DEPARTMENT OF THE AIR FORCE
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HOLLOMAN AIR FORCE BASE, NEW MEXICO

30 AUG 2000

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SEP 2000

FROM: 49 CES/CEV
550 Tabosa Avenue
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SUBJECT: 1999 Long Term Monitoring (LTM) Report, Holloman AFB

1. Enclosed is the report on the results of the 1999 Long-Term Monitoring conducted at Holloman AFB.

2. If you have any questions, please contact Mr. Court Fesmire or Mr. Jose Gallegos at (505) 572-5395.

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Final 1999 Long-Term Groundwater Monitoring Report

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Langley Air Force Base, Virginia

Final
1999 Long-Term Groundwater Monitoring Report

Holloman Air Force Base, New Mexico

June 2000

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49 CES/CEV
Holloman Air Force Base
New Mexico

Project Number: KWRD19997009

FINAL

1999 LONG-TERM GROUNDWATER MONITORING REPORT

HOLLOMAN AIR FORCE BASE, NEW MEXICO

Prepared for:

49 CES/CEV
Holloman Air Force Base, NM
and
HQ ACC/CEVC
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ACRONYMS

AFB	Air Force Base
AOC	area of concern
BRA	baseline risk assessment
BTEX	benzene, toluene, ethylbenzene, and xylenes
CDAP	Chemical Data Acquisition Plan
CRDL	contract-required detection limit
DDD	1,1-bis(chlorophenyl)-2,2-dichloroethane
DDE	1,1-bis(chlorophenyl)-2,2-dichloroethene
DDT	1,1-bis(chlorophenyl)-2,2,2-trichloroethane
EPA	United States Environmental Protection Agency
FEC	Foothill Engineering Consultants, Inc.
Foster Wheeler	Foster Wheeler Environmental Corporation
ft	feet
ft/ft	feet per foot
GTI	Groundwater Technology, Incorporated
IDL	instrument detection limit
LTM	long-term groundwater monitoring
mg/kg	milligrams per kilogram
MOBBS	Mobile Bare Base Squadron
msl	mean sea level
NMED	New Mexico Environment Department
OCP	organochlorine pesticide
PCB	polychlorinated biphenyl
POL	petroleum, oils, and lubricants
ppm	parts per million

ACRONYMS (continued)

QA	quality assurance
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RI	remedial investigation
SOP	standard operating procedure
SVE	soil vapor extraction
SVOC	semivolatile organic compound
SWMU	solid waste management unit
TCE	trichloroethylene
TCLP	Toxicity Characteristic Leaching Procedure
TOC	top of casing
TOX	total organic halogens
TPH	total petroleum hydrocarbons
TRPH	total recoverable petroleum hydrocarbons
USACE	United States Army Corps of Engineers
UST	underground storage tank
VOC	volatile organic compound
μg/L	micrograms per liter

EXECUTIVE SUMMARY

This report presents the results of the 1999 Long-Term Groundwater Monitoring (LTM) Program for selected Resource Conservation and Recovery Act and Installation Restoration Program sites at Holloman Air Force Base, New Mexico. The 1999 LTM Program represents the third of five sampling events scheduled as part of a 10-year voluntary program in which monitoring is performed once every two years. The first LTM Program sampling event was conducted in August 1995. The objective of the LTM Program is to meet United States Environmental Protection Agency Region 6 and New Mexico Environment Department requirements for conditionally closing the sites included in the programs. Although active remediation in the form of free-phase product removal is ongoing at a few of the sites, this program supports conditional closure of all LTM sites as presented in their appropriate decision documents.

In this report, analytical results obtained during the 1999 LTM Program activities were evaluated and compared with results generated in 1995 and 1997. For sites investigated during all three events, analytical results reported in 1995 served as baseline concentrations from which to compare all subsequent results. For the six sites introduced in 1997, analytical results obtained during the 1997 LTM Program served as baseline concentrations from which to compare all subsequent results.

In general, groundwater sample results from 1999 were consistent with sample results from previous LTM Programs (did not change by one order of magnitude). Eight of the wells had analyte detections that exceeded New Mexico Groundwater Quality Standards. Overall, more metals were detected in 1999 than in previous years. This increase in the number of detections of metals is due to improved analytical technologies that have resulted in analytical methods with lower detection limits than previously available.

Recommendations for revising the 2001 LTM Program were made for 12 of the 17 sites addressed in this report. These recommendations primarily focus on decreasing the number of constituents in the analytical requirements for each site. A recommendation was made to resurvey TOC elevations of monitoring wells at LF-29 because groundwater elevations for September and December 1999 appear erroneous and could not easily be contoured. Additional

recommendations have been made pertaining to removing root growth from wells at three landfills prior to sampling.

Table ES-1 summarizes the 1999 LTM Program and the recommendations for the 2001 LTM Program.

Table ES-1. Summary of 1999 Long-Term Monitoring Findings and Recommendations

Site	1999 Analyses (EPA Methods)	1999 Results Above CRDL	1999 Results Above NMGWQ Standards	2001 LTM Program Recommendations
LF-01	VOCs (8260B), Metals (6010B Trace, 7470A)	Manganese	None	The only metals detected in 3 events above the CRDL were selenium and manganese. Recommend monitoring for these metals only in the next sampling round.
LF-10	VOCs (8260B), Metals (6010B Trace, 7470A)	Chromium, Manganese	None	Only metals detected in 3 events above the CRDL were arsenic, chromium, lead, and manganese. Arsenic values reported for the 1995 event were probably reported below the CRDL but not flagged as such when comparing the values to the 1999 (B) values. Recommend monitoring for chromium, lead, and
SD-08	VOCs (8260B), Metals (6010B Trace, 7470A), Organochlorine Pesticides (8081A)	1,2-Dichloroethane; 1,2-Dichloropropane; Iron; Manganese; gamma-Chlordane	1,2-Dichloroethane, Iron, Manganese	Analyze only for barium, lead, iron, and manganese.
LF-19	VOCs (8260B), Metals (6010B Trace, 7470A)	Iron, Manganese, Mercury	Manganese	Drop VOCs from program since no VOCs have been detected above the CRDL for the 3 events. Analyze for only metals detected above the CRDL (barium, iron, lead, manganese, and mercury).
LF-21	VOCs (8260B), Metals (6010B Trace, 7470A)	TCE, Iron, Manganese	None	Analyze for VOCs (TCE), barium, iron, and manganese. Remove roots from all wells 2 weeks prior to sampling to ensure that representative water level measurements and groundwater samples are obtained.
LF-22	VOCs (8260B), Metals (6010B Trace, 7470A), Organochlorine Pesticides (8081A), PCBs (8082), Herbicides (8151A)	Manganese; 2,4-D; MCPP; Picloram	None	Delete VOCs and OCPs since none were detected above the CRDL for 3 events. Analyze for herbicides, iron, and manganese.
LF-23	VOCs (8260B), Metals (6010B Trace, 7470A), Organochlorine Pesticides (8081A), PCBs (8082), Herbicides (8151A)	Iron, Manganese, 4-Nitrophenol	Manganese, Selenium	Delete VOCs and OCPs. Analyze for iron, manganese, selenium, and herbicides only.
OT-44	VOCs (8260B)	Carbon disulfide	None	No changes to the current LTM Program are recommended at this time.
SS-48	VOCs (8260B), Dissolved lead (6010B Trace)	Benzene, Ethylbenzene	Benzene, Ethylbenzene	Delete lead analysis.
DP-30 & SD-33	VOCs (8260B), Metals (6010B Trace, 7470A)	Chloroform; 1,1-Dichloroethane; TCE	1,1-Dichloroethane, TCE	Analyze for VOCs, iron, and selenium only. Remove roots from all wells 2 weeks prior to sampling to ensure that representative water level measurements and groundwater samples are obtained.
SS-56	VOCs (8260B), Dissolved lead (6010B Trace)	None	None	No changes to the current LTM Program are recommended at this time.

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Table ES-1. Summary of 1999 Long-Term Monitoring Findings and Recommendations

Site	1999 Analyses (EPA Methods)	1999 Results Above CRDL	1999 Results Above NMGWQ Standards	2001 LTM Program Recommendations
SS-02 & SS-05	VOCs (8260B)	Benzene; Ethylbenzene; Toluene; m,p-Xylenes; o-Xylene	Benzene, Ethylbenzene	No changes to the current LTM Program are recommended.
SS-46	VOCs (8260B), Dissolved lead (6010B Trace)	None	None	No changes to the current LTM Program are recommended at this time.
OT-16	VOCs (8260B), Organochlorine Pesticides (8081A)	Chloroform, TCE, gamma-BHC	None	Consider collecting additional samples at 118-MW1601 to confirm detections of chloroform and TCE. No other changes to the current LTM Program are recommended.
SS-17	VOCs (8260B)	Benzene; 1,2-Dichloroethane; Ethylbenzene	Benzene, 1,2-Dichloroethane	No changes to the current LTM Program are recommended.
SS-39	VOCs (8260B)	Carbon tetrachloride; TCE	None	Remove roots from all wells 2 weeks prior to sampling to ensure that representative water level measurements and groundwater samples are obtained.
LF-29	VOCs (8260B), SVOCs (8270C)	Chloroform; 1,2-Dichloroethane	1,2-Dichloroethane	Delete SVOCs. Resurvey top of casing elevations.

Notes:
AOC - Area of concern
CRDL - contract-required detection limit
EPA - United States Environmental Protection Agency
LTM - Long-Term Monitoring
NMGWQ - New Mexico Groundwater Quality
PCB - polychlorinated biphenyl
SVOC - semivolatile organic compound
SWMU - Solid Waste Management Unit
TCE - trichloroethylene
Trace - inductively coupled plasma trace analysis
VOC - volatile organic compound

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1.0 INTRODUCTION

This report presents the results of the 1999 Long-Term Groundwater Monitoring (LTM) Program for 17 Resource Conservation and Recovery Act (RCRA) and Installation Restoration Program sites at Holloman Air Force Base (AFB), New Mexico (Figure 1-1). Sites were included in the LTM Program based on investigations and risk assessments conducted for each site. The community participation, background information, quantitative risk assessments, and selected remedies are summarized in the Decision Document for each site or presented in the following documents: *Decision Documents for Installation Restoration Program Sites* (Walk, Haydel & Associates 1990), *Decision Documents Installation Restoration Program* (Ebasco 1995), and *Proposed Plans–Investigation, Study, and Recommendations for 29 Waste Sites* (Radian 1993b). These documents establish the requirement for long-term groundwater monitoring as a condition of site closure. The objective of the LTM Program is twofold:

- Ensure for the three sites with ongoing remediation that the selected remedy has effectively stopped the release of contamination to the groundwater, and/or
- Ensure for all 17 sites that further degradation to groundwater quality is not occurring.

The LTM Program is designed as a 10-year program with monitoring performed once every two years. The 1999 LTM Program represents the third of five scheduled sampling events. The first and second LTM Program sampling events were conducted in August 1995 and September 1997, respectively.

During the 1995 LTM Program, monitoring was conducted at 12 different sites. Eleven of these sites (OT-45 was eliminated) were included in the 1997 sampling event along with six additional sites. All 17 of the 1997 LTM sites were included in the 1999 sampling event and are listed in Table 1-1.

The 1999 LTM Program activities included measuring static water levels and collecting groundwater samples at selected monitoring wells. Groundwater samples were collected from 66 monitoring wells located at the 17 LTM sites listed in Table 1-1. Site locations are shown on Figure 1-2. Groundwater samples were submitted for site-specific chemical analyses including

volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), organochlorine pesticides (OCPs), polychlorinated biphenyls (PCBs), chlorinated herbicides, total mercury, dissolved RCRA metals, iron, manganese, and dissolved lead. Analyses were performed in accordance with *SW-846 Test Methods for Evaluating Solid Waste*, third edition and updates (United States Environmental Protection Agency [EPA] 1986) as specified in Table 2-1.

Table 1-1. 1999 Long-Term Monitoring Program Sites

Site	SWMU	Location
LF-01	106	Main Base Landfill
LF-10	101, 109	Old Main Base Landfill
SD-08	4, 82	Refuse Collection Truck Washrack
LF-19	105	Golf Course Landfill
LF-21	116	West Area Landfill No. 2
LF-22	115	West Area Landfill No. 1
LF-23	108	MOBBS Landfill
OT-44	AOC-P	Building 301 Aircraft Maintenance Hangar
SS-48	None	Military Gas Station
DP-30/SD-33	113B	Grease Trap Disposal Pits
SS-56	None	West Ramp Fuel Spill
SS-02/SS-05 *	AOC-T	POL Spill Sites Nos. 1 and 2
SS-46 *	130	JP-4 Spill Site
OT-16 *	118, 132, AOC-A	Former Entomology Shop Area
SS-17 *	None	BX Service Station
SS-39 *	165, 177, 179, 181	Missile Fuel Spill Area
LF-29 *	104	Former Army Landfill

* These sites were added to the LTM Program during the 1997 sampling event. Site OT-45 was removed from the LTM Program after the 1995 baseline sampling event.

1.1 PURPOSE

This report presents the background and site-specific information necessary to assess groundwater quality and provides recommendations for future long-term groundwater monitoring at Holloman AFB. The data evaluation will provide the basis for recommending future monitoring under the LTM Program. Any recommendation made in this report to either revise the analytical requirements at a site is supported by the data evaluation results.

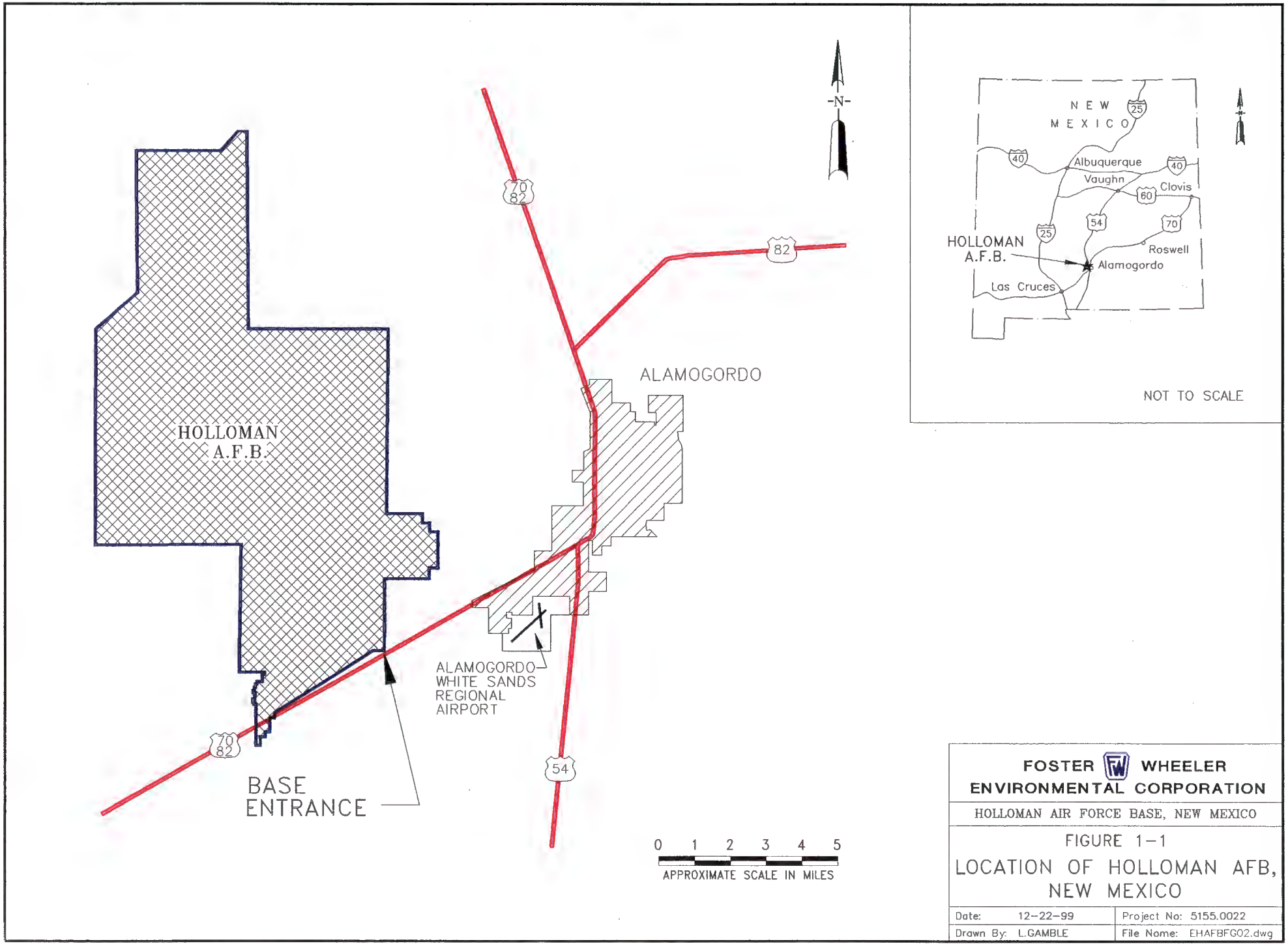
1.2 DOCUMENT ORGANIZATION

This 1999 LTM Report presents groundwater sampling procedures and site-specific background information and analytical results. The document contains the following five sections:

- Section 1.0–Introduction
- Section 2.0–Sampling Procedures
- Section 3.0–Site-Specific Long-Term Monitoring Results
- Section 4.0–Conclusions and Recommendations
- Section 5.0–References

Pertinent site background information and specific agreements made between the United States Air Force and the New Mexico Environment Department (NMED) for each site are presented in the *Draft Final 1995 Long-Term Groundwater Monitoring Report* (Foster Wheeler Environmental Corporation [Foster Wheeler] and Groundwater Technology Government Services, Inc. [GTI] 1996). This information, which provides the basis for the site-specific 1999 LTM Program, has been updated and is summarized in Section 3.0.

This report also includes three appendices. Appendix A presents the Data Quality Control Summary Report for the analytical data collected during the September 1999 LTM Program sampling event. Appendix B provides the analytical results from the subcontractor laboratory for environmental samples and field duplicates. Field sampling and monitoring well gauging information is provided in Appendix C.



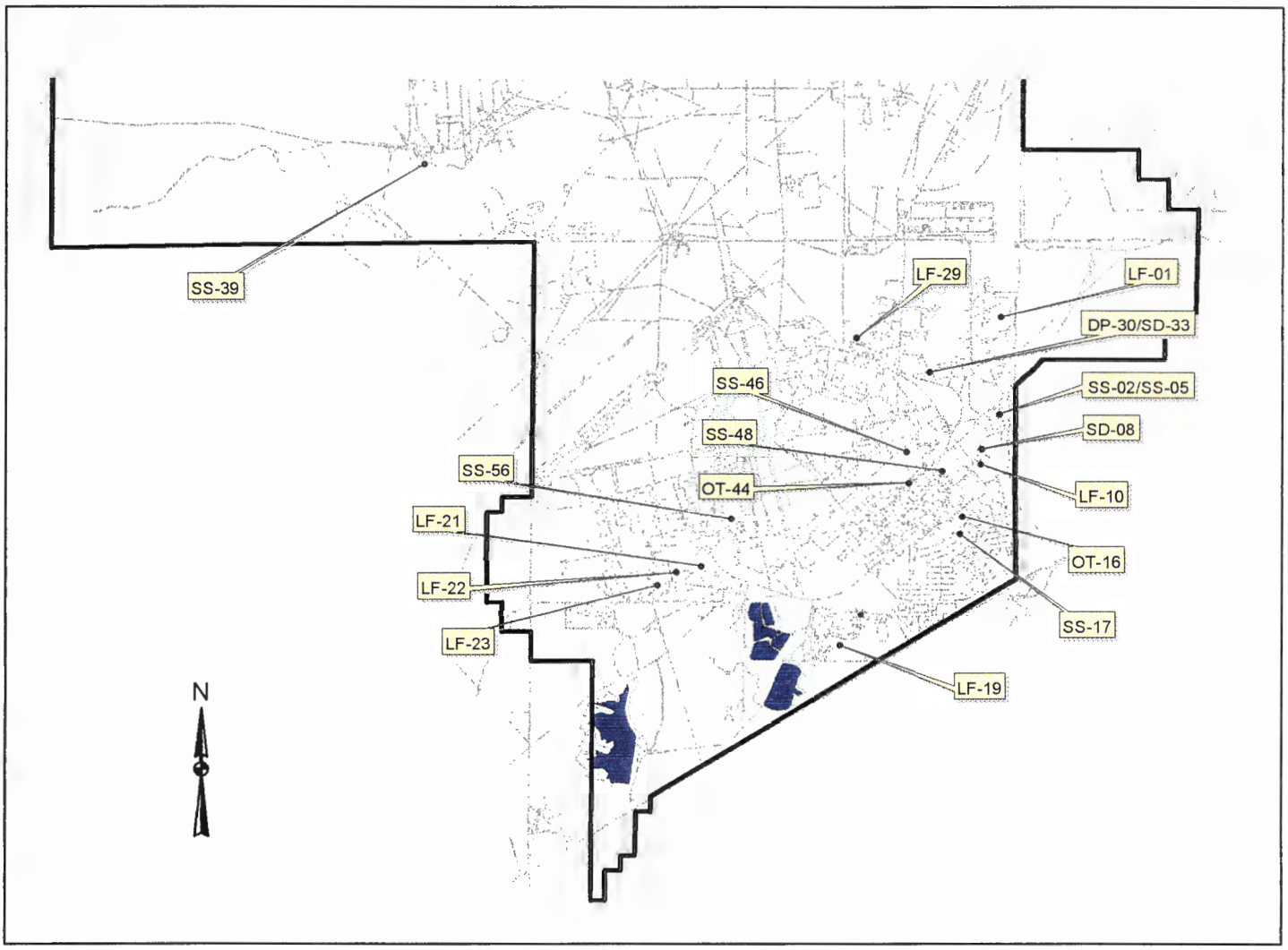
FOSTER WHEELER ENVIRONMENTAL CORPORATION

HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 1-1

LOCATION OF HOLLOMAN AFB, NEW MEXICO

Date: 12-22-99	Project No: 5155.0022
Drawn By: L.GAMBLE	File Name: EHAFBFG02.dwg



1.5 0 1.5 3 Miles

SITES

LF-01	MAIN BASE LANDFILL	OT-44	BLDG 301 - AIRCRAFT MAINTENANCE AREA
LF-10	OLD MAIN BASE LANDFILL	SD-08	REFUSE COLLECTION TRUCK WASHRACK
LF-19	GOLF COURSE LANDFILL	SS-02/SS-05	POL SPILL SITES NOS 1 AND 2
LF-21	WEST AREA LANDFILL NO 2	SS-17	BX SERVICE STATION
LF-22	WEST AREA LANDFILL NO 1	SS-39	MISSILE FUEL SPILL AREA
LF-23	MOBSS LANDFILL	SS-46	JP-4 SPILL SITE
LF-29	FORMER ARMY LANDFILL	SS-48	MILITARY GAS STATION
DP-30/SD-33	GREASE TRAP DISPOSAL PITS	SS-56	WEST RAMP FUEL SPILL
OT-16	FORMER ENTOMOLOGY SHOP AREA		

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 1-2
SITE LOCATION MAP

FOSTER WHEELER ENVIRONMENTAL CORPORATION

2.0 SAMPLING PROCEDURES

Approved LTM Program sampling protocol for Holloman AFB was first established for the 1995 baseline sampling event and was implemented for the 1997 sampling event. The 1999 LTM Program uses sampling methods and procedures that are similar to those procedures followed during the 1995 and 1997 sampling events. These procedures are documented in the *Final Chemical Data Acquisition Plan* (CDAP)–*Long-Term Groundwater Monitoring Program* (Foster Wheeler 1999a). Table 2-1 summarizes the 1999 LTM field sampling program including the monitoring wells sampled and analytical protocol for each site.

Groundwater monitoring and sampling activities for the 1999 LTM Program were conducted in September 1999. Additional water level measurements were collected in December 1999 to determine groundwater flow and direction at each site. In completing the 1999 LTM Program, Foster Wheeler performed groundwater sampling according to established protocol and standard operating procedures (SOPs) specified in Section 2.0 and Appendix A of the CDAP (Foster Wheeler 1999a). Any deviations and variations from the specified procedures are discussed in the following sections.

2.1 VARIATIONS FROM THE WORKPLAN

For the most part, the procedures and protocol presented in the CDAP (Foster Wheeler 1999a) were followed; however, deviations did occur based on the issues presented below:

- Obstructions in monitoring wells due to root growth or objects within the casing
- Inconsistencies in monitoring well locations observed in the field and the existing site maps
- Water level measurements taken in September 1999 and December 1999

All monitoring wells were sampled for the analytical protocol presented in Section 2.0 and the SOPs presented in Appendix A of the CDAP.

Obstructions in monitoring wells were primarily caused by root growth through well screens in areas where shallow groundwater exists. The monitoring wells at the following sites contained roots that were extracted prior to pre-sample purging: LF-19, LF-21, LF-22, LF-23, and SS-39. Prior to sampling, the roots were removed from wells by driving a piece of sharpened stainless

steel pipe to cut through the roots within the well casing. Obstructions were also encountered during pre-sample purging. These obstructions were present at depths of approximately 10 feet below the top of casing (TOC) and were due to metal screws projecting inward from the well casing. The presence of these screws initially prohibited the use of a bailer during purging, but they were subsequently broken from the inside of the casing using a piece of stainless steel pipe and removed. Additional documentation of these field conditions is provided in Appendix C of this report.

During pre-sample purging, inconsistencies were found in the location of some wells at SD-08 when compared to existing maps from previous reports. Monitoring well MW-08-05 was shown in the CDAP approximately 100 ft from the eastern fence surrounding the former washrack. This well is actually located directly adjacent to the eastern fence as shown in Section 3.3 of this report. The location of monitoring well MW-08-03 presented outside and northeast of the fenced area at the former washrack in the CDAP, was also incorrect. This monitoring well is located within the fenced area at the northernmost corner and is labeled as HSTE-10-MW-7 (presented as S10-MW7), a well originally installed upgradient of LF-10 to the south of SD-08. Based on the documentation presented in the Decision Document for SD-08 (EBASCO 1995), monitoring wells MW-08-03 and HSTE-10-MW-7 are the same well. Well MW-08-03/S10-MW7 was sampled in accordance with the CDAP (Foster Wheeler 1999a).

Water level measurements from additional wells were taken at the time of pre-sample purging during September 1999 and December 1999. These measurements provided more control points on which to base the potentiometric surface contours. Potentiometric surface maps for each site, with the exception of SS-56 and SS-46, are presented for the December 1999 data in Section 3.0. Security escorts were required to access SS-56 and SS-46 and Base security personnel could not be reached during either time period. In general, water level measurements did not vary between the September and December 1999 gauging events. Appendix C presents the field sampling information for September 1999 and the well gauging information for water level measurements taken during September and December 1999.

2.2 DATA EVALUATION

Analytical results from the 1999 LTM Program were reviewed and compared with the results of the previous LTM sampling events in order to determine whether further action or additional investigation at any site is warranted. Because analytical data have only been collected biannually and some historical data date back to 1989, the initial round of sampling conducted during 1995 was used to establish baseline conditions at each site. For sites added to the LTM Program after 1995, the initial round of sampling was considered representative of baseline conditions. Although one sampling round does not provide a reliable baseline concentration, it does provide a point of comparison for subsequent sampling rounds to determine if groundwater quality is improving or degrading.

Figure 2-1 presents the data evaluation process utilized in the preparation of the 1999 LTM report. Once the 1999 data were verified for quality assurance and quality control parameters, the analytical results were evaluated for representativeness to actual site conditions. Detections occurring at levels above analyte-specific reporting limits were then tabulated and mapped, and then evaluated for water quality trends which might indicate whether contamination could be attributed to the site or influences outside of the site boundary.

Next, analytical results from the 1999 LTM Program were compared to appropriate baseline conditions, 1997 sampling event results, and New Mexico Groundwater Quality Standards. The comparison for each site are discussed in Section 3.0. Applicable New Mexico Groundwater Quality Standards are included in Table 2-2. If significant changes in water quality are indicated by increases in concentrations or the constituents detected are not consistent with site history, the collection of confirmation samples will be considered for the affected monitoring wells. For this evaluation, a significant change is indicated by an increase in concentration of an order of magnitude or greater, relative to baseline concentrations. If confirmation sampling is warranted at a site, samples will only be analyzed for those parameters indicating a significant increase for a chemical of concern or are not consistent with site history. Monitoring wells not included in the LTM Program but with water quality potentially impacted by a chemical of concern will be considered for inclusion in the confirmation sampling.

The results of the data evaluation process will provide a basis for the recommendations for future monitoring under the 2001 LTM program as presented in Section 4.0 of this report.

2.3 PROJECT REPORTING

This 1999 LTM Report summarizes significant contaminants and provides a comparison of results with the first-round baseline conditions at each site. Potentiometric surface maps were prepared for each site (except for SS-56 and SS-46) based on the water level measurements taken during December 1999 and are included in Section 3.0. When possible, information was provided in tabular format similar to the 1997 LTM report to provide easy comparison between sampling rounds.

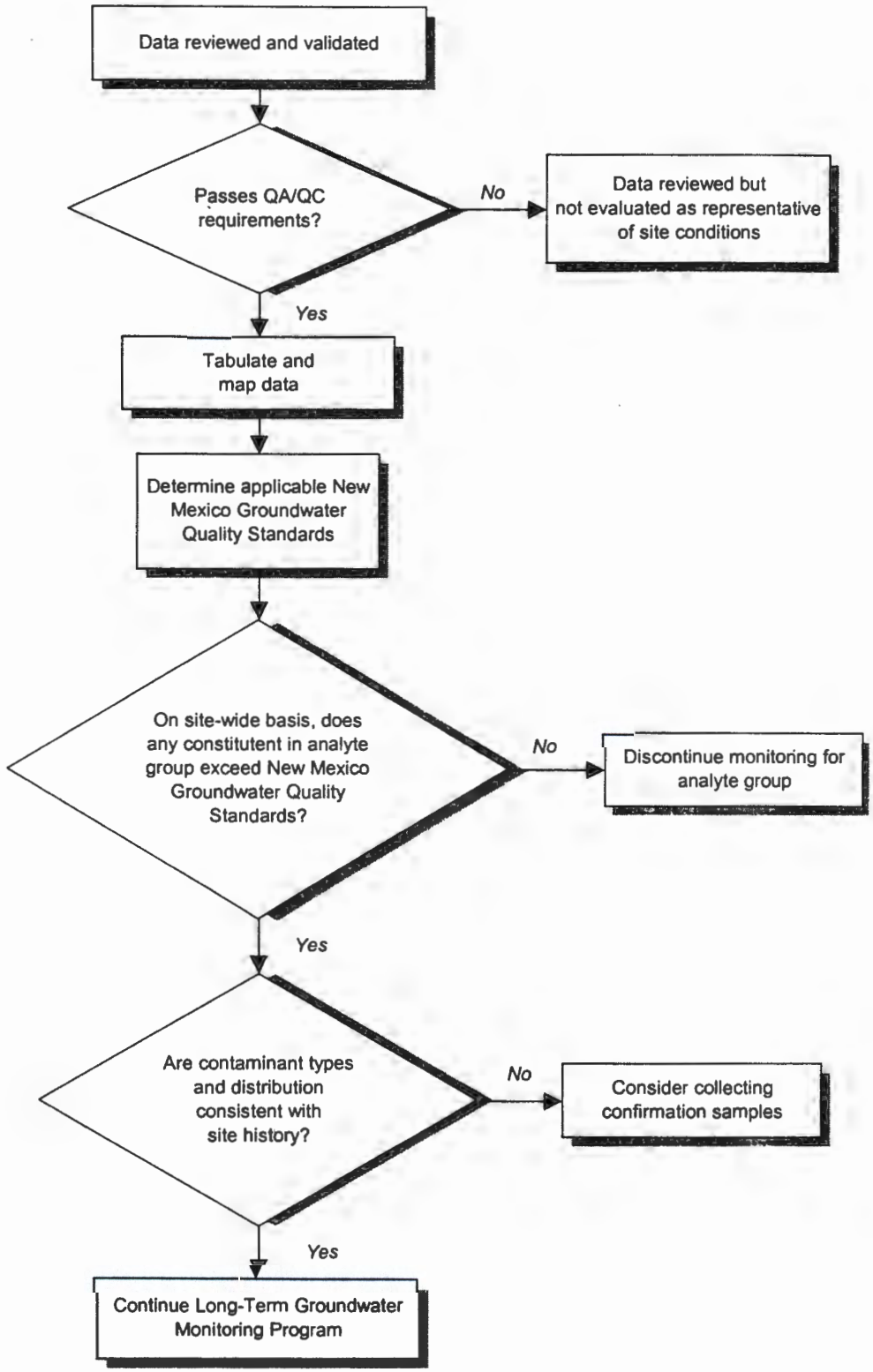


Figure 2-1

LTM Data Evaluation Process

Table 2-1. Summary of the 1999 LTM Field Sampling Program

Site	Well	Sample Number	QA Sample	Analytical Methods [1]: VOCs *SW-846 Method 8260B*	SVOCs *SW-846 Method 8270C*	OCPs *SW-846 Method 8081A*	OCPs/PCBs *SW-846 Method 8081A/8082*	Herbicides *SW-846 Method 8151A*	Dissolved RCRA Metals, Iron, Manganese, and Total Mercury *SW-846 Method 6010B Trace, 7470A*	Dissolved Lead *SW-846 Method 6010B Trace*
LF-01	S1-MW1	LF01MW101		■					■	
	S1-MW2	LF01MW201		■					■	
	S1-MW2	LF01MW202	FD	■					■	
	S1-MW2	LF01MW203	USACE	■					■	
	S1-MW5	LF01MW501		■					■	
	1W2	LF01IW201		■					■	
LF-10	S10-MW2	LF10MW201		■					■	
	S10-MW3	LF10MW301		■					■	
	S10-MW4	LF10MW401		■					■	
	S10-MW6	LF10MW601		■					■	
SD-08	MW-08-01	SD08MW0101		■		■			■	
	MW-08-03	SD08MW0301		■		■			■	
	MW-08-03	SD08MW0302	FD	■		■			■	
	MW-08-03	SD08MW0303	USACE	■		■			■	
	MW-08-04	SD08MW0401		■		■			■	
	MW-08-05	SD08MW0501		■		■			■	
LF-19	MW-19-01	LF19MW0101		■					■	
	MW-19-02	LF19MW0201		■					■	
	MW-19-03	LF19MW0301		■					■	
LF-21	MW-21-01	LF21MW0101		■					■	
	MW-21-02	LF21MW0201		■					■	
	MW-21-03	LF21MW0301		■					■	
	MW-21-04	LF21MW0401		■					■	
LF-22	MW-22-01	LF22MW0101		■			■	■	■	
	MW-22-02	LF22MW0201		■			■	■	■	
	MW-22-03	LF22MW0301		■			■	■	■	
	MW-22-04	LF22MW0401		■			■	■	■	
LF-23	MW-23-01	LF23MW0101		■			■	■	■	
	MW-23-02	LF23MW0201		■			■	■	■	
	MW-23-03	LF23MW0301		■			■	■	■	
	MW-23-04	LF23MW0401		■			■	■	■	

Table 2-1. Summary of the 1999 LTM Field Sampling Program

Site	Well	Sample Number	QA Sample	Analytical Methods [1]: VOCs *SW-846 Method 8260B*	SVOCs *SW-846 Method 8270C*	OCPs *SW-846 Method 8081A*	OCPs/PCBs *SW-846 Method 8081A/8082*	Herbicides *SW-846 Method 8151A*	Dissolved RCRA Metals, Iron, Manganese, and Total Mercury *SW-846 Method 6010B Trace, 7470A*	Dissolved Lead *SW-846 Method 6010B Trace*
OT-44	S50-MW1	OT44MW101		■						
	S50-MW2	OT44MW201		■						
	S50-MW3	OT44MW301		■						
	S50-MW6	OT44MW601		■						
	S50-MW6	OT44MW602	FD	■						
	S50-MW6	OT44MW603	USACE	■						
SS-48	S55-MW2	SS48MW201		■						■
	S55-MW4	SS48MW401		■						■
	S55-MW5	SS48MW501		■						■
	S55-MW5	SS48MW502	FD	■						■
	S55-MW5	SS48MW503	USACE	■						■
	S55-MW7	SS48MW701		■						■
DP-30/SD-33	MW-30/33-01	DP30MW0101		■					■	
	MW-30/33-01	DP30MW0102	FD	■					■	
	MW-30/33-01	DP30MW0103	USACE	■					■	
	MW-30/33-02	DP30MW0201		■					■	
	MW-30/33-03	DP30MW0301		■					■	
	MW-30/33-04	DP30MW0401		■					■	
SS-56	MW-56-01	SS56MW0101		■						■
	WCC-3	SS56WCC301		■						■
	WCC-5	SS56WCC501		■						■
SS-02/SS-05	MW-02 & 05-03	SS02MW0301		■						
	MW-02 & 05-05	SS02MW0501		■						
	MW-02 & 05-06	SS02MW0601		■						
	MW-02 & 05-08	SS02MW0801		■						
SS-46	MW-46-01	SS46MW0101		■						■
	MW-46-02	SS46MW0201		■						■
	MW-46-03	SS46MW0301		■						■
OT-16	118-MW1601	OT16MW0101		■		■				
	118-MW1602	OT16MW0201		■		■				
	118-MW1603	OT16MW0301		■		■				
	118-MW1604	OT46MW0401		■		■				

Table 2-1. Summary of the 1999 LTM Field Sampling Program

Site	Well	Sample Number	QA Sample	Analytical Methods [1]: VOCs *SW-846 Method 8260B*	SVOCs *SW-846 Method 8270C*	OCPs *SW-846 Method 8081A*	OCPs/PCBs *SW-846 Method 8081A/8082*	Herbicides *SW-846 Method 8151A*	Dissolved RCRA Metals, Iron, Manganese, and Total Mercury *SW-846 Method 6010B Trace, 7470A*	Dissolved Lead *SW-846 Method 6010B Trace*
SS-17	W-4	SS17W401		■						
	TH-22	SS17TH2201		■						
	MW-BX-01	SS17BX0101		■						
	MW-BX-02	SS17BX0201		■						
SS-39	MW-39-01	SS39MW0101		■						
	MW-39-01	SS39MW0102	FD	■						
	MW-39-01	SS39MW0103	USACE	■						
	MW-39-02	SS39MW0201		■						
	MW-39-03	SS39MW0301		■						
	MW-39-04	SS39MW0401		■						
LF-29	MW-29-01	LF29MW0101		■	■					
	MW-29-06	LF29MW0601		■	■					
	MW-29-07	LF29MW0701		■	■					
	MW-29-07	LF29MW0702	FD	■	■					
	MW-29-07	LF29MW0703	USACE	■	■					
	MW-29-08	LF29MW0801		■	■					

Notes:

[1] EPA 1986

FD - Field duplicate sample
LTM - long-term groundwater monitoring
OCP - organochlorine pesticide
QA - quality assurance
RCRA - Resource Conservation and Recovery Act
SVOC - semivolatile organic compound
USACE - USACE split sample
VOC - volatile organic compound

Table 2-2. Applicable New Mexico Groundwater Quality Standards[1]

Analyte	Groundwater Standard (µg/L)
VOCs	
Acetone	--
Benzene	10
Bromodichloromethane	--
2-Butanone	--
Carbon disulfide	--
Carbon tetrachloride	10
Chlorobenzene	--
Chloroform	100
1,1-Dichloroethane	25
1,2-Dichloroethane	10
1,1-Dichloroethylene	5
cis-1,2-Dichloroethylene	--
1,2-Dichloropropane	--
Ethylbenzene	750
Methylene chloride	100
Styrene	--
Tetrachloroethylene	20
Toluene	750
1,1,1-Trichloroethane	60
TCE	100
m,p-Xylenes[2]	620
o-Xylene[2]	620
SVOCs	
Butylbenzylphthalate[3]	30
bis(2-Ethylhexyl)phthalate[3]	30
Phenol	5
Metals	
Arsenic	100
Barium	1000
Cadmium	10
Chromium	50
Iron	1000
Manganese	200
Total Mercury	2
Selenium	50
Silver	50
Organochlorine Pesticides	
gamma-BHC (Lindane)	--
gamma-Chlordane	--
Herbicides	
2,4-D	--
MCPP	--
4-Nitrophenol[4]	5
Picloram	--

Notes:

[1] New Mexico Final Regulations: Standards for Groundwater of 10,000 milligrams per Liter Total Dissolved Solids Concentrations or Less (NMED 1995)

[2] Value based on total xylenes

[3] Value based on polynuclear aromatic hydrocarbons

[4] Value based on phenols

-- denotes no applicable New Mexico Groundwater Standard
SVOC - semivolatile organic compounds
TCE - trichloroethylene
VOC - volatile organic compounds
µg/L - micrograms per liter

3.0 SITE-SPECIFIC LONG-TERM MONITORING RESULTS

The following subsections present the results of the 1999 LTM Program at Holloman AFB including site-specific background information and recommendations for each site. Section 2.2 describes the data evaluation procedures and Table 3-1 summarizes the background information for the LTM Program sites.

The 1999 LTM analytical data were reported using data qualifiers to identify values reported above the instrument detection limit (IDL) and below the contract-required detection limit (CRDL). J- and B-qualifiers were used for organic and inorganic data, respectively, to signify a detected value above the IDL and below the CRDL. The J- and B-qualified data are included in the site-specific analytical results summary tables provided in this section. Only those values reported above the CRDL are presented on the Section 3 maps and discussed in the text.

Table 3-1. Summary of Sites Included in the 1999 LTM Program

Site	SWMU	Location	Site History	Historical Results	Investigation Conclusions and Recommendations
LF-01	106	Main Base Landfill	Operated as a trench and fill disposal facility in 1958. The extent of the site is approximately 210 acres. Landfill accepted solid waste and nonhazardous materials from industrial shops on Holloman AFB. Small quantities of waste oils, solvents, and pesticides were reportedly disposed in the landfill.	VOCs have been detected in groundwater. Metals in groundwater exceeded NMWQCC standards.	No risk to public health and environment. NMED recommended long-term monitoring.
LF-10	101, 109	Old Main Base Landfill	Used from 1942 through 1958. Received domestic solid waste and ash from the Holloman AFB incinerator, and possibly drums that contained waste oils and solvents.	TPH was detected in groundwater. Metals exceeded NMWQCC standards.	No risk to public health and environment. No further action is warranted at site. NMED recommended long-term monitoring.
SD-08	4, 82	Refuse Collection Truck Washrack	Washrack was used to clean refuse collection trucks. The wash water flowed into an oil-water separator and discharged into the Base sanitary sewer. Pesticides were routinely applied to the trucks for insect control. The settling basin and separator occasionally became clogged and overflowed into the northwest corner of the washrack.	Metals, VOCs, and pesticides were detected in groundwater.	FS recommended an asphalt cap; installed in 1997. Long-term monitoring for metals and pesticides is required as part of the site closure.
LF-19	105	Golf Course Landfill	Site is located within an arroyo and was primarily used for the disposal of grass clippings from the golf course, but it is possible that unused rodenticide was placed in the landfill.	Metals and fluoride exceeded RCRA Part S Corrective Action Levels for groundwater.	No risk to public health and environment. Long-term monitoring was recommended for this site.
LF-21	116	West Area Landfill No. 2	Active during the 1970s when domestic trash, paper boxes, and tree trimmings were accepted at the landfill. Drum disposal may have taken place.	Groundwater action levels for arsenic, cadmium, benzene, and fluoride exceeded.	No risk to public health and environment. Long-term monitoring of VOCs, pesticides, herbicides, and metals recommended for this site.
LF-22	115	West Area Landfill No. 1	Active 1974 through 1978 when empty cans, cardboard, and plastic sheeting were accepted at the landfill. Drum disposal may have taken place.	Pesticides and metals detected in groundwater. Cadmium exceeded groundwater action level.	No risk to public health and environment. Long-term monitoring of VOCs, pesticides, herbicides, and metals recommended for this site.
LF-23	108	MOBSS Landfill	Borrow pit located west of the Solar Observatory that received cans of pesticides, 55-gallon drums of unknown contents, and demolition debris. Additional field surveys identified trailers, empty 55-gallon drums, and containers of roofing tar and asphalt visible on the landfill surface.	One pesticide was detected in two downgradient wells.	No risk to public health and environment. Long-term monitoring of VOCs, pesticides, herbicides, and metals recommended for this site.
OT-44	AOC-P	Building 301 Aircraft Maintenance Hangar	Located south of Building 301, which was used for equipment maintenance. Petroleum hydrocarbons were observed floating on the water table during sewer line repair. The source of the petroleum is either from jet fuel spills or a leaking UST south of Building 301 that contained heating oil.	Contaminants at the site include SVOCs, BTEX, and VOCs.	No risk to public health and environment. Long-term monitoring recommended for this site. No further action is warranted at the site.
SS-48	None	Military Gas Station	A military gas station that has been in operation for over 30 years (formerly referenced as Site 55). Releases from USTs have occurred at this site in the past. USTs that contained gasoline and diesel fuel were removed from this site in 1994.	VOCs and SVOCs were detected in groundwater at this site.	No risk to public health and environment. Long-term monitoring recommended for this site.
DP-30/SD-33	113B	Grease Trap Disposal Pits	Disposal pits received waste from oil/water separators and grit chambers on Holloman AFB. Occasionally, sludge from vacuum trucks that were used to unclog sewer lines at the Primate Research Laboratory were dumped in the pits.	Groundwater samples contained metals, VOCs, gross alpha, gross beta, and pesticides.	No risk to public health and environment. Long-term monitoring recommended for this site.
SS-56	None	West Ramp Fuel Spill	A concrete pad approximately 2,100 ft by 600 ft that was used for parking and maintenance of airplanes. Suspected fuel contamination associated with past maintenance and spills investigated in 1991. Groundwater encountered at 1.5 to 5 ft below ground surface.	Chromium, mercury, and BTEX were detected in groundwater samples. BTEX was detected at, or below quantification limits. Metals did not exceed action levels.	Long-term monitoring recommended for this site.
SS-02/SS-05	AOC-T	POL Spill Sites Nos. 1 and 2	Two POL sites located in the eastern portion of Holloman AFB that are being remediated together. JP-4 and aviation fuel spills occurred at the two sites.	TPH and benzene were detected in groundwater.	Long-term monitoring is recommended for these sites. Primary risk driver for these sites is their proximity to adjacent arroyo.

Table 3-1. Summary of Sites Included in the 1999 LTM Program

Site	SWMU	Location	Site History	Historical Results	Investigation Conclusions and Recommendations
SS-46	130	JP-4 Spill Site	Underground fuel tank (25,000 gallons) installed in 1978 without containment located on the southeast side of Taxiway 4. Tank taken out of service in 1989 and removed in 1995.	TPH, benzene, chlorobenzene, and toluene detected in groundwater samples.	No risk to public health and environment. No further action recommended for site. NMED recommended long-term monitoring at the site.
OT-16	118, 132, AOC-A	Former Entomology Shop Area	Located at Building 21 in-the southeastern portion of Holloman AFB. Rinse water from pesticide-mixing operations was discharged to leach field located behind Building 21 and a pit on the southwest side of Building 21. Diesel fuel used to stabilize pesticides may also have been discharged. Pesticide holding tank located on the site, although no spills or releases have been reported.	VOCs and pesticides were detected in groundwater.	No risk to public health and environment. Long-term monitoring recommended for this site.
SS-17	None	BX Service Station	Located on First Street in the main portion of Holloman AFB and approximately 2,500 ft from the main gate. The site contains several buildings including a service station, convenience store, car wash, and residences. Up to 4 ft of free-phase product was observed on the water table and contamination extends under adjacent property. Site remediation is ongoing and monitoring also occurs under the Holloman AFB LTO program.	Fuel-related VOCs were detected in groundwater.	NMED requires long-term monitoring to ensure no further migration of groundwater contamination.
SS-39	165, 177, 179,181	Missile Fuel Spill Area	Approximately 3.5 miles northwest of main base area near Building 1176 and consists of two outfall areas. These outfall areas are located downslope from the oxidizer and propellant spill drain pipes and drainage troughs and sumps near the building. Facilities at site were involved in the fueling, detanking, and maintenance of test sleds. Fuels used at the site included UDMH, aniline, JP-4, IRFNA, IWFNA, liquid oxygen, JPX, dyes, and solid rocket propellants. Solvents used at the site included TCE.	VOCs were detected in groundwater at the site and in downgradient monitoring wells.	No risk to public health and environment. Long-term monitoring recommended for this site.
LF-29	104	Former Army Landfill	Occupying 3 acres in the northern portion of Holloman AFB, site is located 300 ft north of Building 1001 and is surrounded by a 3-ft-high earthen berm. Operated from the 1950s to 1975, spent munitions and missiles were disposed at this site. Materials were also dumped outside of the berm approximately 200 ft south of the bermed area and consist primarily of construction debris.	Groundwater samples contained metals, VOCs, pesticides, and herbicides at concentrations below action levels.	No further action was recommended for the site because there is no risk to public health and environment. NMED recommended long-term monitoring for this site.

Notes:
AFB - Air Force Base
AOC - Area of concern
BTEX - benzene, toluene, ethylbenzene, and xylenes
FS - feasibility study
ft - feet
IRFNA - inhibited red fuming nitric acid
IWFNA - inhibited white fuming nitric acid
LTM - long-term groundwater monitoring
LTO - Long-Term Operations
MOBBS - Mobile Bare Base Squadron
NMED - New Mexico Environment Department
NMWQCC - New Mexico Water Quality Control Commission
POL - petroleum, oil, and lubricants
RCRA - Resource Conservation and Recovery Act
SVOC - semivolatile organic compound
SWMU - Solid Waste Management Unit
TCE - trichloroethylene
TPH - total petroleum hydrocarbons
UDMH - unsymmetrical dimethylhydrazine
UST - underground storage tank
VOC - volatile organic compound

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3.1 LF-01 MAIN BASE LANDFILL (SWMU 106)

3.1.1 Background

The Main Base Landfill (LF-01, Solid Waste Management Unit [SWMU] 106) began operations in 1958 as a trench and fill disposal facility. The site encompasses approximately 210 acres and is located north of the Main Base area and the petroleum, oils, and lubricants (POL) storage area. Figure 3-1 presents a map of the landfill, including monitoring well locations. The landfill accepted solid waste and nonhazardous materials from industrial shops located on the Base. Small quantities of waste oils, solvents, and pesticides have reportedly been disposed of at the landfill (Foothill Environmental Consultants, Inc. [FEC] 1998).

The Main Base Landfill has been investigated in a Phase I and II Remedial Investigation (RI) (Walk, Haydel & Associates 1989a). A total of eight groundwater monitoring wells (MW1, 1W1, MW2, 1W2, 1W3, MW3, MW4, and MW5) have been installed at the landfill. The presence of metals (chromium, iron, and manganese) in excess of New Mexico Water Quality Control Commission Standards, and moderate levels of total organic halogens (TOX) were identified in previous groundwater sampling episodes. However, the moderate levels of TOX identified were attributed to interference due to the naturally high mineral content of groundwater at Holloman AFB (Walk, Haydel & Associates 1990).

Other detected constituents included VOCs in wells MW3 and MW1 and SVOCs in wells 1W1 and 1W3. Toluene was detected in the duplicate sample collected from MW1 but not the original field sample. Since MW1 is located upgradient of the landfill, and toluene was reported only in the duplicate sample, it was concluded that the detection may not be representative of actual site conditions. VOCs were detected in well MW3 (Walk, Haydel & Associates 1989a). Because MW3 is downgradient of the landfill and adjacent to the POL storage yard, the VOCs were attributed to releases at the POL storage yard (SS-02 and SS-05).

Other analyses previously conducted at LF-01 include total recoverable petroleum hydrocarbons (TRPH) using EPA Method 418.1 and pesticides using EPA Method 8270. No TRPH or pesticides have been detected at this site.

A Baseline Risk Assessment (BRA) was prepared for the site by Walk, Haydel & Associates, Inc. (December 1989b). The BRA concluded that the landfill poses no significant risk to public health or the environment and recommended inclusion in the LTM Program.

3.1.2 1999 Long-Term Groundwater Monitoring

During the 1999 LTM Program, water levels were collected in September and December and used to develop a map of the potentiometric surface (Section 3.1.2.1). Groundwater samples were collected from four of the eight monitoring wells (MW1 [upgradient], MW2, MW5, and 1W2 [downgradient]) previously installed at the site. It should be noted that well S1-MW2 was added to the monitoring program in 1997. Well MW3, which was sampled in 1995, was removed from the monitoring program in 1997 based on recommendations included in the Long-Term Groundwater Monitoring Report completed in June 1996 (Foster wheeler/GTI 1996). Groundwater samples from these wells were submitted for analysis of VOCs, total mercury, dissolved RCRA metals, iron, and manganese. Results of these analyses are discussed in Section 3.1.2.2. Various field parameters, including pH, temperature, and specific conductivity, were measured prior to the collection of groundwater samples at each well and are presented in Appendix C. The number and type of groundwater samples collected at LF-01 are summarized in Table 3-2.

Table 3-2. Summary of 1999 LTM Program at LF-01

Well Numbers	Analyses (EPA Methods)	Analytes Detected Above CRDLs	Analytes Exceeding NMED Standards	QA Samples	Number of Samples
S1-MW1 S1-MW2 S1-MW5 1W2	VOCs (8260B) Metals (6010B Trace, 7470A)	Manganese	None	S1-MW2	5

3.1.2.1 Site Hydrogeology

Depth-to-groundwater measurements at LF-01 in December 1999 ranged from 11.16 to 35.66 ft below TOC, corresponding to groundwater elevations ranging from 4071.9 to 4088.2 ft mean sea level (msl) (Appendix C). There was little or no variance in water level measurements between September and December 1999. A map of the potentiometric surface was prepared using the groundwater data from December 1999 (Figure 3-2). The contour map indicates that

groundwater flows to the southwest across a gradient of approximately 0.02 feet per foot (ft/ft). The gradient and groundwater flow direction observed in 1999 at LF-01 are comparable with the results of the 1995 and 1997 LTM events.

3.1.2.2 Groundwater Sampling Results

Table 3-3 summarizes the analytical results for the LTM Program at LF-01. Detections reported from the 1995, 1997, and 1999 LTM Program events are presented. Analytes reported above the CRDL for the 1999 LTM event are shown in Figure 3-3.

VOCs were not detected in any of the samples collected at LF-01 during the 1999 event. These results are similar to those obtained during the 1995 and 1997 LTM Programs (VOCs and OCPs were not detected in any of those samples). These results indicate that groundwater at LF-01 is not being degraded due to continued release of VOCs.

Manganese was the only metal detected at LF-01. It was detected at a concentration consistent with concentrations from previous LTM Programs and less than New Mexico Groundwater Quality Standards.

3.1.3 Recommendations

It is recommended that sampling and analysis only for selenium and manganese continues at LF-01. Selenium and manganese are the only analytes detected at this site in any of the three LTM Programs.

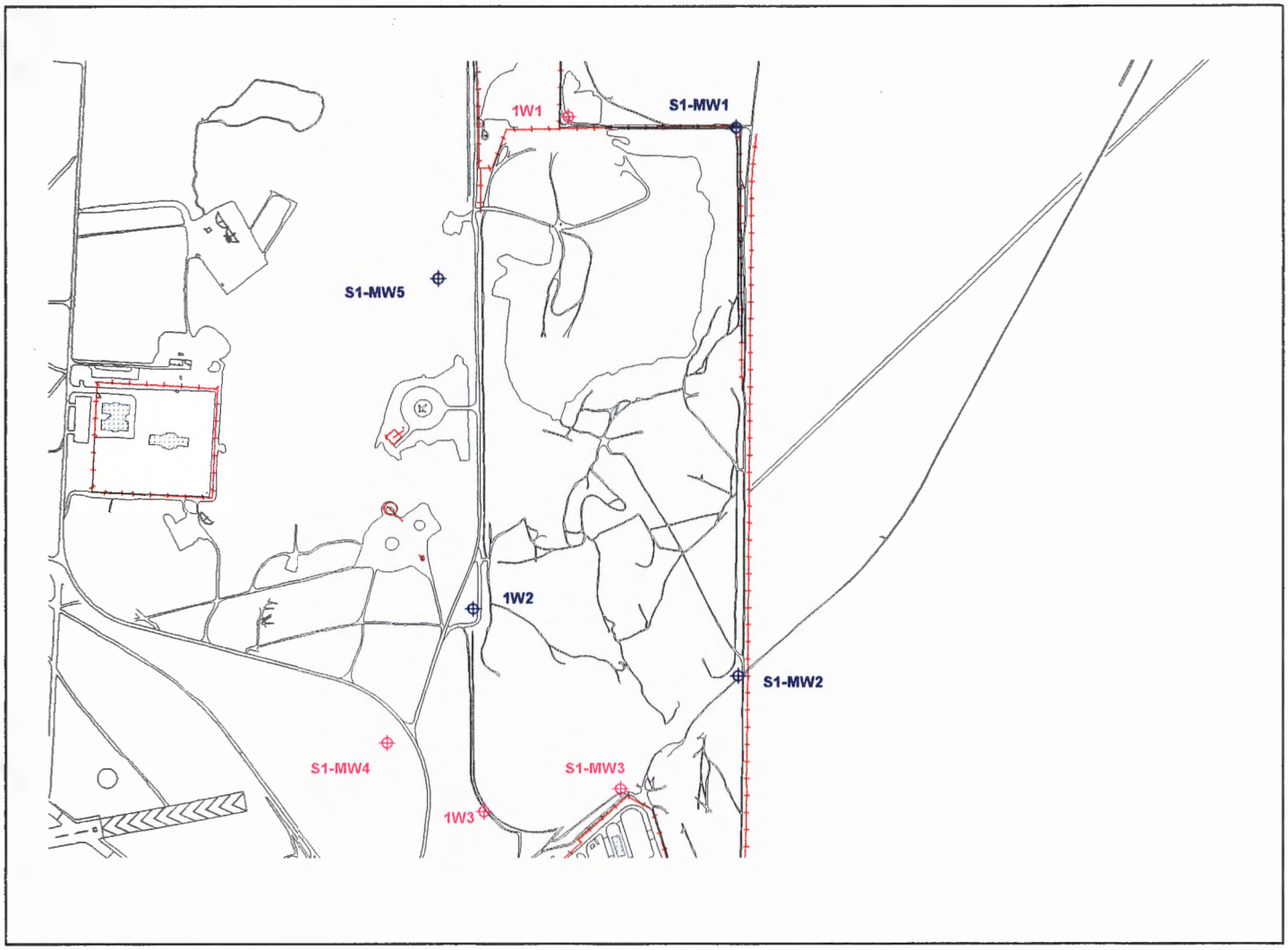
Table 3-3. Summary of Analytical Results from the 1995, 1997, and 1999 Long-Term Monitoring Programs at LF-01

Well Number	S1-MW1[4]			S1-MW2			S1-MW5			1W2		
Sampling Date	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99
VOCs[1] (µg/L)												
all	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND
Metals[2] (µg/L)												
Arsenic	ND	ND	5.6 B (J)	NS	ND	22 B (J)	ND	ND	4.4 B (J)	ND	ND	16.4 B (J)
Barium	ND	ND	8.9 B (J)	NS	ND	10.8 B (J)	ND	ND	11.4 B (J)	ND	ND	12.3 B (J)
Chromium	ND	ND	ND	NS	ND	3.1 B	ND	ND	3.2 B	ND	ND	ND
Lead	ND	ND	ND	NS	ND	ND	44	ND	ND	190	ND	ND
Manganese	ND	76	115	NS	ND	11.9 B	ND	ND	5.7 B	ND	ND	0.2 B
Selenium	ND	ND	8.7 B (J)	NS	14	8.2 B (J)	ND	13	29.4 B (J)	ND	24	19.5 B (J)
Silver	ND	ND	0.6 B (J)	NS	ND	ND	ND	ND	ND	ND	ND	ND
Organochlorine Pesticides[3] (µg/L)												
all	ND	ND	NA	NS	ND	NA	ND	ND	NA	ND	ND	NA

Note:
[1] Unless otherwise reported, no VOCs were detected using EPA Method 8260B.
(EPA Method 8260A was used to analyze for VOCs in the 1995 and 1997 programs.)
[2] Unless otherwise reported, no metals were detected using EPA Methods 6010B Trace & 7470A.
(EPA Methods 6010 & 7000 were used to analyze for metals in the 1995 and 1997 programs.)
[3] Unless otherwise reported, no organochlorine pesticides were detected using EPA Method 8081A.
(EPA Method 8080A was used to analyze for organochlorine pesticides in the 1995 and 1997 programs.)
[4] Upgradient monitoring well
CRDL - Contract Required Detection Limit
IDL - Instrument Detection Limit
NA - not analyzed
ND - not detected at or above method reporting limit
NS - not sampled
VOCs - volatile organic compounds
µg/L - micrograms per liter

Laboratory Qualifiers--assigned as a result of internal laboratory data assessment procedures
B - Value less than CRDL but greater than or equal to IDL

EPA Qualifiers--assigned as a result of independent data validation
(J) - Estimated value



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

1000 0 1000 2000 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

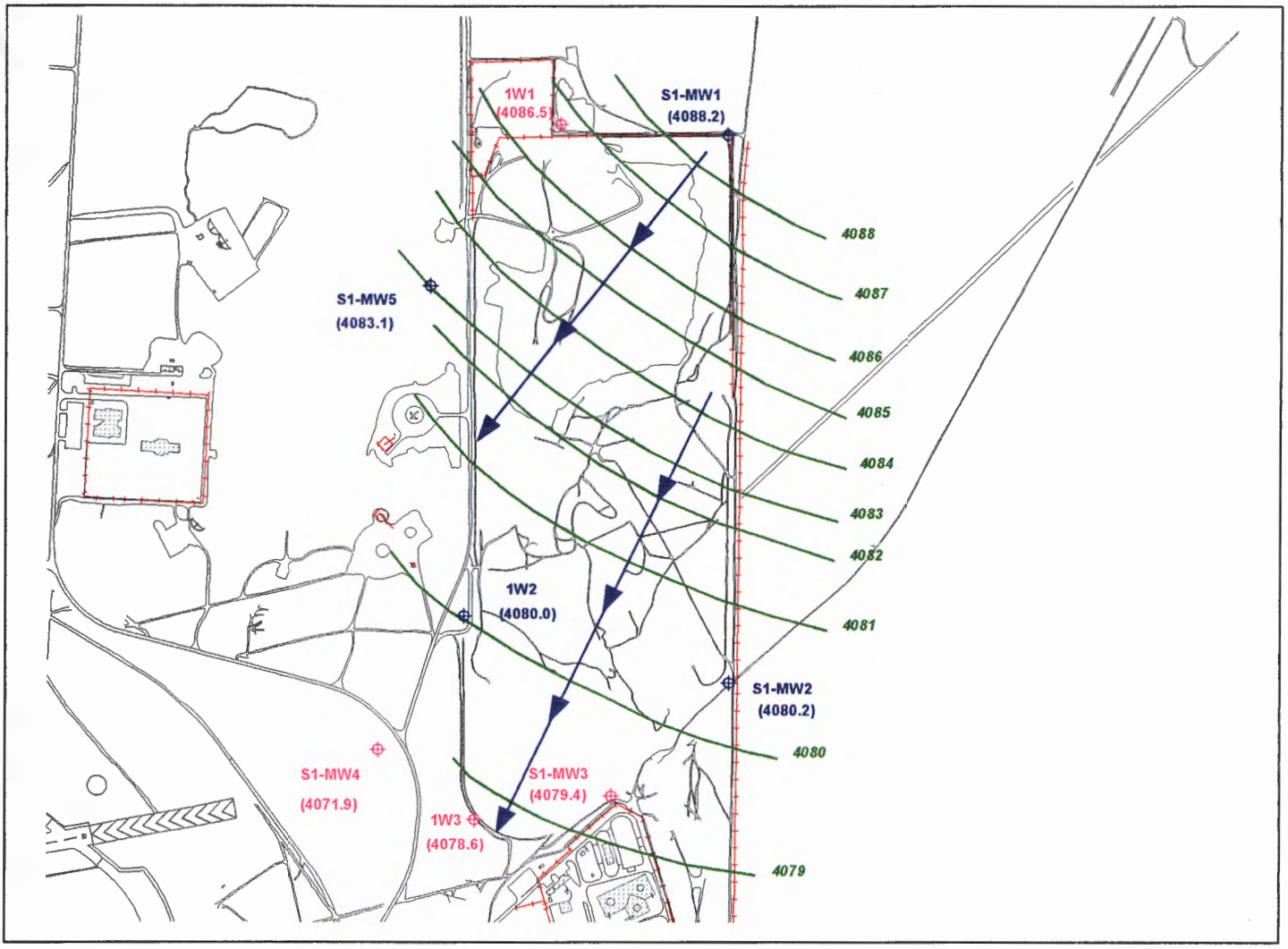
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-1
SITE LOCATION MAP FOR LF-01

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

Groundwater elevations are expressed in feet above mean sea level (msl).

GROUNDWATER FLOW DIRECTION

1000 0 1000 2000 Feet

LEGEND

MONITORING WELL

4081 GROUNDWATER ELEVATION CONTOUR

(4080.2) GROUNDWATER ELEVATION (msl)

ROAD

BUILDING

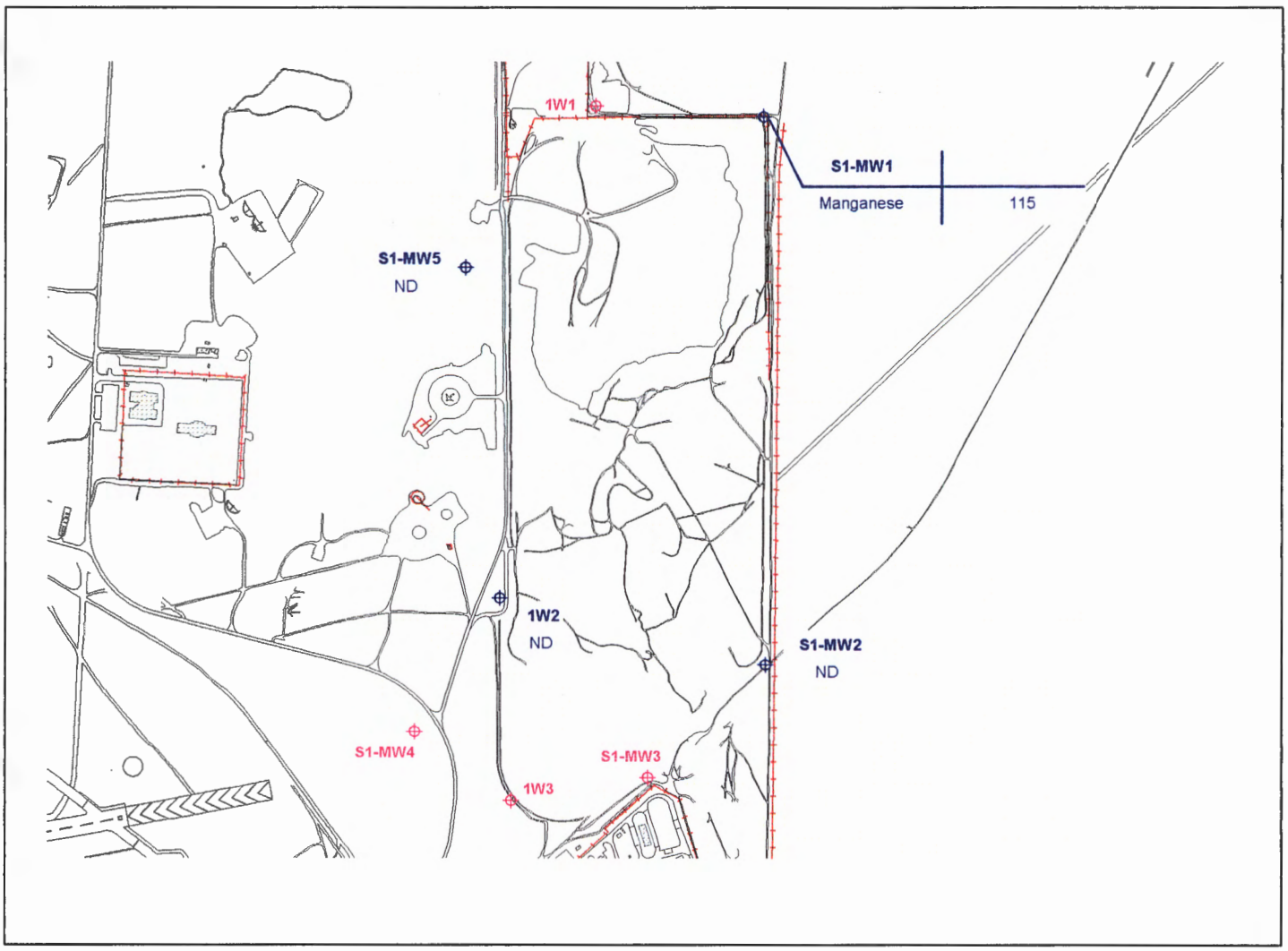
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-2
POTENTIOMETRIC SURFACE MAP FOR LF-01

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

All concentrations are expressed in micrograms per liter.

ND - no analytes were detected above the method reporting limit

1000 0 1000 2000 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-3
GROUNDWATER ANALYTICAL RESULTS FOR LF-01

FOSTER WHEELER ENVIRONMENTAL CORPORATION

3.2 LF-10 OLD MAIN BASE LANDFILL (SWMUs 101 and 109)

3.2.1 Background

The Old Main Base Landfill (LF-10, SWMUs 101 and 109) is approximately 20 acres in size and located east of the Civil Engineering complex. Figure 3-4 presents a map of the landfill including monitoring well locations. The site was used from 1942 to 1958 and received domestic solid waste from the Base and possibly drums containing waste oils and solvents. The landfill also accepted ash from the Base incinerator. The site was identified in 1982 during geotechnical soil boring installation for a concrete pad (FEC 1998).

Seven groundwater monitoring wells were installed at the site during the Phase I and II RI (MW1[L] and MW2 through MW7) (Walk, Haydel & Associates 1989a). SVOCs and pesticides were detected in wells MW2 and MW7. TRPH has been detected in wells MW3 and MW4. In addition, several metals (beryllium, cadmium, chromium, iron, manganese, mercury, nickel, and selenium) were detected.

A BRA was prepared for the site by Walk, Haydel & Associates (1989b). The BRA concluded that the landfill posed no significant risk to public health or the environment and no further action was warranted. The NMED recommended inclusion in the LTM Program as a condition of the Decision Document.

3.2.2 1999 Long-Term Groundwater Monitoring

During the 1999 LTM Program, water levels were collected in September and December. This information was used to develop a map of the potentiometric surface and is discussed in Section 3.2.2.1. Groundwater samples were collected from four of the seven monitoring wells previously installed at LF-10 (S10-MW2 [upgradient], S10-MW3, S10-MW4, and S10-MW6 [downgradient]) and submitted for analysis of VOCs, total mercury, dissolved RCRA metals, iron, and manganese. Results of these analyses are discussed in Section 3.2.2.2. Analysis for OCPs was completed in 1995 and 1997 but was discontinued for the 1999 LTM Program because no pesticides were detected.

Various field parameters, including pH, temperature, and specific conductivity were measured prior to the collection of groundwater samples at each well and are presented in Appendix C. The number and type of groundwater samples collected at LF-10 are summarized in Table 3-4.

Table 3-4. Summary of 1999 LTM Program at LF-10

Well Numbers	Analyses (EPA Methods)	Analytes Detected Above CRDLs	Analytes Exceeding NMED Standards	QA Samples	Number of Samples
S10-MW2 S10-MW3 S10-MW4 S10-MW6	VOCs (8260B) Metals (6010B Trace, 7470A)	Chromium, Manganese	None	None	4

3.2.2.1 Site Hydrogeology

Depth-to-groundwater measurements at LF-10 in December 1999 ranged from 6.62 to 13.32 ft below TOC, corresponding to groundwater elevations ranging from 4071.9 to 4075.7 ft msl (Appendix C). There was little or no variance in water level measurements between September and December 1999. A map of the potentiometric surface was prepared using the groundwater data from December 1999 (Figure 3-5). The contour map indicates that groundwater flows to the southeast across a gradient of approximately 0.004 ft/ft. The gradient and groundwater flow direction at LF-10 are comparable to the results of the 1995 and 1997 LTM events.

3.2.2.2 Groundwater Sampling Results

Table 3-5 summarizes the analytical results for the LTM Program at LF-10. Detections reported from the 1995, 1997, and 1999 LTM Program events are presented. Analytes reported above the CRDL for the 1999 LTM event are included in Figure 3-6.

No VOCs or OCPs were detected at concentrations above the CRDL.

Chromium and manganese were detected at concentrations consistent with concentrations from previous LTM Programs. Neither of the metals detections exceeded New Mexico Groundwater Quality Standards.

3.2.3 Recommendations

It is recommended that sampling and analysis only for chromium, lead, and manganese be continued at LF-10. These metals, plus arsenic, are the only analytes detected above the CRDL in all three LTM Programs. Although arsenic was reported in the 1995 event, its concentrations were probably below the CRDL but were not flagged.

Table 3-5. Summary of Analytical Results from the 1995, 1997, and 1999 Long-Term Monitoring Programs at LF-10

Well Number	S10-MW2[4]			S10-MW3			S10-MW4			S10-MW6		
Sampling Date	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99
VOCs[1] (µg/L)												
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	1 J	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1 J
Methylene chloride	6.6 UB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals[2] (µg/L)												
Arsenic	ND	ND	15.5 B (J)	10	ND	18.5 B (J)	13	17 J	14.9 B (J)	10	17 J	20.6 B (J)
Barium	ND	ND	11.4 B (J)	ND	ND	13.5 B (J)	ND	20	30.9 B (J)	ND	ND	12.2 B (J)
Cadmium	ND	ND	0.5 B	ND	ND	0.5 B	ND	ND	1.2 B	ND	ND	ND
Chromium	ND	ND	10.6 (J)	ND	ND	ND	ND	ND	1.2 B (J)	ND	ND	ND
Lead	ND	ND	ND	98	ND	ND	150	ND	ND	42	ND	ND
Manganese	ND	ND	2.2 B (J)	ND	ND	3.3 B (J)	ND	80	114 (J)	ND	110	50.5 (J)
Selenium	ND	ND	14.6 B (J)	ND	ND	14.2 B (J)	ND	ND	12.7 B (J)	ND	ND	10.6 B (J)
Silver	ND	ND	ND	ND	ND	6.2 B (J)	ND	ND	1.4 B (J)	ND	ND	ND
Organochlorine Pesticides[3] (µg/L)												
all	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA

Notes:

[1] Unless otherwise reported, no VOCs were detected using EPA Method 8260B.
(EPA Method 8260A was used to analyze for VOCs in the 1995 and 1997 programs.)

[2] Unless otherwise reported, no metals were detected using EPA Methods 6010B Trace & 7470A.
(EPA Methods 6010 & 7000 were used to analyze for metals in the 1995 and 1997 programs.)

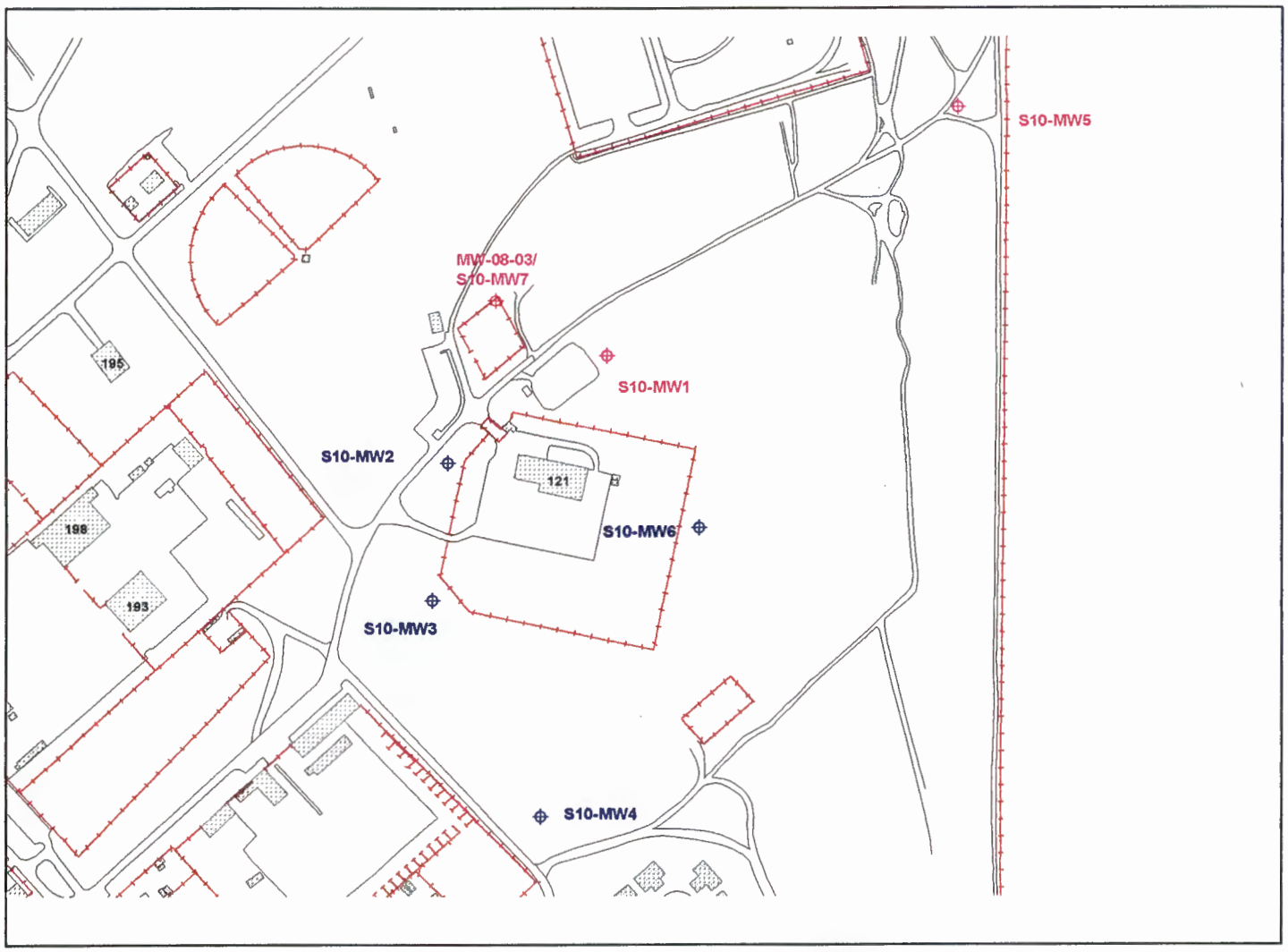
[3] Unless otherwise reported, no organochlorine pesticides were detected using EPA Method 8081A.
(EPA Method 8080A was used to analyze for organochlorine pesticides in the 1995 and 1997 programs.)

[4] Upgradient monitoring well

CRDL - Contract Required Detection Limit
IDL - Instrument Detection Limit
NA - not analyzed
ND - not detected at or above method reporting limit
VOCs - volatile organic compounds
µg/L - micrograms per liter

Laboratory Qualifiers--assigned as a result of internal laboratory data assessment procedures
B - Value less than CRDL but greater than or equal to IDL
J - Estimated value; less than CRDL but greater than or equal to IDL
UB - Qualifies as non-detect due to presence of analyte in associated laboratory blank

EPA Qualifiers--assigned as a result of independent data validation
(J) - Estimated value



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

500 0 500 1000 Feet

LEGEND

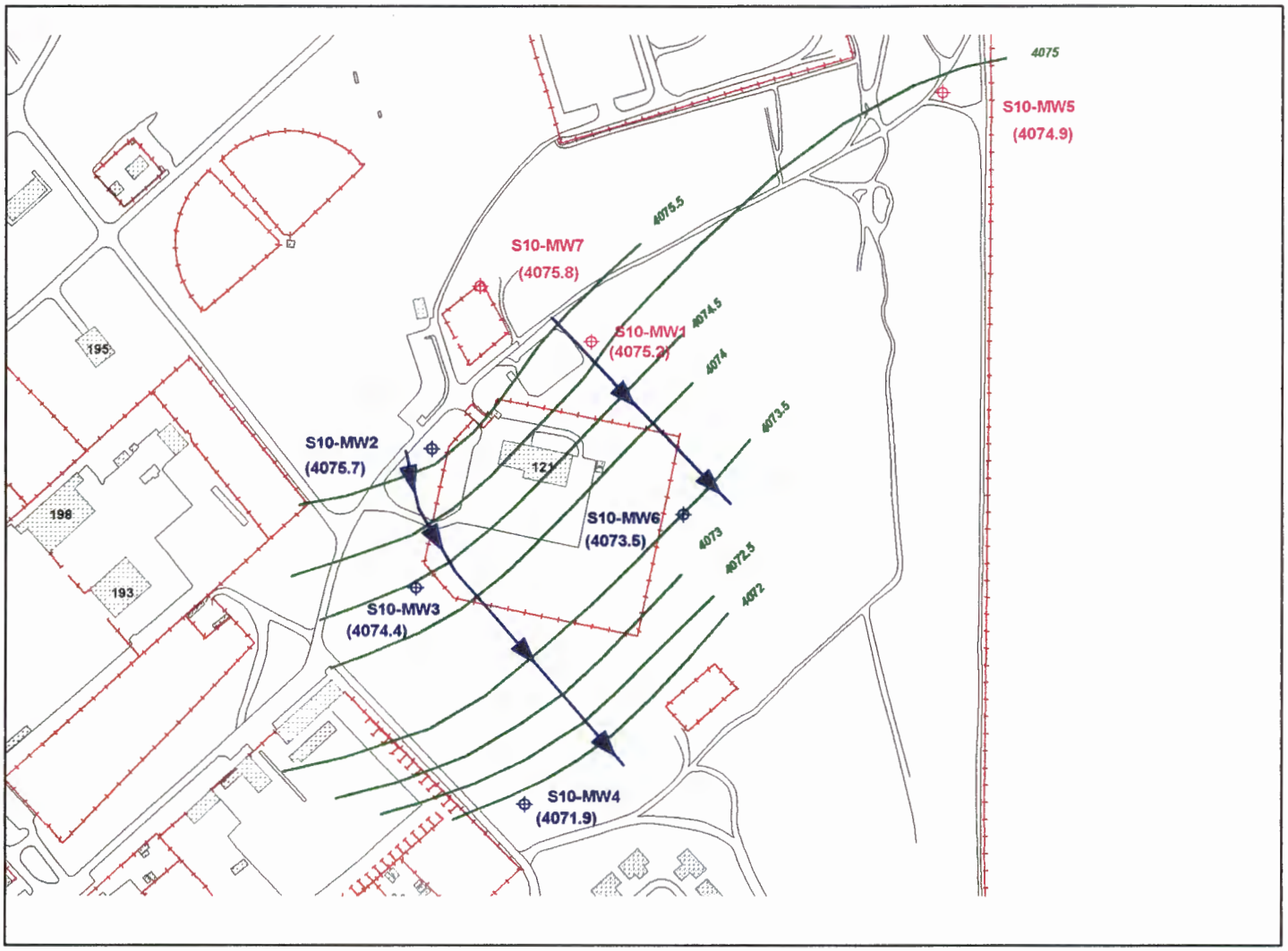
- MONITORING WELL
- ROAD
- BUILDING
- FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-4
SITE LOCATION MAP FOR LF-10

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

Groundwater elevations are expressed in feet above mean sea level (msl).

GROUNDWATER FLOW DIRECTION

500 0 500 1000 Feet

LEGEND

MONITORING WELL

4081 GROUNDWATER ELEVATION CONTOUR

(4080.2) GROUNDWATER ELEVATION (msl)

ROAD

BUILDING

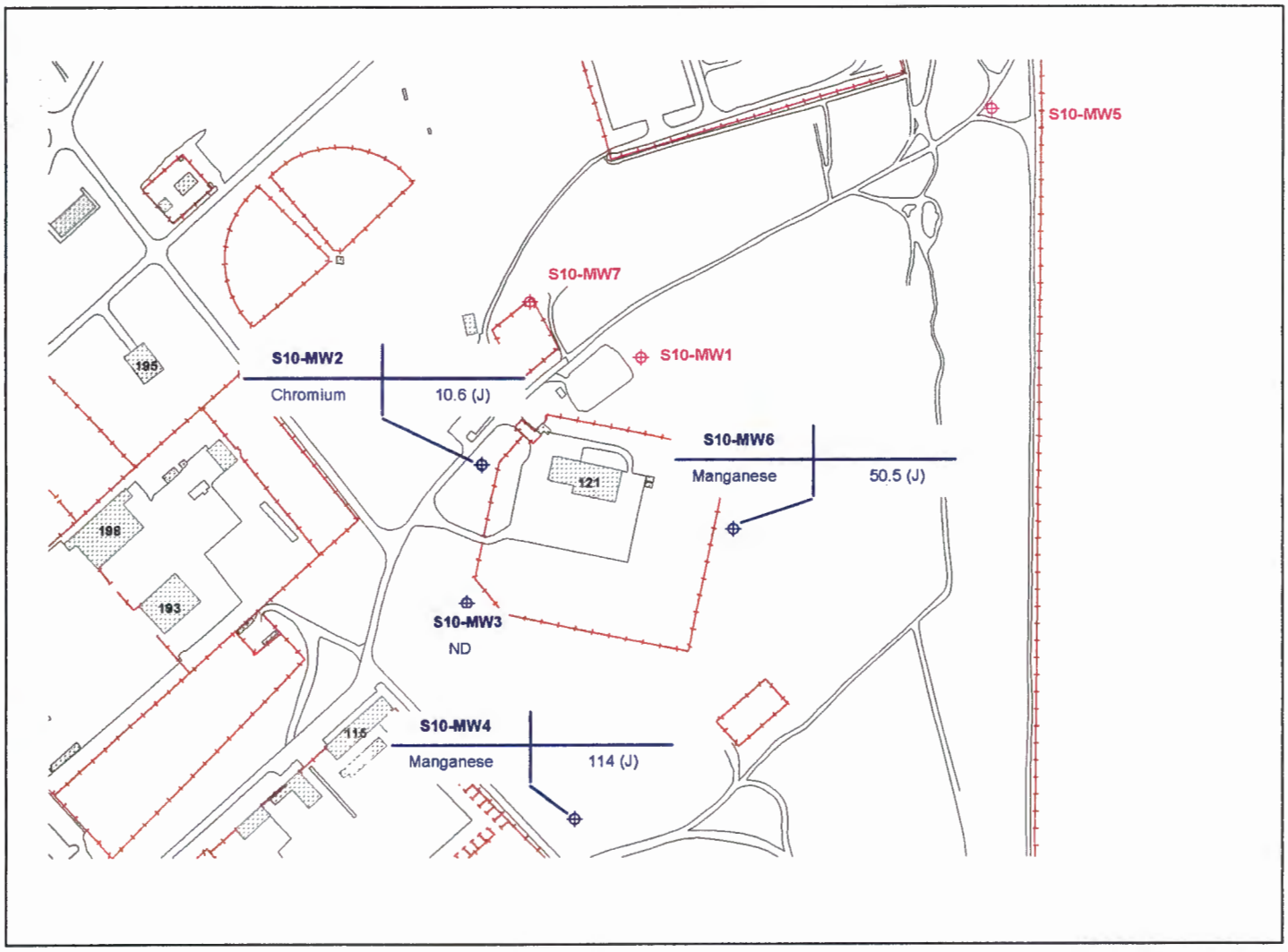
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-5
POTENTIOMETRIC SURFACE MAP FOR LF-10

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

All concentrations are expressed in micrograms per liter.

ND - no analytes were detected above the method reporting limit

(J) - estimated value (EPA qualifier)

1000 0 1000 2000 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-6

GROUNDWATER ANALYTICAL RESULTS FOR LF-10

FOSTER WHEELER ENVIRONMENTAL CORPORATION

3.3 SD-08 REFUSE COLLECTION TRUCK WASHRACK (SWMUs 4 and 82)

3.3.1 Background

The Refuse Collection Truck Washrack (SD-08, SWMUs 4 and 82) is located southwest of the POL storage area and north of the Old Main Base Area (LF-10). Figure 3-7 presents a site map of the washrack including monitoring well locations. The washrack was used to clean refuse collection trucks. Wash water flowed through an oil/water separator and discharged into the Base sanitary sewer system. During the 1970s, pesticides were routinely applied to the trucks for insect control. The settling basin and separator routinely clogged and overflowed at the northwest corner of the washrack (FEC 1998).

During the 29 Waste Sites RI (Radian 1992a) and Phase II RCRA Facility Investigation (RFI) (Foster Wheeler 1995) metals and pesticides were identified in soil; metals, VOCs, and pesticides were detected in groundwater samples. The primary contaminants attributed to site activities at SD-08 are pesticides. The source of the VOCs was identified as the former tank area at AOC-RR.

The site feasibility study and Decision Document recommended an asphalt cap as the preferred remedial action for the site (Ebasco 1995). An asphalt cap was installed in the area of the former washrack in January 1997. As an additional condition for site closure subsequent to any remedial action at SD-08, EPA Region 6 required long-term groundwater monitoring for metals and pesticides (Radian 1993b).

3.3.2 1999 Long-Term Groundwater Monitoring

During the 1999 LTM Program, water level measurements were collected in September and December and used to develop a potentiometric map for the site (Section 3.3.2.1). Groundwater samples were collected from the following four monitoring wells: MW-08-01 (upgradient), MW-08-03, MW-08-04, and MW-08-05 (downgradient). Groundwater samples were analyzed for VOCs, OCPs, total mercury, dissolved RCRA metals, iron, and manganese. Results of these analyses are discussed in Section 3.3.2.2. Various field parameters, including pH, temperature, and specific conductivity were measured prior to the collection of groundwater samples at each

well and are presented in Appendix C. The number and type of groundwater samples collected at SD-08 are summarized in Table 3-6.

Table 3-6. Summary of 1999 LTM Program at SD-08

Well Numbers	Analyses (EPA Methods)	Analytes Detected Above CRDLs	Analytes Exceeding NMED Standards	QA Samples	Number of Samples
MW-08-01 MW-08-03/ S10-MW7 MW-08-04 MW-08-05	VOCs (8260B) Metals (6010B Trace, 7470A) OCPs (8081A)	1,2-Dichloroethane; 1,2-Dicholoropropane; Iron; Manganese; gamma-Chlordane	1,2-Dichloroethane, Iron, Manganese	MW-08-03/ S10-MW7	5

3.3.2.1 Site Hydrogeology

Depth-to-groundwater measurements at SD-08 in December 1999 ranged from 10.05 to 12.60 ft below TOC, corresponding to groundwater elevations ranging from 4073.6 to 4075.9 ft msl (Appendix C). There was little or no variance in water level measurements between September and December 1999. A potentiometric surface map was prepared for the site using the groundwater data from December 1999 (Figure 3-8). The contour map indicates that groundwater flows to the southeast across an approximate gradient of 0.004 ft/ft. The gradient and groundwater flow direction observed at SD-08 during the 1999 LTM Program are comparable with the results of the 1995 and 1997 LTM events.

3.3.2.2 Groundwater Sampling Results

Table 3-7 summarizes the analytical results for the LTM Program at SD-08. Detections reported from the 1995, 1997, and 1999 LTM events are presented. Analytes reported above the CRDL in 1999 are shown in Figure 3-9.

VOCs were detected in MW-08-01 (upgradient well at the site) at concentrations that are consistent with those detected in 1997. Of these detections, the detection of 1,2-dichloroethane in MW-08-01 exceeded groundwater standards. 1,2-Dichloroethane was detected at the same concentration in 1997. There were no VOC concentrations detected in MW-08-04, MW-08-03/S10-MW7, or MW-08-05 in 1999, whereas, in 1997 three VOCs were detected.

Iron and manganese were detected at concentrations consistent with concentrations from previous LTM Programs. One detection of iron and two detections of manganese exceed New Mexico Groundwater Quality Standards.

Gamma-chlordane was detected at SD-08 in MW-08-01 at a concentration of 0.078 μg/L. This concentration is estimated based on data validation criteria. Gamma-chlordane was not previously detected at this site.

3.3.3 Recommendations

It is recommended that sampling and analysis for barium, lead, iron, and manganese continue at SD-08.

Table 3-7. Summary of Analytical Results from the 1995, 1997, and 1999 Long-Term Monitoring Programs at SD-08

Well Number	MW-08-01[4]			MW-08-03/S10-MW7			MW-08-04			MW-08-05		
Sampling Date	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99
VOCs[1] (µg/L)												
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.0 J
Benzene	ND	3.7	2.0 J	ND	3.5	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	0.61 J	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	0.84 J	ND	ND	ND	ND
Sec-butylbenzene[5]	ND	2.3 J	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA
Chloroform	170	ND	ND	ND	0.99 J	1.0 J	5.4	2.2 J	ND	ND	ND	ND
1,2-Dichloroethane	ND	130	**130 D**	ND	ND	ND	ND	ND	ND	5.1	ND	ND
1,2-Dichloropropane	ND	3.5	8	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	1.5	2.0 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene[5]	ND	1.5 J	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA
Napthalene[5]	ND	1.5 J	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA
Toluene	ND	0.86 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals[2] (µg/L)												
Arsenic	ND	ND	31.6 B (J)	10	ND	13.1 B (J)	ND	ND	7.7 B (J)	ND	ND	5.1 B (J)
Barium	ND	28	16.9 B (J)	ND	ND	15.5 B (J)	ND	22	18.0 B (J)	ND	25	24.8 B (J)
Cadmium	ND	ND	0.3 B	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	ND	ND	ND	ND	ND	1.6 B	ND	ND	ND	ND	ND	ND
Iron	ND	5900	**6620 (J)**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	31	ND	ND	92	ND	ND	82	ND	ND	72	ND	ND
Manganese	ND	2600	**3720**	ND	ND	7.0 B	ND	ND	0.4 B	ND	260	**235**
Selenium	ND	ND	ND	ND	ND	10.2 B (J)	ND	ND	2.7 B (J)	ND	ND	2.9 B (J)
Silver	ND	ND	ND	ND	ND	1.2 B (J)	ND	ND	ND	ND	ND	ND
Organochlorine Pesticides[3] (µg/L)												
4,4'-DDD	ND	ND	ND	0.02	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	ND	ND	ND	0.03	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	ND	ND	0.078 P (J)	NA	NA	ND	NA	NA	ND	NA	NA	ND
Endosulfan sulfate	ND	ND	ND	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.04	ND	ND

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Table 3-7. Summary of Analytical Results from the 1995, 1997, and 1999 Long-Term Monitoring Programs at SD-08

Notes:

[1] Unless otherwise reported, no VOCs were detected using EPA Method 8260B.
(EPA Method 8260A was used to analyze for VOCs in the 1995 and 1997 programs.)

[2] Unless otherwise reported, no metals were detected using EPA Methods 6010B Trace & 7470A.
(EPA Methods 6010 & 7000 were used to analyze for metals in the 1995 and 1997 programs.)

[3] Unless otherwise reported, no organochlorine pesticides were detected using EPA Method 8081A.
(EPA Method 8080A was used to analyze for organochlorine pesticides in the 1995 and 1997 programs.)

[4] Upgradient monitoring well

[5] Organic analyte not included in EPA Method 8260B

CRDL - Contract Required Detection Limit
IDL - Instrument Detection Limit
NA - not analyzed
ND - not detected at or above method reporting limit
VOCs - volatile organic compounds
µg/L - micrograms per liter

Laboratory Qualifiers--assigned as a result of internal laboratory data assessment procedures
B - Value less than CRDL but greater than or equal to IDL
D - Value derived from analysis of diluted sample
J - Estimated value; less than CRDL but greater than or equal to IDL
P - Results of dual-column GC technique differ by more than 25%; value is the lower of the two

EPA Qualifiers--assigned as a result of independent data validation
(J) - Estimated value

Bold values indicate 1999 analytes above New Mexico Groundwater Quality Standards.

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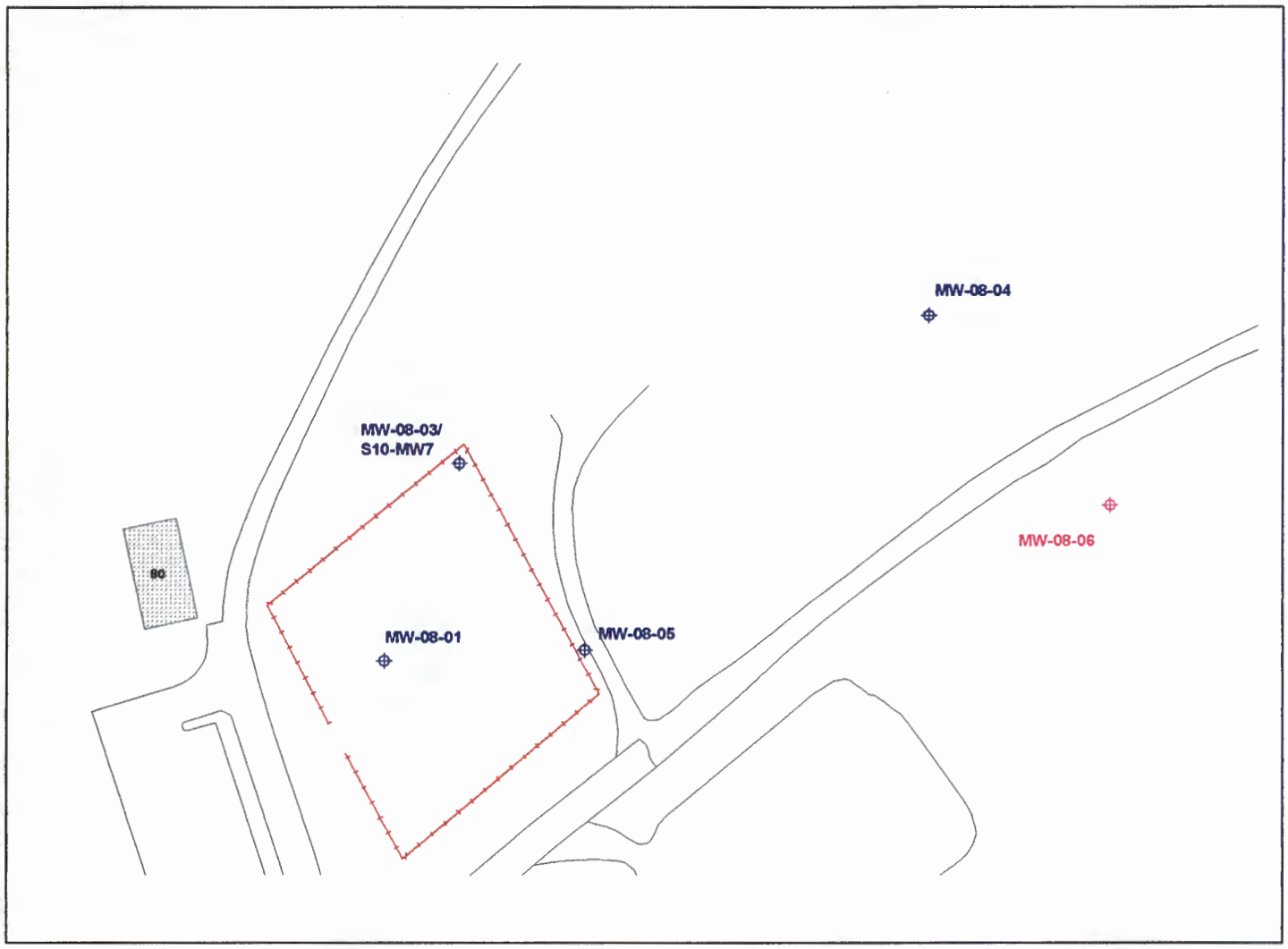


NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

100 0 100 200 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

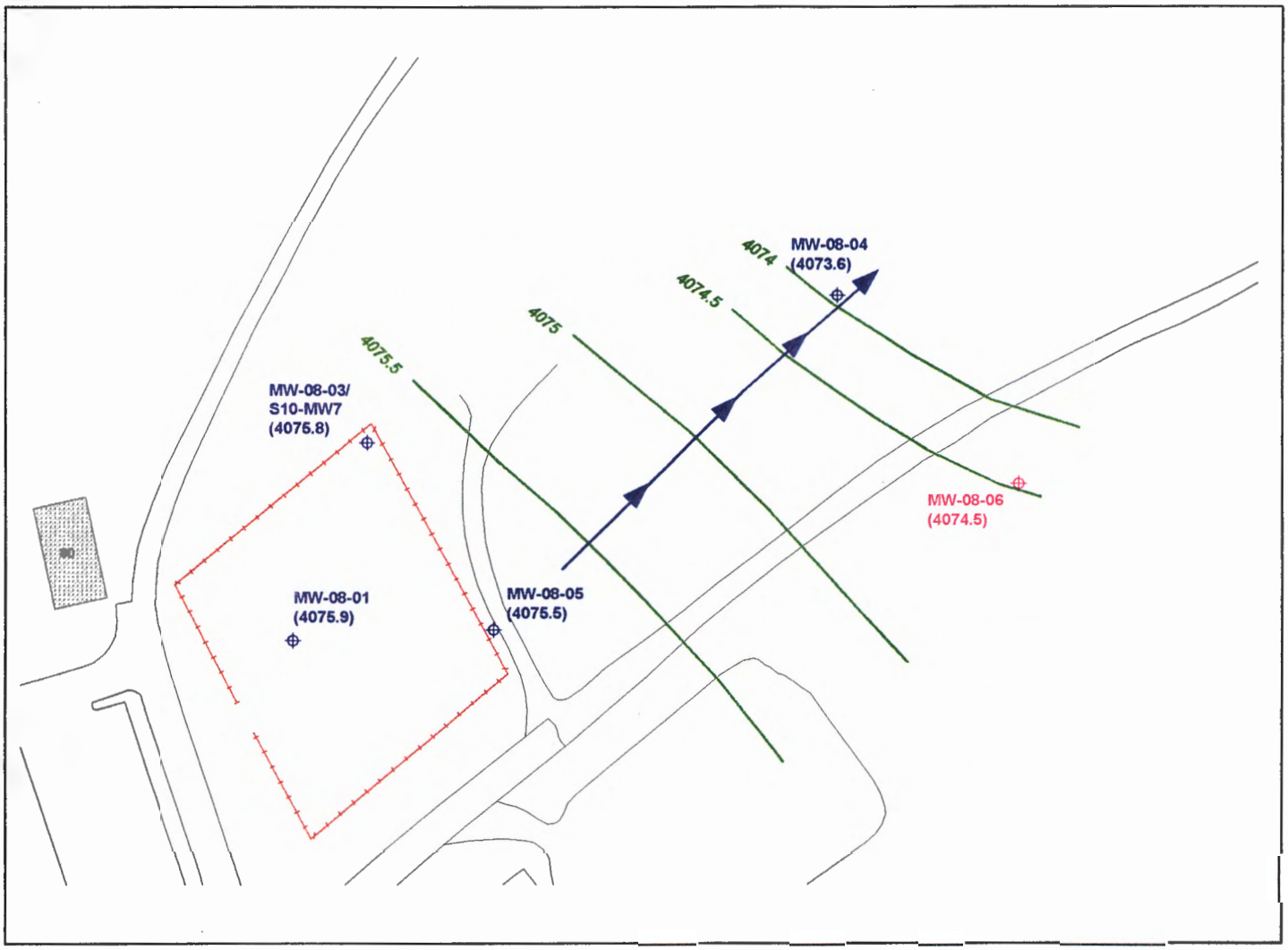
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-7
SITE LOCATION MAP FOR SD-08

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

Groundwater elevations are expressed in feet above mean sea level (msl).

GROUNDWATER FLOW DIRECTION

200 0 200 400 Feet

LEGEND

MONITORING WELL

4081 GROUNDWATER ELEVATION CONTOUR

(4080.2) GROUNDWATER ELEVATION (msl)

ROAD

BUILDING

FENCE

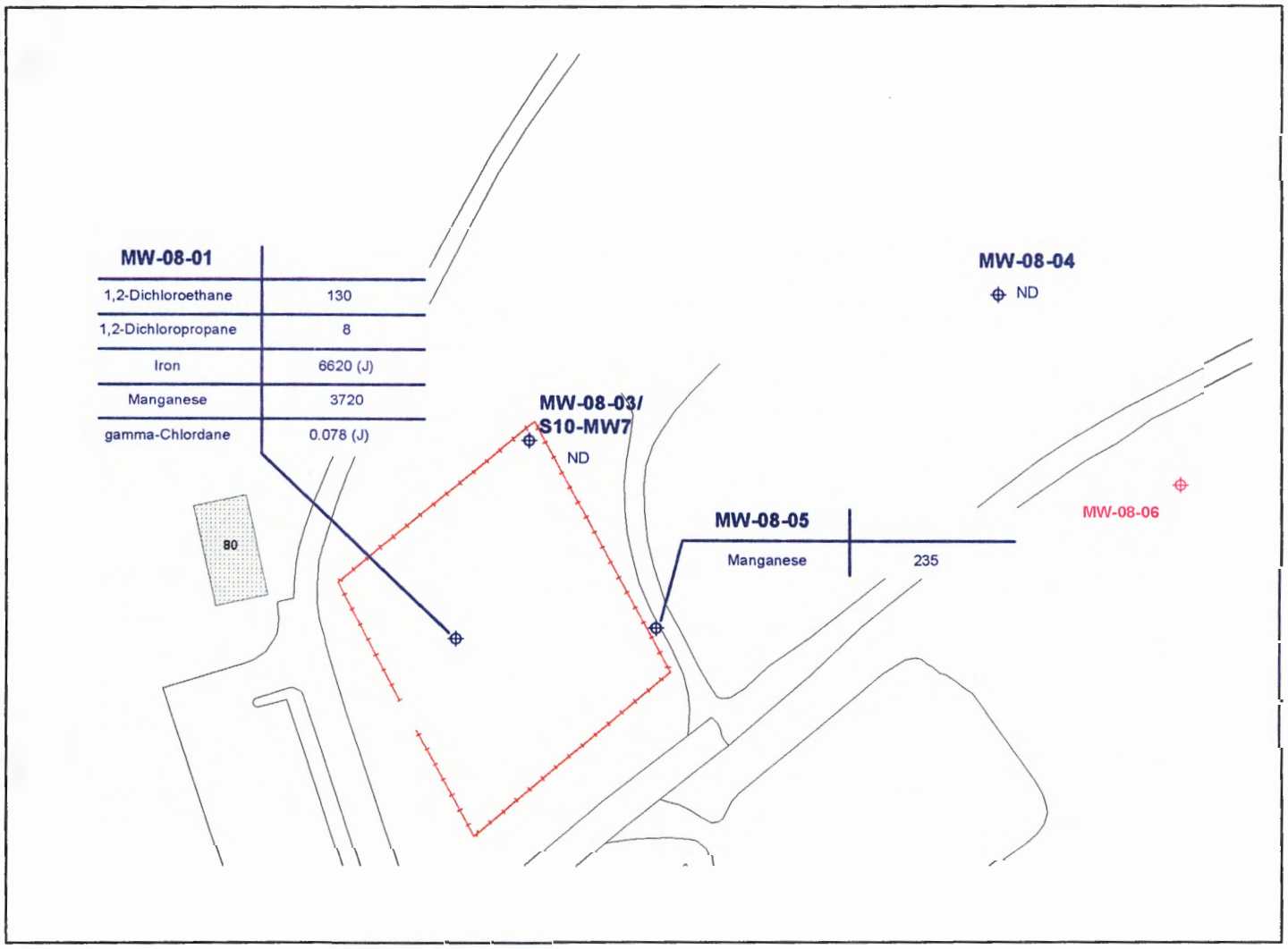
N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-8

POTENTIOMETRIC SURFACE MAP FOR SD-08

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

All concentrations are expressed in micrograms per liter.

ND - no analytes were detected above the method reporting limit

(J) - estimated value (EPA qualifier)

100 0 100 200 Feet

LEGEND

- MONITORING WELL
- ROAD
- BUILDING
- FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-9
GROUNDWATER ANALYTICAL RESULTS FOR SD-08

FOSTER WHEELER ENVIRONMENTAL CORPORATION

3.4 LF-19 GOLF COURSE LANDFILL (SWMU 105)

3.4.1 Background

The Golf Course Landfill (LF-19, SWMU 105) is approximately 2 acres in size and is located within an arroyo. Figure 3-10 presents a site map including monitoring well locations. This site was primarily used for disposal of grass clippings from the golf course; however, unused rodenticide may have been placed in the landfill (FEC 1998).

Three groundwater monitoring wells were installed at the landfill during the 29 Waste Sites RI (Radian 1992a). Groundwater analysis during the RI identified the presence of antimony, cadmium, lead, and fluoride in concentrations greater than RCRA Subpart S Corrective Action Levels.

A BRA was prepared for the landfill (Radian 1992b). The BRA concluded that constituent concentrations do not pose a threat to human health or the environment. Inclusion in the LTM Program was a condition of the Decision Document.

3.4.2 1999 Long-Term Groundwater Monitoring

During the 1999 LTM Program, water level measurements were collected in September and December and used to develop a potentiometric surface map for the site (Section 3.4.2.1). Groundwater samples were collected from three monitoring wells (MW-19-01, MW-19-02, and MW-19-03) and analyzed for VOCs, total mercury, dissolved RCRA metals, iron, and manganese. Results of these analyses are discussed in Section 3.4.2.2. OCPs and chlorinated herbicides were analyzed as part of the 1995 and 1997 LTM Programs. However, because neither analytical group was detected these analyses were discontinued for the 1999 event. Various field parameters, including pH, temperature, and specific conductivity were measured prior to the collection of groundwater samples at each well and are presented in Appendix C. The number and type of groundwater samples collected at LF-19 are summarized in Table 3-8.

Table 3-8. Summary of 1997 LTM Program at LF-19

Well Numbers	Analyses (EPA Methods)	Analytes Detected Above CRDLs	Analytes Exceeding NMED Standards	QA Samples	Number of Samples
MW-19-01 MW-19-02 MW-19-03	VOCs (8260B) Metals (6010B Trace, 7470A)	Iron, Manganese, Mercury	Manganese	None	3

3.4.2.1 Site Hydrogeology

Depth-to-groundwater measurements at LF-19 in December 1999 ranged from 8.52 to 13.05 ftbelow TOC, corresponding to groundwater elevations ranging from 4036.1 to 4040.2 ft msl (Appendix C). There was little or no variance in water level measurements between September and December 1999. A potentiometric surface map was prepared for the site using the groundwater data from December 1999 (Figure 3-11). The contour map indicates that groundwater flows to the south across a gradient of approximately 0.005 ft/ft. The gradient and groundwater flow direction observed at LF-19 during the 1999 LTM Program are comparable with the results of the 1995 and 1997 LTM events.

3.4.2.2 Groundwater Sampling Results

Table 3-9 summarizes the analytical results for the LTM Program at LF-19. Detections reported from the 1995, 1997, and 1999 LTM events are presented. Analytes reported above the CRDL in 1999 are shown in Figure 3-12.

There were no VOCs detected in groundwater samples collected during the 1999 event.

Iron, manganese, and mercury were detected at LF-19. Manganese was detected in one well at concentrations consistent with concentrations from previous LTM Programs. Manganese and mercury were detected in MW-19-02 for the first time in 1999. Both of the detections of manganese exceeded New Mexico Groundwater Quality Standards. Lead was not detected in any well in 1999 although it had been detected in 1995.

3.4.3 Recommendations

It is recommended that sampling and analysis only for barium, iron, lead, manganese, and mercury continues at LF-19. It is recommended that sampling and analysis for VOCs be

discontinued because no VOCs have been detected above the CRDL in any of the three LTM Programs.

Table 3-9. Summary of Analytical Results from the 1995, 1997, and 1999 Long-Term Monitoring Programs at LF-19

Well Number	MW-19-01[6]			MW-19-02[5]			MW-19-03		
Sampling Date	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99
VOCs[1] (µg/L)									
1,2,3-Trichlorobenzene[7]	NA	ND	NA	NA	1.7 J	NA	NA	ND	NA
1,2,4-Trichlorobenzene[7]	NA	ND	NA	NA	0.9 J	NA	NA	ND	NA
Metals[2] (µg/L)									
Arsenic	ND	ND	ND	ND	ND	3.9 B (J)	ND	ND	ND
Barium	ND	19	14.5 B (J)	ND	ND	21.6 B (J)	ND	ND	17.8 B (J)
Cadmium	ND	ND	0.3 B	ND	ND	0.5 B	ND	ND	ND
Iron	ND	ND	ND	ND	ND	132	ND	ND	ND
Lead	54	ND	ND	540	ND	ND	420	ND	ND
Manganese	ND	230	**284 (J)**	ND	ND	**246 (J)**	ND	ND	1.1 B (J)
Mercury	ND	ND	ND	ND	ND	0.56 (J)	ND	ND	ND
Selenium	ND	ND	2.9 B (J)	ND	ND	2.7 B (J)	ND	ND	4.1 B (J)
Silver	ND	ND	ND	ND	ND	ND	ND	ND	1.3 B (J)
Organochlorine Pesticides[3] (µg/L)									
all	ND	ND	NA	ND	ND	NA	ND	ND	NA
Chlorinated Herbicides[4] (µg/L)									
all	ND	ND	NA	ND	ND	NA	ND	ND	NA

Notes:

[1] Unless otherwise reported, no VOCs were detected using EPA Method 8260B.
(EPA Method 8260A was used to analyze for VOCs in the 1995 and 1997 programs.)
[2] Unless otherwise reported, no metals were detected using EPA Methods 6010B Trace & 7470A.
(EPA Methods 6010 & 7000 were used to analyze for metals in the 1995 and 1997 programs.)
[3] Unless otherwise reported, no organochlorine pesticides were detected using EPA Method 8081A.
(EPA Method 8080A was used to analyze for organochlorine pesticides in the 1995 and 1997 programs.)
[4] Unless otherwise reported, no chlorinated herbicides were detected using EPA Method 8151A.
(EPA Method 8150B was used to analyze for chlorinated herbicides in the 1995 and 1997 programs.)
[5] Blind duplicate collected in 1997; information available in 1997 LTM Report (FEC, 1997).
[6] Upgradient monitoring well
[7] Organic analyte not included in EPA Method 8260B
CRDL - Contract Required Detection Limit
IDL - Instrument Detection Limit
NA - not analyzed
ND - not detected at or above method reporting limit
NS - not sampled
VOC's - volatile organic compounds
µg/L - micrograms per liter

Laboratory Qualifiers--assigned as a result of internal laboratory data assessment procedures
B - Value less than CRDL but greater than or equal to IDL
J - Estimated value; less than CRDL but greater than or equal to IDL

EPA Qualifiers--assigned as a result of independent data validation
(J) - Estimated value

Bold values indicate 1999 analytes above New Mexico Groundwater Quality Standards.

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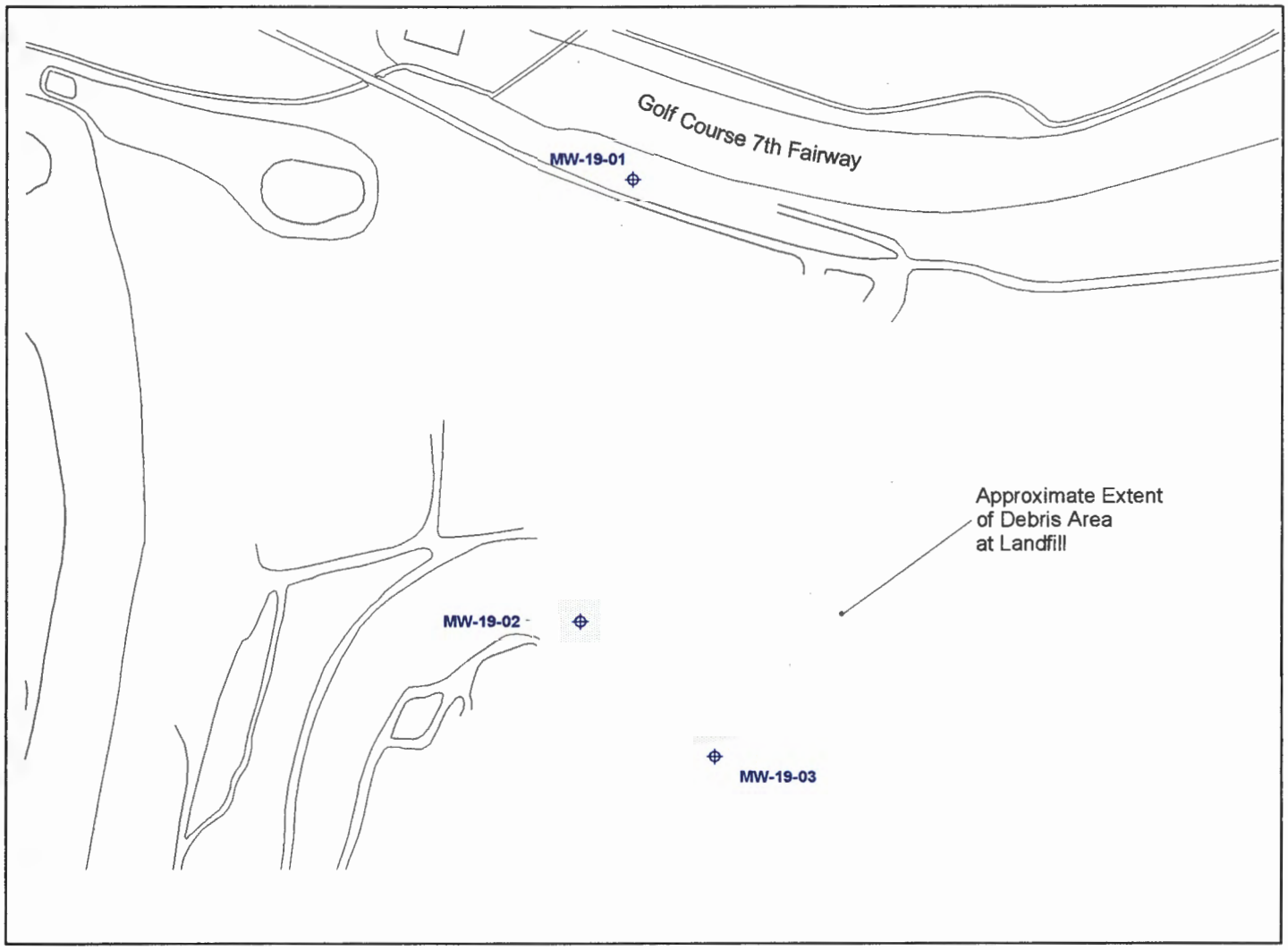


NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

200 0 200 400 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

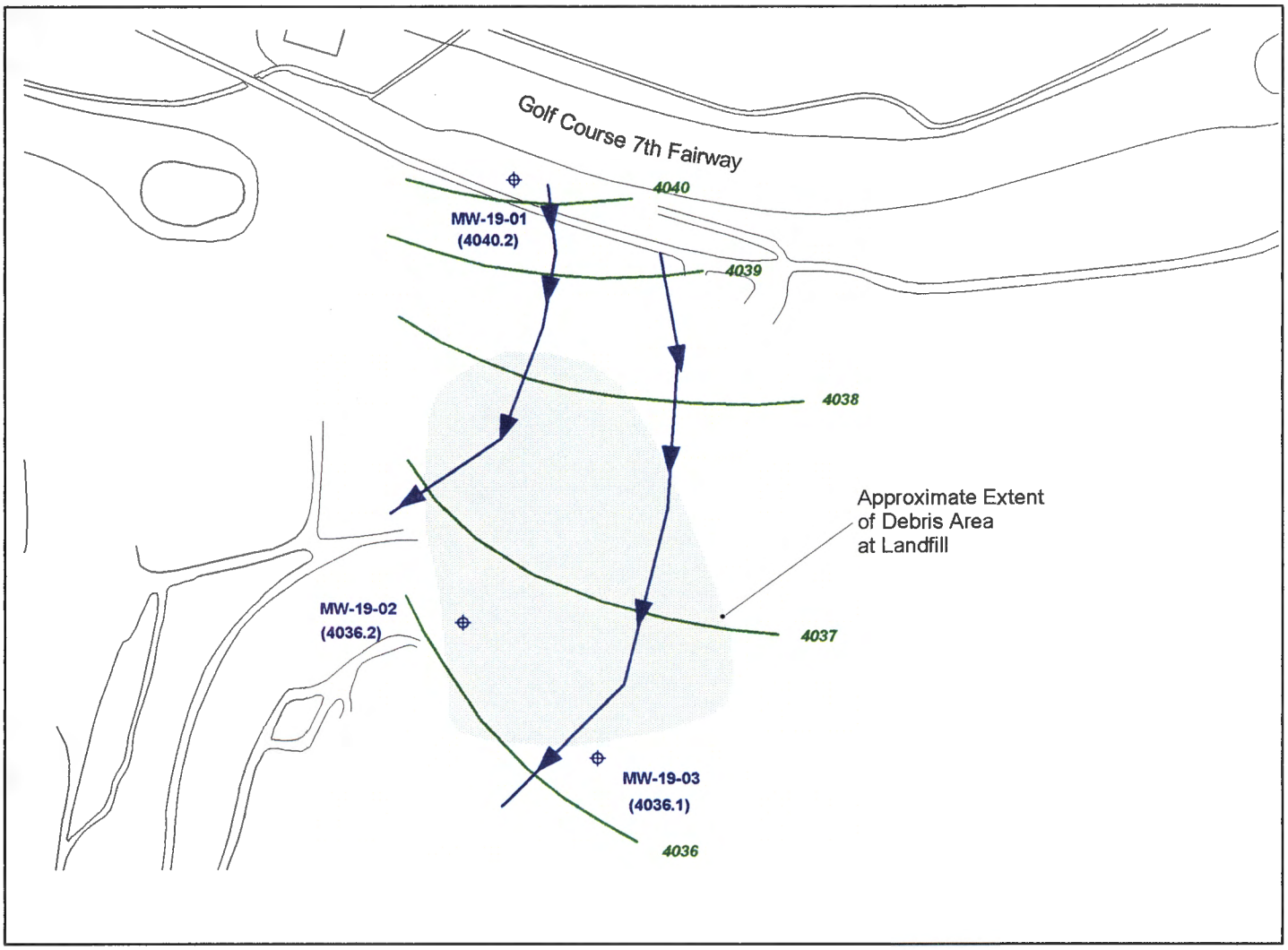
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-10
SITE LOCATION MAP FOR LF-19

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

Groundwater elevations are expressed in feet above mean sea level (msl).

GROUNDWATER FLOW DIRECTION

200 0 200 400 Feet

LEGEND

MONITORING WELL

4081 GROUNDWATER ELEVATION CONTOUR

(4080.2) GROUNDWATER ELEVATION (msl)

ROAD

BUILDING

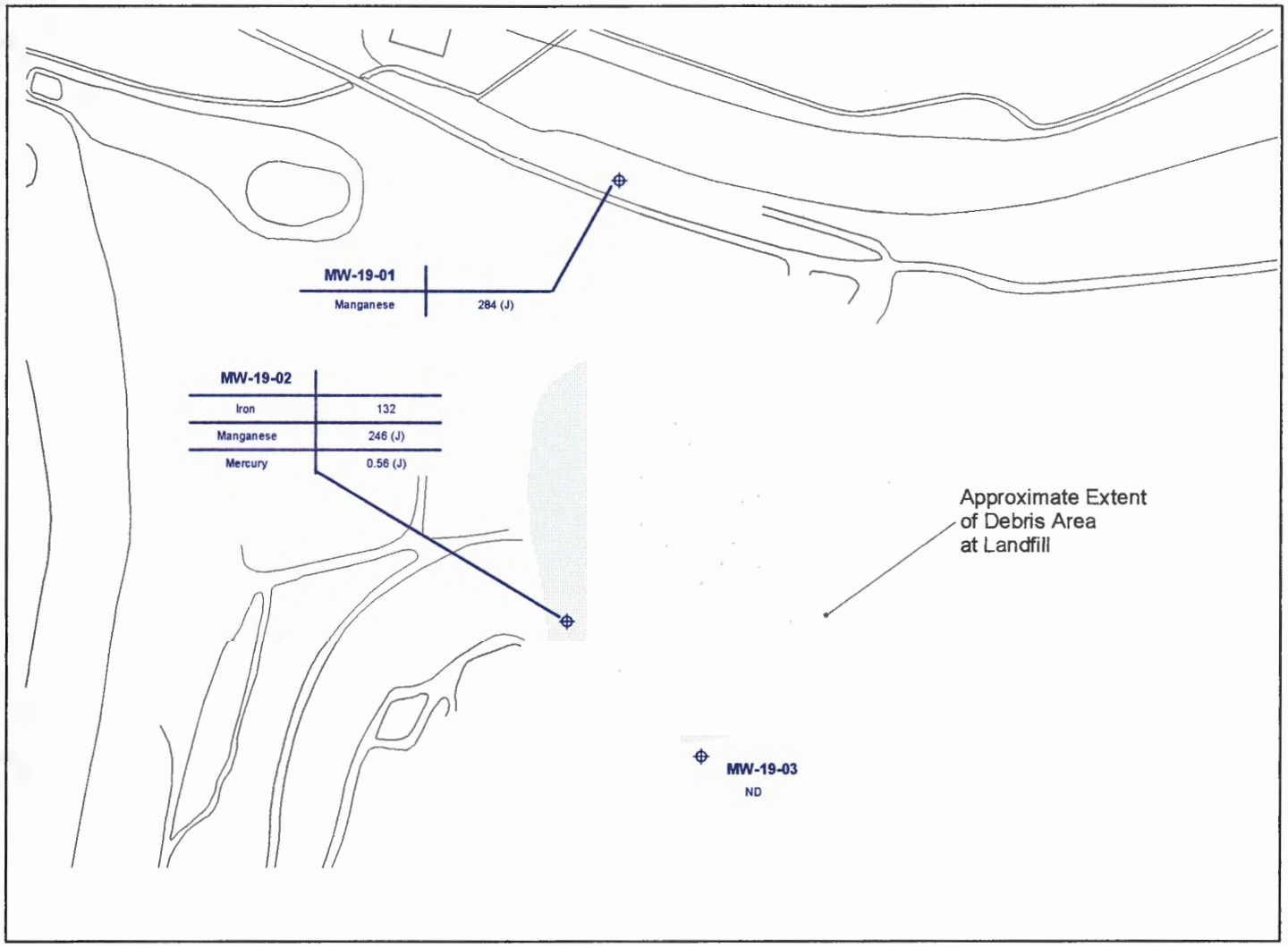
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-11
POTENTIOMETRIC SURFACE MAP FOR LF-19

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

All concentrations are expressed in micrograms per liter.

ND - no analytes were detected above the method reporting limit

(J) - estimated value (EPA qualifier)

200 0 200 400 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-12
GROUNDWATER ANALYTICAL RESULTS FOR LF-19

FOSTER WHEELER ENVIRONMENTAL CORPORATION

3.5 LF-21 WEST AREA LANDFILL NO. 2 (SWMU 116)

3.5.1 Background

West Area Landfill No. 2 (LF-21, SWMU 116) is approximately 2 acres in size and is located east of the Solar Observatory. Figure 3-13 presents a site map including monitoring well locations. The landfill was active during the 1970s. According to Base records, the landfill accepted domestic trash, paper boxes, and tree trimmings. A former employee of the Base indicated that drum disposal may have taken place at the landfill (FEC 1998).

Four groundwater monitoring wells (MW-21-01, MW-21-02, MW-21-03, and MW-21-04) were installed at this landfill during the 29 Waste Sites RI (Radian 1992a). The wells were sampled for VOCs, pesticides, herbicides, PCBs, hazardous metals, and groundwater quality parameters. Concentrations of arsenic, benzene, cadmium, and fluoride were detected.

The BRA prepared for the landfill (Radian 1992b) concluded that constituent concentrations do not pose a threat to human health or the environment. Inclusion in the LTM Program was recommended with 10 years of groundwater monitoring for VOCs, OCPs, chlorinated herbicides, and dissolved RCRA metals.

3.5.2 1999 Long-Term Groundwater Monitoring

During the 1999 LTM Program, water level measurements were collected in September and December and used to develop a potentiometric surface map for the site (Section 3.5.2.1). Groundwater samples were collected from the four monitoring wells previously installed at the site; a fifth blind sample was collected from MW-22-04. Groundwater samples were analyzed for VOCs, total mercury, dissolved RCRA metals, iron, and manganese. Results of these analyses are discussed in Section 3.5.2.2. Analyses for chlorinated herbicides, OCPs, and PCBs were conducted for this site as part of previous LTM Programs but discontinued for the 1999 event because none of these analytic groups were detected. Various field parameters, including pH, temperature, and specific conductivity, were measured prior to the collection of groundwater samples at each well and are presented in Appendix C. The number and type of groundwater samples collected at LF-21 are listed in Table 3-10.

Table 3-10. Summary of 1999 LTM Program at LF-21

Well Numbers	Analyses (EPA Methods)	Analytes Detected Above CRDLs	Analytes Exceeding NMED Standards	QA Samples	Number of Samples
MW-21-01 MW-21-02 MW-21-03 MW-21-04	VOCs (8260B) Metals (6010B Trace, 7470A)	TCE, Iron, Manganese	None	None	4

3.5.2.1 Site Hydrogeology

Depth-to-groundwater measurements at LF-21 in December 1999 ranged from 8.56 to 13.05 ft below TOC, corresponding to groundwater elevations ranging from 4031.2 to 4037.0 ft msl (Appendix C). There was little or no variance in water level measurements between September and December 1999. A potentiometric surface map was prepared for the site using the groundwater data from December 1999 (Figure 3-14). The contour map indicates that groundwater flows to the southwest across a gradient of approximately 0.005 ft/ft. The gradient and groundwater flow direction observed at LF-21 during the 1999 LTM Program are comparable with the results from the 1995 and 1997 LTM events.

3.5.2.2 Groundwater Sampling Results

Table 3-11 summarizes the analytical results for the LTM Program at LF-21. Detections reported from the 1995, 1997, and 1999 LTM events are presented. Analytes reported above the CRDL in 1999 are shown in Figure 3-15.

The only VOC detected at this site during the 1999 event was trichloroethylene (TCE) in well MW-21-01 (the upgradient well at the site). The concentration of TCE was consistent with the 1997 detection in this well (i.e., had not increased by an order of magnitude or greater) and both concentrations were less than the New Mexico Drinking Water Standard.

Iron and manganese were detected at concentrations consistent with concentrations from previous LTM Programs. None of the metals detections exceeded New Mexico Groundwater Quality Standards.

3.5.3 Recommendations

It is recommended that sampling and analysis at LF-21 continues for VOCs, barium, iron, and manganese. It is also recommended that roots be removed from all wells at this site 2 weeks prior to the next sampling event to ensure that representative water level measurements and groundwater samples are obtained. No other changes to the LTM Program for LF-21 are recommended at this time.

Table 3-11. Summary of Analytical Results from the 1995, 1997, and 1999 Long-Term Monitoring Programs at LF-21

Well Number	MW-21-01[5]			MW-21-02			MW-21-03			MW-21-04		
Sampling Date	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99
VOCs[1] (µg/L)												
Methylene chloride	ND	5.1 UB	ND	ND	5 UB	ND	ND	5.4 UB	ND	ND	4.7 UB	ND
TCE	ND	5.4	11	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals[2] (µg/L)												
Arsenic	ND	ND	16.2 B (J)	ND	ND	13.0 B (J)	ND	ND	11.6 B (J)	ND	ND	4.6 B (J)
Barium	ND	17	18.6 B (J)	ND	40	32.1 B (J)	ND	36	36.1 B (J)	ND	38	37.1 B (J)
Cadmium	ND	ND	ND	ND	ND	0.3 B	ND	ND	0.6 B	ND	ND	0.7 B
Chromium	ND	ND	9.3 B (J)	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	600	936
Manganese	ND	ND	2.1 B (J)	ND	ND	0.6 B (J)	ND	50	34.8 (J)	ND	ND	78.5 (J)
Selenium	ND	ND	6.2 B (J)	ND	ND	11.3 B (J)	ND	ND	12.4 B (J)	ND	ND	11.5 B (J)
Organochlorine Pesticides[3] (µg/L)												
all	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA
Chlorinated Herbicides[4] (µg/L)												
all	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA

Notes:

[1] Unless otherwise reported, no VOCs were detected using EPA Method 8260B.
(EPA Method 8260A was used to analyze for VOCs in the 1995 and 1997 programs.)

[2] Unless otherwise reported, no metals were detected using EPA Methods 6010B Trace & 7470A.
(EPA Methods 6010 & 7000 were used to analyze for metals in the 1995 and 1997 programs.)

[3] Unless otherwise reported, no organochlorine pesticides were detected using EPA Method 8081A.
(EPA Method 8080A was used to analyze for organochlorine pesticides in the 1995 and 1997 programs.)

[4] Unless otherwise reported, no chlorinated herbicides were detected using EPA Method 8151A.
(EPA Method 8150B was used to analyze for chlorinated herbicides in the 1995 and 1997 programs.)

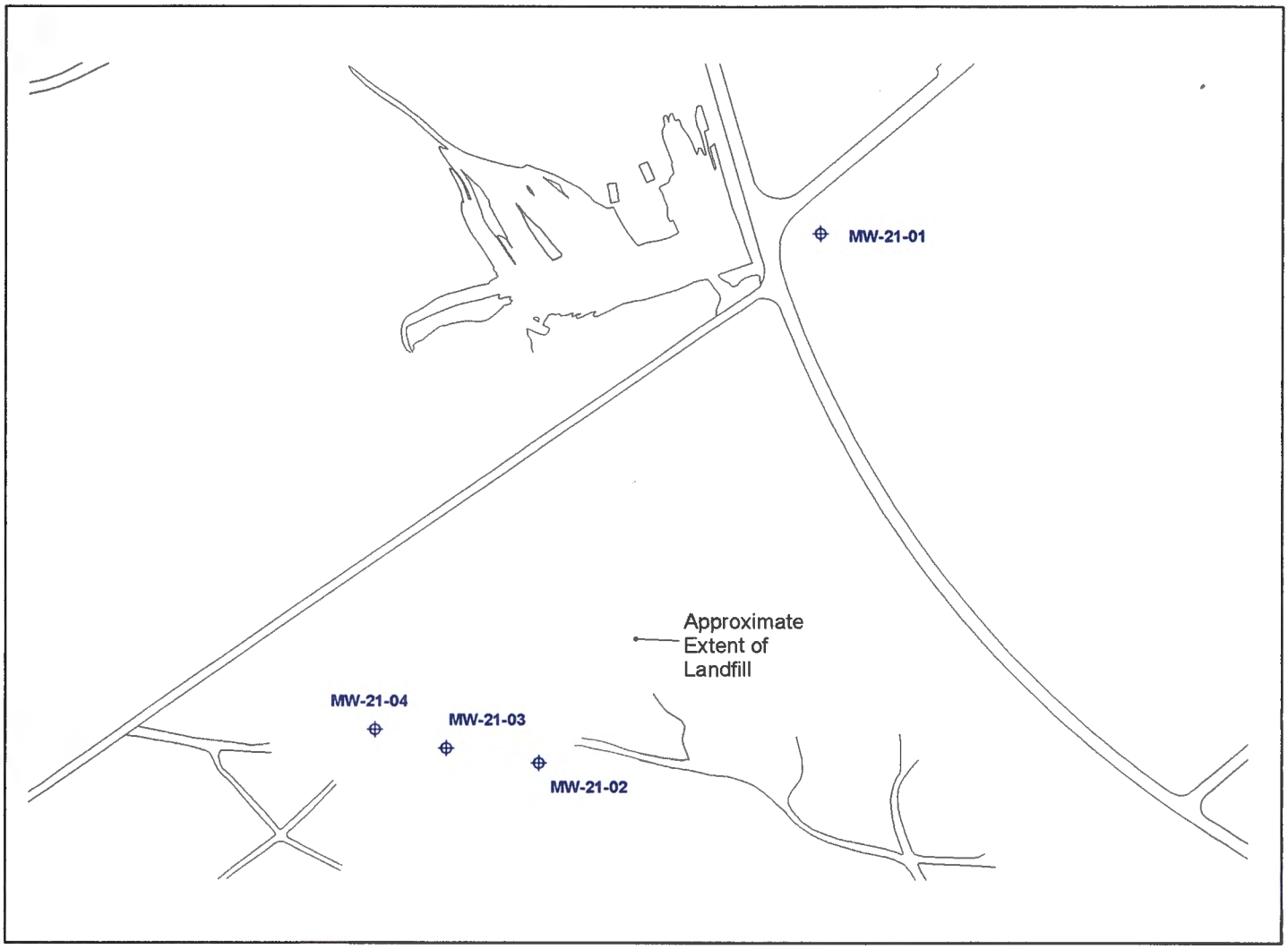
[5] Upgradient monitoring well

CRDL - Contract Required Detection Limit
IDL - Instrument Detection Limit
NA - not analyzed
ND - not detected at or above method reporting limit
TCE - trichloroethylene
VOCs - volatile organic compounds
µg/L - micrograms per liter

Laboratory Qualifiers--assigned as a result of internal laboratory data assessment procedures
B - Value less than CRDL but greater than or equal to IDL
UB - Qualifies as non-detect due to presence of analyte in associated laboratory blank

EPA Qualifiers--assigned as a result of independent data validation
(J) - Estimated value

J:\Projects\HOLLOMAN\LTM\Final Report\LTMdatatables.xls: LF-21



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

300 0 300 600 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

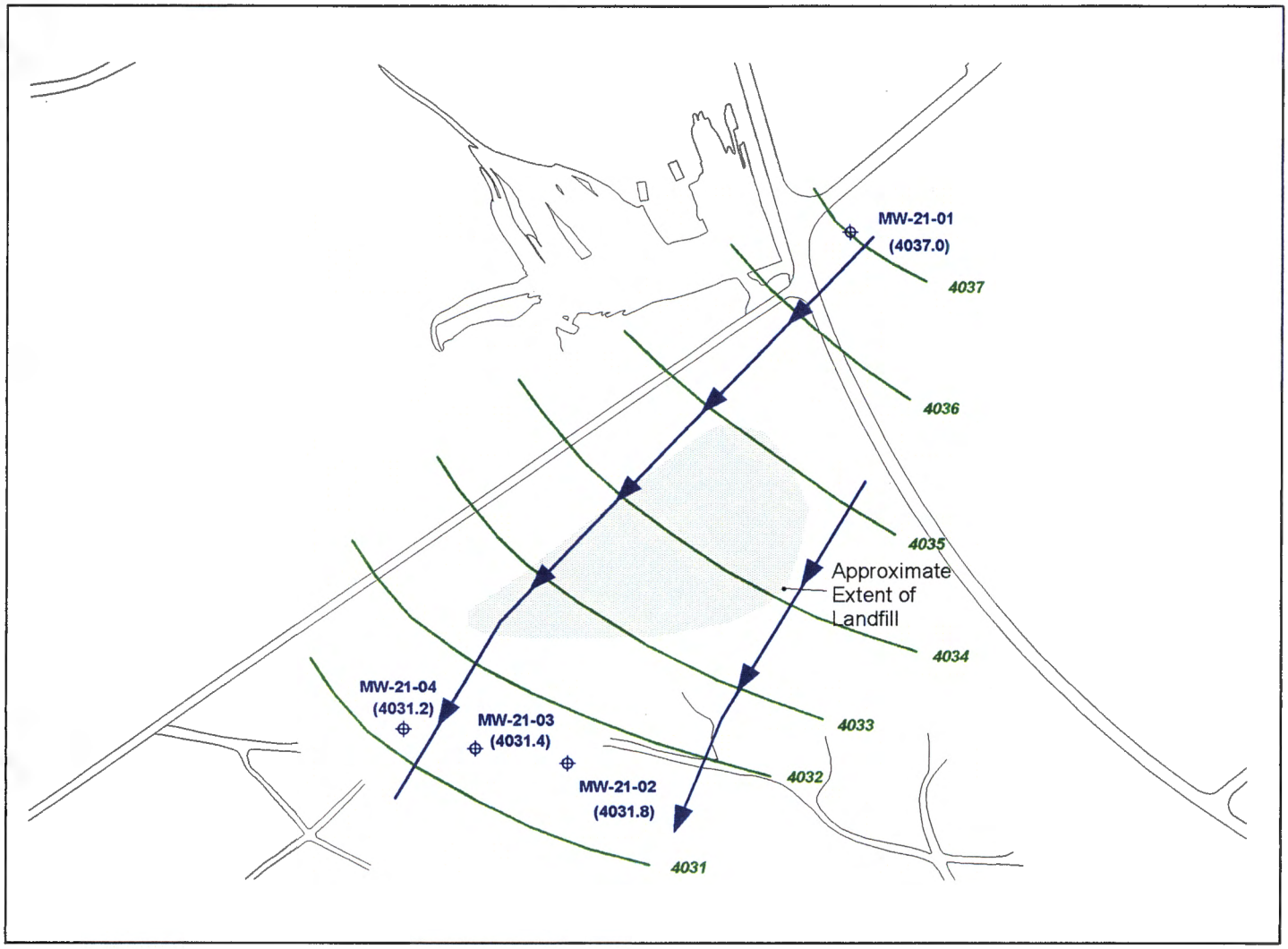
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-13
SITE LOCATION MAP FOR LF-21

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

Groundwater elevations are expressed in feet above mean sea level (msl).

GROUNDWATER FLOW DIRECTION

300 0 300 600 Feet

LEGEND

MONITORING WELL

4081 GROUNDWATER ELEVATION CONTOUR

(4080.2) GROUNDWATER ELEVATION (msl)

ROAD

BUILDING

FENCE

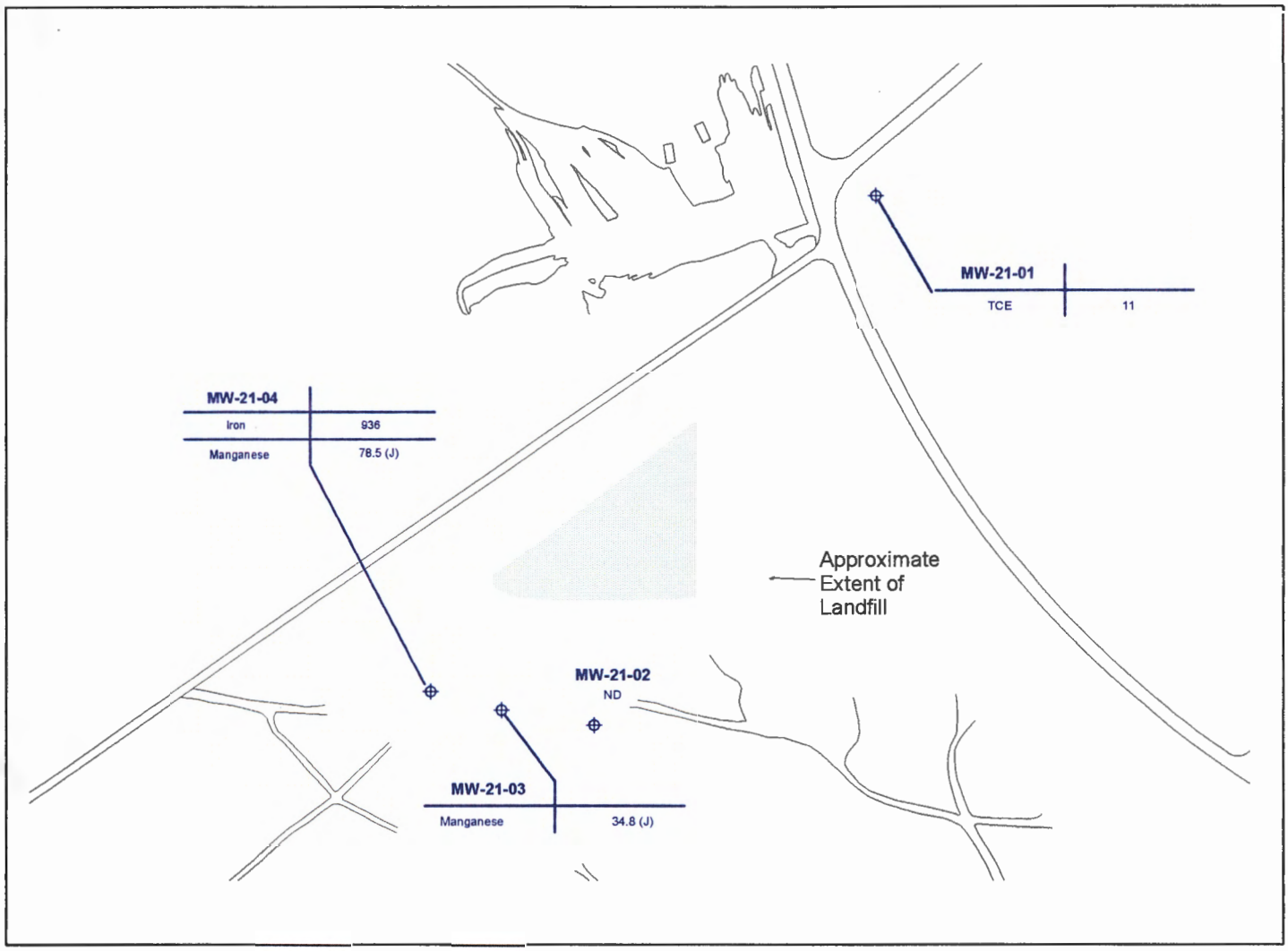
N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-14

POTENTIOMETRIC SURFACE MAP FOR LF-21

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

All concentrations are expressed in micrograms per liter.

ND - no analytes were detected above the method reporting limit

(J) - estimated value (EPA qualifier)

300 0 300 600 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-15
GROUNDWATER ANALYTICAL RESULTS FOR LF-21

FOSTER WHEELER ENVIRONMENTAL CORPORATION

3.6 LF-22 WEST AREA LANDFILL NO. 1 (SWMU 115)

3.6.1 Background

West Area Landfill No. 1 (LF-22, SWMU 115) is approximately 3 acres in size and is located within the arroyo near the Solar Observatory (Building 910). Figure 3-16 presents a site map including groundwater monitoring well locations. The landfill was active from 1974 to 1978. According to Base, records the landfill contains items such as empty cans, cardboard, and plastic sheeting. A former employee of the Base indicated that some drum disposal may have taken place at the landfill (FEC 1998).

Four groundwater monitoring wells (MW-22-01, MW-22-02, MW-22-03, and MW-22-04) were installed at this landfill during the 29 Waste Sites RI (Radian 1992a). The wells were sampled for VOCs, OCPs, chlorinated herbicides, PCBs, total metals, and groundwater quality parameters. Two pesticides, DDE and alpha-BHC, were detected in downgradient well MW-22-04. In addition, cadmium exceeded base-wide background concentrations in well MW-22-02.

A BRA was prepared for the landfill (Radian 1992b). The BRA concluded that constituent concentrations do not pose a threat to human health or the environment. Inclusion in the LTM Program was recommended with 10 years of groundwater monitoring for VOCs, OCPs, chlorinated herbicides, and dissolved RCRA metals.

3.6.2 1999 Long-Term Groundwater Monitoring

During the 1999 LTM Program, water level measurements were collected in September and December and used to develop a potentiometric surface map for the site (Section 3.6.2.1). Groundwater samples were collected from the four monitoring wells previously installed at this site and analyzed for VOCs, OCPs and PCBs, chlorinated herbicides, total mercury, dissolved RCRA metals, iron, and manganese. Results of these analyses are discussed in Section 3.6.2.2. Various field parameters, including pH, temperature, and specific conductivity, were measured prior to the collection of groundwater samples at each well and are presented in Appendix C. The number and type of groundwater samples collected at LF-22 are summarized in Table 3-12.

Table 3-12. Summary of 1999 LTM Program at LF-22

Well Numbers	Analyses (EPA Methods)	Analytes Detected Above CRDLs	Analytes Exceeding NMED Standards	QA Samples	Number of Samples
MW-22-01 MW-22-02 MW-22-03 MW-22-04	VOCs (8260B) Metals (6010B Trace, 7470A) OCPs (8081A) PCBs (8082) Herbicides (8151A)	Manganese; 2,4-D; MCPP; Picloram	None	None	4

3.6.2.1 Site Hydrogeology

Depth-to-groundwater measurements at LF-22 in December 1999 ranged from 9.40 to 12.69 ft below TOC, corresponding to groundwater elevations ranging from 4027.4 to 4029.6 ft msl (Appendix C). There was little or no variance in water level measurements between September and December 1999. A potentiometric surface map was prepared for this site using the groundwater data from December 1999 (Figure 3-17). The contour map indicates that groundwater flows to the south across a gradient of approximately 0.005 ft/ft. The gradient and groundwater flow direction observed at LF-22 during the 1999 LTM are comparable with the results from the 1995 and 1997 LTM events.

3.6.2.2 Groundwater Sampling Results

Table 3-13 summarizes the analytical results for the LTM Program at LF-22. Detections reported for the 1995, 1997, and 1999 LTM events are presented. Analytes reported above the CRDL in 1999 are shown in Figure 3-18.

No VOCs were detected above reporting limits at LF-22 in 1999.

Manganese was detected in three wells (MW-22-01, MW-22-03, and MW-22-04) in concentrations below New Mexico Groundwater Quality Standards.

No OCPs or PCBs were detected at LF-22 in 1999. Three chlorinated herbicides were detected at LF-22 for the first time in 1999. They include the following: 2,4-D (in well MW-22-04) and MCPP and picloram (in well MW-22-01, the upgradient well at the site). These concentrations

are estimated based on data validation criteria. 2,4-D; MCPP; and picloram were not previously detected at this site.

3.6.3 Recommendations

It is recommended that sampling and analysis for herbicides, iron, and manganese continues at LF-22. It is recommended that sampling and analysis for VOCs and OCPs be discontinued at this site because they have not been detected above the CRDL during any of the three LTM Programs.

Table 3-13. Summary of Analytical Results from the 1995, 1997, and 1999 Long-Term Monitoring Programs at LF-22

Well Number	MW-22-01[6]			MW-22-02			MW-22-03			MW-22-04[7]		
Sampling Date	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99
VOCs[1] (µg/L)												
Chloroform	ND	ND	ND	ND	ND	1 J	ND	ND	ND	ND	ND	ND
Methylene chloride	ND	4.1 UB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	ND	2.6 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TCE	ND	1.7 J	1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals[2] (µg/L)												
Arsenic	ND	ND	11.8 B (J)	ND	ND	12 B (J)	ND	ND	6.4 B (J)	ND	ND	5.3 B (J)
Barium	ND	27	23.6 B (J)	ND	29	29.5 B (J)	ND	27	30.2 B (J)	ND	10	16.8 B (J)
Chromium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6 B
Iron	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	86	51.2 B
Manganese	ND	ND	54	ND	ND	0.7 B	ND	ND	38.7	ND	29	52.1
Selenium	ND	ND	4.1 B (J)	ND	ND	13.7 B (J)	ND	ND	17.2 B (J)	ND	ND	4.6 B (J)
Organochlorine Pesticides[3] (µg/L)												
all	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Polychlorinated Biphenyls[4] (µg/L)												
all	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorinated Herbicides[5] (µg/L)												
2,4-D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.51 P (J)
MCPP	ND	ND	34 P (J)	ND	ND	ND	ND	ND	ND	ND	ND	ND
Picloram	ND	ND	0.046 P (J)	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

[1] Unless otherwise reported, no VOCs were detected using EPA Method 8260B.
(EPA Method 8260A was used to analyze for VOCs in the 1995 and 1997 programs.)

[2] Unless otherwise reported, no metals were detected using EPA Methods 6010B Trace & 7470A.
(EPA Methods 6010 & 7000 were used to analyze for metals in the 1995 and 1997 programs.)

[3] Unless otherwise reported, no organochlorine pesticides or PCBs were detected using EPA Method 8081A/8082.
(EPA Method 8080A was used to analyze for organochlorine pesticides in the 1995 and 1997 programs.)

[4] Unless otherwise reported, no PCBs were detected using EPA Method 8082.
(EPA Method 8080A was used to analyze for chlorinated herbicides in the 1995 and 1997 programs.)

[5] Unless otherwise reported, no chlorinated herbicides were detected using EPA Method 8151A.
(EPA Method 8150B was used to analyze for chlorinated herbicides in the 1995 and 1997 programs.)

[6] Upgradient monitoring well

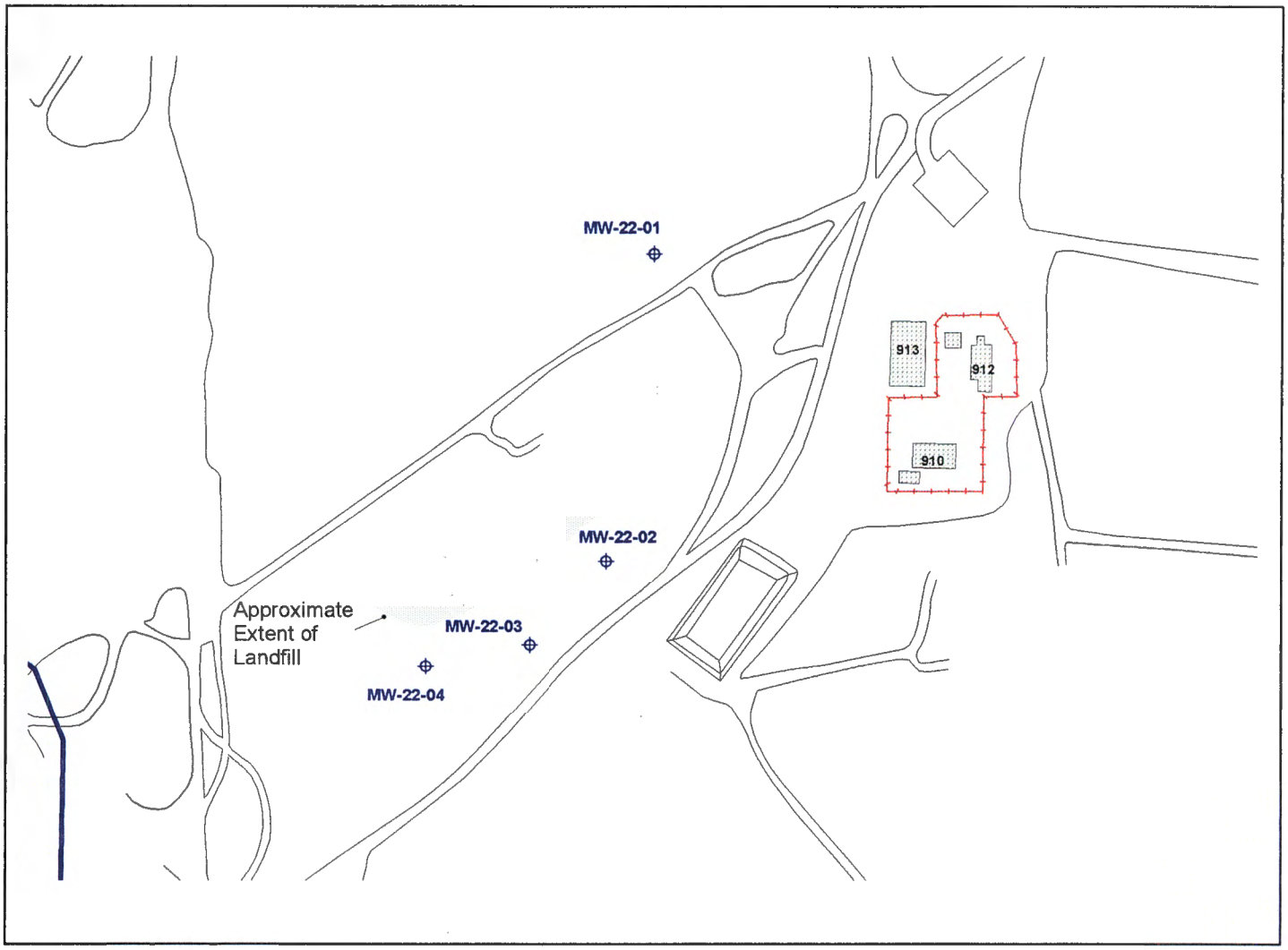
[7] Blind duplicate collected in 1997; information available in 1997 LTM Report (FEC, 1997).

CRDL - Contract Required Detection Limit
IDL - Instrument Detection Limit
ND - not detected at or above method reporting limit
NS - not sampled
PCBs - polychlorinated biphenyls
TCE - trichloroethylene
VOCs - volatile organic compounds
µg/L - micrograms per liter

Laboratory Qualifiers--assigned as a result of internal laboratory data assessment procedures
B - Value less than CRDL but greater than or equal to IDL
J - Estimated value; less than CRDL but greater than or equal to IDL
P - Results of dual-column GC technique differ by more than 25%; value is lower of the two
UB - Qualifies as non-detect due to presence of analyte in associated laboratory blank

EPA Qualifiers--assigned as a result of independent data validation
(J) - Estimated value

J:\Projects\HOLLOMAN\LTM\Final Report\LTMdatatables.xls; LF-22



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

200 0 200 400 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

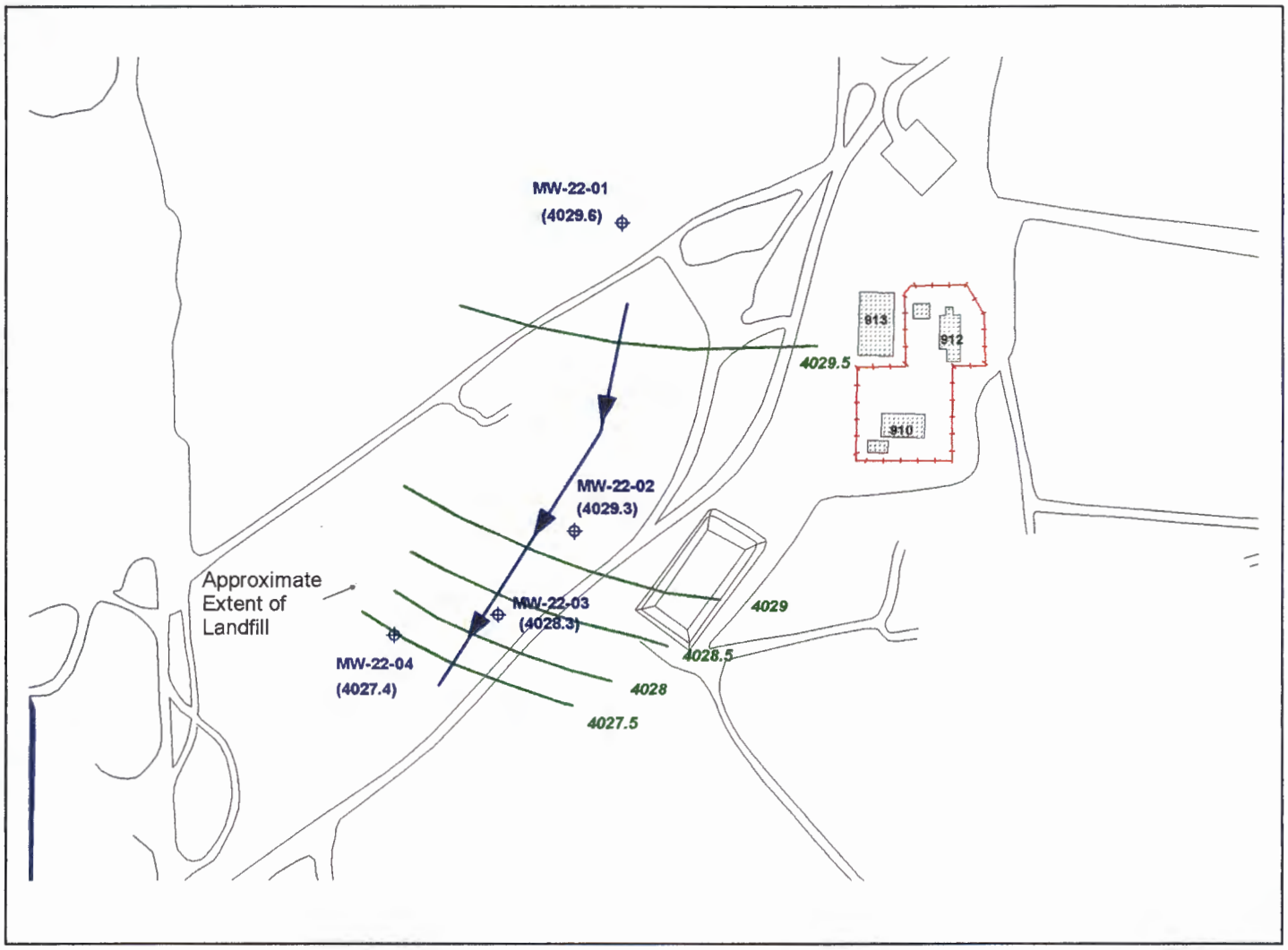
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-16
SITE LOCATION MAP FOR LF-22

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

Groundwater elevations are expressed in feet above mean sea level (msl).

GROUNDWATER FLOW DIRECTION

200 0 200 400 Feet

LEGEND

MONITORING WELL

4081 GROUNDWATER ELEVATION CONTOUR

(4080.2) GROUNDWATER ELEVATION (msl)

ROAD

BUILDING

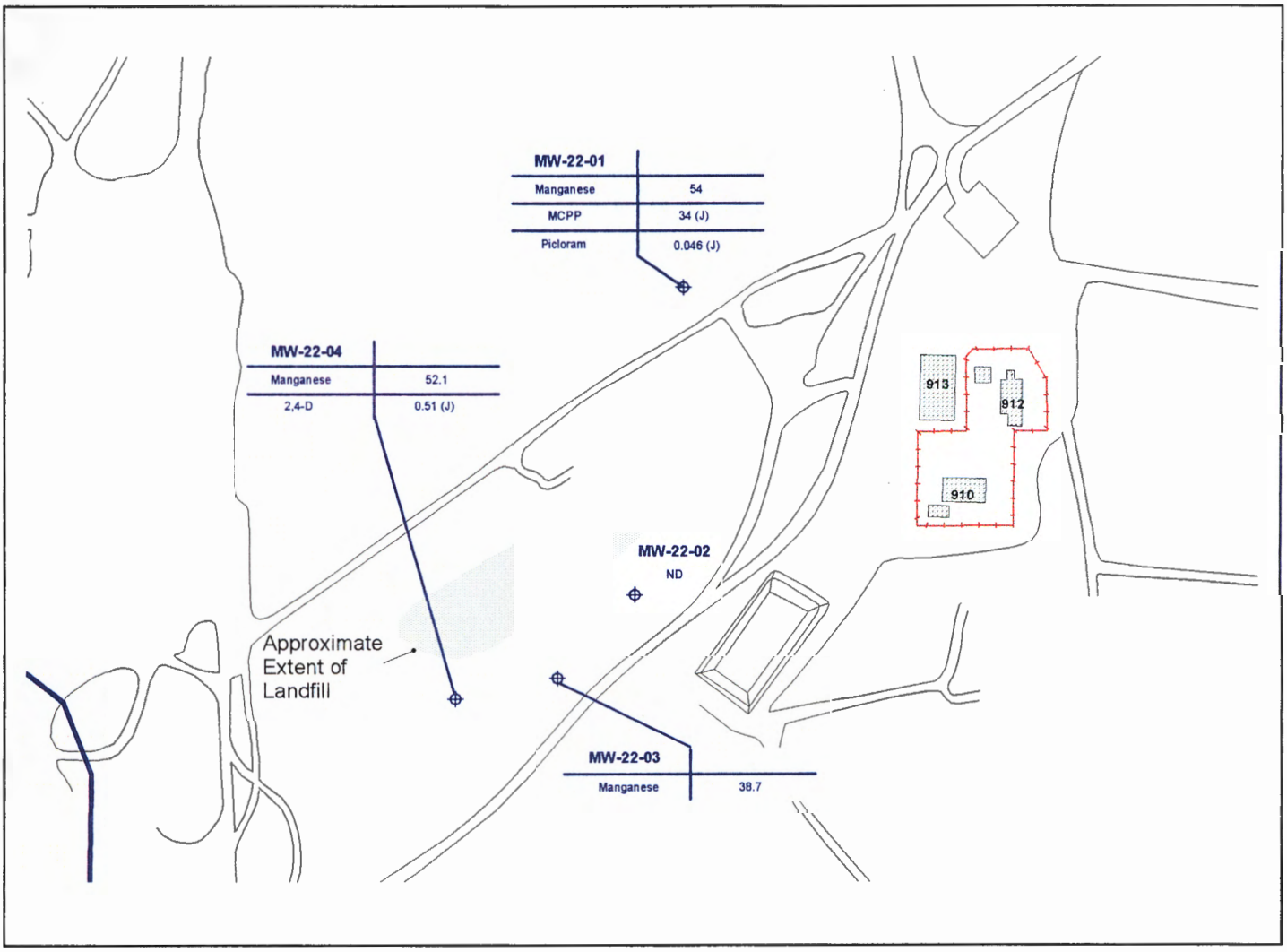
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-17
POTENTIOMETRIC SURFACE MAP FOR LF-22

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

All concentrations are expressed in micrograms per liter.

ND - no analytes were detected above the method reporting limit

(J) - estimated value (EPA qualifier)

200 0 200 400 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-18
GROUNDWATER ANALYTICAL RESULTS FOR LF-22

FOSTER WHEELER ENVIRONMENTAL CORPORATION

3.7 LF-23 MOBBS LANDFILL (SWMU 108)

3.7.1 Background

The Mobile Bare Base Squadron (MOBBS) Landfill (LF-23, SWMU 108) is approximately 2 to 3 acres in size and consists of a borrow pit west of the Solar Observatory. Figure 3-19 presents a site map including monitoring well locations. The landfill received cans of pesticides, 55-gallon drums of unknown contents, and demolition debris. Reconnaissance surveys identified trailers, empty 55-gallon drums, containers of roofing tar, and asphalt visible at the surface of the landfill (FEC 1998).

Four groundwater monitoring wells (MW-23-01, MW-23-02, MW-23-03, and MW-23-04) were installed at this landfill during the 29 Waste Sites RI (Radian 1992a). The wells were sampled for VOCs, pesticides, herbicides, PCBs, total metals, and groundwater quality parameters. The pesticide delta-BHC was detected in two of the downgradient wells (MW-23-02 and MW-23-04). No other pesticides or herbicides were detected.

A BRA was prepared for the landfill (Radian 1992b). The BRA concluded that constituent concentrations do not pose a threat to human health or the environment. Inclusion in the LTM Program was recommended with 10 years of groundwater monitoring for VOCs, OCPs, chlorinated herbicides, and dissolved RCRA metals.

3.7.2 1999 Long-Term Groundwater Monitoring

During the 1999 LTM Program, water level measurements were collected in September and December and used to develop a potentiometric surface map for the site (Section 3.7.2.1). Groundwater samples were collected from the four groundwater monitoring wells previously installed at the site. Groundwater samples collected from this site were analyzed for VOCs, OCPs and PCBs, chlorinated herbicides, total mercury, dissolved RCRA metals, iron, and manganese. Results of these analyses are discussed in Section 3.7.2.2. Various field parameters, including pH, temperature, and specific conductivity, were measured prior to the collection of groundwater samples at each well and are presented in Appendix C. The number and type of groundwater samples collected at LF-23 are summarized in Table 3-14.

Table 3-14. Summary of 1999 LTM Program at LF-23

Well Numbers	Analyses (EPA Methods)	Analytes Detected Above CRDLs	Analytes Exceeding NMED Standards	QA Samples	Number of Samples
MW-23-01 MW-23-02 MW-23-03 MW-23-04	VOCs (8260B) Metals (6010B Trace, 7470A) OCPs (8081A) PCBs (8082) Herbicides (8151A)	Iron, Manganese, 4-Nitrophenol	Manganese	None	4

3.7.2.1 Site Hydrogeology

Depth-to-groundwater measurements at LF-23 in December 1999 ranged from 5.95 to 10.30 ft below TOC, corresponding to groundwater elevations ranging from 4024.2 to 4026.9 ft msl (Appendix C). There was little or no variance in water level measurements between September and December 1999. A potentiometric surface map was prepared for the site using the groundwater data from December 1999 (Figure 3-20). The contour map indicates that groundwater flows to the southwest across a gradient of approximately 0.004 ft/ft. The gradient and groundwater flow direction observed at LF-23 during the 1999 LTM Program are comparable with the results from the 1995 and 1997 LTM events.

3.7.2.2 Groundwater Sampling Results

Table 3-15 summarizes the analytical results for the LTM Program at LF-23. Detections reported during the 1995, 1997, and 1999 LTM events are presented. Analytes reported above the CRDL in 1999 are shown in Figure 3-21.

No VOCs were detected at LF-23 during the 1999 LTM event.

Iron and manganese were detected at LF-23 in 1999. One detection of manganese exceeded New Mexico Groundwater Quality Standards.

No OCPs or PCBs were detected at LF-23 in 1999. 4-Nitrophenol, a chlorinated herbicide, was detected in well MW-23-01 (the upgradient well at the site) at a concentration of 0.085 μg/L. This concentration is estimated based on data validation criteria and is below the New Mexico

Groundwater Quality Standard for phenols. 4-Nitrophenol was not previously detected at this site.

3.7.3 Recommendations

It is recommended that sampling and analysis for iron, manganese, selenium, and herbicides continues at LF-23. It is also recommended that sampling and analysis for VOCs and OCPs be discontinued at this site.

Table 3-15. Summary of Analytical Results from the 1995, 1997, and 1999 Long-Term Monitoring Programs at LF-23

Well Number	MW-23-01[6]			MW-23-02			MW-23-03			MW-23-04[7]		
Sampling Date	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99
VOCs[1] (µg/L)												
Acetone	ND	ND	1 J	ND	ND	ND	ND	ND	ND	ND	ND	1 J
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	ND	20	ND	ND	ND	ND	ND	18 UB	ND	ND	ND	ND
Metals[2] (µg/L)												
Arsenic	ND	ND	7.9 B (J)	ND	ND	6.2 B (J)	ND	ND	ND	ND	ND	3.8 B (J)
Barium	ND	ND	21.5 B (J)	ND	21	29.1 B (J)	ND	20	25.3 B (J)	ND	ND	33.3 B (J)
Cadmium	ND	ND	ND	ND	ND	0.7 B	ND	ND	ND	ND	ND	ND
Iron	ND	ND	646	ND	ND	ND	ND	ND	ND	ND	ND	91.1 B
Manganese	ND	ND	**348**	ND	ND	12.6 B	ND	ND	80.3	ND	ND	98.5
Selenium	ND	ND	16.4 B (J)	ND	13	**57.4 B (J)**	ND	11 JS	42.7 B (J)	ND	ND	13.0 B (J)
Silver	ND	ND	ND	ND	ND	5.2 B (J)	ND	ND	ND	ND	ND	ND
Organochlorine Pesticides[3] (µg/L)												
all	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Polychlorinated Biphenyls[4] (µg/L)												
all	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorinated Herbicides[5] (µg/L)												
4-Nitrophenol	ND	ND	0.085 P (J)	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

[1] Unless otherwise reported, no VOCs were detected using EPA Method 8260B.
(EPA Method 8260A was used to analyze for VOCs in the 1995 and 1997 programs.)

[2] Unless otherwise reported, no metals were detected using EPA Methods 6010B Trace & 7470A.
(EPA Methods 6010 & 7000 were used to analyze for metals in the 1995 and 1997 programs.)

[3] Unless otherwise reported, no organochlorine pesticides or PCBs were detected using EPA Method 8081A/8082.
(EPA Method 8080A was used to analyze for organochlorine pesticides in the 1995 and 1997 programs.)

[4] Unless otherwise reported, no PCBs were detected using EPA Method 8082.
(EPA Method 8080A was used to analyze for chlorinated herbicides in the 1995 and 1997 programs.)

[5] Unless otherwise reported, no chlorinated herbicides were detected using EPA Method 8151A.
(EPA Method 8150B was used to analyze for chlorinated herbicides in the 1995 and 1997 programs.)

[6] Upgradient monitoring well

[7] Blind duplicate collected in 1997; information available in 1997 LTM Report (FEC, 1997).

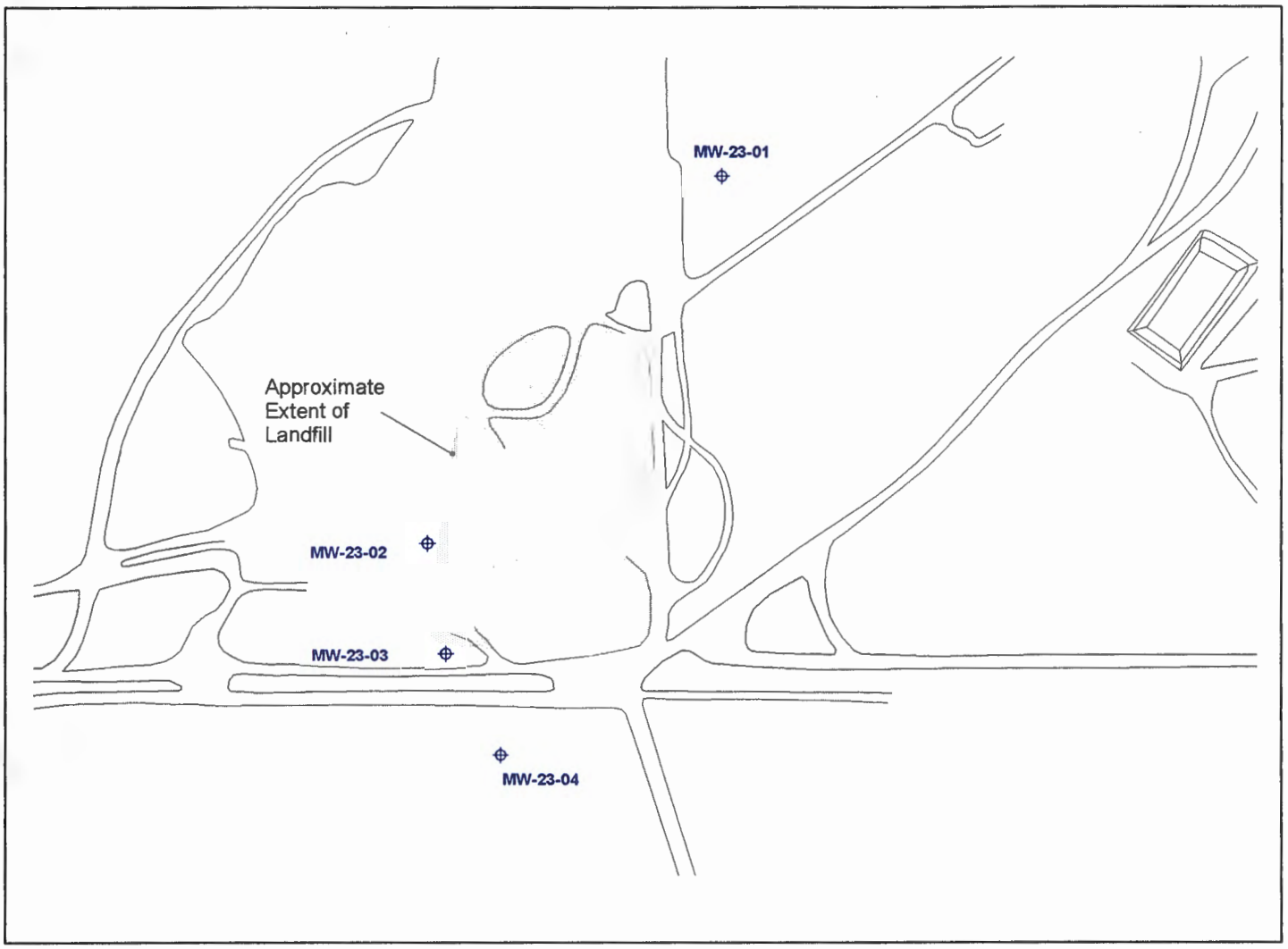
CRDL - Contract Required Detection Limit
IDL - Instrument Detection Limit
ND - not detected at or above method reporting limit
NS - not sampled
PCBs - polychlorinated biphenyls
VOCs - volatile organic compounds
µg/L - micrograms per liter

Laboratory Qualifiers--assigned as a result of internal laboratory data assessment procedures
B - Value less than CRDL but greater than or equal to IDL
J - Estimated value; less than CRDL but greater than or equal to IDL
JS - Result qualified as estimated due to low spike recovery
P - Results of dual-column GC technique differ by more than 25%; value is lower of the two
UB - Qualifies as non-detect due to presence of analyte in associated laboratory blank

EPA Qualifiers--assigned as a result of independent data validation
(J) - Estimated value

Bold values indicate 1999 analytes above New Mexico Groundwater QualityStandards.

J:\Projects\HOLLOMAN\LTM\Final Report\LTMdatatables.xls; LF-23



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

200 0 200 400 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

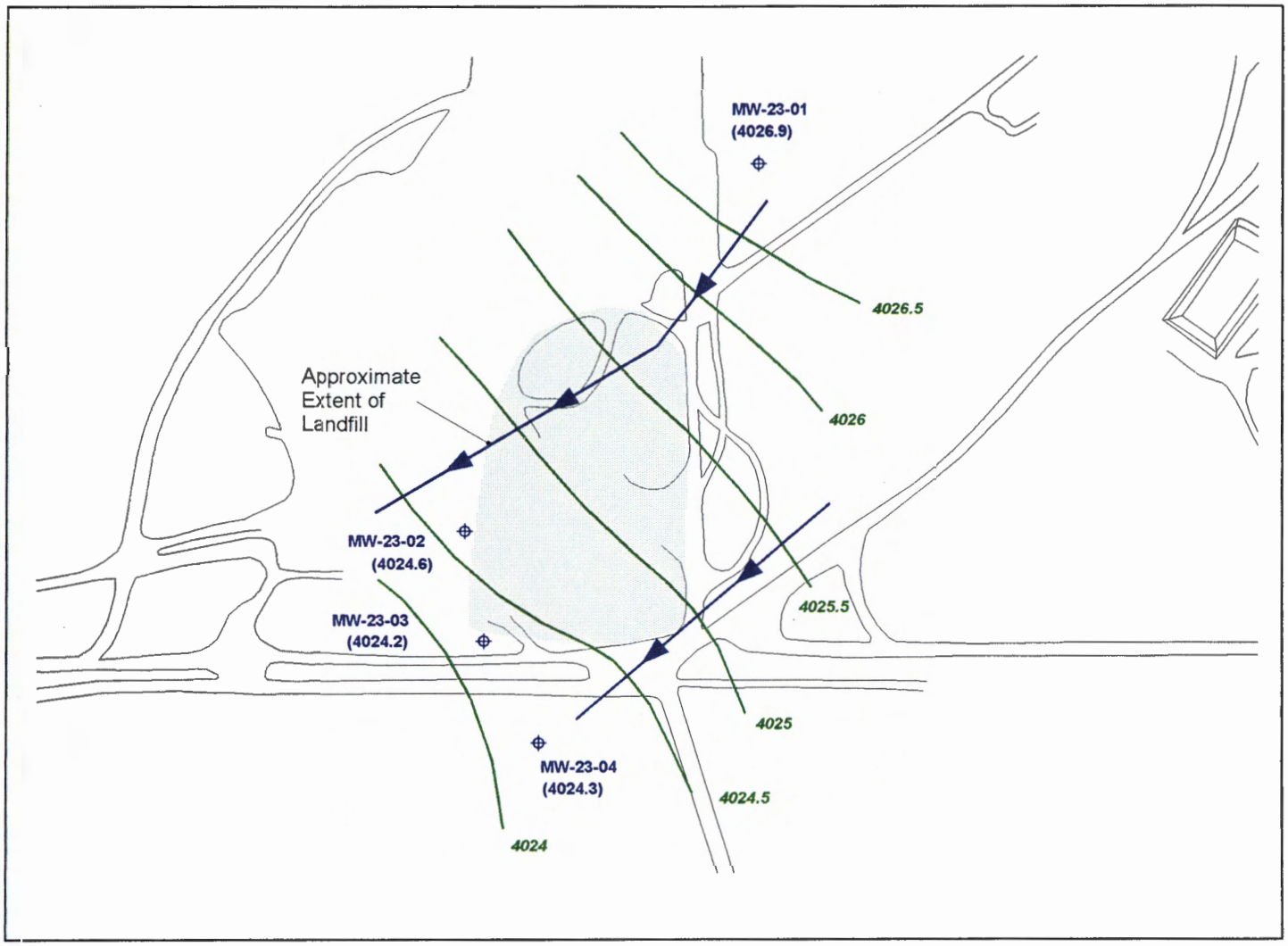
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-19
SITE LOCATION MAP FOR LF-23

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

Groundwater elevations are expressed in feet above mean sea level (msl).

GROUNDWATER FLOW DIRECTION

200 0 200 400 Feet

LEGEND

MONITORING WELL

4081 GROUNDWATER ELEVATION CONTOUR

(4080.2) GROUNDWATER ELEVATION (msl)

ROAD

BUILDING

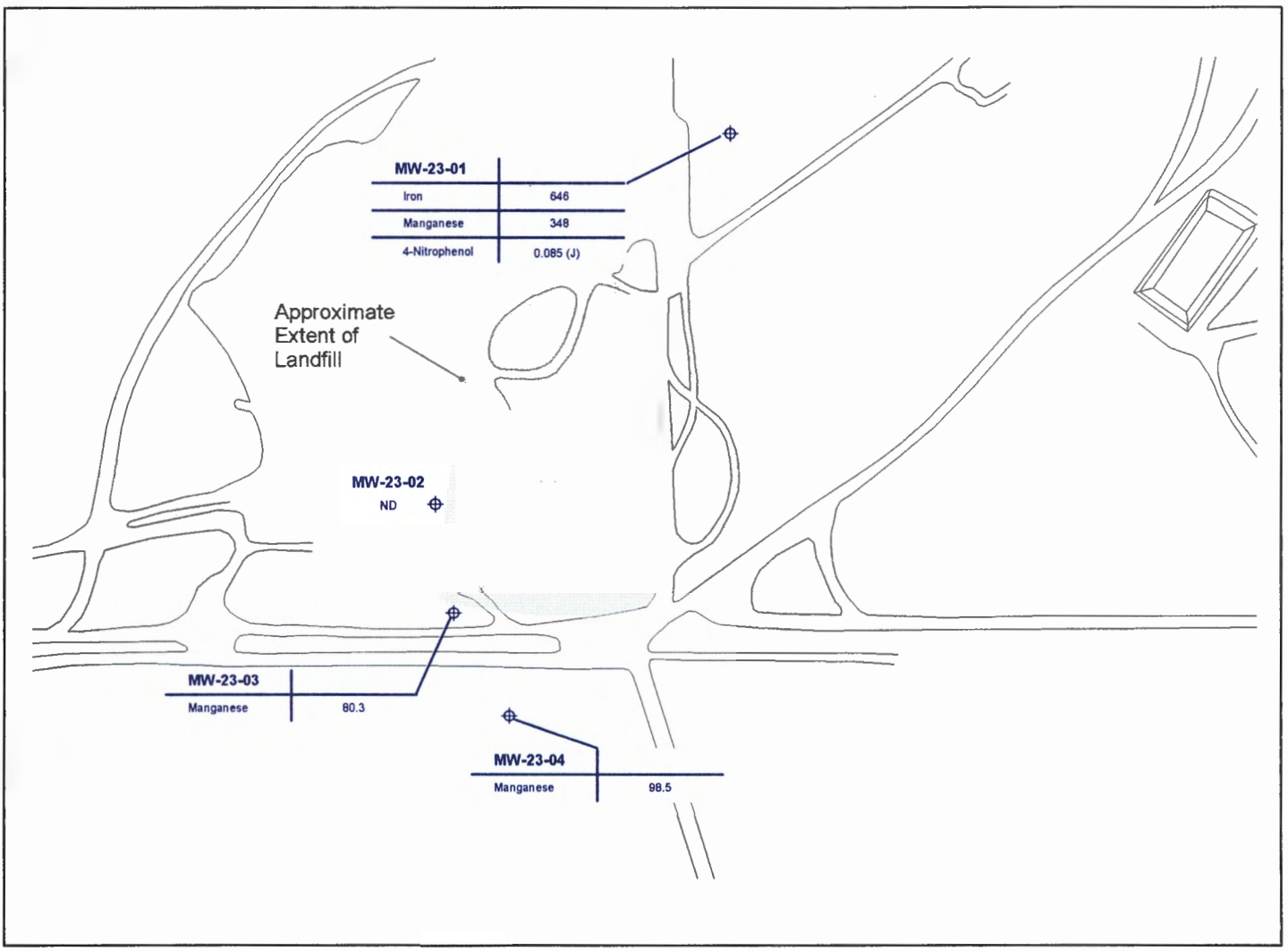
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-20
POTENTIOMETRIC SURFACE MAP FOR LF-23

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

All concentrations are expressed in micrograms per liter.

ND - no analytes were detected above the method reporting limit

(J) - estimated value (EPA qualifier)

200 0 200 400 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-21
GROUNDWATER ANALYTICAL RESULTS FOR LF-23

FOSTER WHEELER ENVIRONMENTAL CORPORATION

3.8 OT-44 BUILDING 301 AIRCRAFT MAINTENANCE HANGAR (SWMU A0C-P)

3.8.1 Background

Building 301 Aircraft Maintenance Hangar (OT-44, SWMU AOC-P), formerly known as Site 50, is located south of Building 301 in the northern portion of the Main Base. Building 301 is a hangar used for equipment maintenance adjacent to the main taxiway. Figure 3-27 presents a site map including groundwater monitoring well locations. Petroleum hydrocarbons were observed floating on the water table during a sewer line repair. The source of the fuel was either from jet fuel spills or a heating oil underground storage tank (UST) formally located south of Building 301 (FEC 1998).

One monitoring well was installed during the 1985 Site Investigation and five wells were installed during the RI (Walk, Haydel & Associates 1989a). Soil and groundwater contamination was present at the site. Contaminants of concern included total petroleum hydrocarbons (TPH); benzene, toluene, ethylbenzene, and xylene (BTEX); and VOCs, including 1,1-dichloroethane; 1,1-dichloroethylene; 2,4-dinitrotoluene; trichloroethylene; 1,1,1-trichloroethane; and 1,2--trans-dichloroethylene.

The BRA conducted by Walk, Haydel & Associates (1989b) concluded that no significant public health or environmental risk exists for the site. An additional investigation to determine the extent of TPH in soil was conducted in 1994 and entailed the drilling and sampling of six soil borings (Foster Wheeler/Radian 1995). TPH concentrations above the base-specific NMED limit of 1,000 milligrams per kilogram (mg/kg) were detected in a single boring. A conditional no further action was recommended for this site.

3.8.2 1999 Long-Term Groundwater Monitoring

During the 1999 LTM Program, water level measurements were collected in September and December and used to develop a potentiometric surface map for the site (Section 3.8.2.1). Groundwater samples were collected from four wells, S50-MW6 (upgradient), S50-MW1, S50-MW2, and S50-MW3 (downgradient). Groundwater samples were analyzed for VOCs. Results of this analysis are discussed in Section 3.8.2.2. Various field parameters, including pH, temperature, and specific conductivity, were measured prior to the collection of groundwater

samples at each well and are presented in Appendix C. The number and type of groundwater samples collected at OT-44 are summarized in Table 3-16.

Table 3-16. Summary of 1999 LTM Program at OT-44

Well Numbers	Analyses (EPA Methods)	Analytes Detected Above CRDLs	Analytes Exceeding NMED Standards	QA Samples	Number of Samples
S50-MW1 S50-MW2 S50-MW3 S50-MW6	VOCs (8260B)	Carbon disulfide	None	S50-MW6	5

3.8.2.1 Site Hydrogeology

Depth-to-groundwater measurements at OT-44 in December 1999 ranged from 6.41 to 9.52 ft below TOC, corresponding to groundwater elevations ranging from 4062.9 to 4063.6 ft msl (Appendix C). There was little or no variance in water level measurements between September and December 1999. A potentiometric surface map was prepared for the site using the groundwater data from December 1999 (Figure 3-23). The contour map indicates that groundwater flows to the southwest across a gradient of approximately 0.004 ft/ft. The gradient and groundwater flow direction observed at OT-44 during the 1999 LTM Program are comparable with the results from the 1995 and 1997 LTM events.

3.8.2.2 Groundwater Sampling Results

Table 3-17 summarizes the analytical results for the LTM Program at OT-44. Detections reported during the 1995, 1997, and 1999 LTM events are presented. Analytes reported above the CRDL in 1999 are shown in Figure 3-24.

Carbon disulfide was the only VOC detected at OT-44 during the 1999 event (in well S50-MW2). The detection of carbon disulfide was consistent with detections of this analyte in 1997.

3.8.3 Recommendations

No changes to the current LTM Program at OT-44 are recommended at this time.

Table 3-17. Summary of Analytical Results from the 1995, 1997, and 1999 Long-Term Monitoring Programs at OT-44

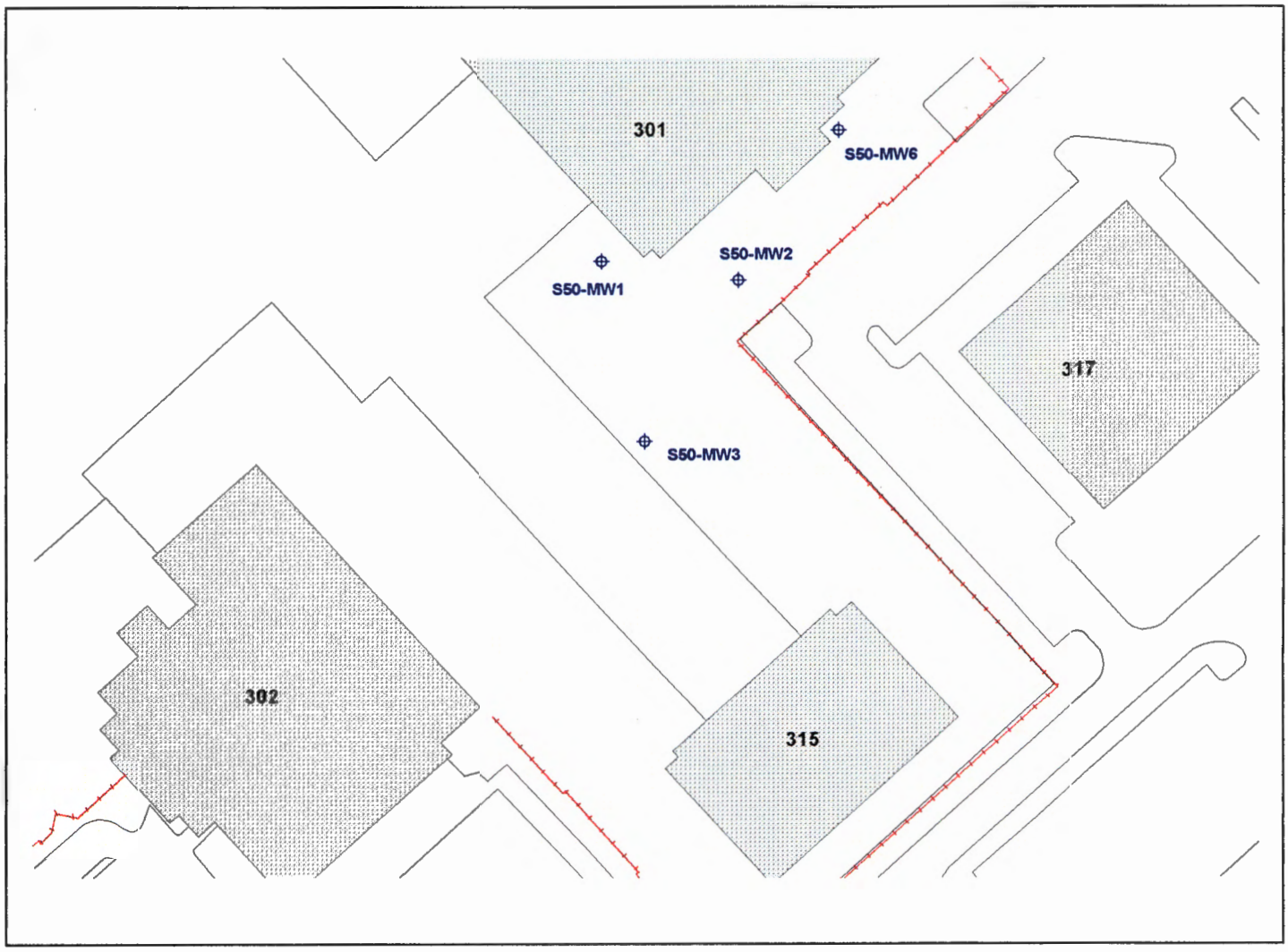
Well Number	S50-MW1			S50-MW2			S50-MW3			S50-MW6[2]		
Sampling Date	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99
VOCs[1] (µg/L)												
Benzene	NS	ND	ND	ND	1.2	ND	NS	ND	ND	ND	ND	ND
sec-Butylbenzene[3]	NS	ND	NA	ND	1.9 J	NA	NS	ND	NA	ND	ND	NA
Carbon disulfide	NS	ND	ND	11	2.6 J	5	NS	ND	ND	ND	1.8 J	ND
Chloroform	NS	0.76 J	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND
Methylene chloride	NS	ND	ND	ND	7.2 UB	ND	NS	7.6 UB	ND	ND	7.1 UB	ND
Toluene	NS	ND	ND	ND	1.4	ND	NS	ND	ND	ND	ND	ND
TCE	NS	ND	ND	ND	ND	1 J	NS	ND	ND	ND	ND	ND

Notes:

[1] Unless otherwise reported, no VOCs were detected using EPA Method 8260B.
(EPA Method 8260A was used to analyze for VOCs in the 1995 and 1997 programs.)
[2] Upgradient monitoring well
[3] Organic analyte not included in EPA Method 8260B
CRDL - Contract Required Detection Limit
IDL - Instrument Detection Limit
NA - not analyzed
ND - not detected at or above method reporting limit
NS - not sampled
TCE - trichloroethylene
VOCs - volatile organic compounds
µg/L - micrograms per liter

Laboratory Qualifiers--assigned as a result of internal laboratory data assessment procedures
J - Estimated value; less than CRDL but greater than or equal to IDL
UB - Qualifies as non-detect due to presence of analyte in associated laboratory blank

EPA Qualifiers--assigned as a result of independent data validation
None



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

100 0 100 200 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

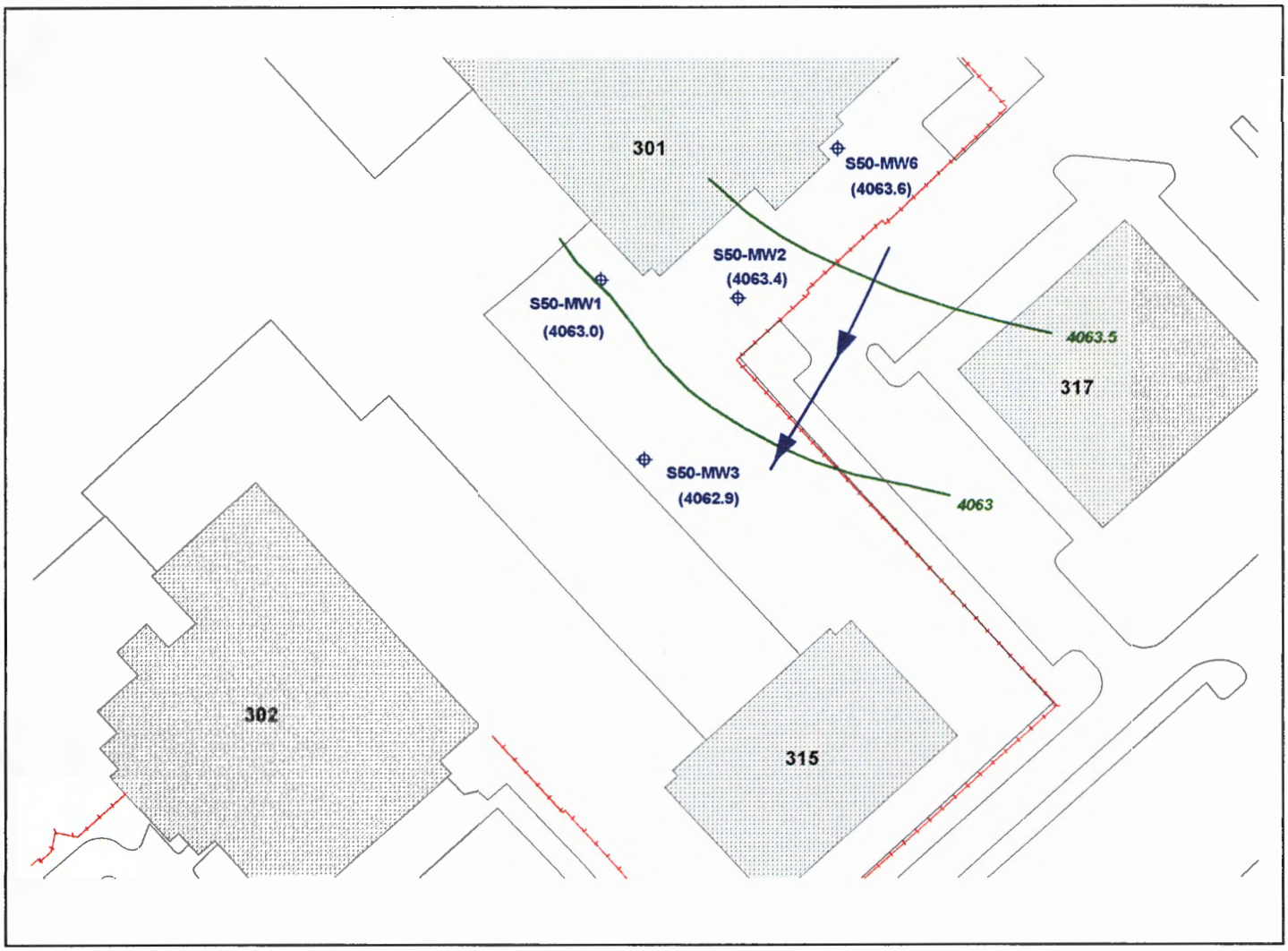
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-22
SITE LOCATION MAP FOR OT-44

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

Groundwater elevations are expressed in feet above mean sea level (msl).

GROUNDWATER FLOW DIRECTION

100 0 100 200 Feet

LEGEND

MONITORING WELL

4081 GROUNDWATER ELEVATION CONTOUR

(4080.2) GROUNDWATER ELEVATION (msl)

ROAD

BUILDING

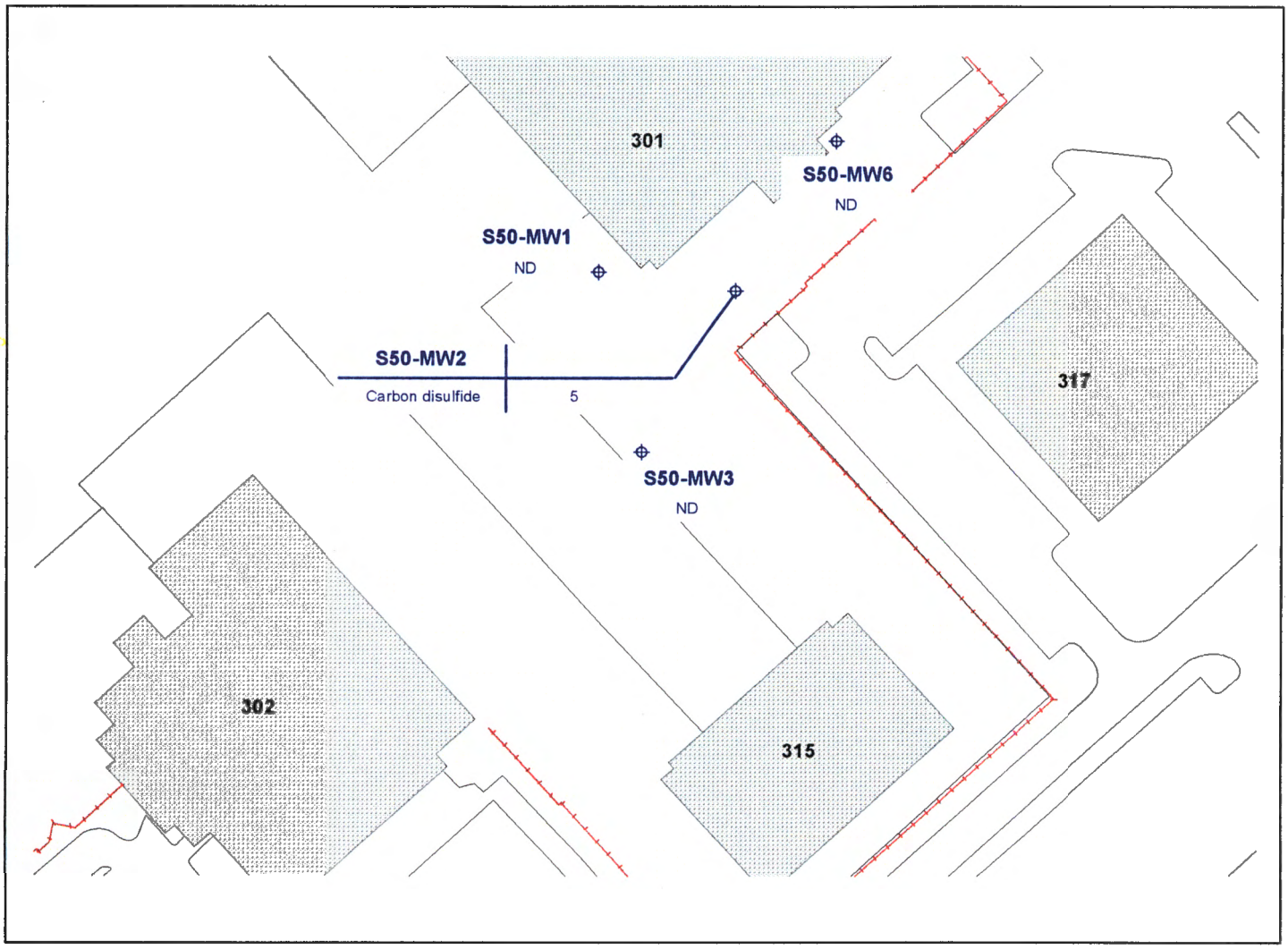
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-23
POTENTIOMETRIC SURFACE MAP FOR OT-44

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

All concentrations are expressed in micrograms per liter.

ND - no analytes were detected above the method reporting limit

100 0 100 200 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-24
GROUNDWATER ANALYTICAL RESULTS FOR OT-44

FOSTER WHEELER ENVIRONMENTAL CORPORATION

3.9 SS-48 MILITARY GAS STATION

3.9.1 Background

The Military Gas Station (SS-48), formerly known as Site 55, has been in operation for over 30 years (FEC 1998). Figure 3-25 presents a site map including groundwater monitoring well locations.

Three monitoring wells were installed during a Phase I RI to determine if groundwater had been contaminated as a result of a leaking UST system at the site. During Phase II, two additional on-site wells and two downgradient monitoring wells were installed. Five VOCs (benzene, toluene, xylene, acetone, and TCE) and six SVOCs (nitrobenzene, acenaphthene, fluorene, 2-methylnaphthalene, naphthalene, and phenanthrene) were detected in well MW3. MW3 is located within 20 ft of the former UST pit. No other organics were detected in any of the other wells, except tetrachloroethylene and TCE in well MW1, located within 30 ft of the former tank pit (Walk, Haydel & Associates 1989a).

A BRA was conducted for the site and concluded that the site posed no significant threat to human health or the environment (Walk, Haydel & Associates 1989b). USTs containing gasoline and diesel fuel were removed in March 1994.

3.9.2 1999 Long-Term Groundwater Monitoring

During the 1999 LTM Program, water levels were collected in September and December and used to develop a potentiometric surface map for the site (Section 3.9.2.1). Groundwater samples were collected from four of the seven previously installed monitoring wells: S55-MW2 (upgradient), S55-MW4, S55-MW5, and S55-MW7 (downgradient). Groundwater samples collected at this site were analyzed for VOCs and total and dissolved lead. Results of these analyses are discussed in Section 3.9.2.2. Various field parameters, including pH, temperature, and specific conductivity, were measured prior to the collection of groundwater samples at each well and are presented in Appendix C. The number and type of groundwater samples collected at SS-48 are summarized in Table 3-18.

Table 3-18. Summary of 1999 LTM Program at SS-48

Well Numbers	Analyses (EPA Methods)	Analytes Detected Above CRDLs	Analytes Exceeding NMED Standards	QA Samples	Number of Samples
S55-MW2 S55-MW4 S55-MW5 S55-MW7	VOCs (8260B) Dissolved lead (6010B Trace)	Benzene, Ethylbenzene	Benzene, Ethylbenzene	S55-MW5	5

3.9.2.1 Site Hydrogeology

Depth-to-groundwater measurements at SS-48 in December 1999 ranged from 4.59 to 7.08 ft below TOC, corresponding to groundwater elevations ranging from 4036 to 4040 ft msl (Appendix C). There was little or no variance in water level measurements between September and December 1999. A potentiometric surface map was prepared for the site using the groundwater data from December 1999 (Figure 3-26). The contour map indicates that groundwater flows to the southwest across a gradient of approximately 0.02 ft/ft. The gradient and groundwater flow direction observed at SS-48 during the 1999 LTM Program are comparable with the results from the 1995 and 1997 LTM events.

3.9.2.2 Groundwater Sampling Results

Table 3-19 summarizes the analytical results for the LTM Program at SS-48. Detections reported during the 1995, 1997, and 1999 LTM events are presented. Analytes reported above the CRDL in 1999 are shown on Figure 3-27.

Two VOCs, benzene and ethylbenzene, were detected at concentrations exceeding the New Mexico Groundwater Quality Standards in well S55-MW5. Benzene was detected in 1995 at a similar concentration; ethylbenzene had not been previously reported in this well.

Dissolved lead was analyzed for but was not detected in any of the wells.

3.9.3 Recommendations

It is recommended that sampling and analysis for lead be discontinued at SS-48 because it has not been detected at this site during any of the three LTM Programs. No other changes are recommended at this time.

Table 3-19. Summary of Analytical Results from the 1995, 1997, and 1999 Long-Term Monitoring Programs at SS-48

Well Number	S55-MW2[3]			S55-MW4			S55-MW5			S55-MW7		
Sampling Date	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99
VOCs[1] (µg/L)												
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	4 J	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	38	ND	**170 D**	ND	ND	ND
Bromodichloromethane	ND	1.3 J	ND	ND	2.2 J	ND	ND	ND	ND	ND	ND	ND
2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylmethyl ether[4]	ND	ND	NA	ND	ND	NA	ND	350	NA	ND	ND	NA
Chloroform	ND	2.6 J	2 J	ND	2.4 J	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.92 J	ND
Ethylbenzene	ND	ND	ND	ND	0.81 J	ND	ND	ND	**870 D**	ND	ND	ND
Methylene chloride	ND	1.7 UB	ND	ND	1.6 UB	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TCE	6.6	ND	ND	ND	ND	ND	ND	ND	ND	6.7	6.7	ND
Toluene	ND	ND	ND	ND	1.2	ND	ND	ND	1 J	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	1 J	ND	ND	ND
o-Xylene	ND	ND	ND	ND	0.74 J	ND	ND	ND	ND	ND	ND	ND
m,p-Xylenes	ND	ND	ND	ND	2.1	ND	ND	ND	ND	ND	ND	ND
Metals[2] (µg/L)												
Dissolved Lead	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND

Notes:

[1] Unless otherwise reported, no VOCs were detected using EPA Method 8260B.
(EPA Method 8260A was used to analyze for VOCs in the 1995 and 1997 programs.)

[2] Dissolved lead (EPA Method 6010B Trace) is the only metallic analyte of interest for site SS-48.
(EPA Method 7421 was used to analyze for dissolved lead in the 1995 and 1997 programs.)

[3] Upgradient monitoring well

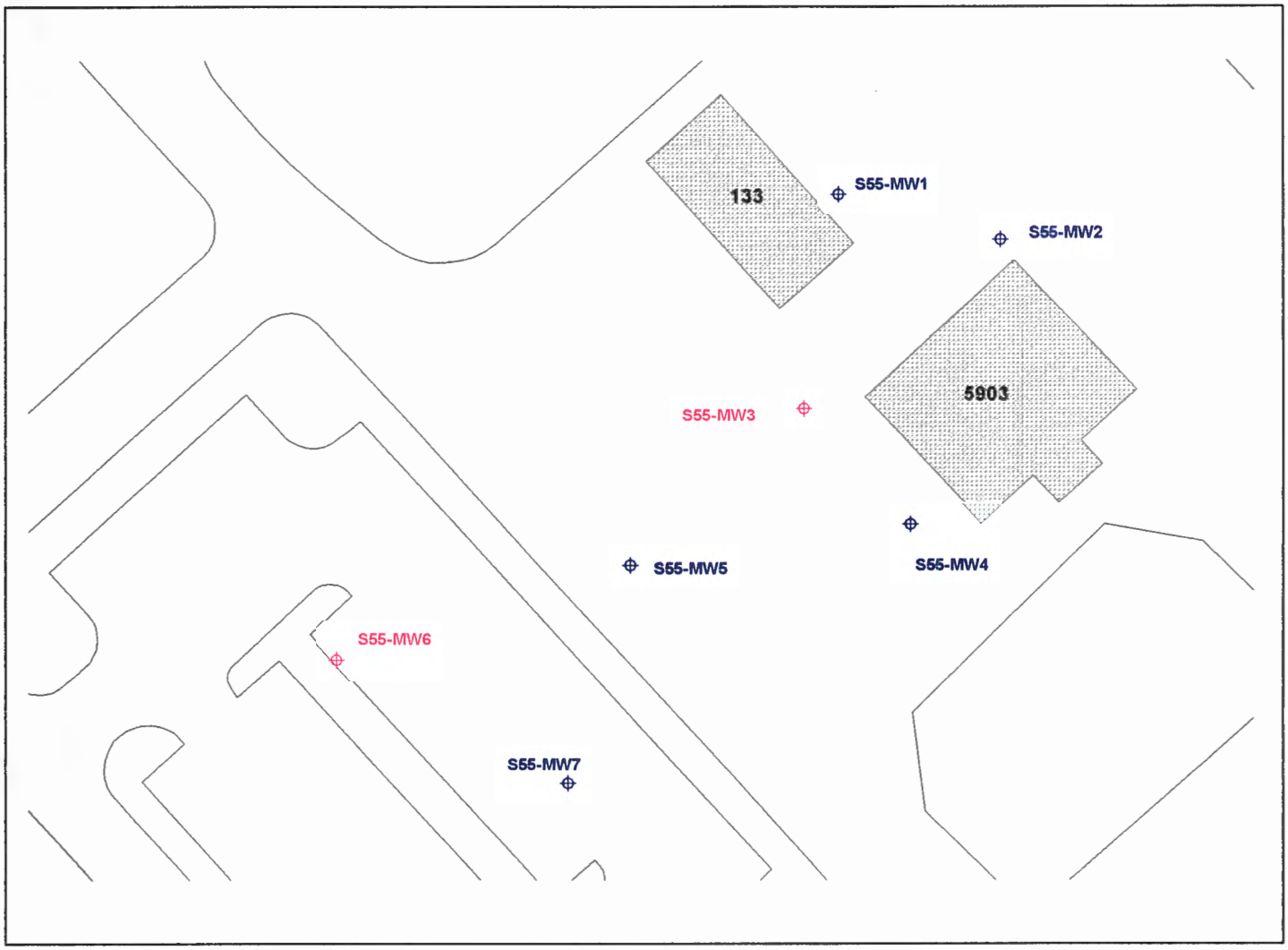
[4] Organic analyte not included in EPA Method 8260B

CRDL - Contract Required Detection Limit
IDL - Instrument Detection Limit
NA - not analyzed
ND - not detected at or above method reporting limit
TCE - trichloroethylene
VOCs - volatile organic compounds
µg/L - micrograms per liter

Laboratory Qualifiers--assigned as a result of internal laboratory data assessment procedures
D - Value derived from analysis of diluted sample
J - Estimated value; less than CRDL but greater than or equal to IDL
UB - Qualifies as non-detect due to presence of analyte in associated laboratory blank

EPA Qualifiers--assigned as a result of independent data validation
None

Bold values indicate 1999 analytes above New Mexico Groundwater Quality Standards.



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

50 0 50 100 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

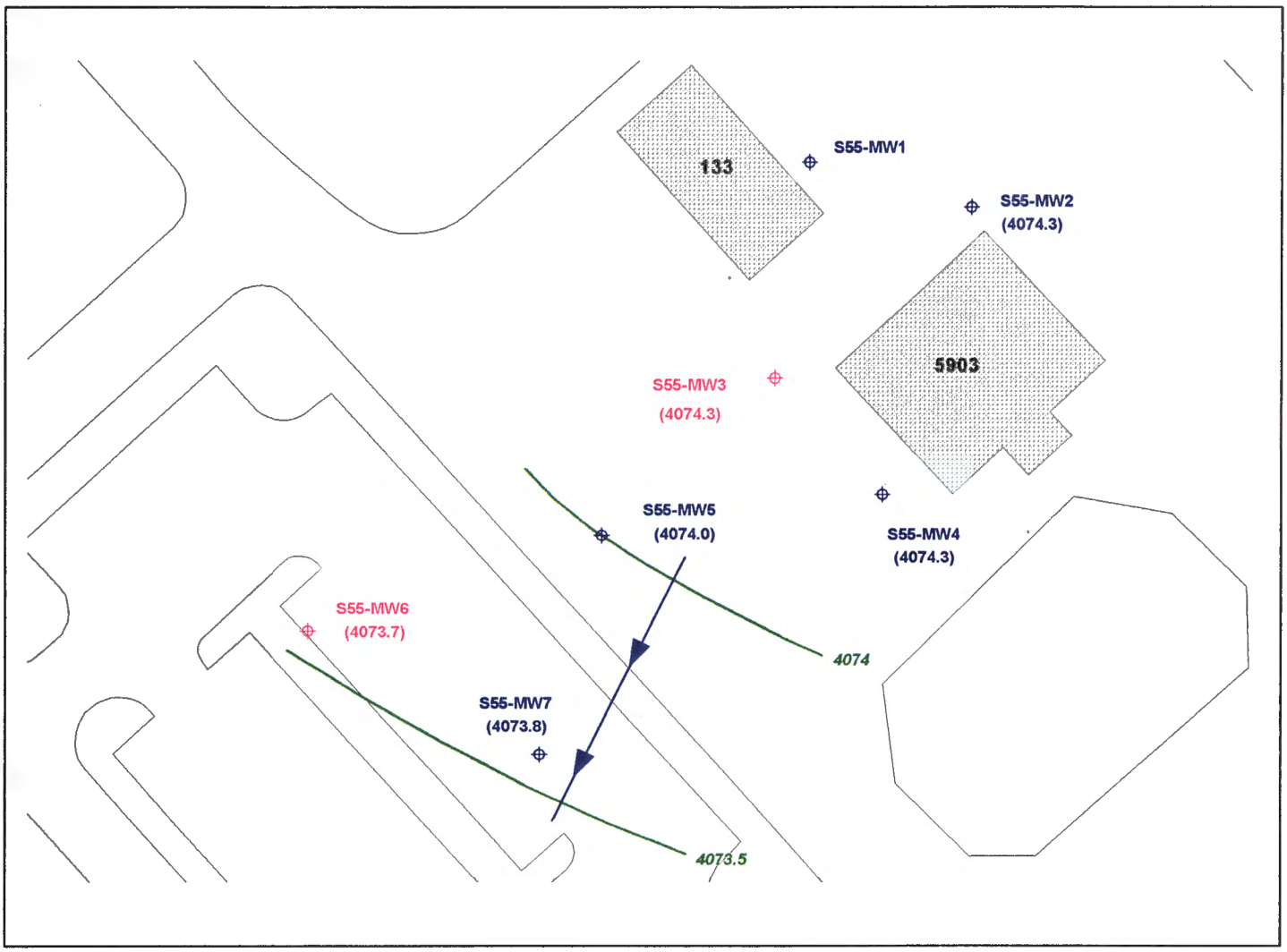
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-25
SITE LOCATION MAP FOR SS-48

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

Groundwater elevations are expressed in feet above mean sea level (msl).

GROUNDWATER FLOW DIRECTION

50 0 50 100 Feet

LEGEND

MONITORING WELL

4081 GROUNDWATER ELEVATION CONTOUR

(4080.2) GROUNDWATER ELEVATION (msl)

ROAD

BUILDING

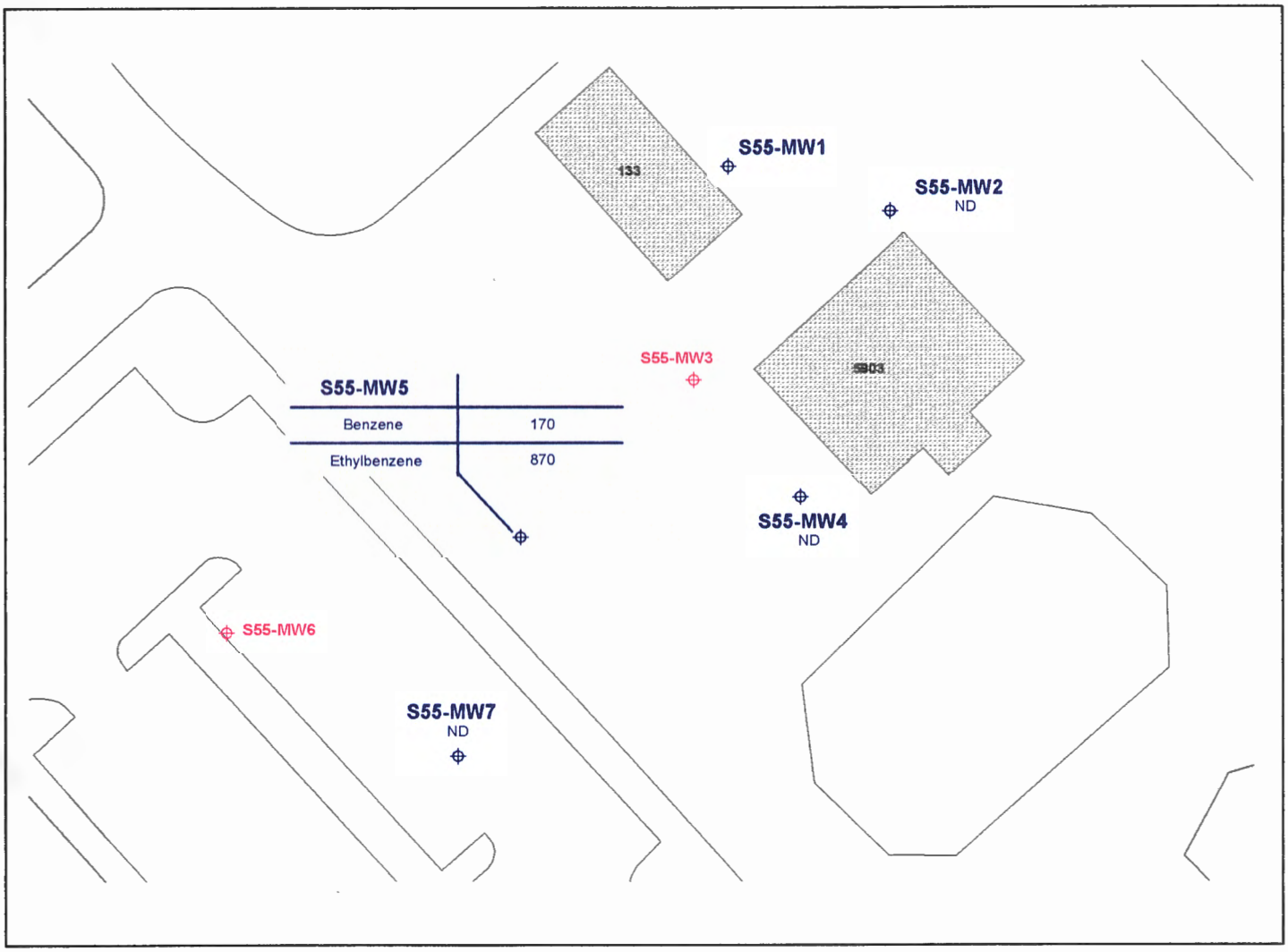
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-26
POTENTIOMETRIC SURFACE MAP FOR SS-48

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

All concentrations are expressed in micrograms per liter.

ND - no analytes were detected above the method reporting limit

50 0 50 100 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-27
GROUNDWATER ANALYTICAL RESULTS FOR SS-48

FOSTER WHEELER ENVIRONMENTAL CORPORATION

3.10 DP-30 AND SD-33 GREASE TRAP DISPOSAL PITS (SWMU 113B)

3.10.1 Background

The Grease Trap Disposal and Cooking Grease Disposal Pits (DP-30/SD-33, SWMU 113B) are located west of the Fire Training Area and east of the Skeet Range. The waste pits consisted of elongated excavations approximately 40- to 50-ft long and 2- to 3-ft wide. Drilling and trenching activities indicated that the depths of the disposal pits ranged from 2.5- to 9-ft deep. The pits received waste from the oil/water separators and grit chambers on the Base. Occasionally, the pits would accept sludge from vacuum trucks used to unclog sewer lines at the Primate Research Lab (Radian 1992a). Figure 3-28 presents a site map including the boring and monitoring well locations.

Soil and groundwater samples were collected from the Grease Trap pits during the 29 Waste Sites RI (Radian 1992a). Soil and waste sludge samples contained VOCs, metals, oil and grease, and pesticides. Four groundwater monitoring wells (MW-30/33-01, MW-30/33-02, MW-30/33-03, and MW-30/33-04) were installed during the RI. One of the wells was installed approximately 400 ft upgradient of the closest pit and three monitoring wells were installed approximately 150 to 200 ft downgradient of the closest pits. Analytes reported above the CRDL include metals (antimony, beryllium, cadmium, chromium, copper, nickel, zinc, lead, and selenium) and toluene. Other constituents listed in the reports, including gross alpha, gross beta, and selected pesticides, were below the method detection limits.

A BRA was conducted for the sites concluded they posed no threat to human health or the environment (Radian 1992b).

3.10.2 1999 Long-Term Groundwater Monitoring

During the 1999 LTM Program, water level measurements were collected in September and December and used to develop a potentiometric surface map for the site (Section 3.10.1). Groundwater samples collected at this site were analyzed of VOCs, total mercury, dissolved RCRA metals, iron, and manganese. Results of these analyses are discussed in Section 3.10.2. OCPs, PCBs, and chlorinated herbicides were analyzed for during previous LTM Program sampling events. However, because none of these compounds were detected during the 1995 or

1997 events, these analyses were discontinued for the 1999 event. Various field parameters, including pH, temperature, and specific conductivity, were measured prior to the collection of groundwater samples at each well and are presented in Appendix C. The number and type of groundwater samples collected at DP-30/SD-33 are summarized in Table 3-20.

Table 3-20. Summary of 1997 LTM Program at DP-30 and SD-33

Well Numbers	Analyses (EPA Methods)	Analytes Detected Above CRDLs	Analytes Exceeding NMED Standards	QA Samples	Number of Samples
MW-30/33-01 MW-30/33-02 MW-30/33-03 MW-30/33-04	VOCs (8260B) Metals (6010B Trace, 7470A)	Chloroform; 1,1-Dichloroethane; TCE	1,1-Dichloroethane; TCE	MW-30/33-01	5

3.10.2.1 Site Hydrogeology

Depth-to-groundwater measurements at DP-30/SD-33 in December 1999 ranged from 21.64 to 23.62 ft below TOC, corresponding to groundwater elevations ranging from 4080.3 to 4081.0 ft msl (Appendix C). There was little or no variance between water level measurements in September and December 1999. A potentiometric surface map was prepared for the site using the groundwater data from December 1999 (Figure 3-29). The contour map indicates that groundwater flows to the south across a gradient of approximately 0.0009 ft/ft. The gradient and groundwater flow direction observed at DP-30/SD-33 during the 1999 LTM Program are comparable with the results from the 1995 and 1997 LTM events.

3.10.2.2 Groundwater Sampling Results

Table 3-21 summarizes the analytical results for the LTM Program at DP-30/SD-33. Detections reported during the 1995, 1997, and 1999 LTM events are presented. Analytes reported above CRDL in 1999 are shown on Figure 3-30.

Two VOCs (1,1-dichloroethane and TCE) were detected in well MW-30/33-04 at concentrations exceeding the New Mexico Groundwater Quality Standards. Both were detected at concentrations only slightly greater than those detected in 1995 and 1997. These increases are not considered significant because they are not greater than one order of magnitude. Chloroform

was also detected in this well at concentration less than the New Mexico Groundwater Quality Standards.

No metals were detected at DP-30/SD-33 in 1999.

3.10.3 Recommendations

It is recommended that sampling and analysis only for VOCs, iron, and selenium continue at DP-30/SD-33. It is also recommended that roots be removed from all wells at this site 2 weeks prior to the next sampling event to ensure that representative water level measurements and groundwater samples are obtained.

Table 3-21. Summary of Analytical Results from the 1995, 1997, and 1999 Long-Term Monitoring Programs at DP-30 & SD-33

Well Number	MW-30/33-01[5,6]			MW-30/33-02			MW-30/33-03			MW-30/33-04		
Sampling Date	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99	Aug-95	Sep-97	Sep-99
VOCs[1] (µg/L)												
Acetone	ND	ND	ND	ND	3.1 J	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1 J
Bromoform	ND	ND	ND	ND	0.73 J	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	0.76 J	ND	ND	ND	ND	ND	4.7	5
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	22	25	**27**
1,1-Dichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2 J
cis-1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.9 J	2 J
Methylene chloride	ND	19 UB	ND	ND	3.8 UB	ND	ND	3.7 UB	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1 J
TCE	ND	ND	ND	ND	ND	ND	ND	ND	ND	110	100	**150**
Metals[2] (µg/L)												
Arsenic	ND	ND	12.4 B (J)	ND	ND	11.7 B (J)	ND	ND	4.3 B (J)	ND	ND	14 B (J)
Barium	ND	ND	12.4 B (J)	ND	22	22.4 B (J)	ND	24	26.3 B (J)	ND	ND	15.8 B (J)
Iron	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	300	ND
Manganese	ND	ND	0.5 B	ND	ND	ND	ND	ND	0.2 B	ND	ND	1.7 B
Selenium	ND	10	21.8 B (J)	ND	23	27 B (J)	ND	35	24.4 B (J)	ND	14	21.3 B (J)
Organochlorine Pesticides[3] (µg/L)												
all	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA
Chlorinated Herbicides[4] (µg/L)												
all	NA	ND	NA	NA	ND	NA	NA	ND	NA	NA	ND	NA

Notes:

[1] Unless otherwise reported, no VOCs were detected using EPA Method 8260B.
(EPA Method 8260A was used to analyze for VOCs in the 1995 and 1997 programs.)

[2] Unless otherwise reported, no metals were detected using EPA Methods 6010B Trace & 7470A.
(EPA Methods 6010 & 7000 were used to analyze for metals in the 1995 and 1997 programs.)

[3] Unless otherwise reported, no organochlorine pesticides were detected using EPA Method 8081A.
(EPA Method 8080A was used to analyze for organochlorine pesticides in the 1995 and 1997 programs.)

[4] Unless otherwise reported, no chlorinated herbicides were detected using EPA Method 8151A.
(EPA Method 8150B was used to analyze for chlorinated herbicides in the 1995 and 1997 programs.)

[5] Blind duplicate collected in 1997; information available in 1997 LTM Report (FEC, 1997).

[6] Upgradient monitoring well

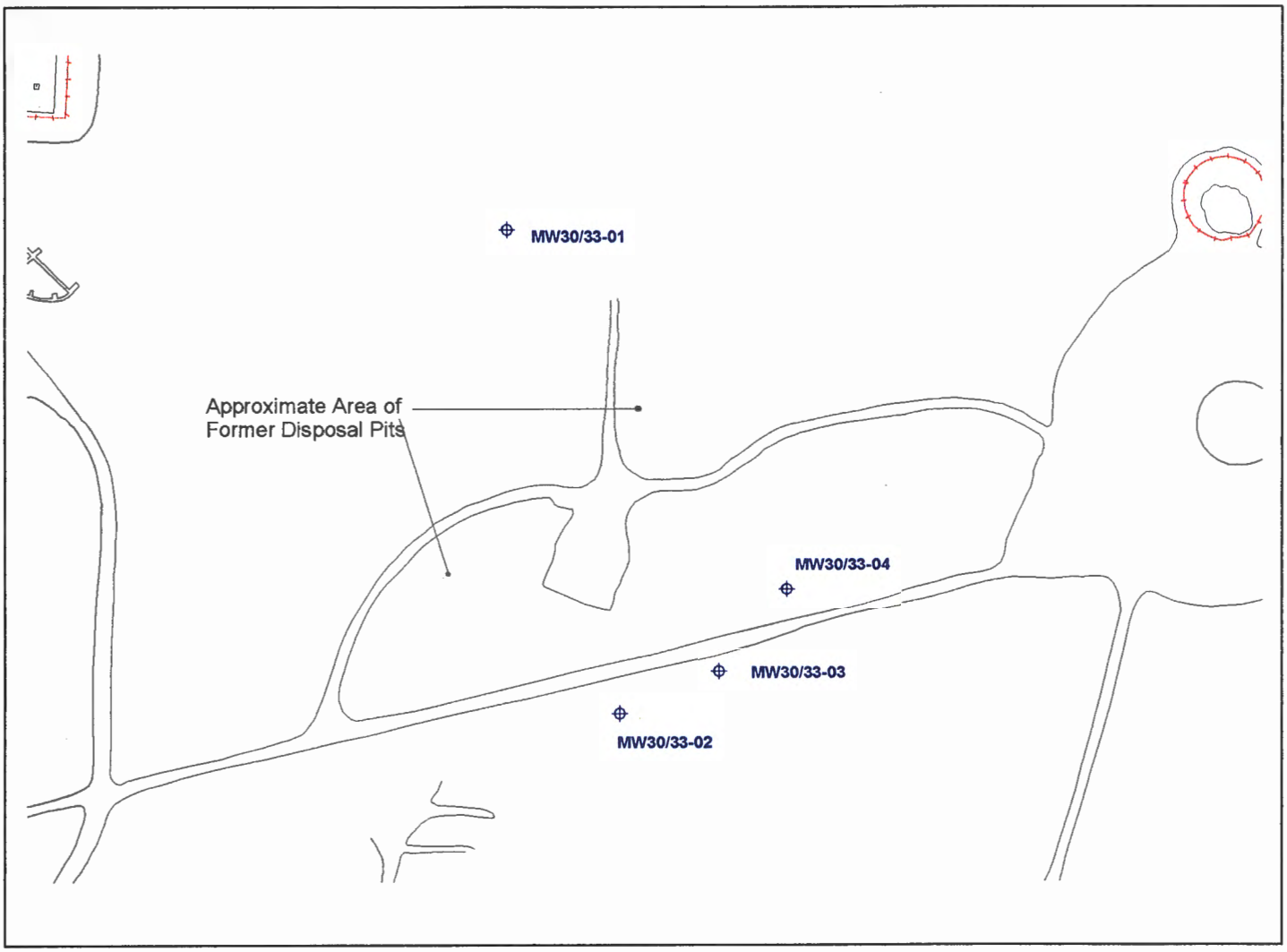
CRDL - Contract Required Detection Limit
IDL - Instrument Detection Limit
NA - not analyzed
ND - not detected at or above method reporting limit
NS - not sampled
TCE - trichloroethylene
VOCs - volatile organic compounds
µg/L - micrograms per liter

Laboratory Qualifiers--assigned as a result of internal laboratory data assessment procedures
B - Value less than CRDL but greater than or equal to IDL
J - Estimated value; less than CRDL but greater than or equal to IDL
UB - Qualifies as non-detect due to presence of analyte in associated laboratory blank

EPA Qualifiers--assigned as a result of independent data validation
(J) - Estimated value

Bold values indicate 1999 analytes above New Mexico Groundwater Quality Standards.

J:\Projects\HOLLOMAN\LTM\Final Report\LTMdatatables.xls; DP-30 & SD-33



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

200 0 200 400 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

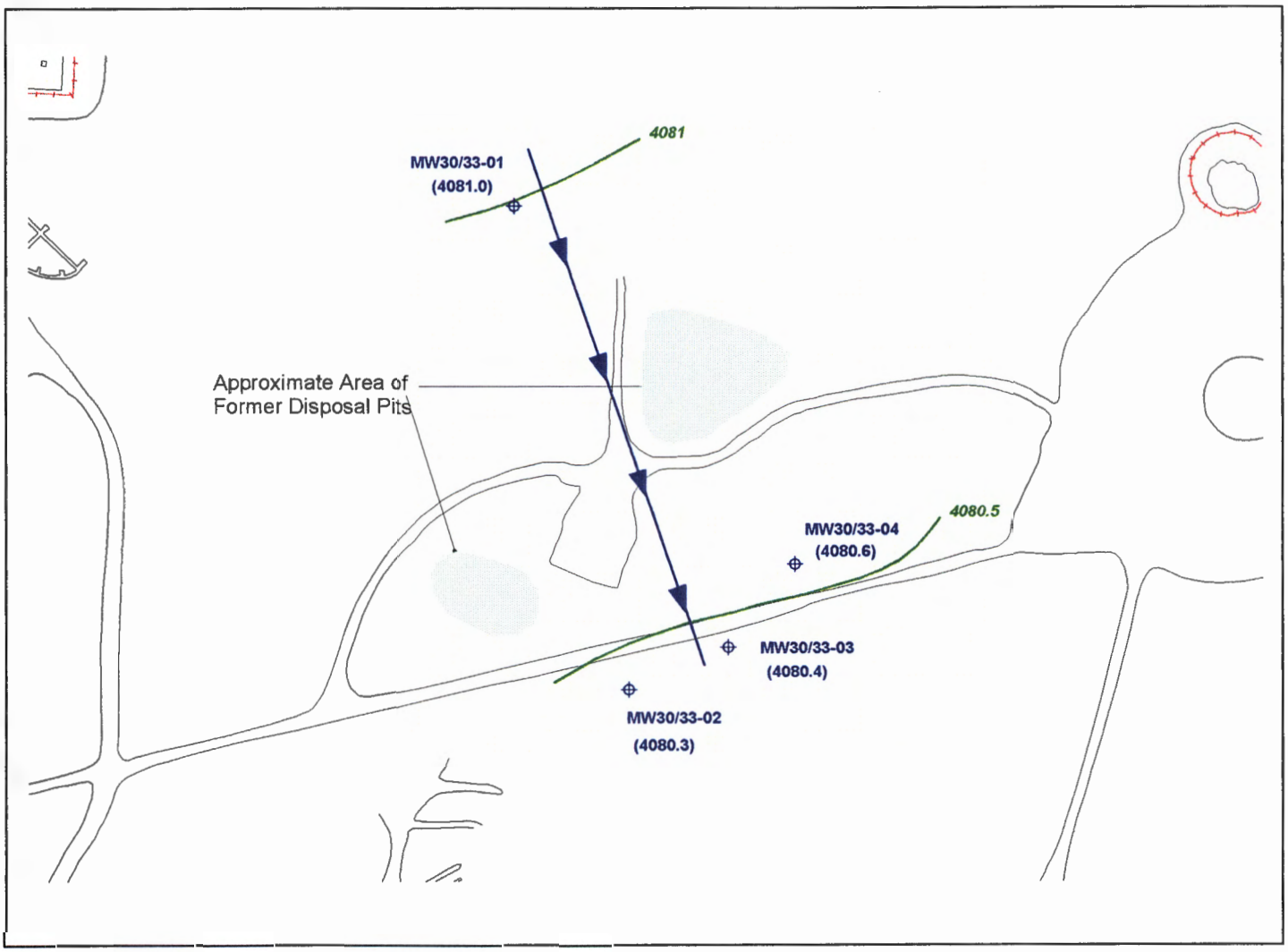
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-28
SITE LOCATION MAP FOR DP-30 AND SD-33

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

Groundwater elevations are expressed in feet above mean sea level (msl).

GROUNDWATER FLOW DIRECTION

200 0 200 400 Feet

LEGEND

MONITORING WELL

4081 GROUNDWATER ELEVATION CONTOUR

(4080.2) GROUNDWATER ELEVATION (msl)

ROAD

BUILDING

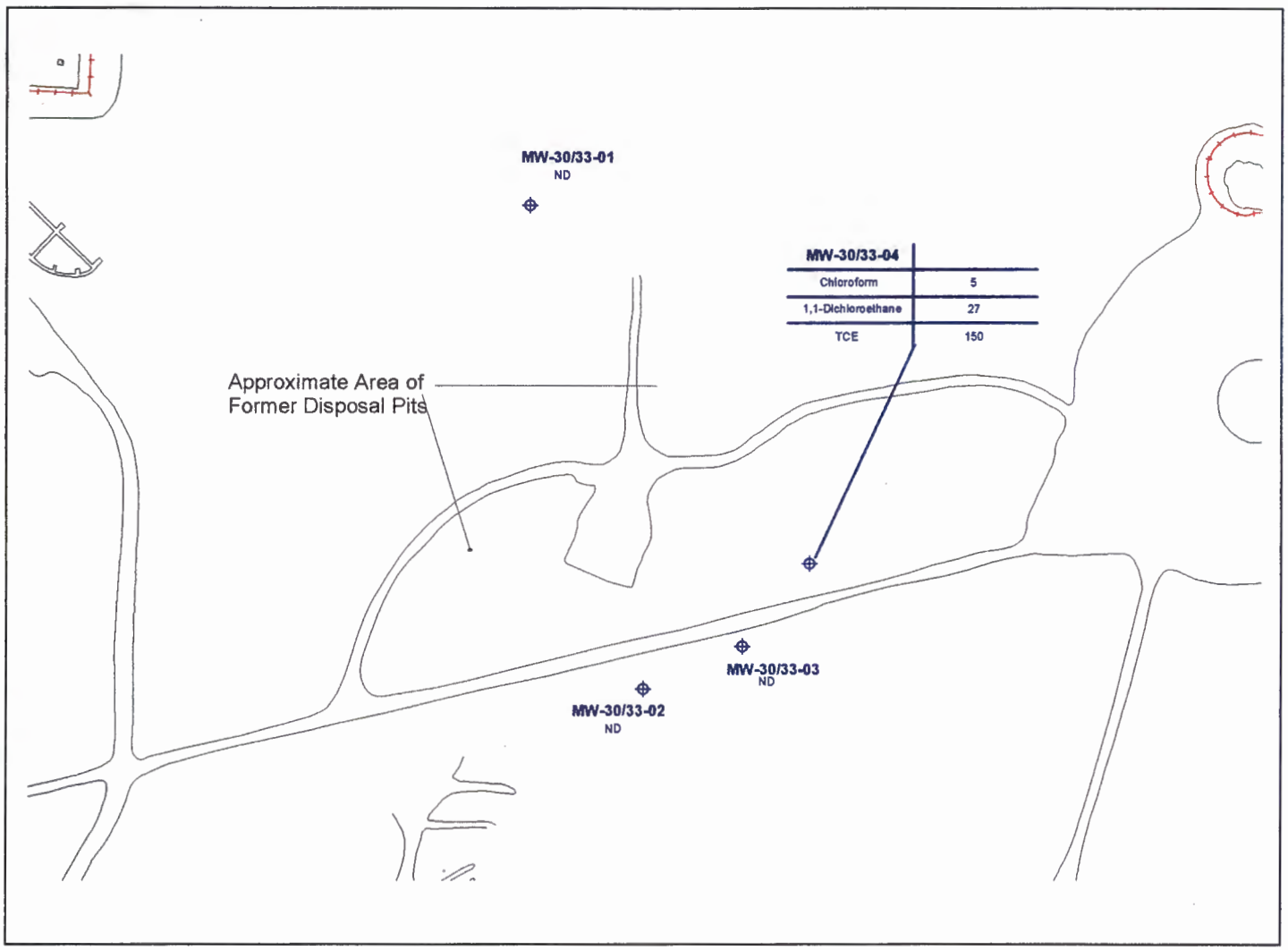
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-29
POTENTIOMETRIC SURFACE MAP
FOR DP-30 AND SD-33

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

All concentrations are expressed in micrograms per liter.

ND - no analytes were detected above the method reporting limit

200 0 200 400 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-30

GROUNDWATER ANALYTICAL RESULTS
FOR DP-30 AND SD-33

FOSTER WHEELER ENVIRONMENTAL CORPORATION

3.11 SS-56 WEST RAMP FUEL SPILL

3.11.1 Background

The West Ramp Fuel Spill Site (SS-56) is located west of the north/south runway. Figure 3-31 presents a site map including the monitoring well locations. The west ramp is a concrete pad approximately 2,100 ft by 600 ft that was formerly used for parking and maintenance of airplanes. A subsurface investigation was conducted at the site in 1991 to evaluate possible subsurface fuel contamination associated with past practices and fuel spills (Woodward-Clyde 1991). The field investigation consisted of installing and sampling six monitoring wells (WCC-1 through WCC-6) and drilling and sampling 14 borings or test holes (TH-1 through TH-14). Groundwater was encountered at the site between 1.5 to 5 ft below grade. No water-level measurements were collected after drilling and no survey of TOC elevations was conducted.

During the field investigation, no TPH was detected and BTEX levels were near or below the limit of quantification in groundwater. Chromium and mercury were detected in two of the six water samples (Woodward-Clyde 1991). Results of the soil sample analyses revealed detections of TPH and lead. All remaining analyses conducted on the soil samples, including the remaining metals; BTEX; Toxicity Characteristic Leaching Procedure (TCLP) volatiles, semivolatiles, metals, pesticides, and herbicides indicated concentrations near or below the limit of quantification (Woodward-Clyde 1991).

Subsequent to the investigation conducted in 1991, ten buildings were installed in the west ramp area.

3.11.2 1999 Long-Term Groundwater Monitoring

During the 1999 LTM Program, water level measurements were collected in September 1999 and used to develop a potentiometric surface map for the site (Section 3.11.2.1). Water levels could not be collected December 1999 because the site is in a secure area and access was not gained. Groundwater samples were collected from wells MW-56-01, WCC-3, and WCC-5 and analyzed for VOCs and dissolved lead. Results of these analyses are discussed in Section 3.11.2.2. Various field parameters, including pH, temperature, and specific conductivity, were measured

prior to the collection of groundwater samples at each well and are presented in Appendix C. The number and type of groundwater samples collected at SS-56 are summarized in Table 3-22.

Table 3-22. Summary of 1999 LTM Program at SS-56

Well Numbers	Analyses (EPA Methods)	Analytes Detected Above CRDLs	Analytes Exceeding NMED Standards	QA Samples	Number of Samples
MW-56-01 WCC-3 WCC-5	VOCs (8260B) Dissolved lead (6010B Trace)	None	None	None	3

3.11.2.1 Site Hydrogeology

Depth-to-groundwater measurements at SS-56 in September 1999 ranged from 5.06 to 10.57 ft below TOC, corresponding to groundwater elevations ranging from 4049.13 to 4052.07 ft msl (Appendix C). A potentiometric surface map was prepared for the site using the groundwater data from September 1999 because access to SS-56 could not be secured through Base security in December (Figure 3-32). The contour map indicates that groundwater flows to the southwest across a gradient of approximately 0.004 ft/ft. The gradient and groundwater flow direction observed at SS-56 during the 1999 LTM Program are comparable with the results from the 1995 and 1997 LTM events.

3.11.2.2 Groundwater Sampling Results

Table 3-23 summarizes the analytical results for the LTM Program at SS-56. SS-56 was added to the LTM Program in 1997. Therefore, sample results from 1997 serve as the baseline concentrations for this site and are included in Table 3-23. This table reflects all analytes detected at least once during LTM Program sampling events.

There were no analytes reported above the CRDL at SS-56 during the 1999 LTM Program. This finding is consistent with results from the 1997 sampling event.

3.11.3 Recommendations

No changes to the LTM Program for SS-56 are recommended at this time.

Table 3-23. Summary of Analytical Results from the 1996, 1997, and 1999 Long-Term Monitoring Programs at SS-56

Well Number	MW-56-01[3]		WCC-3			WCC-5		
Sampling Date	Sep-97	Sep-99	Apr-96[4]	Sep-97	Sep-99	Apr-96[4]	Sep-97	Sep-99
VOCs[1] (µg/L)								
Methylene chloride	1.7 UB	ND	ND	ND	ND	ND	ND	ND
Metals[2] (µg/L)								
Dissolved Lead	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

[1] Unless otherwise reported, no VOCs were detected using EPA Method 8260B.
(EPA Method 8260A was used to analyze for VOCs in the 1996 and 1997 program.)

[2] Dissolved lead (EPA Method 6010B Trace) is the only metallic analyte of interest for site SS-56.
(EPA Method 7421 was used to analyze for dissolved lead in the 1996 and 1997 program.)

[3] Blind duplicate collected in 1997; information available in 1997 LTM Report (FEC, 1997).

[4] LTM data collected in 1996 because access to the site could not be gained in 1995.

ND - not detected at or above method reporting limit

NS - not sampled

VOCs - volatile organic compounds

µg/L - micrograms per liter

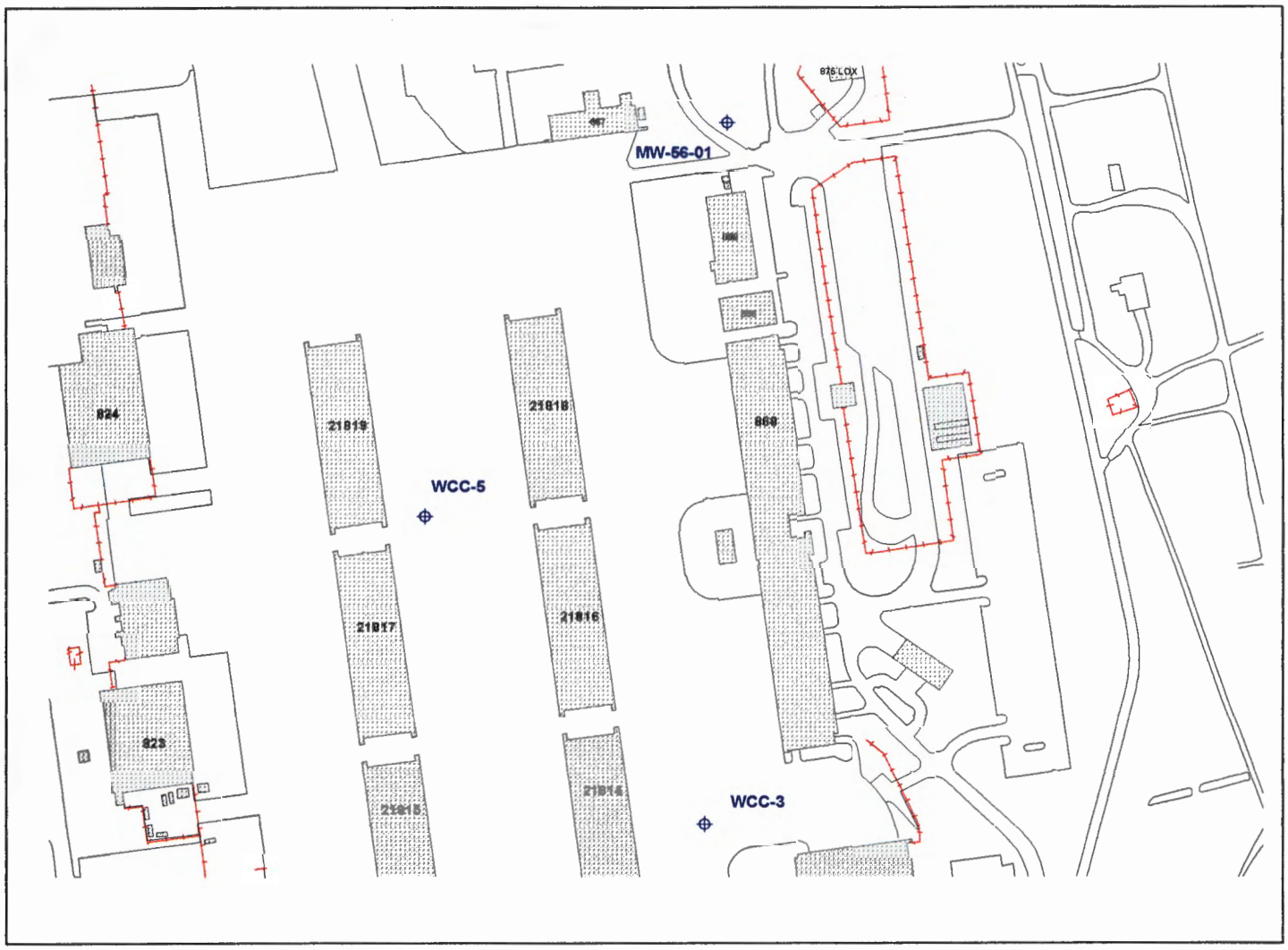
Laboratory Qualifiers--assigned as a result of internal laboratory data assessment procedures

UB - Qualifies as non-detect due to presence of analyte in associated laboratory blank

EPA Qualifiers--assigned as a result of independent data validation

None

J:\Projects\HOLLOMAN\LTM\Final Report\LTMdatatables.xls; SS-56



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

200 0 200 400 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

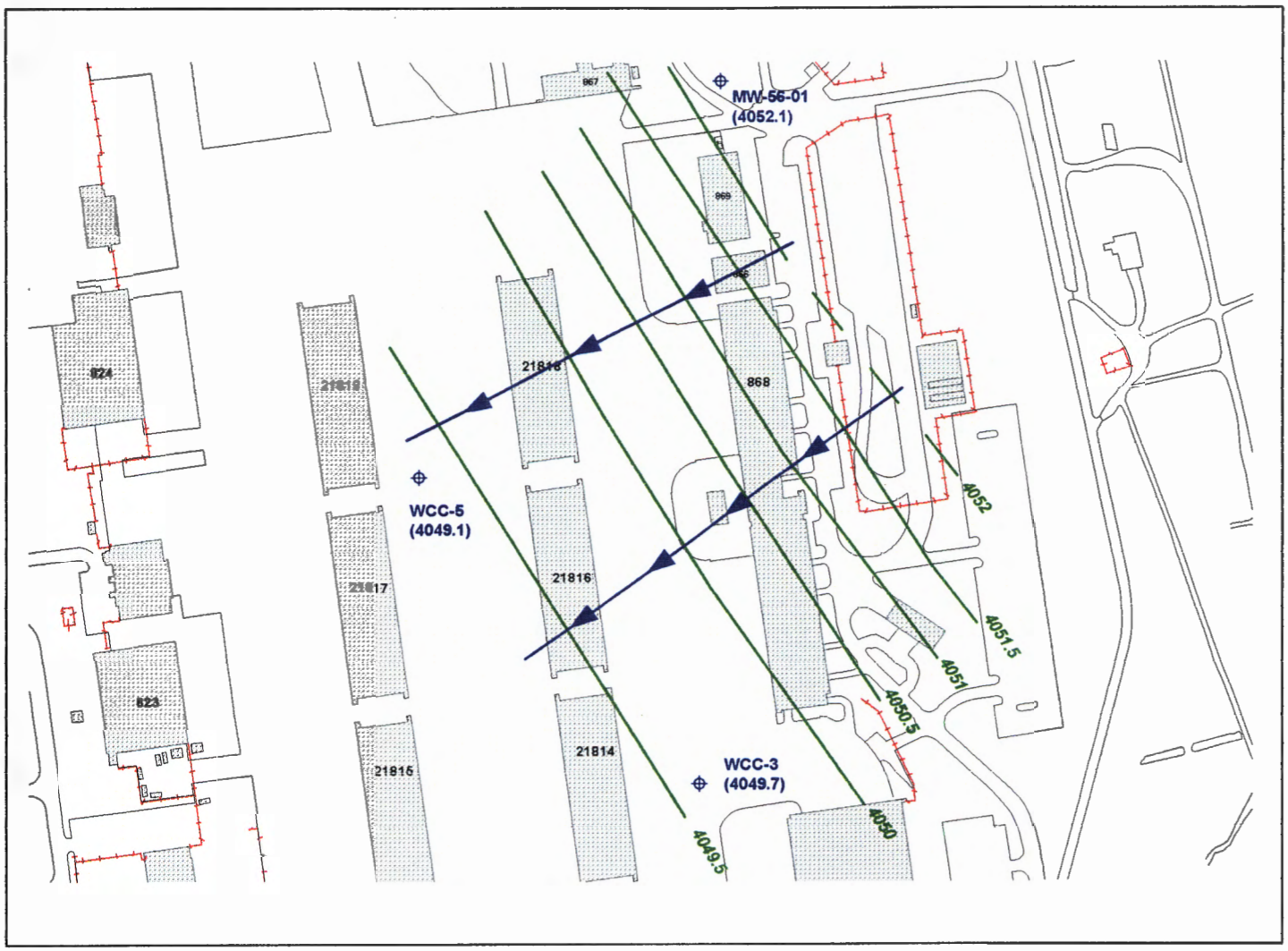
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-31
SITE LOCATION MAP FOR SS-56

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

Groundwater elevations are expressed in feet above mean sea level (msl).

GROUNDWATER FLOW DIRECTION

50 0 50 100 Feet

LEGEND

- MONITORING WELL
- 4081 GROUNDWATER ELEVATION CONTOUR
- (4080.2) GROUNDWATER ELEVATION (msl)
- ROAD
- BUILDING
- FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-32
POTENTIOMETRIC SURFACE MAP FOR SS-56

FOSTER WHEELER ENVIRONMENTAL CORPORATION

3.12 SS-02 and SS-05 POL SPILL SITES NOS. 1 AND 2 (SWMU AOC-T)

3.12.1 Background

POL Spill Sites Nos.1 and 2 (SS-02/SS-05, SWMU AOC-T) are located within the POL compound in the eastern portion of the Main Base area. Figure 3-33 presents a site map including monitoring well locations. The two sites are being remediated together, and are considered one site. From the early 1960s to the late 1970s, 25,000-gallon fuel tanks were periodically over filled at site SS-02. JP-4 and aviation fuel spills occurred throughout the unlined bermed area (FEC 1998).

Approximately 30,000 gallons of JP-4 fuel were spilled at SS-05 in 1978 when a drain valve for a 4-inch fuel line was accidentally left open. The fuel line was used for filling the 25,000-gallon tanks with JP-4 fuel. Interviews with POL personnel indicated the 30,000-gallon spill accumulated primarily in the southeast corner of the former unlined bermed area with fuel draining through the berm drain valve to a low spot southeast of the berm. Personnel also indicated that approximately 28,500 gallons of fuel were recovered with the remaining fuel seeping into the gravel base of the POL storage area. An estimated 1,500 gallons were released; an interim remedial action was not performed (FEC 1998).

The 25,000-gallon fuel tanks were removed in 1987, but the saddle tanks were left in place and covered with soil (FEC 1998).

Sixteen soil borings were drilled and eight monitoring wells were installed during the 29 Waste Sites RI (Radian 1992a). TPH and benzene were detected in soil borings and benzene was detected in groundwater samples. A soil vapor extraction (SVE) system was constructed and became operational in April 1995. As of December 1999, the SVE system removed an estimated 48,000 pounds of TPH. The system has been in operation as of March 1999. The primary risk driver for this site is the connection between the contaminated nonpotable groundwater and the adjacent arroyo that was designated as a navigable water of the United States.

3.12.2 1999 Long-Term Groundwater Monitoring

During the 1999 LTM Program, water level measurements were collected in September and December and used to develop a potentiometric surface map for the site (Section 3.12.2.1). Groundwater samples were collected from MW-02 & 05-03, MW-02 & 05-05, MW-02 & 05-06, and MW-02 & 05-08 and analyzed for VOCs. Results of this analysis are discussed in Section 3.12.2.2. Various field parameters, including pH, temperature, and specific conductivity, were measured prior to the collection of groundwater samples at each well and are presented in Appendix C. The number and type of groundwater samples collected at SS-02/SS-05 are summarized in Table 3-24.

Table 3-24. Summary of 1999 LTM Program at SS-02 and SS-05

Well Numbers	Analyses (EPA Methods)	Analytes Detected Above CRDLs	Analytes Exceeding NMED Standards	QA Samples	Number of Samples
MW-02&5-03 MW-02&5-05 MW-02&5-06 MW-02&5-08	VOCs (8260B)	Benzene; Ethylbenzene; Toluene; m,p-Xylenes; o-Xylenes	Benzene, Ethylbenzene	None	4

3.12.2.1 Site Hydrogeology

Depth-to-groundwater measurements at SS-02/SS-05 in December 1999 ranged from 5.04 to 18.33 ft below TOC, corresponding to groundwater elevations ranging from 4076.9 to 4079.7 ft msl (Appendix C). There was little or no variance between the water level measurements taken in September and December 1999. A potentiometric surface map was prepared for this site using the groundwater data from December 1999 (Figure 3-34). The contour map indicates that groundwater flows to the east across a gradient of approximately 0.005 ft/ft. The gradient and groundwater flow direction observed at SS-02 and SS-05 during the 1999 LTM Program are comparable with the results from the 1995 and 1997 LTM events.

3.12.2.2 Groundwater Sampling Results

Table 3-25 summarizes the analytical results for the LTM Program at SS-02/SS-05. Detections from the 1997 and 1999 LTM events are presented. SS-56 was added to the LTM Program in 1997. Therefore, sample results from 1997 serve as the baseline concentrations for this site. Analytes reported above the CRDL in 1999 are shown in Figure 3-35.

VOCs were detected only in well MW-02 & 05-05 during the 1999 event. This is a departure from the 1997 LTM Program during which VOCs were detected in all wells sampled at SS-02/SS-05. Two VOCs (benzene and ethylbenzene) were detected at concentrations that exceeded New Mexico Groundwater Quality Standards but were less than results from the 1997 LTM Program. m, p-Xylenes were detected at a concentration higher than that previously detected; the increase in concentration was less than one order of magnitude. Two additional compounds (toluene and o-xylene) were detected at concentrations more than one order of magnitude greater than detections from 1997 but less than New Mexico Groundwater Quality Standards. The presence of these analytes is consistent with the historical knowledge of the site.

3.12.3 Recommendations

No changes to the LTM Program for SS-02/SS-05 are recommended at this time.

Table 3-25. Summary of Analytical Results from the 1997 and 1999 Long-Term Monitoring Programs at SS-02 & SS-05

Well Number	MW-02 & 05-032		MW-02 & 05-05		MW-02 & 05-06		MW-02 & 05-08	
Sampling Date	Sep-97	Sep-99	Sep-97	Sep-99	Sep-97	Sep-99	Sep-97	Sep-99
VOCs[1] (µg/L)								
Benzene	ND	ND	300	**250 D**	ND	ND	ND	ND
sec-Butylbenzene[3]	ND	NA	12 J	NA	ND	NA	ND	NA
tert-Butylbenzene[3]	ND	NA	20 J	NA	ND	NA	ND	NA
Ethylbenzene	ND	ND	940	**860 D**	ND	ND	0.79 J	ND
p-Isopropyltoluene[3]	ND	NA	20 J	NA	ND	NA	ND	NA
Isopropylbenzene[3]	ND	NA	110	NA	ND	NA	NA	NA
Methylene chloride	1.6 UB	ND	ND	ND	1.8 UB	ND	ND	ND
Naphthalene[3]	ND	NA	88	NA	ND	NA	1.6 UB	NA
n-Propylbenzene[3]	ND	NA	64	NA	ND	NA	1.3 J	NA
Toluene	0.96 J	ND	3.6 J	63	ND	ND	ND	ND
1,2,4-Trimethylbenzene[3]	ND	NA	170	NA	ND	NA	ND	NA
1,3,5-Trimethylbenzene[3]	ND	NA	42	NA	ND	NA	ND	NA
m,p-Xylenes	ND	ND	31	140	ND	ND	ND	ND
o-Xylene	ND	ND	15	170	ND	ND	ND	ND

Notes:

[1] Unless otherwise reported, no VOCs were detected using EPA Method 8260B. (EPA Method 8260A was used to analyze for VOCs in the 1997 program.)

[2] Upgradient monitoring well

[3] Organic analyte not included in EPA Method 8260B

CRDL - Contract Required Detection Limit

IDL - Instrument Detection Limit

NA - not analyzed

ND - not detected at or above method reporting limit

NS - not sampled

VOCs - volatile organic compounds

µg/L - micrograms per liter

Laboratory Qualifiers--assigned as a result of internal laboratory data assessment procedures

D - Value derived from analysis of diluted sample

J - Estimated value; less than CRDL but greater than or equal to IDL

UB - Qualifies as non-detect due to presence of analyte in associated laboratory blank

EPA Qualifiers--assigned as a result of independent data validation

None

Bold values indicate 1999 analytes above New Mexico Groundwater Quality Standards.

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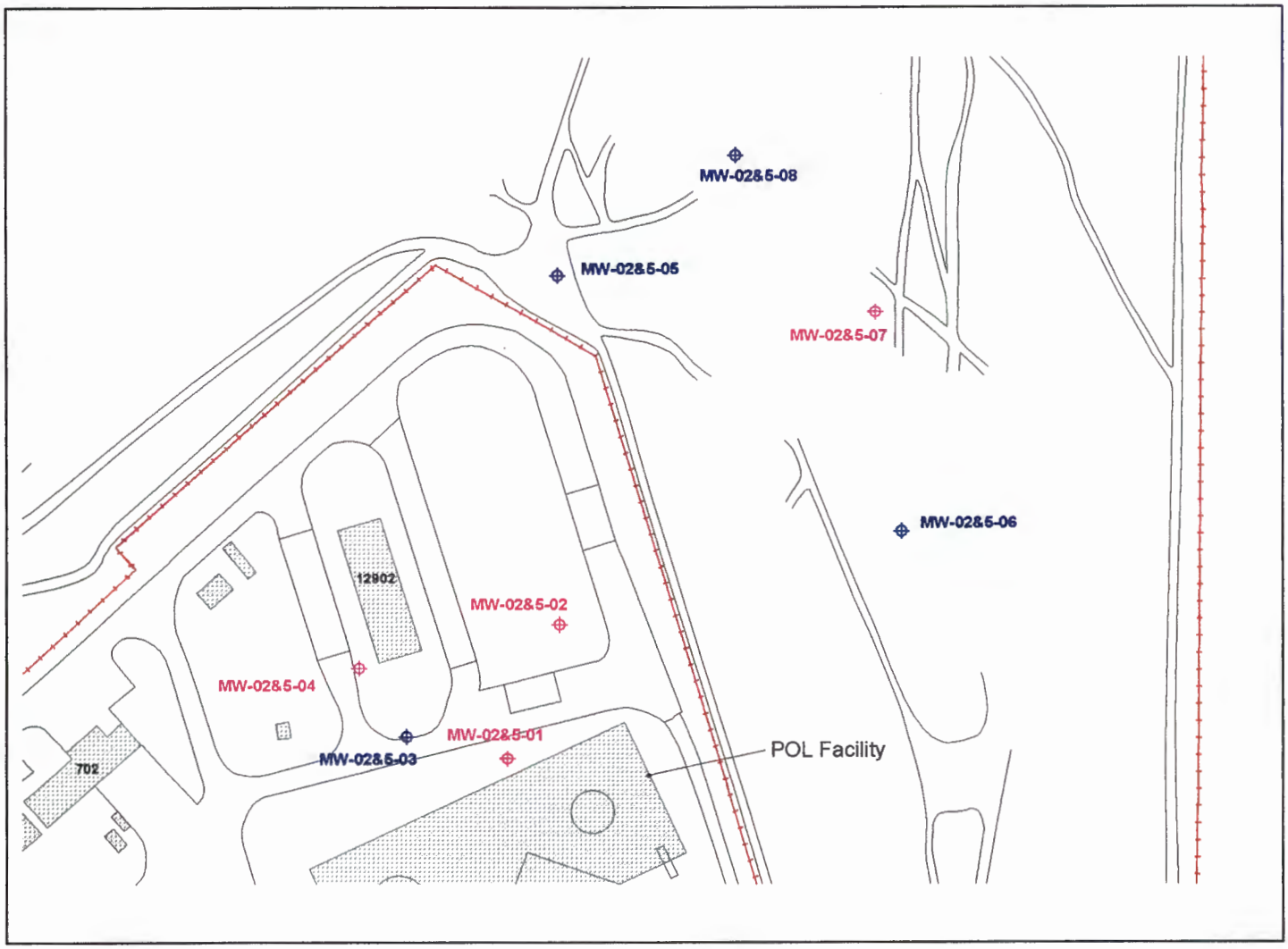


NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

200 0 200 400 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

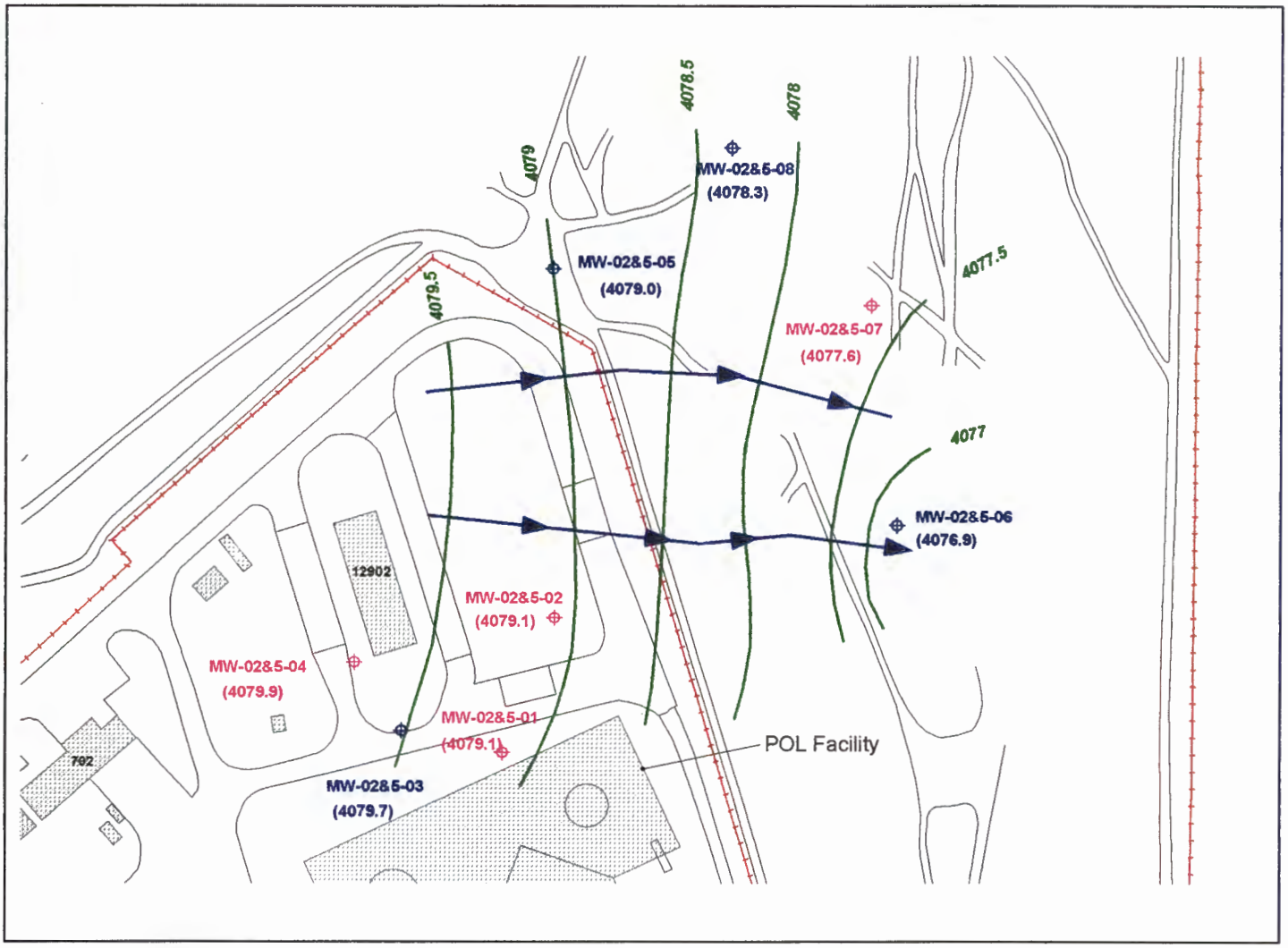
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-33
SITE LOCATION MAP FOR SS-02 AND SS-05

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

Groundwater elevations are expressed in feet above mean sea level (msl).

GROUNDWATER FLOW DIRECTION

200 0 200 400 Feet

LEGEND

MONITORING WELL

4081 GROUNDWATER ELEVATION CONTOUR

(4080.2) GROUNDWATER ELEVATION (msl)

ROAD

BUILDING

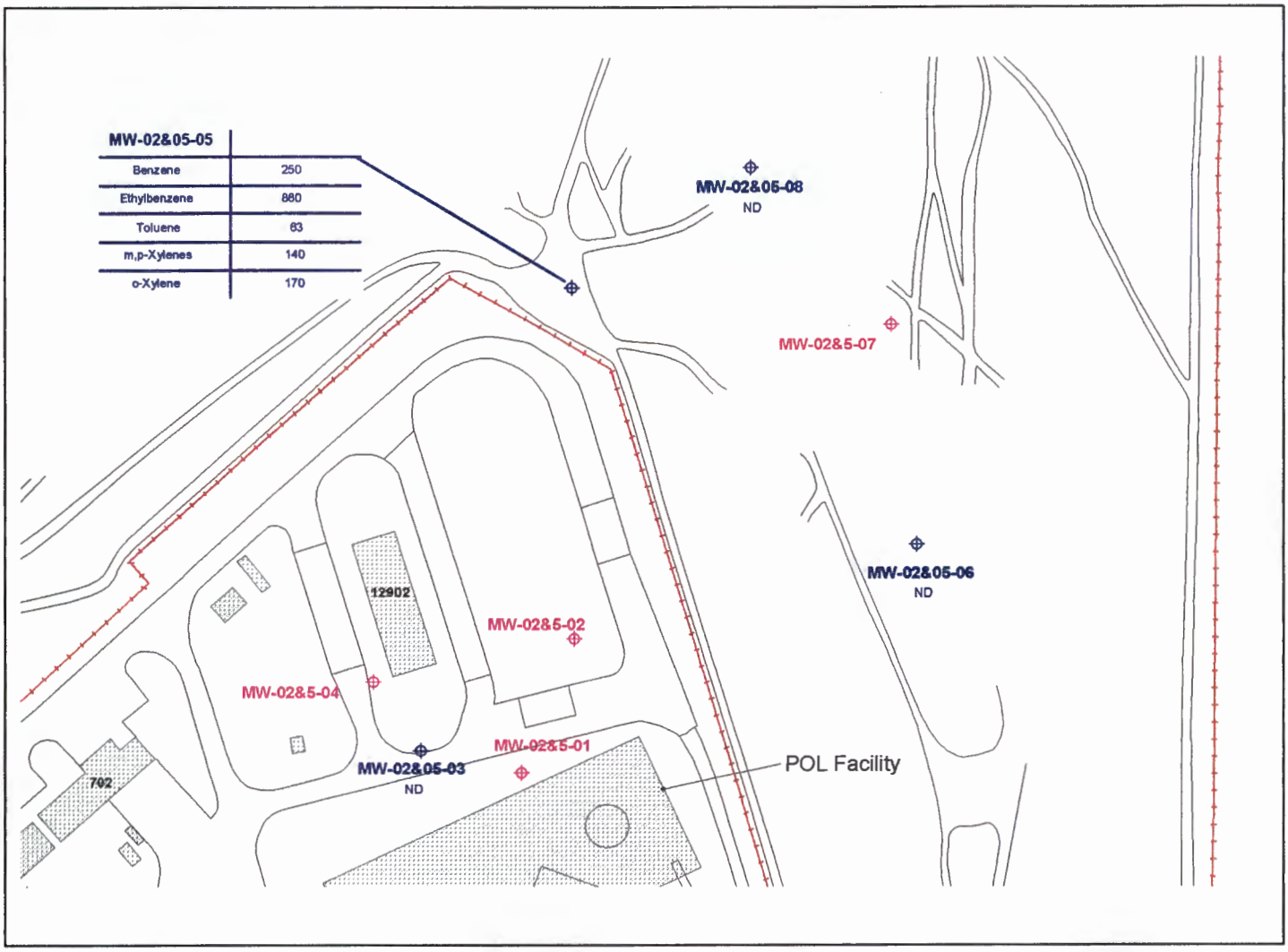
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-34
POTENTIOMETRIC SURFACE MAP
FOR SS-02 AND SS-05

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

All concentrations are expressed in micrograms per liter.

ND - no analytes were detected above the method reporting limit

200 0 200 400 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-35
GROUNDWATER ANALYTICAL RESULTS
FOR SS-02 & SS-05

FOSTER WHEELER ENVIRONMENTAL CORPORATION

3.13 SS-46 JP-4 SPILL SITE (SWMU 130)

3.13.1 Background

JP-4 Spill Site (SS-46, SWMU 130) is a 25,000-gallon JP-4 underground waste fuel tank that was installed in 1978 without containment. The tank is located on the southeast side of Taxiway 4. Figure 3-36 presents a site map including monitoring well locations. No permanent structures were installed as part of SS-46. The site is covered by a concrete hardstand. Waste fuel was stored in the tank and analyzed by the Base fuels laboratory for eventual disposition (FEC 1998).

An RI was conducted on the site in 1988 that included the installation of four groundwater monitoring wells (Walk, Haydel & Associates 1989b). TPH, benzene, chlorobenzene, and toluene were detected in groundwater samples collected from the well. These wells have been removed as part of the German Air Force hangar construction.

A BRA determined that the site posed no threat to human health and the environment. It was recommended that the site be closed with no further action required. The tank was taken out of service in 1989 and was removed as part of a 1995 tank removal project coordinated by the Base.

3.13.2 1999 Long-Term Groundwater Monitoring

Water level measurements were collected at SS-46 in September 1999 and used to develop a potentiometric surface map of the site (Section 3.13.2.1). Water level measurements could not be taken in December 1999 because the site is a secure area and access was not granted. In August 1997, three new groundwater monitoring wells, MW-46-01, MW-46-02, and MW-46-03, were installed at the site. Groundwater samples were collected from these wells during the 1999 LTM Program and analyzed for VOCs and dissolved lead. Results of these analyses are discussed in Section 3.13.2.2. Various field parameters, including pH, temperature, and specific conductivity, were measured prior to the collection of groundwater samples at each well and are presented in Appendix C. The number and type of groundwater samples collected at SS-46 are summarized in Table 3-26.

Table 3-26. Summary of 1999 LTM Program at SS-46

Well Numbers	Analyses (EPA Methods)	Analytes Detected Above CRDLs	Analytes Exceeding NMED Standards	QA Samples	Number of Samples
MW-46-01 MW-46-02 MW-46-03	VOCs (8260B) Dissolved lead (6010B Trace)	None	None	None	3

3.13.2.1 Site Hydrogeology

Depth-to-groundwater measurements at SS-46 in September 1999 ranged from 6.25 to 6.66 ft below TOC, corresponding to groundwater elevations ranging from 4075.33 to 4076.14 ft msl (Appendix C). A potentiometric surface map was prepared for the site using the groundwater data from September 1999 because access to SS-46 could not be secured through Base security personnel in December 1999 (Figure 3-37). The contour map indicates that groundwater flows to the south across a gradient of approximately 0.0003 ft/ft. The gradient and groundwater flow direction observed at SS-46 are comparable with the results of the 1997 LTM event.

3.13.2.2 Groundwater Sampling Results

Table 3-27 summarizes the analytical results for the LTM Program at SS-46. SS-46 was added to the LTM Program in 1997; therefore, data collected during the 1997 event serve as baseline concentrations for this site.

No VOCs or dissolved lead were detected in any of the samples collected during the 1999 event. These findings are consistent with the findings of the 1997 LTM Program.

3.13.3 Recommendations

No changes to the LTM Program are recommended for SS-46 at this time.

Table 3-27. Summary of Analytical Results from the 1997 and 1999 Long-Term Monitoring Programs at SS-46

Well Number	MW-46-01		MW-46-02		MW-46-033	
Sampling Date	Sep-97	Sep-99	Sep-97	Sep-99	Sep-97	Sep-99
VOCs[1] (µg/L)						
all	ND	ND	ND	ND	ND	ND
Metals[2] (µg/L)						
Dissolved Lead	ND	ND	ND	ND	ND	ND

Notes:

[1] Unless otherwise reported, no VOCs were detected using EPA Method 8260B.
(EPA Method 8260A was used to analyze for VOCs in the 1997 program.)

[2] Dissolved lead (EPA Method 6010B Trace) is the only metallic analyte of interest for site SS-46.
(EPA Method 7421 was used to analyze for dissolved lead in the 1997 program.)

[3] Upgradient monitoring well

ND - not detected at or above method reporting limit

NS - not sampled

VOCs - volatile organic compounds

µg/L - micrograms per liter

Laboratory Qualifiers--assigned as a result of internal laboratory data assessment procedures

None

EPA Qualifiers--assigned as a result of independent data validation

None

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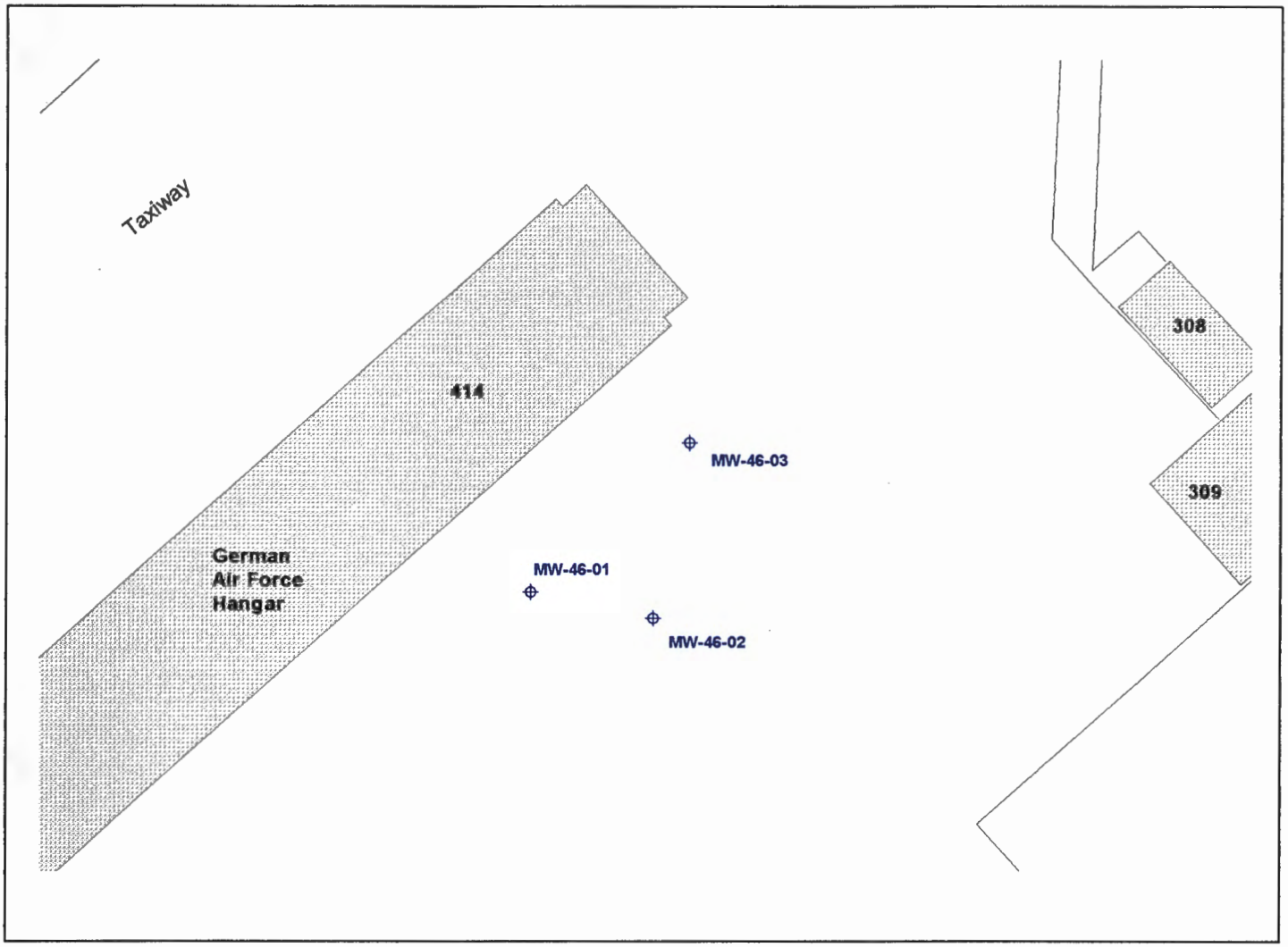


NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

100 0 100 200 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

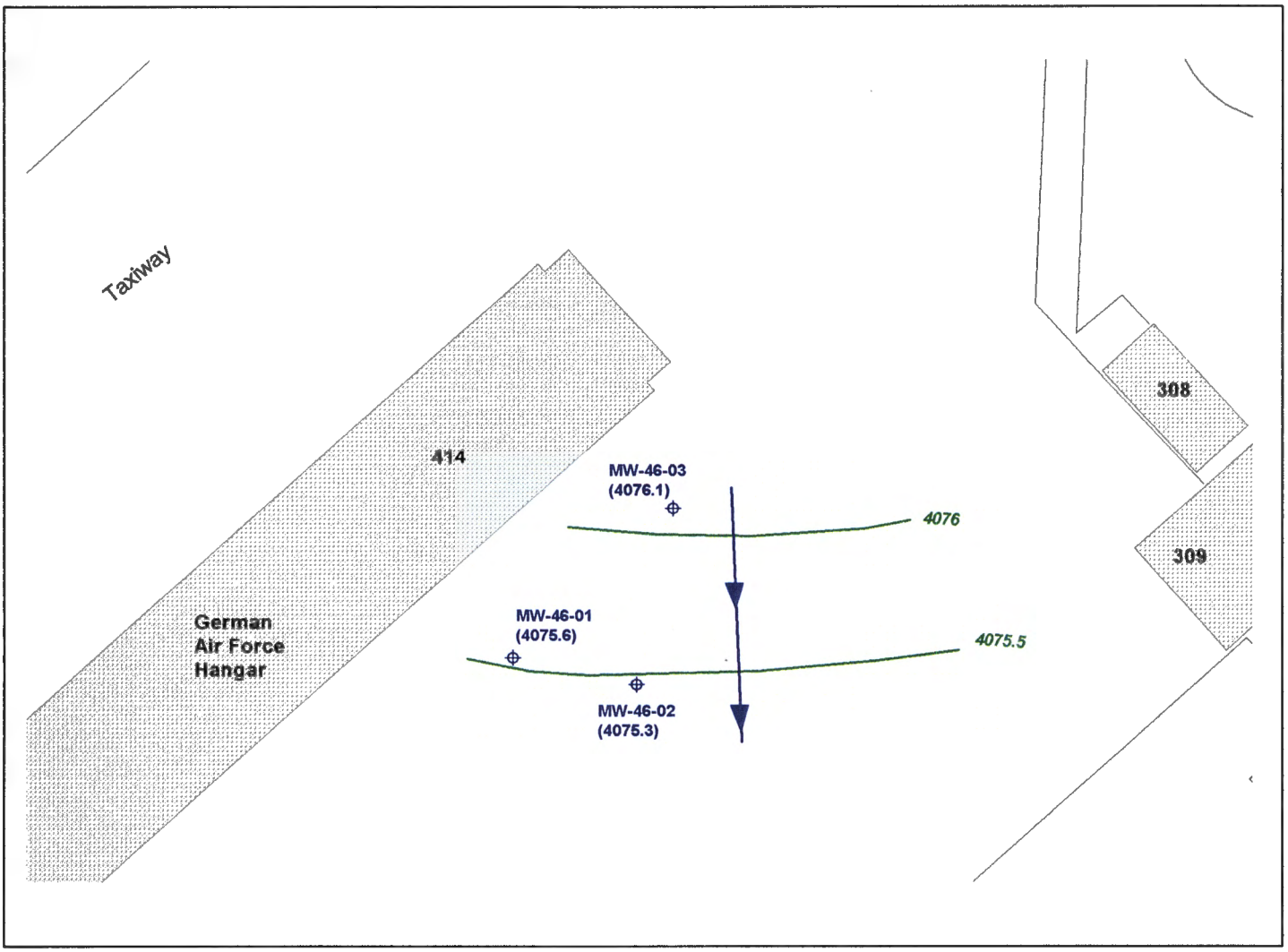
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-36
SITE LOCATION MAP FOR SS-46

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

Groundwater elevations are expressed in feet above mean sea level (msl).

GROUNDWATER FLOW DIRECTION

50 0 50 100 Feet

LEGEND

MONITORING WELL

4081 GROUNDWATER ELEVATION CONTOUR

(4080.2) GROUNDWATER ELEVATION (msl)

ROAD

BUILDING

FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-37
POTENTIOMETRIC SURFACE MAP FOR SS-46

FOSTER WHEELER ENVIRONMENTAL CORPORATION

3.14 OT-16 FORMER ENTOMOLOGY SHOP AREA (SWMUs 118, 132, AOC-A)

3.14.1 Background

The Former Entomology Shop Area (OT-16; SWMUs 118, 132, AOC-A) is located at Building 21 in the southeastern portion of the Main Base area. Figure 3-38 present a site map including monitoring well locations. Rinse water from washing of pesticide mixing equipment was discharged from 1977 to 1980 to a septic tank leach field located in back of the building. Diesel fuel, used to stabilize pesticides, may also have been discharged. From 1980 to 1988, rinse water was discharged into a pit/boring on the northwest side of the building. A pesticide holding tank is located on the southwest side of Building 21, although no spills were reported or documented at the tank or the concrete containment box (FEC 1989).

OT-16 was identified as a potential contaminant source during an IRP records search conducted in 1983. The Phase I RI was completed in 1992 (Radian 1992a). DDT; alpha-BHC; delta-BHC; and methyl parathion were detected in the surface soils indicating that a release had occurred. DDD, DDE, DDT, aldrin, chlordane, heptachlor, and gamma-BHC were also detected. OCPs and VOCs (including benzene, dieldrin, trichloroethylene, alpha-BHC, and gamma-BHC) were detected in all four monitoring wells. The investigation to delineate soil and groundwater contamination detected PCB-1260, TPH, and heptachlor epoxide in soils and heptachlor epoxide and gamma-BHC in groundwater. The RI concluded that no action is necessary to protect human health and the environment.

3.14.2 1999 Long-Term Groundwater Monitoring

During the 1999 LTM Program, water level measurements were collected in September and December and used to develop a potentiometric surface map of the site (Section 3.14.2.1). Groundwater samples were collected from four previously installed groundwater monitoring wells (118-MW1601, 118-MW1602, 118-MW1603, and 118-MW1604). A field duplicate sample, 118-MW1605 was collected at well 118-MW1603. Groundwater samples collected at this site were analyzed for VOCs and OCPs. Results of these analyses are discussed in Section 3.14.2.2. Various field parameters, including pH, temperature, and specific conductivity, were measured prior to the collection of groundwater samples at each well and are presented in

Appendix C. The number and type of groundwater samples collected at OT-16 are summarized in Table 3-28.

Table 3-28. Summary of 1999 LTM Program at OT-16

Well Numbers	Analyses (EPA Methods)	Analytes Detected Above CRDLs	Analytes Exceeding NMED Standards	QA Samples	Number of Samples
118-MW1601 118-MW1602 118-MW1603 118-MW1604	VOCs (8260B) OCPs (8081A)	Chloroform, TCE, gamma-BHC	None	None	5

3.14.2.1 Site Hydrogeology

Depth-to-groundwater measurements at OT-16 in December 1999 ranged from 7.24 to 8.26 ft below TOC, corresponding to groundwater elevations ranging from 4069.0 to 4072.2 ft msl (Appendix C). There was little or no variance between water level measurements taken in September and December 1999. A potentiometric surface map was prepared for the site using the groundwater data from December 1999 (Figure 3-39). The contour map indicates that groundwater flows to the southeast across a gradient of approximately 0.02 ft/ft. The gradient and groundwater flow direction observed at OT-16 during the 1999 LTM Program are comparable with the results from the 1997 LTM event.

3.14.2.2 Groundwater Sampling Results

Table 3-29 summarizes the analytical results for the LTM Program at OT-16. This site was added to the LTM Program in 1997; therefore, Table 3-29 also contains data from groundwater samples collected during the 1997 LTM Program as baseline concentrations. This table reflects the analytes that have been detected at least once at OT-16. Analytes reported above the CRDL in 1999 are shown in Figure 3-40.

VOCs detected include chloroform and TCE at concentrations consistent with those detected in 1997 (i.e., not detected at concentrations increased by more than an order of magnitude).

Gamma-BHC was detected at this site for the first time during the 1999 LTM Program sampling events. This compound was also detected at OT-16 during the Phase I RI.

3.14.3 Recommendations

It is recommended that consideration be given to collecting additional samples at 118-MW1601 to confirm detections of chloroform and TCE. No other changes to the LTM Program for OT-16 are recommended at this time.

Table 3-29. Summary of Analytical Results from the 1997 and 1999 Long-Term Monitoring Programs at OT-16

Well Number	118-MW1601[4]		118-MW1602		118-MW1603[3]		118-MW1604	
Sampling Date	Sep-97	Sep-99	Sep-97	Sep-99	Sep-97	Sep-99	Sep-97	Sep-99
VOCs[1] (µg/L)								
Chlorobenzene	ND	ND	1.8 J	2 J	ND	ND	ND	ND
Chloroform	5.8	21	2.8 J	2 J	4	3	ND	1 J
Methylene chloride	ND	ND	ND	ND	6.3 J	ND	ND	ND
TCE	3	2 J	2.5 J	3	ND	ND	1.6 J	2 J
Organochlorine Pesticides[2] (µg/L)								
gamma-BHC (Lindane)	ND	ND	ND	0.076	ND	ND	ND	ND

Notes:

[1] Unless otherwise reported, no VOCs were detected using EPA Method 8260B.
(EPA Method 8260A was used to analyze for VOCs in the 1997 program.)

[2] Unless otherwise reported, no organochlorine pesticides were detected using EPA Method 8081A.
(EPA Method 8080A was used to analyze for organochlorine pesticides in the 1997 program.)

[3] Blind duplicate collected in 1997; information available in 1997 LTM Report (FEC, 1997).

[4] Upgradient monitoring well

CRDL - Contract Required Detection Limit
IDL - Instrument Detection Limit
ND - not detected at or above method reporting limit
NS - not sampled
TCE - trichloroethylene
VOCs - volatile organic compounds
µg/L - micrograms per liter

Laboratory Qualifiers--assigned as a result of internal laboratory data assessment procedures
J - Estimated value; less than CRDL but greater than or equal to IDL

EPA Qualifiers--assigned as a result of independent data validation
None

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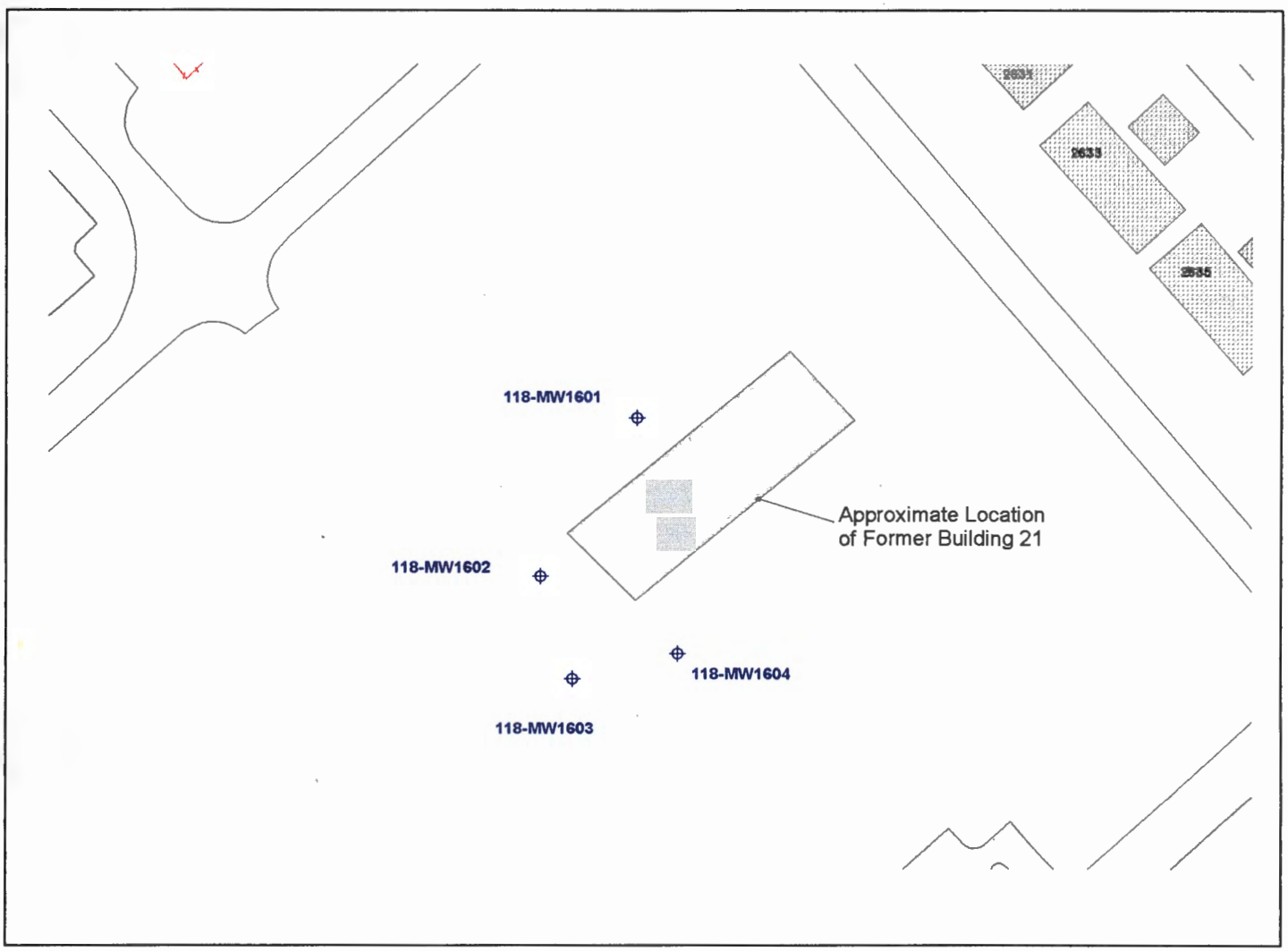


NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

100 0 100 200 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

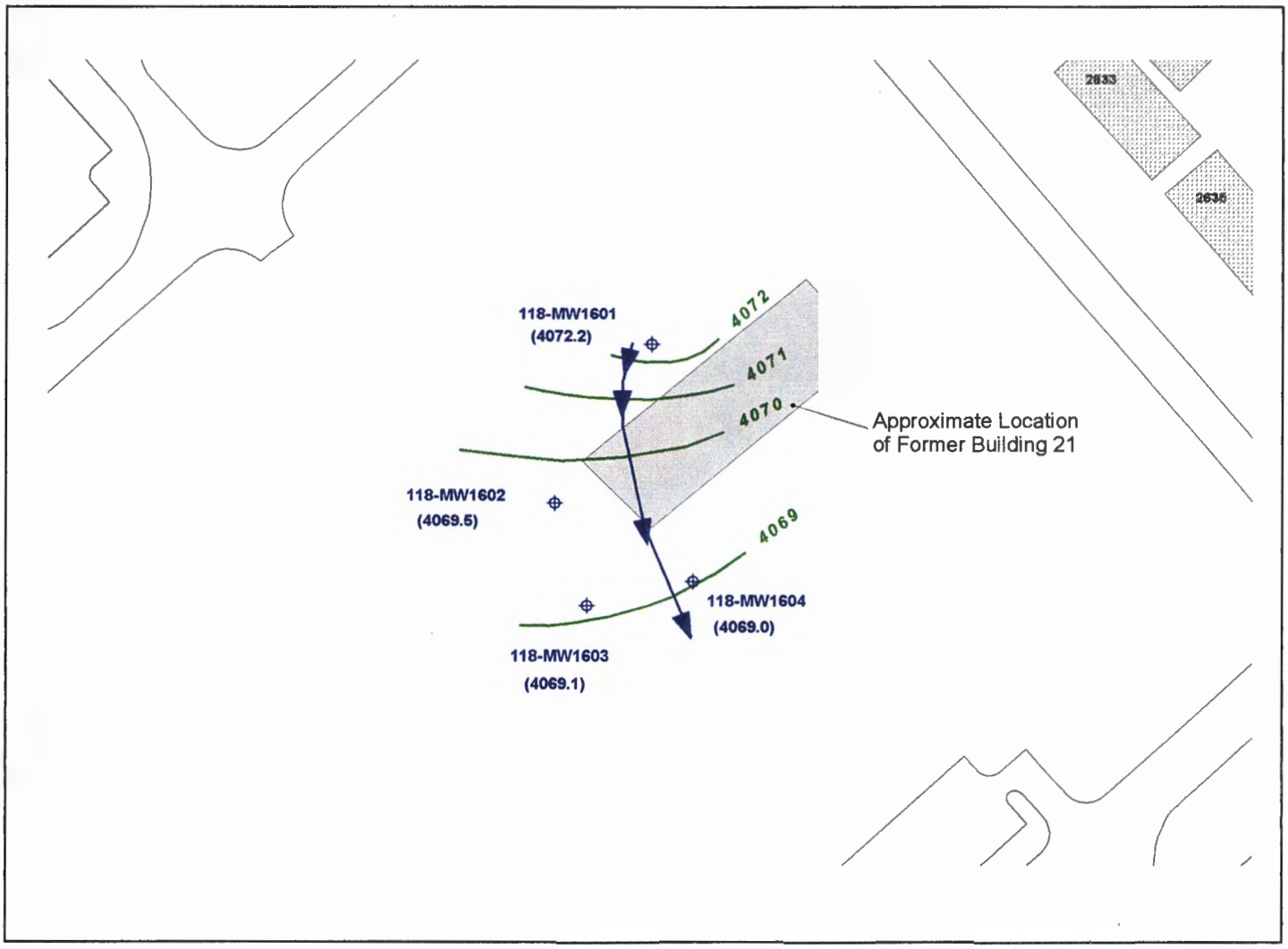
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-38
SITE LOCATION MAP FOR OT-16

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

Groundwater elevations are expressed in feet above mean sea level (msl).

GROUNDWATER FLOW DIRECTION

100 0 100 200 Feet

LEGEND

MONITORING WELL

4081 GROUNDWATER ELEVATION CONTOUR

(4080.2) GROUNDWATER ELEVATION (msl)

ROAD

BUILDING

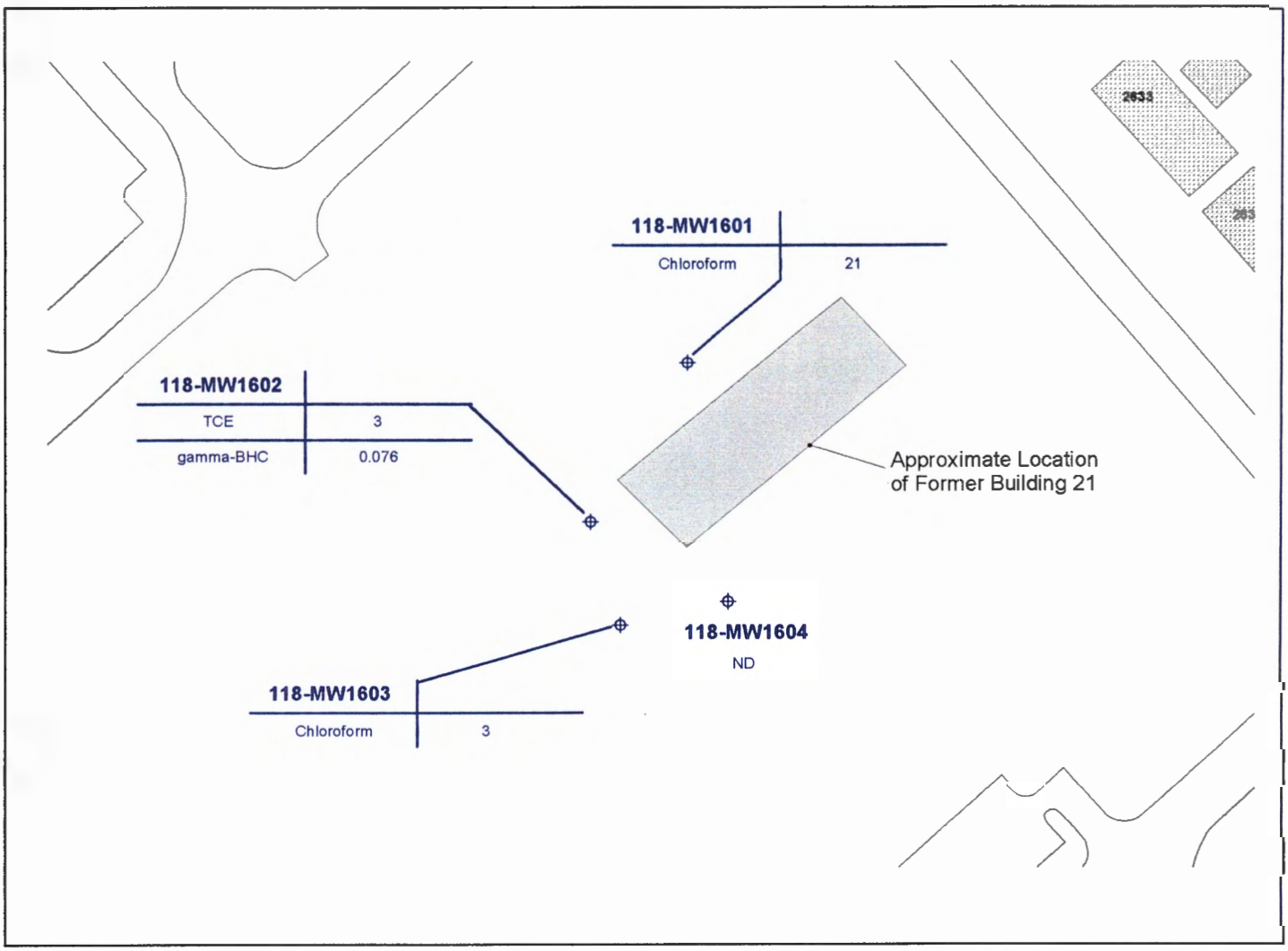
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-39
POTENTIOMETRIC SURFACE MAP FOR OT-16

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

All concentrations are expressed in micrograms per liter.

ND - no analytes were detected above the method reporting limit

100 0 100 200 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-40
GROUNDWATER ANALYTICAL RESULTS FOR OT-16

FOSTER WHEELER ENVIRONMENTAL CORPORATION

3.15 SS-17 BX SERVICE STATION

3.15.1 Background

The BX Service Station (SS-17) is located on First Street in the main portion of the Base and approximately 2,500 ft from the main gate. Figure 3-41 presents a site map including monitoring well locations. SS-17 is an 8-acre site with numerous buildings, including the service station, convenience store, car wash, and several residences. The service station has been in its present location since the early 1950s. The base hospital is located about 420 ft to the northeast; an elementary school is located 600 ft to the northwest; and base residential housing is located 200 ft to the southeast of the service station. Site contamination extends under adjacent properties (FEC 1998).

Discrepancies in the gasoline storage inventories led to the discovery of leaking underground fuel lines. In 1981, test borings were drilled to assess the extent of contamination. Gasoline thicknesses up to 4 ft were found in monitoring wells in some areas. Two recovery wells were installed. An RI completed in 1984 included the installation of 15 monitoring wells and 14 test holes at SS-17. The RI concluded that an estimated 71,000 gallons of free-phase product (gasoline) remained in the subsurface. In January 1987, recovery operations resumed using three recovery wells and two recovery trenches. Changes recommended in a 1988 Technical Report were implemented in 1989 and included more recovery wells. These operations recovered a total of 42,000 gallons of free product at SS-17.

An RI/FS was completed in 1990 and 1991. The five USTs at the site were removed and replaced with aboveground storage tanks in February 1992. In July 1993, a thirty-day SVE pilot test was conducted on a small area of the site. Borings completed prior to the pilot testing revealed TPH (8,340 parts per million [ppm]) and benzene (53.6 ppm) in soil. TPH concentrations in the subsurface soils were reduced by 48 percent and benzene concentrations were reduced by 70 percent. In late 1994, investigations revealed a leak from a pipe under a dispenser island. It is estimated that 4,000 gallons of product was released. Construction and operation of a full scale SVE/bioremediation system began in September 1995. As of January 2000, 69,000 pounds of TPH had been removed.

3.15.2 1999 Long-Term Groundwater Monitoring

Water level measurements were collected at SS-17 in September and December 1999 and used to develop a potentiometric surface map of the site (Section 3.15.2.1).

During previous investigations, twenty groundwater monitoring wells were installed at the site. However, due to construction activities and well abandonment, the total number of monitoring wells in the vicinity of SS-17 is now less than twenty. Groundwater samples were collected from wells W-4 (upgradient), TH-22, MW-BX-01, and MW-BX02. Groundwater samples collected at this site were analyzed for VOCs. Results of these analyses are discussed in Section 3.15.2.2. Various field parameters, including pH, temperature, and specific conductivity, were measured prior to the collection of groundwater samples at each well and are presented in Appendix C. The number and type of groundwater samples collected at SS-17 are summarized in Table 3-30.

Table 3-30. Summary of 1999 LTM Program at SS-17

Well Numbers	Analyses (EPA Methods)	Analytes Detected Above CRDLs	Analytes Exceeding NMED Standards	QA Samples	Number of Samples
MW-BX-01 MW-BX-02 TH-22 W-4	VOCs (8260B)	Benzene; 1,2-Dichloroethane; Ethylbenzene	Benzene; 1,2-Dichloroethane	None	4

3.15.2.1 Site Hydrogeology

Depth-to-groundwater measurements at SS-17 in December 1999 ranged from 5.97 to 9.03 ft below TOC, corresponding to groundwater elevations ranging from 4064.3 to 4066.8 ft msl (Appendix C). There was very little or no variance between water levels taken in September and December 1999. A potentiometric surface map was prepared for the site using the groundwater data from December 1999 (Figure 3-42). The contour map indicates that groundwater flows to the south across a gradient of approximately 0.005 ft/ft. The gradient and groundwater flow direction observed at SS-17 during the 1999 LTM Program are comparable with the results from the 1997 LTM event.

3.15.2.2 Groundwater Sampling Results

Table 3-31 summarizes the analytical results the LTM Program at SS-17. Because SS-17 was added to the LTM Program in 1997, Table 3-31 includes data collected during the 1997 LTM Program sampling event as baseline concentrations. Analytes reported above the CRDL in 1999 are shown in Figure 3-43.

VOCs were detected in wells MW-BX-01 (the upgradient well) and MW-BX-02 at SS-17 during the 1999 event. Benzene was detected at MW-BX-01, ethylbenzene was detected at MW-BX-02, and 1,2-dichloroethane was detected at MW-BX-01 and MW-BX-02 at concentrations exceeding the New Mexico Groundwater Quality Standards. W-4 has not shown detections of VOCs in any of the LTM sampling events.

3.15.3 Recommendations

No changes to the LTM Program for SS-17 are recommended at this time.

Table 3-31. Summary of Analytical Results from the 1997 and 1999 Long-Term Monitoring Programs at SS-17

Well Number	MW-BX-01		MW-BX-02		TH-22		W-4[2]	
Sampling Date	Sep-97	Sep-99	Sep-97	Sep-99	Sep-97	Sep-99	Sep-97	Sep-99
VOCs[1] (µg/L)								
Acetone	ND	3 J	230	ND	ND	3 J	ND	ND
Benzene	ND	15	ND	ND	ND	ND	ND	ND
2-Butanone	ND	ND	ND	ND	ND	2 J	ND	ND
sec-Butylbenzene[3]	ND	NA	ND	NA	5.9	NA	ND	NA
tert-Butylmethyl ether[3]	ND	NA	120	NA	ND	NA	ND	NA
Chloroform	ND	ND	ND	ND	ND	ND	ND	2 J
1,2-Dichloroethane	ND	**280 D**	530	**150 D**	ND	ND	ND	ND
1,2-Dichloropropane	ND	3 J	ND	2 J	ND	ND	ND	ND
Ethylbenzene	ND	1 J	ND	53	ND	ND	ND	ND
1,2,4-Trimethylbenzene[3]	ND	NA	ND	NA	7.9	NA	ND	NA

Notes:

[1] Unless otherwise reported, no VOCs were detected using EPA Method 8260B. (EPA Method 8260A was used to analyze for VOCs in the 1997 program.)
[2] Upgradient monitoring well
[3] Organic analyte not included in EPA Method 8260B
CRDL - Contract Required Detection Limit
IDL - Instrument Detection Limit
NA - not analyzed
ND - not detected at or above method reporting limit
NS - not sampled
VOCs - volatile organic compounds
µg/L - micrograms per liter

Laboratory Qualifiers--assigned as a result of internal laboratory data assessment procedures
D - Value derived from analysis of diluted sample
J - Estimated value; less than CRDL but greater than or equal to IDL

EPA Qualifiers--assigned as a result of independent data validation
None

Bold values indicate 1999 analytes above New Mexico Groundwater Quality Standards.

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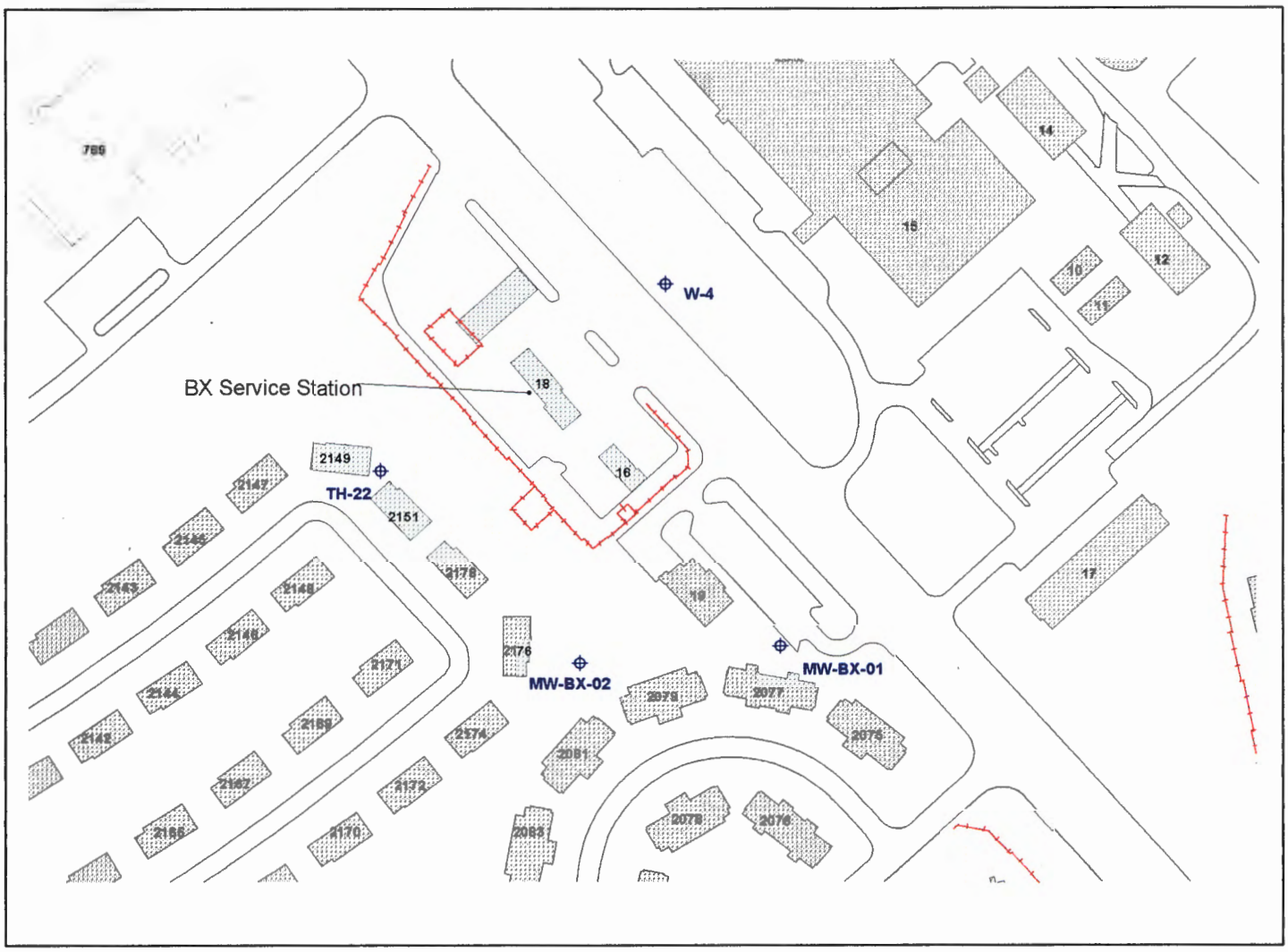


NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

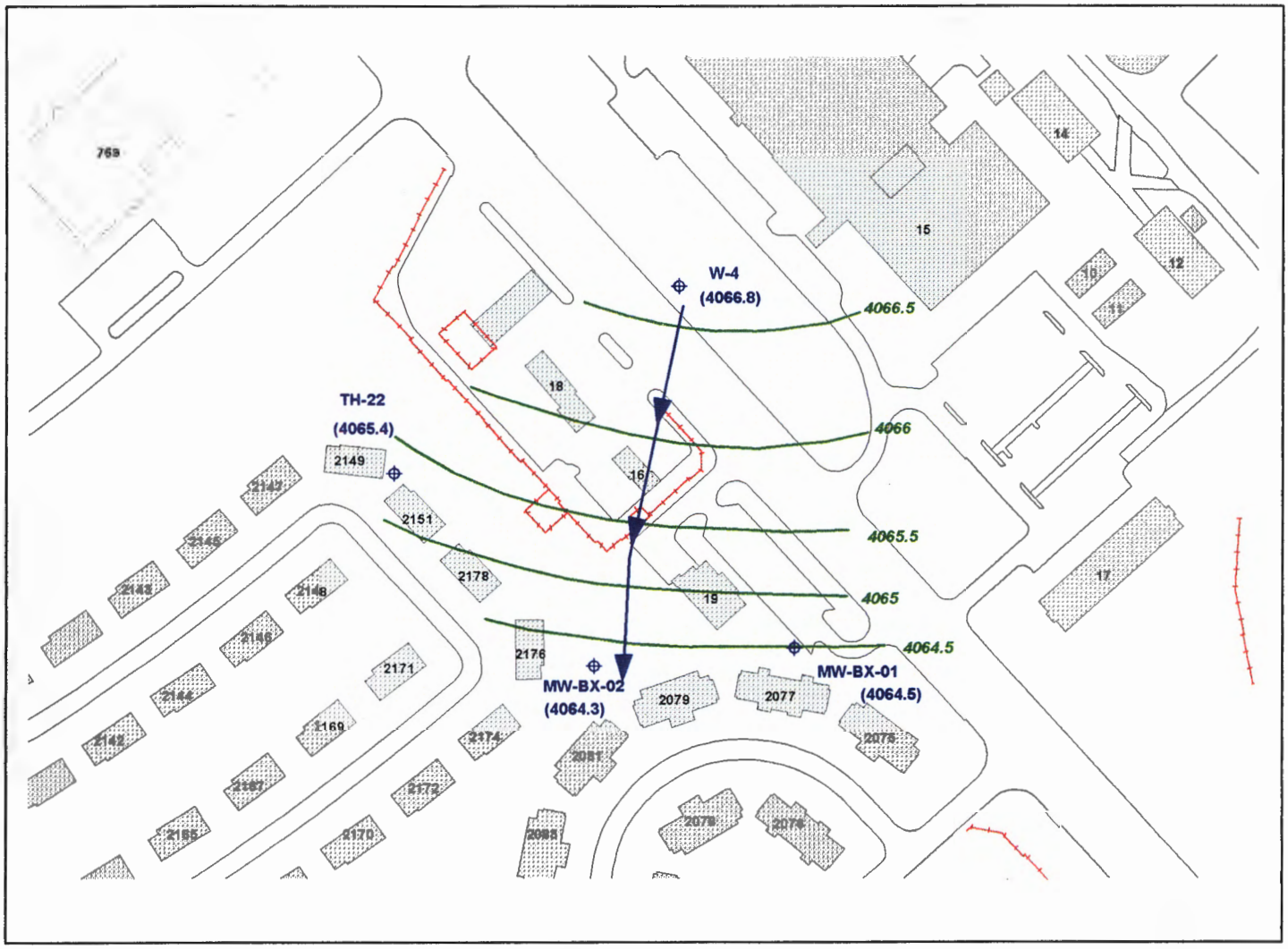
LEGEND

- MONITORING WELL
- ROAD
- BUILDING
- FENCE

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-41
SITE LOCATION MAP FOR SS-17

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

Groundwater elevations are expressed in feet above mean sea level (msl).

GROUNDWATER FLOW DIRECTION

200 0 200 400 Feet

LEGEND

MONITORING WELL

4081 GROUNDWATER ELEVATION CONTOUR

(4080.2) GROUNDWATER ELEVATION (msl)

ROAD

BUILDING

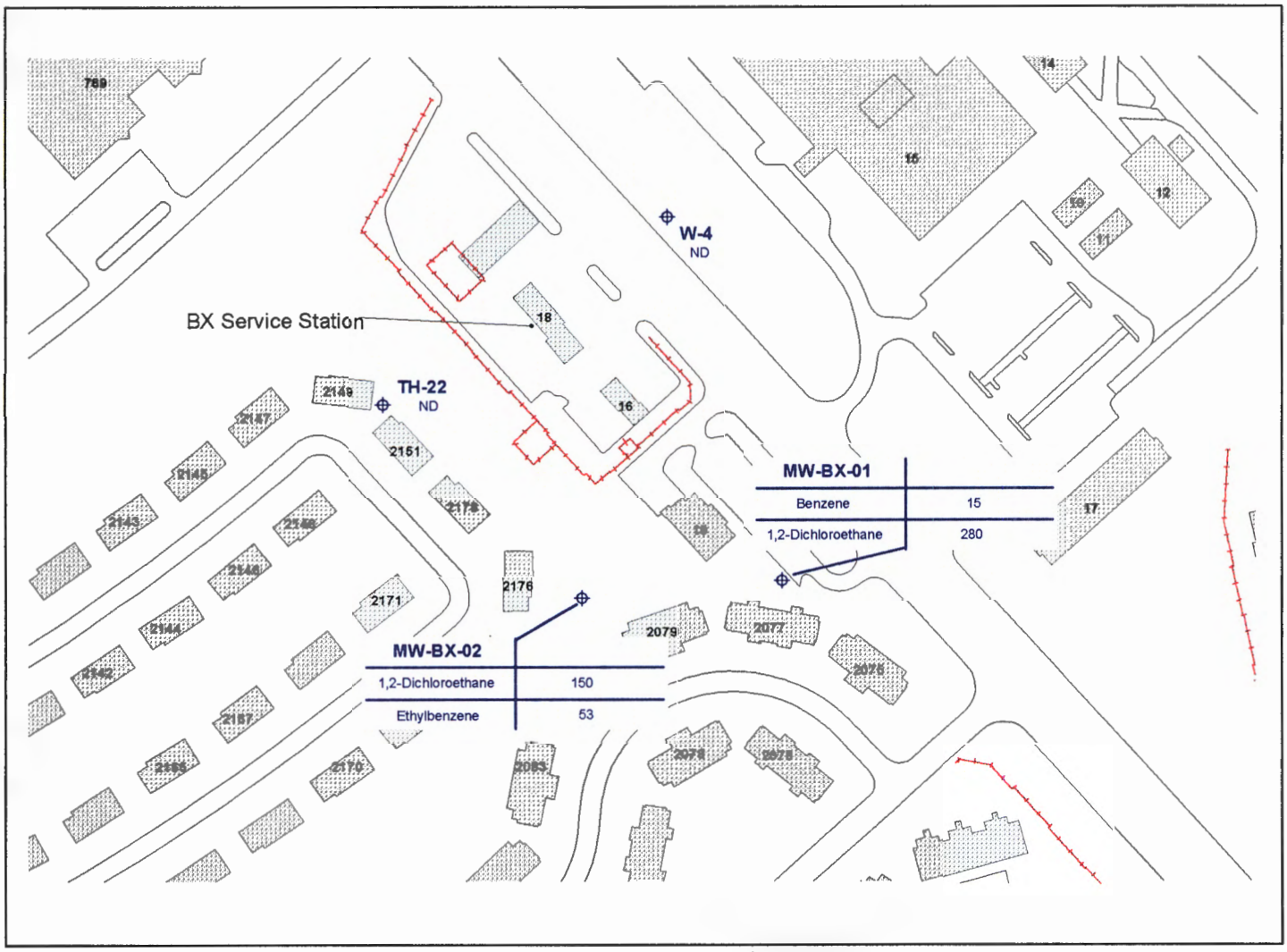
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-42
POTENTIOMETRIC SURFACE MAP FOR SS-17

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

All concentrations are expressed in micrograms per liter.

ND - no analytes were detected above the method reporting limit

200 0 200 400 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-43
GROUNDWATER ANALYTICAL RESULTS FOR SS-17

FOSTER WHEELER ENVIRONMENTAL CORPORATION

3.16 SS-39 MISSILE FUEL SPILL AREA (SWMUs 165, 177, 179, 181)

3.16.1 Background

The Missile Fuel Spill Area (SS-39; SWMUs 165, 177, 179, 181) is located approximately 3.5 miles northwest of the Main Base area near Building 1176. Figure 3-44 presents a site map including monitoring well locations. The site consists of two outfall areas located further downslope from the oxidizer and propellant spill drain pipes and drainage troughs and sumps located near Building 1176. Facilities at SS-39 were involved with the fueling, detanking, and routine maintenance of test sleds. Fuels used at the track included unsymmetrical dimethylhydrazine, aniline, JP-4, inhibited red fuming nitric acid, inhibited white fuming nitric acid, liquid oxygen, JPX, dyes, and solid rocket propellants. Solvents, such as TCE, were commonly used in sled maintenance activities (FEC 1998).

SS-39 was identified as a potential contaminant source during a 1983 IRP records search. An RI was completed in 1992 (Radian 1992a) revealing arsenic, beryllium, lead, and TCE in soils and TCE, carbon tetrachloride, and lead in groundwater near Building 1176. An RFI, completed in 1994, delineated soil and groundwater contamination (Holloman AFB 1994). Fifteen groundwater samples were taken and TCE concentrations ranged from 2.76 ppm directly east of the site to 0.028 ppm 200 ft south of the site (downgradient). The RI and RFI indicated that no action was necessary to protect human health or the environment.

3.16.2 1999 Long-Term Groundwater Monitoring

During the 1999 LTM Program, water level measurements were collected in September and December 1999 and used to develop a potentiometric surface map for the site (Section 3.16.2.1). Groundwater samples were collected from four previously installed wells (MW-39-01, MW-39-02, MW-39-03, and MW-39-04) as part of the 1999 LTM Program and analyzed for VOCs. Results of this analysis are discussed in Section 3.16.2.2. Various field parameters, including pH, temperature, and specific conductivity, were measured prior to the collection of groundwater samples at each well and are presented in Appendix C. The number and type of groundwater samples collected at SS-39 are summarized in Table 3-32.

Table 3-32. Summary of 1999 LTM Program at SS-39

Well Numbers	Analyses (EPA Methods)	Analytes Detected Above CRDLs	Analytes Exceeding NMED Standards	QA Samples	Number of Samples
MW-39-01 MW-39-02 MW-39-03 MW-39-04	VOCs (8260B)	Carbon tetrachloride; TCE	None	MW-39-01	5

3.16.2.1 Site Hydrogeology

Depth-to-groundwater measurements at SS-39 in December 1999 ranged from 8.23 to 24.34 ft below TOC, corresponding to groundwater elevations ranging from 4032.3 to 4035.5 ft msl (Appendix C). There was very little or no variance between water level measurements taken in September and December 1999. A potentiometric surface map was prepared for the site using the groundwater data from December 1999 (Figure 3-45). The contour map indicates that groundwater flows to the south across a gradient of approximately 0.004 ft/ft. The gradient and groundwater flow direction observed at SS-39 during the 1999 LTM Program are comparable with the results from the 1997 LTM event.

3.16.2.2 Groundwater Sampling Results

Table 3-33 summarizes the analytical results for the LTM Program at SS-39. Because SS-39 was added to the LTM Program in 1997, the 1997 analytical results represent the baseline concentrations for the site. This table reflects all analytes detected at least once during LTM Program sampling events. Analytes reported above the CRDL in 1999 are shown in Figure 3-46.

VOCs were detected in well MW-39-02 at concentrations consistent with those from 1997 (i.e., not detected at concentrations that increased by more than one order of magnitude). Detected VOCs include carbon tetrachloride and TCE.

3.16.3 Recommendations

It is recommended that roots be removed from all wells at this site within 2 weeks prior to the next sampling event to ensure that representative water level measurements and groundwater samples are obtained. No other changes to the LTM Program for this site are recommended at this time.

Table 3-33. Summary of Analytical Results from the 1997 and 1999 Long-Term Monitoring Programs at SS-39

Well Number	MW-39-012		MW-39-02		MW-39-03		MW-39-04	
Sampling Date	Sep-97	Sep-99	Sep-97	Sep-99	Sep-97	Sep-99	Sep-97	Sep-99
VOCs[1] (µg/L)								
Carbon disulfide	ND	ND	ND	ND	14	ND	ND	ND
Carbon tetrachloride	ND	ND	8.3 J	4	ND	ND	ND	ND
Chloroform	1.1 J	ND	3.8	2 J	ND	1 J	ND	ND
1,1-Dichloroethylene	ND	ND	ND	1 J	ND	ND	ND	ND
TCE	ND	ND	38	45	ND	1 J	ND	ND

Notes:

[1] Unless otherwise reported, no VOCs were detected using EPA Method 8260B. (EPA Method 8260A was used to analyze for VOCs in the 1997 program.)

[2] Upgradient monitoring well

CRDL - Contract Required Detection Limit

IDL - Instrument Detection Limit

ND - not detected at or above method reporting limit

NS - not sampled

TCE - trichloroethylene

VOCs - volatile organic compounds

µg/L - micrograms per liter

Laboratory Qualifiers--assigned as a result of internal laboratory data assessment procedures

J - Estimated value; less than CRDL but greater than or equal to IDL

EPA Qualifiers--assigned as a result of independent data validation

None

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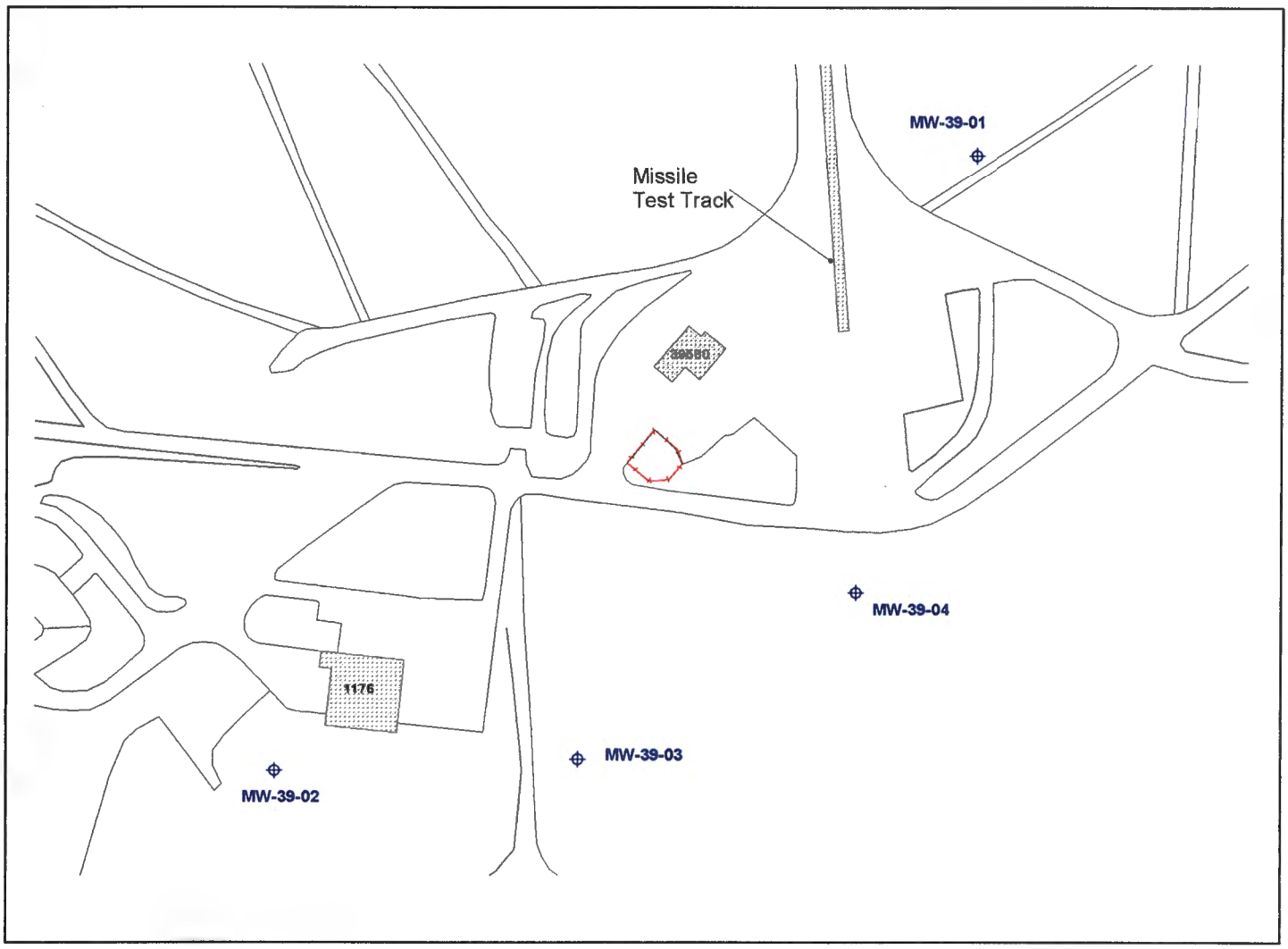


NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

200 0 200 400 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

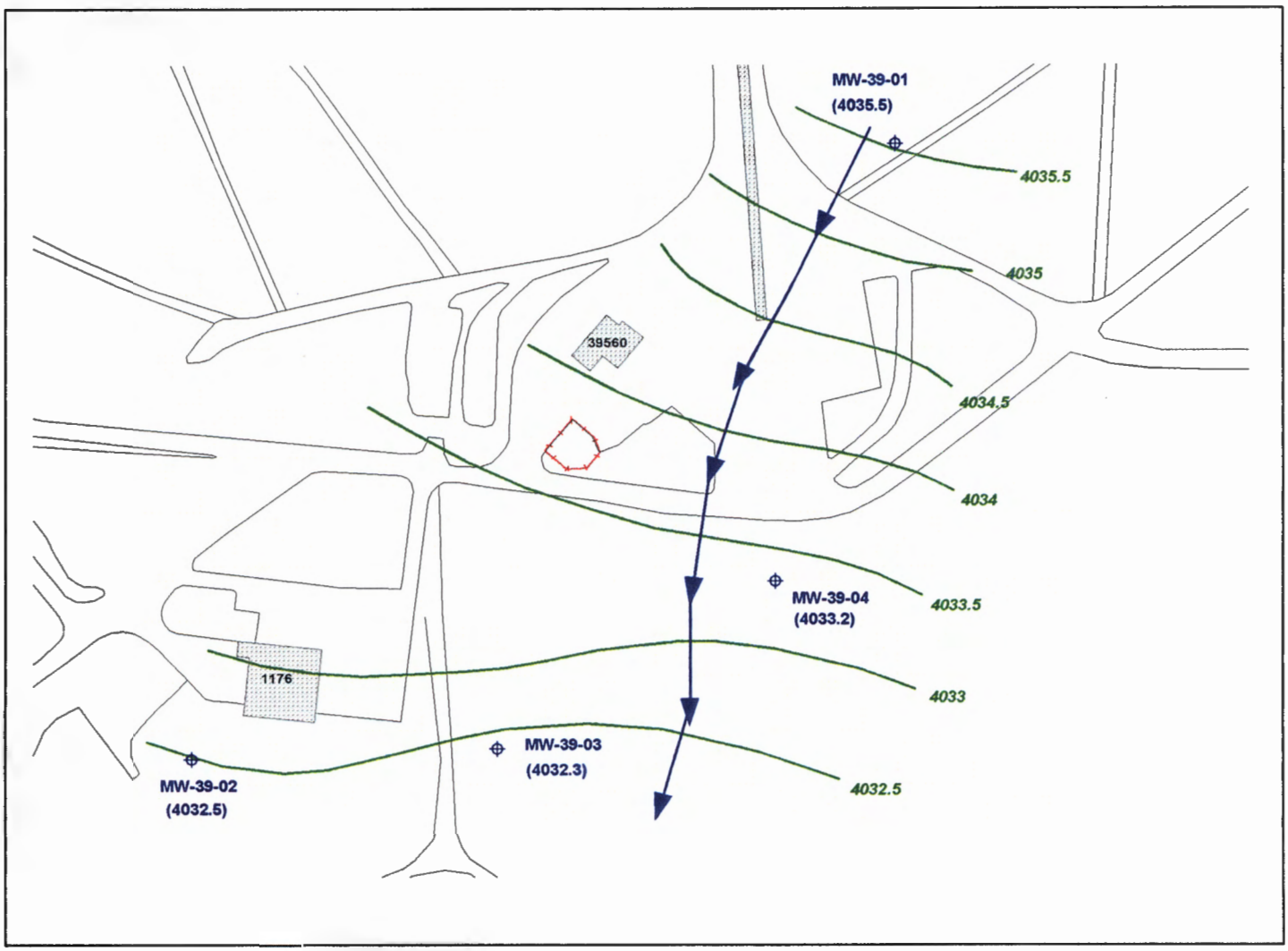
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-44
SITE LOCATION MAP FOR SS-39

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

Groundwater elevations are expressed in feet above mean sea level (msl).

GROUNDWATER FLOW DIRECTION

200 0 200 400 Feet

LEGEND

MONITORING WELL

4081 GROUNDWATER ELEVATION CONTOUR

(4080.2) GROUNDWATER ELEVATION (msl)

ROAD

BUILDING

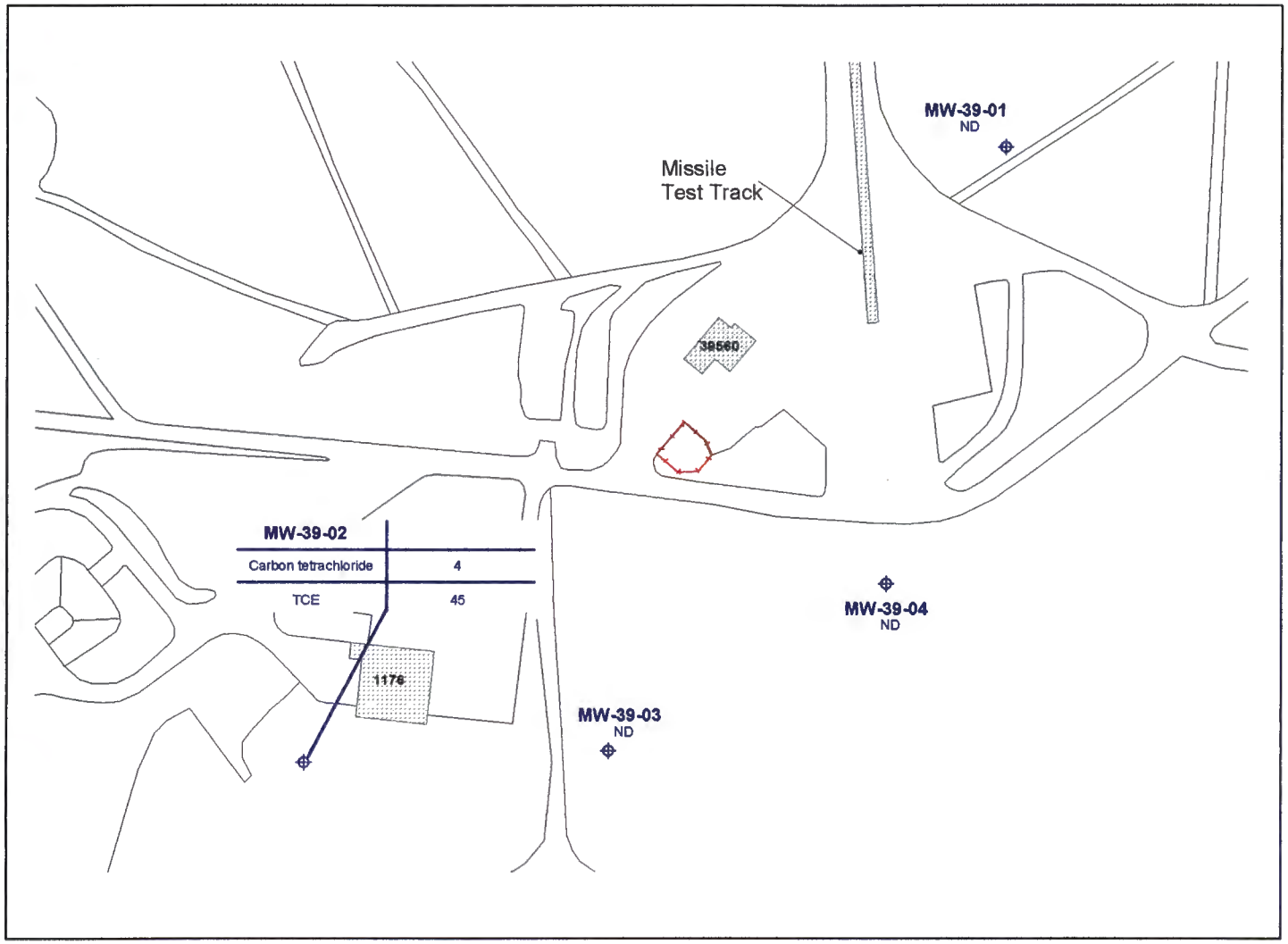
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-45
POTENTIOMETRIC SURFACE MAP FOR SS-39

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

All concentrations are expressed in micrograms per liter.

ND - no analytes were detected above the method reporting limit

200 0 200 400 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-46
GROUNDWATER ANALYTICAL RESULTS FOR SS-39

FOSTER WHEELER ENVIRONMENTAL CORPORATION

3.17 LF-29 FORMER ARMY LANDFILL (SWMU 104)

3.17.1 Background

The Former Army Landfill (LF-29, SWMU 104) occupies approximately 3 acres in the North Base area and is located approximately 300 ft north of Building 1001. The site is surrounded by a 3-ft-high earthen berm that extends 400 ft north-south and 350 ft east-west (FEC 1998). Figure 3-47 presents a site map including monitoring well locations.

From the early 1950s to 1975, the Army disposed of spent munitions and missiles at the site. Materials were also dumped outside the berm, roughly 200 ft south of the landfill border. These materials primarily consist of construction debris (FEC 1998).

During the Phase I RFI, four monitoring wells were installed at the site. Groundwater samples were collected and analyzed for VOCs, total metals, organophosphorus pesticides, OCPs, PCBs, explosives, chlorinated herbicides, anions, and total dissolved solids. The only VOC detected was chloroform, which was detected in monitoring wells MW-29-03 and MW-29-04. DDD was detected in monitoring well MW-29-03. With the exception of lead, all detected inorganic compound concentrations were within the range present in upgradient monitoring wells basewide. Lead was detected at a concentration of 2 micrograms per liter (μg/L) in monitoring well MW-29-02.

A quantitative baseline risk assessment was conducted for LF-29 as part of the Phase I RFI. It was concluded that the site did not pose an unacceptable risk to human health or the environment; however, EPA Region 6 requested additional characterization.

During the 1994 Phase II RFI, three monitoring wells were installed downgradient and one well was installed upgradient of the site to provide adequate flow path coverage. No inorganic compounds were detected above background levels in the groundwater samples. Delta-BHC was detected at concentrations below the CRDL in the monitoring wells. Several other OCPs and chlorinated herbicides were also detected at concentrations below detection limits in monitoring well MW-29-05.

Chloroform was detected in five of the seven groundwater samples, but was not detected in the associated method blanks. With the exception of the sample from monitoring well MW-29-03, all chloroform concentrations were below detection limits. A comparison of the 1991 RFI results with the 1994 Phase II RFI results showed a decrease in chloroform concentrations occurred in monitoring well MW-29-03. 1,2-Dichloroethane was detected in three monitoring wells (MW-29-02, MW-29-06, and MW-29-08) downgradient of the site, and was measured at a concentration of 350 µg/L in the upgradient monitoring well MW-29-05. With the exception of the upgradient well, benzene concentrations were detected below the detection limit in each monitoring well. Benzene was detected in monitoring well MW-29-05 at a concentration of 300 µg/L.

3.17.2 1999 Long-Term Groundwater Monitoring

Water level measurements were collected in September and December 1999 and used to develop a potentiometric surface map for the site (Section 3.17.2.1). During previous investigations, eight groundwater monitoring wells, MW-29-01 through MW-29-08, were installed at LF-29. Groundwater samples were collected from wells MW-29-01, MW-29-06, MW-29-07, and MW-29-08 as part of the 1999 LTM Program and analyzed for VOCs and SVOCs. Results of these analyses are discussed in Section 3.17.2.2. Various field parameters, including pH, temperature, and specific conductivity, were measured prior to the collection of groundwater samples at each well and are presented in Appendix C. The number and type of groundwater samples collected at LF-29 are summarized in Table 3-34.

Table 3-34. Summary of 1999 LTM Program at LF-29

Well Numbers	Analyses (EPA Methods)	Analytes Detected Above CRDLs	Analytes Exceeding NMED Standards	QA Samples	Number of Samples
MW-29-01 MW-29-06 MW-29-07 MW-29-08	VOCs (8260B) SVOCs (8270C)	Chloroform; 1,2-Dichloroethane	1,2-Dichloroethane	MW-29-07	5

3.17.2.1 Site Hydrogeology

Depth-to-groundwater measurements at LF-29 in December 1999 ranged from 19.94 to 25.67 ft below TOC, corresponding to groundwater elevations ranging from 4076.0 to 4078.0 ft msl (Appendix C). A potentiometric surface map was not prepared for water level measurements collected in December 1999 because of the potential for TOC elevation discrepancies. However, the groundwater elevations are presented in Figure 3-48. The area south and east of LF-29 was investigated in April 1999 as part of the Phase I RI for Spill Site 61 (SS-61). Based on information from the SS-61 RI, the groundwater flow direction is to the west-northwest along a gradient ranging from 0.002 to 0.003 ft/ft in the vicinity of LF-29 (Foster Wheeler 1999b)

3.17.2.2 Groundwater Sampling Results

Table 3-35 summarizes the analytical results for the LTM Program at LF-29. Because LF-29 was added to the LTM Program in 1997, the 1997 analytical results represent the baseline concentrations for the site. This table lists analytes detected at least once during LTM Program sampling events. Analytes reported above the CRDL in 1999 are shown in Figure 3-49.

VOCs were detected in three wells (MW-29-06, MW-29-07, and MW-29-08) sampled in 1999. The detection of chloroform was consistent with results from 1997 and was below the New Mexico Groundwater Quality Standard. 1,2-Dichloroethane was detected for the first time at this site and was detected in three of the four wells. The detections of 1,2-dichloroethane in wells MW-29-07 and MW-29-08 were both above New Mexico Groundwater Quality Standards.

SVOCs were not detected in any of the wells sampled during the 1999 LTM event.

3.17.3 Recommendations

It is recommended that sampling and analysis of SVOCs be discontinued at LF-29. No SVOCs have been detected above CRDLs at this site in either of the two LTM Programs. It is also recommended that TOC elevations of the monitoring wells associated with LF-29 be resurveyed.

Table 3-35. Summary of Analytical Results from the 1997 and 1999 Long-Term Monitoring Programs at LF-29

Well Number	MW-29-01[3,4]		MW-29-06		MW-29-07		MW-29-08	
Sampling Date	Sep-97	Sep-99	Sep-97	Sep-99	Sep-97	Sep-99	Sep-97	Sep-99
VOCs[1] (µg/L)								
Benzene	0.54 J	ND	ND	ND	ND	ND	ND	ND
Bromoform	0.64 J	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	3.6	4	ND	ND
1,2-Dichloroethane	ND	ND	ND	6	ND	**11**	ND	**15**
Methylene chloride	2.5 UB	ND	ND	ND	ND	ND	ND	ND
Napthalene	ND	ND	ND	ND	ND	ND	ND	ND
SVOCs[2] (µg/L)								
Butylbenzylphthalate	ND	ND	ND	ND	ND	1 J	ND	ND
Di-n-butylphthalate	ND	ND	1.6 UB	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	ND	1 J	ND	1 J	ND	1 J	ND	1 J
Phenol	ND	2 J	ND	ND	ND	ND	ND	ND

Notes:

[1] Unless otherwise reported, no VOCs were detected using EPA Method 8260B. (EPA Method 8260A was used to analyze for VOCs in the 1997 program.)

[2] Unless otherwise reported, no SVOCs were detected using EPA Method 8270C. (EPA Method 8270B was used to analyze for SVOCs in the 1997 program.)

[3] Blind duplicate collected in 1997; information available in 1997 LTM Report (FEC, 1997).

[4] Upgradient monitoring well

CRDL - Contract Required Detection Limit
IDL - Instrument Detection Limit
ND - not detected at or above method reporting limit
NS - not sampled
SVOCs - semi-volatile organic compounds
VOCs - volatile organic compounds
µg/L - micrograms per liter

Laboratory Qualifiers--assigned as a result of internal laboratory data assessment procedures
J - Estimated value; less than CRDL but greater than or equal to IDL
UB - Qualifies as non-detect due to presence of analyte in associated laboratory blank

EPA Qualifiers--assigned as a result of independent data validation
None

Bold values indicate 1999 analytes above New Mexico Groundwater Quality Standards.

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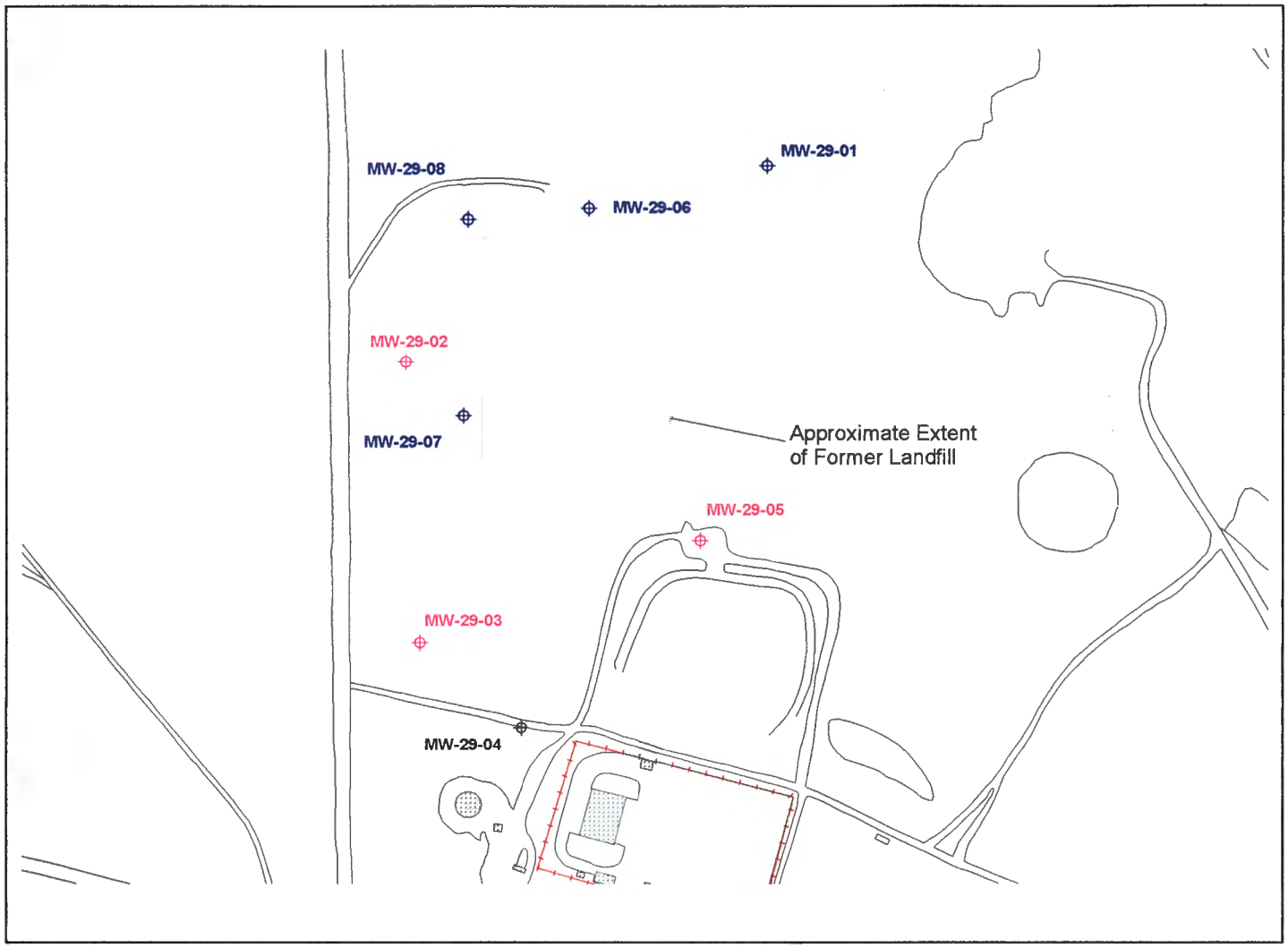


NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

Black well symbols denote wells that had no samples collected and no water level measurements taken.

300 0 300 600 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

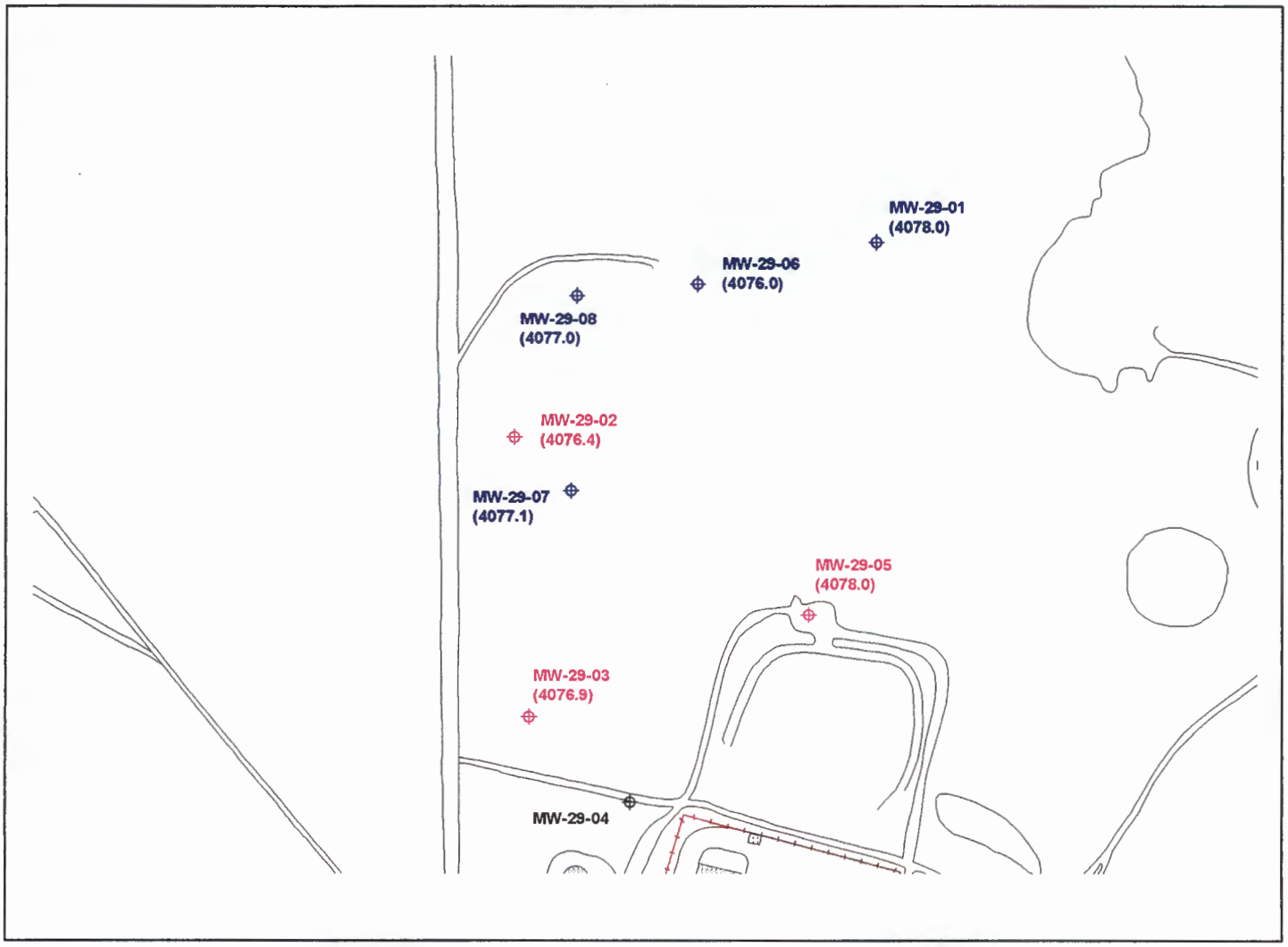
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-47
SITE LOCATION MAP FOR LF-29

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

Black well symbols denote wells that had no samples collected and no water level measurements taken.

Groundwater elevations are expressed in feet above mean sea level (msl).

200 0 200 400 Feet

LEGEND

MONITORING WELL

(4080.2) GROUNDWATER ELEVATION (msl)

ROAD

BUILDING

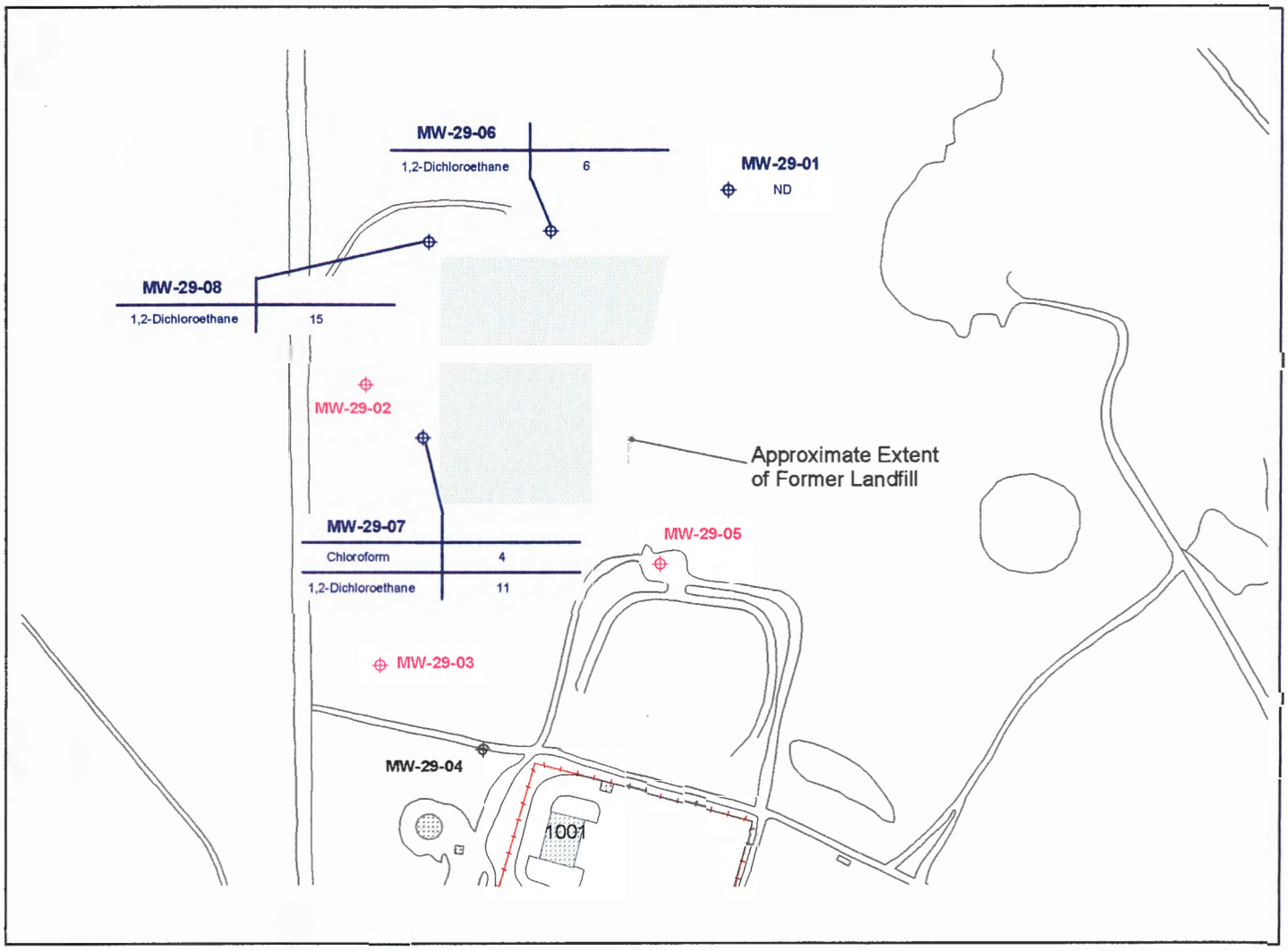
FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-48
GROUNDWATER ELEVATION MAP FOR LF-29

FOSTER WHEELER ENVIRONMENTAL CORPORATION



NOTES:

Blue well symbols denote wells monitored for both groundwater level and groundwater quality.

Magenta well symbols denote wells monitored for groundwater level only.

Black well symbols denote wells that had no samples collected and no water level measurements taken.

All concentrations are expressed in micrograms per liter.

ND - no analytes were detected above the method reporting limit

300 0 300 600 Feet

LEGEND

MONITORING WELL

ROAD

BUILDING

FENCE

N

LONG-TERM GROUNDWATER MONITORING
HOLLOMAN AIR FORCE BASE, NEW MEXICO

FIGURE 3-49
GROUNDWATER ANALYTICAL RESULTS FOR LF-29

FOSTER WHEELER ENVIRONMENTAL CORPORATION

4.0 CONCLUSIONS AND RECOMMENDATIONS

Seventeen sites were evaluated as part of the 1999 LTM Program. Groundwater samples were submitted for site-specific chemical analyses, including VOCs, SVOCs, OCPs, PCBs, chlorinated herbicides, total mercury, dissolved RCRA metals, iron, manganese, and dissolved lead. Analytical results obtained during the 1999 LTM Program activities were evaluated and compared with results observed during the 1995 and 1997 LTM Programs. In general, groundwater sample results from 1999 were consistent with sampling results from previous LTM Programs (i.e., detected analyte concentrations did not increase by one order of magnitude or greater). Eight of the wells at eight sites had detections of analytes that exceeded New Mexico Groundwater Quality Standards. Overall, more metals were detected during the 1999 LTM Program than in previous years. This increase in the number of metals detections can be attributed to one, or both, of the following reasons:

- Improved analytical technologies that have resulted in analytical methods with lower detection limits than previously available
- Elevated groundwater turbidity that often exceeded 100 nephelometric turbidity units indicating suspended solids were present in the samples.

Recommendations for revising the 2001 LTM Program were made for 12 of the 17 sites addressed in this report. These recommendations primarily focus on decreasing the number of constituents in the analytical requirements for each site. A recommendation was made to resurvey TOC elevations of monitoring wells at LF-29 because groundwater elevations for September and December 1999 appear erroneous and could not easily be contoured. Additional recommendations have been made pertaining to removing root growth from wells at three landfills prior to sampling.

Table 4-1 summarizes the 1999 LTM Program sampling event and recommendations for the 2001 LTM Program.

Table 4-1. Summary of 1999 Long-Term Monitoring Findings and Recommendations

Site	1999 Analyses (EPA Methods)	1999 Results Above CRDL	1999 Results Above NMGWQ Standards	2001 LTM Program Recommendations
LF-01	VOCs (8260B), Metals (6010B Trace, 7470A)	Manganese	None	The only metals detected in 3 events above the CRDL were selenium and manganese. Recommend monitoring for these metals only in the next sampling round.
LF-10	VOCs (8260B), Metals (6010B Trace, 7470A)	Chromium, Manganese	None	Only metals detected in 3 events above the CRDL were arsenic, chromium, lead, and manganese. Arsenic values reported for the 1995 event were probably reported below the CRDL but not flagged as such when comparing the values t the 1999 (B) values. Recommend monitoring for chromium, lead, and manganese.
SD-08	VOCs (8260B), Metals (6010B Trace, 7470A), Organochlorine Pesticides (8081A)	1,2-Dichloroethane; 1,2-Dichloropropane; Iron; Manganese; gamma-Chlordane	1,2-Dichloroethane, Iron, Manganese	Analyze only for barium, lead, iron, and manganese.
LF-19	VOCs (8260B), Metals (6010B Trace, 7470A)	Iron, Manganese, Mercury	Manganese	Drop VOCs from program since no VOCs have been detected above the CRDL for the 3 events. Analyze for only metals detected above the CRDL (barium, iron, lead, manganese, and mercury).
LF-21	VOCs (8260B), Metals (6010B Trace, 7470A)	TCE, Iron, Manganese	None	Analyze for VOCs (TCE), barium, iron, and manganese. Remove roots from all wells 2 weeks prior to sampling to ensure that representative water level measurements and groundwater samples are obtained.
LF-22	VOCs (8260B), Metals (6010B Trace, 7470A), Organochlorine Pesticides (8081A), PCBs (8082), Herbicides (8151A)	Manganese; 2,4-D; MCPP; Picloram	None	Delete VOCs and OCPs since none were detected above the CRDL for 3 events Analyze for herbicides, iron, and manganese.
LF-23	VOCs (8260B), Metals (6010B Trace, 7470A), Organochlorine Pesticides (8081A), PCBs (8082), Herbicides (8151A)	Iron, Manganese, 4-Nitrophenol	Manganese, Selenium	Delete VOCs and OCPs. Analyze for iron, manganese, selenium, and herbicides only.
OT-44	VOCs (8260B)	Carbon disulfide	None	No changes to the current LTM Program are recommended at this time.
SS-48	VOCs (8260B), Dissolved lead (6010B Trace)	Benzene, Ethylbenzene	Benzene, Ethylbenzene	Delete lead analysis.
DP-30 & SD-33	VOCs (8260B), Metals (6010B Trace, 7470A)	Chloroform; 1,1-Dichloroethane; TCE	1,1-Dichloroethane, TCE	Analyze for VOCs, iron, and selenium only. Remove roots from all wells 2 weeks prior to sampling to ensure that representative water level measurements and groundwater samples are obtained.
SS-56	VOCs (8260B), Dissolved lead (6010B Trace)	None	None	No changes to the current LTM Program are recommended at this time.

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Table 4-1. Summary of 1999 Long-Term Monitoring Findings and Recommendations

Site	1999 Analyses (EPA Methods)	1999 Results Above CRDL	1999 Results Above NMGWQ Standards	2001 LTM Program Recommendations
SS-02 & SS-05	VOCs (8260B)	Benzene; Ethylbenzene; Toluene; m,p-Xylenes; o-Xylene	Benzene, Ethylbenzene	No changes to the current LTM Program are recommended.
SS-46	VOCs (8260B), Dissolved lead (6010B Trace)	None	None	No changes to the current LTM Program are recommended at this time.
OT-16	VOCs (8260B), Organochlorine Pesticides (8081A)	Chloroform, TCE, gamma-BHC	None	Consider collecting additional samples at 118-MW1601 to confirm detections of chloroform and TCE. No other changes to the current LTM Program are recommended.
SS-17	VOCs (8260B)	Benzene; 1,2-Dichloroethane; Ethylbenzene	Benzene, 1,2-Dichloroethane	No changes to the current LTM Program are recommended.
SS-39	VOCs (8260B)	Carbon tetrachloride; TCE	None	Remove roots from all wells 2 weeks prior to sampling to ensure that representative water level measurements and groundwater samples are obtained.
LF-29	VOCs (8260B), SVOCs (8270C)	Chloroform; 1,2-Dichloroethane	1,2-Dichloroethane	Delete SVOCs. Resurvey top of casing elevations.

Notes:
AOC - Area of concern
CRDL - contract-required detection limit
EPA - United States Environmental Protection Agency
LTM - Long-Term Monitoring
NMGWQ - New Mexico Groundwater Quality
PCB - polychlorinated biphenyl
SVOC - semivolatile organic compound
SWMU - Solid Waste Management Unit
TCE - trichloroethylene
Trace - inductively coupled plasma trace analysis
VOC - volatile organic compound

C:\Holloman\LTM\Final Report\LTM Recommendations.xls.xls

5.0 REFERENCES

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APPENDIX A
DATA QUALITY CONTROL SUMMARY REPORT

DATA QUALITY CONTROL SUMMARY REPORT

The analytical program for the Long-Term Monitoring (LTM) Program consisted of chemical testing performed by Laucks Testing Laboratories (Laucks), Seattle, Washington. Analytical methods for chemical analysis are taken from the latest revision of the United States Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste, SW-846 Third Edition (EPA, 1986). The specific analytical methods used for the 1999 LTM are as follows:

- Volatile organic compounds (VOCs)—Method 8260B
- Semivolatile organic compounds (SVOCs)—Method 8270C
- Organochlorine pesticides (OCPs)—Method 8081A
- Polychlorinated biphenyls (PCBs)—Method 8082
- Herbicides—Method 8151A
- Dissolved RCRA metals, iron, manganese—Method 6010B Trace/7470A
- Dissolved lead—Method 6010B Trace

The 1999 LTM methods varied from the analytical methods used for metals analysis (except mercury) during the 1995 and 1997 LTM events. The metals for the 1995 and 1997 events were analyzed using inductively coupled plasma (ICP) spectroscopy and graphite furnace atomic absorption. The use of the advanced technology, trace ICP instrumentation for the 1999 metals analysis enabled the laboratory to achieve metals reporting limits that are 3 to 20 times lower than the 1995 and 1997 limits. Achieving lower reporting limits for the 1999 metals analysis resulted in a significant increase in reported metals detections.

1.0 DATA VALIDATION

The data validation procedure used for the LTM Program is in accordance with EPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (EPA, 1994). One hundred percent of the analytical data were reviewed for the following criteria:

- Completeness of data deliverables
- Extraction and analysis holding times
- Blank data (method and trip)
- System monitoring compounds (surrogate recoveries)
- Matrix spike/matrix spike duplicate (MS/MSD) recovery
- Laboratory control sample (LCS) recovery
- Overall data assessment

1.1 DATA PRESENTATION AND EVALUATION

Laucks reported the analytical data for the 1999 LTM using data qualifiers to identify values reported above the instrument detection limit (IDL) and below the contract required detection limit (CRDL). J- and B-qualifiers were used for organic (volatile and

semivolatile compounds) and inorganic (metals) data respectively, to signify a detected value above the IDL and below the CRDL. The level of confidence associated with the J- and B-qualified data is less than the 95 percent confidence associated with data reported above the CRDL and therefore, the data are considered estimated. The J- and B-qualified 1999 LTM data are included in the site-specific analytical results summary tables in provided Section 3, Volume 1, of this report. Only those values reported above the CRDL are presented on the Section 3 maps and discussed in the text.

The 1995 and 1997 LTM data are also presented in the Section 3 summary tables. Only for organic compounds were J-qualified results, signifying estimated values, and detections below the CRDL reported for the 1995 and 1997 events. Using trace ICP instrumentation for metals analysis for the 1999 event enabled the laboratory to achieve lower CRDLs than for the previous events. The improved analytical technologies in conjunction with the difference in the data reporting procedure for metals resulted in a significant increase in metals detections for the 1999 event as compared with the 1995 and 1997 events.

1.2 LABORATORY QA/QC

The types of laboratory quality control (QC) samples associated with the LTM include method blanks, laboratory control sample (LCS), and matrix spike/matrix spike duplicate (MS/MSD) samples. These QC samples are used to measure the analytical method precision and accuracy. The method blank is used to assess laboratory contamination. The results of the laboratory QC sample data are summarized below.

Field QC samples were also collected in support of the remedial investigation. Field duplicate samples were collected to assess the precision associated with the sampling activities and laboratory analyses, as well as to determine data comparability. Trip blank samples were included with each cooler containing samples for VOC analysis to assess potential contamination as a result of shipping. The results of the field QC data are summarized below.

1.2.1 HoldingTimes

Representativeness of the data is determined through review of extraction and analysis holding times in conjunction with review of blank data in accordance with EPA analytical method holding time guidelines. All holding times were met for the LTM samples, with the exception of three herbicide samples which were re-extracted outside of their holding time. The herbicide data for samples LF22MW01, LF22MW04, and LF23MW01 will be J- and UJ- qualified, signifying estimated detect and non-detect data.

1.2.2 Laboratory Method Blank Samples

Laboratory method blank samples were analyzed with each batch of field samples for each analytical method. A batch contains 10 or less field samples that were grouped and analyzed together based on receipt at the laboratory. Method blank detections were

evaluated as part of the validation process. No detections were reported in the method blank samples. The representativeness of the data was 100 percent based on method blank results.

1.2.3 Laboratory Control Samples

Laboratory control samples were analyzed with each sample delivery group (SDG) for each analytical method. LCS spike recoveries reported at concentrations above or below the method-specific control limits resulted in qualification of those analytes in the associated field samples. The LCS data are used in conjunction with the matrix spike recovery data and the system monitoring compound recoveries to determine the accuracy of the analytical data.

The LCS recoveries for all analytical parameters were within the method control limits with the exception of one SVOC analyte, pyrene, in SDG FWH47. The pyrene recovery was above the method control limit. No SVOC data was qualified since there were no SVOC detections. LCS recoveries indicate the accuracy of the data was 100 percent.

1.2.4 Matrix Spike Samples

Laboratory MS/MSD samples were analyzed at a frequency of five percent for each analytical method however, MS/MSD were analyzed on LTM project-specific samples for VOCs and metals only. MS/MSD sample recoveries were evaluated in conjunction with the other batch QC sample recoveries to determine the need for qualification of analytical data.

1.2.4.1 VOCs

Four MS samples were analyzed on LTM project-specific samples using EPA Method 8260B for VOCs. The recoveries were within the method-specific control limits for all MS/MSD samples. MS/MSD recoveries indicate no matrix interference associated with the sample analysis.

1.2.4.2 Metals

Eight MS samples were analyzed on LTM project-specific samples using EPA Methods 6010B Trace and 7470A. The MS sample recoveries for arsenic, iron, selenium, and silver were above the method control limits therefore all detections of these metals in SDG FWH45 were J-qualified, signifying estimated data. The MS sample recovery for barium and mercury was below the method control limit in SDG FWH45. Barium and mercury data in SDG FWH45 was J- and UJ- qualified.

The MS sample recoveries for arsenic, selenium, and silver in SDG FWH46 were above the method control limit, therefore all detections of these metals in FWH46 were J-qualified. The MS sample recoveries for barium, and mercury in SDG FWH46 were below the method control limits. Barium and mercury data in SDG FWH46 were J- and

UJ- qualified. The MS/MSD sample relative percent difference (RPD) for chromium and manganese in SDG FWH46 was above the 25 percent criteria therefore, the chromium and manganese data were J- and UJ- qualified.

The MS sample recoveries for arsenic, selenium, and silver in SDG FWH47, were above the method control limits, therefore all detections of these metals in SDG FWH47 were J-qualified. The MS sample recovery for mercury in SDG FWH47 was below the method control limit. Mercury data in SDG FWH47 was J- and UJ-qualified.

1.2.5 System Monitoring Compounds

System monitoring compounds, also known as surrogate spike compounds, are used for the gas chromatography (GC) and GC/mass spectrometry analytical methods (8260B, 8270C, 8081A, 8082, 8151A) to monitor the performance of an individual sample during extraction and analysis. All system monitoring compound recoveries for the LTM data were within the method control limits for all methods.

1.2.6 Metals Quality Control Criteria

In addition to the previously evaluated metals QC criteria, inductively coupled plasma (ICP) interference check samples and ICP serial dilution percent differences were evaluated for ICP metals analysis. All ICP interference check sample results and ICP serial dilution criteria were met with the exception of the ICP serial dilution results for barium in SDGs FWH45 and 47. As a result, the barium data in SDG FWH45 and FWH47 was J-qualified.

1.2.7 GC Second Column Confirmation

A second column is used for GC analytical methods to confirm data results reported from the primary column analysis. In accordance with the EPA Functional Guidelines, the values generated by the second column analysis should confirm within 25 percent of the primary column value. If this does not occur the data should be reported with a data qualifier. The herbicide detections reported in SDG FWH46 for wells LF22MW01, LF22MW04, and LF23MW01 did not confirm within the 25 percent difference criteria. In addition, the pesticide detection reported in sample SD08MW01 did not meet the confirmation criteria. The detections for these analytes were J-qualified.

1.3 FIELD QA/QC

Field QC samples were collected for each sampling activity conducted in support of the LTM. Field duplicates and QA replicates were collected for water sampling to assess the precision associated with the sampling and the laboratory analysis. Trip blanks were collected for water samples and analyzed for VOCs to assess potential contamination resulting from shipping and storage. Temperature blanks were included in each cooler containing groundwater samples submitted for laboratory analysis to assure that samples

were maintained within the appropriate temperature range during sample shipment to the laboratory.

A total of seven United States Army Corps of Engineers (USACE) Chemistry Quality Assurance Branch (CQAB) Laboratory of Waterways Experiment Station replicate samples were collected and analyzed for the LTM. This results in approximately 11 percent of the total samples collected for the LTM. The project objective of 10 percent QA replicates was achieved. A comparison of the CQAB Laboratory replicate data and the Laucks sample data is not available from USACE at this time.

A total of seven field duplicate samples were collected and analyzed for the LTM, resulting in approximately 11 percent of the total samples. The project objective of 10 percent field duplicate samples was achieved. The field duplicate samples were collected at the following wells:

- SS48MW5
- SD08MW03
- LF01MW2
- DP30MW01
- LF29MW07
- OT44MW6
- SS39MW01

There are no required review criteria for field duplicate analyses comparability specified in the EPA Functional Guidelines. An evaluation of the relative percent difference (RPD) values for the field duplicate samples indicates greater than 99 percent of the RPD values are within a 30 percent RPD criteria. The RPDs for chromium in well LF01MW2 and selenium in wells LF01MW2 and SD08MW03 were above the 30 percent criteria. However, the chromium value and the selenium value for well SD08MW03 were below the reporting limit, and the selenium value for well LF01MW2 was J-qualified for matrix spike recovery. The RPD for manganese in well DP30MW01 was above the 30 percent criteria however, the detection was below the reporting limit therefore, no data was qualified.

Data reproducibility indicates minimal matrix interference associated with sample analysis, and a high level of precision associated with sampling and analysis.
Nine trip blanks were shipped and analyzed for VOCs for the LTM. No VOCs were detected in any of nine trip blank samples indicating no VOC contamination occurred during sample shipment or storage. The trip blank for VOC samples shipped on September 22, 1999, was inadvertently omitted from the sample cooler. There was one low-level detection of carbon tetrachloride reported in sample SS39MW02, shipped on September 22.

Temperature blanks were included with each cooler shipment to the laboratory. The EPA recommends sample temperatures be maintained at 4°C ± 2°C during sample shipment and storage at the laboratory to ensure sample integrity. All temperature blanks for the LTM were within the EPA guidelines.

2.0 DATA ASSESSMENT

As a result of the data validation procedure, it was determined that less than one percent of the analytical data for the LTM were qualified as estimated. No analytical data were rejected (R-qualified) or associated with blank contamination (B-qualified). Analytical data were J-qualified based on the following validation criteria:

- Holding time exceedance – herbicides
  LF22MW01, LF22MW04, LF23MW01 (detects and nondetects)

- Matrix spike sample recovery - arsenic, iron, selenium, silver (detects); barium, mercury (detects and nondetects)
  SD08MW01, SD08MW03, SD08MW03D, SD08MW04, SD08MW05, LF01MW1, LF01MW2, LF01MW2D, LF01MW5, LF01IW2

  Arsenic, selenium, silver (detects); barium, mercury (detects and nondetects)
  LF10MW2, LF10MW3, LF10MW4, LF10MW6, LF21MW1, LF21MW2, LF21MW3, LF21MW4, LF19MW1, LF19MW2, LF19MW3

  Arsenic, selenium, silver (detects); mercury (detects and nondetects)
  LF22MW01, LF22MW02, LF22MW03, LF22MW04, LF23MW01, LF23MW02, LF23 MW03, LF23MW04, DP30MW01, DP30MW01D, DP30MW02, DP30MW03, DP30MW04

- MSD RPD – chromium, manganese (detects and nondetects)
  LF10MW2, LF10MW3, LF10MW4, LF10MW6, LF21MW1, LF21MW2, LF21MW3, LF21MW4, LF19MW1, LF19MW2, LF19MW3

- ICP serial dilution percent difference – barium (detects and nondetects)
  SD08MW01, SD08MW03, SD08MW03D, SD08MW04, SD08MW05, LF01MW1, LF01MW2, LF01MW2D, LF01MW5, LF01IW2
  LF22MW01, LF22MW02, LF22MW03, LF22MW04, LF23MW01, LF23MW02, LF23MW03, LF23MW04, DP30MW01, DP30MW01D, DP30MW02, DP30MW03, DP30MW04

- Second column confirmation exceeds criteria – herbicides, pesticides
  LF23MW01 (4-nitrophenol)
  LF22MW01 (MCPP, picloram)
  LF22MW04 (2,4,D)
  SD08MW01 (gamma-Chlordane)

- Field duplicate sample RPD – pesticides, metals
  LF01MW2 – selenium

3.0 DATA USABILITY

Review of the QC data associated with the field sample data indicated project measurement data were reliable and fulfilled project data quality objectives. Sampling and analysis precision and accuracy for the LTM analytical data were acceptable, and valid conclusions may be drawn from the field sample data. Based on the data validation procedure, 172 results were J- qualified (estimated data) but are still usable to establish baseline and determine the release of hazardous substances from the SWMUs to groundwater. No data were R- or B- qualified. A data completeness objective of greater than 99 percent was achieved for the Holloman 1999 LTM.

APPENDIX B
DATA APPENDIX

Holloman AFB Well Identification Cross Reference

FW Location ID	FW Field Sample ID	AFCEE Location ID
S1-MW1	LF01MW101	S1-MW1
S1-MW2	LF01MW201	S1-MW2
S1-MW5	LF01MW501	S1-MW5
IW2	LF01IW201	1W2
S10-MW2	LF10MW201	S10-MW2
S10-MW3	LF10MW301	S10-MW3
S10-MW4	LF10MW401	S10-MW4
S10-MW6	LF10MW601	S10-MW6
MW-08-01	SD08MW0101	MW-08
MW-08-03	SD08MW0301	MW-08-03
MW-08-04	SD08MW0401	MW-08-04
MW-08-05	SD08MW0501	MW-08-05
MW-19-01	LF19MW0101	MW-19-01
MW-19-02	LF19MW0201	MW-19-02
MW-19-03	LF19MW0301	MW-19-03
MW-21-01	LF21MW0101	MW-21-01
MW-21-02	LF21MW0201	MW-21-02
MW-21-03	LF21MW0301	MW-21-03
MW-21-04	LF21MW0401	MW-21-04
MW-22-01	LF22MW0101	MW-22-01
MW-22-02	LF22MW0201	MW-22-02
MW-22-03	LF22MW0301	MW-22-03
MW-22-04	LF22MW0401	MW-22-04
MW-23-01	LF23MW0101	MW-23-01
MW-23-02	LF23MW0201	MW-23-02
MW-23-03	LF23MW0301	MW-23-03
MW-23-04	LF23MW0401	MW-23-04
S50-MW1	OT44MW101	S50-MW1
S50-MW2	OT44MW201	S50-MW2
S50-MW3	OT44MW301	S50-MW3
S50-MW6	OT44MW601	S50-MW6
S55-MW2	SS48MW201	S55-MW2
S55-MW4	SS48MW401	S55-MW4
S55-MW5	SS48MW501	S55-MW5
S55-MW7	SS48MW701	S55-MW7
MW-30/33-01	DP30MW0101	MW30&33-01
MW-30/33-02	DP30MW0201	MW30&33-02
MW-30/33-03	DP30MW0301	MW30&33-03
MW-30/33-04	DP30MW0401	MW30&33-04

Holloman AFB Well Identification Cross Reference

FW Location ID	FW Field Sample ID	AFCEE Location ID
MW-56-01	SS56MW0101	MW-56-01
WCC-3	SS56WCC301	WR-WCC-3
WCC-5	SS56WCC501	WR-WCC-5
MW-0205-03	SS02MW0301	MW-02&05-03
MW-0205-05	SS02MW0501	MW-02&05-05
MW-0205-06	SS02MW0601	MW-02&05-06
MW-0205-08	SS02MW0801	MW-02&05-08
MW-46-01	SS46MW0101	MW-46-01
MW-46-02	SS46MW0201	MW-46-02
MW-46-03	SS46MW0301	MW-46-03
118-MW1601	OT16MW0101	118-MW1601
118-MW1602	OT16MW0201	118-MW1602
118-MW1603	OT16MW0301	118-MW1603
118-MW1604	OT16MW0401	118-MW1604
W-4	SS17W401	W-4
TH-22	SS17TH2201	TH-22
MW-BX-01	SS17BX0101	MW-BX-01
MW-BX-02	SS17BX0201	MW-BX-02
MW-39-01	SS39MW0101	179-MW3901
MW-39-02	SS39MW0201	179-MW3902
MW-39-03	SS39MW0301	179-MW3903
MW-39-04	SS39MW0401	179-MW3904
MW-29-01	LF29MW0101	MW-29-01
MW-29-06	LF29MW0601	MW-29-06
MW-29-07	LF29MW0701	MW-29-07
MW-29-08	LF29MW0801	MW-29-08

Notes:

AFCEE Air Force Center for Environmental Excellence
FW Foster Wheeler Environmental Corporation
ID Identification

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

9909386 FWH45

COOLER 4

1.4

AFIID:	Project:	Sample Date:
Holloman AFB	LTM SD-08	9/14/99
Method Type: Bailer	Samplers: CBieniulis/D Riggato	

	Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	Preservative: HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury						Comments
2	WELL	SD08MW0101	1740					X	B	3	X													
3	WELL	SD08MW0101	1740		X				B	1						X								
	WELL	SD08MW0101	1740		X				B	1								X						
	WELL	SD08MW0101	1740						B	2			X											
3	WELL	SD08MW0301	1715					X	B	3	X													
4	WELL	SD08MW0301	1715		X				B	1						X								
	WELL	SD08MW0301	1715		X				B	1								X						
	WELL	SD08MW0301	1715						B	2			X											
4	WELL	SD08MW0302	1720					X	B	3	X													Field Duplicate
	~~WELL~~	~~SD08MW0302~~	~~1720~~		~~X~~				~~B~~	~~1~~						~~X~~								~~Field Duplicate~~
	~~WELL~~	~~SD08MW0302~~	~~1720~~		~~X~~				~~B~~	~~1~~								~~X~~						~~Field Duplicate~~
	~~WELL~~	~~SD08MW0302~~	~~1720~~						~~B~~	~~2~~			~~X~~											~~Field Duplicate~~
15	WELL	SD08MW0401	1640					X	B	3	X													
	~~WELL~~	~~SD08MW0401~~	~~1640~~		~~X~~				~~B~~	~~1~~						~~X~~								
	~~WELL~~	~~SD08MW0401~~	~~1640~~		~~X~~				~~B~~	~~1~~								~~X~~						
	~~WELL~~	~~SD08MW0401~~	~~1640~~						~~B~~	~~2~~			~~X~~											
6	WELL	SD08MW0501	1655					X	B	3	X													
	~~WELL~~	~~SD08MW0501~~	~~1655~~		~~X~~				~~B~~	~~1~~						~~X~~								
	~~WELL~~	~~SD08MW0501~~	~~1655~~		~~X~~				~~B~~	~~1~~								~~X~~						
	~~WELL~~	~~SD08MW0501~~	~~1655~~						~~B~~	~~2~~			~~X~~											

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
CBie	9/14/99 1800	CBie	9/14/99 1800
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
CBie	9/15/99 1200	FED EX	9/15/99 1200
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
		Chl Chl A	9/16/99 0840

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 8005676199 71

LABORATORY USE ONLY	Y	N
Package Received/Custody Seals Intact		
Sample Labels/C-O-Cs Agree		
Temperature Within Specification ____ °C		
Corrected Copy Attached		
Problems or Discrepancies		

FWENC\SD08COCL97 09/15/99 7:22 AM

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

9909386 FW1445

COOLER A 16

AFIID: Holloman AFB	Project: LTM	Sample Date: 9/15/99
Method Type: Bailer	Samplers: C Bieniulis	

	Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	Preservative: HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury						Comments
17	TB	TRIP BLANK	1200					X	B	3	X													

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
C Bien	9/15/99 1200	FED EX	9/15/99 1200
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
		Chl Clt	9/16/99 0840

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 800567619971

LABORATORY USE ONLY

Package Received Custody Seal Intact

Sample Labels/C.O.C. Agree

Temperature Within Specification

Corrected Copy Attached

Problems or Discrepancies

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

9909386 FWH45

COOLER B 15

AFIID:	Project:	Sample Date:
Holloman AFB	LTM SD-08	9/14/99
Method Type: Bailer	Samplers: CBieniulis/D Riggato	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	HNO3	H2SO4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury						Comments
~~WELL~~	~~SD08MW0101~~	~~1740~~					X	B	3	X													
~~WELL~~	~~SD08MW0101~~	~~1740~~		X				B	1						X								
~~WELL~~	~~SD08MW0101~~	~~1740~~		X				B	1								X						
~~WELL~~	~~SD08MW0101~~	~~1740~~						B	2			X											
~~WELL~~	~~SD08MW0301~~	~~1715~~					X	B	3	X													
~~WELL~~	~~SD08MW0301~~	~~1715~~		X				B	1						X								
~~WELL~~	~~SD08MW0301~~	~~1715~~		X				B	1								X						
~~WELL~~	~~SD08MW0301~~	~~1715~~						B	2			X											
25 ~~WELL~~	~~SD08MW0302~~	~~1720~~					X	B	3	X													~~Field Duplicate~~
14 WELL	SD08MW0302	1720		X				B	1						X								Field Duplicate
14 WELL	SD08MW0302	1720		X				B	1								X						Field Duplicate
WELL	SD08MW0302	1720						B	2			X											Field Duplicate
~~WELL~~	~~SD08MW0401~~	~~1640~~					X	B	3	X													
15 WELL	SD08MW0401	1640		X				B	1						X								
26 WELL	SD08MW0401	1640		X				B	1								X						
WELL	SD08MW0401	1640						B	2			X											
~~WELL~~	~~SD08MW0501~~	~~1655~~					X	B	3	X													
16 WELL	SD08MW0501	1655		X				B	1						X								
27 WELL	SD08MW0501	1655		X				B	1								X						
WELL	SD08MW0501	1655						B	2			X											

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
CBi	9/14/99 1800	CB	9/14/99 1800
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
CBi	9/15/99 1200	FED EX	9/15/99 1200
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
		[illegible]	9/16/99 0840

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 8020 5676 ~~19971~~ 20004

LABORATORY USE ONLY	Y	N
Package Received/Custody Seals Intact		
Sample Labels/C-o-C's Agree		
Temperature Within Specification ___ °C		
Corrected Copy Attached		
Problems or Discrepancies		

FWENC\SD08COCL97 09/15/99 7:22 AM

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

9909386 FWH45

COOLER D

12

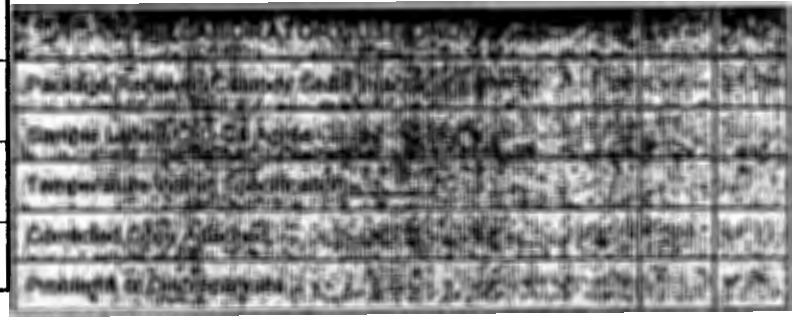
AFIID:	Project:	Sample Date:
Holloman AFB	LTM SS-48	9/15/99
Method Type: Bailer	Samplers: DRizzuto / RJones	

	Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury						Comments
1	WELL	SS48MW201	1002					X	B	3	X													
	WELL	SS48MW201	1002		X				B	1							X							
2	WELL	SS48MW401	1015					X	B	3	X													
	WELL	SS48MW401	1015		X				B	1							X							
3	WELL	SS48MW501	0950					X	B	3	X													
	WELL	SS48MW501	0950		X				B	1							X							
4	WELL	SS48MW502	0952					X	B	3	X													Field Duplicate
	WELL	SS48MW502	0952		X				B	1							X							Field Duplicate
5	WELL	SS48MW701	0932					X	B	3	X													
	WELL	SS48MW701	0932		X				B	1							X							

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
DR	9/15/99 1400	CB	9/15/99 1400
CB	9/15/99 1500	FED EX	9/15/99 1500
			9/16/99 0840

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 800567620129



FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record 9909386 FWH45

COOLER D 13

AFIID:	Project:	Sample Date:
Holloman AFB	LTM SS-17	9/15/99
Method Type: Bailer	Samplers: DRizzuto / R Jones	

	Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury						Comments
7	WELL	SS17W401	0740					X	B	3	X													
8	WELL	SS17TH2201	0819					X	B	3	X													
9	WELL	SS17BX0101	0730					X	B	3	X													
10	WELL	SS17BX0201	0750					X	B	3	X													
	~~WEL~~ CLB																							
11	TB	TripBlank	1400					X	B	3	X													

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
DR	9/15/99 0900	CBrien	9/15/99 0900
CBrien	9/15/99 1400	FED EX	9/15/99 1400
		Chl Chl	9/16/99 0840

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 800567620129

LABORATORY USE ONLY	Y	N
Package Received/Custody Seals Intact		
Sample Labels/C-O-Cs Agree		
Temperature Within Specification ___ °C		
Corrected Copy Attached		
Problems of Discrepancies		

FWENC\SS17_COC97 09/14/99 7:36 AM

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

9909386 FWH45

COOLER C

17

AFIID:	Project:	Sample Date:
Holloman AFB	LTM LF-01	9/14/99
Method Type: Bailer	**Samplers:** C Bieniulis/D Rizzuto	

	Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	Preservative: HNO_3	H_2SO_4	NaOH	HCl	Analysis Required: Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury						Comments
8	WELL	LF01MW101	1430	NA				X	B	3	X													
18	WELL	LF01MW101	1430		X				B	1						X								
	WELL	LF01MW101	1430		X				B	1								X						
9	WELL	LF01MW201	1345					X	B	3	X													
19	WELL	LF01MW201	1345		X				B	1						X								
	WELL	LF01MW201	1345		X				B	1								X						
0	WELL	LF01MW202	1350					X	B	3	X													Field Duplicate
50	WELL	LF01MW202	1350		X				B	1						X								Field Duplicate
	WELL	LF01MW202	1350		X				B	1								X						Field Duplicate
1	WELL	LF01MW501	1450					X	B	3	X													
51	WELL	LF01MW501	1450		X				B	1						X								
	WELL	LF01MW501	1450		X				B	1								X						
2	WELL	LF01IW201	1510					X	B	3	X													
2	WELL	LF01IW201	1510		X				B	1						X								
	WELL	LF01IW201	1510		X				B	1								X						

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
C Bie	9/14/99 1800	CB	9/14/99 1800
CB	9/15/99 1200	FED EX	9/15/99 1200
		Chl Chl	9/16/99 0840

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 800567619993

LABORATORY USE ONLY	Y	N
Package Received/Custody Seal Intact		
Sample Labels/C.O.C. Agree		
Temperature Within Specification °C		
Corrected Copy Attached		
Problems or Discrepancies		

FWENC\LF01COCL97 09/15/99 7:53 AM

Trip blank also goes w/ FWH45 LF01

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

9909389 FWH46

COOLER C

AFIID:	Project:	Sample Date:
Holloman AFB	LTM	9/15/99
Method Type: Bailer	**Samplers:** C Bieniulis	

	Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	Preservative: HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	Analysis Required: VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury						Comments
5	TB	TRIP BLANK	1200					X	B	3	X													

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
C Bien	9/15/99 1200	FED EX	9/15/99 1200
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
		Chl Cht	9/16/99 0840

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 800567619993

[redacted]

FWENC\LTM_COC97 09/15/99 1:45 PM

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF01MW101

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-18

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0920024.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/20/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichlcromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: UMW101

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-28

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic	5.6	B	N	P
7440-39-3	Barium	8.9	B	EN	P
7440-41-7	Beryllium				
7440-43-9	Cadmium	0.3	U		P
7440-70-2	Calcium				
7440-47-3	Chromium	0.6	U		P
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron	21.	U		P
7439-92-1	Lead	1.5	U		P
7439-95-4	Magnesium				
7439-96-5	Manganese	115.			P
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium	8.7	B	N	P
7440-22-4	Silver	0.6	B	N	P
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF01MW101 DISS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: KMW101

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-18

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

UJ

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF01MW101

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF01MW201

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-19

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0920025.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec.

Date Analyzed: 09/20/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: VMW201

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

ab Code: LAUCKS Case No.: __ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-29

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	EPA QUAL
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic	22.	B	N	P	J
7440-39-3	Barium	10.8	B	EN	P	J
7440-41-7	Beryllium					
7440-43-9	Cadmium	0.3	U		P	
7440-70-2	Calcium					
7440-47-3	Chromium	3.1	B		P	
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron	21.	U		P	
7439-92-1	Lead	1.5	U		P	
7439-95-4	Magnesium					
7439-96-5	Manganese	11.9	B		P	
7439-97-6	Mercury	0.2	U	N	AV	
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium	8.2	B	N	P	J
7440-22-4	Silver	0.5	U	N	P	
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF01MW201 DISS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: LMW201

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-19

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

UJ

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF01MW201

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF01MW202

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-20

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0920026.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec.

Date Analyzed: 09/20/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: WMW202

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-30

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic	23.3	B	N	P
7440-39-3	Barium	10.9	B	EN	P
7440-41-7	Beryllium				
7440-43-9	Cadmium	0.3	U		P
7440-70-2	Calcium				
7440-47-3	Chromium	0.6	U		P
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron	21.	U		P
7439-92-1	Lead	1.5	U		P
7439-95-4	Magnesium				
7439-96-5	Manganese	9.5	B		P
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium	11.4	B	N	P
7440-22-4	Silver	0.5	U	N	P
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF01MW202 DISS

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: MMW202

Lab Name: LAUCKS TESTING LABS, INC. Contract: ____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-20

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

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Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF01MW202

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF01MW501

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-21

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0920027.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/20/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: XMW501

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-31

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic	4.4	B	N	P
7440-39-3	Barium	11.4	B	EN	P
7440-41-7	Beryllium				
7440-43-9	Cadmium	0.3	U		P
7440-70-2	Calcium				
7440-47-3	Chromium	3.2	B		P
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron	21.	U		P
7439-92-1	Lead	1.5	U		P
7439-95-4	Magnesium				
7439-96-5	Manganese	5.7	B		P
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium	29.4	B	N	P
7440-22-4	Silver	0.5	U	N	P
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF01MW501 DISS

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: NMW501

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-21

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF01MW501

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF01IW201

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-22

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0920028.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec.

Date Analyzed: 09/20/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: YIW201

Lab Name: LAUCKS TESTING LABS, INC. Contract: ____

Lab Code: LAUCKS Case No.: __ SAS No.: __ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-32

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic	16.4	B	N	P
7440-39-3	Barium	12.3	B	EN	P
7440-41-7	Beryllium				
7440-43-9	Cadmium	0.3	U		P
7440-70-2	Calcium				
7440-47-3	Chromium	0.6	U		P
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron	21.	U		P
7439-92-1	Lead	1.5	U		P
7439-95-4	Magnesium				
7439-96-5	Manganese	0.2	B		P
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium	19.5	B	N	P
7440-22-4	Silver	0.5	U	N	P
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF01IW201 DISS

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: OIW201

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-22

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic					
7440-39-3	Barium					
7440-41-7	Beryllium					
7440-43-9	Cadmium					
7440-70-2	Calcium					
7440-47-3	Chromium					
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron					
7439-92-1	Lead					
7439-95-4	Magnesium					
7439-96-5	Manganese					
7439-97-6	Mercury	0.2	U	N	AV	UJ
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium					
7440-22-4	Silver					
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF01IW201

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIP BLANK1

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909389-05

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0922012.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/22/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	3	J
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

FORM I VOA

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SD08MW0101

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-12

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0920019.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. -

Date Analyzed: 09/20/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	2	J
107-06-2	1,2-Dichloroethane	200	E
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	8	
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	2	J
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

FORM I VOA

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

SD08MW0101

Lab Name: LAUCKS TESTING LABS

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-12

Sample wt/vol: 1000 (g/ml) ml

Lab File ID: B921938.D

% Moisture: N/A

Date Collected: 09/14/99

Extraction: SEPF

Date Received: 09/16/99

Concentrated Extract Volume: 10000 (uL)

Date Prepared: 09/17/99

Dilution Factor: 1.0

Date Analyzed: 09/22/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
319-84-6	alpha-BHC	0.050	U	0.050
319-85-7	beta-BHC	0.050	U	0.050
319-86-8	delta-BHC	0.050	U	0.050
58-89-9	gamma-BHC (Lindane)	0.050	U	0.050
76-44-8	Heptachlor	0.050	U	0.050
309-00-2	Aldrin	0.050	U	0.050
1024-57-3	Heptachlor epoxide	0.050	U	0.050
5103-74-2	gamma-Chlordane	0.078	P	0.050
5103-71-9	alpha-Chlordane	0.050	U	0.050
959-98-8	Endosulfan I	0.050	U	0.050
60-57-1	Dieldrin	0.10	U	0.10
72-55-9	4,4'-DDE	0.10	U	0.10
72-20-8	Endrin	0.10	U	0.10
33213-65-9	Endosulfan II	0.10	U	0.10
72-54-8	4,4'-DDD	0.10	U	0.10
1031-07-8	Endosulfan sulfate	0.10	U	0.10
50-29-3	4,4'-DDT	0.10	U	0.10
72-43-5	Methoxychlor	0.50	U	0.50
7421-93-4	Endrin aldehyde	0.10	U	0.10
53494-70-5	Endrin ketone	0.10	U	0.10
8001-35-2	Toxaphene	5.0	U	5.0

RL = Reporting Limit

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: PW0101

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-23

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic	31.6	B	N	P	J
7440-39-3	Barium	16.9	B	EN	P	J
7440-41-7	Beryllium					
7440-43-9	Cadmium	0.3	B		P	
7440-70-2	Calcium					
7440-47-3	Chromium	0.6	U		P	
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron	6620.			P	J
7439-92-1	Lead	1.5	U		P	
7439-95-4	Magnesium					
7439-96-5	Manganese	3720.			P	
7439-97-6	Mercury	0.2	U	N	AV	
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium	2.2	U	N	P	
7440-22-4	Silver	0.5	U	N	P	
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: SD08MW0101 DISS

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: FW0101

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-12

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

UJ

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: SD08MW0101

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SD08MW0101DL

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-12DL

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0928016.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/28/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 2.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	6	U
75-01-4	Vinyl chloride	6	U
74-83-9	Bromomethane	6	U
75-00-3	Chloroethane	6	U
75-35-4	1,1-Dichloroethene	6	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	6	U
75-09-2	Methylene chloride	6	U
156-60-5	trans-1,2-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
156-59-2	cis-1,2-Dichloroethene	6	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	6	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon tetrachloride	6	U
71-43-2	Benzene	6	U
107-06-2	1,2-Dichloroethane	130	D
79-01-6	Trichloroethene	6	U
78-87-5	1,2-Dichloropropane	7	D
75-27-4	Bromodichloromethane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
79-00-5	1,1,2-Trichloroethane	6	U
127-18-4	Tetrachloroethene	6	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
108-38-3	m,p-Xylene	6	U
95-47-6	o-Xylene	6	U
100-42-5	Styrene	6	U
75-25-2	Bromoform	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U

FORM I VOA

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SD08MW0301

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-13

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0920020.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/20/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	1	J
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

SD08MW0301

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH45

Lab Sample ID: 9909386-13

Lab File ID: B921918.D

Date Collected: 09/14/99

Date Received: 09/16/99

Date Prepared: 09/17/99

Date Analyzed: 09/21/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
319-84-6	alpha-BHC	0.050	U	0.050
319-85-7	beta-BHC	0.050	U	0.050
319-86-8	delta-BHC	0.050	U	0.050
58-89-9	gamma-BHC (Lindane)	0.050	U	0.050
76-44-8	Heptachlor	0.050	U	0.050
309-00-2	Aldrin	0.050	U	0.050
1024-57-3	Heptachlor epoxide	0.050	U	0.050
5103-74-2	gamma-Chlordane	0.050	U	0.050
5103-71-9	alpha-Chlordane	0.050	U	0.050
959-98-8	Endosulfan I	0.050	U	0.050
60-57-1	Dieldrin	0.10	U	0.10
72-55-9	4,4'-DDE	0.10	U	0.10
72-20-8	Endrin	0.10	U	0.10
33213-65-9	Endosulfan II	0.10	U	0.10
72-54-8	4,4'-DDD	0.10	U	0.10
1031-07-8	Endosulfan sulfate	0.10	U	0.10
50-29-3	4,4'-DDT	0.10	U	0.10
72-43-5	Methoxychlor	0.50	U	0.50
7421-93-4	Endrin aldehyde	0.10	U	0.10
53494-70-5	Endrin ketone	0.10	U	0.10
8001-35-2	Toxaphene	5.0	U	5.0

RL = Reporting Limit

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: QW0301

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-24

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic	13.1	B	N	P
7440-39-3	Barium	15.5	B	EN	P
7440-41-7	Beryllium				
7440-43-9	Cadmium	0.3	U		P
7440-70-2	Calcium				
7440-47-3	Chromium	1.6	B		P
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron	21.	U		P
7439-92-1	Lead	1.5	U		P
7439-95-4	Magnesium				
7439-96-5	Manganese	7.	B		P
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium	10.2	B	N	P
7440-22-4	Silver	1.2	B	N	P
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: SD08MW0301 DISS

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: GW0301

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-13

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic					
7440-39-3	Barium					
7440-41-7	Beryllium					
7440-43-9	Cadmium					
7440-70-2	Calcium					
7440-47-3	Chromium					
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron					
7439-92-1	Lead					
7439-95-4	Magnesium					
7439-96-5	Manganese					
7439-97-6	Mercury	0.2	U	N	AV	UJ
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium					
7440-22-4	Silver					
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: SD08MW0301

FORM I - IN

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SD08MW0302

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-14

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0920021.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/20/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	1	J
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

SD08MW0302

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH45

Lab Sample ID: 9909386-14

Lab File ID: B921919.D

Date Collected: 09/14/99

Date Received: 09/16/99

Date Prepared: 09/17/99

Date Analyzed: 09/22/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
319-84-6	alpha-BHC	0.050	U	0.050
319-85-7	beta-BHC	0.050	U	0.050
319-86-8	delta-BHC	0.050	U	0.050
58-89-9	gamma-BHC (Lindane)	0.050	U	0.050
76-44-8	Heptachlor	0.050	U	0.050
309-00-2	Aldrin	0.050	U	0.050
1024-57-3	Heptachlor epoxide	0.11		0.050
5103-74-2	gamma-Chlordane	0.050	U	0.050
5103-71-9	alpha-Chlordane	0.050	U	0.050
959-98-8	Endosulfan I	0.050	U	0.050
60-57-1	Dieldrin	0.10	U	0.10
72-55-9	4,4'-DDE	0.10	U	0.10
72-20-8	Endrin	0.10	U	0.10
33213-65-9	Endosulfan II	0.10	U	0.10
72-54-8	4,4'-DDD	0.10	U	0.10
1031-07-8	Endosulfan sulfate	0.10	U	0.10
50-29-3	4,4'-DDT	0.10	U	0.10
72-43-5	Methoxychlor	0.50	U	0.50
7421-93-4	Endrin aldehyde	0.10	U	0.10
53494-70-5	Endrin ketone	0.10	U	0.10
8001-35-2	Toxaphene	5.0	U	5.0

RL = Reporting Limit

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: RW0302

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-25

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic	14.5	B	N	P
7440-39-3	Barium	16.	B	EN	P
7440-41-7	Beryllium				
7440-43-9	Cadmium	0.3	U		P
7440-70-2	Calcium				
7440-47-3	Chromium	2.6	B		P
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron	21.	U		P
7439-92-1	Lead	1.5	U		P
7439-95-4	Magnesium				
7439-96-5	Manganese	8.	B		P
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium	7.5	B	N	P
7440-22-4	Silver	2.7	B	N	P
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: SD08MW0302 DISS

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: HW0302

ab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-14

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

UJ

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: SD08MW0302

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SD08MW0401

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-15

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0920022.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/20/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

SD08MW0401

Lab Name: LAUCKS TESTING LABS

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-15

Sample wt/vol: 1000 (g/ml) ml

Lab File ID: B921920.D

% Moisture: N/A

Date Collected: 09/14/99

Extraction: SEPF

Date Received: 09/16/99

Concentrated Extract Volume: 10000 (uL)

Date Prepared: 09/17/99

Dilution Factor: 1.0

Date Analyzed: 09/22/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
319-84-6	alpha-BHC	0.050	U	0.050
319-85-7	beta-BHC	0.050	U	0.050
319-86-8	delta-BHC	0.050	U	0.050
58-89-9	gamma-BHC (Lindane)	0.050	U	0.050
76-44-8	Heptachlor	0.050	U	0.050
309-00-2	Aldrin	0.050	U	0.050
1024-57-3	Heptachlor epoxide	0.050	U	0.050
5103-74-2	gamma-Chlordane	0.050	U	0.050
5103-71-9	alpha-Chlordane	0.050	U	0.050
959-98-8	Endosulfan I	0.050	U	0.050
60-57-1	Dieldrin	0.10	U	0.10
72-55-9	4,4'-DDE	0.10	U	0.10
72-20-8	Endrin	0.10	U	0.10
33213-65-9	Endosulfan II	0.10	U	0.10
72-54-8	4,4'-DDD	0.10	U	0.10
1031-07-8	Endosulfan sulfate	0.10	U	0.10
50-29-3	4,4'-DDT	0.10	U	0.10
72-43-5	Methoxychlor	0.50	U	0.50
7421-93-4	Endrin aldehyde	0.10	U	0.10
53494-70-5	Endrin ketone	0.10	U	0.10
8001-35-2	Toxaphene	5.0	U	5.0

RL = Reporting Limit

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: SW0401

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-26

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic	7.7	B	N	P
7440-39-3	Barium	18.	B	EN	P
7440-41-7	Beryllium				
7440-43-9	Cadmium	0.3	U		P
7440-70-2	Calcium				
7440-47-3	Chromium	0.6	U		P
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron	21.	U		P
7439-92-1	Lead	1.5	U		P
7439-95-4	Magnesium				
7439-96-5	Manganese	0.4	B		P
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium	2.7	B	N	P
7440-22-4	Silver	0.5	U	N	P
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: SD08MW0401 DISS

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: IW0401

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-15

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

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Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: SD08MW0401

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SD08MW0501

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-16

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0920023.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec.

Date Analyzed: 09/20/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	1	J
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

SD08MW0501

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH45

Lab Sample ID: 9909386-16

Lab File ID: B921921.D

Date Collected: 09/14/99

Date Received: 09/16/99

Date Prepared: 09/17/99

Date Analyzed: 09/22/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
319-84-6	alpha-BHC	0.050	U	0.050
319-85-7	beta-BHC	0.050	U	0.050
319-86-8	delta-BHC	0.050	U	0.050
58-89-9	gamma-BHC (Lindane)	0.050	U	0.050
76-44-8	Heptachlor	0.050	U	0.050
309-00-2	Aldrin	0.050	U	0.050
1024-57-3	Heptachlor epoxide	0.050	U	0.050
5103-74-2	gamma-Chlordane	0.050	U	0.050
5103-71-9	alpha-Chlordane	0.050	U	0.050
959-98-8	Endosulfan I	0.050	U	0.050
60-57-1	Dieldrin	0.10	U	0.10
72-55-9	4,4'-DDE	0.10	U	0.10
72-20-8	Endrin	0.10	U	0.10
33213-65-9	Endosulfan II	0.10	U	0.10
72-54-8	4,4'-DDD	0.10	U	0.10
1031-07-8	Endosulfan sulfate	0.10	U	0.10
50-29-3	4,4'-DDT	0.10	U	0.10
72-43-5	Methoxychlor	0.50	U	0.50
7421-93-4	Endrin aldehyde	0.10	U	0.10
53494-70-5	Endrin ketone	0.10	U	0.10
8001-35-2	Toxaphene	5.0	U	5.0

RL = Reporting Limit

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: JW0501

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-16

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

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Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: SD08MW0501

FORM I - IN

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: TW0501

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-27

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic	5.1	B	N	P
7440-39-3	Barium	24.8	B	EN	P
7440-41-7	Beryllium				
7440-43-9	Cadmium	0.3	U		P
7440-70-2	Calcium				
7440-47-3	Chromium	0.6	U		P
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron	21.	U		P
7439-92-1	Lead	1.5	U		P
7439-95-4	Magnesium				
7439-96-5	Manganese	235.			P
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium	2.9	B	N	P
7440-22-4	Silver	0.5	U	N	P
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: ___

Comments:

CLIENT ID: SD08MW0501 DISS

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIP BLANK 2

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-17

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0920009.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/20/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	2	J
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

FORM I VOA

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS48MW201

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-01

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0920010.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/20/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	2	J
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: AMW201

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-01

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead	1.5	U		P
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury				
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

UJ

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: SS48MW201

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS48MW401

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-02

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0920011.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/20/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: BMW401

Lab Name: LAUCKS TESTING LABS, INC. Contract: ____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-02

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic					
7440-39-3	Barium					
7440-41-7	Beryllium					
7440-43-9	Cadmium					
7440-70-2	Calcium					
7440-47-3	Chromium					
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron					
7439-92-1	Lead	1.5	U		P	UJ
7439-95-4	Magnesium					
7439-96-5	Manganese					
7439-97-6	Mercury					
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium					
7440-22-4	Silver					
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: SS48MW401

FORM I - IN

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS48MW501

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-03

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0920012.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/20/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	4	J
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	240	E
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	1	J
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	670	E
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	1	J
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS48MW501DL

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-03DL

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0928010.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec.

Date Analyzed: 09/28/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 10.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	30	U
75-01-4	Vinyl chloride	30	U
74-83-9	Bromomethane	30	U
75-00-3	Chloroethane	30	U
75-35-4	1,1-Dichloroethene	30	U
67-64-1	Acetone	50	U
75-15-0	Carbon disulfide	30	U
75-09-2	Methylene chloride	30	U
156-60-5	trans-1,2-Dichloroethene	30	U
75-34-3	1,1-Dichloroethane	30	U
156-59-2	cis-1,2-Dichloroethene	30	U
78-93-3	2-Butanone	50	U
67-66-3	Chloroform	30	U
71-55-6	1,1,1-Trichloroethane	30	U
56-23-5	Carbon tetrachloride	30	U
71-43-2	Benzene	170	D
107-06-2	1,2-Dichloroethane	30	U
79-01-6	Trichloroethene	30	U
78-87-5	1,2-Dichloropropane	30	U
75-27-4	Bromodichloromethane	30	U
10061-01-5	cis-1,3-Dichloropropene	30	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	30	U
10061-02-6	trans-1,3-Dichloropropene	30	U
79-00-5	1,1,2-Trichloroethane	30	U
127-18-4	Tetrachloroethene	30	U
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	30	U
108-90-7	Chlorobenzene	30	U
100-41-4	Ethylbenzene	870	D
108-38-3	m,p-Xylene	30	U
95-47-6	o-Xylene	30	U
100-42-5	Styrene	30	U
75-25-2	Bromoform	30	U
79-34-5	1,1,2,2-Tetrachloroethane	30	U

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: CMW501

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-03

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead	1.5	U		P
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury				
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

UJ

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: SS48MW501

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS48MW502

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-04

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0920013.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/20/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	14	
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	4	J
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	170	
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	1	J
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	520	E
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS48MW502DL

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-04DL

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0928013.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/28/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 10.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	30	U
75-01-4	Vinyl chloride	30	U
74-83-9	Bromomethane	30	U
75-00-3	Chloroethane	30	U
75-35-4	1,1-Dichloroethene	30	U
67-64-1	Acetone	50	U
75-15-0	Carbon disulfide	30	U
75-09-2	Methylene chloride	30	U
156-60-5	trans-1,2-Dichloroethene	30	U
75-34-3	1,1-Dichloroethane	30	U
156-59-2	cis-1,2-Dichloroethene	30	U
78-93-3	2-Butanone	50	U
67-66-3	Chloroform	30	U
71-55-6	1,1,1-Trichloroethane	30	U
56-23-5	Carbon tetrachloride	30	U
71-43-2	Benzene	150	D
107-06-2	1,2-Dichloroethane	30	U
79-01-6	Trichloroethene	30	U
78-87-5	1,2-Dichloropropane	30	U
75-27-4	Bromodichloromethane	30	U
10061-01-5	cis-1,3-Dichloropropene	30	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	30	U
10061-02-6	trans-1,3-Dichloropropene	30	U
79-00-5	1,1,2-Trichloroethane	30	U
127-18-4	Tetrachloroethene	30	U
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	30	U
108-90-7	Chlorobenzene	30	U
100-41-4	Ethylbenzene	760	D
108-38-3	m,p-Xylene	30	U
95-47-6	o-Xylene	30	U
100-42-5	Styrene	30	U
75-25-2	Bromoform	30	U
79-34-5	1,1,2,2-Tetrachloroethane	30	U

FORM I VOA

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: DMW502

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-04

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead	1.8	B		P
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury				
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

UJ

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: SS48MW502

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS48MW701

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-05

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0928009.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/28/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: EMW701

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH45

Matrix (soil/water): WATER Lab Sample ID: 09386-05

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead	1.5	U		P
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury				
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

UJ

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: SS48MW701

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS17W401

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-07

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0920015.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/20/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	2	J
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS17TH2201

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-08

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0920016.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. -

Date Analyzed: 09/20/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	3	J
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	2	J
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

FORM I VOA

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS17BX0101

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-09

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0920017.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec.

Date Analyzed: 09/20/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	3	J
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	15	
107-06-2	1,2-Dichloroethane	470	E
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	J
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	1	J
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS17BX0101DL

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-09DL

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0928014.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/28/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 10.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	30	U
75-01-4	Vinyl chloride	30	U
74-83-9	Bromomethane	30	U
75-00-3	Chloroethane	30	U
75-35-4	1,1-Dichloroethene	30	U
67-64-1	Acetone	50	U
75-15-0	Carbon disulfide	30	U
75-09-2	Methylene chloride	30	U
156-60-5	trans-1,2-Dichloroethene	30	U
75-34-3	1,1-Dichloroethane	30	U
156-59-2	cis-1,2-Dichloroethene	30	U
78-93-3	2-Butanone	50	U
67-66-3	Chloroform	30	U
71-55-6	1,1,1-Trichloroethane	30	U
56-23-5	Carbon tetrachloride	30	U
71-43-2	Benzene	16	JD
107-06-2	1,2-Dichloroethane	280	D
79-01-6	Trichloroethene	30	U
78-87-5	1,2-Dichloropropane	30	U
75-27-4	Bromodichloromethane	30	U
10061-01-5	cis-1,3-Dichloropropene	30	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	30	U
10061-02-6	trans-1,3-Dichloropropene	30	U
79-00-5	1,1,2-Trichloroethane	30	U
127-18-4	Tetrachloroethene	30	U
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	30	U
108-90-7	Chlorobenzene	30	U
100-41-4	Ethylbenzene	30	U
108-38-3	m,p-Xylene	30	U
95-47-6	o-Xylene	30	U
100-42-5	Styrene	30	U
75-25-2	Bromoform	30	U
79-34-5	1,1,2,2-Tetrachloroethane	30	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS17BX0201

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-10

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0920018.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/20/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	210	E
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	2	J
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	53	
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS17BX0201DL

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-10DL

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0928015.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec.

Date Analyzed: 09/28/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 2.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	6	U
75-01-4	Vinyl chloride	6	U
74-83-9	Bromomethane	6	U
75-00-3	Chloroethane	6	U
75-35-4	1,1-Dichloroethene	6	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	6	U
75-09-2	Methylene chloride	6	U
156-60-5	trans-1,2-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
156-59-2	cis-1,2-Dichloroethene	6	U
78-93-3	2-Butanone	10	U
67-66-3	Chloroform	6	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon tetrachloride	6	U
71-43-2	Benzene	6	U
107-06-2	1,2-Dichloroethane	150	D
79-01-6	Trichloroethene	6	U
78-87-5	1,2-Dichloropropane	6	U
75-27-4	Bromodichloromethane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
79-00-5	1,1,2-Trichloroethane	6	U
127-18-4	Tetrachloroethene	6	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	51	D
108-38-3	m,p-Xylene	6	U
95-47-6	o-Xylene	6	U
100-42-5	Styrene	6	U
75-25-2	Bromoform	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIP BLANK 1

Lab Name: Laucks Testing Labs

SDG No.: FWH45

Matrix: (soil/water) WATER

Lab Sample ID: 9909386-11

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0920008.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec.

Date Analyzed: 09/20/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	2	J
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

FORM I VOA

Trip blank also goes w/ FWH45 LTM

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

9909389 FWH46

COOLER C

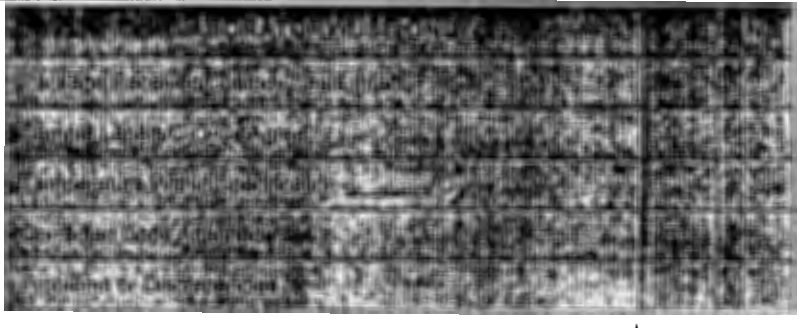
AFIID:	Project:	Sample Date:
Holloman AFB	LTM	9/15/99
Method Type: Bailer	**Samplers:** C Bieniulis	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	Preservative: HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury						Comments
TB	TRIP BLANK	1200					X	B	3	X													

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
C Bien	9/15/99 1200	FED EX	9/15/99 1200
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
		Chl Chl	9/16/99 0840

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 800567619993



FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

9909389 FWH46

COOLER Eg

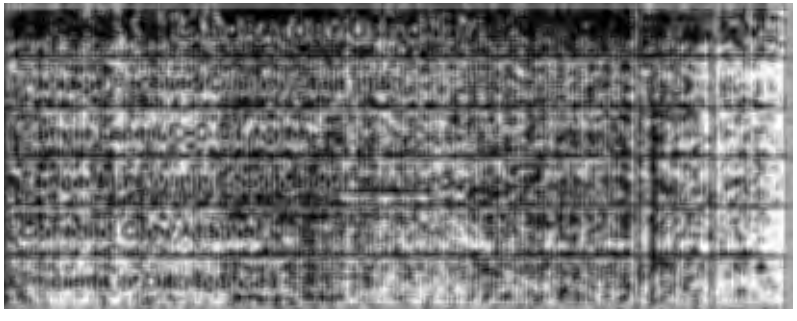
AFIID:	Project:	Sample Date:
Holloman AFB	LTM OT-16	9/15/99
Method Type: Bailer	**Samplers:** DRizzuto/ RJones	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury						Comments
WELL	OT16MW0101	0918					X	B	3	X													
WELL	OT16MW0101	0918						B	2			X											
WELL	OT16MW0201	0857					X	B	3	X													
WELL	OT16MW0201	0857						B	2			X											
WELL	OT16MW0301	0904					X	B	3	X													
WELL	OT16MW0301	0904						B	2			X											
WELL	OT16MW0401	0918					X	B	3	X													
WELL	OT16MW0401	0918						B	2			X											
TB	Trip Blank	1530					X	B	3	X													

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
DR	9/15/99 1500	CB	9/15/99 1500
CB	9/15/99 1530	FEDEX	9/15/99 1530
		Chl Chl	9/16/99 0840

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 800567620092



FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

FWH46

COOLER A

20

AFIID:	Project:	Sample Date:
Holloman AFB	LTM LF-21	9/16/99
Method Type: Bailer	**Samplers:** CBieniulis/D Rizzuto	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	Preservative: HNO_3	H_2SO_4	NaOH	HCl	Analysis Required: Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury						Comments
WELL	LF21MW101	1135					X	B	3	X													
WELL	LF21MW101	1135		X				B	1						X								
WELL	LF21MW101	1135		X				B	1								X						
WELL	LF21MW201	1210					X	B	3	X													
WELL	LF21MW201	1210		X				B	1						X								
WELL	LF21MW201	1210		X				B	1								X						
WELL	LF21MW301	1200					X	B	3	X													
WELL	LF21MW301	1200		X				B	1						X								
WELL	LF21MW301	1200		X				B	1								X						
WELL	LF21MW401	1145					X	B	3	X													
WELL	LF21MW401	1145		X				B	1						X								
WELL	LF21MW401	1145		X				B	1								X						
TB	Trip Blank	1630					X	—	3	X													

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
CB	9/16/99 1300	CB	9/16/99 1300
CB	9/16/99 1630	FEDEX	9/16/99 1630
	Date/Time	Received by: (Signature)	Date/Time
		[illegible]	9/17/99 1330

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 800567620118

LABORATORY USE ONLY	Y	N
Package Received/Custody Seals Intact	✓	
Sample Labels/C-O-Cs Agree	✓	
Temperature Within Specification 2.9 °C	✓	
Corrected Copy Attached		
Problems or Discrepancies		

FWFNC\LF21_COC97 09/13/99 1:05 PM

4404442

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

FWH46

COOLER____

21

AFIID:	Project:	Sample Date:
Holloman AFB	LTM LF-19	9/16/99
Method Type: Bailer	**Samplers:** CBionulis/DRizzuto	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	Preservative: HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury						Comments
WELL	LF19MW101	1120					X	B	3	X													
WELL	LF19MW101	1120		X				B	1						X								
WELL	LF19MW101	1120		X				B	1								X						
WELL	LF19MW201	1055					X	B	3	X													
WELL	LF19MW201	1055		X				B	1						X								
WELL	LF19MW201	1055		X				B	1								X						
WELL	LF19MW301	1107					X	B	3	X													
WELL	LF19MW301	1107		X				B	1						X								
WELL	LF19MW301	1107		X				B	1								X						

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
CB	9/16/99 1300	CB	9/16/99 1300
CB	9/16/99 1630	FEDEX	9/16/99 1630
		Pam Johnson	9/17/99 1330

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 800567620118

LABORATORY USE ONLY	Y	N
Package Received/Custody Seals Intact	✓	
Sample Labels/C-O-C's Agree?	✓	
Temperature Within Specification 2.9 °C	✓	
Corrected Copy Attached?		
Problems or Discrepancies		

9909448 FWH46

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

COOLER A

AFIID:	Project:	Sample Date:
Holloman AFB	LTM SS-56	9/17/99
Method Type: Bailer	**Samplers:** DRizzuto / RJones	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury						Comments
WELL	SS56MW0101	0823					X	B	3	X													
WELL	SS56MW0101	0823		X				B	1							X							
WELL	SS56WCC301	0855					X	B	3	X													
WELL	SS56WCC301	0855		X				B	1							X							
WELL	SS56WCC501	0732					X	B	3	X													
WELL	SS56WCC501	0732		X				B	1							X							
TB	Trip Blank	1200		~~X~~			X	B	3	X													
				CB 9/17/99																			

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
DR	9/17/99 0945	CB	9/17/99 0945
CB	9/17/99 1200	FED EX	9/17/99 1200
			9/18/99 1030

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 812737495275

LABORATORY USE ONLY	Y	N
Package Received/Custody Seals Intact	✓	
Sample Labels/C-O-Cs Agree	✓	
Temperature Within Specification 2.6 °C	✓	
Corrected Copy Attached		
Problems or Discrepancies		

FWENC\SS56_COC97 09/17/99 9:46 AM

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

9909389 FWH46

COOLER C

11

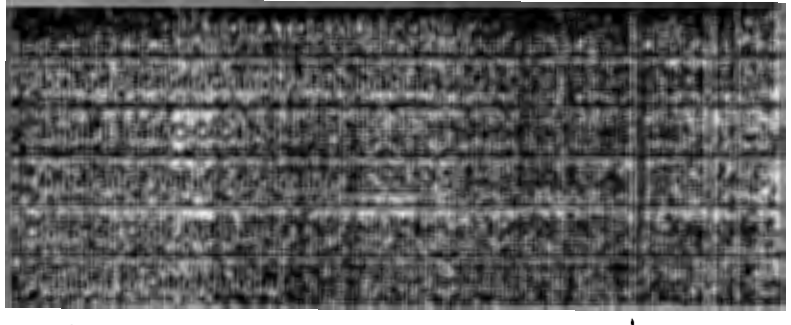
AFIID:	Project:	Sample Date:
Holloman AFB	LTM LF-10	9/14/99
Method Type: Bailer	**Samplers:** CBrenimlis/DRizzuto	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	Preservative: HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury						Comments
WELL	LF10MW201	1625					X	B	3	X													
WELL	LF10MW201	1625		X				B	1						X								
WELL	LF10MW201	1625		X				B	1								X						
WELL	LF10MW301	1607					X	B	3	X													
WELL	LF10MW301	1607		X				B	1						X								
WELL	LF10MW301	1607		X				B	1								X						
WELL	LF10MW401	1640					X	B	3	X													
WELL	LF10MW401	1640		X				B	1						X								
WELL	LF10MW401	1640		X				B	1								X						
WELL	LF10MW601	1555					X	B	3	X													
WELL	LF10MW601	1555		X				B	1						X								
WELL	LF10MW601	1555		X				B	1								X						

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
CBie	9/14/99 1800	CBienul	9/14/99 1800
CBi	9/15/99 1200	FED EX	9/15/99 1200
		Chl Chl	9/16/99 0840

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 800567619993



SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF10MW201

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909389-01

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0922016.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/22/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

FORM I VOA

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: EMW201

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09389-11

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic	15.5	B	N	P	
7440-39-3	Barium	11.4	B	N	P	
7440-41-7	Beryllium					
7440-43-9	Cadmium	0.5	B		P	
7440-70-2	Calcium					
7440-47-3	Chromium	10.6			P	J
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron	21.	U		P	
7439-92-1	Lead	1.5	U		P	
7439-95-4	Magnesium					
7439-96-5	Manganese	2.2	B		P	J
7439-97-6	Mercury	0.2	U	N	AV	
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium	14.6	B	N	P	J
7440-22-4	Silver	0.5	U	N	P	
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF10MW201 DISS

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: AMW201

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46_

Matrix (soil/water): WATER Lab Sample ID: 09389-01_

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2 U			AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

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Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF10MW201

FORM I - IN

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF10MW301

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909389-02

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0922017.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/22/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg) UG/L		Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: FMW301

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09389-12

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic	18.5	B	N	P	J
7440-39-3	Barium	13.5	B	N	P	J
7440-41-7	Beryllium					
7440-43-9	Cadmium	0.5	B		P	
7440-70-2	Calcium					
7440-47-3	Chromium	0.6	U		P	UJ
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron	21.	U		P	
7439-92-1	Lead	1.5	U		P	
7439-95-4	Magnesium					
7439-96-5	Manganese	3.3	B		P	J
7439-97-6	Mercury	0.2	U	N	AV	
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium	14.2	B	N	P	J
7440-22-4	Silver	6.2	B	N	P	J
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF10MW301 DISS

FORM I - IN

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: BMW301

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09389-02

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2 U			AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

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Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF10MW301

FORM I - IN

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF10MW401

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909389-03

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0922018.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec.

Date Analyzed: 09/22/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	1	J
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: GMW401

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09389-13

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic	14.9	B	N	P	J
7440-39-3	Barium	30.9	B	N	P	J
7440-41-7	Beryllium					
7440-43-9	Cadmium	1.2	B		P	
7440-70-2	Calcium					
7440-47-3	Chromium	1.2	B		P	J
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron	21.	U		P	
7439-92-1	Lead	1.5	U		P	
7439-95-4	Magnesium					
7439-96-5	Manganese	114.			P	J
7439-97-6	Mercury	0.2	U	N	AV	
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium	12.7	B	N	P	J
7440-22-4	Silver	1.4	B	N	P	J
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF10MW401 DISS

FORM I - IN

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: CMW401

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

.ab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09389-03

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2 U			AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

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Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

LIENT ID: LF10MW401

FORM I - IN

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF10MW601

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909389-04

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0922019.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/22/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg) UG/L		Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	1	J
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: HMW601

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46_

Matrix (soil/water): WATER Lab Sample ID: 09389-14

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic	20.6	B	N	P	J
7440-39-3	Barium	12.2	B	N	P	J
7440-41-7	Beryllium					
7440-43-9	Cadmium	0.3	U		P	
7440-70-2	Calcium					
7440-47-3	Chromium	0.6	U		P	UJ
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron	21.	U		P	
7439-92-1	Lead	1.5	U		P	
7439-95-4	Magnesium					
7439-96-5	Manganese	50.5			P	J
7439-97-6	Mercury	0.2	U	N	AV	
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium	10.6	B	N	P	J
7440-22-4	Silver	0.5	U	N	P	
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

LIENT ID: LF10MW601 DISS

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: DMW601

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09389-04

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2	U		AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

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Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF10MW601

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIP BLANK1

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909389-05

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0922012.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/22/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	3	J
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

OT16MW0101

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909389-06

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0922020.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec.

Date Analyzed: 09/22/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	21	
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	2	J
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

FORM I VOA

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

OT16MW0101

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH46

Lab Sample ID: 9909389-06

Lab File ID: B921924.D

Date Collected: 09/15/99

Date Received: 09/16/99

Date Prepared: 09/17/99

Date Analyzed: 09/22/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
319-84-6	alpha-BHC	0.050	U	0.050
319-85-7	beta-BHC	0.050	U	0.050
319-86-8	delta-BHC	0.050	U	0.050
58-89-9	gamma-BHC (Lindane)	0.050	U	0.050
76-44-8	Heptachlor	0.050	U	0.050
309-00-2	Aldrin	0.050	U	0.050
1024-57-3	Heptachlor epoxide	0.050	U	0.050
5103-74-2	gamma-Chlordane	0.050	U	0.050
5103-71-9	alpha-Chlordane	0.050	U	0.050
959-98-8	Endosulfan I	0.050	U	0.050
60-57-1	Dieldrin	0.10	U	0.10
72-55-9	4,4'-DDE	0.10	U	0.10
72-20-8	Endrin	0.10	U	0.10
33213-65-9	Endosulfan II	0.10	U	0.10
72-54-8	4,4'-DDD	0.10	U	0.10
1031-07-8	Endosulfan sulfate	0.10	U	0.10
50-29-3	4,4'-DDT	0.10	U	0.10
72-43-5	Methoxychlor	0.50	U	0.50
7421-93-4	Endrin aldehyde	0.10	U	0.10
53494-70-5	Endrin ketone	0.10	U	0.10
8001-35-2	Toxaphene	5.0	U	5.0

RL = Reporting Limit

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

OT16MW0201

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909389-07

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0922021.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec.

Date Analyzed: 09/22/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	2	J
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	2	J
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

OT16MW0201

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH46

Lab Sample ID: 9909389-07

Lab File ID: B921925.D

Date Collected: 09/15/99

Date Received: 09/16/99

Date Prepared: 09/17/99

Date Analyzed: 09/22/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
319-84-6	alpha-BHC	0.050	U	0.050
319-85-7	beta-BHC	0.050	U	0.050
319-86-8	delta-BHC	0.050	U	0.050
58-89-9	gamma-BHC (Lindane)	0.076		0.050
76-44-8	Heptachlor	0.050	U	0.050
309-00-2	Aldrin	0.050	U	0.050
1024-57-3	Heptachlor epoxide	0.050	U	0.050
5103-74-2	gamma-Chlordane	0.050	U	0.050
5103-71-9	alpha-Chlordane	0.050	U	0.050
959-98-8	Endosulfan I	0.050	U	0.050
60-57-1	Dieldrin	0.10	U	0.10
72-55-9	4,4'-DDE	0.10	U	0.10
72-20-8	Endrin	0.10	U	0.10
33213-65-9	Endosulfan II	0.10	U	0.10
72-54-8	4,4'-DDD	0.10	U	0.10
1031-07-8	Endosulfan sulfate	0.10	U	0.10
50-29-3	4,4'-DDT	0.10	U	0.10
72-43-5	Methoxychlor	0.50	U	0.50
7421-93-4	Endrin aldehyde	0.10	U	0.10
53494-70-5	Endrin ketone	0.10	U	0.10
8001-35-2	Toxaphene	5.0	U	5.0

RL = Reporting Limit

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

OT16MW0301

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909389-08

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0929010.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

OT16MW0301

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH46

Lab Sample ID: 9909389-08

Lab File ID: B921926.D

Date Collected: 09/15/99

Date Received: 09/16/99

Date Prepared: 09/17/99

Date Analyzed: 09/22/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
319-84-6	alpha-BHC	0.050	U	0.050
319-85-7	beta-BHC	0.050	U	0.050
319-86-8	delta-BHC	0.050	U	0.050
58-89-9	gamma-BHC (Lindane)	0.050	U	0.050
76-44-8	Heptachlor	0.050	U	0.050
309-00-2	Aldrin	0.050	U	0.050
1024-57-3	Heptachlor epoxide	0.050	U	0.050
5103-74-2	gamma-Chlordane	0.050	U	0.050
5103-71-9	alpha-Chlordane	0.050	U	0.050
959-98-8	Endosulfan I	0.050	U	0.050
60-57-1	Dieldrin	0.10	U	0.10
72-55-9	4,4'-DDE	0.10	U	0.10
72-20-8	Endrin	0.10	U	0.10
33213-65-9	Endosulfan II	0.10	U	0.10
72-54-8	4,4'-DDD	0.10	U	0.10
1031-07-8	Endosulfan sulfate	0.10	U	0.10
50-29-3	4,4'-DDT	0.10	U	0.10
72-43-5	Methoxychlor	0.50	U	0.50
7421-93-4	Endrin aldehyde	0.10	U	0.10
53494-70-5	Endrin ketone	0.10	U	0.10
8001-35-2	Toxaphene	5.0	U	5.0

RL = Reporting Limit

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

OT16MW0401

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909389-09

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0922023.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec.

Date Analyzed: 09/22/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	1	J
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	2	J
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

OT16MW0401

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH46

Lab Sample ID: 9909389-09

Lab File ID: B921939.D

Date Collected: 09/15/99

Date Received: 09/16/99

Date Prepared: 09/17/99

Date Analyzed: 09/22/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
319-84-6	alpha-BHC	0.050	U	0.050
319-85-7	beta-BHC	0.050	U	0.050
319-86-8	delta-BHC	0.050	U	0.050
58-89-9	gamma-BHC (Lindane)	0.050	U	0.050
76-44-8	Heptachlor	0.050	U	0.050
309-00-2	Aldrin	0.050	U	0.050
1024-57-3	Heptachlor epoxide	0.050	U	0.050
5103-74-2	gamma-Chlordane	0.050	U	0.050
5103-71-9	alpha-Chlordane	0.050	U	0.050
959-98-8	Endosulfan I	0.050	U	0.050
60-57-1	Dieldrin	0.10	U	0.10
72-55-9	4,4'-DDE	0.10	U	0.10
72-20-8	Endrin	0.10	U	0.10
33213-65-9	Endosulfan II	0.10	U	0.10
72-54-8	4,4'-DDD	0.10	U	0.10
1031-07-8	Endosulfan sulfate	0.10	U	0.10
50-29-3	4,4'-DDT	0.10	U	0.10
72-43-5	Methoxychlor	0.50	U	0.50
7421-93-4	Endrin aldehyde	0.10	U	0.10
53494-70-5	Endrin ketone	0.10	U	0.10
8001-35-2	Toxaphene	5.0	U	5.0

RL = Reporting Limit

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIP BLANK2

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909389-10

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0922013.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/22/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	4	J
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF21MW101

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909442-01

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0922024.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/22/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	11	
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: PMW101

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09442-08

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic	16.2	B	N	P
7440-39-3	Barium	18.6	B	N	P
7440-41-7	Beryllium				
7440-43-9	Cadmium	0.3	U		P
7440-70-2	Calcium				
7440-47-3	Chromium	9.3	B		P
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron	21.	U		P
7439-92-1	Lead	1.5	U		P
7439-95-4	Magnesium				
7439-96-5	Manganese	2.1	B		P
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium	6.2	B	N	P
7440-22-4	Silver	0.5	U	N	P
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF21MW101 DISS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: IMW101

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09442-01

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2	U		AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

UJ

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF21MW101

FORM I - IN

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF21MW201

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909442-02

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0922025.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec.

Date Analyzed: 09/22/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: QMW201

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09442-09

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic	13.	B	N	P	J
7440-39-3	Barium	32.1	B	N	P	J
7440-41-7	Beryllium					
7440-43-9	Cadmium	0.3	B		P	
7440-70-2	Calcium					
7440-47-3	Chromium	0.6	U		P	UJ
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron	21.	U		P	
7439-92-1	Lead	1.5	U		P	
7439-95-4	Magnesium					
7439-96-5	Manganese	0.6	B		P	J
7439-97-6	Mercury	0.2	U	N	AV	
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium	11.3	B	N	P	J
7440-22-4	Silver	0.5	U	N	P	
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF21MW201 DISS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: JMW201

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09442-02

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2 U			AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

UJ

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF21MW201

508

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF21MW301

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909442-03

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0922026.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec.

Date Analyzed: 09/22/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: RMW301

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09442-10

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic	11.6	B	N	P	J
7440-39-3	Barium	36.1	B	N	P	J
7440-41-7	Beryllium					
7440-43-9	Cadmium	0.6	B		P	
7440-70-2	Calcium					
7440-47-3	Chromium	0.6	U		P	UJ
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron	21.	U		P	
7439-92-1	Lead	1.5	U		P	
7439-95-4	Magnesium					
7439-96-5	Manganese	34.8			P	J
7439-97-6	Mercury	0.2	U	N	AV	
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium	12.4	B	N	P	J
7440-22-4	Silver	0.5	U	N	P	
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF21MW301 DISS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: KMW301

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09442-03

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2	U		AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

UJ

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF21MW301

FORM I - IN

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF21MW401

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909442-04

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0928018.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/28/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: SMW401

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09442-11

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic	4.6	B	N	P	UJ
7440-39-3	Barium	37.1	B	N	P	UJ
7440-41-7	Beryllium					
7440-43-9	Cadmium	0.7	B		P	
7440-70-2	Calcium					
7440-47-3	Chromium	0.6	U		P	UJ
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron	936.			P	
7439-92-1	Lead	1.5	U		P	
7439-95-4	Magnesium					
7439-96-5	Manganese	78.5			P	J
7439-97-6	Mercury	0.2	U	N	AV	
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium	11.5	B	N	P	UJ
7440-22-4	Silver	0.5	U	N	P	
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF21MW401 DISS

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: LMW401

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09442-04

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2	U		AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

UJ

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF21MW401

510

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF19MW101

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909442-05

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0928019.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/28/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: TMW101

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09442-12

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic	3.	U	N	P	
7440-39-3	Barium	14.5	B	N	P	J
7440-41-7	Beryllium					
7440-43-9	Cadmium	0.3	B		P	
7440-70-2	Calcium					
7440-47-3	Chromium	0.6	U		P	UJ
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron	21.	U		P	
7439-92-1	Lead	1.5	U		P	
7439-95-4	Magnesium					
7439-96-5	Manganese	284.			P	J
7439-97-6	Mercury	0.2	U	N	AV	
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium	2.9	B	N	P	J
7440-22-4	Silver	0.5	U	N	P	
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF19MW101 DISS

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: MMW101

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09442-05

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2	U		AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

UJ

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF19MW101

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF19MW201

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909442-06

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0928020.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/28/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: UMW201

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09442-13

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic	3.9	B	N	P	J
7440-39-3	Barium	21.6	B	N	P	J
7440-41-7	Beryllium					
7440-43-9	Cadmium	0.5	B		P	
7440-70-2	Calcium					
7440-47-3	Chromium	0.6	U		P	UJ
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron	132.			P	
7439-92-1	Lead	1.5	U		P	
7439-95-4	Magnesium					
7439-96-5	Manganese	246.			P	J
7439-97-6	Mercury	0.2	U	N	AV	
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium	2.7	B	N	P	J
7440-22-4	Silver	0.5	U	N	P	
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF19MW201 DISS

FORM I - IN

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: NMW201

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09442-06

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.56			AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF19MW201

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF19MW301

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909442-07

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0928021.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/28/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: VMW301

Lab Name: LAUCKS TESTING LABS, INC. Contract: ____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09442-14

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic	3.	U	N	P	
7440-39-3	Barium	17.8	B	N	P	J
7440-41-7	Beryllium					
7440-43-9	Cadmium	0.3	U		P	
7440-70-2	Calcium					
7440-47-3	Chromium	0.6	U		P	UJ
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron	105.	U		P	
7439-92-1	Lead	1.5	U		P	
7439-95-4	Magnesium					
7439-96-5	Manganese	1.1	B		P	J
7439-97-6	Mercury	0.2	U	N	AV	
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium	4.1	B	N	P	UJ
7440-22-4	Silver	1.3	B	N	P	UJ
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF19MW301 DISS

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: OMW301

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: __ SAS No.: __ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09442-07

Level (low/med): LOW Date Received: 09/16/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2	U		AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

UJ

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF19MW301

FORM I - IN

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIP BLANK3

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909442-15

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0922014.D

Level: (low/med) LOW

Date Received: 09/16/99

% Moisture: not dec. _____

Date Analyzed: 09/22/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	1	J
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

FORM I VOA

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS56MW0101

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909448-01

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0928022.D

Level: (low/med) LOW

Date Received: 09/18/99

% Moisture: not dec. _____

Date Analyzed: 09/28/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: WW0101

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09448-01

Level (low/med): LOW Date Received: 09/18/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead	1.5	U		P
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury				
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: SS56MW0101

FORM I - IN

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS56WCC301

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909448-02

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0928023.D

Level: (low/med) LOW

Date Received: 09/18/99

% Moisture: not dec. _____

Date Analyzed: 09/28/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: XCC301

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09448-02

Level (low/med): LOW Date Received: 09/18/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead	1.5	U		P
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury				
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: SS56WCC301

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS56WCC501

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909448-03

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0928024.D

Level: (low/med) LOW

Date Received: 09/18/99

% Moisture: not dec. _____

Date Analyzed: 09/28/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: YCC501

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH46

Matrix (soil/water): WATER Lab Sample ID: 09448-03

Level (low/med): LOW Date Received: 09/18/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead	1.5	U		P
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury				
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: SS56WCC501

FORM I - IN

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIP BLANK4

Lab Name: Laucks Testing Labs

SDG No.: FWH46

Matrix: (soil/water) WATER

Lab Sample ID: 9909448-04

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0922015.D

Level: (low/med) LOW

Date Received: 09/18/99

% Moisture: not dec. _____

Date Analyzed: 09/22/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	2	J
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIP BLANK 1

Lab Name: Laucks Testing Lab

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-32

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0929016.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: DW0401

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-04

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

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Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF22MW0401

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FORM I - IN

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: QW0401

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-22

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic	5.3 B		N	P
7440-39-3	Barium	16.8 B		E	P
7440-41-7	Beryllium				
7440-43-9	Cadmium	0.3 U			P
7440-70-2	Calcium				
7440-47-3	Chromium	1.6 B			P
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron	51.2 B			P
7439-92-1	Lead	1.5 U			P
7439-95-4	Magnesium				
7439-96-5	Manganese	52.1			P
7439-97-6	Mercury	0.2 U		N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium	4.6 B		N	P
7440-22-4	Silver	0.5 U		N	P
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF22MW0401 (DISS)

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF22MW0401RX

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH47

Lab Sample ID: 9909525-04RX

Lab File ID: LA08929.D

Date Collected: 09/20/99

Date Received: 09/22/99

Date Prepared: 10/06/99

Date Analyzed: 10/09/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
75-99-0	Dalapon	0.080	U	0.080
1918-00-9	Dicamba	0.040	U	0.040
93-65-2	MCPP	20	U	20
94-74-6	MCPA	10	U	10
120-36-5	Dichlorprop	0.080	U	0.080
94-75-7	2,4-D	0.51	P	0.080
93-72-1	2,4,5-TP	0.040	U	0.040
93-76-5	2,4,5-T	0.040	U	0.040
94-82-6	2,4-DB	0.080	U	0.080
88-85-7	Dinoseb	0.080	U	0.080
100-02-7	4-Nitrophenol	0.080	U	0.080
87-86-5	Pentachlorophenol	0.010	U	0.010
1918-02-1	Picloram	0.040	U	0.040

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RL = Reporting Limit

RESULT FORM

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ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF22MW0401

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH47

Lab Sample ID: 9909525-04

Lab File ID: LA04929.D

Date Collected: 09/20/99

Date Received: 09/22/99

Date Prepared: 09/27/99

Date Analyzed: 10/05/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
75-99-0	Dalapon	0.080	U	0.080
1918-00-9	Dicamba	0.040	U	0.040
93-65-2	MCPP	20	U	20
94-74-6	MCPA	10	U	10
120-36-5	Dichlorprop	0.080	U	0.080
94-75-7	2,4-D	0.60	B	0.080
93-72-1	2,4,5-TP	0.040	U	0.040
93-76-5	2,4,5-T	0.040	U	0.040
94-82-6	2,4-DB	0.080	U	0.080
88-85-7	Dinoseb	0.080	U	0.080
100-02-7	4-Nitrophenol	0.24	B	0.080
87-86-5	Pentachlorophenol	0.010	U	0.010
1918-02-1	Picloram	0.040	U	0.040

RL = Reporting Limit

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF22MW0401

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH47

Lab Sample ID: 9909525-04

Lab File ID: BA05911.D

Date Collected: 09/20/99

Date Received: 09/22/99

Date Prepared: 09/27/99

Date Analyzed: 10/05/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
319-84-6	alpha-BHC	0.050	U	0.050
319-85-7	beta-BHC	0.050	U	0.050
319-86-8	delta-BHC	0.050	U	0.050
58-89-9	gamma-BHC (Lindane)	0.050	U	0.050
76-44-8	Heptachlor	0.050	U	0.050
309-00-2	Aldrin	0.050	U	0.050
1024-57-3	Heptachlor epoxide	0.050	U	0.050
5103-74-2	gamma-Chlordane	0.050	U	0.050
5103-71-9	alpha-Chlordane	0.050	U	0.050
959-98-8	Endosulfan I	0.050	U	0.050
60-57-1	Dieldrin	0.10	U	0.10
72-55-9	4,4'-DDE	0.10	U	0.10
72-20-8	Endrin	0.10	U	0.10
33213-65-9	Endosulfan II	0.10	U	0.10
72-54-8	4,4'-DDD	0.10	U	0.10
1031-07-8	Endosulfan sulfate	0.10	U	0.10
50-29-3	4,4'-DDT	0.10	U	0.10
72-43-5	Methoxychlor	0.50	U	0.50
7421-93-4	Endrin aldehyde	0.10	U	0.10
53494-70-5	Endrin ketone	0.10	U	0.10
12674-11-2	Aroclor-1016	1.0	U	1.0
11104-28-2	Aroclor-1221	2.0	U	2.0
11141-16-5	Aroclor-1232	1.0	U	1.0
53469-21-9	Aroclor-1242	1.0	U	1.0
12672-29-6	Aroclor-1248	1.0	U	1.0
11097-69-1	Aroclor-1254	1.0	U	1.0
11096-82-5	Aroclor-1260	1.0	U	1.0
8001-35-2	Toxaphene	5.0	U	5.0

RL = Reporting Limit

RESULT FORM

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SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF22MW0401

Lab Name: Laucks Testing Lab

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-04

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0929021.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: CW0301

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-03

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic					
7440-39-3	Barium					
7440-41-7	Beryllium					
7440-43-9	Cadmium					
7440-70-2	Calcium					
7440-47-3	Chromium					
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron					
7439-92-1	Lead					
7439-95-4	Magnesium					
7439-96-5	Manganese					
7439-97-6	Mercury	0.2	U	N	AV	UJ
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium					
7440-22-4	Silver					
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF22MW0301

FORM I - IN

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: PW0301

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-21

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic	6.4 B		N	P
7440-39-3	Barium	30.2 B		E	P
7440-41-7	Beryllium				
7440-43-9	Cadmium	0.3 U			P
7440-70-2	Calcium				
7440-47-3	Chromium	0.6 U			P
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron	21. U			P
7439-92-1	Lead	1.5 U			P
7439-95-4	Magnesium				
7439-96-5	Manganese	38.7			P
7439-97-6	Mercury	0.2 U		N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium	17.2 B		N	P
7440-22-4	Silver	0.5 U		N	P
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF22MW0301 (DISS)

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF22MW0301RX

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH47

Lab Sample ID: 9909525-03RX

Lab File ID: LA08928.D

Date Collected: 09/20/99

Date Received: 09/22/99

Date Prepared: 10/06/99

Date Analyzed: 10/09/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
75-99-0	Dalapon	0.080	U	0.080
1918-00-9	Dicamba	0.040	U	0.040
93-65-2	MCPP	20	U	20
94-74-6	MCPA	10	U	10
120-36-5	Dichlorprop	0.080	U	0.080
94-75-7	2,4-D	0.080	U	0.080
93-72-1	2,4,5-TP	0.040	U	0.040
93-76-5	2,4,5-T	0.040	U	0.040
94-82-6	2,4-DB	0.080	U	0.080
88-85-7	Dinoseb	0.080	U	0.080
100-02-7	4-Nitrophenol	0.080	U	0.080
87-86-5	Pentachlorophenol	0.010	U	0.010
1918-02-1	Picloram	0.040	U	0.040

RL = Reporting Limit

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF22MW0301

Lab Name: LAUCKS TESTING LABS

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-03

Sample wt/vol: 1000 (g/ml) ml

Lab File ID: LA04928.D

% Moisture: N/A

Date Collected: 09/20/99

Extraction: SEPF

Date Received: 09/22/99

Concentrated Extract Volume: 10000 (uL)

Date Prepared: 09/27/99

Dilution Factor: 1.0

Date Analyzed: 10/05/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
75-99-0	Dalapon	0.080	U	0.080
1918-00-9	Dicamba	0.040	U	0.040
93-65-2	MCPP	20	U	20
94-74-6	MCPA	10	U	10
120-36-5	Dichlorprop	0.080	U	0.080
94-75-7	2,4-D	0.080	U	0.080
93-72-1	2,4,5-TP	0.040	U	0.040
93-76-5	2,4,5-T	0.040	U	0.040
94-82-6	2,4-DB	0.080	U	0.080
88-85-7	Dinoseb	0.080	U	0.080
100-02-7	4-Nitrophenol	0.080	U	0.080
87-86-5	Pentachlorophenol	0.010	U	0.010
1918-02-1	Picloram	0.040	U	0.040

RL = Reporting Limit

RESULT FORM

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ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF22MW0301

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH47

Lab Sample ID: 9909525-03

Lab File ID: BA05910.D

Date Collected: 09/20/99

Date Received: 09/22/99

Date Prepared: 09/27/99

Date Analyzed: 10/05/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
319-84-6	alpha-BHC	0.050	U	0.050
319-85-7	beta-BHC	0.050	U	0.050
319-86-8	delta-BHC	0.050	U	0.050
58-89-9	gamma-BHC (Lindane)	0.050	U	0.050
76-44-8	Heptachlor	0.050	U	0.050
309-00-2	Aldrin	0.050	U	0.050
1024-57-3	Heptachlor epoxide	0.050	U	0.050
5103-74-2	gamma-Chlordane	0.050	U	0.050
5103-71-9	alpha-Chlordane	0.050	U	0.050
959-98-8	Endosulfan I	0.050	U	0.050
60-57-1	Dieldrin	0.10	U	0.10
72-55-9	4,4'-DDE	0.10	U	0.10
72-20-8	Endrin	0.10	U	0.10
33213-65-9	Endosulfan II	0.10	U	0.10
72-54-8	4,4'-DDD	0.10	U	0.10
1031-07-8	Endosulfan sulfate	0.10	U	0.10
50-29-3	4,4'-DDT	0.10	U	0.10
72-43-5	Methoxychlor	0.50	U	0.50
7421-93-4	Endrin aldehyde	0.10	U	0.10
53494-70-5	Endrin ketone	0.10	U	0.10
12674-11-2	Aroclor-1016	1.0	U	1.0
11104-28-2	Aroclor-1221	2.0	U	2.0
11141-16-5	Aroclor-1232	1.0	U	1.0
53469-21-9	Aroclor-1242	1.0	U	1.0
12672-29-6	Aroclor-1248	1.0	U	1.0
11097-69-1	Aroclor-1254	1.0	U	1.0
11096-82-5	Aroclor-1260	1.0	U	1.0
8001-35-2	Toxaphene	5.0	U	5.0

RL = Reporting Limit

RESULT FORM

FormVer 1.0 11/23/96

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF22MW0301

Lab Name: Laucks Testing Lab

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-03

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0929020.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: BW0201

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-02

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

UJ

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF22MW0201

FORM I - IN

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: OW0201

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-20

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic	12. B	N		P	J
7440-39-3	Barium	29.5 B	E		P	J
7440-41-7	Beryllium					
7440-43-9	Cadmium	0.3 U			P	
7440-70-2	Calcium					
7440-47-3	Chromium	0.6 U			P	
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron	21. U			P	
7439-92-1	Lead	1.5 U			P	
7439-95-4	Magnesium					
7439-96-5	Manganese	0.7 B			P	
7439-97-6	Mercury	0.2 U	N		AV	
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium	13.7 B	N		P	J
7440-22-4	Silver	0.5 U	N		P	
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF22MW0201 (DISS)

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF22MW0201RX

Lab Name: LAUCKS TESTING LABS

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-02RX

Sample wt/vol: 1000 (g/ml) ml

Lab File ID: LA08927.D

% Moisture: N/A

Date Collected: 09/20/99

Extraction: SEPF

Date Received: 09/22/99

Concentrated Extract Volume: 10000 (uL)

Date Prepared: 10/06/99

Dilution Factor: 1.0

Date Analyzed: 10/09/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
75-99-0	Dalapon	0.080	U	0.080
1918-00-9	Dicamba	0.040	U	0.040
93-65-2	MCPP	20	U	20
94-74-6	MCPA	10	U	10
120-36-5	Dichlorprop	0.080	U	0.080
94-75-7	2,4-D	0.080	U	0.080
93-72-1	2,4,5-TP	0.040	U	0.040
93-76-5	2,4,5-T	0.040	U	0.040
94-82-6	2,4-DB	0.080	U	0.080
88-85-7	Dinoseb	0.080	U	0.080
100-02-7	4-Nitrophenol	0.080	U	0.080
87-86-5	Pentachlorophenol	0.010	U	0.010
1918-02-1	Picloram	0.040	U	0.040

RL = Reporting Limit

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF22MW0201

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH47

Lab Sample ID: 9909525-02

Lab File ID: LA04927.D

Date Collected: 09/20/99

Date Received: 09/22/99

Date Prepared: 09/27/99

Date Analyzed: 10/04/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
75-99-0	Dalapon	0.080	U	0.080
1918-00-9	Dicamba	0.040	U	0.040
93-65-2	MCPP	20	U	20
94-74-6	MCPA	10	U	10
120-36-5	Dichlorprop	0.080	U	0.080
94-75-7	2,4-D	0.080	U	0.080
93-72-1	2,4,5-TP	0.040	U	0.040
93-76-5	2,4,5-T	0.040	U	0.040
94-82-6	2,4-DB	0.080	U	0.080
88-85-7	Dinoseb	0.080	U	0.080
100-02-7	4-Nitrophenol	0.080	U	0.080
87-86-5	Pentachlorophenol	0.010	U	0.010
1918-02-1	Picloram	0.040	U	0.040

RL = Reporting Limit

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF22MW0201

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH47

Lab Sample ID: 9909525-02

Lab File ID: BA05909.D

Date Collected: 09/20/99

Date Received: 09/22/99

Date Prepared: 09/27/99

Date Analyzed: 10/05/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
319-84-6	alpha-BHC	0.050	U	0.050
319-85-7	beta-BHC	0.050	U	0.050
319-86-8	delta-BHC	0.050	U	0.050
58-89-9	gamma-BHC (Lindane)	0.050	U	0.050
76-44-8	Heptachlor	0.050	U	0.050
309-00-2	Aldrin	0.050	U	0.050
1024-57-3	Heptachlor epoxide	0.050	U	0.050
5103-74-2	gamma-Chlordane	0.050	U	0.050
5103-71-9	alpha-Chlordane	0.050	U	0.050
959-98-8	Endosulfan I	0.050	U	0.050
60-57-1	Dieldrin	0.10	U	0.10
72-55-9	4,4'-DDE	0.10	U	0.10
72-20-8	Endrin	0.10	U	0.10
33213-65-9	Endosulfan II	0.10	U	0.10
72-54-8	4,4'-DDD	0.10	U	0.10
1031-07-8	Endosulfan sulfate	0.10	U	0.10
50-29-3	4,4'-DDT	0.10	U	0.10
72-43-5	Methoxychlor	0.50	U	0.50
7421-93-4	Endrin aldehyde	0.10	U	0.10
53494-70-5	Endrin ketone	0.10	U	0.10
12674-11-2	Aroclor-1016	1.0	U	1.0
11104-28-2	Aroclor-1221	2.0	U	2.0
11141-16-5	Aroclor-1232	1.0	U	1.0
53469-21-9	Aroclor-1242	1.0	U	1.0
12672-29-6	Aroclor-1248	1.0	U	1.0
11097-69-1	Aroclor-1254	1.0	U	1.0
11096-82-5	Aroclor-1260	1.0	U	1.0
8001-35-2	Toxaphene	5.0	U	5.0

RL = Reporting Limit

RESULT FORM

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SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF22MW0201

Lab Name: Laucks Testing Lab

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-02

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0929019.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec. _____

Date Analyzed: 09/29/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	1	J
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: AW0101

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-01

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

UJ

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF22MW0101

FORM I - IN

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: NW0101

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-19

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic	11.8 B	N		P
7440-39-3	Barium	23.6 B	E		P
7440-41-7	Beryllium				
7440-43-9	Cadmium	0.3 U			P
7440-70-2	Calcium				
7440-47-3	Chromium	0.6 U			P
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron	21. U			P
7439-92-1	Lead	1.5 U			P
7439-95-4	Magnesium				
7439-96-5	Manganese	54.			P
7439-97-6	Mercury	0.2 U	N		AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium	4.1 B	N		P
7440-22-4	Silver	0.5 U	N		P
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF22MW0101 (DISS)

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF22MW0101RX ✓

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH47

Lab Sample ID: 9909525-01RX

Lab File ID: LA08926.D

Date Collected: 09/20/99

Date Received: 09/22/99

Date Prepared: 10/06/99

Date Analyzed: 10/08/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
75-99-0	Dalapon	0.080	U	0.080
1918-00-9	Dicamba	0.040	U	0.040
93-65-2	MCPP	34	P	20
94-74-6	MCPA	10	U	10
120-36-5	Dichlorprop	0.080	U	0.080
94-75-7	2,4-D	0.080	U	0.080
93-72-1	2,4,5-TP	0.040	U	0.040
93-76-5	2,4,5-T	0.040	U	0.040
94-82-6	2,4-DB	0.080	U	0.080
88-85-7	Dinoseb	0.080	U	0.080
100-02-7	4-Nitrophenol	0.080	U	0.080
87-86-5	Pentachlorophenol	0.010	U	0.010
1918-02-1	Picloram	0.049	P	0.040

RL = Reporting Limit

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF22MW0101 ✓

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH47

Lab Sample ID: 9909525-01

Lab File ID: LA04926.D

Date Collected: 09/20/99

Date Received: 09/22/99

Date Prepared: 09/27/99

Date Analyzed: 10/04/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
75-99-0	Dalapon	0.080	U	0.080
1918-00-9	Dicamba	0.040	U	0.040
93-65-2	MCPP	20	U	20
94-74-6	MCPA	10	U	10
120-36-5	Dichlorprop	0.080	U	0.080
94-75-7	2,4-D	0.080	U	0.080
93-72-1	2,4,5-TP	0.040	U	0.040
93-76-5	2,4,5-T	0.040	U	0.040
94-82-6	2,4-DB	0.080	U	0.080
88-85-7	Dinoseb	0.080	U	0.080
100-02-7	4-Nitrophenol	0.080	U	0.080
87-86-5	Pentachlorophenol	0.010	U	0.010
1918-02-1	Picloram	0.046	PB	0.040 J

RL = Reporting Limit

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF22MW0101

Lab Name: LAUCKS TESTING LABS

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-01

Sample wt/vol: 1000 (g/ml) ml

Lab File ID: BA05908.D

% Moisture: N/A

Date Collected: 09/20/99

Extraction: SEPF

Date Received: 09/22/99

Concentrated Extract Volume: 10000 (uL)

Date Prepared: 09/27/99

Dilution Factor: 1.0

Date Analyzed: 10/05/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
319-84-6	alpha-BHC	0.050	U	0.050
319-85-7	beta-BHC	0.050	U	0.050
319-86-8	delta-BHC	0.050	U	0.050
58-89-9	gamma-BHC (Lindane)	0.050	U	0.050
76-44-8	Heptachlor	0.050	U	0.050
309-00-2	Aldrin	0.050	U	0.050
1024-57-3	Heptachlor epoxide	0.050	U	0.050
5103-74-2	gamma-Chlordane	0.050	U	0.050
5103-71-9	alpha-Chlordane	0.050	U	0.050
959-98-8	Endosulfan I	0.050	U	0.050
60-57-1	Dieldrin	0.10	U	0.10
72-55-9	4,4'-DDE	0.10	U	0.10
72-20-8	Endrin	0.10	U	0.10
33213-65-9	Endosulfan II	0.10	U	0.10
72-54-8	4,4'-DDD	0.10	U	0.10
1031-07-8	Endosulfan sulfate	0.10	U	0.10
50-29-3	4,4'-DDT	0.10	U	0.10
72-43-5	Methoxychlor	0.50	U	0.50
7421-93-4	Endrin aldehyde	0.10	U	0.10
53494-70-5	Endrin ketone	0.10	U	0.10
12674-11-2	Aroclor-1016	1.0	U	1.0
11104-28-2	Aroclor-1221	2.0	U	2.0
11141-16-5	Aroclor-1232	1.0	U	1.0
53469-21-9	Aroclor-1242	1.0	U	1.0
12672-29-6	Aroclor-1248	1.0	U	1.0
11097-69-1	Aroclor-1254	1.0	U	1.0
11096-82-5	Aroclor-1260	1.0	U	1.0
8001-35-2	Toxaphene	5.0	U	5.0

RL = Reporting Limit

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF22MW0101

Lab Name: Laucks Testing Lab

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-01

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0929018.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	1	J
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

FORM I VOA

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIP BLANK 2

Lab Name: Laucks Testing Lab

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-33

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0929017.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec. _____

Date Analyzed: 09/29/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: HW0401

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-08

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic					
7440-39-3	Barium					
7440-41-7	Beryllium					
7440-43-9	Cadmium					
7440-70-2	Calcium					
7440-47-3	Chromium					
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron					
7439-92-1	Lead					
7439-95-4	Magnesium					
7439-96-5	Manganese					
7439-97-6	Mercury	0.2 U	N		AV	UJ
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium					
7440-22-4	Silver					
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF23MW0401

FORM I - IN

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: UW0401

ab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-26

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic	3.8 B	N		P	J
7440-39-3	Barium	33.3 B	E		P	J
7440-41-7	Beryllium					
7440-43-9	Cadmium	0.3 U			P	
7440-70-2	Calcium					
7440-47-3	Chromium	0.6 U			P	
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron	91.1 B			P	
7439-92-1	Lead	1.5 U			P	
7439-95-4	Magnesium					
7439-96-5	Manganese	98.5			P	
7439-97-6	Mercury	0.2 U	N		AV	
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium	13. B	N		P	J
7440-22-4	Silver	0.5 U	N		P	
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

`omments:

CLIENT ID: LF23MW0401 (DISS)

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF23MW0401RX

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH47

Lab Sample ID: 9909525-08RX

Lab File ID: LA08936.D

Date Collected: 09/20/99

Date Received: 09/22/99

Date Prepared: 10/06/99

Date Analyzed: 10/09/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
75-99-0	Dalapon	0.080	U	0.080
1918-00-9	Dicamba	0.040	U	0.040
93-65-2	MCPP	20	U	20
94-74-6	MCPA	10	U	10
120-36-5	Dichlorprop	0.080	U	0.080
94-75-7	2,4-D	0.080	U	0.080
93-72-1	2,4,5-TP	0.040	U	0.040
93-76-5	2,4,5-T	0.040	U	0.040
94-82-6	2,4-DB	0.080	U	0.080
88-85-7	Dinoseb	0.080	U	0.080
100-02-7	4-Nitrophenol	0.080	U	0.080
87-86-5	Pentachlorophenol	0.010	U	0.010
1918-02-1	Picloram	0.040	U	0.040

RL = Reporting Limit

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF23MW0401

Lab Name: LAUCKS TESTING LABS

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-08

Sample wt/vol: 1000 (g/ml) ml

Lab File ID: LA04936.D

% Moisture: N/A

Date Collected: 09/20/99

Extraction: SEPF

Date Received: 09/22/99

Concentrated Extract Volume: 10000 (uL)

Date Prepared: 09/27/99

Dilution Factor: 1.0

Date Analyzed: 10/05/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
75-99-0	Dalapon	0.080	U	0.080
1918-00-9	Dicamba	0.040	U	0.040
93-65-2	MCPP	20	U	20
94-74-6	MCPA	10	U	10
120-36-5	Dichlorprop	0.080	U	0.080
94-75-7	2,4-D	0.080	U	0.080
93-72-1	2,4,5-TP	0.040	U	0.040
93-76-5	2,4,5-T	0.040	U	0.040
94-82-6	2,4-DB	0.080	U	0.080
88-85-7	Dinoseb	0.080	U	0.080
100-02-7	4-Nitrophenol	0.080	U	0.080
87-86-5	Pentachlorophenol	0.010	U	0.010
1918-02-1	Picloram	0.040	U	0.040

RL = Reporting Limit

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF23MW0401

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH47

Lab Sample ID: 9909525-08

Lab File ID: BA05915.D

Date Collected: 09/20/99

Date Received: 09/22/99

Date Prepared: 09/27/99

Date Analyzed: 10/05/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
319-84-6	alpha-BHC	0.050	U	0.050
319-85-7	beta-BHC	0.050	U	0.050
319-86-8	delta-BHC	0.050	U	0.050
58-89-9	gamma-BHC (Lindane)	0.050	U	0.050
76-44-8	Heptachlor	0.050	U	0.050
309-00-2	Aldrin	0.050	U	0.050
1024-57-3	Heptachlor epoxide	0.050	U	0.050
5103-74-2	gamma-Chlordane	0.050	U	0.050
5103-71-9	alpha-Chlordane	0.050	U	0.050
959-98-8	Endosulfan I	0.050	U	0.050
60-57-1	Dieldrin	0.10	U	0.10
72-55-9	4,4'-DDE	0.10	U	0.10
72-20-8	Endrin	0.10	U	0.10
33213-65-9	Endosulfan II	0.10	U	0.10
72-54-8	4,4'-DDD	0.10	U	0.10
1031-07-8	Endosulfan sulfate	0.10	U	0.10
50-29-3	4,4'-DDT	0.10	U	0.10
72-43-5	Methoxychlor	0.50	U	0.50
7421-93-4	Endrin aldehyde	0.10	U	0.10
53494-70-5	Endrin ketone	0.10	U	0.10
12674-11-2	Aroclor-1016	1.0	U	1.0
11104-28-2	Aroclor-1221	2.0	U	2.0
11141-16-5	Aroclor-1232	1.0	U	1.0
53469-21-9	Aroclor-1242	1.0	U	1.0
12672-29-6	Aroclor-1248	1.0	U	1.0
11097-69-1	Aroclor-1254	1.0	U	1.0
11096-82-5	Aroclor-1260	1.0	U	1.0
8001-35-2	Toxaphene	5.0	U	5.0

RL = Reporting Limit

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF23MW0401

Lab Name: Laucks Testing Lab

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-08

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0929025.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	1	J
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

FORM I VOA

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: GW0301

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-07

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2 U	N	AV	UJ
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF23MW0301

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U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: TW0301

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-25

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic	3. U		N	P
7440-39-3	Barium	25.3 B		E	P
7440-41-7	Beryllium				
7440-43-9	Cadmium	0.3 U			P
7440-70-2	Calcium				
7440-47-3	Chromium	0.6 U			P
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron	105. U			P
7439-92-1	Lead	1.5 U			P
7439-95-4	Magnesium				
7439-96-5	Manganese	80.3			P
7439-97-6	Mercury	0.2 U		N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium	42.7 B		N	P
7440-22-4	Silver	0.5 U		N	P
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

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Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF23MW0301 (DISS)

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF23MW0301RX

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH47

Lab Sample ID: 9909525-07RX

Lab File ID: LA08935.D

Date Collected: 09/20/99

Date Received: 09/22/99

Date Prepared: 10/06/99

Date Analyzed: 10/09/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
75-99-0	Dalapon	0.080	U	0.080
1918-00-9	Dicamba	0.040	U	0.040
93-65-2	MCPP	20	U	20
94-74-6	MCPA	10	U	10
120-36-5	Dichlorprop	0.080	U	0.080
94-75-7	2,4-D	0.080	U	0.080
93-72-1	2,4,5-TP	0.040	U	0.040
93-76-5	2,4,5-T	0.040	U	0.040
94-82-6	2,4-DB	0.080	U	0.080
88-85-7	Dinoseb	0.080	U	0.080
100-02-7	4-Nitrophenol	0.080	U	0.080
87-86-5	Pentachlorophenol	0.010	U	0.010
1918-02-1	Picloram	0.040	U	0.040

RL = Reporting Limit

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF23MW0301

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH47

Lab Sample ID: 9909525-07

Lab File ID: LA04935.D

Date Collected: 09/20/99

Date Received: 09/22/99

Date Prepared: 09/27/99

Date Analyzed: 10/05/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
75-99-0	Dalapon	0.080	U	0.080
1918-00-9	Dicamba	0.040	U	0.040
93-65-2	MCPP	20	U	20
94-74-6	MCPA	10	U	10
120-36-5	Dichlorprop	0.080	U	0.080
94-75-7	2,4-D	0.080	U	0.080
93-72-1	2,4,5-TP	0.040	U	0.040
93-76-5	2,4,5-T	0.040	U	0.040
94-82-6	2,4-DB	0.080	U	0.080
88-85-7	Dinoseb	0.080	U	0.080
100-02-7	4-Nitrophenol	0.080	U	0.080
87-86-5	Pentachlorophenol	0.010	U	0.010
1918-02-1	Picloram	0.040	U	0.040

RL = Reporting Limit

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF23MW0301

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH47

Lab Sample ID: 9909525-07

Lab File ID: BA05914.D

Date Collected: 09/20/99

Date Received: 09/22/99

Date Prepared: 09/27/99

Date Analyzed: 10/05/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
319-84-6	alpha-BHC	0.050	U	0.050
319-85-7	beta-BHC	0.050	U	0.050
319-86-8	delta-BHC	0.050	U	0.050
58-89-9	gamma-BHC (Lindane)	0.050	U	0.050
76-44-8	Heptachlor	0.050	U	0.050
309-00-2	Aldrin	0.050	U	0.050
1024-57-3	Heptachlor epoxide	0.050	U	0.050
5103-74-2	gamma-Chlordane	0.050	U	0.050
5103-71-9	alpha-Chlordane	0.050	U	0.050
959-98-8	Endosulfan I	0.050	U	0.050
60-57-1	Dieldrin	0.10	U	0.10
72-55-9	4,4'-DDE	0.10	U	0.10
72-20-8	Endrin	0.10	U	0.10
33213-65-9	Endosulfan II	0.10	U	0.10
72-54-8	4,4'-DDD	0.10	U	0.10
1031-07-8	Endosulfan sulfate	0.10	U	0.10
50-29-3	4,4'-DDT	0.10	U	0.10
72-43-5	Methoxychlor	0.50	U	0.50
7421-93-4	Endrin aldehyde	0.10	U	0.10
53494-70-5	Endrin ketone	0.10	U	0.10
12674-11-2	Aroclor-1016	1.0	U	1.0
11104-28-2	Aroclor-1221	2.0	U	2.0
11141-16-5	Aroclor-1232	1.0	U	1.0
53469-21-9	Aroclor-1242	1.0	U	1.0
12672-29-6	Aroclor-1248	1.0	U	1.0
11097-69-1	Aroclor-1254	1.0	U	1.0
11096-82-5	Aroclor-1260	1.0	U	1.0
8001-35-2	Toxaphene	5.0	U	5.0

RL = Reporting Limit

RESULT FORM

FormVer 1.0 11/23/96

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF23MW0301

Lab Name: Laucks Testing Lab

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-07

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0929024.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec. _____

Date Analyzed: 09/29/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: FW0201

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-06

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2 U	N	AV	UJ
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF23MW0201

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U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: SW0201

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-24

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic	6.2 B	N		P	J
7440-39-3	Barium	29.1 B	E		P	J
7440-41-7	Beryllium					
7440-43-9	Cadmium	0.7 B			P	
7440-70-2	Calcium					
7440-47-3	Chromium	0.6 U			P	
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron	105. U			P	
7439-92-1	Lead	1.5 U			P	
7439-95-4	Magnesium					
7439-96-5	Manganese	12.6 B			P	
7439-97-6	Mercury	0.2 U	N		AV	
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium	57.4 B	N		P	J
7440-22-4	Silver	5.2 B	N		P	J
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF23MW0201 (DISS)

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF23MW0201RX

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH47

Lab Sample ID: 9909525-06RX

Lab File ID: LA08934.D

Date Collected: 09/20/99

Date Received: 09/22/99

Date Prepared: 10/06/99

Date Analyzed: 10/09/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
75-99-0	Dalapon	0.080	U	0.080
1918-00-9	Dicamba	0.040	U	0.040
93-65-2	MCPP	20	U	20
94-74-6	MCPA	10	U	10
120-36-5	Dichlorprop	0.080	U	0.080
94-75-7	2,4-D	0.080	U	0.080
93-72-1	2,4,5-TP	0.040	U	0.040
93-76-5	2,4,5-T	0.040	U	0.040
94-82-6	2,4-DB	0.080	U	0.080
88-85-7	Dinoseb	0.080	U	0.080
100-02-7	4-Nitrophenol	0.080	U	0.080
87-86-5	Pentachlorophenol	0.010	U	0.010
1918-02-1	Picloram	0.040	U	0.040

RL = Reporting Limit

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF23MW0201 ✓

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH47

Lab Sample ID: 9909525-06

Lab File ID: LA04934.D

Date Collected: 09/20/99

Date Received: 09/22/99

Date Prepared: 09/27/99

Date Analyzed: 10/05/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
75-99-0	Dalapon	0.080	U	0.080
1918-00-9	Dicamba	0.040	U	0.040
93-65-2	MCPP	20	U	20
94-74-6	MCPA	10	U	10
120-36-5	Dichlorprop	0.080	U	0.080
94-75-7	2,4-D	0.080	U	0.080
93-72-1	2,4,5-TP	0.040	U	0.040
93-76-5	2,4,5-T	0.040	U	0.040
94-82-6	2,4-DB	0.080	U	0.080
88-85-7	Dinoseb	0.080	U	0.080
100-02-7	4-Nitrophenol	0.080	U	0.080
87-86-5	Pentachlorophenol	0.010	U	0.010
1918-02-1	Picloram	0.040	U	0.040

RL = Reporting Limit

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF23MW0201

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH47

Lab Sample ID: 9909525-06

Lab File ID: BA05913.D

Date Collected: 09/20/99

Date Received: 09/22/99

Date Prepared: 09/27/99

Date Analyzed: 10/05/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
319-84-6	alpha-BHC	0.050	U	0.050
319-85-7	beta-BHC	0.050	U	0.050
319-86-8	delta-BHC	0.050	U	0.050
58-89-9	gamma-BHC (Lindane)	0.050	U	0.050
76-44-8	Heptachlor	0.050	U	0.050
309-00-2	Aldrin	0.050	U	0.050
1024-57-3	Heptachlor epoxide	0.050	U	0.050
5103-74-2	gamma-Chlordane	0.050	U	0.050
5103-71-9	alpha-Chlordane	0.050	U	0.050
959-98-8	Endosulfan I	0.050	U	0.050
60-57-1	Dieldrin	0.10	U	0.10
72-55-9	4,4'-DDE	0.10	U	0.10
72-20-8	Endrin	0.10	U	0.10
33213-65-9	Endosulfan II	0.10	U	0.10
72-54-8	4,4'-DDD	0.10	U	0.10
1031-07-8	Endosulfan sulfate	0.10	U	0.10
50-29-3	4,4'-DDT	0.10	U	0.10
72-43-5	Methoxychlor	0.50	U	0.50
7421-93-4	Endrin aldehyde	0.10	U	0.10
53494-70-5	Endrin ketone	0.10	U	0.10
12674-11-2	Aroclor-1016	1.0	U	1.0
11104-28-2	Aroclor-1221	2.0	U	2.0
11141-16-5	Aroclor-1232	1.0	U	1.0
53469-21-9	Aroclor-1242	1.0	U	1.0
12672-29-6	Aroclor-1248	1.0	U	1.0
11097-69-1	Aroclor-1254	1.0	U	1.0
11096-82-5	Aroclor-1260	1.0	U	1.0
8001-35-2	Toxaphene	5.0	U	5.0

RL = Reporting Limit

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF23MW0201

Lab Name: Laucks Testing Lab

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-06

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0929023.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: EW0101

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-05

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic					
7440-39-3	Barium					
7440-41-7	Beryllium					
7440-43-9	Cadmium					
7440-70-2	Calcium					
7440-47-3	Chromium					
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron					
7439-92-1	Lead					
7439-95-4	Magnesium					
7439-96-5	Manganese					
7439-97-6	Mercury	0.2 U	N		AV	UJ
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium					
7440-22-4	Silver					
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF23MW0101

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF23MW0101

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH47

Lab Sample ID: 9909525-05

Lab File ID: BA05912.D

Date Collected: 09/20/99

Date Received: 09/22/99

Date Prepared: 09/27/99

Date Analyzed: 10/05/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
319-84-6	alpha-BHC	0.050	U	0.050
319-85-7	beta-BHC	0.050	U	0.050
319-86-8	delta-BHC	0.050	U	0.050
58-89-9	gamma-BHC (Lindane)	0.050	U	0.050
76-44-8	Heptachlor	0.050	U	0.050
309-00-2	Aldrin	0.050	U	0.050
1024-57-3	Heptachlor epoxide	0.050	U	0.050
5103-74-2	gamma-Chlordane	0.050	U	0.050
5103-71-9	alpha-Chlordane	0.050	U	0.050
959-98-8	Endosulfan I	0.050	U	0.050
60-57-1	Dieldrin	0.10	U	0.10
72-55-9	4,4'-DDE	0.10	U	0.10
72-20-8	Endrin	0.10	U	0.10
33213-65-9	Endosulfan II	0.10	U	0.10
72-54-8	4,4'-DDD	0.10	U	0.10
1031-07-8	Endosulfan sulfate	0.10	U	0.10
50-29-3	4,4'-DDT	0.10	U	0.10
72-43-5	Methoxychlor	0.50	U	0.50
7421-93-4	Endrin aldehyde	0.10	U	0.10
53494-70-5	Endrin ketone	0.10	U	0.10
12674-11-2	Aroclor-1016	1.0	U	1.0
11104-28-2	Aroclor-1221	2.0	U	2.0
11141-16-5	Aroclor-1232	1.0	U	1.0
53469-21-9	Aroclor-1242	1.0	U	1.0
12672-29-6	Aroclor-1248	1.0	U	1.0
11097-69-1	Aroclor-1254	1.0	U	1.0
11096-82-5	Aroclor-1260	1.0	U	1.0
8001-35-2	Toxaphene	5.0	U	5.0

RL = Reporting Limit

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF23MW0101

Lab Name: Laucks Testing Lab

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-05

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0929022.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	1	J
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: RW0101

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: __ SAS No.: ___ SDG No.: FWH47_

Matrix (soil/water): WATER Lab Sample ID: 09525-23

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic	7.9	B	N	P
7440-39-3	Barium	21.5	B	E	P
7440-41-7	Beryllium				
7440-43-9	Cadmium	0.3	U		P
7440-70-2	Calcium				
7440-47-3	Chromium	0.6	U		P
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron	646.			P
7439-92-1	Lead	1.5	U		P
7439-95-4	Magnesium				
7439-96-5	Manganese	348.			P
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium	16.4	B	N	P
7440-22-4	Silver	0.5	U	N	P
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: LF23MW0101 (DISS)

ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE ID

LF23MW0101

Lab Name: LAUCKS TESTING LABS

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/ml) ml

% Moisture: N/A

Extraction: SEPF

Concentrated Extract Volume: 10000 (uL)

Dilution Factor: 1.0

SDG No.: FWH47

Lab Sample ID: 9909525-05

Lab File ID: LA04930.D

Date Collected: 09/20/99

Date Received: 09/22/99

Date Prepared: 09/27/99

Date Analyzed: 10/05/99

CONCENTRATION UNITS:

CAS NO.	COMPOUND	ug/L	Q	RL
75-99-0	Dalapon	0.080	U	0.080
1918-00-9	Dicamba	0.040	U	0.040
93-65-2	MCPP	20	U	20
94-74-6	MCPA	10	U	10
120-36-5	Dichlorprop	0.080	U	0.080
94-75-7	2,4-D	0.080	U	0.080
93-72-1	2,4,5-TP	0.040	U	0.040
93-76-5	2,4,5-T	0.040	U	0.040
94-82-6	2,4-DB	0.080	U	0.080
88-85-7	Dinoseb	0.080	U	0.080
100-02-7	4-Nitrophenol	0.080	U	0.080
87-86-5	Pentachlorophenol	0.010	U	0.010
1918-02-1	Picloram	0.040	U	0.040

RL = Reporting Limit

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: MW0401

.ab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-13

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

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Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: DP30MW0401

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: ZW0401

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: __ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-31

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic	14. B		N	P	J
7440-39-3	Barium	15.8 B		E	P	J
7440-41-7	Beryllium					
7440-43-9	Cadmium	0.3 U			P	
7440-70-2	Calcium					
7440-47-3	Chromium	0.6 U			P	
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron	105. U			P	
7439-92-1	Lead	1.5 U			P	
7439-95-4	Magnesium					
7439-96-5	Manganese	1.7 B			P	
7439-97-6	Mercury	0.2 U		N	AV	
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium	21.3 B		N	P	J
7440-22-4	Silver	0.5 U		N	P	
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: DP30MW0401 (DISS)

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

DP30MW0401

Lab Name: Laucks Testing Lab

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-13

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0929030.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec.

Date Analyzed: 09/30/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	2	J
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	27	
156-59-2	cis-1,2-Dichloroethene	2	J
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	5	
71-55-6	1,1,1-Trichloroethane	1	J
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	150	
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	1	J
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: LW0301

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-12

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

UJ

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: DP30MW0301

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: YW0301

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-30

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic	4.3 B	N		P	J
7440-39-3	Barium	26.3 B	E		P	J
7440-41-7	Beryllium					
7440-43-9	Cadmium	0.3 U			P	
7440-70-2	Calcium					
7440-47-3	Chromium	0.6 U			P	
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron	105. U			P	
7439-92-1	Lead	1.5 U			P	
7439-95-4	Magnesium					
7439-96-5	Manganese	0.2 B			P	
7439-97-6	Mercury	0.2 U	N		AV	
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium	24.4 B	N		P	J
7440-22-4	Silver	0.5 U	N		P	
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: DP30MW0301 (DISS)

FORM I - IN

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

DP30MW0301

Lab Name: Laucks Testing Lab

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-12

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0929029.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec. _____

Date Analyzed: 09/30/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

FORM I VOA

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: KW0201

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-11

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic					
7440-39-3	Barium					
7440-41-7	Beryllium					
7440-43-9	Cadmium					
7440-70-2	Calcium					
7440-47-3	Chromium					
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron					
7439-92-1	Lead					
7439-95-4	Magnesium					
7439-96-5	Manganese					
7439-97-6	Mercury	0.2 U		N	AV	UJ
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium					
7440-22-4	Silver					
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: DP30MW0201

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: XW0201

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-29

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic	11.7	B	N	P	J
7440-39-3	Barium	22.4	B	E	P	J
7440-41-7	Beryllium					
7440-43-9	Cadmium	0.3	U		P	
7440-70-2	Calcium					
7440-47-3	Chromium	0.6	U		P	
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron	21.	U		P	
7439-92-1	Lead	1.5	U		P	
7439-95-4	Magnesium					
7439-96-5	Manganese	0.2	U		P	
7439-97-6	Mercury	0.2	U	N	AV	
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium	27.	B	N	P	J
7440-22-4	Silver	0.5	U	N	P	
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: DP30MW0201 (DISS)

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

DP30MW0201

Lab Name: Laucks Testing Lab

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-11

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0929028.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec. _____

Date Analyzed: 09/30/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: JW0102

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-10

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2 U	N	AV	4.5
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: DP30MW0102

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U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: WW0102

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-28

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic	14. B	N		P
7440-39-3	Barium	11.8 B	E		P
7440-41-7	Beryllium				
7440-43-9	Cadmium	0.3 U			P
7440-70-2	Calcium				
7440-47-3	Chromium	0.6 U			P
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron	21. U			P
7439-92-1	Lead	1.5 U			P
7439-95-4	Magnesium				
7439-96-5	Manganese	0.2 U			P
7439-97-6	Mercury	0.2 U	N		AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium	18.8 B	N		P
7440-22-4	Silver	0.5 U	N		P
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: DP30MW0102 (DISS)

FORM I - IN

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

DP30MW0102

Lab Name: Laucks Testing Lab

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-10

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0929027.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec. _____

Date Analyzed: 09/30/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: IW0101

ab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-09

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead				
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury	0.2	U	N	AV
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: DP30MW0101

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U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: VW0101

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH47

Matrix (soil/water): WATER Lab Sample ID: 09525-27

Level (low/med): LOW Date Received: 09/22/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum					
7440-36-0	Antimony					
7440-38-2	Arsenic	12.4 B		N	P	J
7440-39-3	Barium	12.4 B		E	P	J
7440-41-7	Beryllium					
7440-43-9	Cadmium	0.3 U			P	
7440-70-2	Calcium					
7440-47-3	Chromium	0.6 U			P	
7440-48-4	Cobalt					
7440-50-8	Copper					
7439-89-6	Iron	21. U			P	
7439-92-1	Lead	1.5 U			P	
7439-95-4	Magnesium					
7439-96-5	Manganese	0.5 B			P	
7439-97-6	Mercury	0.2 U		N	AV	
7440-02-0	Nickel					
7440-09-7	Potassium					
7782-49-2	Selenium	21.8 B		N	P	J
7440-22-4	Silver	0.5 U		N	P	
7440-23-5	Sodium					
7440-28-0	Thallium					
7440-62-2	Vanadium					
7440-66-6	Zinc					
7439-98-7	Molybdenum					

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: DP30MW0101 (DISS)

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

DP30MW0101

Lab Name: Laucks Testing Lab

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-09

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0929026.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec. _____

Date Analyzed: 09/30/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LF29MW0801

Lab Name: Laucks Testing Labs Contract:

Lab Code: Case No.: SAS No.: SDG No.: FWH47

Matrix: (soil/water) WATER Lab Sample ID: 9909525-18

Sample wt/vol: 1000 (g/ml) ML Lab File ID: L1004014.D

Level: (low/med) LOW Date Received: 09/22/99

% Moisture: decanted:(Y/N) N Date Extracted: 09/27/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/04/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
132-64-9	Dibenzofuran	5	U
121-14-2	2,4-Dinitrotoluene	5	U
100-02-7	4-Nitrophenol	10	U
86-73-7	Fluorene	5	U
7005-72-3	4-Chlorophenyl-phenylether	5	U
84-66-2	Diethylphthalate	5	U
100-01-6	4-Nitroaniline	5	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	n-Nitrosodiphenylamine	5	U
101-55-3	4-Bromophenyl-phenylether	5	U
118-74-1	Hexachlorobenzene	5	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5	U
120-12-7	Anthracene	5	U
86-74-8	Carbazole	5	U
206-44-0	Fluoranthene	5	U
129-00-0	Pyrene	5	U
85-68-7	Butylbenzylphthalate	5	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo[a]anthracene	5	U
218-01-9	Chrysene	5	U
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo[b]fluoranthene	5	U
207-08-9	Benzo[k]fluoranthene	5	U
50-32-8	Benzo[a]pyrene	5	U
193-39-5	Indeno[1,2,3-cd]pyrene	5	U
53-70-3	Dibenz[a,h]anthracene	5	U
191-24-2	Benzo[g,h,i]perylene	5	U
122-66-7	1,2-Diphenylhydrazine	5	U
92-87-5	Benzidine	25	U
62-53-3	Aniline	5	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LF29MW0801

Lab Name: Laucks Testing Labs Contract:

Lab Code: Case No.: SAS No.: SDG No.: FWH47

Matrix: (soil/water) WATER Lab Sample ID: 9909525-18

Sample wt/vol: 1000 (g/ml) ML Lab File ID: L1004014.D

Level: (low/med) LOW Date Received: 09/22/99

% Moisture: decanted:(Y/N) N Date Extracted: 09/27/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/04/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
84-74-2	Di-n-butylphthalate	5	U
117-81-7	Bis(2-Ethylhexyl)phthalate	1	J
111-44-4	bis(2-Chloroethyl)ether	5	U
108-95-2	Phenol	5	U
95-57-8	2-Chlorophenol	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
100-51-6	Benzyl alcohol	5	U
108-60-1	2,2'-oxybis(1-chloropropane)	5	U
95-48-7	2-Methylphenol	5	U
67-72-1	Hexachloroethane	5	U
621-64-7	N-Nitroso-di-n-propylamine	5	U
106-44-5	4-Methylphenol	5	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	5	U
88-75-5	2-Nitrophenol	5	U
105-67-9	2,4-Dimethylphenol	5	U
65-85-0	Benzoic Acid	25	U
111-91-1	bis(2-Chloroethoxy)methane	5	U
120-83-2	2,4-Dichlorophenol	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
91-20-3	Naphthalene	5	U
106-47-8	4-Chloroaniline	5	U
87-68-3	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	5	U
91-58-7	2-Chloronaphthalene	5	U
88-74-4	2-Nitroaniline	5	U
208-96-8	Acenaphthylene	5	U
131-11-3	Dimethylphthalate	5	U
606-20-2	2,6-Dinitrotoluene	5	U
83-32-9	Acenaphthene	5	U
99-09-2	3-Nitroaniline	5	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF29MW0801

Lab Name: Laucks Testing Lab

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-18

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0929035.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec. _____

Date Analyzed: 09/30/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	15	
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LF29MW0702

Lab Name: Laucks Testing Labs Contract:

Lab Code: Case No.: SAS No.: SDG No.: FWH47

Matrix: (soil/water) WATER Lab Sample ID: 9909525-17

Sample wt/vol: 1000 (g/ml) ML Lab File ID: L1004013.D

Level: (low/med) LOW Date Received: 09/22/99

% Moisture: decanted:(Y/N) N Date Extracted: 09/27/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/04/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
132-64-9	Dibenzofuran	5	U
121-14-2	2,4-Dinitrotoluene	5	U
100-02-7	4-Nitrophenol	10	U
86-73-7	Fluorene	5	U
7005-72-3	4-Chlorophenyl-phenylether	5	U
84-66-2	Diethylphthalate	5	U
100-01-6	4-Nitroaniline	5	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	n-Nitrosodiphenylamine	5	U
101-55-3	4-Bromophenyl-phenylether	5	U
118-74-1	Hexachlorobenzene	5	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5	U
120-12-7	Anthracene	5	U
86-74-8	Carbazole	5	U
206-44-0	Fluoranthene	5	U
129-00-0	Pyrene	5	U
85-68-7	Butylbenzylphthalate	1	J
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo[a]anthracene	5	U
218-01-9	Chrysene	5	U
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo[b]fluoranthene	5	U
207-08-9	Benzo[k]fluoranthene	5	U
50-32-8	Benzo[a]pyrene	5	U
193-39-5	Indeno[1,2,3-cd]pyrene	5	U
53-70-3	Dibenz[a,h]anthracene	5	U
191-24-2	Benzo[g,h,i]perylene	5	U
122-66-7	1,2-Diphenylhydrazine	5	U
92-87-5	Benzidine	25	U
62-53-3	Aniline	5	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LF29MW0702

Lab Name: Laucks Testing Labs Contract:

Lab Code: Case No.: SAS No.: SDG No.: FWH47

Matrix: (soil/water) WATER Lab Sample ID: 9909525-17

Sample wt/vol: 1000 (g/ml) ML Lab File ID: L1004013.D

Level: (low/med) LOW Date Received: 09/22/99

% Moisture: decanted:(Y/N) N Date Extracted: 09/27/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/04/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
84-74-2	Di-n-butylphthalate	5	U
117-81-7	Bis(2-Ethylhexyl)phthalate	1	J
111-44-4	bis(2-Chloroethyl)ether	5	U
108-95-2	Phenol	5	U
95-57-8	2-Chlorophenol	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
100-51-6	Benzyl alcohol	5	U
108-60-1	2,2'-oxybis(1-chloropropane)	5	U
95-48-7	2-Methylphenol	5	U
67-72-1	Hexachloroethane	5	U
621-64-7	N-Nitroso-di-n-propylamine	5	U
106-44-5	4-Methylphenol	5	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	5	U
88-75-5	2-Nitrophenol	5	U
105-67-9	2,4-Dimethylphenol	5	U
65-85-0	Benzoic Acid	25	U
111-91-1	bis(2-Chloroethoxy)methane	5	U
120-83-2	2,4-Dichlorophenol	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
91-20-3	Naphthalene	5	U
106-47-8	4-Chloroaniline	5	U
87-68-3	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	5	U
91-58-7	2-Chloronaphthalene	5	U
88-74-4	2-Nitroaniline	5	U
208-96-8	Acenaphthylene	5	U
131-11-3	Dimethylphthalate	5	U
606-20-2	2,6-Dinitrotoluene	5	U
83-32-9	Acenaphthene	5	U
99-09-2	3-Nitroaniline	5	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF29MW0702

Lab Name: Laucks Testing Lab

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-17

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0929034.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec. _____

Date Analyzed: 09/30/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	4	
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	10	
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LF29MW0701

Lab Name: Laucks Testing Labs Contract:

Lab Code: Case No.: SAS No.: SDG No.: FWH47

Matrix: (soil/water) WATER Lab Sample ID: 9909525-16

Sample wt/vol: 1000 (g/ml) ML Lab File ID: L1004012.D

Level: (low/med) LOW Date Received: 09/22/99

% Moisture: decanted:(Y/N) N Date Extracted: 09/27/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/04/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
132-64-9	Dibenzofuran	5	U
121-14-2	2,4-Dinitrotoluene	5	U
100-02-7	4-Nitrophenol	10	U
86-73-7	Fluorene	5	U
7005-72-3	4-Chlorophenyl-phenylether	5	U
84-66-2	Diethylphthalate	5	U
100-01-6	4-Nitroaniline	5	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	n-Nitrosodiphenylamine	5	U
101-55-3	4-Bromophenyl-phenylether	5	U
118-74-1	Hexachlorobenzene	5	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5	U
120-12-7	Anthracene	5	U
86-74-8	Carbazole	5	U
206-44-0	Fluoranthene	5	U
129-00-0	Pyrene	5	U
85-68-7	Butylbenzylphthalate	1	J
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo[a]anthracene	5	U
218-01-9	Chrysene	5	U
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo[b]fluoranthene	5	U
207-08-9	Benzo[k]fluoranthene	5	U
50-32-8	Benzo[a]pyrene	5	U
193-39-5	Indeno[1,2,3-cd]pyrene	5	U
53-70-3	Dibenz[a,h]anthracene	5	U
191-24-2	Benzo[g,h,i]perylene	5	U
122-66-7	1,2-Diphenylhydrazine	5	U
92-87-5	Benzidine	25	U
62-53-3	Aniline	5	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LF29MW0701

Lab Name: Laucks Testing Labs Contract:

Lab Code: Case No.: SAS No.: SDG No.: FWH47

Matrix: (soil/water) WATER Lab Sample ID: 9909525-16

Sample wt/vol: 1000 (g/ml) ML Lab File ID: L1004012.D

Level: (low/med) LOW Date Received: 09/22/99

% Moisture: decanted:(Y/N) N Date Extracted: 09/27/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/04/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
84-74-2	Di-n-butylphthalate	5	U
117-81-7	Bis(2-Ethylhexyl)phthalate	1	J
111-44-4	bis(2-Chloroethyl)ether	5	U
108-95-2	Phenol	5	U
95-57-8	2-Chlorophenol	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
100-51-6	Benzyl alcohol	5	U
108-60-1	2,2'-oxybis(1-chloropropane)	5	U
95-48-7	2-Methylphenol	5	U
67-72-1	Hexachloroethane	5	U
621-64-7	N-Nitroso-di-n-propylamine	5	U
106-44-5	4-Methylphenol	5	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	5	U
88-75-5	2-Nitrophenol	5	U
105-67-9	2,4-Dimethylphenol	5	U
65-85-0	Benzoic Acid	25	U
111-91-1	bis(2-Chloroethoxy)methane	5	U
120-83-2	2,4-Dichlorophenol	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
91-20-3	Naphthalene	5	U
106-47-8	4-Chloroaniline	5	U
87-68-3	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	5	U
91-58-7	2-Chloronaphthalene	5	U
88-74-4	2-Nitroaniline	5	U
208-96-8	Acenaphthylene	5	U
131-11-3	Dimethylphthalate	5	U
606-20-2	2,6-Dinitrotoluene	5	U
83-32-9	Acenaphthene	5	U
99-09-2	3-Nitroaniline	5	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF29MW0701

Lab Name: Laucks Testing Lab

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-16

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0929033.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec.

Date Analyzed: 09/30/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	4	
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	11	
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LF29MW0601

Lab Name: Laucks Testing Labs Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: FWH47

Matrix: (soil/water) WATER Lab Sample ID: 9909525-15

Sample wt/vol: 1000 (g/ml) ML Lab File ID: L1004011.D

Level: (low/med) LOW Date Received: 09/22/99

% Moisture: _____ decanted:(Y/N) N Date Extracted: 09/27/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/04/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
132-64-9	Dibenzofuran	5	U
121-14-2	2,4-Dinitrotoluene	5	U
100-02-7	4-Nitrophenol	10	U
86-73-7	Fluorene	5	U
7005-72-3	4-Chlorophenyl-phenylether	5	U
84-66-2	Diethylphthalate	5	U
100-01-6	4-Nitroaniline	5	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	n-Nitrosodiphenylamine	5	U
101-55-3	4-Bromophenyl-phenylether	5	U
118-74-1	Hexachlorobenzene	5	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5	U
120-12-7	Anthracene	5	U
86-74-8	Carbazole	5	U
206-44-0	Fluoranthene	5	U
129-00-0	Pyrene	5	U
85-68-7	Butylbenzylphthalate	5	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo[a]anthracene	5	U
218-01-9	Chrysene	5	U
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo[b]fluoranthene	5	U
207-08-9	Benzo[k]fluoranthene	5	U
50-32-8	Benzo[a]pyrene	5	U
193-39-5	Indeno[1,2,3-cd]pyrene	5	U
53-70-3	Dibenz[a,h]anthracene	5	U
191-24-2	Benzo[g,h,i]perylene	5	U
122-66-7	1,2-Diphenylhydrazine	5	U
92-87-5	Benzidine	25	U
62-53-3	Aniline	5	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LF29MW0601

Lab Name: Laucks Testing Labs Contract:

Lab Code: Case No.: SAS No.: SDG No.: FWH47

Matrix: (soil/water) WATER Lab Sample ID: 9909525-15

Sample wt/vol: 1000 (g/ml) ML Lab File ID: L1004011.D

Level: (low/med) LOW Date Received: 09/22/99

% Moisture: decanted:(Y/N) N Date Extracted: 09/27/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/04/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
84-74-2	Di-n-butylphthalate	5	U
117-81-7	Bis(2-Ethylhexyl)phthalate	1	J
111-44-4	bis(2-Chloroethyl)ether	5	U
108-95-2	Phenol	5	U
95-57-8	2-Chlorophenol	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
100-51-6	Benzyl alcohol	5	U
108-60-1	2,2'-oxybis(1-chloropropane)	5	U
95-48-7	2-Methylphenol	5	U
67-72-1	Hexachloroethane	5	U
621-64-7	N-Nitroso-di-n-propylamine	5	U
106-44-5	4-Methylphenol	5	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	5	U
88-75-5	2-Nitrophenol	5	U
105-67-9	2,4-Dimethylphenol	5	U
65-85-0	Benzoic Acid	25	U
111-91-1	bis(2-Chloroethoxy)methane	5	U
120-83-2	2,4-Dichlorophenol	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
91-20-3	Naphthalene	5	U
106-47-8	4-Chloroaniline	5	U
87-68-3	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	5	U
91-58-7	2-Chloronaphthalene	5	U
88-74-4	2-Nitroaniline	5	U
208-96-8	Acenaphthylene	5	U
131-11-3	Dimethylphthalate	5	U
606-20-2	2,6-Dinitrotoluene	5	U
83-32-9	Acenaphthene	5	U
99-09-2	3-Nitroaniline	5	U

FORM I SV-1

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF29MW0601

Lab Name: Laucks Testing Lab

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-15

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0929032.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec. _____

Date Analyzed: 09/30/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	6	
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LF29MW0101

Lab Name: Laucks Testing Labs Contract:

Lab Code: Case No.: SAS No.: SDG No.: FWH47

Matrix: (soil/water) WATER Lab Sample ID: 9909525-14

Sample wt/vol: 1000 (g/ml) ML Lab File ID: L1004010.D

Level: (low/med) LOW Date Received: 09/22/99

% Moisture: decanted:(Y/N) N Date Extracted: 09/27/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/04/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: .

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	10	U
132-64-9	Dibenzofuran	5	U
121-14-2	2,4-Dinitrotoluene	5	U
100-02-7	4-Nitrophenol	10	U
86-73-7	Fluorene	5	U
7005-72-3	4-Chlorophenyl-phenylether	5	U
84-66-2	Diethylphthalate	5	U
100-01-6	4-Nitroaniline	5	U
534-52-1	4,6-Dinitro-2-methylphenol	10	U
86-30-6	n-Nitrosodiphenylamine	5	U
101-55-3	4-Bromophenyl-phenylether	5	U
118-74-1	Hexachlorobenzene	5	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	5	U
120-12-7	Anthracene	5	U
86-74-8	Carbazole	5	U
206-44-0	Fluoranthene	5	U
129-00-0	Pyrene	5	U
85-68-7	Butylbenzylphthalate	5	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo[a]anthracene	5	U
218-01-9	Chrysene	5	U
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo[b]fluoranthene	5	U
207-08-9	Benzo[k]fluoranthene	5	U
50-32-8	Benzo[a]pyrene	5	U
193-39-5	Indeno[1,2,3-cd]pyrene	5	U
53-70-3	Dibenz[a,h]anthracene	5	U
191-24-2	Benzo[g,h,i]perylene	5	U
122-66-7	1,2-Diphenylhydrazine	5	U
92-87-5	Benzidine	25	U
62-53-3	Aniline	5	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LF29MW0101

Lab Name: Laucks Testing Labs Contract:

Lab Code: Case No.: SAS No.: SDG No.: FWH47

Matrix: (soil/water) WATER Lab Sample ID: 9909525-14

Sample wt/vol: 1000 (g/ml) ML Lab File ID: L1004010.D

Level: (low/med) LOW Date Received: 09/22/99

% Moisture: decanted:(Y/N) N Date Extracted: 09/27/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/04/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: .

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
84-74-2	Di-n-butylphthalate	5	U
117-81-7	Bis(2-Ethylhexyl)phthalate	1	J
111-44-4	bis(2-Chloroethyl)ether	5	U
108-95-2	Phenol	2	J
95-57-8	2-Chlorophenol	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
100-51-6	Benzyl alcohol	5	U
108-60-1	2,2'-oxybis(1-chloropropane)	5	U
95-48-7	2-Methylphenol	5	U
67-72-1	Hexachloroethane	5	U
621-64-7	N-Nitroso-di-n-propylamine	5	U
106-44-5	4-Methylphenol	5	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	5	U
88-75-5	2-Nitrophenol	5	U
105-67-9	2,4-Dimethylphenol	5	U
65-85-0	Benzoic Acid	25	U
111-91-1	bis(2-Chloroethoxy)methane	5	U
120-83-2	2,4-Dichlorophenol	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
91-20-3	Naphthalene	5	U
106-47-8	4-Chloroaniline	5	U
87-68-3	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	5	U
91-58-7	2-Chloronaphthalene	5	U
88-74-4	2-Nitroaniline	5	U
208-96-8	Acenaphthylene	5	U
131-11-3	Dimethylphthalate	5	U
606-20-2	2,6-Dinitrotoluene	5	U
83-32-9	Acenaphthene	5	U
99-09-2	3-Nitroaniline	5	U

FORM I SV-1

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LF29MW0101

Lab Name: Laucks Testing Lab

SDG No.: FWH47

Matrix: (soil/water) WATER

Lab Sample ID: 9909525-14

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: M0929031.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec. _____

Date Analyzed: 09/30/99

GC Column: RTX-624 ID: 0.25 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record 99095525 FWH47

COOLER A

AFIID:	Project:	Sample Date:
Holloman AFB	LTM LF-22	9/20/99

Method Type: Bailer

Samplers: CBianulis/DRizzuto

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	Preservative: HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe Mn	Diss lead	Total mercury						Comments
~~WELL~~	~~LF22MW0101~~	~~1232~~					X	B	3	X													
WELL	LF22MW0101	1232		X				B	1						X								
WELL	LF22MW0101	1232		X				B	1								X						
~~WELL~~	~~LF22MW0101~~	~~1232~~						B	2				X										
~~WELL~~	~~LF22MW0101~~	~~1232~~						B	2					X									
~~WELL~~	~~LF22MW0201~~	~~1215~~					X	B	3	X													
WELL	LF22MW0201	1215		X				B	1						X								
WELL	LF22MW0201	1215		X				B	1								X						
~~WELL~~	~~LF22MW0201~~	~~1215~~						B	2				X										
~~WELL~~	~~LF22MW0201~~	~~1215~~						B	2					X									
~~WELL~~	~~LF22MW0301~~	~~1202~~					X	B	3	X													
WELL	LF22MW0301	1202		X				B	1						X								
WELL	LF22MW0301	1202		X				B	1								X						
~~WELL~~	~~LF22MW0301~~	~~1202~~						B	2				X										
~~WELL~~	~~LF22MW0301~~	~~1202~~						B	2					X									
~~WELL~~	~~LF22MW0401~~	~~1140~~					X	B	3	X													
WELL	LF22MW0401	1140		X				B	1						X								
WELL	LF22MW0401	1140		X				B	1								X						
~~WELL~~	~~LF22MW0401~~	~~1140~~						B	2				X										
~~WELL~~	~~LF22MW0401~~	~~1140~~						B	2					X									

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
CB	9/20/99 1300	CB	9/20/99 1300
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
CB	9/21/99 1200	FED EX	9/21/99 1200
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
		[illegible]	9/22/99 0830

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: ~~812737495238~~ ~~812737495242~~

~~812737495231~~ | ~~812737496182~~

(812737495209)

FWENCLF22 COC97 09/13/99 1:42 PM

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

9909525 FWH47 COOLER A

AFIID:	Project:	Sample Date:
Holloman AFB	LTM LF-23	9/20/99
Method Type: Bailer	Samplers: CBienialis/DRizzuto	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe, Mn	Diss lead	Total mercury	Comments
~~WELL~~	~~LF23MW0101~~	~~1130~~					X	B	3	X								
WELL	LF23MW0101	1130		X				B	1						X			
WELL	LF23MW0101	1130		X				B	1								X	
~~WELL~~	~~LF23MW0101~~	~~1130~~						B	2				X					
~~WELL~~	~~LF23MW0101~~	~~1130~~						B	2					X				
~~WELL~~	~~LF23MW0201~~	~~1010~~					X	B	3	X								
WELL	LF23MW0201	1010		X				B	1						X			
WELL	LF23MW0201	1010		X				B	1								X	
~~WELL~~	~~LF23MW0201~~	~~1010~~						B	2				X					
~~WELL~~	~~LF23MW0201~~	~~1010~~						B	2					X				
~~WELL~~	~~LF23MW0301~~	~~1035~~					X	B	3	X								
WELL	LF23MW0301	1035		X				B	1						X			
WELL	LF23MW0301	1035		X				B	1								X	
~~WELL~~	~~LF23MW0301~~	~~1035~~						B	2				X					
~~WELL~~	~~LF23MW0301~~	~~1035~~						B	2					X				
~~WELL~~	~~LF23MW0401~~	~~1055~~					X	B	3	X								
WELL	LF23MW0401	1055		X				B	1						X			
WELL	LF23MW0401	1055		X				B	1								X	
~~WELL~~	~~LF23MW0401~~	~~1055~~						B	2				X					
~~WELL~~	~~LF23MW0401~~	~~1055~~						B	2					X				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
CB	9/20/99 1300	CB	9/20/99 1300
CB	9/21/99 1200	FEDEX	9/21/99 1200
		[illegible]	9/22/99 0830

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: ~~812737495253~~ ~~812737495240~~ ~~812737495231~~ ~~812737495182~~ 812737495209

FWENC\LF23COCC97 09/13/99 1:43 PM

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

99Q9525 FWH47 COOLER B

41

AFIID:	Project:	Sample Date:
Holloman AFB	LTM LF-22	9/20/99
Method Type: Bailer	Samplers: CBiancuilis/DRizzuto	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	Preservative: HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury						Comments
WELL	LF22MW0101	1232					X	B	3	X													
~~WELL~~	~~LF22MW0101~~	~~1232~~		X				B	1						X								
~~WELL~~	~~LF22MW0101~~	~~1232~~		X				B	1								X						
~~WELL~~	~~LF22MW0101~~	~~1232~~						B	2				X										
~~WELL~~	~~LF22MW0101~~	~~1232~~						B	2					X									
WELL	LF22MW0201	1215					X	B	3	X													
~~WELL~~	~~LF22MW0201~~	~~1215~~		X				B	1						X								
~~WELL~~	~~LF22MW0201~~	~~1215~~		X				B	1								X						
~~WELL~~	~~LF22MW0201~~	~~1215~~						B	2				X										
~~WELL~~	~~LF22MW0201~~	~~1215~~						B	2					X									
WELL	LF22MW0301	1202					X	B	3	X													
~~WELL~~	~~LF22MW0301~~	~~1202~~		X				B	1						X								
~~WELL~~	~~LF22MW0301~~	~~1202~~		X				B	1								X						
WELL	LF22MW0301	1202						B	2				X										
WELL	LF22MW0301	1202						B	2					X									
WELL	LF22MW0401	1140					X	B	3	X													
~~WELL~~	~~LF22MW0401~~	~~1140~~		X				B	1						X								
~~WELL~~	~~LF22MW0401~~	~~1140~~		X				B	1								X						
WELL	LF22MW0401	1140						B	2				X										
WELL	LF22MW0401	1140						B	2					X									

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
CB	9/20/99 1300	CB	9/20/99 1300
CB	9/21/99 1200	FED EX	9/21/99 1200
		[illegible]	9/22/99 0830

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: ~~[illegible]~~ 812737495242

~~812737495231~~ ~~812737495183~~

~~812737495209~~

LABORATORY USE ONLY	Y	N
Package Received/Custody Seals Intact	✓	
Sample Labels/C-O-Cs Agree	✓	
Temperature Within Specification 3.6°C	✓	
Corrected Copy Attached		
Problems or Discrepancies		

FWHOLL22 COC 97 09/13/99 1:42 PM

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

4409535 FWH47

COOLER B

AFIID: Holloman AFB	Project: LTM	Sample Date: 9/21/99
Method Type: Bailer	Samplers: C Bieninlis	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	Preservative: HNO_3	H_2SO_4	NaOH	HCl	Analysis Required: Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals Fe,Mn	Diss lead	Total mercury						Comments
TB	TRIP BLANK	1200					X	B	3	X													

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
C B	9/21/99 1200	FED EX	9/21/99 1200
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
		[illegible]	9/22/99 0830

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 812737495242

LABORATORY USE ONLY	Y	N
Package Received/Custody Seals Intact	✓	
Sample Labels/C-O-Cs Agree	✓	
Temperature Within Specification 3.6 °C	✓	
Corrected Copy Attached		
Problems or Discrepancies		

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record 9909525 FWH47 COOLER C

AFIID:	Project:	Sample Date:
Holloman AFB	LTM LF-22	9/20/99
Method Type: Bailer	Samplers: CBianulis/DRizzuto	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	Preservative: HNO_3	H_2SO_4	NaOH	HCl	Analysis Required: Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury	Comments
~~WELL~~	~~LF22MW0101~~	~~1232~~					X	B	2	X								
~~WELL~~	~~LF22MW0101~~	~~1232~~		X				B	1						X			
~~WELL~~	~~LF22MW0101~~	~~1232~~		X				B	1								X	
WELL	LF22MW0101	1232						B	2				X					
WELL	LF22MW0101	1232						B	2					X				
~~WELL~~	~~LF22MW0201~~	~~1215~~					X	B	2	X								
~~WELL~~	~~LF22MW0201~~	~~1215~~		X				B	1						X			
~~WELL~~	~~LF22MW0201~~	~~1215~~		X				B	1								X	
WELL	LF22MW0201	1215						B	2				X					
WELL	LF22MW0201	1215						B	2					X				
~~WELL~~	~~LF22MW0301~~	~~1202~~					X	B	2	X								
~~WELL~~	~~LF22MW0301~~	~~1202~~		X				B	1						X			
~~WELL~~	~~LF22MW0301~~	~~1202~~		X				B	1								X	
~~WELL~~	~~LF22MW0301~~	~~1202~~						B	2				X					
~~WELL~~	~~LF22MW0301~~	~~1202~~						B	2					X				
~~WELL~~	~~LF22MW0401~~	~~1140~~					X	B	2	X								
~~WELL~~	~~LF22MW0401~~	~~1140~~		X				B	1						X			
~~WELL~~	~~LF22MW0401~~	~~1140~~		X				B	1								X	
~~WELL~~	~~LF22MW0401~~	~~1140~~						B	2				X					
~~WELL~~	~~LF22MW0401~~	~~1140~~						B	2					X				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
CB	9/20/99 1300	CB	9/20/99 1300
CB	9/21/99 1200	FED EX	9/21/99 1200
		[illegible]	9/21/99 [illegible]

Remarks: LIMS NO. 5702

FEDERAL EXPRESS # 8127374952 53 ~~[illegible]~~

~~[illegible]~~ ~~8127374961 82~~

~~[illegible]~~

LABORATORY USE ONLY	Y	N
Package Received/Custody Seals Intact		
Sample Labels/C-O-Cs Agree		
Temperature Within Specification		
Corrected Copy Attached		
Problems or Discrepancies		

FWENC\LF22_COC97 09/13/99 1:42 PM

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

9909525 FWH47 COOLER A E D

AFIID:	Project:	Sample Date:
Holloman AFB	LTM LF-23	9/20/99
Method Type: Bailer	Samplers: CBienialis/DRizzuto	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	Preservative: HNO_3	H_2SO_4	NaOH	HCl	Analysis Required: Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals Fe,Mn	Diss lead	Total mercury						Comments
WELL	LF23MW0101	1130					X	B	3	X													
~~WELL~~	~~LF23MW0101~~	~~1130~~		X				B	1						X								
~~WELL~~	~~LF23MW0101~~	~~1130~~		X				B	1								X						
WELL	LF23MW0101	1130						B	2				X										
WELL	LF23MW0101	1130						B	2					X									
WELL	LF23MW0201	1010					X	B	3	X													
~~WELL~~	~~LF23MW0201~~	~~1010~~		X				B	1						X								
~~WELL~~	~~LF23MW0201~~	~~1010~~		X				B	1								X						
WELL	LF23MW0201	1010						B	2				X										
WELL	LF23MW0201	1010						B	2					X									
WELL	LF23MW0301	1035					X	B	3	X													
~~WELL~~	~~LF23MW0301~~	~~1035~~		X				B	1						X								
~~WELL~~	~~LF23MW0301~~	~~1035~~		X				B	1								X						
~~WELL~~	~~LF23MW0301~~	~~1035~~						B	2				X										
~~WELL~~	~~LF23MW0301~~	~~1035~~						B	2					X									
WELL	LF23MW0401	1055					X	B	3	X													
~~WELL~~	~~LF23MW0401~~	~~1055~~		X				B	1						X								
~~WELL~~	~~LF23MW0401~~	~~1055~~		X				B	1								X						
~~WELL~~	~~LF23MW0401~~	~~1055~~						B	2				X										
~~WELL~~	~~LF23MW0401~~	~~1055~~						B	2					X									

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
CB	9/20/99 1300	CB	9/20/99 1300
CB	9/21/99 1200	FEDEX	9/21/99 1200
		[illegible] 9/22/99 0830	

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: ~~812737495253~~ ~~812737495242~~ (812737495231) ~~812737495183~~ ~~812737495209~~

LABORATORY USE ONLY	Y	N
Package Received/Custody Seals Intact		
Sample Labels/C.O.C. Agree		
Temperature Within Specification		
Corrected Copy Attached		
Problems or Discrepancies		

FWENCNLF23COCC97 09/13/99 1:43 PM

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

9909525 FWH47

COOLER D

AFIID:	Project:	Sample Date:
Holloman AFB	LTM	9/21/99
Method Type: Bailer	**Samplers:** C Bienulis	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals Fe,Mn	Diss lead	Total mercury						Comments
TB	TRIP BLANK	1200					X	B	3	X													

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
C Bien	9/21/99 1200	FED EX	9/21/99 1200
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
		[illegible]	9/22/99 0810

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 812737495231

LABORATORY USE ONLY	Y	N
Package Received/Custody Seals Intact	✓	
Sample Labels/C-O-Cs Agree	✓	
Temperature Within Specification 23 °C	✓	
Corrected Copy Attached		
Problems or Discrepancies		

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record 9909525 FWH47

COOLER A E1-2 4B

AFIID:	Project:	Sample Date:
Holloman AFB	LTM LF-23	9/20/99
Method Type: Bailer	Samplers: CBieniulis/DRizzuto	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	Preservative: HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals Fe,Mn	Diss lead	Total mercury						Comments
~~WELL~~	~~LF23MW0101~~	~~1130~~					X	B	3	X													
~~WELL~~	~~LF23MW0101~~	~~1130~~		X				B	1						X								
~~WELL~~	~~LF23MW0101~~	~~1130~~		X				B	1								X						
~~WELL~~	~~LF23MW0101~~	~~1130~~						B	2				X										
~~WELL~~	~~LF23MW0101~~	~~1130~~						B	2					X									
~~WELL~~	~~LF23MW0201~~	~~1010~~					X	B	3	X													
~~WELL~~	~~LF23MW0201~~	~~1010~~		X				B	1						X								
~~WELL~~	~~LF23MW0201~~	~~1010~~		X				B	1								X						
~~WELL~~	~~LF23MW0201~~	~~1010~~						B	2				X										
~~WELL~~	~~LF23MW0201~~	~~1010~~						B	2					X									
~~WELL~~	~~LF23MW0301~~	~~1035~~					X	B	3	X													
~~WELL~~	~~LF23MW0301~~	~~1035~~		X				B	1						X								
~~WELL~~	~~LF23MW0301~~	~~1035~~		X				B	1								X						
WELL	LF23MW0301	1035						B	2				X										
WELL	LF23MW0301	1035						B	2					X									
~~WELL~~	~~LF23MW0401~~	~~1055~~					X	B	3	X													
~~WELL~~	~~LF23MW0401~~	~~1055~~		X				B	1						X								
~~WELL~~	~~LF23MW0401~~	~~1055~~		X				B	1								X						
WELL	LF23MW0401	1055						B	2				X										
WELL	LF23MW0401	1055						B	2					X									

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
CB	9/20/99 1300	CB	9/20/99 1300
CB	9/21/99 1200	FEDEX	9/21/99 1200
		[illegible]	9/22/99 0830

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: ~~8127374952 8127374952~~ ~~8127374952~~ (8127374951 83) ~~8127374952~~

LABORATORY USE ONLY	Y	N
Package Received/Custody Seals Intact	✓	
Sample Labels/C-O-Cs Agree	✓	
Temperature Within Specification 2.8 °C	✓	
Corrected Copy Attached		
Problems or Discrepancies		

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

0199 1425 FW447

COOLER F

AFIID:	Project:	Sample Date:
Holloman AFB	LTM DP-30/SD-33	9/20/99
Method Type: Bailer	Samplers: CBieniulis/DRizzuto	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals Fe,Mn	Diss lead	Total mercury						Comments
WELL	DP30MW0101	1535					X	B	3	X													
~~WELL~~	~~DP30MW0101~~	~~1535~~		X				B	1						X								
~~WELL~~	~~DP30MW0101~~	~~1535~~		X				B	1								X						
WELL	DP30MW0102	1538					X	B	3	X													Field Duplicate
~~WELL~~	~~DP30MW0102~~	~~1538~~		X				B	1						X								Field Duplicate
~~WELL~~	~~DP30MW0102~~	~~1538~~		X				B	1								X						Field Duplicate
WELL	DP30MW0201	1610					X	B	3	X													
~~WELL~~	~~DP30MW0201~~	~~1610~~		X				B	1						X								
~~WELL~~	~~DP30MW0201~~	~~1610~~		X				B	1								X						
WELL	DP30MW0301	1555					X	B	3	X													
~~WELL~~	~~DP30MW0301~~	~~1555~~		X				B	1						X								
~~WELL~~	~~DP30MW0301~~	~~1555~~		X				B	1								X						
WELL	DP30MW0401	1548					X	B	3	X													
~~WELL~~	~~DP30MW0401~~	~~1548~~		X				B	1						X								
~~WELL~~	~~DP30MW0401~~	~~1548~~		X				B	1								X						

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
CB	9/20/99 1700	CB	9/20/99 1700
CB	9/21/99 1500	FED EX	9/21/99 1500
		[illegible]	9/22/99 0830

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 812737495220

LABORATORY USE ONLY	Y	N
Package Received/Custody Seals Intact	✓	
Sample Labels/C-O-Cs Agree	✓	
Temperature Within Specification 3.3 °C	✓	
Corrected Copy Attached		
Problems or Discrepancies		

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

9909525 FWH47 COOLER F

32

AFIID:	Project:	Sample Date:
Holloman AFB	LTM LF-29	9/20/99
Method Type: Bailer	Samplers: CBieniulis/DRizzuto	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals Fe Mn	Diss lead	Total mercury						Comments
WELL	LF29MW0101	1650					X	B	3	X													
~~WELL~~	~~LF29MW0101~~	~~1650~~						~~B~~	~~2~~		~~X~~												
WELL	LF29MW0601	1642					X	B	3	X													
~~WELL~~	~~LF29MW0601~~	~~1642~~						~~B~~	~~2~~		~~X~~												
WELL	LF29MW0701	1620					X	B	3	X													
WELL	LF29MW0701	1620						B	2		X												
WELL	LF29MW0702	1624					X	B	3	X													Field Duplicate
WELL	LF29MW0702	1624						B	2		X												Field Duplicate
WELL	LF29MW0801	1634					X	B	3	X													
WELL	LF29MW0801	1634							2		X												

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
CB	9/20/99 1700	CB	9/20/99 1700
CB	9/21/99 1500	FED EX	9/21/99 1500
		[illegible] 9/22/99	0830

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 812737495220

LABORATORY USE ONLY	Y	N
Package Received/Custody Seals Intact	✓	
Sample Labels/C-O-Cs Agree	✓	
Temperature Within Specification 3.3 °C	✓	
Corrected Copy Attached		
Problems or Discrepancies		

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record 9909525 FWH47 COOLER G

AFIID:	Project:	Sample Date:
Holloman AFB	LTM DP-30/SD-33	9/20/99
Method Type: Bailer	Samplers: CBieniulis/DRizzuto	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	Preservative: HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury						Comments
~~WELL~~	~~DP30MW0101~~	~~1535~~					~~X~~	~~B~~	~~3~~	~~X~~													
WELL	DP30MW0101	1535		X				B	1						X								
WELL	DP30MW0101	1535		X				B	1								X						
~~WELL~~	~~DP30MW0102~~	~~1538~~					~~X~~	~~B~~	~~3~~	~~X~~													~~Field Duplicate~~
WELL	DP30MW0102	1538		X				B	1						X								Field Duplicate
WELL	DP30MW0102	1538		X				B	1								X						Field Duplicate
~~WELL~~	~~DP30MW0201~~	~~1610~~					~~X~~	~~B~~	~~3~~	~~X~~													
WELL	DP30MW0201	1610		X				B	1						X								
WELL	DP30MW0201	1610		X				B	1								X						
~~WELL~~	~~DP30MW0301~~	~~1555~~					~~X~~	~~B~~	~~3~~	~~X~~													
WELL	DP30MW0301	1555		X				B	1						X								
WELL	DP30MW0301	1555		X				B	1								X						
~~WELL~~	~~DP30MW0401~~	~~1548~~					~~X~~	~~B~~	~~3~~	~~X~~													
WELL	DP30MW0401	1548		X				B	1						X								
WELL	DP30MW0401	1548		X				B	1								X						

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
CB	9/20/99 1700	CB	9/20/99 1700
CB	9/21/99 1500	FED EX	9/21/99 1500
		[illegible]	9/22/99 0830

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 812737495210

LABORATORY USE ONLY	Y	N
Package Received/Custody Seals Intact		
Sample Labels/C-o-C's Agree		
Temperature Within Specification		
Corrected Copy Attached		
Problems or Discrepancies		

FWENC\DP30COC1.97 09/14/99 8:09 AM

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

49@41525 FWH47

COOLER G

AFIID:	Project:	Sample Date:
Holloman AFB	LTM LF-29	9/20/99
Method Type: Bailer	Samplers: CBieniulis/DRizzuto	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	HNO3	H2SO4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury						Comments
~~WELL~~	~~LF29MW0101~~	~~1650~~					X	B	3	X													
WELL	LF29MW0101	1650						B	2		X												
~~WELL~~	~~LF29MW0601~~	~~1642~~					X	B	3	X													
WELL	LF29MW0601	1642						B	2		X												
~~WELL~~	~~LF29MW0701~~	~~1620~~					X	B	3	X													
~~WELL~~	~~LF29MW0701~~	~~1620~~						B	2		X												
~~WELL~~	~~LF29MW0702~~	~~1621~~					X	B	3	X													Field Duplicate
~~WELL~~	~~LF29MW0702~~	~~1621~~						B	2		X												Field Duplicate
~~WELL~~	~~LF29MW0801~~	~~1654~~					X	B	3	X													
~~WELL~~	~~LF29MW0801~~	~~1654~~							2		X												

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
CB	9/20/99 1700	CB	9/20/99 1700
CB	9/21/99 1500	FED EX	9/21/99 1500
			9/22/99 (0830)

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 812737495210

LABORATORY USE ONLY	Y	N
Package Received/Custody Seals Intact		
Sample Labels/COC Agree		
Temperature Within Specification		
Corr. Fed Copy Attached		
Problems or Discrepancies		

FWENC\LF29COC1.97 09/15/99 8:20 AM

9909534 FWH48

~~9909525 FWH47~~ 10

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

COOLER F

AFIID:	Project:	Sample Date:
Holloman AFB	LTM OT-44	9/20/99
Method Type: Bailer	**Samplers:** CBieniulis/DRizzuto	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	Preservative: HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury						Comments
WELL	OT44MW101	1505					X	B	3	X													
WELL	OT44MW201	1450					X	B	3	X													
WELL	OT44MW301	1500					X	B	3	X													
WELL	OT44MW601	1635					X	B	3	X													
WELL	OT44MW602	1637					X	B	3	X													Field Duplicate
TB	Tripblank	1500					X	—	3	X													Trip blank

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
CB	9/20/99 1700	CB	9/20/99 1700
CB	9/21/99 1500	FED EX	9/21/99 1500
		[illegible]	9/22/99 0830

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 812737495220

LABORATORY USE ONLY

Back to Receiving/Custody Sample Log

Sample Label Verified: Yes/No

Temperature within specified range: Yes/No

Corrected Copy Attached

Problems Observed

FWENCOT44COCL97 09/14/99 8:07 AM

9909564

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

FWH48

Laucks

COOLER A

14

AFIID:	Project:	Sample Date:
Holloman AFB	LTM SS-39	9-22-99
Method Type: Bailer	**Samplers:** Rafe Jones	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury						Comments
WELL	SS39MW0101	0831					X	B	3	X													
WELL	SS39MW0102	0831					X	B	3	X													Field Duplicate
WELL	SS39MW0201	0823					X	B	3	X													
WELL	SS39MW0301	0815					X	B	3	X													
WELL	SS39MW0401	0809					X	B	3	X													

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
James Clark	9-22-99 1520	[illegible]	9/23/99 0830
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 812737495194

[redacted]

FWENC\SS39COCL97 09/14/99 8:05 AM

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

Laucks

COOLER A

AFIID:	Project:	Sample Date:
Holloman AFB	LTM SS-02/SS-05	9-22-99
Method Type: Bailer	**Samplers:** Rafe Jones	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	Preservative: HNO_3	H_2SO_4	NaOH	HCl	Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury						Comments
WELL	SS02MW0301	1232					X	B	3	X													
WELL	SS02MW0501	1241					X	B	3	X													
WELL	SS02MW0601	1223					X	B	3	X													
WELL	SS02MW0801	1236					X	B	3	X													
TB	Trip blank																						
							X	—	3	X													Trip blank

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
James Clark	9-22-99 1530	[illegible]	9/23/99 0830
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 812737495194

[illegible]

Package Received in Good Condition

Sample Labels Correct

Temperature within Specification

Corrected Copy Attached

Problems Noted on back

FWENC\SS02_COC97 09/14/99 7:22 AM

Laucks 16

COOLER A

FOSTER WHEELER ENVIRONMENTAL CORPORATION

Chain-of-Custody Record

AFIID:	Project:	Sample Date:
Holloman AFB	LTM SS-46	9-22-99
Method Type: Bailer	Samplers: Rafe Jones	

Location Type	Location Identification	Time (military standard)	Sample Depth (feet)	Preservative: HNO_3	H_2SO_4	NaOH	HCl	Analysis Required: Sampling Method	No. of Containers	VOCs	SVOCs	Pesticides	Pesticides/PCBs	Herbicides	Diss RCRA metals, Fe,Mn	Diss lead	Total mercury							Comments
WELL	SS46MW0101	1211					X	B	3	X														
WELL	SS46MW0101	1211		X				B	1							X								
WELL	SS46MW0201	1203					X	B	3	X														
WELL	SS46MW0201	1203		X				B	1							X								
WELL	SS46MW0301	1155					X	B	3	X														
WELL	SS46MW0301	1155		X				B	1							X								

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
James Clark	9-22-99 1530	Chl Chl	9/23/99 0830
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

Remarks: LIMS NO. 5702

FEDERAL EXPRESS #: 8127374 95194

[redacted]

FWENCASS46_COC97 09/14/99 7:37 AM

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

OT44MW101

Lab Name: Laucks Testing Lab

SDG No.: FWH48

Matrix: (soil/water) WATER

Lab Sample ID: 9909534-01

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0929009.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg) UG/L		Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

OT44MW201

Lab Name: Laucks Testing Lab

SDG No.: FWH48

Matrix: (soil/water) WATER

Lab Sample ID: 9909534-02

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0929011.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	1	J
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

OT44MW301

Lab Name: Laucks Testing Lab

SDG No.: FWH48

Matrix: (soil/water) WATER

Lab Sample ID: 9909534-03

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0929012.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

OT44MW601

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Laucks Testing Lab

SDG No.: FWH48

Matrix: (soil/water) WATER

Lab Sample ID: 9909534-04

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0929013.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

OT44MW602

Lab Name: Laucks Testing Lab

SDG No.: FWH48

Matrix: (soil/water) WATER

Lab Sample ID: 9909534-05

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0929014.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

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Lab Name: Laucks Testing Lab

SDG No.: FWH48

Matrix: (soil/water) WATER

Lab Sample ID: 9909534-06

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0929008.D

Level: (low/med) LOW

Date Received: 09/22/99

% Moisture: not dec. _____

Date Analyzed: 09/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS39MW0101

Lab Name: Laucks Testing Lab

SDG No.: FWH48

Matrix: (soil/water) WATER

Lab Sample ID: 9909564-01

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0929015.D

Level: (low/med) LOW

Date Received: 09/23/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg) UG/L		Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS39MW0102

Lab Name: Laucks Testing Lab

SDG No.: FWH48

Matrix: (soil/water) WATER

Lab Sample ID: 9909564-02

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0929016.D

Level: (low/med) LOW

Date Received: 09/23/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS39MW0201

Lab Name: Laucks Testing Lab

SDG No.: FWH48

Matrix: (soil/water) WATER

Lab Sample ID: 9909564-03

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0929017.D

Level: (low/med) LOW

Date Received: 09/23/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	1	J
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	2	J
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	4	
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	45	
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS39MW0301

Lab Name: Laucks Testing Lab

SDG No.: FWH48

Matrix: (soil/water) WATER

Lab Sample ID: 9909564-04

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0929018.D

Level: (low/med) LOW

Date Received: 09/23/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	1	J
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	1	J
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: CW0301

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

.ab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH48

Matrix (soil/water): WATER Lab Sample ID: 09564-12

Level (low/med): LOW Date Received: 09/23/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead	1.5	U		P
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury				
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After:, COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

LIENT ID: SS46MW0301

FORM I - IN

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS46MW0301

Lab Name: Laucks Testing Lab

SDG No.: FWH48

Matrix: (soil/water) WATER

Lab Sample ID: 9909564-12

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U1001011.D

Level: (low/med) LOW

Date Received: 09/23/99

% Moisture: not dec.

Date Analyzed: 10/01/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: BW0201

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH48

Matrix (soil/water): WATER Lab Sample ID: 09564-11

Level (low/med): LOW Date Received: 09/23/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead	1.5	U		P
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury				
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: SS46MW0201

FORM I - IN

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS46MW0201

Lab Name: Laucks Testing Lab

SDG No.: FWH48

Matrix: (soil/water) WATER

Lab Sample ID: 9909564-11

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0929025.D

Level: (low/med) LOW

Date Received: 09/23/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: AW0101

Lab Name: LAUCKS TESTING LABS, INC. Contract: _____

Lab Code: LAUCKS Case No.: ___ SAS No.: ___ SDG No.: FWH48

Matrix (soil/water): WATER Lab Sample ID: 09564-10

Level (low/med): LOW Date Received: 09/23/99

% Solids: 0.0

ConcentrationUnits (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				
7440-36-0	Antimony				
7440-38-2	Arsenic				
7440-39-3	Barium				
7440-41-7	Beryllium				
7440-43-9	Cadmium				
7440-70-2	Calcium				
7440-47-3	Chromium				
7440-48-4	Cobalt				
7440-50-8	Copper				
7439-89-6	Iron				
7439-92-1	Lead	1.5	U		P
7439-95-4	Magnesium				
7439-96-5	Manganese				
7439-97-6	Mercury				
7440-02-0	Nickel				
7440-09-7	Potassium				
7782-49-2	Selenium				
7440-22-4	Silver				
7440-23-5	Sodium				
7440-28-0	Thallium				
7440-62-2	Vanadium				
7440-66-6	Zinc				
7439-98-7	Molybdenum				

Color Before: COLORLESS Clarity Before: CLEAR Texture: ___

Color After: COLORLESS Clarity After: CLEAR Artifacts: _

Comments:

CLIENT ID: SS46MW0101

FORM I - IN

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS46MW0101

Lab Name: Laucks Testing Lab

SDG No.: FWH48

Matrix: (soil/water) WATER

Lab Sample ID: 9909564-10

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0929024.D

Level: (low/med) LOW

Date Received: 09/23/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS02MW0801

Lab Name: Laucks Testing Lab

SDG No.: FWH48

Matrix: (soil/water) WATER

Lab Sample ID: 9909564-09

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0929023.D

Level: (low/med) LOW

Date Received: 09/23/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS02MW0601

Lab Name: Laucks Testing Lab

SDG No.: FWH48

Matrix: (soil/water) WATER

Lab Sample ID: 9909564-08

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0929022.D

Level: (low/med) LOW

Date Received: 09/23/99

% Moisture: not dec. _____

Date Analyzed: 09/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg) UG/L		Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS02MW0501DL

Lab Name: Laucks Testing Lab

SDG No.: FWH48

Matrix: (soil/water) WATER

Lab Sample ID: 9909564-07DL

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U1001007.D

Level: (low/med) LOW

Date Received: 09/23/99

% Moisture: not dec.

Date Analyzed: 10/01/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 10.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	30	U
75-01-4	Vinyl chloride	30	U
74-83-9	Bromomethane	30	U
75-00-3	Chloroethane	30	U
75-35-4	1,1-Dichloroethene	30	U
67-64-1	Acetone	50	U
75-15-0	Carbon disulfide	30	U
75-09-2	Methylene chloride	30	U
156-60-5	trans-1,2-Dichloroethene	30	U
75-34-3	1,1-Dichloroethane	30	U
156-59-2	cis-1,2-Dichloroethene	30	U
78-93-3	2-Butanone	50	U
67-66-3	Chloroform	30	U
71-55-6	1,1,1-Trichloroethane	30	U
56-23-5	Carbon tetrachloride	30	U
71-43-2	Benzene	250	D
107-06-2	1,2-Dichloroethane	30	U
79-01-6	Trichloroethene	30	U
78-87-5	1,2-Dichloropropane	30	U
75-27-4	Bromodichloromethane	30	U
10061-01-5	cis-1,3-Dichloropropene	30	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	60	D
10061-02-6	trans-1,3-Dichloropropene	30	U
79-00-5	1,1,2-Trichloroethane	30	U
127-18-4	Tetrachloroethene	30	U
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	30	U
108-90-7	Chlorobenzene	30	U
100-41-4	Ethylbenzene	860	D
108-38-3	m,p-Xylene	130	D
95-47-6	o-Xylene	160	D
100-42-5	Styrene	30	U
75-25-2	Bromoform	30	U
79-34-5	1,1,2,2-Tetrachloroethane	30	U

FORM I VOA

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS02MW0501

Lab Name: Laucks Testing Lab

SDG No.: FWH48

Matrix: (soil/water) WATER

Lab Sample ID: 9909564-07

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0929021.D

Level: (low/med) LOW

Date Received: 09/23/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	2	J
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	270	E
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	63	
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	730	E
108-38-3	m,p-Xylene	140	
95-47-6	o-Xylene	170	
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS02MW0301

Lab Name: Laucks Testing Lab

SDG No.: FWH48

Matrix: (soil/water) WATER

Lab Sample ID: 9909564-06

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0929020.D

Level: (low/med) LOW

Date Received: 09/23/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg) UG/L		Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

FORM I VOA

SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SS39MW0401

Lab Name: Laucks Testing Lab

SDG No.: FWH48

Matrix: (soil/water) WATER

Lab Sample ID: 9909564-05

Sample wt/vol: 5.0 (g/ml) ML

Lab File ID: U0929019.D

Level: (low/med) LOW

Date Received: 09/23/99

% Moisture: not dec.

Date Analyzed: 09/29/99

GC Column: DB-624 ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	3	U
75-01-4	Vinyl chloride	3	U
74-83-9	Bromomethane	3	U
75-00-3	Chloroethane	3	U
75-35-4	1,1-Dichloroethene	3	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	3	U
75-09-2	Methylene chloride	3	U
156-60-5	trans-1,2-Dichloroethene	3	U
75-34-3	1,1-Dichloroethane	3	U
156-59-2	cis-1,2-Dichloroethene	3	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	3	U
71-55-6	1,1,1-Trichloroethane	3	U
56-23-5	Carbon tetrachloride	3	U
71-43-2	Benzene	3	U
107-06-2	1,2-Dichloroethane	3	U
79-01-6	Trichloroethene	3	U
78-87-5	1,2-Dichloropropane	3	U
75-27-4	Bromodichloromethane	3	U
10061-01-5	cis-1,3-Dichloropropene	3	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	3	U
10061-02-6	trans-1,3-Dichloropropene	3	U
79-00-5	1,1,2-Trichloroethane	3	U
127-18-4	Tetrachloroethene	3	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	3	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	3	U
108-38-3	m,p-Xylene	3	U
95-47-6	o-Xylene	3	U
100-42-5	Styrene	3	U
75-25-2	Bromoform	3	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U

APPENDIX C
FIELD SAMPLING AND MONITORING WELL GAUGING INFORMATION

Appendix C
1999 LTM WELL GAUGING DATA
September 1999

SITE	CDAP WELL ID	Actual ID on Well	Date Of Reading (MM/DD/YY)	TIME Of Reading (HH:MM)	DTW From TOC (ft)	Total Well Depth From TOC (ft)	Purge Volume (3 Well Volumes) (gallons)	Turbidity After Purging (NTU)	OTHER COMMENTS
LF-01	S1-MW1	HSTE-1-MW-1	09/08/99	9:46	11.26	27.13	7.76	558@50%	
	S1-MW2	HSTE-1-MW-2	09/08/99	9:57	18.58	37.32	9.16	686	
	S1-MW5	HSTE-1-MW-5	09/08/99	10:31	31.85	44.34	6.11	698	
	IW2	SAME	09/08/99	10:16	20.91	37.97	8.34	OR	
LF-10	S10-MW2	HSTE 10 MW 2	09/08/99	10:40	13.05	20.35	3.57	OR	
	S10-MW3	HSTE 10 MW 3	09/08/99	10:56	9.76	21.86	5.92	OR	
	S10-MW4	HSTE 10 MW 4	09/08/99	11:14	8.73	20.29	5.65	359	
	S10-MW6	HSTE 10 MW 6	09/08/99	11:05	9.78	22.29	6.12	OR	
SD-08	MW-08-01	N/A	09/14/99		12.36	15.37	1.47	897	
	MW-08-03	HSTE10 MW 7	09/14/99		12.32	23.41	5.42	OR	
	MW-08-04	94 MW-08-04	09/08/99	11:50	11.33	18.94	3.72	192	
	MW-08-05	No ID	09/08/99	12:05	11.16	18.92	3.79	162	No Name Plate
LF-19	MW-19-01	SAME	09/08/99	14:30	8.56	17.62	4.43	530	
	MW-19-02	SAME	09/08/99	14:52	8.57	15.00	3.14	953	(Obstruction at 10.28' - Possible roots)
	MW-19-03	SAME	09/08/99	15:00	13.52	19.45	2.90	843	
LF-21	MW-21-01	SAME	09/09/99	7:23	9.15	16.43	3.56	528	
	MW-21-02	SAME	09/09/99	7:30	11.09	16.41	2.60	935	
	MW-21-03	SAME	09/09/99	7:35	9.59	16.39	3.33	519	(Obstruction at 10.31)
	MW-21-04	SAME	09/09/99	7:42	4.66	15.60	5.35	619	(Obstruction at 8.76)
LF-22	MW-22-01	SAME	09/09/99	7:55	9.45	17.51	3.94	931	
	MW-22-02	SAME	09/09/99	8:01	8.78	18.36	4.68	OR	
	MW-22-03	SAME	09/09/99	8:05	10.76	18.94	4.00	1056	(Obstruction at 12.18)
	MW-22-04	SAME	09/09/99	8:11	12.97	19.64	3.26	OR	
LF-23	MW-23-01	SAME	09/09/99	8:18	11.00	16.46	2.67	504	(Obstruction at 11.31)
	MW-23-02	No ID	09/09/99	10:43	3.60	16.22	6.17	OR	No Name Plate (Obstruction at 7.37)
	MW-23-03	No ID	09/09/99	10:50	3.10	16.42	6.51	OR	No Name Plate (Obstruction at 7.75)
	MW-23-04	No ID	09/09/99	11:00	4.45	15.10	5.21	OR	No Name Plate (Obstruction at 7.41)
OT-44	S50-MW1	HSTE-50-MW-1	09/09/99	9:05	5.74	16.68	5.35	856	
	S50-MW2	HSTE-50-MW-2	09/09/99	8:52	5.65	17.90	5.99	OR	
	S50-MW3	HSTE-50-MW-3	09/09/99	8:58	6.02	17.68	5.70	OR	
	S50-MW6	HSTE-50-MW-6	09/09/99	8:34	5.49	17.41	5.83	OR	
SS-48	S55-MW2	HSTE-55-MW-2	09/09/99	11:50	6.49	17.91	5.58	799	
	S55-MW4	HSTE 55 MW 4	09/09/99	11:55	5.53	18.91	6.54	OR	
	S55-MW5	HSTE 55 MW 5	09/09/99	11:42	4.92	18.98	6.88	OR	
	S55-MW7	HSTE 55 MW 7	09/09/99	11:30	4.71	17.13	6.07	OR	
DP-30/SD-33	MW-30/33-01	SAME	09/09/99	12:58	23.75	31.13	3.61	OR	
	MW-30/33-02	SAME	09/09/99	12:49	23.75	31.66	3.87	OR	
	MW-30/33-03	SAME	09/09/99	12:40	22.71	26.53	1.87	OR	
	MW-30/33-04	SAME	09/09/99	12:30	21.79	31.11	4.56	OR	
SS-56	MW56-01	None	09/21/99	NA	10.57	15.66	2.49	OR	
	WCC-3	None	09/21/99	Na	5.06	7.38	1.13	OR	
	WCC-5	None	09/21/99	NA	6.49	12.50	2.94	OR	

Appendix C
1999 LTM WELL GAUGING DATA
September 1999

SITE	CDAP WELL ID	Actual ID on Well	Date Of Reading (MM/DD/YY)	TIME Of Reading (HH:MM)	DTW From TOC (ft)	Total Well Depth From TOC (ft)	Purge Volume (3 Well Volumes) (gallons)	Turbidity After Purging (NTU)	OTHER COMMENTS
SS-02/SS-05	MW-02 & 05-03	MW-2-5-03	09/10/99	6:58	16.41	24.36	3.89	801	
	MW-02 & 05-05	MW-2-5-05	09/09/99	14:04	15.20	22.81	3.72	365	
	MW-02 & 05-06	94-MW-2+5-6	09/09/99	14:21	5.27	15.08	4.80	705	
	MW-02 & 05-08	94-MW-2-5-08	09/09/99	14:10	5.54	15.09	4.67	199	
SS-46	MW-46-01	None	09/22/99	8:26	6.66	15.16	4.16	OR	
	MW-46-02	None	09/22/99	8:15	6.25	15.12	4.34	OR	
	MW-46-03	None	09/22/99	8:10	6.66	14.73	3.95	565	
OT-16	118-MW1601	16-01	09/10/99	7:43	6.43	16.44	4.89	OR	
	118-MW1602	MW-16-02	09/10/99	7:51	6.75	16.63	4.83	OR	
	118-MW1603	MW-16-03	09/10/99	7:56	6.01	16.24	5.00	OR	
	118-MW1604	MW-16-04	09/10/99	8:02	6.80	15.42	4.22	OR	
SS-17	W-4	SAME	09/10/99	8:25	7.36	14.00	3.25	OR	
	TH-22	SAME	09/10/99	8:43	5.49	10.62	2.51	616	
	MW-BX-01	SAME	09/10/99	8:21	8.79	12.41	1.77	874	
	MW-BX-02	SAME	09/10/99	8:54	5.59	12.95	3.60	990	
SS-39	MW-39-01	SAME	09/10/99	10:12	23.01	29.85	3.34	OR	
	MW-39-02	SAME	09/10/99	9:56	18.51	27.08	4.19	570	
	MW-39-03	SAME	09/10/99	9:50	7.89	16.50	4.21	OR	(Obstruction at 7.22)
	MW-39-04	SAME	09/10/99	10:05	20.12	25.00	2.39	OR	(Obstruction at 20.87)
LF-29	MW-29-01	SAME	09/10/99	11:00	25.20	36.37	5.46	OR	
	MW-29-06	94-MW-29-06	09/10/99	10:52	23.82	32.49	4.24	OR	
	MW-29-07	94-MW-29-07	09/10/99	10:38	21.42	29.10	3.76	OR	
	MW-29-08	94-MW-29-08	09/10/99	10:46	23.64	32.51	4.34	OR	

Instruments Used for Field Parameters

Parameter	Make and Model
pH	Cole Parmer, Model 59002-10; Serial number: 24350
Specific Conductivity	Cole Parmer, Model CON20--Combination temperature/conductivity meter
Temperature	Serial number: 32557
Interphase probe	ORS, Model 1068013; Serial number 973902194
Turbidity	LaMotte Model, 2020; Serial number 1269-2699

C	Centigrade
umhos/sec	Micromhos per second
NTU	Nephelometric turbidity units
OR	Instrument out of range
ER	Instrument error

Appendix C
Pre-Sample Purging Purging Information, September 1999

SITE	CDAP WELL ID	Actual ID on Well	Date (MM/DD/YY)	TIME (HH:MM)	Temp (degrees C)	Conductivity (umhos/sec)	pH (pH units)	Volume Purged (gallons)	Turbidity After Purging (NTU)	COMMENTS
LF-01	S1-MW1	HSTE-1-MW-1	09/14/99	8:20	18.10	OR	6.55	2.5	558@50	
					20.60	OR	6.82	5.0		
					20.50	OR	6.93	8.0		
	S1-MW2	HSTE-1-MW-2	09/14/99	8:50	19.00	OR	6.85	3.0	686.00	
					19.50	OR	7.05	6.0		
					19.60	OR	7.13	10.0		
	S1-MW5	HSTE-1-MW-5	09/14/99	9:40	20.40	OR	7.24	2.0	698.00	
					19.90	OR	7.25	4.0		
					20.00	OR	7.30	6.5		
	I W 2	SAME	09/14/99	9:20	20.20	OR	7.20	3.0	OR	
					19.60	OR	7.23	6.0		
					19.70	OR	7.28	9.0		

SITE	CDAP WELL ID	Actual ID on Well	Date (MM/DD/YY)	TIME (HH:MM)	Temp (degrees C)	Conductivity (umhos/sec)	pH (pH units)	Volume Purged (gallons)	Turbidity After Purging (NTU)	COMMENTS
LF-10	S10-MW2	HSTE 10 MW 2	09/14/99	10:30	22.70	18.29	7.43	2.5	OR	
					21.40	19.32	7.48	5.0		
					20.90	19.77	7.52	8.0		
	S10-MW3	HSTE 10 MW 3	09/14/99	11:04	24.00	OR	7.41	3.0	OR	
					23.00	OR	7.46	6.0		
					22.00	OR	7.49	10.0		
	S10-MW4	HSTE 10 MW 4	09/14/99	11:26	21.80	OR	7.02	2.0	359.00	
					21.50	OR	7.14	4.0		
					21.00	OR	7.19	6.5		
	S10-MW6	HSTE 10 MW 6	09/14/99	10:50	21.80	OR	7.17	3.0	OR	
					21.20	OR	7.25	6.0		
					20.80	OR	7.28	9.0		

Appendix C
Pre-Sample Purging Purging Information, September 1999

SITE	CDAP WELL ID	Actual ID on Well	Date (MM/DD/YY)	TIME (HH:MM)	Temp (degrees C)	Conductivity (umhos/sec)	pH (pH units)	Volume Purged (gallons)	Turbidity After Purging (NTU)	COMMENTS
SD-08	MW-08-01	No ID	09/14/99	12:55	26.40	9.96	6.97	0.5	897.00	
					26.00	9.84	6.96	1.0		
					25.00	9.79	7.02	1.5		
	MW-08-03	No ID	09/14/99	13:21	26.30	16.16	7.13	2.0	OR	
					24.20	17.24	7.23	4.0		
					23.70	OR	7.33	6.0		
	MW-08-04	94 MW-08-04	09/14/99	12:16	24.70	14.59	7.37	1.0	192.00	
					21.50	15.09	7.55	2.0		
					21.30	15.21	7.50	2.5		
	MW-08-05	No ID	09/14/99	12:35	25.30	4.75	7.12	2.0	162.00	
					23.60	4.48	7.16	3.0		
					23.10	4.54	7.19	4.0		

SITE	CDAP WELL ID	Actual ID on Well	Date (MM/DD/YY)	TIME (HH:MM)	Temp (degrees C)	Conductivity (umhos/sec)	pH (pH units)	Volume Purged (gallons)	Turbidity After Purging (NTU)	COMMENTS
LF-19	MW-19-01	SAME	09/16/99	7:05	17.30	12.11	6.95	1.5		
					16.70	13.04	7.12	1.5		
								1.5	530.00	
	MW-19-02	SAME	09/16/99	7:25	19.30	OR	6.92	1.0		
					20.40	OR	6.98	1.0		
					20.60	OR	7.02	1.5	953.00	
	MW-19-03	SAME	09/16/99	7:40	18.50	OR	6.91	1.0		
					19.10	OR	6.96	1.0		
					19.20	OR	6.99	1.0	843.00	

SITE	CDAP WELL ID	Actual ID on Well	Date (MM/DD/YY)	TIME (HH:MM)	Temp (degrees C)	Conductivity (umhos/sec)	pH (pH units)	Volume Purged (gallons)	Turbidity After Purging (NTU)	COMMENTS
LF-21	MW-21-01	SAME	09/16/99	8:05	21.20	13.87	7.26	1.2		
					21.90	13.82	7.29	1.2		
								1.2	528.00	
	MW-21-02	SAME	09/16/99	10:05	22.30	OR	7.01	1.0		
					21.40	OR	7.15	1.0		
								1.0	935.00	
	MW-21-03	SAME	09/16/99	9:55	22.90	OR	6.76	1.2		
					22.40	OR	6.82	1.2		
					21.70	OR	6.84	1.2	519.00	
	MW-21-04	SAME	09/16/99	9:25	23.60	OR	6.72	2.0		
					23.20	OR	6.76	2.0		
					22.60	OR	6.81	2.0	619.00	

SITE	CDAP WELL ID	Actual ID on Well	Date (MM/DD/YY)	TIME (HH:MM)	Temp (degrees C)	Conductivity (umhos/sec)	pH (pH units)	Volume Purged (gallons)	Turbidity After Purging (NTU)	COMMENTS
LF-22	MW-22-01	SAME	09/16/99	2:20	22.60	9.99	7.28	1.35		
					21.10	10.18	7.27	1.35		
					21.00	9.94	7.34	1.35	931.00	
	MW-22-02	SAME	09/16/99	1:25	25.40	OR	7.10	2.0		
					24.30	OR	7.24	2.0		
					23.40	OR	7.21	2.0	OR@50	
	MW-22-03	SAME	09/16/99	1:45	23.70	OR	6.97	1.0		
					22.60	OR	6.98	1.0		
					21.70	OR	7.01	1.0	1056.00	
	MW-22-04	SAME	09/16/99	2:00	21.80	14.74	7.27	1.1		
					20.40	15.24	7.31	1.1		
					20.40	15.51	7.33	1.1	OR@50	

SITE	CDAP WELL ID	Actual ID on Well	Date (MM/DD/YY)	TIME (HH:MM)	Temp (degrees C)	Conductivity (umhos/sec)	pH (pH units)	Volume Purged (gallons)	Turbidity After Purging (NTU)	COMMENTS
LF-23	MW-23-01	SAME	09/16/99	12:25	22.90	OR	6.86	1.0		
					21.90	OR	6.88	1.0		
					21.80	OR	6.95	1.0	504.00	
	MW-23-02	No ID	09/16/99	10:55	24.90	OR	6.99	2.5		
					24.50	OR	6.96	2.5		
					23.60	OR	6.99	2.5	OR@50	
	MW-23-03	No ID	09/16/99	11:10	23.10	OR	7.17	2.5		
					24.80	OR	6.93	2.5		
					22.40	OR	7.00	2.5	OR@50	
	MW-23-04	No ID	09/16/99	11:45	25.60	OR	7.09	2.0		
					24.60	OR	6.98	2.0		
					24.30	OR	6.98	2.0	OR@50	

Appendix C
Pre-Sample Purging Purging Information, September 1999

SITE	CDAP WELL ID	Actual ID on Well	Date (MM/DD/YY)	TIME (HH:MM)	Temp (degrees C)	Conductivity (umhos/sec)	pH (pH units)	Volume Purged (gallons)	Turbidity After Purging (NTU)	COMMENTS
OT-44	S50-MW1	HSTE-50-MW-1	09/20/99	11:55	28.40	2.70	7.47	2.0		
					27.10	2.88	7.42	2.0		
					27.10	2.89	7.43	2.0	856.00	
	S50-MW2	HSTE-50-MW-2	09/20/99	11:35	27.90	3.35	7.07	2.0		
					27.70	3.37	7.09	2.0		
					27.70	3.30	7.15	2.0	OR@50	
	S50-MW3	HSTE-50-MW-3	09/20/99	11:45	28.00	2.73	7.21	2.0		
					27.20	2.82	7.24	2.0		
					26.30	2.83	7.26	2.0	OR@50	
	S50-MW6	HSTE-50-MW-6	09/20/99	11:20	28.30	2.48	7.46	2.0		
					26.70	2.56	7.54	2.0		
					26.40	2.70	7.70	2.0	OR@50	

SITE	CDAP WELL ID	Actual ID on Well	Date (MM/DD/YY)	TIME (HH:MM)	Temp (degrees C)	Conductivity (umhos/sec)	pH (pH units)	Volume Purged (gallons)	Turbidity After Purging (NTU)	COMMENTS
SS-48	S55-MW2	HSTE-55-MW-2	09/14/99	6:40	26.80	3.47	7.24	2.0		
					27.00	3.44	7.32	2.0		
					26.90	3.56	7.36	2.0	799.00	
	S55-MW4	HSTE 55 MW 4	09/14/99	6:50	25.10	4.32	7.31	2.0		
					24.60	4.49	7.42	2.0		
					23.70	4.62	7.44	3.0	OR@50	
	S55-MW5	HSTE 55 MW 5	09/14/99	6:25	27.50	16.12	7.16	2.0		
					27.50	16.21	7.25	2.0		
					27.00	16.69	7.33	3.0	OR@50	
	S55-MW7	HSTE 55 MW 7	09/14/99	6:10	28.00	8.53	7.13	2.0		
					28.20	6.17	7.24	2.0		
					27.90	5.85	7.30	2.5	OR@50	

SITE	CDAP WELL ID	Actual ID on Well	Date (MM/DD/YY)	TIME (HH:MM)	Temp (degrees C)	Conductivity (umhos/sec)	pH (pH units)	Volume Purged (gallons)	Turbidity After Purging (NTU)	COMMENTS
DP-30/SD-33	MW-30/33-01	SAME	09/20/99	10:50	23.00	OR	7.32	1.5		
					21.90	OR	7.31	1.5		
					21.00	OR	7.32	1.0	OR@50	
	MW-30/33-02	SAME	09/20/99	10:00	20.00	OR	7.21	1.5		
					19.10	OR	7.26	1.5		
					19.10	OR	7.35	1.0	OR@50	
	MW-30/33-03	SAME	09/20/99	10:15	20.00	OR	7.32	1.0		
					19.60	OR	7.38	1.0		
					19.40	OR	7.33	1.0	OR@50	
	MW-30/33-04	SAME	09/20/99	10:35	20.80	OR	7.38	1.5		
					20.20	OR	7.31	1.5		
					19.60	OR	7.35	2.0	OR@50	

SITE	CDAP WELL ID	Actual ID on Well	Date (MM/DD/YY)	TIME (HH:MM)	Temp (degrees C)	Conductivity (umhos/sec)	pH (pH units)	Volume Purged (gallons)	Turbidity After Purging (NTU)	COMMENTS
SS-56	MW56-01	No ID	09/17/99	8:17	19.00	5.26	6.80	1.0		
					21.60	5.07	6.86	2.0		
					22.20	5.06	6.91	3.0	OR@50	
	WCC-3	No ID	09/17/99	8:38	21.30	2.70	7.08	0.5		
					24.30	2.66	7.21	1.0		
					25.00	2.68	7.30	2.0	OR@50	
	WCC-5	No ID	09/17/99	9:08	23.40	5.46	6.85	1.0		
					25.60	5.21	7.00	2.0		
					25.80	5.11	7.04	3.0	OR@50	

SITE	CDAP WELL ID	Actual ID on Well	Date (MM/DD/YY)	TIME (HH:MM)	Temp (degrees C)	Conductivity (umhos/sec)	pH (pH units)	Volume Purged (gallons)	Turbidity After Purging (NTU)	COMMENTS
SS-02/SS-05	MW-02 & 05-03	MW-2-5-03	09/21/99	8:45	23.40	2.72	7.99	1.5		
					23.90	2.78	8.16	1.5		
						2.76	8.14	1.0	801.00	
	MW-02 & 05-05	MW-2-5-05	09/21/99	8:25	22.00	13.23	7.21	1.5		
					21.90	13.18	7.38	1.5	365.00	
	MW-02 & 05-06	94-MW-2+5-6	09/21/99	7:55	26.70	OR	7.12	1.5		
					27.30	OR	7.13	1.5		
					27.40	OR	7.23	2.0	705.00	
	MW-02 & 05-08	94-MW-2-5-08	09/21/99	8:10	25.00	OR	7.10	1.5		
					25.30	OR	7.11	1.5		
					25.50	OR	7.15	2.0	199.00	

Appendix C
Pre-Sample Purging Purging Information, September 1999

SITE	CDAP WELL ID	Actual ID on Well	Date (MM/DD/YY)	TIME (HH:MM)	Temp (degrees C)	Conductivity (umhos/sec)	pH (pH units)	Volume Purged (gallons)	Turbidity After Purging (NTU)	COMMENTS
SS-46	MW-46-01	No ID	09/21/99	10:16	22.80	18.32	7.22	1.5		
					24.30	18.66	7.33	1.5		
					22.80	19.26	7.34	1.5	OR@50	
	MW-46-02	No ID	09/21/99	10:05	23.70	7.43	7.73	1.5		
					23.60	7.71	7.72	1.5		
					24.00	7.92	7.77	1.5	OR@50	
	MW-46-03	No ID	09/21/99	9:45	25.30	12.80	7.78	1.5		
					25.90	13.15	7.84	1.5		
					25.60	12.98	7.90	1.5	565.00	

SITE	CDAP WELL ID	Actual ID on Well	Date (MM/DD/YY)	TIME (HH:MM)	Temp (degrees C)	Conductivity (umhos/sec)	pH (pH units)	Volume Purged (gallons)	Turbidity After Purging (NTU)	COMMENTS
OT-16	118-MW1601	16-01	09/14/99	4:55	28.60	3.28	7.31	1.63		
					26.30	3.34	7.35	1.63		
					24.30	3.47	7.34	1.63	OR@50	
	118-MW1602	MW-16-02	09/14/99	4:20	29.60	4.91	7.25	1.6		
					28.50	4.81	7.27	1.6		
					27.60	4.68	7.29	1.6	ER-3@50	
	118-MW1603	MW-16-03	09/14/99	4:35	28.00	3.67	7.30	1.66		
					26.60	3.64	7.28	1.66		
					26.20	3.73	7.31	1.66	OR@50	
	118-MW1604	MW-16-04	09/14/99	4:45	27.40	5.43	7.55	1.41		
					25.70	4.68	7.59	1.41		
								1.41	OR@50	

SITE	CDAP WELL ID	Actual ID on Well	Date (MM/DD/YY)	TIME (HH:MM)	Temp (degrees C)	Conductivity (umhos/sec)	pH (pH units)	Volume Purged (gallons)	Turbidity After Purging (NTU)	COMMENTS
SS-17	W-4	SAME	09/14/99	5:50	24.00	2.77	7.15	1.0		
					23.20	2.82	7.24	1.0		
					22.80	2.88	7.26	1.25	OR@50	
	TH-22	SAME	09/14/99	5:10	26.70	4.16	7.03	1.0		
					25.60	4.16	7.05	1.0		
					25.50	4.26	7.08	1.0	616.00	
	MW-BX-01	SAME	09/14/99	5:40	25.10	7.55	6.76	0.6		
					24.50	7.41	6.78	0.6		
					23.80	7.52	6.82	0.6	874.00	
	MW-BX-02	SAME	09/14/99	5:25	25.40	10.00	6.81	1.2		
					24.30	9.75	6.84	1.2		
					23.90	10.47	6.87	1.2	990.00	

SITE	CDAP WELL ID	Actual ID on Well	Date (MM/DD/YY)	TIME (HH:MM)	Temp (degrees C)	Conductivity (umhos/sec)	pH (pH units)	Volume Purged (gallons)	Turbidity After Purging (NTU)	COMMENTS
SS-39	MW-39-01	SAME	09/20/99	5:35	25.00	6.97	7.62	1.0		
					22.20	6.94	7.87	1.0	OR@50	
	MW-39-02	SAME	09/20/99	5:00	23.60	16.77	7.13	1.5		
					21.40	18.28	7.39	1.5		
					20.70	18.23	7.36	1.5	570.00	
	MW-39-03	SAME	09/20/99	4:25	24.70	11.91	7.15	1.5		
					22.00	14.81	7.26	1.5		
					20.50	15.10	7.26	1.5	OR@50	
	MW-39-04	SAME	09/20/99	3:55	24.10	8.24	7.23	1.0		
					23.20	8.61	7.67	1.0		
								1.0	OR@50	

Appendix C
Pre-Sample Purging Purging Information, September 1999

SITE	CDAP WELL ID	Actual ID on Well	Date (MM/DD/YY)	TIME (HH:MM)	Temp (degrees C)	Conductivity (umhos/sec)	pH (pH units)	Volume Purged (gallons)	Turbidity After Purging (NTU)	COMMENTS
LF-29	MW-29-01	SAME	09/20/99	1:30	25.10	OR	7.51	2.0		
					22.30	OR	7.54	2.0		
					21.00	OR	7.62	2.0	OR@50	
	MW-29-06	94-MW-29-06	09/20/99	1:05	22.50	OR	7.27	1.5		
					20.30	OR	7.31	1.5		
					20.10	OR	7.30	1.5	OR@50	
	MW-29-07	94-MW-29-07	09/20/99	12:35	22.50	19.80	7.31	1.5		
					20.30	OR	7.32	1.5		
					19.80	OR	7.35	1.0	OR@50	
	MW-29-08	94-MW-29-08	09/20/99	12:50	22.10	OR	7.21	1.5		
					20.20	OR	7.25	1.5		
					20.10	OR	7.26	1.5	OR@50	

Instruments Used for Field Parameters

Parameter	Make and Model
pH	Cole Parmer, Model 59002-10; Serial number: 24350
Specific Conductivity	Cole Parmer, Model CON20--Combination temperature/conductivity meter
Temperature	Serial number: 32557
Interphase probe	ORS, Model 1068013; Serial number 973902194
Turbidity	LaMotte Model, 2020; Serial number 1269-2699

C	Centigrade
umhos/sec	Micromhos per second
NTU	Nephelometric turbidity units
OR	Instrument out of range
ER	Instrument error

Appendix C
1999 LTM WELL GAUGING DATA
September 1999

SITE	CDAP WELL ID	Actual ID on Well	Date Of Reading (MM/DD/YY)	TOC Elevation from 1997 Rpt (ft)	DTW From TOC (ft)	Total Depth From TOC Measured (ft)	Groundwater Elevation (ft)	PID Reading ppm	COMMENTS
DP-30/SD-33	MW-30/33-01	SAME	09/09/99	4104.58	31.13	31.17	4073.45	0.50	No Name Plate (Obstruction at 7.75)
DP-30/SD-33	MW-30/33-02	SAME	09/09/99	4103.94	31.66	36.70	4072.28	0.00	No Name Plate (Obstruction at 7.37)
DP-30/SD-33	MW-30/33-03	SAME	09/09/99	4102.95	26.53	26.56	4076.42	0.00	No Name Plate (Obstruction at 7.41)
DP-30/SD-33	MW-30/33-04	SAME	09/09/99	4102.22	31.11	36.20	4071.11	0.00	(Obstruction at 8.76)
LF-01	1W1	SAME	09/08/99	4122.15	NM	NM	NM	NM	Note: Site ID corrected to match ERPIMS
LF-01	1W2	SAME	09/08/99	4100.69	20.91	37.97	4079.78	0.00	Note: Site ID corrected to match ERPIMS
LF-01	1W3	SAME	09/08/99	4092.04	NM	NM	NM	NM	
LF-01	S1-MW1	HSTE-1-MW-1	09/08/99	4099.39	11.26	27.13	4088.13	0.00	
LF-01	S1-MW2	HSTE-1-MW-2	09/08/99	4098.62	18.58	37.32	4080.04	0.00	
LF-01	S1-MW3	SAME	09/08/99	4096.97	NM	NM	NM	NM	
LF-01	S1-MW4	SAME	09/08/99	4096.15	NM	NM	NM	NM	
LF-01	S1-MW5	HSTE-1-MW-5	09/08/99	4114.89	31.85	44.34	4083.04	0.00	
LF-10	S10-MW1		09/08/99	4087.66	NM	NM	NM	NM	
LF-10	S10-MW2	HSTE 10 MW 2	09/08/99	4089.00	13.05	20.35	4075.95	1.40	
LF-10	S10-MW3	HSTE 10 MW 3	09/08/99	4084.21	9.76	21.86	4074.45	2.43	
LF-10	S10-MW4	HSTE 10 MW 4	09/08/99	4081.31	8.73	20.29	4072.58	0.00	
LF-10	S10-MW5		09/08/99	4081.54	NM	NM	NM	NM	
LF-10	S10-MW6	HSTE 10 MW 6	09/08/99	4083.50	9.78	22.29	4073.72	0.00	
LF-10	S10-MW7		09/08/99	4088.24	NM	NM	NM	NM	
LF-19	MW-19-01	SAME	09/08/99	4048.70	8.56	17.62	4040.14	0.00	
LF-19	MW-19-02	SAME	09/08/99	4044.87	8.57	10.28	4036.30	0.00	(Obstruction at 7.22)
LF-19	MW-19-03	SAME	09/08/99	4049.12	13.52	19.45	4035.60	0.00	
LF-21	MW-21-01	SAME	09/09/99	4046.34	9.15	16.43	4037.19	0.00	
LF-21	MW-21-02	SAME	09/09/99	4042.81	11.09	16.41	4031.72	0.00	(Obstruction at 10.28' - Possible roots)
LF-21	MW-21-03	SAME	09/09/99	4041.50	9.59	10.31	4031.91	0.00	
LF-21	MW-21-04	SAME	09/09/99	4039.71	4.66	8.76	4035.05	0.00	
LF-22	MW-22-01	SAME	09/09/99	4039.00	9.45	17.51	4029.55	0.00	
LF-22	MW-22-02	SAME	09/09/99	4038.67	8.78	18.36	4029.89	0.00	
LF-22	MW-22-03	SAME	09/09/99	4038.88	10.76	12.18	4028.12	0.00	
LF-22	MW-22-04	SAME	09/09/99	4040.10	12.69	19.66	4027.41	0.00	
LF-23	MW-23-01	SAME	09/09/99	4037.16	11.00	11.31	4026.16	0.00	
LF-23	MW-23-02	No ID	09/09/99	4030.50	1.83	7.37	4028.67	0.00	(Obstruction at 12.18)
LF-23	MW-23-03	No ID	09/09/99	4030.44	1.73	7.75	4028.71	0.00	(Obstruction at 11.31)
LF-23	MW-23-04	No ID	09/09/99	4030.95	2.55	7.41	4028.40	0.00	

Appendix C
1999 LTM WELL GAUGING DATA
September 1999

SITE	CDAP WELL ID	Actual ID on Well	Date Of Reading (MM/DD/YY)	TOC Elevation from 1997 Rpt (ft)	DTW From TOC (ft)	Total Depth From TOC Measured (ft)	Groundwater Elevation (ft)	PID Reading ppm	COMMENTS
LF-29	MW-29-01	SAME	09/10/99	4103.09	25.20	36.37	4077.89	1.00	No Name Plate
LF-29	MW-29-02		09/10/99	4097.55	NM	NM	NM	NM	
LF-29	MW-29-03		09/10/99	4096.85	NM	NM	NM	NM	
LF-29	MW-29-05		09/10/99	4101.36	NM	NM	NM	NM	
LF-29	MW-29-06	94-MW-29-06	09/10/99	4101.64	23.82	32.49	4077.82	1.00	
LF-29	MW-29-07	94-MW-29-07	09/10/99	4098.29	21.42	29.10	4076.87	0.50	
LF-29	MW-29-08	94-MW-29-08	09/10/99	4100.43	23.64	32.51	4076.79	0.00	
OT-16	118-MW1601	16-01	09/10/99	4079.90	6.43	16.44	4073.47	0.80	
OT-16	118-MW1602	MW-16-02	09/10/99	4077.71	6.75	16.63	4070.96	0.00	
OT-16	118-MW1603	MW-16-03	09/10/99	4076.65	6.01	16.24	4070.64	0.50	
OT-16	118-MW1604	MW-16-04	09/10/99	4076.88	6.80	15.42	4070.08	1.50	
OT-44	S50-MW1	HSTE-50-MW-1	09/09/99	4069.69	5.74	16.68	4063.95	4.60	(Obstruction at 20.87)
OT-44	S50-MW2	HSTE-50-MW-2	09/09/99	4069.90	5.65	17.90	4064.25	0.50	
OT-44	S50-MW3	HSTE-50-MW-3	09/09/99	4069.66	6.02	17.68	4063.64	0.50	
OT-44	S50-MW4		09/09/99	4071.40	NM	NM	NM	NM	
OT-44	S50-MW6	HSTE-50-MW-6	09/09/99	4069.99	5.49	17.41	4064.50	2.00	
SD-08	MW-08-01		09/09/99	4088.51	12.36	15.37	4076.15	22.00	**1997 TOC elev=4059.86**
SD-08	MW-08-03	HSTE-50-MW-7	09/09/99	4088.24	12.32	23.41	4075.92	0.00	
SD-08	MW-08-04	94 MW-08-04	09/08/99	4084.22	11.33	18.94	4072.89	0.50	
SD-08	MW-08-05	No ID	09/08/99	4086.82	11.16	18.92	4075.66	4.20	
SD-08	MW-08-06		09/08/99	4084.58	NM	NM	NM	NM	
SS-02/SS-05	MW-02 & 05-01		09/10/99	4095.27	NM	NM	NM	NM	
SS-02/SS-05	MW-02 & 05-02		09/10/99	4095.06	NM	NM	NM	NM	
SS-02/SS-05	MW-02 & 05-03	MW-2-5-03	09/10/99	4096.28	16.41	24.36	4079.87	1.50	
SS-02/SS-05	MW-02 & 05-04		09/10/99	4096.73	NM	NM	NM	NM	
SS-02/SS-05	MW-02 & 05-05	MW-2-5-05	09/10/99	4094.35	15.20	22.81	4079.15	1.20	
SS-02/SS-05	MW-02 & 05-06	94-MW-2+5-6	09/10/99	4082.37	5.27	15.08	4077.10	5.90	
SS-02/SS-05	MW-02 & 05-07		09/10/99	4082.63	NM	NM	NM	NM	
SS-02/SS-05	MW-02 & 05-08	94-MW-2-5-08	09/10/99	4083.96	5.54	15.09	4078.42	2.90	
SS-02/SS-05	MW-02 & 05-09		09/10/99	4097.21	NM	NM	NM	NM	
SS-17	MW-BX-01	SAME	09/10/99	4073.54	8.79	12.41	4064.75	2.50	
SS-17	MW-BX-02	SAME	09/10/99	4070.24	5.59	12.95	4064.65	0.00	
SS-17	TH-22	SAME	09/10/99	4071.64	5.49	10.62	4066.15	1.30	
SS-17	W-4	SAME	09/10/99	4074.97	7.36	14.00	4067.61	0.90	
SS-39	MW-39-01	SAME	09/10/99	4051.10	23.01	29.85	4028.09	0.00	
SS-39	MW-39-02	SAME	09/10/99	4051.15	18.51	27.08	4032.64	1.00	
SS-39	MW-39-03	SAME	09/10/99	4040.57	7.89	16.50	4032.68	1.50	
SS-39	MW-39-04	SAME	09/10/99	4053.33	20.12	20.87	4033.21	0.00	
SS-46	MW-46-01		09/21/99	4082.27	6.66	15.16	4075.61	NM	
SS-46	MW-46-02		09/21/99	4081.58	6.25	15.12	4075.33	NM	
SS-46	MW-46-03		09/21/99	4082.80	6.66	14.73	4076.14	NM	

Appendix
1999 LTM WELL GAUGING DATA
September 1999

SITE	CDAP WELL ID	Actual ID on Well	Date Of Reading (MM/DD/YY)	TOC Elevation from 1997 Rpt (ft)	DTW From TOC (ft)	Total Depth From TOC Measured (ft)	Groundwater Elevation (ft)	PID Reading ppm	COMMENTS
SS-48	S55-MW1		09/09/99	4080.51	NM	NM	NM	NM	
SS-48	S55-MW2	HSTE-55-MW-2	09/09/99	4081.39	6.49	17.91	4074.90	0.70	
SS-48	S55-MW3		09/09/99	4080.22	NM	NM	NM	NM	
SS-48	S55-MW4	HSTE 55 MW 4	09/09/99	4080.16	5.53	18.91	4074.63	0.00	
SS-48	S55-MW5	HSTE 55 MW 5	09/09/99	4079.16	4.92	18.98	4074.24	2.50	
SS-48	S55-MW6		09/09/99	4078.29	NM	NM	NM	NM	
SS-48	S55-MW7	HSTE 55 MW 7	09/09/99	4078.70	4.71	17.13	4073.99	0.00	
SS-56	MW56-01		09/21/99	4062.64	10.57	15.66	4052.07	NM	
SS-56	WCC-3		09/21/99	4054.80	5.06	7.38	4049.74	NM	
SS-56	WCC-5		09/21/99	4055.62	6.49	12.50	4049.13	NM	

Appendix C
1999 LTM WELL GAUGING DATA
December 1999

SITE	CDAP WELL ID	Actual ID on Well	Date Of Reading (MM/DD/YY)	TOC Elevation from 1997 Rpt (ft)	DTW From TOC (ft)	Total Depth From TOC Measured (ft)	Groundwater Elevation (ft)	PID Reading ppm	COMMENTS
DP-30/SD-33	MW-30/33-01	SAME	NA	4104.58	23.62	31.17	4080.96	0.30	
DP-30/SD-33	MW-30/33-02	SAME	NA	4103.94	23.60	36.70	4080.34	0.00	
DP-30/SD-33	MW-30/33-03	SAME	NA	4102.95	22.54	26.56	4080.41	0.00	
DP-30/SD-33	MW-30/33-04	SAME	NA	4102.22	21.64	36.20	4080.58	0.00	
LF-01	1W3	SAME	NA	4092.04	13.45	32.98	4078.59	0.00	
LF-01	1W1	SAME	NA	4122.15	35.66	>50	4086.49	0.00	Note: Site ID corrected to match ERPIMS
LF-01	1W2	SAME	NA	4100.69	20.70	38.60	4079.99	0.00	Note: Site ID corrected to match ERPIMS
LF-01	S1-MW1	HSTE-1-MW-1	NA	4099.39	11.16	27.07	4088.23	0.00	
LF-01	S1-MW2	HSTE-1-MW-2	NA	4098.62	18.42	37.34	4080.20	0.00	
LF-01	S1-MW3	SAME	NA	4096.97	17.58	28.84	4079.39	0.00	
LF-01	S1-MW4	SAME	NA	4096.15	17.59	30.38	4078.56	0.00	
LF-01	S1-MW5	HSTE-1-MW-5	NA	4114.89	31.77	45.05	4083.12	0.00	
LF-10	S10-MW1		NA	4087.66	12.46	21.72	4075.20	0.60	
LF-10	S10-MW2	HSTE 10 MW 2	NA	4089.00	13.32	20.40	4075.68	0.40	
LF-10	S10-MW3	HSTE 10 MW 3	NA	4084.21	9.77	21.88	4074.44	1.70	
LF-10	S10-MW4	HSTE 10 MW 4	NA	4081.31	9.37	20.33	4071.94	0.00	
LF-10	S10-MW5		NA	4081.54	6.62	7.00	4074.92	2.80	
LF-10	S10-MW6	HSTE 10 MW 6	NA	4083.50	10.00	22.30	4073.50	0.00	
LF-10	S10-MW7		NA	4088.24	12.48	23.35	4075.76	1.60	
LF-19	MW-19-01	SAME	NA	4048.70	8.52	17.65	4040.18	0.00	
LF-19	MW-19-02	SAME	NA	4044.87	8.67	15.64	4036.20	0.00	(Obstruction at 10.28' - Possible roots)
LF-19	MW-19-03	SAME	NA	4049.12	13.05	19.47	4036.07	0.00	
LF-21	MW-21-01	SAME	NA	4046.34	9.31	16.45	4037.03	0.00	
LF-21	MW-21-02	SAME	NA	4042.81	11.00	16.43	4031.81	0.00	
LF-21	MW-21-03	SAME	NA	4041.50	10.10	16.56	4031.40	0.00	(Obstruction at 10.31)
LF-21	MW-21-04	SAME	NA	4039.71	8.56	15.60	4031.15	0.00	(Obstruction at 8.76)
LF-22	MW-22-01	SAME	NA	4039.00	9.42	17.54	4029.58	0.00	
LF-22	MW-22-02	SAME	NA	4038.67	9.40	18.39	4029.27	0.00	
LF-22	MW-22-03	SAME	NA	4038.88	10.58	18.97	4028.30	0.00	(Obstruction at 12.18)
LF-22	MW-22-04	SAME	NA	4040.10	12.69	19.66	4027.41	0.00	
LF-23	MW-23-01	SAME	NA	4037.16	10.30	16.54	4026.86	0.00	(Obstruction at 11.31)
LF-23	MW-23-02	No ID	NA	4030.50	5.95	16.45	4024.55	0.00	No Name Plate (Obstruction at 7.37)
LF-23	MW-23-03	No ID	NA	4030.44	6.20	16.26	4024.24	0.00	No Name Plate (Obstruction at 7.75)
LF-23	MW-23-04	No ID	NA	4030.95	6.69	15.16	4024.26	0.00	No Name Plate (Obstruction at 7.41)

Appendix C
1999 LTM WELL GAUGING DATA
December 1999

SITE	CDAP WELL ID	Actual ID on Well	Date Of Reading (MM/DD/YY)	TOC Elevation from 1997 Rpt (ft)	DTW From TOC (ft)	Total Depth From TOC Measured (ft)	Groundwater Elevation (ft)	PID Reading ppm	COMMENTS
LF-29	MW-29-01	SAME	NA	4103.09	25.13	36.48	4077.96	0.40	
LF-29	MW-29-02		NA	4097.55	21.15	30.30	4076.40	1.40	
LF-29	MW-29-03		NA	4096.85	19.94	26.49	4076.91	0.00	
LF-29	MW-29-05		NA	4101.36	23.41	31.51	4077.95	2.70	
LF-29	MW-29-06	94-MW-29-06	NA	4101.64	25.67	32.47	4075.97	0.90	
LF-29	MW-29-07	94-MW-29-07	NA	4098.29	21.16	29.08	4077.13	0.20	
LF-29	MW-29-08	94-MW-29-08	NA	4100.43	23.42	32.48	4077.01	0.00	
OT-16	118-MW1601	16-01	NA	4079.90	7.24	16.44	4072.66	0.70	
OT-16	118-MW1602	MW-16-02	NA	4077.71	8.26	16.63	4069.45	0.00	
OT-16	118-MW1603	MW-16-03	NA	4076.65	7.53	16.25	4069.12	0.40	
OT-16	118-MW1604	MW-16-04	NA	4076.88	7.92	15.42	4068.96	1.20	
OT-44	S50-MW1	HSTE-50-MW-1	NA	4069.69	6.71	16.60	4062.98	3.90	
OT-44	S50-MW2	HSTE-50-MW-2	NA	4069.90	6.53	17.81	4063.37	0.10	
OT-44	S50-MW3	HSTE-50-MW-3	NA	4069.66	6.74	17.50	4062.92	0.20	
OT-44	S50-MW4		NA	4071.40	9.52	20.12	4061.88	0.90	
OT-44	S50-MW6	HSTE-50-MW-6	NA	4069.99	6.41	17.83	4063.58	2.00	
SD-08	MW-08-01		NA	4088.51	12.60	15.70	4075.91	0.00	
SD-08	MW-08-03	HSTE 10 MW 7	NA	4088.24	12.48	23.35	4075.76	1.60	
SD-08	MW-08-04	94 MW-08-04	NA	4084.22	10.65	17.89	4073.57	0.60	
SD-08	MW-08-05	No ID	NA	4086.82	11.29	18.95	4075.53	3.10	No Name Plate
SD-08	MW-08-06		NA	4084.58	10.05	18.28	4074.53	0.00	
SS-02/SS-05	MW-02 & 05-01		NA	4095.27	16.22	23.40	4079.05	0.00	
SS-02/SS-05	MW-02 & 05-02		NA	4095.06	16.01	23.65	4079.05	0.20	
SS-02/SS-05	MW-02 & 05-03	MW-2-5-03	NA	4096.28	16.58	24.40	4079.70	1.00	
SS-02/SS-05	MW-02 & 05-04		NA	4096.73	16.80	22.93	4079.93	2.70	
SS-02/SS-05	MW-02 & 05-05	MW-2-5-05	NA	4094.35	15.40	22.85	4078.95	0.90	
SS-02/SS-05	MW-02 & 05-06	94-MW-2+5-6	NA	4082.37	5.43	15.10	4076.94	4.10	
SS-02/SS-05	MW-02 & 05-07		NA	4082.63	5.04	15.12	4077.59	0.00	
SS-02/SS-05	MW-02 & 05-08	94-MW-2-5-08	NA	4083.96	5.66	15.11	4078.30	1.30	
SS-02/SS-05	MW-02 & 05-09		NA	4097.21	18.33	24.14	4078.88	0.00	
SS-17	MW-BX-01	SAME	NA	4073.54	9.03	12.42	4064.51	1.60	
SS-17	MW-BX-02	SAME	NA	4070.24	5.97	12.93	4064.27	0.00	
SS-17	TH-22	SAME	NA	4071.64	6.24	10.61	4065.40	0.50	
SS-17	W-4	SAME	NA	4074.97	8.13	13.91	4066.84	1.00	
SS-39	MW-39-01	SAME	NA	4059.86	24.34	29.85	4035.52	0.00	**1997 TOC elev=4059.86**
SS-39	MW-39-02	SAME	NA	4051.15	18.62	27.05	4032.53	0.20	
SS-39	MW-39-03	SAME	NA	4040.57	8.23	15.80	4032.34	0.50	(Obstruction at 7.22)
SS-39	MW-39-04	SAME	NA	4053.33	20.18	25.30	4033.15	0.00	(Obstruction at 20.87)
SS-46	MW-46-01		NA	4082.27	NA	NA	NA	NA	Secure area--no access granted
SS-46	MW-46-02		NA	4081.58	NA	NA	NA	NA	Secure area--no access granted
SS-46	MW-46-03		NA	4082.80	NA	NA	NA	NA	Secure area--no access granted

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December 1999

SITE	CDAP WELL ID	Actual ID on Well	Date Of Reading (MM/DD/YY)	TOC Elevation from 1997 Rpt (ft)	DTW From TOC (ft)	Total Depth From TOC Measured (ft)	Groundwater Elevation (ft)	PID Reading ppm	COMMENTS
SS-48	S55-MW1		NA	4080.51	NA	NA	NA	NA	Secure area--no access granted
SS-48	S55-MW2	HSTE-55-MW-2	NA	4081.39	7.08	17.95	4074.31	0.40	
SS-48	S55-MW3		NA	4080.22	5.88	17.40	4074.34	4.90	
SS-48	S55-MW4	HSTE 55 MW 4	NA	4080.16	5.90	18.85	4074.26	0.00	
SS-48	S55-MW5	HSTE 55 MW 5	NA	4079.16	5.19	18.90	4073.97	1.10	
SS-48	S55-MW6		NA	4078.29	4.59	17.78	4073.70	0.10	
SS-48	S55-MW7	HSTE 55 MW 7	NA	4078.70	4.95	17.32	4073.75	0.00	
SS-56	MW56-01		NA	4062.64	NA	NA	NA	NA	Secure area--no access granted
SS-56	WCC-3		NA	4054.80	NA	NA	NA	NA	Secure area--no access granted
SS-56	WCC-5		NA	4055.62	NA	NA	NA	NA	Secure area--no access granted