16	1:1	N/A	U
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

Comments:
GV6LJ1AA

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59DW1GW1 Lab Sample ID: D4K030317-001 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 00:20

Concentration Units (ug/L or mg/kg dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,2-Dichloroethane-d4	N/A	N/A	**8.3**	1:1	N/A	
4-Bromofluorobenzene	N/A	N/A	**8.4**	1:1	N/A	
Dibromofluoromethane	N/A	N/A	**9.3**	1:1	N/A	
Toluene-d8	N/A	N/A	**9.4**	1:1	N/A	

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier

Comments:
GV6LJ1AA

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59DW3WG1 Lab Sample ID: D4K030317-004 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:19

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	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	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

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	82	72 - 119	
4-Bromofluorobenzene	84	76 - 119	
Dibromofluoromethane	92	85 - 115	

Internal Std	Qualifier
Fluorobenzene	

Comments:
GV6LQ1AA

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59DW3WG1 Lab Sample ID: D4K030317-004 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:19

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

Surrogate	Recovery	Control Limits	Qualifier
Toluene-d8	93	81 - 120	

Internal Std	Qualifier
Chlorobenzene-d5	

Comments:
GV6LQ1AA

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59DW3WG1 Lab Sample ID: D4K030317-004 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:19

Concentration Units (ug/L or mg/kg dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
Acetone	0.63	10	1.9	1:1	N/A	F J
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	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	2.1	1:1	N/A	

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier
1,4-Dichlorobenzene-d5	

Comments:
GV6LQ1AA

PC 11/19/04

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59DW3WG1 Lab Sample ID: D4K030317-004 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:19

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	**0.43**	1:1	N/A	F 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

Comments:
GV6LQ1AA

DC 11/1a/04

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59DW3WG1 Lab Sample ID: D4K030317-004 Matrix: WATER

% Solids: Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:19

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	U
Trichloroethene	0.16	1.0	0.16	1:1	N/A	U
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

Comments:
GV6LQ1AA

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59DW3WG1 Lab Sample ID: D4K030317-004 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:19

Concentration Units (ug/L or mg/kg dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,2-Dichloroethane-d4	N/A	N/A	**8.2**	1:1	N/A	
4-Bromofluorobenzene	N/A	N/A	**8.4**	1:1	N/A	
Dibromofluoromethane	N/A	N/A	**9.2**	1:1	N/A	
Toluene-d8	N/A	N/A	**9.3**	1:1	N/A	

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier

Comments:
GV6LQ1AA

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW1WG1 Lab Sample ID: D4K030317-002 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 00:40

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	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	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

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	86	72 - 119	
4-Bromofluorobenzene	87	76 - 119	
Dibromofluoromethane	96	85 - 115	

Internal Std	Qualifier
Fluorobenzene	

Comments:
GV6LM1AA

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW1WG1 Lab Sample ID: D4K030317-002 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 00:40

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

Surrogate	Recovery	Control Limits	Qualifier
Toluene-d8	96	81 - 120	

Internal Std	Qualifier
Chlorobenzene-d5	

Comments:
GV6LM1AA

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW1WG1 Lab Sample ID: D4K030317-002 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 00:40

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	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	0.20	1:1	N/A	U

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier
1,4-Dichlorobenzene-d5	

Comments:
GV6LM1AA

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW1WG1 Lab Sample ID: D4K030317-002 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 00:40

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	**0.43**	1:1	N/A	B 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

Comments:
GV6LM1AA

DL 11/9/04

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW1WG1 Lab Sample ID: D4K030317-002 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.I-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 00:40

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	U
Trichloroethene	0.16	1.0	0.16	1:1	N/A	U
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

Comments:
GV6LM1AA

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW1WG1 Lab Sample ID: D4K030317-002 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 00:40

Concentration Units (ug/L or mg/kg dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,2-Dichloroethane-d4	N/A	N/A	**8.6**	1:1	N/A	
4-Bromofluorobenzene	N/A	N/A	**8.7**	1:1	N/A	
Dibromofluoromethane	N/A	N/A	**9.6**	1:1	N/A	
Toluene-d8	N/A	N/A	**9.6**	1:1	N/A	

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier

Comments:
GV6LM1AA

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW3WG1 Lab Sample ID: D4K030317-003 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:00

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	**0.52**	1:1	N/A	F J
1,1,2,2-Tetrachloroethane	0.18	0.50	0.18	1:1	N/A	U
-1,2-Trichloroethane	0.30	1.0	0.30	1:1	N/A	U
-Dichloroethane	0.16	1.0	**0.38**	1:1	N/A	F J
Dichloroethene	0.17	1.0	0.17	1:1	N/A	U
chloropropene	0.17	1.0	0.17	1:1	N/A	U
ichlorobenzene	0.24	1.0	0.24	1:1	N/A	U
hloropropane	0.18	1.0	0.18	1:1	N/A	U
robenzene	0.26	1.0	0.26	1:1	N/A	U
ylbenzene	0.18	1.0	0.18	1:1	N/A	U
chloropropane	0.28	2.0	0.28	1:1	N/A	U

Surrogate	Recovery	Control Limits	Qualifier
ethane-d4	83	72 - 119	
benzene	83	76 - 119	
ethane	93	85 - 115	

Internal Std	Qualifier
Fluorobenzene	

DC 11/19/04

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW3WG1 Lab Sample ID: D4K030317-003 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.I-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:00

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	**0.52**	1:1	N/A	~~F~~ J
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	**0.38**	1:1	N/A	~~F~~ J
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

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	83	72 - 119	
4-Bromofluorobenzene	83	76 - 119	
Dibromofluoromethane	93	85 - 115	

Internal Std	Qualifier
Fluorobenzene	

[redacted]omments:
/6LN1AA

DC 11/19/04

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW3WG1 Lab Sample ID: D4K030317-003 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:00

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	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	93	81 - 120	

Internal Std	Qualifier
Chlorobenzene-d5	

Comments:
GV6LN1AA

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW3WG1 Lab Sample ID: D4K030317-003 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:00

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	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	1.5	1:1	N/A	

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier
1,4-Dichlorobenzene-d5	

Comments:
GV6LN1AA

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW3WG1 Lab Sample ID: D4K030317-003 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:00

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	**0.44**	1:1	N/A	FU
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:
GV6LN1AA

DC 11/19/04

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW3WG1 Lab Sample ID: D4K030317-003 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:00

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	U
Trichloroethene	0.16	1.0	**1.0**	1:1	N/A	
Trichlorofluoromethane	0.13	1.0	0.13	1:1	N/A	U
Vinyl chloride	0.21	1.0	**0.26**	1:1	N/A	J

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier

Comments:
GV6LN1AA

DC 11/19/04

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW3WG1 Lab Sample ID: D4K030317-003 Matrix: WATER

% Solids: Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:00

Concentration Units (ug/L or mg/kg dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,2-Dichloroethane-d4	N/A	N/A	**8.3**	1:1	N/A	
4-Bromofluorobenzene	N/A	N/A	**8.3**	1:1	N/A	
Dibromofluoromethane	N/A	N/A	**9.3**	1:1	N/A	
Toluene-d8	N/A	N/A	**9.3**	1:1	N/A	

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier

Comments:
GV6LN1AA

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW4WG1 Lab Sample ID: D4K030317-006 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:59

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	**3.1**	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	**1.4**	1:1	N/A	
1,1-Dichloroethene	0.17	1.0	**0.88**	1:1	N/A	~~F~~ J
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

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	82	72 - 119	
4-Bromofluorobenzene	82	76 - 119	
Dibromofluoromethane	92	85 - 115	

Internal Std	Qualifier
Fluorobenzene	

Comments:
GV6LX1AA

DC 11/19/04

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW4WG1 Lab Sample ID: D4K030317-006 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:59

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

Surrogate	Recovery	Control Limits	Qualifier
Toluene-d8	93	81 - 120	

Internal Std	Qualifier
Chlorobenzene-d5	

Comments:
GV6LX1AA

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW4WG1 Lab Sample ID: D4K030317-006 Matrix: WATER

% Solids: Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:59

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	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	4.1	1:1	N/A	

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier
1,4-Dichlorobenzene-d5	

Comments:
GV6LX1AA

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW4WG1 Lab Sample ID: D4K030317-006 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:59

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	**0.42**	1:1	N/A	FU
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:
GV6LX1AA

DC 11/9/04

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW4WG1 Lab Sample ID: D4K030317-006 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:59

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	**0.52**	1:1	N/A	~~F~~ J
Toluene	0.17	1.0	0.17	1:1	N/A	U
trans-1,2-Dichloroethene	0.16	1.0	**0.19**	1:1	N/A	~~F~~ J
trans-1,3-Dichloropropene	0.21	1.0	0.21	1:1	N/A	U
Trichloroethene	0.16	1.0	**56**	1:1	N/A	
Trichlorofluoromethane	0.13	1.0	**1.4**	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:
GV6LX1AA

DC 11/19/04

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW4WG1 Lab Sample ID: D4K030317-006 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:59

Concentration Units (ug/L or mg/kg dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,2-Dichloroethane-d4	N/A	N/A	**8.2**	1:1	N/A	
4-Bromofluorobenzene	N/A	N/A	**8.2**	1:1	N/A	
Dibromofluoromethane	N/A	N/A	**9.2**	1:1	N/A	
Toluene-d8	N/A	N/A	**9.3**	1:1	N/A	

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier

Comments:
GV6LX1AA

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW7WG1 Lab Sample ID: D4K030317-007 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.I-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 02:19

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	**1.5**	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	**1.5**	1:1	N/A	J
1,1-Dichloroethene	0.17	1.0	**0.25**	1:1	N/A	J
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

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	82	72 - 119	
4-Bromofluorobenzene	83	76 - 119	
Dibromofluoromethane	91	85 - 115	

Internal Std	Qualifier
Fluorobenzene	

Comments:
GV6L31AA

DC 11/19/04

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW7WG1 Lab Sample ID: D4K030317-007 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.I-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 02:19

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

Surrogate	Recovery	Control Limits	Qualifier
Toluene-d8	91	81 - 120	

Internal Std	Qualifier
Chlorobenzene-d5	

Comments:
GV6L31AA

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW7WG1 Lab Sample ID: D4K030317-007 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.I-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 02:19

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	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	**10**	1:1	N/A	J

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier
1,4-Dichlorobenzene-d5	

Comments:
GV6L31AA

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW7WG1 Lab Sample ID: D4K030317-007 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 02:19

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	**0.37**	1:1	N/A	P 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

Comments:
GV6L31AA

DC 11/19/04

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW7WG1 Lab Sample ID: D4K030317-007 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 02:19

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	**0.31**	1:1	N/A	~~F~~ J
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	**2.1**	1:1	N/A	
Trichlorofluoromethane	0.13	1.0	0.13	1:1	N/A	U
Vinyl chloride	0.21	1.0	**0.47**	1:1	N/A	~~F~~ J

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier

Comments:
GV6L31AA

DL 11/19/04

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW7WG1 Lab Sample ID: D4K030317-007 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 02:19

Concentration Units (ug/L or mg/kg dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,2-Dichloroethane-d4	N/A	N/A	**8.2**	1:1	N/A	
4-Bromofluorobenzene	N/A	N/A	**8.3**	1:1	N/A	
Dibromofluoromethane	N/A	N/A	**9.1**	1:1	N/A	
Toluene-d8	N/A	N/A	**9.1**	1:1	N/A	

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier

Comments:
GV6L31AA

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW7WG9 Lab Sample ID: D4K030317-008 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 02:38

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	**1.4**	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	**1.0**	1:1	N/A	J
1,1-Dichloroethene	0.17	1.0	**0.24**	1:1	N/A	~~F~~ J
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

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	84	72 - 119	
4-Bromofluorobenzene	83	76 - 119	
Dibromofluoromethane	93	85 - 115	

Internal Std	Qualifier
Fluorobenzene	

Comments:
GV6L51AA

DC 11/19/04

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW7WG9 Lab Sample ID: D4K030317-008 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 02:38

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

Surrogate	Recovery	Control Limits	Qualifier
Toluene-d8	92	81 - 120	

Internal Std	Qualifier
Chlorobenzene-d5	

Comments:
GV6L51AA

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW7WG9 Lab Sample ID: D4K030317-008 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 02:38

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	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	**6.0**	1:1	N/A	J

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier
1,4-Dichlorobenzene-d5	

Comments:
GV6L51AA

11/14/04

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW7WG9 Lab Sample ID: D4K030317-008 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 02:38

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	**0.38**	1:1	N/A	~~B~~ V
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:
GV6L51AA

DC 11/19/04

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW7WG9 Lab Sample ID: D4K030317-008 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.I-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 02:38

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	**0.30**	1:1	N/A	~~F~~ J
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	**1.6**	1:1	N/A	
Trichlorofluoromethane	0.13	1.0	0.13	1:1	N/A	U
Vinyl chloride	0.21	1.0	**0.26**	1:1	N/A	~~F~~ J

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier

Comments:
GV6L51AA

DC 11/19/04

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: 59SW7WG9 Lab Sample ID: D4K030317-008 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 02:38

Concentration Units (ug/L or mg/kg dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,2-Dichloroethane-d4	N/A	N/A	**8.4**	1:1	N/A	
4-Bromofluorobenzene	N/A	N/A	**8.3**	1:1	N/A	
Dibromofluoromethane	N/A	N/A	**9.3**	1:1	N/A	
Toluene-d8	N/A	N/A	**9.2**	1:1	N/A	

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier

Comments:
GV6L51AA

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: TB110104 Lab Sample ID: D4K030317-005 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:39

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	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	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

Surrogate	Recovery	Control Limits	Qualifier
1,2-Dichloroethane-d4	82	72 - 119	
4-Bromofluorobenzene	84	76 - 119	
Dibromofluoromethane	92	85 - 115	

Internal Std	Qualifier
Fluorobenzene	

Comments:
GV6LT1AA

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: TB110104 Lab Sample ID: D4K030317-005 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:39

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

Surrogate	Recovery	Control Limits	Qualifier
Toluene-d8	93	81 - 120	

Internal Std	Qualifier
Chlorobenzene-d5	

Comments:
GV6LT1AA

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: TB110104 Lab Sample ID: D4K030317-005 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:39

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	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	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	0.20	1:1	N/A	U

Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier
1,4-Dichlorobenzene-d5	

Comments:
GV6LT1AA

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: TB110104 Lab Sample ID: D4K030317-005 Matrix: WATER

% Solids: _____ Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:39

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	**0.57**	1:1	N/A	J 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

Comments:
GV6LT1AA

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ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: TB110104 Lab Sample ID: D4K030317-005 Matrix: WATER

% Solids: Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:39

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	U
Trichloroethene	0.16	1.0	0.16	1:1	N/A	U
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

Comments:
GV6LT1AA

AFCEE
ORGANIC ANALYSES DATA SHEET 2
RESULTS

Analytical Method: 8260B Preparatory Method: 5030B/8260B AAB #: 4316010

Lab Name: STL Denver Contract #: F41624-00-D-8023

Field Sample ID: TB110104 Lab Sample ID: D4K030317-005 Matrix: WATER

% Solids: Initial Calibration ID: H.i-1-07-NOV-04

Date Received: 03-Nov-04 08:45 Date Prepared: 08-Nov-04 18:36 Date Analyzed: 09-Nov-04 01:39

Concentration Units (ug/L or mg/kg dry weight): ug/L

Analyte	MDL	RL	Concentration	Dilution	Confirm	Qualifer
1,2-Dichloroethane-d4	N/A	N/A	**8.2**	1:1	N/A	
4-Bromofluorobenzene	N/A	N/A	**8.4**	1:1	N/A	
Dibromofluoromethane	N/A	N/A	**9.2**	1:1	N/A	
Toluene-d8	N/A	N/A	**9.3**	1:1	N/A	

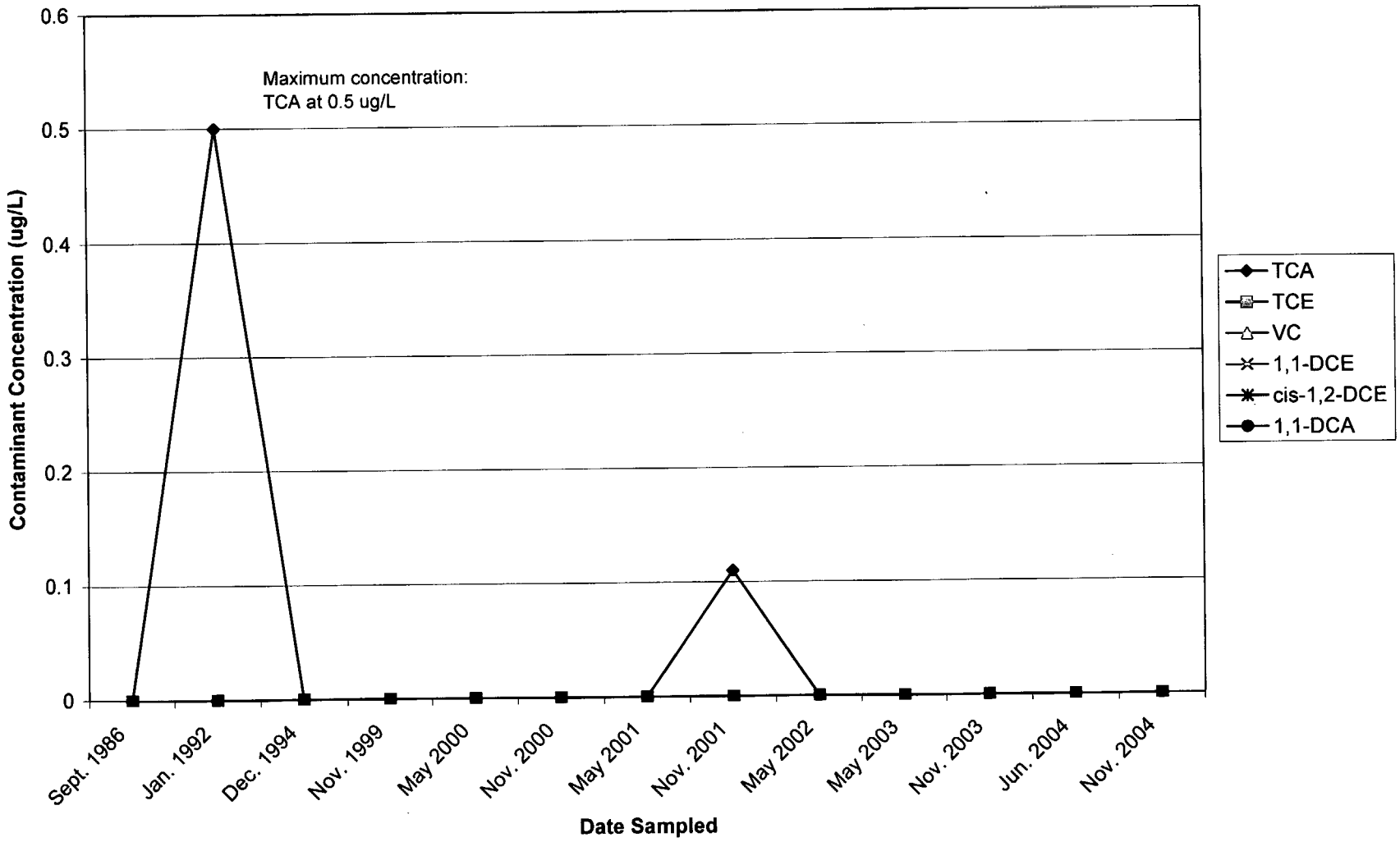
Surrogate	Recovery	Control Limits	Qualifier

Internal Std	Qualifier

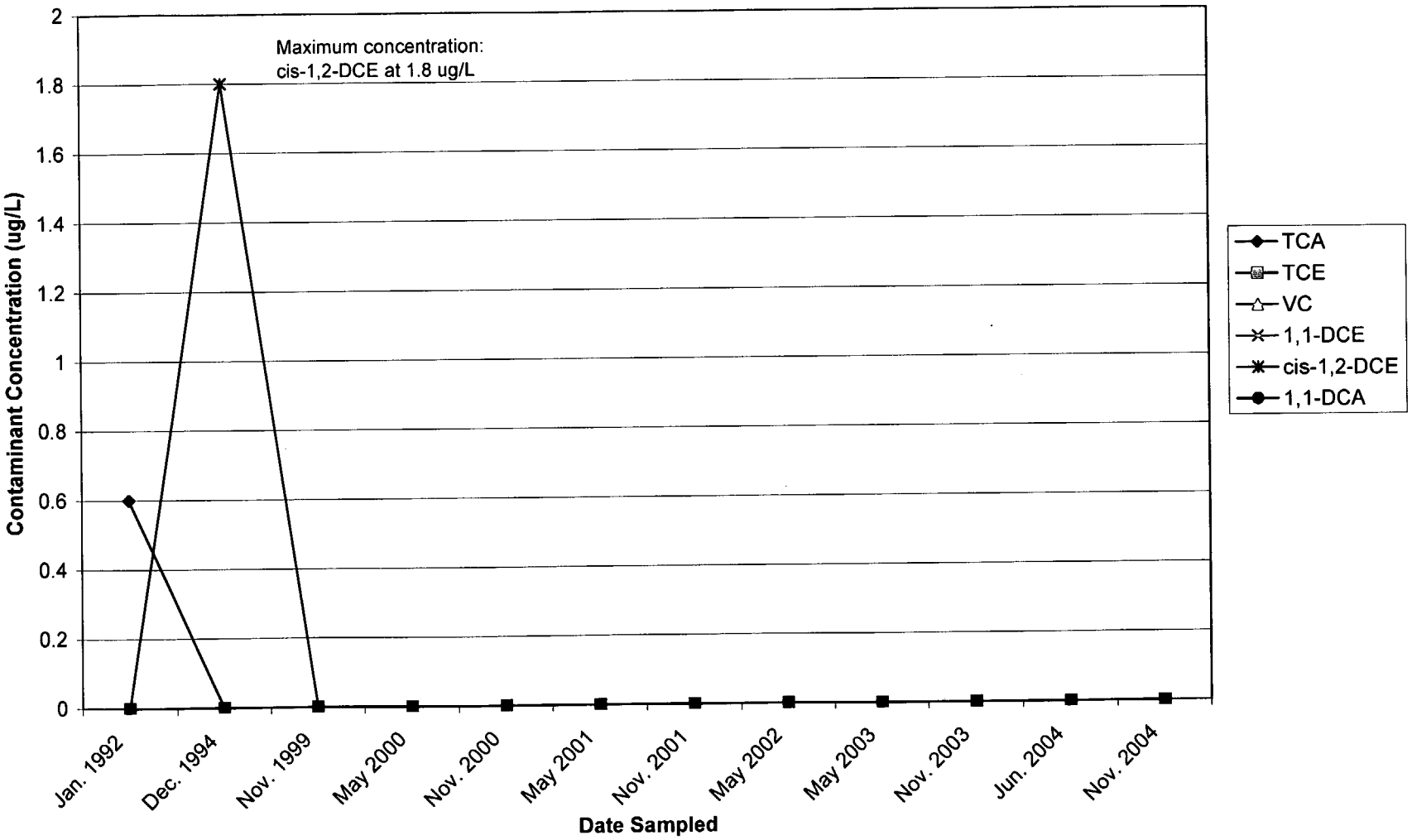
Comments:
GV6LT1AA

APPENDIX E. TREND ANALYSIS OF VOCS IN GROUNDWATER

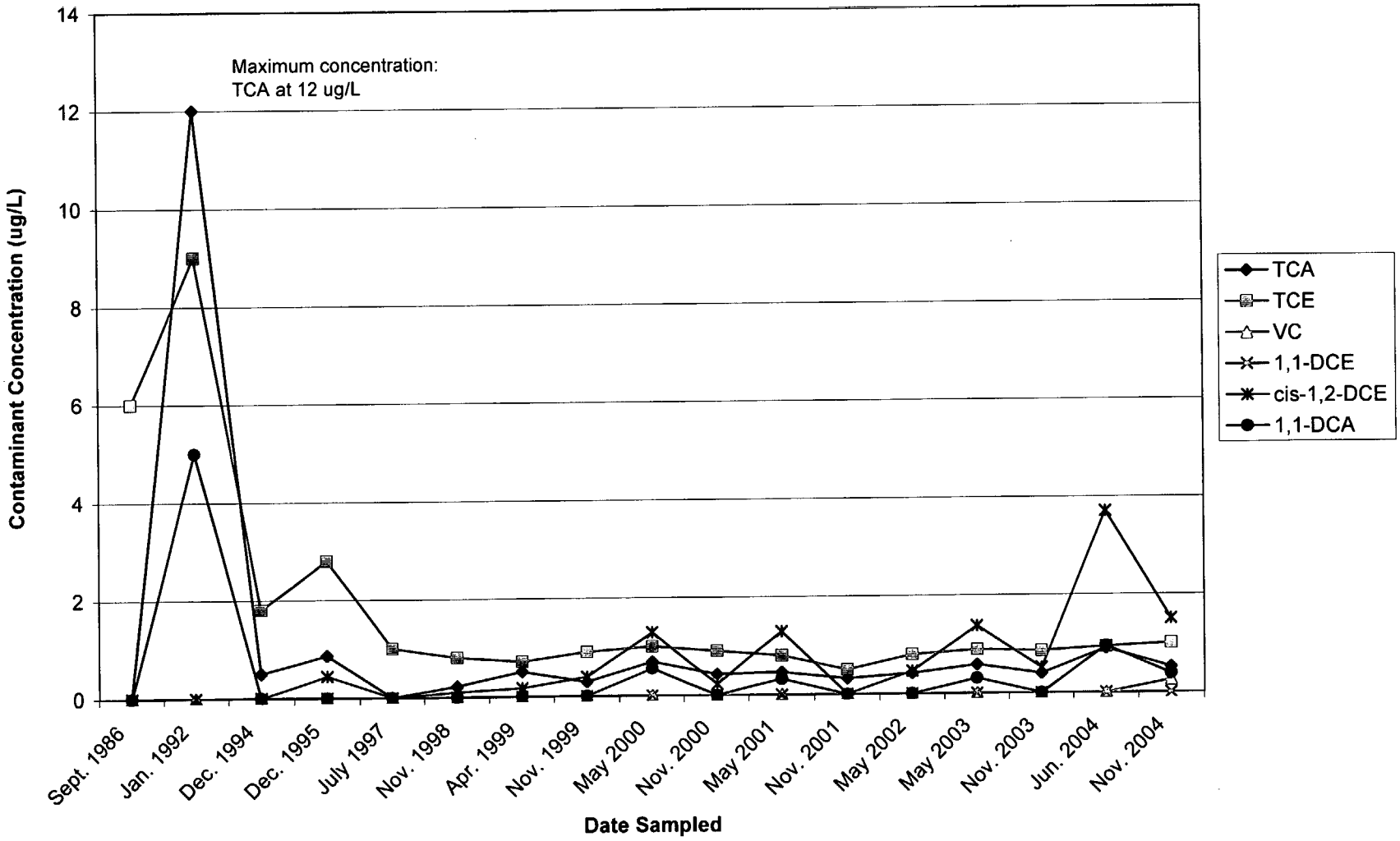
SW1 Trend Analysis of VOCs in Groundwater



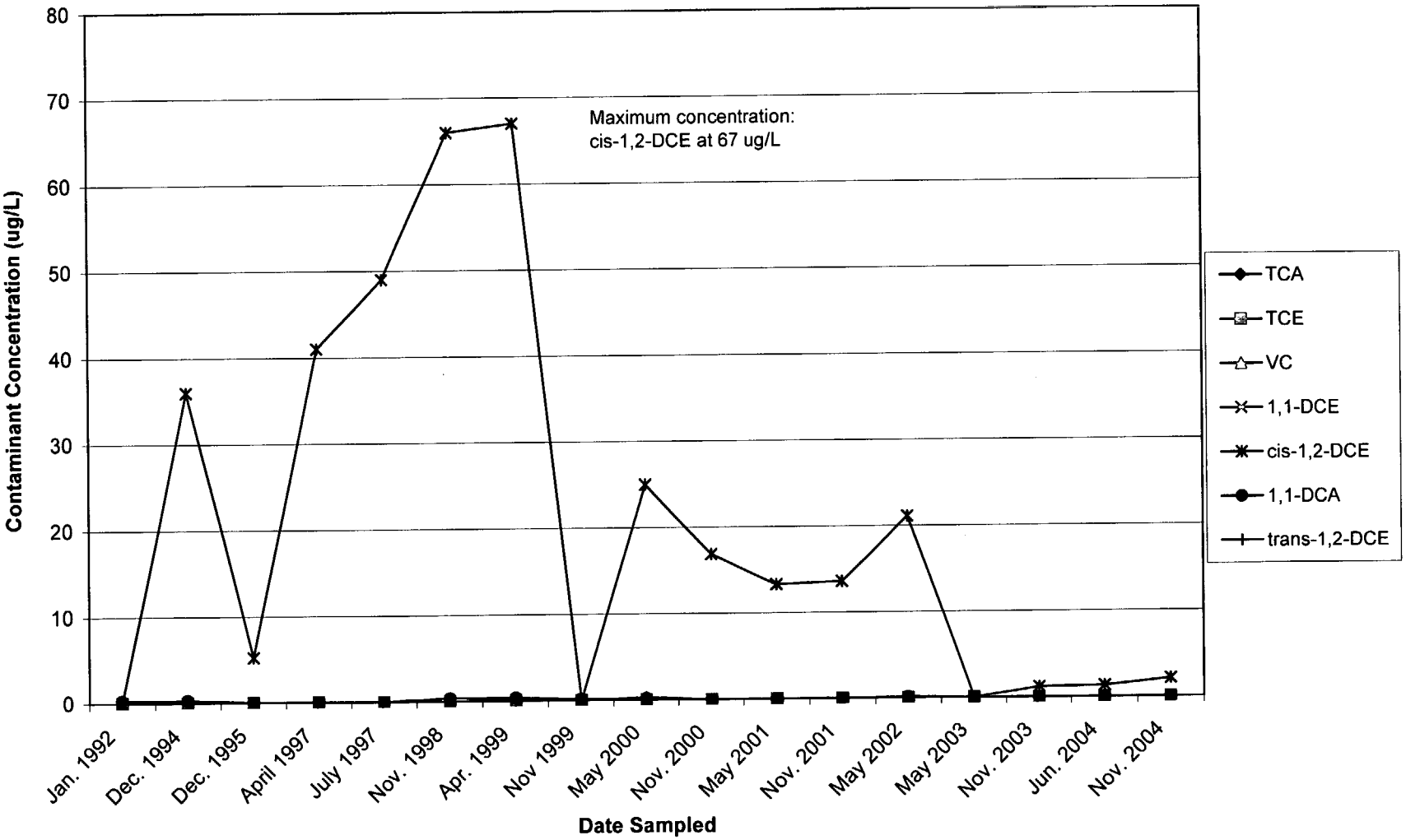
DW1 Trend Analysis of VOCs in Groundwater



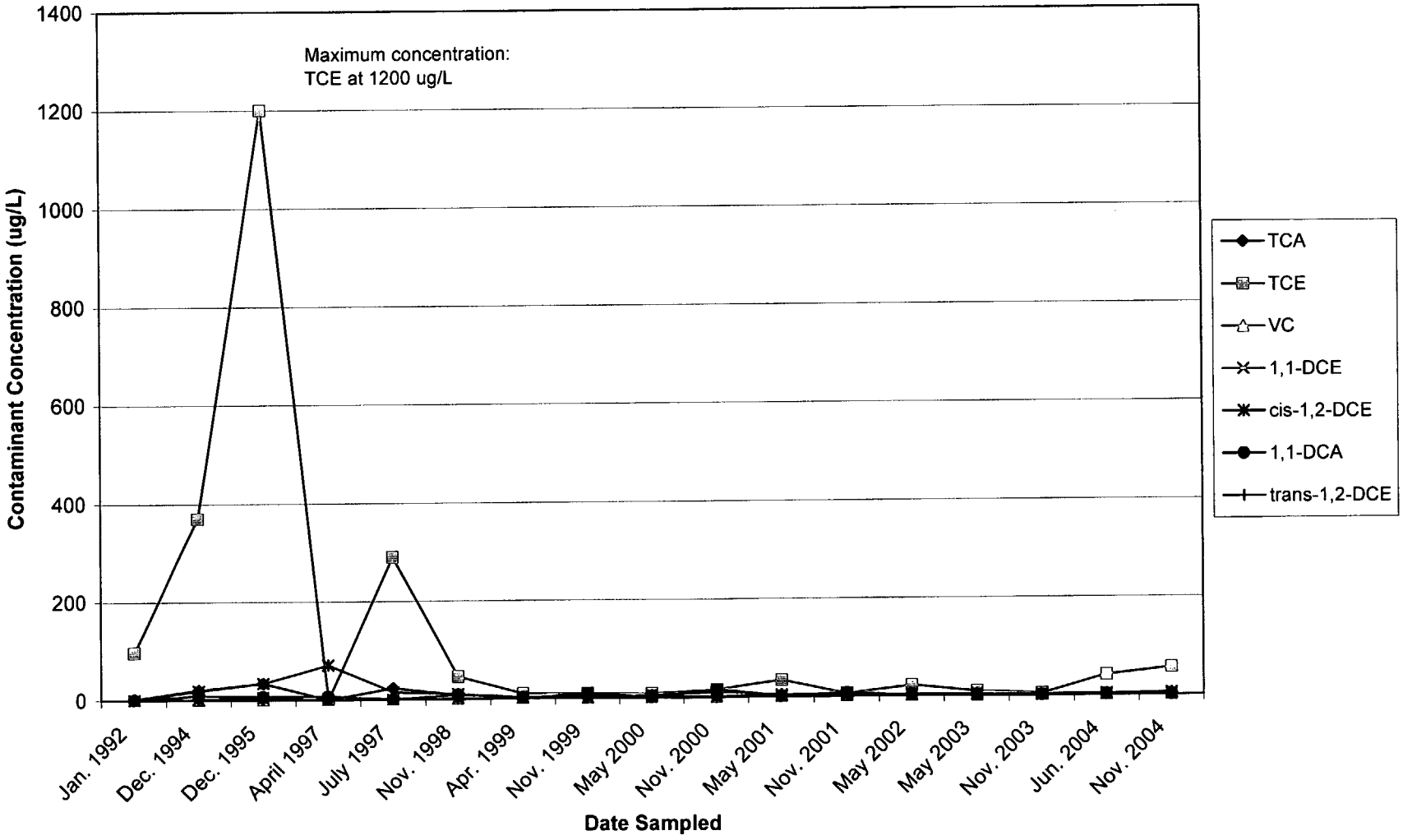
SW3 Trend Analysis of VOCs in Groundwater



DW3 Trend Analysis of VOCs in Groundwater



SW4 Trend Analysis of VOCs in Groundwater



SW7 Trend Analysis of VOCs in Groundwater