IT CORPORATION

Final
Revision 0

INSTALLATION RESTORATION PROGRAM

Final Long-Term Groundwater Monitoring Report: October 2000

Wright-Patterson Air Force Base Long-Term Monitoring Program

Wright-Patterson Air Force Base
88th Air Base Wing
Office of Environmental Management

STRENGTH THROUGH SUPPORT

PROTECT RESTORE ENHANCE

Environmental Management
Wright-Patterson AFB

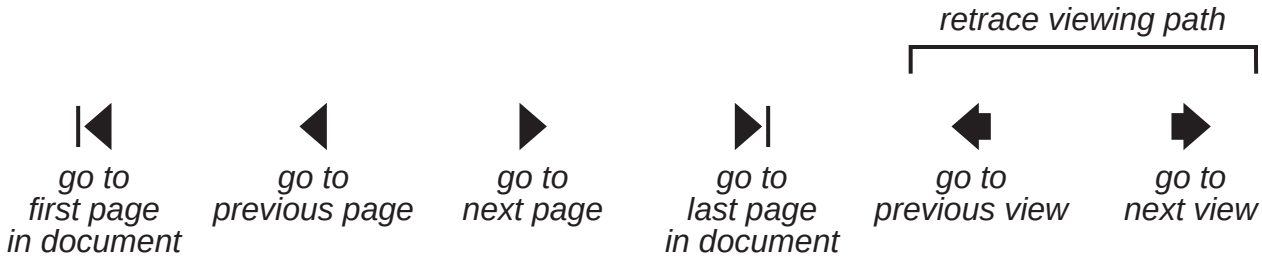
Prepared by:

IT Corporation
11499 Chester Road
Cincinnati, Ohio 45246

July 18, 2001

Navigation notes:

For easiest navigation, extensive use of “bookmarks” has been made. To view a given Section, simply click on the desired Section heading. A “+” sign indicates collapsed subheadings can be found by clicking on the “+”. To re-collapse the heading, click on the “–” sign. Use the *Page Up* and *Page Down* keys to move to adjacent pages. You can also navigate by single-clicking the arrow buttons on the toolbar at the top of the Acrobat Reader window (see the diagrams below for an explanation).



FINAL

LONG-TERM GROUNDWATER MONITORING

REPORT: OCTOBER 2000

LONG-TERM MONITORING PROGRAM

Submitted to:

Wright-Patterson Air Force Base
88th Air Base Wing
Office of Environmental Management
Wright-Patterson Air Force Base, Ohio

Prepared by:

IT Corporation
11499 Chester Road
Cincinnati, Ohio 45246

July 18, 2001

Table of Contents

List of Tables v
List of Figures vii
List of Appendices xii
List of Acronyms xiii
1.0 Introduction 1-1
1.1 Purpose and Objectives 1-2
1.2 Basewide Monitoring Program 1-3
1.3 WPAFB Location 1-4
1.4 WPAFB GWOU Background Information 1-4
1.5 Organization of the LTM October 2000 Report 1-5
2.0 Quarterly and Annual Record of Decision (ROD) Sampling at Landfills 8 and 10 (OU1) 2-1
2.1 Introduction 2-1
2.2 OU1 Quarterly Remedial Action Groundwater Monitoring 2-1
2.2.1 Extraction Well Sampling 2-2
2.2.2 Groundwater Sampling Procedures: Monitoring Wells 2-3
2.2.2.1 Well Purging: Micropurge Pumping Method 2-4
2.2.2.2 Well Purging: Bailing method 2-4
2.2.2.3 Field Parameters 2-4
2.2.3 Sample Collection and Management 2-5
2.2.4 Field Quality Control Samples 2-6
2.2.5 Sample Management 2-7
2.2.6 Leachate Discharge System Monitoring 2-7
2.3 OU1 ROD Quarterly and Annual Groundwater Sampling Results 2-8
2.3.1 Landfill 8 Analytical Results 2-8
2.3.2 Landfill 10 Analytical Results 2-9
2.3.3 Leachate Collection System Effluent Sample 2-9
2.4 OU1 Explosive Gas Monitoring 2-9
2.4.1 Procedures 2-10
2.4.2 Results 2-10
2.4.3 Explosive Gas Recovery System Modifications 2-11

Table of Contents (continued)

2.5 Water Level Monitoring and Evaluation 2-11
2.5.1 Landfill 8 2-12
2.5.2 Landfill 10 2-12
2.5.3 Leachate Collection System Modifications 2-14
2.6 Conclusions 2-14
3.0 OU5 Monthly Hydraulic Containment Monitoring 3-1
3.1 Introduction 3-1
3.2 Site Location and Description 3-2
3.3 Further Action Area A 3-2
3.4 Water Level Monitoring 3-3
3.5 Groundwater Capture Zone Analysis 3-3
3.6 Conclusions 3-5
4.0 Landfill Gas Monitoring at OU4 4-1
4.1 Introduction 4-1
4.2 OU4 Landfill Gas Monitoring Results 4-1
5.0 OU2 Semi-annual LTM Groundwater Sampling: Round 7 5-1
5.1 Introduction 5-1
5.2 Groundwater Sampling Field Procedures 5-2
5.3 Groundwater Analytical Parameters 5-3
5.4 Soil Gas Sampling Field Procedures 5-3
5.5 Analytical Results 5-4
5.5.1 Soil Gas 5-4
5.5.2 Groundwater 5-4
5.6 Discussion 5-5
5.7 Conclusions 5-8
5.8 Evaluation of Natural Attenuation Enhancements 5-9
6.0 Basewide Long-Term Monitoring 6-1

Table of Contents (continued)

6.1 Introduction 6-1
6.2 Site Location and Description 6-1
6.3 Basewide LTM Groundwater Sampling 6-1
6.3.1 Well Purging 6-2
6.3.2 Groundwater Sampling Methods 6-5
6.3.3 Sample Management 6-5
6.3.4 Sample Handling 6-6
6.3.5 Sample Containers and Preservation 6-7
6.3.6 Project Generated Wastes 6-7
6.3.7 Procedure Variances 6-7
6.4 Analytical Results 6-7
6.4.1 VOCs 6-7
6.5 Data Evaluation 6-8
7.0 Basewide Groundwater Operable Unit Evaluation 7-1
7.1 VOC Analytical Findings 7-1
7.1.1 TCE 7-1
7.1.2 PCE 7-2
7.1.3 1,2-DCA 7-2
7.1.4 1,2-DCE 7-2
7.1.5 Vinyl Chloride 7-3
7.1.6 Benzene 7-3
7.1.7 MTBE 7-3
7.1.8 Summary 7-3
7.2 Inorganic Analytical Findings 7-4
8.0 References 8-1

List of Tables

2-1 OU1 Remedial Action Groundwater Quality Monitoring Sample Handling Criteria
2-2 OU1 Extraction Well Sampling Field Parameters: July 2000
2-3 OU1 Monitoring Well Sampling Field Parameters: October 2000
2-4 OU1 Quarterly Leachate Discharge Line Sampling Program
2-5 OU1 Regulatory and Detection Limits for Chemicals of Concern: July 2000
2-6 OU1 Regulatory Detection Limits for Chemicals of Concern: October 2000
2-7 Landfill 8 Extraction Wells – Groundwater Analytical Results Summary - VOCs
2-8 Landfill 8 Extraction Wells – Groundwater Analytical Results Summary - Inorganics
2-9 Groundwater Analytical Results Summary – VOCs, Monitoring Wells – Landfill 8
2-10 Groundwater Analytical Results Summary - SVOCs, Monitoring Wells - Landfill 8
2-11 Groundwater Analytical Results Summary - Dioxins, Monitoring Wells - Landfill 8
2-12 Groundwater Analytical Results Summary - Pesticides/PCBs, Monitoring Wells - Landfill 8
2-13 Groundwater Analytical Results Summary – Inorganics, Monitoring Wells - Landfill 8
2-14 Landfill 10 Extraction Wells – Groundwater Analytical Results Summary - VOCs
2-15 Landfill 10 Extraction Wells – Groundwater Analytical Results Summary - Inorganics
2-16 Groundwater Analytical Results Summary - VOCs, Monitoring Wells - Landfill 10
2-17 Groundwater Analytical Results Summary - SVOCs, Monitoring Wells - Landfill 10
2-18 Groundwater Analytical Results Summary - Dioxins, Monitoring Wells - Landfill 10
2-19 Groundwater Analytical Results Summary - Pesticides/PCBs, Monitoring Wells - Landfill 10
2-20 Groundwater Analytical Results Summary - Inorganics, Monitoring Wells - Landfill 10
2-21 Landfill 8 Explosive Gas Monitoring Field Measurements: January through October 2000
2-22 Landfill 10 Explosive Gas Monitoring Field Measurements: January through October 2000
2-23 Landfill 8 Groundwater Level Elevations: July and November 2000
2-24 Landfill 10 Groundwater Level Elevations: July and November 2000
2-25 Landfill 10 Landfill Bottom Elevations
3-1 OU5 Monthly Water Levels for the LTM Program
3-2 OU5 Groundwater Treatment System Water Quality Analytical Results and VOCs Removed
4-1 OU4 Landfill Gas Monitoring Results: October 2000
5-1 OU2 Round 7 Groundwater Monitoring Field Parameters
5-2 OU2 Round 7 and Historical Soil Gas Analytical Results

List of Tables (continued)

5-3 OU2 Round 7 and Historical Groundwater Analytical Results
5-4 OU2 Baseline and October 2000 Groundwater Elevations
5-5 OU2 Benzene Concentrations Comparison
5-6 OU2 Free Product Recovery Volume, Well: NEA-MW21-3S
6-1 Basewide LTM Groundwater Field Parameters: October 2000
6-2 Basewide LTM October 2000 and Historic Groundwater Sampling Results: VOCs

List of Figures

1-1 Area Location Map
1-2 Wright-Patterson AFB Boundary Map
1-3 WPAFB OUs - Areas A and C
1-4 WPAFB OUs - Area B
2-1 Landfills 8 & 10 Site Vicinity
2-2 Landfill 8 Site Map
2-3 Landfill 10 Site Map
2-4 Leachate Collection System Details
2-5 Landfill 8 Detected Chemicals of Concern: July 2000
2-6 Landfill 8 Detected Organic Chemicals of Concern: October 2000
2-7 Landfill 8 Detected Inorganic Chemicals of Concern: October 2000
2-8 Landfill 10 Detected Chemicals of Concern: July 2000
2-9 Landfill 10 Detected Organic Chemicals of Concern: October 2000
2-10 Landfill 10 Detected Inorganic Chemicals of Concern: October 2000
2-11 Landfill 8 Landfill Gas Monitoring Locations
2-12 Landfill 10 Landfill Gas Monitoring Locations
2-13 LF8 Groundwater Elevation Contour Map (7/26/00)
2-14 LF8 Groundwater Elevation Contour Map (11/8/00)
2-15 Landfill 8 Groundwater Velocity Vector Plot (7/26/00)
2-16 Landfill 8 Groundwater Velocity Vector Plot (11/8/00)
2-17 LF8 Particle Tracking (7/26/00)
2-18 LF8 Particle Tracking (11/8/00)
2-19 LF10 Groundwater Elevation Contour Map (7/26/00)
2-20 LF10 Groundwater Elevation Contour Map (11/8/00)
2-21 Landfill 10 Water Level Elevation Graphs, Extraction Wells: EW-1001 and EW-1002
2-22 Landfill 10 Water Level Elevation Graphs, Extraction Wells: EW-1003 and EW-1004
2-23 Landfill 10 Water Level Elevation Graphs, Extraction Wells: EW-1006 and EW-1008
2-24 Landfill 10 Water Level Elevation Graphs, Extraction Wells: EW-1011 and EW-1012
2-25 Landfill 10 Water Level Elevation Graphs, Extraction Wells: EW-1013 and EW-1014
2-26 Landfill 10 Water Level Elevation Graphs, Extraction Wells: EW-1015 and EW-1016

List of Figures (continued)

2-27 Landfill 10 Water Level Elevation Graphs, Extraction Wells: EW-1017 and EW-1018
2-28 Landfill 10 Water Level Elevation Graphs, Extraction Wells: EW-1019 and EW-1020
2-29 Landfill 10 Water Level Elevation Graphs, Extraction Wells: EW-1022 and EW-1024
2-30 Landfill 10 Water Level Elevation Graphs, Extraction Wells: EW-1025 and EW-1026
2-31 Landfill 10 Geologic Cross-Section and Potentiometric Surface: November 2000
2-32 Landfill 8 Geologic Cross-Section and Potentiometric Surface: November 2000
3-1 Operable Unit 5
3-2 OU5 Groundwater Elevation Contours and Velocity Vectors: May 2000
3-3 OU5 Groundwater Elevation Contours and Velocity Vectors: June 2000
3-4 OU5 Groundwater Elevation Contours and Velocity Vectors: July 2000
3-5 OU5 Groundwater Elevation Contours and Velocity Vectors: August 2000
3-6 OU5 Groundwater Elevation Contours and Velocity Vectors: September 2000
3-7 OU5 Groundwater Elevation Contours and Velocity Vectors: October 2000
3-8 OU5 Particle Tracking Plot: May 2000
3-9 OU5 Particle Tracking Plot: June 2000
3-10 OU5 Particle Tracking Plot: July 2000
3-11 OU5 Particle Tracking Plot: August 2000
3-12 OU5 Particle Tracking Plot: September 2000
3-13 OU5 Particle Tracking Plot: October 2000
4-1 OU4 - Landfills 3, 4, 6 and 7
4-2 Landfill Gas Monitoring Wells: OU4
5-1 Round 7 Groundwater Monitoring Results: Benzene, OU2 Area
5-2 Round 7 Groundwater Monitoring Results: BTEX (Total), OU2 Area
5-3 Round 7 Soil Gas Monitoring Results: BTEX, OU2 Area
5-4 Round 7 Soil Gas Monitoring Results: Total Volatile Hydrocarbons, OU2 Area
5-5 Round 7 Groundwater Monitoring Results: Dissolved Oxygen, OU2 Area
5-6 Round 7 Groundwater Monitoring Results: Ferrous Iron, OU2 Area
5-7 Round 7 Groundwater Monitoring Results: Sulfate, OU2 Area
5-8 Round 7 Groundwater Monitoring Results: Nitrate, OU2 Area
5-9 OU2 Hydrocarbon Concentration Graphs, Well: 04-016-M
5-10 OU2 Hydrocarbon Concentration Graphs, Well: 04-518-M

List of Figures (continued)

5-11 OU2 Hydrocarbon Concentration Graphs, Well: NEA-MW20-2S
5-12 OU2 Hydrocarbon Concentration Graphs, Well: NEA- MW21-3S
5-13 OU2 Hydrocarbon Concentration Graphs, Well: NEA- MW26-3S
5-14 OU2 Hydrocarbon Concentration Graphs, Well: NEA- MW28-5S
5-15 OU2 Hydrocarbon Concentration Graphs, Well: OW-1
5-16 OU2 Hydrocarbon Concentration Graphs, Well: OW-2
5-17 OU2 Hydrocarbon Concentration Graphs, Well: OW-3
5-18 OU2 Hydrocarbon Concentration Graphs, Well: OW-4
5-19 OU2 Hydrocarbon Concentration Graphs, Well: P18-1
5-20 OU2 Hydrocarbon Concentration Graphs, Well: P18-2
5-21 OU2 Benzene Concentrations vs. Downgradient Distance from Well 04-517-M
5-22 OU2 Soil Vapor Hydrocarbon Concentration Graphs, Well: OU2-SV01
5-23 OU2 Soil Vapor Hydrocarbon Concentration Graphs, Well: OU2-SV02
5-24 OU2 Soil Vapor Hydrocarbon Concentration Graphs, Well: OU2-SV03
5-25 OU2 Soil Vapor Hydrocarbon Concentration Graphs, Well: OU2-SV04
5-26 OU2 Soil Vapor Hydrocarbon Concentration Graphs, Well: OU2-SV05
5-27 OU2 Soil Vapor Hydrocarbon Concentration Graphs, Well: OU2-SV06
5-28 OU2 Soil Vapor Hydrocarbon Concentration Graphs, Well: OU2-SV07
5-29 OU2 Soil Vapor Hydrocarbon Concentration Graphs, Well: OU2-SV08
5-30 OU2 Soil Vapor Hydrocarbon Concentration Graphs, Well: OU2-SV10
5-31 OU2 Soil Vapor Hydrocarbon Concentration Graphs, Well: OU2-SV09 & OU2-SV11
5-32 OU2 Soil Vapor Hydrocarbon Concentration Graphs, Well: OU2-SV12 & OU2-SV13
5-33 OU2 Soil Vapor Hydrocarbon Concentration Graphs, Well: OU2-SV14
5-34 OU2 Baseline Groundwater Level Elevation Contour Map: May 1997
5-35 OU2 Average Groundwater Elevations and Temperature
6-1 Long-Term Monitoring Well Network: VOC Analysis
6-2 Basewide Long-Term Monitoring Well Locations: OU2
6-3 Basewide Long-Term Monitoring Well Locations: OU3
6-4 Basewide Long-Term Monitoring Well Locations: OU4
6-5 Basewide Long-Term Monitoring Well Locations: OU5 Downgradient
6-6 Basewide Long-Term Monitoring Well Locations: OU8

List of Figures (continued)

6-7 Basewide Long-Term Monitoring Well Locations: OU10
6-8 Basewide Long-Term Monitoring Well Locations: CHP-4
6-9 Basewide Long-Term Monitoring Well Locations: BS5
6-10 OU2 Detected Chemicals of Concern: October 2000
6-11 OU3 Detected Chemicals of Concern: October 2000
6-12 OU4 Detected Chemicals of Concern: October 2000
6-13 OU5 Detected Chemicals of Concern: November 2000
6-14 OU8 Detected Chemicals of Concern: October 2000
6-15 OU10 Detected Chemicals of Concern: October 2000
6-16 Central Heating Plant 4 (OU10) Detected Chemicals of Concern: October 2000
6-17 Burial Site 5 Detected Chemicals of Concern: October 2000
6-18 LTM Program Graphs: Chemicals of Primary Concern, Area: BS5
6-19 LTM Program Graphs: Chemicals of Primary Concern, Area: BS5
6-20 LTM Program Graphs: Chemicals of Primary Concern, Area: OU2
6-21 LTM Program Graphs: Chemicals of Primary Concern, Area: OU3
6-22 LTM Program Graphs: Chemicals of Primary Concern, Area: OU3
6-23 LTM Program Graphs: Chemicals of Primary Concern, Area: OU3
6-24 LTM Program Graphs: Chemicals of Primary Concern, Area: OU4
6-25 LTM Program Graphs: Chemicals of Primary Concern, Area: OU4
6-26 LTM Program Graphs: Chemicals of Primary Concern, Area: OU4
6-27 LTM Program Graphs: Chemicals of Primary Concern, Area: OU4
6-28 LTM Program Graphs: Chemicals of Primary Concern, Area: OU5 (FAA-A)
6-29 LTM Program Graphs: Chemicals of Primary Concern, Area: OU5 (FAA-A)
6-30 LTM Program Graphs: Chemicals of Primary Concern, Area: OU5 (FAA-A)
6-31 LTM Program Graphs: Chemicals of Primary Concern, Area: OU5 (FAA-A)
6-32 LTM Program Graphs: Chemicals of Primary Concern, Area OU5 (FAA-A)
6-33 LTM Program Graphs: Chemicals of Primary Concern, Area OU5 (FAA-A)
6-34 LTM Program Graphs: Chemicals of Primary Concern, Area: OU8
6-35 LTM Program Graphs: Chemicals of Primary Concern, Area: OU10
6-36 LTM Program Graphs: Chemicals of Primary Concern, Area: OU10
6-37 LTM Program Graphs: Chemicals of Primary Concern, Area: OU10

List of Figures (continued)

6-38 LTM Program Graphs: Chemicals of Primary Concern, Area: OU10
6-39 LTM Program Graphs: Chemicals of Primary Concern, Area: OU10
6-40 LTM Program Graphs: Chemicals of Primary Concern, Area: OU10
6-41 LTM Program Graphs: Chemicals of Primary Concern, Area: OU10 (CHP4)
6-42 LTM Program Graphs: Chemicals of Primary Concern, Area: OU10 (CHP4)
7-1 OU4 TCE Groundwater Concentrations Isopleth Map: October 2000
7-2 Groundwater Isopleth Map for PCE, TCE, and Vinyl Chloride: November 2000, OU5 Downgradient (FAA-A)
7-3 OU10 PCE and TCE Groundwater Isopleth Map: October 2000
7-4 Central Heating Plant 4/OU10 PCE Isopleth Maps: October 2000
7-5 Central Heating Plant 4/OU10 TCE Isopleth Maps: October 2000
7-6 Burial Site 5 PCE Groundwater Concentration Isopleth Map: October 2000

List of Appendices

A Table A-1, BMP LTM Locations (EE/CA)
Table A-2, Basewide LTM Program Monitoring Well Inventory
Table A-3, OU5 Historic Groundwater Sampling Results: VOCs
B OU1 Field Data Forms
B-1 OU1 Sample Collection Forms
B-2 OU1 Water Level
B-3 OU1 Explosive Gas Monitoring Field Logs
C OU1 Chain of Custody Records and Analytical Data
C-1 OU1 Chain of Custody Records: July and October 2000
C-2 OU1 Groundwater Analytical Data: July 2000
C-3 OU1 Groundwater Analytical Data: October 2000
D OU5 Water Level Monitoring Field Logs
E OU4 Soil Gas Monitoring Field Logs
F OU2 Groundwater Purge Logs, Water Level Field Logs and Chain of Custody Records
G OU2 Groundwater and Soil Gas Analytical Data
H Basewide LTM Sample Collection Forms and Bill of Lading
I Basewide LTM Chain of Custody Records
J Basewide LTM Semiannual and Annual VOCs Analytical Data

List of Acronyms

BMP	Basewide Monitoring Plan
BS	Burial Site
BTEX	Benzene, toluene, ethylene, and xylenes
°C	Degrees Celsius
CGI	combustible gas indicator
CHP4	Central Heating Plant 4
CofC	Chain-of-Custody
COCs	Chemicals of concern
DCA	Dichloroethane
DCE	Dichloroethene
DO	Dissolved oxygen
EE/CA	Engineering Evaluation/Cost Analysis
EFDZs	Earthfill Disposal Zones
EMR	Environmental Management Restoration
EOD	Explosive ordnance disposal
EPA	Environmental Protection Agency
EW	Extraction well
FAA	Further Action Area
FPs	Field Procedures
FS	Feasibility Study
FTA	Fire Training Area
GBT	Gas barrier trench
GLTS	Gravel Lake Tank Site
GWOU	Groundwater Operable Unit
GWTS	Groundwater Treatment System
HP	Heating Plant
IRP	Installation Restoration Program
LEL	Lower explosive limit
LF	Landfill
LFG	Landfill gas
LTM	Long-term monitoring
MCLs	Maximum Contaminant Levels
ml	milliliters
µg/L	micrograms per liter
µS/cm	microSiemens per centimeter
MP	monitoring point
MS	Matrix spike
MSD	Matrix spike duplicate
MTBE	Methyl tert-butyl ether
MW	Monitoring well

List of Acronyms (continued)

NTU	Nephelometric Turbidity Unit
NEA	Northeast Area
O&M	Operation and Maintenance
ORP	Oxidation reduction potential
OSL	Off-site laboratory
OU	Operable Unit
PCB	Polychlorinated biphenyls
PCE	Tetrachloroethene
PID	Photoionization detector
POL	Petroleum, oil and lubricant
POTW	Publicly owned treatment works
ppb	Parts per billion
psi	Pounds per square inch
PT	punchbar monitoring point
PWP	Project Work Plan
QA	Quality assurance
QC	Quality control
RASP	Removal Action System Performance
RI	Remedial Investigation
ROD	Record of Decision
SCOU	Source Control Operable Unit
SIs	Site Investigations
SOW	Statement of Work
SP	Spill Site
SPMP	System Performance Monitoring Plan
STL	Severn Trent Laboratories
SVOC	Semivolatile organic compound
TCE	Trichloroethene
TVH	Total volatile hydrocarbon
USEPA	U.S. Environmental Protection Agency
µg/L	Micrograms per liter
µS/cm	Microsiemens per centimeter
VOA	volatile organic analysis
VOC	Volatile organic compound
WPAFB	Wright-Patterson Air Force Base

1.0 Introduction

This document presents a summary of the continuing field activities and monitoring results for the long-term monitoring (LTM) program at Wright-Patterson Air Force Base (WPAFB) for the May through October 2000 reporting period. Activities conducted during reporting period included quarterly monitoring in July 2000 and the quarterly, semi-annual and annual, monitoring conducted in October 2000. The following is a summary of the tasks performed:

- Continued quarterly (July 2000) and annual (October 2000) monitoring in accordance with the Record of Decision (ROD) at Landfills (LFs) 8 and 10 (Operable Unit [OU] 1);
- Continued monthly hydraulic containment monitoring at Landfill 5 (OU5);
- Continued quarterly Operation and Maintenance landfill gas monitoring at Landfills 3, 4, 6, and 7 (OU4);
- Continued semi-annual monitoring in accordance with the ROD at Spill Sites 2, 3, and 10 (OU2); and
- Continued semi-annual volatile organic compounds (VOCs) monitoring for the Basewide LTM program for groundwater removal actions (Groundwater OU).

Each chapter contains a discussion of the various tasks including: methods of data collection, variances from approved procedures based on field conditions, results of sampling, and an evaluation of the results.

Each of the above tasks are presented in a stand-alone chapter so that it can be extracted from the compendium, all groundwater monitoring tasks are ultimately evaluated together under the Groundwater Operable Unit (GWOU) for all of WPAFB (Chapter 7.0). The GWOU was established under the Basewide Monitoring Plan (BMP) to provide a comprehensive method for monitoring and evaluating the individual source areas (OUs), plume migration and the natural attenuation of contaminants.

The continuing long-term natural attenuation monitoring at OU2, originally implemented under the BMP and issued in a separate report, is now conducted under the Basewide LTM program and is included in this report.

1.1 Purpose and Objectives

The tasks of the LTM program are performed in accordance with the individual sampling programs that were previously being conducted concurrently at WPAFB. These sampling programs are summarized in the *Final Long-Term Groundwater Monitoring Report: October 1998* (IT, 1999a).

Data collected under the LTM program will form a data set to be used to evaluate the trends in the organic and inorganic chemicals of concern (COCs) in groundwater and evaluate the progress of ongoing remedial actions throughout WPAFB. Specific objectives of the LTM program are:

- Provide data to monitor past detections of inorganic COCs above the Maximum Contaminant Levels (MCLs) at WPAFB that do not appear to form congruent contaminant plumes.

- Provide data to monitor areas of WPAFB where groundwater concentrations of volatile organic compounds (VOCs) exceed MCLs.

- Provide monitoring data in accordance with the recommended action for Further Action Area-B (FAA-B) [vinyl chloride contaminated groundwater site adjacent to the drum storage facility (Building 92, Area B)] to evaluate current conditions. Sampling will be conducted annually until the pilot study conducted in October 1999 has been evaluated.

- Provide monitoring to verify the progress of ongoing remedial efforts in accordance with the RODs for OU1 and OU2.

- Provide methane monitoring at OU4 to evaluate the progress of the selected remedy in accordance with the OU4 Landfill Gas Monitoring Technical Memorandum (CH2M HILL, 1998).

- Provide monthly groundwater elevations and semi-annual groundwater quality data for monitoring downgradient of OU5 (FAA-A) to evaluate the horizontal and vertical groundwater flow and capture zones and, ultimately, the effectiveness of the extraction system.

- Provide long-term monitoring for the remainder of the GWOU.

1.2 Basewide Monitoring Program

Numerous investigations have been undertaken relative to groundwater contamination at WPAFB. Table 2-1 of the *Final BMP Engineering Evaluation/Cost Analysis* (EE/CA) (IT, 1999b) provides a synopsis of the environmental studies performed on the Base as a whole and those performed on specific OUs. Expanded discussions of the results of studies are provided in other documents, which delineate the extent of contamination at the different OUs. As such, the COC sources and likely pathways for contaminant migration are well defined.

The EE/CA was prepared for the proposed groundwater removal actions under the BMP. The EE/CA evaluated reasonable removal action alternatives for the GWOU that will provide protection of human health and environment by mitigating groundwater contamination. Based on a comparative evaluation of the alternatives presented in the EE/CA and/or ROD, the following actions were recommended:

- For Area A, FAA-A, continue current groundwater treatment, discharge to surface water, monitoring, and restrictive regulations. As part of the EE/CA, removal action objectives were identified and removal action alternatives were evaluated for FAA-A. Of the four alternatives evaluated, Alternative A4, in-situ treatment via chemical oxidation in the vicinity of Extraction Well-1 (EW-1), has the potential to significantly reduce the time necessary to achieve the remedial action objectives. Currently, a Treatability Study including a chemical oxidation pilot-test at EW-1 is being evaluated.

- For Area B, FAA-B, the results of an in-situ chemical oxidation pilot-test are being evaluated for effectiveness. If in-situ chemical oxidation is not effective, either long-term monitoring or an alternative remedial action via a ROD amendment will be implemented.

In addition to the alternatives presented for the two further action areas (FAA-A and FAA-B) presented above, long-term monitoring was recommended for other areas on Base:

- Areas with existing remedies in place (OU1 and OU2);

- Areas that exceed MCLs for organic COCs, but do not exceed the target risk range;

- Areas that exceed a cumulative cancer risk of 1×10^{-4} or a hazard index of 1 for organic COCs, but do not exceed MCLs; and

- Areas exceeding MCLs and background concentrations for inorganic COCs.

The LTM program will be conducted in these areas to: (1) confirm that the conclusions drawn in the EE/CA are valid; (2) ensure that appropriate actions can be implemented if monitoring indicates that organic COCs are migrating; and (3) confirm that the stated remedial action objectives are met.

The Baseline sampling round for the Basewide LTM was conducted in April 1998 under the BMP and is considered the GWOU baseline data set for VOCs and metals. Data from subsequent sampling rounds will be compared to the LTM baseline data to establish trends. Data from the baseline sampling event was presented in the *Final Long-Term Groundwater Monitoring Baseline Report* (IT, 1999c). The wells selected for the baseline sampling were recommended in the EE/CA but excluded the wells that were being monitored under existing sampling programs associated with remedial actions in OU1, OU2, and OU5.

1.3 WPAFB Location

WPAFB is located in southwestern Ohio between the cities of Dayton and Fairborn and occupies portions of Greene and Montgomery Counties (Figure 1-1). WPAFB is subdivided into three areas: A, B, and C. The installation was formed as a consolidation of two bases: Wright Field (Area B) and Patterson Field (Areas A and C). Area B is separated from Areas A and C by State Route 444 and the ConRail Corporation railroad tracks. Area B encompasses approximately 2,800 acres and Areas A and C encompasses approximately 5,711 acres (Figure 1-2).

1.4 WPAFB GWOU Background Information

WPAFB has grouped all confirmed or suspected sites requiring investigation and characterization in to 11 geographically based source operable units (designated OUs 1 through 11) and one groundwater operable unit (Figures 1-3 and 1-4). Groundwater, surface water, and sediment contaminants from each of the 11 OUs and groundwater contaminants that are not attributable to a known source on WPAFB were combined to form the GWOU for removal activities under the BMP. Because of groundwater movement patterns under WPAFB, contaminants from one source area may be transported through others, commingling contaminants and finally moving into remote portions of the Base. The BMP was established to evaluate this contaminant movement, assess risks posed to human health and the environment by exposure to the contaminants, and design a remedy for groundwater throughout the Base (IT, 1999b).

The GWOU is defined by three boundaries; an upper boundary consisting of the water table surface (including the vertical zone of seasonal water table fluctuations); a lower boundary where first occurrence of bedrock is at the base of the alluvial aquifer; and horizontal boundaries that are within the confines of WPAFB and areas effected by off-site migration of contaminants from WPAFB.

1.5 Organization of the LTM October 2000 Report

Monitoring procedures, results, and data evaluation of the July and October 2000 Basewide LTM program sampling are presented in the following chapters.

- Chapter 2 describes the quarterly and annual sampling conducted in accordance with the ROD for Landfills 8 and 10 (OU1). Activities conducted as part of the OU1 sampling effort include extraction well leachate sampling, monitoring well groundwater sampling, explosive gas monitoring, and hydraulic containment monitoring. Included in this section is: a summary of the sampling results; a discussion of gas explosive monitoring results; a description of hydraulic containment monitoring results; and an evaluation of the performance of the OU1 remediation system.

- Chapter 3 describes the hydraulic containment monitoring being conducted at OU5. This section presents the monthly water level elevations and provides an evaluation of the extraction system and hydraulic flow conditions at OU5.

- Chapter 4 describes the landfill gas monitoring activities at OU4 and includes a summary of the scope of work and site description/history, monitoring procedures, and monitoring results.

- Chapter 5 presents the field activities and analytical results from the semi-annual sampling conducted at OU2. Field activities at OU2 consisted of soil gas monitoring and groundwater sampling.

- Chapter 6 describes the Basewide LTM activities. Included in this section is a summary of the semi-annual sampling results, and a presentation of the groundwater monitoring results.

- Chapter 7 presents a overview of all groundwater monitoring activities currently being conducted at WPAFB, including the LTM program described above and monitoring of the natural attenuation of petroleum hydrocarbons being conducted at OU2.

- Chapter 8 provides a list of the references used throughout the document.

2.0 Quarterly and Annual Record of Decision (ROD) Sampling at Landfills 8 and 10 (OU1)

Chapter 2 presents the results of the July quarterly and October annual long-term groundwater monitoring and the quarterly explosive gas monitoring conducted in July and September 2000, for Operable Unit 1 (OU1) at WPAFB, Ohio.

2.1 Introduction

The LTM program was initiated at OU1 in accordance with the ROD for Source Control Operable Unit 1 (SCOU1) - Landfills 8 and 10 (WPAFB, 1993) and the OU1 Final Operation and Maintenance Plan (O&M Plan) (Kelchner, 1997). The information presented in this report is the result of fieldwork conducted as part of the O&M and performance monitoring.

The monitoring program includes annual and quarterly compliance sampling of groundwater, explosive gas (methane), and groundwater levels. The objective of the groundwater sampling is to confirm that contaminants have not migrated beyond the extent detected during the remedial investigations and to determine whether analytical compliance levels set forth in the ROD have been achieved. The objective of the explosive gas monitoring is to determine whether the landfill gas collection and treatment system has established a capture zone that extends outside the landfill boundaries so that migration of explosive gas beyond the landfill boundaries is prevented. The objective of monitoring groundwater levels is to evaluate effectiveness of the LFs 8 and 10 leachate extraction systems in providing hydraulic containment to prevent the migration of contamination beyond the boundaries of the landfills. Overall, data collected as part of the OU1 LTM program will form a data set to be used to evaluate the progress of the ongoing remedial efforts at OU1 and determine whether the selected remedy identified in the ROD continues to be protective of human health and the environment.

The site location and description of LFs 8 and 10 are summarized in the Long-Term Groundwater Monitoring Report: October 1998 (IT, 1999a). The landfill site vicinity is depicted in Figure 2-1. Monitoring procedures and results are presented in the sections below.

2.2 OU1 Quarterly Remedial Action Groundwater Monitoring

One quarterly and one annual OU1 sampling events were conducted during the reporting period of May 2000 through October 2000. The sampling events were conducted on July 27, and on

October 18 through 31, 2000. Quarterly water level monitoring was conducted on July 26, and November 8, 2000, respectively. The field activities discussed in the following sections were conducted in accordance with the task Statement of Work (SOW) (WPAFB, 1998) and the O&M Plan for LFs 8 and 10 (Kelchner, 1997).

Figures 2-2 and 2-3 present the locations of the extraction and monitoring wells at LFs 8 and 10, respectively. The analytical parameters and sample handling criteria for the July quarterly and October annual sampling events, are presented in Table 2-1. Only selected extraction wells were sampled in the July quarterly event. The sampling frequency and schedule for OU1 wells is defined in Table A-1 of the EE/CA (IT, 1999b), and has been provided in Appendix A. The OU1 sampling program was revised for the October 2000 sampling event per the Draft Amendment to the OU1 System Performance Monitoring Plan (IT, 2000a). Revisions to the program include the deletion of the quarterly extraction well sampling and the deletion of the extraction wells from the annual sampling programs. Additional perimeter monitoring wells have been added to the program for the annual sampling event with a subset of these wells sampled semiannually. Table A-1 in Appendix A has been revised to reflect the new monitoring well network.

The following sections describe the field activities and results of the July 2000 quarterly and October 2000 annual remedial action groundwater quality monitoring for OU1.

2.2.1 Extraction Well Sampling

Extraction wells at Landfills 8 and 10 are equipped with dedicated pneumatic pumping systems for leachate collection (Figure 2-4). Prior to water level monitoring and sampling, headspace in extraction wells were screened with a photoionization detector (PID) and a combustible gas indicator (CGI) to monitor for the presence of airborne VOCs and combustible gas. The reading on the QED® cycle totalizer was also recorded at each well. The totalizer is fitted to each pumping system and indicates the pump cycling frequency. Each cycle represents one-half gallon of water pumped from the well in the automatic mode. A cycle is registered on the totalizer each time the air supply line to the pump is pressurized and discharged. If an attempt were made to sample an extraction well by manually operating the air supply line and cycling the pump, one cycle would register on the QED® even if the well was dry and water was not pumped.

Extraction wells were sampled directly from a quick-connect adapter fitted to the discharge line. The adapter was decontaminated prior to the initial sample and also between each location.

Samples were collected in accordance with the procedures presented in Section 6.3.2 of the OU1 O&M Plan with the exception of purging one well volume prior to sampling from wells that had not cycled within 12 hours of sampling. Wells that had not cycled within the 12 hour period prior to sampling were either completely dry wells with no recharge, or were slow recharge wells. These wells did not have sufficient water volume to collect all analytical parameters and were sampled until dry. To conserve the available water from these wells, one well volume was not purged prior to sampling. For the extraction wells that produce water at frequent pumping cycles on a daily basis, well purging was not required and ample water was available for collecting sufficient sample volume. Wells EW-1003, EW-1012 and EW-1015 were not sampled during the July 2000 event because their pumps were not activating properly.

Following sampling and when sufficient water was available, the field parameters of temperature, pH, specific conductivity, dissolved oxygen (DO), and turbidity were measured using a Horiba® U-10 water quality meter. Oxidation-reduction potential (ORP) was monitored using an Orion® Model 250 portable meter. Table 2-2 presents the post-sample field parameters for the extraction wells sampled in July at LFs 8 and 10. Appendix B-1 presents the OU1 sample collection forms for the July and October 2000 sampling events.

When compared to the field parameters in groundwater from the surrounding monitoring wells sampled (Table 2-3), OU1 extraction wells have elevated DO concentrations. This condition is most likely due to the positive air displacement pumps that are used in the extraction wells. With the high-pressure air used to evacuate the pumps (90 to 120 psi) it is likely that some aeration of the water inside the pump occurs.

Purge water was containerized and transported to the leachate collection sump for discharge into the City of Fairborn publicly owned treatment works (POTW) via a sanitary sewer.

2.2.2 Groundwater Sampling Procedures: Monitoring Wells

For the October 2000 annual sampling event, OU1 groundwater monitoring wells were purged and sampled in accordance with the addendum to Field Procedure (FP) 5-6 (ES, 1990a), using the micropurge low flow-rate technique. Micropurging has been selected for sampling because the low flow rates that are required to maintain a constant dynamic water level draw water from directly within the screened interval of the well where the pump inlet is positioned. This eliminates the purging of the entire stagnant water column and, therefore, generates a minimal

amount of wastewater to be disposed. The outside casing for well LF10-MW07B had been damaged by a lawn mower and was not secure when sampled. The well casing has not yet been repaired, but the well has been locked. Repairs have been scheduled for the summer of 2001.

Monitoring wells were purged and sampled with either dedicated bladder (pneumatic) pumps or by hand bailing. Wells with insufficient water columns for dedicated pumps were hand bailed with a Teflon® bailer.

All sampling pumps used to purge the wells are 1.66 inches in diameter and 44 inches in length. Pumps are constructed of stainless steel bodies with Teflon® internal bladders. The bladder pumps in the wells were positioned in the lower portion of the screened interval and pumped at sufficiently low flow rates to maintain water levels with only minimal drawdown.

2.2.2.1 Well Purging: Micropurge Pumping Method

Prior to the commencement of monitoring well purging, the background and wellhead area at each location was screened with a PID to monitor for the presence of airborne VOCs. After VOC screening, static water levels were measured from the top of the inner casing to the nearest 0.01 foot and recorded. Micropurging was then conducted in accordance with the addendum to field procedure FP 5-6. Monitoring wells were purged with dedicated pneumatic pumps using the micropurge method to remove stagnant water in the well at the inlet to the pump prior to collecting groundwater samples. A minimum purge volume of two pump and two tubing volumes were removed from the well prior to the measurement of the first field parameters. Groundwater quality was considered representative of the surrounding geologic formation when the field parameters and the pumping water level in the well had stabilized as discussed below.

2.2.2.2 Well Purging: Bailing Method

Three monitoring wells (MW) (LF08-MW03A, LF10-MW05C and LF10-MW103) had insufficient water columns for the installation of a dedicated pumping system. These wells were bailed in accordance with FP 5-5 and Section 6.3.1 of the OU1 Final O&M Plan (Kelchner, 1997) using disposable Teflon® bailers. These wells were bailed dry and allowed to recover until sufficient water recharged the well for sampling.

2.2.2.3 Field Parameters

Purge water was monitored in the field to indicate when the groundwater was representative of the

surrounding water bearing zone. The field parameters of temperature, pH, specific conductivity, DO, and turbidity were monitored using a Horiba® U-10 water quality meter. ORP was monitored using an Orion® Model 250 portable meter. The meters were placed in a flow-through cell and measurements were collected every five minutes during purging until a set of three stabilized readings were obtained. Readings were considered stabilized when the physical and chemical parameters were within the following limits:

- pH was within ± 0.2 Standard Units
- Water temperature was consistent within ± 1 degree Celsius (°C)
- Specific conductance was consistent within ± 50 microSiemens per centimeter (µS/cm) for readings <500 µS/cm, or ± 10% for specific conductance >500 µS/cm

If turbidity in the well water still exceeded 25 Nephelometric Turbidity Units (NTUs) (FP 5-4) after the above parameters were stabilized, pumping rates were lowered to the lowest possible rate and additional water was purged until the discharge water cleared.

A well was also considered to be sufficiently purged if it went dry repeatedly during micropurging. Using the micropurge method, wells were purged and sampled at a low flow rate that maintains a constant dynamic water level without removing all the stagnant water above the screened portion of the depth interval being purged. If after continued lowering of the pumping rate to obtain a constant water level, a well still went dry it was sampled after sufficient water had recharged the well (FP 5-5). Wells that were purged dry are typically screened in material of low permeability or have only a small portion of the screen intersecting the saturated zone. In either case recharge water entering the well will be of low velocity and turbulence. Therefore, the loss of volatiles due to the cascading effect is expected to be minimal. The monitoring well purge logs for sample collection are presented in Appendix B-1 and the final parameters measured just prior to sampling are presented in Table 2-3.

Purge water was containerized, transported back to a central staging area and was disposed of by a certified treatment and disposal facility with the purge water from the Basewide LTM sampling program (Section 6.0).

2.2.3 Sample Collection and Management

Immediately after purging, groundwater samples were collected following field procedure FP 6-5 using the same dedicated pumps or bailers. The analytical laboratory provided new, certified

clean volatile organic analysis (VOA) vials (prepreserved) and poly sample containers. Sample parameters, preservation, containerization and holding time requirements are presented in Table 2-1. Quarterly samples were collected by filling the VOC vials first, then the metals container. OU1 annual samples were collected in the following order: VOCs, dioxin/furans, semi-volatile organic compounds (SVOCs), pesticides/polychlorinated biphenyls (PCBs), and inorganics. Acidified samples, with the exception of VOCs, were field checked for the correct pH by pouring a small amount of sample out of the container onto pH paper.

After collection, samples were placed on ice in a cooler and maintained at 4°C until shipment to the laboratory. Generally, samples were shipped the day of collection; however, when sampling logistics did not allow shipment on the day of collection, samples were held overnight in a secured sample cooler for shipping the next day. Samples were shipped by overnight carrier to Severn Trent Laboratory (STL) (formerly Quanterra Laboratory) located in North Canton, Ohio for analysis following methods specified in the OU1 O&M Plan (Kelchner, 1997).

2.2.4 Field Quality Control Samples

As a check on the quality of field activities (including sample collection, containerization, shipping, and handling), trip blanks, ambient blanks, and field duplicates were collected within specified frequencies following the Installation Restoration Program (IRP) Project Work Plan (PWP) for Remedial Investigation/Feasibility Study at WPAFB (ES, 1990a). The frequency with which these samples were taken, and number of such samples, are discussed below. In addition, quality assurance (QA)/quality control (QC) requirements for field analyses are also discussed below. Each extraction well is equipped with a dedicated pumping system; however, a discharge line adapter, which was decontaminated between wells (Section 2.2.1) was required to collect the sample. A rinsate sample from the decontaminated adapter was collected to monitor for cross contamination between wells.

The QA/QC program implemented in the field to ensure that valid data was obtained during sampling was performed in accordance with Section 9.0 of the Quality Assurance Project Plan, Volume 2 of the PWP (ES, 1991). The analytical QA/QC sampling protocol is summarized as follows:

QA/QC Sample Type	Frequency
Trip Blanks	1 per VOC cooler per shipping day
Field Duplicates	1 every 10 samples
Ambient Blank	1 per sampling event

Matrix Spikes (MS)	1 every 20 samples
Matrix Spike Duplicates (MSD)	1 every 20 samples

Trip blanks were collected daily and were kept with the VOC samples during handling and shipping to the laboratory.

2.2.5 Sample Management

Groundwater samples collected for the OU1 groundwater monitoring were identified, preserved, and handled in accordance with Section 4.0 of Volume 1 and FP 6-12 of Volume 2, Appendix C of the PWP (ES, 1990a). Sample identification was consistent with the numbering system presented in Section 2.4.5 of the October 1998 LTM report.

Samples were handled in accordance with procedures in Section 5.11.3 of Volume 1 and FP 6-12 of Volume 2, Appendix C of the PWP (ES, 1990a). Sample numbers, descriptions and other pertinent information were entered into field logbooks by the Field Team Leaders. In addition, Chain-of-Custody (CofC) records were completed for each sample. CofC forms contain sample team members, sample numbers, date and time of collection, container types and volumes, preservatives and analytical parameters. CofC records for the OU1 July and October 2000 sampling events are presented in Appendix C-1.

2.2.6 Leachate Discharge System Monitoring

For compliance with the conditions specified in the City of Fairborn sewer discharge permit, one sample per quarter was collected from the discharge line of the Leachate Discharge System. These samples were collected by first purging an initial amount of water from the valve-operated tap in the discharge line to clear any stagnant water within the tap. A minimum purge volume was not required as the treatment system is in continuous operation. Purged water was collected and disposed of in the treatment system sump. After clearing the stagnant water, sample containers were filled directly from the tap in the discharge line. If sufficient water remained during that discharge cycle, field parameters were measured and recorded (Table 2-3).

Samples from the leachate treatment system discharge are given a unique sample number with the following designation system: WPAFB-LF8/10-LW0x-yyyy. The “x” typically represents the quarter of the year in which the sample is being collected. However, for the July and October samples the months were substituted for the quarters (July = 07, October = 10). The “yyyy” represents the current year at the time of sampling. Therefore, the sample number for the discharge

compliance sample collected in July of 2000 is WPAFB-LF8/10-LW07-2000. Analytical parameters and sample management criteria for the OU1 treatment system POTW discharge sample are presented in Table 2-4**.**

In addition to reporting the treatment system discharge analytical data semi-annually in the April and October LTM reports, quarterly data reports are submitted to the WPAFB project manager and to the City of Fairborn Water Projects Coordinator.

2.3 OU1 ROD Quarterly and Annual Groundwater Sampling Results

The following sections present a summary of the analytical results from the July and October 2000 sampling events at LFs 8 and 10. Sample detection limits for the July and October 2000 OU1 sampling events and the COC compliance levels are presented in Tables 2-5 and 2-6, respectively. Compliance levels were establish in the *SCOU1 - Landfills 8 and 10 ROD* (WPAFB, 1993) to provide acceptable exposure levels that are protective of human health and the environment. As defined in the SCOU1 ROD, the analytical compliance levels for LFs 8 and 10 include the MCL and/or a ROD compliance level (i.e., a risk-based concentration level) for each COC. The ROD compliance levels were determined by back calculating the risk associated with the potential household use of the landfill leachate (ROD, Section I; WPAFB, 1993). When both an MCL and a ROD compliance level exist for a COC, the ROD compliance level was used for evaluation. The ROD compliance levels are typically more conservative criteria than the MCLs and are the current ROD criteria for system shut-off. If after one year of groundwater monitoring where no compliance levels are exceeded by the COCs, the leachate collection and treatment system will be shut off. The MCLs are provided in this report for information purposes.

2.3.1 Landfill 8 Analytical Results

Tables 2-7 and 2-8 present summaries of the July quarterly VOCs and inorganics analytical data, respectively for the LF8 extraction wells. In addition to the July and October 2000 sampling results, data from previous sampling events has been included on all tables for comparison. Figure 2-5 presents the concentrations of the detected VOCs and inorganics of concern for the quarterly LF8 sampling in July 2000.

Tables 2-9 through 2-13 present summaries of the annual VOCs, SVOCs, dioxins, pesticides/PCBs, and inorganics analytical data for the LF8 monitoring wells. In addition to the July and October 2000 sampling results, data from previous sampling events has been included on all tables for

comparison. Figures 2-6 and 2-7 present the October 2000 concentrations of the detected organic and inorganic COCs, respectively. Concentrations that are listed on the figures that exceeded MCLs and/or ROD compliance levels are denoted in red. Appendices C-2 and C-3 present a complete listing of the July and October analytical results, respectively.

2.3.2 Landfill 10 Analytical Results

Tables 2-14 and 2-15 present summaries of the July 2000 VOCs and total metals analytical data for the LF10 extraction wells. Tables 2-16 through 2-20 present summaries of the VOCs, SVOCs, dioxins, pesticides/PCBs, and total metals analytical data for the LF10 monitoring wells. Figure 2-8 presents the concentrations of the detected VOCs and total metals of concern for the quarterly LF10 sampling in July 2000. Figures 2-9 and 2-10 present the concentrations of the detected organic and inorganic COCs, respectively, for October 2000. Concentrations that are listed on the figures that exceeded MCLs and/or ROD compliance levels are denoted in red.

2.3.3 Leachate Collection System Effluent Sample

During the July and October 2000 sampling events, one sample was collected from the discharge line of the OU1 leachate collection system. Parameters analyzed for include VOCs, inorganics, oil and grease, total suspended solids, chemical oxygen demand, and pH. The concentrations of all compliance parameters detected were below the MCLs. Analytical results for the July and October OU1 effluent samples are presented at the end of Appendices C-2 and C-3, respectively.

2.4 OU1 Explosive Gas Monitoring

The following section presents an overview of the explosive gas monitoring effort at OU1. As described in Section 2.1, the purpose of the OU1 explosive gas monitoring is to determine the effectiveness of the landfill gas (LFG) collection system in establishing a capture zone that extends outside the landfill boundaries. The existing explosive gas monitoring probes and permanent punchbar locations are located within the surrounding Base residential property lines to monitor for potentially migrating landfill gas (Figures 2-11 and 2-12). In addition to the monitoring probes and punchbar locations, the gas barrier trench (GBT) located east of LF10 is monitored at the locations shown on Figure 2-12. The explosive gas monitoring probes, permanent punchbar testing stations, and GBT are being monitored per the ROD: quarterly for the first five years of the post-remedial action construction period and semi-annually between five years and the director's granting authorization to cease monitoring.

2.4.1 Procedures

Procedures for the explosive gas monitoring at LFs 8 and 10 are presented in the O&M Plan (Kelchner, 1997) and in the October 1998 LTM report. One exception to the procedures is that in place of the CGI as specified in the O&M Plan, a Landtec GA-90 Infrared Gas Analyzer was used for the explosive gas monitoring. The GA-90 is equipped with a built-in sampling pump that allows for drawing a sample from the explosive gas monitoring probes. Levels of methane, Lower Explosive Limit (LEL), carbon dioxide, oxygen and pressure are displayed in a digital readout.

2.4.2 Results

Explosive gas monitoring at LFs 8 and 10 points was conducted on July 24 and September 28 and 29, 2000. Results of the explosive gas monitoring for LFs 8 and 10 are presented in Tables 2-21 and 2-22, respectively. OU1 explosive gas monitoring field logs are presented in Appendix B-3. LF8 monitoring point MP13, which had been damaged for previous monitoring events, was repaired August 30, 2000 and sampled during this event.

As seen in Table 2-21, monitoring points (MP) MP010 and MP012 at LF8 had initial detections of methane/explosive gas during the July monitoring event. No methane/explosive gas detections were observed during the September event. Only the south LF10 gas barrier trench monitoring location had detection of methane/explosive gas during the past two quarters. Results of the explosive gas monitoring were presented to WPAFB/Environmental Management-Operations (EMO) for evaluation and comparison to the previous quarters.

Monitoring points WP-LF08-MP010 and MP012 have had previous methane detections. To ensure that methane was not migrating into the nearest house, the atmosphere in the laundry room at the piping inlet was monitored with a GA-90 in June 1999. A permanent methane monitor was then installed in the laundry room. To ensure that methane is not migrating into the surrounding utility lines or adjacent house, additional punchbar monitoring points (PT) have been added to the quarterly monitoring network. The additional punchbar monitoring points are shown on Figure 2-11 as WP-LF08-PT10A, -PT10B and -PT10C. Methane was not detected in the house or the adjacent punchbar locations.

The monitoring point at the south end of the LF10 GBT has had consistent historic methane detections (LF10-GBT0S). It is unknown over which portion of the GBT methane may be entering

but, at monitoring points located adjacent to the GBT, methane is generally not detected (Figure 2-12). The GBT is connected to the explosive gas recovery system.

2.4.3 Explosive Gas Recovery System Modifications

During the current reporting period no modifications to the explosive gas recovery system for LFs 8 and 10 were made.

2.5 Water Level Monitoring and Evaluation

The objective of measuring groundwater levels is to evaluate the impact of the extraction system on the water levels in the vicinity of the landfills. The *Design Package Number 1, Final (100%) Design* (IT, 1994) states that "the leachate collection system shall establish a capture zone that extends outside the landfill boundaries as determined by groundwater level measurements." In addition, the extraction well networks for each landfill were uniquely configured to accomplish the collection system objective.

Water levels were measured on July 26, and November 8, 2000 in monitoring and extraction wells at LFs 8 and 10. Measurements were recorded to the nearest 0.01-foot in accordance with FP 7-2, using electric tape water level indicators.

Figures 2-2 and 2-3 show the locations of monitoring and extraction wells that are used to observe groundwater levels at LF8 and LF10, respectively. The coordinates of the wells, their reference point, screen interval, and the water levels are provided in Tables 2-23 and 2-24 for LF8 and LF10, respectively. OU1 groundwater level monitoring logs for July and November 2000, are presented in Appendix B-2.

Groundwater contours were generated for the observed hydraulic heads using SURFER, a contouring package (Golden Software, Inc., Golden, Colorado). The contours were generated by first overlying a grid on the landfill. Hydraulic head values at the grid nodes were then computed from the measured values using linear kriging, an interpolation option in SURFER.

To show the effectiveness of the extraction system, the water levels in the observation wells and extraction wells must be measured accurately. This is not a trivial task as the water levels in the extraction wells tend to oscillate as the cycling of the installed pumps occurs. Care is taken to ensure that representative water levels are measured and pump cycling is not resulting in

erroneously short-term minimum water levels. In these wells the water level was recorded several times until the most stable reading was obtained. The pump extraction system also will be periodically evaluated and overhauled as appropriate.

2.5.1 Landfill 8

The objective of the extraction system at LF8 is to provide a capture area at the downgradient portion of the landfill (east and northeast sides) that prevents migration of the dilute leachate passing through and under LF8. As the regional groundwater flow direction in this area is from west to east, the extraction wells have been configured at the downgradient boundary of the landfill to provide the necessary capture. Figures 2-13 and 2-14 present the LF8 water level elevation and contour maps for July and November 2000, respectively. Due to the varying depths of the screened interval, not all of the measured groundwater elevations were used to develop the groundwater elevation contours. Only monitoring wells with screened intervals at the approximate elevation of the bottom of the extraction wells were contoured.

Although the regional groundwater flow is from west to east, it is altered by the presence of extraction wells that create local cones of depression. Figures 2-15 through 2-18 illustrate the zones of capture created by the LF8 extraction wells. The arrows in Figures 2-15 and 2-16 represent velocity vectors for groundwater flow in July and November 2000, respectively. The length of an arrow represents a relative groundwater velocity magnitude. The "particle tracks" in Figures 2-17 and 2-18 illustrate the potential contaminant migration paths across LF8. Particles originating along the upgradient (western) boundary of the landfill area are captured by the extraction wells along the eastern edge of the landfill. In July, particle capture is occurring along the eastern boundary of the landfill with the exception of the EW-0807 vicinity and the northernmost tip of LF8 (Figure 2-17). At its current depth setting, extraction well EW-0807 is not completely effective in providing capture. A lower placement of the extraction pump in this well is being evaluated by WPAFB. During the November monitoring event, overall water volume pumped by the system was approximately half of the normal operating capacity. As a result capture occurred only in the southern portion of the landfill (Figure 2-18).

2.5.2 Landfill 10

Landfill 10 represents a local hydrologic high where groundwater from outside the landfill does not contribute substantially to leachate generation. The objective of the extraction system at LF10 is to maintain groundwater levels below the bottom of the landfill in order to prevent water from

mixing with the landfill waste. By controlling the groundwater levels, the impact of the LF10 leachate outside the landfill is minimized.

The effectiveness of the LF10 extraction system is evaluated by comparing the elevation of the water table (Table 2-24) to the elevation of the landfill bottom at each well location (Table 2-25). The system is achieving the stated goal as long as the water table is below the landfill bottom, and thus any verification of the radius of influence for the extraction wells is not necessary. The extraction wells serve the purpose of lowering the water table rather than creating a capture zone under Landfill 10. Figures 2-19 and 2-20 show water level elevation contours generated with the influence of the extraction wells in July and November 2000, respectively. While the regional groundwater flow is north-northeast, toward the Mad River and the Buried Valley Aquifer, the hills and valleys in the OU1 area create a localized flow pattern. The Focused Remedial Investigation Report for LFs 8 and 10 (ES, 1992) identified a groundwater divide that extended through LF10 from south to north prior to capping. Groundwater movement was to the west on the west side of the divide and to the east on the east side. After the installation of the landfill cap and extraction wells, groundwater flow direction is contingent on the operation of the extraction pumps. At those extraction wells where pumping problems have occurred, high groundwater levels still occur. For example, well EW-1003 in the southern portion of LF10 has the highest groundwater level in this area for both the July and November 2000 data. This observation is consistent with the findings of previous monitoring events at LF10.

To examine the effectiveness of each extraction well, historic water level elevations and the landfill bottom elevation were compared on well hydrographs (Figures 2-21 through 2-30). Landfill bottom elevations were determined from extraction well installation notes and the drilling reference point elevations. The graphs show the fluctuations in water levels from one sampling event to another.

Figures 2-21 through 2-30 show that the majority of extraction well water levels are below the bottom of the landfill. However, as seen in the hydrograph for well EW-1003 (Figure 2-22), water levels are consistently above the bottom of the landfill indicating that this extraction well may be malfunctioning. WPAFB is currently servicing the pump in EW-1003 to restore operation.

Extraction well EW-1006 (Figure 2-23) has historic water levels fluctuated above the bottom of the landfill. Since the October 1999 well refurbishing, EW-1006 water levels were in the landfill

bottom in January 2000 but have remained below the bottom of the landfill since the April 2000 monitoring. Water levels in well EW-1016 (Figure 2-26) dropped below the landfill bottom following the well refurbishing but have steadily risen to the current level at approximately the landfill bottom. Figure 2-31 is a cross-sectional profile along the long axis of LF10 (Figure 2-3) illustrating the variable landfill bottom and November 2000 water level elevations throughout the landfill. This profile provides an indication that groundwater levels are currently being maintained below the base of the landfill with the exception of the two wells discussed above (EW-1003 and EW-1006).

2.5.3 Leachate Collection System Modifications

During the reporting period of May through the first part of November 2000, no reported system modifications were performed.

2.6 Conclusions

Water levels at LF8 and the resultant capture zone at each extraction well appear to vary seasonally with more substantial capture occurring during the dry seasons. Based on the current groundwater levels, it appears that the extraction system at LF8 is not providing adequate groundwater capture in the center portion of the landfill and that the effectiveness of system is being reduced at the remaining wells. Subsequent quarters of water level measurements will indicate if the current trend will continue. Figure 2-32 presents a north-south trending cross-section of the lithology through the eastern portion of LF8. The cross-section line is shown on Figure 2-2. From Figure 2-32 it is also apparent that capture is occurring along the northern and southern boundaries of the landfill. However, due to the landfill cap and the lack of monitoring points upgradient from the extraction wells, capture from west to east is difficult to determine. WPAFB is evaluating possible solutions to obtain capture in the center portion of LF8 and methods for improving pump efficiency by reducing the amount of silting that may be occurring in the wells. WPAFB is currently evaluating remedial alternatives to improve well performance.

At LF10 the extraction system is maintaining water levels below the landfill bottom at 14 of 16 LF10 well locations. Extraction wells EW-1003 and EW-1016, are being evaluated as to how to improve effectiveness. In addition, to improve the effectiveness of well EW-1006 in maintaining the water level below the base of the landfill, lowering of the pump in the well is being evaluated (Figure 2-31).

3.0 OU5 Monthly Hydraulic Containment Monitoring

This chapter presents the results of the hydraulic containment monitoring for OU5 at Wright-Patterson Air Force Base, Ohio during the reporting period of May through October 2000.

3.1 Introduction

The monthly hydraulic containment monitoring at OU5 was conducted in accordance with the OU5 System Performance Monitoring Plan [(SPMP) IT, 1992a] and Addendum No.1 to the SPMP (IT, 1999d). The hydraulic containment monitoring program at OU5 currently consists of monthly water level monitoring at 39 monitoring wells and extraction well EW-1. Included in the 39 monitoring wells are selected wells in the City of Dayton well clusters (MW130, MW131, MW132 and MW133). These 40 total wells are an expanded monitoring network from the original network presented in the SPMP (IT, 1992a). The objective of monitoring groundwater levels is to evaluate the effectiveness of the groundwater extraction system in containing contaminated groundwater in the vicinity of the site (i.e., maintaining a capture zone to prevent migration of contaminated groundwater beyond the Base boundaries).

The original water quality monitoring program under the SPMP included quarterly sampling of 19 OU5 monitoring wells. Under the subsequent Removal Action System Performance (RASP) monitoring program, 24 wells were sampled quarterly. Of the 24 wells monitored, VOCs were regularly either not detected or were detected significantly below the MCL in 15 wells (Tetra Tech, 1998). A summary of the historic contaminant concentrations is presented in Table A-3.

Based on these historic analytical results and that hydraulic containment of the groundwater plume is occurring, the 24 monitoring wells specified for continued sampling were reduced to nine wells. These nine wells were then presented in the EE/CA (IT, 1999b) and GWOU ROD (WPAFB, 1999). To provide a more comprehensive coverage downgradient of EW-1, monitoring wells Mad Mon 127 (HD-13D) (screened interval: 96 to 106 ft, bgs), and CW04-060 (screened interval: 50 to 60 ft, bgs) were added to the water quality monitoring well network during the April 2000 sampling event. These 11 wells are currently sampled semiannually and now comprise the LF5 groundwater quality monitoring network.

3.2 Site Location and Description

OU5, which is located in the southwest corner of Area C (Figure 3-1), is a collection of discrete sites that have or may have been used for handling or disposal of hazardous chemical materials in the past and other areas located adjacent to these sites. Discrete sites include LF5 and the LF5 Extension, Fire Training Area 1 (FTA1), the Gravel Lake Tanks Site (GLTS), and Burial Site 4 (BS4). Other areas included in OU5 are located south of LF5 to Hebble Creek, west of the WPAFB southwest boundary to Huffman Dam and north to the extension of Trout Creek, and north of FTA1 to Hebble Creek. Site background information including a summary of the types of wastes that were historically disposed of at LF5 and a synopsis of the land use in the surrounding area, is presented in the October 1998 LTM report and the OU5 Remedial Investigation (RI) Report (IT, 1995a).

The results of the groundwater level monitoring at OU5 will be used to evaluate the effectiveness of the groundwater extraction system in containing groundwater in the vicinity of the site. The hydraulic containment monitoring procedures and results conducted under the LTM program for OU5 are presented in the following sections. Long-term groundwater monitoring for OU5 is being conducted under the LTM program and is described in Chapter 6.0.

3.3 Further Action Area-A

The western boundary of OU5 has been designated Further Action Area A (FAA-A) to address the groundwater contamination in this area. An in-situ treatment test pilot study for this area was conducted from April 19 to July 13, 2000. In April 2000 one single well (TTW-01) and four well pairs (TTW-02 through TTW-05) were installed to monitor the progression of the test. The in-situ test consisted of injecting an oxidant (potassium permanganate) into wells CW05-085 and TTW-01, to oxidize chlorinated ethenes (tetrachloroethene [PCE], trichloroethene [TCE] and dichloroethene [DCE]). After the injections into each well was completed, surrounding monitoring wells were sampled for field parameters to observe the permanganate plume movement. Analytical samples were collected periodically and analyzed for VOCs, manganese, iron, acetone, 2-butanone, acetic acid, oxalic acid, and malonic acid. The last sample of the test was collected on July 13, 2000. For a complete presentation of the test please see the *Draft Report, Further Action Area-A Treatability Tests, WPAFB, Groundwater Basewide Monitoring Program* (IT, 2001a).

3.4 Water Level Monitoring

The objective of measuring groundwater levels at OU5 is to evaluate the impact of the groundwater extraction system on the water levels in the vicinity of the site. Water level measurements were taken at each well from a surveyed reference point. Wells without a dedicated sampling pump were measured from the top of the inner well casing. For wells with dedicated sampling pumps, measurements were taken from the top of the well cap at the monitoring port. Figures 3-2 through 3-7 show the monthly water level contours for the monitoring wells and extraction well EW-1 during the period of May through October 2000. Hydraulic head in a monitoring well was computed by subtracting the measured depth to water from the reference elevation for the well (Table 3-1). OU5 water level monitoring field logs are presented in Appendix D.

The groundwater contours on Figures 3-2 through 3-7 were generated for the observed hydraulic head using SURFER, a contouring package (Golden Software, Inc., Golden, Colorado). The modeling area of OU5 represented in the figures is 2,300 feet long and 2,200 feet wide. The contours were generated by first overlying the area with a 231 by 221 grid. The value of the hydraulic head at a grid node was computed from the 22 measured values by using linear kriging, an interpolation option in SURFER.

Accuracy of a water level map depends not only on the number of measured values but also on the distribution of the measuring points (monitoring wells). As seen in Figures 3-2 through 3-7, most of the wells used in monitoring groundwater levels at OU5 are located in a narrow north-south zone on the west side of the LF 5. In addition to being concentrated within the narrow zone, the monitoring wells are also clustered. Thus, in effect, the number of points used in the contouring procedure, were reduced. In spite of the distribution of the data, the water levels are reasonable considering the historic water levels and the regional groundwater flow direction. The groundwater elevation contours in the figures are representative of the general groundwater flow conditions at OU5 and indicate that there is a cone of depression created by pumping extraction well EW-1.

3.5 Groundwater Capture Zone Analysis

The main purpose of the extraction well is to maintain a capture zone to prevent migration of contaminated groundwater from the LF 5 area. The main mechanism of contaminant transport is advection, i.e., a process by which moving groundwater carries dissolved solutes. Thus understanding the groundwater flow pattern is the first step in an analysis of contaminant transport.

In an isotropic aquifer, the flow lines are perpendicular to the equipotential lines (groundwater contours).

The water level contour maps were constructed from measured values imported into Visual MODFLOW, a widely used groundwater simulation package (Waterloo Hydrogeologic, Inc., Waterloo, Ontario). The model area was discretized into 2310 columns and 220 rows, with a uniform spacing of 10 feet. In addition to the "isotropic" assumption, the aquifer is also assumed to be homogeneous within the model area. Groundwater velocity vector and particle tracking plots were generated by Visual MODFLOW. The length of a velocity vector is proportional to the actual groundwater velocity.

The velocity vectors, also shown on Figures 3-2 through 3-7, indicate that groundwater flow across the eastern portion of LF 5 is in the southwest direction. At the western boundary of LF 5, groundwater flow direction is altered by EW-1 where a capture zone is created. The influence of extraction well EW-1 on the regional flow can be evaluated by examining the flow pattern in the vicinity of the landfill. The relatively long velocity vectors and closely spaced water level contours upgradient from the extraction well indicate that EW-1 is "pulling" water from beneath the landfill.

Downgradient from EW-1 the water level contours are widely spaced and the velocity vectors are relatively short. A stagnation zone exists in this area.

The capture zone created by EW-1 can be outlined by examining the plot of the particle tracks (Figures 3-8 through 3-13). To accommodate the needs of the in-situ treatability test, EW-1 was shut off for extended periods during this reporting period. EW-1 was off initially from May 24 to July 11 for the treatability study, then again from August 16 to August 18 due to a power failure. From October 17 through October 24 the system was down for maintenance. The May 16 water level elevations are representative of normal operating conditions for EW-1 and the capture zone created. It appears that groundwater “particles” released upgradient from the central portion of LF5 are being “captured” by EW-1. However, as seen on Figure 3-8, the particles tracks along the northern and southern portions of LF5 are influenced but not captured by EW-1. The July 13, September 21 and October 13 particle tracks are similar to those in May in that capture is occurring along most of the western landfill boundary but not at the northern and southern corners. In June, EW-1 was off for the treatability study and capture was not occurring. On August 18, groundwater levels were taken during the $2^1/_2$ days when EW-1 was off (Figure 3- 11).

3.6 Conclusions

In conclusion, based on the distribution of groundwater velocity and particle tracking presented on the figures, it appears that when extraction well EW-1 has been operating consistently at approximately 545 gpm or greater over an extended period, a hydrodynamic barrier to contaminant migration is created over the majority of LF5s' western boundary. The May 2000 particle track for OU5 (Figure 3-8) represents the only time during the reporting period when these conditions were met at the time when water levels were monitored. In the southern and northern portions of LF5, EW-1 did not consistently achieve complete capture during the reporting period. In the southern area, downgradient wells CW04-060 and HD-13D (located adjacent to HD-13S) were added to the monitoring well network beginning with the April 2000 sampling event and are now sampled semiannually. These wells will be monitored as a means to observe potential contaminant migration from the southern portion of the landfill.

The lack of capture in the northern portion of the landfill is possibly a function of the intermittent operation of EW-1 during the reporting period. With the prolific aquifer in the OU5 area, sustained operation of EW-1 is needed to establish a larger area of influence. Another potential cause for the lack of capture in the northern area is the well rehabilitation that was conducted from March 31 to April 13, 2000 (IT, 2001b). The capture zone created by the April 17, 2000 water level elevations and presented in the April 2000 LTM report (IT, 2001b) is similar to the current capture zone. The rehabilitation increased the efficiency of EW-1 and subsequently reduced drawdown.

OU5 VOCs Removed

Table 3-2 presents a summary of the monthly and total quantities of VOCs removed from the extracted groundwater at LF5 by the groundwater treatment system (GWTS) between May and October 2000. The GWTS extracted and treated a total of approximately 101.6 million gallons of water during this period and removed approximately 40 pounds of the listed VOCs, 24 pounds of which were TCE. These totals were compiled by TetraTech in their monthly reports to WPAFB.

Complete system performance reports on pumping rates, system down time, repairs made and estimated volume of VOCs removed from the extracted groundwater, are compiled monthly for WPAFB by Tetra Tech and provided to the agencies. Analytical data and groundwater treatment system effectiveness is evaluated in Section 7.0

4.0 Landfill Gas Monitoring at OU4

Chapter 4 presents the results of the landfill gas monitoring at OU4.

4.1 Introduction

Landfill gas monitoring is conducted at OU4 in accordance with the *OU4 Landfill Gas Monitoring Technical Memorandum* (CH2M HILL, 1998) and the *Operation and Maintenance Plan Operable Unit 4 Landfills 3, 4, 6, and 7, and Drum Staging/Disposal Area* (CH2M Hill, 1997). This program includes quarterly monitoring of soil gas at Landfills 3, 4, 6, and 7 (OU4). The landfills are located on the southeastern boundary of Areas A and C, near the intersection of Skeel Avenue and Hebble Creek Road (Figure 4-1). The objective of this monitoring program is to evaluate the migration of landfill gas away from the landfills towards nearby structures. Data collected as part of this monitoring program is used to evaluate trends in the generation of landfill gas and to determine if a landfill gas collection system at OU4 will be necessary. Site background information including a summary of the types of wastes that were historically disposed of at OU4 and a synopsis of the land use in the surrounding area, is presented in the October 1998 LTM report (IT, 1999a).

The landfill gas monitoring network at OU4 consists of eight gas monitoring wells (LG-1, LG-2, LG-3, LG-6, LG-7, LG-8, LG-9, and LG10) that are located around the perimeters of Landfills 3, 4, 6, and 7, and locations inside Building 878 (Figure 4-2). Building 877, which has been removed, was a previous monitoring point located adjacent to monitoring point LG-10. This area is now an open lot. Landfill gas measurements were taken on July 25 and September 29, 2000. The field parameters of atmospheric pressure, methane, carbon dioxide, and oxygen, were measured using a LandTec GA-90 infrared gas analyzer. The flush-mounted surface completion for monitoring point LG-10 has been damaged with a snowplow and could not be opened for the October monitoring event. On January 17, 2001, the surface completion for LG-10 was replaced and was monitored during the January quarterly monitoring event.

4.2 OU4 Landfill Gas Monitoring Results

Results of the sampling, including well number, date, and gas concentration, are presented in Table 4-1. Methane/explosive gas was not detected at any of the OU4 monitoring points. Historically, only location LG-10 has had detected concentrations of combustible gas. Field logs for July and September 2000 are in Appendix E.

5.0 OU2 Semiannual LTM Groundwater Sampling: Round 7

This chapter presents the long-term natural attenuation monitoring results for OU2 at Wright-Patterson Air Force Base, Ohio.

5.1 Introduction

In accordance with the Record of Decision (ROD) of September 30, 1997 (WPAFB, 1997), and remedial alternative GW2a from the Final Feasibility Study (FS) for Spill Sites 2, 3, and 10 (SP2, 3 and 10, respectively) within Operable Unit 2 (OU2 FS; ES, 1996), a long-term soil gas and groundwater monitoring (LTM) program was initiated for this area. The monitoring program includes the Baseline evaluation, conducted in May 1997, and semiannual rounds of groundwater and soil gas sampling and analysis. The objectives of this monitoring program are to evaluate the effectiveness of in-situ biodegradation and natural attenuation processes on petroleum hydrocarbon contamination in soil and groundwater.

The Baseline evaluation was initiated on May 5, 1997 in accordance with the *Draft-Final, Site-Specific Work Plan Addendum No. 2* (IT, 1997a) to the *Final Site-Specific Work Plan For Remedial Design Tasks under the BMP* (IT, 1995b). Field activities for the Baseline event included one round of soil gas and groundwater sampling to provide a reference distribution of the petroleum hydrocarbons in the area (IT, 1999f). The subsequent LTM semiannual sampling rounds were conducted as follows:

- Round 1 sampling was conducted on October 20 through October 23, 1997 (IT, 1997c)
- Round 2 sampling was conducted on April 28 and 29, 1998 (IT, 1997d and 1998)
- Round 3 sampling was conducted on October 15 and 16, 1998 (IT, 1999e)
- Round 4 sampling was conducted on April 13 and 14, 1999 (IT, 2000b)
- Round 5 sampling was conducted on October 11, 1999 (IT, 2000c)
- Round 6 sampling was conducted on April 19, 20, 24 and 25, 2000 (IT, 2001b).

This chapter presents methods and results of analyses from the Round 7 soil gas and groundwater sampling event. Round 7 groundwater sampling was conducted on October 17 and 19, 2000. As determined from the groundwater analytical data from the Baseline and subsequent sampling rounds, only selected wells at OU2 comprise the ROD monitoring network. The majority of the wells selected for sampling are located in the total volatile hydrocarbon (TVH) plume identified in the OU2 FS and are screened across the water table, which historically is the zone of highest

concentration of dissolved phase hydrocarbons. Soil gas sampling was conducted on November 3, 2000.

Groundwater samples were collected during the October 2000 sampling event from the following 12 existing wells that comprise the OU2 monitoring network in the vicinity of the petroleum, oil and lubricant (POL) tank farm (IT, 1997d):

- OW-1
- OW-2
- OW-3
- OW-4
- P18-1
- P18-2
- 04-016-M
- 04-518-M
- WP-NEA-MW20-2S
- WP-NEA-MW21-3S
- WP-NEA-MW26-3S
- WP-NEA-MW28-5S

and the following downgradient wells to be sampled periodically, these wells were last sampled during the April 2000 sampling event (IT, 2001b):

- OW-6
- WP-NEA-MW25-3S

Monitoring wells locations are presented on Figure 5-1.

Monitoring well WP-NEA-MW21-3S has historically had a hydrocarbon layer of varying thickness (up to 1 foot) present on the water surface. By removing the hydrocarbon layer prior to sampling (Section 5.8), this well was added to the original eleven monitoring wells sampled in October 1998.

During the removal of the sampling pumps at the NEA-MW28 well cluster for flush-mounting in December 2000, it was discovered that the well pad monument of monitoring well NEA-MW28-5S was incorrectly labeled as being well NEA-MW28-4I, the intermediate depth well of the MW28 cluster. NEA-MW28-5S was conversely labeled as MW28-4I. Therefore, since the Baseline sampling event in April 1997, well MW28-4I has been sampled in place of well MW28-5S. After the correct wells were identified, well MW28-5S was sampled for Round 7 on December 8, 2000. This data is presented on the figures.

5.2 Groundwater Sampling Field Procedures

OU2 monitoring wells were purged and sampled using the low flow rate/low volume purging and low flow rate sampling (micropurge) method. Monitoring wells were purged and sampled using

dedicated pneumatic bladder pumps with the inlets placed within the screened interval in accordance with addendum to WPAFB FP 5-6.

Groundwater samples were analyzed in the field for natural attenuation parameters of dissolved oxygen (DO) and ferrous iron using a Horiba® U-10 Water Quality Checker and a HACH® Photometer Kit. In addition, during the purging of each monitoring well, temperature, pH, conductivity, turbidity, and oxidation-reduction potential (ORP) were measured in the field in accordance with FP 5-5 and FP 5-6. The purge water discharge was routed to a flow-through type cell fitted with the field instruments. Field measurements were recorded on groundwater purge logs (Appendix F) and are summarized in Table 5-1.

5.3 Groundwater Analytical Parameters

Groundwater samples were sent to an off-site laboratory (OSL) (Severn Trent Laboratories (STL) [formerly Quanterra Environmental Services]) and analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) using U.S. Environmental Protection Agency (USEPA) Method 8260B, nitrates (Method 353.2), and sulfate (Method 300.0A). The natural attenuation parameters of methane, ethane and ethene were analyzed using Method SOP-175 by STL. Request for Analysis/Chain-of-Custody Records for the October 2000 OU2 sampling event are presented in Appendix F.

5.4 Soil Gas Sampling Field Procedures

During the Baseline field activities, 15 permanent soil gas probes were installed throughout the POL tank farm and downgradient vicinity to monitor for hydrocarbon vapor in the vadose zone above the water table. Construction details of the soil gas probes are presented in the OU2 Baseline Sampling Results Report (IT, 1997b). Soil gas samples were collected on November 3, 2000 from 14 of the original 15 soil gas probes. Monitoring point OU2-SV05 was destroyed during summer construction activities in the POL tank farm. However, the purpose of the soil gas probes was to monitor soil vapor as a method of monitoring concentrations of soil contamination. Results from soil samples collected from the soil vapor monitoring point borings did not correlate well with the subsequent soil vapor concentrations from these points during the Baseline event. Also, the correlation between soil vapor VOC concentrations and groundwater VOC concentrations has been inconclusive. For these reasons soil vapor point OU2-SV05 will not be replaced.

Soil gas samples were collected by evacuating the soil probes with a hand operated vacuum syringe connected to the sample tubing. Varying volumes of soil gas (in milliliters), were purged from each probe prior to sampling. Purge volumes were based on probe construction data (IT, 1997b). Vapor samples were collected by fitting the syringe with a stainless steel sampling tip, extracting a sample through the sample tubing then injecting the sample into a 20 ml glass sample ampule fitted with a Teflon® lined septa. Soil gas samples were kept at ambient temperatures and packed in foam-lined shipping containers. The soil gas samples were analyzed off-site by Columbia Environmental Services for the BTEX compounds and TVH by USEPA Method 8020 (Modified). Soil gas samples were also analyzed for the natural attenuation parameters of methane, oxygen and carbon dioxide by Method 133 (Lodge, 1989) using a gas chromatograph equipped with a thermal conductivity detector.

5.5 Analytical Results

The OU2 analytical results are summarized in the following sections.

5.5.1 Soil Gas

Soil gas analytical results are summarized in Table 5-2. OSL analytical data for soil gas is presented in Appendix G. Figure 5-3 presents the distribution of the BTEX concentrations in the soil gas for Round 7 with the 1997 Baseline concentrations as background, for comparison. As seen in Figure 5-3, BTEX concentrations are centered primarily on two areas. One area is beneath and west of the POL tanks in the vicinity of SV06 and the other area is around SP10. Round 7 BTEX concentrations in the soil gas are predominantly comprised of benzene and toluene (Table 5-2).

The Round 7 TVH soil gas plume is presented in Figure 5-4 and has a similar distribution to the BTEX presented in Figure 5-3.

5.5.2 Groundwater

OSL groundwater analytical results from Round 7, prior LTM sampling rounds, and historical sampling events for OU2, are summarized in Table 5-3. Round 7 OSL groundwater analytical data is presented on Figures 5-1 and 5-2. The complete analytical results from the Round 7 sampling are presented in Appendix G.

Natural Attenuation Parameters

Concentrations of the natural attenuation parameters of DO and ferrous iron are measured in the field and are presented in Table 5-1. Concentrations of ferrous iron measured in the field were recorded either on the purge logs or in the field books. The distribution of the Round 7 DO concentrations in groundwater is presented in Figure 5-5. The distribution of ferrous iron concentrations in groundwater is presented in Figure 5-6.

OSL analytical results for sulfate and nitrate are presented in Table 5-3. The distributions of sulfate and nitrate concentrations in groundwater are presented in Figures 5-7 and 5-8, respectively. Analytical results for these parameters are presented in Appendix G.

Petroleum Hydrocarbon Compounds

Benzene concentrations ranged from below detection limits in wells NEA-MW26-3S, OW-1, OW-2, OW-3, OW-4, P18-1 and P18-2 to a maximum of 290 µg/L in well NEA-MW21-3S. As seen in Figure 5-1, benzene contamination is centered downgradient from the POL tank farm around well NEA-MW21-3S. This plume is known collectively as the POL tank farm plume.

5.6 Discussion

Groundwater

BTEX concentrations for the selected LTM monitoring wells are graphed as a function of time in Figures 5-9 through 5-20. Figure 5-10 presents two graphs of the BTEX concentrations in well 04-518-M. The top graph includes the initial concentrations of BTEX in September 1988, which includes a xylene detection of 36,000 µg/L. The bottom graph excludes the initial data to show the fluctuations of BTEX concentrations beginning in 1991 on a larger scale. Well NEA-MW26-3S is also graphed twice, the bottom graph at a larger scale (Figure 5-13), in order to distinguish the fluctuations of the lower concentrations. Figure 5-21 presents a graph showing the benzene concentrations along the length of the hydrocarbon plume in the downgradient direction during each of the seven LTM sampling events beginning with the Baseline sampling in May 1997.

In general, Round 7 groundwater concentrations of benzene and BTEX have shown significant decreases in the vicinity of SP10 (Figures 5-1 and 5-2) since the OU2 RI sampling (ES, 1995). In the POL tank farm plume, benzene and BTEX concentrations remain similar to those reported in the Baseline sampling; although the center of the plume has shifted slightly to the southwest.

Figure 5-21 is a graph showing the benzene concentrations along the length of the hydrocarbon plume in the down gradient direction. The reference point (0 feet) is at monitoring well 04-517-M located immediately up gradient of the POL tank farm plume. Benzene concentrations at this well were below the detection limit and are considered 0 µg/L for the Baseline sampling (May 1997). This is the reference point for down gradient distances and concentrations for the Baseline and Rounds 1 through 7 sampling events (October 1997, April 1998, October 1998, and April 1999, October 1999, April 2000 and October 2000, respectively). The distances between each well in the hydrocarbon plume, down gradient of well 04-517-M are as follows:

- NEA-MW20-2S = 420 feet
- NEA-MW21-3S = 860 feet
- 04-518-M = 930 feet
- OW-1 = 1130 feet
- NEA-MW28-5S = 1310 feet
- OW-3 = 1480 feet
- P18-2 = 1580 feet
- OW-4 = 1660 feet
- P18-1 = 1855 feet.

A significant reduction in benzene concentrations has been observed in the area of the SP10 plume (Figure 5-21). Benzene concentrations in the area of the POL plume have remained consistent throughout the monitoring period.

Natural Attenuation Parameters

The expected relationship between BTEX concentrations and the concentration of a particular natural attenuation parameter (electron acceptor or its reduction product) when natural attenuation is occurring, is summarized in the following table:

BTEX	Oxygen	Ferrous Iron	Sulfate	Nitrate	Manganese	Methane
High	Low	High	Low	Low	High	High
Low	High	Low	High	High	Low	Low

When comparing the BTEX concentrations in groundwater (Figure 5-2) to the concentrations of the natural attenuation parameters of dissolved oxygen (DO) (Figure

5-5) ferrous iron (Figure 5-6) sulfate (Figure 5-7) and nitrate (Figure 5-8) a correlation similar to the above table is not always present for every parameter.

Sulfate (Figure 5-7) is the only natural attenuation parameter that shows a correlation for this round of sampling. There are low concentrations in the plume area and higher concentrations outside the plume.

Comparison of natural attenuation parameters with analytical data from the 1992 timeframe indicates that contaminant concentrations and the size of the contaminant plume are decreasing with time. The 1992 model of the POL tank farm area (ES, 1996) predicted that benzene concentrations would be below the MCL in 8-9.5 years (2000-2002). After 7 years (1999) there has been a significant decrease in benzene concentrations. Table 5-5 compares the highest detected benzene concentrations from selected wells and concentrations from the last round of sampling. Benzene concentrations in the SP10 plume area have substantially decreased from the initial concentrations. Figures 5-9 through 5-20 show all wells sampled from OU2 and concentrations of BTEX compounds through time.

The original model created in 1992 predicted that benzene concentrations would be below MCLs in 8-9.5 years. Based on current concentrations, it does not appear that benzene will be below MCLs within that time frame at all locations. However, benzene concentrations in the area down gradient of where free product is encountered have exhibited a significant downward trend (Figures 5-1 and 5-2). As an example at well P18-1, benzene concentrations decreased from a high of 570 µg/l (August 1991) to less than the detection limit during the October 2000 sampling event. The model was created assuming idealized conditions to provide a conceptual model and an estimate of future contaminant concentrations in soil or groundwater. BTEX concentrations are reducing towards remediation goals.

Soil Gas

BTEX and TVH concentrations for the soil gas LTM monitoring points are graphed as a function of time in Figures 5-22 through 5-33. Soil vapor concentrations of BTEX and TVH have been below detection limits at monitoring point OU2- SV15 since the long-term monitoring at OU2 began and have not been graphed. TVH only was graphed for locations SV11, SV12 and SV13 where BTEX compounds were not detected. Point SV09 was graphed for the first time to show

the first detected BTEX compound, total xylenes, since the baseline sampling. TVH has never been detected at SV09 and therefore was not graphed.

Generally, soil gas analytical results from the October 2000 sampling event indicate an increase in concentrations of BTEX compounds (predominantly benzene and toluene) and TVH when compared to recent sampling periods.

5.7 Conclusions

Figures 5-1 and 5-2 provide a comparison of the current benzene and BTEX concentrations in groundwater to the Remedial Investigation (RI) results from 1991 and 1992 (ES, 1995). As seen in the current and RI isopleths plotted on the figures, the size and concentration of the current benzene and BTEX plumes at SP 10 have decreased from 1991-1992. During the OU2 Baseline monitoring event in May 1997, all shallow depth monitoring wells in the vicinity of OU2, including down gradient wells OW-6 and NEA-MW25-3S, were sampled (IT, 1997b).

The benzene and BTEX plumes in POL tank farm have remained approximately the same or have decreased in size slightly since the RI sampling. In addition, since the Baseline sampling BTEX concentrations within the plumes have decreased significantly. The majority of the monitoring wells in this area have remained in the OU2 monitoring program.

Figure 5-34 illustrates the groundwater flow pattern through OU2 during the October 2000 sampling event. Depth to water measurements and water level elevations are presented in Table 5-4. As seen in Figure 5-34, groundwater is flowing predominantly from northeast to southwest through OU2. Based on the interpreted groundwater flow vectors shown on Figure 5-34, monitoring wells NEA-MW25-3S, OW-6, and NEA-MW26-3S provide good downgradient definition of the hydrocarbon plumes in the OU2 area. However, with the reduction in BTEX concentrations to below detection limits at the wells in the vicinity of Spill Site 10 (SP10), the continued annual sampling of specific wells in addition to the current water quality monitoring network at OU2 is not warranted. Therefore, as was done with wells NEA-MW25-3S and OW-6 in April 2000, and NEA-MW25-1D and NEA-MW25-2I in April 2001, it is proposed that two of the 25 wells in the vicinity of OU2 that are not currently sampled semiannually, be "spot-checked" annually (April) for VOCs to monitor for any unforeseen contaminant migration. Selection of which two wells may vary from year to year. Monitoring wells NEA-MW25-3S and OW-6 could be monitored every three years if necessary.

Figure 5-35 presents a graph of the average water level elevations for the seven LTM sampling events at OU2. As seen in Figure 5-35, the water table is typically higher in the spring of the year (April). Well 04-518-M (Figure 5-10) indicates how the groundwater hydrocarbon concentrations in some wells may be influenced by the seasonal fluctuations of the water table. Comparison of the remaining graphs with Figure 5-35 does not provide a clear correlation between a high water table and increased hydrocarbon concentrations.

5.8 Evaluation of Natural Attenuation Enhancements

Monitoring well WP-NEA-MW21-3S has historically had a layer of hydrocarbon product ranging from 0.01 foot to 1.0 foot on the water surface. A disposable, hydrophobic, hydrocarbon absorbent tube (i.e., SOAKEASE™) was initially placed in well MW21-3S prior to Round 4 sampling in April 1999 to remove the hydrocarbon layer and allow sampling. This passive method using the absorbent tube replaced the belt-skimmer in June 1999. Due to an increasing hydrocarbon layer, on June 9, 2000, the SoakEase™ was permanently replaced with a Petro-trap™ hydrocarbon removal system. Sampling was conducted in the same manner, with a dedicated pneumatic submersible pump installed after the Petro-trap™ was removed and residual product was absorbed with a SoakEase™. The hydrocarbon trap is checked and emptied periodically. Between May 16 and October 16, 2000, approximately 1.74 gallons of petroleum product has been recovered from this well (Table 5-6).

Monitoring well WP-04-518-M has also had an intermittent thin layer of hydrocarbon product (up to 0.01 foot) on the water surface. This well has however, been sampled during each sampling round beginning with the Baseline event. Between sampling events this well is equipped with a hydrocarbon absorbent tube to recover any free product that may enter the well. It is replaced on an "as-needed" basis. During the May to October 2000 monitoring period the hydrocarbon layer has not been observed in the well. Since the Baseline assessment of OU2 was conducted in the spring of 1997, a measurable amount of free product has not been recovered.

6.0 Basewide Long-Term Monitoring

Chapter 6 presents the results of the long-term groundwater monitoring for the GWOU at WPAFB, Ohio. Data evaluation and conclusions are discussed in Chapter 7.

6.1 Introduction

The October 2000 sampling event consisted of: semiannual sampling of basewide groundwater wells for VOCs in BS5, OU2, OU3, OU4, OU5, OU8, and OU10. Annual sampling of basewide groundwater wells for VOCs and inorganics (metals) is conducted in April. Sampling frequencies for selected basewide monitoring wells are specified in Table A-1 (Appendix A). Further information on the LTM program, including objectives, can be obtained in the October 1998, Final Long-Term Groundwater Monitoring (LTM) report (IT, 1999a).

6.2 Site Location and Description

A summary of the source operable units included within the GWOU is provided in the EE/CA, Appendix A. Operable Units 2, 3, 4, 5, 7, 10, and 11 are located within Areas A & C of WPAFB (Figure 1-3). Operable Units 1, 6, 8, and 9 are located within Area B (Figure 1-4). A brief description of each Operable Unit (OU) is provided in the October 1998 LTM report (IT, 1999a).

As discussed in Chapter 1, the GWOU was established under the BMP to provide a comprehensive method for monitoring and evaluating the individual source areas (OUs), plume migration and the natural attenuation of contaminants. Further discussion of the BMP is provided in the October 1998 LTM report (IT, 1999a). The specific objectives of the BMP, are presented in the *Site-Specific BMP Work Plan* (IT, 1995b)

This section describes the LTM activities associated with all wells in the LTM network with the exception of wells specified in the OU1 and OU2 RODs. LTM activities at OU1 and OU2 are discussed in Chapters 2 and 5 respectively.

6.3 Basewide LTM Groundwater Sampling

Monitoring wells for the basewide LTM program were purged and sampled using the micropurge low flow-rate technique in accordance with the addendum to FP 5-6. Monitoring wells were purged and sampled with dedicated submersible bladder (pneumatic) or low flow electric (Grundfos®) pumps. The dedicated bladder pumps were either existing in the wells from prior

sampling programs or were new pumps installed during either the Baseline (April 1998) or the October 1998 sampling events. The electric pumps were existing. Table A-2 (Appendix A) presents a summary of the Basewide LTM Program well inventory.

6.3.1 Well Purging

Well purging was conducted in accordance with the following methodology.

- The background and wellhead atmosphere at each location were screened with a photoionization detector (PID) to monitor for the presence of airborne VOCs.
- After VOC screening, static water levels were measured from the top of the inner casing to the nearest 0.01 foot and recorded.

Monitoring wells were purged by the micropurge method in accordance with the addendum to FP 5-6. The micropurge method requires a minimum purge volume of two pump and two tubing volumes. Using this method, wells are purged and sampled at a low flow rate that maintains a constant dynamic water level without removing all the stagnant water above the screened portion of the depth interval being purged. Groundwater quality was considered representative of the surrounding geologic formation when the field parameters and the pumping water level in the well had stabilized as discussed below.

Purge water was monitored in the field for the field parameters of temperature, pH, specific conductivity, dissolved oxygen, and turbidity using a Horiba® U-10 water quality meter. Oxidation-reduction potential was monitored using an Orion® Model 250 portable meter. The meters were placed in a flow-through cell and measurements were collected every five minutes during purging until a set of three stabilized readings were obtained. Readings were considered stabilized when the physical and chemical parameters were within the following limits:

- pH was within ± 0.2 Standard Units
- Water temperature was consistent within ± 1 degree Celsius (°C)
- Specific conductance was consistent within ± 50 microSiemens per centimeter (μS/cm) for readings <500 μS/cm, or ± 10% for specific conductance >500 μS/cm.

If turbidity in the purged water exceeded 25 NTUs (FP 5-4) after the above parameters were stabilized, pumping rates were reduced to the lowest possible rate and additional water was purged until the discharge water cleared. In the event that a well did not produce enough water for continued pumping and went dry, the well was sampled after it had recharged sufficiently. This procedure is consistent with Section 8.4 of FP 5-5 (Well Purging-Bailing Method). Wells that were purged dry are typically screened in unconsolidated material of low permeability or have only a small portion of the screen intersecting the saturated zone. In either case, recharge water entering the well will be of low velocity and turbulence. Therefore, the loss of volatiles due to the cascading effect is expected to be minimal.

Levels of dissolved oxygen and oxidation-reduction potential will continue to be monitored for information purposes; however, they will not be included in the stabilization criteria for WPAFB groundwater sampling. The purge logs for sample collection are presented in Appendix H and the final parameters measured just prior to sampling are summarized in Table 6-1.

Purge water was containerized, transported back to a central staging area and disposed of at a certified treatment and disposal facility. The bill of lading for purge water disposal is located in Appendix H.

This semiannual groundwater sampling of the 46 Basewide monitoring wells was conducted from October 16 through November 2, 2000. Groundwater samples were analyzed for VOCs only. Monitoring well locations by management area are shown on Figures 6-1 through 6-9. Sampling frequencies for selected basewide monitoring wells are specified in Table A-1 (Appendix A). The following is a list of the wells that comprise each sampling program.

Semiannual VOC sampling (April and October):

BS5: BS5 P-1, BS5 P-2, BS5 P-3, and BS5 P-4.

OU2: NEA-MW34-2S and NEA-MW27-3l (OU10).

OU3: FTA2:MW02C, LF12:MW15A, 07-520-M, 05-DM-123S, 05-DM-1231, 05-DM-123D.

OU4: OU4-MW-02A, OU4-MW-02B, OU4-MW-04A, OU4-MW-03B, OU4-MW-03C, OU4-MW-12B, BMP-OU4-1B-60, and BMP-OU4-1C-84.

OU5: CW05-055, CW05-85, HD-11, HD-12M, HD-12S, HD-13S, MW131M (HSA-4A), MW131S (HSA-4B), MW132S (HSA-5), MAD-MON127 (HD-13D), and CW04-060.

OU8: CW03-77.

OU10: OU10-MW-03S, OU10-MW-06S, OU10-MW-06D, OU10-MW-11S, OU10-MW-11D, OU10-MW-19D, OU10-MW-21S, OU10-MW-25S, GR-333, GR-334, NEA-MW37-1D, CHP4-MW01, GR-330, and 23-578-M

Annual VOC sampling (April):

BS6: BS6 P-1 and BS6 P-2.

FAA-B: SP11-MW01, SP11-MW02, SP11-MW03, SP11-MW08, and EFDZ2-MW03.

OU8: OU8-MW-02S, P6-1, and P6-2.

OU9: EFD04-MW06 and EFD09-M575.

Annual Metals sampling (April):

OU2: 14-554-M, WP-NEA-MW01-1S, WP-NEA-MW02-2S, WP-NEA-MW20-2S, WP-NEA-MW23-2S, WP-NEA-MW24-2S, and WP-NEA-MW31-3S.

OU3: 07-520-M

OU5: CW15-055.

OU8: OU8-MW-02D and OU8-MW23D.

OU9: P4-2, EFDZ3-MW02, EFDZ3-MW03, and EFDZ8-MW01.

OU10: OU10-MW10I (Replacement for well 20-566-M), 25-582-M, 25-583-M, 25-584-M, OU10-MW03S, and OU10-MW-06S.

Table A-1 (Appendix A) contains the monitoring frequency, sampling months, analytical parameters and other sampling rationale for all groundwater and leachate sampling locations monitored under the LTM program.

6.3.2 Groundwater Sampling Methods

Immediately after purging, groundwater samples were collected following field procedure FP 6-5 using the same dedicated pumps. The OSL provided new, certified clean and prepreserved sample containers (VOA vials). Groundwater samples for VOCs analysis were collected by filling each sample container directly from the dedicated Teflon®-lined discharge tubes for each well. VOC samples were not checked for pH to preserve the zero headspace of the filled VOC vials.

After collection, samples were placed on ice in a cooler and maintained at 4°C until shipped to the OSL. Generally, samples were shipped the day of collection; however, in some cases, samples were held overnight in a secured sample cooler for shipment the next day. Samples were shipped by overnight carrier to the Severn Trent Laboratory (STL) (formerly Quanterra Laboratory) in North Canton, Ohio. Groundwater samples were analyzed for VOCs by EPA Method 8260B with the additional reporting of methyl tert-butyl ether (MTBE). EPA Method 8260 was originally specified for VOCs analysis for the Baseline Basewide Monitoring in April 1998 (IT, 1999c). However, it was determined that Method 8260 could not achieve the low detection limits required for some of the OU1 parameters and vinyl chloride. EPA Method 524.2 for drinking water, replaced Method 8260 for all VOCs analysis to achieve the lower detection limits. Using this method required the primary laboratory (Severn Trent, North Canton, Ohio) to ship samples off to an affiliate laboratory for analysis. Subsequently, Method 8260B was developed which does achieve the lower detection limits and samples can be analyzed at the primary laboratory, which has improved reporting time and cost. Method 8260B will be used for VOCs analysis for all subsequent sampling events.

6.3.3 Sample Management

Groundwater samples for OSL VOC analysis were preserved, collected, and handled in accordance with Section 4.0 of Volume 1 and FP 6-12 of Volume 2, Appendix C of the Project Work Plan (ES, 1990b). Each sample was designated with a unique sample number, which identified the location and type of sample collected. The sample number format is as follows:

- LTM – Basewide monitoring wells sampled under the Long-Term Monitoring Program.

- Sample Location Identification - Each location is identified by a unique designation. The following designators were used to show the location of each well: “OU” (Operable Unit), “LF” (Landfill), “CHP” (Central Heating Plant), “WP” (Wright-Patterson), “NEA” (Northeast Area), “EFDZ” (Earthfill Disposal Zone), “xx-0yy-M”

Phase 2, Stage 1; site No.-well No., “xx-5yy-M” Phase 2, Stage 2; site No.-well No., “CW” OU5 off-site well, “GR” US Geological Survey; “SP11” (Spill Site 11, [FAA-B]); and "FTA2" (Fire Training Area 2).

- Groundwater Sampling Event Number - An alpha-numeric code was used to identify the sampling event when the sample was collected. The following designator was used during this task: “-1000” (indicates the October 2000 sampling event under the LTM program).

- Additional designators for QA/QC use - Duplicate samples were identified with “5” preceding the sampling event designator. Matrix Spike and Matrix Spike Duplicates had “MS” and “MSD,” respectively, appended after the well number.

For example, a complete sample identification number for a groundwater sample collected from monitoring well No. 1 at Heating Plant 4 during this round of sampling would be as follows: LTM-CHP4-MW01-1000. Note that the Baseline samples collected for the Basewide LTM under the BMP project in April 1998 had the sample prefix “ROD” for Record of Decision and the suffix “GW01” representing the first sampling event under the Basewide ROD.

As a check on the quality of field activities (including sample collection, containerization, shipping, and handling), trip blanks, ambient blanks, and field duplicates were collected with specified frequencies following the PWP guidelines. The frequency with which these samples were taken, and number of such samples, are discussed in Section 2.2.4. Sampling equipment (pumps and discharge tubing) is dedicated for each well; therefore, equipment rinsate samples were not required.

6.3.4 Sample Handling

Samples were handled in accordance with procedures in Section 5.11.3 of Volume 1 and FP 6-12 of Volume 2, Appendix C of the Project Work Plan. The Field Team Leaders entered sample numbers, descriptions and other pertinent information into field logbooks. In addition, CofC records were completed for each sample. CofC records contain sample team members, sample numbers, date and time of collection, container types and volumes, preservatives and analytical parameters. CofC records for the October 2000 Basewide LTM sampling event are presented in Appendix I.

All samples were maintained under direct control of the sampling team members or Site Coordinator until custody was transferred to the overnight freight carrier. Samples were shipped in coolers sealed with custody seals to ensure against tampering.

6.3.5 Sample Containers and Preservation

VOC sample containers were provided by the OSL (STL) and consisted of (3) 40 ml VOA vials with Teflon®-lined septum caps, prepreserved with hydrochloric acid. On the days of October 19 and 20, samples were collected in unpreserved VOA vials with instructions to the OSL to preserve the samples upon receipt. All containers were labeled with the sample number, collector's initials, date and time of collection, location of sampling point and analytical parameters requested. Samples for chemical analysis were kept at approximately 4°C by placing the sample containers on ice in insulated coolers until relinquished to FEDEX®.

6.3.6 Project Generated Wastes

Wastewater generated during the investigation consisted of monitoring well purge water. Wastewater generated during the field activities was pumped into 55-gallon drums on the back of each field sampling truck. After filling, the drums then were pumped into two 750-gallon storage tanks staged in the contractors parking lot near OU4. Approximately 400 gallons of wastewater were generated during the October 2000 LTM field activities. The wastewater was transported by vacuum tank-truck to a certified treatment and disposal facility (Perma-Fix of Dayton). The WPAFB LTM purge water shipping document is included in Appendix H. Purge waters are being shipped under a waste profile previously defined by this waste stream.

6.3.7 Procedure Variances

The only variance to the task SOW was the use of the existing dedicated Grundfos® electric submersible pumps in wells GR-333, GR-334 and FTA2: MW02C in place of installing new bladder pumps. The pumps and fixtures in these wells appeared to be permanently attached and were left in-place. Groundwater purging and sampling were completed using the Grundfos® pumps in accordance with FP 5-6 Addendum.

6.4 Analytical Results

6.4.1 VOCs

The October 2000 VOCs analytical results from the Basewide LTM sampling are presented in Table 6-2 by area, along with historical groundwater analytical data for each well. Figures 6-10

through 6-17 present the detected concentrations of VOCs for each management area (concentrations exceeding MCLs are denoted in red). The October 2000 laboratory data for VOCs analysis are presented in Appendix J in "detects only" and "all data" formats. Case narrative data summaries for each sample delivery group are also presented in Appendix J.

As defined in the EE/CA, the remediation goal for organic contaminants of concern (benzene; ethylbenzene; xylenes; toluene; 1,2-DCA; 1,2-DCE; TCE; vinyl chloride; and PCE) is the MCL for each constituent. Detected concentrations exceeding the MCLs in Table 6-2 are denoted with "( )." The maximum detected concentration of TCE (73 μg/L) in October 2000 sampling was found in well CW05-085 (OU5). The maximum detected concentration of vinyl chloride (18 μg/L) was found in well MW131M (OU5). PCE was detected at a maximum detected concentration of 23 μg/L in well BS5 P-4.

6.5 Data Evaluation

The following sections discuss the analytical results from the Basewide LTM sampling for each area. For wells that have a history of VOCs above MCLs, a discussion of the historic trend in concentrations is presented. Table 6-2 presents a summary of the Basewide LTM and historic groundwater analytical data for wells that have a history of exceeding VOC MCLs. Figures 6-18 through 6-42 present graphs of the groundwater analytical data collected through November 2, 2000 for each well where chemicals of primary concern were detected. In the legend of each graph, the MCL concentration is noted for the VOCs of concern detected at that well location. A summary of the historic groundwater sampling results for the VOC contaminants of concern for the OU5 monitoring well network is presented in Table A-3 (Appendix A). The following discussion provides a general evaluation of the contaminant trends for each management area.

BS5

As seen in Figure 6-17, groundwater monitoring at BS5 is conducted at two areas. The monitoring well pair BS5 P-1 and P-2 bracket an area close to the museum runway. TCE and PCE concentrations in this area (Figure 6-18) have historically been below MCLs (5 µg/L for each) at well BS5 P-1 or have not been detected (BS5 P-2). During the October 2000 sampling event, well BS5 P-1 was dry and VOC concentrations at BS5 P-2 were not detected.

The other area of concern is at the BS5 P-3 and P-4 well cluster located approximately due south of the BS5 P-2, near the Base boundary. Historically in this area, TCE concentrations have

remained below the MCL while PCE concentrations have ranged from 20 to 33 µg/L (Figure 6-19). During the October 2000 sampling round, PCE was detected at 22 µg/L and 23 µg/L in P-3 and P-4, respectively.

OU2

As seen in Figure 6-20, TCE and total 1,2-DCE were not detected in well NEA-MW27-3I. However, the detected PCE concentration (15 µg/L) has exceeded the MCL. PCE concentrations have decreased since the April 2000 sampling event (23 µg/L), but still remained consistent with previous historic concentrations. VOCs were not detected in well NEA-MW34-2S during the October 2000 sampling round. Historically, this well has only had one VOC detection in the last eight years. TCE was detected above MCL, at 15 µg/L, in December 1992 (Figure 6-20).

OU3

For the October 2000 sampling event, all detected VOCs were below MCLs (Figures 6-21 through 6-23). Historically, both TCE and total 1,2-DCE have been detected at low concentrations in wells LF12:MW15A, 05-DM-123S-M, and 05-DM-123I-M. Only in July 1993 did the concentration of TCE at LF12:MW15A (12.11 µg/L) exceed the MCL (5 µg/L). Well 07-520-M had trace amounts of total 1,2-DCE in 1994 and 1998 and again in October 2000 (0.21 µg/L).

OU4

During the October 2000 sampling event, TCE concentrations exceeded the MCL at four of the eight monitoring locations (Figures 6-24 through 6-27). TCE concentrations exceeding the MCL ranged from 6.9 µg/L (OU4-MW-12B) to 12 µg/L (OU4-MW-02B). Historically, these same four wells (OU4-MW-02B, OU4-MW-03B, OU4-MW-03C, and OU4-MW-12B) consistently have had TCE concentrations above or near the MCL (5 µg/L). The highest concentrations of TCE were detected in 1993 in all four wells. PCE was detected above the MCL (5 µg/L) at well OU4-MW-12B (5.3 µg/L). PCE has never been detected in any of the other wells at OU4. Since 1998, total 1,2-DCE has been detected at varying concentrations ranging up to 9.7 µg/L in well OU4-MW-02A (Table 6-2). Currently, the highest concentrations of total 1,2-DCE occur in well OU4-MW-02A (7.01 µg/L) and downgradient well BMP-OU4-1B-60 (2.9 µg/L) (Figure 6-12). All detected concentrations of total 1,2-DCE at OU4 have been below the MCL of 70 µg/L.

OU5

TCE concentrations exceeded the MCL (5 µg/L) at three of the eleven OU5 sampling locations during the October 2000 sampling event (Figures 6-28 through 6-33). The TCE concentrations exceeding the MCL were detected at wells HD-11, MW132-S and CW05-085 with concentrations ranging from 22 µg/L to 73 µg/L. Historically, wells CW-05-085 and HD-11 have had the highest concentrations of TCE of the monitored OU5 wells. PCE concentrations exceeded the MCL (5 µg/L) at well HD-12S (15 µg/L). Historically, PCE has usually been detected at downgradient wells MW131-S, MW132-S and HD-12S since at least 1993 and has never been detected at any of the remaining eight monitored wells. Total 1,2-DCE has been detected consistently at concentrations below the MCL (70 µg/L) in nine wells. However, 1994 was the last time the total 1,2-DCE concentrations exceeded the MCL at well MW131-M (74 µg/L). Wells MW131-M and HD-13S exceeded the vinyl chloride MCL (2 µg/L) with concentrations of 18 µg/L and 3.5 µg/L, respectively. MW131-M has had vinyl chloride concentrations exceeding the MCL since 1996 with the highest detection, 22 µg/L, in April 1999. A historical general trend is seen in the vinyl chloride and TCE concentrations in this well. As TCE concentrations decrease, vinyl chloride concentrations increase. These trends indicate that natural attenuation may be reducing TCE to vinyl chloride, a daughter product. A treatability pilot study was conducted at the western boundary of OU5 during the reporting period and is discussed in Chapter 7.

OU8

All VOCs were below MCLs during the October 2000 sampling event (Figure 6-34) for well CW03-77. Historically, VOCs have not been detected above the MCLs since TCE in 1994.

OU10

TCE concentrations exceeded the MCL at three of the eleven sampling locations during the October 2000 sampling event (Figures 6-35 through 6-40). TCE concentrations exceeded the MCL at OU10-MW-06S (9.7 µg/L), OU10-MW-19D (5.1 µg/L), and OU10-MW-21S (8.4 µg/L). Wells OU10-MW-06S and OU10-MW-21S show TCE detections consistently above the MCL since at least 1995. PCE concentrations exceeded the MCL at four locations ranging from 5 µg/L (OU10-MW-06D) to 19 µg/L (OU10-MW-25S). Historically, PCE concentrations have exceeded the MCL consistently in wells OU10-MW-03S, OU10-MW11S, and OU10-MW-25S since 1994. All groundwater samples were analyzed for MTBE for the first time in October 2000. The only detection (0.45 µg/L) occurred at well NEA-MW37-1D (Figure 6-15).

OU10 (CHP4)

Figures 6-41 and 6-42 represent TCE and PCE results for the three OU10 (CHP4) sampling locations for the October 2000 sampling event. The MCL (5 µg/L) for TCE was exceeded at well 23-578-M with a concentration of 14 µg/L. During most of the previous sampling events since 1993, TCE has been detected at this well at concentrations over the MCL. PCE concentrations exceeded the MCL (5 µg/L) at well GR-330 (12 µg/L). This well has had PCE detected at concentrations consistently above the MCL since 1993 with the highest concentration at 43 µg/L in April 1998.

7.0 Basewide Groundwater Operable Unit Evaluation

This chapter presents a site-wide evaluation of LTM results for the October 2000 sampling event. The LTM results are compared to the concentration data collected during the RI activities (IT, 1997d) and previous LTM events. These comparisons were used to identify noticeable trends in contaminant concentrations across the site.

7.1 VOC Analytical Findings

The following discussion presents the observations of the basewide groundwater operable unit evaluation for the October 2000 LTM event. These findings are discussed by contaminant for the following organic compounds: TCE, PCE, 1,2-DCE, 1,2-DCA, vinyl chloride, benzene, toluene, ethylbenzene, xylene and methyl tert-butyl ether (MTBE). The current and early 1990s findings were compared to evaluate whether there exists:

- Discernable differences in the distribution of VOC <u>detections</u> between the two periods
- Discernable differences in distributions of VOC <u>concentrations</u> between the two periods.

7.1.1 TCE

On the Basewide scale, TCE concentrations exhibited remained consistent with the April 2000 sampling event and previous October sampling rounds (Table 6-2). The TCE degradation products of 1,2-DCE, and to a lesser extent vinyl chloride, continue to be detected at locations with TCE contamination. However, the TCE degradation product of 1,2-DCA is only detected at isolated locations.

At BS5 TCE continues to be either not detected or is intermittently detected at estimated concentrations below 1 ppb. At OU2 and OU3, TCE has either not been detected or was detected below the MCL (5 µg/L) in most samples since the 1992 and 1993 sampling events.

At OU4, OU8, and OU10, the October 2000 TCE concentrations remained consistent with the April 2000 and previous LTM sampling rounds. TCE concentrations remain above the MCL at OU10 wells MW-06S, MW-19D and MW-21S. Basewide TCE concentrations are generally decreasing from those observed in the RI sampling events.

At OU5, TCE concentrations have decreased since the April 2000 sampling event in monitoring wells MW131M (from 22 µg/L to 0.24 µg/L) and CW05-085 (from 110 µg/L to 73 µg/L). TCE concentrations in the remaining OU5 wells are consistent with previous sampling rounds. TCE concentrations remain above the MCL at wells CW05-085, HD-11, and MW132S.

At OU10/CHP4, TCE concentrations were consistent with the April 2000 levels (Table 6-2). Only well 23-578-M had a TCE concentration (14 µg/L) above the MCL. Figures 7-1 through 7-3 and 7-5 illustrate the October 2000 TCE plume locations for OU4, OU5, OU10 and OU10/CHP4, respectively. Concentrations of the TCE degradation products are discussed in the following sections.

7.1.2 PCE

The Basewide PCE concentrations for October 2000 remained consistent with the April 2000 levels (Table 6-2). The areas that continue to have PCE concentrations exceeding the MCL (5 µg/L) include BS5, OU2, OU4, OU5 and OU10. In general, PCE concentrations have been consistent since the Baseline sampling event in April 1998.

Monitoring well OU10-MW-03S was sampled for the second time during the LTM Program since being repaired and had a PCE concentration of 7.4 µg/L.

Figures 7-2, 7-3, 7-4 and 7-6 show the approximate PCE plume locations during the October 2000 sampling event for OU5, OU10, OU10/CHP4 and BS5, respectively. PCE isopleths are plotted together with TCE isopleths on Figures 7-2 and 7-3 to illustrate the downgradient degradation of PCE to TCE.

7.1.3 1,2-DCA

During the October 2000 sampling event, 1,2-DCA was only detected at OU5, in monitoring wells MAD-MON127, CW04-060 and HD-11. In these wells, the detected concentrations were below the MCL (5 µg/L). 1,2-DCA has not historically been detected in any other management area.

7.1.4 1,2-DCE

During the October 2000 sampling event, total 1,2-DCE was detected at concentrations below 1 parts per billion (ppb) at OU3 and OU8. Detected total 1,2,-DCE concentrations ranged from 0.29 µg/L to 7.01 µg/L at OU4, and from 0.89 µg/L to 29.63 µg/L at OU5 (FAA-A). All detected

concentrations were below the MCL (70 µg/L). Total 1,2-DCE was not detected in samples from other areas of the Base.

7.1.5 Vinyl Chloride

Vinyl chloride was detected in one well at OU4 (0.34 µg/L) and five wells at OU5 with concentrations ranging from 0.31 µg/L to 18 µg/L. Two of the OU5 wells (HD-13S and MW131M) had vinyl chloride concentrations that exceeded the MCL (2 µg/L). Vinyl chloride was not detected in samples from other areas of the Base. Figure 7-2 illustrates the distribution of the vinyl chloride concentrations in groundwater at OU5.

7.1.6 Benzene

During the October 2000 sampling event, benzene was detected below a concentration of 1 ppb at BS5, OU4, OU5 and OU10 (Table 6-2). All of these detected concentrations were below the MCL (5 µg/L). Benzene was not detected above 1 ppb in any other sample with the exception of the OU5 ambient blank (1.1 µg/L). A discussion on benzene and other hydrocarbon compounds detected during the OU2 October 2000 sampling event is presented in Section 5.0.

7.1.7 MTBE

Methyl tert-butyl ether (MTBE) is a colorless synthetic VOC derived from natural gas and is added to gasoline to increase octane level, boost engine performance, and ostensibly improves air quality by reducing carbon monoxide and ozone levels in the air. The October 2000 sampling event was the first time VOC samples were analyzed for MTBE. Only one well, NEA-MW37-1D (OU10), had a detected concentration of MTBE (0.45 µg/L). An MCL for MTBE has not been established.

7.1.8 Summary

The analytical results from the October 2000 LTM sampling event indicate that in general, the VOC concentrations in groundwater have remained consistent with previous sampling events since the Baseline in April 1998.

OU5

The historic and current analytical data presented in Table 6-2 indicate the near steady state PCE and TCE concentrations in well MW132S since 1992. In November 1992, the combined total of PCE and TCE concentrations in MW132S was 45 µg/L. In November 2000, the

total concentration of PCE and TCE was 34 µg/L, slightly down from the total in April 2000 (42 µg/L). Concentrations of TCE in the wells CW05-055, CW05-085, HD-11, MW131S and MW131M decreased steadily after the GWTS was initially placed in operation in December 1991. After the first few years of GWTS operation, TCE concentrations in these wells reached relatively constant levels. These levels have remained approximately the same for the past several years with some anomalies (Table 6-2). PCE concentrations in wells HD-12S and MW131S have also decreased and stabilized at approximately the same rate as TCE, but from lower initial concentrations.

FAA-A Treatability Test

On May 31, and June 19 and 20, 2000, OU5 monitoring wells CW05-085 and TTW-01, respectively, were injected with potassium permanganate for a treatability study. Potassium permanganate has been demonstrated to effectively oxidize chlorinated ethenes (such as TCE) in several full-scale implementations. The purpose of the test was to determine the design parameters for in-situ oxidation of VOCs as the final remediation of groundwater in this area. The study and results are currently presented in the Draft Treatability Study Report, Further Action Area A (IT, 2001a).

7.2 Inorganic Analytical Findings

Basewide LTM sampling for annual inorganic analysis is conducted in April.

8.0 References

CH2M HILL, 1997, Operation and Maintenance Plan Landfills 3, 4, 6, and 7, and Drum Staging / Disposal Area, Wright-Patterson Air Force Base, Ohio, April.

CH2M HILL, 1998, OU-4 Landfill Gas Monitoring Technical Memorandum, Wright-Patterson Air Force Base, Ohio, June.

Engineering Science, Inc., (ES), 1990, Installation Restoration Program (IRP), Project Work Plan for Remedial Investigations and Feasibility Studies at Wright-Patterson Air Force Base, Ohio, as amended through April 1992. (Field Procedures (FP) 5-6 Addendum 1998).

Engineering Science, Inc., (ES), 1991, Quality Assurance Project Plan, Volume 2 of the Project Work Plan, Wright-Patterson Air Force Base, Ohio.

Engineering Science, Inc., (ES), 1992, Installation Restoration Program Focused Remedial Investigation Report for Landfills 8 and 10 at Wright-Patterson Air Force Base, Ohio, March 1992.

Engineering Science, Inc., (ES), 1995, Installation Restoration Program Final Remedial Investigation Report for Operable Unit 2 at Wright-Patterson Air Force Base, Ohio, August 1995.

Engineering Science, Inc., (ES), 1996, Final Feasibility Study for Spill Sites 2, 3, and 10 Within Operable Unit 2 at Wright-Patterson Air Force Base, Ohio, Parsons Engineering Science, Oak Ridge, TN.

IT Corporation (IT) 1992, OU5 System Performance Monitoring Plan, Wright-Patterson Air Force Base, April.

IT Corporation (IT), 1994, Design Package Number 1, Final (100%) Design, Landfills 8 and 10 Source Control Operable Unit, Three Systems Design, Wright-Patterson Air Force Base, Ohio.

IT Corporation (IT), 1995a, Installation Restoration Program Final Remedial Investigation Report Operable Unit 5, Wright-Patterson Air Force Base, August.

IT Corporation (IT), 1995b, Final Site-Specific Work Plan For Remedial Design Tasks, Basewide Monitoring Program, Wright-Patterson Air Force Base, Ohio.

IT Corporation (IT), 1997a, Draft-Final Site-Specific Work Plan Addendum No. 2 To the Site-Specific Work Plan For Design Tasks, Basewide Monitoring Program, Wright-Patterson Air Force Base, Ohio.

IT Corporation (IT), 1997b, Draft OU2 Baseline Sampling Results Report, Basewide Monitoring Program, Wright-Patterson Air Force Base, Ohio.

IT Corporation (IT), 1997c, Final OU2 Long-Term Monitoring Round 1 Sampling Results Report, Basewide Monitoring Program, Wright-Patterson Air Force Base, Ohio.

IT Corporation (IT), 1997d, Data Evaluation and Sampling Recommendation Letter to Ms. Kim Ehret, Project Manager, 88 ABW/EMR, Basewide Monitoring Program, Wright-Patterson Air Force Base, Ohio.

IT Corporation (IT), 1998, Final OU2 Long-Term Monitoring Round 2 Sampling Results Report, Basewide Monitoring Program, Wright-Patterson Air Force Base, Ohio.

IT Corporation (IT), 1999a, Final Long-Term Groundwater Monitoring report: October 1998, Long-Term Monitoring Program, Wright-Patterson Air Force Base, Ohio.

IT Corporation (IT), 1999b, Final Engineering Evaluation/Cost Analysis (EE/CA) Groundwater Basewide Monitoring Program, Wright-Patterson Air Force Base. Evaluation of Remedies for Groundwater Operable Unit, Wright-Patterson Air Force Base, Ohio.

IT Corporation (IT), 1999c, Final Long-Term Groundwater Monitoring Baseline Report, Basewide Monitoring Program, Wright-Patterson Air Force Base, Ohio.

IT Corporation (IT), 1999d, Final Addendum No. 1 to the Landfill 5 System Performance Monitoring Plan, Basewide Monitoring Program, Wright-Patterson Air Force Base, Ohio.

IT Corporation (IT), 1999e, Final OU2 Long-Term Monitoring Round 3 Sampling Results Report, Basewide Monitoring Program, Wright-Patterson Air Force Base, Ohio.

IT Corporation (IT), 1999f, Final OU2 Baseline Sampling Results Report, Basewide Monitoring Program, Wright-Patterson Air Force Base, Ohio.

IT Corporation (IT), 2000a, Draft Amendment to the OU1 System Performance Monitoring Plan, Long-Term Monitoring Program, Wright-Patterson Air Force Base, Ohio.

IT Corporation (IT), 2000b, Final Long-Term Groundwater Monitoring Report: April 1999, Basewide Monitoring Program, Wright-Patterson Air Force Base, Ohio.

IT Corporation (IT), 2000c, Draft Long-Term Monitoring Report: October 1999, Long-Term Monitoring Program, Wright-Patterson Air Force Base, Ohio.

IT Corporation (IT), 2001a, Draft Report, Further Action Area-A Treatability Tests, WPAFB, Groundwater Basewide Monitoring Program, Wright-Patterson Air Force Base, Ohio, January 31, 2001.

IT Corporation (IT), 2001b, Draft Long-Term Monitoring Report: April 2000, Long-Term Monitoring Program, Wright-Patterson Air Force Base, Ohio, January 16, 2001.

Kelchner Environmental, Inc. (Kelchner), 1997, OU1 Final Operations and Maintenance Plan - Part 4.

Lodge, J.P., Jr., Ed., 1989, "Methods of Air Sampling and Analysis."

Tetra Tech, Inc., 1998, Draft Final Removal Action System Performance Report, No. 27, April-September 1998, Landfill 5 Groundwater Treatment System, Volume 1 of 2.

Wright-Patterson Air Force Base (WPAFB), 1993, Record of Decision, Source Control Operable Unit - Landfills 8 and 10, Wright-Patterson Air Force Base, Greene County, Ohio.

Wright-Patterson Air Force Base (WPAFB), 1997, Draft Record of Decision for Spill Sites 2, 3, and 10 (Operable Unit 2), Wright-Patterson Air Force Base, Ohio.

Wright-Patterson Air Force Base (WPAFB), 1998, Statement of Work for the Long-Term Monitoring (LTM) Program; Contract No.: F33601-96-D-W006/5031.

Wright-Patterson Air Force Base (WPAFB), 1999, Record of Decision, Groundwater Operable Unit, Groundwater Basewide Monitoring Program, Wright-Patterson Air Force Base, Ohio.

Table 2-1

OU1 Remedial Action Groundwater Quality Monitoring
Sample Handling Criteria
Wright-Patterson AFB, Ohio

Parameter	Analytical Method[1]	Sampling Frequency	Container	Sample Preservative	Holding Time
Volatiles	EPA 8260B	Quarterly	Three x 40-ml glass vials, no headspace, teflon-lined septum cap	HCl to pH ≤ 2 using 4 drops HCl prior to sampling; Store @ 4°C	Analyze within 14 days
Metals	EPA 200	Quarterly	One 1 liter polyethylene bottle	HNO_3 to pH ≤ 2 Store @ 4°C Field-filter (FP 6-8)	6 months
Semi-Volatiles		Annually	Two x 1 amber glass container, Teflon-lined cap	Store @ 4°C	Extract within 7 days; analyze within 40 days after extraction
Dioxin/Furans		Annually	Two x 1 liter amber glass bottle, Teflon-lined cap	Store @ 4°C	Extract within 1 year; analyze within 90 days after extraction
Pest/PCBs		Annually	One x 1 liter amber	Field-filter (FP 6-8) Store @ 4°C	Extract within 14 days; 40 days to analyze
Ammonia		Annually	One x 500 ml poly	H_2SO_4 to pH ≤ 12 Store @ 4°C	Analyze within 28 days
Cyanide		Annually	One x 500 ml poly	NaOH to pH > 12 Store @ 4°C	Analyze within 14 days
Extra Extractable		Annually	One x 1 liter amber	Store @ 4°C	

[1] Analytical methods per OU1 Final Operations and Maintenance Plan or similar – Part 4, Kelchner, 1997.

Table 2-2
OU1 Extraction Well Sampling
Field Parameters: July 2000
LTM Program
Wright-Patterson AFB, Ohio

Well Number	Date Sampled	Static Water Level (ft, TOC)	pH (SU)	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp. (C°)	ORP (RmV)
Landfill 8								
EW-0803	7/27/00	43.11	7.84	1.22	90	13.49	21.4	-154.1
EW-0807	7/27/00	31.67	7.69	2.09	>999	12.67	20.9	165.1
EW-0812	7/27/00	37.31	6.69	2.38	335	13.18	21.0	1.5
EW-0816	7/27/00	27.91	6.39	2.72	494	10.39	27.1	2.5
Landfill 10								
EW-1001	7/27/00	BTP	6.02	1.82	7.49	8.7	25.4	14.2
EW-1003	7/27/00	19.57	Well would not produce water, no sample collected				- -	- -
EW-1006*	7/27/00	28.94	6.8	3.3	121	12.28	19.2	-138.9
EW-1008	7/27/00	NA	DRY	- -	- -	- -	- -	- -
EW-1012	7/27/00	29.28	Well would not produce water, no sample collected				- -	- -
EW-1015	7/27/00	49.10	Well would not produce water, no sample collected				- -	- -
EW-1019	7/27/00	NA	DRY	- -	- -	- -	- -	- -
EW-1020	7/27/00	NA	DRY	- -	- -	- -	- -	- -
EW-1024	7/27/00	34.77	6.61	1.33	100	11.61	20	-262.7
EW-1025	7/27/00	NA	DRY	- -	- -	- -	- -	- -
LF8/10-LW07-2000	7/28/00	- -	7.55	2.05	30.0	9.46	21.3	208.2

BTP - Below top of pump
DO - Dissolved Oxygen
NA - Not available, insufficient water.
ORP - Oxygen Reduction Potential
RmV - Relative millivolts
ft, TOC - feet, Top of Casing
NTU - Nephelometric turbidity units
* - Well 1006 was sampled to replace dry well 1008
Well would not produce water, no sample collected - Sufficient water in well, however, pump not activating properly.

Table 2-3
OU1 Monitoring Well Sampling
Field Parameters: October 2000
Wright-Patterson AFB, Ohio
Page 1 of 4

Well Number	Date Sampled	Static Water Level (ft, TOC)	Temp. (C°)	pH (SU)	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mv)	DO (mg/L)	Well Went Dry (Y/N)
Landfill 8									
LF08-MW02A	10/12/99	5.81	13.2	6.81	1.53	18	-48.5	8.21	N
	10/23/00	5.58	14.2	7.52	1.20	0	-190.7	0.52	N
LF08-MW02C	10/12/99	12.96	14.7	7.15	0.933	20	-42.8	5.96	N
	10/13/00	13.05	14.3	7.28	1.05	3	129.5	2.51	N
LF08-MW05B	11/2/00	20.67	14.8	7.67	1.00	0	52.7	6.79	N
LF08-MW08A	10/24/00	6.00	14.0	7.43	0.722	7	-116.1	0.09	N
LF08-MW08B	10/24/00	5.00	14.9	7.43	0.721	0	-95.0	0.79	N
LF08-MW08C	10/24/2000^^	7.73	16.2	7.32	0.92	6	169.6	10.19	Y
LF08-MW09A	10/12/99	17.32	15.0	7.41	0.813	7	157.2	4.67	N
	10/23/00	15.36	14.3	7.15	0.425	0	141.8	7.46	N
LF08-MW09B	10/12/99	15.07	13.6	6.95	1.12	23	157.9	2.54	N
	10/23/00	14.60	14.8	6.54	0.605	0	147.3	2.50	N
LF08-MW10A	10/12/99	26.42	15.7	7.19	0.762	2	-189.0	1.58	N
	10/25/00	27.76	13.7	6.83	0.428	1	-144.4	0.62	N
LF08-MW10B	10/18/99	24.11	14.0	6.72	1.81	0	-29.1	1.18	N
	10/25/00	25.20	14.0	6.26	1.60	24	-22.4	0.99	N
LF08-MW10C	10/20/1999^	23.22	12.1	6.68	1.86	140	67.8	8.90	N
	10/25/00	DRY	No samples collected						Y
LF08-MW101	10/20/1999*	33.46	13.2	7.41	0.484	off scale	NR	ERR	Y
	10/24/00	34.60	14.0	6.99	0.219	14	-166.1	0.23	N

Table 2-3
OU1 Monitoring Well Sampling
Field Parameters: October 2000
Wright-Patterson AFB, Ohio
Page 2 of 4

Well Number	Date Sampled	Static Water Level (ft, TOC)	Temp. (C°)	pH (SU)	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mv)	DO (mg/L)	Well Went Dry (Y/N)
LF08-MW102	10/19/99	39.50	13.5	6.88	0.404	21	-122.5	ERR	N
	10/18/00	37.94	11.0	7.44	0.726	1	-77.2	6.29	N
LF08-MW103	10/19/99	35.93	13.8	7.05	0.505	4	-154.4	ERR	N
	10/24/00	37.35	14.7	6.98	0.274	4	-123.3	1.87	N
02-DM-81S-M	10/27/00	29.98	13.0	11.31	4.48	10	-128.9	4.50	N
02-DM-81D-M	10/30/00	30.29	15.2	7.32	0.845	48	-91.9	1.80	N
02-DM-82-M	10/30/00	12.58	11.7	7.30	0.80	5	-101.6	1.57	N
02-DM-83S-M	10/31/00	20.40	15.2	6.34	1.55	495	32.8	3.15	N
02-DM-83D-M	10/31/00	17.00	14.1	6.61	0.439	0	285.4	0.37	N
02-DM-84-M	10/27/00	22.90	14.0	6.21	0.815	10	-108.1	0.75	N
Landfill 10									
LF10-MW03A	10/26/00	92.30	16.2	7.53	0.949	78	25.5	12.63	Y
LF10-MW05B	10/12/99	20.41	11.7	7.05	0.553	0	15.0	ERR	N
	10/25/00	20.51	13.0	7.03	0.792	0	-84.0	0.47	N
LF10-MW05C	10/12/99	10.90	(Went dry but some samples collected on 10-14-99)**						Y
	10/25/00	10.28	14.5	6.75	1.18	84	-89.5	12.09	N
LF10-MW06A	10/12/99	72.10	15.1	7.26	0.478	0	37.7	7.76	N
	10/25/00	72.10	13.9	7.20	0.691	0	-50.1	6.71	N
LF10-MW6A-DUP***	10/25/00	67.07	No samples collected						Y

Table 2-3
OU1 Monitoring Well Sampling
Field Parameters: October 2000
Wright-Patterson AFB, Ohio
Page 3 of 4

Well Number	Date Sampled	Static Water Level (ft, TOC)	Temp. (C°)	pH (SU)	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mv)	DO (mg/L)	Well Went Dry (Y/N)
LF10-MW06B	10/12/99	36.00	22.3	7.07	0.59	0	-18.0	2.11	N
	10/25/00	34.95	14.0	7.00	0.832	0	-97.3	0.63	Y
LF10-MW07A	10/26/00	53.30	13.1	7.27	0.885	0	-198.2	0.21	N
LF10-MW07B	10/26/00	DRY	No samples collected						Y
LF10-MW07C	10/26/2000^^	17.02	15.3	6.37	1.45	off scale	72.8	9.52	Y
LF10-MW08A-2	10/13/99	68.13	16.4	7.12	0.636	15	-72.3	ERR	N
	10/18/00	67.16	12.6	6.75	0.553	22	-84.2	0.60	N
LF10-MW08B	10/13/99	DRY	No samples collected						Y
	10/26/00	10.14	16.3	6.59	2.03	6	-38.6	0.48	N
LF10-MW09A	10/18/99	51.76	12.3	7.43	0.603	0	-20.5	0.79	N
	10/30/00	51.58	12.5	7.35	0.755	0	-167.6	0.28	N
LF10-MW09B	10/18/99	51.05	11.7	7.06	1.29	0	-108.7	1.42	N
	10/26/00	50.89	13.4	7.02	1.25	0	-175.1	1.23	N
LF10-MW09C	10/18/99	36.65	12.6	7.18	1.14	6	-89.1	2.29	N
	10/30/00	36.68	12.0	7.10	1.15	1	-165.1	1.53	N
LF10-MW10C	10/30/00	50.29	14.1	6.66	0.529	22	-31.1	0.81	N
LF10-MW11A	10/14/99	30.56	12.6	7.51	0.608	9	-72.2	3.47	N
	10/30/00	33.40	10.8	6.81	0.413	0	-106.2	0.76	N
LF10-MW11B	10/14/99	27.95	13.1	7.58	1.00	18	-73.3	1.26	N
	10/30/00	30.40	11.8	6.66	0.641	11	-90.6	1.86	N

Table 2-3
OU1 Monitoring Well Sampling
Field Parameters: October 2000
Wright-Patterson AFB, Ohio
Page 4 of 4

Well Number	Date Sampled	Static Water Level (ft, TOC)	Temp. (C°)	pH (SU)	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mv)	DO (mg/L)	Well Went Dry (Y/N)
LF10-MW102	10/18/99	62.34	Went dry - but some samples collected						Y
	10/25/00	64.78	No samples collected						Y
LF10-MW103	10/19/1999*	32.81	13.9	6.40	1.36	455	-49.6	ERR	Y
	10/26/00	36.60	16.7	6.27	1.70	6	-89.7	0.64	Y
LF10-MW104	10/18/99	DRY	No samples collected						Y
	10/25/00	DRY	No samples collected						Y
LF10-MW105	10/14/99	46.58	13.2	7.62	0.413	19	197.3	1.22	Y
	10/26/00	48.36	12.4	7.10	0.368	2	164.5	1.30	Y
01-DM-102S-M	10/30/00	26.03	No samples collected						Y
01-DM-102D-M	10/31/00	48.27	13.5	7.97	0.931	42	89.1	2.35	N
01-004-M	10/27/00	46.82	16.4	7.24	0.884	643	31.5	6.24	N
LF8/10-LW07-2000	7/28/00	NA	21.3	7.55	2.05	30	208.2	9.46	N
LF8/10-LW10-2000	10/31/00	NA	13.0	6.35	1.90	104	-6.8	8.00	N

BTP - Below top of pump
DO - Dissolved Oxygen
NA - Not applicable
NR - No reading
ORP - Oxygen Reduction Potential
ERR - equipment error

^ - Only ending parameters taken
^^ - Parameters taken before well went dry. Well allowed to recover for few hours and then sampled later that day.
* - Parameters taken one day earlier
** - After well was allowed to recharge, some samples were taken. However, there was not enough water for complete sample analysis or field parameters.
*** - Well LF10-MW06A-DUP is a separate well

Table 2-4

OU1 Quarterly Leachate Discharge Line Sampling Program Wright-Patterson AFB, Ohio

Parameter	Analytical Method	Container	Preservative	Holding Time
Volatile Organics 1,2-Dichloroethene Benzene Methylene Chloride Toluene	EPA 8260B[(a)]	Three 40-ml glass vials, no headspace, Teflon-lined septum cap	HCl to pH $\leq$ 2, using drops HCl prior to sampling, store @ 4°C.	Within 14 days
Metals (total) Arsenic Cadmium Chromium Copper Lead Mercury Molybdenum Nickel Selenium Zinc	EPA 200.7[(b)]	One 1 liter polyethylene bottle	HNO_3 to pH $\leq$ 2, store @ 4°C.	6 months
Oil and Grease	EPA 413.1[(b)]	One 1 liter amber glass	H_2SO_4 to pH $\leq$ 2, store @ 4°C.	28 days
Total Suspended Solids	EPA 160.2[(b)]	One 250-ml polyethylene	Store @ 4°C.	7 days
Chemical oxygen Demand	EPA 410.1[(b)]	One 250-ml poly or polyethylene	H_2SO_4 to pH $\leq$ 2, store @ 4°C.	28 days
pH	EPA 150.1[(b)]	One 25-ml glass or polyethylene	None Required	Analyze immediately
Total Flow and Daily Flow	N/A	Field reading from totalizing flow meter and strip chart recorded	N/A	N/A

(a) "Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater," 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions

(b) "Methods for Chemical Analysis of Water and Wastes," EPA-600/4-79-020, March 1983 and subsequent revisions.

Table 2-5
OU1 Regulatory and Detection Limits for Chemicals of Concern: July 2000
Wright-Patterson AFB, Ohio

	Regulatory Limits		Detection Limits							
COCs	**ROD Compliance Level** (ug/L)	**MCL** (ug/L)	EW-0803 (ug/L)	EW-0807 (ug/L)	EW-0812 (ug/L)	EW-0816 (ug/L)	EW-1001 (ug/L)	EW-1001-DUP (ug/L)	EW-1003 (ug/L)	EW-1006 (ug/L)
VOCs									NA	
Benzene	0.62	5	1.0	1.0	1.0	2.5	1.0	1.0		2.5
Chloroform	0.28	100	1.0	1.0	1.0	2.5	1.0	1.0		2.5
trans-1,2-Dichloroethene	100	100	0.5	0.5	0.5	1.2	0.5	0.5		1.2
Methylene Chloride	6.22	5	1.0	1.0	1.0	2.5	1.0	1.0		2.5
Toluene	NRL	1000	1.0	1.0	1.0	2.5	1.0	1.0		2.5
Trichloroethene	3.03	5	2.0	2.0	2.0	5.0	2.0	2.0		5.0
Vinyl Chloride	0.0283	2	1.0	1.0	1.0	2.5	1.0	1.0		2.5
Ethylbenzene	NRL	700	1.0	1.0	1.0	2.5	1.0	1.0		2.5
Total Xylenes	NRL	10000	1.0	1.0	1.0	2.5	1.0	1.0		2.5
Inorganic Metals									NA	
Arsenic	11	50	10	10	10	10	10	10		10
Beryllium	0.02	4	4	4	4	4	4	4		4
Cadmium	NRL	5	5	5	5	5	5	5		5
Copper	NRL	1300	25	25	25	25	25	25		25
Iron	NRL	NRL	100	100	100	100	100	100		100
Lead	NRL	15	3	3	3	3	3	3		3
Zinc	NRL	NRL	20	20	20	20	20	20		20

Table 2-5
OU1 Regulatory and Detection Limits for Chemicals of Concern: July 2000
Wright-Patterson AFB, Ohio

	Regulatory Limits		Detection Limits						
COCs	**ROD Compliance Level** (ug/L)	**MCL** (ug/L)	EW-1008 (ug/L)	EW-1012 (ug/L)	EW-1015 (ug/L)	EW-1019 (ug/L)	EW-1020 (ug/L)	EW-1024 (ug/L)	EW-1025 (ug/L)
VOCs			*N*	NA	NA	*N*	*N*		*N*
Benzene	0.62	5	*O*			*O*	*O*	1.0	*O*
Chloroform	0.28	100						1.0	
trans-1,2-Dichloroethene	100	100	*S*			*S*	*S*	0.5	*S*
Methylene Chloride	6.22	5	*A*			*A*	*A*	1.0	*A*
Toluene	NRL	1000	*M*			*M*	*M*	1.0	*M*
Trichloroethene	3.03	5	*P*			*P*	*P*	2.0	*P*
Vinyl Chloride	0.0283	2	*L*			*L*	*L*	1.0	*L*
Ethylbenzene	NRL	700	*E*			*E*	*E*	1.0	*E*
Total Xylenes	NRL	10000						1.0	
			W			*W*	*W*		*W*
Inorganic Metals			*E*	NA	NA	*E*	*E*		*E*
Arsenic	11	50	*L*			*L*	*L*	10	*L*
Beryllium	0.02	4	*L*			*L*	*L*	4	*L*
Cadmium	NRL	5						5	
Copper	NRL	1300	*D*			*D*	*D*	25	*D*
Iron	NRL	NRL	*R*			*R*	*R*	100	*R*
Lead	NRL	15	*Y*			*Y*	*Y*	3	*Y*
Zinc	NRL	NRL						20	

COC - Chemical of Concern
MCL - Maximum Contaminant Level
ROD - Record of Decision
VOCs - Volatile Organic Compounds
SVOCs - Semivolatile Organic Compounds

NRL - No regulatory limit set for these chemicals.
NA - Not Available. Well would not produce water because the pump was not activating properly, so no sample was collected.

Table 2-6
OU1 Regulatory Detection Limits for Chemicals of Concern: October 2000
Wright-Patterson AFB, OH

	REGULATORY LIMITS		DETECTION LIMITS								
	ROD Compliance Level	MCL	LF08-MW02A	LF08-MW02C	LF08-MW05B	LF08-MW08A	LF08-MW08B	LF08-MW08B-DUP	LF08-MW08C	LF08-MW09A	LF08-MW09B
Chemicals of Concern	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOCs											
Benzene	0.62	5.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Chloroform	0.28	100	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
trans-1,2-Dichloroethene	100	100	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Ethylbenzene	NRL	700	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Methylene Chloride	6.22	5.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Toluene	NRL	1000	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Trichloroethene	3.03	5.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Vinyl Chloride	0.0283	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
SVOCs											
Benzo(a)pyrene	NRL	NRL	10	10	10	10	10	10	10	10	10
Diethylphthalate	NRL	NRL	10	10	10	10	10	10	10	10	10
4-Methylphenol	NRL	NRL	10	10	10	10	10	10	10	10	10
Naphthalene	NRL	NRL	10	10	10	10	10	10	10	10	10
Dioxins											
1,2,3,4,6,7,8 HPCDD	$5.67X10^{-5}$	NRL	$8.4X10^{-7}$	$1.3X10^{-6}$	$5.1X10^{-7}$	$2.0X10^{-6}$	$7.9X10^{-7}$	$1.0X10^{-6}$	$9.0X10^{-7}$	$6.9X10^{-7}$	$9.1X10^{-7}$
1,2,3,4,6,7,8 HPCDF	$5.67X10^{-5}$	NRL	$6.1X10^{-7}$	$8.4X10^{-7}$	$3.7X10^{-7}$	$8.8X10^{-7}$	$6.9X10^{-7}$	$6.2X10^{-7}$	$5.6X10^{-7}$	$5.2X10^{-7}$	$5.8X10^{-7}$
1,2,3,4,7,8 HXCDD	$5.67X10^{-6}$	NRL	$5.4X10^{-7}$	$8.3X10^{-7}$	$4.4X10^{-7}$	$9.4X10^{-7}$	$5.0X10^{-7}$	$7.0X10^{-7}$	$6.7X10^{-7}$	$5.3X10^{-7}$	$5.5X10^{-7}$
2,3,7,8 TCDD	$5.67X10^{-7}$	$3.00X10^{-5}$	$1.3X10^{-6}$	$2.0X10^{-6}$	$9.5X10^{-7}$	$2.1X10^{-6}$	$1.3X10^{-6}$	$1.9X10^{-6}$	$1.5X10^{-6}$	$1.3X10^{-6}$	$1.5X10^{-6}$
2,3,7,8 TCDF	$5.67X10^{-6}$	NRL	$9.9X10^{-7}$	$1.5X10^{-6}$	$7.5X10^{-7}$	$1.6X10^{-6}$	$1.0X10^{-6}$	$1.4X10^{-6}$	$1.0X10^{-6}$	$1.0X10^{-6}$	$1.1X10^{-6}$
OCDD	$5.67X10^{-4}$	NRL	$9.4X10^{-7}$	$1.7X10^{-6}$	$6.6X10^{-7}$	$2.2X10^{-6}$	$1.0X10^{-6}$	$1.3X10^{-6}$	$1.1X10^{-6}$	$8.9X10^{-7}$	$1.0X10^{-6}$
OCDF	$5.67X10^{-4}$	NRL	$8.9X10^{-7}$	$1.7X10^{-6}$	$5.5X10^{-7}$	$2.4X10^{-6}$	$8.8X10^{-7}$	$1.4X10^{-6}$	$8.2X10^{-7}$	$8.8X10^{-7}$	$7.5X10^{-7}$
Pesticides											
Dieldrin	NRL	NRL	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
PCBs											
Arochlor 1242	NRL	NRL	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Arochlor 1248	NRL	NRL	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Arochlor 1254	NRL	NRL	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Arochlor 1260	NRL	NRL	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Inorganic Metals											
Arsenic	11	50	10	10	10	10	10	10	10	10	10
Beryllium	0.02	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Cadmium	NRL	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Copper	NRL	1300	25	25	25	25	25	25	25	25	25
Iron	NRL	NRL	100	100	100	100	100	100	100	100	100
Cyanide	NRL	200	10	10	10	10	10	10	10	10	10
Lead	NRL	15	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Zinc	NRL	NRL	50	50	50	50	50	50	50	50	50
Inorganic											
Ammonia	NRL	NRL	200	200	200	200	200	200	200	200	200

Table 2-6
OU1 Regulatory Detection Limits for Chemicals of Concern: October 2000
Wright-Patterson AFB, OH

	REGULATORY LIMITS		DETECTION LIMITS								
	ROD Compliance Level	MCL	LF08-MW10A	LF08-MW10B	LF08-MW10C	LF08-MW101	LF08-MW102	LF08-MW103	02-DM-81S-M	02-DM-81S-M-AMB01	02-DM-81D-M
Chemicals of Concern	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOCs											
Benzene	0.62	5.0	1.0	1.0	*N*	1.0	1.0	1.0	1.0	1.0	1.0
Chloroform	0.28	100	1.0	1.0	*O*	1.0	1.0	1.0	1.0	1.0	1.0
trans-1,2-Dichloroethene	100	100	0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Ethylbenzene	NRL	700	1.0	1.0	*S*	1.0	1.0	1.0	1.0	1.0	1.0
Methylene Chloride	6.22	5.0	1.0	1.0	*A*	1.0	1.0	1.0	1.0	1.0	1.0
Toluene	NRL	1000	1.0	1.0	*M*	1.0	1.0	1.0	1.0	1.0	1.0
Trichloroethene	3.03	5.0	2.0	2.0	*P*	2.0	2.0	2.0	2.0	2.0	2.0
Vinyl Chloride	0.0283	2.0	1.0	1.0	*L*	1.0	1.0	1.0	1.0	1.0	1.0
SVOCs					*E*						
Benzo(a)pyrene	NRL	NRL	10	10	*S*	10	10	10	10	10	10
Diethylphthalate	NRL	NRL	10	10		10	10	10	10	10	10
4-Methylphenol	NRL	NRL	10	10	*C*	10	10	10	10	10	10
Naphthalene	NRL	NRL	10	10	*O*	10	10	10	10	10	10
Dioxins					*L*						
1,2,3,4,6,7,8 HPCDD	$5.67X10^{-5}$	NRL	$8.7X10^{-7}$	$9.8X10^{-7}$	*L*	$1.4X10^{-6}$	$8.3X10^{-7}$	$9.3X10^{-7}$	$8.9X10^{-7}$	$7.9X10^{-7}$	$4.4X10^{-7}$
1,2,3,4,6,7,8 HPCDF	$5.67X10^{-5}$	NRL	$6.2X10^{-7}$	$7.7X10^{-7}$	*E*	$7.7X10^{-7}$	$6.6X10^{-7}$	$6.4X10^{-7}$	$7.4X10^{-7}$	$5.5X10^{-7}$	$6.0X10^{-7}$
1,2,3,4,7,8 HXCDD	$5.67X10^{-6}$	NRL	$5.0X10^{-7}$	$8.4X10^{-7}$	*C*	$7.1X10^{-7}$	$5.6X10^{-7}$	$5.8X10^{-7}$	$7.6X10^{-7}$	$5.8X10^{-7}$	$3.4X10^{-7}$
2,3,7,8 TCDD	$5.67X10^{-7}$	$3.00X10^{-5}$	$1.5X10^{-6}$	$1.8X10^{-6}$	*T*	$1.6X10^{-6}$	$1.6X10^{-6}$	$1.7X10^{-6}$	$2.2X10^{-6}$	$1.5X10^{-6}$	$9.7X10^{-7}$
2,3,7,8 TCDF	$5.67X10^{-6}$	NRL	$1.1X10^{-6}$	$1.1X10^{-6}$	*E*	$1.2X10^{-6}$	$1.3X10^{-6}$	$1.1X10^{-6}$	$1.8X10^{-6}$	$1.1X10^{-6}$	$6.5X10^{-7}$
OCDD	$5.67X10^{-4}$	NRL	$1.1X10^{-6}$	$1.4X10^{-6}$	*D*	$1.8X10^{-6}$	$1.1X10^{-6}$	$1.2X10^{-6}$	$1.2X10^{-6}$	$1.0X10^{-6}$	$4.6X10^{-7}$
OCDF	$5.67X10^{-4}$	NRL	$1.0X10^{-6}$	$1.4X10^{-6}$		$1.5X10^{-6}$	$1.0X10^{-6}$	$9.9X10^{-7}$	$1.3X10^{-6}$	$1.0X10^{-6}$	$5.0X10^{-7}$
Pesticides					*W*						
Dieldrin	NRL	NRL	0.05	0.05	*E*	0.05	0.5	0.05	0.05	0.05	0.05
PCBs					*L*						
Arochlor 1242	NRL	NRL	1.0	1.0	*L*	1.0	1.0	1.0	1.0	1.0	1.0
Arochlor 1248	NRL	NRL	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Arochlor 1254	NRL	NRL	1.0	1.0	*D*	1.0	1.0	1.0	1.0	1.0	1.0
Arochlor 1260	NRL	NRL	1.0	1.0	*R*	1.0	1.0	1.0	1.0	1.0	1.0
Inorganic Metals					*Y*						
Arsenic	11	50	10	10		10	10	10	10	10	10
Beryllium	0.02	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Cadmium	NRL	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Copper	NRL	1300	25	25		25	25	25	25	25	25
Iron	NRL	NRL	100	100		100	100	100	100	100	100
Cyanide	NRL	200	10	10		10	10	10	10	10	10
Lead	NRL	15	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Zinc	NRL	NRL	50	50		50	50	50	50	50	50
Inorganic											
Ammonia	NRL	NRL	200	200		200	200	200	200	200	200

Table 2-6
OU1 Regulatory Detection Limits for Chemicals of Concern: October 2000
Wright-Patterson AFB, OH

	REGULATORY LIMITS		DETECTION LIMITS								
	ROD Compliance Level	MCL	02-DM-82-M	02-DM-83S-M	02-DM-83D-M	02-DM-83D-M-DUP	02-DM-84-M	LF10-MW03A	LF10-MW05B	LF10-MW05C	LF10-MW06A
Chemicals of Concern	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOCs											
Benzene	0.62	5.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Chloroform	0.28	100	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
trans-1,2-Dichloroethene	100	100	0.5	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Ethylbenzene	NRL	700	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Methylene Chloride	6.22	5.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Toluene	NRL	1000	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Trichloroethene	3.03	5.0	2.0	4.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Vinyl Chloride	0.0283	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
SVOCs											
Benzo(a)pyrene	NRL	NRL	10	10	10	10	10	10	10	10	10
Diethylphthalate	NRL	NRL	10	10	10	10	10	10	10	10	10
4-Methylphenol	NRL	NRL	10	10	10	10	10	10	10	10	10
Naphthalene	NRL	NRL	10	10	10	10	10	10	10	10	10
Dioxins											
1,2,3,4,6,7,8 HPCDD	$5.67X10^{-5}$	NRL	$6.4X10^{-7}$	$9.0X10^{-7}$	$9.2X10^{-7}$	$6.2X10^{-6}$	$1.0X10^{-6}$	$7.0X10^{-6}$	$7.2X10^{-7}$	$7.7X10^{-7}$	$4.9X10^{-7}$
1,2,3,4,6,7,8 HPCDF	$5.67X10^{-5}$	NRL	$8.0X10^{-7}$	$7.8X10^{-7}$	$1.3X10^{-6}$	$6.4X10^{-6}$	$7.3X10^{-7}$	$6.7X10^{-6}$	$5.2X10^{-7}$	$5.4X10^{-7}$	$3.9X10^{-7}$
1,2,3,4,7,8 HXCDD	$5.67X10^{-6}$	NRL	$5.8X10^{-7}$	$5.6X10^{-7}$	$9.0X10^{-7}$	$4.1X10^{-6}$	$7.5X10^{-7}$	$5.7X10^{-6}$	$5.6X10^{-7}$	$4.8X10^{-7}$	$3.9X10^{-7}$
2,3,7,8 TCDD	$5.67X10^{-7}$	$3.00X10^{-5}$	$1.2X10^{-6}$	$1.0X10^{-6}$	$1.9X10^{-6}$	$1.0X10^{-7}$	$2.1X10^{-6}$	$1.2X10^{-7}$	$1.3X10^{-6}$	$1.0X10^{-6}$	$8.3X10^{-7}$
2,3,7,8 TCDF	$5.67X10^{-6}$	NRL	$8.7X10^{-7}$	$8.1X10^{-7}$	$1.3X10^{-6}$	$7.9X10^{-6}$	$1.7X10^{-6}$	$8.7X10^{-6}$	$9.6X10^{-7}$	$7.9X10^{-7}$	$6.5X10^{-7}$
OCDD	$5.67X10^{-4}$	NRL	$8.6X10^{-7}$	$9.0X10^{-7}$	$9.8X10^{-7}$	$6.7X10^{-6}$	$1.5X10^{-6}$	$1.0X10^{-7}$	$1.3X10^{-6}$	$8.2X10^{-7}$	$4.7X10^{-7}$
OCDF	$5.67X10^{-4}$	NRL	$8.7X10^{-7}$	$6.7X10^{-7}$	$9.4X10^{-7}$	$5.5X10^{-6}$	$1.4X10^{-6}$	$9.6X10^{-6}$	$7.4X10^{-7}$	$6.3X10^{-7}$	$5.0X10^{-7}$
Pesticides											
Dieldrin	NRL	NRL	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
PCBs											
Arochlor 1242	NRL	NRL	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Arochlor 1248	NRL	NRL	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Arochlor 1254	NRL	NRL	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Arochlor 1260	NRL	NRL	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Inorganic Metals											
Arsenic	11	50	10	10	10	10	10	10	10	10	10
Beryllium	0.02	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Cadmium	NRL	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Copper	NRL	1300	25	25	25	25	25	25	25	25	25
Iron	NRL	NRL	100	100	100	100	100	100	100	100	100
Cyanide	NRL	200	10	10	10	10	10	10	10	10	10
Lead	NRL	15	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Zinc	NRL	NRL	50	50	50	50	50	50	50	50	50
Inorganic											
Ammonia	NRL	NRL	200	200	200	200	200	200	200	200	200

Table 2-6
OU1 Regulatory Detection Limits for Chemicals of Concern: October 2000
Wright-Patterson AFB, OH

	REGULATORY LIMITS		DETECTION LIMITS							
	ROD Compliance Level	MCL	LF10-MW06A-DUP	LF10-MW06B	LF10-MW07A	LF10-MW07A-DUP	LF10-MW07B	LF10-MW07C	LF10-MW08A-2	LF10-MW08B
Chemicals of Concern	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)		(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOCs										
Benzene	0.62	5.0	*N*	1.0	1.0	1.0	*N*	1.0	1.0	1.0
Chloroform	0.28	100	*O*	1.0	1.0	1.0	*O*	1.0	1.0	1.0
trans-1,2-Dichloroethene	100	100		0.5	0.5	0.5		0.5	0.5	0.5
Ethylbenzene	NRL	700	*S*	1.0	1.0	1.0	*S*	1.0	1.0	1.0
Methylene Chloride	6.22	5.0	*A*	1.0	1.0	1.0	*A*	1.0	1.0	1.0
Toluene	NRL	1000	*M*	1.0	1.0	1.0	*M*	1.0	1.0	1.0
Trichloroethene	3.03	5.0	*P*	2.0	2.0	2.0	*P*	2.0	2.0	2.0
Vinyl Chloride	0.0283	2.0	*L*	1.0	1.0	1.0	*L*	1.0	1.0	1.0
SVOCs			*E*				*E*			
Benzo(a)pyrene	NRL	NRL	*S*	10	10	10	*S*	NC	10	10
Diethylphthalate	NRL	NRL		10	10	10		NC	10	10
4-Methylphenol	NRL	NRL	*C*	10	10	10	*C*	NC	10	10
Naphthalene	NRL	NRL	*O*	10	10	10	*O*	NC	10	10
Dioxins			*L*				*L*			
1,2,3,4,6,7,8 HPCDD	$5.67X10^{-5}$	NRL	*L*	$6.5X10^{-7}$	$6.5X10^{-7}$	$4.6X10^{-6}$	*L*	$7.8X10^{-6}$	$7.3X10^{-7}$	NC
1,2,3,4,6,7,8 HPCDF	$5.67X10^{-5}$	NRL	*E*	$5.7X10^{-7}$	$6.0X10^{-7}$	$3.9X10^{-6}$	*E*	$4.3X10^{-6}$	$8.2X10^{-7}$	NC
1,2,3,4,7,8 HXCDD	$5.67X10^{-6}$	NRL	*C*	$5.2X10^{-7}$	$5.4X10^{-7}$	$3.6X10^{-6}$	*C*	$4.3X10^{-6}$	$6.0X10^{-7}$	NC
2,3,7,8 TCDD	$5.67X10^{-7}$	$3.00X10^{-5}$	*T*	$1.1X10^{-6}$	$1.3X10^{-6}$	$1.0X10^{-7}$	*T*	$1.2X10^{-5}$	$1.8X10^{-6}$	NC
2,3,7,8 TCDF	$5.67X10^{-6}$	NRL	*E*	$8.8X10^{-7}$	$1.0X10^{-6}$	$7.6X10^{-6}$	*E*	$1.1X10^{-5}$	$1.4X10^{-6}$	NC
OCDD	$5.67X10^{-4}$	NRL	*D*	$7.2X10^{-7}$	$6.4X10^{-7}$	$6.1X10^{-6}$	*D*	$7.2X10^{-6}$	$9.9X10^{-7}$	NC
OCDF	$5.67X10^{-4}$	NRL		$6.4X10^{-7}$	$8.2X10^{-7}$	$6.2X10^{-6}$		$7.5X10^{-6}$	$7.1X10^{-7}$	NC
Pesticides			*W*				*W*			
Dieldrin	NRL	NRL	*E*	0.05	0.05	0.05	*E*	NC	0.05	0.05
PCBs			*L*				*L*			
Arochlor 1242	NRL	NRL	*L*	1.0	1.0	1.0	*L*	NC	1.0	1.0
Arochlor 1248	NRL	NRL		1.0	1.0	1.0		NC	1.0	1.0
Arochlor 1254	NRL	NRL	*D*	1.0	1.0	1.0	*D*	NC	1.0	1.0
Arochlor 1260	NRL	NRL	*R*	1.0	1.0	1.0	*R*	NC	1.0	1.0
Inorganic Metals			*Y*				*Y*			
Arsenic	11	50		10	10	10		NC	10	10
Beryllium	0.02	4.0		4.0	4.0	4.0		NC	4.0	4.0
Cadmium	NRL	5.0		5.0	5.0	5.0		NC	5.0	5.0
Copper	NRL	1300		25	25	25		NC	25	25
Iron	NRL	NRL		100	100	100		NC	100	100
Cyanide	NRL	200		50	10	10		NC	10	10
Lead	NRL	15		3.0	3.0	3.0		NC	3.0	3.0
Zinc	NRL	NRL		50	50	50		NC	50	50
Inorganic										
Ammonia	NRL	NRL		200	200	200		NC	200	200

Table 2-6
OU1 Regulatory Detection Limits for Chemicals of Concern: October 2000
Wright-Patterson AFB, OH
Page 5 of 6

	REGULATORY LIMITS		DETECTION LIMITS								
	ROD Compliance Level	MCL	LF10-MW09A	LF10-MW09B	LF10-MW09C	LF10-MW10C	LF10-MW11A	LF10-MW11A-DUP	LF10-MW11B	LF10-MW102	LF10-MW103
Chemicals of Concern	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOCs											
Benzene	0.62	5.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	*N*	1.0
Chloroform	0.28	100	1.0	1.0	1.0	1.0	1.0	1.0	1.0	*O*	1.0
trans-1,2-Dichloroethene	100	100	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5
Ethylbenzene	NRL	700	1.0	1.0	1.0	1.0	1.0	1.0	1.0	*S*	1.0
Methylene Chloride	6.22	5.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	*A*	1.0
Toluene	NRL	1000	1.0	1.0	1.0	1.0	1.0	1.0	1.0	*M*	1.0
Trichloroethene	3.03	5.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	*P*	2.0
Vinyl Chloride	0.0283	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	*L*	1.0
SVOCs										*E*	
Benzo(a)pyrene	NRL	NRL	10	10	10	10	10	10	10	*S*	10
Diethylphthalate	NRL	NRL	10	10	10	10	10	10	10		10
4-Methylphenol	NRL	NRL	10	10	10	10	10	10	10	*C*	10
Naphthalene	NRL	NRL	10	10	10	10	10	10	10	*O*	10
Dioxins										*L*	
1,2,3,4,6,7,8 HPCDD	$5.67X10^{-5}$	NRL	$4.7X10^{-7}$	$5.6X10^{-7}$	NC	$4.1X10^{-7}$	$4.3X10^{-7}$	$4.9X10^{-7}$	$4.1X10^{-7}$	*L*	$9.1X10^{-7}$
1,2,3,4,6,7,8 HPCDF	$5.67X10^{-5}$	NRL	$5.3X10^{-7}$	$5.3X10^{-7}$	NC	$5.0X10^{-7}$	$4.5X10^{-7}$	$6.5X10^{-7}$	$4.5X10^{-7}$	*E*	$6.3X10^{-7}$
1,2,3,4,7,8 HXCDD	$5.67X10^{-6}$	NRL	$4.2X10^{-7}$	$4.7X10^{-7}$	NC	$3.1X10^{-7}$	$4.1X10^{-7}$	$4.3X10^{-7}$	$3.2X10^{-7}$	*C*	$5.9X10^{-7}$
2,3,7,8 TCDD	$5.67X10^{-7}$	$3.00X10^{-5}$	$9.0X10^{-7}$	$1.4X10^{-6}$	NC	$8.5X10^{-7}$	$1.1X10^{-6}$	$9.3X10^{-7}$	$7.7X10^{-7}$	*T*	$1.4X10^{-6}$
2,3,7,8 TCDF	$5.67X10^{-6}$	NRL	$6.3X10^{-7}$	$9.2X10^{-7}$	NC	$5.5X10^{-7}$	$6.9X10^{-7}$	$6.6X10^{-7}$	$5.4X10^{-7}$	*E*	$1.1X10^{-6}$
OCDD	$5.67X10^{-4}$	NRL	$7.5X10^{-7}$	$6.1X10^{-7}$	NC	$3.8X10^{-7}$	$3.9X10^{-7}$	$6.7X10^{-7}$	$5.0X10^{-7}$	*D*	$9.0X10^{-7}$
OCDF	$5.67X10^{-4}$	NRL	$5.9X10^{-7}$	$9.3X10^{-7}$	NC	$3.8X10^{-7}$	$4.9X10^{-7}$	$5.3X10^{-7}$	$3.6X10^{-7}$		$1.1X10^{-6}$
Pesticides										*W*	
Dieldrin	NRL	NRL	0.05	0.05	0.05	0.05	0.05	0.05	0.05	*E*	NC
PCBs										*L*	
Arochlor 1242	NRL	NRL	1.0	1.0	1.0	1.0	1.0	1.0	1.0	*L*	NC
Arochlor 1248	NRL	NRL	1.0	1.0	1.0	1.0	1.0	1.0	1.0		NC
Arochlor 1254	NRL	NRL	1.0	1.0	1.0	1.0	1.0	1.0	1.0	*D*	NC
Arochlor 1260	NRL	NRL	1.0	1.0	1.0	1.0	1.0	1.0	1.0	*R*	NC
Inorganic Metals										*Y*	
Arsenic	11	50	10	10	10	10	10	10	10		10
Beryllium	0.02	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0
Cadmium	NRL	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0
Copper	NRL	1300	25	25	25	25	25	25	25		25
Iron	NRL	NRL	100	100	100	100	100	100	100		100
Cyanide	NRL	200	10	10	10	10	10	10	10		NC
Lead	NRL	15	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0
Zinc	NRL	NRL	50	50	50	50	50	50	50		50
Inorganic											
Ammonia	NRL	NRL	200	200	200	200	200	200	200		NC

Table 2-6
OU1 Regulatory Detection Limits for Chemicals of Concern: October 2000
Wright-Patterson AFB, OH

	REGULATORY LIMITS		DETECTION LIMITS				
	ROD Compliance Level	MCL	LF10-MW104	LF10-MW105	01-DM-102S-M	01-DM-102D-M	01-004-M
Chemicals of Concern	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
VOCs							
Benzene	0.62	5.0	*N*	1.0	*N*	1.0	1.0
Chloroform	0.28	100	*O*	1.0	*O*	1.0	1.0
trans-1,2-Dichloroethene	100	100		0.5		0.5	0.5
Ethylbenzene	NRL	700	*S*	1.0	*S*	1.0	1.0
Methylene Chloride	6.22	5.0	*A*	1.0	*A*	1.0	1.0
Toluene	NRL	1000	*M*	1.0	*M*	1.0	1.0
Trichloroethene	3.03	5.0	*P*	2.0	*P*	2.0	2.0
Vinyl Chloride	0.0283	2.0	*L*	1.0	*L*	1.0	1.0
SVOCs			*E*		*E*		
Benzo(a)pyrene	NRL	NRL	*S*	10	*S*	10	10
Diethylphthalate	NRL	NRL		10		10	10
4-Methylphenol	NRL	NRL	*C*	10	*C*	10	10
Naphthalene	NRL	NRL	*O*	10	*O*	10	10
Dioxins			*L*		*L*		
1,2,3,4,6,7,8 HPCDD	$5.67X10^{-5}$	NRL	*L*	$4.0X10^{-7}$	*L*	$6.9X10^{-7}$	$2.4X10^{-6}$
1,2,3,4,6,7,8 HPCDF	$5.67X10^{-5}$	NRL	*E*	$3.3X10^{-7}$	*E*	$4.6X10^{-7}$	$2.6X10^{-6}$
1,2,3,4,7,8 HXCDD	$5.67X10^{-6}$	NRL	*C*	$2.7X10^{-7}$	*C*	$4.5X10^{-7}$	$1.8X10^{-6}$
2,3,7,8 TCDD	$5.67X10^{-7}$	$3.00X10^{-5}$	*T*	$6.7X10^{-7}$	*T*	$1.0X10^{-6}$	$3.8X10^{-6}$
2,3,7,8 TCDF	$5.67X10^{-6}$	NRL	*E*	$5.3X10^{-7}$	*E*	$7.4X10^{-7}$	$3.3X10^{-6}$
OCDD	$5.67X10^{-4}$	NRL	*D*	$4.3X10^{-7}$	*D*	$1.1X10^{-6}$	$3.2X10^{-6}$
OCDF	$5.67X10^{-4}$	NRL		$4.1X10^{-7}$		$8.6X10^{-7}$	$3.2X10^{-6}$
Pesticides			*W*		*W*		
Dieldrin	NRL	NRL	*E*	NC	*E*	0.05	0.05
PCBs			*L*		*L*		
Arochlor 1242	NRL	NRL	*L*	NC	*L*	1.0	1.0
Arochlor 1248	NRL	NRL		NC		1.0	1.0
Arochlor 1254	NRL	NRL	*D*	NC	*D*	1.0	1.0
Arochlor 1260	NRL	NRL	*R*	NC	*R*	1.0	1.0
Inorganic Metals			*Y*		*Y*		
Arsenic	11	50		NC		10	500
Beryllium	0.02	4.0		NC		4.0	80
Cadmium	NRL	5.0		NC		5.0	100
Copper	NRL	1300		NC		25	500
Iron	NRL	NRL		NC		100	5000
Cyanide	NRL	200		NC		10	10
Lead	NRL	15		NC		3.0	60
Zinc	NRL	NRL		NC		50	1000
Inorganic							
Ammonia	NRL	NRL		NC		200	200

NA - Not Applicable
MCL - Maximum Contaminant Level
VOCs - Volatile Organic Compounds
SVOCs - Semivolatile Organic Compounds
NC - Not Collected. Well was not sampled for this chemical or well went dry.
NRL - No Regulatory Limit set for these chemicals.

Table 2-7
Landfill 8 Extraction Wells
Groundwater Analytical Results Summary - VOCs
Wright-Patterson AFB, Ohio

LOCATION	DATE	BENZENE	CHLOROFORM	TRANS-1,2-DCE	ETHYLBENZENE	METHYLENE CHLORIDE	TOLUENE	TCE	TOTAL XYLENES	VINYL CHLORIDE
Units		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
Compliance Level - ROD		0.62	0.28	100	NCL	6.22	NCL	3.03	NCL	0.0283
Compliance Level - MCL		5	100	100	700	5	1000	5	10000	2
WP-EW-0801**	Jan-99	(2.2)	ND	ND	ND	0.21 J	ND	ND	ND	ND
WP-EW-0803	Oct-96	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Jan-97	ND	(2.0)	ND	ND	ND	ND	ND	ND	ND
	Apr-97	ND	(3.0)	ND	ND	ND	ND	ND	ND	ND
	Jul-97	(11.0)	ND	ND	1	(58)	2	ND	ND	ND
	Nov-97	(8.4)	ND	ND	ND	(30)	ND	ND	ND	ND
	Feb-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	ND	DRY
	Jun-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	ND	DRY
	Sep-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	ND	DRY
	Nov-98	(9.6)	ND	ND	ND	(950)	ND	ND	ND	ND
	Jan-99	No sample collected, well would not produce water - replaced with EW-0801								
	Apr-99	ND	ND	ND	ND	0.28 J	ND	ND	ND	ND
	Jul-99	(1.2)	ND	ND	ND	0.24 JB	ND	ND	ND	ND
	Oct-99	(10.0)	ND	ND	ND	ND	0.31 J	ND	0.80 J	(7.5)
	Feb-00	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Apr-00	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Jul-00	ND	ND	ND	ND	1.1	ND	ND	ND	ND
WP-EW-0807	Oct-96	(27.0)	ND	2.0	33	ND	150	ND	ND	ND
	Jan-97	(19.0)	ND	2.0	30	ND	48	ND	135	ND
	Apr-97	(18.0)	ND	2.0	33	ND	98	ND	141	ND
	Jul-97	(1.0)	ND	ND	3	ND	ND	ND	NA	ND
	Nov-97	(15.0)	ND	ND	33	(29)	90	ND	ND	ND
	Feb-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jun-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Sep-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jan-99	No sample collected, well would not produce water - replaced with EW-0810								
	Apr-99	No sample collected, well would not produce water								
	Jul-99*	(1.3)	ND	ND	2.1	0.30 J	ND	ND	ND	ND
	Oct-99	(9.1)	ND	ND	22	0.62	1.3	ND	49	ND
	Feb-00	ND	ND	ND	ND	0.29 J	ND	ND	ND	ND
	Apr-00	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Jul-00	ND	ND	ND	ND	1.5	ND	ND	ND	ND
WP-EW-0810**	Jan-99	ND	ND	ND	ND	0.19 J	ND	ND	ND	(1.8)
	Feb-00	ND	ND	ND	ND	0.20 J	0.38 J	ND	0.92 J	(2.7)

NCL - No Compliance Level set
NS - Not Sampled
ND - Not Detected
TCE - Trichloroethene
DCE - Dichloroethene
NA - Not available

( ) - Indicates a concentration exceeds a compliance level.
* - Initial sample run over using a different bottle due to high Methylene Chloride results. Second sample was clear.
** - Replacement samples for wells that would not produce water
J - Reported concentration is between the method detection limit and the reporting detection limit.
µg/L - micrograms per liter
No Sample Collected, well would not produce water - Sufficient water in well, however, pump not activating properly.

Please see Appendix C-2 for detections of VOCs not listed here.

Table 2-7
Landfill 8 Extraction Wells
Groundwater Analytical Results Summary - VOCs
Wright-Patterson AFB, Ohio

LOCATION	DATE	BENZENE	CHLOROFORM	TRANS-1,2-DCE	ETHYLBENZENE	METHYLENE CHLORIDE	TOLUENE	TCE	TOTAL XYLENES	VINYL CHLORIDE
Units		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
Compliance Level - ROD		0.62	0.28	100	NCL	6.22	NCL	3.03	NCL	0.0283
Compliance Level - MCL		5	100	100	700	5	1000	5	10000	2
WP-EW-0812	Feb-89	ND	ND	ND	ND	ND	ND	ND		ND
	Jun-89	0.4	ND	ND	ND	ND	ND	ND		ND
	Oct-96	ND	ND	ND	ND	ND	ND	ND		ND
	Jan-97	(1.0)	ND	ND	ND	ND	ND	ND	ND	ND
	Apr-97	(2.0)	ND	ND	ND	ND	ND	ND	ND	(16.0)
	Jul-97	(1.0)	ND	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	(29)	ND	ND	ND	ND
	Feb-98	ND	ND	ND	ND	ND	ND	ND	0.42	ND
	Jun-98	0.4 J	ND	ND	ND	ND	ND	ND	ND	ND
	Sep-98	0.54	ND	ND	ND	ND	ND	ND	1.58	ND
	Nov-98	ND	ND	ND	ND	(420)	ND	ND	ND	ND
	Jan-99	0.34 J	ND	ND	ND	0.32 J	ND	ND	0.67 J	(0.75)
Duplicate	Jan-99	0.39 J	ND	ND	ND	0.39 J	ND	ND	0.79 J	(0.82)
	Apr-99	ND	ND	ND	ND	0.31 J	ND	ND	ND	ND
	Jul-99	ND	ND	ND	ND	4.1	ND	ND	ND	ND
	Oct-99	0.38 J	ND	ND	ND	ND	ND	ND	ND	(1.4)
Duplicate	Oct-99	0.28 J	ND	ND	ND	ND	ND	ND	ND	(0.57)
	Feb-00	(1.3)	ND	ND	0.48 J	0.25 J	0.28 J	ND	1.38 J	(8.1)
Duplicate	Feb-00	1.2 J	ND	0.68	ND	0.37 J	ND	0.52	ND	(16.0)
	Apr-00	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Jul-00	ND	ND	ND	ND	1.2	ND	ND	ND	(2.0)
WP-EW-0816	Oct-96	(4.0)	ND	ND	ND	ND	ND	ND	ND	(21)
	Jan-97	(4.0)	ND	2.6	3	ND	ND	ND	5	(16)
	Apr-97	(2.0)	ND	ND	ND	ND	ND	ND	ND	(12)
	Jul-97	(2.0)	(2)	ND	ND	ND	ND	ND	ND	(8)
	Nov-97	(2.5)	ND	2.6	ND	(30)	ND	ND	ND	(41)
	Feb-98	(2.6)	ND	2.3	ND	(8)	ND	1.9	ND	(24)
	Jun-98	(4.6)	ND	ND	ND	3.5	ND	ND	ND	(49)
	Sep-98	(3.0)	ND	ND	ND	4.35	ND	2.0	ND	(28.7)
	Nov-98	(2.3)	ND	1.8	ND	(51)	ND	1.7	ND	(18)
Duplicate	Nov-98	(2.9)	ND	2.2	ND	ND	ND	1.9	ND	(24)
	Jan-99	(3.6)	ND	3.5	ND	1 J	ND	3.0	ND	(40)
	Apr-99	(2.5)	ND	2.1 J	ND	2.2 J	ND	1.6 J	ND	(26)
Duplicate	Apr-99	(2.5)	ND	2.0 J	ND	2.1 J	ND	1.6 J	ND	(24)
	Jul-99	ND	ND	ND	ND	(7.4)	ND	ND	ND	ND
	Oct-99	(1.7)	ND	0.95 J	ND	ND	ND	1.4	ND	ND
	Feb-00	(4.1)	ND	2.5	ND	0.37 J	0.40 J	2.3	ND	(60) D
	Apr-00	(2.3 J)	ND	3.0	ND	3.8	ND	2.5	ND	(28)
Duplicate	Apr-00	(1.5 J)	ND	1.8 J	ND	4.8	ND	1.7 J	ND	(9.1)
	Jul-00	(2.8)	ND	1.3	ND	ND	ND	ND	ND	(15)

Table 2-8
Landfill 8 Extraction Wells Groundwater Analytical Results Summary - Inorganics
Wright-Patterson AFB, Ohio

LOCATION	DATE	ARSENIC	BERYLLIUM	CADMIUM	COPPER	CYANIDE	IRON	LEAD	ZINC
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		11	0.02	NCL	NCL	NCL	NCL	NCL	NCL
Compliance Level - MCL		50	4	5	1,300	200	NCL	15	NCL
WP-EW-0801*	Jan-99	ND	ND	ND	ND	ND	5,400	ND	ND
WP-EW-0803	Oct-96	ND	ND	0.2	ND	ND	59,300	ND	ND
	Jan-97	ND	ND	0.3	ND	ND	21,400	6.0	63
	Apr-97	(53)	ND	0.8	ND	ND	66,500	ND	ND
	Jul-97	ND	ND	ND	ND	ND	17,300	ND	ND
	Nov-97	ND	ND	ND	ND	ND	15,000	ND	ND
	Feb-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jun-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Sep-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Nov-98	ND	ND	ND	ND	16	18,200 MBB	ND	53 MBD
	Jan-99	No sample collected, well would not produce water - replaced with EW-0801							
	Apr-99	ND	ND	ND	ND	NS	20,500	ND	ND
	Jul-99	ND	ND	ND	ND	NS	23,500	ND	ND
	Oct-99	ND	ND	ND	ND	ND	23,500	ND	ND
	Feb-00	ND	ND	ND	ND	NS	3,300	ND	67
	Apr-00	ND	ND	ND	ND	NS	1,500	ND	ND
	Jul-00	(45)	ND	ND	ND	NS	18,500	ND	98
WP-EW-0807	Oct-96	(213)	ND	0.6	ND	ND	802,000	11	3,010
	Jan-97	(89)	ND	0.9	ND	ND	203	26	420
	Apr-97	(112)	ND	0.3	ND	ND	471,000	ND	ND
	Jul-97	(69)	ND	0.4	ND	ND	208,000	13	1,360
	Nov-97	ND	ND	ND	ND	ND	46,000	ND	80
	Feb-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jun-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Sep-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jan-99	No sample collected, well would not produce water - replaced with EW-0810							
	Apr-99	No sample collected, well would not produce water							
	Jul-99	ND	ND	ND	ND	NS	14,200	8.3	53
	Oct-99	(56)	ND	ND	ND	NS	18,400	7.4	5,800
	Feb-00	(11)	ND	ND	ND	NS	12,300	ND	100
	Apr-00	ND	ND	ND	ND	NS	2,000	ND	ND
	Jul-00	(45)	ND	ND	54	NS	90,400	ND	740
WP-EW-0810*	Jan-99	ND	ND	ND	ND	ND	10,400	ND	68
	Feb-00	ND	ND	ND	ND	NS	6,500	ND	ND

NCL - No Compliance Level set for these chemicals
ND = Not Detected
NS = Not Sampled
D = Dilution by a factor of 10
µg/L - Micrograms per liter
* - Replacement samples for wells that would not produce water
( ) - Concentration exceeds a compliance level

MBB - This analyte is present at a reportable level in the associated method blank, but is less than 5% of the sample amount.
MBD - This analyte is present in the associated method blank at an amount that is less than two times the reporting limit.
No sample collected, well would not produce water - Sufficient water in well, however, pump not activating properly.

Table 2-8
Landfill 8 Extraction Wells Groundwater Analytical Results Summary - Inorganics
Wright-Patterson AFB, Ohio

LOCATION	DATE	ARSENIC	BERYLLIUM	CADMIUM	COPPER	CYANIDE	IRON	LEAD	ZINC
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		11	0.02	NCL	NCL	NCL	NCL	NCL	NCL
Compliance Level - MCL		50	4	5	1,300	200	NCL	15	NCL
WP-EW-0812	Oct-96	ND	ND	ND	ND	ND	48,900	ND	ND
	Jan-97	ND	ND	ND	ND	ND	63,800	7	52
	Apr-97	ND	ND	ND	ND	ND	16,100	ND	ND
	Jul-97	ND	ND	ND	ND	ND	38,500	ND	ND
	Nov-97	ND	ND	ND	ND	ND	28,000	ND	ND
	Feb-98	8.0	ND	ND	ND	ND	4,300	ND	ND
	Jun-98	0.04	ND	ND	ND	NS	22	ND	ND
	Sep-98	0.03	ND	ND	ND	NS	13	ND	ND
	Nov-98	(410)	ND	ND	ND	ND	96,000	ND	ND
	Jan-99	(22)	ND	ND	ND	ND	9,400	ND	ND
Duplicate	Jan-99	(20)	ND	ND	ND	ND	8,700	ND	ND
	Apr-99	(39)	ND	ND	ND	NS	13,100	ND	ND
	Jul-99	(42)	ND	ND	ND	NS	14,400	ND	ND
	Oct-99	(50)	ND	ND	ND	ND	18,100	ND	ND
Duplicate	Oct-99	(55)	ND	ND	ND	ND	20,100	ND	ND
	Feb-00	(62)	ND	ND	ND	NS	26,800	ND	ND
Duplicate	Feb-00	(99)	ND	ND	ND	NS	44,200	ND	ND
	Apr-00	ND	ND	ND	ND	NS	4,100	ND	ND
	Jul-00	(120)	ND	ND	ND	NS	21,200	ND	ND
WP-EW-0816	Oct-96	ND	ND	ND	ND	ND	16,400	ND	ND
	Jan-97	ND	ND	ND	ND	ND	19,700	ND	ND
	Apr-97	ND	ND	ND	ND	ND	2,610	ND	ND
	Jul-97	ND	ND	ND	ND	ND	7,630	ND	ND
	Nov-97	(1,100)	ND	ND	ND	ND	23,000	ND	ND
	Feb-98	1.0	ND	ND	ND	ND	700	ND	ND
	Jun-98	0.24	ND	ND	ND	NS	87	ND	ND
	Sep-98	0.08	ND	ND	0.04	NS	36	0.031	0.05
	Nov-98	(260)	ND	ND	ND	ND	49,700	ND	ND
Duplicate	Nov-98	(900)	ND	ND	ND	ND	166,000	ND	50
	Jan-99	ND	ND	ND	ND	ND	8,400	ND	ND
	Apr-99	ND	ND	ND	ND	NS	10,600	ND	ND
Duplicate	Apr-99	(17)	ND	ND	ND	NS	13,200	ND	ND
	Jul-99	(17)	ND	ND	ND	NS	43,400	ND	ND
	Oct-99	(24)	ND	ND	ND	ND	25,100	ND	ND
	Feb-00	(17)	ND	ND	ND	NS	15,000	ND	ND
	Apr-00	(23)	ND	ND	ND	NS	19,100	ND	ND
Duplicate	Apr-00	(51)	ND	ND	ND	NS	27,200	ND	ND
	Jul-00	(23)	ND	ND	ND	NS	21,700	ND	23

Table 2-9
Groundwater Analytical Results Summary - VOCs
Monitoring Wells - Landfill 8
Wright-Patterson AFB, Ohio
Page 1 of 3

LOCATION	SAMPLE DATE	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	CHLOROFORM	TRANS-1,2-DCE	METHYLENE CHLORIDE	MTBE	TCE	VINYL CHLORIDE
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		0.62	NCL	NCL	NCL	0.28	100	6.22	NCL	3.03	0.0283
Compliance Level - MCL		5	1000	700	10000	NCL	100	NCL	NCL	5	2
WP-LF08-MW02A	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/26/98	ND	ND	ND	ND	ND	ND	1.1	NS	ND	ND
	10/12/99	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/23/00	ND	ND	ND	ND	ND	ND	0.55 J	ND	ND	ND
WP-LF08-MW02C	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/26/98	ND	ND	ND	ND	ND	ND	1.2	NS	ND	ND
	10/12/99	0.37 J	0.34 J	ND	ND	ND	ND	ND	NS	ND	ND
Duplicate	10/12/99	0.35 J	0.32 J	ND	ND	ND	ND	ND	NS	ND	ND
	10/23/00	ND	ND	ND	ND	ND	ND	0.46 J	ND	ND	ND
WP-LF08-MW05B	5/31/91	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	9/9/91	1 J	0.5 J	ND	ND	ND	ND	ND	NS	ND	ND
	1/27/92	0.8 J		ND	ND	ND	ND	ND	NS	ND	ND
	11/2/00	0.17 J	0.19 J	ND	ND	ND	ND	0.20 J	ND	0.40 J	0.38 J
WP-LF08-MW08A	5/15/91	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	9/10/91	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	2/1/92	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/24/00	ND	ND	ND	ND	ND	ND	0.81 J,B	ND	ND	ND
WP-LF08-MW08B	5/15/91	<1 J	ND	ND	ND	ND	ND	<2 J	NS	ND	<2 J
	10/24/00	ND	ND	ND	ND	ND	ND	0.39 J,B	ND	ND	ND
Duplicate	10/24/00	ND	ND	ND	ND	ND	ND	0.40 J,B	ND	ND	ND
WP-LF08-MW08C	5/15/91	ND	<1 J	ND	ND	ND	ND	<2 J	NS	ND	<2 J
	1/16/92	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/24/00	ND	0.13 J	ND	ND	ND	ND	0.31 J,B	ND	ND	ND
WP-LF08-MW09A	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	ND	ND	ND	ND	ND	ND	(29)	NS	ND	ND
	10/22/98	(1.1)	1.3	0.33 J	1.87	ND	ND	3.1	NS	ND	ND
	10/12/99	0.43 J	0.67	ND	ND	ND	ND	ND	NS	ND	ND
	10/23/00	(1.8)	6.4	0.82 J	4.9	ND	ND	0.37 J	ND	ND	ND
WP-LF08-MW09B	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	ND	ND	ND	ND	ND	ND	3.2	NS	ND	ND
	10/22/98	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/12/99	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/23/00	ND	0.27 J	ND	ND	ND	ND	0.30 J	ND	ND	ND
WP-LF08-MW10A	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/19/98	ND	ND	ND	ND	ND	ND	0.31 J	NS	ND	ND
	10/12/99	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/25/00	ND	0.20 J	ND	ND	ND	ND	0.25 J	ND	ND	ND
WP-LF08-MW10B	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	(9.0)
	11/1/97	ND	ND	ND	ND	ND	ND	ND	NS	ND	(6.4)
	10/19/98	ND	ND	ND	ND	ND	ND	0.45 J	NS	ND	(10)
	10/18/99	ND	ND	ND	ND	ND	ND	ND	NS	ND	(8.2)
	10/25/00	ND	0.24 J	ND	ND	ND	0.11 J	0.38 J	ND	ND	(8.2)

Table 2-9
Groundwater Analytical Results Summary - VOCs
Monitoring Wells - Landfill 8
Wright-Patterson AFB, Ohio
Page 2 of 3

LOCATION	SAMPLE DATE	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	CHLOROFORM	TRANS-1,2-DCE	METHYLENE CHLORIDE	MTBE	TCE	VINYL CHLORIDE
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		0.62	NCL	NCL	NCL	0.28	100	6.22	NCL	3.03	0.0283
Compliance Level - MCL		5	1000	700	10000	NCL	100	NCL	NCL	5	2
WP-LF08-MW10C	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	(6.0)
	11/1/97	ND	ND	ND	ND	ND	ND	(29)	NS	ND	(3.6)
	10/29/98	ND	ND	ND	ND	ND	0.22 J	ND	NS	ND	(4.4)
	10/20/99	(0.64)	ND	ND	ND	ND	0. 38 J	ND	NS	0.33 J	(2.5)
	10/25/00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-LF08-MW101	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS	DRY	DRY
	10/22/98	ND	0.84	ND	ND	ND	ND	2.3	NS	ND	ND
	10/20/99	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/24/00	ND	0.15 J	ND	ND	ND	ND	0.33 J,B	ND	ND	ND
WP-LF08-MW102	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS	DRY	DRY
	10/22/98	ND	ND	ND	ND	ND	ND	1.1	NS	ND	ND
	10/19/99	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/18/00	ND	0.29 J	ND	ND	ND	ND	ND	ND	ND	ND
WP-LF08-MW103	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS	DRY	DRY
	10/26/98	ND	ND	ND	ND	ND	ND	0.91	NS	ND	ND
	10/19/99	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/24/00	ND	0.19 J	ND	ND	ND	ND	0.33 J,B	ND	ND	ND
WP-02-DM-81S-M	6/1/86	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	5/15/91	ND	ND	ND	ND	ND	ND	<2 J	NS	ND	ND
	9/16/91	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	1/28/92	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	9/1/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/27/00	ND	0.16 J	ND	ND	ND	ND	0.44 J	ND	ND	ND
WP-02-DM-81D-M	6/1/86	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	5/15/91	ND	<1 J	ND	ND	ND	ND	<2 J	NS	ND	<2 J
	9/16/91	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	1/28/92	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	9/1/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/30/00	ND	0.16 J	ND	ND	ND	ND	ND	ND	ND	ND
WP-02-DM-82-M	6/1/86	ND	ND	ND	ND	<5	ND	ND	NS	ND	ND
	5/13/91	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	9/17/91	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	2/1/92	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	9/1/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/30/00	ND	ND	ND	ND	ND	ND	0.23 J,B	ND	ND	ND

Table 2-9
Groundwater Analytical Results Summary - VOCs
Monitoring Wells - Landfill 8
Wright-Patterson AFB, Ohio
Page 3 of 3

LOCATION	SAMPLE DATE	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	CHLOROFORM	TRANS-1,2-DCE	METHYLENE CHLORIDE	MTBE	TCE	VINYL CHLORIDE
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		0.62	NCL	NCL	NCL	0.28	100	6.22	NCL	3.03	0.0283
Compliance Level - MCL		5	1000	700	10000	NCL	100	NCL	NCL	5	2
WP-02-DM-83S-M	6/1/86	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	5/13/91	1 J	ND	ND	ND	ND	1	<2 J	NS	ND	<2 J
	9/11/91	1 J	ND	ND	ND	ND	1	ND	NS	ND	4
	1/17/92	1 J	ND	ND	ND	ND	2	ND	NS	ND	8
Duplicate	1/17/92	0.9 J	ND	ND	ND	ND	ND	ND	NS	ND	ND
	9/1/98	2	ND	ND	ND	6	3	ND	NS	ND	3
	10/31/00	0.56 J	ND	ND	ND	ND	0.34 J	0.82 J	ND	ND	(6.6)
WP-02-DM-83D-M	6/1/86	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	5/13/91	ND	ND	ND	ND	ND	ND	<2 J	NS	ND	ND
	9/16/91	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	2/2/92	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	9/1/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/31/00	ND	ND	ND	ND	ND	ND	0.22 J	ND	ND	ND
Duplicate	10/31/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
WP-02-DM-84-M	6/1/86	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	5/13/91	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	9/16/91	1 J	ND	ND	ND	ND	0.6 J	ND	NS	ND	ND
	2/1/92	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	9/1/98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/27/00	0.79 J	ND	ND	ND	ND	ND	0.51 J	ND	ND	ND
WP-02-DM-81S-M-AMB01 (ambient blank)	10/27/00	ND	0.25 J	ND	ND	(21)	ND	0.81 J	ND	ND	ND
LF8/10-LW07-2000	7/28/00	ND	ND	ND	ND	ND	ND	1.2	NS	ND	ND
LF8/10-LW10-2000	10/31/00	ND	0.20 J	ND	ND	ND	ND	0.21 J	ND	ND	ND

( ) - Concentration exceeds a compliance level.
ND - Not Detected
NS - Not Sampled
NCL - No Compliance Level set for these chemicals.
µg/L - micrograms per liter

DCE - Dichloroethene
TCE - Trichloroethene
MTBE - Methyl tert-butyl ether
J = Estimated result, result less than reporting limit
B = Method blank contamination.

See Appendix C-3 to find any other detections of VOCs not listed here for the October 2000 sampling round and Appendix C-2 for the July 2000 sampling round.

Table 2-10
Groundwater Analytical Results Summary - SVOCs
Monitoring Wells - LF 8
Wright-Patterson AFB, Ohio
Page 1 of 2

LOCATION	DATE	4-METHYL-PHENOL	BENZO(A) PYRENE	DIETHYL-PHTHALATE	NAPHTHALENE
Units		(µg/L)	(µg/L)	(µg/L)	(µg/L)
Compliance Level - ROD		NCL	NCL	NCL	NCL
Compliance Level - MCL		NCL	0.2	NCL	NCL
WP-LF08-MW02A	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	10/26/98	ND	ND	ND	ND
	10/12/99	ND	ND	ND	ND
	10/23/00	ND	ND	ND	ND
WP-LF08-MW02C	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	10/26/98	ND	ND	ND	ND
	10/12/99	ND	ND	ND	ND
Duplicate	10/12/99	ND	ND	ND	ND
	10/23/00	ND	ND	ND	ND
WP-LF08-MW05B	11/2/00	ND	ND	ND	ND
WP-LF08-MW08A	10/24/00	ND	ND	ND	ND
WP-LF08-MW08B	10/24/00	ND	ND	ND	ND
Duplicate	10/24/00	ND	ND	ND	ND
WP-LF08-MW08C	10/24/00	ND	ND	ND	ND
WP-LF08-MW09A	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	10/22/98	ND	ND	ND	ND
	10/12/99	ND	ND	ND	ND
	10/23/00	ND	ND	ND	ND
WP-LF08-MW09B	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	10/22/98	ND	ND	ND	ND
	10/12/99	ND	ND	ND	ND
	10/23/00	ND	ND	ND	ND
WP-LF08-MW10A	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	10/19/98	ND	ND	ND	ND
	10/12/99	ND	ND	ND	ND
	10/25/00	ND	ND	ND	ND
WP-LF08-MW10B	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	10/19/98	ND	ND	ND	ND
	10/18/99	ND	ND	ND	ND
	10/25/00	ND	ND	ND	ND
WP-LF08-MW10C	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	10/29/98	ND	ND	ND	ND
	10/20/99	ND	ND	ND	ND
	10/25/00	DRY	DRY	DRY	DRY
WP-LF08-MW101	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	6/1/98	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY
	10/22/98	ND	ND	ND	ND
	10/20/99	ND	ND	ND	ND
	10/24/00	ND	ND	ND	ND

Table 2-10
Groundwater Analytical Results Summary - SVOCs
Monitoring Wells - LF 8
Wright-Patterson AFB, Ohio
Page 2 of 2

LOCATION	DATE	4-METHYL-PHENOL	BENZO(A) PYRENE	DIETHYL-PHTHALATE	NAPHTHALENE
Units		(µg/L)	(µg/L)	(µg/L)	(µg/L)
Compliance Level - ROD		NCL	NCL	NCL	NCL
Compliance Level - MCL		NCL	0.2	NCL	NCL
WP-LF08-MW102	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	6/1/98	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY
	10/22/98	ND	ND	ND	0.5
	10/19/99	ND	ND	ND	ND
	10/18/00	ND	ND	ND	ND
WP-LF08-MW103	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	6/1/98	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY
	10/26/98	ND	ND	ND	ND
	10/19/99	ND	ND	ND	ND
	10/24/00	ND	ND	ND	ND
WP-02-DM-81S-M	10/27/00	ND	ND	ND	ND
WP-02-DM-81D-M	10/30/00	ND	ND	ND	ND
WP-02-DM-82-M	10/30/00	ND	ND	ND	ND
WP-02-DM-83S-M	10/31/00	ND	ND	ND	ND
WP-02-DM-83D-M	10/31/00	ND	ND	ND	ND
Duplicate	10/31/00	ND	ND	ND	ND
WP-02-DM-84-M	10/27/00	ND	ND	ND	ND
WP-02-DM-81S-M-AMB01	10/27/00	ND	ND	ND	ND

NCL - No Compliance Level set for these chemicals.
ND - Not detected
µg/L = micrograms per liter
AMB01 = Ambient blank

Table 2-11
Groundwater Analytical Results Summary - Dioxins
Monitoring Wells - Landfill 8
Wright-Patterson AFB, Ohio

LOCATION	DATE	Total-HpCDD	1,2,3,4,6,7,8-HpCDF	1,2,3,4,7,8-HxCDD	2,3,7,8-TCDD	2,3,7,8-TCDF	OCDD	OCDF
Units		(pg/L)	(pg/L)	(pg/L)	(pg/L)	(pg/L)	(pg/L)	(pg/L)
Compliance Level - ROD		56.7	56.7	5.67	0.567	5.67	5.67	5.67
Compliance Level - MCL		NCL	NCL	NCL	30	NCL	NCL	NCL
WP-LF08-MW02A	10/26/98	ND	ND	ND	ND	ND	3.4 JQB	ND
	10/12/99	0.64 JQ	ND	ND	ND	ND	4.7 JB	ND
	10/23/00	ND	ND	ND	ND	ND	2.3 JQB	ND
WP-LF08-MW02C	10/26/98	ND	ND	ND	ND	ND	2.4 JQB	ND
	10/12/99	ND	ND	ND	ND	ND	1.4 JB	ND
Duplicate	10/12/99	ND	ND	ND	ND	ND	1.8 JBQ	ND
	10/23/00	ND	ND	ND	ND	ND	(6.1 JB)	ND
WP-LF08-MW05B	11/2/00	ND	0.43 JQ	ND	ND	ND	2.2 JBQ	ND
WP-LF08-MW08A	10/24/00	ND	ND	ND	ND	ND	ND	ND
WP-LF08-MW08B	10/24/00	ND	ND	ND	ND	ND	4.2 JB	ND
Duplicate	10/24/00	ND	ND	ND	ND	ND	(7.7 JB)	ND
WP-LF08-MW08C	10/24/00	ND	ND	ND	(2.2 JQ)	ND	(13 JB)	ND
WP-LF08-MW09A	10/22/98	ND	ND	ND	ND	ND	2.7 JB	ND
	10/12/99	ND	ND	ND	ND	ND	2.2 JB	ND
	10/23/00	ND	ND	ND	ND	ND	2.2 JBQ	ND
WP-LF08-MW09B	10/22/98	ND	ND	ND	ND	ND	3.3 JB	ND
	10/12/99	ND	ND	ND	ND	ND	2.3 JB	ND
	10/23/00	ND	ND	ND	ND	ND	(11 JBQ)	ND
WP-LF08-MW10A	10/19/98	ND	ND	ND	ND	ND	3.2 JB	ND
	10/12/99	ND	ND	ND	ND	ND	1.4 JBQ	ND
	10/25/00	ND	ND	ND	ND	ND	4.1 JB	ND
WP-LF08-MW10B	10/19/98	ND	ND	ND	ND	ND	1.9 JBQ	ND
	10/18/99	0.55 J	0.26 JQ	ND	ND	ND	4.0 JB	0.83 JBQ
	10/25/00	ND	ND	ND	ND	ND	4.9 JB	ND
WP-LF08-MW10C	10/29/98	ND	ND	ND	ND	ND	(34 JB)	ND
	10/20/99	0.96 JBQ	0.26 JBQ	ND	ND	ND	(12 JB)	0.5 JBQ
	10/25/00	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-LF08-MW101	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/22/98	(160 J)	7.3	ND	ND	ND	(1000 B)	(44 J)
	10/20/99	11 JBQ	0.9 JB	ND	ND	ND	(68 JB)	4.3 JB
	10/24/00	13 JQ	ND	ND	ND	ND	(57 JB)	4.1 JBQ
WP-LF08-MW102	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/22/98	20 JQ	1.8 J	ND	ND	ND	(110 B)	(6.3 J)
	10/19/99	1.3 JQ	ND	ND	ND	ND	5.6 JB	0.84 JB
	10/18/00	ND	ND	ND	ND	ND	3.6 JB	ND
WP-LF08-MW103	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/26/98	(57 J)	2.9	ND	ND	ND	(320 B)	(15 J)
	10/19/99	ND	ND	ND	ND	ND	(6.5 JB)	2.3 JB
	10/24/00	1.7	ND	ND	ND	ND	(23 JB)	ND
WP-02-DM-81S-M	10/27/00	ND	ND	ND	ND	ND	5.3 JB	ND
WP-02-DM-81D-M	10/30/00	ND	ND	ND	(10 JQ)	ND	2.0 JB	ND
WP-02-DM-82-M	10/30/00	ND	ND	ND	ND	ND	3.5 JB	ND
WP-02-DM-83S-M	10/31/00	5.1 J	0.94 J	ND	ND	ND	(37 JB)	ND
WP-02-DM-83D-M	10/31/00	ND	ND	ND	(4.1 JQ)	ND	1.9 JBQ	ND
Duplicate	10/31/00	ND	ND	ND	ND	ND	4.4 JB	1.0 JBQ
WP-02-DM-84-M	10/27/00	ND	ND	ND	ND	ND	4.8 JBQ	ND
WP-02-DM-81S-M-AMB01	10/27/00	ND	ND	ND	ND	ND	ND	ND

NCL = No Compliance Level set for these chemicals.
ND = Not Detected
J = Estimated Result, Result less than reporting limit.
Q = Estimated Maximum Possible Concentration
B = Method Blank Contamination

AMB01 = Ambient blank
( ) - Concentration exceeds a compliance level.
pg/L = picograms per liter

Table 2-12
Groundwater Analytical Results Summary - Pesticides/PCBs
Monitoring Wells - Landfill 8
Wright-Patterson AFB, Ohio

LOCATION	DATE	AROCLOR 1242	AROCLOR 1248	AROCLOR 1254	AROCLOR 1260	DIELDRIN
Units		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Compliance Level - ROD		NCL	NCL	NCL	NCL	NCL
Compliance Level - MCL		NCL	NCL	NCL	NCL	NCL
WP-LF08-MW02A	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	10/26/98	ND	ND	ND	ND	ND
	10/12/99	ND	ND	ND	ND	ND
	10/23/00	ND	ND	ND	ND	ND
WP-LF08-MW02C	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	10/26/98	ND	ND	ND	ND	ND
	10/12/99	ND	ND	ND	ND	ND
Duplicate	10/12/99	ND	ND	ND	ND	ND
	10/23/00	ND	ND	ND	ND	ND
WP-LF08-MW05B	11/2/00	ND	ND	ND	ND	ND
WP-LF08-MW08A	10/24/00	ND	ND	ND	ND	ND
WP-LF08-MW08B	10/24/00	ND	ND	ND	ND	ND
Duplicate	10/24/00	ND	ND	ND	ND	ND
WP-LF08-MW08C	10/24/00	ND	ND	ND	ND	ND
WP-LF08-MW09A	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	10/22/98	ND	ND	ND	ND	ND
	10/12/99	ND	ND	ND	ND	ND
	10/23/00	ND	ND	ND	ND	ND
WP-LF08-MW09B	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	10/22/98	ND	ND	ND	ND	ND
	10/12/99	ND	ND	ND	ND	ND
	10/23/00	ND	ND	ND	ND	ND
WP-LF08-MW10A	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	10/19/98	ND	ND	ND	ND	ND
	10/12/99	ND	ND	ND	ND	ND
	10/25/00	ND	ND	ND	ND	ND
WP-LF08-MW10B	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	10/19/98	ND	ND	ND	ND	ND
	10/18/99	ND	ND	ND	ND	ND
	10/25/00	ND	ND	ND	ND	ND
WP-LF08-MW10C	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	10/29/98	ND	ND	ND	ND	ND
	10/20/99	ND	ND	ND	ND	ND
	10/25/00	DRY	DRY	DRY	DRY	DRY
WP-LF08-MW101	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	6/1/98	DRY	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY
	10/22/98	ND	ND	ND	ND	ND
	10/20/99	ND	ND	ND	ND	ND
	10/24/00	ND	ND	ND	ND	ND
WP-LF08-MW102	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	6/1/98	DRY	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY
	10/22/98	ND	ND	ND	ND	ND
	10/19/99	ND	ND	ND	ND	ND
	10/18/00	ND	ND	ND	ND	ND
WP-LF08-MW103	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	6/1/98	DRY	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY
	10/26/98	ND	ND	ND	ND	ND
	10/19/99	ND	ND	ND	ND	ND
	10/24/00	ND	ND	ND	ND	ND
WP-02-DM-81S-M	10/27/00	ND	ND	ND	ND	ND
WP-02-DM-81D-M	10/30/00	ND	ND	ND	ND	ND
WP-02-DM-82-M	10/30/00	ND	ND	ND	ND	ND
WP-02-DM-83S-M	10/31/00	ND	ND	ND	ND	ND
WP-02-DM-83D-M	10/31/00	ND	ND	ND	ND	ND
Duplicate	10/31/00	ND	ND	ND	ND	ND
WP-02-DM-84-M	10/27/00	ND	ND	ND	ND	ND
WP-02-DM-81S-M-AMB01	10/27/00	ND	ND	ND	ND	ND

AMB01 = Ambient blank
NCL = No Compliance Level set for these chemicals.
ND = Not Detected
µg/L - Micrograms per liter

Table 2-13
Groundwater Analytical Results Summary - Inorganic Compounds
Monitoring Wells - Landfill 8
Wright-Patterson AFB, Ohio

LOCATION	DATE	ARSENIC	BERYLLIUM	CADMIUM	CYANIDE	COPPER	IRON	LEAD	ZINC	AMMONIA
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		11	0.02	NCL	NCL	NCL	NCL	NCL	NCL	NCL
Compliance Level - MCL		50	4	5	200	1,300	NCL	15	NCL	NCL
WP-LF08-MW02A	10/1/96	ND	ND	1.0	ND	ND	21,700	(22)	63	NS
	11/1/97	ND	ND	ND	ND	60	30	9.0	70	NS
	10/26/98	ND	ND	ND	ND	ND	4,400	ND	53	500
	10/12/99	ND	ND	ND	ND	ND	1,500	ND	ND	1,000
	10/23/00	ND	ND	ND	ND	ND	7,800	ND	ND	800
WP-LF08-MW02C	10/1/96	ND	ND	ND	ND	ND	10,700	6.0	ND	NS
	11/1/97	(50)	ND	ND	ND	50	44,000	(21)	120	NS
	10/26/98	(14)	ND	ND	ND	ND	4,000	ND	ND	900
	10/12/99	(19)	ND	ND	ND	ND	3,800	ND	ND	700
Duplicate	10/12/99	(23)	ND	ND	ND	ND	4,600	ND	ND	900
	10/23/00	(19)	ND	ND	ND	ND	5,400	ND	ND	900
WP-LF08-MW05B	5/31/91	4 J	ND	ND	ND	21 J	ND	2 J	ND	160
	9/9/91	4 J	ND	3 J	ND	2 J	3,690	1 J	ND	NS
	1/27/92	3 J	(1 J)	ND	NS	8 J	ND	ND	ND	NS
	11/2/00	ND	ND	ND	ND	ND	1,700	ND	ND	ND
WP-LF08-MW08A	5/15/91	7 J	ND	ND	ND	ND	554	ND	14 J	730
	9/10/91	(11)	(3 J)	ND	ND	ND	26,000	1 J	ND	NS
	2/1/92	10 J	ND	ND	ND	ND	731 J	ND	ND	NS
	10/24/00	(130)	ND	ND	ND	ND	9,300	ND	ND	900
WP-LF08-MW08B	5/15/91	5.2 J	ND	ND	ND	ND	391	ND	13.4 J	660
	10/24/00	(14)	ND	ND	ND	ND	1,600	ND	ND	800
Duplicate	10/24/00	(17)	ND	ND	ND	ND	1,800	ND	ND	700
WP-LF08-MW08C	5/15/91	ND	ND	ND	ND	17 J	ND	2 J	8 J	NS
	5/16/91	4 J	ND	ND	ND	67	7,170	ND	ND	100
	1/16/92	3 J	ND	ND	ND	ND	ND	2 J	14 J	NS
	10/24/00	ND	ND	ND	ND	ND	830	ND	ND	ND
WP-LF08-MW09A	10/1/96	ND	ND	ND	ND	ND	418	ND	ND	NS
	11/1/97	ND	ND	ND	ND	20	18,000	6.0	30	NS
	10/22/98	ND	ND	ND	ND	ND	ND	ND	ND	500
	10/12/99	ND	ND	ND	ND	ND	ND	ND	ND	400
	10/23/00	ND	ND	ND	ND	ND	170	ND	ND	500
WP-LF08-MW09B	10/1/96	ND	ND	ND	ND	ND	3,520	7.0	ND	NS
	11/1/97	ND	ND	ND	ND	10	12,000	4.0	50	NS
	10/22/98	ND	ND	ND	ND	ND	270	ND	ND	ND
	10/12/99	ND	ND	ND	ND	ND	180	ND	ND	400
	10/23/00	ND	ND	ND	ND	ND	ND	ND	ND	ND
WP-LF08-MW10A	10/1/96	ND	ND	0.3	ND	ND	4,610	8.0	ND	NS
	11/1/97	(30)	ND	ND	ND	ND	6,700	ND	ND	NS
	10/19/98	(25)	ND	ND	ND	ND	2,300	ND	ND	2,500
	10/12/99	(29)	ND	ND	ND	ND	2,500	ND	ND	2,200
	10/25/00	(34)	ND	ND	ND	ND	2,400	ND	ND	2600

Table 2-13
Groundwater Analytical Results Summary - Inorganic Compounds
Monitoring Wells - Landfill 8
Wright-Patterson AFB, Ohio
Page 2 of 3

LOCATION	DATE	ARSENIC	BERYLLIUM	CADMIUM	CYANIDE	COPPER	IRON	LEAD	ZINC	AMMONIA
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		11	0.02	NCL	NCL	NCL	NCL	NCL	NCL	NCL
Compliance Level - MCL		50	4	5	200	1,300	NCL	15	NCL	NCL
WP-LF08-MW10B	10/1/96	ND	ND	ND	ND	ND	1,670	ND	ND	NS
	11/1/97	ND	ND	ND	ND	ND	1,400	ND	ND	NS
	10/19/98	ND	ND	ND	ND	ND	1,600	ND	ND	ND
	10/18/99	ND	ND	ND	ND	ND	1,400	ND	ND	ND
	10/25/00	ND	ND	ND	ND	ND	1,500	ND	ND	ND
WP-LF08-MW10C	10/1/96	(128)	(1.0)	1.1	ND	82	75,900	(24)	288	NS
	11/1/97	(770)	ND	ND	ND	270	370,000	(80)	590	NS
	10/29/98	(110)	ND	ND	ND	67	53,000	(19)	230	ND
	10/20/99	(11)	ND	ND	ND	ND	6,200	ND	ND	ND
	10/25/00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-LF08-MW101	10/1/96	ND	ND	0.4	ND	ND	6,210	(17)	62	NS
	11/1/97	ND	(7)	ND	ND	ND	54,000	ND	180	NS
	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS
	10/22/98	10	ND	ND	ND	26	15,200	(26)	100	1,400
	10/20/99	(15)	ND	ND	ND	ND	24,200	(26)	84	1,200
	10/24/00	ND	ND	ND	ND	ND	6,800	8.3	450	600
WP-LF08-MW102	10/1/96	(61)	(3.0)	2	ND	164	115,000	(86)	396	NS
	11/1/97	(40)	ND	ND	ND	30	30,000	(17)	90	NS
	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS
	10/22/98	(11)	ND	ND	ND	ND	6,200	ND	ND	700
	10/19/99	10	ND	ND	ND	ND	2,100	ND	69	ND
	10/18/00	(11)	ND	ND	ND	ND	2,400	ND	110	600
WP-LF08-MW103	10/1/96	ND	(1.0)	3	ND	106	56,200	(49)	258	NS
	11/1/97	(50)	ND	ND	ND	50	44,000	(21)	120	NS
	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS
	10/26/98	(13)	ND	ND	ND	ND	9,000	5.1	70	2,500
	10/19/99	ND	ND	ND	ND	ND	2,100	ND	ND	500
	10/24/00	ND	ND	ND	ND	ND	1,100	ND	190	500
WP-02-DM-81S-M	5/15/91	(12)	ND	ND	ND	ND	563	2 J	13 J	280
	9/16/91	(12)	ND	ND	ND	ND	1,030	5 J	ND	NS
	1/28/92	(18)	ND	ND	ND	3 J	1340 J	2 J	ND	NS
	10/27/00	ND	ND	ND	NS	ND	ND	ND	ND	300
WP-02-DM-81D-M	5/15/91	5 J	ND	2 J	NS	ND	2150	2 J	19 J	200
	9/16/91	(22)	ND	ND	NS	ND	5,330	5 J	ND	NS
	1/28/92	(18)	ND	ND	NS	5 J	3670 J	2 J	ND	NS
	10/30/00	(24)	ND	ND	ND	ND	4,700	ND	ND	300

Table 2-13
Groundwater Analytical Results Summary - Inorganic Compounds
Monitoring Wells - Landfill 8
Wright-Patterson AFB, Ohio
Page 3 of 3

LOCATION	DATE	ARSENIC	BERYLLIUM	CADMIUM	CYANIDE	COPPER	IRON	LEAD	ZINC	AMMONIA
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		11	0.02	NCL	NCL	NCL	NCL	NCL	NCL	NCL
Compliance Level - MCL		50	4	5	200	1,300	NCL	15	NCL	NCL
WP-02-DM-82-M	5/13/91	(12 J)	(0.8 J)	ND	ND	8 J	2,590	2 J	ND	660
	9/17/91	(13)	ND	ND	ND	95	7,690	1 J	ND	NS
	2/1/92	(18)	ND	ND	NS	ND	783	2 J	ND	NS
	10/30/00	ND	ND	ND	ND	ND	190	ND	ND	400
WP-02-DM-83S-M	5/13/91	8 J	ND	2 J	67	26 J	4,180	1 J	19 J	ND
	9/11/91	(34)	(2 J)	3 J	ND	147	79,900	(44 J)	314	NS
	1/17/92	(18 J)	ND	ND	NS	47	2,640	6 J	20 J	NS
	10/31/00	ND	ND	ND	ND	ND	8,100	9	58	ND
WP-02-DM-83D-M	5/13/91	4 J	ND	ND	8 J	ND	3,960	8 J	ND	ND
	9/16/91	2 J	ND	ND	ND	ND	1,140	1 J	ND	NS
	2/2/92	3 J	ND	ND	NS	ND	169 J	ND	ND	NS
	10/31/00	ND	ND	ND	ND	ND	ND	ND	ND	200
Duplicate	10/31/00	ND	ND	ND	ND	ND	ND	ND	ND	ND
WP-02-DM-84-M	5/13/91	(31 J)	ND	4 J	ND	9 J	22,900	2 J	ND	100
	9/16/91	(90)	ND	(5 J)	ND	ND	40,900	1 J	ND	NS
	2/1/92	(59 J)	ND	ND	NS	4 J	25,800	ND	ND	NS
	10/27/00	(46)	ND	ND	ND	ND	21,500	ND	ND	400
WP-02-DM-81S-M-AMB01	10/27/00	ND	ND	ND	ND	ND	ND	ND	ND	ND
LF8/10-LW07-2000	7/28/00	(13)	ND	ND	NS	55	11,300	9.7	120	NS
LF8/10-LW10-2000	10/31/00	ND	ND	ND	NS	ND	6,300	ND	ND	NS

NS = Not Sampled
ND = Not Detected
( ) - Concentration exceeds a compliance level.
AMB01 = Ambient blank
NCL - No Compliance Level set for these chemicals.
µg/L - Micrograms per liter

Table 2-14
Landfill 10 Extraction Wells
Groundwater Analytical Results Summary - VOCs
Wright-Patterson AFB, Ohio

LOCATION	DATE	BENZENE	CHLOROFORM	TRANS-1,2-DCE	ETHYLBENZENE	METHYLENE CHLORIDE	TOLUENE	TCE	TOTAL XYLENES	VINYL CHLORIDE
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		0.62	0.28	100	NCL	6.22	NCL	3.03	NCL	0.0283
Compliance Level - MCL		5	100	100	700	5	1000	5	10000	2
WP-EW-1001	Oct-96	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Jan-97	(2.0)	ND	ND	10	ND	ND	ND	28	ND
	Apr-97	ND	ND	ND	ND	ND	ND	ND	3.0	ND
	Jul-97	(1.0)	(4.0)	ND	3.0	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	11	(9.5)	ND	ND	ND	ND
	Feb-98	0.37 J	ND	ND	ND	ND	ND	ND	ND	ND
	Jun-98	0.4 J	ND	ND	ND	ND	ND	ND	ND	ND
	Sep-98	0.026 J	ND	ND	1.2	ND	ND	ND	5.27	ND
	Oct-98	(1.6)	ND	ND	2.5	0.27 J	ND	ND	4.58 J	ND
	Jan-99	0.21 J	ND	ND	0.6	0.37 J	ND	ND	2.4	ND
	Apr-99	0.23 J	ND	ND	ND	0.34 J	ND	ND	ND	ND
	Jul-99	Dismantled								
	Oct-99	No sample collected, well would not produce water								
	Feb-00	0.44 J	ND	ND	0.44 J	0.35 J	ND	ND	2.0	ND
Duplicate	Feb-00	0.52	ND	ND	0.45 J	0.33 J	0.44 J	ND	1.7	ND
	Apr-00	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Jul-00	(1.5)	ND	ND	4.5	1.4	ND	ND	5.2	ND
Duplicate	Jul-00	(1.5)	ND	ND	4.2	1.3	ND	ND	3.1	ND
WP-EW-1003	Oct-96	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Jan-97	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Jul-97	ND	(2.0)	ND	ND	ND	ND	ND	ND	ND
	Nov-97	(2.4)	ND	ND	ND	(25)	ND	ND	ND	ND
	Feb-98	(0.84)	ND	ND	ND	ND	ND	ND	ND	ND
	Jun-98	(1.0)	ND	ND	ND	ND	ND	ND	ND	ND
	Sep-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jan-99	No sample collected, well would not produce water								
	Apr-99	No sample collected, well would not produce water								
	Jul-99	No sample collected, well would not produce water								
	Oct-99	Dismantled								
	Feb-00	Lid Frozen Shut and Well Head Partially Disassembled								
	Apr-00	No sample collected, well would not produce water								
	Jul-00	No sample collected, well would not produce water								
WP-EW-1006*	Jan-99	(240)	ND	ND	310	ND	220	ND	780	ND
	Feb-00	(110)	ND	ND	72	1.8 J	130	ND	279	ND
	Apr-00	(81)	ND	ND	46	ND	14	ND	141	ND
	Jul-00	(70)	ND	ND	24	ND	9.7	ND	99	ND

Table 2-14
Landfill 10 Extraction Wells
Groundwater Analytical Results Summary - VOCs
Wright-Patterson AFB, Ohio

LOCATION	DATE	BENZENE	CHLOROFORM	TRANS-1,2-DCE	ETHYLBENZENE	METHYLENE CHLORIDE	TOLUENE	TCE	TOTAL XYLENES	VINYL CHLORIDE
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		0.62	0.28	100	NCL	6.22	NCL	3.03	NCL	0.0283
Compliance Level - MCL		5	100	100	700	5	1000	5	10000	2
WP-EW-1008	Oct-96	(5.0)	ND	ND	4.0	ND	3.0	ND	ND	ND
	Jan-97	(3.0)	ND	ND	ND	ND	ND	ND	ND	(2.0)
	Nov-97	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jun-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Sep-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jan-99	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Apr-99	No sample collected, well would not produce water								
	Jul-99	No sample collected, well would not produce water								
	Oct-99	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Apr-00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jul-00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-EW-1012	Nov-97	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-98	(1.1)	ND	ND	ND	ND	0.42	ND	0.91	ND
	Jun-98	(0.85)	ND	ND	0.33	0.31	0.56	ND	ND	ND
	Sep-98	(1.4)	ND	ND	0.45	ND	0.27	ND	0.85	ND
	Oct-98	(0.67)	ND	ND	ND	ND	0.52	ND	ND	(0.69)
	Jan-99	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Apr-99	ND	ND	ND	ND	0.88	ND	ND	ND	ND
	Jul-99	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Oct-99	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Apr-00	No sample collected, well would not produce water								
	Jul-00	No sample collected, well would not produce water								
WP-EW-1015	Oct-96	(10)	ND	ND	29	ND	4.0	ND	82	ND
	Jan-97	(10)	ND	ND	39	ND	4.0	ND	92	(2.0)
	Apr-97	(11)	ND	3.0	32	ND	2.0	ND	56	ND
	Jul-97	(10)	(3.0)	ND	23	ND	1.0	ND	48	ND
	Nov-97	(13)	ND	ND	45	4.6	14	ND	ND	ND
	Feb-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jun-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Sep-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jan-99	(3.6)	ND	ND	3.4	0.23 J	0.42 J	ND	3.3	ND
	Apr-99	No sample collected, well would not produce water								
	Jul-99	No sample collected, well would not produce water - replaced with WP-EW-1017								
	Oct-99	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-00	(1.7)	ND	ND	2.9	0.19 J	0.67	ND	12	ND
	Apr-00	0.56	ND	ND	0.8	(8.8)	ND	ND	5.5	ND
	Jul-00	No sample collected, well would not produce water								
WP-EW-1017^	Jul-99	(1.4)	ND	ND	0.34 J	ND	0.30 J	ND	0.74 J	ND

Table 2-14
Landfill 10 Extraction Wells
Groundwater Analytical Results Summary - VOCs
Wright-Patterson AFB, Ohio

LOCATION	DATE	BENZENE	CHLOROFORM	TRANS-1,2-DCE	ETHYLBENZENE	METHYLENE CHLORIDE	TOLUENE	TCE	TOTAL XYLENES	VINYL CHLORIDE
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		0.62	0.28	100	NCL	6.22	NCL	3.03	NCL	0.0283
Compliance Level - MCL		5	100	100	700	5	1000	5	10000	2
WP-EW-1019	Oct-96	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Jan-97	(2.0)	ND	ND	ND	ND	ND	ND	ND	ND
	Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Jul-97	(1.0)	ND	ND	1.0	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Feb-98	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Jun-98	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Sep-98	(0.87)	ND	ND	1.84	ND	ND	ND	4.43	ND
Duplicate	Sep-98	(0.86)	ND	ND	1.9	ND	ND	ND	NA	ND
	Nov-98	(1.5)	ND	ND	ND	(45)	ND	ND	ND	ND
	Jan-99	0.36 J	ND	ND	ND	0.31 J	ND	ND	ND	ND
	Apr-99	ND	ND	ND	ND	0.54	ND	ND	ND	ND
	Jul-99	0.31 J	ND	ND	ND	3.8	ND	ND	ND	ND
Duplicate	Jul-99	(0.79)	ND	ND	ND	0.67 B	ND	ND	ND	ND
	Oct-99	ND	ND	ND	ND	ND	ND	ND	ND	ND
Duplicate	Oct-99	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Feb-00	ND	0.28 J	ND	ND	0.32 J	ND	ND	ND	ND
	Apr-00	No sample collected, well would not produce water								
	Jul-00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-EW-1020	Oct-96	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Jan-97	(2.0)	ND	ND	ND	ND	2.0	ND	ND	ND
	Jul-97	ND	(21)	ND	1.0	ND	1.0	ND	NA	ND
	Nov-97	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jun-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Sep-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jan-99	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Apr-99	No sample collected, well would not produce water								
	Jul-99	No sample collected, well would not produce water								
	Oct-99	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Apr-00	(0.64)	(1.0)	ND	0.61	0.72 B	0.82	ND	1.4	ND
	Jul-00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY

Table 2-14
Landfill 10 Extraction Wells
Groundwater Analytical Results Summary - VOCs
Wright-Patterson AFB, Ohio

LOCATION	DATE	BENZENE	CHLOROFORM	TRANS-1,2-DCE	ETHYLBENZENE	METHYLENE CHLORIDE	TOLUENE	TCE	TOTAL XYLENES	VINYL CHLORIDE
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		0.62	0.28	100	NCL	6.22	NCL	3.03	NCL	0.0283
Compliance Level - MCL		5	100	100	700	5	1000	5	10000	2
WP-EW-1024	Oct-96	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Jan-97	(1.0)	ND	ND	2.0	ND	6.0	ND	8.0	ND
	Apr-97	ND	ND	ND	ND	ND	2.0	ND	ND	ND
	Jul-97	(1.0)	(2.0)	ND	4.0	ND	9.0	ND	17	ND
	Nov-97	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jun-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Sep-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jan-99	ND	ND	ND	ND	0.38 J	ND	ND	ND	ND
Duplicate	Jan-99	ND	ND	ND	ND	0.21 J	ND	ND	ND	ND
	Apr-99	ND	ND	ND	ND	1.0	ND	ND	ND	ND
	Jul-99	ND	ND	ND	ND	0.83 B	ND	ND	0.53 J	ND
Duplicate	Jul-99	ND	ND	ND	ND	0.95 B	ND	ND	ND	ND
	Oct-99	ND	ND	ND	ND	ND	ND	ND	1.63 J	ND
	Feb-00	ND	ND	ND	0.64	0.21 J	0.36 J	ND	2.9	ND
	Apr-00	ND	ND	ND	ND	0.19 JB	ND	ND	ND	ND
	Jul-00	ND	ND	ND	ND	1.0	ND	ND	ND	ND
WP-EW-1025	Nov-97	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jun-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Sep-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jan-99	No sample collected, well would not produce water								
	Apr-99	No sample collected, well would not produce water								
	Jul-99	No sample collected, well would not produce water								
	Oct-99	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-00	0.22 J	0.83	ND	ND	0.74	0.75	ND	0.74 J	ND
	Apr-00	ND	(1.4)	ND	ND	1.8	ND	ND	ND	ND
	Jul-00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY

NCL - No Compliance Level set for these chemicals.
DCE - Dichloroethene
TCE - Trichloroethene
NS - Not Sampled
ND - Not Detected
NA - Not Available
J = Estimated Result. Result between detection and reporting limit.
B - Method blank contamination. The associated method blank contains the target analyte at a reportable level.

* - Replacement sample for WP-EW-1008
^ - Replacement sample for WP-EW-1015
µg/L = micrograms per liter
( ) - Concentration exceeds a compliance level.
No sample collected, well would not produce water - Sufficient water in well, however, pump not activating properly.
See Appendix C-2 for any detections of VOCs not listed here for July 2000 sampling round.

Table 2-15
Landfill 10 Extraction Wells Groundwater Analytical Results Summary - Inorganics
Wright-Patterson AFB, Ohio

	DATE	ARSENIC	BERYLLIUM	CADMIUM	COPPER	CYANIDE	IRON	LEAD	ZINC
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		11	0.02	NCL	NCL	NCL	NCL	NCL	NCL
Compliance Level - MCL		50	4	5	1,300	200	NCL	15	NCL
WP-EW-1001	Oct-96	(163)	ND	ND	ND	ND	50,200	ND	ND
	Jan-97	(50)	ND	ND	ND	ND	26,000	ND	55
	Apr-97	ND	ND	ND	ND	ND	11,100	ND	ND
	Jul-97	(117)	ND	ND	ND	ND	13,700	ND	ND
	Nov-97	(50)	ND	ND	ND	ND	26,000	ND	ND
	Feb-98	3.0	ND	ND	ND	ND	1,800	ND	ND
	Jun-98	1.2	ND	ND	ND	NS	190	ND	ND
	Sep-98	0.06	ND	ND	ND	NS	27	ND	ND
	Oct-98	(54)	ND	ND	ND	ND	37,600	ND	ND
	Jan-99	(22)	ND	ND	ND	ND	14,500	ND	ND
	Apr-99	(40)	ND	ND	ND	NS	28,400	ND	ND
	Jul-99	Dismantled							
	Oct-99	No sample collected, well would not produce water							
	Feb-00	(340)	ND	(6.3)	93	NS	133,000	(26)	280
Duplicate	Feb-00	(140)	ND	ND	110	NS	99,100	(28)	200
	Apr-00	(37)	ND	ND	ND	NS	35,400	ND	ND
	Jul-00	(2000)	ND	(5)	ND	NS	379,000	ND	ND
Duplicate	Jul-00	(380)	ND	ND	ND	NS	113,000	ND	ND
WP-EW-1003	Oct-96	ND	ND	0.4	ND	ND	10,200	ND	ND
	Jan-97	ND	ND	ND	ND	ND	9,510	ND	55
	Apr-97	ND	ND	ND	ND	ND	23,100	83	ND
	Jul-97	(66)	ND	ND	ND	ND	43,000	6.0	ND
	Nov-97	(40)	ND	ND	ND	ND	39,000	ND	ND
	Feb-98	3.0	ND	ND	ND	ND	1,700	ND	ND
	Jun-98	0.21	ND	ND	ND	NS	120	ND	ND
	Sep-98	DRY	DRY	DRY	DRY	NS	DRY	DRY	DRY
	Jan-99	No sample collected, well would not produce water							
	Apr-99	No sample collected, well would not produce water							
	Jul-99	No sample collected, well would not produce water							
	Oct-99	Dismantled							
	Feb-00	Lid Frozen Shut and Partially Disassembled							
	Apr-00	No sample collected, well would not produce water							
	Jul-00	No sample collected, well would not produce water							
WP-EW-1006*	Jan-99	ND	ND	ND	ND	ND	150,000	ND	130
	Feb-00	10	ND	(13)	ND	NS	288,000	ND	74
	Apr-00	ND	ND	ND	ND	NS	27,800	ND	ND
	Jul-00	(12)	ND	ND	ND	NS	29,500	ND	76

Table 2-15
Landfill 10 Extraction Wells Groundwater Analytical Results Summary - Inorganics
Wright-Patterson AFB, Ohio

	DATE	ARSENIC	BERYLLIUM	CADMIUM	COPPER	CYANIDE	IRON	LEAD	ZINC
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		11	0.02	NCL	NCL	NCL	NCL	NCL	NCL
Compliance Level - MCL		50	4	5	1,300	200	NCL	15	NCL
WP-EW-1008	Oct-96	ND	ND	0.2	ND	ND	73,800	ND	ND
	Nov-97	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jun-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Sep-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jan-99	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Apr-99	No sample collected, well would not produce water							
	Jul-99	No sample collected, well would not produce water							
	Oct-99	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Apr-00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jul-00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-EW-1012	Nov-97	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-98	(16)	ND	ND	ND	ND	10,000	ND	ND
	Jun-98	0.27	ND	ND	ND	NS	84	ND	0.03
	Sep-98	0.08	ND	ND	ND	NS	46	ND	0.21
	Oct-98	ND	ND	ND	ND	ND	ND	ND	ND
	Jan-99	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Apr-99	ND	ND	ND	ND	NS	3,500	ND	ND
	Jul-99	(59)	ND	ND	ND	NS	24,000	ND	ND
	Oct-99	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-00	No sample collected, well would not produce water							
	Apr-00	No sample collected, well would not produce water							
	Jul-00	No sample collected, well would not produce water							
WP-EW-1015	Oct-96	ND	ND	0.7	ND	ND	61,400	9.0	67
	Jan-97	ND	ND	ND	ND	ND	43,200	ND	ND
	Jul-97	ND	ND	ND	ND	ND	40,500	ND	ND
	Nov-97	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jun-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Sep-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jan-99	ND	ND	ND	ND	ND	159,000	ND	55
	Apr-99	No sample collected, well would not produce water							
	Jul-99	No sample collected, well would not produce water							
	Oct-99	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-00	ND	ND	ND	ND	NS	3,100	3.7	ND
	Apr-00	ND	ND	ND	ND	NS	950	ND	ND
	Jul-00	No sample collected, well would not produce water							

Table 2-15
Landfill 10 Extraction Wells Groundwater Analytical Results Summary - Inorganics
Wright-Patterson AFB, Ohio

	DATE	ARSENIC	BERYLLIUM	CADMIUM	COPPER	CYANIDE	IRON	LEAD	ZINC
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		11	0.02	NCL	NCL	NCL	NCL	NCL	NCL
Compliance Level - MCL		50	4	5	1,300	200	NCL	15	NCL
WP-EW-1017^	Jul-99	ND	ND	ND	ND	NS	28,300	(15)	170
WP-EW-1019	Oct-96	ND	ND	0.3	ND	ND	5,330	ND	ND
	Jan-97	ND	ND	ND	ND	ND	3,060	ND	ND
	Apr-97	ND	ND	ND	ND	ND	1,040	ND	ND
	Jul-97	ND	ND	ND	ND	ND	12,400	ND	ND
	Nov-97	ND	ND	ND	ND	ND	1,600	ND	ND
	Feb-98	ND	ND	ND	ND	ND	1.2	ND	ND
	Jun-98	ND	ND	ND	ND	NS	1.9	ND	ND
	Sep-98	0.01	ND	ND	0.02	NS	10	ND	0.03
Duplicate	Sep-98	0.01	ND	ND	0.03	NS	11	0.032	ND
	Nov-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Oct-99	(13)	ND	ND	ND	ND	8,600	ND	ND
	Jan-99	ND	ND	ND	ND	ND	2,000	ND	ND
	Apr-99	(170)	ND	ND	ND	NS	103,000	ND	60
	Jul-99	ND	ND	ND	ND	NS	2,700	ND	ND
Duplicate	Jul-99	ND	ND	ND	ND	NS	4,100	ND	ND
	Oct-99	ND	ND	ND	ND	ND	2,400	ND	ND
Duplicate	Oct-99	(13)	ND	ND	ND	ND	8,600	ND	ND
	Feb-00	ND	ND	ND	ND	NS	3,200	ND	ND
	Apr-00	No sample collected, well would not produce water							
	Jul-00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-EW-1020	Oct-96	ND	ND	ND	ND	ND	8,070	6.0	ND
	Jan-97	ND	ND	ND	ND	ND	7,020	ND	ND
	Jul-97	ND	ND	ND	ND	ND	15,900	ND	66
	Nov-97	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jun-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Sep-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jan-99	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Apr-99	No sample collected, well would not produce water							
	Jul-99	No sample collected, well would not produce water							
	Oct-99	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Apr-00	VOCs only were collected, well did not produce enough water							
	Jul-00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY

Table 2-15
Landfill 10 Extraction Wells Groundwater Analytical Results Summary - Inorganics
Wright-Patterson AFB, Ohio

	DATE	ARSENIC	BERYLLIUM	CADMIUM	COPPER	CYANIDE	IRON	LEAD	ZINC
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		11	0.02	NCL	NCL	NCL	NCL	NCL	NCL
Compliance Level - MCL		50	4	5	1,300	200	NCL	15	NCL
WP-EW-1024	Oct-96	ND	ND	ND	ND	ND	27,200	ND	ND
	Jan-97	ND	ND	ND	ND	ND	15,000	ND	ND
	Apr-97	ND	ND	0.2	ND	ND	5,310	ND	ND
	Jul-97	ND	ND	ND	ND	ND	9,770	ND	ND
	Nov-97	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jun-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Sep-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Oct-98	(27)	ND	ND	ND	ND	48,700	ND	ND
	Jan-99	ND	ND	ND	ND	ND	11,100	ND	ND
Duplicate	Jan-99	(12)	ND	ND	ND	ND	26,600	ND	71
	Apr-99	ND	ND	ND	ND	NS	4,100	ND	ND
	Jul-99	ND	ND	ND	ND	NS	8,500	ND	97
Duplicate	Jul-99	ND	ND	ND	ND	NS	3,300	ND	ND
	Oct-99	VOCs only were collected, well did not produce enough water							
	Feb-00	ND	ND	ND	ND	NS	5,700	ND	ND
	Apr-00	ND	ND	ND	ND	NS	10,800	ND	ND
	Jul-00	ND	ND	ND	ND	NS	9,500	ND	170 L
WP-EW-1025	Nov-97	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jun-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Sep-98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Jan-99	No sample collected, well would not produce water							
	Apr-99	No sample collected, well would not produce water							
	Jul-99	No sample collected, well would not produce water							
	Oct-99	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	Feb-00	ND	ND	ND	ND	NS	11,400	ND	ND
	Apr-00	ND	ND	ND	ND	NS	37,000	ND	ND
	Jul-00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY

NCL - No Compliance Level set for these chemicals. µg/L = micrograms per liter
ND = Not Detected
NS = Not Sampled this Round
^ - Replacement sample for EW-1015
* - Replacement sample for EW-1008
No sample collected, well would not produce water - Sufficient water in well, however, pump not activating properly.
( ) - Concentration exceeds a compliance level.
L - Serial dilution of digestate in the analytical batch indicates that physical and chemical interferences occurre

Table 2-16
Groundwater Analytical Results Summary - VOCs
Monitoring Wells - Landfill 10
Wright-Patterson AFB, Ohio
Page 1 of 3

LOCATION	SAMPLE DATE	BENZENE	ETHYLBENZENE	TOLUENE	TOTAL XYLENES	CHLOROFORM	TRANS-1,2-DCE	METHYLENE CHLORIDE	MTBE	TCE	VINYL CHLORIDE
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		0.62	NCL	NCL	NCL	0.28	100	6.22	NCL	3.03	0.0283
Compliance Level - MCL		5	700	1000	10000	NCL	100	NCL	NCL	5	2
WP-LF10-MW03A	5/23/91	ND	ND	ND	ND	13 J	ND	ND	NS	ND	ND
	1/19/92	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/26/00	0.36 J,B	ND	0.14 J	ND	ND	ND	0.30 J,B	ND	ND	ND
WP-LF10-MW05B	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	ND	ND	ND	ND	ND	ND	(25.0)	NS	ND	ND
	10/23/98	ND	ND	ND	0.64 J	ND	ND	1.2	NS	0.29 J	ND
Duplicate	10/23/98	ND	ND	ND	ND	ND	ND	1.8	NS	ND	ND
	10/12/99	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/25/00	ND	ND	ND	ND	ND	ND	0.26 J	ND	ND	ND
WP-LF10-MW05C	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	ND	ND	ND	ND	ND	ND	4.2	NS	ND	ND
	10/30/98	ND	ND	ND	ND	ND	ND	2.3	NS	ND	ND
	10/14/99	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/25/00	ND	ND	ND	ND	ND	ND	0.32 J	ND	ND	ND
WP-LF10-MW06A	5/19/91	ND	ND	ND	ND	ND	ND	<2 J	NS	ND	ND
	8/28/91	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	1/30/92	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	(2.0)	ND	3.2	ND	ND	ND	(11.0)	NS	ND	ND
	10/27/98	0.55	ND	0.74	ND	ND	ND	ND	NS	ND	ND
	10/12/99	0.42 J	ND	0.32 J	ND	ND	ND	ND	NS	ND	ND
	10/25/00	ND	ND	0.21 J	ND	ND	ND	0.24 J	ND	ND	ND
WP-LF10-MW06A DUP*	5/19/91	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/25/00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-LF10-MW06B	5/30/91	ND	ND	ND	ND	ND	<1 J	ND	NS	ND	ND
	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	ND	ND	ND	ND	ND	ND	3.8	NS	ND	ND
	10/26/98	ND	ND	ND	ND	ND	ND	0.73	NS	1.2	(4.2)
	10/12/99	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/25/00	ND	ND	ND	ND	ND	ND	0.28 J	ND	ND	ND
WP-LF10-MW07A	5/21/91	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	8/26/91	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	1/28/92	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/26/00	0.23 J,B	ND	ND	ND	ND	ND	ND	ND	ND	ND
Duplicate	10/26/00	0.21 J,B	ND	ND	ND	ND	ND	0.25 J,B	ND	ND	ND
WP-LF10-MW07B	5/17/91	ND	ND	ND	ND	ND	ND	<2 J	NS	ND	ND
	10/26/00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-LF10-MW07C	5/17/91	3	ND	ND	ND	ND	ND	<2 J	NS	ND	ND
	8/27/91	2 J	ND	ND	ND	ND	ND	ND	NS	ND	ND
	1/27/92	9	0.7 J	ND	1	ND	ND	ND	NS	ND	ND
	10/26/00	(1.1 B)	ND	0.21 J	ND	ND	ND	0.36 J,B	ND	ND	ND

Table 2-16
Groundwater Analytical Results Summary - VOCs
Monitoring Wells - Landfill 10
Wright-Patterson AFB, Ohio
Page 2 of 3

LOCATION	SAMPLE DATE	BENZENE	ETHYLBENZENE	TOLUENE	TOTAL XYLENES	CHLOROFORM	TRANS-1,2-DCE	METHYLENE CHLORIDE	MTBE	TCE	VINYL CHLORIDE
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		0.62	NCL	NCL	NCL	0.28	100	6.22	NCL	3.03	0.0283
Compliance Level - MCL		5	700	1000	10000	NCL	100	NCL	NCL	5	2
WP-LF10-MW08A-2	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	ND	ND	ND	ND	ND	ND	3.8	NS	ND	ND
	10/20/98	ND	ND	ND	ND	ND	ND	0.47 J	NS	ND	ND
	10/13/99	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
Duplicate	10/13/99	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/18/00	0.12 J	ND	0.24 J	ND	ND	ND	ND	ND	ND	ND
WP-LF10-MW08B	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	ND	ND	ND	ND	ND	ND	2.7	NS	ND	ND
	10/29/98	ND	ND	ND	ND	ND	ND	0.41 J	NS	ND	ND
Duplicate	10/29/98	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/13/99	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/26/00	ND	ND	0.19 J	ND	ND	ND	0.20 J	ND	ND	ND
WP-LF10-MW09A	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	ND	ND	ND	ND	ND	ND	5.4	NS	ND	ND
	11/1/98	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/18/99	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/30/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
WP-LF10-MW09B	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/19/98	(1.0)	ND	ND	ND	ND	ND	0.41 J	NS	ND	ND
	10/18/99	(1.2)	ND	ND	ND	ND	ND	ND	NS	ND	(0.45 J)
	10/26/00	(1.4 B)	ND	0.25 J	ND	ND	ND	0.29 J,B	ND	ND	(0.46 J)
WP-LF10-MW09C	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	(2.9)	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/29/98	(3.2)	ND	ND	ND	ND	ND	0.28 J	NS	ND	ND
	10/18/99	(3.0)	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/30/00	(3.8)	ND	0.47 J	ND	ND	ND	0.34 J,B	ND	ND	ND
WP-LF10-MW10C	5/16/91	ND	<1 J	<2 J	2	ND	ND	<2 J	NS	1	ND
	8/23/91	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	1/30/92	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/30/00	ND	ND	0.13 J	ND	ND	ND	0.23 J,B	ND	ND	ND
WP-LF10-MW11A	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/26/98	ND	ND	ND	ND	ND	ND	0.74	NS	ND	ND
Duplicate	10/26/98	ND	ND	ND	ND	ND	ND	0.91	NS	ND	ND
	10/14/99	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
Duplicate	10/14/99	ND	ND	ND	ND	ND	ND	3.3	NS	ND	ND
	10/30/00	0.13 J	ND	0.32 J	ND	ND	ND	0.22 J,B	ND	ND	ND
Duplicate	10/30/00	0.14 J	ND	0.30 J	ND	ND	ND	0.26 J,B	ND	ND	ND
WP-LF10-MW11B	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/26/98	ND	ND	ND	ND	ND	ND	2.8	NS	ND	ND
	10/14/99	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/30/00	0.44 J	ND	1.2	0.69 J	ND	ND	ND	ND	ND	ND

Table 2-16
Groundwater Analytical Results Summary - VOCs
Monitoring Wells - Landfill 10
Wright-Patterson AFB, Ohio
Page 3 of 3

LOCATION	SAMPLE DATE	BENZENE	ETHYLBENZENE	TOLUENE	TOTAL XYLENES	CHLOROFORM	TRANS-1,2-DCE	METHYLENE CHLORIDE	MTBE	TCE	VINYL CHLORIDE
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		0.62	NCL	NCL	NCL	0.28	100	6.22	NCL	3.03	0.0283
Compliance Level - MCL		5	700	1000	10000	NCL	100	NCL	NCL	5	2
WP-LF10-MW102	11/1/97	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/29/98	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/18/99	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/25/00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-LF10-MW103	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	(2.7)	ND	ND	ND	ND	ND	2.5	NS	ND	ND
	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/23/98	(1.5)	ND	ND	ND	ND	ND	1.5	NS	ND	ND
	10/19/99	(0.87)	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/26/00	(2.1)	ND	0.24 J	ND	ND	ND	0.32 J	0.12 J	ND	ND
WP-LF10-MW104	11/1/97	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/18/99	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/25/00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-LF10-MW105	10/1/96	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	11/1/97	ND	ND	55	ND	ND	ND	3.8	NS	ND	ND
	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/23/98	ND	ND	ND	ND	ND	ND	1.2	NS	ND	ND
	10/14/99	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/26/00	ND	ND	0.19 J	ND	ND	ND	0.22 J	ND	ND	ND
WP-01-DM-102S-M	6/1/86	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/1/88	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/31/00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-01-DM-102D-M	6/1/86	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	9/1/88	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	5/16/91	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	9/4/91	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	1/20/92	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	10/31/00	ND	ND	0.14 J	ND	ND	ND	ND	ND	ND	ND
WP-01-004-M	6/1/86	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	9/1/88	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND
	5/21/91	2 J	1 J	1 J	1 J	2 J	1 J	2 J	NS	1 J	2 J
	9/5/91	3	0.6 J	4	4	ND	ND	ND	NS	ND	ND
	10/27/00	0.43 J	ND	1.8	0.93 J	ND	ND	0.60 J	ND	ND	ND

NCL - No Compliance Level set for these chemicals.
ND = Not Detected
J = Estimated Result
B = Method blank contamination.
µg/L = micrograms per liter
( ) - Concentration exceeds a compliance level.
* - MW06A DUP is a separate well.
MTBE - Methyl tert-butyl ether
TCE - Trichloroethene
DCE - Dichloroethene
See Appendix C-3 to find any detections of other VOCs not listed here for the October 2000 sampling round.

Table 2-17
Groundwater Analytical Results Summary - SVOCs
Monitoring Wells - Landfill 10
Wright-Patterson AFB, Ohio
Page 1 of 2

LOCATION	DATE	4-METHYL-PHENOL	BENZO(A) PYRENE	DIETHYL PHTHALATE	NAPHTHALENE
Units		(µg/L)	(µg/L)	(µg/L)	(µg/L)
Compliance Level - ROD		NCL	NCL	NCL	NCL
Compliance Level - MCL		NCL	0.2	NCL	NCL
WP-LF10-MW03A	10/26/00	ND	ND	ND	ND
WP-LF10-MW05B	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	10/23/98	ND	ND	ND	0.81
Duplicate	10/23/98	ND	ND	ND	ND
	10/12/99	ND	ND	ND	ND
	10/25/00	ND	ND	ND	ND
WP-LF10-MW05C	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	10/30/98	ND	ND	ND	ND
	10/14/99	ND	ND	ND	ND
	10/25/00	ND	ND	ND	ND
WP-LF10-MW06A	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	10/27/98	ND	ND	ND	ND
	10/12/99	ND	ND	ND	ND
	10/25/00	ND	ND	ND	ND
WP-LF10-MW06A-DUP*	10/25/00	DRY	DRY	DRY	DRY
WP-LF10-MW06B	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	10/26/98	ND	ND	ND	ND
	10/12/99	ND	ND	ND	ND
	10/25/00	ND	ND	ND	ND
WP-LF10-MW07A	10/26/00	ND	ND	ND	ND
Duplicate	10/26/00	ND	ND	ND	ND
WP-LF10-MW07B	10/26/00	DRY	DRY	DRY	DRY
WP-LF10-MW07C	10/26/00	Only VOCs and dioxin/furan samples collected, not enough water produced			
WP-LF10-MW08A-2	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	10/20/98	ND	ND	ND	ND
	10/13/99	ND	ND	ND	ND
Duplicate	10/13/99	ND	ND	ND	ND
	10/18/00	ND	ND	ND	ND
WP-LF10-MW08B	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	10/29/98	ND	ND	ND	ND
Duplicate	10/29/98	ND	ND	ND	ND
	10/13/99	DRY	DRY	DRY	DRY
	10/26/00	ND	ND	ND	ND
WP-LF10-MW09A	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	11/1/98	ND	ND	ND	ND
	10/18/99	ND	ND	ND	ND
	10/30/00	ND	ND	ND	ND
WP-LF10-MW09B	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	10/19/98	ND	ND	ND	ND
	10/18/99	ND	ND	ND	ND
	10/26/00	ND	ND	ND	ND
WP-LF10-MW09C	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	10/29/98	ND	ND	ND	ND
	10/18/99	ND	ND	ND	ND
	10/30/00	ND	ND	ND	ND
WP-LF10-MW10C	10/30/00	ND	ND	ND	ND

Table 2-17
Groundwater Analytical Results Summary - SVOCs
Monitoring Wells - Landfill 10
Wright-Patterson AFB, Ohio
Page 2 of 2

LOCATION	DATE	4-METHYL-PHENOL	BENZO(A) PYRENE	DIETHYL PHTHALATE	NAPHTHALENE
Units		(µg/L)	(µg/L)	(µg/L)	(µg/L)
Compliance Level - ROD		NCL	NCL	NCL	NCL
Compliance Level - MCL		NCL	0.2	NCL	NCL
WP-LF10-MW11A	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	10/26/98	ND	ND	ND	ND
Duplicate	10/26/98	ND	ND	ND	ND
	10/14/99	ND	ND	ND	ND
Duplicate	10/14/99	ND	ND	ND	ND
	10/30/00	ND	ND	ND	ND
Duplicate	10/30/00	ND	ND	ND	ND
WP-LF10-MW11B	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	10/26/98	ND	ND	ND	ND
	10/14/99	ND	ND	ND	ND
	10/30/00	ND	ND	ND	ND
WP-LF10-MW102	11/1/97	ND	ND	ND	ND
	6/1/98	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY
	10/29/98	ND	ND	ND	ND
	10/18/99	ND	ND	ND	ND
	10/25/00	DRY	DRY	DRY	DRY
WP-LF10-MW103	10/1/96	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND
	6/1/98	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY
	10/23/98	ND	ND	ND	ND
	10/19/99	ND	ND	ND	ND
	10/26/00	ND	ND	ND	ND
WP-LF10-MW104	11/1/97	DRY	DRY	DRY	DRY
	6/1/98	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY
	10/18/99	DRY	DRY	DRY	DRY
	10/25/00	DRY	DRY	DRY	DRY
WP-LF10-MW105	10/1/96	ND	ND	ND	ND
	11/1/97	DRY	DRY	DRY	DRY
	6/1/98	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY
	10/23/98	ND	ND	ND	ND
	10/14/99	Only VOCs and Metals were collected, not enough water produced			
	10/26/00	ND	ND	ND	ND
WP-01-DM-102S-M	10/31/00	DRY	DRY	DRY	DRY
WP-01-DM-102D-M	10/31/00	ND	ND	ND	ND
WP-01-004-M	10/27/00	ND	ND	ND	ND

NCL -No Compliance Level set for these chemicals
ND = Not Detected
µg/L = micrograms per liter

Table 2-18
Groundwater Analytical Results Summary - Dioxin Compounds
Monitoring Wells - Landfill 10
Wright-Patterson AFB, Ohio
Page 1 of 2

LOCATION	DATE	Total-HPCDD	1,2,3,4,6,7,8-HPCDF	1,2,3,4,7,8-HXCDD	2,3,7,8-TCDD	2,3,7,8-TCDF	OCDD	OCDF
Units		pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L
Compliance Level - ROD		56.7	56.7	5.67	0.567	5.67	5.67	5.67
Compliance Level - MCL		NCL	NCL	NCL	30	NCL	NCL	NCL
WP-LF10-MW03A	10/26/00	2.4 JQ	ND	ND	ND	ND	(14 JB)	3.3 JQ
WP-LF10-MW05B	10/23/98	ND	ND	ND	ND	ND	1.8 JBQ	ND
Duplicate	10/23/98	ND	ND	ND	ND	ND	3.8 JQB	ND
	10/12/99	ND	ND	ND	ND	ND	5.3 JB	ND
	10/25/00	ND	ND	ND	ND	ND	(7.7 JB)	ND
WP-LF10-MW05C	10/30/98	ND	ND	ND	ND	ND	(18 JB)	(10 J)
	10/14/99	1.3 JQB	1.0 JQB	ND	ND	ND	(14 JB)	0.9 JB
	10/25/00	1.5 JQ	ND	ND	(1.5 JQ)	ND	(15 JB)	ND
WP-LF10-MW06A	10/27/98	10 JQB	ND	ND	ND	ND	(220 JB)	ND
	10/12/99	ND	ND	ND	ND	ND	2 JB	ND
	10/25/00	ND	ND	ND	ND	ND	(8.9 JB)	ND
WP-LF10-MW06A DUP**	10/25/00	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-LF10-MW06B	10/26/98	ND	ND	ND	ND	ND	2.5 JB	ND
	10/12/99	ND	ND	ND	ND	ND	1.7 JQB	ND
	10/25/00	ND	ND	ND	ND	ND	(5.8 JB)	1.5 JB
WP-LF10-MW07A	10/26/00	ND	ND	ND	ND	ND	2.7 JB	ND
Duplicate	10/26/00	ND	ND	ND	ND	ND	3.0 JB	ND
WP-LF10-MW07B	10/26/00	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-LF10-MW07C	10/26/00	ND	ND	ND	ND	ND	(24 JBQ)	ND
WP-LF10-MW08A-2	10/20/98	ND	ND	ND	ND	ND	(6.8 JB)	ND
	10/13/99	NS	NS	NS	NS	NS	NS	NS
Duplicate	10/13/99	NS	NS	NS	NS	NS	NS	NS
	10/18/00	ND	ND	ND	ND	ND	(6.3 JB)	ND
WP-LF10-MW08B	10/29/98	ND	ND	ND	ND	ND	ND	ND
Duplicate	10/29/98	ND	ND	ND	ND	ND	3.3 JB	ND
	10/13/99	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/26/00	NS	NS	NS	NS	NS	NS	NS
WP-LF10-MW09A	11/1/98	ND	ND	ND	ND	ND	2.4	ND
	10/18/99	ND	0.3 JQ	ND	ND	ND	4.0 JB	ND
	10/30/00	ND	ND	ND	ND	ND	4.6 JB	1.3 JBQ
WP-LF10-MW09B	10/19/98	ND	ND	ND	ND	ND	2.6 JBQ	ND
	10/18/99	0.6 JQ	0.48 JQ	ND	ND	ND	2.7 BJQ	1.1 BJQ
	10/26/00	ND	ND	ND	ND	ND	4.1 JBQ	1.9 JQ
WP-LF10-MW09C	10/29/98	ND	ND	ND	ND	ND	ND	ND
	10/18/99	NS	NS	NS	NS	NS	NS	NS
	10/30/00	NS	NS	NS	NS	NS	NS	NS
WP-LF10-MW10C	10/30/00	0.60 J	ND	ND	ND	ND	3.9 JB	0.98 JBQ
WP-LF10-MW11A	10/26/98	1.5 J	ND	ND	ND	ND	(12 JB)	1.1 JQ
Duplicate	10/26/98	4.7 JQS	ND	ND	(3.8 J)	ND	(74 JB)	2.4 J
	10/14/99	ND	ND	ND	ND	ND	(6.5 JB)	ND
Duplicate	10/14/99	ND	N D	ND	ND	ND	(6.5 JB)	ND
	10/30/00	ND	ND	ND	(6.0 JQ)	ND	1.7 JBQ	ND
Duplicate	10/30/00	ND	ND	ND	ND	ND	1.6 JBQ	ND
WP-LF10-MW11B	10/26/98	ND	ND	ND	ND	ND	3.6 JB	ND
	10/14/99	1.0 JQB	ND	ND	ND	ND	(14 JB)	1.0 JB
	10/30/00	ND	ND	ND	ND	ND	2.4 JB	ND

Table 2-18
Groundwater Analytical Results Summary - Dioxin Compounds
Monitoring Wells - Landfill 10
Wright-Patterson AFB, Ohio
Page 2 of 2

LOCATION	DATE	Total-HPCDD	1,2,3,4,6,7,8-HPCDF	1,2,3,4,7,8-HXCDD	2,3,7,8-TCDD	2,3,7,8-TCDF	OCDD	OCDF
Units		pg/L	pg/L	pg/L	pg/L	pg/L	pg/L	pg/L
Compliance Level - ROD		56.7	56.7	5.67	0.567	5.67	5.67	5.67
Compliance Level - MCL		NCL	NCL	NCL	30	NCL	NCL	NCL
WP-LF10-MW102	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/29/98	ND	ND	ND	ND	ND	(18 JB)	ND
	10/18/99	2.8 JQ	0.68 JQ	ND	ND	ND	(24 JB)	1.2 JB
	10/25/00	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-LF10-MW103	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/23/98	NS	NS	NS	NS	NS	NS	NS
	10/19/99	2.5 J	0.47 JQ	ND	ND	ND	(9.8 JB)	0.98 JBQ
	10/26/00	1.3 JQ	ND	ND	ND	ND	(10 JB)	ND
WP-LF10-MW104	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/18/99	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/25/00	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-LF10-MW105	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/23/98	ND	ND	ND	ND	ND	3.1 JBQ	ND
	10/14/99*	ND	ND	ND	ND	ND	4.5 JB	ND
	10/26/00	ND	ND	ND	ND	ND	2.7 JB	0.73 J
WP-01-DM-102S-M	10/31/00	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-01-DM-102D-M	10/31/00	ND	ND	ND	ND	ND	(7.9 JB)	ND
WP-01-004-M	10/27/00	ND	ND	ND	ND	ND	5.1 JBQ	ND

NCL = No Compliance Level set for these chemicals
J = Estimated Result
Q = Estimated Maximum Possible Concentration
B = Method Blank Contamination
* = Partial sample used for dioxin analysis
** = MW06A DUP is a separate well

pg/L = picograms per liter
( ) = Concentration exceeds a compliance level
NS = Not Sampled
NA = Not Available
ND = Not Detected

Table 2-19
Groundwater Analytical Results Summary - Pesticides/PCBs
Monitoring Wells - Landfill 10
Wright-Patterson AFB, Ohio
Page 1 of 2

LOCATION	DATE	AROCLOR 1242	AROCLOR 1248	AROCLOR 1254	AROCLOR 1260	DIELDRIN
Units		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Compliance Level - ROD		NCL	NCL	NCL	NCL	NCL
Compliance Level - MCL		NCL	NCL	NCL	NCL	NCL
WP-LF10-MW03A	10/26/00	ND	ND	ND	ND	ND
WP-LF10-MW05B	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	10/23/98	ND	ND	ND	ND	ND
Duplicate	10/23/98	ND	ND	ND	ND	ND
	10/12/99	ND	ND	ND	ND	ND
	10/25/00	ND	ND	ND	ND	ND
WP-LF10-MW05C	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	10/30/98	NS	NS	NS	NS	NS
	10/14/99	VOCs, Inorganics, SVOCs, and Dioxins only collected, not enough water produc				
	10/25/00	ND	ND	ND	ND	ND
WP-LF10-MW06A	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	10/27/98	ND	ND	ND	ND	ND
	10/12/99	ND	ND	ND	ND	ND
	10/25/00	ND	ND	ND	ND	ND
WP-LF10-MW06A DUP*	10/25/00	DRY	DRY	DRY	DRY	DRY
WP-LF10-MW06B	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	10/26/98	ND	ND	ND	ND	ND
	10/12/99	ND	ND	ND	ND	ND
	10/25/00	ND	ND	ND	ND	ND
WP-LF10-MW07A	10/26/00	ND	ND	ND	ND	ND
Duplicate	10/26/00	ND	ND	ND	ND	ND
WP-LF10-MW07B	10/26/00	DRY	DRY	DRY	DRY	DRY
WP-LF10-MW07C	10/26/00	Only VOCs and Dioxin samples collected, not enough water produced				
WP-LF10-MW08A-2	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	10/20/98	ND	ND	ND	ND	ND
	10/13/99	ND	ND	ND	ND	ND
Duplicate	10/13/99	ND	ND	ND	ND	ND
	10/18/00	ND	ND	ND	ND	ND
WP-LF10-MW08B	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	10/29/98	ND	ND	ND	ND	ND
Duplicate	10/29/98	ND	ND	ND	ND	ND
	10/13/99	DRY	DRY	DRY	DRY	DRY
	10/26/00	ND	ND	ND	ND	ND
WP-LF10-MW09A	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	11/1/98	ND	ND	ND	ND	ND
	10/18/99	ND	ND	ND	ND	ND
	10/30/00	ND	ND	ND	ND	ND
WP-LF10-MW09B	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	10/19/98	ND	ND	ND	ND	ND
	10/18/99	ND	ND	ND	ND	ND
	10/26/00	ND	ND	ND	ND	ND
WP-LF10-MW09C	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	10/29/98	ND	ND	ND	ND	ND
	10/18/99	ND	ND	ND	ND	ND
	10/30/00	ND	ND	ND	ND	ND
WP-LF10-MW10C	10/30/00	ND	ND	ND	ND	ND

Table 2-19
Groundwater Analytical Results Summary - Pesticides/PCBs
Monitoring Wells - Landfill 10
Wright-Patterson AFB, Ohio
Page 2 of 2

LOCATION	DATE	AROCLOR 1242	AROCLOR 1248	AROCLOR 1254	AROCLOR 1260	DIELDRIN
Units		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
Compliance Level - ROD		NCL	NCL	NCL	NCL	NCL
Compliance Level - MCL		NCL	NCL	NCL	NCL	NCL
WP-LF10-MW11A	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	10/26/98	ND	ND	ND	ND	ND
Duplicate	10/26/98	ND	ND	ND	ND	ND
	10/14/99	ND	ND	ND	ND	ND
Duplicate	10/14/99	ND	ND	ND	ND	ND
	10/30/00	ND	ND	ND	ND	ND
Duplicate	10/30/00	ND	ND	ND	ND	ND
WP-LF10-MW11B	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	10/26/98	ND	ND	ND	ND	ND
	10/14/99	ND	ND	ND	ND	ND
	10/30/00	ND	ND	ND	ND	ND
WP-LF10-MW102	11/1/97	ND	ND	ND	ND	ND
	6/1/98	DRY	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY
	10/29/98	NS	NS	NS	NS	NS
	10/18/99	VOC, Dioxin and SVOCs only were collected, not enough water produced				
	10/25/00	DRY	DRY	DRY	DRY	DRY
WP-LF10-MW103	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	6/1/98	DRY	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY
	10/23/98	NS	NS	NS	NS	NS
	10/19/99	ND	ND	ND	ND	ND
	10/26/00	VOCs, SVOCs, Dioxins and Metals only were collected, not enough water produ				
WP-LF10-MW104	11/1/97	DRY	DRY	DRY	DRY	DRY
	6/1/98	DRY	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY
	10/18/99	DRY	DRY	DRY	DRY	DRY
	10/25/00	DRY	DRY	DRY	DRY	DRY
WP-LF10-MW105	10/1/96	ND	ND	ND	ND	ND
	11/1/97	ND	ND	ND	ND	ND
	6/1/98	DRY	DRY	DRY	DRY	DRY
	9/1/98	DRY	DRY	DRY	DRY	DRY
	10/23/98	ND	ND	ND	ND	ND
	10/14/99	VOCs, Dioxins and Metals only were collected, not enough water produced				
	10/26/00	VOCs, SVOCs and Dioxins only were collected, not enough water produced				
WP-01-DM-102S-M	10/31/00	DRY	DRY	DRY	DRY	DRY
WP-01-DM-102D-M	10/31/00	ND	ND	ND	ND	ND
WP-01-004-M	10/27/00	ND	ND	ND	ND	ND

* = MW06A DUP is a separate well
NCL = No Compliance Level set for these chemicals
ND = Not Detected
NS = Not Sampled During this Round
µg/L = micograms per liter

Table 2-20
Groundwater Analytical Results Summary - Inorganic Compounds
Monitoring Wells - Landfill 10
Wright-Patterson AFB, Ohio

LOCATION	DATE	ARSENIC	BERYLLIUM	CADMIUM	COPPER	CYANIDE	IRON	LEAD	ZINC	AMMONIA
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		11	0.02	NCL	NCL	NCL	NCL	NCL	NCL	NCL
Compliance Level - MCL		50	4	5	1,300	200	NCL	15	NCL	NCL
WP-LF10-MW03A	1/19/92	ND	ND	ND	6 J	NS	ND	2 J	ND	NS
	10/26/00	ND	ND	ND	34	ND	7,500	9.9	ND	200
WP-LF10-MW05B	11/1/97	ND	ND	ND	ND	ND	500	ND	ND	NS
	10/23/98	ND	ND	ND	ND	ND	390	ND	ND	800
Duplicate	10/23/98	ND	ND	ND	ND	ND	430	ND	ND	1,000
	10/12/99	ND	ND	ND	ND	ND	290	ND	ND	800
	10/25/00	ND	ND	ND	ND	ND	210	ND	ND	300
WP-LF10-MW05C	11/1/97	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/30/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/14/99	ND	ND	ND	ND	ND	1,800	ND	ND	ND
	10/25/00	ND	ND	ND	ND	ND	9,900	3.4	ND	700
WP-LF10-MW06A	5/19/91	ND	ND	ND	ND	ND	136	ND	26.8	840
	8/28/91	2 J	ND	ND	ND	ND	459 J	1 J	49 J	NS
	1/30/92	ND	ND	ND	3 J	NS	28 J	3 J	ND	NS
	10/1/96	ND	ND	0.8	ND	ND	7,060	(15)	ND	NS
	11/1/97	ND	ND	ND	ND	ND	1,700	ND	ND	NS
	10/27/98	ND	ND	ND	ND	ND	190	ND	ND	700
	10/12/99	ND	ND	ND	ND	ND	130	ND	ND	800
	10/25/00	ND	ND	ND	ND	ND	140	ND	ND	700
WP-LF10-MW06A DUP**	10/25/00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-LF10-MW06B	5/30/91	4 J	ND	ND	5.7 J	ND	ND	2 J	ND	ND
	10/1/96	ND	ND	ND	ND	ND	1,020	ND	86	NS
	11/1/97	ND	ND	ND	ND	ND	900	ND	ND	NS
	10/26/98	ND	ND	ND	ND	ND	1,400	ND	ND	ND
	10/12/99	ND	ND	ND	ND	ND	670	ND	ND	ND
	10/25/00	ND	ND	ND	ND	ND	880	3.7	ND	ND
WP-LF10-MW07A	5/21/91	10 J	ND	ND	ND	ND	3,540 J	2 J	ND	ND
	8/26/91	12 J	0.9 J	ND	ND	NS	39,600	20 J	166 J	NS
	1/28/92	(12)	ND	ND	3 J	NS	2,800	ND	ND	NS
	10/26/00	(12)	ND	ND	ND	ND	3,700	ND	ND	200
Duplicate	10/26/00	(12)	ND	ND	ND	ND	3,500	ND	ND	ND
WP-LF10-MW07B	10/26/00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-LF10-MW07C	5/17/91	5 J	ND	ND	8 J	ND	271	ND	87 J	6030
	8/27/91	11 J	ND	ND	ND	NS	6,380	2 J	33 J	NS
	1/27/91	8 J	ND	ND	3 J	NS	164 J	2 J	ND	NS
	10/26/00	Only VOCs and Dioxin samples collected, not enough water produced								
WP-LF10-MW08A-2	11/1/97	ND	ND	ND	ND	ND	10,000	5.0	ND	NS
	10/20/98	ND	ND	ND	ND	ND	1,200	ND	ND	ND
	10/13/99	ND	ND	ND	ND	ND	1,400	ND	ND	200
Duplicate	10/13/99	ND	ND	ND	ND	ND	1,400	ND	ND	ND
	10/18/00	ND	ND	ND	ND	ND	1,500	ND	ND	ND

Table 2-20
Groundwater Analytical Results Summary - Inorganic Compounds
Monitoring Wells - Landfill 10
Wright-Patterson AFB, Ohio
Page 2 of 3

LOCATION	DATE	ARSENIC	BERYLLIUM	CADMIUM	COPPER	CYANIDE	IRON	LEAD	ZINC	AMMONIA
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		11	0.02	NCL	NCL	NCL	NCL	NCL	NCL	NCL
Compliance Level - MCL		50	4	5	1,300	200	NCL	15	NCL	NCL
WP-LF10-MW08B	10/1/96	(232)	(2.0)	3.3	67	ND	99,000	(50)	331	NS
	11/1/97	(50)	ND	ND	30	ND	41,000	(24)	110	NS
	10/29/98	ND	ND	ND	ND	ND	360	ND	52	ND
Duplicate	10/29/98	ND	ND	ND	ND	ND	360	ND	ND	ND
	10/13/99	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/26/00	ND	ND	ND	ND	ND	1,000	ND	ND	ND
WP-LF10-MW09A	10/1/96	ND	ND	ND	ND	ND	2,550	6.0	ND	NS
	11/1/97	ND	ND	ND	ND	ND	2,500	ND	ND	NS
	11/1/98	ND	ND	ND	ND	ND	2,700	ND	ND	ND
	10/18/99	ND	ND	ND	ND	ND	1,900	ND	ND	ND
	10/30/00	ND	ND	ND	ND	ND	1,800	ND	ND	ND
WP-LF10-MW09B	10/1/96	ND	ND	ND	ND	ND	2,550	6.0	ND	NS
	11/1/97	10	ND	ND	ND	ND	7,500	ND	ND	NS
	10/19/98	(13)	ND	ND	ND	ND	7,500	ND	ND	ND
	10/18/99	(13)	ND	ND	ND	ND	7,100	ND	ND	200
	10/26/00	(15)	ND	ND	ND	ND	7,800	ND	ND	200
WP-LF10-MW09C	10/1/96	ND	(1.0)	0.9	68	ND	67,300	(48)	263	NS
	11/1/97	10	ND	ND	ND	ND	30,000	ND	ND	NS
	10/29/98	ND	ND	ND	ND	ND	1,500	ND	ND	600
	10/18/99	(15)	ND	ND	ND	ND	5,100	ND	ND	400
	10/30/00	(16)	ND	ND	ND	ND	6,700	ND	ND	400
WP-LF10-MW10C	5/16/91	4	ND	ND	ND	ND	75 J	2 J	ND	ND
	8/23/91	2 J	ND	ND	ND	NS	5,210	2 J	ND	NS
	1/30/92	ND	ND	ND	ND	NS	2,720	ND	ND	NS
	10/30/00	ND	ND	ND	ND	ND	600	ND	ND	ND
WP-LF10-MW11A	10/1/96	ND	ND	ND	ND	ND	1,760	ND	ND	NS
	11/1/97	ND	ND	ND	ND	ND	2,600	ND	ND	NS
	10/26/98	ND	ND	ND	ND	ND	1,100	ND	ND	200
Duplicate	10/26/98	ND	ND	ND	ND	ND	1,100	ND	ND	ND
	10/14/99	ND	ND	ND	ND	ND	1,100	ND	ND	ND
Duplicate	10/14/99	ND	ND	ND	ND	ND	1,100	ND	ND	200
	10/30/00	ND	ND	ND	ND	ND	1,200	ND	ND	ND
Duplicate	10/30/00	ND	ND	ND	ND	ND	1,200	ND	ND	ND
WP-LF10-MW11B	10/1/96	ND	ND	ND	ND	ND	12,100	12	58	NS
	11/1/97	10	ND	ND	20	ND	22,000	13	60	NS
	10/26/98	ND	ND	ND	ND	ND	2,900	ND	300	ND
	10/14/99	ND	ND	ND	ND	ND	3,400	ND	ND	200
	10/30/00	ND	ND	ND	ND	ND	3,100	ND	ND	ND

Table 2-20
Groundwater Analytical Results Summary - Inorganic Compounds
Monitoring Wells - Landfill 10
Wright-Patterson AFB, Ohio

LOCATION	DATE	ARSENIC	BERYLLIUM	CADMIUM	COPPER	CYANIDE	IRON	LEAD	ZINC	AMMONIA
Units		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Compliance Level - ROD		11	0.02	NCL	NCL	NCL	NCL	NCL	NCL	NCL
Compliance Level - MCL		50	4	5	1,300	200	NCL	15	NCL	NCL
WP-LF10-MW102	11/1/97	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS
	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS
	10/29/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/18/99	VOC, Dioxin and SVOCs only were collected, not enough water produced								
	10/25/00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-LF10-MW103	10/1/96	(273)	(10)	ND	631	ND	407,000	(233)	1460	NS
	11/1/97	(70)	ND	ND	20	ND	27,000	ND	ND	NS
	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS
	10/23/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/19/99	(56)	ND	ND	ND	ND	20,300	ND	95	3,400
	10/26/00	(47)	ND	ND	ND	NS*	13,400	ND	66	NS*
WP-LF10-MW104	11/1/97	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS
	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/18/99	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	10/25/00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-LF10-MW105	10/1/96	ND	ND	ND	ND	ND	1,310	ND	ND	NS
	11/1/97	ND	ND	ND	20	ND	4,100	ND	ND	NS
	6/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS
	9/1/98	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	NS
	10/23/98	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/14/99	ND	ND	ND	ND	NS*	570	ND	ND	NS*
	10/26/00	VOCs, SVOCs and Dioxins only were collected, not enough water produced								
WP-01-DM-102S-M	10/31/00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WP-01-DM-102D-M	5/16/91	4 J	ND	ND	ND	ND	ND	ND	ND	NS
	9/4/91	25	1 J	ND	ND	NS	21,700	21 J	ND	NS
	1/20/92	6 J	ND	ND	9 J	NS	61 J	2 J	5 J	NS
	10/31/00	ND	ND	ND	ND	ND	2,500	4	ND	ND
WP-01-004-M	5/21/91	4 J	ND	ND	ND	NS	419 J	2 J	ND	490
	9/5/91	5 J	ND	ND	ND	NS	1,800	2 J	ND	NS
	10/27/00	(16,100)	ND G	ND G	ND G	ND	6,910,000	ND G	ND G	ND

NCL = No Compliance Level set for these chemicals.
ND = Not Detected
ND G = Not Detected, but the reporting limit was elevated due to matrix interference
NS = Not Sampled
NS* = Well did not produce enough water to collect all samples.
µg/L = micrograms per liter
( ) = Concentration exceeds a compliance level.
** = MW06A DUP is a separate well

Table 2-21
Landfill 8 Explosive Gas Monitoring
Field Measurements: January through October 2000
Wright-Patterson AFB, Ohio
Page 1 of 2

Location	Date Monitored	Probe Press. (2) (in. of Hg)	Probe Oxygen (%)	(% Methane / % LEL) Initial (3)	Sustained (4)	Methane TLV (%) (5)	Distance/Direction From Nearest Probe/Structure	Comments
Monitor Points								
LF08-MP001	1/17/00	29.5	14.3	0/0	--	0.11	91 ft. West	
	4/13/00	29.3	6.3	15.4/328	11.5/296	0.11	91 ft. West	
	7/24/00	29.1	18.0	0/0	--	0.11	91 ft. West	
	9/28/00	29.2	19.8	0/0	--	0.11	91 ft. West	
LF08-MP002	1/17/00	29.4	19.9	0/0	--	0.19	150 ft. West	
	4/13/00	29.3	14.6	0/0	--	0.19	150 ft. West	
	7/24/00	29.1	20.2	0/0	--	0.19	150 ft. West	
	9/28/00	29.2	16.8	0/0	--	0.19	150 ft. West	
LF08-MP003	1/17/00	29.5	19.5	0/0	--	0.25	200 ft. West	
	4/13/00	29.3	20.5	0/0	--	0.25	200 ft. West	
	7/24/00	29.1	19.9	0/0	--	0.25	200 ft. West	
	9/28/00	29.3	18.5	0/0	--	0.25	200 ft. West	
LF08-MP004	1/17/00	29.5	19.3	0/0	--	0.23	160 ft. West	
	4/13/00	29.3	20.5	0/0	--	0.23	160 ft. West	
	7/24/00	29.1	17.8	0/0	--	0.23	160 ft. West	
	9/28/00	29.3	18.7	0/0	--	0.23	160 ft. West	
LF08-MP006	1/17/00	--	--	--	--	0.05	39 ft. South	No access to yard
	4/13/00	29.3	20.5	0/0	--	0.05	39 ft. South	
	7/24/00	29.1	19.9	0/0	--	0.05	39 ft. South	
	9/28/00	29.2	14.3	0/0	--	0.05	39 ft. South	
LF08-MP007	1/17/00	--	--	--	--	0.06	50 ft. North	No access to yard
	5/7/00 (6)	29.3	20.6	0/0	--	0.06	50 ft. North	
	7/24/00	29.1	19.9	0/0	--	0.06	50 ft. North	
	9/28/00	29.2	19.1	0/0	--	0.06	50 ft. North	
LF08-MP008	1/17/00	--	--	--	--	0.02	17 ft. North	No access to yard
	5/7/00 (6)	29.3	1	1.2/24	NT	0.02	17 ft. North	
	7/24/00	28.7	5.0	0/0	--	0.02	17 ft. North	
	9/28/00	28.8	10.6	0/0	--	0.02	17 ft. North	
LF08-MP009	1/17/00	29.4	16.5	0/0	--	0.03	20 ft. North	
	4/13/00	28.1	18.9	0/0	--	0.03	20 ft. North	
	7/24/00	29.1	2.3	0/0	--	0.03	20 ft. North	
	9/28/00	29.2	6.0	0/0	--	0.03	20 ft. North	
LF08-MP010	1/17/00	29.5	1.1	19.2/384	4.3/72	0.03	22 ft. North	
	4/13/00	29.3	1.9	21.1/434	13.8/402	0.03	22 ft. North	
	7/24/00	29.1	0.4	19.7/394	0/0	0.03	22 ft. North	
	9/28/00	29.3	15.6	0/0	--	0.03	22 ft. North	

Table 2-21
Landfill 8 Explosive Gas Monitoring
Field Measurements: January through October 2000
Wright-Patterson AFB, Ohio
Page 2 of 2

Location	Date Monitored	Probe Press. (2) (in. of Hg)	Probe Oxygen (%)	(% Methane / % LEL) Initial (3)	Sustained (4)	Methane TLV (%) (5)	Distance/Direction From Nearest Probe/Structure	Comments
LF08-MP011	1/17/00	29.5	6.7	0/0	--	0.02	17 ft. North	
	4/13/00	29.3	15.3	0/0	--	0.02	17 ft. North	
	7/24/00	29.1	19.8	0/0	--	0.02	17 ft. North	
	9/28/00	29.3	9.4	0/0	--	0.02	17 ft. North	
LF08-MP012	1/17/00	29.5	19.5	0.1/2	NT	0.02	13 ft. North	
	4/13/00	29.3	4.3	1.0/20	0/0	0.02	13 ft. North	
	7/24/00	29.1	0.6	0.1/2	0/0	0.02	13 ft. North	
	9/28/00	29.2	9.4	0/0	0/0	0.02	13 ft. North	
LF08-MP013	1/17/00	--	--	--	--	0.03	20 ft. South	Pressure valve broken
	4/13/00	--	--	--	--	0.03	20 ft. South	Pressure valve broken
	7/24/00	--	--	--	--	0.03	20 ft. South	Pressure valve broken
	9/28/00	29.2	10.7	0/0	--	0.03	20 ft. South	Repired 8/30/2000
Punchbars								
LF08-PT003	1/17/00	ATMP	19.9	0/0	--	0.02	12 ft. North	
	4/13/00	ATMP	20.8	0/0	--	0.02	12 ft. North	
	7/24/00	ATMP	19.5	0/0	--	0.02	12 ft. North	
	9/28/00	ATMP	19.4	0/0	--	0.02	12 ft. North	
LF08-PT10A	1/17/00	ATMP	19.5	0/0	--	0.02	12 ft. North	
	4/13/00	ATMP	20.6	0/0	--	0.02	12 ft. North	
	7/24/00	ATMP	19.4	0/0	--	0.02	12 ft. North	
	9/28/00	ATMP	18.8	0/0	--	0.02	12 ft. North	
LF08-PT10B	1/17/00	ATMP	18.2	0/0	--	0.01	5 ft East	
	4/13/00	ATMP	20.8	0/0	--	0.01	5 ft East	
	7/24/00	ATMP	19.0	0/0	--	0.01	5 ft East	
	9/28/00	ATMP	19.1	0/0	--	0.01	5 ft East	
LF08-PT10C	1/17/00	ATMP	18.8	0/0	--	0.01	5 ft North	
	4/13/00	ATMP	20.0	0/0	--	0.01	5 ft North	
	7/24/00	--	--	--	--	0.01	5 ft North	Location not marked
	9/28/00	ATMP	19.1	0/0	--	0.01	5 ft North	

Notes:

1. Abbreviations: in. = inches; ft,bgs = feet below ground surface; Hg = Mercury; TLV = percent combustible gas by volume (see Note 5); NA = not applicable, atmospheric pressure; GBT = gas barrier trench, N = north, S = south.
2. Pressure readings taken via pressure valve in unvented cap at top of probe.
3. Initial gas concentrations reading taken after purging probe a minimum of 30 seconds.
4. If methane/LEL initially present, sustained combustible gas concentration reading taken approx. 1/2 hour after removing unvented lid from monitoring probe.
5. Methane TLV was calculated using the formula T = (0.00125)(H), where T = threshold limit value, H = horizontal distance in feet between probe and closest occupied structure.
6. Access to the yard was gained and readings were taken on May 7, 2000.

ATMP - Atmospheric Pressure (Open bore hole).

NT - Not taken. Monitoring probe was not disassembled prior to sustained measurement.

Table 2-22
Landfill 10 Explosive Gas Monitoring
Field Measurements: January through October 2000
Wright-Patterson AFB, Ohio

Location	Date Monitored	Probe Press. (2) (in. of Hg)	Probe Oxygen (%)	(% Methane / % LEL) Initial (3)	Sustained (4)	Methane TLV (%) (5)	Distance/Direction From Nearest Probe/Structure	Comments
Monitor Points								
LF10-MP014	1/18/00	29.5	18.1	0/0	--	0.04	30 ft. Northwest	
	4/13/00	29.2	20.5	0/0	--	0.04	30 ft. Northwest	
	7/24/00	29.1	18.5	0/0	--	0.04	30 ft. Northwest	
	9/29/00	29.3	17.1	0/0		0.04	30 ft. Northwest	
LF10-MP016	1/18/00	29.1	17.8	0/0	--	0.11	87 ft. Southeast	
	4/13/00	29.4	12.4	0/0	--	0.11	87 ft. Southeast	
	7/24/00	28.9	9.5	0/0	--	0.11	87 ft. Southeast	
	9/29/00	29.4	8.8	0/0		0.11	87 ft. Southeast	
LF10-MP019	1/18/00	29.4	10.3	0/0	--	0.03	25 ft. West	
	4/13/00	29.2	9.5	0/0	--	0.03	25 ft. West	
	7/24/00	29.1	9.4	0/0	--	0.03	25 ft. West	
	9/29/00	29.4	4.7	0/0		0.03	25 ft. West	
LF10-MP020	1/18/00	29.4	3.1	30/1.6	2.2/44	0.02	18 ft. East	Could not air out properly
	4/13/00	29.2	1.1	0/0	--	0.02	18 ft. East	
	7/24/00	28.5	1.8	0/0	--	0.02	18 ft. East	
	9/29/00	29.4	11.1	0/0	--	0.02	18 ft. East	
LF10-MP021	1/18/00	29.4	18.2	0/0	--	0.02	17 ft. East	
	4/13/00	29.3	19.6	0/0	--	0.02	17 ft. East	
	7/24/00	29.1	18.5	0/0	--	0.02	17 ft. East	
	9/29/00	29.4	17.3	0/0	--	0.02	17 ft. East	
LF10-MP023	1/18/00	29.4	19.1	0/0	--	0.02	15 ft. Southeast	
	4/13/00	29.2	19.1	0/0	--	0.02	15 ft. Southeast	
	7/24/00	29.1	18.2	0/0	--	0.02	15 ft. Southeast	
	9/29/00	29.4	17.3	0/0	--	0.02	15 ft. Southeast	
LF10-MP026	1/18/00	29.5	18.6	0/0	--	0.02	18 ft. East	
	4/13/00	29.2	20.5	0/0	--	0.02	18 ft. East	
	7/24/00	29.1	19.8	0/0	--	0.02	18 ft. East	
	9/29/00	29.4	17.8	0/0	--	0.02	18 ft. East	
Punchbars								
LF10-PT030	1/18/00	ATMP	20.1	0/0	--	0.09	70 ft. East	
	4/13/00	ATMP	20.7	0/0	--	0.09	70 ft. East	
	7/24/00	ATMP	19.5	0/0	--	0.09	70 ft. East	
	9/29/00	ATMP	18.8	0/0	--	0.09	70 ft. East	
LF10-PT031	1/18/00	ATMP	20.0	0/0	--	0.09	70 ft. East	
	4/13/00	ATMP	16.8	0/0	--	0.09	70 ft. East	
	7/24/00	ATMP	19.6	0/0	--	0.09	70 ft. East	
	9/29/00	ATMP	18.7	0/0	--	0.09	70 ft. East	
LF10-PT035	1/18/00	ATMP	20.1	0/0	--	0.08	66 ft. East	
	4/13/00	ATMP	20.5	0/0	--	0.08	66 ft. East	
	7/24/00	ATMP	19.4	0/0	--	0.08	66 ft. East	
	9/29/00	ATMP	18.7	0/0	--	0.08	66 ft. East	
LF10-PT036	1/18/00	ATMP	20.1	0/0	--	0.09	69 ft. East	
	4/13/00	ATMP	19.7	0/0	--	0.09	69 ft. East	
	7/24/00	ATMP	19.4	0/0	--	0.09	69 ft. East	
	9/29/00	ATMP	18.7	0/0	--	0.09	69 ft. East	
LF10-PT060	1/18/00	ATMP	19.7	0/0	--	0.08	65 ft. East	
	4/13/00	ATMP	20.6	0/0	--	0.08	65 ft. East	
	7/24/00	ATMP	19.8	0/0	--	0.08	65 ft. East	
	9/29/00	ATMP	16.5	0/0	--	0.08	65 ft. East	
LF10-PT065	1/18/00	ATMP	19.7	0/0	--	0.09	69 ft. East	
	4/13/00	ATMP	19.3	0/0	--	0.09	69 ft. East	
	7/24/00	ATMP	19.7	0/0	--	0.09	69 ft. East	
	9/29/00	ATMP	19.1	0/0	--	0.09	69 ft. East	
LF10-PT078	1/18/00	ATMP	19.7	0/0	--	0.05	39 ft. Northeast	
	4/13/00	ATMP	20.6	0/0	--	0.05	39 ft. Northeast	
	7/24/00	ATMP	20.0	0/0	--	0.05	39 ft. Northeast	
	9/29/00	ATMP	18.9	0/0	--	0.05	39 ft. Northeast	

Table 2-22
Landfill 10 Explosive Gas Monitoring
Field Measurements: January through October 2000
Wright-Patterson AFB, Ohio

Location	Date Monitored	Probe Press. (2) (in. of Hg)	Probe Oxygen (%)	(% Methane / % LEL) Initial (3)	Sustained (4)	Methane TLV (%) (5)	Distance/Direction From Nearest Probe/Structure	Comments
LF10-PT085	1/18/00	ATMP	19.8	0/0	--	0.08	60 ft. Soutwest	
	4/13/00	ATMP	19.9	0/0	--	0.08	60 ft. Soutwest	
	7/24/00	ATMP	19.6	0/0	--	0.08	60 ft. Soutwest	
	9/29/00	ATMP	19.2	0/0	--	0.08	60 ft. Soutwest	
LF10-PT088	1/18/00	ATMP	19.8	0/0	--	0.02	14 ft. Northeast	
	4/13/00	ATMP	20.1	0/0	--	0.02	14 ft. Northeast	
	7/24/00	ATMP	19.9	0/0	--	0.02	14 ft. Northeast	
	9/29/00	ATMP	19.1	0/0	--	0.02	14 ft. Northeast	
LF10-PT090	1/18/00	ATMP	20.0	0/0	--	0.24	196 ft. Southeast	
	4/13/00	ATMP	20.7	0/0	--	0.24	196 ft. Southeast	
	7/24/00	ATMP	19.9	0/0	--	0.24	196 ft. Southeast	
	9/29/00	ATMP	18.6	0/0	--	0.24	196 ft. Southeast	
LF10-PT091	1/18/00	ATMP	19.6	0/0	--	0.28	225 ft. Southeast	
	4/13/00	ATMP	20.6	0/0	--	0.28	225 ft. Southeast	
	7/24/00	ATMP	19.8	0/0	--	0.28	225 ft. Southeast	
	9/29/00	ATMP	18.6	0/0	--	0.28	225 ft. Southeast	
LF10-PT093	1/18/00	ATMP	19.5	0/0	--	0.28	225 ft. Southeast	
	4/13/00	ATMP	20.3	0/0	--	0.28	225 ft. Southeast	
	7/24/00	ATMP	19.6	0/0	--	0.28	225 ft. Southeast	
	9/29/00	ATMP	18.8	0/0	--	0.28	225 ft. Southeast	
LF10-PT095	1/18/00	ATMP	19.2	0/0	--	0.38	300 ft. North	
	4/13/00	ATMP	20.5	0/0	--	0.38	300 ft. North	
	7/24/00	ATMP	19.8	0/0	--	0.38	300 ft. North	
	9/29/00	ATMP	19.0	0/0	--	0.38	300 ft. North	
LF10-PT100	1/18/00	ATMP	19.6	0/0	--	0.44	350 ft. Southeast	
	4/13/00	ATMP	19.5	0/0	--	0.44	350 ft. Southeast	
	7/24/00	ATMP	19.8	0/0	--	0.44	350 ft. Southeast	
	9/29/00	ATMP	17.3	0/0	--	0.44	350 ft. Southeast	
LF10-GBT0S	1/18/00	29.1	13.8	1.9/38	0/0	0.09	75 ft. Southeast	
	4/13/00	NT	19.0	1.2/24	0/0	0.09	75 ft. Southeast	
	7/24/00	29.1	4.6	11.2/222	0/0	0.09	75 ft. Southeast	
	9/29/00	29.3	14.4	0.1/2	0/0	0.09	75 ft. Southeast	
LF10-GBT0N	1/18/00	29.4	16.8	0/0	--	0.05	39 ft. East	
	4/13/00	NT	NT	NT	NT	0.05	39 ft. East	Submerged in water
	7/24/00	29.1	19.9	0/0	--	0.05	39 ft. East	
	9/29/00	29.4	11.5	0/0	--	0.05	39 ft. East	

Notes:

1. Abbreviations: in. = inches; ft,bgs = feet below ground surface; Hg = Mercury; TLV = threshold limit value (see Note 5); NA = not applicable, atmospheric pressure; NT = not taken; GBT = gas barrier trench; N = north, S = south.
2. Pressure readings taken via pressure valve in unvented cap at top of probe.
3. Initial gas concentrations reading taken after purging probe a minimum of 30 seconds.
4. Sustained combustible gas concentration reading taken approximately one half hour after removing unvented lid from monitoring probe. This reading is only taken if methane and LEL were detected in the initial reading.
5. Methane TLV was calculated using the formula T = (0.00125)(H), where T = threshold limit value, H = horizontal distance in feet between probe and closest occujpied structure.

ATMP - Atmospheric Pressure (Open bore hole).

NT - Reading Not taken.

Table 2-23
Landfill 8 Groundwater Level Elevations: July and November 2000
Wright-Patterson AFB, Ohio
Page 1 of 2

Well No.	Northing	Easting	Ref. Point Elevation (ft)	Screen Intervals (ft bgs)	Well Depth (ft)	7/26/00 GW Depth (ft, TOC)	7/26/00 GW Elevation (ft, MSL)	11/8/00 GW Depth (ft, TOC)	11/8/00 GW Elevation (ft, MSL)
EW-0801	654394.13	1557147.31	937.59	0.5-55.5	55.5	38.85	898.74	36.80	900.79
EW-0803	654453.14	1557213.49	936.73	5.0-55.5	55.5	50.90	885.83	49.15	887.58
EW-0805*	654525.61	1558593.29	938.54	5.5-55.5	55.5	50.21	888.33	52.76	885.78
EW-0807	654717.13	1557303.13	934.98	0.5-51.5	51.5	41.76	893.22	44.43	890.553
EW-0810	654916.57	1557327.28	931.04	5.0-55.5	55.0	48.08	882.96	46.90	884.141
EW-0812	655161.44	1557325.21	926.88	5.0-50	50.0	42.97	883.91	25.82	901.06
EW-0816	655241.68	1557243.03	932.99	5.0-55.0	55.0	28.02	904.97	29.25	903.74
02-003-M	655195.68	1557599.06	850.24	24.0-44.0	44.0	3.61	846.63	6.75	843.49
02-DM-81D-M	654372.65	1556701.67	949.67	48.5-53.5	94.4	29.35	920.32	32.54	917.13
02-DM-81S-M	654367.84	1556705.76	949.75	31.3-36.3	36.3	26.65	923.10	30.09	919.66
02-DM-82S-M	655031.69	1557606.43	893.37	59.5-64.5	64.5	11.11	882.26	14.50	878.87
02-DM-83D-M	655330.68	1557334.47	912.56	37.1-47.1	72.7	16.97	895.59	16.97	895.59
02-DM-83S-M	655335.36	1557328.28	913.32	12-17	17.0	14.82	913.32	20.38	892.94
02-DM-84-M	654725.79	1557463.27	914.49	52.8-57.8	57.8	20.50	893.99	23.09	891.4
02-DM-85-M	654423.84	1557385.79	894.81	47.5-52.5	52.5	4.61	890.20	7.16	887.65
LF08-MW01A	654132.39	1557154.35	905.69	23.8-29.4	42.2	5.25	900.44	7.39	898.3
LF08-MW01C	654123.81	1557144.25	905.92	7.2-15.0	17.0	6.69	899.23	9.61	896.31
LF08-MW02A	654418.18	1557374.09	894.07	43.7-53.7	56.0	5.32	888.75	7.63	886.44
LF08-MW02C	654446.85	1557382.85	895.61	11.7-21.7	24.0	12.97	882.64	15.06	880.55
LF08-MW03A	656331.63	1557401.92	888.38	22.7-27.7	42.0	18.60	869.78	R	--
LF08-MW03C	656340.94	1557399.60	888.08	8.7-13.7	15.5	14.45	873.63	R	--
LF08-MW04A	654838.64	1557618.29	913.45	51.3-63.0	68.0	30.45	883.00	33.68	879.77
LF08-MW04B	654829.68	1557624.11	912.76	29.5-37.0	39.0	22.41	890.35	28.43	884.33
LF08-MW04C	654829.72	1557613.08	914.02	21.0-26.0	28.0	20.85	893.17	26.41	887.61
LF08-MW05A	654691.07	1556722.51	949.38	59.8-69.8	88.0	31.14	918.24	33.92	915.46
LF08-MW05B	654680.84	1556732.28	949.17	41.7-51.7	53.8	20.78	928.39	23.92	925.25
LF08-MW05C	654689.63	1556732.16	949.30	17.75-27.75	30.0	19.40	929.90	22.97	926.33
LF08-MW06A	655113.55	1557659.08	891.30	53.5-73.8	80.0	28.13	863.17	30.50	860.8
LF08-MW06B	655107.64	1557653.36	890.63	32.75-42.75	45.0	11.46	879.17	14.87	875.76
LF08-MW06C	655113.21	1557649.54	891.72	7.0-12.0	NA	DRY	--	DRY	--
LF08-MW07A	654823.76	1556514.50	952.62	43.7-53.7	64.0	22.60	930.02	25.82	926.8
LF08-MW07B	654828.84	1556522.83	952.56	33.0-38.0	40.0	23.30	929.26	26.45	926.11
LF08-MW07C	654820.00	1556522.84	952.79	24.0-29.0	31.0	23.25	929.54	26.52	926.27

Table 2-23
Landfill 8 Groundwater Level Elevations: July and November 2000
Wright-Patterson AFB, Ohio
Page 2 of 2

Well No.	Northing	Easting	Ref. Point Elevation (ft)	Screen Intervals (ft bgs)	Well Depth (ft)	7/26/00 GW Depth (ft, TOC)	7/26/00 GW Elevation (ft, MSL)	11/8/00 GW Depth (ft, TOC)	11/8/00 GW Elevation (ft, MSL)
LF08-MW08A	655232.00	1557715.00	878.70	16.7-32.0	36.0	3.78	874.92	6.86	871.84
LF08-MW08B	655239.55	1557719.53	878.63	16.67-22.0	24.0	2.71	875.92	6.81	871.82
LF08-MW08C	655231.55	1557721.65	877.72	6.67-11.67	14.0	7.44	870.28	10.26	867.46
LF08-MW09A	655488.16	1557938.20	855.38	25.2-30.2	32.5	15.29	840.09	16.97	838.41
LF08-MW09B	655482.68	1557938.41	856.01	13.67-18.67	20.5	14.65	841.36	17.78	838.23
LF08-MW10A	655375.00	1557511.15	911.86	53.7-63.8	66.00	24.80	887.06	27.54	884.32
LF08-MW10B	655386.20	1557506.18	912.27	29.8-34.8	39.0	22.67	889.60	25.11	887.16
LF08-MW10C	655385.42	1557520.23	911.83	17.5-22.5	25.0	21.83	890.00	DRY	--
LF08-MW11A	655424.57	1556948.45	934.37	49.8-54.8	57.0	12.27	922.10	15.11	919.26
LF08-MW11B	655430.98	1556930.30	934.95	31.75-42.0	44.3	11.35	923.60	14.44	920.51
LF08-MW11C	655417.40	1556933.44	935.18	12.25-22.5	23.9	10.59	924.59	13.80	921.38
LF08-MW12B	655539.63	1556787.87	936.03	26.2-33.5	35.8	11.55	924.48	14.89	921.14
LF08-MW12C	655555.19	1556783.70	936.16	6.2-11.2	13.5	11.40	924.76	14.94	921.22
LF08-MW13A	655659.27	1556720.56	934.01	76.2-86.2	88.5	13.78	920.23	16.72	917.29
LF08-MW13B	655667.30	1556706.41	933.22	18.5-28.5	30.9	10.32	922.90	13.71	919.51
LF08-MW13C	655673.31	1556728.07	933.48	7.2-17.2	19.7	10.72	922.76	14.06	919.42
LF08-MW14B	655433.83	1556557.46	942.45	24.4-28.9	38.0	11.66	930.79	15.26	927.19
LF08-MW14C	655452.02	1556567.21	941.75	7.0-17.0	21.2	10.20	931.55	13.98	927.77
LF08-MW15A	656864.03	1557676.57	841.67	6.0-11.0	20.6	8.54	833.13	R	--
LF08-MW15B	656868.90	1557663.70	841.98	16.0-31.0	35.0	14.46	827.52	R	--
LF08-MW101	655115.53	1557381.88	918.41	58.0-68.0	68.0	31.74	886.67	34.66	883.749
LF08-MW102	654754.18	1557350.72	930.77	63.0-73.0	73.0	37.17	893.60	39.82	890.954
LF08-MW103	654374.39	1557241.86	927.42	58.0-68.0	68.0	35.10	892.32	37.05	890.366

R - These wells were removed from the Hydraulic Containment Monitoring Well Network in October 2000.
(See Table 4-7 in the OU1 System Performance Maintenance Plan.) Wells located too far from LF8 to be influenced by the extraction wells.

NA - Information Not Available

ft - feet

TOC - Top of Casing

* - EW-0805 coordinates from Reinke and Associates "as built" landfill drawings.

Survey data in boxes is from the WPAFB Civil Engineering survey September 2000.

Table 2-24
Landfill 10 Groundwater Level Elevations: July and November 2000
Wright-Patterson AFB, Ohio
Page 1 of 2

Well No.	Northing	Easting	Ref. Point Elevation (ft)	Screened Interval (ft, bgs)	Well Depth (ft, bgs)	7/26/00 GW Depth (ft, TOC)	7/26/00 GW Elevation (ft, MSL)	11/8/00 GW Depth (ft, TOC)	11/8/00 GW Elevation (ft, MSL)
EW-1001	655230.37	1558362.57	908.28	3.0-53.0	53.0	34.45	873.83	34.40	873.88
EW-1002	655241.92	1558408.41	921.32	3.0-53.0	53.0	46.28	875.04	44.45	876.87
EW-1003	655193.79	1558528.58	915.68	6.0-66.0	66.0	19.50	896.18	20.25	895.43
EW-1004	655340.94	1558476.80	923.08	5.0-63.0	63.0	54.60	868.48	56.79	866.29
EW-1006	655401.26	1558419.23	915.24	5.0-38.0	38.0	30.25	884.99	30.28	884.96
EW-1008	655424.99	1558315.64	911.16	6.0-36.0	36.0	DRY	--	DRY	--
EW-1011	655790.42	1558542.21	909.31	6.0-66.0	66.0	60.02	849.29	56.66	852.65
EW-1012	655863.34	1558447.91	891.43	5.0-30.0	35.0	28.70	862.73	32.33	859.10
EW-1013	655951.73	1558455.01	886.21	5.0-30.0	35.0	DRY	--	31.28	854.93
EW-1014	656024.46	1558494.33	884.90	5.0-30.0	30.0	DRY	--	DRY	--
EW-1015	655860.99	1558659.77	907.94	5.0-62.0	62.0	DRY	--	44.71	863.23
EW-1016	655879.59	1558686.74	907.41	5.5-50.5	50.5	35.90	871.51	29.80	877.61
EW-1017	656048.61	1558708.08	901.79	3.0-48.0	48.0	DRY	--	DRY	--
EW-1018	656037.49	1558605.74	901.77	2.0-37.0	37.0	31.84	869.93	DRY	--
EW-1019	656160.04	1558562.30	884.74	2.0-52.0	52.0	37.24	847.50	NT	--
EW-1020	656404.25	1558693.00	868.18	5.0-35.0	35.0	DRY	--	33.20	834.98
EW-1022	656372.20	1558803.48	870.55	5.0-65.0	65.0	61.13	809.42	60.23	810.32
EW-1024	656111.51	1558768.60	891.25	6.0-41.0	41.0	39.78	851.47	39.61	851.64
EW-1025	656300.98	1558823.81	877.61	3.0-43.0	43.0	28.12	849.49	38.38	839.23
EW-1026	656451.59	1558853.13	861.26	6.0-85.0	85.0	53.32	807.94	69.17	792.09
LF10-MW01A	654536.40	1558267.12	918.50	87.0-92.0	106.0	75.35	843.15	75.28	843.22
LF10-MW01B	654539.85	1558257.22	918.52	27.0-37.0	40.0	24.05	894.47	26.67	891.85
LF10-MW01C	654546.09	1558266.10	918.57	6.0-11.0	14.0	14.36	904.21	14.47	904.10
LF10-MW03A	655460.55	1558771.86	907.49	86.0-91.0	93.0	90.25	817.24	89.81	817.68
LF10-MW04A	655635.32	1559287.45	898.90	184.2-194.2	218.0	Too deep	--	R	R
LF10-MW04B	655637.96	1559284.08	898.86	113.65-123.65	126.0	98.91	799.95	99.24	799.62
LF10-MW04C	655641.80	1559278.79	898.87	56.0-61.0	65.0	DRY	DRY	R	R
LF10-MW05B	655310.63	1558091.29	858.44	27.0-34.2	37.0	20.50	837.94	20.35	838.09
LF10-MW05C	655303.83	1558090.40	859.06	3.42-8.42	11.0	10.04	849.02	10.74	848.32
LF10-MW06A	655744.29	1558817.18	894.62	74.8-84.8	87.1	72.10	822.52	71.70	822.92
LF10-MW06ADUP^	655745.53	1558807.09	894.78	55.0-65.0	66.0	67.20	827.58	66.99	827.79
LF10-MW06B	655743.21	1558789.40	894.09	37.15-42.50	44.0	34.78	859.31	34.97	859.12
LF10-MW07A	655550.86	1558314.65	897.54	64.0-69.0	82.0	53.12	844.42	53.35	844.19
LF10-MW07B	655561.94	1558307.90	897.01	19.3-24.3	36.0	DRY	--	DRY	--
LF10-MW07C	655538.93	1558304.49	897.72	9.33-14.33	18.0	12.65	885.07	DRY	--
LF10-MW08A-2	656238.18	1559055.16	863.35	79.9-89.9	92.2	DRY	--	87.33	776.02
LF10-MW08B	656214.05	1559057.11	865.09	11.5-16.5	18.7	10.55	854.54	10.11	854.98

Table 2-24
Landfill 10 Groundwater Level Elevations: July and November 2000
Wright-Patterson AFB, Ohio
Page 2 of 2

Well No.	Northing	Easting	Ref. Point Elevation (ft)	Screened Interval (ft, bgs)	Well Depth (ft, bgs)	7/26/00 GW Depth (ft, TOC)	7/26/00 GW Elevation (ft, MSL)	11/8/00 GW Depth (ft, TOC)	11/8/00 GW Elevation (ft, MSL)
LF10-MW09A	656100.62	1558359.94	877.98	77.0-87.0	88.0	51.42	826.56	50.60	827.38
LF10-MW09B	656118.57	1558356.66	878.21	46.4-57.0	61.0	50.89	827.32	51.00	827.21
LF10-MW09C	656113.14	1558370.50	878.17	31.05-41.10	45.0	35.21	842.96	36.70	841.47
LF10-MW10A	656519.46	1558950.61	844.26	120.0-130.0	135.0	46.78	797.48	R	R
LF10-MW10B	656516.46	1558963.82	844.40	13.75-23.75	26.0	DRY	--	DRY	--
LF10-MW10C	656517.64	1558958.19	844.19	56.0-66.0	68.0	48.10	796.09	48.48	795.71
LF10-MW10D	656515.55	1558971.70	843.99	5.17-10.17	12.0	DRY	--	R	R
LF10-MW11A	656398.51	1558414.72	854.20	61.7-71.7	74.0	30.15	824.05	30.35	823.85
LF10-MW11B	656389.71	1558410.16	854.52	30.2-40.2	43.0	28.33	826.19	28.47	826.05
LF10-MW13A	656579.15	1558419.32	845.53	34.65-44.65	52.0	21.58	823.95	21.80	823.73
LF10-MW13C	656581.42	1558409.91	845.64	17.0-27.0	40.0	21.02	824.62	21.30	824.34
LF10-MW14A	653959.82	1558150.35	948.58	83.1-98.7	101.0	73.85	874.73	73.75	874.83
LF10-MW102	655907.19	1558782.01	891.25	55.0-65.0	65.0	62.00	829.25	DRY	--
LF10-MW103	655461.27	1558594.10	909.65	32.0-42.0	42.0	32.87	876.78	32.42	877.23
LF10-MW104	655171.27	1558337.69	909.40	72.0-82.0	82.0	69.32	840.08	DRY	--
LF10-MW105	656122.67	1558549.02	873.24	53.0-63.0	65.0	46.25	826.99	46.50	826.74
01-DM-101S-M	655024.94	1558644.42	914.95	41.8-51.8	51.8	37.50	877.45	37.81	877.14
01-DM-101D-M	655032.81	1558645.94	914.54	78.8-83.8	85.0	DRY	--	DRY	--
01-DM-102S-M	656584.54	1558775.18	844.88	17.9-22.9	98.0	NM	--	26.00	818.88
01-DM-102D-M	656591.27	1558748.12	844.27	51.5-56.5	98.0	48.00	796.27	48.65	795.62
01-004-M	655682.90	1558364.11	880.58	33.0-63.0	63.0	41.47	839.11	49.03	831.55
01-005-M	656098.13	1558202.86	839.72	36.0-46.0	46.0	9.70	830.02	9.85	829.87

NM - Not monitored during this round. These wells were not part of the Hydrologic Contamination Monitoring Well Network in July 1999.
(See Table 4-7 in the OU1 Operation Maintenance Plan.) They were added to the network to further define groundwater flow.
NT - Not Taken. Water level was not taken at EW1019 because the probe was stuck.
NA - Information not Available
TOC - Top of Casing
ft - feet
bgs - below ground surface
^ - LF10-MW06ADUP is a separate well from LF10-MW06A
Survey data in boxes is from the Reinke and Associates (Surveyors) survey February 28, 2000.

Table 2-25
Landfill 10 Landfill Bottom Elevations
Wright-Patterson AFB, Ohio

Well No.	Easting (ft.)	Northing (ft.)	Total Depth (ft)	Top of Casing Elevation	Bottom of Landfill (ft)	Bottom of LF Elev. (ft)
EW-1001	1558373	655167	53.0	908.28	13.50	894.78
EW-1002	1558408	655241	53.0	921.78	25.00	896.78
EW-1003	1558528	655193	66.0	915.81	36.00	879.81
EW-1004	1558489	655275	63.0	923.08	27.00	896.08
EW-1006	1558419	655401	38.0	916.36	28.00	888.36
EW-1008	1558315	655424	36.0	911.05	19.00	892.05
EW-1026	1558884	656379	85.0	861.26	16.00	845.26
EW-1020	1558723	656335	35.0	868.18	15.00	853.18
EW-1022	1558803	656372	65.0	871.32	22.00	849.32
EW-1025	1558824	656301	43.0	877.61	18.00	859.61
EW-1019	1558588	656093	52.0	884.74	2.00	882.74
EW-1014	1558518	655958	30.0	884.9	7.00	877.90
EW-1013	1558477	655886	35.0	886.21	7.00	879.21
EW-1024	1558794	656041	41.0	891.25	15.00	876.25
EW-1012	1558469	655798	35.0	891.43	10.00	881.43
EW-1018	1558630	655969	37.0	901.77	22.00	879.77
EW-1017	1558732	655979	48.0	901.79	22.00	879.79
EW-1016	1558686	655879	50.5	907.88	32.00	875.88
EW-1015	1558681	655792	62.0	907.94	26.00	881.94
EW-1011	1558561	655724	66.0	909.31	30.00	879.31

Note: Survey completed by Reinke Associates for Kelchener Environmental, 1996

Table 3-1
OU5 Monthly Water Levels for the LTM Program
Wright-Patterson AFB, Ohio
Page 1 of 2

Well No.	Reference Point Elevation (ft, MSL)	Screened Interval (ft, bgs)	5/16/00 Depth to Water (ft, TOC)	5/16/00 Water Level Elev. (ft, MSL)	6/15/00(S) Depth to Water (ft, TOC)	6/15/00(S) Water Level Elev. (ft, MSL)
08-020-M	790.71	11 -21	11.08	779.63	11.35	779.36
08-021-M	790.38	13 - 23	11.05	779.33	11.24	779.14
08-022-M	795.63	26 - 36	14.53	781.10	15.50	780.13
08-023-M	791.38	24 - 34	6.40	784.98	6.76	784.62
08-523-M	789.86	5.5 - 15.5	6.15	783.71	6.59	783.27
08-524-M	789.61	5.4 - 15.4	6.47	783.14	6.94	782.67
08-525-M	791.51	6 - 16	9.74	781.77	10.00	781.51
08-526-M	790.53	6.4 - 16.4	10.84	779.69	--	--
08-527-M	788.60	6 - 16	--	--	9.57	779.03
08-528-M	790.04	7.5 - 17.5	10.76	779.28	11.07	778.97
CW04-060	791.76	49.67 - 59.67	12.09	779.67	12.72	779.04
CW04-085	789.72	74 - 84	--	--	10.55	779.17
CW05-055	793.19	45 - 55	14.30	778.89	13.98	779.21
CW05-085	793.53	75 - 85	14.83	778.70	14.22	779.31
CW06-077	792.92	67 - 77	--	--	13.48	779.44
CW07-055	794.43	44.5 - 54.5	12.64	781.79	12.85	781.58
CW07-100	792.34	90 - 100	9.52	782.82	9.56	782.78
CW08-017	792.32	6.75 - 16.75	10.37	781.95	10.73	781.59
CW08-055	792.06	44.67 - 54.67	9.22	782.84	9.21	782.85
CW08-110	790.95	100 - 110	8.25	782.70	7.15	783.80
CW09-073	790.95	63 - 73	12.00	778.95	12.34	778.61
CW12-085	789.33	75 - 85	5.42	783.91	5.64	783.69
CW13-085	790.96	75 - 85	5.86	785.10	6.17	784.79
CW15-055	790.78	45 - 55	11.31	779.47	12.71	778.07
CW21-040	794.88	30 - 40	12.35	782.53	12.13	782.75
MW130S	792.12	29.03 - 38.8	12.12	780.00	12.34	779.78
MW131M	786.92	58.3 - 68.3	7.67	779.25	7.95	778.97
MW131D	787.83	105.4 - 115.4	8.53	779.30	8.83	779.00
MW132S	789.46	38.5 - 48.5	10.95	778.51	11.36	778.10
MW133S	789.11	43.4 - 53.4	10.41	778.70	10.94	778.17
MW133D	788.72	59.5 - 69.5	9.92	778.80	10.43	778.29
HD-10D	792.80	59 - 69	13.34	779.46	14.00	778.80
HD-11D	791.42	71 - 81	12.37	779.05	12.33	779.09
HD-12S	791.13	14 - 24	11.67	779.46	11.90	779.23
HD-12M	792.03	44 - 54	12.48	779.55	12.74	779.29
HD-13S	789.17	22.5 - 32.5	9.77	779.40	10.27	778.90
HD-13D	789.96	96 - 106	10.61	779.35	11.04	778.92
HD-14S	790.47	22.5 - 32.5	12.13	778.34	12.60	777.87
EW-1	809.67	9.5 - 73.5	31.65	778.02	30.57	779.10
TTW-01	791.46	45 - 65	NM	NM	12.21	779.25

Table 3-1
OU5 Monthly Water Levels for the LTM Program
Wright-Patterson AFB, Ohio
Page 2 of 2

Well No.	7/13/00 Depth to Water (ft, TOC)	7/13/00 Water Level Elev. (ft, MSL)	8/18/00(S) Depth to Water (ft, TOC)	8/18/00(S) Water Level Elev. (ft, MSL)	9/21/00 Depth to Water (ft, TOC)	9/21/00 Water Level Elev. (ft, MSL)	10/13/00 Depth to Water (ft, TOC)	10/13/00 Water Level Elev. (ft, MSL)
08-020-M	11.99	778.72	12.06	778.65	15.31	775.40	16.99	773.72
08-021-M	12.10	778.28	11.91	778.47	15.52	774.86	17.37	773.01
08-022-M	15.83	779.80	16.10	779.53	19.03	776.60	20.73	774.90
08-023-M	6.77	784.61	7.45	783.93	8.78	782.60	8.33	783.05
08-523-M	6.70	783.16	7.30	782.56	8.90	780.96	Dry	--
08-524-M	7.01	782.60	7.65	781.96	9.13	780.48	9.30	780.31
08-525-M	10.26	781.25	10.77	780.74	12.74	778.77	13.24	778.27
08-526-M	11.59	778.94	11.88	778.65	14.83	775.70	16.51	774.02
08-527-M	10.11	778.49	10.28	778.32	13.50	775.10	15.30	773.30
08-528-M	NA	NA	12.35	777.69	15.18	774.86	17.03	773.01
CW04-060	13.11	778.65	13.32	778.44	16.65	775.11	18.61	773.15
CW04-085	11.09	778.63	11.28	778.44	14.61	775.11	16.55	773.17
CW05-055	15.30	777.89	14.65	778.54	18.78	774.41	20.60	772.59
CW05-085	15.74	777.79	14.94	778.59	19.23	774.30	21.04	772.49
CW06-077	NA	NA	14.19	778.73	17.47	775.45	19.08	773.84
CW07-055	NA	NA	13.61	780.82	15.62	778.81	16.15	778.28
CW07-100	9.73	782.61	10.34	782.00	11.93	780.41	12.00	780.34
CW08-017	10.95	781.37	11.55	780.77	13.42	778.90	13.90	778.42
CW08-055	9.41	782.65	10.04	782.02	11.61	780.45	11.65	780.41
CW08-110	8.39	782.56	8.02	782.93	10.58	780.37	10.62	780.33
CW09-073	12.72	778.23	13.05	777.90	16.40	774.55	18.38	772.57
CW12-085	5.79	783.54	6.40	782.93	7.90	781.43	8.70	780.63
CW13-085	6.21	784.75	6.86	784.10	8.15	782.81	7.62	783.34
CW15-055	13.06	777.72	13.50	777.28	17.11	773.67	19.10	771.68
CW21-040	12.24	782.64	12.76	782.12	14.65	780.23	14.91	779.97
MW130S	12.70	779.42	13.02	779.10	15.66	776.46	17.30	774.82
MW131M	8.57	778.35	8.64	778.28	12.10	774.82	13.70	773.22
MW131D	9.40	778.43	9.52	778.31	12.91	774.92	14.78	773.05
MW132S	11.73	777.73	12.08	777.38	15.73	773.73	17.72	771.74
MW133S	11.24	777.87	11.51	777.60	15.12	773.99	17.10	772.01
MW133D	10.78	777.94	11.04	777.68	14.59	774.13	16.57	772.15
HD-10D	14.34	778.46	14.50	778.30	17.88	774.92	19.86	772.94
HD-11D	13.34	778.08	12.97	778.45	16.80	774.62	18.65	772.77
HD-12S	12.51	778.62	12.58	778.55	15.88	775.25	17.65	773.48
HD-12M	13.36	778.67	13.41	778.62	16.72	775.31	18.43	773.60
HD-13S	10.76	778.41	10.85	778.32	14.28	774.89	16.23	772.94
HD-13D	11.61	778.35	11.70	778.26	15.15	774.81	17.07	772.89
HD-14S	12.90	777.57	13.29	777.18	17.07	773.40	19.02	771.45
EW-1	32.64	777.03	31.17	778.50	36.07	773.60	37.95	771.72
TTW-01	13.42	778.04	12.93	778.53	16.88	774.58	18.77	772.69

ft - feet
bgs - below ground surface
TOC - Top of casing
MSL - Mean sea level
S - static conditions, EW-1 was off
NM - Not Measured
NA - Not Accessible - Bird's nest with eggs blocking well cap.

Table 3-2
OU5 Groundwater Treatment System Water Quality Analytical Results and VOCs Removed
Wright-Patterson AFB, Ohio

	Units		May-00	Jun-00	Jul-00	Aug-00	Sep-00	Oct-00
VOCs								
cis-1,2-DCE	µg/L	Influent	16	*SYSTEM*	21	13	12	NM
	µg/L	Effluent	1.3		1.7	0.76 J	2.5	NM
2-Butanone	µg/L	Influent	NM		NM	ND	NM	NM
	µg/L	Effluent	NM		NM	2.1 JB	NM	NM
Vinyl Chloride	µg/L	Influent	1.2 J	*SHUTDOWN FOR PILOT STUDY TEST NO DATA*	0.76 J	0.56 J	0.28 J	ND
	µg/L	Effluent	ND		ND	ND	ND	ND
Acetone	µg/L	Influent	7.6 J		4.8 J	3.9 J	ND	NM
	µg/L	Effluent	2.8 J		4.1 J	6.4 B	ND	NM
trans-1,2-DCE	µg/L	Influent	1.4		1.7	1.3	0.65	NM
	µg/L	Effluent	ND		ND	ND	ND	NM
Chlorobenzene	µg/L	Influent	2		1.8	1.4 J	1.5 J	2
	µg/L	Effluent	0.21 J		0.19 J	ND	0.38 J	ND
TCE	µg/L	Influent	30		36	27	20	29
	µg/L	Effluent	1.4 J		0.64 J	0.26 J	2.8	ND
Benzene	µg/L	Influent	NM		0.1 J	NM	ND	NM
	µg/L	Effluent	NM		ND	NM	ND	NM
Methylene Chloride	µg/L	Influent	0.84 JB		ND	0.34 JB	0.97 J	ND
	µg/L	Effluent	0.35 JB		ND	0.66 JB	1.1	ND
Chloroform	µg/L	Influent	0.24 J		0.092 J	ND	ND	ND
	µg/L	Effluent	ND		ND	ND	ND	ND
Analyte								
pH	SU	Influent	7.3		7.6	7.4	7.3	7.1
	SU	Effluent	8.5		8.3	8.3	7.9	8.3
Hardness	mg $CaCO_3$/L	Influent	461		444	449	472	466
	mg $CaCO_3$/L	Effluent	459		448	445	466	434
TSS	mg/L	Influent	20		ND	ND	ND	ND
	mg/L	Effluent	20		ND	ND	ND	ND
Iron (Total)	mg/L	Influent	1.5		1.1	1.2	1.4	1.68
	mg/L	Effluent	1.4		1.1	1.2	0.8	1.61
Iron (Dissolved)	mg/L	Influent	0.26		0.27	0.22	0.058	0.13
	mg/L	Effluent	0.15		0.15	0.11	0.07	ND
Total Volume Discharged (in millions of gallons)			18.91	--	17.3	26.5	22.02	16.9
Total Pounds of TCE Removed			4.73	--	5.2	5.97	3.65	4.09
Total Pounds of All VOCs Removed			9.36	--	9.68	10.5	6.51	4.37

J - Estimated Result. Concentration less than reporting limit and above detection limit.
B - Method Blank Detection
ND - Not Detected
NM - Analyte Not Measured
DCE - Dichloroethene
TCE - Trichloroethene

SU - Standard Units
mg - milligrams
µg - micrograms
L - liter
$CaCO_3$ - Calcium Carbonate
TSS - Total Suspended Solids

Table 4-1
OU4 Landfill Gas Monitoring Results: October 2000
Wright-Patterson AFB, Ohio
Page 1 of 3

Monitoring Location	Date	CO_2 %	O_2 %	CH_4 %	LEL %	Atmos. Press. (in. Hg)
LG-1	04/17/98	1.7	18.6	0	0	NM
	10/14/98	5.9	16.1	0	0	NM
	01/12/99	0	16.9	0	0	NM
	04/15/99	2.6	18.1	0	0	NM
	07/20/99	0	18.8	0	0	NM
	10/22/99	2.9	17.5	0	0	NM
	01/17/00	0.9	18.9	0	0	NM
	04/10/00	0	20.3	0	0	29.5
	07/25/00	7.2	9.802	0	0	29.2
	09/28/00	0.7	18.6	0	0	29.3
LG-2	04/17/98	3.7	21.7	0	0	NM
	10/14/98	7.6	13.1	0	0	NM
	01/12/99	10.1	5.2	0	0	NM
	04/15/99	3.1	8.2	0	0	NM
	07/20/99	7	11	0	0	NM
	10/22/99	7.8	13.8	0	0	NM
	01/17/00	3.8	15	0	0	NM
	04/10/00	1.3	14.4	0	0	29.5
	07/25/00	6.6	4.3	0	0	29.2
	09/28/00	9.5	10	0	0	29.3
LG-3	04/17/98	2.9	22.9	0	0	NM
	10/14/98	3.8	18.4	0	0	NM
	01/12/99	2	19	0	0	NM
	04/15/99	2.1	15.4	0	0	NM
	07/20/99	3.5	17.1	0	0	NM
	10/22/99	2.3	19.2	0	0	NM
	01/17/00	1	18.4	0	0	NM
	04/10/00	0.2	17.7	0	0	29.5
	07/25/00	5	13.02	0	0	29.2
	09/28/00	3.6	16.8	0	0	29.3
LG-6	04/17/98	2.6	13.7	0	0	NM
	10/14/98	5.1	13.9	0	0	NM
	01/12/99	3.5	4.8	0	0	NM
	04/15/99	1.9	17.4	0	0	NM
	07/20/99	1.7	16	0	0	NM
	10/22/99	4.4	15.2	0	0	NM
	01/17/00	2	18.3	0	0	NM
	04/10/00	1.7	17	0	0	29.5
	07/25/00	2.8	12.5	0	0	29.2
	09/28/00	2.7	13.8	0	0	29.3

Table 4-1
OU4 Landfill Gas Monitoring Results: October 2000
Wright-Patterson AFB, Ohio
Page 2 of 3

Monitoring Location	Date	CO_2 %	O_2 %	CH_4 %	LEL %	Atmos. Press. (in. Hg)
LG-7	04/17/98	0.8	18.7	0	0	NM
	10/14/98	2.1	18.7	0	0	NM
	01/12/99	1	2.8	0	0	NM
	04/15/99	0.9	20.1	0	0	NM
	07/20/99	0.7	18.6	0	0	NM
	10/22/99	1	19.2	0	0	NM
	01/17/00	0.7	19.2	0	0	NM
	04/10/00	0.7	19	0	0	29.5
	07/25/00	1.6	18.1	0	0	29.2
	09/28/00	1.3	17.8	0	0	29.3
LG-8	04/17/98	1.9	18.8	0	0	NM
	10/14/98	4	15.6	0	0	NM
	01/12/99	3.2	15.7	0	0	NM
	04/15/99	2.6	17	0	0	NM
	07/20/99	0.8	18.2	0	0	NM
	10/22/99	3.2	16.2	0	0	NM
	01/17/00	2.2	18.8	0	0	NM
	04/10/00	0.3	19.4	0	0	29.5
	07/25/00	2.4	16.5	0	0	29.2
	09/28/00	2.1	16.2	0	0	29.3
LG-9	04/17/98	1.8	14	0	0	NM
	10/14/98	4.2	10.4	0	0	NM
	01/12/99	0	20.8	0	0	NM
	04/15/99	1.7	17	0	0	NM
	07/20/99	1.5	14.4	0	0	NM
	10/22/99	3	12.6	0	0	NM
	01/17/00	1.4	17.4	0	0	NM
	04/10/00	1.5	14.5	0	0	29.5
	07/25/00	2.6	12.5	0	0	29.2
	09/28/00	2.3	14.5	0	0	29.3
LG-10*	04/17/98	8.3	0	1.9	16	NM
	10/14/98	9.2	0	3.1	NM	NM
	2/3/99*	7.5	0.2	2.9	60	NM
	04/15/99	8.4	1.4	2.2	48	NM
	07/20/99	7.9	0.5	1.8	36	NM
	10/22/99	8.9	0	2.7	54	NM
	01/17/00	Could not open vault (damaged)				
	04/10/00	Could not open vault (damaged)				
	07/25/00	Could not open vault (damaged)				
	09/28/00	Could not open vault (damaged)				

Table 4-1
OU4 Landfill Gas Monitoring Results: October 2000
Wright-Patterson AFB, Ohio
Page 3 of 3

Monitoring Location	Date	CO_2 %	O_2 %	CH_4 %	LEL %	Atmos. Press. (in. Hg)
Bldg. 877 Center	04/17/98	NS	NS	NS	NS	NS
	10/14/98	0	20.3	0	0	NM
	01/12/99	0	21	0	0	NM
	04/15/99	0	21.2	0	0	NM
	07/20/99	0	19	0	0	NM
	10/22/99	0	20.5	0	0	NM
	01/17/00	Building Removed				
Bldg. 878A NW	04/17/98	NS	NS	NS	NS	NS
	10/14/98	0	20.3	0	0	NM
	01/12/99	0	21	0	0	NM
	04/15/99	0.1	21.2	0	0	NM
	07/20/99	0	19.1	0	0	NM
	10/22/99	0	20.5	0	0	NM
	01/17/00	0	19.5	0	0	NM
	04/10/00	0	20.2	0	0	29.5
	07/25/00	0	20.3	0	0	29.2
	09/28/00	0	19.3	0	0	29.3
Bldg. 878A SE	04/17/98	NS	NS	NS	NS	NS
	10/14/98	0	20.3	0	0	NM
	01/12/99	0	21	0	0	NM
	04/15/99	0	21.2	0	0	NM
	07/20/99	0	19.1	0	0	NM
	10/22/99	0	20.5	0	0	NM
	01/17/00	0	18.6	0	0	NM
	04/10/00	0	20.2	0	0	29.5
	07/25/00	0	20.402	0	0	29.2
	09/29/00	0	18.8	0	0	NM

* - Monitoring point LG-10 repaired on 1/17/2001
CO_2 = Carbon dioxide
O_2 = Oxygen
CH_4 = Methane
LEL = Lower Explosive Level
NM = Not measured
NS = Not sampled

Table 5-1
OU2 Round 7 Groundwater Monitoring Field Parameters
Wright-Patterson AFB, Ohio

Well Number	Sampling Round	Date Sampled	Depth to Water (ft, TOC)	Water Level Elevation (ft, MSL)	Temp. (C°)	pH (SU)	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Ferrous Iron (mg/L)
04-016-M	Baseline	5/21/97	11.15	809.75	12.4	7.11	843	17.0	-196.0	1.73	7.92
(MP Elev.; ft,MSL)	1	10/22/97	12.62	808.28	14.8	6.99	775	1.50	-208.0	5.63	7.64
820.9	2	4/28/98	10.65	810.25	12.1	7.09	748	4.00	-287.1	0.00	4.33
	3	10/15/98	11.51	809.39	15.7	6.96	819	4.00	-198.8	0.02	7.10
	4	4/13/99	10.50	810.40	14.2	8.62	825	5.00	-180.5	0.46	3.90
	5	10/11/99	13.00	807.90	15.7	7.05	571	9.00	-146.7	ERR	1.89
	6	4/25/00	7.69	813.21	13.8	7.16	1100	23.0	-131.1	ERR	8.88
	7	10/19/00	9.60	811.30	15.1	7.12	898	0.00	-155.8	0.04	5.10
04-518-M	Baseline	5/13/97	11.00	809.41	10.8	7.06	800	NA	-95.0	1.87	2.36
(MP Elev.; ft,MSL)	1	10/21/97	12.89	807.52	18.9	6.87	688	NA	-138.0	4.54	2.84
820.41	2	4/29/98	11.25	809.16	10.9	7.19	822	0.00	-84.3	0.96	4.20
	3	10/15/98	12.00	808.41	20.1	6.53	766	9.00	-179.1	0.12	2.88
	4	4/13/99	11.10	809.31	10.0	6.83	1029	3.00	-65.8	1.19	4.68
	5	10/11/99	13.94	806.47	20.2	6.91	814	2.00	-210.3	0.10	3.11
	6	4/24/00	10.85	809.56	11.6	6.76	2070	24.0	-140.1	ERR	2.19
	7	10/17/00	12.51	807.90	18.9	7.07	742	ERR	-95.0	0.38	6.00*
OW-1	Baseline	5/14/97	8.50	808.70	12.8	6.94	850	1.70	-136.0	1.00	5.10
(MP Elev.; ft,MSL)	1	10/20/97	9.95	807.25	17.8	7.07	689	1.33	-141.0	3.59	5.46
817.2	2	4/28/98	8.55	808.65	12.1	7.15	693	0.00	-275.7	0.00	1.99
	3	10/15/98	9.14	808.06	18.3	6.55	761	1.00	-156.0	7.93	4.66
	4	4/13/99	8.31	808.89	12.2	8.86	840	4.00	123.7	0.10	1.36
	5	10/13/99	10.81	806.39	18.4	6.87	846	0.00	-4.9	0.38	3.06
	6	4/24/00	7.89	809.31	12.6	7.38	1141	0.00	-100.2	1.95	4.22
	7	10/17/00	9.49	807.71	17.8	7.28	918	ERR	9.68	0.23	4.46
OW-2	Baseline	5/21/97	12.71	807.06	12.9	6.90	864	2.68	-145.0	2.68	5.10
(MP Elev.; ft,MSL)	3	10/21/98	13.48	806.29	15.3	6.53	794	1.00	-123.3	0.78	5.40
819.77	4	4/13/99	13.19	806.58	14.4	7.18	532	0.00	-116.6	0.05	1.82
	5	10/11/99	15.20	804.57	15.3	6.99	880	1.00	-168.7	0.14	3.52
	6	4/25/00	10.02	809.75	14.2	7.04	919	11.0	-133.4	ERR	8.32
	7	10/19/00	11.69	808.08	15.0	6.64	610	7.00	-129.5	0.69	12.40

Table 5-1
OU2 Round 7 Groundwater Monitoring Field Parameters
Wright-Patterson AFB, Ohio

Well Number	Sampling Round	Date Sampled	Depth to Water (ft, TOC)	Water Level Elevation (ft, MSL)	Temp. (C°)	pH (SU)	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Ferrous Iron (mg/L)
OW-3	Baseline	5/22/97	14.54	806.41	12.4	7.00	878	6.70	-118.0	2.61	3.08
(MP Elev.; ft,MSL)	1	10/23/97	15.92	805.03	17.6	6.88	770	1.97	-154.0	4.58	7.62
820.95	2	4/29/98	14.30	806.65	11.5	7.14	757	6.00	-305.0	0.00	6.76
	3	10/15/98	15.10	805.85	19.1	7.13	837	2.00	-140.6	0.13	4.58
	4	4/13/99	14.40	806.55	12.0	7.20	833	7.00	-125.1	0.00	4.60
	5	10/11/99	16.70	804.25	18.0	7.09	846	1.00	-166.9	0.19	4.72
	6	4/25/00	12.04	808.91	12.6	7.20	910	52.0	-121.9	1.95	1.99
	7	10/19/00	13.60	807.35	17.5	6.76	558	ERR	-148.8	0.26	7.40
OW-4	Baseline	5/27/97	11.15	806.05	12.6	7.09	806	48.0	-93.0	1.78	9.58
(MP Elev.; ft,MSL)	1	10/22/97	12.39	804.81	15.4	6.92	785	29.4	-136.0	4.76	9.96
817.2	2	4/29/98	10.95	806.25	12.9	7.29	837	0.00	-117.7	1.03	9.24
	3	10/16/98	11.33	805.87	18.3	6.40	844	43.0	-111.2	0.13	5.86
	4	4/14/99	11.01	806.19	12.5	7.13	537	ERR	-123.5	0.12	1.89
	5	10/11/99	12.68	804.52	15.7	7.01	813	6.00	-193.9	0.14	3.82
	6	4/25/00	10.11	807.09	13.3	7.12	1280	52.0	-107.7	1.61	1.65
	7	10/19/00	11.56	805.64	16.2	6.54	561	ERR	-127.4	0.09	10.00
P18-1	Baseline	5/16/97	10.65	806.07	10.7	6.49	NR	>100	-50.0	2.12	5.10
(MP Elev.; ft,MSL)	1	10/21/97	Dry	--	--	--	--	--	--	--	--
816.72	2	4/29/98	BTP	--	12.6	6.73	783	23.0	-188.4	1.36	7.98
	3	10/16/98	11.22	805.50	Insufficient water for parameters						4.28
	4	4/13/99	9.69	807.03	12.7	6.96	566	1.00	-81.1	0.08	1.81
	5	10/11/99	Dry								
	6	4/24/00	BTP	--	13.8	6.75	937	29.0	-123.9	ERR	3.40
	7	10/19/00	BTP	--	19.1	6.85	1000	1.00	-83.4	5.30	5.10
P18-2	Baseline	5/16/97	13.67	806.37	12.0	6.73	881	6.73	-85.0	1.96	5.10
(MP Elev.; ft,MSL)	1	10/21/97	Dry	--	--	--	--	--	--	--	--
820.04	2	4/29/98	BTP	--	10.9	6.58	1130	9.00	-234.9	0.14	19.00
	3	10/16/98	BTP	--	16.8	6.21	1050	7.00	-73.6	0.45	6.50
	4	4/13/99	BTP	--	11.7	8.10	1020	3.00	-84.8	3.05	3.47
	5	10/11/99	Dry								
	6	4/24/00	BTP	--	12.2	6.82	1150	21.0	-120.1	1.73	6.04
	7	10/19/00	BTP	--	Insufficient water for parameters						4.65

Table 5-1
OU2 Round 7 Groundwater Monitoring Field Parameters
Wright-Patterson AFB, Ohio

Well Number	Sampling Round	Date Sampled	Depth to Water (ft, TOC)	Water Level Elevation (ft, MSL)	Temp. (C°)	pH (SU)	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Ferrous Iron (mg/L)
NEA-MW20-2S	Baseline	5/22/97	10.10	811.39	12.4	6.80	871	2.76	-71.0	3.17	1.10
(MP Elev.; ft,MSL)	1	10/21/97	11.80	809.69	17.4	6.58	687	2.63	-176.0	4.06	1.30
821.49	2	4/20/98	9.31	812.18	11.6	7.03	781	7.00	-102.8	1.87	9.70
	3	10/15/98	10.54	810.95	18.4	6.39	697	137	-153.3	ERR	5.92
	4	4/13/99	9.66	811.83	11.5	6.94	522	0.00	-110.3	0.12	1.69
	5	10/11/99	12.44	809.05	18.7	6.77	584	0.00	-172.7	ERR	1.92
	6	4/20/00	8.94	812.55	15.1	6.74	970	17.0	-189.3	ERR	7.40
	7	10/17/00	10.91	810.58	17.1	6.92	710	ERR	-158.8	0.17	6.40
NEA-MW21-3S	2	4/29/98	11.89	808.96	Not sampled, free product						
(MP Elev.; ft,MSL)	3	10/15/98	12.69	808.16	Not sampled, free product						
820.85	4	4/13/99	11.00	809.85	11.9	7.12	822	21.0	-54.9	2.51	2.08
	5	10/11/99	14.19	806.66	19.2	7.03	578	14.0	-103.8	ERR	1.80
	6	4/24/00	12.96	807.89	12.7	7.19	930	9.00	-71.7	4.80	5.08
	7	10/19/00	12.51	808.34	16.3	6.69	937	3.00	-40.4	7.90	3.11
NEA-MW26-3S	6	4/24/00	12.74	804.86	12.8	7.18	1140	0.00	-137.3	1.65	1.23
(MP Elev.; ft,MSL)	7	10/17/00	14.17	803.43	16.9	7.19	1000	ERR	-279.9	0.33	14.00
817.6											
NEA-MW28-4I	Baseline	5/14/97	12.33	807.59	14.3	7.19	817	11.8	-169.0	0.77	5.10
(MP Elev.; ft,MSL)	1	10/20/97	13.99	805.93	14.9	7.44	725	2.04	-121.0	3.83	6.92
819.92	2	4/28/98	13.07	806.85	13.6	7.29	857	-10.0	-121.0	9.65	3.34
	3	10/15/98	13.13	806.79	14.9	7.17	947	2.00	-143.3	0.04	4.76
	4	4/13/99	12.99	806.93	13.7	7.31	498	12.00	-119.9	0.21	1.79
	5	10/11/99	14.83	805.27	15.7	7.21	999	2.00	-185.1	0.19	3.42
	6	4/24/00	11.91	808.01	13.6	7.02	857	82.0	-131.9	0.21	1.98
	7	10/17/00	13.60	806.32	15.0	7.24	1380	ERR	9.25	1.02	5.05
NEA-MW28-5S	7**	12/8/00	19.81	800.29	14.9	6.92	1000	0.00	-126.20	0.09	5.09
(MP Elev.; ft,MSL)											
820.1											

MP - Monitoring point
BTP - Below top of pump, probe won't clear
DO - Dissolved Oxygen
NA - Not available
NR - No reading
ORP - Oxygen Reduction Potential

mg/L - milligrams per liter
ft,TOC - feet below top of casing
ft, MSL - feet, ref. Mean sea level
C° - Degrees Celsius
SU - Standard Units
mV - millivolts

* - Iron measurements were taken on 10/19/00.
** - Well monument was incorrectly tagged in the field (MW28-4I).
Actual well (MW28-5S) was sampled in December 2000 for Round 7.
ERR - Equipment error
NTU - Nephelometric turbidity units

Table 5-2
OU2 Round 7 and Historical Soil Gas Analytical Results
Wright-Patterson AFB, Ohio

Sample Location	Date Sampled	Sample Round	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Total BTEX (ug/L)	Total Volatile Hydrocarbons (ug/L)	Methane (%)	Oxygen (%)	Carbon Dioxide (%)
OU2-SV01	5/7/97	Baseline	ND	ND	ND	ND	ND	172	ND	25.1	ND
	10/27/97	1	ND	ND	ND	ND	ND	ND	ND	16.5	1.03
	4/22/98	2	ND	ND	ND	ND	ND	36.6	ND	15.3	0.56
	10/20/98	3*	ND	ND	ND	ND	ND	ND	ND	23	0.8
	4/8/99	4	ND	ND	ND	ND	ND	ND	ND	16.95	0.5
	10/6/99	5	ND	ND	2	ND	2	79.8	ND	18.1	1.2
	4/20/00	6	ND	ND	ND	ND	ND	145	ND	15	0.65
	11/3/00	7	ND	ND	ND	ND	ND	ND	ND	18.1	1.3
	Duplicate	7	ND	ND	ND	ND	ND	ND	ND	18	1.3
OU2-SV02	5/7/97	Baseline	ND	ND	ND	ND	ND	ND	2.1	24.1	ND
	10/27/97	1	ND	ND	ND	ND	ND	ND	ND	16.4	1.36
	4/22/98	2	ND	ND	ND	ND	ND	ND	ND	12.9	1.38
	10/20/98	3*	ND	ND	ND	ND	ND	ND	ND	2.6	1.8
	4/8/99	4	1.35	ND	ND	ND	1.35	ND	ND	3.37	1.52
	10/6/99	5	1.6	ND	4	ND	5.58	59	ND	18	0.59
	4/20/00	6	4.39	ND	9.02	6.87	20.3	487	ND	13	0.97
	11/3/00	7	ND	ND	ND	ND	ND	ND	ND	18.3	1.7
OU2-SV03	5/7/97	Baseline	ND	ND	ND	3.58	3.58	630	11.1	15.8	ND
	10/27/97	1	53.5	32.5	11.3	21.7	119	1673	1.22	2.77	8.6
	4/22/98	2	212	112	37.7	34	395.7	4540	1.41	3.18	6.81
	10/20/98	3*	ND	ND	11	8.6	19.6	2760	5.1	2.6	10
	4/8/99	4	9.57[1]	2.79	4.43	ND	16.79	4351	1.1	4.85	5
	10/6/99	5	ND	14.5	47.7	120	182.2	8300	2.7	6.4	8.24
	4/20/00	6	ND	15.1	71.9	69	156	11040 D	2.7	3.5	11
	Duplicate	6	ND	14.9	69.2	71	155	9960 D	2.7	4.2	10
	11/3/00	7	610	433	47	95.7	1185.7	50880	5.2	4.4	9.3
	Duplicate	7	575	361	19.6	36.9	992.5	49380	5.2	4.7	9.2
OU2-SV04	5/7/97	Baseline	ND	ND	ND	5.51	5.51	453	ND	22.6	ND
	10/27/97	1	230	160	60.6	67.7	518.3	6851	ND	10.2	3.47
	4/22/98	2	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/20/98	3*	ND	ND	8.6	4.9	13.5	1600	0.055	16	4.3
	4/8/99	4	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/6/99	5	ND	40.6	ND	44.6	85.2	2780	ND	12.6	4.1
	4/20/00	6	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/3/00	7	49.6	78.7	4.4	13.7	146.4	2990	0.5	10.2	5.3

Table 5-2
OU2 Round 7 and Historical Soil Gas Analytical Results Wright-Patterson AFB, Ohio

Sample Location	Date Sampled	Sample Round	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Total BTEX (ug/L)	Total Volatile Hydrocarbons (ug/L)	Methane (%)	Oxygen (%)	Carbon Dioxide (%)
OU2-SV05	5/7/97	Baseline	ND	ND	ND	8.49	8.49	4420	5.08	10.7	12.6
	10/27/97	1	890	146	49.7	29.3	1115	17244	19.7	3.02	4.66
	4/22/98	2	2490	275	90.7	66.5	2922.2	29200	19.4	2.64	3.01
	10/20/98	3*	ND	ND	6	ND	6	5050	9.8	2.8	7.5
	Duplicate	3*	ND	ND	24	8.1	32.1	6740	9.1	10	5
	4/8/99	4	154	8.17	19.3	ND	181.47	20986	8.35	4	3.45
	10/6/99	5	ND	ND	249	105	354	34900	5.1	7.55	4.65
	4/20/00	6	ND	23.7	119	113	255.7	24600 D	14	3.6	4.2
	11/3/00**	7	-	-	-	-	-	-	-	-	-
OU2-SV06	5/7/97	Baseline	ND	ND	ND	93.9	93.9	9480	4.66	3.8	38.9
	10/27/97	1	528	216	60.4	39.8	844.2	19209	34.6	6.47	0.76
	4/22/98	2	1250	528	157	175	2110	33200	26.4	2.42	0.75
	10/20/98	3*	ND	ND	27	ND	27	11100	38	2.7	2
	4/8/99	4	374(2)	59.5	39.6	14.9	488	35119	7.7	2.9	0.57
	10/6/99	5	2060	2410	849	221	5540	66600	20	3.1	1.5
	4/20/00	6	ND	66.1	106	89.4	262	24050 D	25 D	3.5	1
	11/3/00	7	1630	708	26.4	48.1	2412.5	1233440	27.2 D	4.7	1
OU2-SV07	5/7/97	Baseline	ND	ND	ND	ND	ND	119	2.06	22.2	ND
	10/27/97	1	44.3	70.9	28.2	15.8	159.2	3426	12.3	2.33	4.61
	4/22/98	2	112	13.7	66.9	49.8	242.4	5090	5.02	2.66	3.47
	10/20/98	3*	ND	ND	12	ND	12	2830	8.9	2.7	6
	4/8/99	4	ND	17.2	11.6	28.5	57.3	4395	5.31	3.45	4.28
	10/6/99	5	117	36.6	64.4	68.8	286.5	3710	4.5	8.2	3.9
	Duplicate	5	VOCs not analyzed because the sample broke during analysis.						5.2	6.42	5
	4/20/00	6	98.2	25.5	52.9	33.2	210	2786 D	3.3	4.6	5.8
	Duplicate	6	91.3	24.8	56.9	39.3	212	3920 D	3.5	3.4	6.2
	11/3/00	7	7.2	111	7.9	28.4	154.5	3530	2.6	4.5	6.4
OU2-SV08	5/8/97	Baseline	ND	ND	ND	ND	ND	22.2	ND	25.1	ND
	10/27/97	1	39.9	50.7	19.6	14.1	124.3	6709	18.8	7.6	1.04
	4/22/98	2	5.38	7.91	2.78	3.28	19.35	330	2.19	9.32	ND
	10/20/98	3*	ND	ND	ND	ND	ND	2090	4.6	21	0.77
	4/8/99	4	34.3	13.2	14.8	9.32	71.62	10662	6.2	8.65	1.34
	10/6/99	5	103	32.4	101	192	428.4	8790	6	11.2	1.7
	Duplicate	5	91.5	30.8	91.4	70.8	284.5	7950	7.8	9.7	1.9
	4/20/00	6	59.7	9.86	32.8	28.3	131	4880 D	5.9	8.2	2
	11/3/00	7	14.3	17	18.4	56.1	105.8	23510	2.6	17.6	0.5

Table 5-2
OU2 Round 7 and Historical
Soil Gas Analytical Results
Wright-Patterson AFB, Ohio
Page 3 of 4

Sample Location	Date Sampled	Sample Round	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Total BTEX (ug/L)	Total Volatile Hydrocarbons (ug/L)	Methane (%)	Oxygen (%)	Carbon Dioxide (%)
OU2-SV09	5/7/97	Baseline	ND	ND	ND	ND	ND	ND	ND	26.5	ND
	10/27/97	1	ND	ND	ND	ND	ND	ND	ND	16.2	1.51
	4/22/98	2	ND	ND	ND	ND	ND	ND	ND	15.1	1.05
	10/20/98	3*	ND	ND	ND	ND	ND	ND	ND	21	2
	4/8/99	4	ND	ND	ND	ND	ND	ND	ND	17.35	0.74
	10/6/99	5	ND	ND	ND	ND	ND	ND	ND	18	1.7
	4/20/00	6	ND	ND	ND	ND	ND	ND	ND	15	1
	11/3/00	7	ND	ND	ND	4.1	4.1	ND	ND	18.3	1.4
OU2-SV10	5/7/97	Baseline	ND	424	9.2	135	568.2	12500	8.5	5.78	24.2
	10/27/97	1	1192	356	111	167	1826	26575	16.4	2.87	8.13
	4/22/98	2	1340	644	236	234	2454	31600	7.36	3.05	4.1
	10/20/98	3*	ND	ND	50	20	70	9600	6.9	3.3	14
	Duplicate	3*	ND	ND	68	17	85	10600	6.9	4	15
	4/8/99	4	396	ND	ND	ND	396	22374	5.65	4	4.65
	10/6/99	5	196	23.2	116	161	496	12000	3.3	2.9	11
	4/20/00	6	375 D	23.6 D	145	122	666	16620 D	1.5	4	8.5
	11/3/00	7	263	308	25	45.2	641.2	29650	3.1	3.5	12.1
OU2-SV11	5/8/97	Baseline	ND	ND	ND	ND	ND	ND	ND	25.3	ND
	10/27/97	1	ND	ND	ND	ND	ND	ND	ND	4.55	4.81
	4/22/98	2	ND	ND	ND	ND	ND	ND	ND	5.29	4.17
	10/20/98	3*	ND	ND	ND	ND	ND	ND	ND	5.2	10
	4/8/99	4	ND	ND	ND	ND	ND	ND	ND	3.89	4.44
	10/6/99	5	ND	ND	ND	ND	ND	77.8	ND	3.7	7.3
	4/20/00	6	ND	ND	ND	ND	ND	ND	ND	6.1	6.6
	11/3/00	7	ND	ND	ND	ND	ND	ND	ND	7.8	7.4
OU2-SV12	5/8/97	Baseline	ND	ND	ND	ND	ND	ND	ND	26.2	ND
	10/27/97	1	ND	ND	ND	ND	ND	ND	ND	10.2	6.45
	4/22/98	2	ND	ND	ND	ND	ND	ND	ND	9.01	3.53
	10/20/98	3*	ND	ND	ND	ND	ND	ND	ND	14	7.1
	4/8/99	4	ND	ND	ND	ND	ND	ND	ND	9.3	3.64
	10/6/99	5	ND	ND	ND	ND	ND	ND	ND	13.4	5.6
	4/20/00	6	ND	ND	ND	ND	ND	98.4	ND	9.2	3.4
	11/3/00	7	ND	ND	ND	ND	ND	ND	ND	10.1	6.7

Table 5-2
OU2 Round 7 and Historical Soil Gas Analytical Results
Wright-Patterson AFB, Ohio

Sample Location	Date Sampled	Sample Round	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Total BTEX (ug/L)	Total Volatile Hydrocarbons (ug/L)	Methane (%)	Oxygen (%)	Carbon Dioxide (%)
OU2-SV13	5/7/97	Baseline	ND	ND	ND	ND	ND	1090	ND	24.7	ND
	10/27/97	1	ND	ND	ND	ND	ND	ND	ND	15.7	1.8
	4/22/98	2	ND	ND	ND	ND	ND	ND	ND	16.2	0.6
	10/20/98	3*	ND	ND	ND	ND	ND	ND	ND	21	2.6
	4/8/99	4	ND	ND	ND	ND	ND	ND	ND	14.7	0.79
	10/6/99	5	ND	ND	ND	ND	ND	ND	ND	16.5	2.4
	4/20/00	6	ND	ND	ND	ND	ND	162	ND	16	0.71
	11/3/00	7	ND	ND	ND	ND	ND	ND	ND	17.9	1.7
OU2-SV14	5/7/97	Baseline	ND	ND	9.26	11.3	20.56	8700	10.3	8.78	8.28
	10/27/97	1	1975	414	101	110	2600	38558	14.4	3.42	7.13
	4/22/98	2	3480	910	303	456	5149	53100	7.33	1.75	4.88
	10/20/98	3*	ND	ND	30	ND	30	18500	5.8	4.7	12
	4/8/99	4	182	ND	ND	ND	182	50812	4.2	0.53	4.44
	10/6/99	5	673	80.3	454	358	1563	36800	3.6	2.8	9.9
	4/20/00	6	234 D	35.3	214	130	613	15850 D	1.8	4.8	7.9
	11/3/00	7	340	1680	120	205.4	2345.4	30600	2.5	6.8	7.6
OU2-SV15	5/7/97	Baseline	ND	ND	ND	ND	ND	ND	ND	25.6	ND
	10/27/97	1	ND	ND	ND	ND	ND	ND	ND	15.2	1.62
	4/22/98	2	ND	ND	ND	ND	ND	ND	ND	15.6	0.94
	10/20/98	3*	ND	ND	ND	ND	ND	ND	ND	21	1.8
	4/8/99	4	ND	ND	ND	ND	ND	ND	ND	17.3	0.94
	10/6/99	5	ND	ND	ND	ND	ND	ND	ND	17	2.1
	4/20/00	6	ND	ND	ND	ND	ND	ND	ND	16	0.76
	11/3/00	7	ND	ND	ND	ND	ND	ND	ND	19.1	1.2

(1) - Pore volume (PV) purged prior to sampling = 420 cc, provided the highest benzene concentration.
(2) - Pore volume (PV) purged prior to sampling = 3240 cc, provided the highest benzene concentration.
3* - BTEX analysis was run outside of the 14 day holding time for EPA Method 8021.
ND - Concentration is below detection limits.
NS - Not sampled. Groundwater in vapor monitoring point.
ug/L - micrograms per liter (ppb)
D - Diluted sample
**OU2-SV-05 was destroyed during construction.

Table 5-3
OU2 Round 7 and Historical Groundwater Analytical Results
Wright-Patterson AFB, Ohio
Page 1 of 10

Well Number:	04-016-M									
Sample Round:			Baseline	1	2	3	4	5	6	7
Date Sampled:	9/2/88	8/12/91	5/21/97	10/22/97	4/28/98	10/15/98	4/13/99	10/11/99	4/25/00	10/19/00
PARAMETERS:										
Ethane (ppm)	NA	NA	0.002	ND	0.001	0.002	0.001	0.002	0.002	0.00083
Ethene (ppm)	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
Methane (ppm)	NA	NA	19.4	25.6	15.4	12.7	9.59	14.7	12.9	7.0 DB
Benzene (ug/L)	63	440	8.8	12	6.6	8.6	2.6	14	5.4*	9.2
Toluene (ug/L)	ND	NA	ND	5.6	12	6.5	1.2	6.1	3.0*	0.77 J
Ethylbenzene (ug/L)	ND	ND	ND	6.6	50	31	28	67	ND	ND
Xylenes (Total) (ug/L)	ND	ND	ND	9.7	3.4	ND	ND	4	37	ND
Total BTEX (ug/L)	63	440	8.8	33.9	72	46.1	31.8	91.1	45.4	9.97
Sulfate (mg/L)	NA	0.58	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate (mg/L)	NA	0.142	ND	ND	ND	ND	ND	ND	ND	ND

Table 5-3
OU2 Round 7 and Historical
Groundwater Analytical Results
Wright-Patterson AFB, Ohio
Page 2 of 10

Well Number:							04-518-M					
Sample Round:				Baseline	1	2	3	4	4	5	6	7
Date Sampled:	9/6/88	9/6/88	8/9/91	5/13/97	10/21/97	4/29/98	10/15/98	4/13/99	DUP	10/11/99	4/24/00	10/17/00
PARAMETERS:		(Dup)										
Ethane (ppm)	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethene (ppm)	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methane (ppm)	NA	NA	NA	7.67	12.6	13.4	9.99	14.2	16.3	11.8	12.8	4.7 DB
Benzene (ug/L)	560	2600	27	160	42	100	52	120	250	16	160	20
Toluene (ug/L)	2500	13000	ND	5.6	2.3	17	43	12	25	13	ND	ND
Ethylbenzene (ug/L)	1500	8300	100	290	45	170	41	680	460	6.8	64	ND
Xylenes (Total) (ug/L)	5700	36000	46	23	12	ND	12	15	ND	5	ND	ND
Total BTEX (ug/L)	10260	59900	173	478.6	101.3	287	148	827	735	40.8	224	20
Sulfate (mg/L)	NA	NA	0.11	ND	ND	ND	ND	ND	ND	ND	ND**	ND
Nitrate (mg/L)	NA	NA	0.094	ND	ND	ND	ND	ND	ND	ND	ND**	ND

Table 5-3
OU2 Round 7 and Historical Groundwater Analytical Results
Wright-Patterson AFB, Ohio
Page 3 of 10

Well Number:	NEA-MW20-2S												
Sample Round:				Baseline	1	2	3	4	5	5	6	7	7
Date Sampled:	12/16/92	5/5/93	9/8/93	5/22/97	10/21/97	4/17/98	10/15/98	4/13/99	10/11/99	DUP	4/20/00	10/17/00	DUP
PARAMETERS:													
Ethane (ppm)	NA	NA	NA	ND	ND	ND	ND	0.027	0.001	0.002	ND[A]	ND	ND
Ethene (ppm)	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND[A]	ND	ND
Methane (ppm)	NA	NA	NA	21.3	24.4	32.2	16	25.5	21.7	21.8	30.3[A]	6.8 DB	6.2 DB
Benzene (ug/L)	75	39	14	46	45	39	22	37	56	54	76	46	46
Toluene (ug/L)	ND	ND	1	ND	7.1	ND	ND	ND	5.9	6.5	2.3*	ND	ND
Ethylbenzene (ug/L)	70	46	31	4.6	6.8	2.7	ND	ND	3.4	3.6	ND	ND	ND
Xylenes (Total) (ug/L)	75	46	14	1.1	10	4.1	ND	ND	ND	ND	3.2*	ND	ND
Total BTEX (ug/L)	220	131	60	51.7	68.9	45.8	22	37	65.3	64.1	81.5	46	46
Sulfate (mg/L)	9.78	1600	1.09	ND	ND	ND	ND	ND	ND	ND	ND	2.4	2.0
Nitrate (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 5-3
OU2 Round 7 and Historical Groundwater Analytical Results
Wright-Patterson AFB, Ohio
Page 4 of 10

Well Number:	NEA-MW21-3S								NEA-MW25-3S				
Sample Round:		4	4	5	6	6	7	7				Baseline	6
Date Sampled:	12/16/92	4/13/99	DUP	10/11/99	4/24/00	DUP	10/19/00	DUP	12/7/92	5/6/93	9/13/93	5/23/97	4/25/00
PARAMETERS:													
Ethane (ppm)	NA	0.003	0.002	0.002	0.005	0.005	0.00067	0.00058	NA	NA	NA	0.001U	ND
Ethene (ppm)	NA	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	0.001U	ND
Methane (ppm)	NA	13	13.9	14.6	25.5	23.5	5.8 DB	4.7 DB	NA	NA	NA	12.3	0.006
Benzene (ug/L)	77	240	200	230	300	290	290	290	ND	0.7	ND	ND	ND
Toluene (ug/L)	54	ND	ND	10	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene (ug/L)	82	110	92	110	110	120	260	250	ND	ND	ND	ND	ND
Xylenes (Total) (ug/L)	150 J	140	130	70	120	110	320	330	ND	ND	ND	ND	ND
Total BTEX (ug/L)	363	490	422	420	530	520	870	870	ND	0.7	ND	ND	ND
Sulfate (mg/L)	1.05 J	ND	ND	ND	ND	ND	ND	ND	0.634	3.87	0.409	ND	2.7
Nitrate (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 5-3
OU2 Round 7 and Historical Groundwater Analytical Results
Wright-Patterson AFB, Ohio
Page 5 of 10

Well Number:	NEA-MW26-3S								NEA-MW28-5S				
Sample Round:						Baseline	6	7				7^B	7^B
Date Sampled:	10/11/92	10/26/92	12/6/92	4/24/93	5/14/93	5/14/97	4/24/00	10/17/00	12/8/92	4/21/93	9/10/93	12/8/00	DUP
PARAMETERS:													
Ethane (ppm)	NA	NA	NA	NA	NA	ND	ND	ND	NA	NA	NA	0.00029 J	0.00029 J
Ethene (ppm)	NA	NA	NA	NA	NA	ND	ND	ND	NA	NA	NA	ND	ND
Methane (ppm)	NA	NA	NA	NA	NA	0.109	0.002	0.026 B	NA	NA	NA	5.4 DB	5.5 DB
Benzene (ug/L)	ND	ND	ND	ND	ND	ND	ND	ND	120	500	250	0.46 J	0.28 J
Toluene (ug/L)	320	55	ND	ND	ND	ND	ND	0.22 J	ND	ND	ND	ND	ND
Ethylbenzene (ug/L)	12000	200	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	ND
Xylenes (Total) (ug/L)	5700	150	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total BTEX (ug/L)	18020	405	ND	ND	ND	ND	ND	0.22	120	500	251	0.46	0.28
Sulfate (mg/L)	ND	ND	61.3	101	37	ND	102**	54.5	1.06 J	1.77 J	0.675 J	ND	ND
Nitrate (mg/L)	ND	ND	ND	ND	ND	ND	ND**	ND	ND	ND	ND	ND	ND

Table 5-3
OU2 Round 7 and Historical Groundwater Analytical Results
Wright-Patterson AFB, Ohio
Page 6 of 10

Well Number:	NEA-MW28-4I											
Sample Round:				Baseline	1	2	3	4	5	6	6	7
Date Sampled:	12/8/92	4/21/93	9/9/93	5/14/97	10/20/97	4/28/98	10/15/98	4/13/99	10/11/99	4/24/00	DUP	10/17/00
PARAMETERS:												
Ethane (ppm)	NA	NA	NA	ND	ND	ND	ND	ND	ND	0.001	0.001	ND
Ethene (ppm)	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methane (ppm)	NA	NA	NA	7.27	4.41	13.6	1.91	6.9	4.4	11.1	13.2	1.9 DB
Benzene (ug/L)	44	23	1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene (ug/L)	ND	0.8 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.21 J
Ethylbenzene (ug/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total) (ug/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total BTEX (ug/L)	44	23.8	1	ND	ND	ND	ND	ND	ND	ND	ND	0.21
Sulfate (mg/L)	0.86 J	0.636 J	1.37 J	ND	4.65	ND	2	3.6	1.9	ND	ND	ND
Nitrate (mg/L)	ND	ND	0.0674 J	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 5-3
OU2 Round 7 and Historical Groundwater Analytical Results
Wright-Patterson AFB, Ohio
Page 7 of 10

Well Number:	OW-1								OW-2						
Sample Round:	Baseline	1	2	3	4	5	6	7	Baseline	3	3	4	5	6	7
Date Sampled:	5/14/97	10/20/97	4/28/98	10/15/98	4/13/99	10/13/99	4/24/00	10/17/00	5/21/97	10/21/98	(Dup.)	4/13/99	10/11/99	4/25/00	10/19/00
PARAMETERS:															
Ethane (ppm)	ND	ND	ND	0.002	ND	0.001	0.002	0.00035 J	ND	0.001	0.002	0.019	0.002	0.003	0.0005
Ethene (ppm)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methane (ppm)	11.7	13.2	11.2	12.9	14	8.29	12.8	4.2 DB	24.9	14.9	13.7	20.5	21.1	23	7.3 DB
Benzene (ug/L)	430	400	460	160	150	13	13*	ND	ND	ND	ND	ND	2.4	ND	ND
Toluene (ug/L)	ND	8.5	28	7.1	19	12	3.5	ND	ND	ND	5.1	2.3	7.7	3.0*	ND
Ethylbenzene (ug/L)	1.3	1.8	ND	ND	11	6.8	ND	ND	ND	ND	ND	2.4	2.6	ND	ND
Xylenes (Total) (ug/L)	ND	8.3	ND	ND	11	3.6	4.8	ND	ND	ND	ND	ND	1.5	3.5*	ND
Total BTEX (ug/L)	431.3	418.6	488	167.1	191	35.4	21.3	ND	ND	ND	5.1	4.7	14.2	6.5	ND
Sulfate (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND
Nitrate (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	0.5	ND	ND	ND	ND	ND	ND

Table 5-3
OU2 Round 7 and Historical Groundwater Analytical Results
Wright-Patterson AFB, Ohio
Page 8 of 10

Well Number:	OW-3								OW-4						
Sample Round:	Baseline	1	2	3	4	5	6	7	Baseline	1	2	3	4	5	6
Date Sampled:	5/22/97	10/23/97	4/29/98	10/15/98	4/13/99	10/11/99	4/25/00	10/19/00	5/27/97	10/22/97	4/29/98	10/15/98	4/14/99	10/11/99	4/25/00
PARAMETERS:															
Ethane (ppm)	ND	ND	ND	ND	0.008	0.001	0.003	0.00031 J	ND	ND	ND	0.001	0.002	0.001	0.004
Ethene (ppm)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methane (ppm)	12.1	12.4	16.5	13.8	15.9	10.1	21	4.5 DB	19.5	13.7	12.6	10.8	9.91	10.8	16.8
Benzene (ug/L)	2.2	8.2	8.7	ND	10	7	6.8*	ND	ND	4	ND	ND	ND	ND	ND
Toluene (ug/L)	ND	7.6	ND	ND	13	11	2.6*	ND	ND	ND	4.3	1	4.5	3.2	1.2*
Ethylbenzene (ug/L)	ND	4.2	7.1	ND	6.2	5.9	ND	ND	ND	ND	3.1	1.2	2.2	2.3	ND
Xylenes (Total) (ug/L)	ND	7.2	2.6	ND	7.3	6	5.7*	ND	ND	3.3	1.5	ND	2.6	1.2	1.3*
Total BTEX (ug/L)	2.2	27.2	18.4	ND	36.5	29.9	15.1	ND	ND	7.3	8.9	2.2	9.3	6.7	2.5
Sulfate (mg/L)	ND	1.52	ND	ND	ND	ND	ND	ND	3	ND	ND	1.2	1	ND	7
Nitrate (mg/L)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 5-3
OU2 Round 7 and Historical Groundwater Analytical Results
Wright-Patterson AFB, Ohio
Page 9 of 10

Well Number:		OW-6		P18-1								
Sample Round:	7	Baseline	6		Baseline	1	2	3	4	5	6	7
Date Sampled:	10/19/00	5/27/97	4/19/00	8/12/91	5/16/97	10/20/97	4/29/98	10/16/98	4/13/99	10/11/99	4/24/00	10/19/00
PARAMETERS:												
Ethane (ppm)	0.00029 J	0.001U	ND	NA	ND	DRY	ND	ND	0.009	Dry	ND	ND
Ethene (ppm)	ND	0.001U	ND	NA	ND	DRY	ND	ND	ND	Dry	ND	ND
Methane (ppm)	4.3 DB	0.291	ND	NA	11.5	DRY	7.27	4.36	17.3	Dry	7.29	6.0 DB
Benzene (ug/L)	ND	ND	ND	570	5.5	DRY	15	15	4.6	Dry	5.7*	ND
Toluene (ug/L)	ND	ND	ND	NA	ND	DRY	13	13	13	Dry	ND	ND
Ethylbenzene (ug/L)	ND	ND	ND	54	ND	DRY	7.4	7.4	7.1	Dry	ND	ND
Xylenes (Total) (ug/L)	ND	ND	ND	280	ND	DRY	11	ND	20	Dry	ND	ND
Total BTEX (ug/L)	ND	ND	ND	904	5.5	DRY	46.4	35.4	44.7	Dry	5.7	ND
Sulfate (mg/L)	1.5	23	30.8	0.24	10	DRY	ND	ND	ND	Dry	ND	ND
Nitrate (mg/L)	ND	ND	ND	0.107	0.5	DRY	ND	ND	ND	Dry	ND	ND

Table 5-3
OU2 Round 7 and Historical Groundwater Analytical Results
Wright-Patterson AFB, Ohio
Page 10 of 10

Well Number:	P18-2								
Sample Round:		Baseline	1	2	3	4	5	6	7
Date Sampled:	8/12/91	5/16/97	10/20/97	4/29/98	10/16/98	4/13/99	10/11/99	4/24/00	10/19/00
PARAMETERS:									
Ethane (ppm)	NA	ND	DRY	ND	ND	ND	Dry	ND	ND
Ethene (ppm)	NA	ND	DRY	ND	ND	ND	Dry	ND	ND
Methane (ppm)	NA	16.9	DRY	8.24	16.2	8.96	Dry	2.08	5.0 DB
Benzene (ug/L)	1900	130	DRY	66	42	ND	Dry	8.2*	ND
Toluene (ug/L)	NA	ND	DRY	8.5	ND	ND	Dry	ND	ND
Ethylbenzene (ug/L)	450	43	DRY	29	ND	ND	Dry	50	ND
Xylenes (Total) (ug/L)	490	ND	DRY	4.7	ND	ND	Dry	ND	ND
Total BTEX (ug/L)	2840	173	DRY	108.2	42	ND	Dry	58.2	ND
Sulfate (mg/L)	0.15	1.7	DRY	ND	ND	ND	Dry	32.6**	ND
Nitrate (mg/L)	0.013	ND	DRY	1	ND	ND	Dry	ND**	ND

ug/L - Micorgrams per Liter (ppb)
mg/L - Milligrams per Liter (ppm)
NA = Not Analyzed
ND = Not Detected
U = Undetected at the detection limit
D - Result obtained from the analysis of a dilution
J - Estimated Result. Result between reporting limit and detection limit
B - Method blank contamination.
[A] - Well NEA-MW20-2S was sampled for ethane, ethene and methane on 4/25/00.
[B] - Well monument was incorrectly tagged in the field (MW28-4I). Actual well (MW28-5S) was sampled in December 2000 for Round 7.
* - Quantitation suspect due to hydrocarbon interference.
** - Reporting limit was raised due to matrix interference.

Table 5-4
OU2 Baseline and October 2000 Groundwater Elevations
Wright-Patterson AFB, Ohio

Well Name	Old [a] Monitoring Point Elev. (ft, MSL)	New [b] Monitoring Point Elev. (ft, MSL)	May-97[d] Depth to Water (ft, TOC)	May-97 Groundwater Elevation (ft, MSL)	16-Oct-00 Depth to Water (ft, TOC)	16-Oct-00 Groundwater Elevation (ft, MSL)
04-016-M	820.90	818.33	10.82	810.08	9.58	808.75
04-517-M	821.96	NC	8.00	813.96	9.88	813.98
04-518-M	820.41	NC	11.08	809.33	12.47	807.94
OW-1	817.20	NC	8.70	808.50	9.50	807.70
OW-2	819.77	817.64	12.71	807.06	11.70	805.94
OW-3	820.95	819.04	14.50	806.45	13.62	805.42
OW-4	817.20	NC	10.87	806.33	11.59	805.61
OW-6	816.40	NC	10.91	805.49	11.74	804.66
P11-1	819.98	NC	8.92	811.06	BTP	--
P16-1	818.92	816.50	7.00	811.92	6.22	810.28
P18-1	816.72	NC	10.65	806.07	BTP	--
P18-2	820.04	817.91	13.58	806.46	BTP	--
NEA-MW20-2S	821.49	NC	9.75	811.74	10.88	810.61
NEA-MW21-3S	820.85	NC	~12.15[c]	808.70	~12.52[c]	808.33
NEA-MW22-3S	819.48	817.87	9.00	810.48	8.52	809.35
NEA-MW23-2S	818.06	816.50	8.91	809.15	8.49	808.01
NEA-MW24-2S	818.68	NC	10.08	808.60	11.43	807.25
NEA-MW25-3S	817.08	815.20	12.50	804.58	11.85	803.35
NEA-MW26-3S	819.23	NC	12.75	806.48	14.16	805.07
NEA-MW28-5S	820.10	NC	12.25	807.85	13.55	806.55
NEA-MW29-2S	817.92	816.23	12.62	805.30	11.97	804.26
NEA-MW31-3S	819.56	NC	14.28	805.28	NT	--
NEA-MW34-2S	815.28	814.02	10.61	804.67	NT	--
NEA-PZ32	821.60	NC	NM	---	NT	--

ft - Feet
MSL - Mean Sea Level
TOC - Top of Casing
BTP - Below top of pump
NM - Not Measured
NC - No change in TOC elevation.

[a] - Monitoring point elevations prior to October 1999
[b] - Monitoring point elevations after flush-mounting in October 1999
[c] - Free Product Layer in Well
[d] - Reference: OU2 Baseline Sampling Results Report (IT, 1997)

Table 5-5
OU2 Benzene Concentrations Comparison
Wright-Patterson AFB, Ohio

Well Number	Sample Date of Highest Concentration	Highest Benzene Concentration (µg/L)	October-00 Benzene Concentrations (µg/L)
04-016-M	8/12/91	440	9.2
04-518-M	9/6/88	2,600	20
NEA-MW20-2S	4/20/00	76	46
NEA-MW21-3S	4/24/00	300	290
NEA-MW26-3S	4/24/00	ND	ND
NEA-MW28-5S	4/21/93	500	0.46 J*
P18-1	8/12/91	570	ND
P18-2	8/12/91	1,900	ND
OW-1	4/28/98	460	ND
OW-2	10/11/99	2.4	ND
OW-3	4/13/99	10	ND
OW-4	10/22/97	4	ND

* - Results shown are from December 2000 resampling. Well monument was incorrectly tagged in the field (MW28-4I). Actual well (MW28-5S) was sampled in December 2000 for Round 7.
ND - Not Detected
NA - Not Applicable
J - Estimated result. Result is between the reporting limit and the detection limit.

Table 5-6
OU2 Free Product Recovery Volume,
Well: NEA-MW21-3S
Wright-Patterson AFB, Ohio

Date Removed	Removal Method	Product Removed (gal)
16 May, 2000	Soakease™	0.230
7 June, 2000*	Soakease™	0.230
7 July, 2000	Petro-trap™	0.156
11 July, 2000	Petro-trap™	0.156
14 July, 2000	Petro-trap™	0.156
18 July, 2000	Petro-trap™	0.156
25 July, 2000	Petro-trap™	0.078
1 August, 2000	Petro-trap™	0.078
4 August, 2000	Petro-trap™	0.078
14 August, 2000	Petro-trap™	0.008
31 August, 2000	Petro-trap™	0.016
15 September, 2000	Petro-trap™	0.023
25 September, 2000	Petro-trap™	0.156
9 October, 2000	Petro-trap™	0.063
16 October, 2000	Petro-trap™	0.156
Total Volume		1.74

* - The Petro-trap™ was installed on June 9, 2000

Table 6-1
Basewide LTM Groundwater Field Parameters: October 2000
Wright-Patterson AFB, Ohio

Well Number	Date Sampled	Static Water Level (ft, TOC)	Temp. (C^o)	pH (SU)	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mv)	DO (mg/L)
Basewide Semi-Annual VOCs								
BS5 P-1	11/4/98	30.40	13.0	6.66	0.736	208	169.9	6.62
	4/19/99	30.18	13.8	8.45	0.930	43	-114.2	6.99
	10/8/99	DRY						
	4/26/00	BTP	14.4	7.36	0.627	19	97.3	9.76
	10/20/00	DRY						
BS5 P-2	11/4/98	31.02	12.3	6.53	0.634	Offscale	364.9	6.87
	4/19/99	30.70	13.9	7.29	0.468	326	228.2	8.28
	10/8/99	BTP	14.7	7.16	0.936	38	4.1	6.63
	4/26/00	BTP	11.9	7.09	0.683	17	93.0	6.84
	10/20/00	BTP	12.7	6.72	0.431	9	221.2	7.20
BS5 P-3	11/4/98	35.56	14.6	6.60	0.742	473	163.0	5.20
	4/19/99	35.26	15.8	8.61	0.910	51	-125.9	5.37
	10/8/99	DRY						
	4/26/00	BTP	12.4	7.27	0.980	0	127.0	7.21
	10/20/00	BTP	14.2	6.99	0.516	64	200.9	7.42
BS5 P-4	11/4/98	35.76	13.4	6.63	0.735	146	152.7	5.83
	4/19/99	35.40	13.8	7.26	0.600	44	NA	6.52
	10/8/99	42.72	14.1	6.59	1.080	19	149.4	6.47
	4/26/00	40.56	11.9	7.28	1.250	0	-14.6	7.30
	10/20/00	40.21	16.0	6.84	0.552	6	158.4	7.42
NEA-MW27-3I	4/27/98	18.45	13.8	7.10	0.760	19	-63.1	5.16
	10/28/98	19.09	14.5	6.88	0.825	20	83.0	5.60
	4/21/99	18.04	14.0	8.63	0.879	4	-355.9	5.13
	10/13/99	20.81	14.3	6.56	0.783	0	-1.8	4.32
	4/19/00	18.57	14.0	7.02	0.857	14	-32.0	11.40
	10/18/00	19.65	14.2	7.28	0.859	3	164.5	4.90

Table 6-1
Basewide LTM Groundwater Field Parameters: October 2000
Wright-Patterson AFB, Ohio

Well Number	Date Sampled	Static Water Level (ft, TOC)	Temp. (C°)	pH (SU)	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mv)	DO (mg/L)
NEA-MW34-2S	10/23/98	11.32	15.2	6.75	0.627	7	146.5	6.27
	4/19/99	10.44	11.1	7.20	0.463	0	NA	5.78
	10/7/99	12.71	15.2	6.78	0.628	5	172.5	5.04
	4/19/00	8.41	11.7	7.38	1.020	19	183.5	7.34
	10/19/00	10.46	15.2	7.37	0.805	5	130.0	5.38
FTA2:MW02C	4/23/98	13.61	13.7	7.11	0.824	0	-120.1	1.03
	10/28/98	14.52	18.1	6.44	0.695	0	-179.6	0.57
	4/22/99	12.70	13.2	8.12	0.906	1	-260.8	1.42
	10/7/99	14.77	16.6	6.98	0.839	8	-191.9	2.29
	4/25/00	15.39	15.2	6.85	0.900	0	-52.0	1.46
	10/20/00	14.25	17.0	6.96	0.857	0	-16.0	0.06
LF12:MW15A	10/21/98	8.21	15.5	6.52	0.697	0	14.1	0.00
	4/21/99	7.23	13.1	7.01	0.803	3	211.8	0.54
	10/7/99	8.23	15.2	6.65	0.782	0	165.9	0.00
	10/13/99 (dup)	8.16	15	7.09	0.594	0	181.3	0.00
	4/20/00	7.31	12.2	7.15	1.230	0	198.9	1.70
	10/18/00	7.60	14.4	7.22	0.862	0	179.9	0.14
07-520-M	10/21/98	9.61	15.1	6.56	1.08	0	-134.9	5.19
	4/20/99	9.10	11.9	6.64	1.11	56	NA	0.62
	10/7/99	9.91	14.7	6.33	1.04	8	-78.3	0.37
	4/20/00	8.80	11.6	6.74	1.13	19	-123.0	2.12
	10/18/00	9.40	14.8	6.81	1.12	0	-116.5	0.20
05-DM-123S	10/21/98	7.44	14.7	6.57	0.805	3	7.7	0.76
	4/20/99	7.85	10.1	6.98	0.837	3	118.9*	0.50
	10/7/99	8.47	14.4	6.96	0.847	2	-3.1	0.15
	4/20/00	7.53	12.3	6.99	0.880	0	-83.9	ERR
	10/23/00	7.83	14.2	6.54	0.486	1	60.1	0.72

Table 6-1
Basewide LTM Groundwater Field Parameters: October 2000
Wright-Patterson AFB, Ohio

Well Number	Date Sampled	Static Water Level (ft, TOC)	Temp. (C^o)	pH (SU)	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mv)	DO (mg/L)
05-DM-123I	10/21/98	8.39	14.0	6.61	0.793	8	-44.9	0.00
	4/20/99	7.70	10.9	7.11	0.841	7	98.5*	0.54
	10/7/99	8.3	13.7	7.16	0.841	1	-65.2	0.14
	4/20/00	7.38	12.5	7.04	0.859	2	-79.4	ERR
	10/23/00	7.70	13.7	6.73	0.471	0	-29.5	0.24
05-DM-123D	10/21/98	7.75	14.1	6.60	0.800	1	-160.0	0.10
	4/20/99	6.95	12.0	7.20	0.862	3	115.6*	0.59
	10/7/99	7.5	14.9	7.25	0.857	8	-79.7	0.67
	4/20/00	6.56	13.0	7.12	0.866	5	-67.9	ERR
	10/23/00	6.93	13.6	6.83	0.473	0	-112.7	0.24
BMP-OU4-1B-60	10/21/98	8.71	14.1	6.53	1.41	0	-22.6	0.00
	4/16/99	7.98	12.8	8.14	1.23	0	-56.2	0.16
	10/5/99	9.08	14.2	6.89	1.44	0	-146.3	0.09
	4/18/00	7.21	13.4	7.02	1.20	10	-69.9	ERR
	10/16/00	8.12	15.1	6.99	1.47	0	90.6	0.04
BMP-OU4-1C-84	10/20/98	8.53	15.5	6.73	1.15	19	-127.9	1.18
	4/16/99	7.85	11.2	7.06	1.18	0	159.1	0.94
	10/5/99	8.9	15.3	7.17	1.14	23	-266.1	0.21
	4/18/00	7.11	12.7	6.77	1.10	5	-89.6	ERR
	10/16/00	7.89	14.5	6.97	1.03	10	-156.9	0.11
OU4-MW-02A	4/23/98	11.65	12.3	7.20	0.920	0	-111.4	0.68
	10/20/98	13.25	14.5	6.96	1.15	112	-63.3	11.19
	4/19/99	12.10	12.0	6.91	1.15	1	75.0*	0.19
	10/5/99	13.76	14.8	6.51	1.06	37	-79.1	0.04
	4/17/00	11.69	13.4	7.11	1.19	16	-197.0	2.69
	10/23/00	12.88	14.9	7.16	1.16	1	110.3	0.52

Table 6-1
Basewide LTM Groundwater Field Parameters: October 2000
Wright-Patterson AFB, Ohio

Well Number	Date Sampled	Static Water Level (ft, TOC)	Temp. (C^o)	pH (SU)	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mv)	DO (mg/L)
OU4-MW-02B	4/23/98	11.32	13.5	7.40	1.04	0	99.9	0.98
	10/20/98	12.95	13.3	7.07	1.20	9	36.5	12.75
	4/19/99	12.15	13.4	7.15	1.06	5	186.1*	0.51
	10/7/99	13.52	13.6	7.75	0.836	0	103.2	0.69
	4/17/00	11.42	13.7	7.41	1.00	3	-90.0	3.18
	10/23/00	12.58	14.3	7.22	1.29	0	134.9	0.19
OU4-MW-03B	4/21/98	12.26	13.4	7.53	1.08	0	12.3	1.97
	10/20/98	14.10	12.9	6.97	1.48	5	84.8	0.47
	4/21/99	12.87	13.1	8.56	1.10	0	-195.2	2.44
	10/13/99	14.55	15.2	6.51	1.25	0	130.6	0.00
	4/17/00	12.57	14.6	7.26	1.03	0	150.3	1.57
	10/18/00	13.56	13.7	7.27	1.80	0	-62.7	0.16
OU4-MW-03C	4/21/98	20.85	13.4	7.28	0.940	0	-17.9	1.73
	10/20/98	13.92	13.2	6.99	1.30	16	120.7	2.17
	4/19/99	13.06	13.7	8.45	1.11	0	-189.8	0.09
	10/4/99	14.39	12.9	7.07	1.33	2	6.87	0.26
	4/17/00	12.40	14.5	7.23	1.08	0	139.5	1.50
	10/19/00	13.42	14.1	7.17	1.63	0	104.1	0.33
OU4-MW-04A	4/23/98	12.38	11.5	6.96	0.980	0	161.3	1.23
	10/20/98	14.32	13.0	6.30	1.39	1	-70.3	1.53
	4/19/99	13.27	11.6	7.85	1.25	0	-186.9	0.27
	10/4/99	14.81	14.3	6.23	1.31	0	-36.1	0.00
	4/18/00	12.77	11.2	6.72	1.32	10	-26.5	ERR
	10/23/00	14.00	15.5	6.76	1.27	0	65.1	0.77
OU4-MW-12B	4/23/98	11.55	13.4	7.42	1.68	0	49.3	1.68
	10/20/98	13.21	14.4	6.62	1.03	0	78.9	1.32
	4/19/99	12.30	12.2	7.12	0.995	5	193.2*	2.90
	10/6/99	13.67	15.1	6.55	0.921	1	119.1	0.07
	4/17/00	11.67	14.5	7.07	0.960	3	103.3	0.74
	10/23/00	12.78	14.0	7.28	1.13	0	80.0	0.54

Table 6-1
Basewide LTM Groundwater Field Parameters: October 2000
Wright-Patterson AFB, Ohio

Well Number	Date Sampled	Static Water Level (ft, TOC)	Temp. (C^o)	pH (SU)	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mv)	DO (mg/L)
CW04-060	4/14/00	6.31	16.3	7.31	0.920	37	-43.3	0.09
	11/2/00	20.87	14.9	7.49	1.05	0	-100.5	0.08
CW05-055	10/23/98	26.55	12.4	6.67	0.920	0	-62.9	0.94
	4/19/99	26.42	12.4	8.40	1.04	0	-193.4	0.11
	10/5/99	15.53	13.9	6.5	0.921	0	-71.1	0.00
	4/17/00	10.12	12.1	7.17	0.960	0	-70.9	1.51
	10/31/00	22.48	13.6	7.02	0.960	12	-65.3	1.15
CW05-085	10/21/98	27.13	12.2	7.00	1.04	0	-84.9	1.76
	4/21/99	27.47	11.6	7.08	0.702	NA	-55.7	0.09
	10/4/99	15.87	12.3	6.52	1.10	0	-54	ERR
	4/17/00	10.63	12.0	6.99	1.04	0	-98.2	ERR
	11/2/00	24.04	12.4	6.86	0.698	5	-41.0	0.22
HD-11	10/28/98	24.55	12.4	6.92	0.990	169	-94.3	0.55
	4/22/99	23.98	13.8	7.31	0.941	7	81.2	1.38
	10/5/99	13.97	13.3	6.67	1.00	5	-68.3	0.2
	4/18/00	8.64	14.1	7.37	1.00	10	-358.0	1.26
	11/2/00	21.76	12.7	6.87	0.637	2	-123.3	0.19
HD-12S	10/5/99	13.47	12.6	6.86	1.05	1	-5	0.79
	4/18/00	10.12	11.5	7.06	1.30	0	-1.0	1.78
	11/1/00	BTP	12.4	6.80	0.990	0	-37.2	1.34
HD-12M	10/28/98	24.10	12.2	6.92	0.980	15	-89.8	0.17
	4/22/99	23.33	12.3	7.09	0.649	NA	-66.5	0.11
	10/5/99	14.28	11.8	7.13	1.00	5	-25.9	0.54
	4/18/00	9.03	11.2	7.14	0.950	0	-19.4	1.65
	11/1/00	22.38	11.8	6.88	0.960	0	-72.8	0.22

Table 6-1
Basewide LTM Groundwater Field Parameters: October 2000
Wright-Patterson AFB, Ohio

Well Number	Date Sampled	Static Water Level (ft, TOC)	Temp. (C°)	pH (SU)	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mv)	DO (mg/L)
HD-13S	10/26/98	22.45	13.3	7.12	0.980	44	-47.1	6.17
	4/22/99	21.53	13.6	7.10	1.03	24	13.5	3.90
	10/5/99	11.81	15.2	6.7	0.92	22	19.9	4.67
	4/17/00	5.71	17.0	7.26	0.940	81	-235.0	2.44
	11/1/00	18.36	12.3	7.40	0.940	0	-66.5	5.39
MAD-MON-127 (HD-13D)	4/17/00	6.93	13.9	7.40	0.940	5	-274.0	1.26
	11/1/00	19.21	12.2	7.43	0.950	0	-105.0	0.93
HSA-4A (MW131M)	10/26/98	20.15	12.3	7.06	0.980	24	-96.4	0.24
	4/21/99	19.62	13.3	8.26	0.950	25	-500.1	0.79
	10/4/99	9.65	18.8	7.08	0.980	42	9.31	0.2
	4/17/00	3.98	11.8	7.27	1.32	70	-29.3	1.79
	11/2/00	16.20	12.3	7.20	0.990	0	-89.0	0.22
HSA-4B (MW131S)	10/26/98	NR	13.0	7.01	0.920	25	-84.1	0.10
	4/21/99	NR	13.4	8.30	0.920	29	-454.8	1.03
	10/5/99	NR	12	6.83	1.070	16	96.3	0.27
	4/17/00	NR	12.1	6.94	0.979	101	-11.4	ERR
	11/1/00	NR	13.6	7.19	0.940	0	-41.4	0.39
HSA-5 (MW132S)	10/26/98	24.35	12.0	6.99	0.930	0	20.9	0.07
	4/22/99	23.20	12.3	6.97	0.922	9	133.5	0.26
	10/5/99	13.05	11.3	7.07	0.976	1	23.4	0.18
	4/18/00	8.09	11.2	7.24	0.990	13	-175.0	1.56
	11/2/00	21.09	11.4	6.82	0.566	5	58.2	0.13
CW3-77	10/21/98	31.31	16.7	6.76	0.543	18	93.8	ERR
	4/21/99	32.65	12.4	7.39	0.641	5	255.9*	4.62
	10/13/99	23.51	15.6	6.68	0.807	9	20.6	1.06
	4/25/00	23.54	13.4	7.27	0.966	6	143.0	1.77
	10/18/00	24.06	15.0	6.90	0.481	2	38.6	0.31

Table 6-1
Basewide LTM Groundwater Field Parameters: October 2000
Wright-Patterson AFB, Ohio

Well Number	Date Sampled	Static Water Level (ft, TOC)	Temp. (C°)	pH (SU)	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mv)	DO (mg/L)
CHP4-MW01	4/22/98	27.67	15.7	7.03	1.61	304	-44.4	4.74
	10/16/98	27.63	16.9	6.99	1.55	71	-38.0	3.25
	4/15/99	27.17	16.2	8.37	1.78	15	-72.5	4.14
	10/6/99	29.13	16.2	6.49	1.69	300	25.2	3.72
	4/18/00	27.53	15.4	6.77	1.82	157	-58.7	3.97
	10/17/00	27.50	15.8	7.18	1.83	-10*	-13.8	4.70
GR-330	4/24/98	33.19	14.4	7.03	0.970	1	-129.3	2.61
	10/16/98	33.09	14.2	7.01	0.970	13	9.3	2.93
	4/15/99	32.72	13.9	8.30	1.05	0	601.1	3.48
	10/6/99	34.49	15.9	6.45	0.950	21	42.2	1.96
	4/24/00	33.87	15.1	7.27	0.904	10	NA	2.49
	10/20/00	33.89	15.6	7.18	0.990	0	87.1	1.96
GR-333	4/22/98	14.45	15.1	7.62	1.13	0	77.8	5.82
	10/27/98	15.35	16.0	6.52	0.859	31	4.8	6.00
	4/27/99	14.45	16.2	7.30	0.630	14	35.4	5.19
	10/6/99	16.31	15.7	7.25	1.04	2	54.7	4.82
	4/25/00	16.47	15.4	7.15	0.980	18	NA	4.29
	10/20/00	15.40	16.2	7.22	1.01	0	56.9	3.08
GR-334	4/22/98	13.85	15.6	7.72	0.815	0	-145.1	0.93
	10/28/98	14.62	15.0	6.56	0.603	0	-104.7	0.27
	4/22/99	13.76	15.5	8.62	0.800	1	-240.6	0.33
	10/6/99	15.59	15.2	7.32	0.758	7	-113.5	0.13
	4/25/00	15.76	14.3	7.26	0.775	0	NA	1.54
	10/20/00	14.67	14.8	7.33	0.891	0	-143.1	0.05
OU10-MW-03S	4/19/00**^	26.70	14.4	7.50	0.930	Offscale	-120.0	6.55
	10/17/00	27.81	14.7	7.49	0.688	10	216.3	5.35

Table 6-1
Basewide LTM Groundwater Field Parameters: October 2000
Wright-Patterson AFB, Ohio

Well Number	Date Sampled	Static Water Level (ft, TOC)	Temp. (C^o)	pH (SU)	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mv)	DO (mg/L)
OU10-MW-06D	4/20/98	27.46	13.6	7.55	1.03	0	-94.7	5.04
	10/23/98	29.29	14.1	5.15	0.940	23	413.1	8.50
	4/16/99	27.96	10.5	8.70	0.930	0	-110.1	2.52
	10/8/99	29.85	15.6	7.22	0.607	0	173.9	3.65
	4/21/00	27.56	11.9	7.18	0.940	0	-34.3	3.47
	10/17/00	28.79	13.9	7.42	0.733	-10*	-27.3	1.62
OU10-MW-06S	4/24/98	12.84	14.7	7.44	0.911	0	130.0	1.59
	10/23/98	27.45	14.9	4.56	0.827	55	107.7	3.82
	4/16/99	26.56	14.1	8.57	0.936	6	-139.1	1.01
	10/6/99	28.59	13.9	7.24	0.876	5	76	1.58
	4/21/00	26.49	13.0	7.15	1.27	0	68.6	1.74
	10/17/00	27.69	14.1	7.43	0.672	-10*	112.0	1.60
OU10-MW-11D	4/23/98	11.65	14.5	7.30	1.26	0	161.7	2.03
	10/20/98	12.23	14.2	6.60	0.833	3	181.8	0.77
	4/16/99	11.60	13.2	7.03	0.893	65	229.3	0.90
	10/6/99	13.56	16	6.91	1.52	22	129.2	0.39
	4/18/00	11.49	13.8	7.19	1.27	0	142.8	1.80
	10/18/00	12.51	14.8	6.67	0.545	0	105.9	0.29
OU10-MW-11S	4/27/98	11.48	13.7	7.13	0.772	1	24.4	3.36
	10/20/98	11.37	14.3	6.42	0.820	3	214.2	3.30
	4/21/99	11.70	13.3	7.10	0.805	19	260.7*	3.25
	10/13/99	13.31	16.7	6.56	0.820	0	146.4	3.31
	4/18/00	11.28	14.1	7.24	1.22	0	180.4	5.16
	10/18/00	13.20	15.6	6.67	0.559	1	117.5	3.51
OU10-MW-19D	4/24/98	33.58	16.8	7.30	1.01	0	231.6	5.21
	10/20/98	34.44	14.8	6.66	0.916	0	173.2	4.13
	4/19/99	33.69	14.6	7.27	0.683	15	223.1	4.60
	10/6/99	35.35	15.1	7.14	1.07	2	81.2	4.87
	4/19/00	33.56	14.7	7.24	1.01	2	-116.0	5.33
	10/20/00	34.40	15.3	6.73	0.561	1	177.4	5.36

Table 6-1
Basewide LTM Groundwater Field Parameters: October 2000
Wright-Patterson AFB, Ohio

Well Number	Date Sampled	Static Water Level (ft, TOC)	Temp. (C^o)	pH (SU)	Conductivity (mS/cm)	Turbidity (NTU)	ORP (mv)	DO (mg/L)
OU10-MW-21S	10/27/98	8.10	15.5	6.57	0.736	4	81.0	1.46
	4/14/99	7.65	11.7	7.00	0.910	0	217.8	0.75
	10/7/99	8.62	15.1	7.34	0.626	1	207.8	0.02
	4/19/00	7.11	12.8	7.09	0.892	2	-64.0	1.00
	10/19/00	7.70	14.9	6.68	0.570	-10*	73.1	0.81
OU10-MW-25S	4/24/98	28.05	14.1	7.11	1.32	5	182.4	4.22
	10/20/98	27.80	15.1	6.72	0.765	0	76.3	2.48
	4/16/99	27.35	12.8	7.10	0.830	119	40.1	4.36
	10/6/99	29.75	14.2	7.23	0.786	15	94	3.29
	4/18/00	28.03	14.2	7.38	0.860	3	-81.0	5.25
	10/17/00	28.81	14.2	7.37	0.953	-10*	122.9	3.22
NEA-MW37-1D	4/27/98	10.30	13.7	7.31	0.892	0	41.3	1.14
	10/16/98	11.00	18.9	7.07	0.665	105	-112.4	8.77
	4/14/99	10.53	13.3	8.55	0.947	0	-240.0	0.11
	10/8/99	12.25	14.1	7.07	0.625	0	32.6	1.77
	4/19/00	9.05	13.3	7.05	0.897	1	-85.4	0.73
	10/19/00	10.12	16.3	6.71	0.565	-10*	-40.9	0.46
23-578-M	10/29/98	31.82	15.1	6.62	1.59	31	94.8	6.11
	4/20/99	31.40	15.9	8.75	1.41	2	-138.9	5.40
	10/6/99	33.42	16.5	6.4	1.51	22	155.7	3.88
	4/18/00	31.99	14.4	7.28	1.30	10	-53.9	6.21
	10/17/00	31.92	15.1	7.39	1.62	-10*	95.2	5.24

BTP - Below top of pump
DO - Dissolved Oxygen
NA - Not available
NR - No reading. Broken off water level probe obstructing well 131S.

* or ERR - Meter not functioning
** - Sampled with a bailer for VOCs
^ - Sampled at later date with a pump for metals
ORP - Oxygen Reduction Potential

Table 6-2
Basewide LTM October 2000 and Historic Groundwater Sampling Results: VOCs
Wright-Patterson AFB, Ohio

Sample Location	Management Area	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	1,2-DCA (µg/L)	Total 1,2-DCE (µg/L)	PCE (µg/L)	TCE (µg/L)	Vinyl Chloride (µg/L)	MTBE (µg/L)
	MCL		**5**	**1,000**	**700**	**10,000**	**5**	**70**	**5**	**5**	**2**	**NCL**
BS5 P-1	BS5	4-Jun-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		4-Nov-98	ND	ND	ND	ND	ND	ND	1.5	0.41 J	ND	
		19-Apr-99	ND	ND	ND	ND	ND	ND	1.6	0.32 J	ND	
		8-Oct-99	Dry	--	--	--	--	--	--	--	--	
		26-Apr-00	ND	ND	ND	ND	ND	ND	0.56	ND	ND	
		20-Oct-00	Dry	--	--	--	--	--	--	--	--	
BS5 P-2	BS5	4-Jun-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		4-Nov-98	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		19-Apr-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		8-Oct-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		26-Apr-00	ND	0.33 J	ND	ND	ND	ND	ND	ND	ND	
		20-Oct-00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BS5 P-3	BS5	6-Jun-97	ND	ND	ND	ND	ND	ND	(23)	ND	ND	
		4-Nov-98	ND	ND	ND	ND	ND	ND	(29)	0.27 J	ND	
	Duplicate	4-Nov-98	ND	ND	ND	ND	ND	ND	(33)	0.30 J	ND	
		19-Apr-99	ND	ND	ND	ND	ND	ND	(30)	ND	ND	
		8-Oct-99	Dry	--	--	--	--	--	--	--	--	
		26-Apr-00	ND	ND	ND	ND	ND	ND	(25)	ND	ND	
	Duplicate	26-Apr-00	ND	ND	ND	ND	ND	ND	(24)	ND	ND	
		20-Oct-00	ND	ND	ND	ND	ND	ND	(22)	0.19 J	ND	ND
	Duplicate	20-Oct-00	ND	ND	ND	ND	ND	ND	(20)	ND	ND	ND
BS5 P-4	BS5	6-Jun-97	ND	ND	ND	ND	ND	ND	(29)	ND	ND	
		4-Nov-98	ND	ND	ND	ND	ND	ND	(33)	0.34 J	ND	
		19-Apr-99	ND	ND	ND	ND	ND	ND	(20)	ND	ND	
		8-Oct-99	ND	ND	ND	ND	ND	ND	(31)	ND	ND	
	Duplicate	8-Oct-99	ND	ND	ND	ND	ND	ND	(30)	0.39 J	ND	
		26-Apr-00	ND	ND	ND	ND	ND	ND	(25)	ND	ND	
		20-Oct-00	0.35 J	0.33 J	ND	ND	ND	ND	(23)	ND	ND	ND
WP-NEA-MW27-3I	OU2 (OU10)	30-Mar-93	ND	ND	ND	ND	ND	ND	(21)	ND	ND	
		25-Aug-93	ND	ND	ND	ND	ND	ND	(22)	ND	ND	
		7-Dec-93	ND	ND	ND	ND	ND	ND	(20)	ND	ND	
		27-Apr-98	ND	ND	ND	ND	ND	ND	(26)	0.17 J	ND	
		28-Oct-98	ND	ND	ND	ND	ND	ND	(18)	ND	ND	
		21-Apr-99	ND	ND	ND	ND	ND	ND	(11)	ND	ND	
		13-Oct-99	ND	ND	ND	ND	ND	ND	(17)	ND	ND	
		19-Apr-00	ND	ND	ND	ND	ND	0.27 J	(23)	0.30 J	ND	
		18-Oct-00	ND	0.21 J	ND	ND	ND	ND	(15)	ND	ND	ND
WP-NEA-MW34-2S	OU2	15-Dec-92	ND	ND	ND	ND	ND	ND	ND	(15)	ND	
		26-Apr-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		23-Apr-98	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		23-Oct-98	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		19-Apr-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		7-Oct-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	Duplicate	7-Oct-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		19-Apr-00	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	Duplicate	19-Apr-00	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		19-Oct-00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FTA2:MW02C	OU3	13-Jul-93	(6.0)	ND	2.0	14.0	ND	ND	ND	ND	ND	
		24-Jan-94	2.0	ND	2.0	20.0	ND	ND	ND	ND	ND	
		23-Apr-98	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		28-Oct-98	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		22-Apr-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	Duplicate	22-Apr-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		7-Oct-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		25-Apr-00	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		20-Oct-00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 6-2
Basewide LTM October 2000 and Historic Groundwater Sampling Results: VOCs
Wright-Patterson AFB, Ohio

Sample Location	Management Area	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	1,2-DCA (µg/L)	Total 1,2-DCE (µg/L)	PCE (µg/L)	TCE (µg/L)	Vinyl Chloride (µg/L)	MTBE (µg/L)
	MCL		**5**	**1,000**	**700**	**10,000**	**5**	**70**	**5**	**5**	**2**	**NCL**
LF12:MW15A	OU3	6-Jul-93	ND	ND	ND	ND	ND	ND	ND	(12.11)	ND	
		10-Jan-94	ND	ND	ND	ND	ND	ND	ND	1.0	ND	
		21-Oct-98	ND	ND	ND	ND	ND	0.57 J	ND	1.8	ND	
		21-Apr-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		7-Oct-99	ND	ND	ND	ND	ND	0.57	ND	2.5	ND	
	Duplicate	13-Oct-99	ND	ND	ND	ND	ND	ND	ND	2.5	ND	
		20-Apr-00	ND	ND	ND	ND	ND	ND	ND	2.7	ND	
		18-Oct-00	ND	0.21 J	ND	ND	ND	0.45 J	ND	2.2	ND	ND
07-520-M	OU3	1-Jul-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		1-Jun-94	ND	ND	ND	ND	ND	0.3 J	ND	ND	ND	
		21-Oct-98	ND	ND	ND	ND	ND	0.21 J	ND	ND	ND	
		20-Apr-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	Duplicate	20-Apr-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		7-Oct-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		20-Apr-00	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		18-Oct-00	ND	0.21 J	ND	ND	ND	0.21 J	ND	ND	ND	ND
05-DM-123S-M	OU3	13-Jul-93	ND	ND	ND	ND	ND	ND	ND	2.0	ND	
		11-Jan-94	ND	ND	ND	ND	ND	ND	ND	2.0	ND	
		14-Apr-94	ND	ND	ND	ND	ND	ND	ND	2.0	ND	
		31-Aug-94	ND	ND	ND	ND	ND	ND	ND	2.0	ND	
		21-Oct-98	ND	ND	ND	ND	ND	0.85 J	ND	2.2	ND	
		20-Apr-99	ND	ND	ND	ND	ND	0.42 J	ND	1.3	ND	
		7-Oct-99	ND	ND	ND	ND	ND	0.85	ND	2.2	ND	
		20-Apr-00	ND	ND	ND	ND	ND	1.2	ND	1.8	ND	
		23-Oct-00	ND	ND	ND	ND	ND	0.68	ND	2.5	ND	ND
	Duplicate	23-Oct-00	ND	ND	ND	ND	ND	0.68	ND	2.6	ND	ND
05-DM-123I-M	OU3	26-Jul-93	ND	ND	ND	ND	ND	ND	ND	2.0	ND	
		11-Jan-94	ND	ND	ND	ND	ND	ND	ND	2.0	ND	
		14-Apr-94	ND	ND	ND	ND	ND	ND	ND	2.0	ND	
		31-Aug-94	ND	ND	ND	ND	ND	ND	ND	2.2	ND	
		21-Oct-98	ND	ND	ND	ND	ND	0.48 J	ND	2.7	ND	
		20-Apr-99	ND	ND	ND	ND	ND	ND	ND	1.0	ND	
		7-Oct-99	ND	ND	ND	ND	ND	0.36 J	ND	2.6	ND	
		20-Apr-00	ND	ND	ND	ND	ND	0.39 J	ND	2.9	ND	
		23-Oct-00	ND	ND	ND	ND	ND	0.34 J	ND	2.5	ND	ND
05-DM-123D-M	OU3	22-Jul-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		11-Jan-94	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		14-Apr-94	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		31-Aug-94	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		21-Oct-98	ND	ND	ND	ND	ND	ND	ND	1.6	ND	
		20-Apr-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		7-Oct-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		20-Apr-00	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		23-Oct-00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BMP-OU4-1B-60	OU4	21-Oct-98	ND	ND	ND	ND	ND	3.1	ND	4.5	0.5 J	
		16-Apr-99	ND	ND	ND	ND	ND	1.5	ND	1.8	ND	
		5-Oct-99	ND	ND	ND	ND	ND	3.2	ND	3.2	0.42 J	
		18-Apr-00	ND	ND	ND	ND	ND	2.8	ND	2.6	1.3	
		16-Oct-00	ND	0.22 J	ND	ND	ND	2.9	ND	2.5	0.34 J	ND
BMP-OU4-1C-84	OU4	20-Oct-98	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		16-Apr-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		5-Oct-99	ND	ND	ND	ND	ND	0.27 J	ND	ND	ND	
		18-Apr-00	ND	ND	ND	ND	ND	0.39 J	ND	ND	ND	
		16-Oct-00	ND	0.22 J	ND	ND	ND	0.29 J	ND	ND	ND	ND

Table 6-2
Basewide LTM October 2000 and Historic Groundwater Sampling Results: VOCs
Wright-Patterson AFB, Ohio

Sample Location	Management Area	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	1,2-DCA (µg/L)	Total 1,2-DCE (µg/L)	PCE (µg/L)	TCE (µg/L)	Vinyl Chloride (µg/L)	MTBE (µg/L)
	MCL		**5**	**1,000**	**700**	**10,000**	**5**	**70**	**5**	**5**	**2**	**NCL**
OU4-MW-02A	OU4	22-Jul-93	ND	ND	ND	ND	ND	ND	ND	2.0	ND	
		26-Aug-93	ND	ND	ND	ND	ND	ND	ND	4.0	ND	
		15-Dec-93	ND	ND	ND	ND	ND	ND	ND	(5.0)	ND	
		23-Apr-98	ND	ND	ND	ND	ND	4.4	ND	0.56 J	ND	
		20-Oct-98	ND	ND	ND	ND	ND	7.1	ND	1.7	ND	
		19-Apr-99	ND	ND	ND	ND	ND	3.5	ND	0.36 J	ND	
		5-Oct-99	ND	ND	ND	ND	ND	9.7	ND	3.0	ND	
		17-Apr-00	ND	ND	ND	ND	ND	3.9	ND	0.40 J	ND	
		23-Oct-00	ND	ND	ND	ND	ND	7.01 J	ND	2.8	ND	ND
OU4-MW-02B	OU4	15-Dec-93	ND	ND	ND	ND	ND	ND	ND	(23)	ND	
		26-Aug-93	ND	ND	ND	ND	ND	ND	ND	(22)	ND	
		23-Apr-98	ND	ND	ND	ND	ND	0.74 J	ND	(21)	ND	
		20-Oct-98	ND	ND	ND	ND	ND	0.69	ND	(16)	ND	
		19-Apr-99	ND	ND	ND	ND	ND	ND	ND	(9.4)	ND	
		7-Oct-99	ND	ND	ND	ND	ND	0.98	ND	(15)	ND	
		17-Apr-00	ND	ND	ND	ND	ND	0.70	ND	(16)	ND	
		23-Oct-00	ND	ND	ND	ND	ND	0.74	ND	(12)	ND	ND
OU4-MW-03B	OU4	24-Aug-93	ND	ND	ND	ND	ND	ND	ND	(17)	ND	
		15-Dec-93	ND	ND	ND	ND	ND	ND	ND	(16)	ND	
		21-Apr-98	ND	ND	ND	ND	ND	0.61 J	ND	(12)	ND	
		20-Oct-98	ND	ND	ND	ND	ND	0.61	ND	(10)	ND	
		21-Apr-99	ND	ND	ND	ND	ND	0.59	ND	(9.5)	ND	
		13-Oct-99	ND	ND	ND	ND	ND	0.95	ND	(7.9)	ND	
		17-Apr-00	ND	ND	ND	ND	ND	0.61	ND	(8.2)	ND	
	Duplicate	19-Apr-00	ND	ND	ND	ND	ND	0.70	ND	(8.6)	ND	
		18-Oct-00	ND	0.25 J	ND	ND	ND	1.1	ND	(7.3)	ND	ND
OU4-MW-03C	OU4	24-Aug-93	ND	ND	ND	ND	ND	ND	ND	(22)	ND	
		14-Dec-93	ND	ND	ND	ND	ND	ND	ND	(24)	ND	
		21-Apr-98	ND	ND	ND	ND	ND	0.96 J	ND	(21)	ND	
		20-Oct-98	ND	ND	ND	ND	ND	1.0	ND	(15)	ND	
		19-Apr-99	ND	ND	ND	ND	ND	0.94	ND	(5.4)	ND	
		4-Oct-99	ND	ND	ND	ND	ND	1.3	ND	(8.6)	ND	
		17-Apr-00	ND	ND	ND	ND	ND	1.2	ND	(7.9)	ND	
		19-Oct-00	ND	0.19 J	ND	ND	ND	1.2	ND	(8.5)	ND	ND
OU4-MW-04A	OU4	22-Jul-93	ND	ND	ND	ND	ND	ND	ND	ND	0.5 J	
		23-Aug-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		13-Dec-93	ND	ND	ND	ND	ND	ND	ND	ND	(2.0)	
		23-Apr-98	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		20-Oct-98	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		19-Apr-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		4-Oct-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		18-Apr-00	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		23-Oct-00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
OU4-MW-12B	OU4	26-Aug-93	ND	ND	ND	ND	ND	ND	ND	(12)	ND	
		15-Dec-93	ND	ND	ND	ND	ND	ND	ND	(14)	ND	
		23-Apr-98	ND	ND	ND	ND	ND	0.70 J	1.2	(11)	ND	
		20-Oct-98	ND	ND	ND	ND	ND	1.1	2.5	(9.0)	ND	
		19-Apr-99	ND	ND	ND	ND	ND	0.75	(5.0)	4.4	ND	
		6-Oct-99	ND	ND	ND	ND	ND	1.2	4.4	(9.4)	ND	
		17-Apr-00	ND	ND	ND	ND	ND	0.84	(5.4)	(7.8)	ND	
		23-Oct-00	0.19 J	0.63 J	ND	ND	ND	0.81	(5.3)	(6.9)	ND	ND

Table 6-2
Basewide LTM October 2000 and Historic Groundwater Sampling Results: VOCs
Wright-Patterson AFB, Ohio

Sample Location	Management Area	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	1,2-DCA (µg/L)	Total 1,2-DCE (µg/L)	PCE (µg/L)	TCE (µg/L)	Vinyl Chloride (µg/L)	MTBE (µg/L)
	MCL		**5**	**1,000**	**700**	**10,000**	**5**	**70**	**5**	**5**	**2**	**NCL**
CW04-060	OU5	1-Sep-90	ND	ND	ND	ND	ND	0.3	ND	ND	ND	
		1-Nov-91	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		1-Nov-92	ND	ND	ND	0.2	0.4	1.0	ND	ND	ND	
		1-Oct-93	ND	ND	ND	ND	ND	1.5	ND	ND	ND	
		1-Apr-94	ND	10	ND	ND	ND	0.8	ND	0.3	ND	
		1-Dec-94	ND	ND	ND	ND	2.0	2.0	ND	ND	ND	
		1-Sep-95	ND	ND	ND	ND	ND	1.0	ND	ND	ND	
		1-Dec-96	ND	NN	ND	ND	ND	1.6	ND	ND	ND	
		1-Sep-97	ND	ND	ND	ND	ND	1.3	ND	ND	ND	
		1-Jul-98	ND	ND	ND	ND	ND	0.66	ND	0.62	ND	
		14-Apr-00	ND	1.2	ND	ND	ND	1.4	ND	0.40 J	ND	
		2-Nov-00	ND	ND	ND	ND	0.29 J	0.89	ND	0.48 J	ND	ND
CW05-055	OU5	1-Sep-90	ND	0.3	ND	ND	ND	41	ND	(550)	1.0	
		1-Nov-91	0.7	ND	ND	0.2	ND	60	ND	(529)	ND	
		1-Nov-92	ND	ND	ND	ND	ND	15	ND	(19)	(3.0)	
		1-Oct-93	ND	ND	ND	ND	ND	1.7	ND	(8.4)	ND	
		1-Dec-94	ND	ND	ND	ND	ND	8.0	ND	3.0	(3.0)	
		1-Sep-95	ND	ND	ND	ND	ND	19.4	ND	1.81	(10.6)	
		1-Dec-96	ND	ND	ND	ND	ND	8.9	ND	(5.0)	ND	
		1-Sep-97	ND	ND	ND	1.6	ND	7.4	ND	2.1	ND	
		23-Oct-98	ND	ND	ND	ND	ND	19.7	ND	(6.1)	ND	
		19-Apr-99	ND	ND	ND	ND	ND	7.6	ND	(5.4)	ND	
		5-Oct-99	ND	ND	ND	ND	ND	4.0	ND	3.3	ND	
		17-Apr-00	ND	ND	ND	ND	ND	3.0	ND	2.0	0.54	
		31-Oct-00	0.13 J	0.29 J	ND	ND	ND	5.0	ND	1.8 J	0.31 J	ND
CW05-085	OU5	1-Sep-90	ND	ND	ND	ND	ND	40	ND	(770)	0.5	
		1-Nov-91	ND	ND	ND	ND	ND	30.2	ND	(346)	ND	
		1-Nov-92	ND	ND	ND	ND	ND	25	ND	(380)	ND	
		1-Oct-93	ND	ND	ND	ND	ND	25.6	ND	(250)	ND	
		1-Dec-94	ND	ND	ND	ND	ND	20	ND	(250)	ND	
		1-Sep-95	1.91 J	4.81 J	1.08 J	6.13	ND	22.54	ND	(132)	ND	
		1-Dec-96	ND	ND	ND	ND	ND	29.8	ND	(150)	ND	
		1-Sep-97	ND	ND	ND	ND	ND	20	ND	(130)	ND	
		21-Oct-98	ND	0.71 J	ND	ND	ND	10	ND	(83)	ND	
		21-Apr-99	ND	ND	ND	ND	ND	4.6	ND	(57)	ND	
		4-Oct-99	ND	ND	ND	ND	ND	23.6	ND	(150)	ND	
		17-Apr-00	ND	ND	ND	ND	ND	12.2	ND	(110 D)	0.74	
		2-Nov-00	ND	ND	ND	ND	ND	6.6	ND	(73)	ND	ND
HD-11	OU5	1-Sep-90	ND	ND	ND	ND	ND	21	ND	(600)	ND	
		1-Nov-91	ND	ND	ND	ND	ND	35.3	ND	(394)	ND	
		1-Nov-92	ND	ND	ND	ND	ND	24	ND	(310)	ND	
		1-Oct-93	ND	0.8	ND	0.4	ND	7.0	ND	(370)	ND	
		1-Dec-94	ND	ND	ND	ND	ND	35	ND	(180)	ND	
		1-Sep-95	ND	ND	ND	ND	ND	23	ND	(108)	ND	
		1-Dec-96	ND	ND	ND	ND	ND	26.3	ND	(39)	ND	
		1-Sep-97	ND	ND	ND	ND	ND	22.6	ND	(22.6)	ND	
		28-Oct-98	ND	ND	ND	ND	ND	30.5 J	ND	(51)	ND	
		22-Apr-99	ND	ND	ND	ND	ND	16.48	ND	(31)	ND	
		5-Oct-99	ND	ND	ND	ND	0.47 J	27	ND	(8.4)	ND	
		18-Apr-00	ND	ND	ND	ND	ND	16.64	ND	(18)	0.77	
		2-Nov-00	ND	ND	ND	ND	0.20 J	29.63	ND	(22)	0.59 J	ND

Table 6-2
Basewide LTM October 2000 and Historic Groundwater
Sampling Results: VOCs
Wright-Patterson AFB, Ohio
Page 5 of 8

Sample Location	Management Area	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	1,2-DCA (µg/L)	Total 1,2-DCE (µg/L)	PCE (µg/L)	TCE (µg/L)	Vinyl Chloride (µg/L)	MTBE (µg/L)
	MCL		**5**	**1,000**	**700**	**10,000**	**5**	**70**	**5**	**5**	**2**	**NCL**
HD-12M	OU5	1-Sep-90	ND	ND	ND	ND	ND	ND	ND	(9.1)	ND	
		1-Nov-91	ND	ND	ND	ND	ND	ND	ND	4.8	ND	
		1-Nov-92	ND	0.4	ND	ND	ND	ND	ND	(7.0)	ND	
		1-Oct-93	ND	ND	ND	ND	ND	ND	ND	4.0	ND	
		1-Dec-94	ND	ND	ND	ND	ND	ND	ND	3.0	ND	
		1-Sep-95	ND	ND	ND	ND	ND	ND	ND	2.07	ND	
		1-Dec-96	ND	ND	ND	ND	ND	ND	ND	1.5	ND	
		1-Sep-97	ND	ND	ND	ND	ND	ND	ND	1.5 J	ND	
		28-Oct-98	ND	ND	ND	ND	ND	ND	ND	1.3	ND	
		22-Apr-99	ND	ND	ND	ND	ND	ND	ND	0.88	ND	
		5-Oct-99	ND	ND	ND	ND	ND	ND	ND	1.1	ND	
		18-Apr-00	ND	ND	ND	ND	ND	ND	ND	1.2	ND	
		1-Nov-00	ND	ND	ND	ND	ND	ND	ND	1.0 J	ND	ND
HD-12S	OU5	1-Oct-93	ND	ND	ND	ND	ND	ND	(71)	1.0	ND	
		1-Sep-95	ND	ND	ND	ND	ND	ND	(69.5)	1.16	ND	
		1-Dec-96	ND	ND	ND	ND	ND	ND	(44)	1.1	ND	
		1-Sep-97	ND	ND	ND	ND	ND	ND	(34)	1.1 J	ND	
		28-Oct-98	Dry	--	--	--	--	--	--	--	--	
		22-Apr-99	Dry	--	--	--	--	--	--	--	--	
		5-Oct-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		18-Apr-00	ND	ND	ND	ND	ND	ND	(22)	0.99	ND	
		1-Nov-00	ND	ND	ND	ND	ND	ND	(15)	1.6 J	ND	ND
HD-13S	OU5	1-Sep-90	0.3	0.2	ND	ND	ND	63	ND	(35)	ND	
		1-Nov-91	ND	ND	ND	ND	ND	(105)	ND	(32.9)	ND	
		1-Nov-92	ND	ND	ND	ND	ND	4.0	ND	(9.0)	ND	
		1-Oct-93	ND	0.6	0.5	ND	ND	12	ND	(6.0)	(2.0)	
		1-Dec-94	ND	ND	ND	ND	ND	1.0	ND	2.0	ND	
		1-Sep-95	ND	ND	ND	ND	ND	5.94	ND	4.66	ND	
		1-Dec-96	ND	ND	0.6	ND	ND	ND	ND	1.1	ND	
		1-Sep-97	ND	ND	ND	ND	ND	1.1	ND	ND	ND	
		26-Oct-98	ND	ND	ND	ND	ND	17.30 J	ND	0.28 J	1.5	
		22-Apr-99	ND	ND	ND	ND	ND	7.4	ND	ND	ND	
		5-Oct-99	ND	0.28 J	ND	ND	0.32 J	1.3	ND	0.29 J	ND	
		17-Apr-00	ND	ND	ND	ND	ND	4.8	ND	ND	1.5	
		1-Nov-00	ND	0.15 J	ND	ND	ND	4.5	ND	ND	(3.5)	ND
MAD-MON127 (HD13D)	OU5	17-Apr-00	ND	ND	ND	ND	2.8	30.92	ND	ND	ND	
		1-Nov-00	ND	ND	ND	ND	3.4	26.9	ND	ND	0.47 J	ND
HSA-4A (MW131M)	OU5	1-Nov-92	ND	ND	ND	ND	ND	3.0	ND	(260)	ND	
		1-Oct-93	ND	ND	ND	ND	ND	23	ND	(250)	ND	
		1-Dec-94	ND	ND	ND	ND	ND	(74)	ND	(35)	1.0	
		1-Sep-95	ND	ND	ND	ND	ND	49.2	ND	(39.1)	ND	
		1-Dec-96	ND	ND	ND	ND	ND	36	ND	(27)	(5.5)	
		1-Sep-97	ND	ND	ND	ND	ND	19	ND	(41)	(3.7)	
		26-Oct-98	ND	ND	ND	ND	ND	50.4 J	ND	1.2	(4.2)	
		21-Apr-99	ND	ND	ND	ND	ND	28.32	ND	0.84	(22)	
		4-Oct-99	ND	ND	ND	ND	ND	9.5	ND	0.8	(21)	
		17-Apr-00	ND	ND	ND	ND	ND	11	ND	(22)	(3.4)	
		2-Nov-00	ND	ND	ND	ND	ND	21.24 J	ND	0.24 J	(18)	ND
	Duplicate	2-Nov-00	ND	ND	ND	ND	ND	22.22 J	ND	0.21 J	(18)	ND

Table 6-2
Basewide LTM October 2000 and Historic Groundwater Sampling Results: VOCs
Wright-Patterson AFB, Ohio

Sample Location	Management Area	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	1,2-DCA (µg/L)	Total 1,2-DCE (µg/L)	PCE (µg/L)	TCE (µg/L)	Vinyl Chloride (µg/L)	MTBE (µg/L)
	MCL		**5**	**1,000**	**700**	**10,000**	**5**	**70**	**5**	**5**	**2**	**NCL**
HSA-4B (MW131S)	OU5	1-Nov-92	ND	ND	ND	ND	ND	ND	(10)	(26)	ND	
		1-Oct-93	ND	ND	ND	ND	ND	ND	(6.7)	(14.5)	ND	
		1-Dec-94	ND	ND	ND	ND	ND	ND	(8.0)	4.0	ND	
		1-Sep-95	ND	ND	ND	ND	ND	ND	4.16	4.71	ND	
		1-Dec-96	ND	ND	ND	ND	ND	ND	1.8	1.8	ND	
		1-Sep-97	ND	ND	ND	ND	ND	ND	1.5	31	ND	
		26-Oct-98	ND	ND	ND	ND	ND	2.0	1.5	3.1	ND	
		21-Apr-99	ND	ND	ND	ND	ND	1.7	0.44 J	2.1	ND	
		5-Oct-99	ND	ND	ND	ND	ND	2.4	1.8	2.1	ND	
		17-Apr-00	ND	ND	ND	ND	ND	0.36 J	3.7	1.3	ND	
		1-Nov-00	ND	ND	ND	ND	ND	2.6	1.4	1.3 J	ND	ND
HSA-5 (MW132S)	OU5	1-Nov-92	ND	ND	ND	ND	ND	ND	(14)	(31)	ND	
		1-Oct-93	ND	ND	ND	ND	ND	ND	(12.1)	(20.6)	ND	
		1-Dec-94	ND	ND	ND	ND	ND	ND	(9.0)	(35)	ND	
		1-Sep-95	ND	ND	ND	ND	ND	ND	(8.68)	(34.5)	ND	
		1-Dec-96	ND	ND	ND	ND	ND	ND	(5.7)	(28)	ND	
		1-Sep-97	ND	ND	ND	ND	ND	ND	(6.5)	(33)	ND	
		26-Oct-98	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	Duplicate	26-Oct-98	ND	ND	ND	ND	ND	0.55	(7.3)	(33)	ND	
		22-Apr-99	ND	ND	ND	ND	ND	0.55	(7.7)	(31)	ND	
		5-Oct-99	ND	ND	ND	ND	ND	1.2	(7.1)	(40)	ND	
	Duplicate	5-Oct-99	ND	ND	ND	ND	0.26 J	0.99	(6.4)	(35)	ND	
		18-Apr-00	ND	ND	ND	ND	ND	1.3	(6.0)	(36 D)	ND	
	Duplicate	18-Apr-00	ND	ND	ND	ND	ND	1.1 D	4.9 D	(37 D)	ND	
		2-Nov-00	ND	ND	ND	ND	ND	1.9	4.1	(30)	ND	ND
CW03-77	OU8	19-Aug-93	ND	ND	ND	ND	ND	ND	ND	2.0	ND	
		29-Oct-93	ND	ND	ND	ND	ND	1.0	ND	(8.0)	ND	
		6-Apr-94	ND	ND	ND	ND	ND	1.0	ND	(9.0)	ND	
		25-Aug-94	ND	ND	ND	ND	ND	ND	ND	(7.4)	ND	
		21-Oct-98	ND	0.21 J	ND	ND	ND	0.28 J	1.1	3.7	ND	
		21-Apr-99	ND	ND	ND	ND	ND	ND	0.95	1.2	ND	
		13-Oct-99	ND	ND	ND	ND	ND	ND	0.95	1.7	ND	
		25-Apr-00	ND	ND	ND	ND	ND	ND	1.1	2.4	ND	
		18-Oct-00	ND	0.21 J	ND	ND	ND	0.32 J	1.1	2.1	ND	ND
GR-333	OU10	3-Apr-93	ND	ND	ND	ND	ND	ND	ND	(5.0)	ND	
		30-Aug-93	ND	ND	ND	ND	ND	ND	ND	(6.0)	ND	
		9-Dec-93	ND	ND	ND	ND	ND	ND	ND	(6.0)	ND	
		13-Apr-94	ND	ND	ND	ND	ND	ND	ND	(6.0)	ND	
		22-Apr-98	ND	ND	ND	ND	ND	ND	0.58 J	(6.1)	ND	
		27-Oct-98	ND	ND	ND	ND	ND	ND	0.68	4.9	ND	
		27-Apr-99	ND	ND	ND	ND	ND	ND	0.79	4.0	ND	
		6-Oct-99	ND	ND	ND	ND	ND	ND	0.56	3.4	ND	
	Duplicate	6-Oct-99	ND	ND	ND	ND	ND	ND	0.6	3.5	ND	
		25-Apr-00	ND	ND	ND	ND	ND	ND	0.75	3.5	ND	
	Duplicate	25-Apr-00	ND	ND	ND	ND	ND	ND	0.67	3.7	ND	
		20-Oct-00	ND	ND	ND	ND	ND	ND	0.75 J	3.4	ND	ND
	Duplicate	20-Oct-00	ND	ND	ND	ND	ND	ND	0.80 J	3.4	ND	ND
GR-334	OU10	3-Apr-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		13-Apr-94	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		30-Aug-94	ND	ND	ND	ND	ND	ND	ND	(7.0)	ND	
		22-Apr-98	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		28-Oct-98	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		22-Apr-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		6-Oct-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		25-Apr-00	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		20-Oct-00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 6-2
Basewide LTM October 2000 and Historic Groundwater Sampling Results: VOCs
Wright-Patterson AFB, Ohio

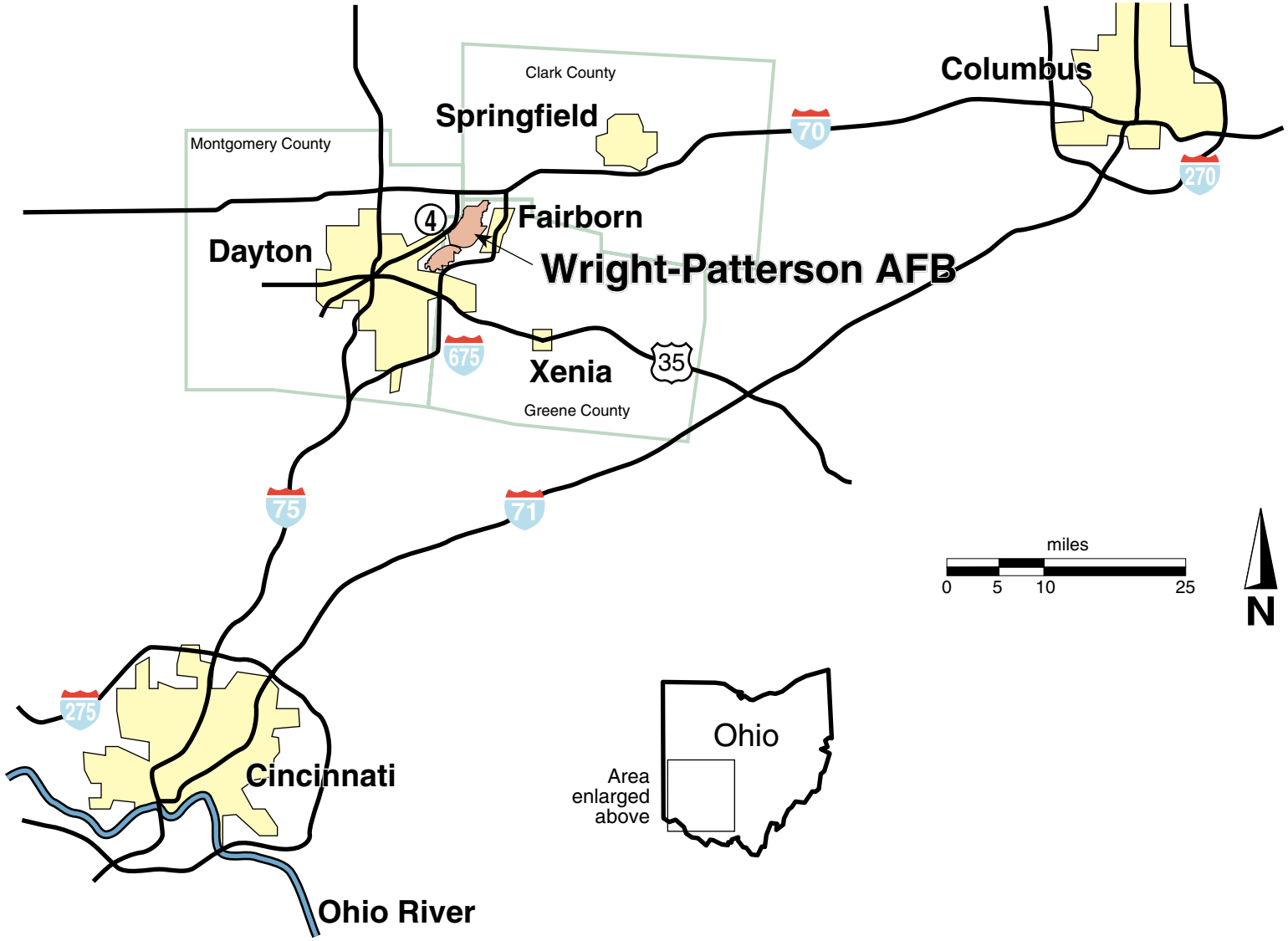
Sample Location	Management Area	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	1,2-DCA (µg/L)	Total 1,2-DCE (µg/L)	PCE (µg/L)	TCE (µg/L)	Vinyl Chloride (µg/L)	MTBE (µg/L)
	MCL		**5**	**1,000**	**700**	**10,000**	**5**	**70**	**5**	**5**	**2**	**NCL**
WP-NEA-MW37-1D	OU10	27-Aug-93	(7.0)	11.0	2.0	10.0	ND	ND	ND	ND	ND	
		13-Dec-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		23-Apr-98	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		16-Oct-98	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		14-Apr-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		8-Oct-99	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		19-Apr-00	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		19-Oct-00	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.45 J
OU10-MW03S	OU10	3-Oct-94	ND	ND	ND	ND	ND	ND	(11)	1.0	ND	
		6-Jan-95	ND	ND	ND	ND	ND	ND	(14)	1.0	ND	
		19-Apr-00	ND	ND	ND	ND	ND	ND	(8.6)	ND	ND	
		17-Oct-00	ND	0.24 J	ND	ND	ND	ND	(7.4)	ND	ND	ND
OU10-MW-06S	OU10	6-Oct-94	ND	ND	ND	ND	ND	ND	ND	2.0	ND	
		13-Jan-95	ND	ND	ND	ND	ND	ND	ND	(10)	ND	
		24-Apr-98	ND	ND	ND	ND	ND	ND	ND	(13)	ND	
		23-Oct-98	ND	ND	ND	ND	ND	ND	ND	(14)	ND	
		16-Apr-99	ND	ND	ND	ND	ND	ND	ND	(8.3)	ND	
		6-Oct-99	ND	ND	ND	ND	ND	ND	ND	(11)	ND	
	Duplicate	6-Oct-99	ND	ND	ND	ND	ND	ND	ND	(14)	ND	
		21-Apr-00	ND	ND	ND	ND	ND	ND	ND	(7.2)	ND	
	Duplicate	21-Apr-00	ND	ND	ND	ND	ND	ND	ND	(7.7)	ND	
		17-Oct-00	ND	0.25 J	ND	ND	ND	ND	ND	(9.7)	ND	ND
	Duplicate	17-Oct-00	ND	0.21 J	0.23 J	ND	ND	ND	ND	(9.5)	ND	ND
OU10-MW-06D	OU10	06-Oct-94	ND	ND	ND	ND	ND	ND	(20)	ND	ND	
		13-Jan-95	ND	ND	ND	ND	ND	ND	(10)	ND	ND	
		20-Apr-98	ND	ND	ND	ND	ND	ND	2.6	ND	ND	
		23-Oct-98	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		16-Apr-99	ND	ND	ND	ND	ND	ND	0.99	ND	ND	
		8-Oct-99	ND	0.8	ND	1.08 J	ND	ND	(8.8)	ND	ND	
		21-Apr-00	ND	ND	ND	ND	ND	ND	(6.5)	ND	ND	
		17-Oct-00	ND	0.20 J	ND	ND	ND	ND	(5.0)	ND	ND	ND
OU10-MW-11S	OU10	05-Oct-94	ND	ND	ND	ND	ND	ND	(10)	ND	ND	
		10-Jan-95	ND	ND	ND	ND	ND	ND	(11)	ND	ND	
		27-Apr-98	ND	ND	ND	ND	ND	ND	(12)	ND	ND	
		20-Oct-98	ND	ND	ND	ND	ND	ND	(12)	0.39 J	ND	
		21-Apr-99	ND	ND	ND	ND	ND	ND	(8.4)	ND	ND	
		13-Oct-99	ND	ND	ND	ND	ND	ND	(9.9)	0.39 J	ND	
		18-Apr-00	ND	ND	ND	ND	ND	ND	(12)	0.37 J	ND	
		18-Oct-00	0.10 J	0.21 J	ND	ND	ND	ND	(9.4)	0.24 J	ND	ND
OU10-MW-11D	OU10	05-Oct-94	ND	ND	ND	ND	ND	ND	ND	(6.0)	ND	
		10-Jan-95	ND	ND	ND	ND	ND	ND	ND	(7.0)	ND	
		23-Apr-98	ND	ND	ND	ND	ND	ND	0.65 J	3.0	ND	
		20-Oct-98	ND	ND	ND	ND	ND	ND	0.92	(10)	ND	
		16-Apr-99	ND	ND	ND	ND	ND	ND	0.64	(6.2)	ND	
		6-Oct-99	ND	ND	ND	ND	ND	ND	1.9	(9.2)	ND	
		18-Apr-00	ND	ND	ND	ND	ND	ND	1.2	3.4	ND	
		18-Oct-00	ND	0.21 J	ND	ND	ND	ND	0.70 J	2.4	ND	ND
OU10-MW-19D	OU10	06-Oct-94	ND	ND	ND	ND	ND	ND	ND	(7.0)	ND	
		11-Jan-95	ND	ND	ND	ND	ND	ND	ND	(6.0)	ND	
		24-Apr-98	ND	ND	ND	ND	ND	ND	ND	(7.1)	ND	
		20-Oct-98	ND	ND	ND	ND	ND	ND	ND	(5.7)	ND	
		19-Apr-99	ND	ND	ND	ND	ND	ND	ND	3.4	ND	
		6-Oct-99	ND	ND	ND	ND	ND	ND	ND	(5.4)	ND	
		19-Apr-00	ND	ND	ND	ND	ND	ND	ND	(5.8)	ND	
		20-Oct-00	ND	ND	ND	ND	ND	ND	ND	(5.1)	ND	ND

Table 6-2
Basewide LTM October 2000 and Historic Groundwater Sampling Results: VOCs
Wright-Patterson AFB, Ohio

Sample Location	Management Area	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	1,2-DCA (µg/L)	Total 1,2-DCE (µg/L)	PCE (µg/L)	TCE (µg/L)	Vinyl Chloride (µg/L)	MTBE (µg/L)
	MCL		**5**	**1,000**	**700**	**10,000**	**5**	**70**	**5**	**5**	**2**	**NCL**
OU10-MW-21S	OU10	05-Oct-94	ND	ND	ND	ND	ND	ND	ND	(9.0)	ND	
		12-Jan-95	ND	ND	ND	ND	ND	ND	ND	(7.0)	ND	
		23-Apr-98	ND	ND	ND	ND	ND	ND	ND	(10)	ND	
		27-Oct-98	ND	ND	ND	ND	ND	ND	ND	(9.4)	ND	
		14-Apr-99	ND	ND	ND	ND	ND	ND	ND	(6.8)	ND	
		7-Oct-99	ND	ND	ND	ND	ND	ND	ND	(9.3)	ND	
		19-Apr-00	ND	ND	ND	ND	ND	ND	ND	(8.7)	ND	
		19-Oct-00	ND	ND	ND	ND	ND	ND	ND	(8.4)	ND	ND
OU10-MW-25S	OU10	08-Oct-94	ND	ND	ND	ND	ND	ND	(19)	ND	ND	
		12-Jan-95	ND	ND	ND	ND	ND	ND	(22)	ND	ND	
		24-Apr-98	ND	ND	ND	ND	ND	ND	(19)	ND	ND	
		20-Oct-98	ND	ND	ND	ND	ND	ND	(18)	ND	ND	
		16-Apr-99	ND	ND	ND	ND	ND	ND	(11)	ND	ND	
		6-Oct-99	ND	ND	ND	ND	ND	ND	(16)	ND	ND	
		18-Apr-00	ND	ND	ND	ND	ND	ND	(22)	ND	ND	
		17-Oct-00	ND	0.26 J	ND	ND	ND	ND	(19)	ND	ND	ND
CHP4-MW01	OU10 (CHP4)	5-Dec-95	ND	ND	ND	ND	ND	ND	(5.0)	(8.0)	ND	
		22-Apr-98	ND	ND	ND	ND	ND	ND	4.7	4.5	ND	
		16-Oct-98	ND	ND	ND	ND	ND	ND	2.5	2.1	ND	
		15-Apr-99	ND	ND	ND	ND	ND	ND	1.9	1.4	ND	
		6-Oct-99	ND	ND	ND	ND	ND	ND	3.6	2.1	ND	
		18-Apr-00	ND	ND	ND	ND	ND	ND	2.1	0.65	ND	
		17-Oct-00	ND	0.29 J	ND	ND	ND	ND	2.3	1.1 J	ND	ND
GR-330	OU10 (CHP4)	1-Sep-93	ND	ND	ND	ND	ND	ND	(20)	ND	ND	
		3-Nov-93	ND	ND	ND	ND	ND	ND	(13)	ND	ND	
		7-Apr-94	ND	ND	ND	ND	ND	ND	(22)	ND	ND	
		30-Aug-94	ND	ND	ND	ND	ND	ND	(37)	ND	ND	
		7-Dec-95	ND	ND	ND	ND	ND	ND	(16)	ND	ND	
		24-Apr-98	ND	ND	ND	ND	ND	ND	(43)	ND	ND	
		16-Oct-98	ND	ND	ND	ND	ND	ND	(30)	ND	ND	
		15-Apr-99	ND	ND	ND	ND	ND	ND	(35)	ND	ND	
	Duplicate	15-Apr-99	ND	ND	ND	ND	ND	ND	(31)	ND	ND	
		6-Oct-99	ND	ND	ND	ND	ND	ND	(12)	ND	ND	
		24-Apr-00	ND	ND	ND	ND	ND	ND	(11)	ND	ND	
		20-Oct-00	ND	ND	ND	ND	ND	ND	(12)	ND	ND	ND
23-578-M	OU10 (CHP4)	1-Nov-93	ND	ND	ND	ND	ND	ND	2.0	(52)	ND	
		14-Apr-94	ND	ND	ND	ND	ND	ND	1.0	(28)	ND	
		1-Sep-94	ND	ND	ND	ND	ND	ND	2.0	(43)	ND	
		29-Oct-98	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		20-Apr-99	ND	0.32 J	ND	ND	ND	ND	1.8	(14)	ND	
	Duplicate	20-Apr-99	ND	ND	ND	ND	ND	ND	1.3	(10)	ND	
		6-Oct-99	ND	ND	ND	ND	ND	0.3 J	(7.5)	(39)	ND	
		18-Apr-00	ND	0.28 J	ND	ND	ND	ND	2.0	(11)	ND	
		17-Oct-00	ND	0.31 J	ND	ND	ND	ND	2.3	(14)	ND	ND
HD-13S-AMB-01 (ambient blank)	OU5	1-Nov-00	1.1	0.24 J	ND	ND	ND	ND	ND	ND	ND	ND

MCLs - Maximum Contaminant Levels.
1,2-DCA - 1,2-Dichloroethane
TCE - Trichloroethylene
PCE - Tetrachloroethylene
1,2-DCE - 1,2-Dichloroethene (Total)
µg/L - Micrograms per liter

( ) - Concentration exceeds MCL.
R - Surrogate recovery was outside stated control limits.
J - Concentration less than reporting limit and above detection limit. Estimated result.
D - Result obtained from the analysis of a dilution
ND - Concentration is below detection limits.
NCL - No compliance level set



IT CORPORATION

Figure 1-1. Area Location Map.

Source: ES, 1982

DRAWING BY	JIS, III	CHECKED BY	PCM	2/1/95	DRAWING NO.
	4/1/99	APPROVED BY	SWS	2/1/95	S-777097.0108-4/99-4w

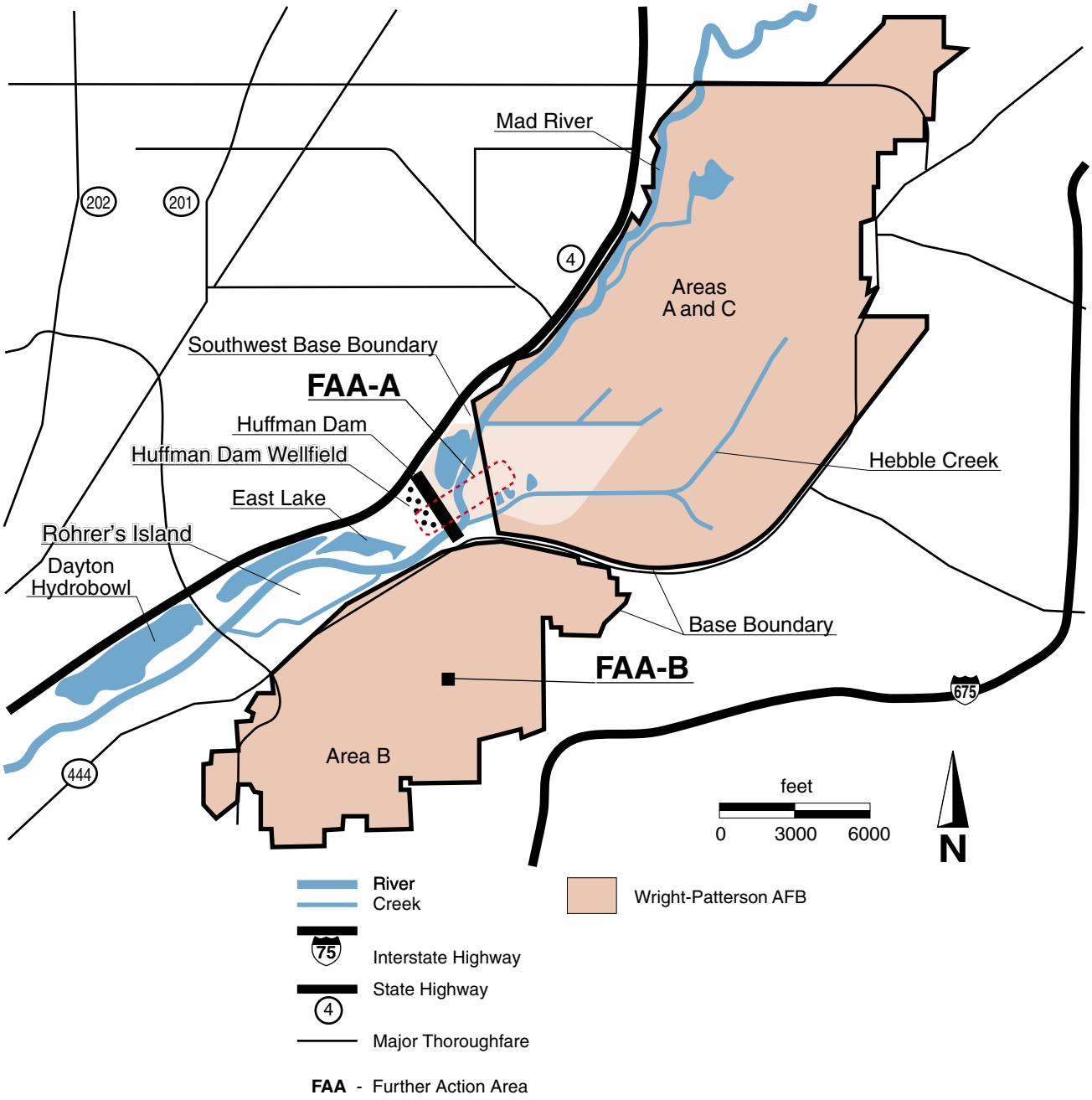
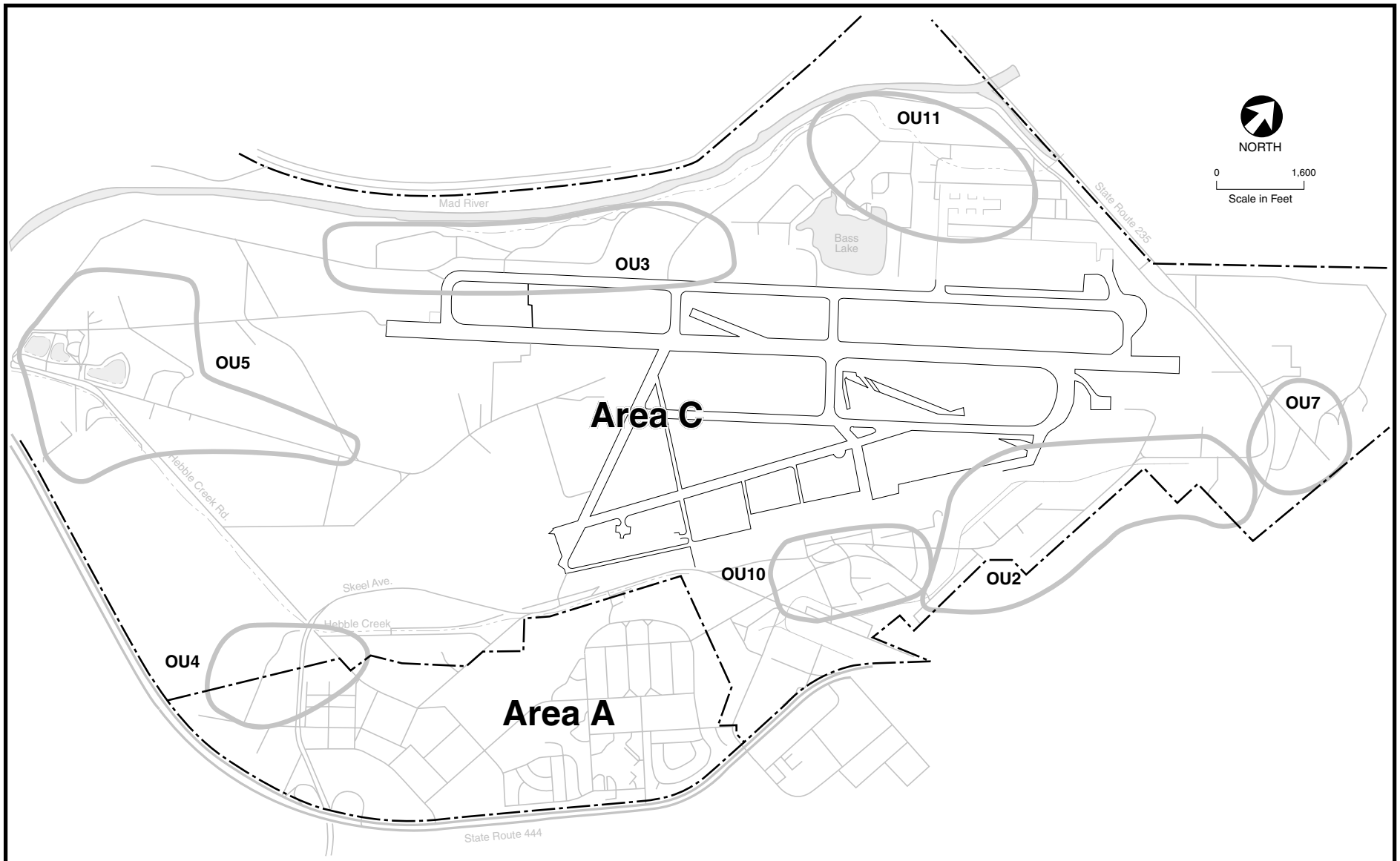


Figure 1-2. Site Location.

DRAWING NO. S-777097.0108-01/01-1w

DRAWING BY	JIS, III	7/13/99
CHECKED BY	MWC	1/26/01
APPROVED BY	JRT	1/26/01

IT CORPORATION

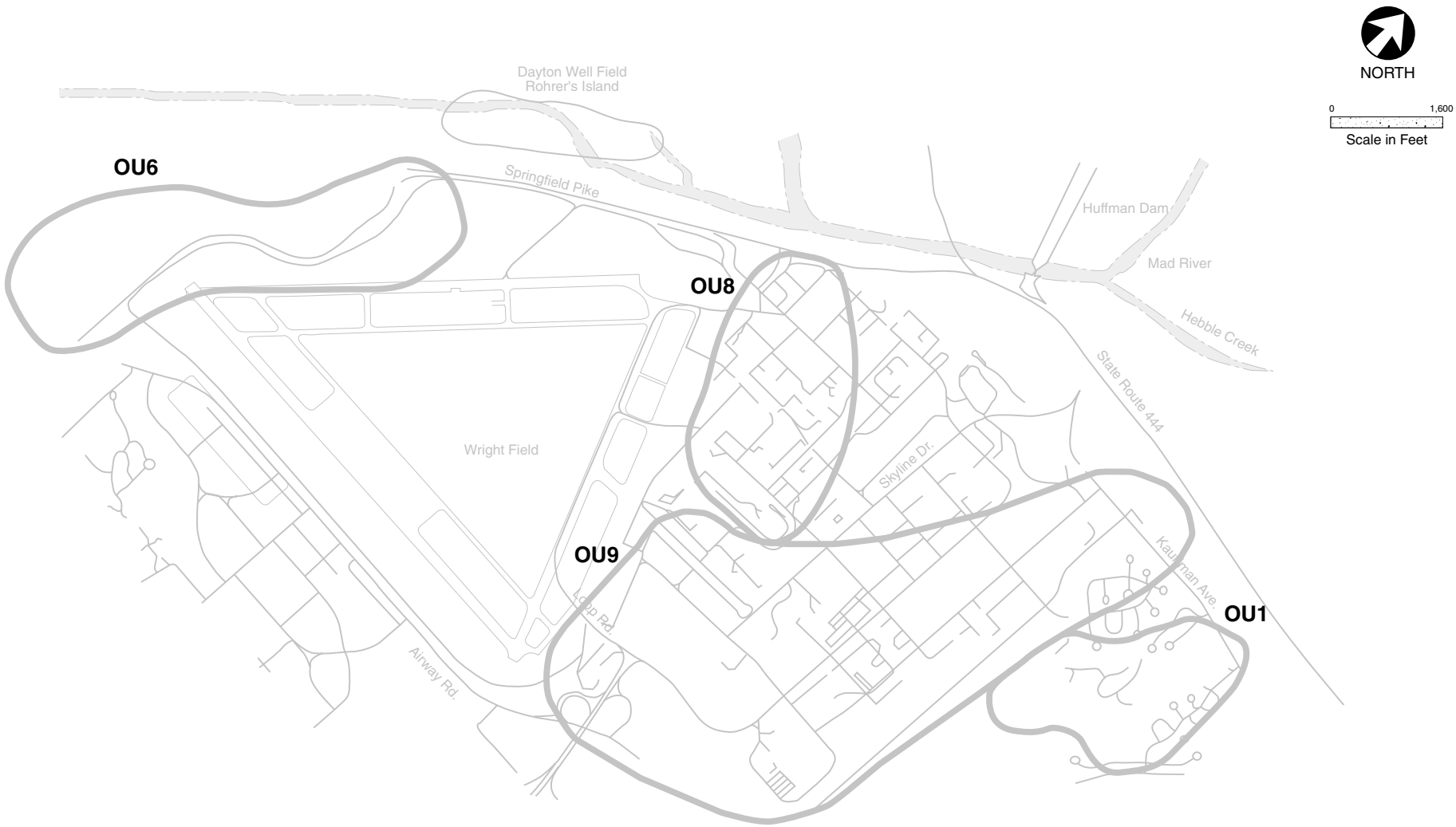


IT CORPORATION

Figure 1-3. WPAFB OUs - Areas A and C.

Source: Map (CH2M Hill, 1994)

DRAWING BY	JIS, III	CHECKED BY	TAC	12/15/98	DRAWING NO.
	4/1/99	APPROVED BY	JRT	1/26/01	S-777097.0108-4/99-3w

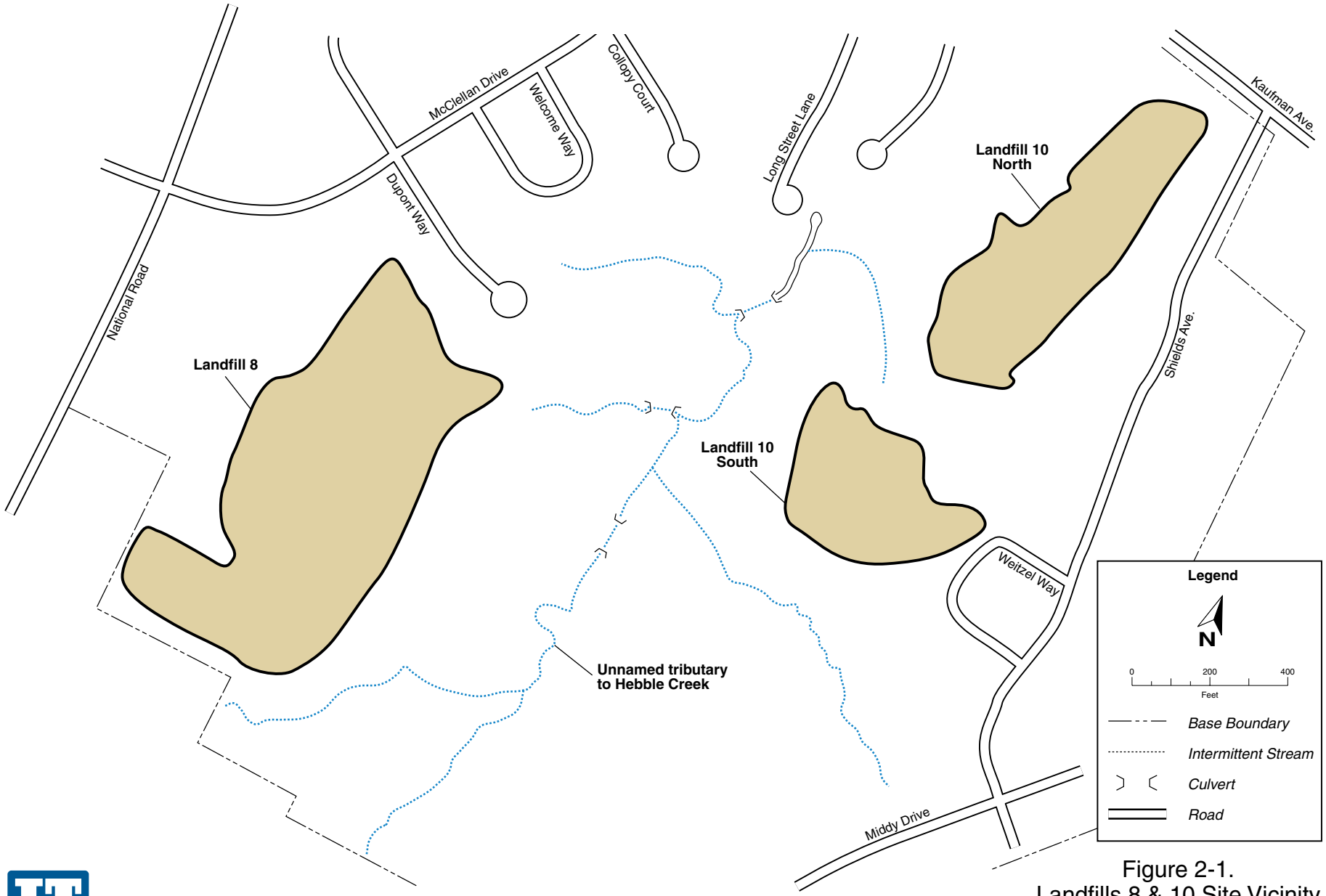


IT CORPORATION

Figure 1-4. WPAFB OUs - Area B.

Source: Map (CH2M Hill, 1994)

DRAWING BY	JIS, III	CHECKED BY	JIS, III	4/21/95	DRAWING NO.
	4/1/99	APPROVED BY	SRS	4/24/95	S-777097.0108-4/99-2w



IT CORPORATION

Figure 2-1.
Landfills 8 & 10 Site Vicinity
Prepared for
Wright-Patterson Air Force Base
Dayton, OH

DRAWING BY	JIS, III	CHECKED BY	MWC	1/26/01	DRAWING NO.
	4/1/99	APPROVED BY	JRT	1/26/01	S-777097.0108-4/99-1w

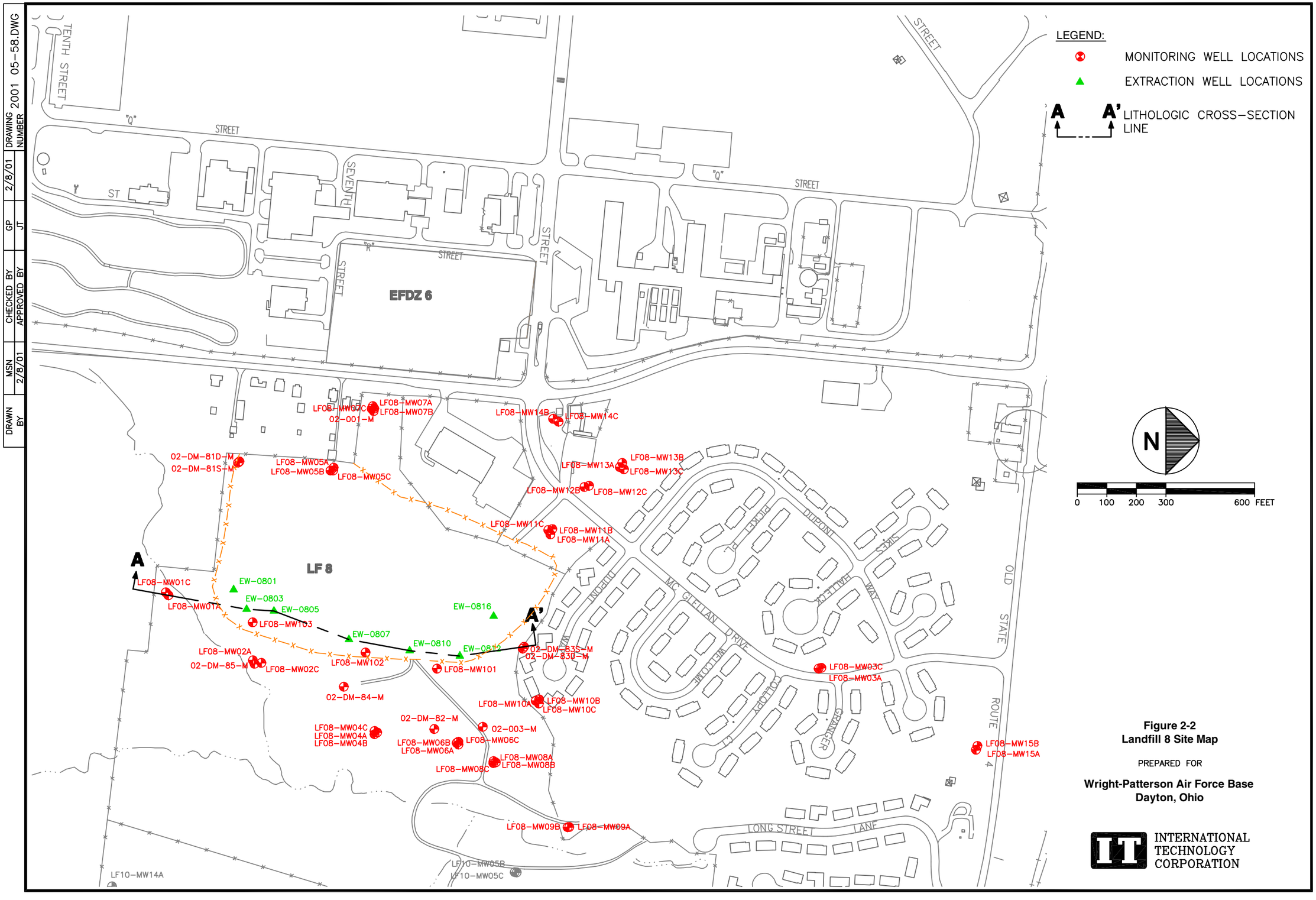


Figure 2-2
Landfill 8 Site Map

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

INTERNATIONAL TECHNOLOGY CORPORATION

DRAWN BY	MSN 2/8/01	CHECKED BY / APPROVED BY	GP JT	2/8/01	DRAWING NUMBER 2001 05-58.DWG

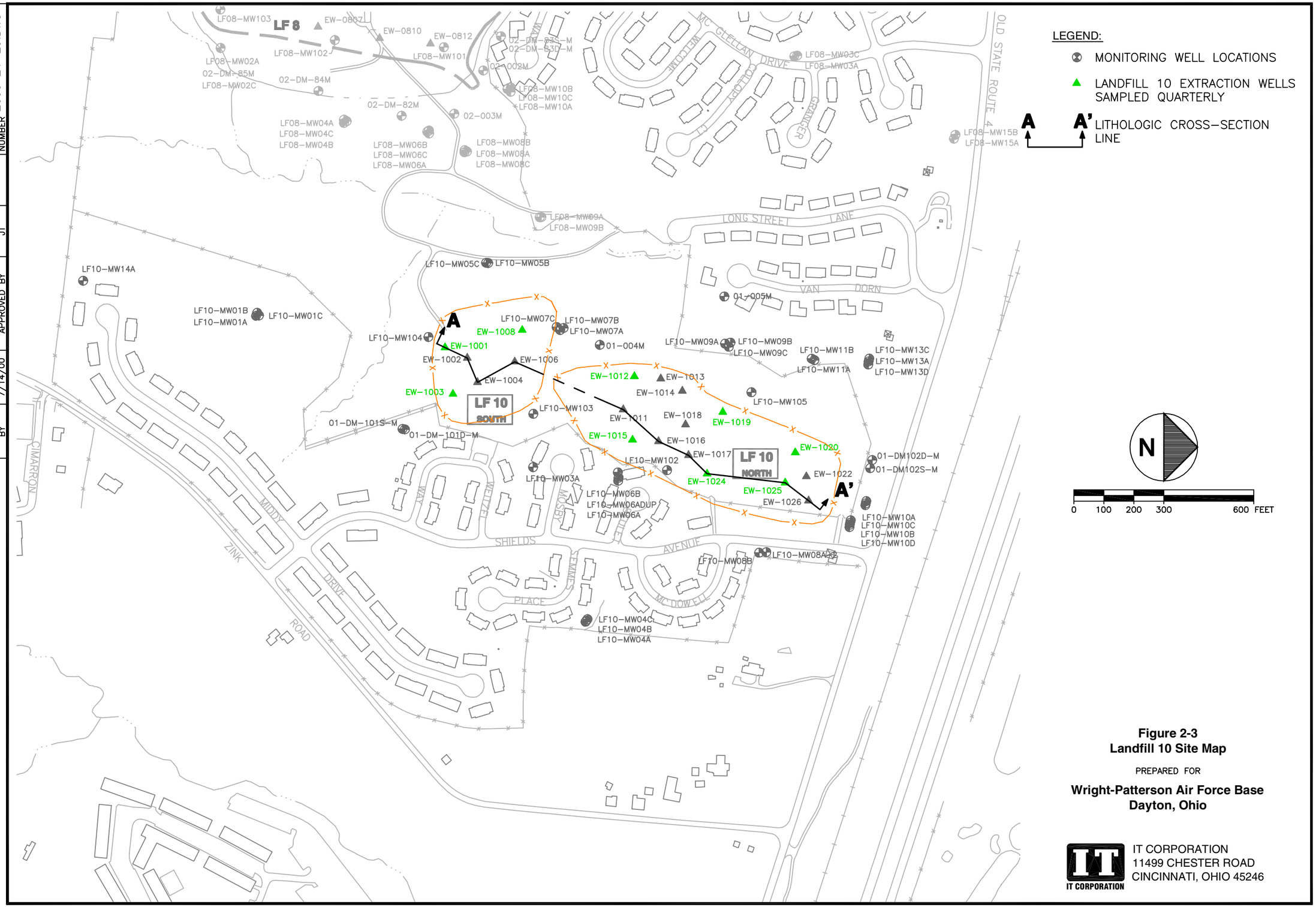


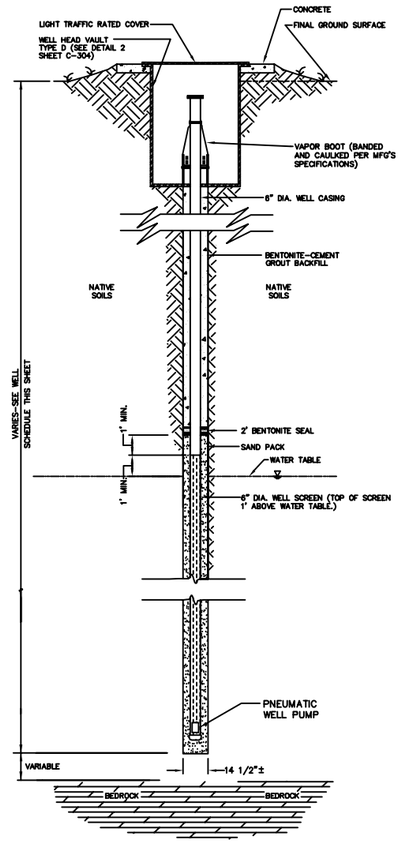
Figure 2-3
Landfill 10 Site Map

PREPARED FOR

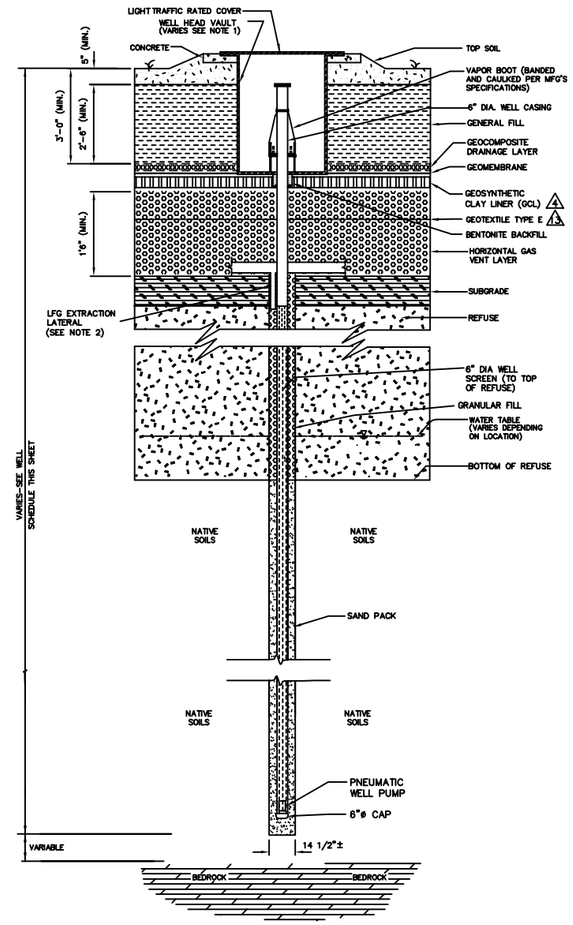
Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

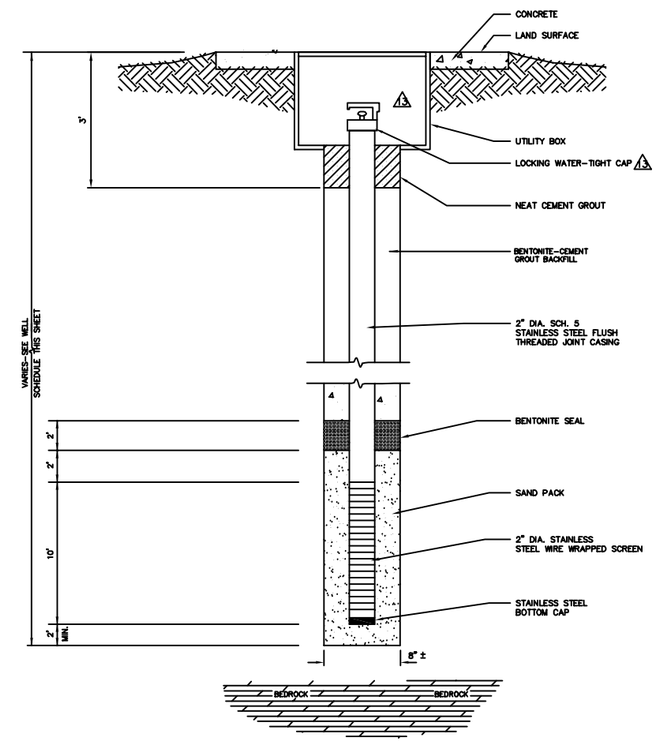
DRAWN BY	MSN	CHECKED BY	GP	1/11/01	DRAWING NUMBER 2000 24-29.DWG
	7/14/00	APPROVED BY	JT		



TYPICAL EXTERIOR LEACHATE COLLECTION WELL
NOT TO SCALE
A C-302 C-300, C-301



TYPICAL INTERIOR LEACHATE AND GAS COLLECTION WELL
NOT TO SCALE
B C-302 C-300, C-301, C-200, C-201, E-4



TYPICAL BEDROCK MONITORING WELL
NOT TO SCALE
C C-302 C-300, C-301

NOTES:
1. SEE EXTRACTION WELL SCHEDULE (THIS SHEET) AND SHEETS C-302 AND C-303 FOR DETAILS OF WELL HEAD VAULT TYPES.
2. SEE SHEET C-202 FOR DETAIL OF LFG EXTRACTION LATERAL.

Revisions

Symbol	Description	Date	Approved
3	RECORD DRAWING	3/3/98	W.H.S.
2	SOIL BARRIER LAYER CHANGED TO GEOSYNTHETIC CLAY LINER (GCL)	05/03/95	W.H.S.
1	ISSUED FOR CONSTRUCTION	10/20/94	W.H.S.
0	ISSUED FOR BID	7/7/94	W.H.S.

IT CORPORATION
CINCINNATI, OHIO

3 88th AIR BASE WING
OFFICE OF ENVIRONMENTAL MANAGEMENT
WRIGHT-PATTERSON AFB, OHIO

Designed by: G.A.H.
Drawn by: M.S.N.
Checked by: J.M.M.
Reviewed by: J.M.M.
Approved by: W.H.S.

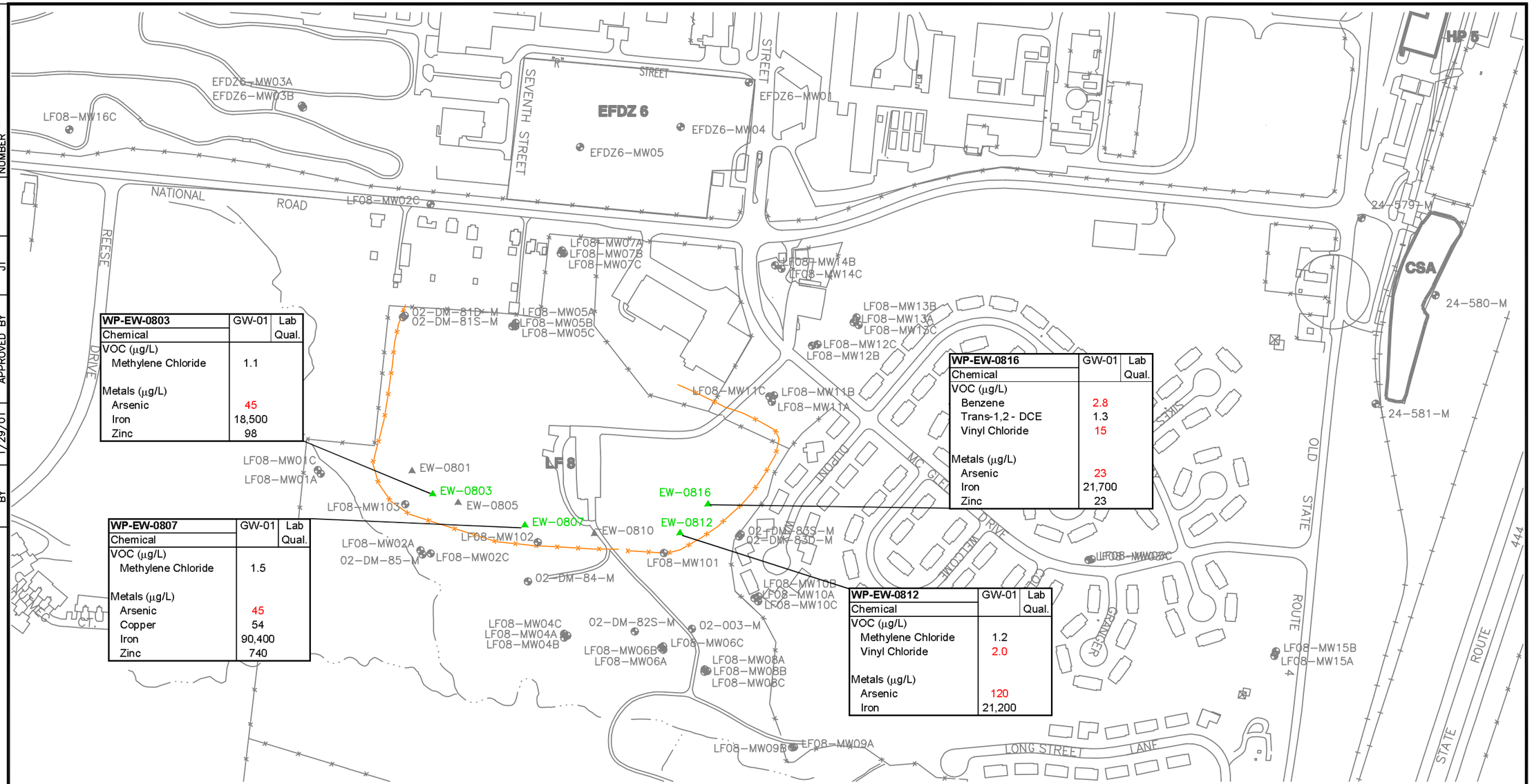
WRIGHT-PATTERSON AFB, OHIO
SOURCE CONTROL OPERABLE UNIT
LANDFILLS 8 AND 10

LEACHATE COLLECTION SYSTEM DETAILS
FIGURE 2-4

Scale N.T.S.
Date: 7-7-94
Drawing Code

Sheet reference number: C-302

Sheet 45 of 75



WP-EW-0803	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Methylene Chloride	1.1	
Metals (µg/L)		
Arsenic	45	
Iron	18,500	
Zinc	98	

WP-EW-0807	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Methylene Chloride	1.5	
Metals (µg/L)		
Arsenic	45	
Copper	54	
Iron	90,400	
Zinc	740	

WP-EW-0816	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Benzene	2.8	
Trans-1,2 - DCE	1.3	
Vinyl Chloride	15	
Metals (µg/L)		
Arsenic	23	
Iron	21,700	
Zinc	23	

WP-EW-0812	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Methylene Chloride	1.2	
Vinyl Chloride	2.0	
Metals (µg/L)		
Arsenic	120	
Iron	21,200	

LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL SAMPLING LOCATION
- ND NOT DETECTED
- NS NOT SAMPLED, WOULD NOT PRODUCE WATER
- 18 VOC CONCENTRATION (µg/L) (RED=>MCL AND/OR ROD COMPLIANCE LEVEL)
- * REPLACEMENT SAMPLES FOR WELLS THAT WOULD NOT PRODUCE SUFFICIENT WATER, SPLIT WITH THE OEPA

N

0 100 200 300 600 FEET

Figure 2-5

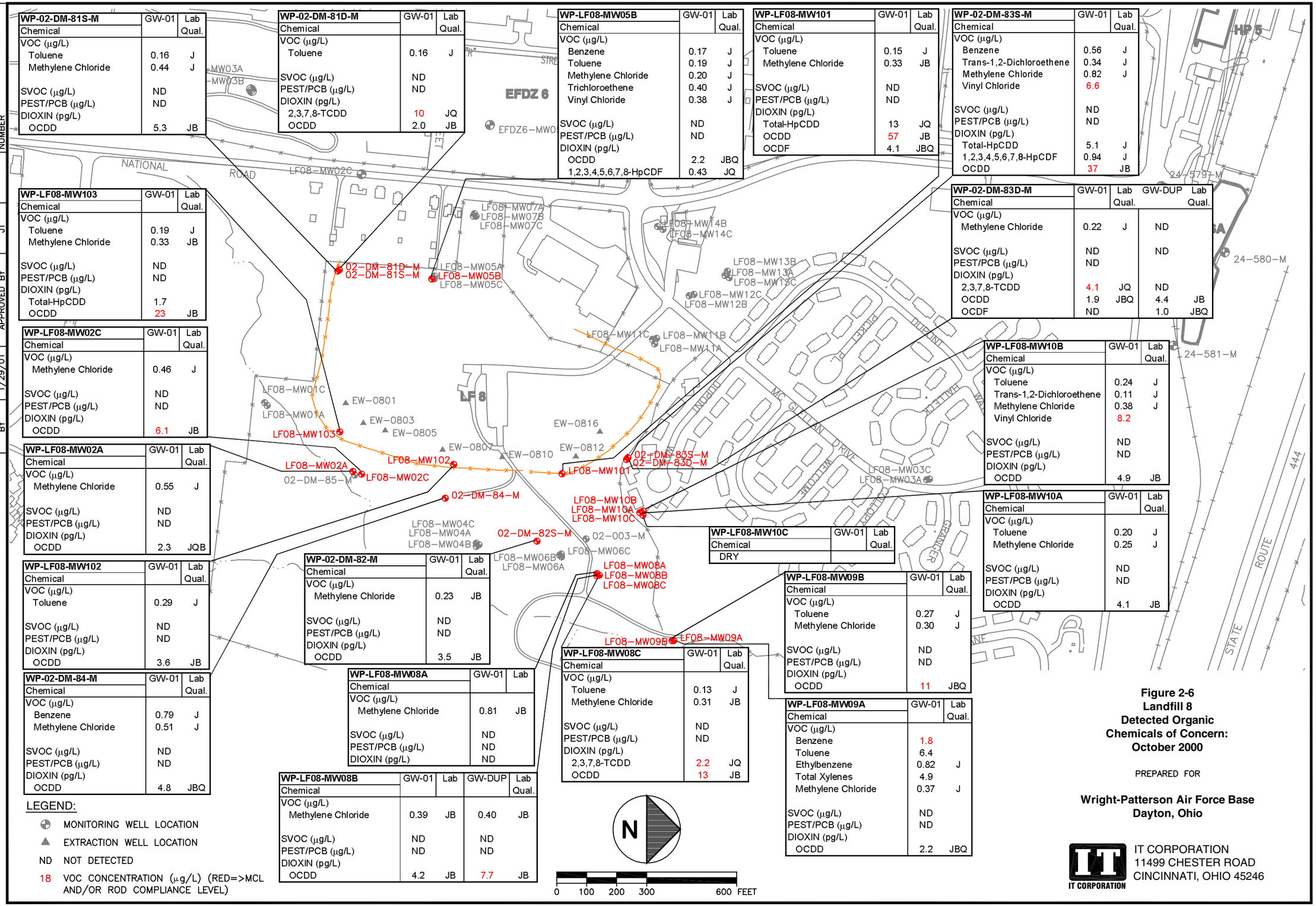
Landfill 8
Detected Chemicals of Concern:
July 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN	CHECKED BY	GP	1/29/01	DRAWING NUMBER 2001 05-01.DWG
	1/29/01	APPROVED BY	JT		



WP-02-DM-81S-M	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Toluene	0.16	J
Methylene Chloride	0.44	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
OCDD	5.3	JB

WP-02-DM-81D-M	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Toluene	0.16	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
2,3,7,8-TCDD	10	JQ
OCDD	2.0	JB

WP-LF08-MW05B	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Benzene	0.17	J
Toluene	0.19	J
Methylene Chloride	0.20	J
Trichloroethene	0.40	J
Vinyl Chloride	0.38	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
OCDD	2.2	JBQ
1,2,3,4,5,6,7,8-HpCDF	0.43	JQ

WP-LF08-MW101	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Toluene	0.15	J
Methylene Chloride	0.33	JB
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
Total-HpCDD	13	JQ
OCDD	57	JB
OCDF	4.1	JBQ

WP-02-DM-83S-M	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Benzene	0.56	J
Trans-1,2-Dichloroethene	0.34	J
Methylene Chloride	0.82	J
Vinyl Chloride	6.6	
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
Total-HpCDD	5.1	J
1,2,3,4,5,6,7,8-HpCDF	0.94	J
OCDD	37	JB

WP-LF08-MW103	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Toluene	0.19	J
Methylene Chloride	0.33	JB
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
Total-HpCDD	1.7	
OCDD	23	JB

WP-02-DM-83D-M	GW-01	Lab Qual.	GW-DUP	Lab Qual.
Chemical				
VOC (µg/L)				
Methylene Chloride	0.22	J	ND	
SVOC (µg/L)	ND		ND	
PEST/PCB (µg/L)	ND			
DIOXIN (pg/L)				
2,3,7,8-TCDD	4.1	JQ	ND	
OCDD	1.9	JBQ	4.4	JB
OCDF	ND		1.0	JBQ

WP-LF08-MW02C	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Methylene Chloride	0.46	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
OCDD	6.1	JB

WP-LF08-MW10B	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Toluene	0.24	J
Trans-1,2-Dichloroethene	0.11	J
Methylene Chloride	0.38	J
Vinyl Chloride	8.2	
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
OCDD	4.9	JB

WP-LF08-MW02A	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Methylene Chloride	0.55	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
OCDD	2.3	JQB

WP-LF08-MW10A	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Toluene	0.20	J
Methylene Chloride	0.25	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
OCDD	4.1	JB

WP-LF08-MW10C	GW-01	Lab Qual.
Chemical		
DRY		

WP-LF08-MW102	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Toluene	0.29	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
OCDD	3.6	JB

WP-02-DM-82-M	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Methylene Chloride	0.23	JB
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
OCDD	3.5	JB

WP-LF08-MW09B	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Toluene	0.27	J
Methylene Chloride	0.30	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
OCDD	11	JBQ

WP-02-DM-84-M	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Benzene	0.79	J
Methylene Chloride	0.51	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
OCDD	4.8	JBQ

WP-LF08-MW08A	GW-01	Lab
Chemical		
VOC (µg/L)		
Methylene Chloride	0.81	JB
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)	ND	

WP-LF08-MW08C	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Toluene	0.13	J
Methylene Chloride	0.31	JB
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
2,3,7,8-TCDD	2.2	JQ
OCDD	13	JB

WP-LF08-MW09A	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Benzene	1.8	
Toluene	6.4	
Ethylbenzene	0.82	J
Total Xylenes	4.9	
Methylene Chloride	0.37	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
OCDD	2.2	JBQ

WP-LF08-MW08B	GW-01	Lab	GW-DUP	Lab Qual.
Chemical				
VOC (µg/L)				
Methylene Chloride	0.39	JB	0.40	JB
SVOC (µg/L)	ND		ND	
PEST/PCB (µg/L)	ND		ND	
DIOXIN (pg/L)				
OCDD	4.2	JB	7.7	JB

LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL LOCATION
- ND NOT DETECTED
- 18 VOC CONCENTRATION (µg/L) (RED=>MCL AND/OR ROD COMPLIANCE LEVEL)

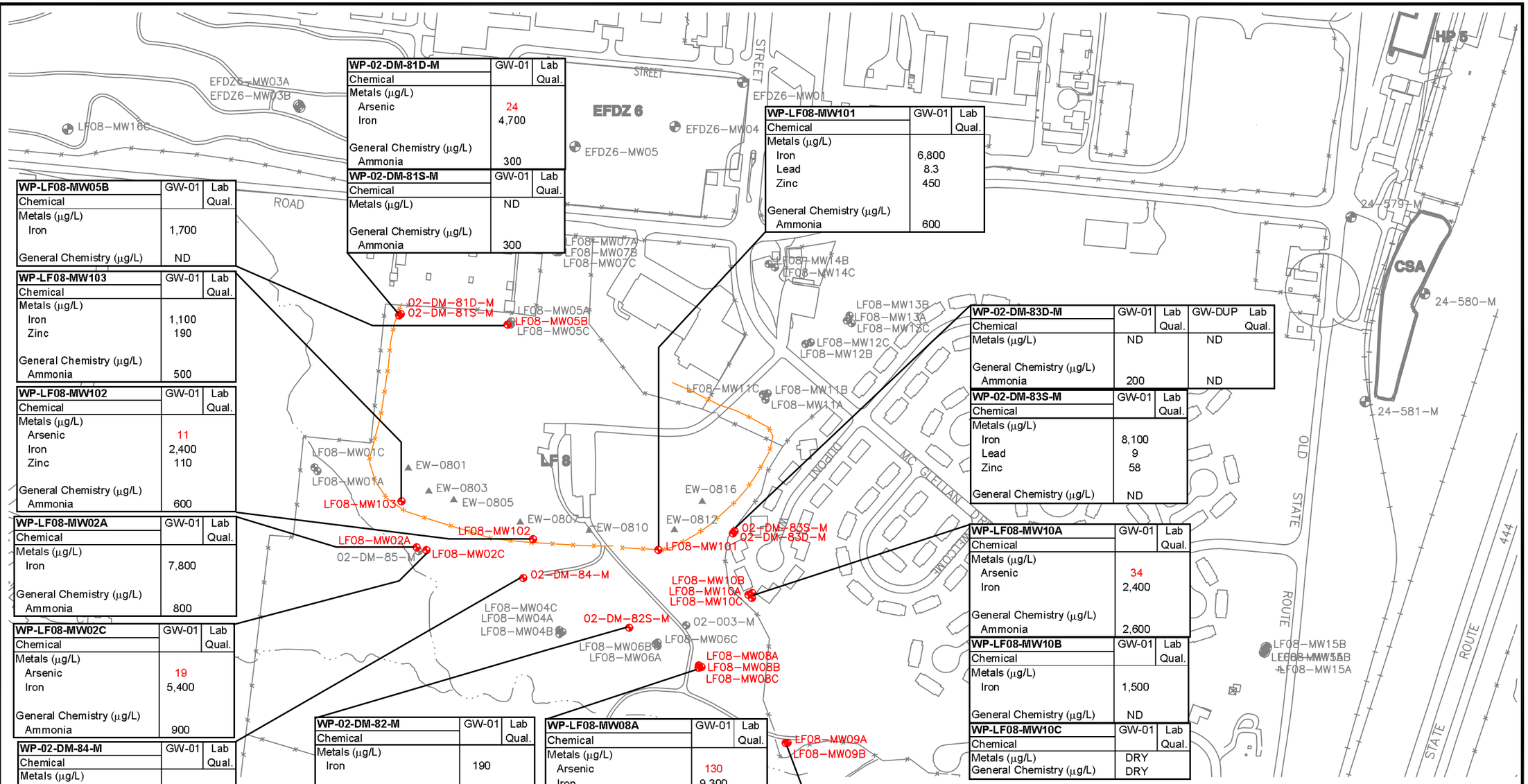
Figure 2-6
Landfill 8
Detected Organic Chemicals of Concern:
October 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWING NUMBER 2001 05–02.DWG
1/29/01 GP
CHECKED BY JT
APPROVED BY
MSN 1/29/01
DRAWN BY



WP-02-DM-81D-M	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Arsenic	24	
Iron	4,700	
General Chemistry (µg/L)		
Ammonia	300	

WP-02-DM-81S-M	GW-01	Lab Qual.
Chemical		
Metals (µg/L)	ND	
General Chemistry (µg/L)		
Ammonia	300	

WP-LF08-MW101	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Iron	6,800	
Lead	8.3	
Zinc	450	
General Chemistry (µg/L)		
Ammonia	600	

WP-LF08-MW05B	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Iron	1,700	
General Chemistry (µg/L)	ND	

WP-LF08-MW103	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Iron	1,100	
Zinc	190	
General Chemistry (µg/L)		
Ammonia	500	

WP-LF08-MW102	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Arsenic	11	
Iron	2,400	
Zinc	110	
General Chemistry (µg/L)		
Ammonia	600	

WP-LF08-MW02A	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Iron	7,800	
General Chemistry (µg/L)		
Ammonia	800	

WP-LF08-MW02C	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Arsenic	19	
Iron	5,400	
General Chemistry (µg/L)		
Ammonia	900	

WP-02-DM-84-M	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Arsenic	46	
Iron	21,500	
General Chemistry (µg/L)		
Ammonia	400	

WP-02-DM-82-M	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Iron	190	
General Chemistry (µg/L)		
Ammonia	400	

WP-LF08-MW08A	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Arsenic	130	
Iron	9,300	
General Chemistry (µg/L)		
Ammonia	900	

WP-LF08-MW08B	GW-01	Lab Qual.	GW-DUP	Lab Qual.
Chemical				
Metals (µg/L)				
Arsenic	14		17	
Iron	1,600		1,800	
General Chemistry (µg/L)				
Ammonia	800		700	

WP-LF08-MW08C	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Iron	830	
General Chemistry (µg/L)	ND	

WP-02-DM-83D-M	GW-01	Lab Qual.	GW-DUP	Lab Qual.
Chemical				
Metals (µg/L)	ND		ND	
General Chemistry (µg/L)				
Ammonia	200		ND	

WP-02-DM-83S-M	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Iron	8,100	
Lead	9	
Zinc	58	
General Chemistry (µg/L)	ND	

WP-LF08-MW10A	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Arsenic	34	
Iron	2,400	
General Chemistry (µg/L)		
Ammonia	2,600	

WP-LF08-MW10B	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Iron	1,500	
General Chemistry (µg/L)	ND	

WP-LF08-MW10C	GW-01	Lab Qual.
Chemical		
Metals (µg/L)	DRY	
General Chemistry (µg/L)	DRY	

WP-LF08-MW09A	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Iron	170	
General Chemistry (µg/L)		
Ammonia	500	

WP-LF08-MW09B	GW-01	Lab Qual.
Chemical		
Metals (µg/L)	ND	
General Chemistry (µg/L)	ND	

LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL LOCATION
- D = DILUTED
- ND = NOT DETECTED
- NS = NOT SAMPLED
- 18 VOC CONCENTRATION (µg/L) (RED=>MCL AND/OR ROD COMPLIANCE LEVEL)

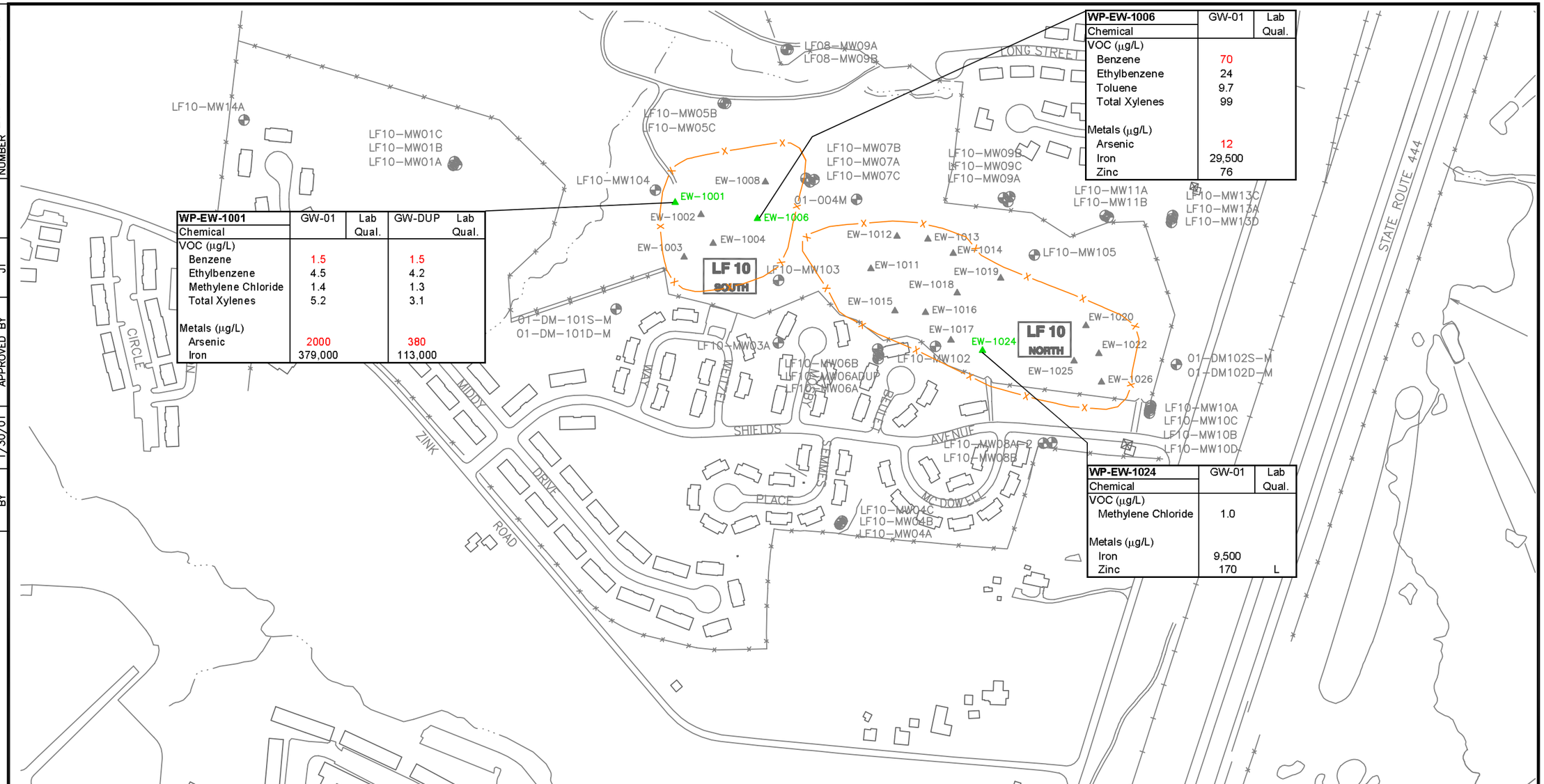
Figure 2-7
Landfill 8
Detected Inorganic Chemicals of Concern:
October 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWING NUMBER	2001 05-03.DWG
DRAWN BY	MSN 1/30/01
CHECKED BY	GP 1/30/01
APPROVED BY	JT



WP-EW-1001	GW-01	Lab Qual.	GW-DUP	Lab Qual.
Chemical				
VOC (µg/L)				
Benzene	1.5		1.5	
Ethylbenzene	4.5		4.2	
Methylene Chloride	1.4		1.3	
Total Xylenes	5.2		3.1	
Metals (µg/L)				
Arsenic	2000		380	
Iron	379,000		113,000	

WP-EW-1006	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Benzene	70	
Ethylbenzene	24	
Toluene	9.7	
Total Xylenes	99	
Metals (µg/L)		
Arsenic	12	
Iron	29,500	
Zinc	76	

WP-EW-1024	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Methylene Chloride	1.0	
Metals (µg/L)		
Iron	9,500	
Zinc	170	L

LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL SAMPLING LOCATION
- ND NOT DETECTED
- NS NOT SAMPLED, WELL WOULD NOT PRODUCE WATER
- 12 VOC CONCENTRATION (µg/L)(RED=>MCL AND/OR ROD COMPLIANCE LEVEL)

N

0 100 200 300 600 FEET

Figure 2-8

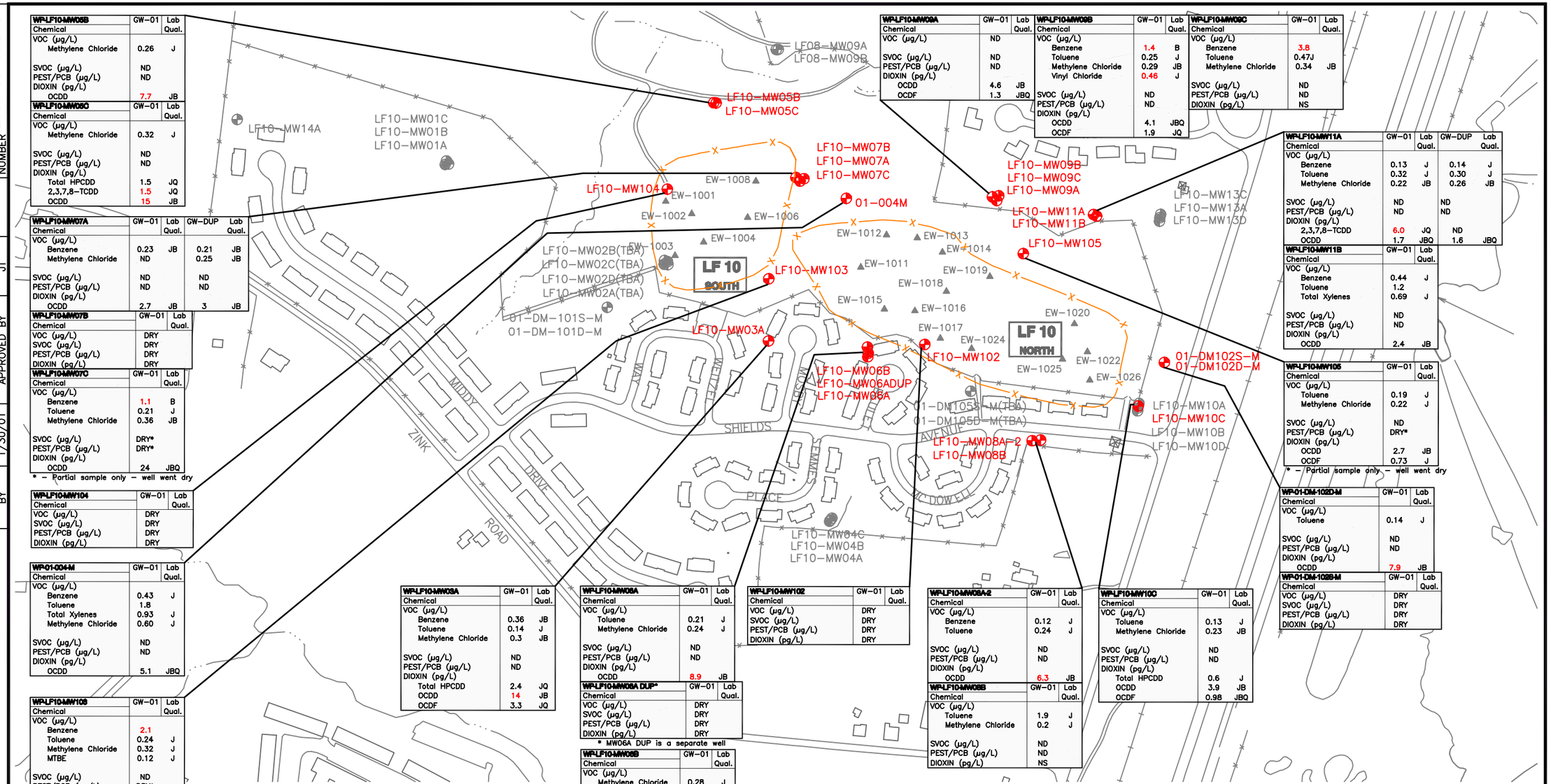
Landfill 10
Detected Chemicals of Concern:
July 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN	CHECKED BY	GP	DRAWING NUMBER	05-04.DWG
	1/30/01	APPROVED BY	JT	1/30/01	2001



WP-LF10-MW05B	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Methylene Chloride	0.26	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
OCDD	7.7	JB

WP-LF10-MW05C	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Methylene Chloride	0.32	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
Total HPCDD	1.5	JQ
2,3,7,8-TCDD	1.5	JQ
OCDD	15	JB

WP-LF10-MW07A	GW-01	Lab Qual.	GW-DUP	Lab Qual.
Chemical				
VOC (µg/L)				
Benzene	0.23	JB	0.21	JB
Methylene Chloride	ND		0.25	JB
SVOC (µg/L)	ND		ND	
PEST/PCB (µg/L)	ND		ND	
DIOXIN (pg/L)				
OCDD	2.7	JB	3	JB

WP-LF10-MW07B	GW-01	Lab Qual.
Chemical		
VOC (µg/L)	DRY	
SVOC (µg/L)	DRY	
PEST/PCB (µg/L)	DRY	
DIOXIN (pg/L)	DRY	

WP-LF10-MW07C	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Benzene	1.1	B
Toluene	0.21	J
Methylene Chloride	0.36	JB
SVOC (µg/L)	DRY*	
PEST/PCB (µg/L)	DRY*	
DIOXIN (pg/L)		
OCDD	24	JBQ

* – Partial sample only – well went dry

WP-LF10-MW104	GW-01	Lab Qual.
Chemical		
VOC (µg/L)	DRY	
SVOC (µg/L)	DRY	
PEST/PCB (µg/L)	DRY	
DIOXIN (pg/L)	DRY	

WP-01-004-M	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Benzene	0.43	J
Toluene	1.8	
Total Xylenes	0.93	J
Methylene Chloride	0.60	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
OCDD	5.1	JBQ

WP-LF10-MW103	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Benzene	2.1	
Toluene	0.24	J
Methylene Chloride	0.32	J
MTBE	0.12	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	DRY*	
DIOXIN (pg/L)		
Total HPCDD	1.3	JQ
OCDD	10	JB

* – Partial sample only – well went dry

WP-LF10-MW09A	GW-01	Lab Qual.
Chemical		
VOC (µg/L)	ND	
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
OCDD	4.6	JB
OCDF	1.3	JBQ

WP-LF10-MW09B	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Benzene	1.4	B
Toluene	0.25	J
Methylene Chloride	0.29	JB
Vinyl Chloride	0.46	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
OCDD	4.1	JBQ
OCDF	1.9	JQ

WP-LF10-MW09C	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Benzene	3.8	
Toluene	0.47J	
Methylene Chloride	0.34	JB
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)	NS	

WP-LF10-MW11A	GW-01	Lab Qual.	GW-DUP	Lab Qual.
Chemical				
VOC (µg/L)				
Benzene	0.13	J	0.14	J
Toluene	0.32	J	0.30	J
Methylene Chloride	0.22	JB	0.26	JB
SVOC (µg/L)	ND		ND	
PEST/PCB (µg/L)	ND		ND	
DIOXIN (pg/L)				
2,3,7,8-TCDD	6.0	JQ	ND	
OCDD	1.7	JBQ	1.6	JBQ

WP-LF10-MW11B	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Benzene	0.44	J
Toluene	1.2	
Total Xylenes	0.69	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
OCDD	2.4	JB

WP-LF10-MW105	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Toluene	0.19	J
Methylene Chloride	0.22	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	DRY*	
DIOXIN (pg/L)		
OCDD	2.7	JB
OCDF	0.73	J

* – Partial sample only – well went dry

WP-01-DM-102D-M	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Toluene	0.14	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
OCDD	7.9	JB

WP-01-DM-102S-M	GW-01	Lab Qual.
Chemical		
VOC (µg/L)	DRY	
SVOC (µg/L)	DRY	
PEST/PCB (µg/L)	DRY	
DIOXIN (pg/L)	DRY	

WP-LF10-MW03A	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Benzene	0.36	JB
Toluene	0.14	J
Methylene Chloride	0.3	JB
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
Total HPCDD	2.4	JQ
OCDD	14	JB
OCDF	3.3	JQ

WP-LF10-MW06A	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Toluene	0.21	J
Methylene Chloride	0.24	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
OCDD	8.9	JB

WP-LF10-MW06A DUP*	GW-01	Lab Qual.
Chemical		
VOC (µg/L)	DRY	
SVOC (µg/L)	DRY	
PEST/PCB (µg/L)	DRY	
DIOXIN (pg/L)	DRY	

* MW06A DUP is a separate well

WP-LF10-MW06B	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Methylene Chloride	0.28	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
OCDD	5.8	JB
OCDF	1..5	JB

WP-LF10-MW102	GW-01	Lab Qual.
Chemical		
VOC (µg/L)	DRY	
SVOC (µg/L)	DRY	
PEST/PCB (µg/L)	DRY	
DIOXIN (pg/L)	DRY	

WP-LF10-MW08A-2	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Benzene	0.12	J
Toluene	0.24	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
OCDD	6.3	JB

WP-LF10-MW08B	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Toluene	1.9	J
Methylene Chloride	0.2	J
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)	NS	

WP-LF10-MW10C	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Toluene	0.13	J
Methylene Chloride	0.23	JB
SVOC (µg/L)	ND	
PEST/PCB (µg/L)	ND	
DIOXIN (pg/L)		
Total HPCDD	0.6	J
OCDD	3.9	JB
OCDF	0.98	JBQ

LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL LOCATION
- ND NOT DETECTED
- NS NOT SAMPLED
- pg/L=1X10^{12} µg/L
- 5.8 VOC CONCENTRATION (µg/L)(RED=>MCL AND/OR ROD COMPLIANCE LEVEL)

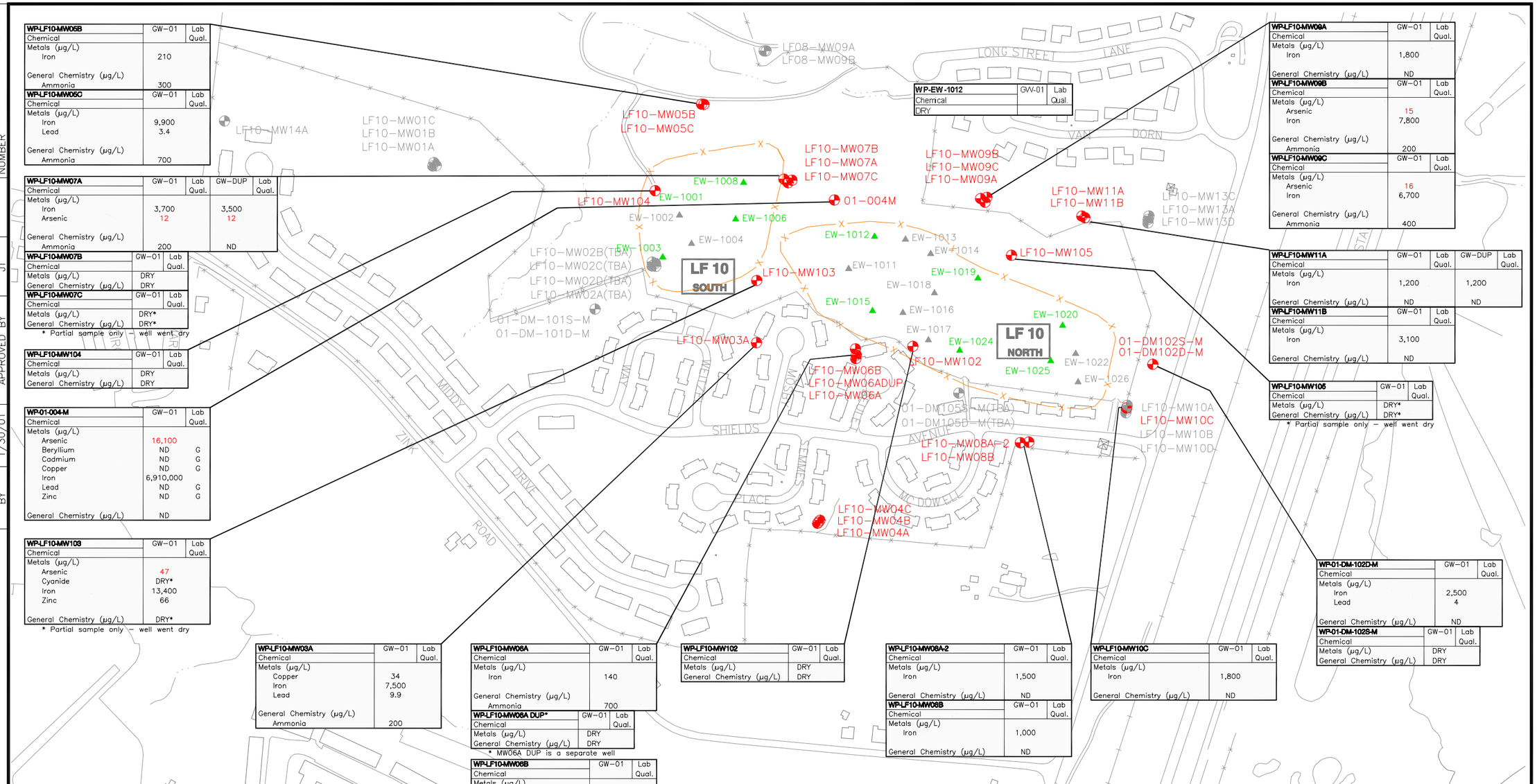
Figure 2-9
Landfill 10
Detected Organic Chemicals of Concern:
October 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWING NUMBER 2001 05-05.DWG
1/30/01 GP JT
CHECKED BY APPROVED BY
MSN 1/30/01
DRAWN BY



WP-LF10-MW06B	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Iron	210	
General Chemistry (µg/L)		
Ammonia	300	

WP-LF10-MW06C	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Iron	9,900	
Lead	3.4	
General Chemistry (µg/L)		
Ammonia	700	

WP-LF10-MW07A	GW-01	Lab Qual.	GW-DUP	Lab Qual.
Chemical				
Metals (µg/L)				
Iron	3,700		3,500	
Arsenic	12		12	
General Chemistry (µg/L)				
Ammonia	200		ND	

WP-LF10-MW07B	GW-01	Lab Qual.
Chemical		
Metals (µg/L)	DRY	
General Chemistry (µg/L)	DRY	

WP-LF10-MW07C	GW-01	Lab Qual.
Chemical		
Metals (µg/L)	DRY*	
General Chemistry (µg/L)	DRY*	

* Partial sample only – well went dry

WP-LF10-MW104	GW-01	Lab Qual.
Chemical		
Metals (µg/L)	DRY	
General Chemistry (µg/L)	DRY	

WP-01-004-M	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Arsenic	16,100	
Beryllium	ND	G
Cadmium	ND	G
Copper	ND	G
Iron	6,910,000	
Lead	ND	G
Zinc	ND	G
General Chemistry (µg/L)	ND	

WP-LF10-MW103	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Arsenic	47	
Cyanide	DRY*	
Iron	13,400	
Zinc	66	
General Chemistry (µg/L)	DRY*	

* Partial sample only – well went dry

WP-EW-1012	GW-01	Lab Qual.
Chemical		
DRY		

WP-LF10-MW09A	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Iron	1,800	
General Chemistry (µg/L)	ND	

WP-LF10-MW09B	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Arsenic	15	
Iron	7,800	
General Chemistry (µg/L)		
Ammonia	200	

WP-LF10-MW09C	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Arsenic	16	
Iron	6,700	
General Chemistry (µg/L)		
Ammonia	400	

WP-LF10-MW11A	GW-01	Lab Qual.	GW-DUP	Lab Qual.
Chemical				
Metals (µg/L)				
Iron	1,200		1,200	
General Chemistry (µg/L)	ND		ND	

WP-LF10-MW11B	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Iron	3,100	
General Chemistry (µg/L)	ND	

WP-LF10-MW105	GW-01	Lab Qual.
Chemical		
Metals (µg/L)	DRY*	
General Chemistry (µg/L)	DRY*	

* Partial sample only – well went dry

WP-01-DM-102D-M	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Iron	2,500	
Lead	4	
General Chemistry (µg/L)	ND	

WP-01-DM-102S-M	GW-01	Lab Qual.
Chemical		
Metals (µg/L)	DRY	
General Chemistry (µg/L)	DRY	

WP-LF10-MW03A	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Copper	34	
Iron	7,500	
Lead	9.9	
General Chemistry (µg/L)		
Ammonia	200	

WP-LF10-MW06A	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Iron	140	
General Chemistry (µg/L)		
Ammonia	700	

WP-LF10-MW06A DUP*	GW-01	Lab Qual.
Chemical		
Metals (µg/L)	DRY	
General Chemistry (µg/L)	DRY	

* MW06A DUP is a separate well

WP-LF10-MW06B	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Iron	880	
Lead	4	
General Chemistry (µg/L)	ND	

WP-LF10-MW102	GW-01	Lab Qual.
Chemical		
Metals (µg/L)	DRY	
General Chemistry (µg/L)	DRY	

WP-LF10-MW08A-2	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Iron	1,500	
General Chemistry (µg/L)	ND	

WP-LF10-MW08B	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Iron	1,000	
General Chemistry (µg/L)	ND	

WP-LF10-MW10C	GW-01	Lab Qual.
Chemical		
Metals (µg/L)		
Iron	1,800	
General Chemistry (µg/L)	ND	

LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL LOCATION
- ND NOT DETECTED
- NS NOT SAMPLED
- 4.2 INORGANIC CONCENTRATION (µg/L)(RED=>MCL AND/OR ROD COMPLIANCE LEVEL)

N

0 100 200 300 600 FEET

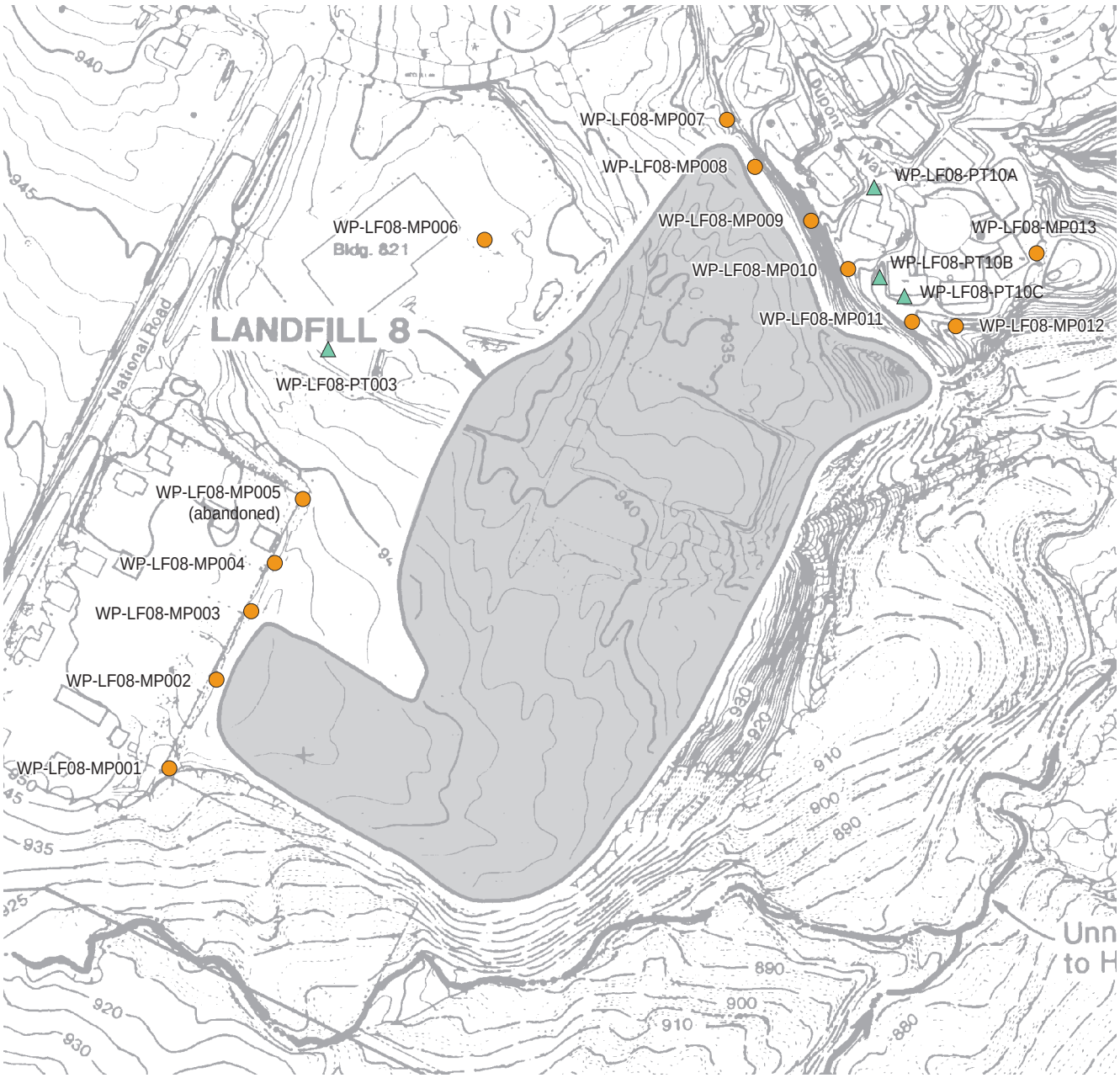
Figure 2-10
Landfill 10
Detected Inorganic Chemicals of Concern:
October 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN	1/30/01
CHECKED BY	GP	1/30/01
APPROVED BY	JT	
DRAWING NUMBER	2001 05-06.DWG	



0 100 200
feet

N

WP-LF08-PT003 LFG Punchbar Location

WP-LF08-MP005 LFG Monitoring Probe Location

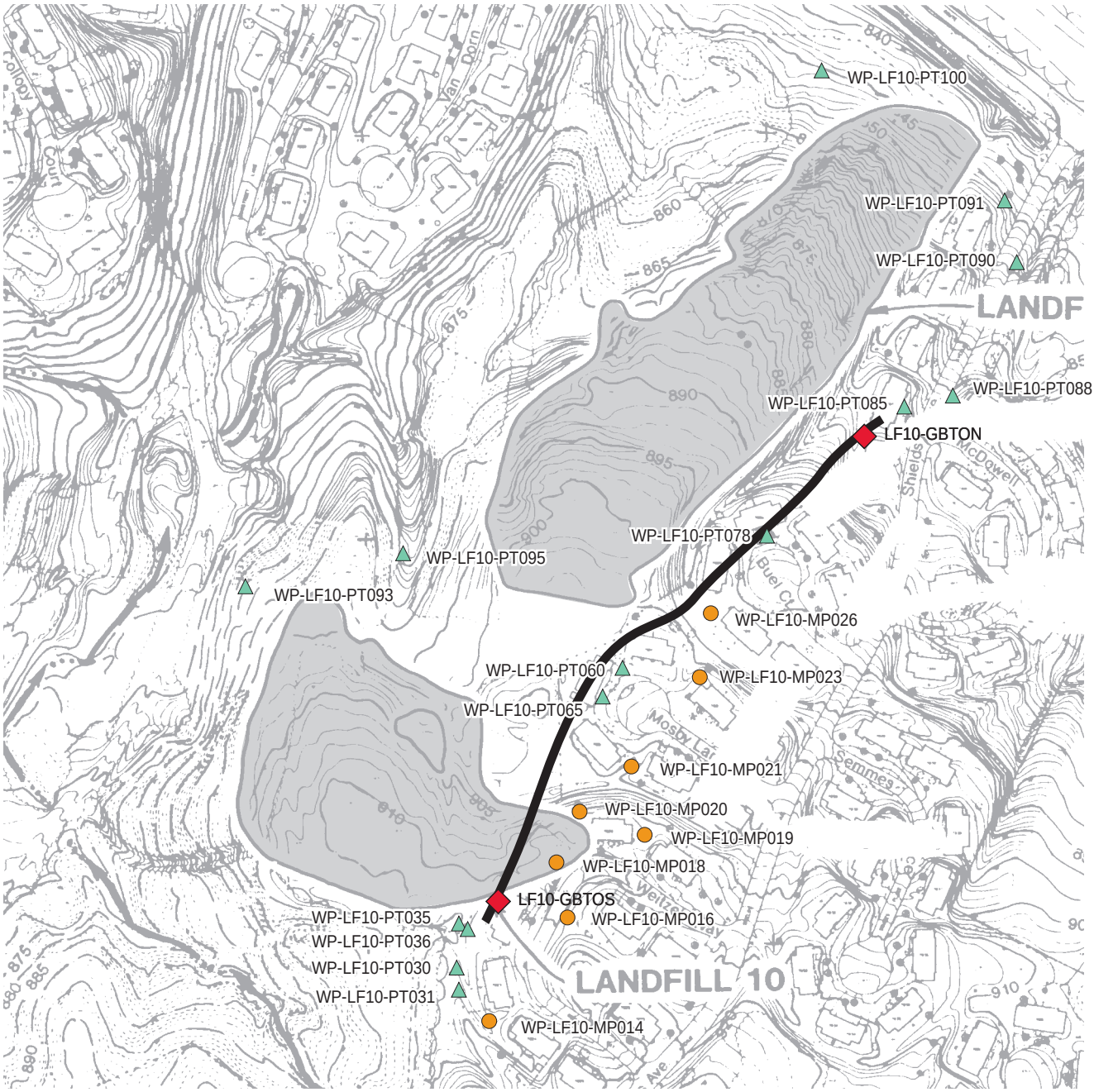
Approximate Landfill Boundary

IT CORPORATION

Figure 2-11. Landfill 8 Landfill Gas Monitoring Locations

Prepared for
Wright-Patterson Air Force Base
Dayton, Ohio

DRAWING NO.	
S-322505-3-6-4-3/94-2	
2/5/01	2/5/01
MWC	GDP
CHECKED BY	APPROVED BY
JIS, III	3/29/94
DRAWING BY	



LF10-GBTOS	Gas Barrier Trench Monitoring Point
WP-LF10-PT100	LFG Punchbar
WP-LF10-MP014	LFG Monitoring Probe
	Gas Barrier Trench
	Approximate Landfill Boundary

0 100 200
feet

N

Figure 2-12. Landfill 10 Landfill Gas Monitoring Locations

Prepared for
Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION

DRAWING NO.	CHECKED BY	APPROVED BY	DRAWING BY
S-322505-3-6-4-3/94-2	MWC	GDP	JIS,
2/5/		2/5/0	3/29/

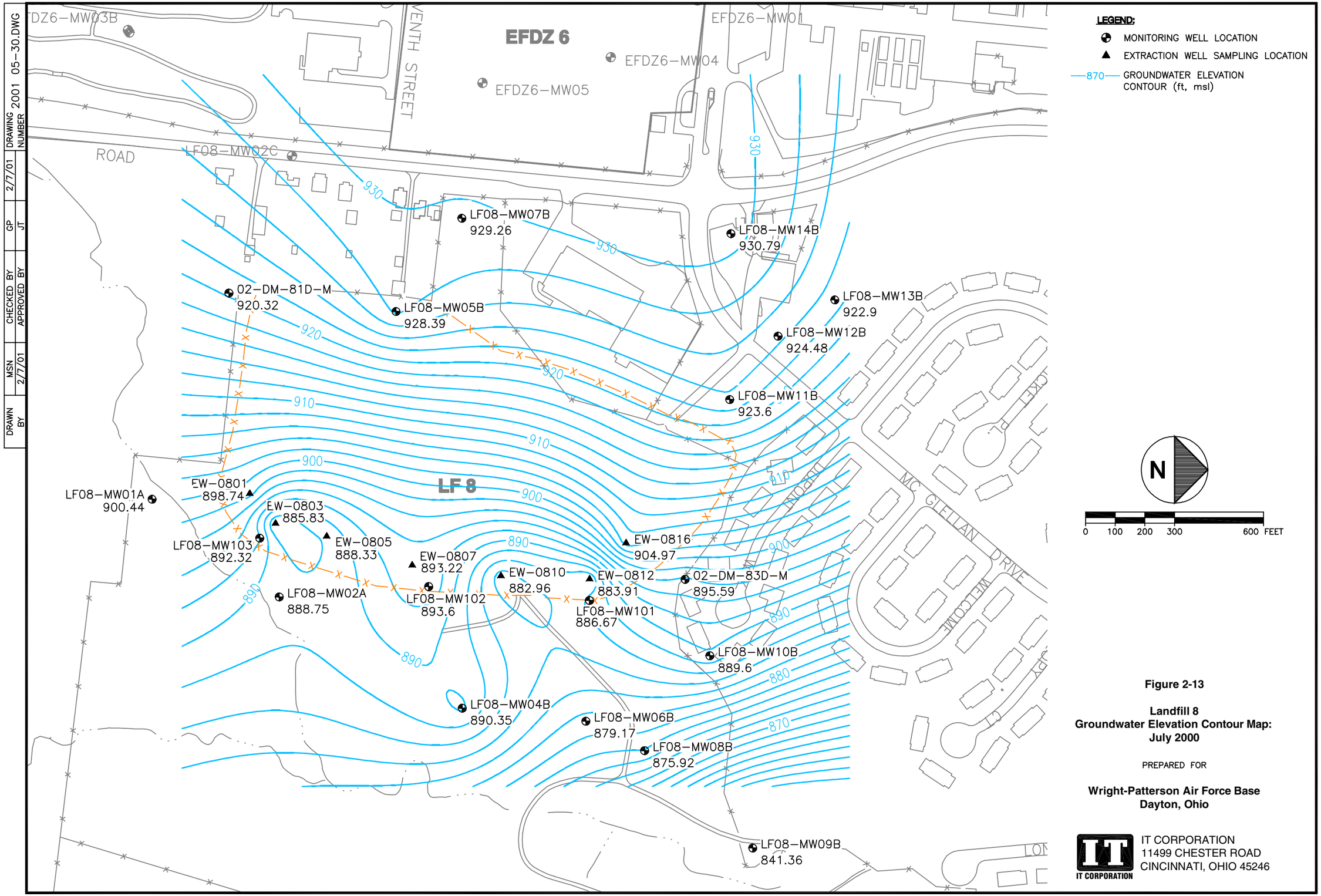


Figure 2-13

Landfill 8
Groundwater Elevation Contour Map:
July 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN 2/7/01	CHECKED BY / APPROVED BY	GP / JT	2/7/01	DRAWING NUMBER 2001 05-30.DWG

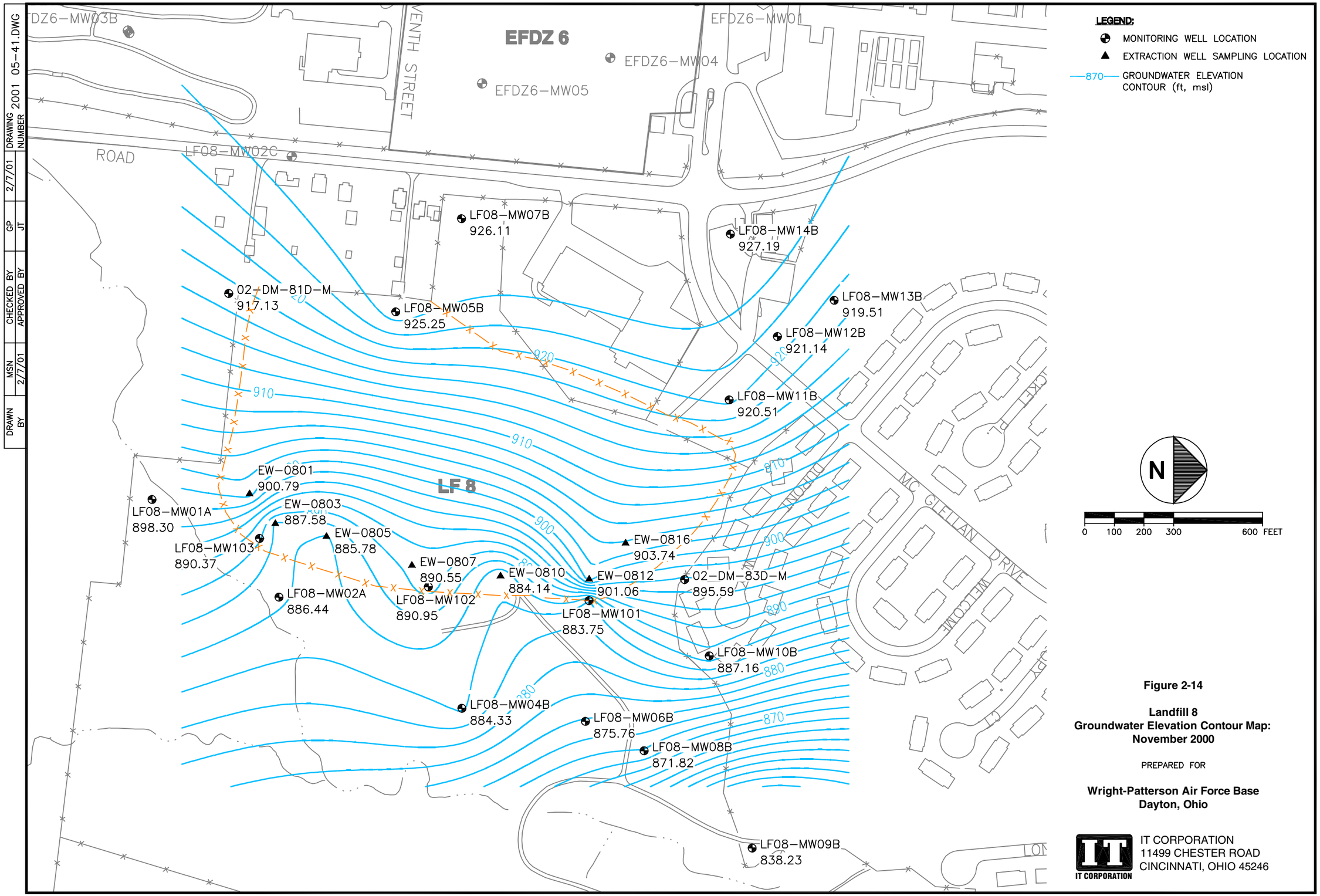
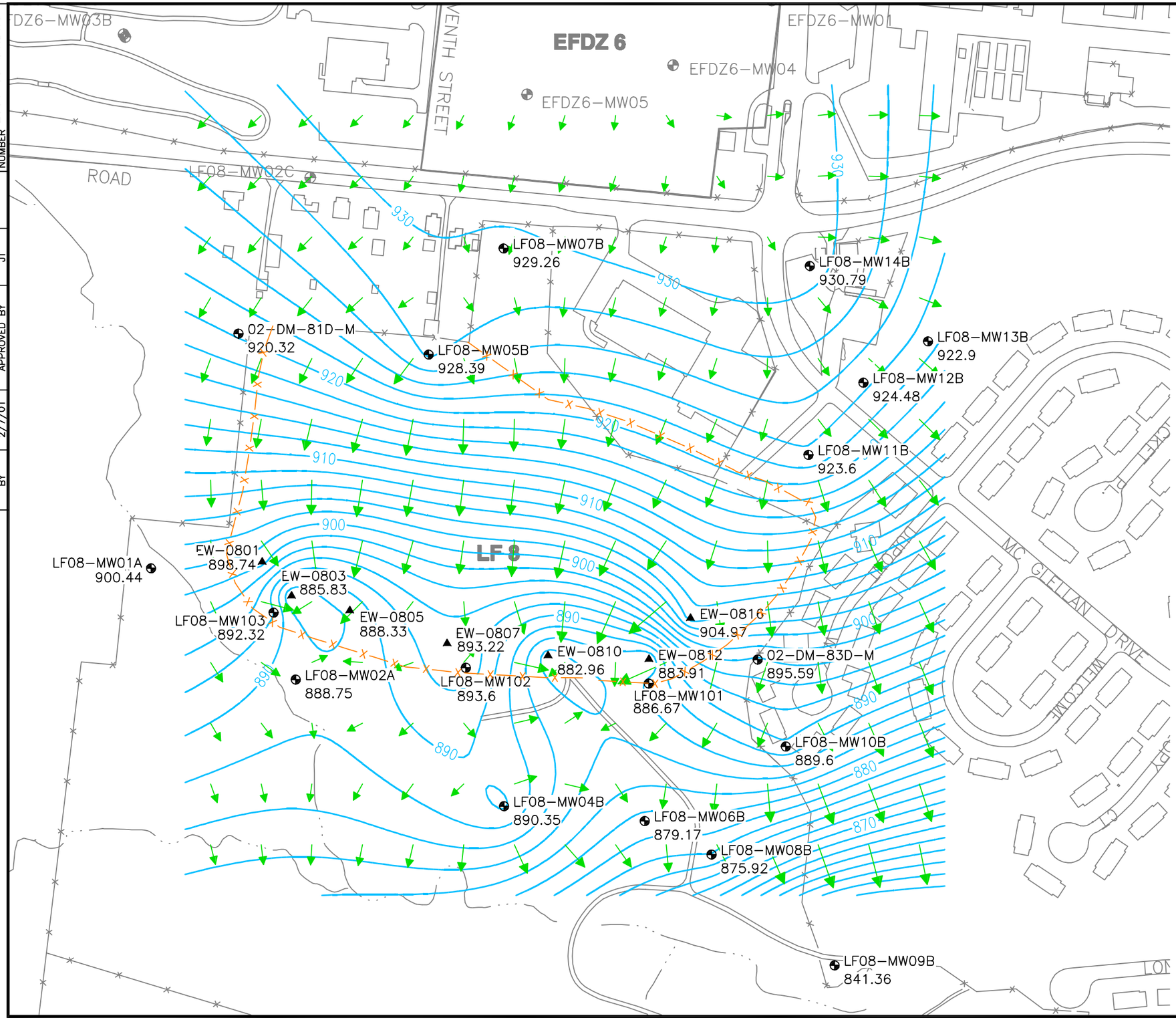


Figure 2-14

Landfill 8
Groundwater Elevation Contour Map:
November 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio



LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL SAMPLING LOCATION
- 870 GROUNDWATER ELEVATION CONTOUR (ft, msl)
- GROUNDWATER FLOW VELOCITY VECTOR

N

0 100 200 300 600 FEET

Figure 2-15

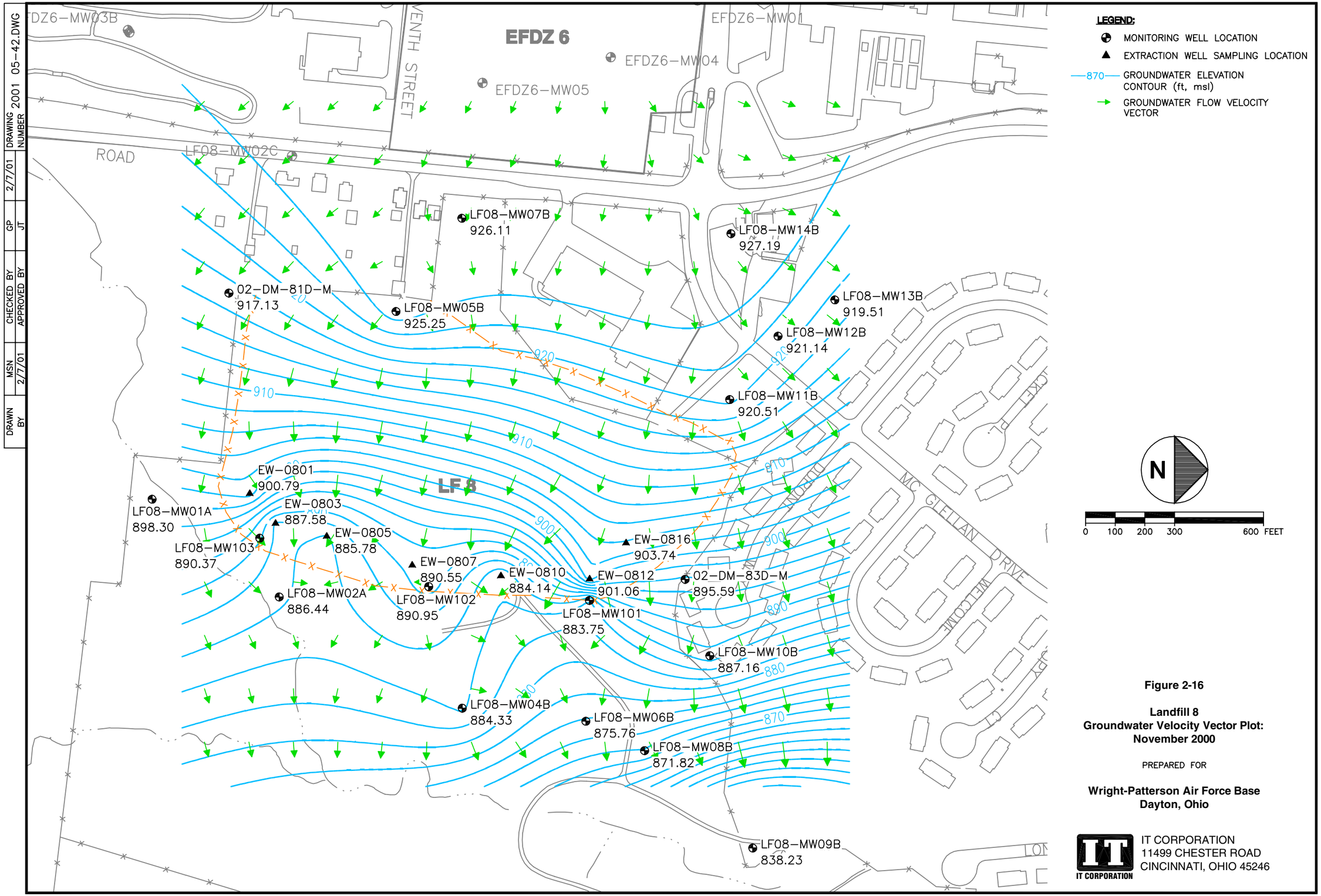
Landfill 8
Groundwater Velocity Vector Plot:
July 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN 2/7/01	CHECKED BY	GP	2/7/01	DRAWING NUMBER 2001 05-31.DWG
		APPROVED BY	JT		



LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL SAMPLING LOCATION
- 870 GROUNDWATER ELEVATION CONTOUR (ft, msl)
- GROUNDWATER FLOW VELOCITY VECTOR

Figure 2-16

Landfill 8
Groundwater Velocity Vector Plot:
November 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN 2/7/01	CHECKED BY / APPROVED BY	GP / JT	2/7/01	DRAWING NUMBER 2001 05-42.DWG

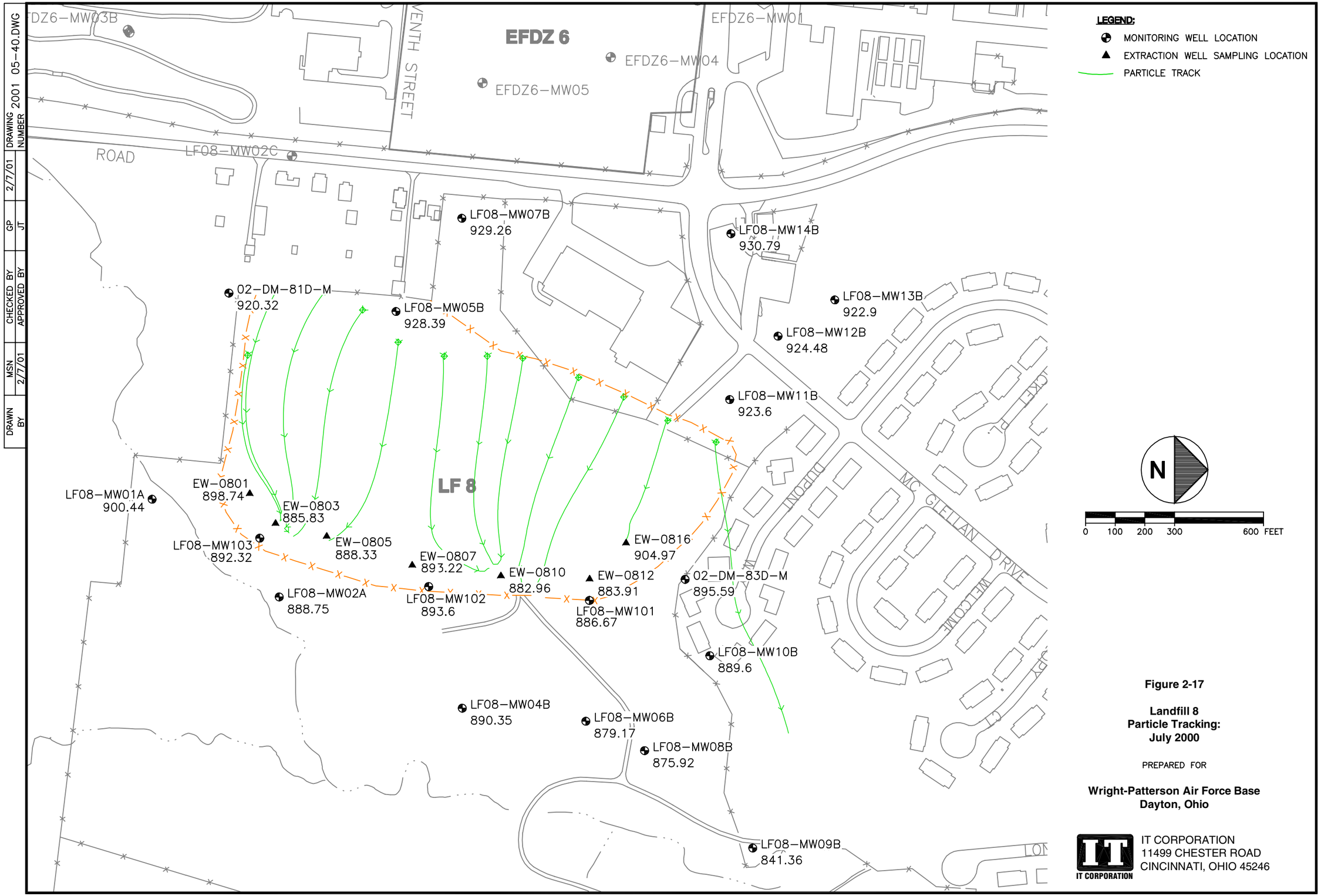


Figure 2-17

Landfill 8
Particle Tracking:
July 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN 2/7/01	CHECKED BY / APPROVED BY	GP / JT	2/7/01	DRAWING NUMBER 2001 05-40.DWG

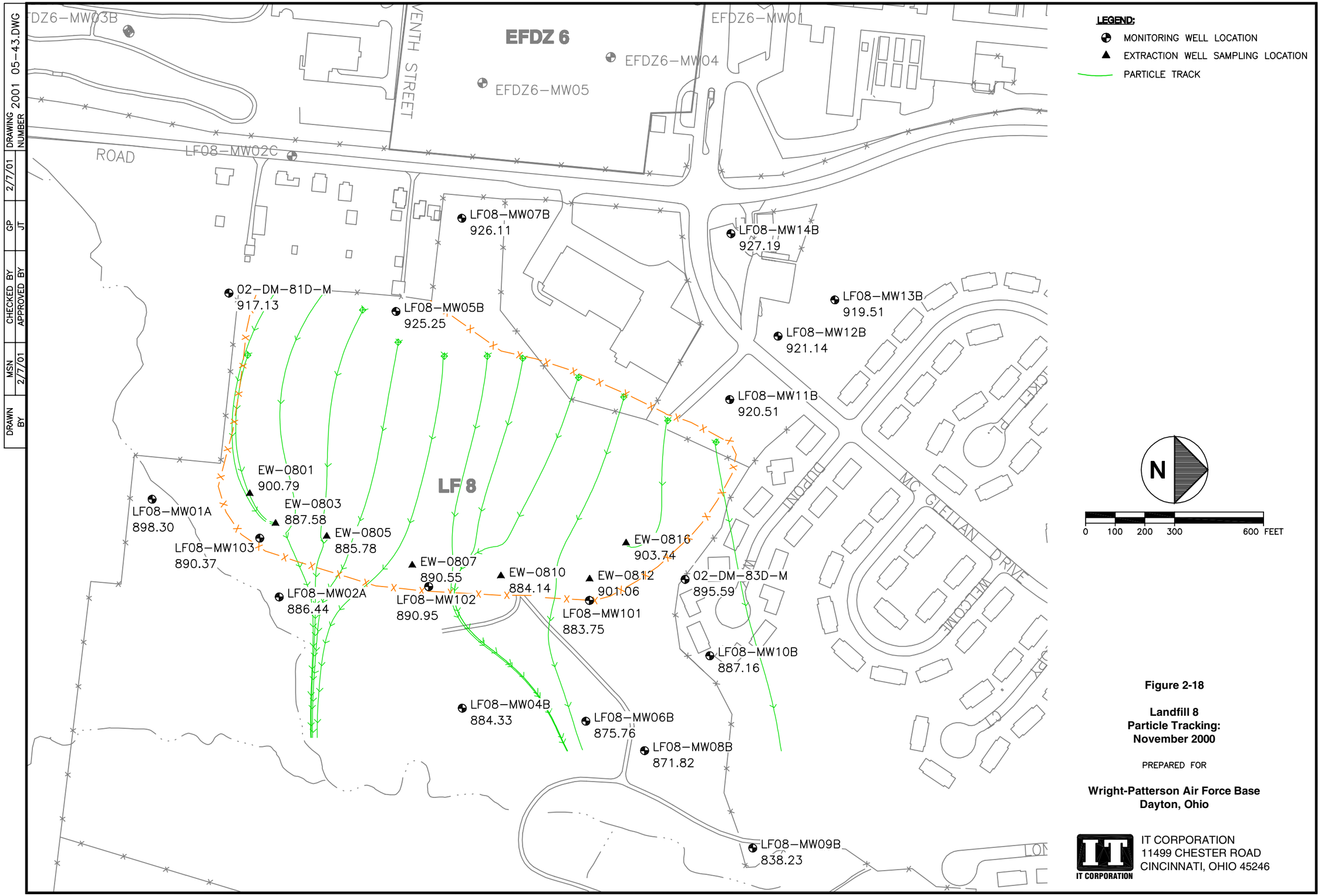


Figure 2-18

Landfill 8
Particle Tracking:
November 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWING NUMBER 2001 05-44.DWG

DRAWN BY	MSN	CHECKED BY	GP	2/7/01
	2/7/01	APPROVED BY	JT	

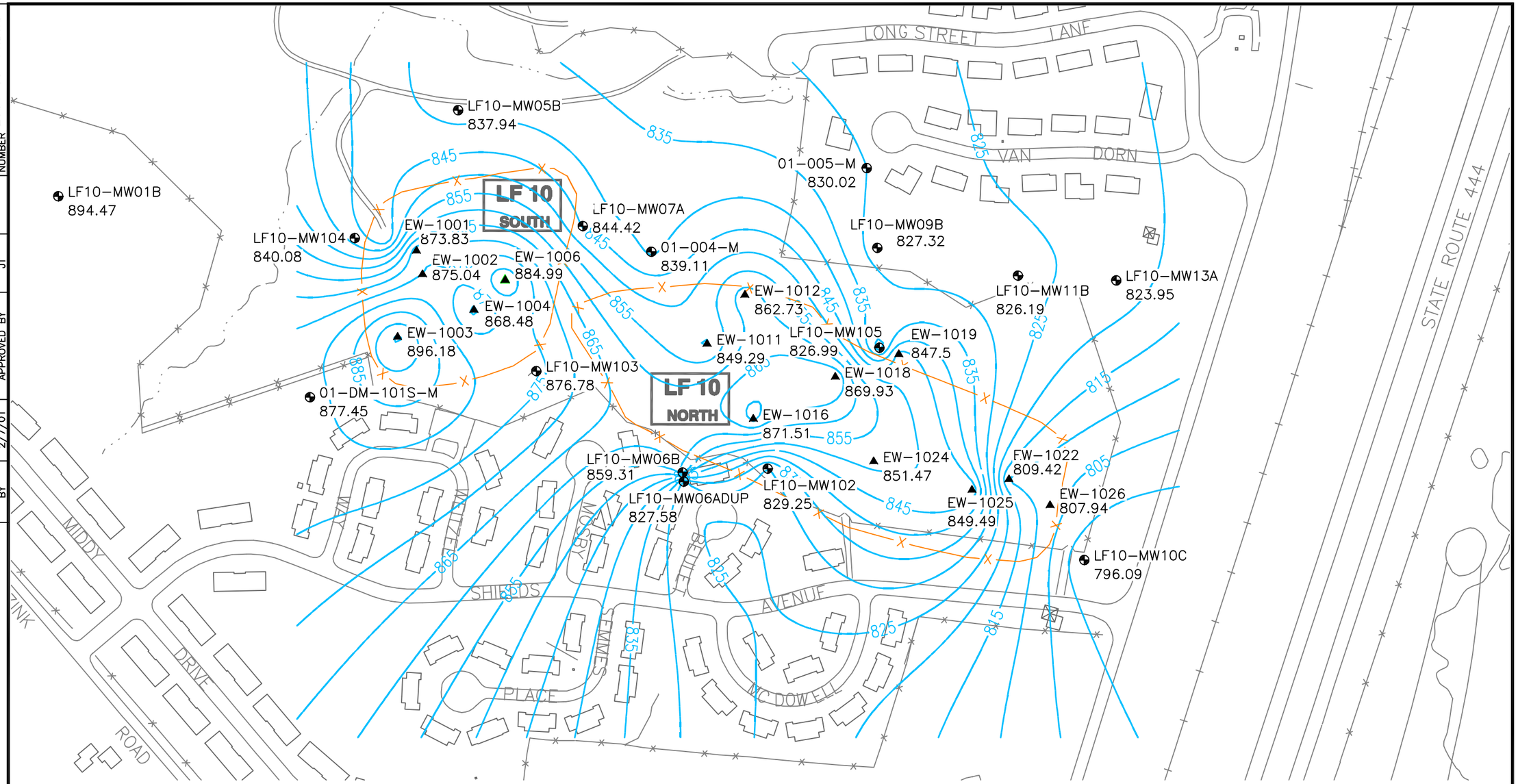


Figure 2-19

Landfill 10
Groundwater Elevation Contour Map:
July 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL SAMPLING LOCATION
- —815— GROUNDWATER ELEVATION CONTOUR (ft, msl)

N

SCALE: 1"=200'

0 50 100 150 200 400 FEET

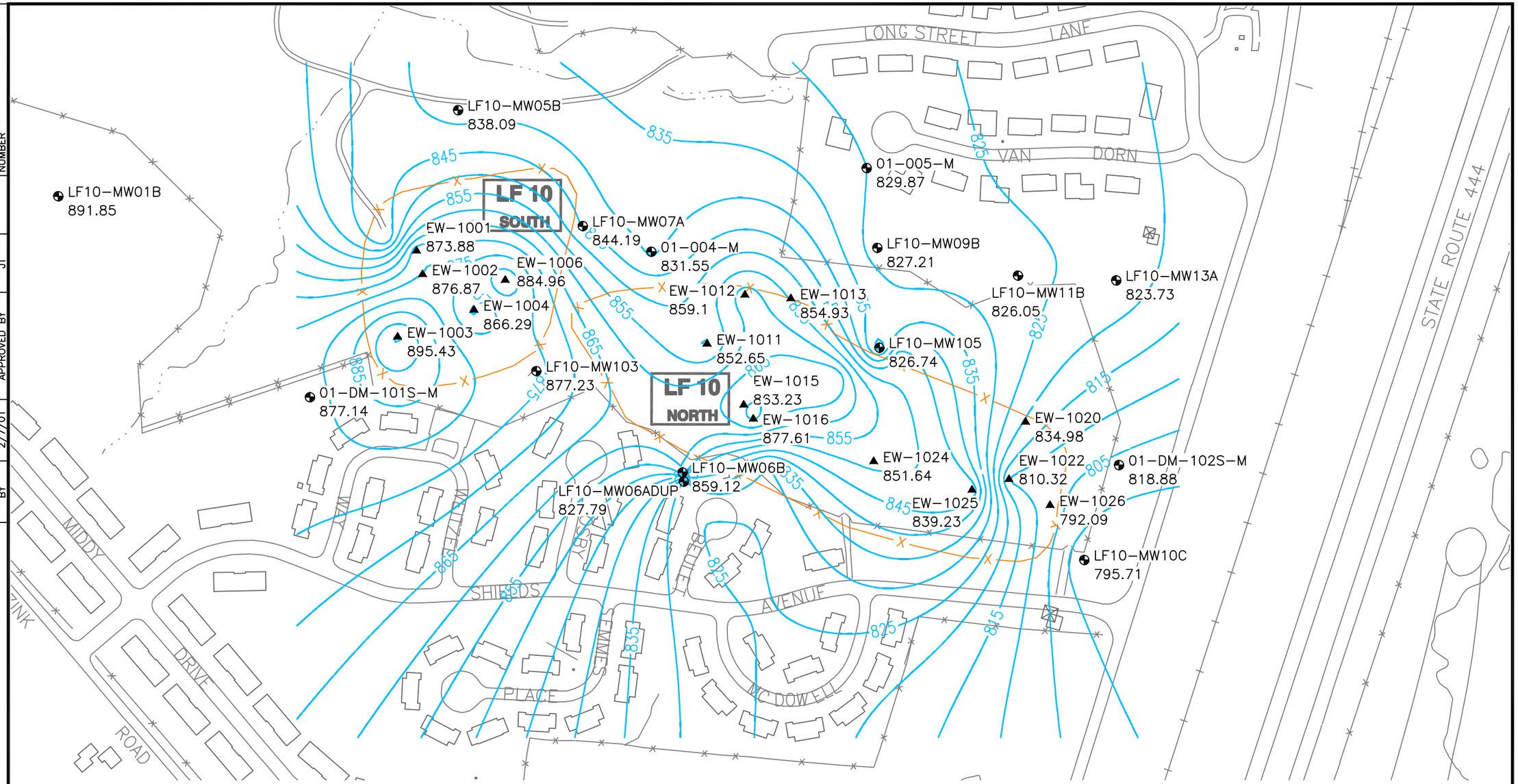


Figure 2-20

Landfill 10
Groundwater Elevation Contour Map:
November 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL SAMPLING LOCATION
- 815 GROUNDWATER ELEVATION CONTOUR (ft, msl)

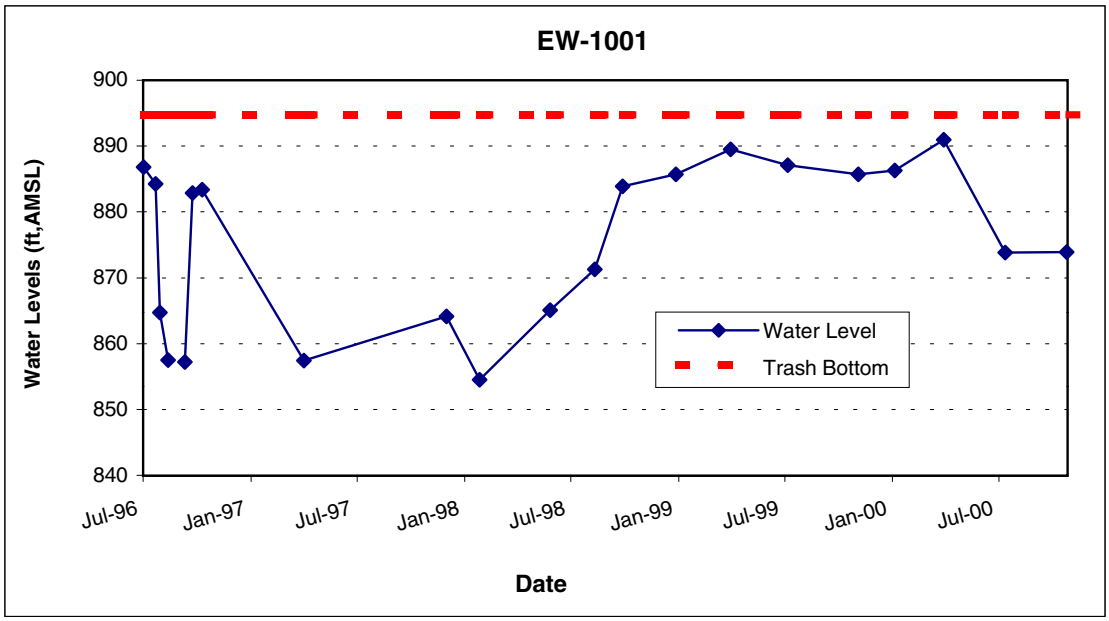
N

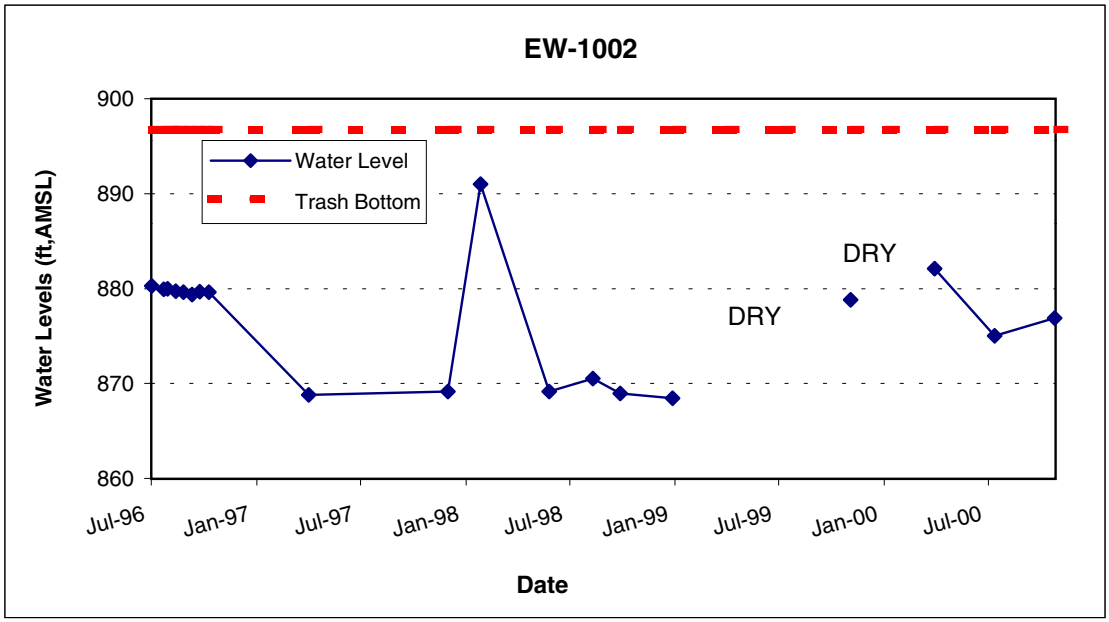
SCALE: 1"=200'

0 50 100 150 200 400 FEET

DRAWN BY	MSN	2/7/01	CHECKED BY	GP	2/7/01	DRAWING NUMBER	2001 05-45.DWG
			APPROVED BY	JT			

LANDFILL 10 WATER LEVEL ELEVATION GRAPHS
Extraction Wells: EW-1001 and EW-1002
WPAFB - LTM Program

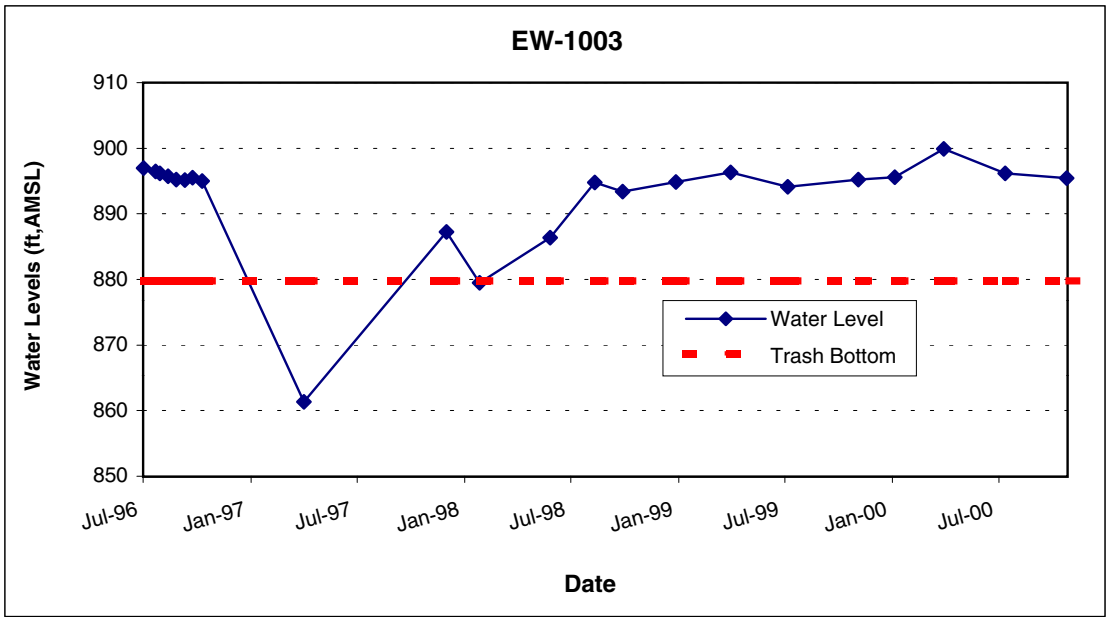




n:\3\777097\October00\IntrnlDraft\Figures\OU1\October00LF10gra.xls\1001-2

FIGURE 2-21

LANDFILL 10 WATER LEVEL ELEVATION GRAPHS
Extraction Wells: EW-1003 and EW-1004
WPAFB - LTM Program



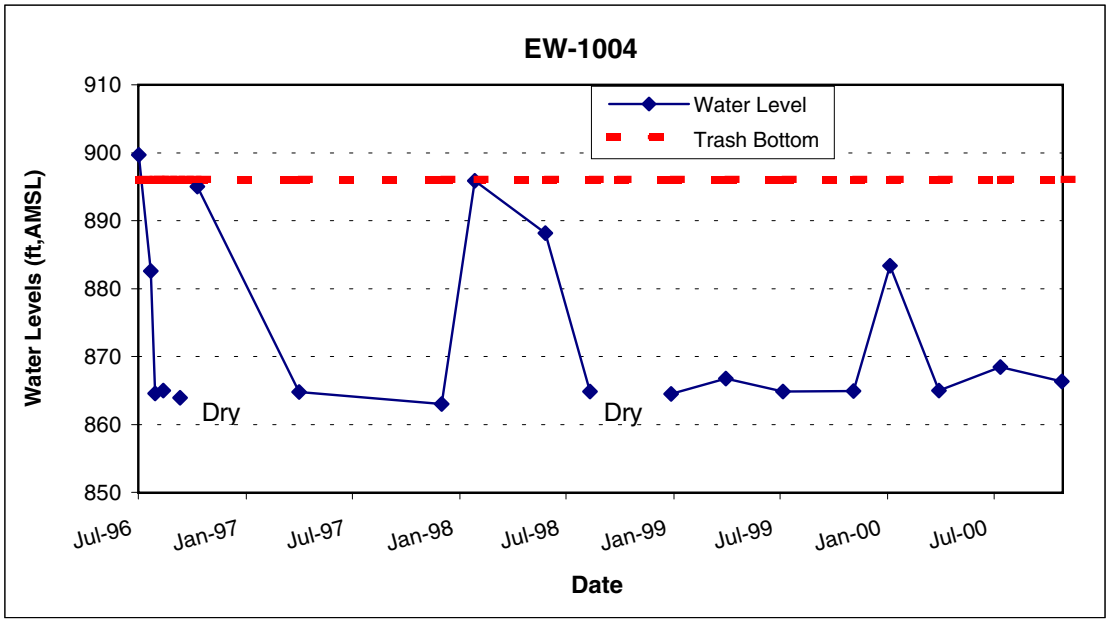
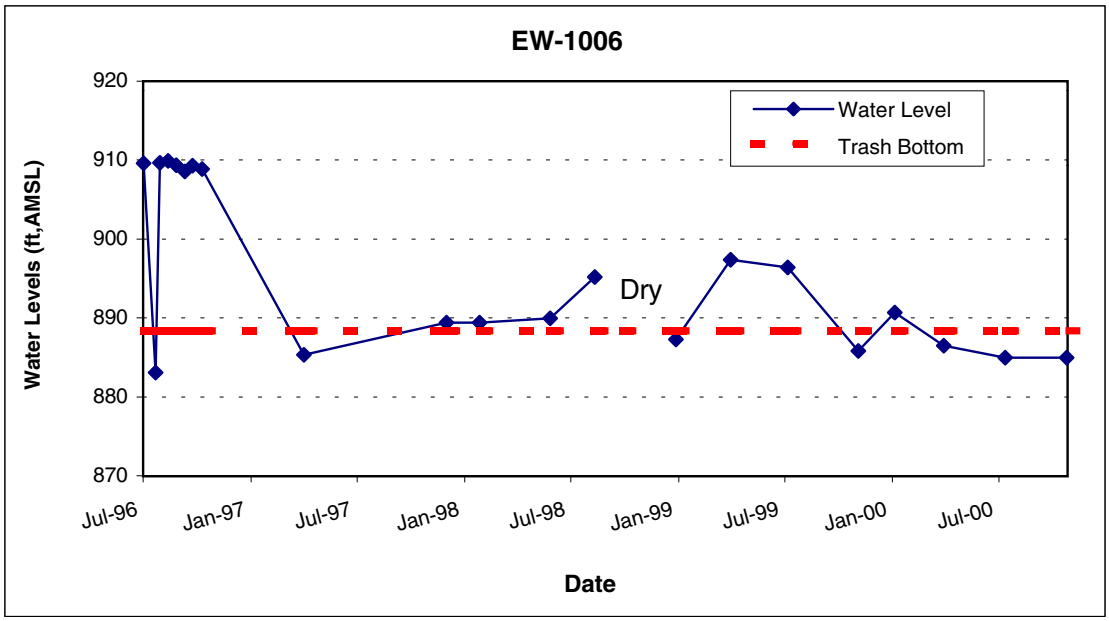
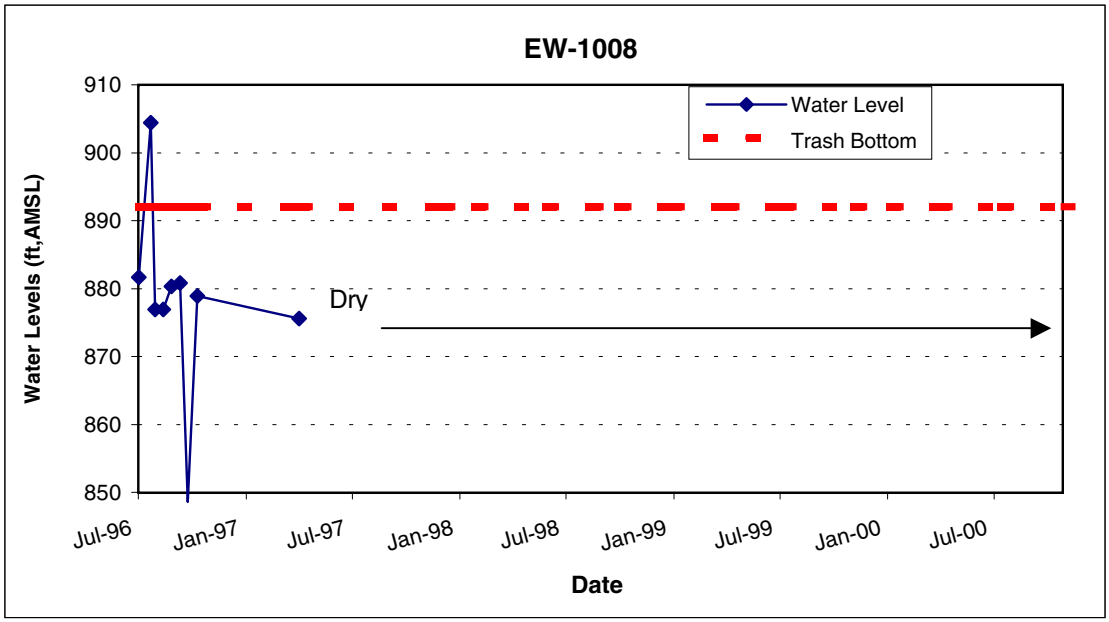


FIGURE 2-22

LANDFILL 10 WATER LEVEL ELEVATION GRAPHS
Extraction Wells: EW-1006 and EW-1008
WPAFB - LTM Program

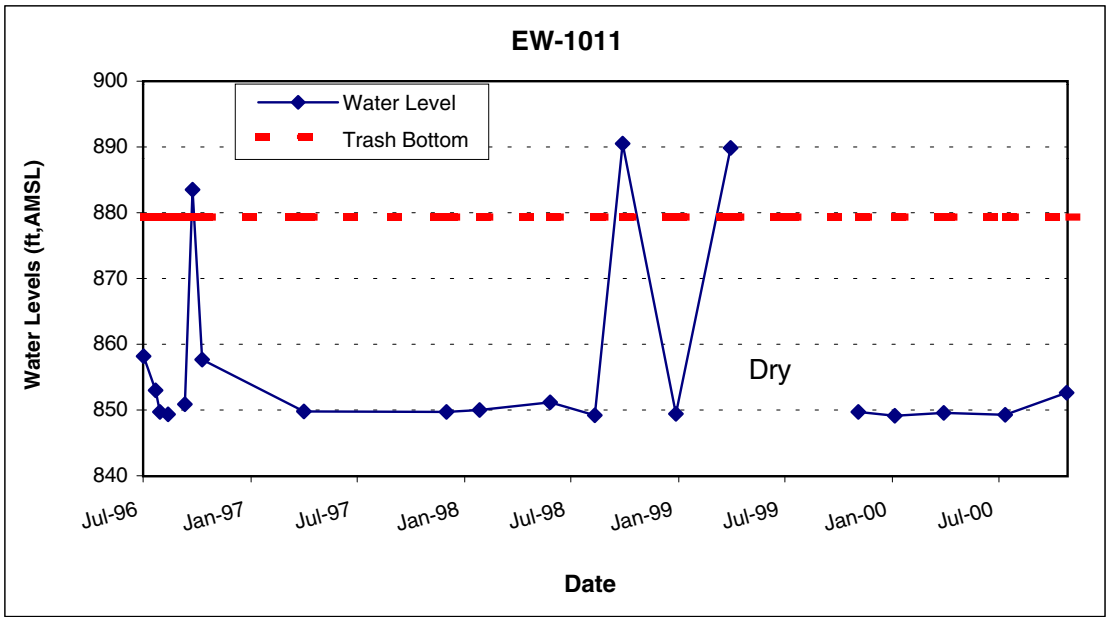


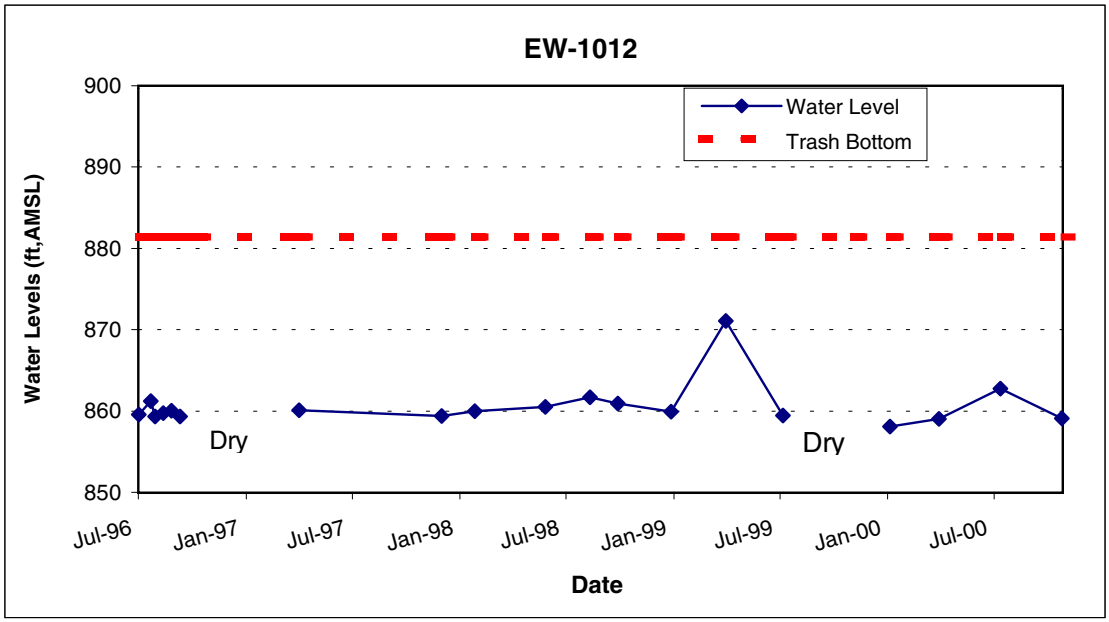


n:\3\777097\October00\IntrnlDraft\Figures\OU1\October00LF10gra.xls\1006-8

FIGURE 2-23

LANDFILL 10 WATER LEVEL ELEVATION GRAPHS
Extraction Wells: EW-1011 and EW-1012
WPAFB - LTM Program

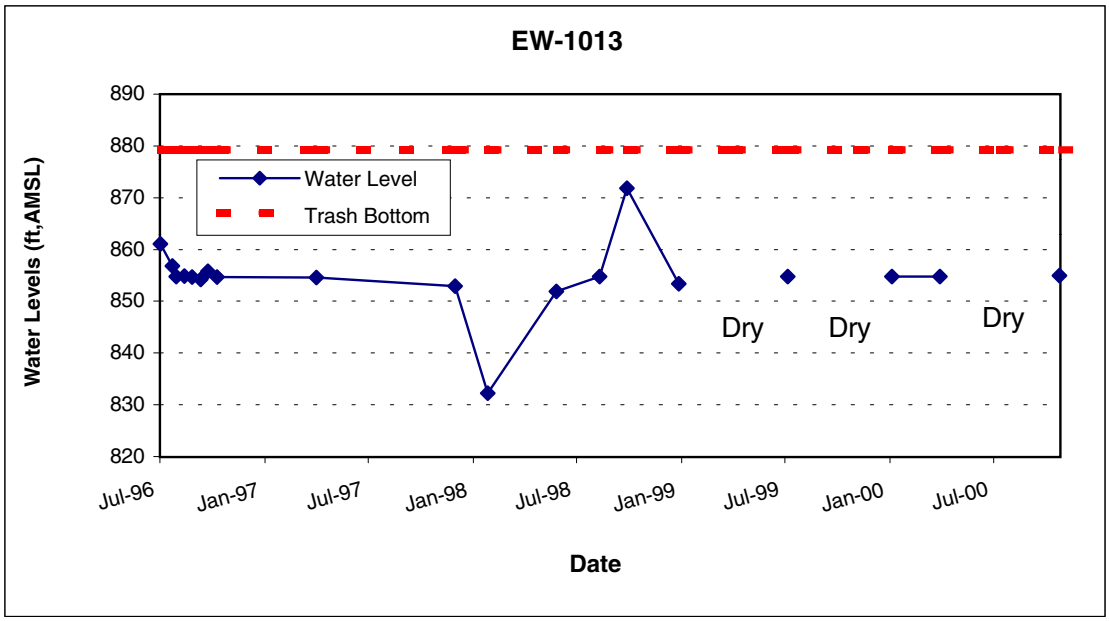


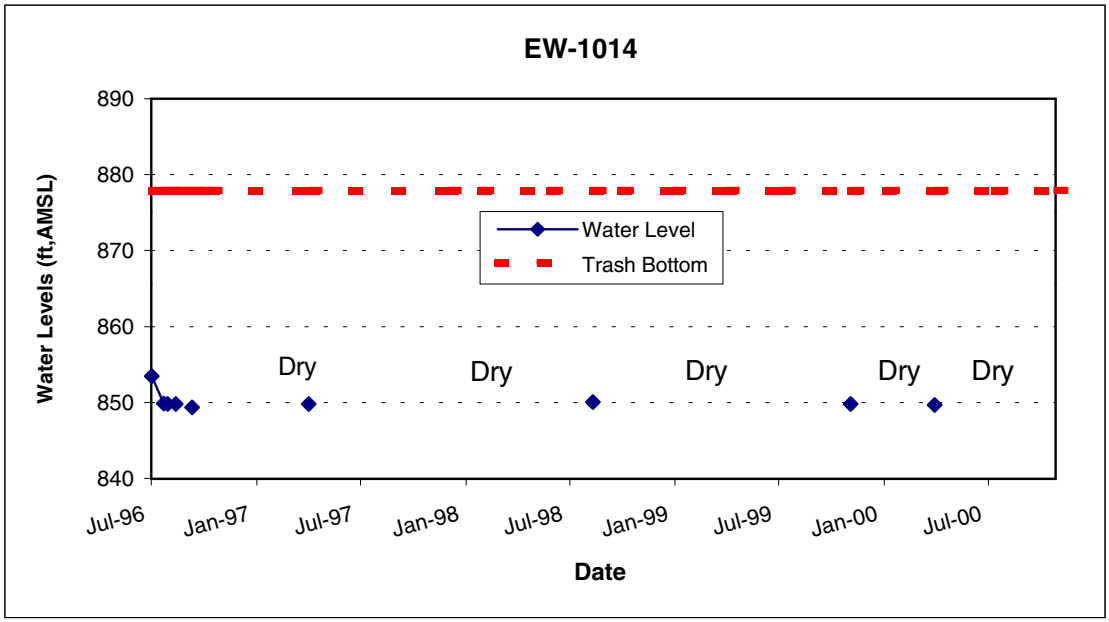


n:\3\777097\October00\IntrnlDraft\Figures\OU1\October00LF10gra.xls\1011-12

FIGURE 2-24

LANDFILL 10 WATER LEVEL ELEVATION GRAPHS
Extraction Wells: EW-1013 and EW-1014
WPAFB - LTM Program

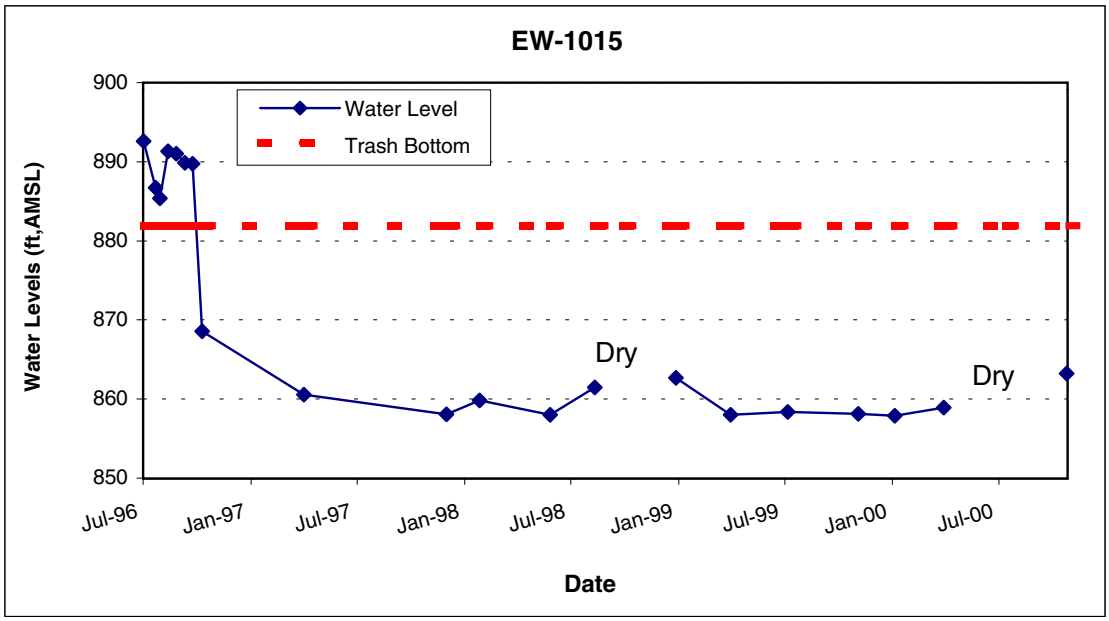


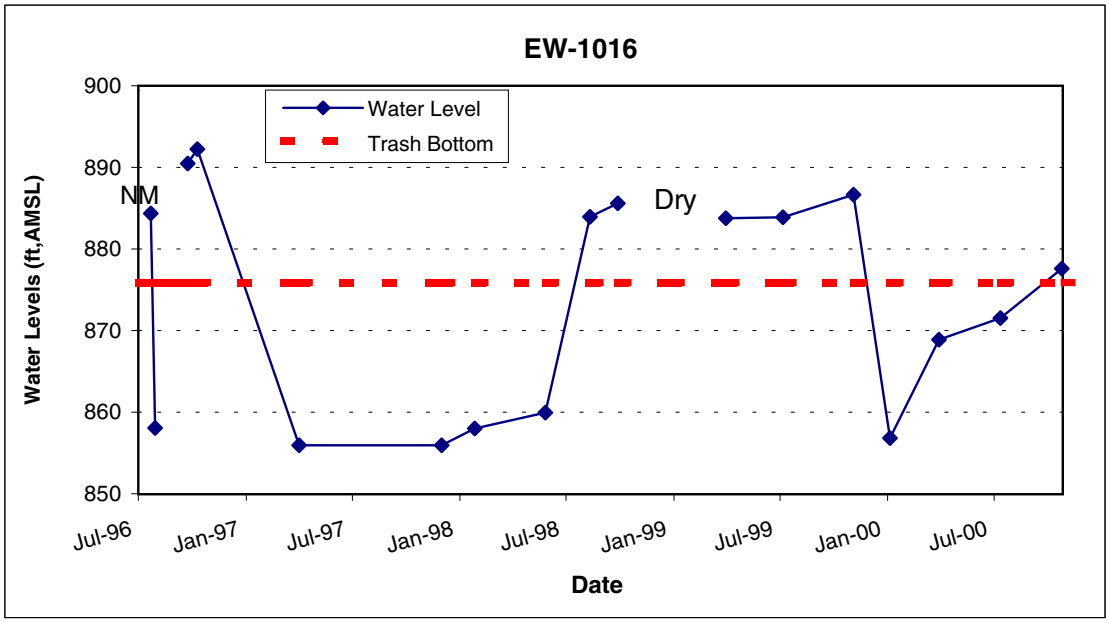


n:\3\777097\October00\IntrnlDraft\Figures\OU1\October00LF10gra.xls\1013-14

FIGURE 2-25

LANDFILL 10 WATER LEVEL ELEVATION GRAPHS
Extraction Wells: EW-1015 and EW-1016
WPAFB - LTM Program

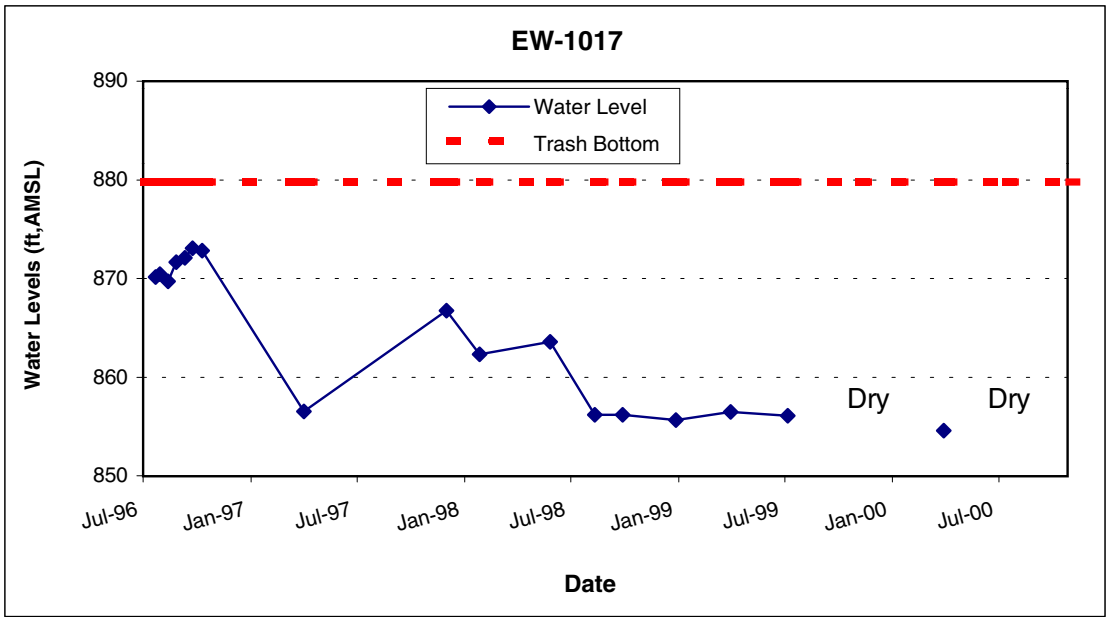


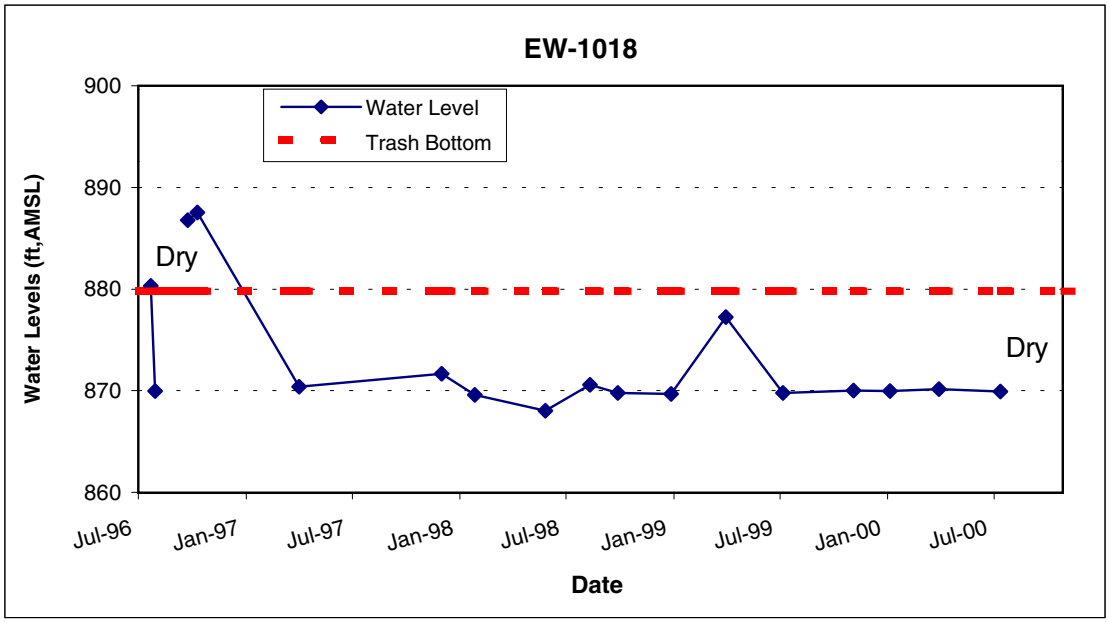


n:\3\777097\October00\IntrnlDraft\Figures\OU1\October00LF10gra.xls\1015-16

FIGURE 2-26

LANDFILL 10 WATER LEVEL ELEVATION GRAPHS
Extraction Wells: EW-1017 and EW-1018
WPAFB - LTM Program

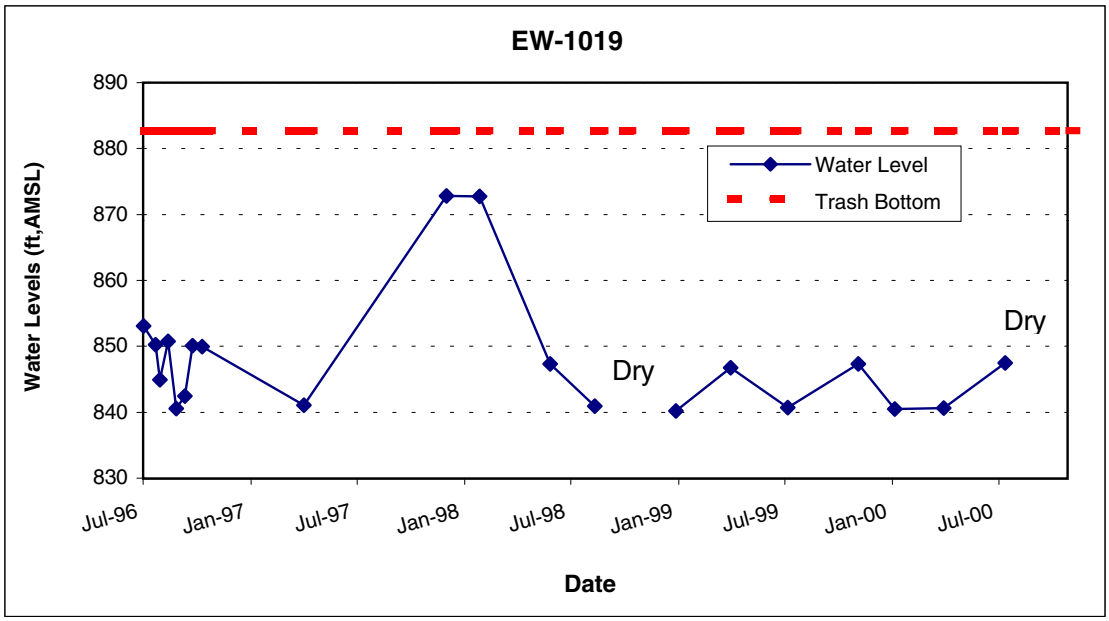


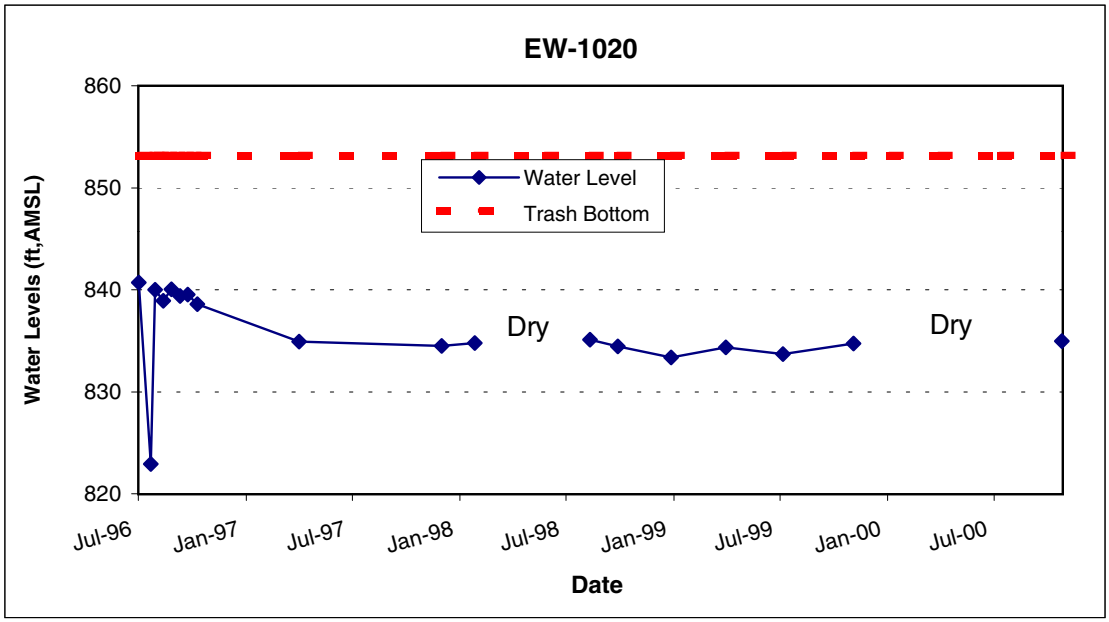


n:\3\777097\October00\IntrnlDraft\Figures\OU1\October00LF10gra.xls\1017-18

FIGURE 2-27

LANDFILL 10 WATER LEVEL ELEVATION GRAPHS
Extraction Wells: EW-1019 and EW-1020
WPAFB - LTM Program

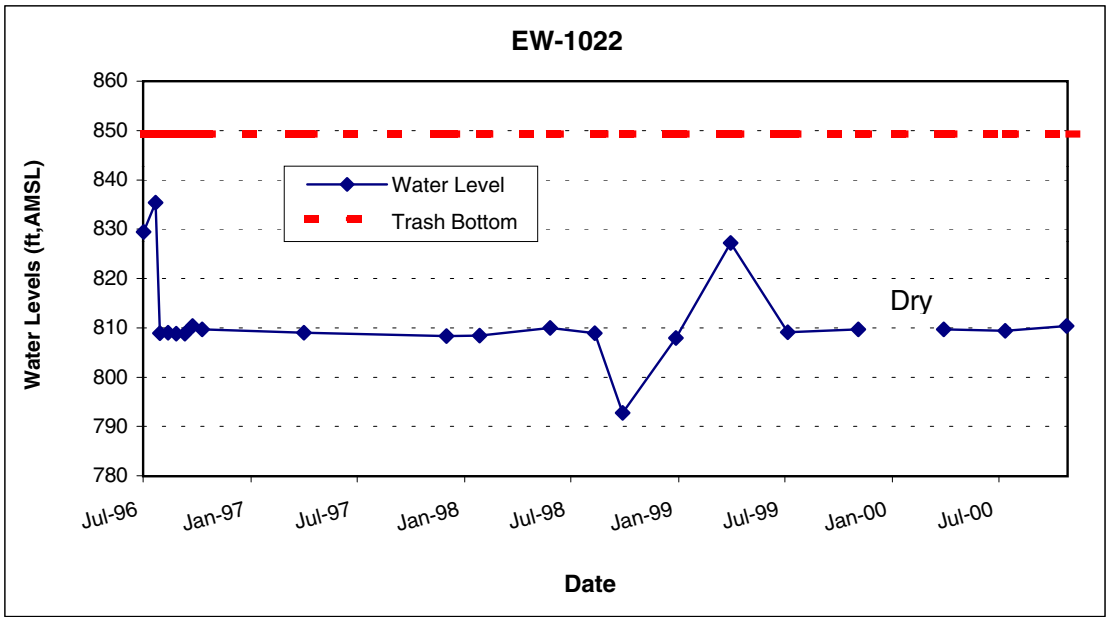


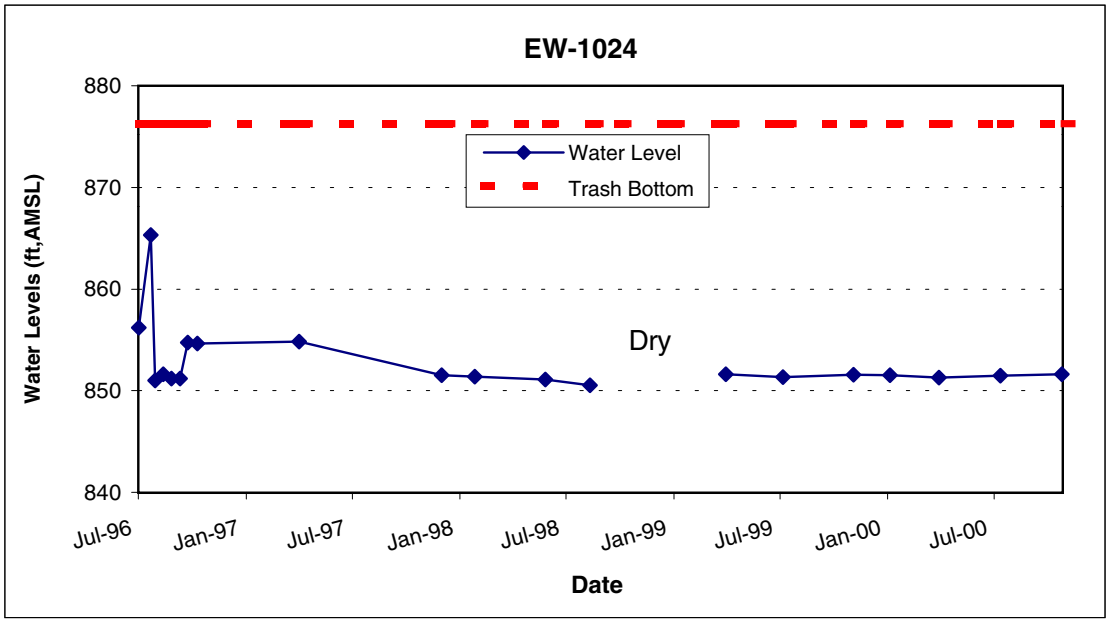


n:\3\777097\October00\IntrnlDraft\Figures\OU1\October00LF10gra.xls\1019-20

FIGURE 2-28

LANDFILL 10 WATER LEVEL ELEVATION GRAPHS
Extraction Wells: EW-1022 and EW-1024
WPAFB - LTM Program

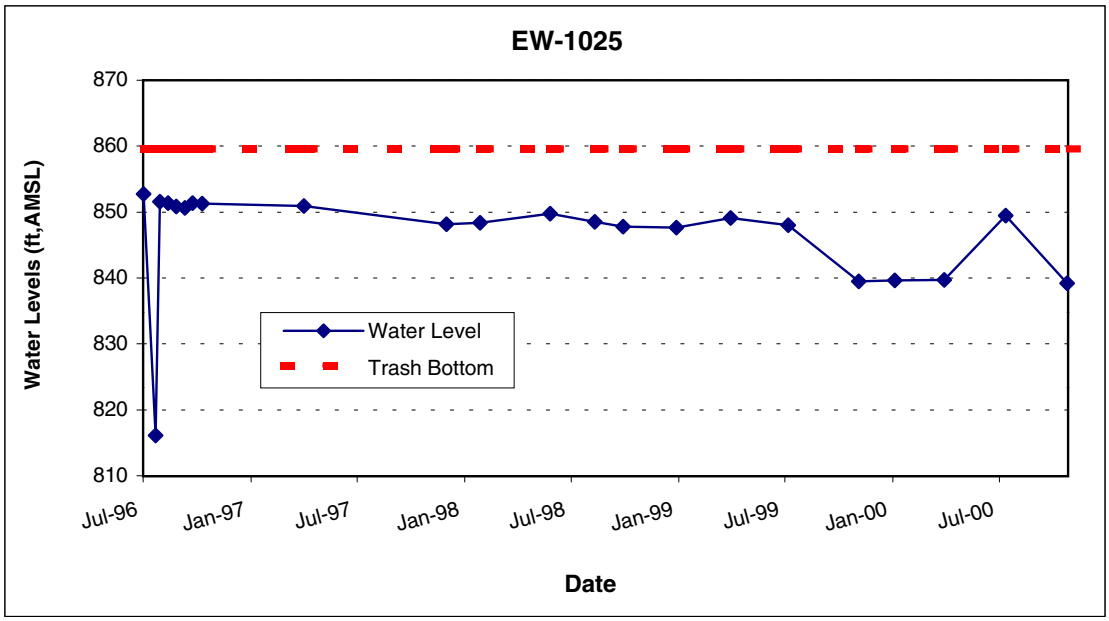




n:\3\777097\October00\IntrnlDraft\Figures\OU1\October00LF10gra.xls\1022-24

FIGURE 2-29

LANDFILL 10 WATER LEVEL ELEVATION GRAPHS
Extraction Wells: EW-1025 and EW-1026
WPAFB - LTM Program



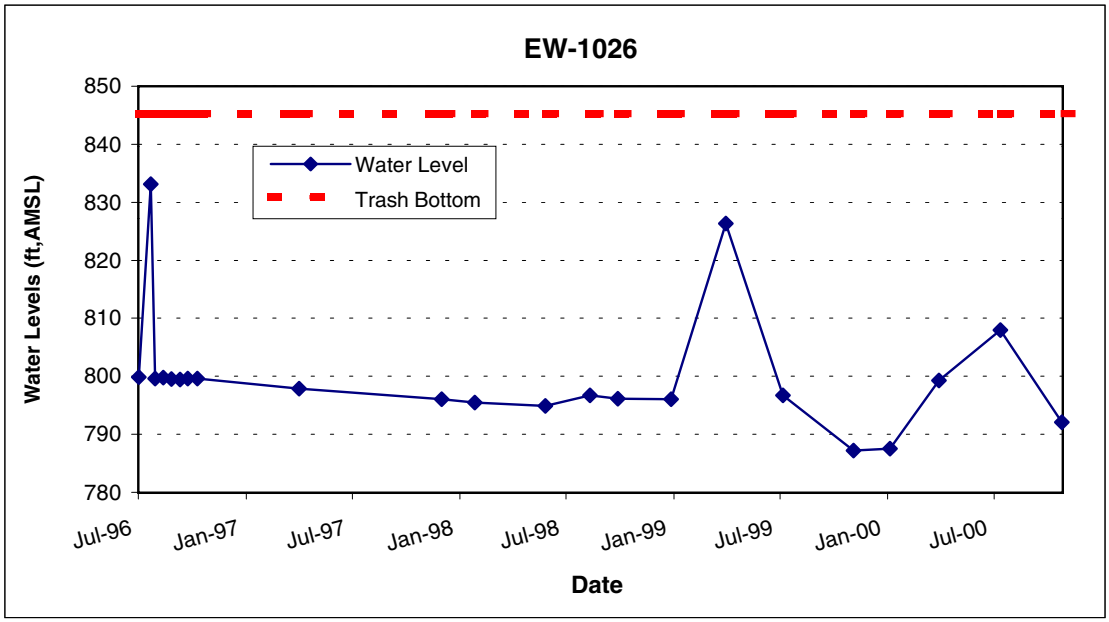


FIGURE 2-30

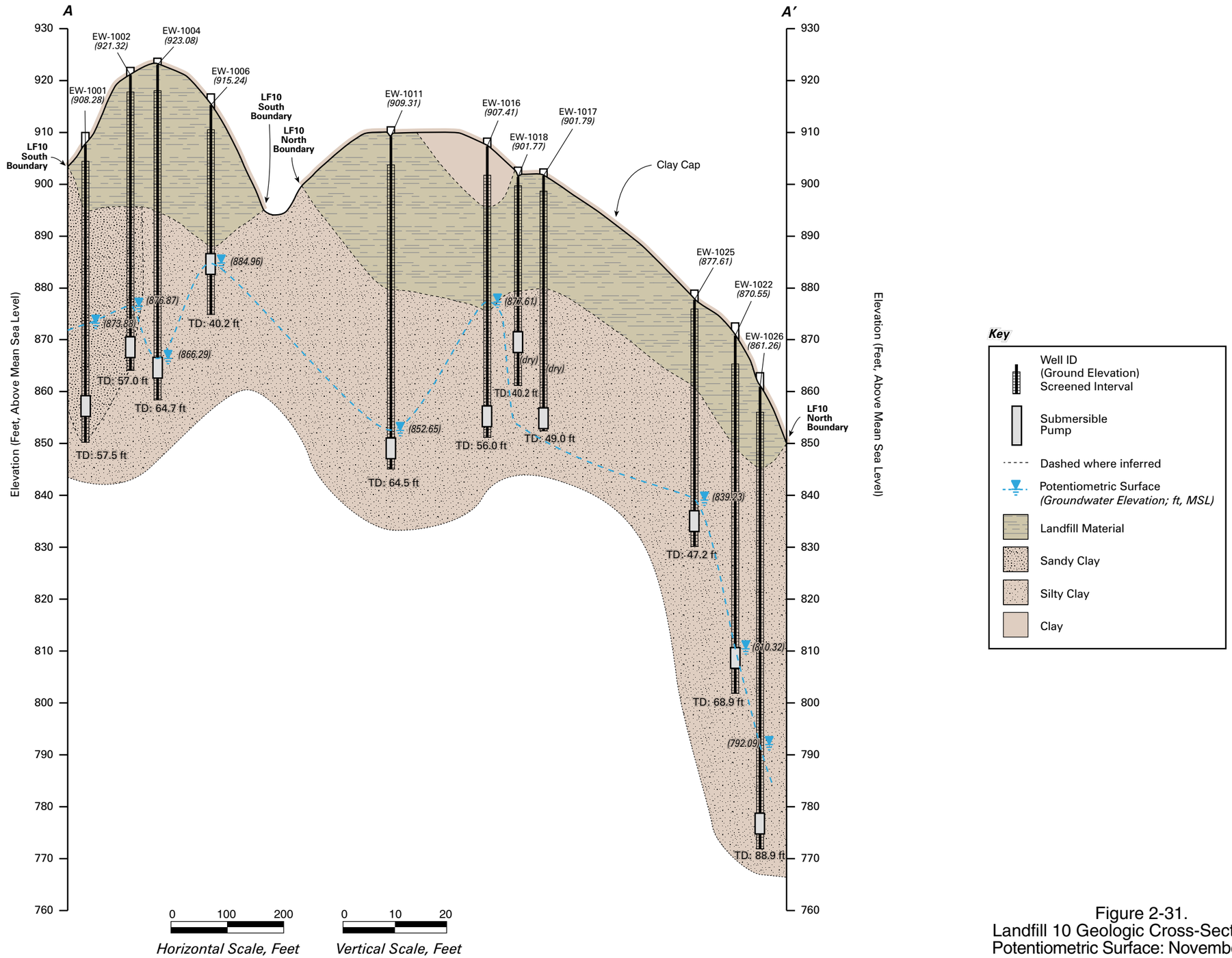
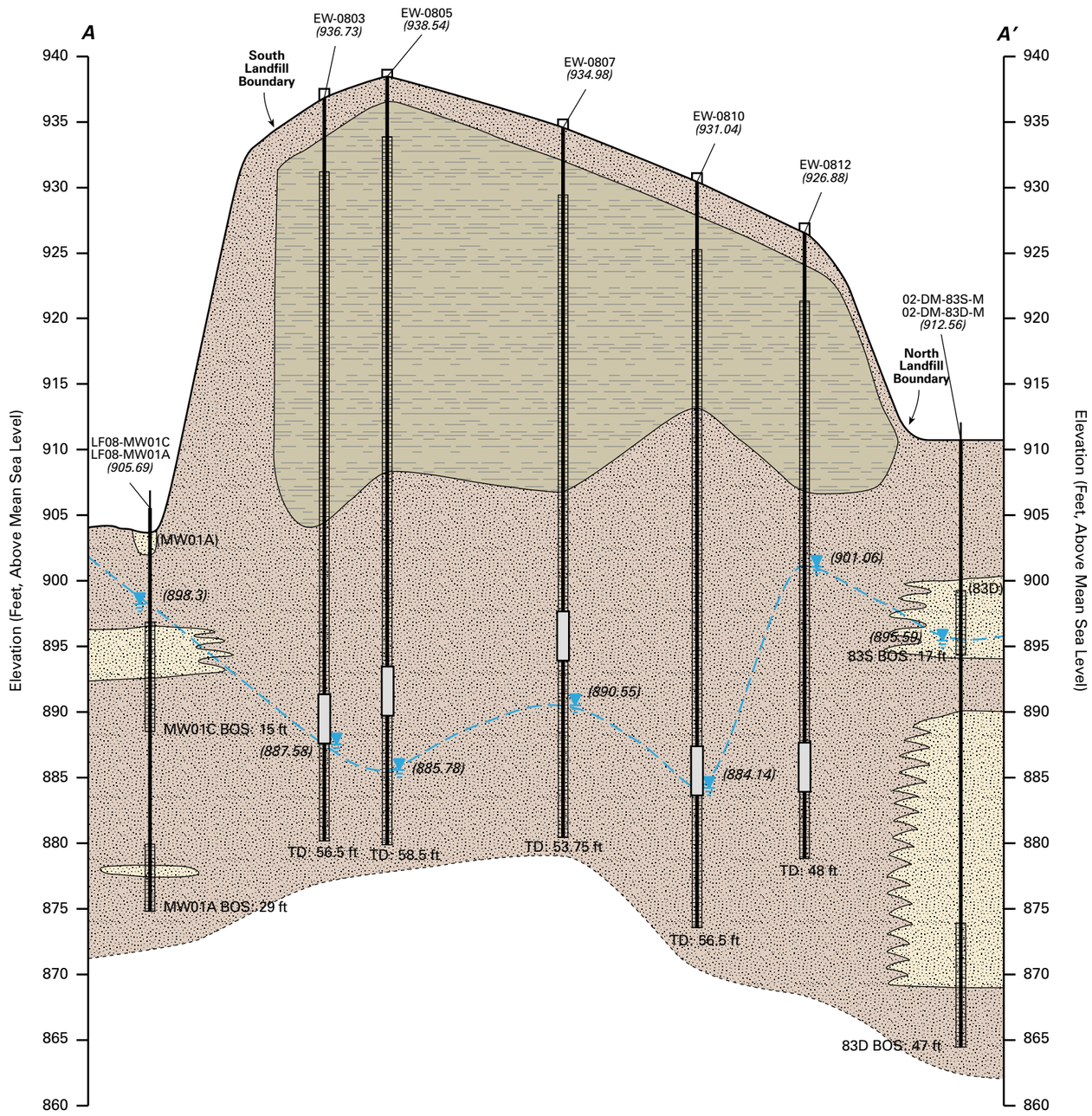


Figure 2-31.
Landfill 10 Geologic Cross-Section and Potentiometric Surface: November 2000.

IT CORPORATION

DRAWING NO.	DRAWING BY	CHECKED BY	APPROVED BY	
S-77097-0606-6/99-w	JIS, III	MWC	GDP	
	7/11/01	7/11/01	7/11/01	



Key

- Well ID (Ground Elevation) Screened Interval
- Submersible Pump
- BOS Depth to Bottom of Screen (ft, BGS)
- Dashed where inferred
- Potentiometric Surface *(Groundwater Elevation; ft, MSL)*
- Landfill Material
- Clays and Silts
- Sands and Gravels

0 100 200
Horizontal Scale, Feet

0 5 10
Vertical Scale, Feet

IT CORPORATION

Figure 2-32.
Landfill 8 Geologic Cross-Section and Potentiometric Surface: November 2000.

DRAWING NO.	CHECKED BY	APPROVED BY	DRAWING BY
S-777097.0606-9/00-1w	7/11/01	7/11/01	JIG, III
	MWC	GDP	7/11/01

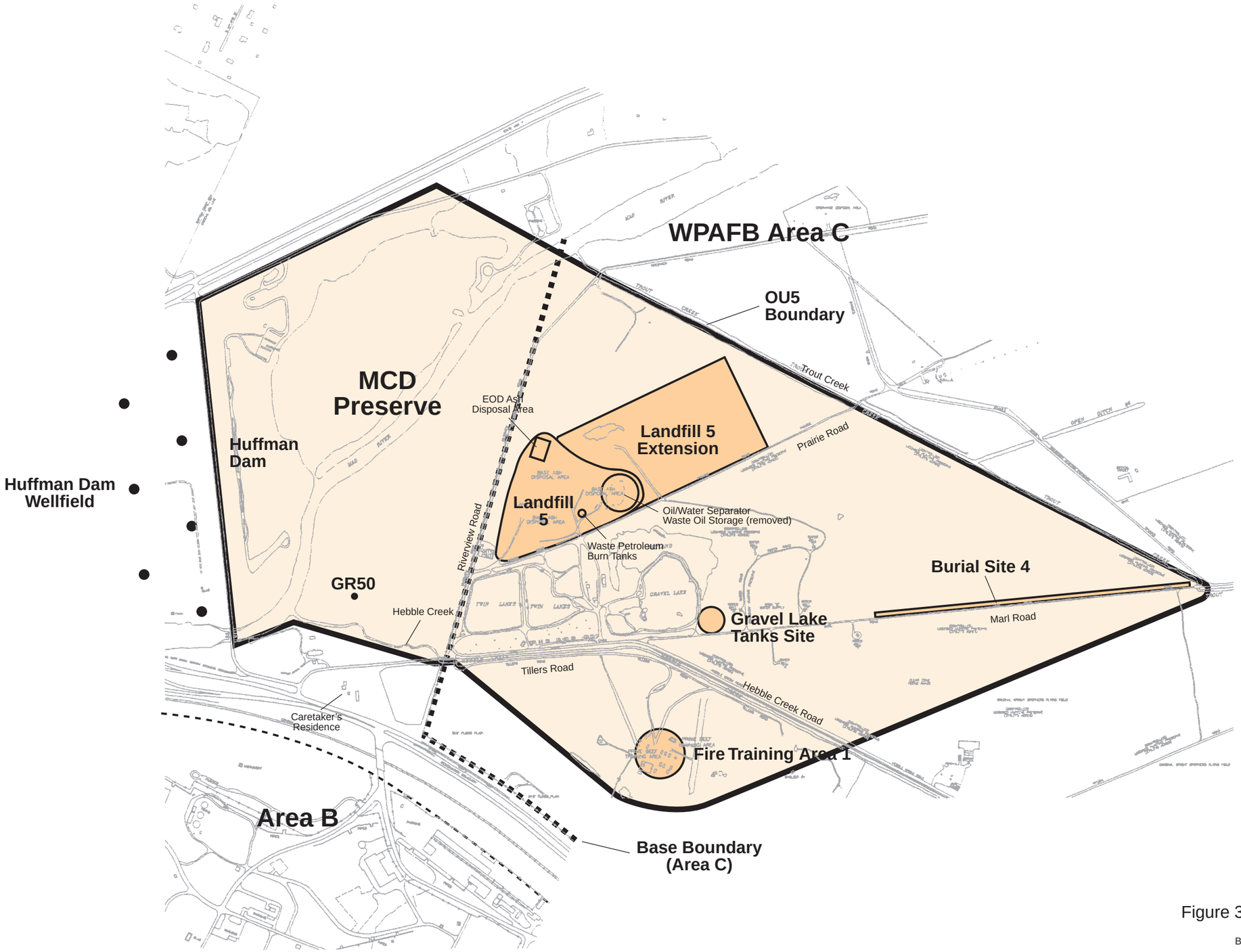


Figure 3-1. Operable Unit 5.

Basemap: Compiled from Woolpert Consultants 1987
Woolpert Consultants 1991
Henderson Aerial Surveys, Inc. 1993

IT CORPORATION

DRAWING NO. S-322504-6-4/94-D4	2/1/95	PCM	CHECKED BY	JIS, III
	2/1/95	SWS	APPROVED BY	4/27/94
			DRAWING BY	

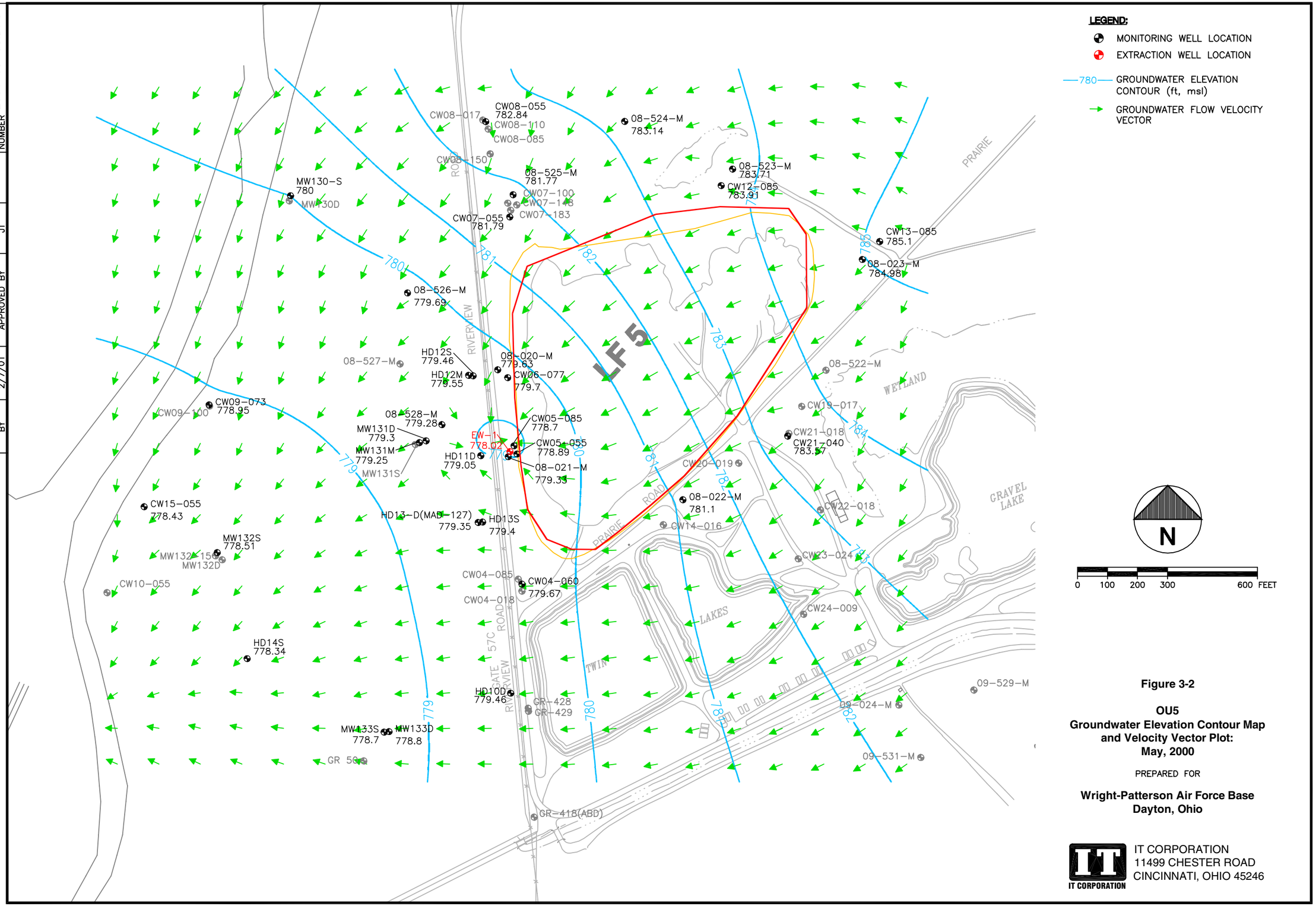


Figure 3-2

OU5
Groundwater Elevation Contour Map and Velocity Vector Plot: May, 2000

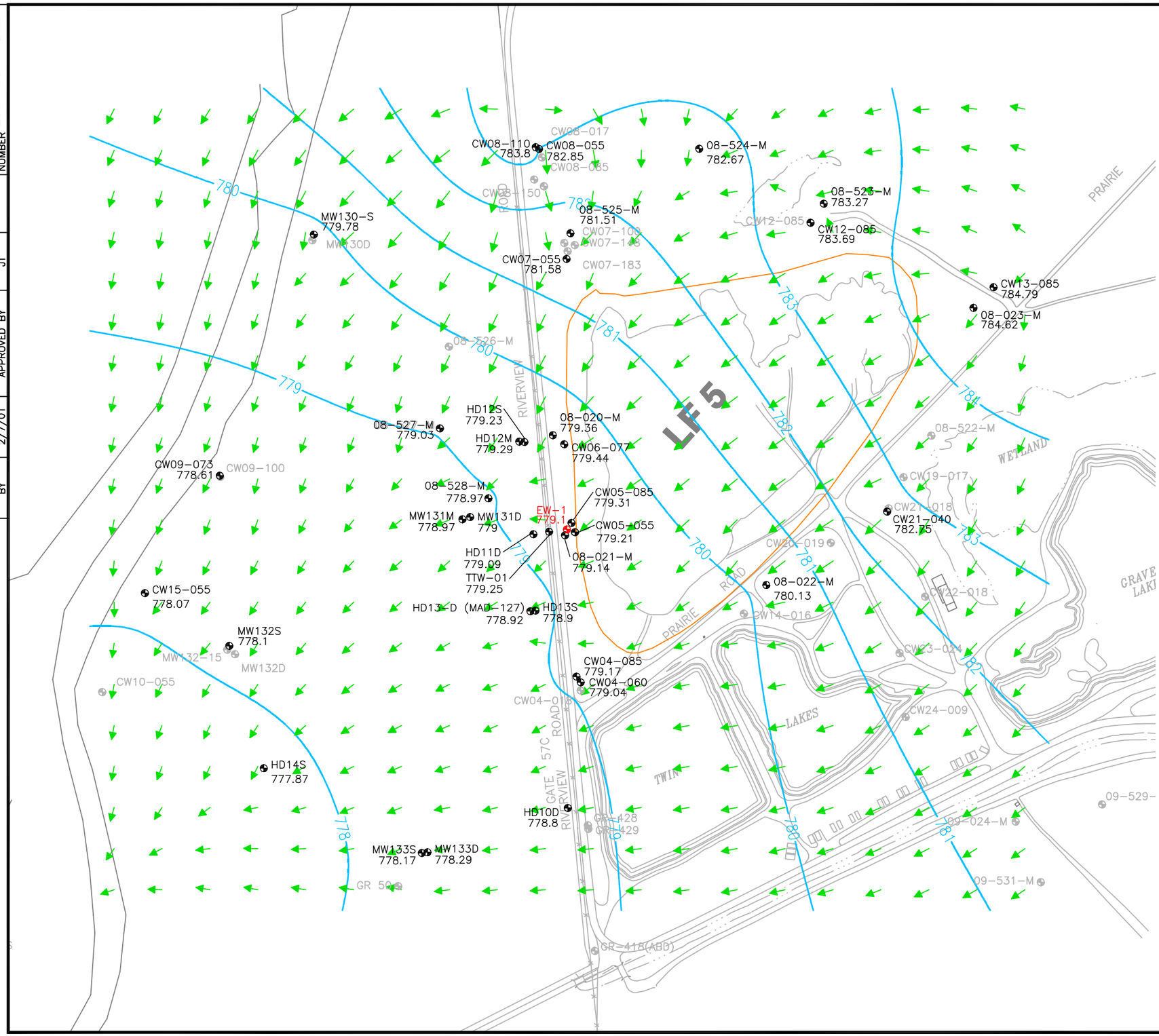
PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN 2/7/01	CHECKED BY	GP 2/9/01	DRAWING NUMBER 2001 05-38.DWG
		APPROVED BY	JT	

DRAWN BY	MSN	CHECKED BY	GP	5/4/01	DRAWING NUMBER 2001 05-47.DWG
	2/7/01	APPROVED BY	JT		



LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL LOCATION
- —780— GROUNDWATER ELEVATION CONTOUR (ft, msl)
- GROUNDWATER FLOW VELOCITY VECTOR

NOTE: GROUNDWATER TREATMENT SYSTEM OFF FOR FAA-A PILOT TEST.

N

0 100 200 300 600 FEET

Figure 3-3

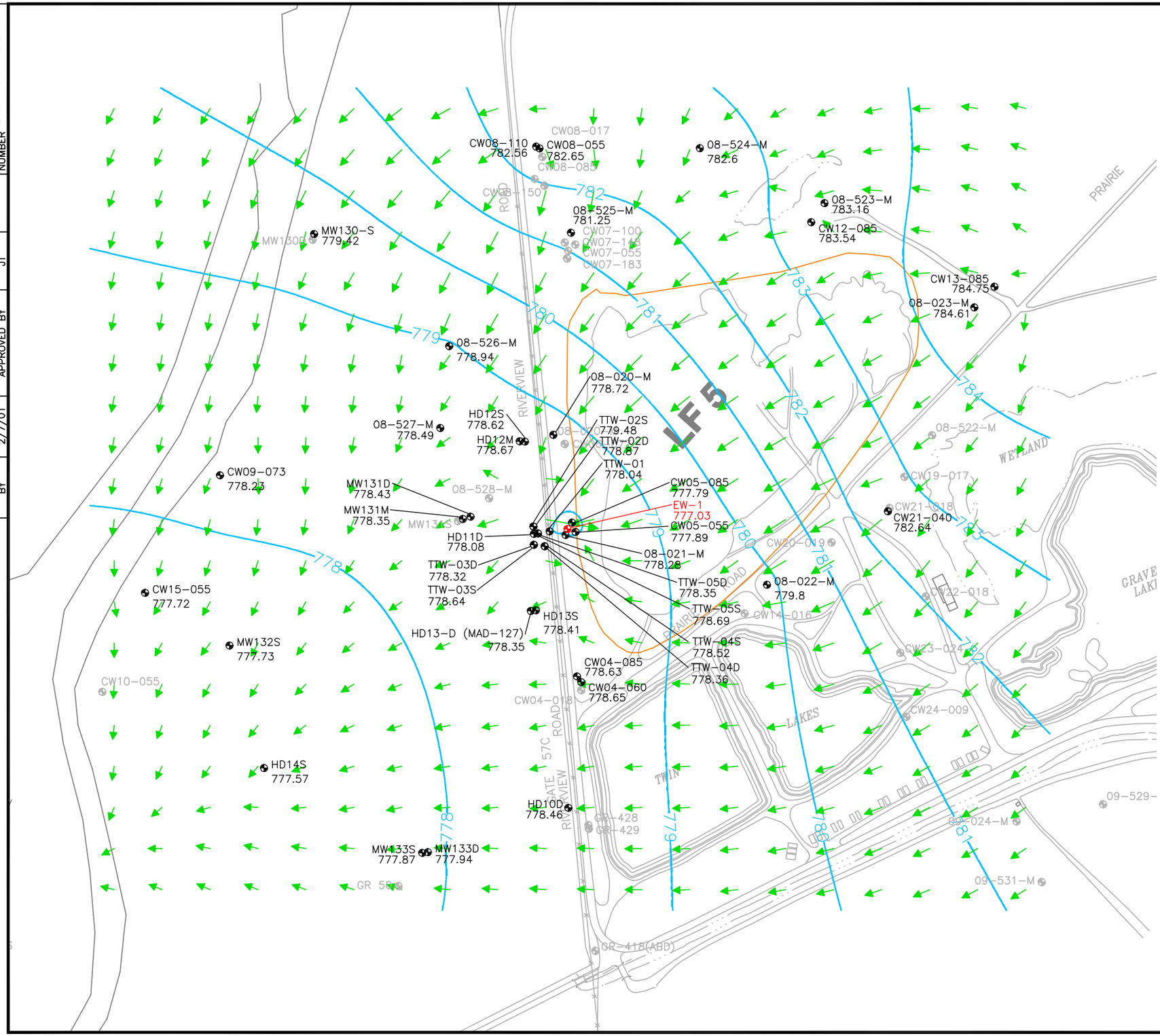
OU5
Groundwater Elevation Contour Map and Velocity Vector Plot: June, 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN	CHECKED BY	GP	2/26/01	DRAWING NUMBER 2001 05-48.DWG
	2/7/01	APPROVED BY	JT		



LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL LOCATION
- 780 GROUNDWATER ELEVATION CONTOUR (ft, msl)
- GROUNDWATER FLOW VELOCITY VECTOR

N

0 100 200 300 600 FEET

Figure 3-4

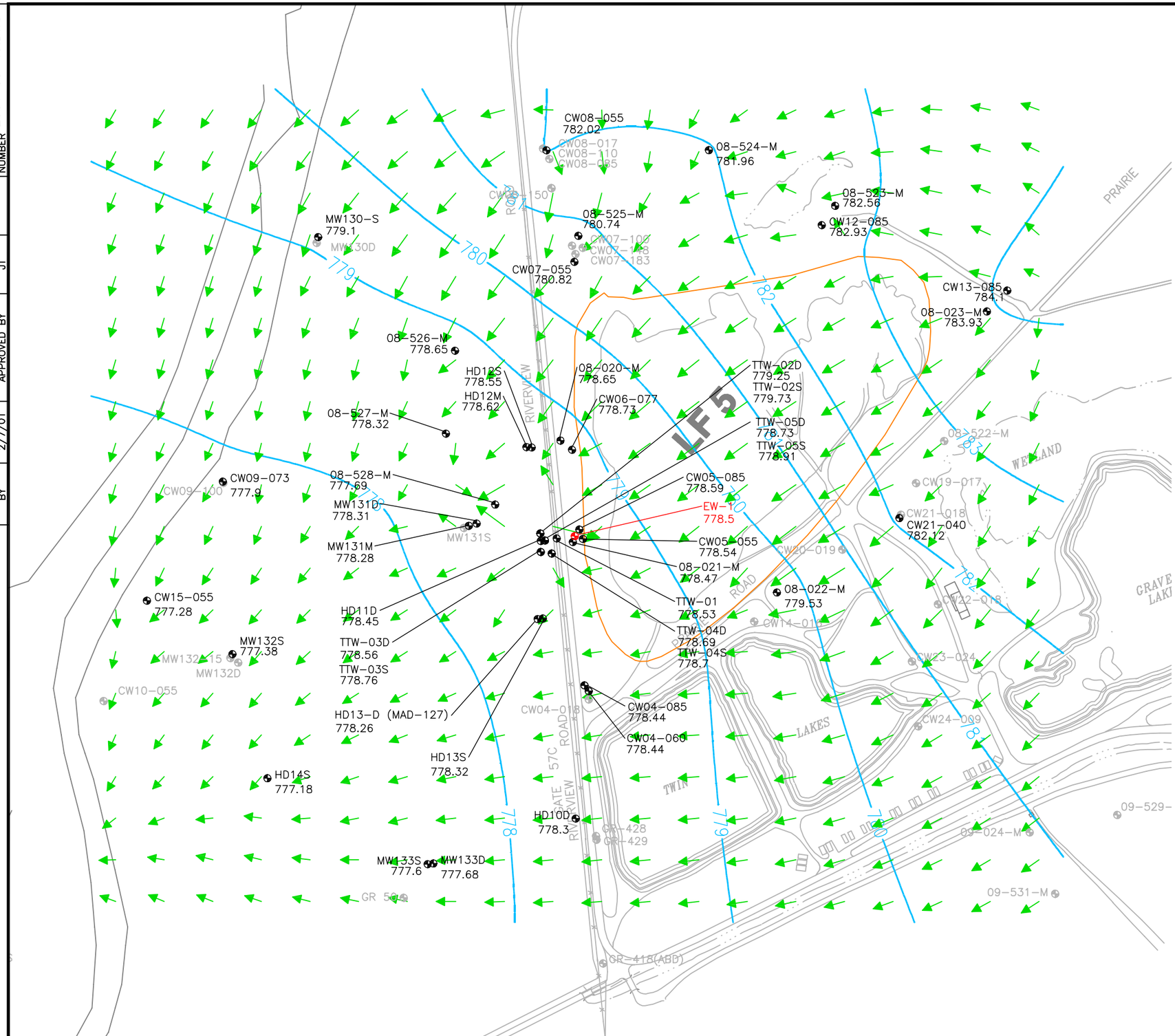
OU5
Groundwater Elevation Contour Map and Velocity Vector Plot: July, 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN 2/7/01	CHECKED BY	GP 2/26/01	DRAWING NUMBER 2001 05-49.DWG
		APPROVED BY	JT	



LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL LOCATION
- 780 GROUNDWATER ELEVATION CONTOUR (ft, msl)
- GROUNDWATER FLOW VELOCITY VECTOR

NOTE: GROUNDWATER TREATMENT SYSTEM DOWN DUE TO POWER OUTAGE.

N

0 100 200 300 600 FEET

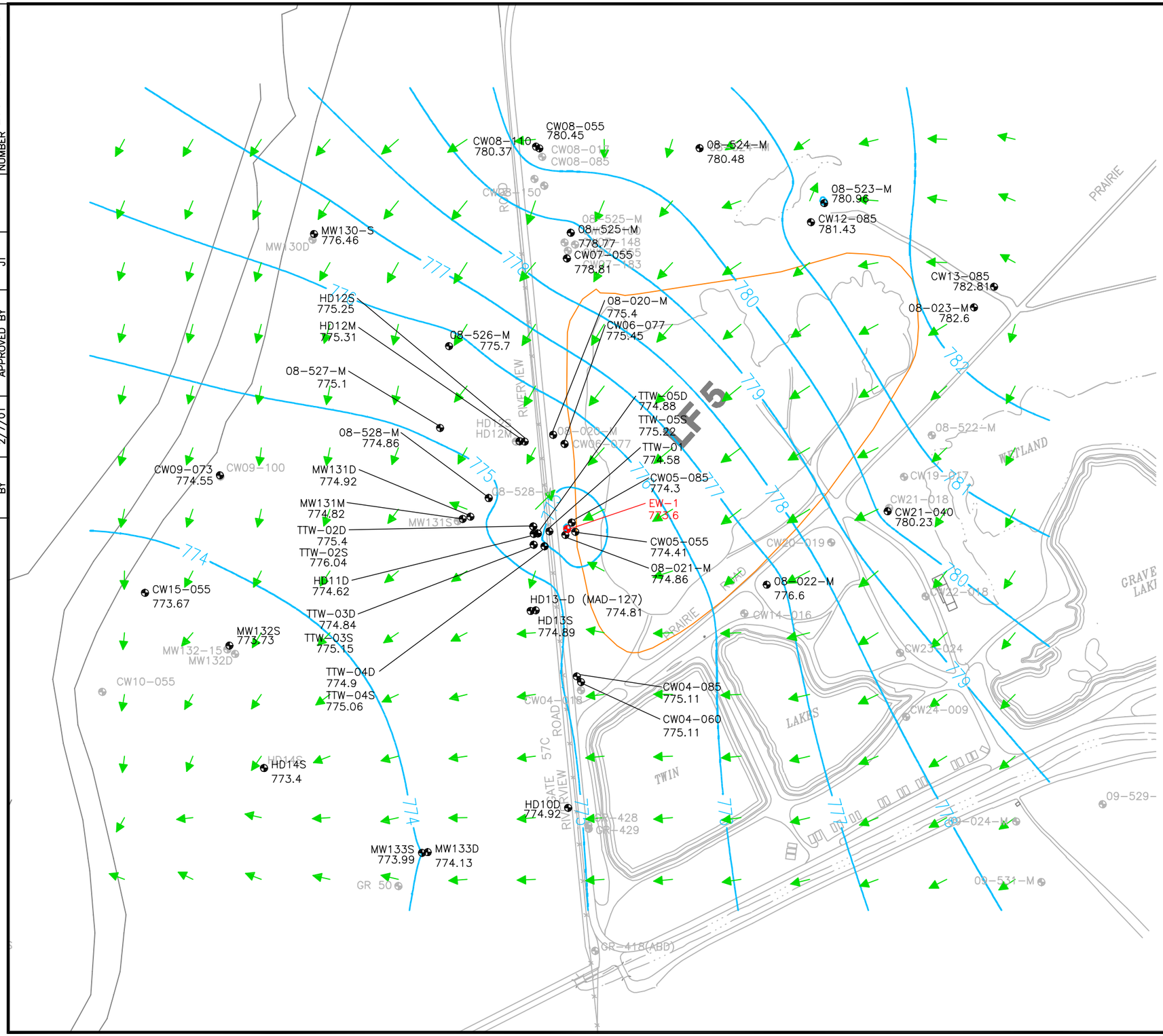
Figure 3-5

OU5
Groundwater Elevation Contour Map and Vector Velocity Plot: August, 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246



LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL LOCATION
- 780 GROUNDWATER ELEVATION CONTOUR (ft, msl)
- GROUNDWATER FLOW VELOCITY VECTOR

N

0 100 200 300 600 FEET

Figure 3-6

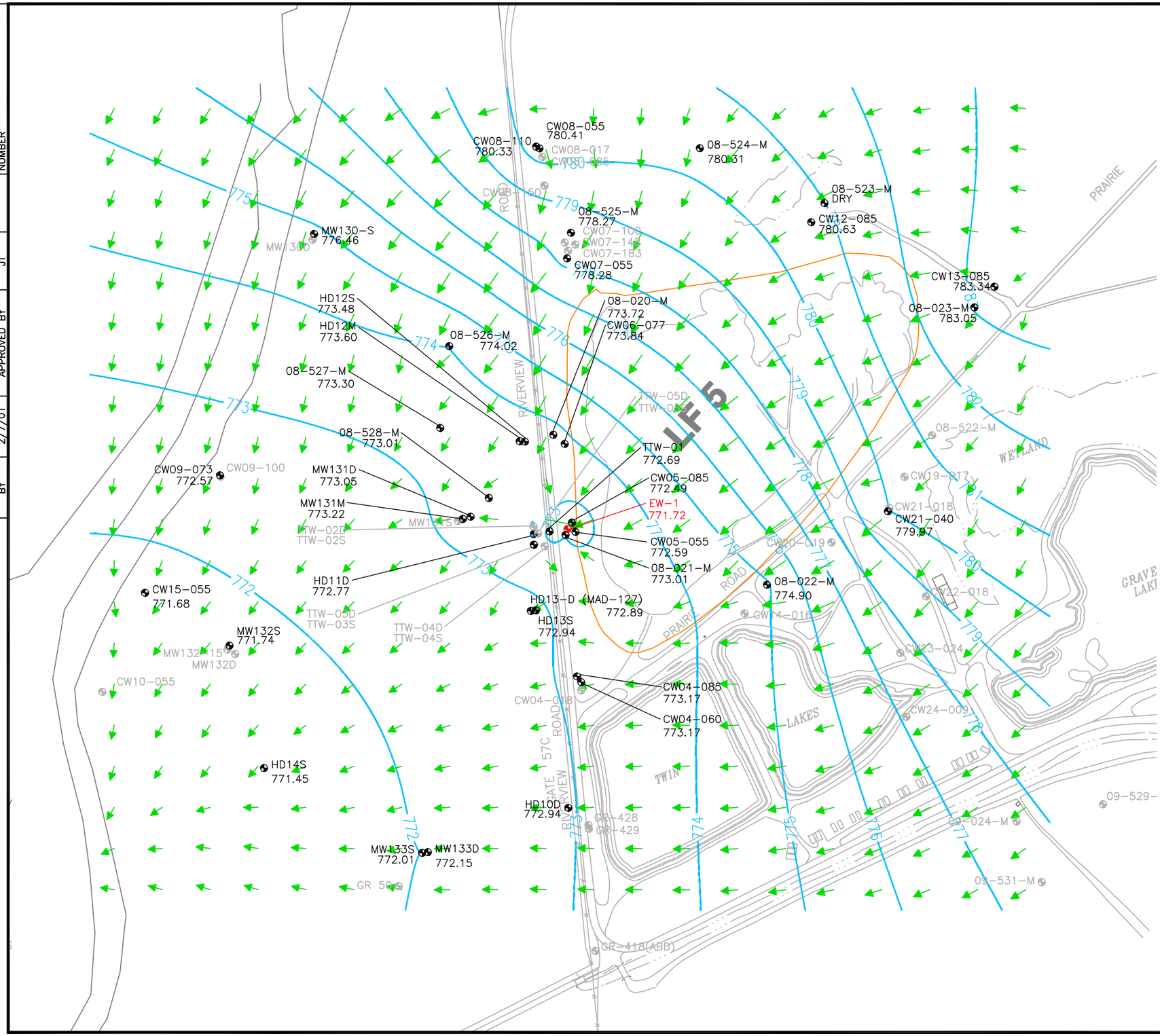
OU5
Groundwater Elevation Contour Map and Velocity Vector Plot: September, 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN	CHECKED BY	GP	2/26/01	DRAWING NUMBER 2001 05-50.DWG
	2/7/01	APPROVED BY	JT		



LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL LOCATION
- 780 GROUNDWATER ELEVATION CONTOUR (ft, msl)
- GROUNDWATER FLOW VELOCITY VECTOR

Figure 3-7

OU5
Groundwater Elevation Contour Map and Velocity Vector Plot: October, 2000

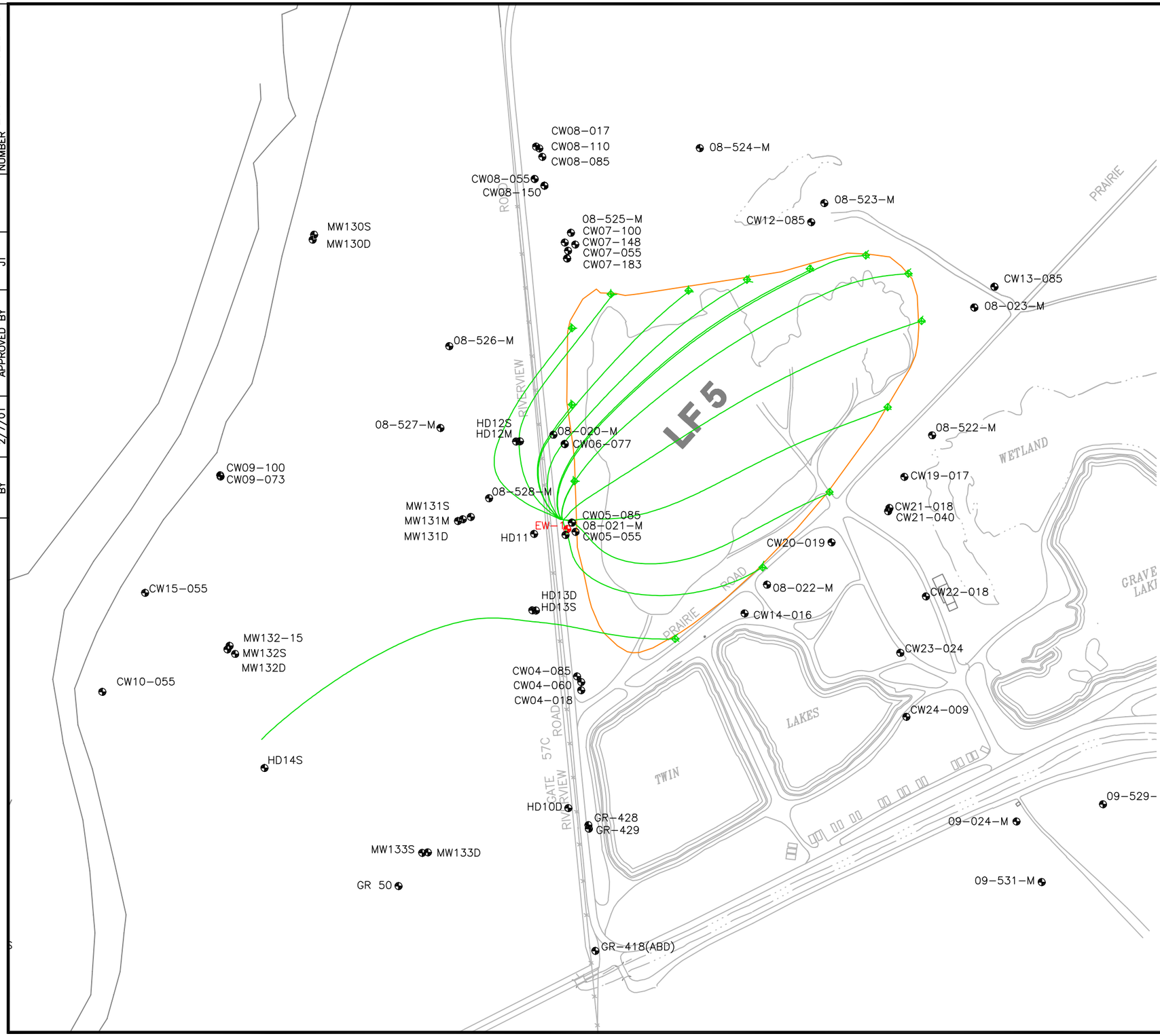
PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN 2/7/01	CHECKED BY / APPROVED BY	GP JT	2/9/01	DRAWING NUMBER 2001 05-51.DWG

DRAWN BY	MSN	CHECKED BY	GP	2/8/01	DRAWING NUMBER 2001 05-52.DWG
	2/7/01	APPROVED BY	JT		



LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL SAMPLING LOCATION
- PARTICLE TRACK

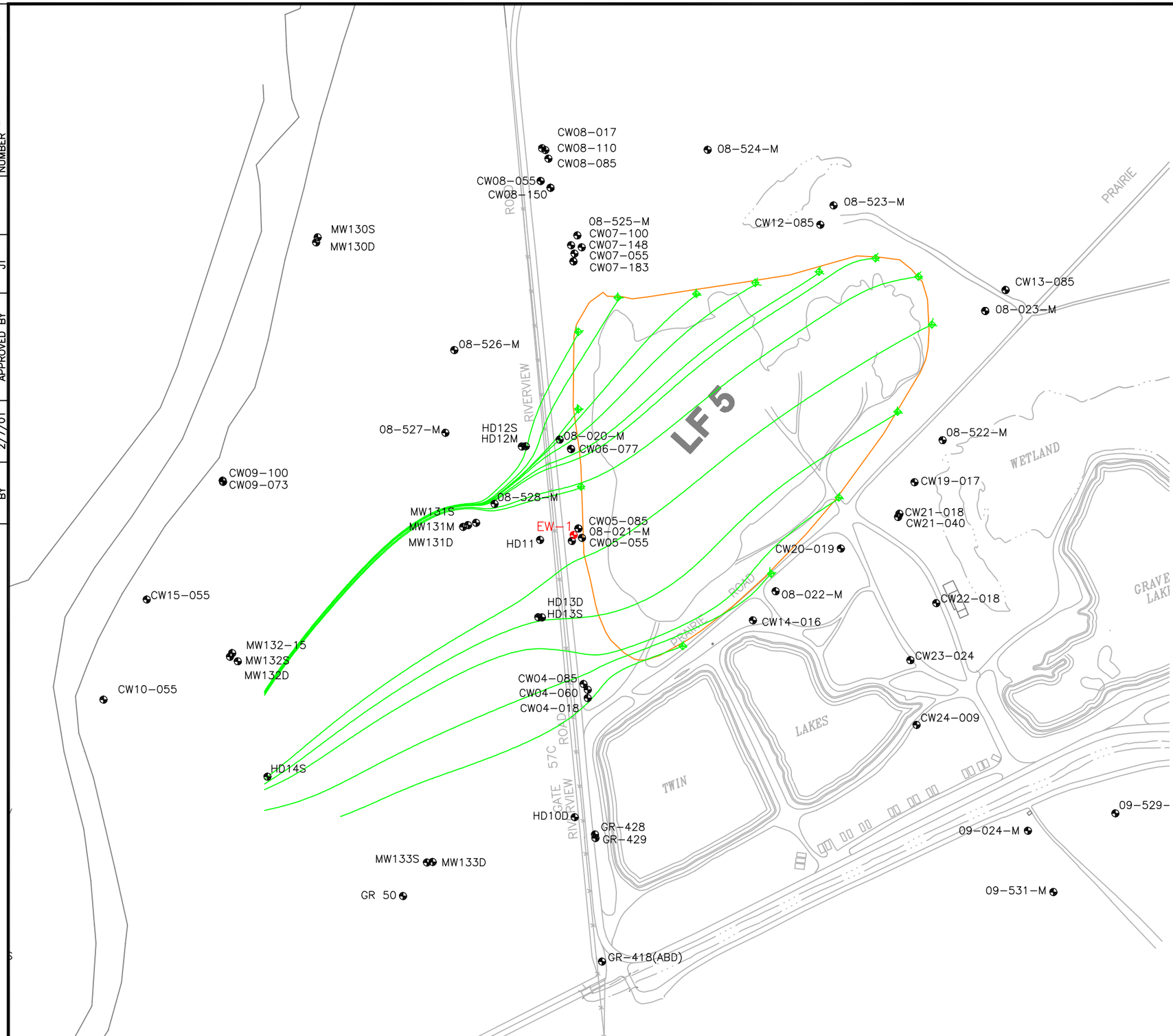
Figure 3-8

OU5
Particle Tracking Plot:
May, 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246



LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL SAMPLING LOCATION
- PARTICLE TRACK

NOTE: GROUNDWATER TREATMENT SYSTEM OFF FOR FAA-A PILOT TEST.

Figure 3-9

OU5
Particle Tracking Plot:
June, 2000

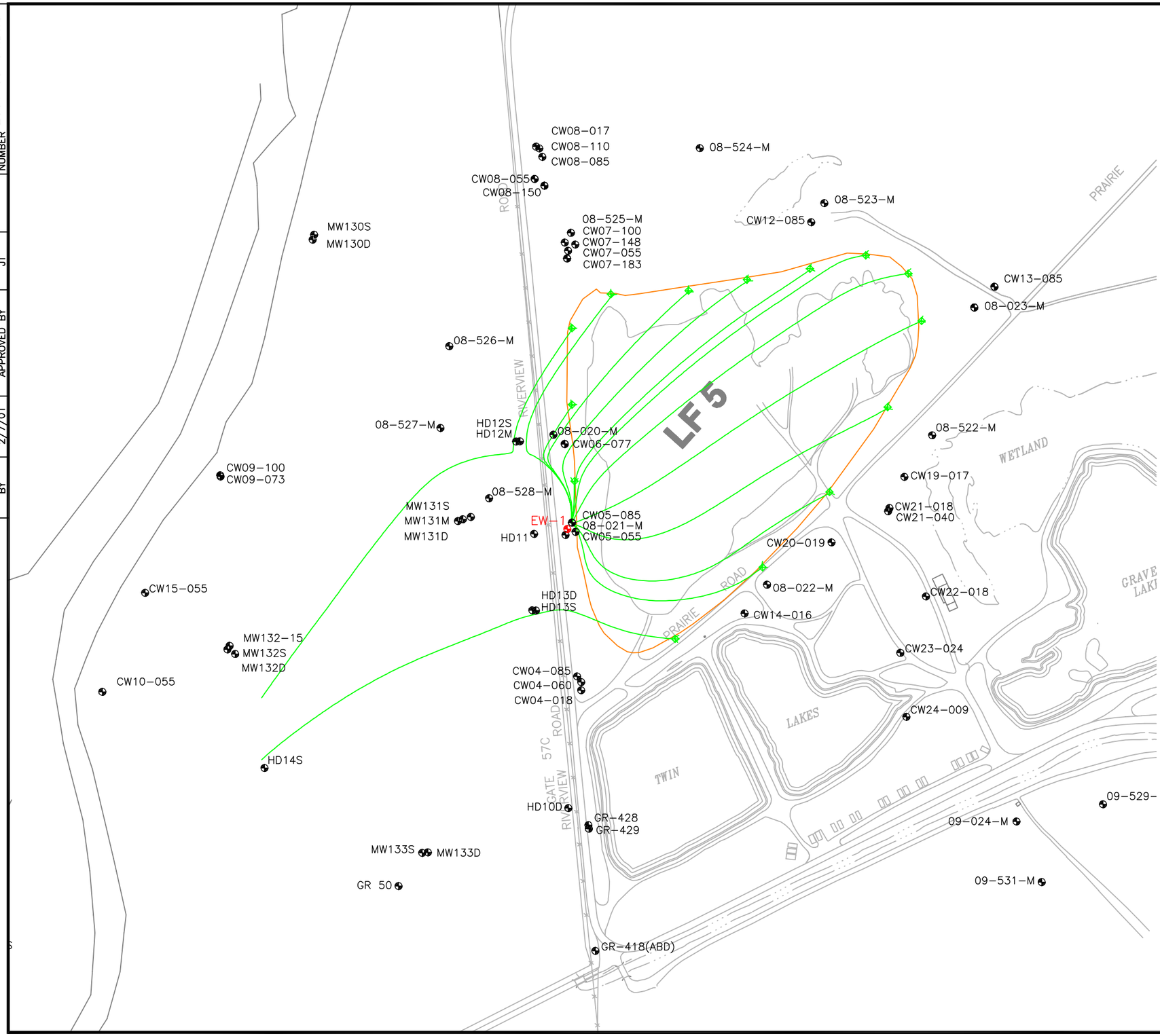
PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN	CHECKED BY	GP	5/4/01	DRAWING NUMBER 2001 05-53.DWG
	2/7/01	APPROVED BY	JT		

DRAWN BY	MSN	CHECKED BY	GP	2/8/01	DRAWING NUMBER 2001 05-54.DWG
	2/7/01	APPROVED BY	JT		



LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL SAMPLING LOCATION
- PARTICLE TRACK

Figure 3-10

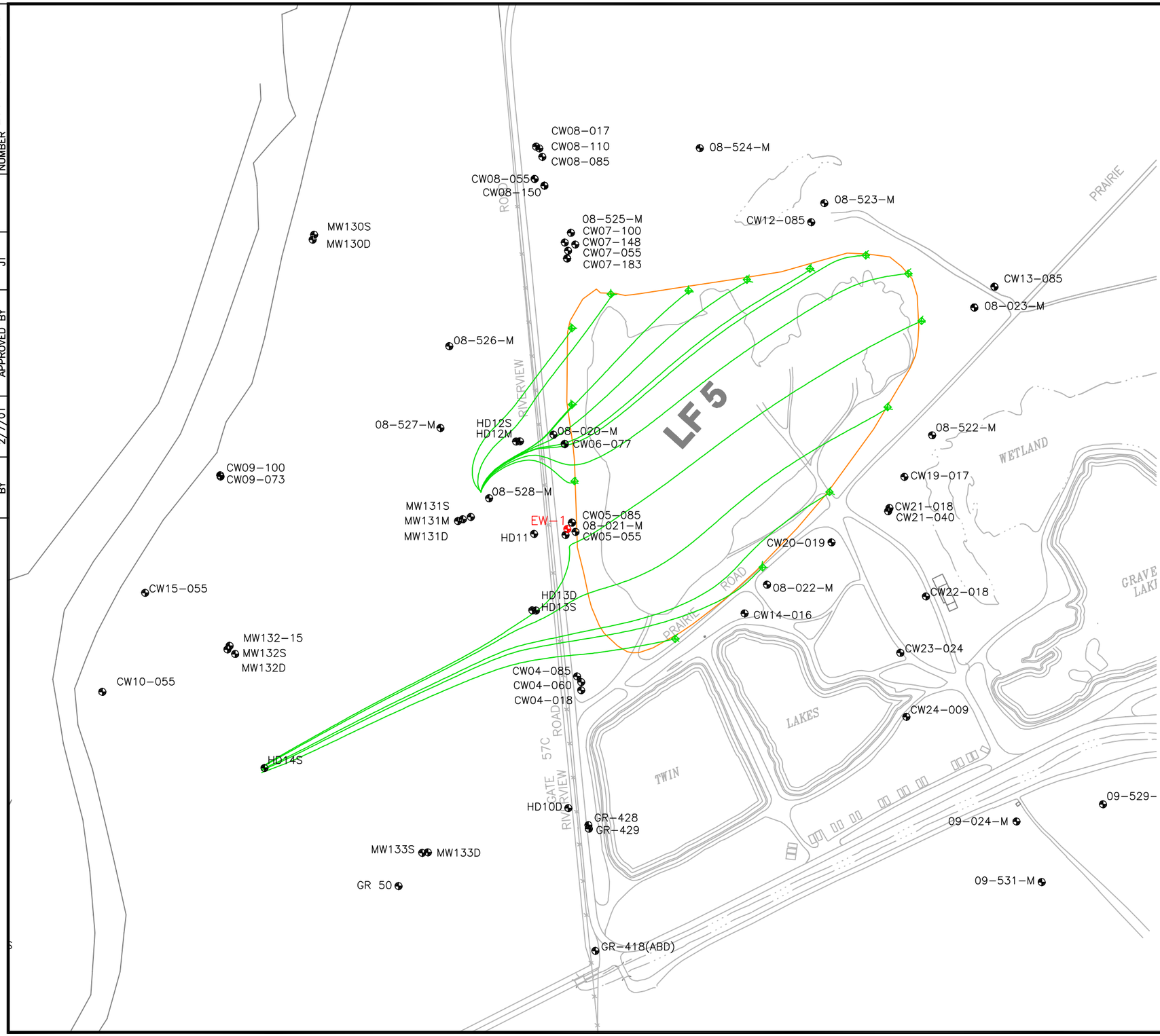
OU5
Particle Tracking Plot:
July, 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN	CHECKED BY	GP	5/4/01	DRAWING NUMBER 2001 05-55.DWG
	2/7/01	APPROVED BY	JT		



LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL SAMPLING LOCATION
- PARTICLE TRACK

NOTE: GROUNDWATER TREATMENT SYSTEM DOWN DUE TO POWER OUTAGE.

Figure 3-11

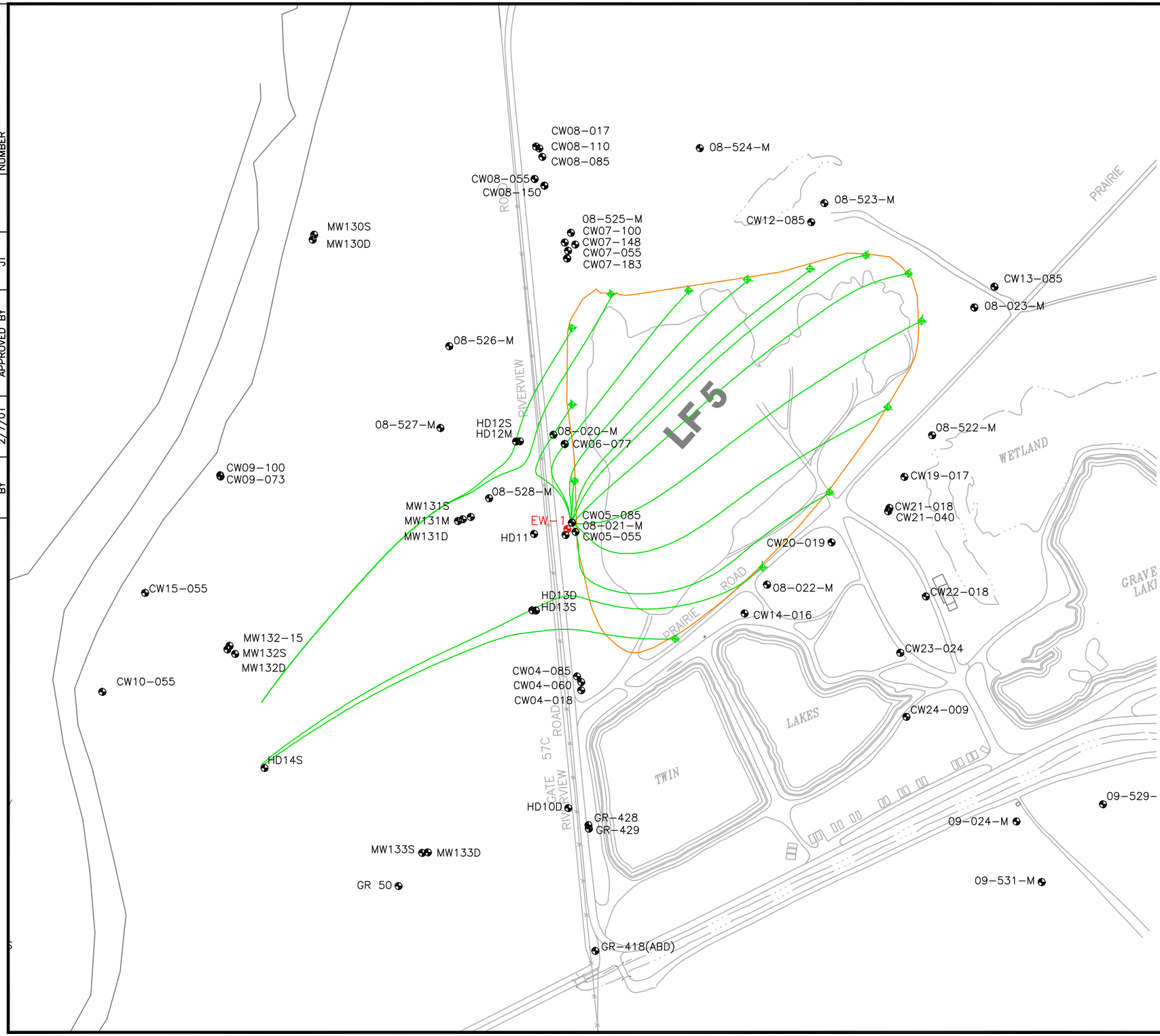
OU5
Particle Tracking Plot:
August, 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN	CHECKED BY	GP	2/8/01	DRAWING NUMBER 2001 05-56.DWG
	2/7/01	APPROVED BY	JT		



LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL SAMPLING LOCATION
- PARTICLE TRACK

Figure 3-12

OU5
Particle Tracking Plot:
September, 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN	CHECKED BY	GP	2/8/01	DRAWING NUMBER 2001 05-57.DWG
	2/7/01	APPROVED BY	JT		

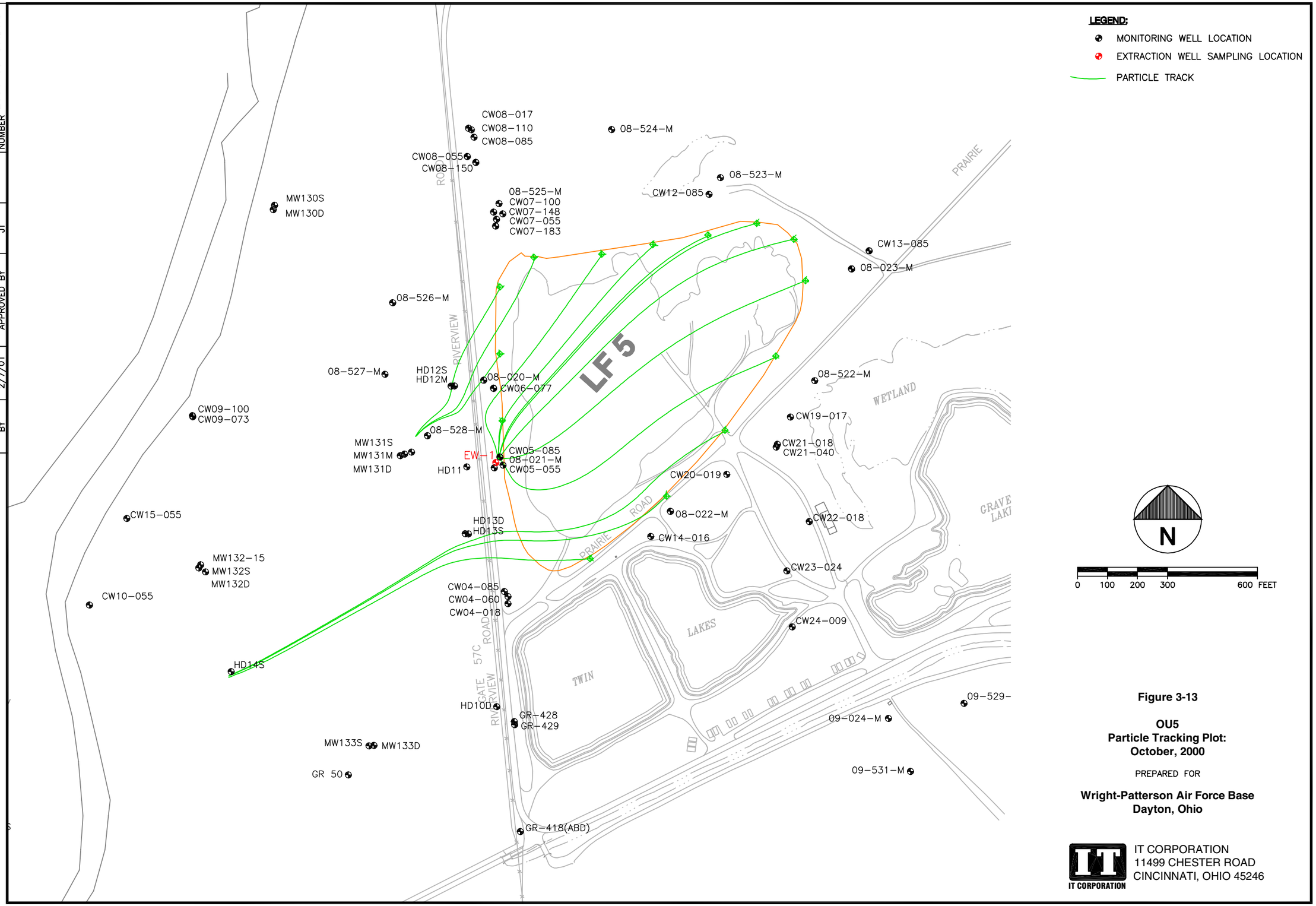


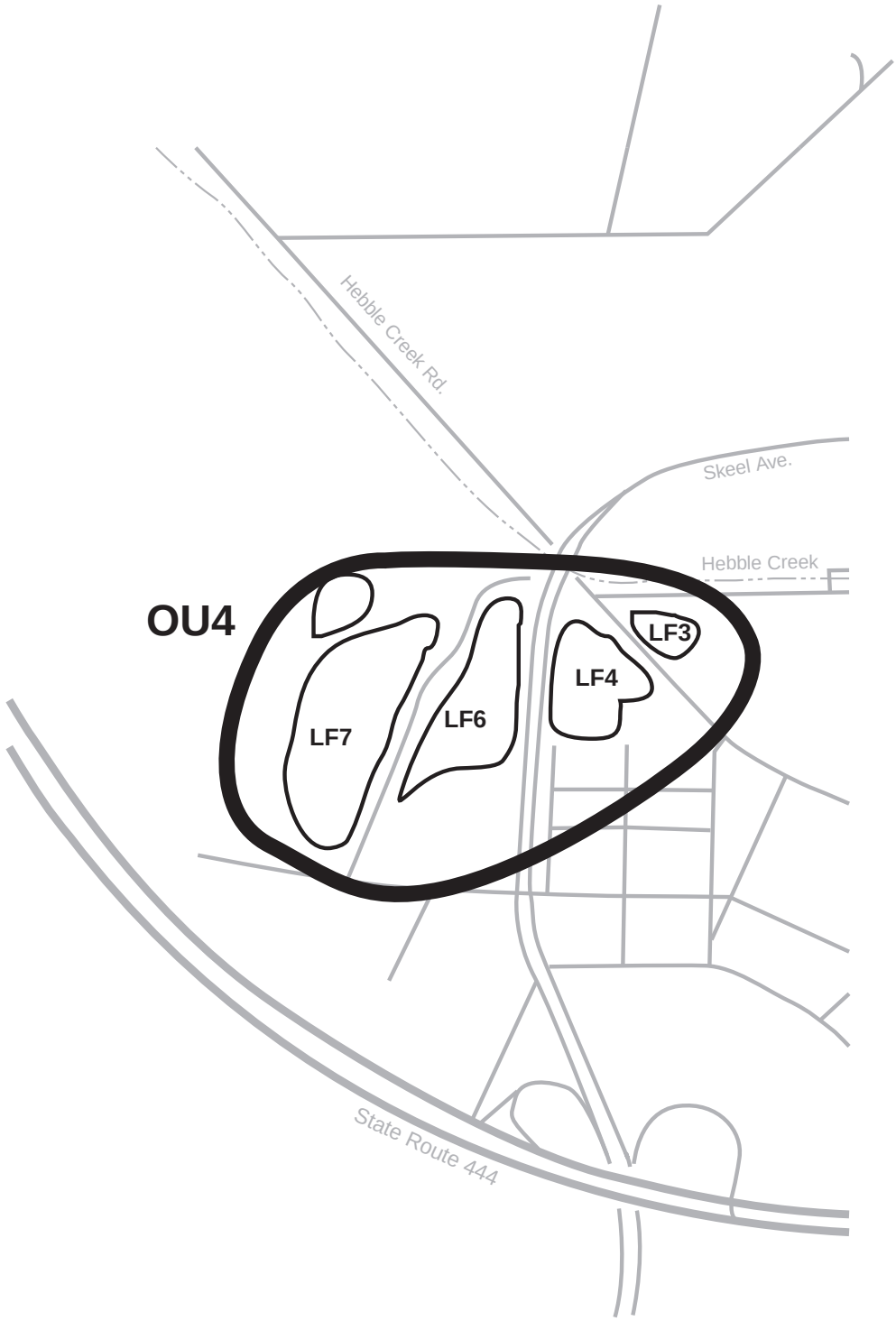
Figure 3-13

OU5
Particle Tracking Plot:
October, 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246



NORTH

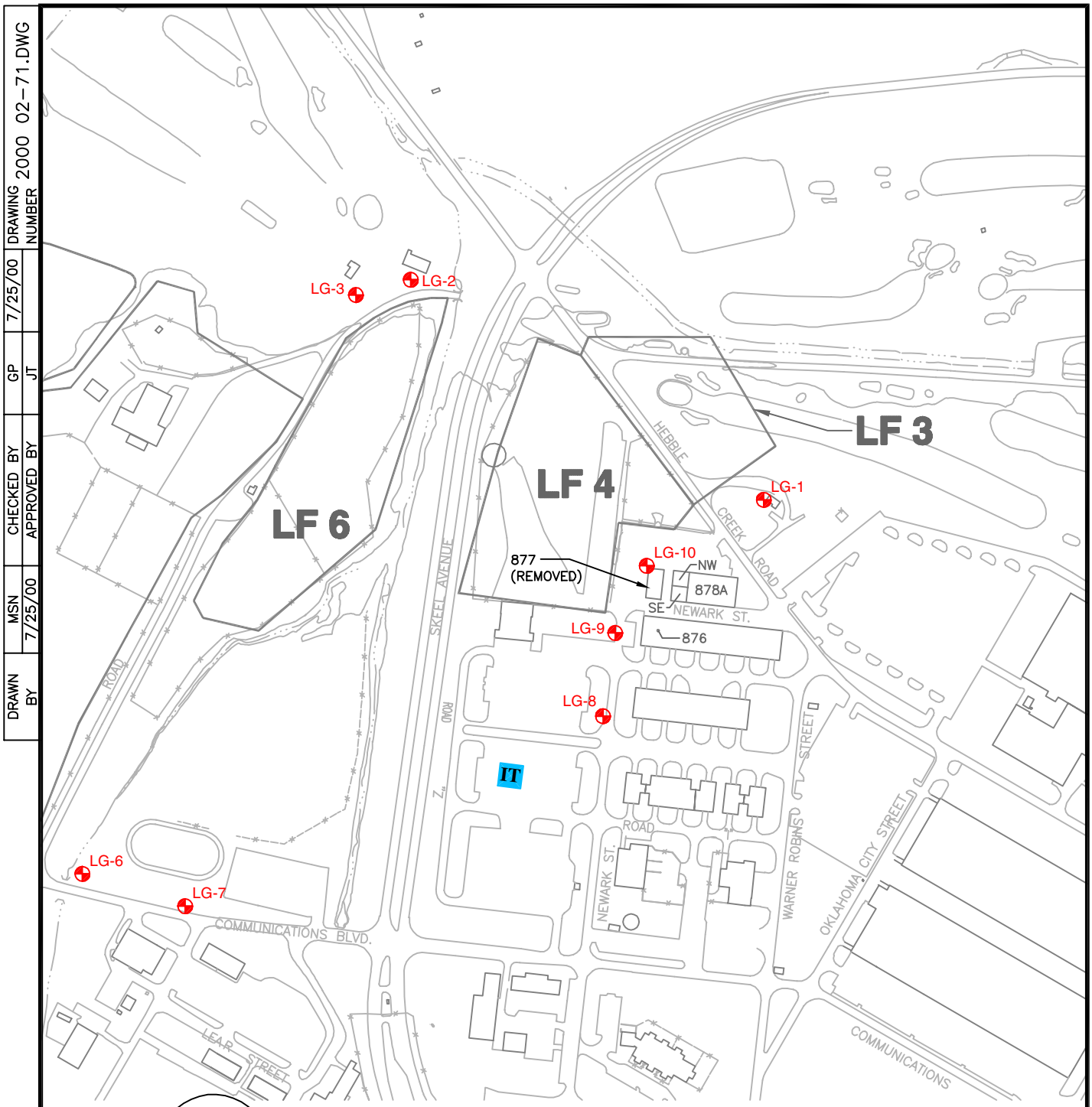
0 1,600

Scale in Feet

IT CORPORATION

Figure 4-1.
OU 4 - Landfills 3, 4, 6 and 7.

DRAWING BY	CHECKED BY		DRAWING NO.
JIS, III	MWC	1/26/01	S-777097-2/99-1w
2/17/99	APPROVED BY		
	JRT	1/26/01	



DRAWN BY	MSN	CHECKED BY	GP	7/25/00	DRAWING NUMBER 2000 02-71.DWG
	7/25/00	APPROVED BY	JT		

N

0 100 200 300 400 800 FEET

LEGEND

LG-1 LANDFILL GAS MONITORING WELL LOCATIONS

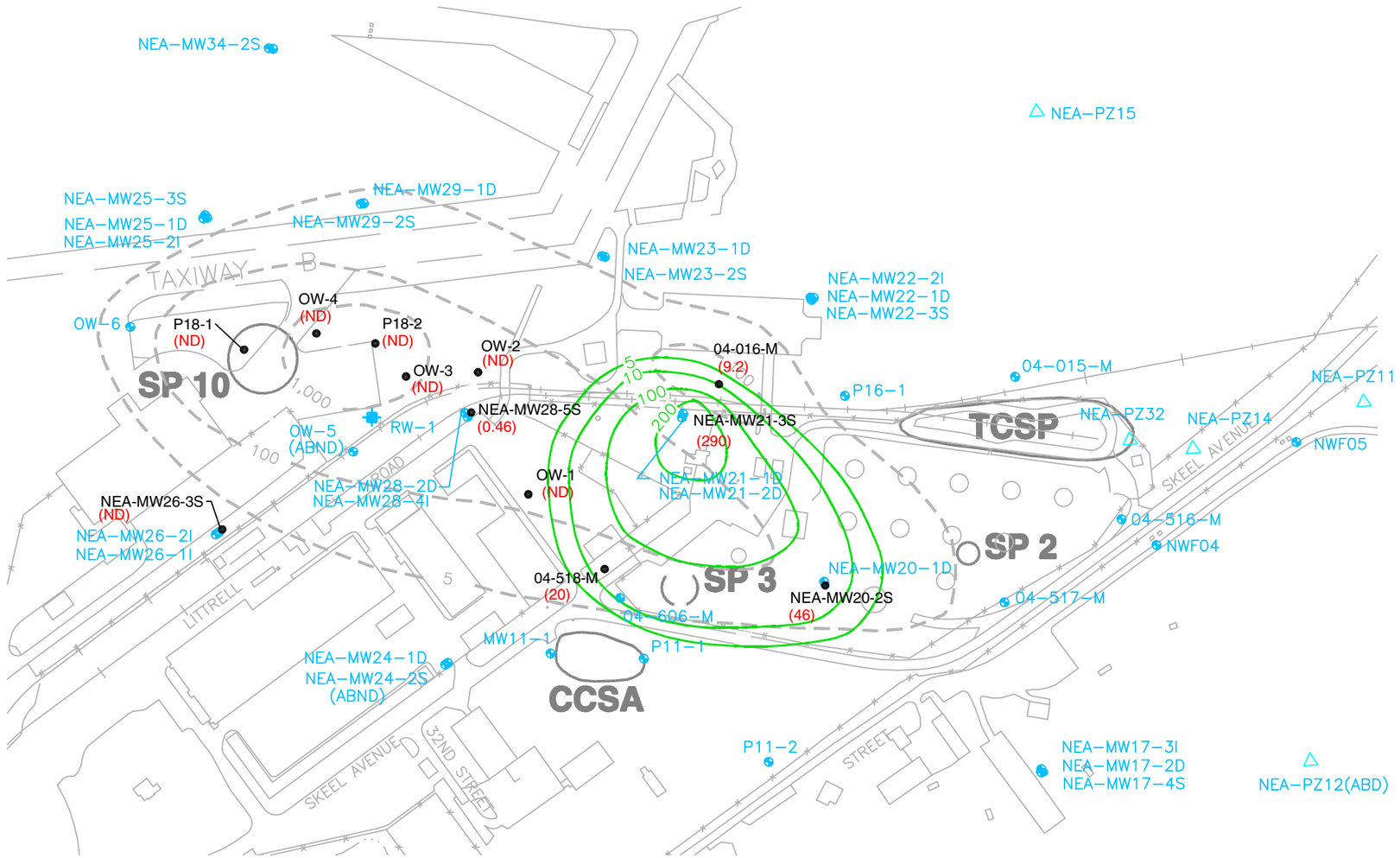
IRP SITES (LOCATIONS APPROXIMATE)

Figure 4-2
LANDFILL GAS
MONITORING WELLS: OU4

PREPARED FOR

WRIGHT-PATTERSON
AIR FORCE BASE
DAYTON, OHIO

INTERNATIONAL TECHNOLOGY CORPORATION



LEGEND:

- GROUNDWATER MONITORING WELLS
- GROUNDWATER MONITORING WELLS SAMPLED DURING SUCCESSIVE MONITORING PROGRAM.
- (9.2) ROUND 7 BENZENE GROUNDWATER CONCENTRATION, (µg/L.)
- 10 ROUND 7 BENZENE ISOPLETH, (µg/L.) (DASHED WHERE INFERRED)
- 5 1991–1992 BENZENE ISOPLETH, (µg/L.)
- (ND) NOT DETECTED

NOTE: 1. ALL WELLS SHOWN IN BLACK ON FIGURE WILL BE SAMPLED DURING THE PERIODIC MONITORING PROGRAM.

N

0 100 200 300 600 FEET

Figure 5-1

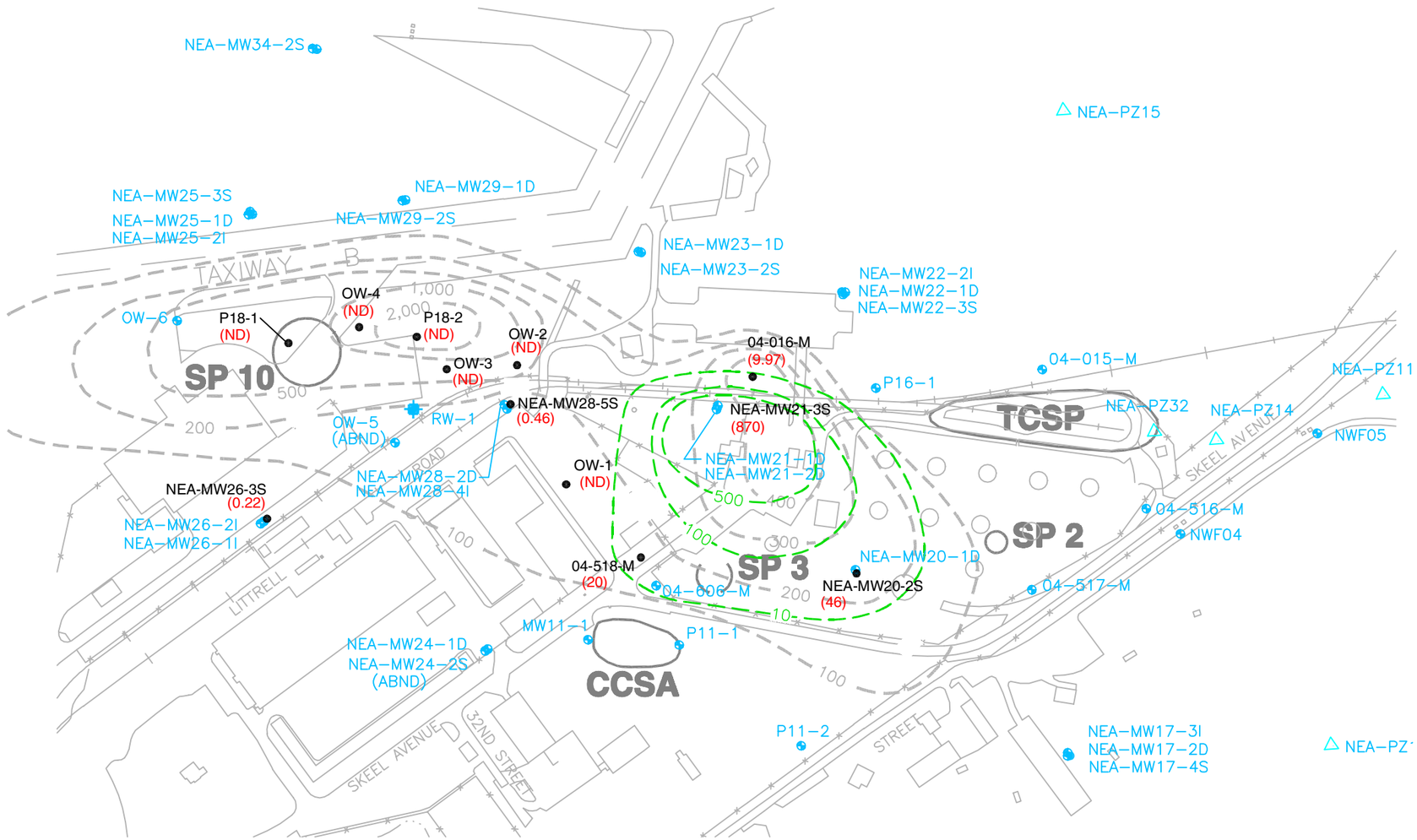
Round 7 Groundwater Monitoring Results: Benzene OU2 Area, October 2000

PREPARED FOR

Wright-Patterson Air Force Base Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN 1/31/01	CHECKED BY APPROVED BY	GP JT	1/31/01	DRAWING NUMBER 2001 05-23.DWG



LEGEND:

- GROUNDWATER MONITORING WELLS
- GROUNDWATER MONITORING WELLS SAMPLED DURING SUCCESSIVE MONITORING PROGRAM.
- (9.97) ROUND 7 BTEX GROUNDWATER CONCENTRATION, (µg/L.)
- 100 ROUND 7 BTEX ISOPLETH, (µg/L.) (DASHED WHERE INFERRED)
- 100 1991–1992 BTEX ISOPLETH, (µg/L.)
- (ND) NOT DETECTED

NOTE: 1. ALL WELLS SHOWN IN BLACK ON FIGURE WILL BE SAMPLED DURING THE PERIODIC MONITORING PROGRAM.

N

0 100 200 300 600 FEET

Figure 5-2

Round 7 Groundwater Monitoring Results: BTEX (Total) OU2 Area, October 2000

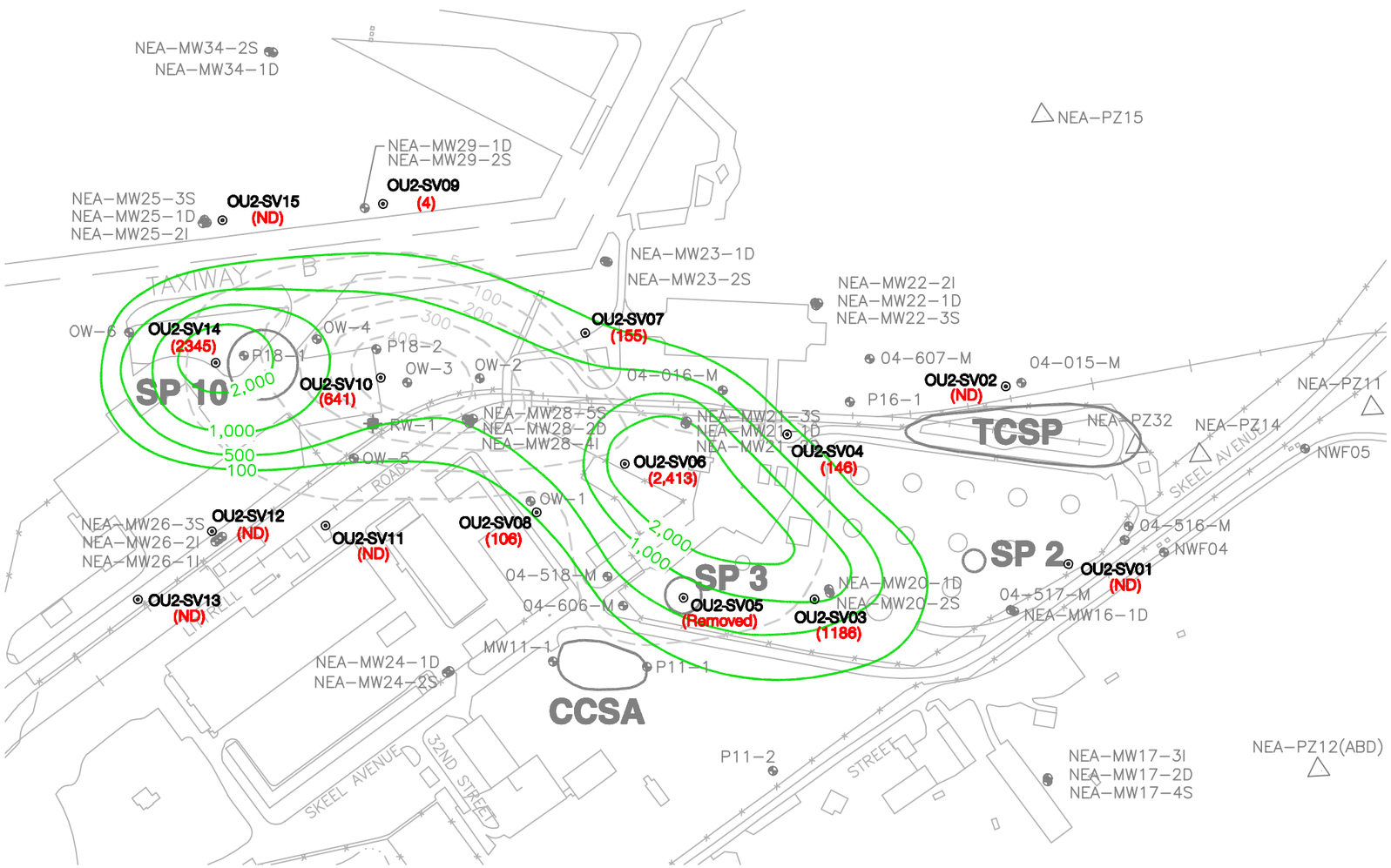
PREPARED FOR

Wright-Patterson Air Force Base Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN 1/31/01	CHECKED BY / APPROVED BY	GP / JT	1/31/01	DRAWING NUMBER 2001 05-24.DWG

DRAWN BY	MSN 1/31/01	CHECKED BY APPROVED BY	GP JT	2/26/01	DRAWING NUMBER 2001 05-25.DWG



LEGEND:

- ⊙ SOIL VAPOR MONITORING POINTS
- (4.1) ROUND 7 BTEX SOIL VAPOR CONCENTRATIONS, (µg/L).
- —100— ROUND 7 BTEX SOIL VAPOR ISOPLETH, (µg/L). (DASHED WHERE INFERRED)
- - -200- - BASELINE BTEX ISOPLETH, (µg/L).
- (ND) NOT DETECTED

N

0 100 200 300 600 FEET

Figure 5-3

Round 7 Soil Gas Monitoring Results: BTEX OU2 Area, October 2000

PREPARED FOR

Wright-Patterson Air Force Base Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

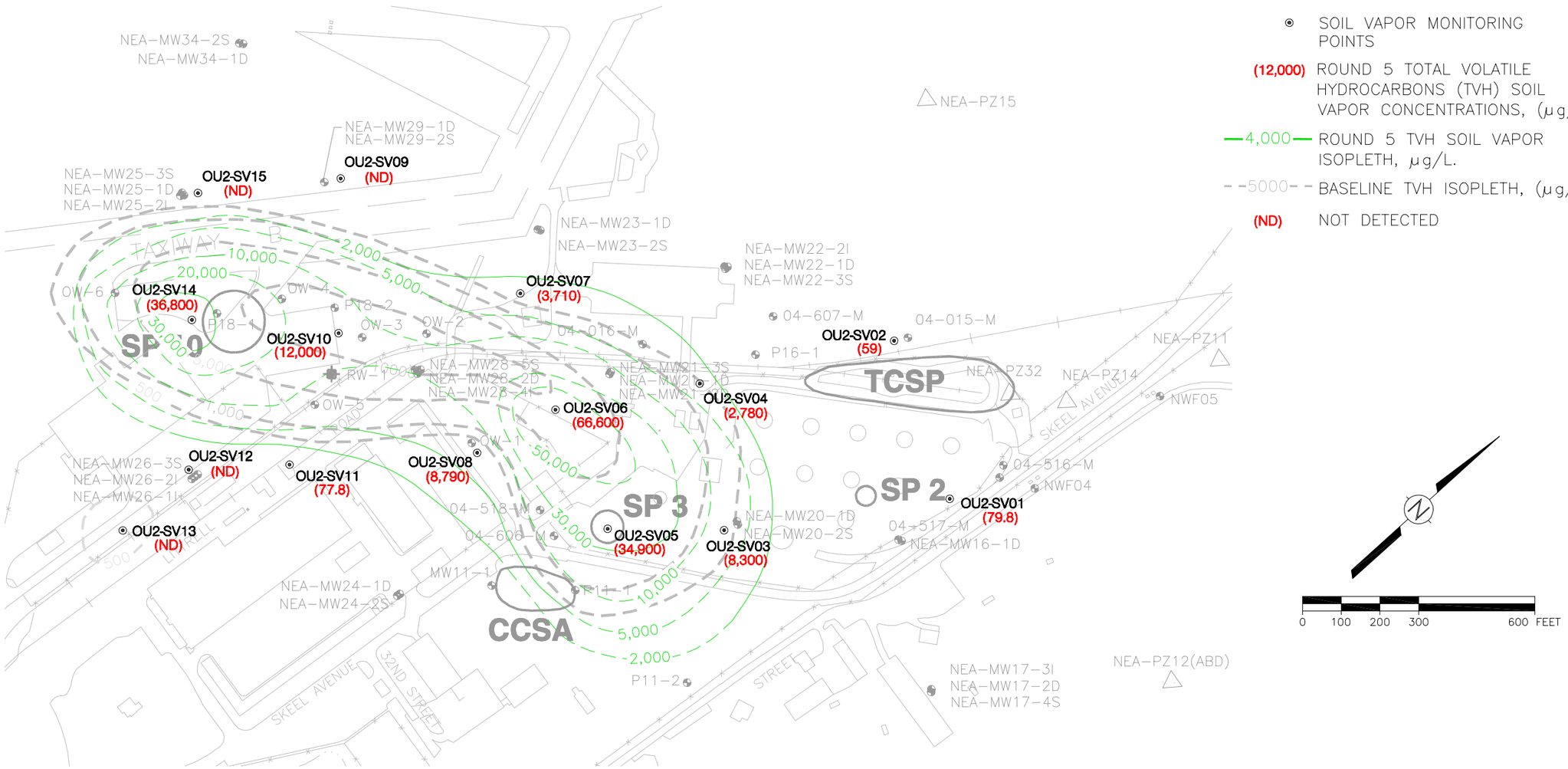


Figure 5-4

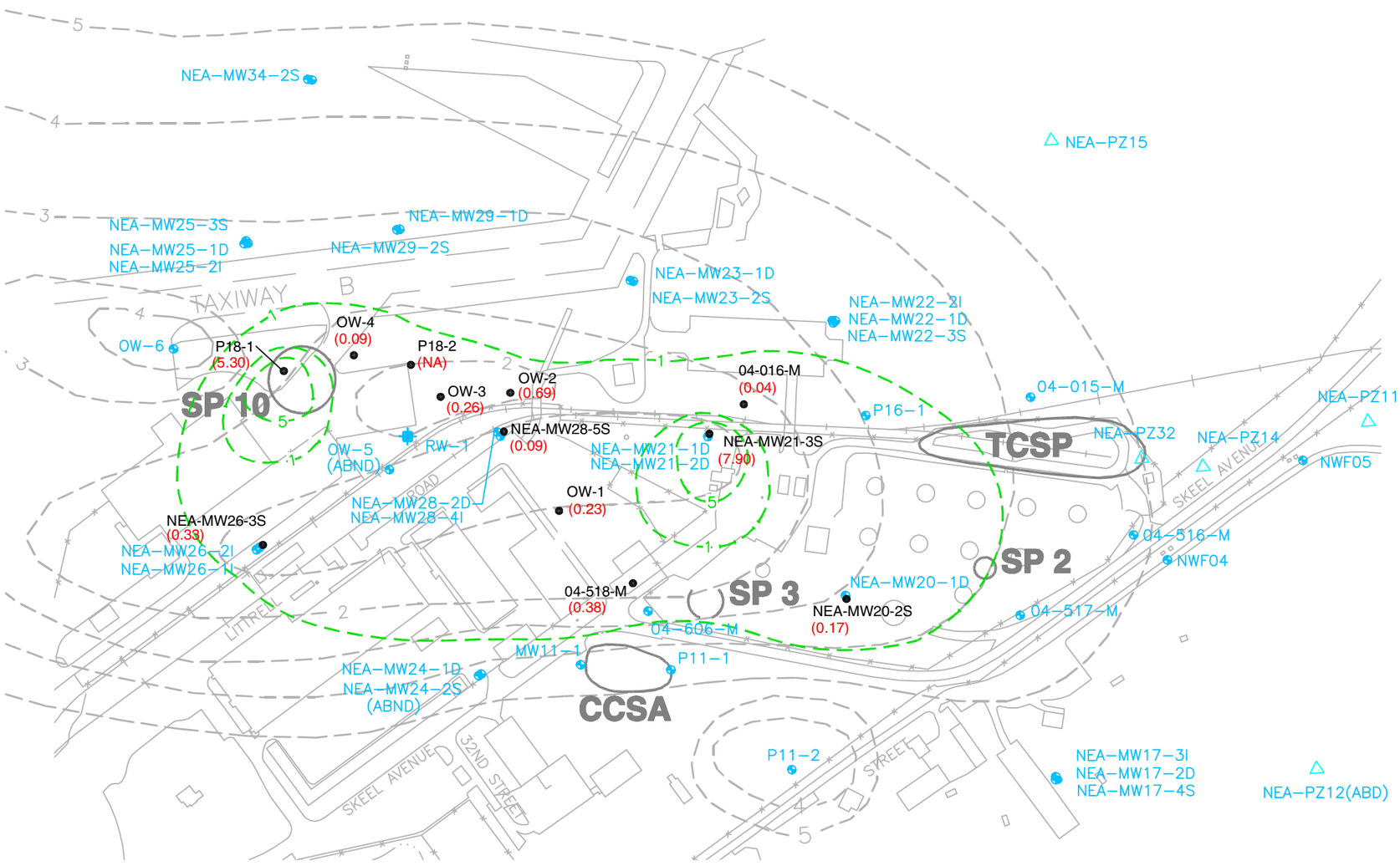
Round 5 Soil Gas Monitoring Results: Total Volatile Hydrocarbons OU2 Area, October 1999

PREPARED FOR

Wright-Patterson Air Force Base Dayton, Ohio

INTERNATIONAL TECHNOLOGY CORPORATION

DRAWN BY	MSN 1/14/00	CHECKED BY / APPROVED BY	LD GP	1/26/00	DRAWING NUMBER 2000 02-19.DWG



LEGEND:

- GROUNDWATER MONITORING WELLS
- GROUNDWATER MONITORING WELLS SAMPLED DURING SUCCESSIVE MONITORING PROGRAM.
- (0.14) ROUND 7 DISSOLVED OXYGEN GROUNDWATER CONCENTRATION, (mg/L.)
- 1 ROUND 7 DISSOLVED OXYGEN ISOPLETH, (mg/L.) (DASHED WHERE INFERRED)
- 5 BASELINE DISSOLVED OXYGEN ISOPLETH, (mg/L.)
- (NA) NOT AVAILABLE, INSUFFICIENT WATER

NOTE: 1. ALL WELLS SHOWN IN BLACK ON FIGURE WILL BE SAMPLED DURING THE PERIODIC MONITORING PROGRAM.

0 100 200 300 600 FEET

Figure 5-5

Round 7 Groundwater Monitoring Results: Dissolved Oxygen OU2 Area, October 2000

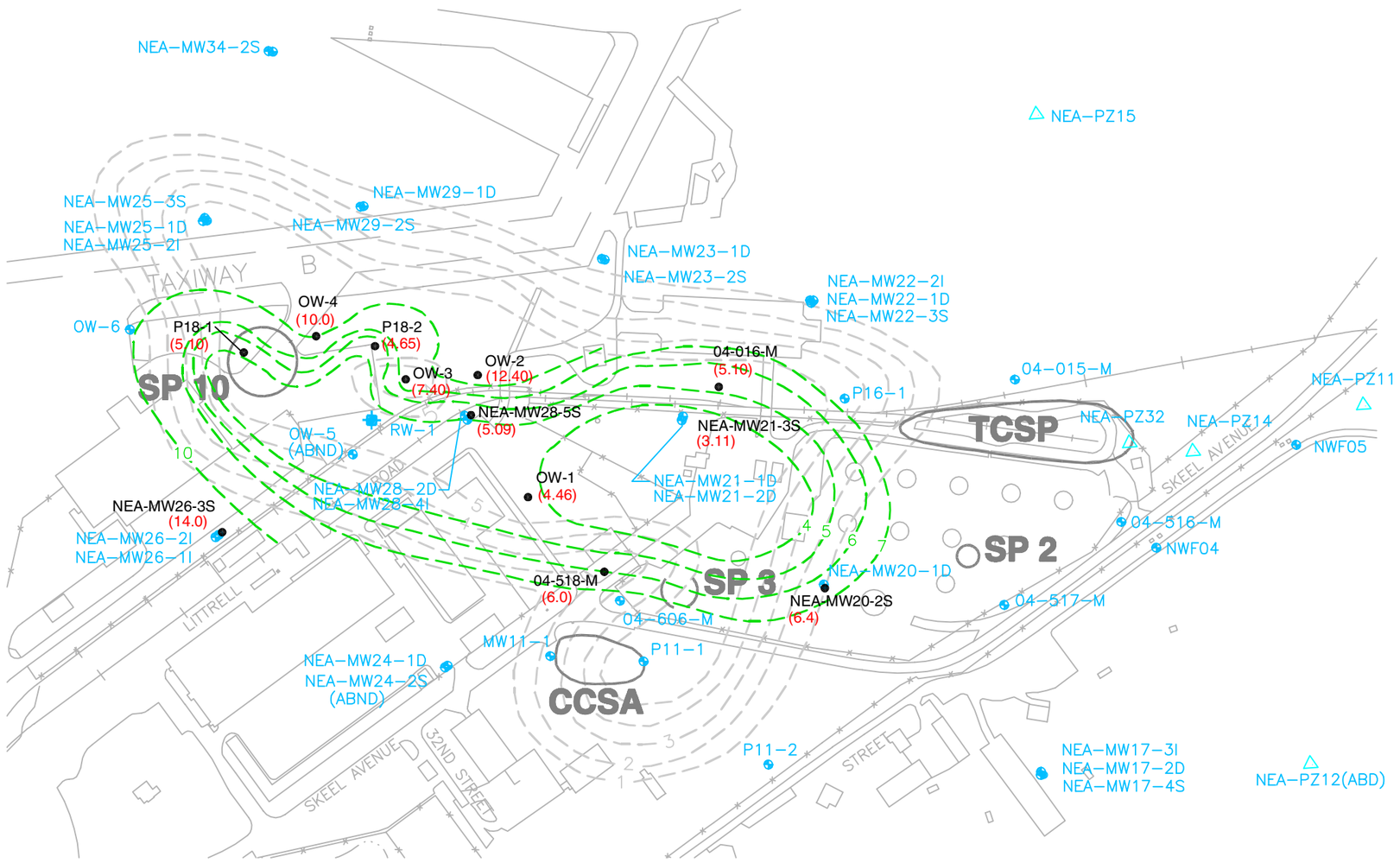
PREPARED FOR

Wright-Patterson Air Force Base Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN 1/31/01	CHECKED BY APPROVED BY	GP JT	1/31/01	DRAWING NUMBER 2001 05-26.DWG

DRAWN BY	MSN 2/1/01	CHECKED BY / APPROVED BY	GP / JT	2/1/01	DRAWING NUMBER 2001 05-27.DWG



LEGEND:

- GROUNDWATER MONITORING WELLS
- GROUNDWATER MONITORING WELLS SAMPLED DURING SUCCESSIVE MONITORING PROGRAM.
- (5.10) ROUND 7 FERROUS IRON GROUNDWATER CONCENTRATION, (mg/L.)
- —5— ROUND 7 FERROUS IRON ISOPLETH, (mg/L.) (DASHED WHERE INFERRED)
- —3— BASELINE FERROUS IRON ISOPLETH, (mg/L.)
- (ND) NOT DETECTED

NOTE: 1. ALL WELLS SHOWN IN BLACK ON FIGURE WILL BE SAMPLED DURING THE PERIODIC MONITORING PROGRAM.

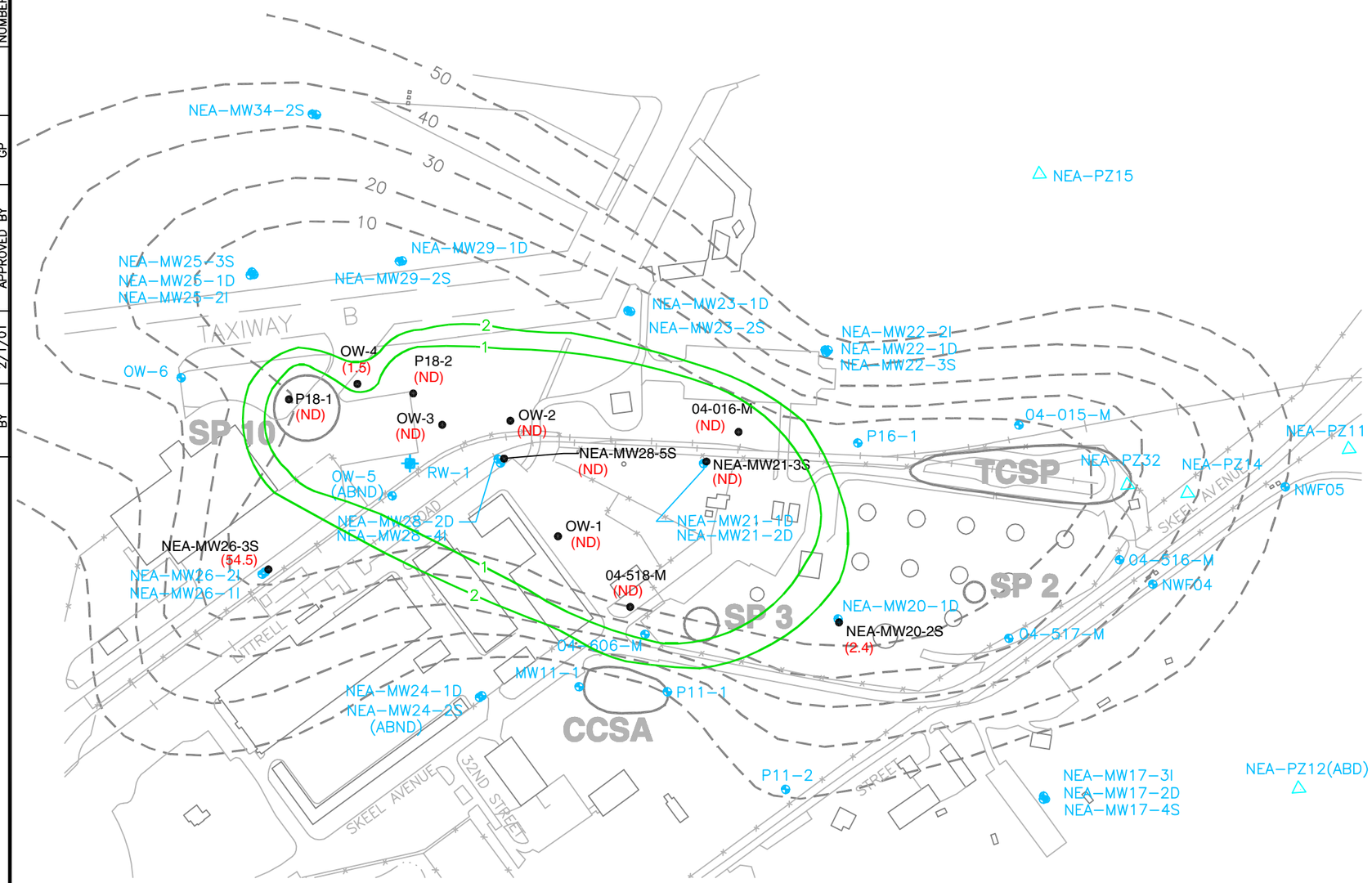
Figure 5-6

Round 7 Groundwater Monitoring Results: Ferrous Iron OU2 Area, October 2000

PREPARED FOR

Wright-Patterson Air Force Base Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246



LEGEND:

- GROUNDWATER MONITORING WELLS
- GROUNDWATER MONITORING WELLS SAMPLED DURING SUCCESSIVE MONITORING PROGRAM.
- (2.4) ROUND 7 SULFATE GROUNDWATER CONCENTRATION, (mg/L).
- —1— ROUND 7 SULFATE ISOPLETH (mg/L) (DASHED WHERE INFERRED)
- - -40- - BASELINE SULFATE ISOPLETH, (mg/L).
- (ND) NOT DETECTED

NOTE: 1. ALL WELLS SHOWN IN BLACK ON FIGURE WILL BE SAMPLED DURING THE PERIODIC MONITORING PROGRAM.

N

0 100 200 300 600 FEET

Figure 5-7

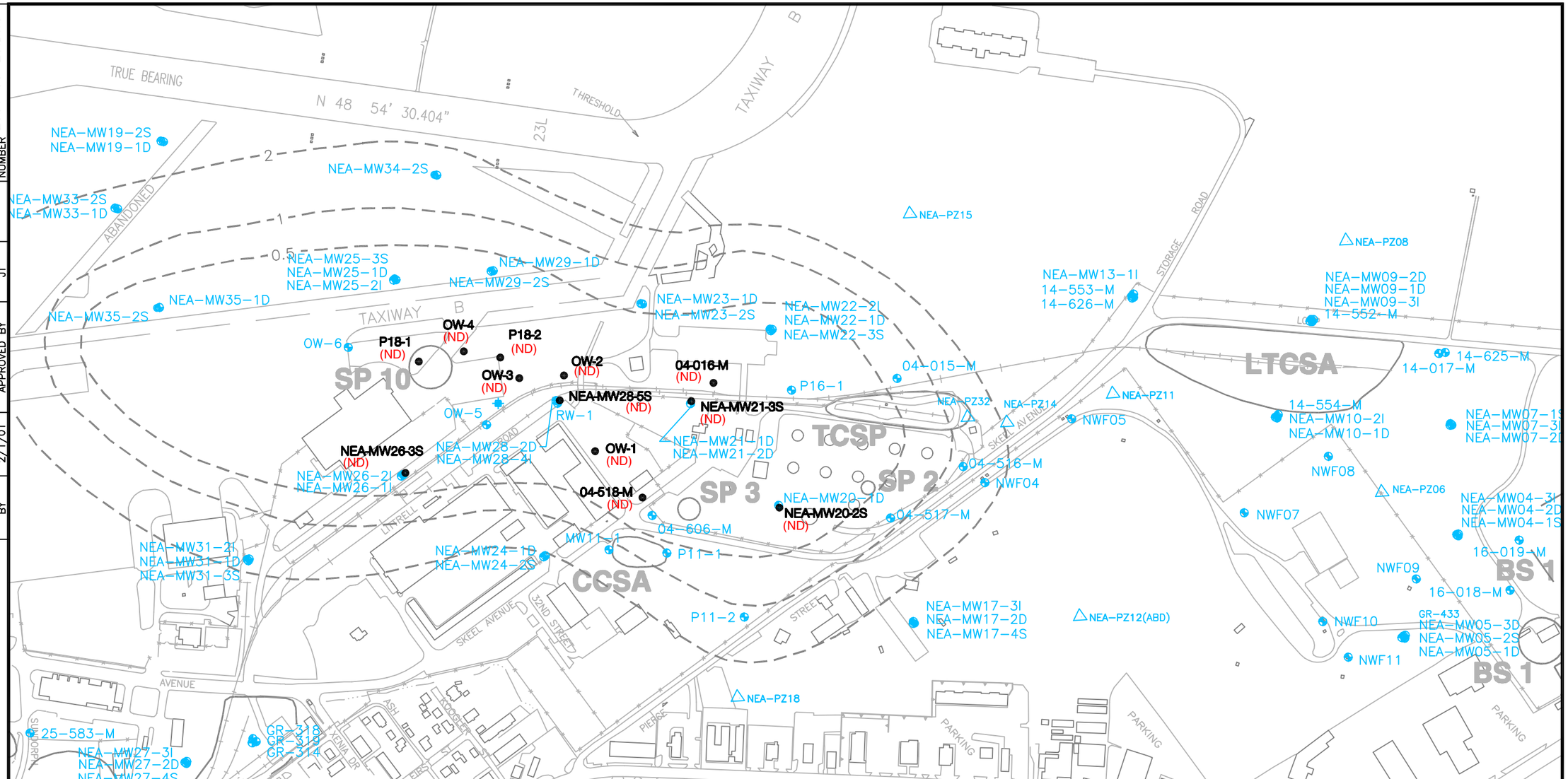
Round 7 Groundwater Monitoring Results: Sulfate OU2 Area, October 2000

PREPARED FOR

Wright-Patterson Air Force Base Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN 2/1/01	CHECKED BY / APPROVED BY	LD / GP	2/1/01	DRAWING NUMBER 2001 05-28.DWG



LEGEND:

- GROUNDWATER MONITORING WELLS
- GROUNDWATER MONITORING WELLS TO BE SAMPLED DURING SUCCESSIVE MONITORING PROGRAM.
- (1) ROUND 7 NITRATE GROUNDWATER CONCENTRATION, (mg/L).
- - -1- - BASELINE NITRATE ISOPLETH, (mg/L).
- (ND) NOT DETECTED

NOTES:
1. ALL WELLS SHOWN IN BLACK ON FIGURE WILL BE SAMPLED DURING PERIODIC MONITORING PROGRAM.
2. NITRATE CONCENTRATIONS WERE BELOW DETECTION LEVELS FOR ROUND 7 GROUNDWATER SAMPLES.

N

0 100 200 300 400 800 FEET

Figure 5-8

Round 7 Groundwater Monitoring Results: Nitrate OU2 Area, October 2000

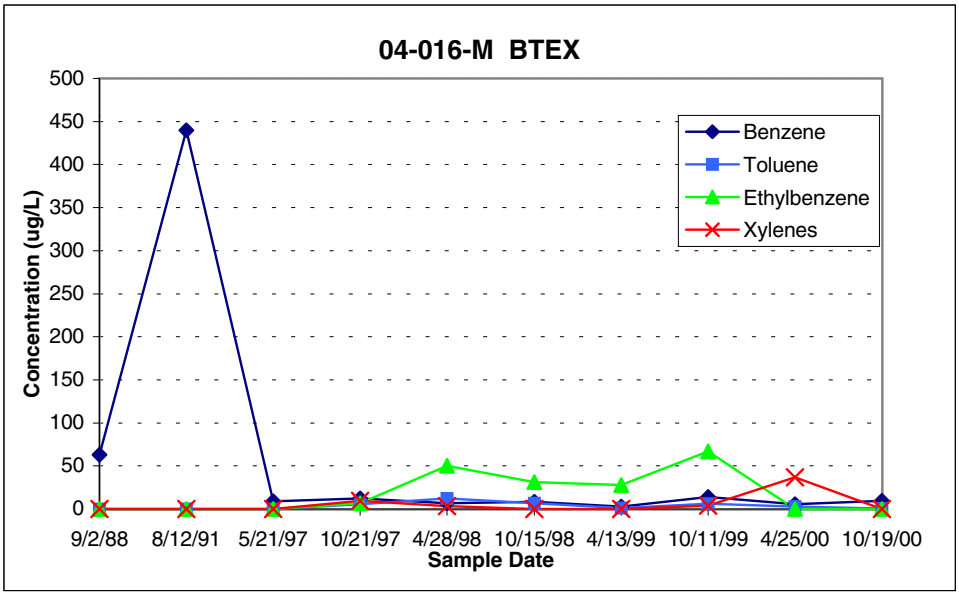
PREPARED FOR

Wright-Patterson Air Force Base Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN	CHECKED BY	GP	2/1/01	DRAWING NUMBER 2001 05-29.DWG
	2/1/01	APPROVED BY	JT		

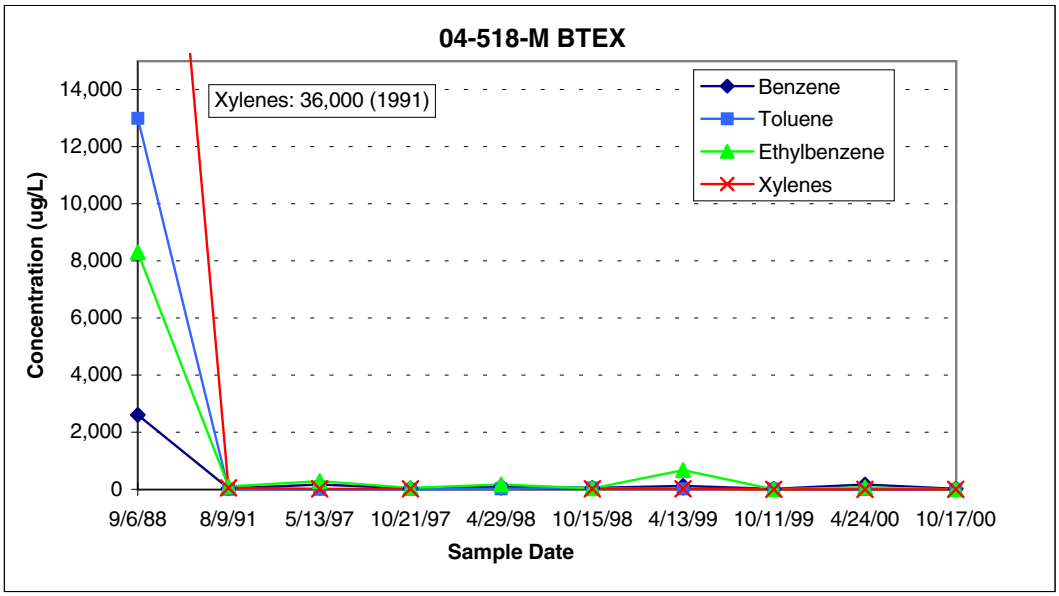
OU2 HYDROCARBON CONCENTRATION GRAPHS
WELL: 04-016-M
WPAFB-BMP

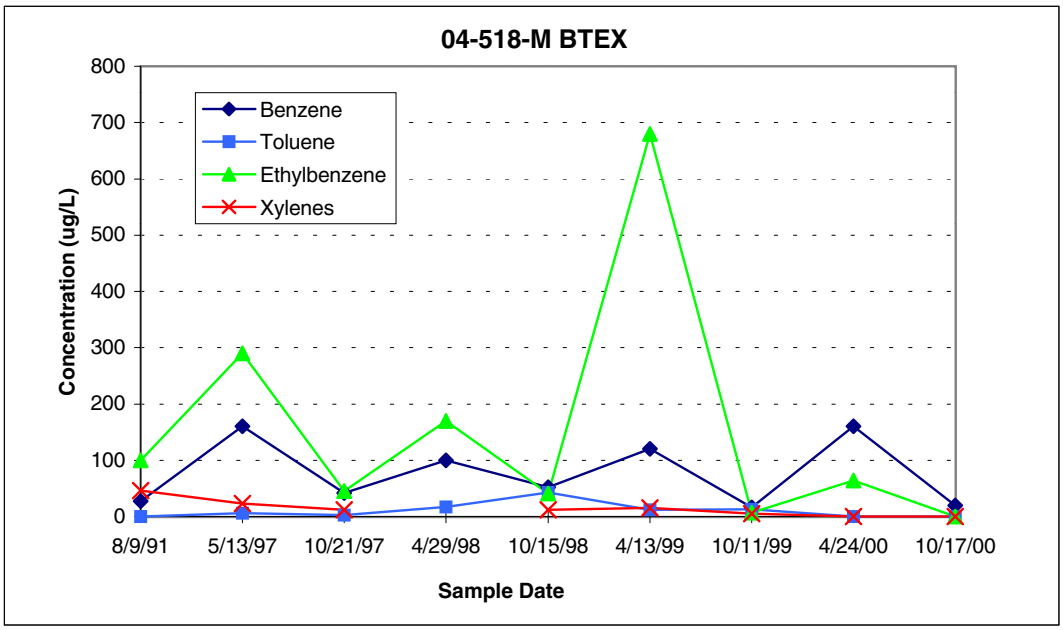


n:\3\777097\October00\Draft\Figures\OU2\OU2GraBTEX_Oct00.xls\04-016-M

FIGURE 5-9

OU2 HYDROCARBON CONCENTRATION GRAPHS
WELL: 04-518-M
WPAFB - BMP



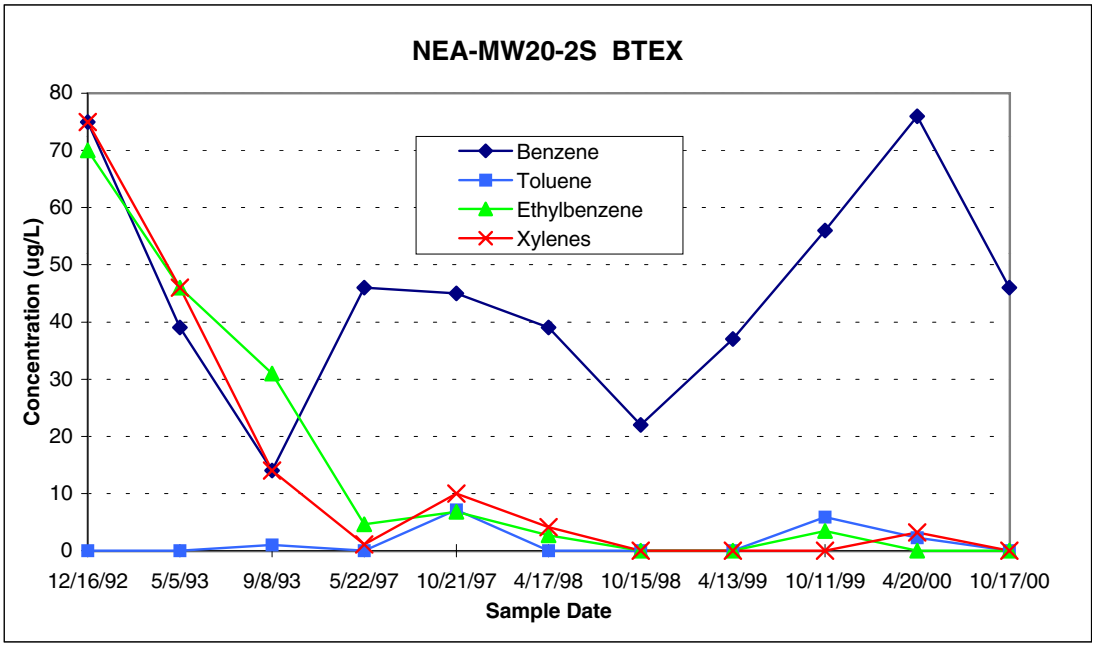


BTEX concentrations from samples after 1988 are plotted on the bottom graph, at a larger scale to show the variations in concentrations.

n:\3\777097\October00\Draft\Figures\OU2\OU2GraBTEX_Oct00.xls\04-518-M

FIGURE 5-10

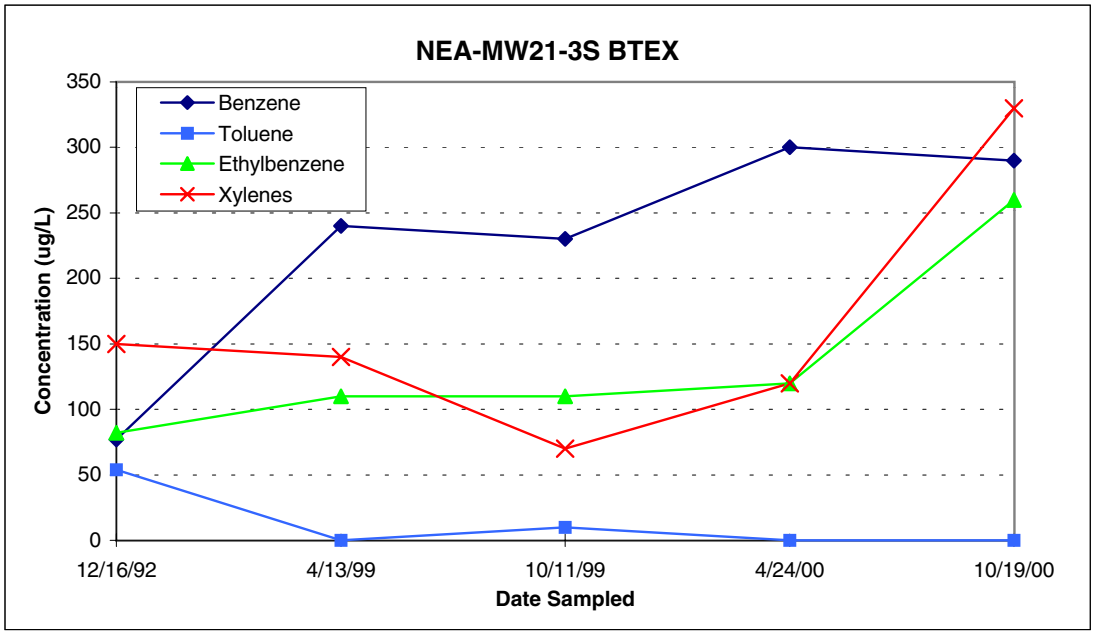
OU2 HYDROCARBON CONCENTRATION GRAPHS
WELL: NEA-MW20-2S
WPAFB - BMP



n:\3\777097\October00\Draft\Figures\OU2\OU2GraBTEX_Oct00.xls\NEA-MW20-2S

FIGURE 5-11

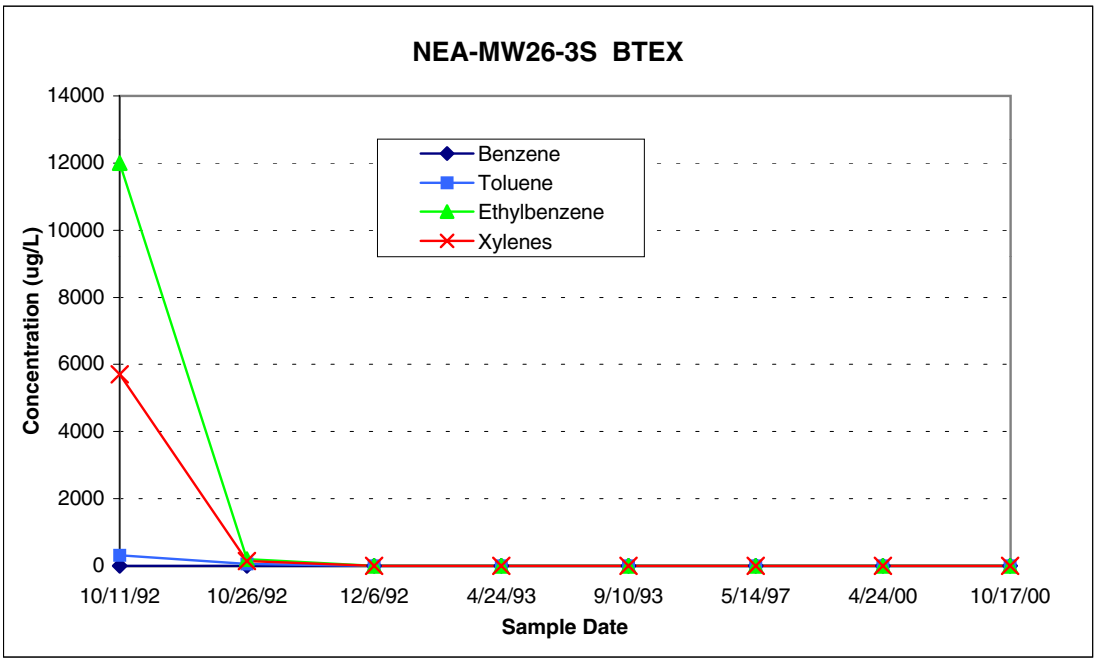
OU2 HYDROCARBON CONCENTRATION GRAPHS
WELL: NEA-MW21-3S
WPAFB - BMP

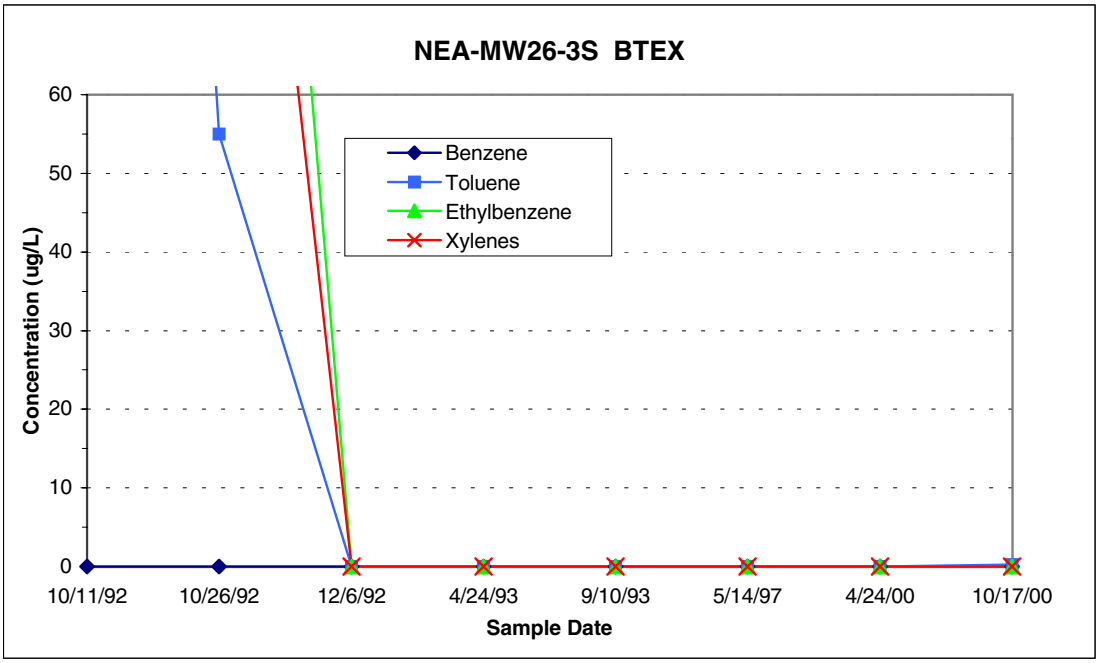


n:\3\777097\October00\Draft\Figures\OU2\OU2GraBTEX_Oct00.xls\WP-NEA-MW21-3S

FIGURE 5-12

OU2 HYDROCARBON CONCENTRATION GRAPHS
WELL: NEA-MW26-3S
WPAFB-BMP



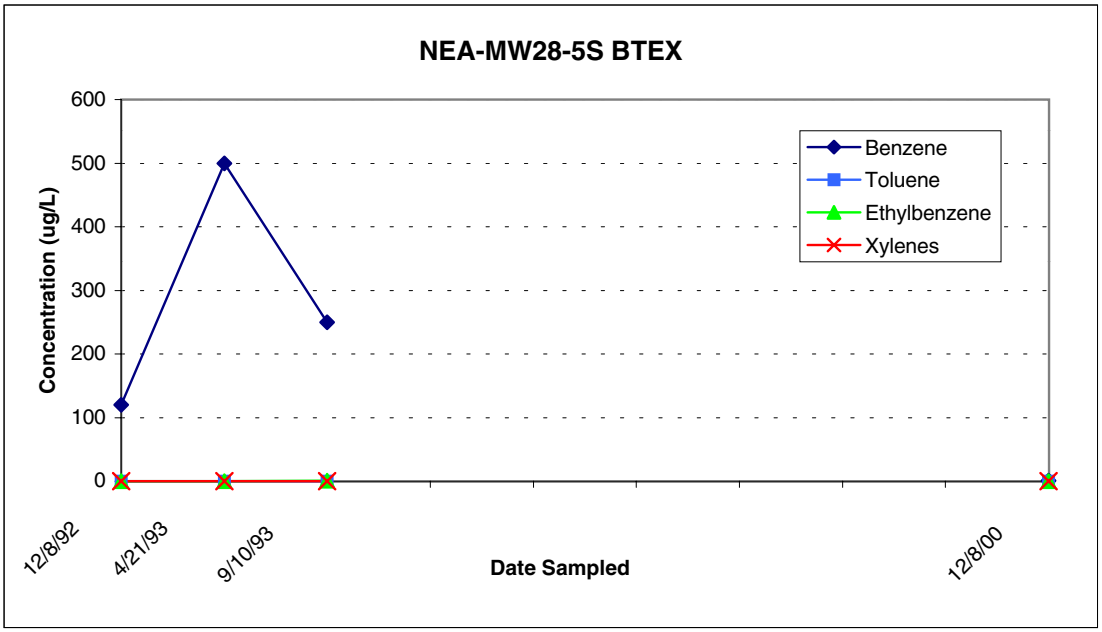


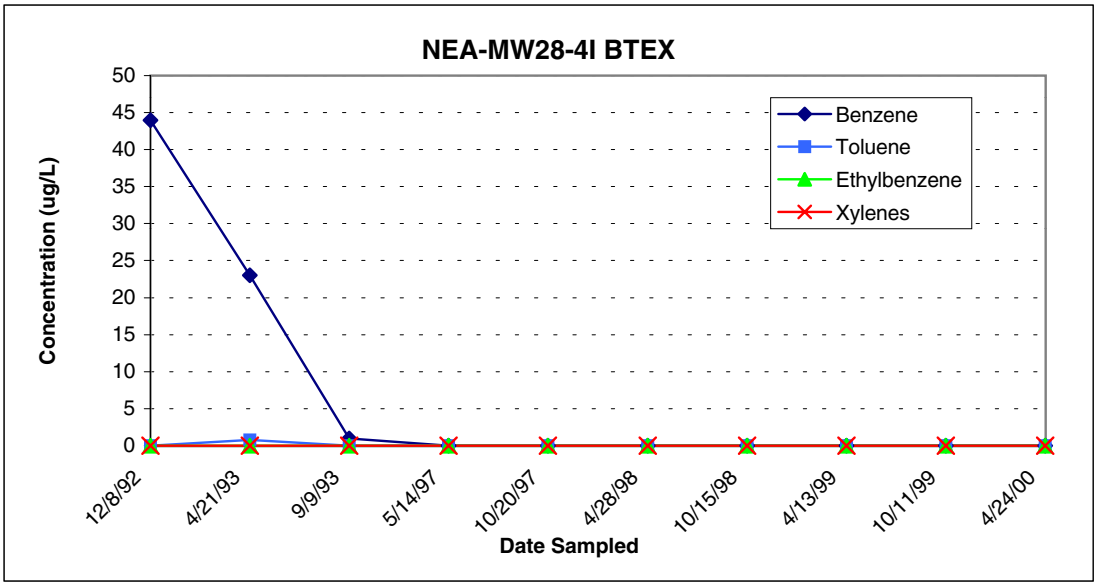
BTEX concentrations are plotted on the bottom graph at a larger scale.

N\3\777097\LTM\October00\Draft\Figures\OU2\OU2GraBTEX_Oct00.xls\NEA-MW26-3S

FIGURE 5-13

OU2 HYDROCARBON CONCENTRATION GRAPHS
WELL: NEA-MW28-4I and NEA-MW28-5S
WPAFB - BMP

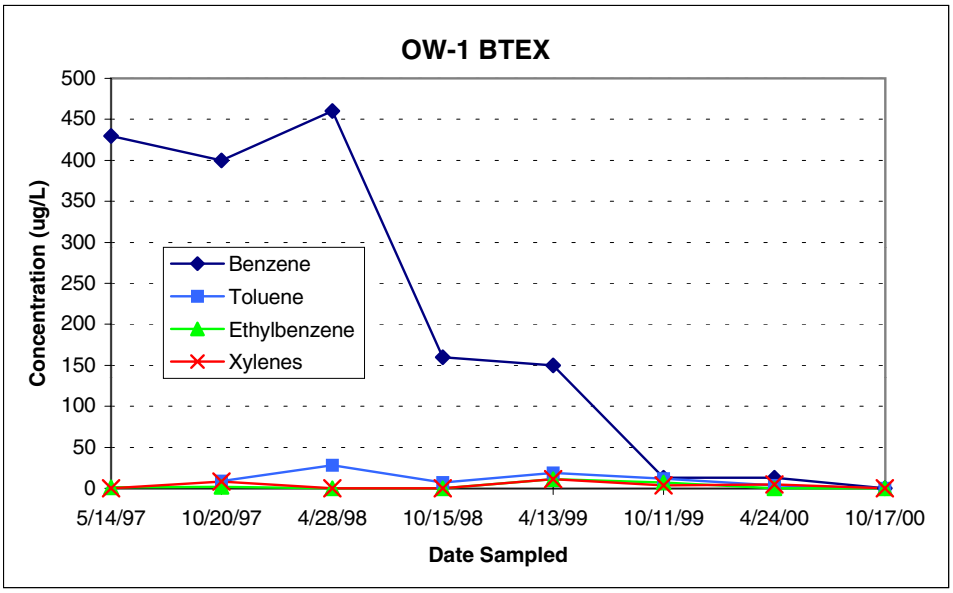




n:\3\777097\October00\Draft\Figures\OU2\OU2GraBTEX_Oct00.xls\NEA-MW28-5S

FIGURE 5-14

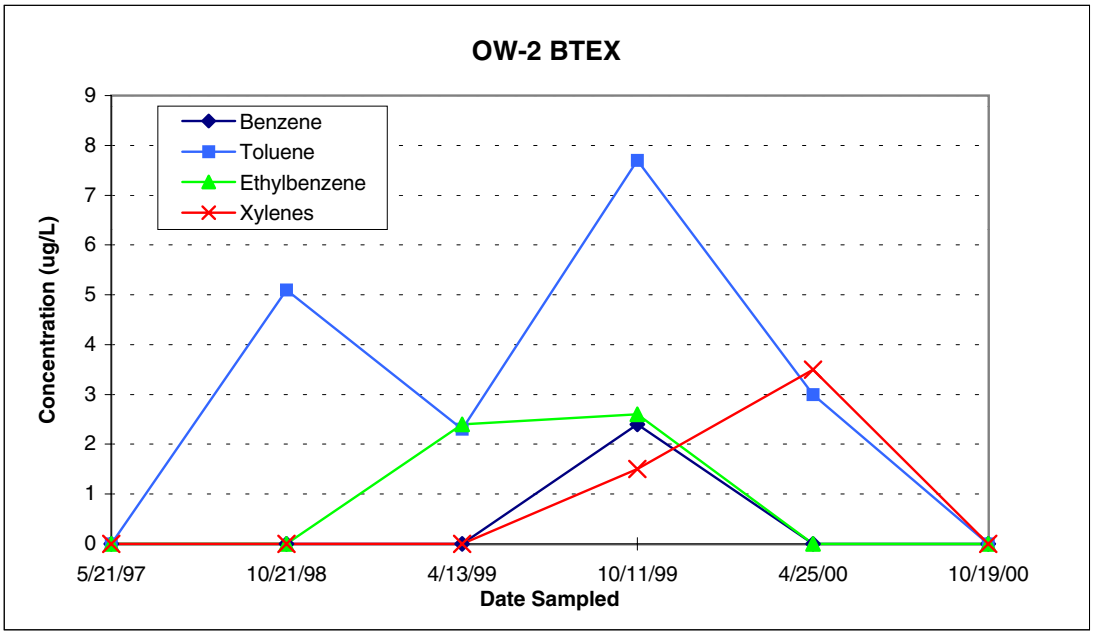
OU2 HYDROCARBON CONCENTRATION GRAPHS
WELL: OW-1
WPAFB-BMP



n:\3\777097\October00\Draft\Figures\OU2\OU2GraBTEX_Oct00.xls\OW-1

FIGURE 5-15

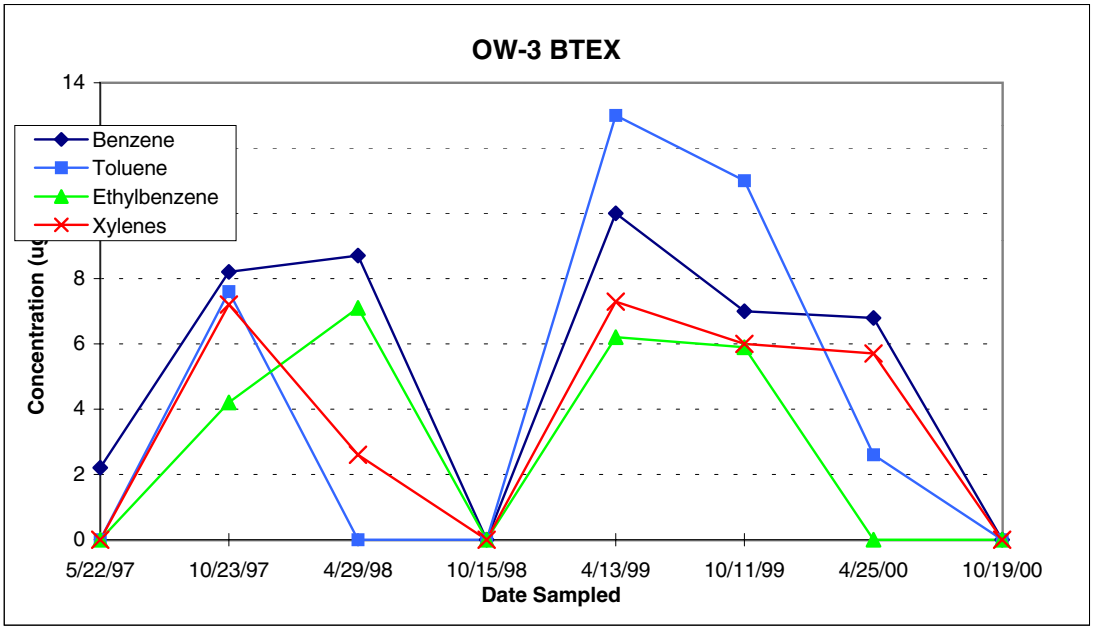
OU2 HYDROCARBON CONCENTRATION GRAPHS
WELL: OW-2
WPAFB - BMP



n:\3\777097\October00\Draft\Figures\OU2\OU2GraBTEX_Oct00.xls\OW-2

FIGURE 5-16

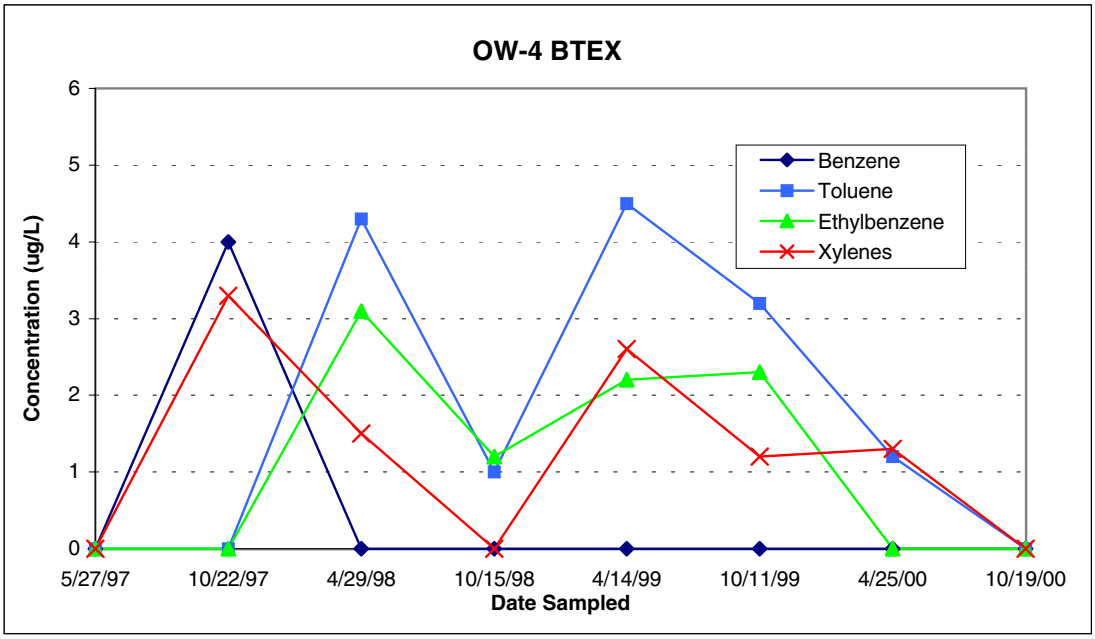
OU2 HYDROCARBON CONCENTRATION GRAPHS
WELL: OW-3
WPAFB - BMP



n:\3\777097\October00\Draft\Figures\OU2\OU2GraBTEX_Oct00.xls\OW-3

FIGURE 5-17

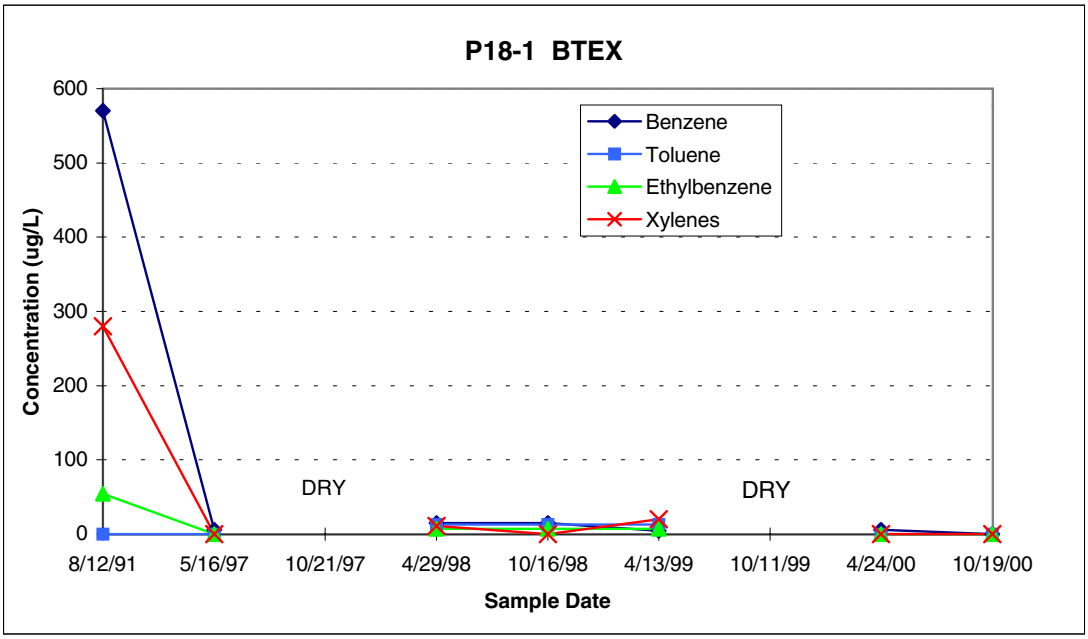
OU2 HYDROCARBON CONCENTRATION GRAPHS
WELL: OW-4
WPAFB - BMP



n:\3\777097\October00\Draft\Figures\OU2\OU2GraBTEX_Oct00.xls\OW-4

FIGURE 5-18

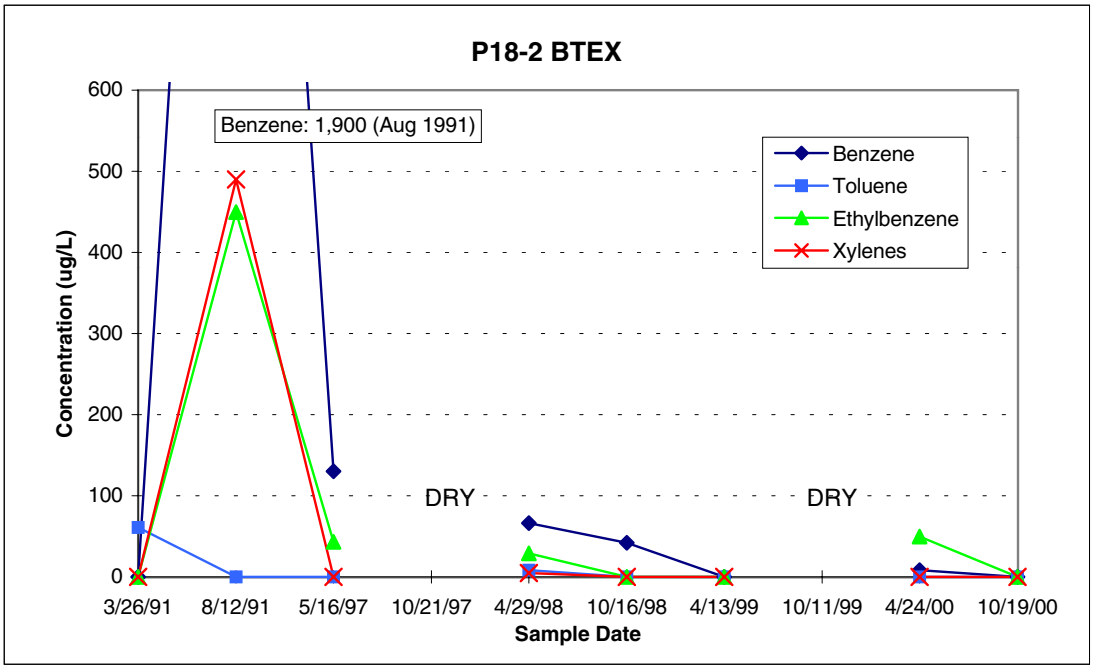
OU2 HYDROCARBON CONCENTRATION GRAPHS
WELL: P18-1
WPAFB - BMP



n:\3\777097\October00\Draft\Figures\OU2\OU2GraBTEX_Oct00.xls\P18-1

FIGURE 5-19

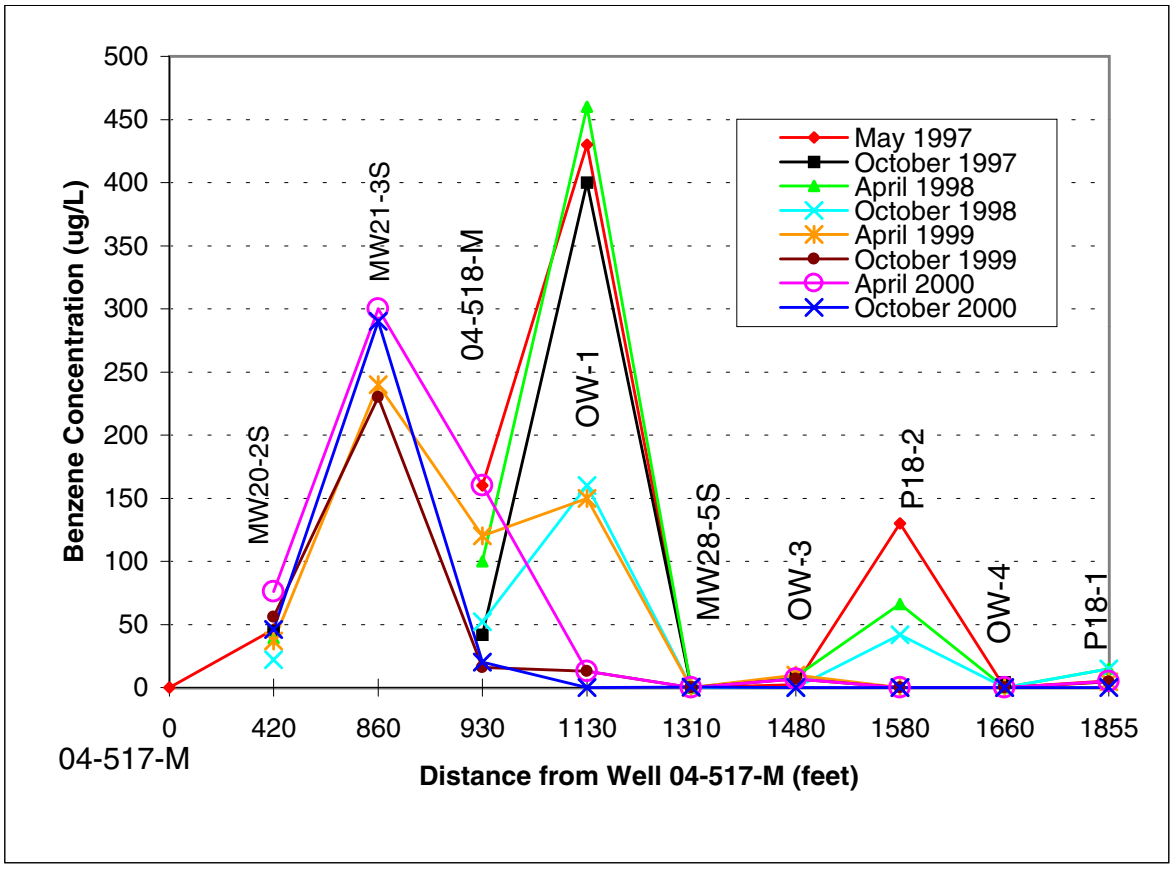
OU2 HYDROCARBON CONCENTRATION GRAPHS
WELL: P18-2
WPAFB - BMP



n:\3\777097\October00\Draft\Figures\OU2\OU2GraBTEX_Oct00.xls\P18-2

FIGURE 5-20

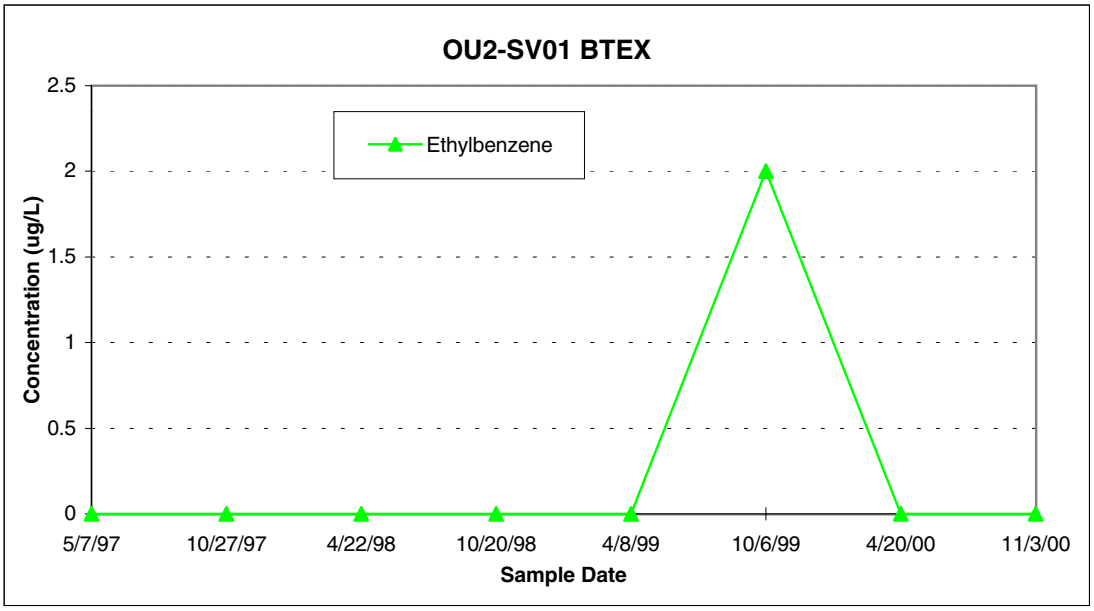
OU2 Benzene Concentrations vs Downgradient Distance From Well 04-517-M WPAFB-BMP

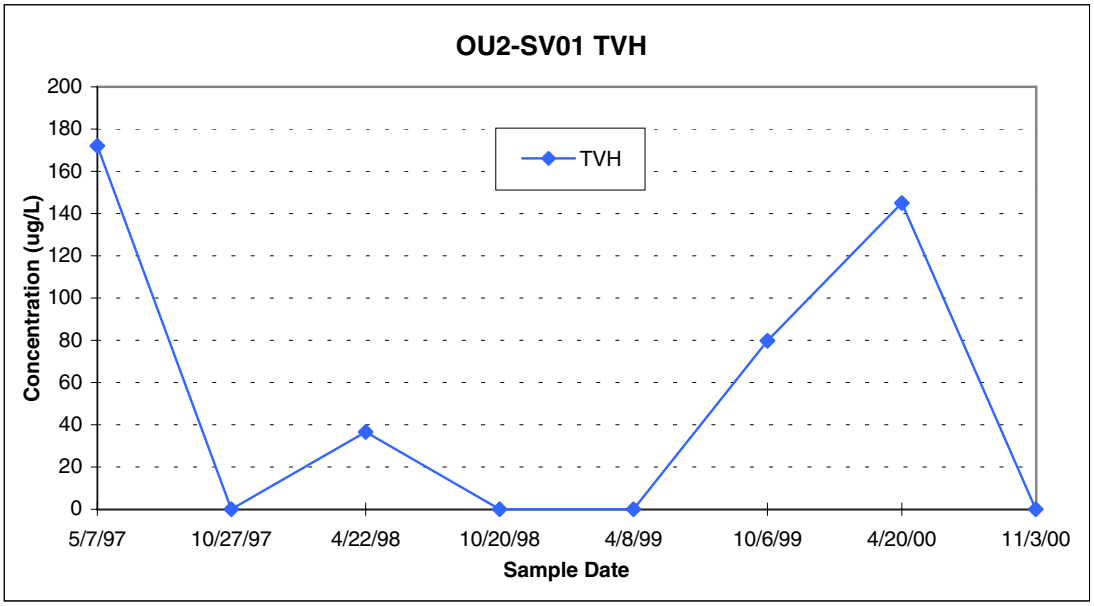


n:\3\777097\October00\Draft\Figures\OU2\BenzDwngrdnt_Oct00.xls

FIGURE 5-21

OU2 SOIL VAPOR HYDROCARBON
CONCENTRATION GRAPHS
WELL: OU2-SV01
WPAFB - BMP

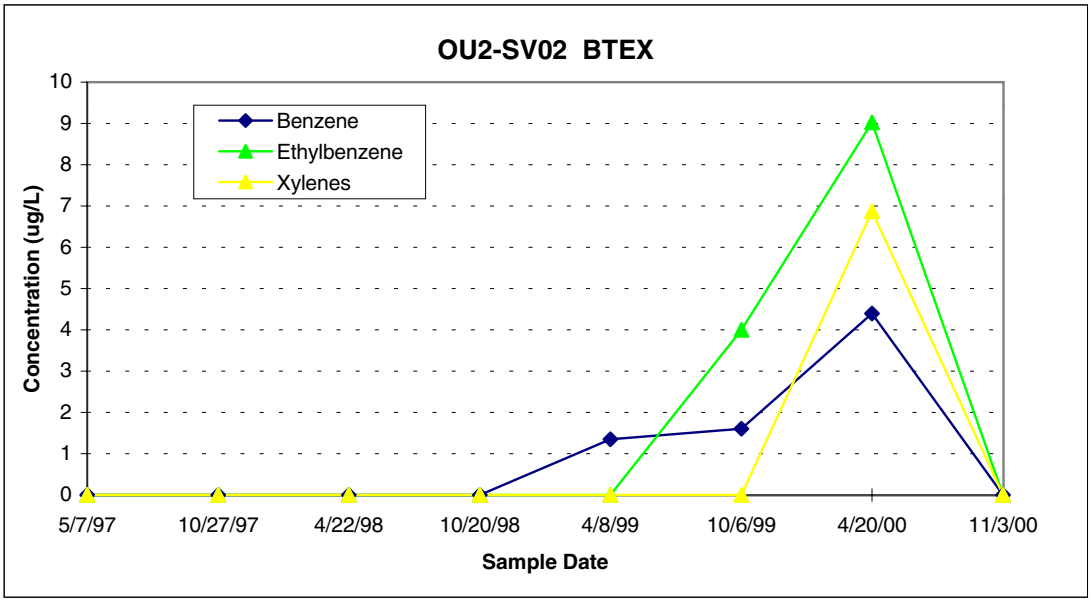


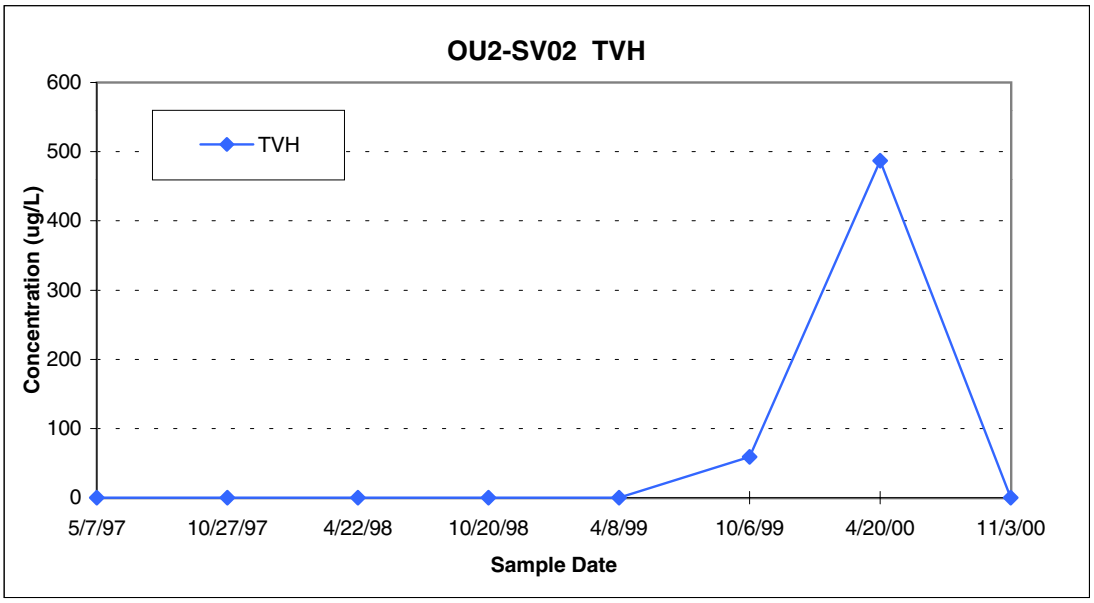


n:\3\777097\October00\Draft\Figures\OU2\Oct00OU2SVAP.XLS\OU2-SV01BTEX

FIGURE 5-22

OU2 SOIL VAPOR HYDROCARBON
CONCENTRATION GRAPHS
WELL: OU2-SV02
WPAFB - BMP

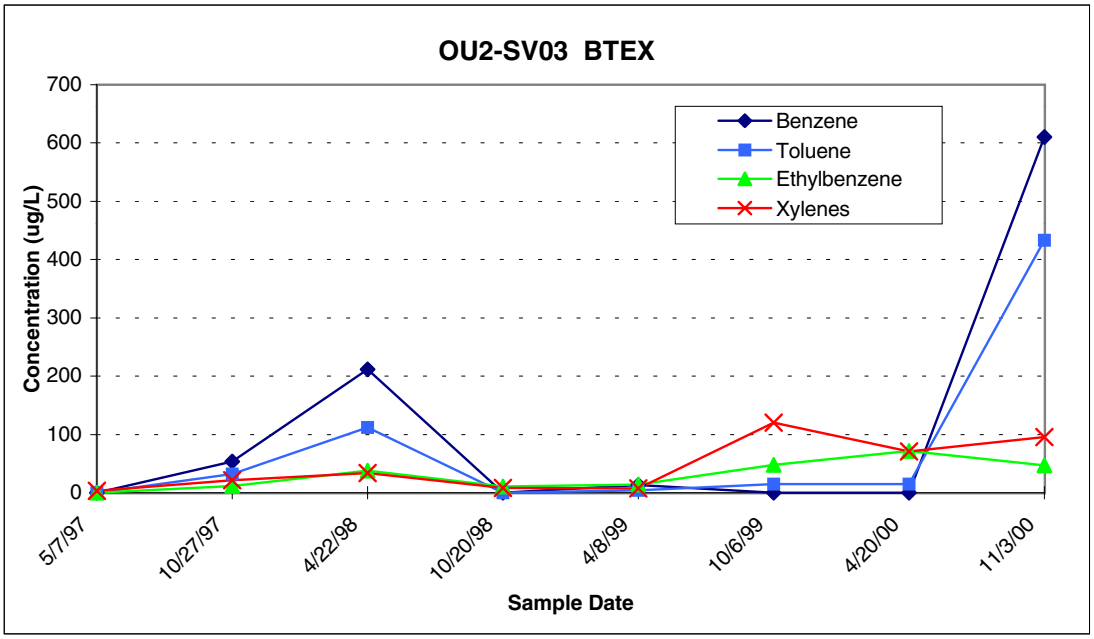


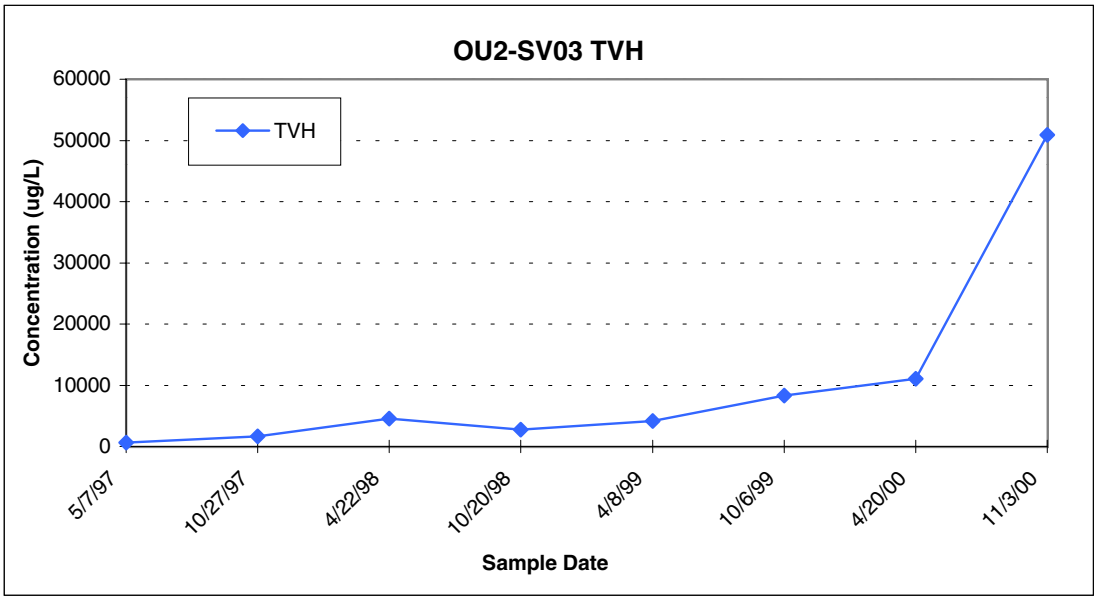


n:\3\777097\October00\Draft\Figures\OU2\Oct00OU2SVAP.XLS\OU2-SV02BTEX

FIGURE 5-23

OU2 SOIL VAPOR HYDROCARBON
CONCENTRATION GRAPHS
WELL: OU2-SV03
WPAFB - BMP

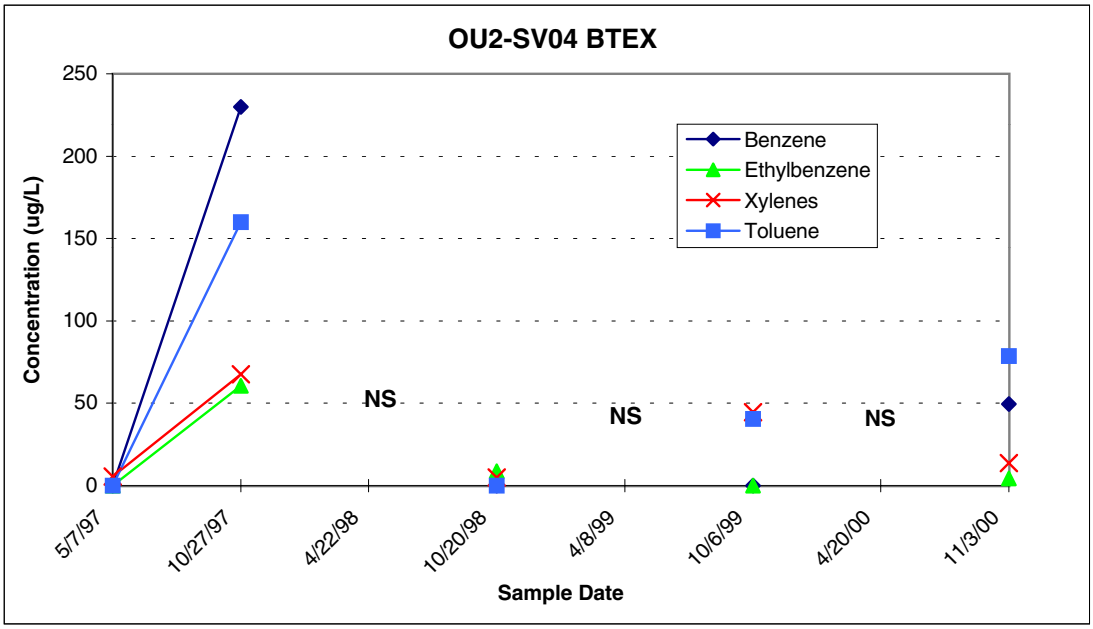


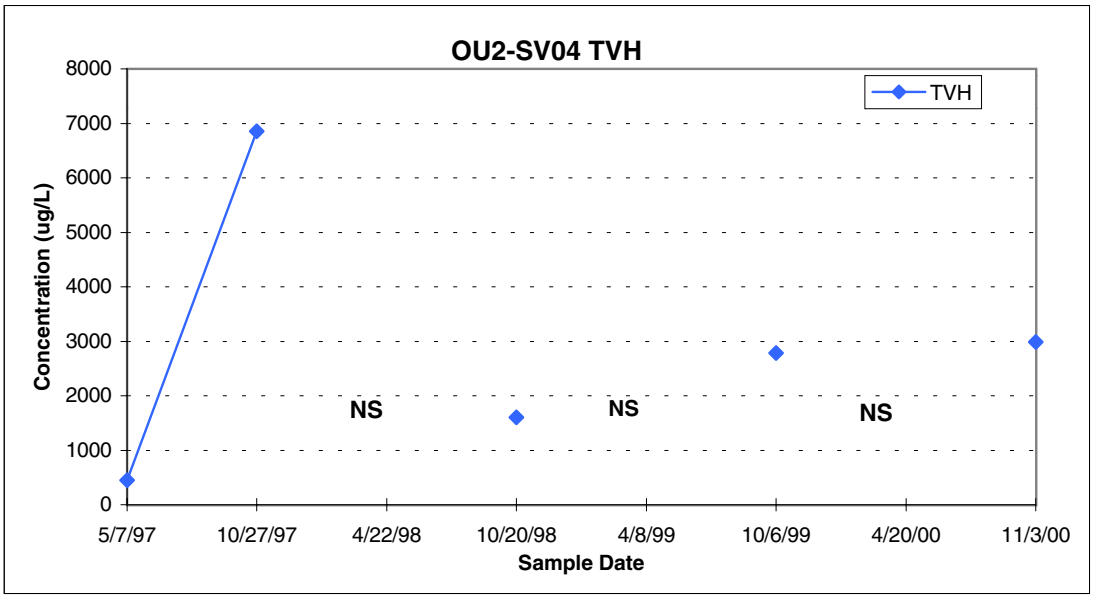


n:\3\777097\October00\Draft\FIgures\OU2\Oct00OU2SVAP.XLS\OU2-SV03BTEX

FIGURE 5-24

OU2 SOIL VAPOR HYDROCARBON
CONCENTRATION GRAPHS
WELL: OU2-SV04
WPAFB - BMP

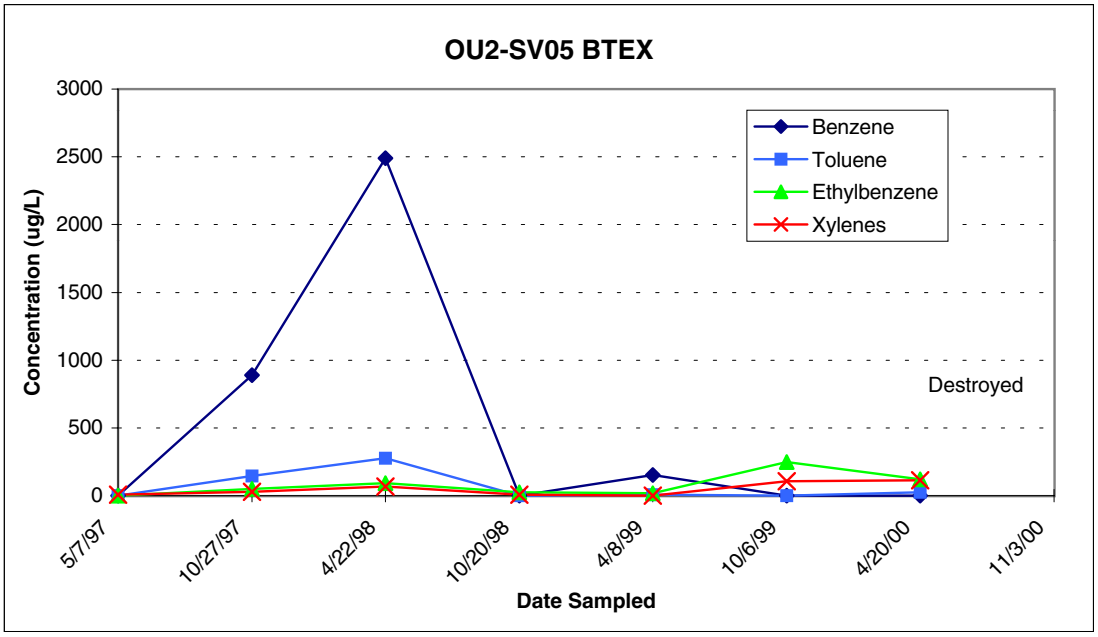


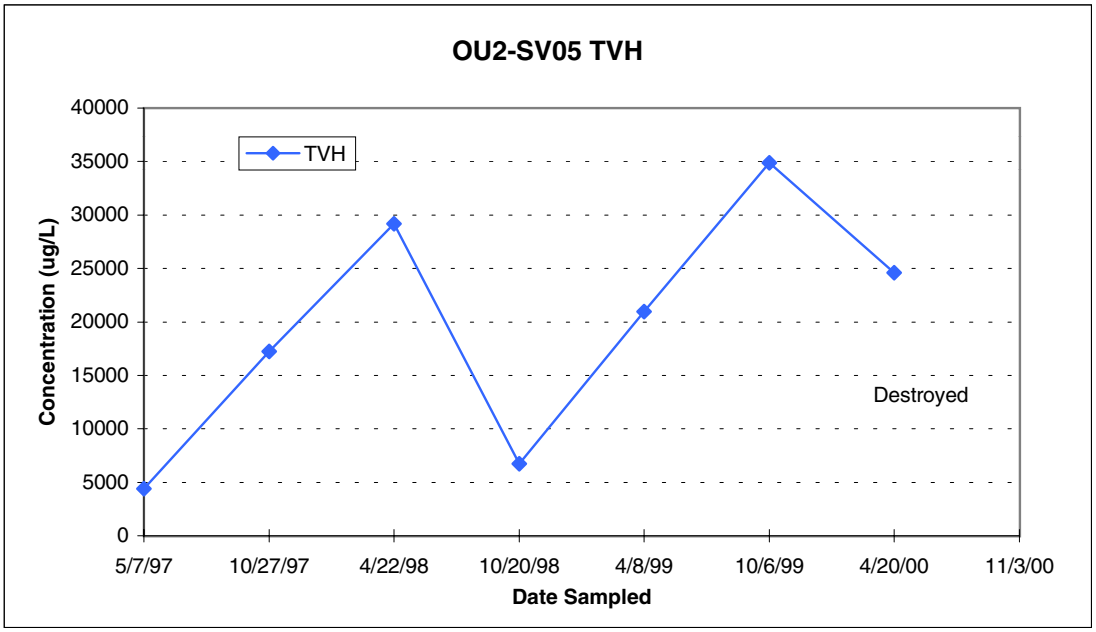


n:\3\777097\October00\Draft\Figures\OU2\Oct00OU2SVAP.XLS\OU2-SV04BTEX

FIGURE 5-25

OU2 SOIL VAPOR HYDROCARBON
CONCENTRATION GRAPHS
WELL: OU2-SV05
WPAFB-BMP

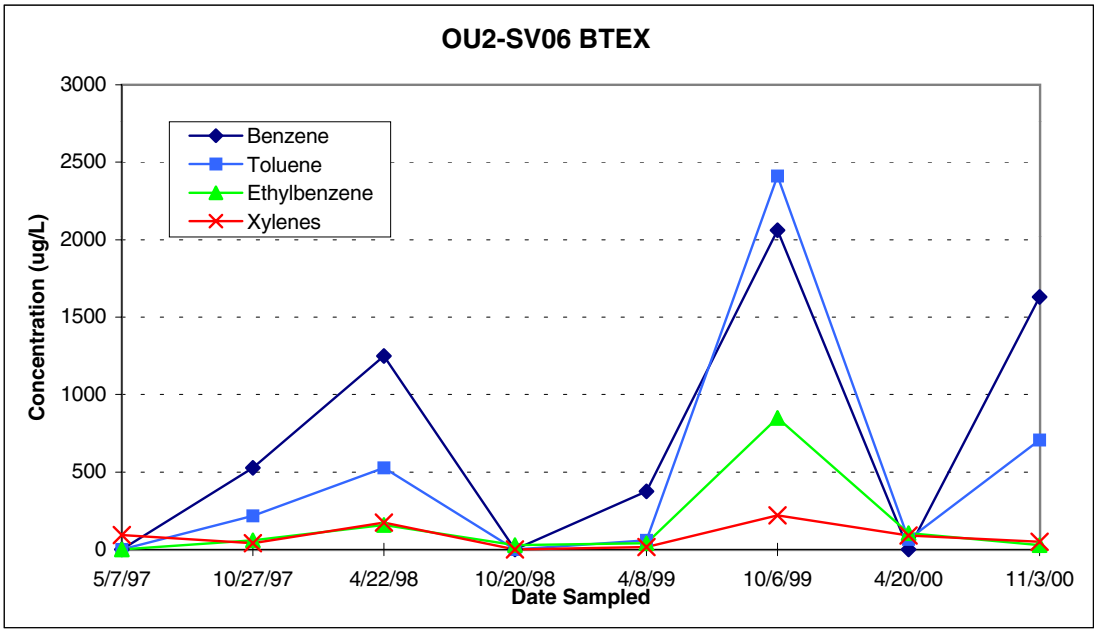




n:\3\777097\October00\Draft\Figures\OU2\Oct00OU2SVAP.XLS\OU2-SV05BTEX

FIGURE 5-26

OU2 SOIL VAPOR HYDROCARBON
CONCENTRATION GRAPHS
WELL: OU2-SV06
WPAFB - BMP



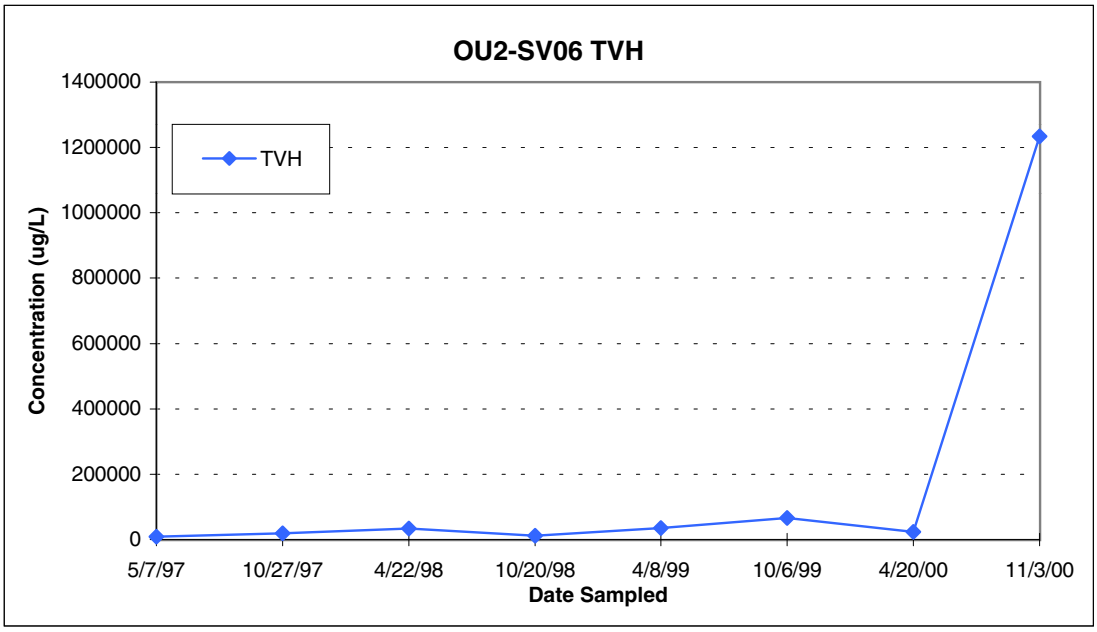
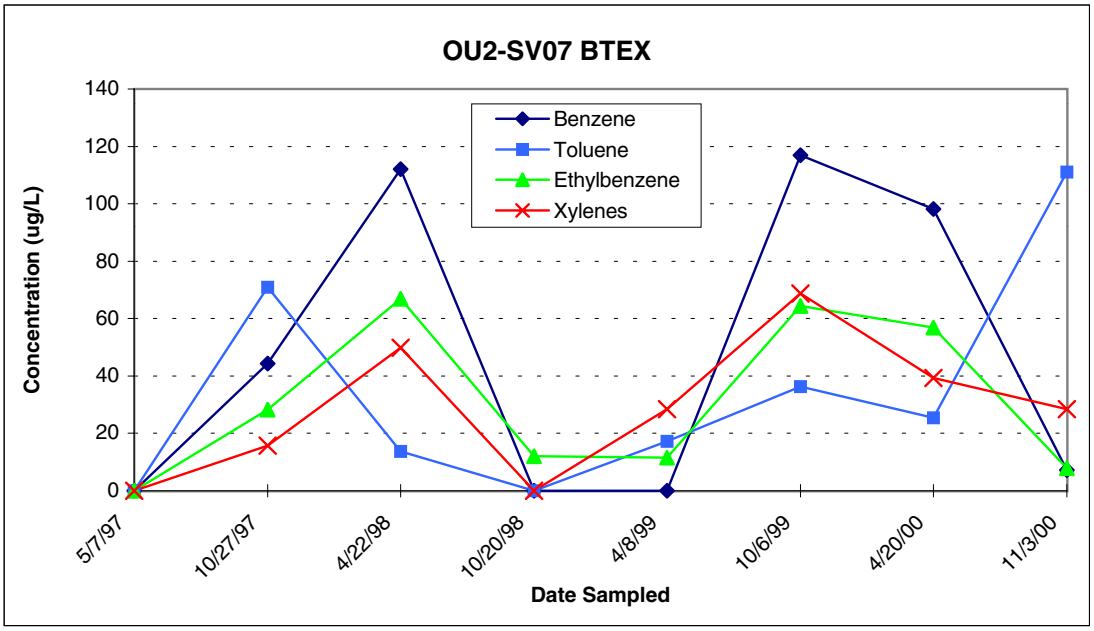
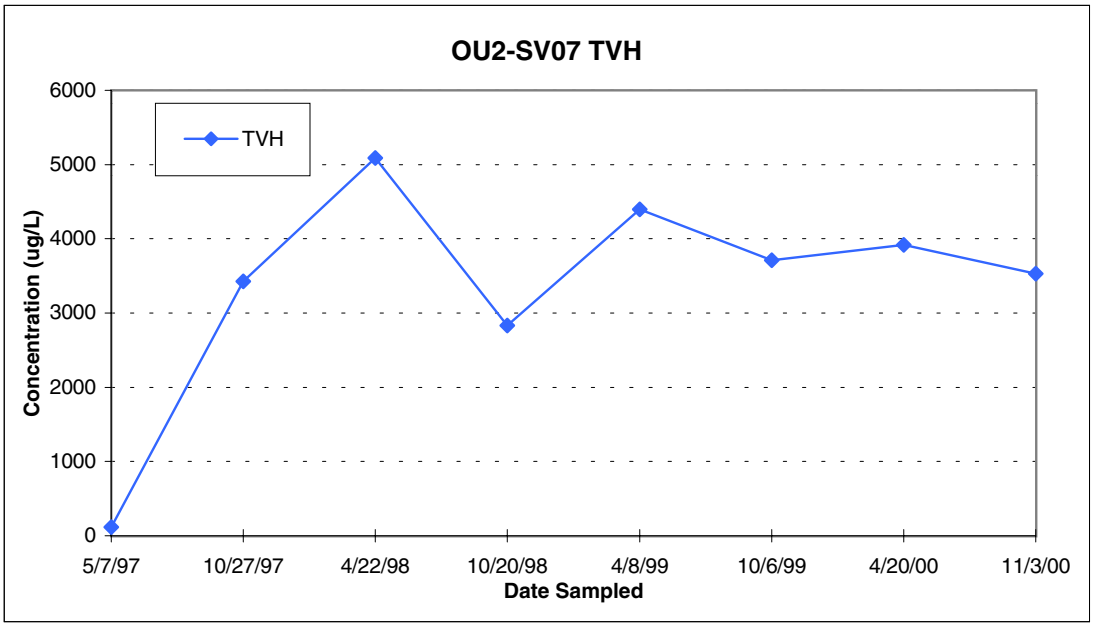


FIGURE 5-27

n:\3\777097\October00\Draft\Figures\OU2\Oct00OU2SVAP.XLS\OU2-SV06BTEX

OU2 SOIL VAPOR HYDROCARBON
CONCENTRATION GRAPHS
WELL: OU2-SV07
WPAFB - BMP

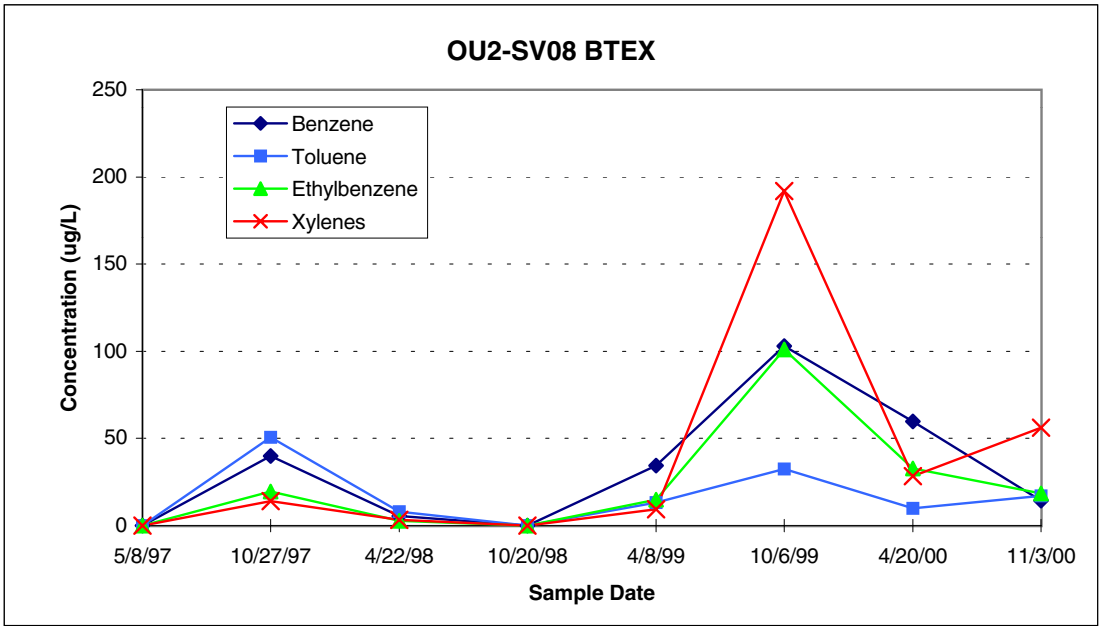


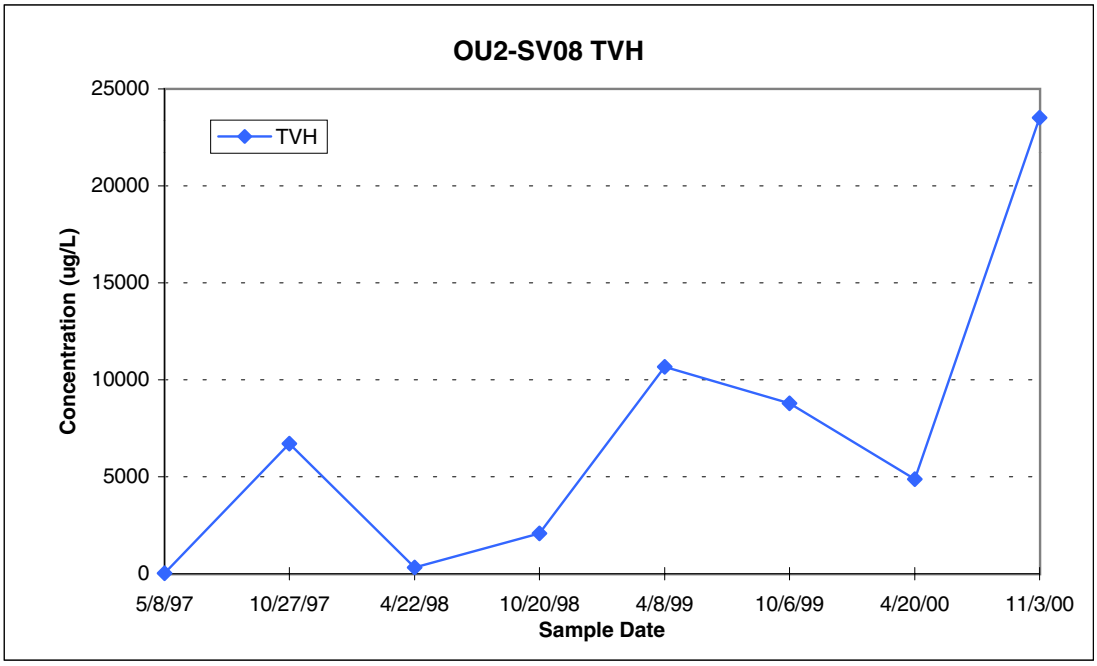


n:\3\777097\October00\Draft\Figures\OU2\Oct00OU2SVAP.XLS\OU2-SV07BTEX

FIGURE 5-28

OU2 SOIL VAPOR HYDROCARBON
CONCENTRATION GRAPHS
WELL: OU2-SV08
WPAFB - BMP

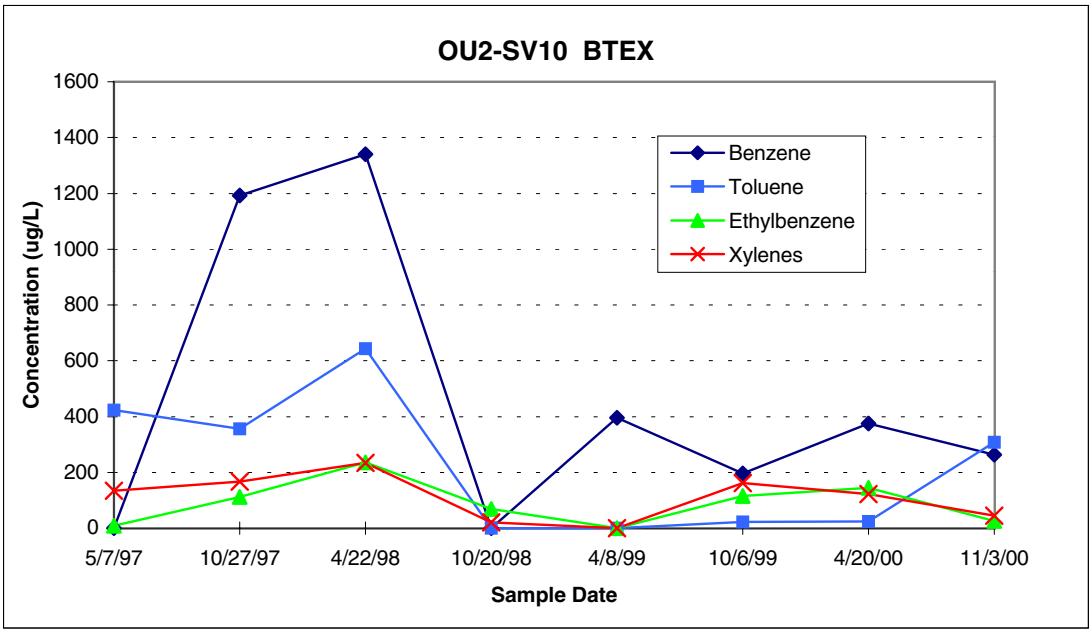


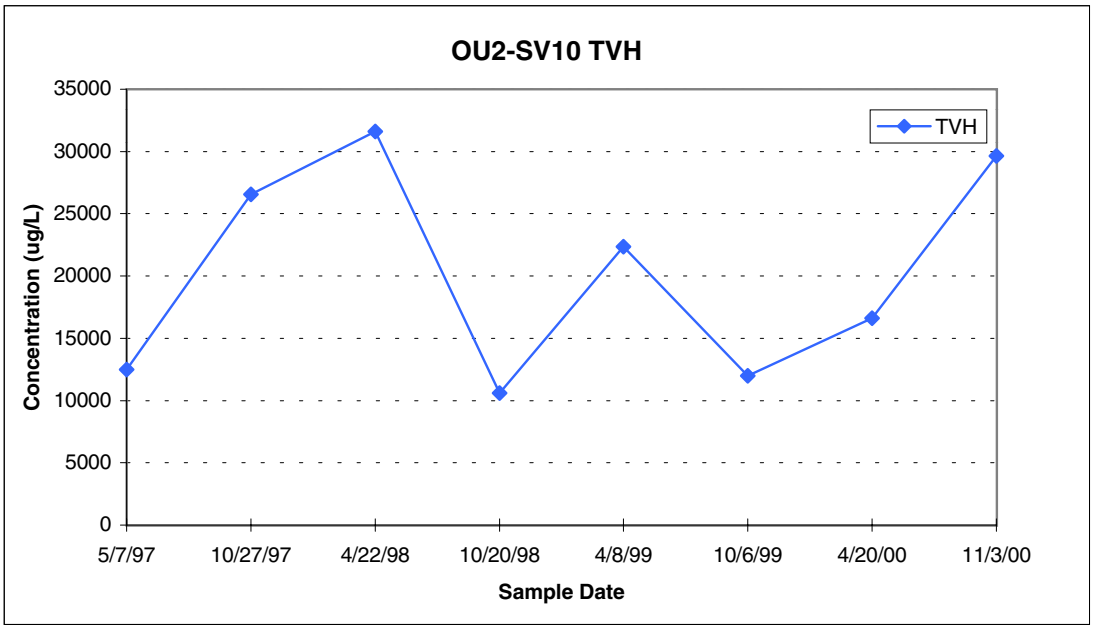


n:\3\777097\October00\Draft\Figures\OU2\Oct00OU2SVAP.XLS\OU2-SV08BTEX

FIGURE 5-29

OU2 SOIL VAPOR HYDROCARBON
CONCENTRATION GRAPHS
WELL: OU2-SV10
WPAFB - BMP

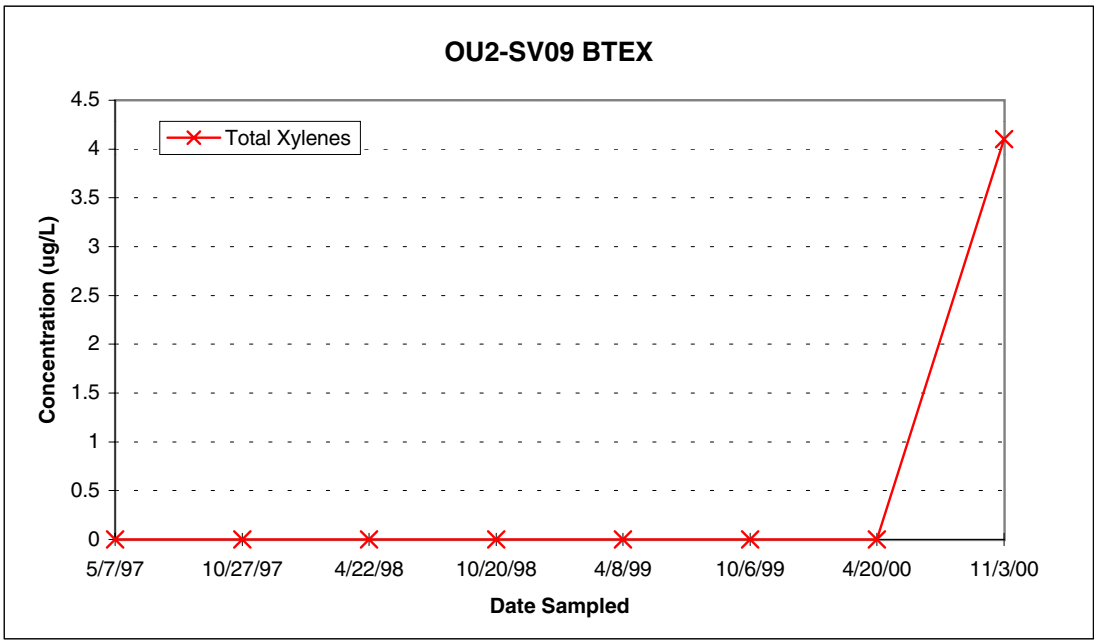


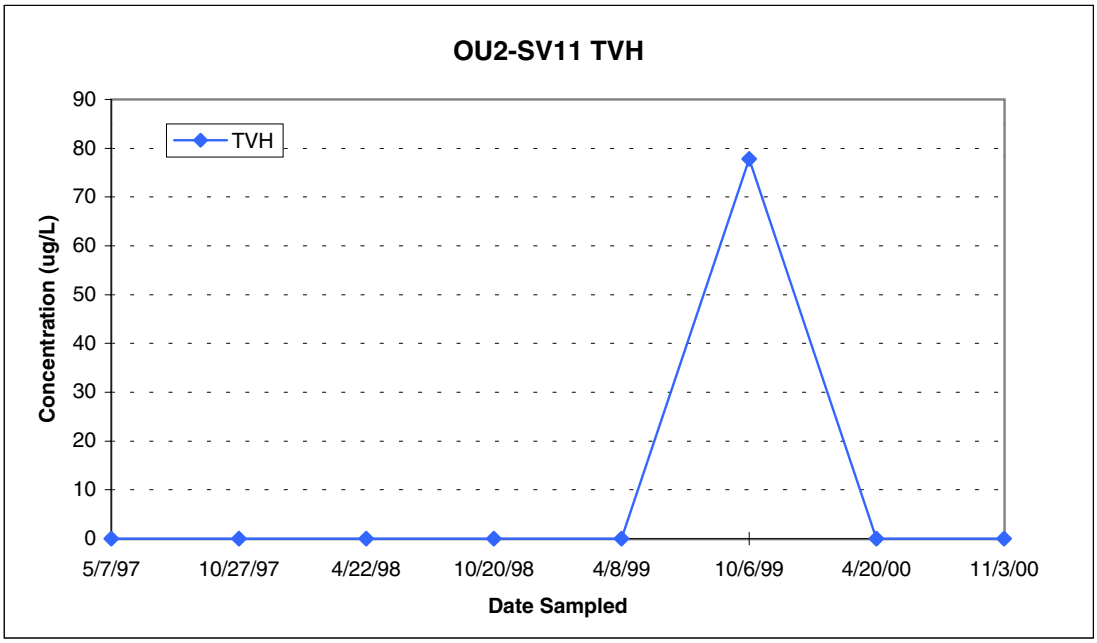


n:\3\777097\October00\Draft\Figures\OU2\Oct00OU2SVAP.XLS\OU2-SV10BTEX

FIGURE 5-30

OU2 SOIL VAPOR HYDROCARBON CONCENTRATION GRAPHS
WELLS: OU2-SV09 and OU2-SV11
WPAFB - BMP

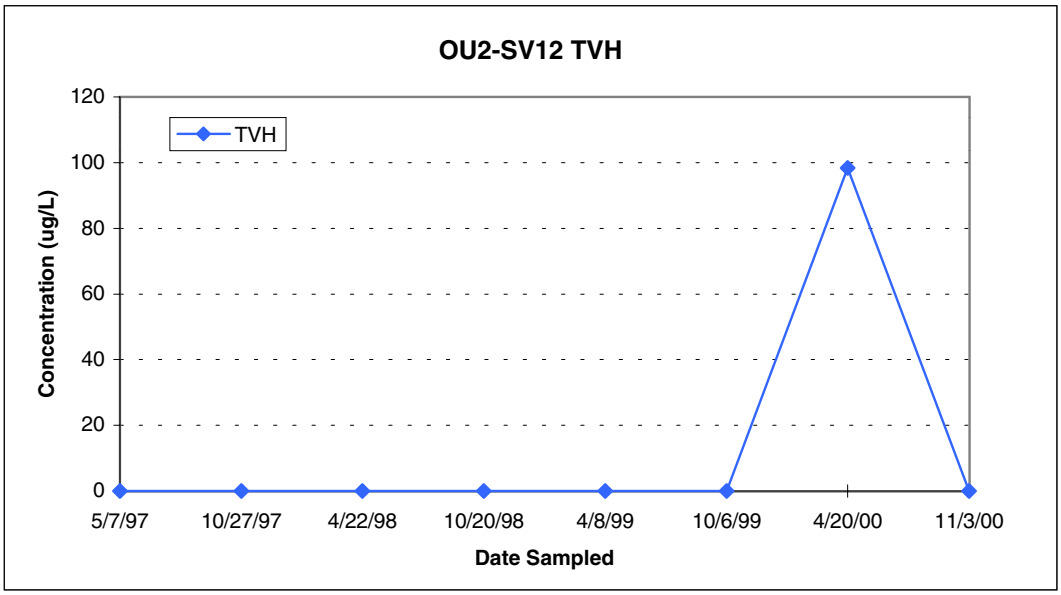


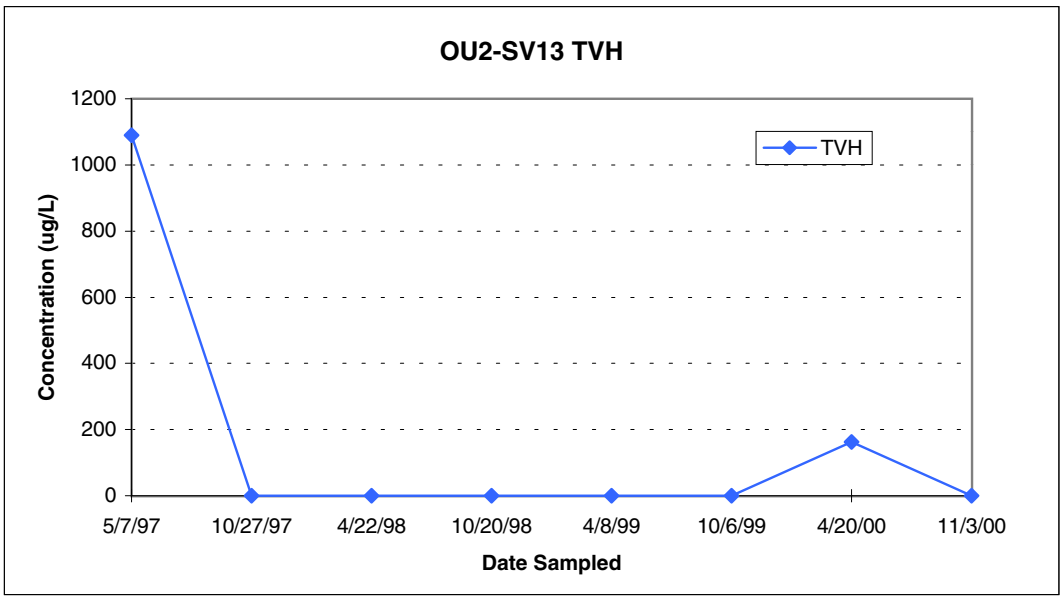


N\3\777097\LTM\October00\Draft\Figures\OU2\Oct00OU2SVAP.XLS\OU2-SV09&11

FIGURE 5-31

OU2 SOIL VAPOR TOTAL HYDROCARBON
CONCENTRATION GRAPH
WELLS: OU2-SV12 and OU2-SV13
WPAFB - BMP

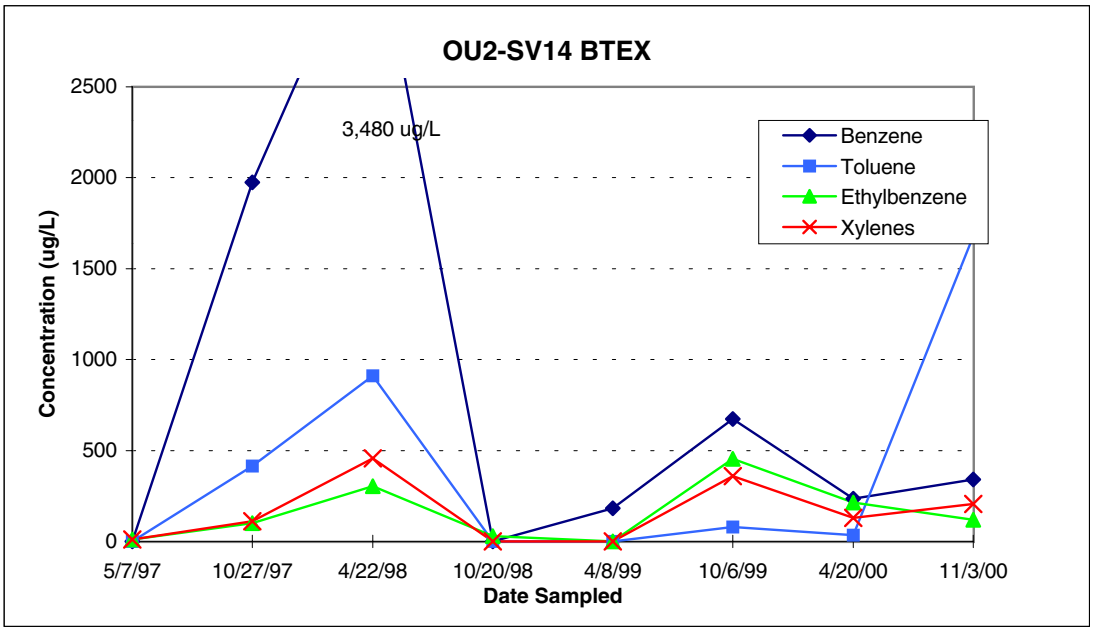


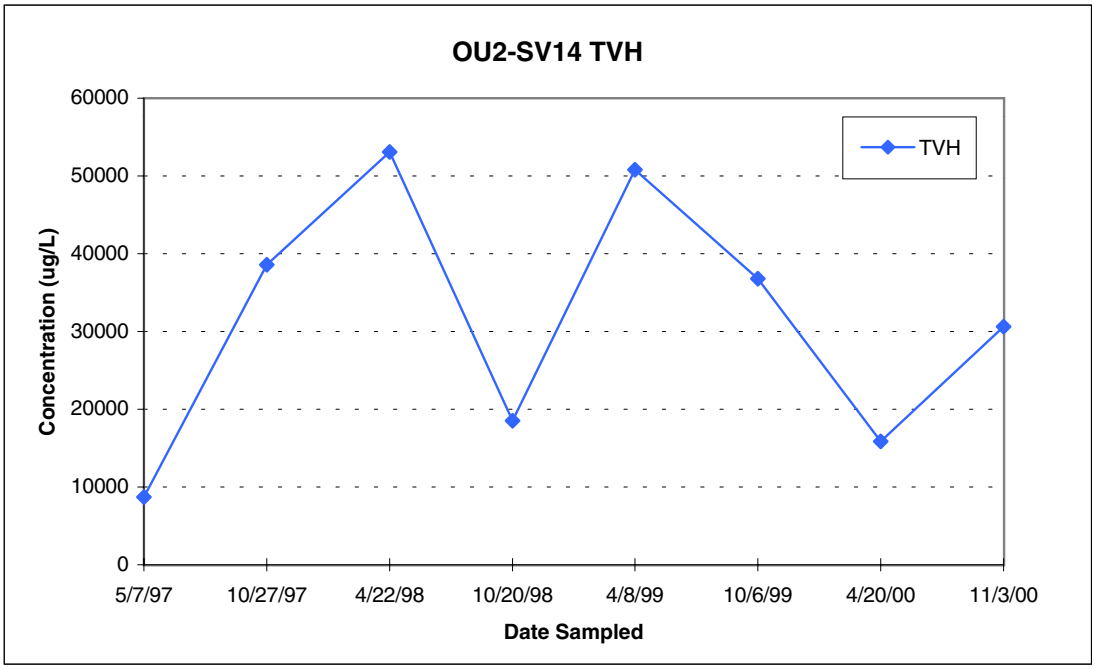


n:\3\777097\October00\Draft\Figures\OU2\Oct00OU2SVAP.XLS\OU2-SV13&12TVH

FIGURE 5-32

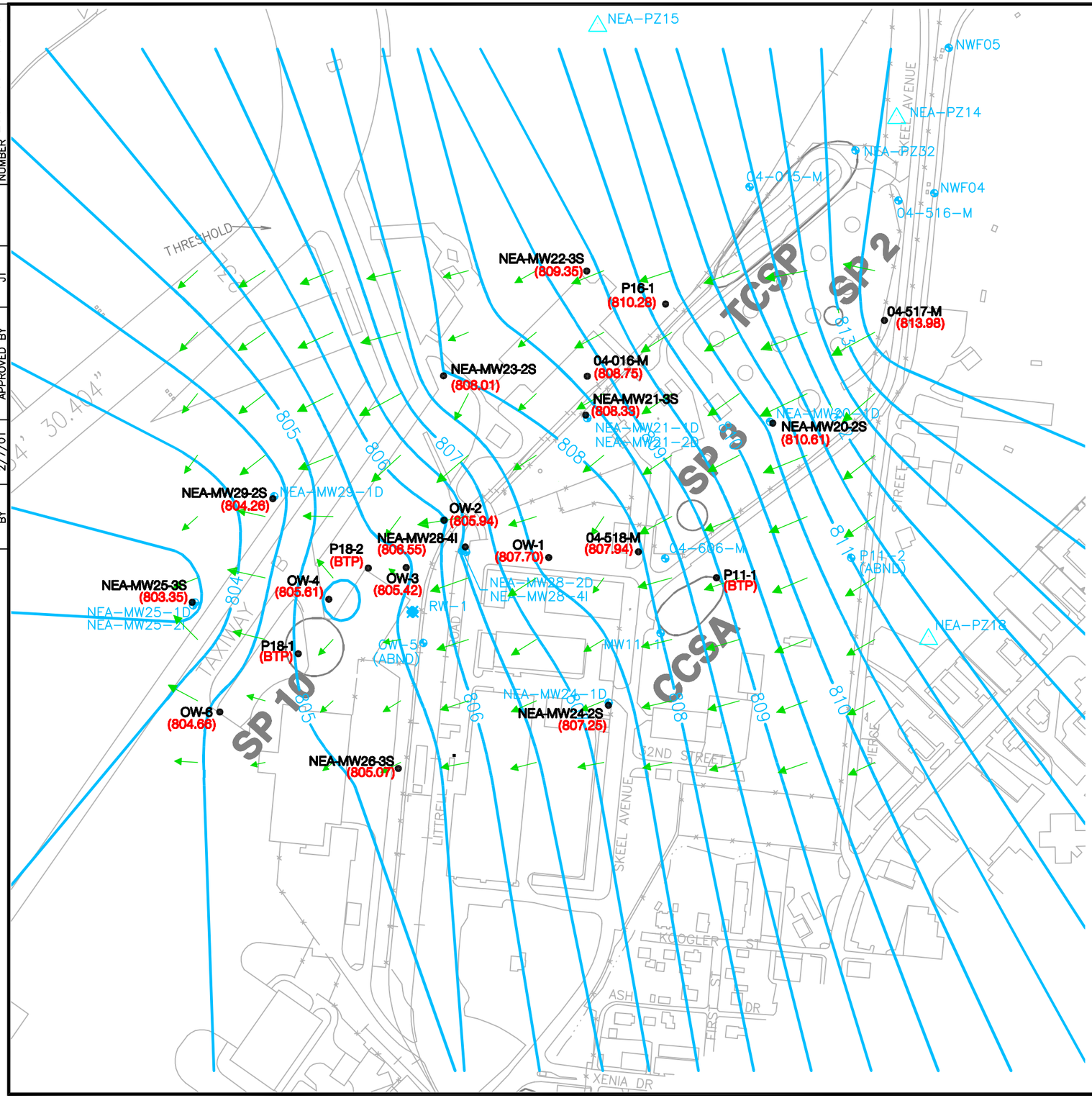
OU2 SOIL VAPOR HYDROCARBON
CONCENTRATION GRAPHS
WELL: OU2-SV14
WPAFB - BMP





n:\3\777097\October00\Draft\Figures\OU2\Oct00OU2SVAP.XLS\OU2-SV14BTEX

FIGURE 5-33



LEGEND:

- GROUNDWATER MONITORING WELLS
- GROUNDWATER MONITORING WELLS MEASURED DURING THE BASELINE MONITORING PROGRAM.
- (810.28) OCTOBER 2000 GROUNDWATER LEVEL ELEVATION (FT, MSL)
- 810 OCTOBER 2000 GROUNDWATER ELEVATION CONTOUR (ft, msl) (DASHED WHERE INFERRED)
- (BTP) WATER LEVEL IN WELL WAS BELOW THE TOP OF PUMP
- GROUNDWATER FLOW VELOCITY VECTOR

N

0 100 200 300 600 FEET

Figure 5-34

OU2 Groundwater Level Elevation Contour Map: October 16, 2000

PREPARED FOR

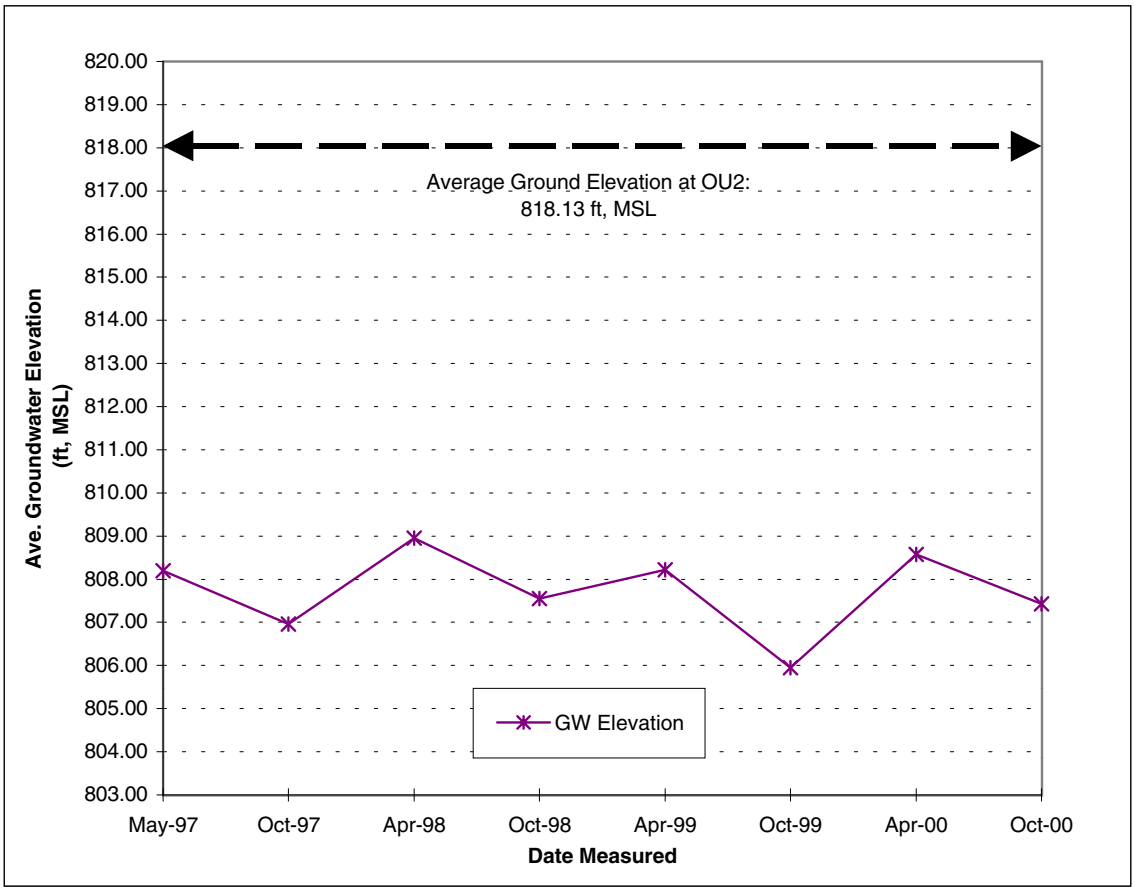
Wright-Patterson Air Force Base Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN 2/7/01	CHECKED BY / APPROVED BY	GP / JT	2/26/01	DRAWING NUMBER 2001 05-46.DWG

OU2 Average Groundwater Elevations

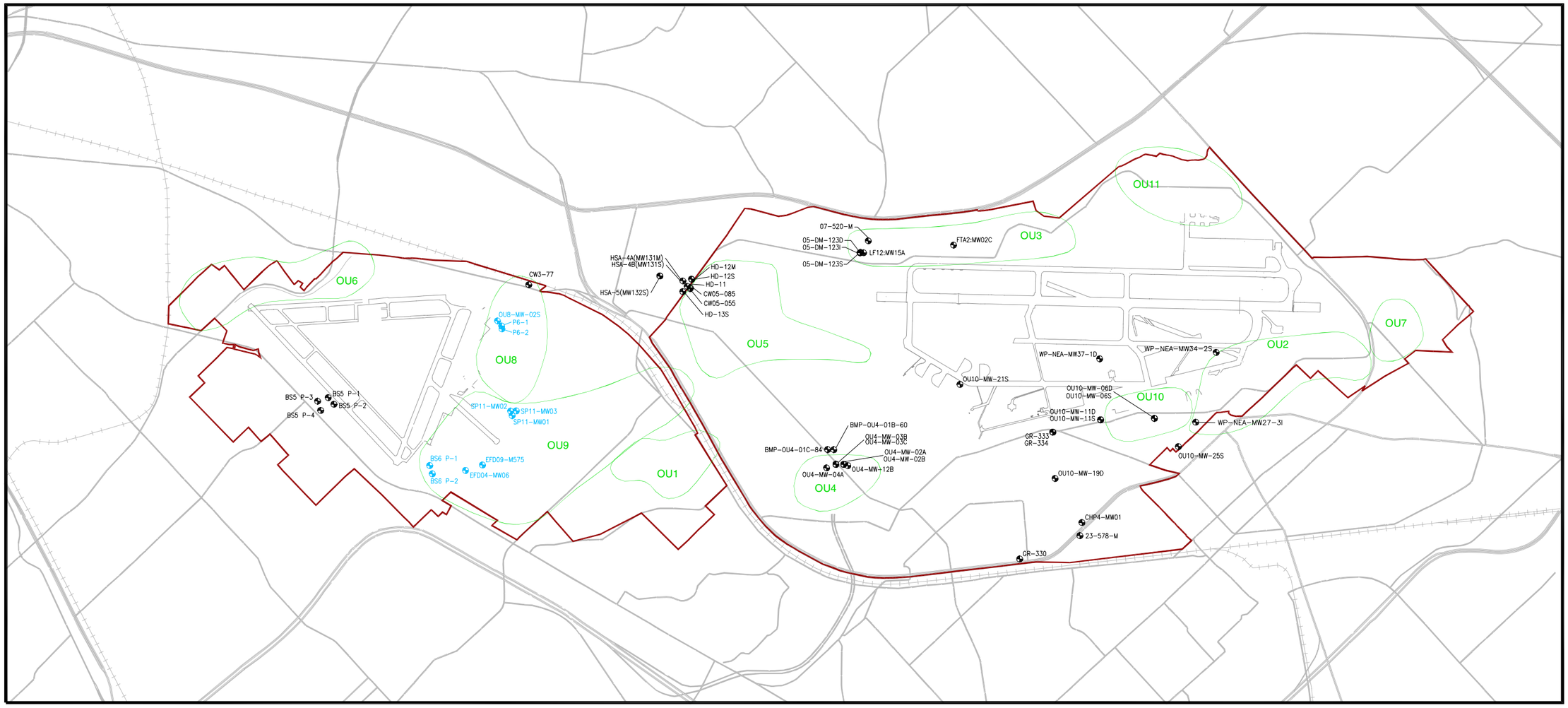
WPAFB-BMP



n:\3\777097\LTM\Octobr00\Draft\Figures\OU2\Rnd7_gwe.xls

Figure 5-35

DRAWN BY	MSN	CHECKED BY	LD	1/14/00	DRAWING NUMBER 2000 02-20.DWG
	1/14/00	APPROVED BY	GP		



LEGEND:

- Annual VOC Monitoring Well Locations
- Semi-annual VOC Monitoring Well Locations
- Base Boundary
- Roadways/Runways
- Operable Unit (OU) Boundaries

N

0 1750 3500 7000 FEET

Figure 6-1
Long-Term Monitoring Well Network:
VOC Analysis

Prepared For

Wright-Patterson Air Force Base
Dayton, Ohio

INTERNATIONAL TECHNOLOGY CORPORATION

DRAWN BY	MSN	CHECKED BY	GP	1/29/01	DRAWING NUMBER 2001 05-15.DWG
	1/29/01	APPROVED BY	JT		

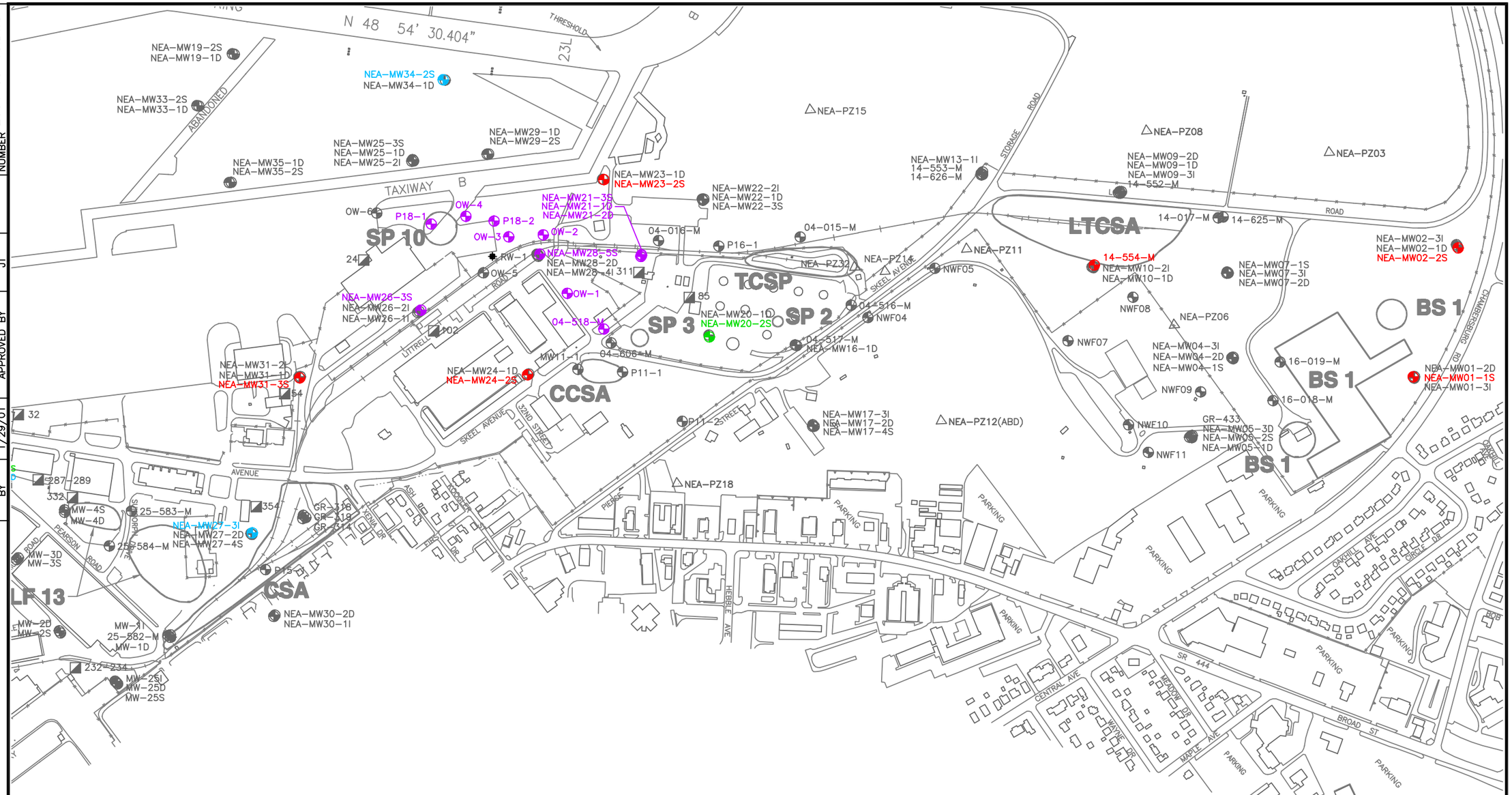


Figure 6-2

Basewide Long-term Monitoring Well Locations: OU2

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

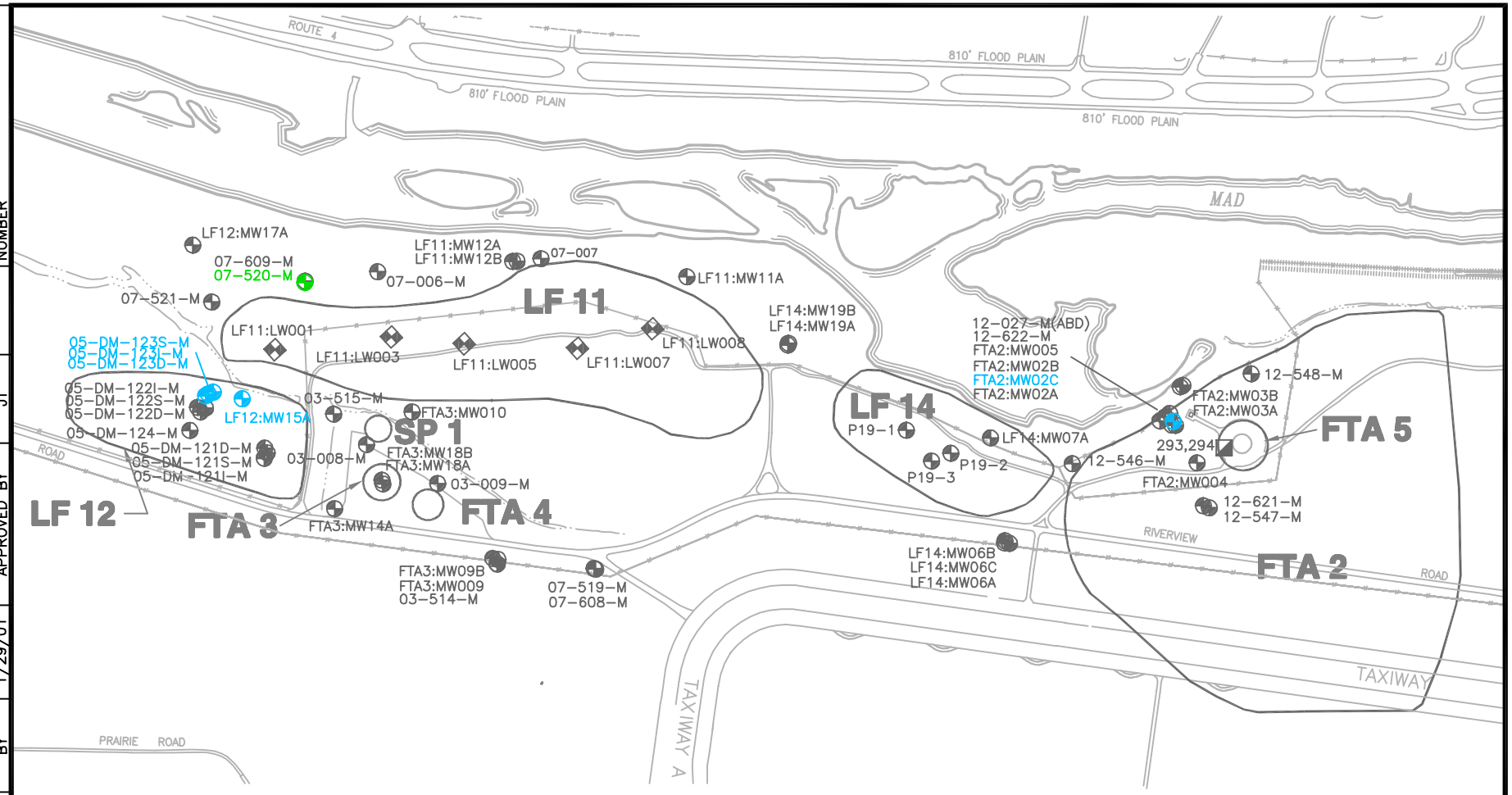
IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

LEGEND

- BMP-OU2 MONITORING WELL WITH BTEX ANALYSIS
- BMP-OU2 MONITORING WELL WITH LTM METALS ANALYSIS
- LTM MONITORING WELL WITH METALS ANALYSIS
- LTM MONITORING WELL WITH VOCS ANALYSIS
- IRP SITES (LOCATIONS APPROXIMATE)

N

0 100 200 300 400 500 1000 FEET



LEGEND

- MONITORING WELLS WITH ANNUAL METALS & SEMI-ANNUAL VOCS ANALYSIS
- MONITORING WELLS WITH SEMI-ANNUAL METALS ANALYSIS
- MONITORING WELLS WITH SEMI-ANNUAL VOCS ANALYSIS
- IRP SITES (LOCATIONS APPROXIMATE)

N

0 100 200 300 400 500 1000 FEET

Figure 6-3

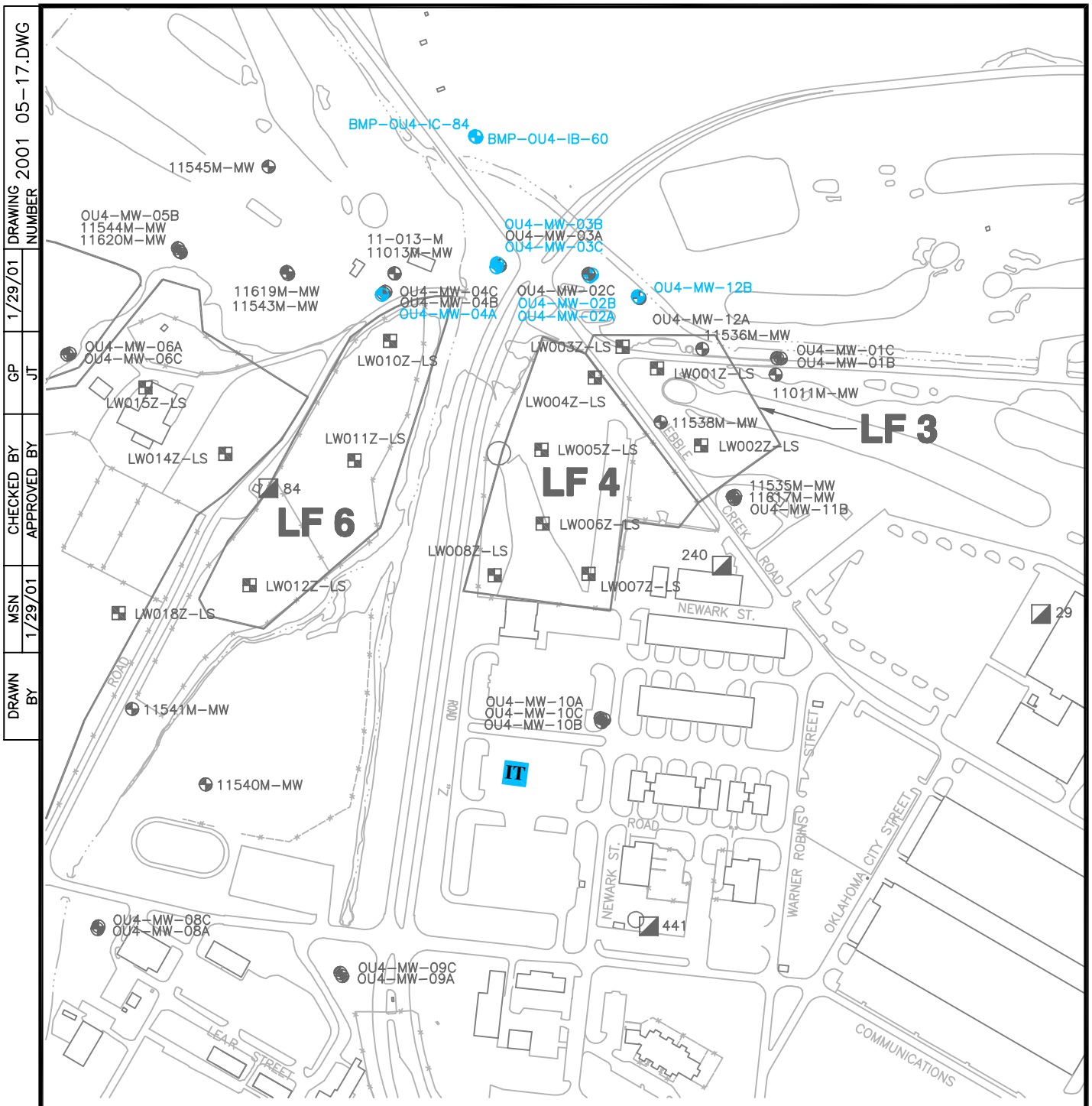
Basewide Long-Term Monitoring Well Locations: OU3

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN 1/29/01	CHECKED BY / APPROVED BY	GP / JT	1/29/01	DRAWING NUMBER 2001 05-16.DWG



0 100 200 300 400 800 FEET

N

Figure 6-4

Basewide Long-term Monitoring Well Locations: OU4

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

LEGEND

MONITORING WELLS WITH SEMI-ANNUAL VOCS ANALYSIS

IRP SITES (LOCATIONS APPROXIMATE)

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN	CHECKED BY	GP	1/29/01	DRAWING NUMBER 2001 05-17.DWG
	1/29/01	APPROVED BY	JT		

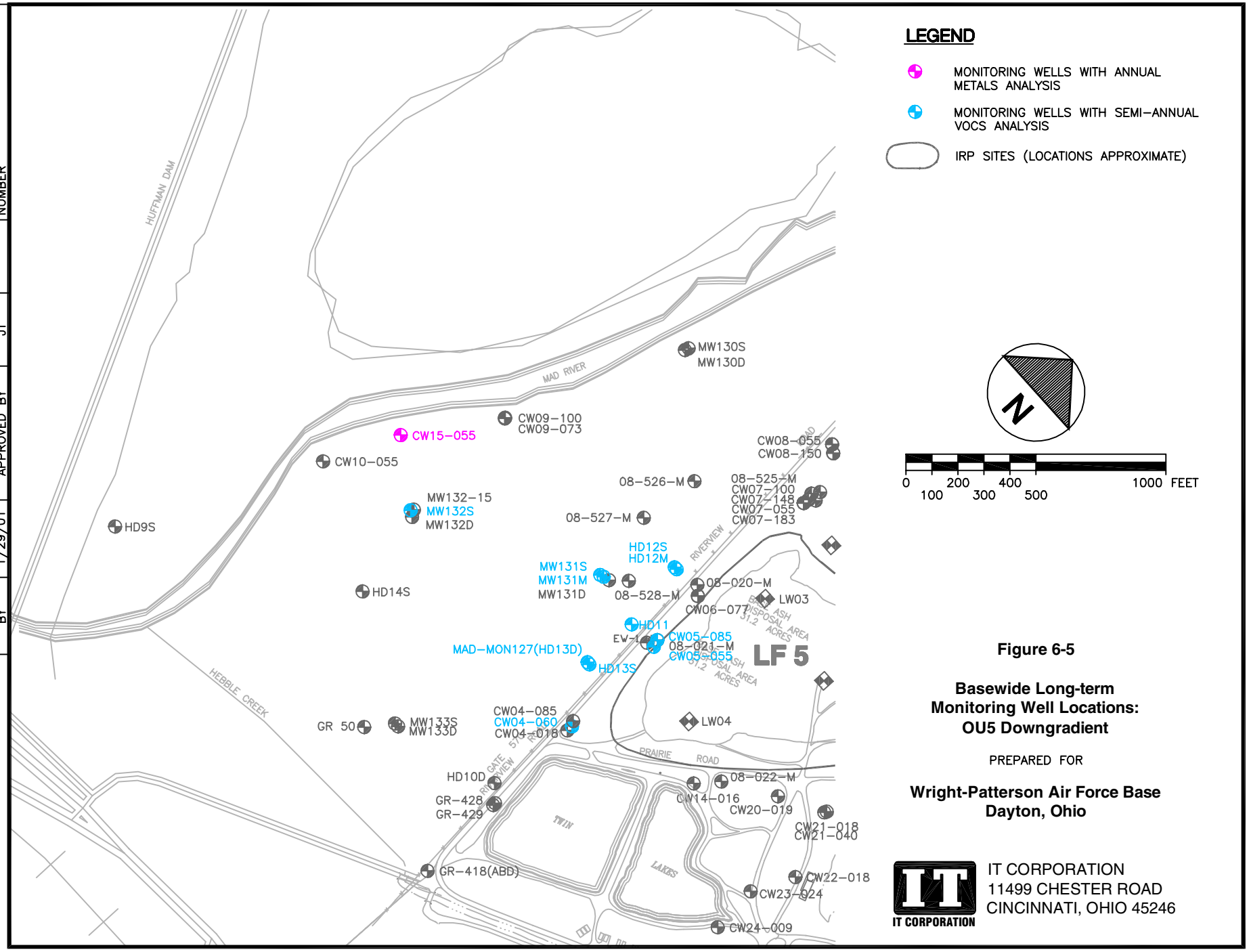


Figure 6-5

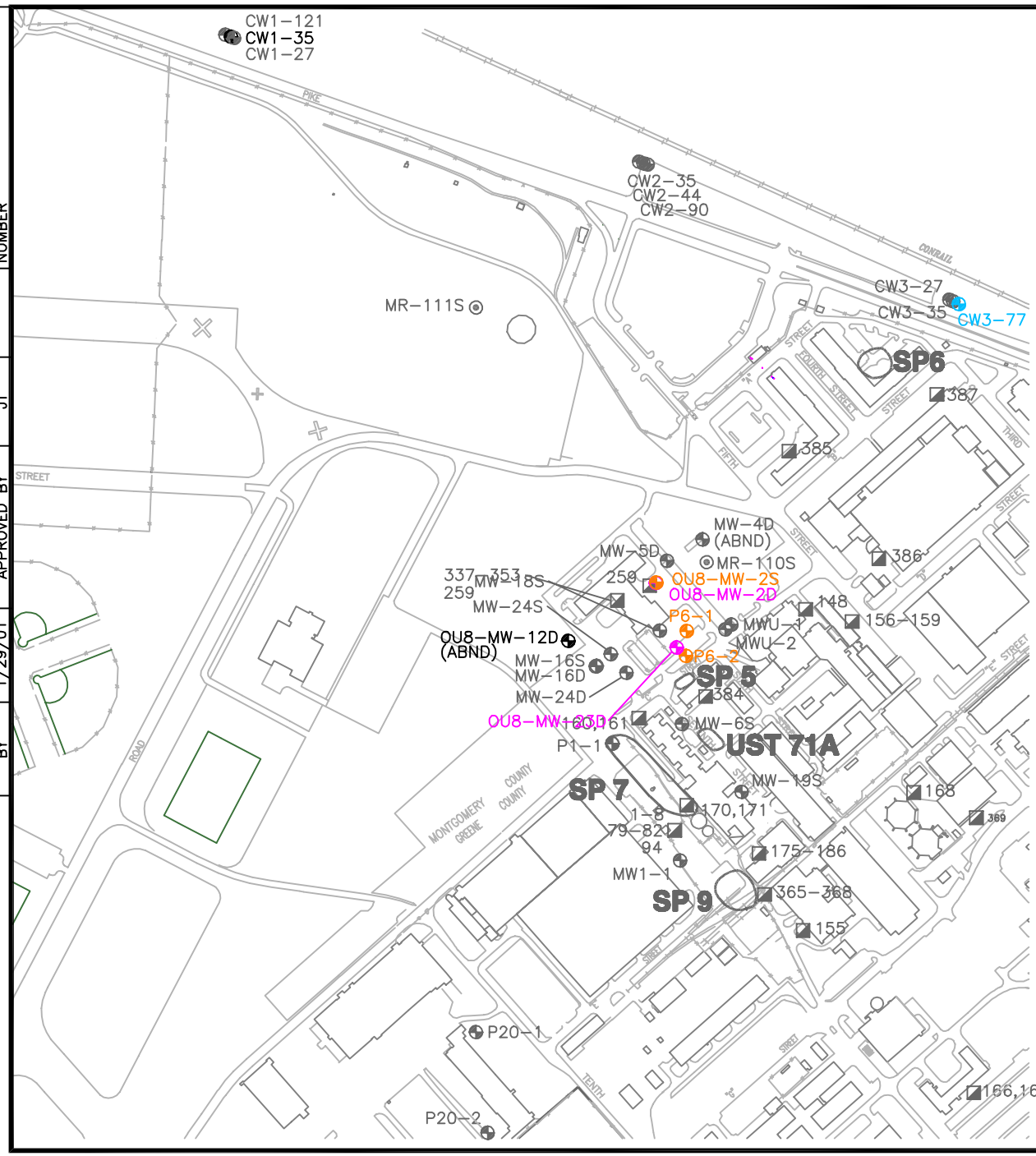
Basewide Long-term Monitoring Well Locations: OU5 Downgradient

PREPARED FOR

Wright-Patterson Air Force Base Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN	CHECKED BY	GP	1/29/01	DRAWING NUMBER 2001 05-18.DWG
	1/29/01	APPROVED BY	JT		



LEGEND

- MONITORING WELLS WITH ANNUAL METALS ANALYSIS
- MONITORING WELLS WITH SEMI-ANNUAL VOCS ANALYSIS
- MONITORING WELLS WITH ANNUAL VOCS ANALYSIS
- (ABND) ABANDONED
- IRP SITES (LOCATIONS APPROXIMATE)

N

0 200 400 600 1200 FEET

Figure 6-6

Basewide Long-term Monitoring Well Locations: OU8

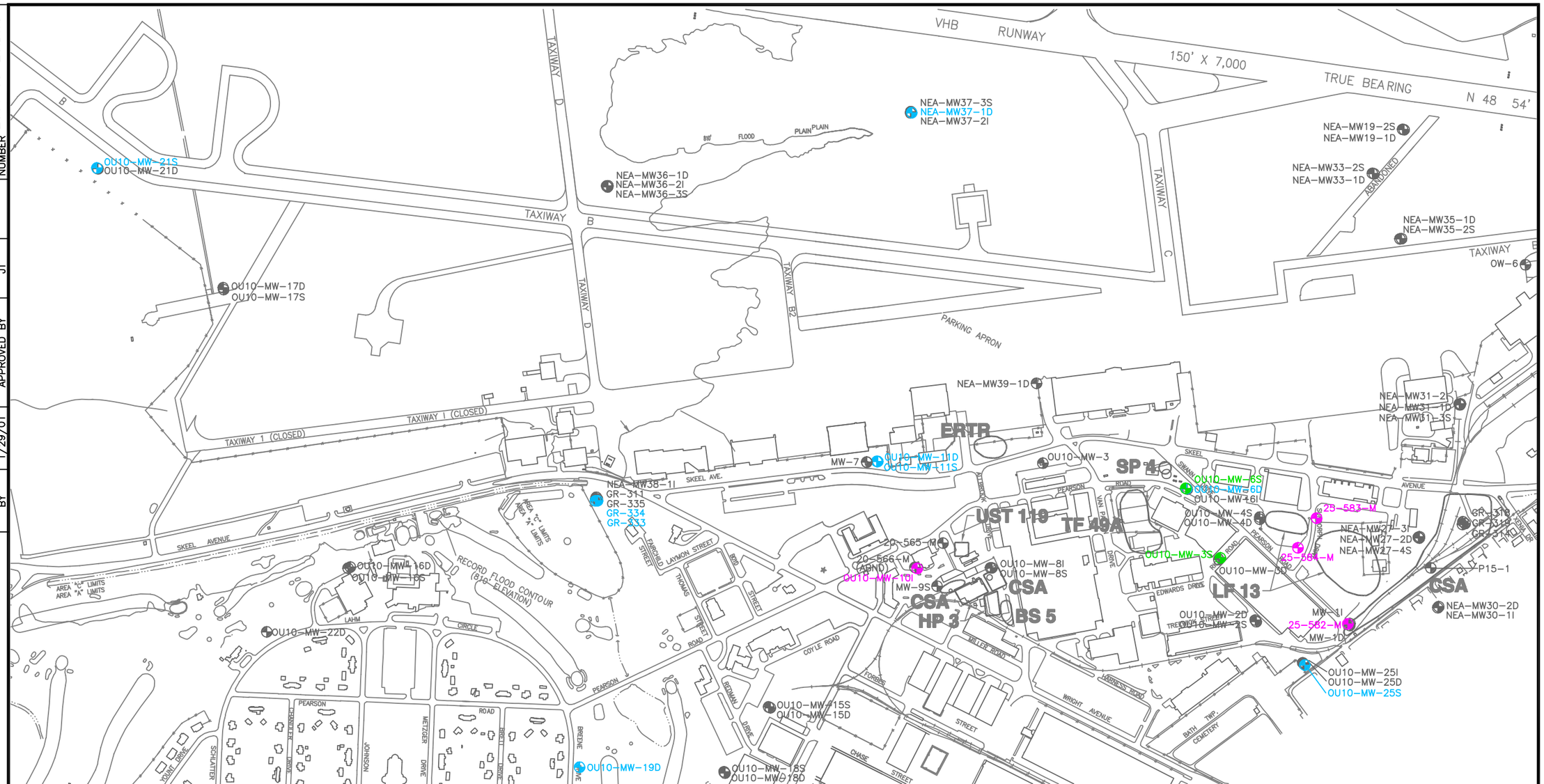
PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN 1/29/01	CHECKED BY / APPROVED BY	GP JT	1/29/01	DRAWING NUMBER 2001 05-19.DWG

DRAWN BY	MSN	CHECKED BY	GP	1/29/01	DRAWING NUMBER 2001 05-20.DWG
	1/29/01	APPROVED BY	JT		



LEGEND

- MONITORING WELLS WITH ANNUAL METALS & SEMI-ANNUAL VOCS ANALYSIS
- MONITORING WELLS WITH ANNUAL METALS ANALYSIS
- MONITORING WELLS WITH SEMI-ANNUAL VOCS ANALYSIS
- IRP SITES (LOCATIONS APPROXIMATE)

N

0 200 400 600 1200 FEET

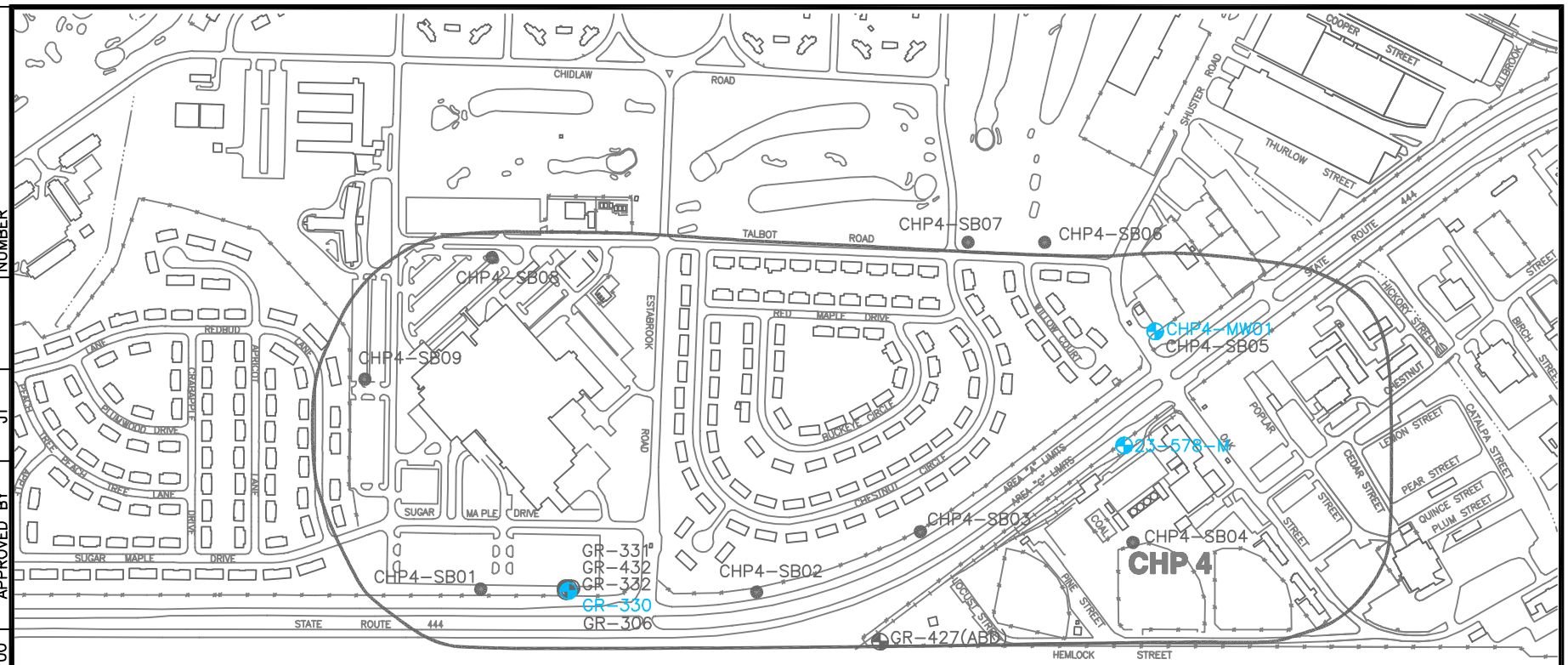
Figure 6-7

Basewide Long-term Monitoring Well Locations: OU10

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246



DRAWN BY	MSN	CHECKED BY	GP	7/26/00	DRAWING NUMBER 2000 24-26.DWG
	7/12/00	APPROVED BY	JT		

LEGEND

- MONITORING WELLS WITH VOCS ANALYSIS
- IRP SITES (LOCATIONS APPROXIMATE)

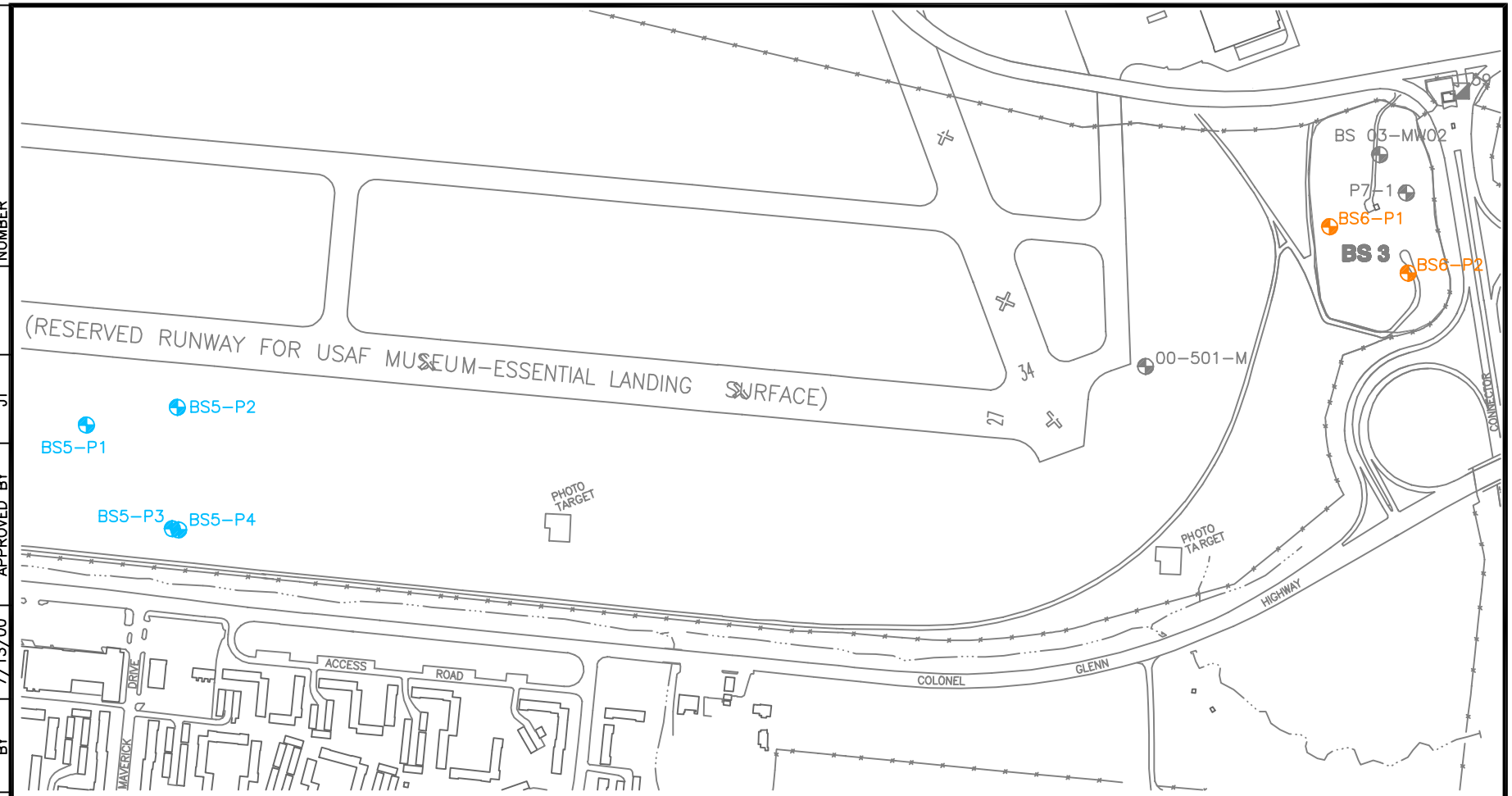
Figure 6-8

Basewide Long-term Monitoring Well Locations: Central Heating Plant 4

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

INTERNATIONAL TECHNOLOGY CORPORATION



DRAWN BY	MSN	CHECKED BY	GP	7/31/00	DRAWING NUMBER 2000 24-27.DWG
	7/13/00	APPROVED BY	JT		

LEGEND:

- MONITORING WELLS WITH ANNUAL VOCs ANALYSIS
- MONITORING WELLS WITH SEMI-ANNUAL VOCs ANALYSIS

N

0 100 200 300 400 500 1000 FEET

Figure 6-9

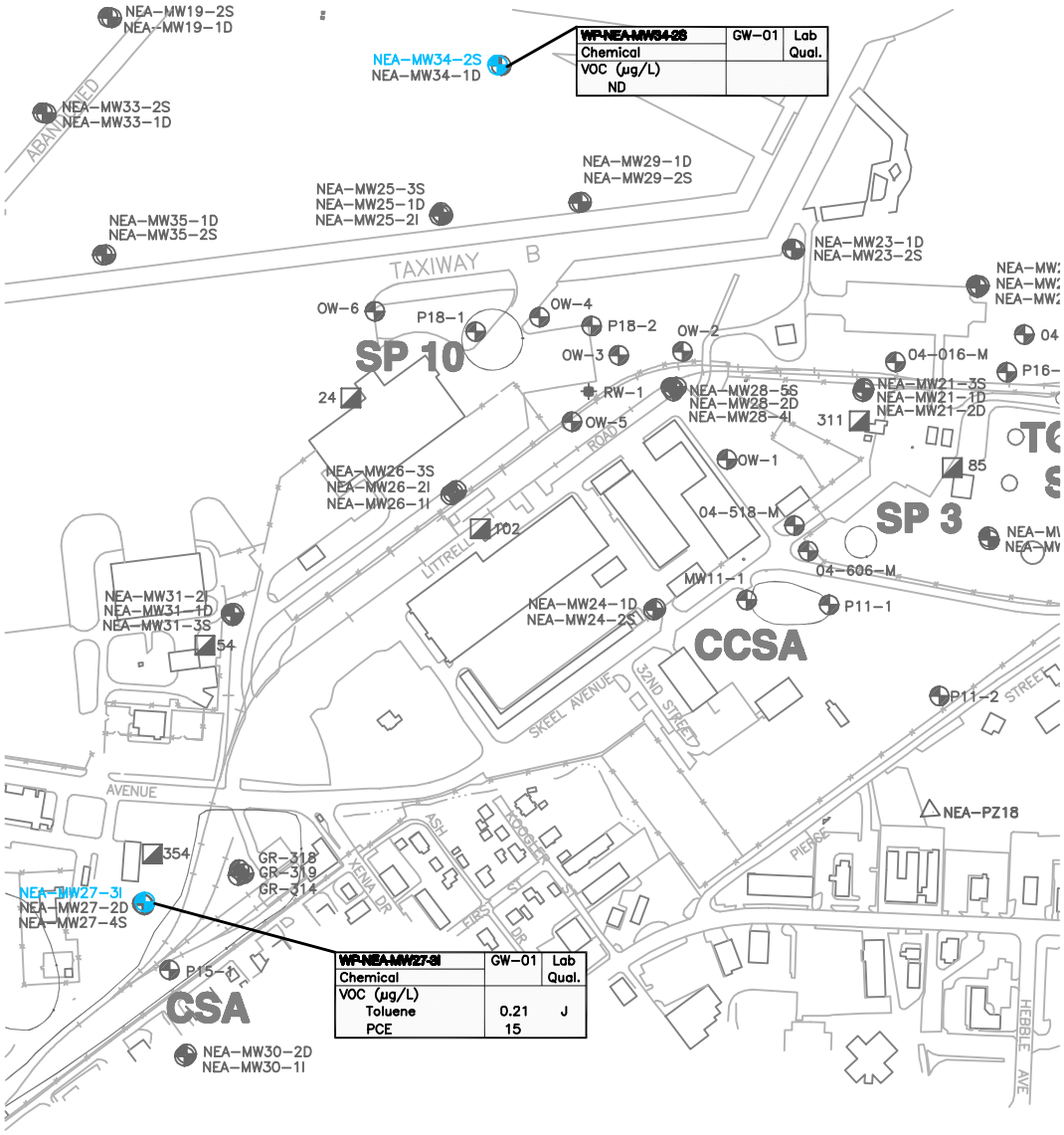
Basewide Long-Term Monitoring Well Locations: Burial Sites 5 and 6

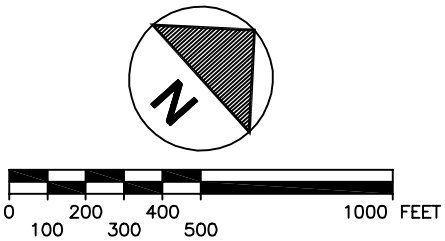
PREPARED FOR

Wright-Patterson Air Force Base Dayton, Ohio

INTERNATIONAL TECHNOLOGY CORPORATION

DRAWN BY	MSN	CHECKED BY	GP	1/30/01	DRAWING NUMBER 2001 05-07.DWG
	1/30/01	APPROVED BY	JT		





LEGEND

- MONITORING WELLS WITH SEMI-ANNUAL VOCS ANALYSIS
- 11 VOC CONCENTRATION (RED=>MCL)
- ND NOT DETECTED
- IRP SITES (LOCATIONS APPROXIMATE)

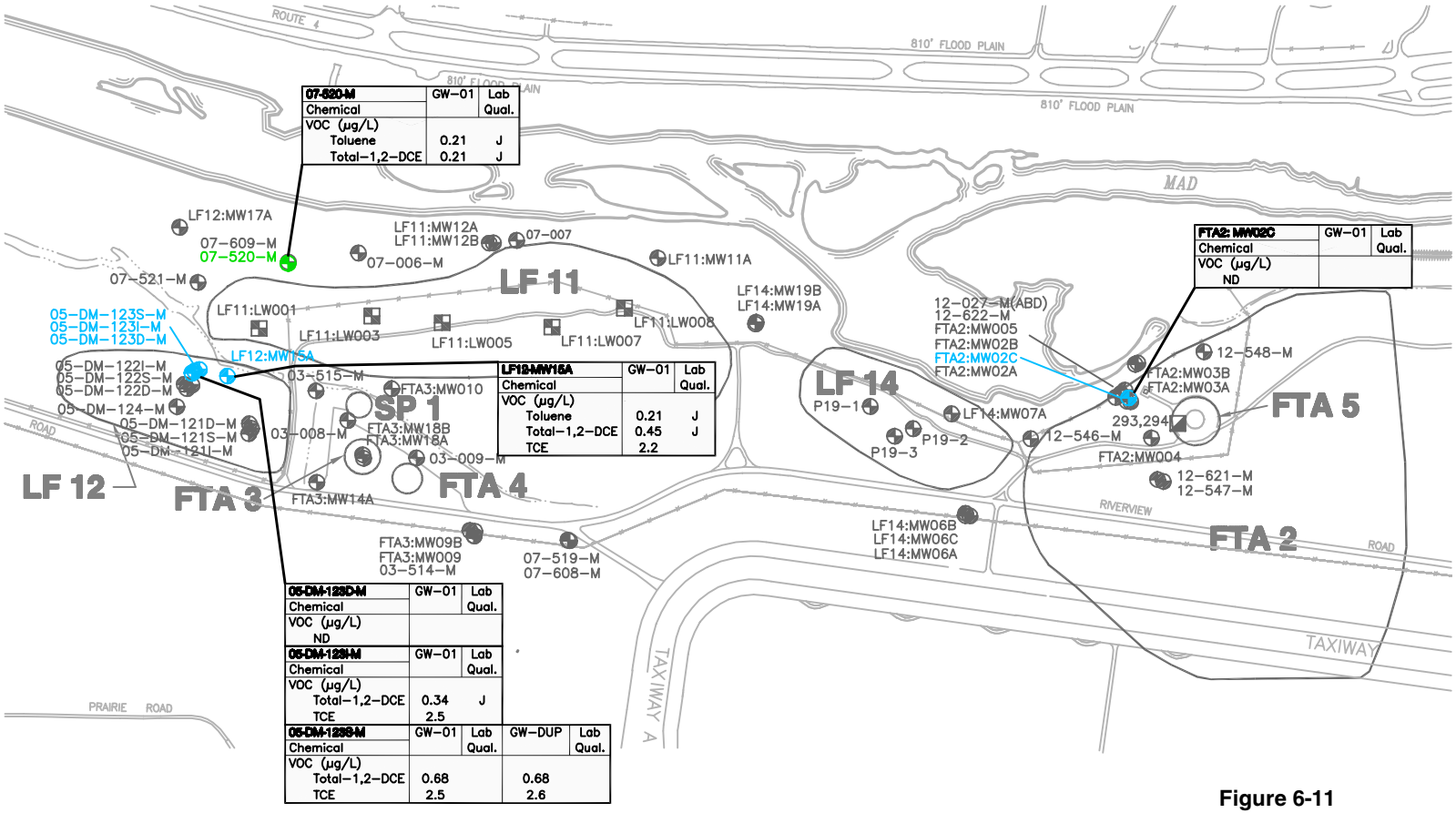
Figure 6-10

OU2 Groundwater Concentrations of VOCs: October 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246



07-520-M	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Toluene	0.21	J
Total-1,2-DCE	0.21	J

LF12:MW15A	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Toluene	0.21	J
Total-1,2-DCE	0.45	J
TCE	2.2	

FTA2: MW02C	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
ND		

05-DM-123D-M	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
ND		

05-DM-123I-M	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Total-1,2-DCE	0.34	J
TCE	2.5	

05-DM-123S-M	GW-01	Lab Qual.	GW-DUP	Lab Qual.
Chemical				
VOC (µg/L)				
Total-1,2-DCE	0.68		0.68	
TCE	2.5		2.6	

LEGEND

- MONITORING WELLS WITH ANNUAL METALS & SEMI-ANNUAL VOCs ANALYSIS
- MONITORING WELLS WITH SEMI-ANNUAL VOCS ANALYSIS
- 1.8 VOC CONCENTRATION (RED=>MCL)
- ND NOT DETECTED
- IRP SITES (LOCATIONS APPROXIMATE)

N

0 100 200 300 400 500 1000 FEET

Figure 6-11

OU3 Groundwater Concentrations of VOCs: October 2000

PREPARED FOR

Wright-Patterson Air Force Base Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN 1/30/01	CHECKED BY / APPROVED BY	GP JT	1/30/01	DRAWING NUMBER 2001 05-08.DWG

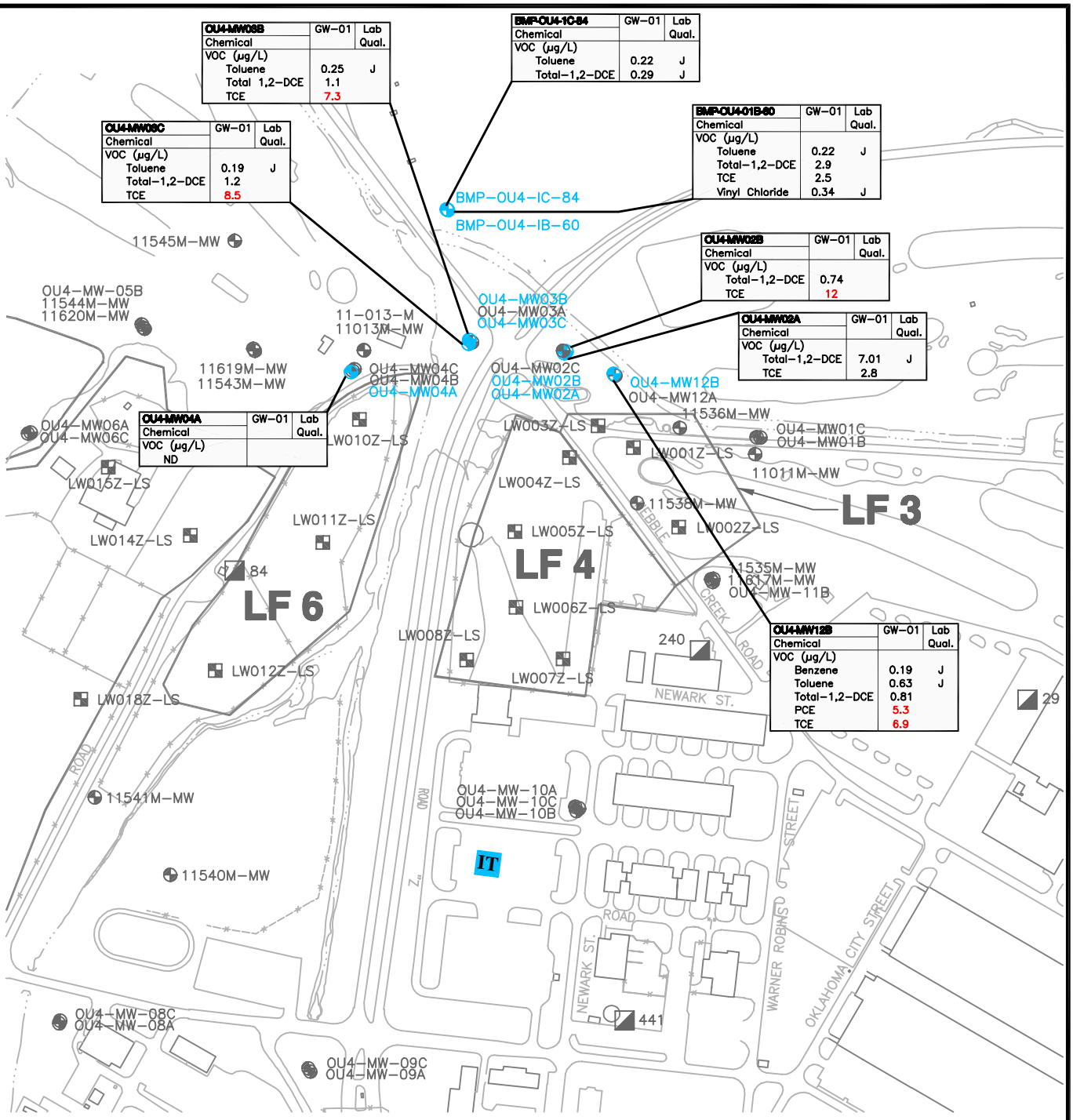


Figure 6-12

OU4 Groundwater Concentrations of VOCs: October 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

LEGEND

- MONITORING WELLS WITH VOCS ANALYSIS
- ND NOT DETECTED
- 5.4 VOC CONCENTRATION (RED = >MCL)
- IRP SITES (LOCATIONS APPROXIMATE)

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWING NUMBER 2001 05-09.DWG
1/30/01 GP JT
CHECKED BY APPROVED BY
MSN 1/30/01
DRAWN BY

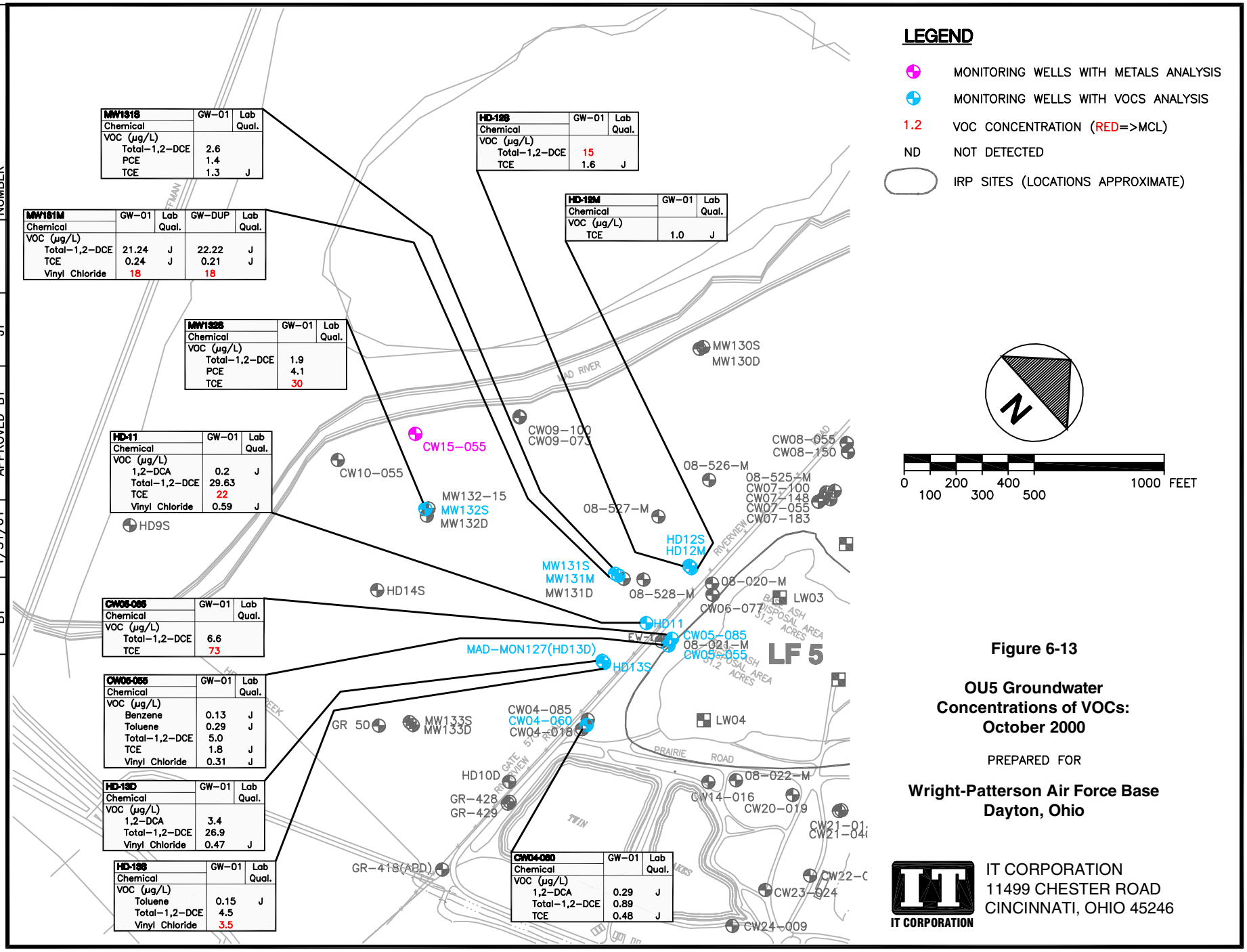


Figure 6-13

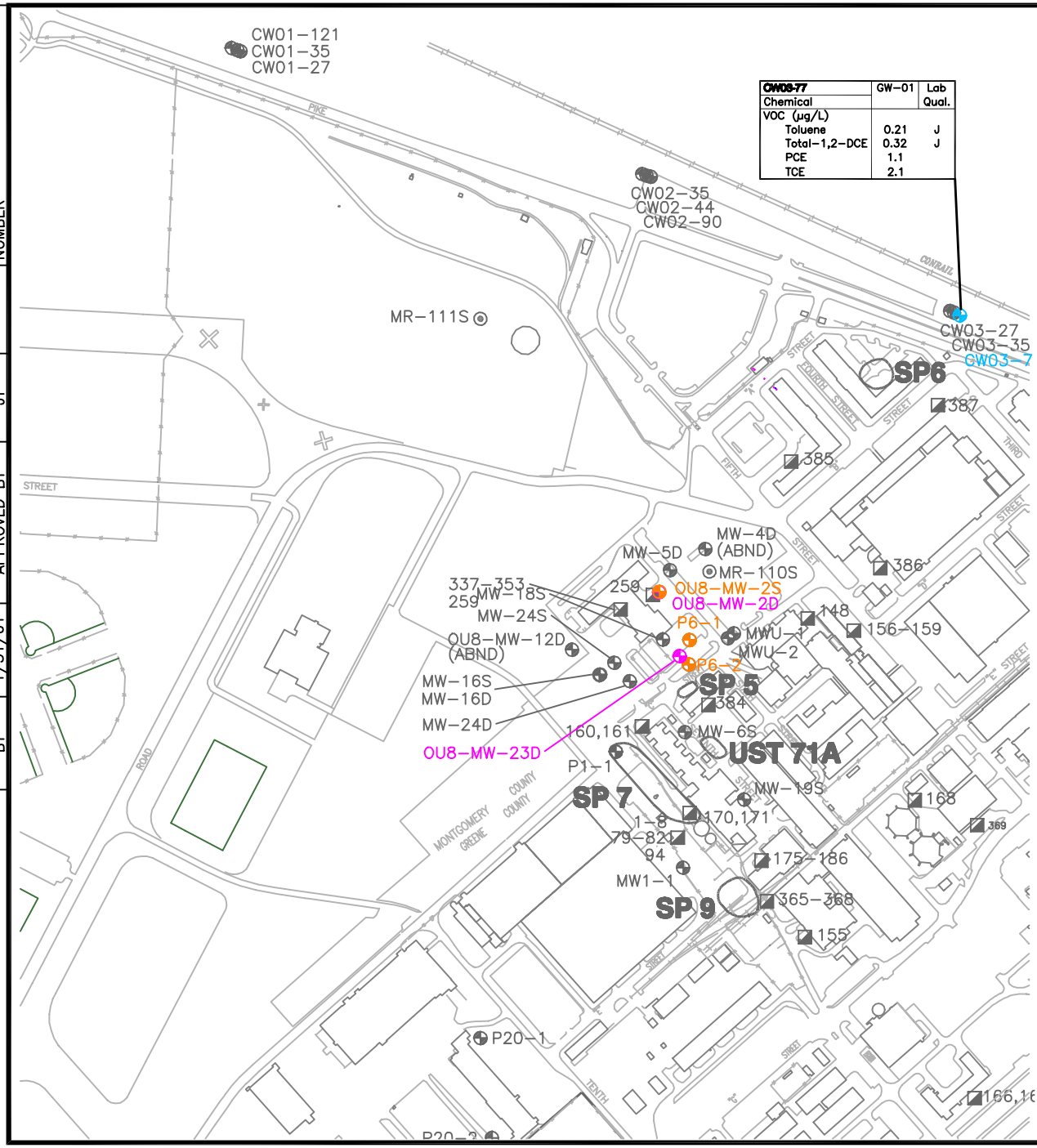
OU5 Groundwater Concentrations of VOCs: October 2000

PREPARED FOR

Wright-Patterson Air Force Base Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN	CHECKED BY	GP	2/26/01	DRAWING NUMBER 2001 05-10.DWG
	1/31/01	APPROVED BY	JT		



LEGEND

- MONITORING WELLS WITH ANNUAL METALS ANALYSIS
- MONITORING WELLS WITH ANNUAL VOCS ANALYSIS
- MONITORING WELLS WITH SEMI-ANNUAL VOCS ANALYSIS
- 2.4 VOC CONCENTRATION (RED=>MCL)
- (ABND) ABANDONED
- ND NOT DETECTED
- IRP SITES (LOCATIONS APPROXIMATE)

N

0 200 400 600 1200 FEET

Figure 6-14

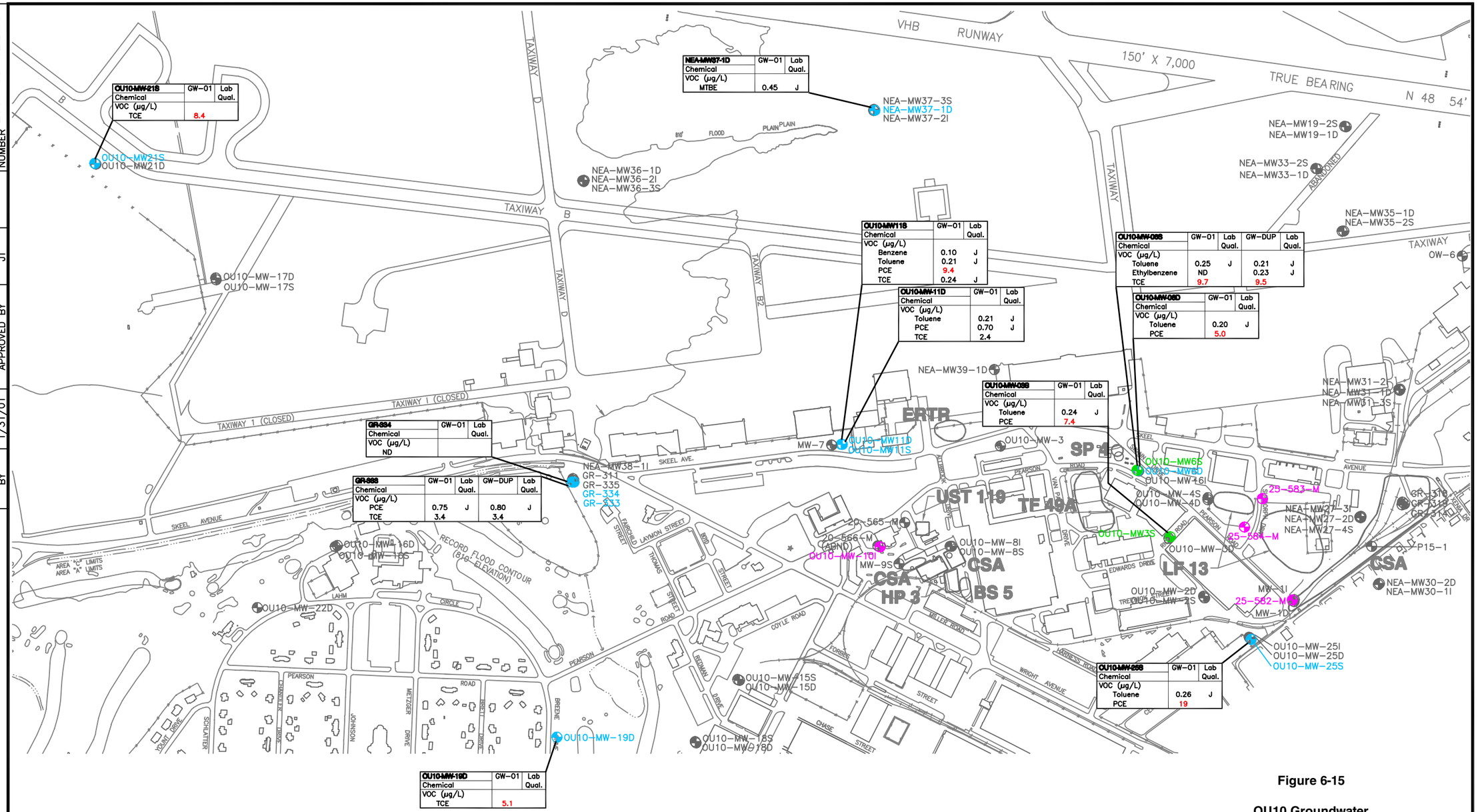
OU8 Groundwater Concentrations of VOCs: October 2000

PREPARED FOR

Wright-Patterson Air Force Base Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN	CHECKED BY	GP	1/31/01	DRAWING NUMBER 2001 05-11.DWG
	1/31/01	APPROVED BY	JT		



LEGEND

- MONITORING WELLS WITH ANNUAL METALS & SEMI-ANNUAL VOCS ANALYSIS
- MONITORING WELLS WITH ANNUAL METALS ANALYSIS
- MONITORING WELLS WITH SEMI-ANNUAL VOCS ANALYSIS
- 5.8 VOC CONCENTRATION (RED=>MCL)
- IRP SITES (LOCATIONS APPROXIMATE)

Figure 6-15

OU10 Groundwater Concentrations of VOCs October 2000

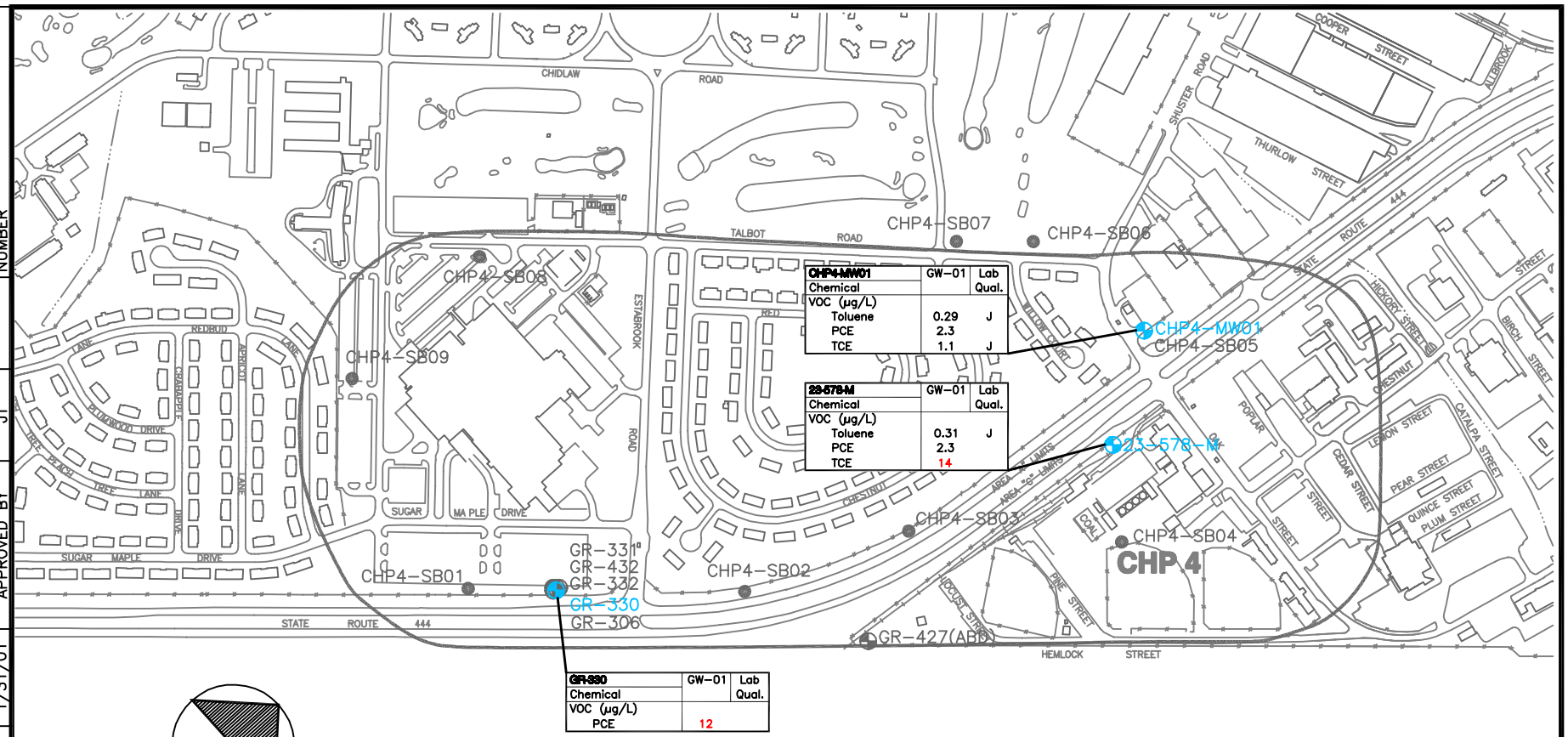
PREPARED FOR

Wright-Patterson Air Force Base Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN	CHECKED BY	GP	DRAWING NUMBER
	1/31/01	APPROVED BY	JT	1/31/01

2001 05-12.DWG



CHP4-MW01	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Toluene	0.29	J
PCE	2.3	
TCE	1.1	J

23-578-M	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
Toluene	0.31	J
PCE	2.3	
TCE	14	

GR-330	GW-01	Lab Qual.
Chemical		
VOC (µg/L)		
PCE	12	

N

0 200 400 600 1200 FEET

LEGEND

- MONITORING WELLS WITH SEMI-ANNUAL VOCS ANALYSIS
- 2.1 VOC CONCENTRATION (RED = >MCL)
- IRP SITES (LOCATIONS APPROXIMATE)

Figure 6-16

Central Heating Plant 4
Groundwater Concentrations of VOCs:
October 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN	CHECKED BY	GP	1/31/01	DRAWING NUMBER 2001 05-13.DWG
	1/31/01	APPROVED BY	JT		

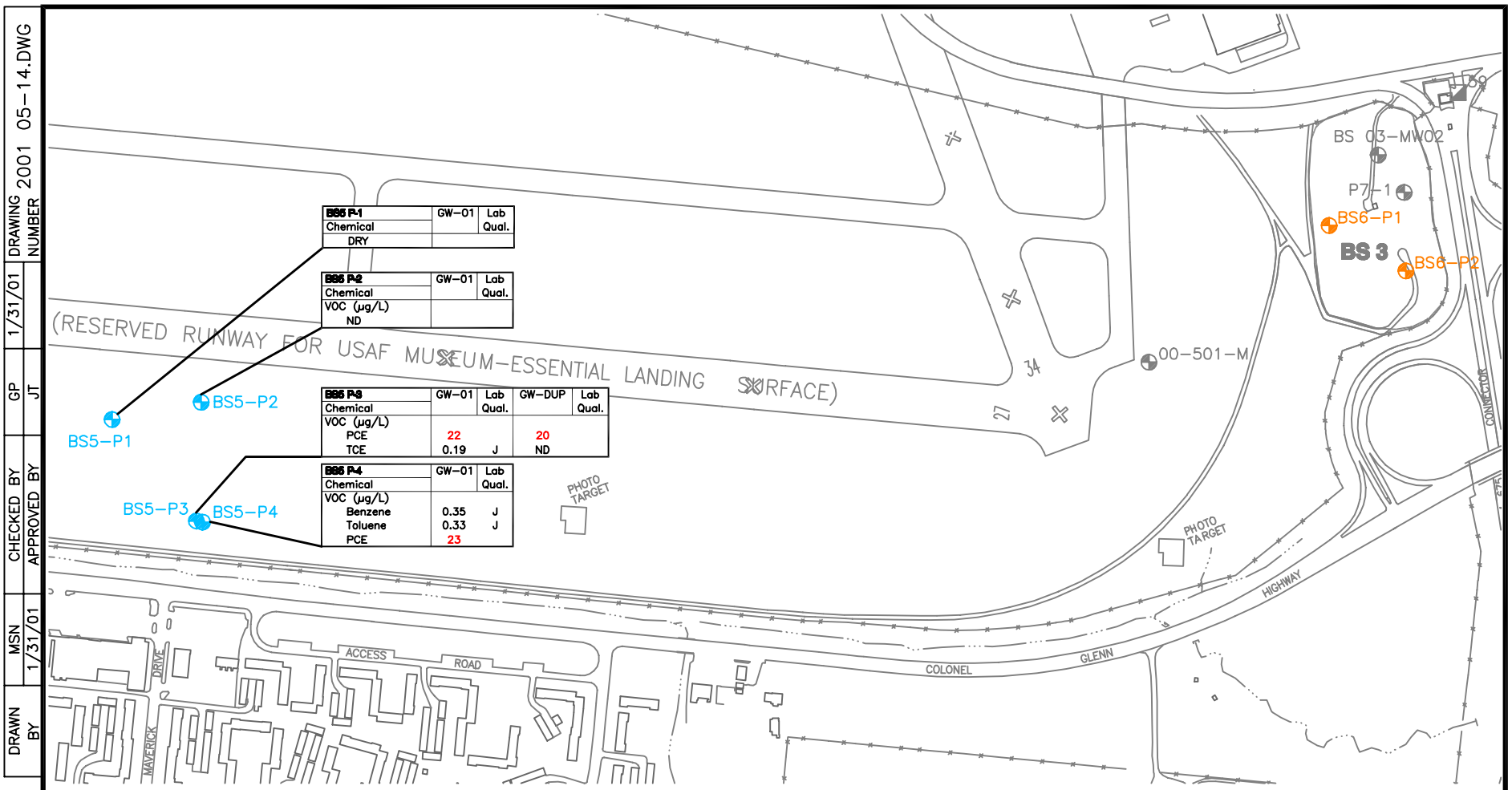


Figure 6-17

Burial Site 5 and 6
Groundwater Concentrations of VOCs:
October 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

LEGEND:

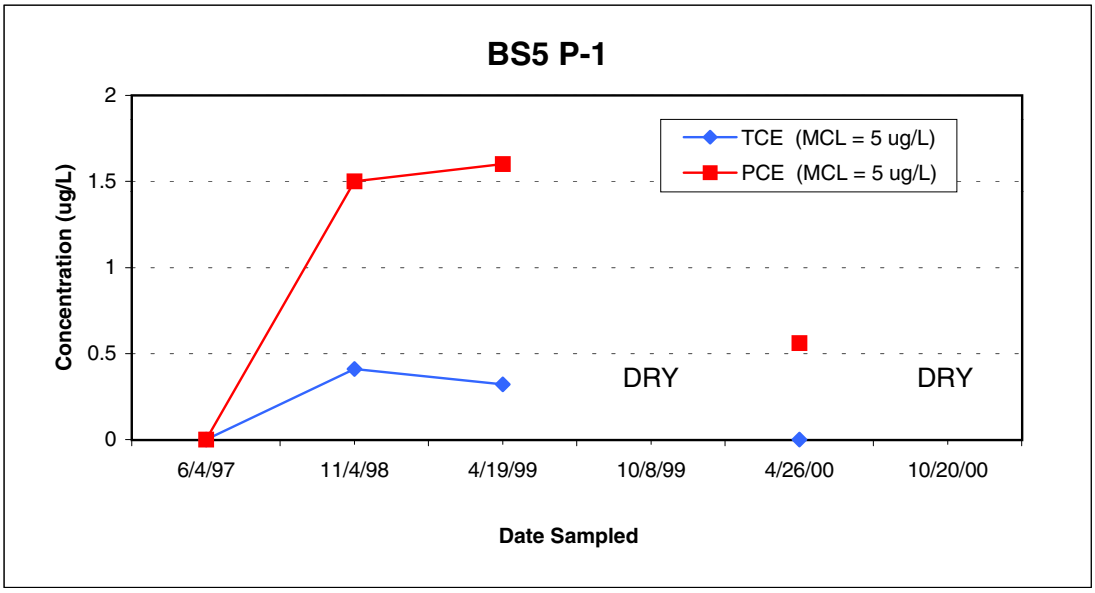
- MONITORING WELLS WITH ANNUAL VOCs ANALYSIS
- MONITORING WELLS WITH SEMI–ANNUAL VOCs ANALYSIS
- 25 VOC CONCENTRATION (RED = >MCL)

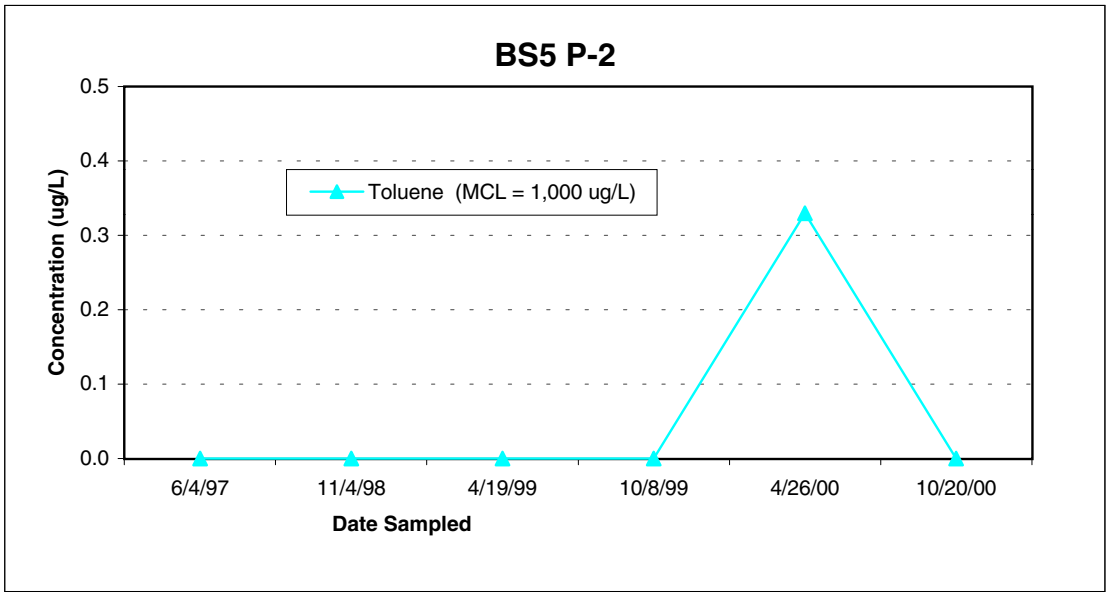
N

0 100 200 300 400 500 1000 FEET

IT CORPORATION
IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: BS5
WPAFB - LTM Program

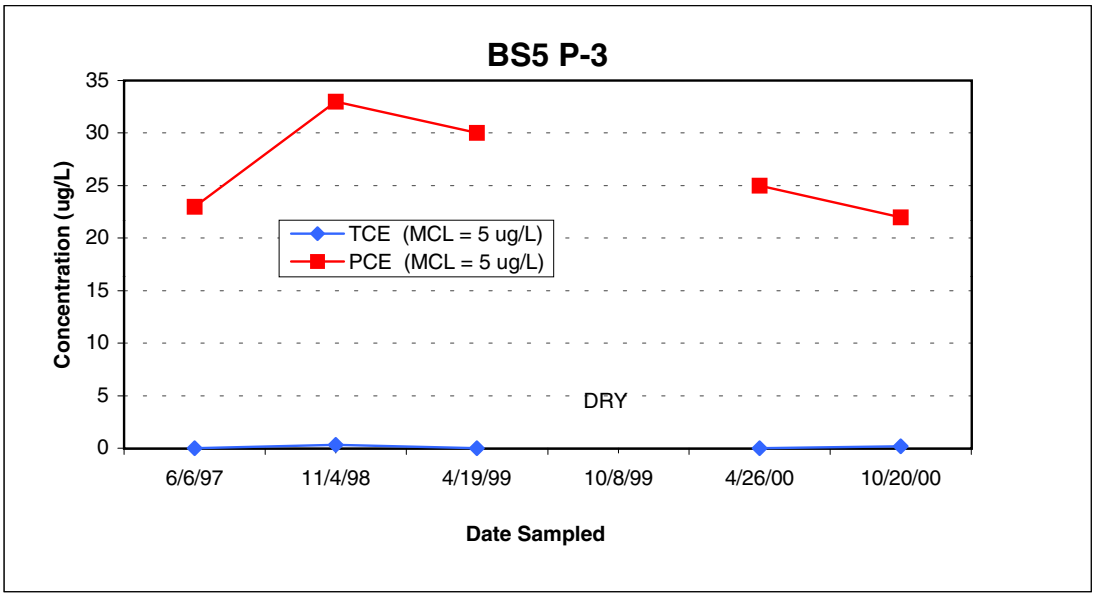


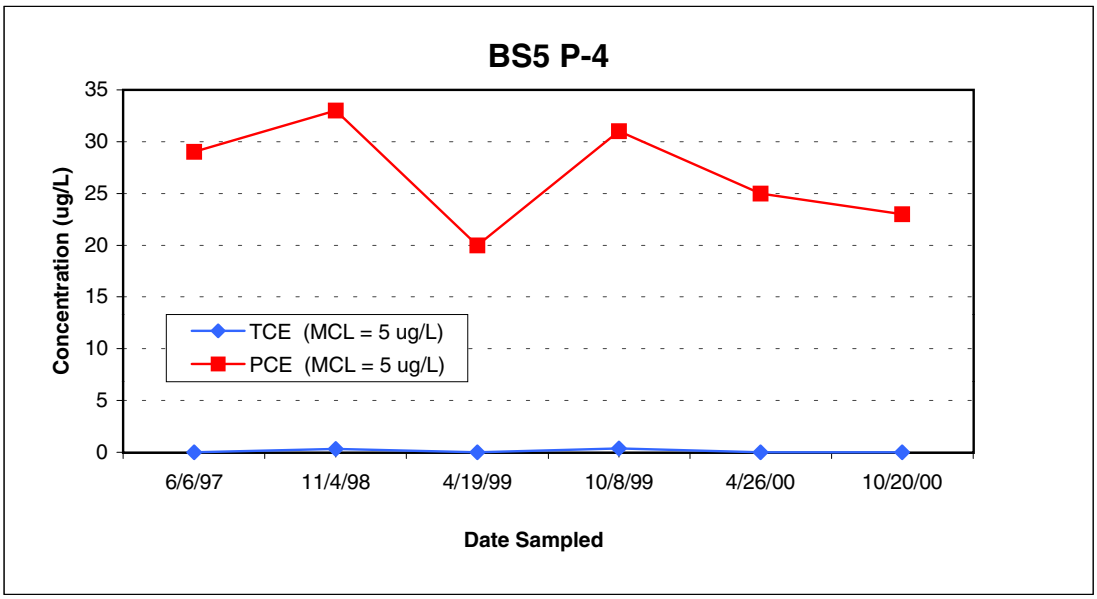


n:\3\777097\LTM\Octobr00\Draft\Figures\LTM\Oct00Gra_BS5-OU8.xls\BS5

FIGURE 6-18

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: BS5
WPAFB - LTM Program

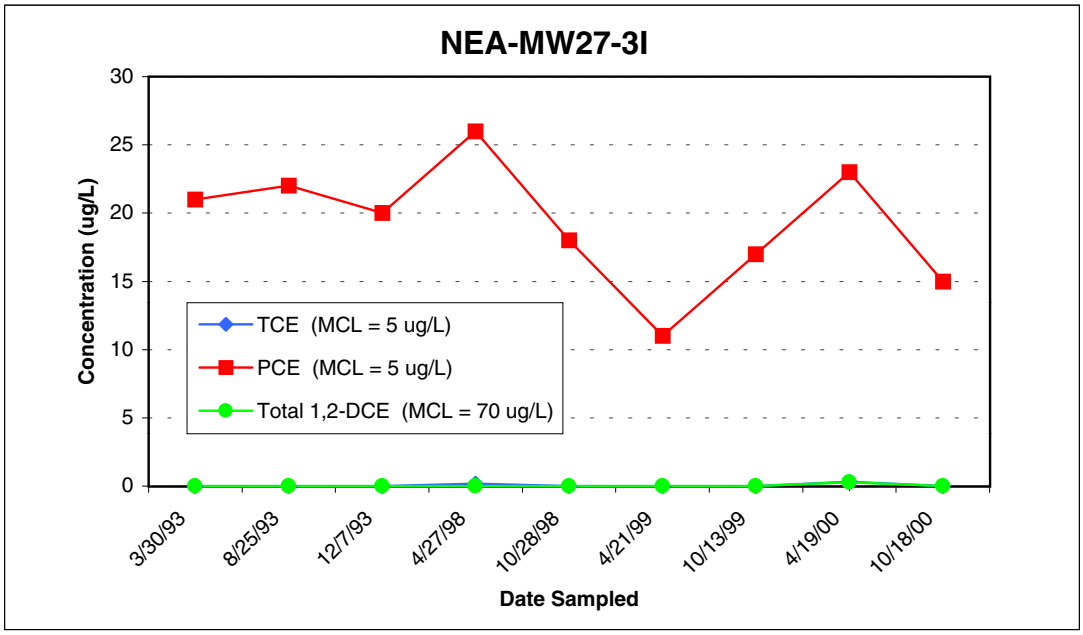


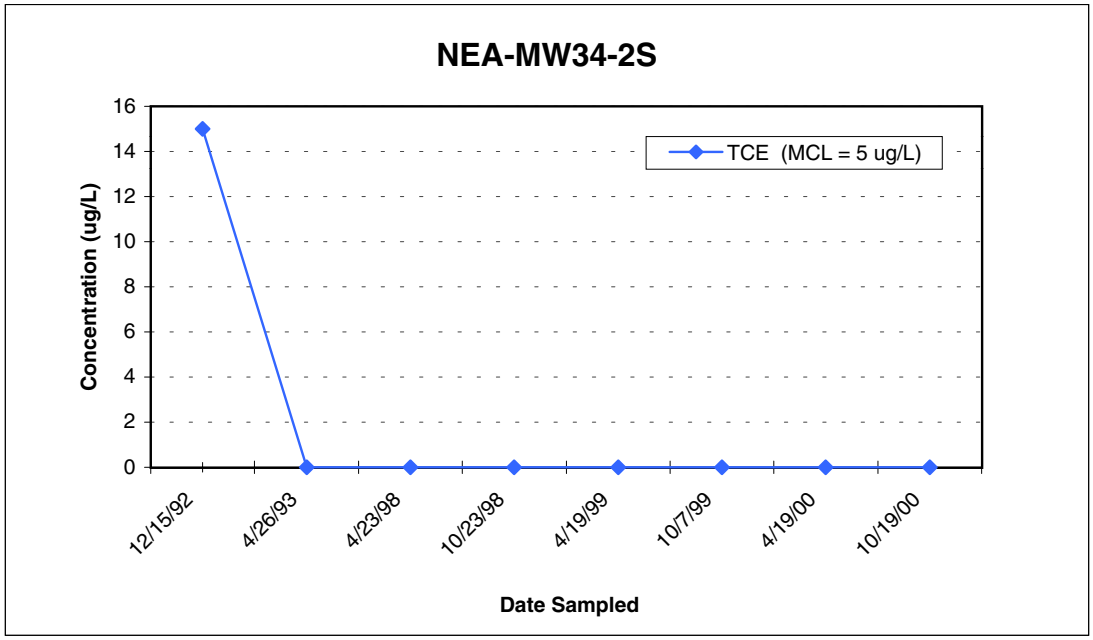


n:\3\777097\LTM\Octobr00\Draft\Figures\LTM\Oct00Gra_BS5-OU8.xls\BS5(2)

FIGURE 6-19

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU2
WPAFB - LTM Program

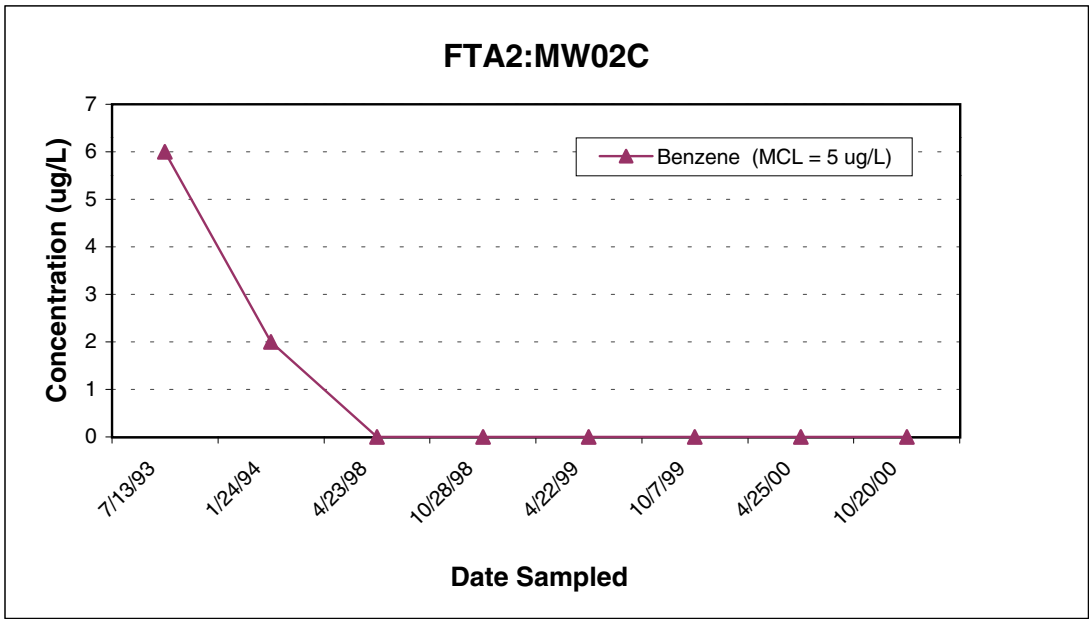


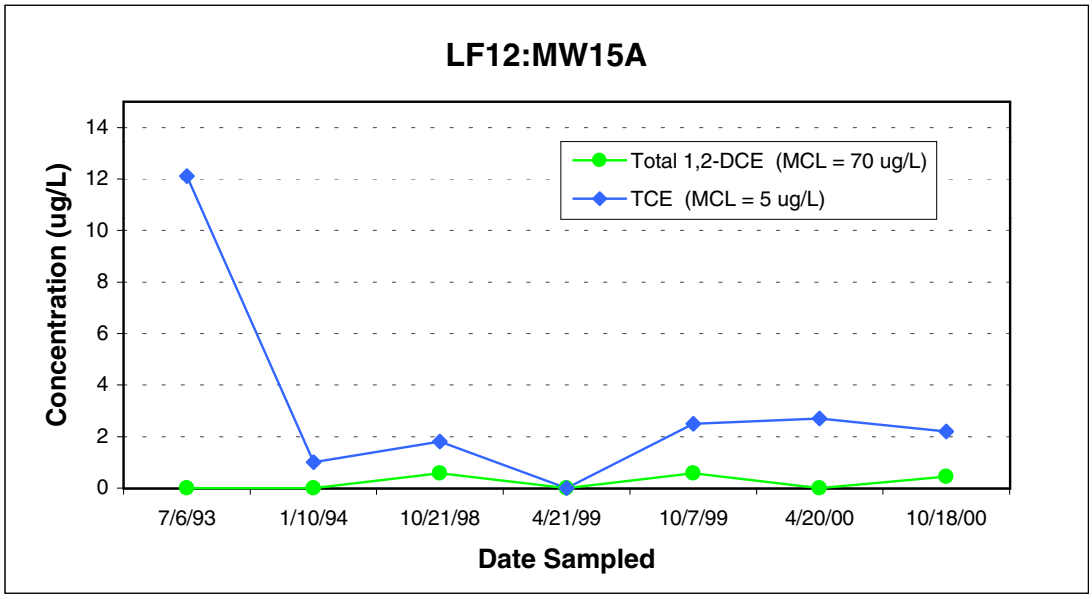


n:\3\777097\LTM\Octobr00\Draft\Figures\LTM\Oct00Gra_BS5-OU8.xls\OU2

FIGURE 6-20

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU3
WPAFB - LTM Program

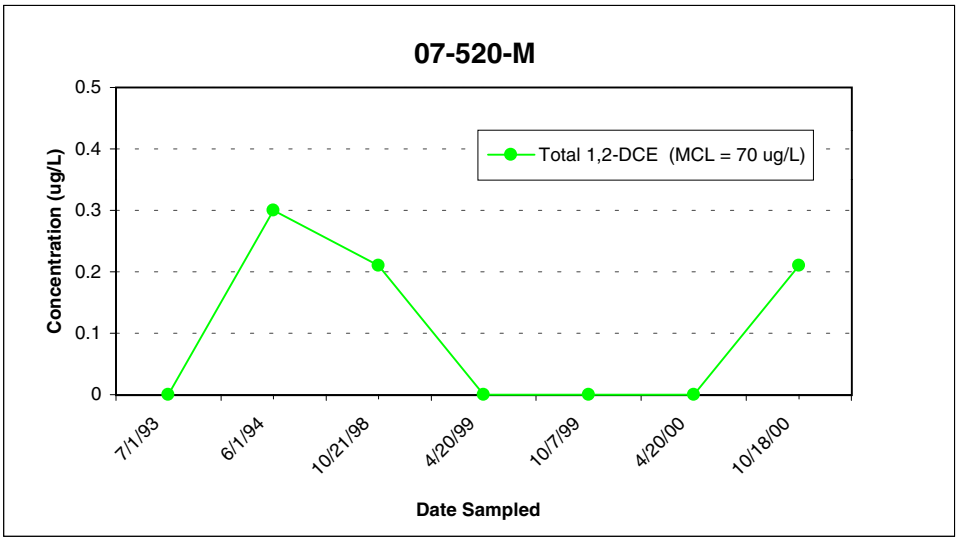




n:\3\777097\LTM\Octobr00\Draft\Figures\LTM\Oct00Gra_BS5-OU8.xls\OU3

FIGURE 6-21

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU3
WPAFB - LTM Program



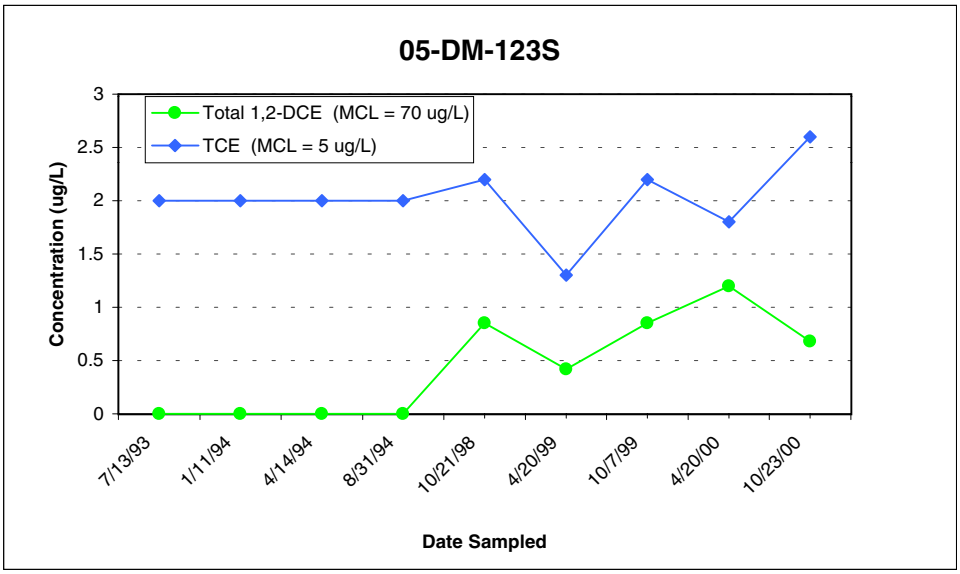
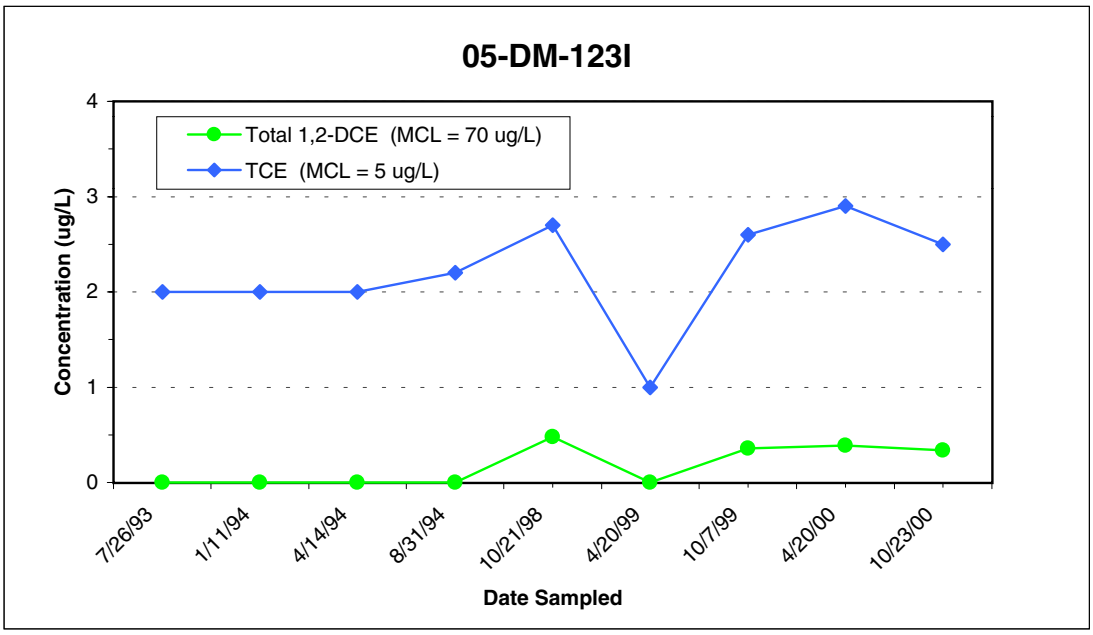
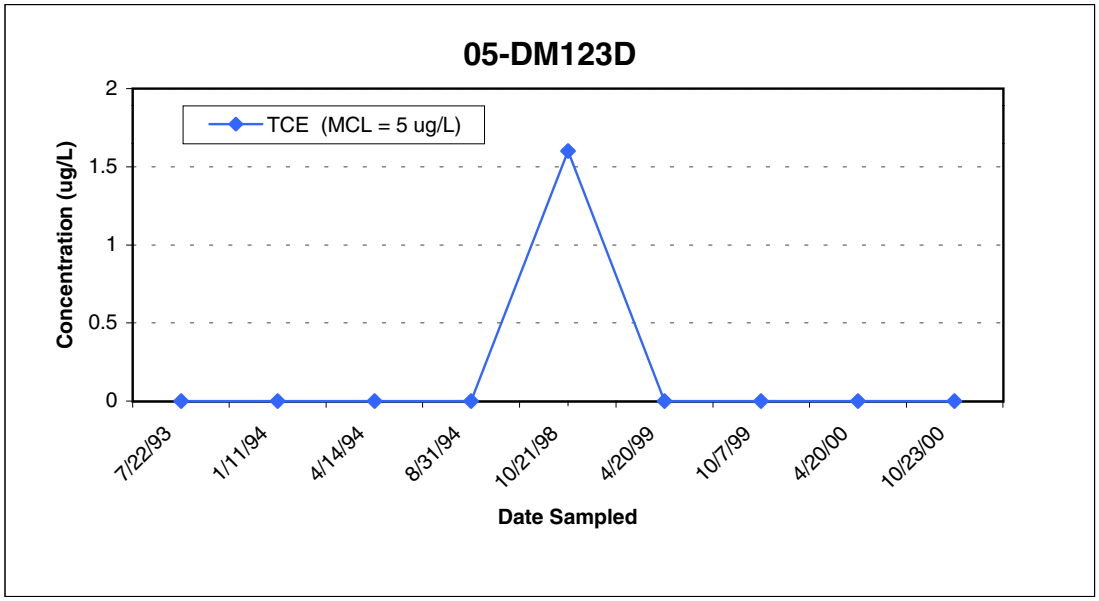


FIGURE 6-22

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU3
WPAFB - LTM Program

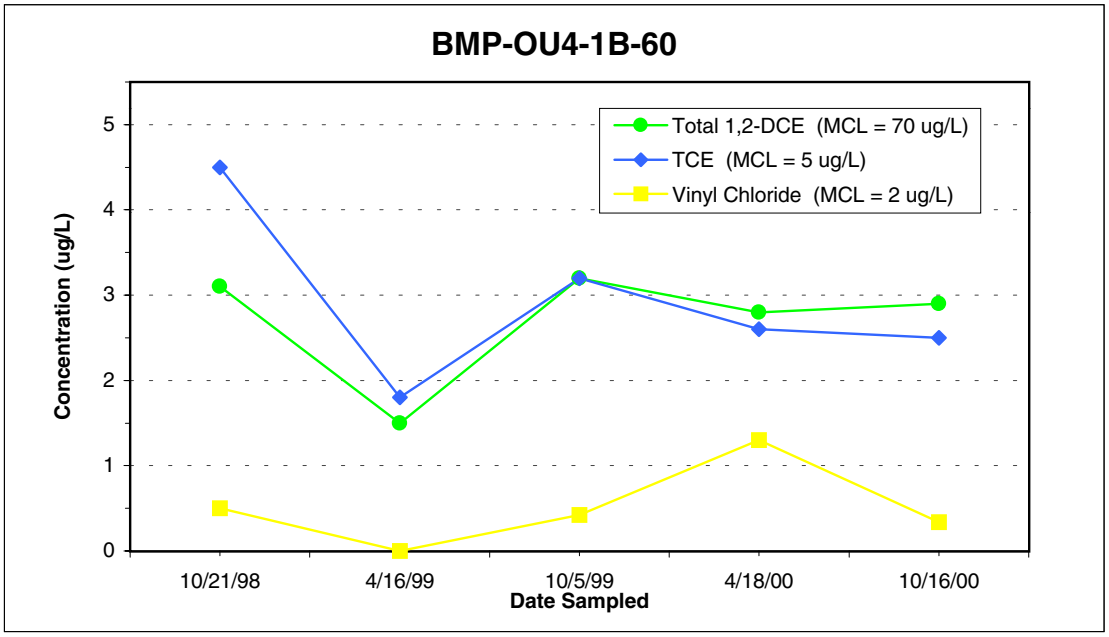




n:\3\777097\LTM\Octobr00\Draft\Figures\LTM\Oct00Gra_BS5-OU8.xls\OU3(3)

FIGURE 6-23

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU4
WPAFB - LTM Program



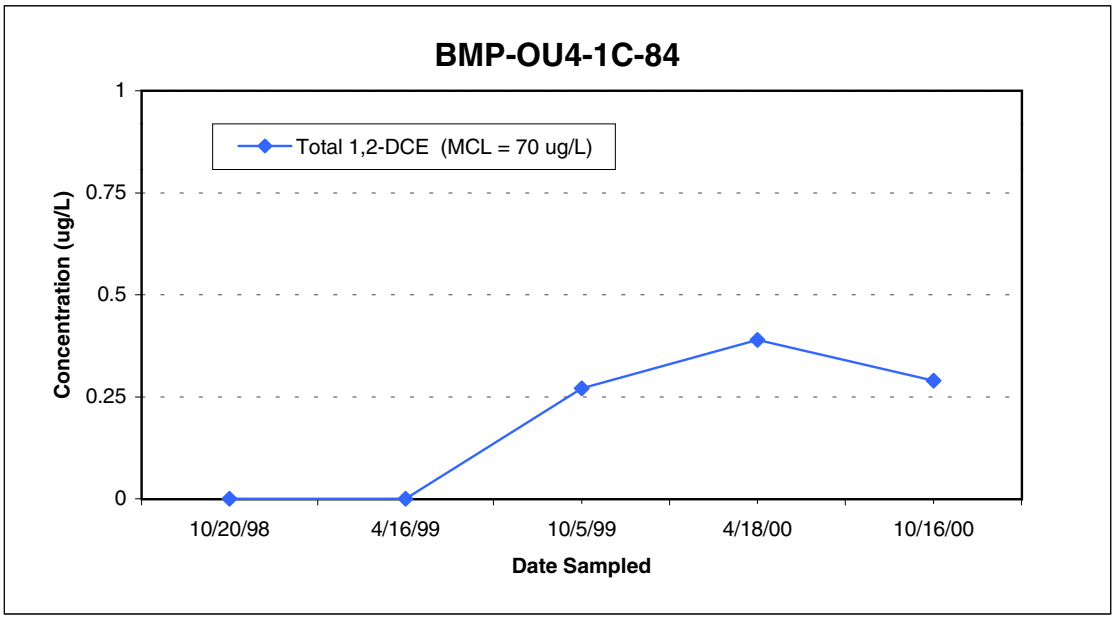
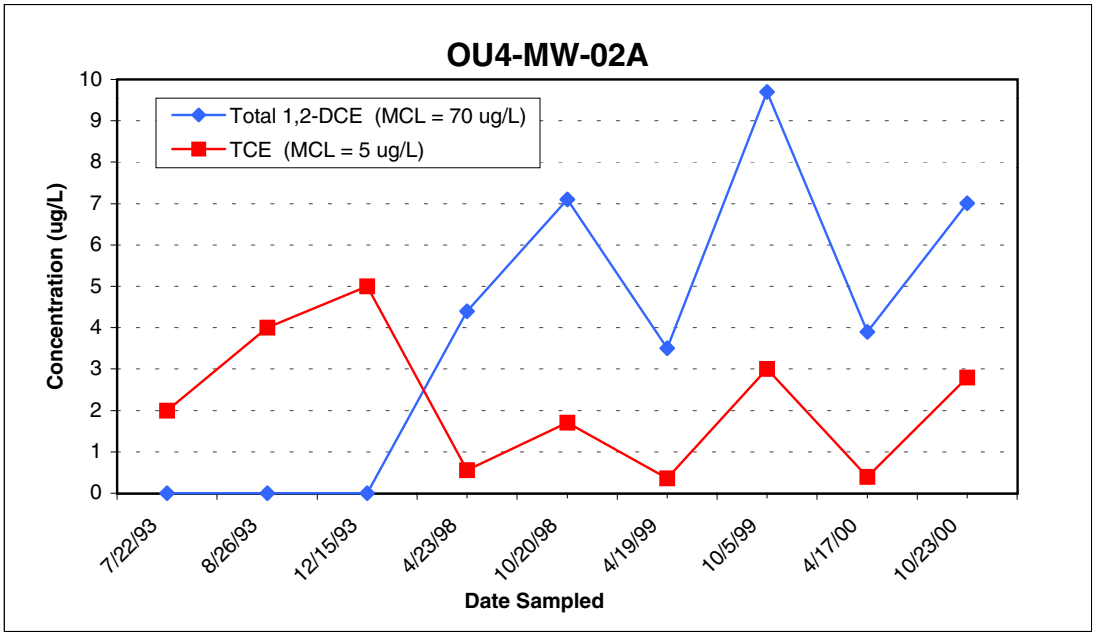
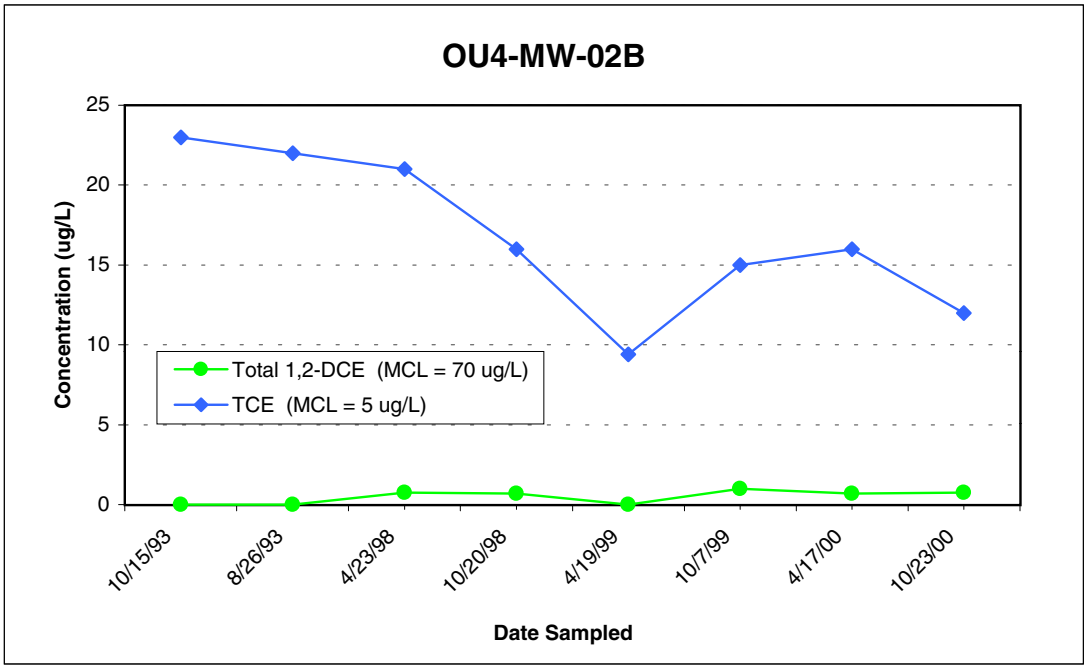


FIGURE 6-24

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU4
WPAFB - LTM Program

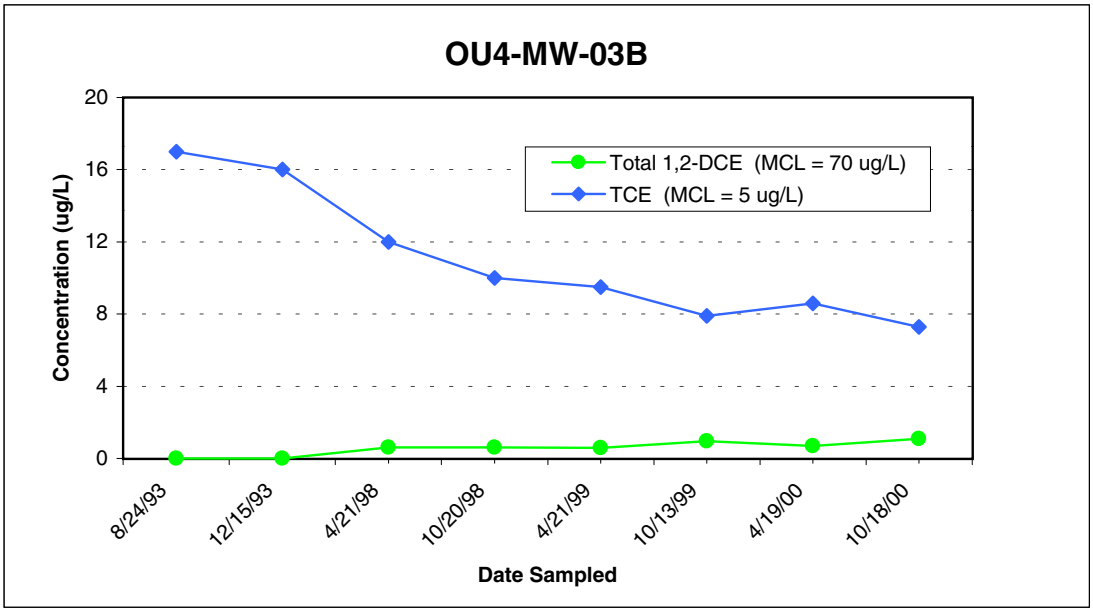


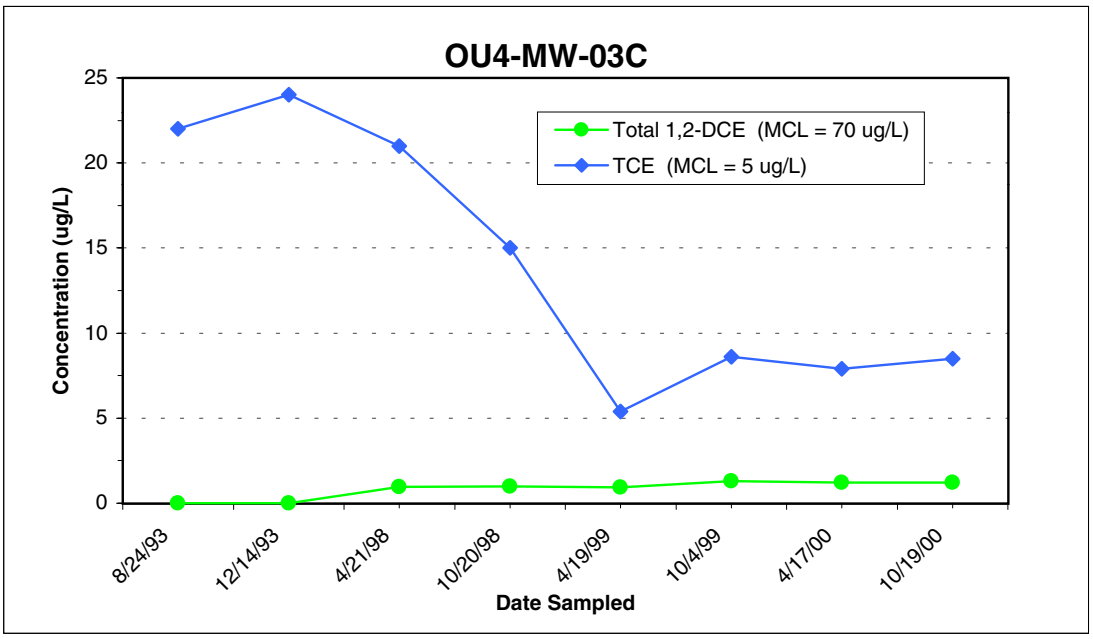


n:\3\777097\LTM\Octobr00\Draft\Figures\LTM\Oct00Gra_BS5-OU8.xls\OU4(2)

FIGURE 6-25

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU4
WPAFB - LTM Program

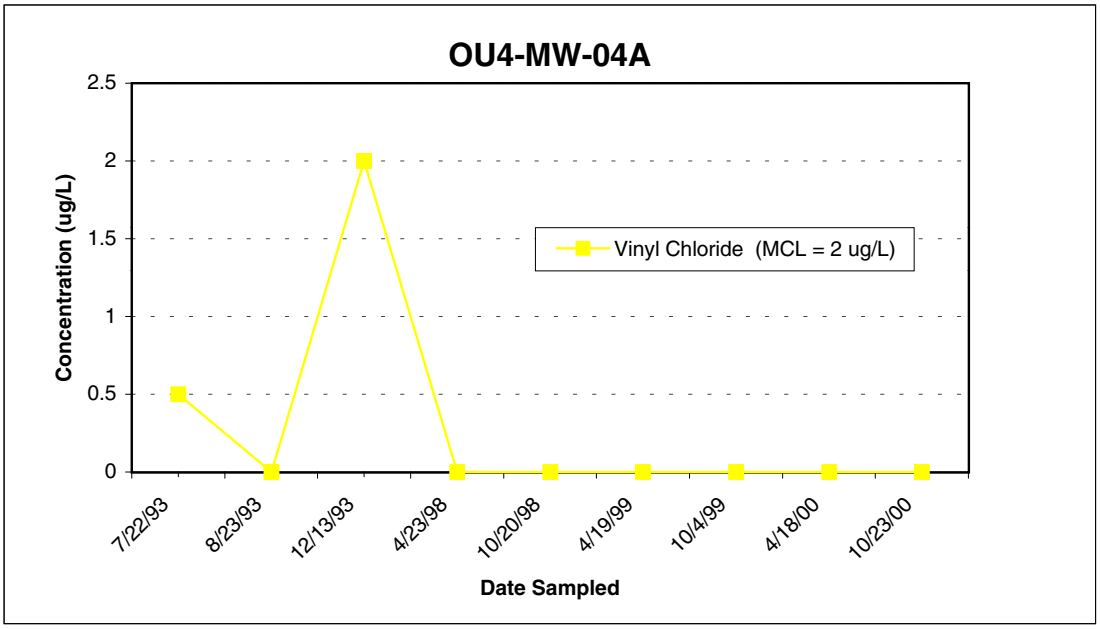




n:\3\777097\LTM\Octobr00\Draft\Figures\LTM\Oct00Gra_BS5-OU8.xls\OU4(3)

FIGURE 6-26

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU4
WPAFB - LTM Program



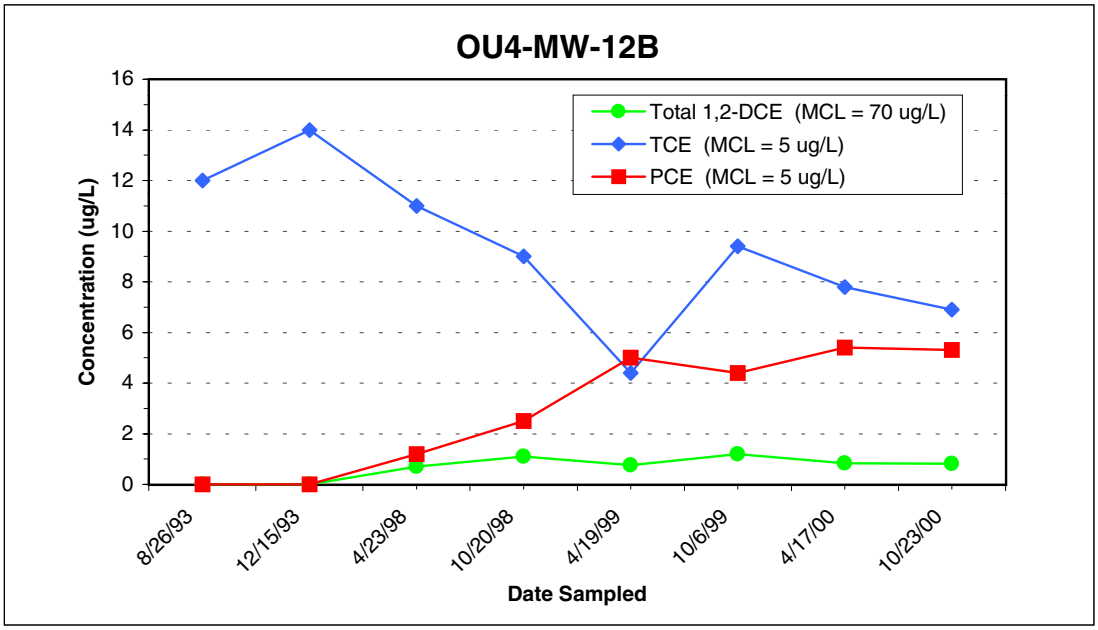
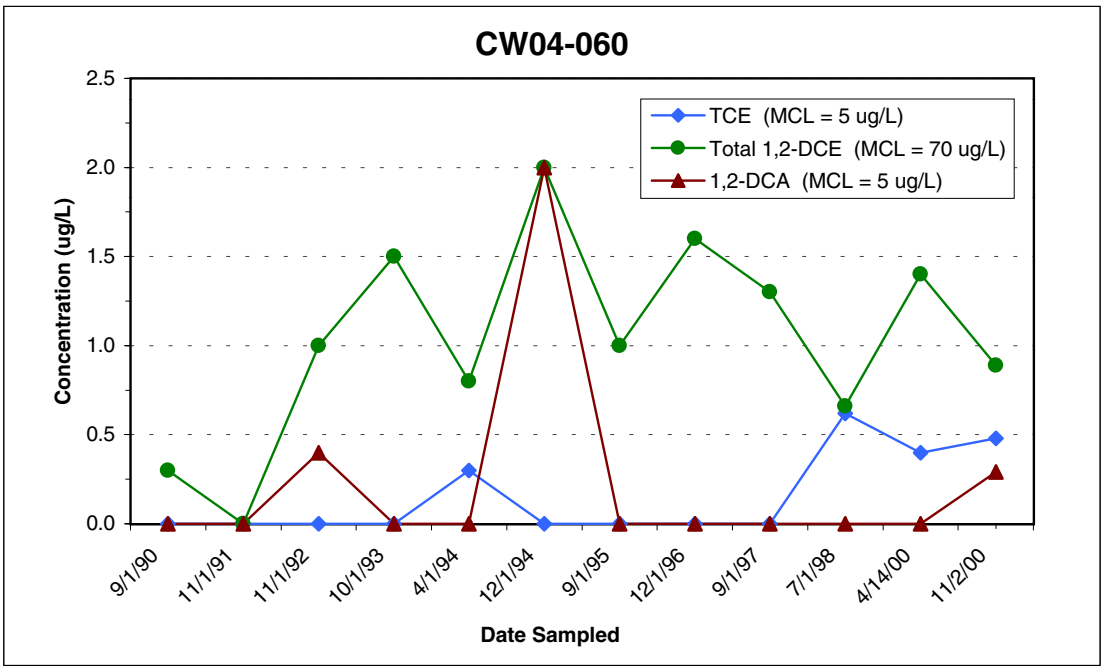


FIGURE 6-27

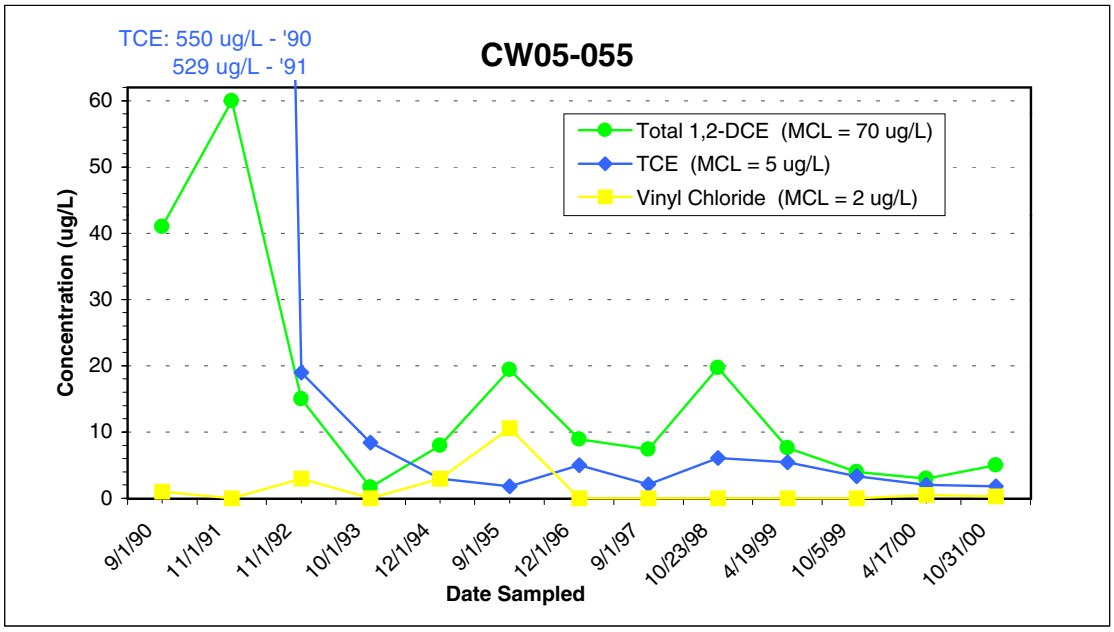
LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU5 (FAA-A)
WPAFB - LTM Program

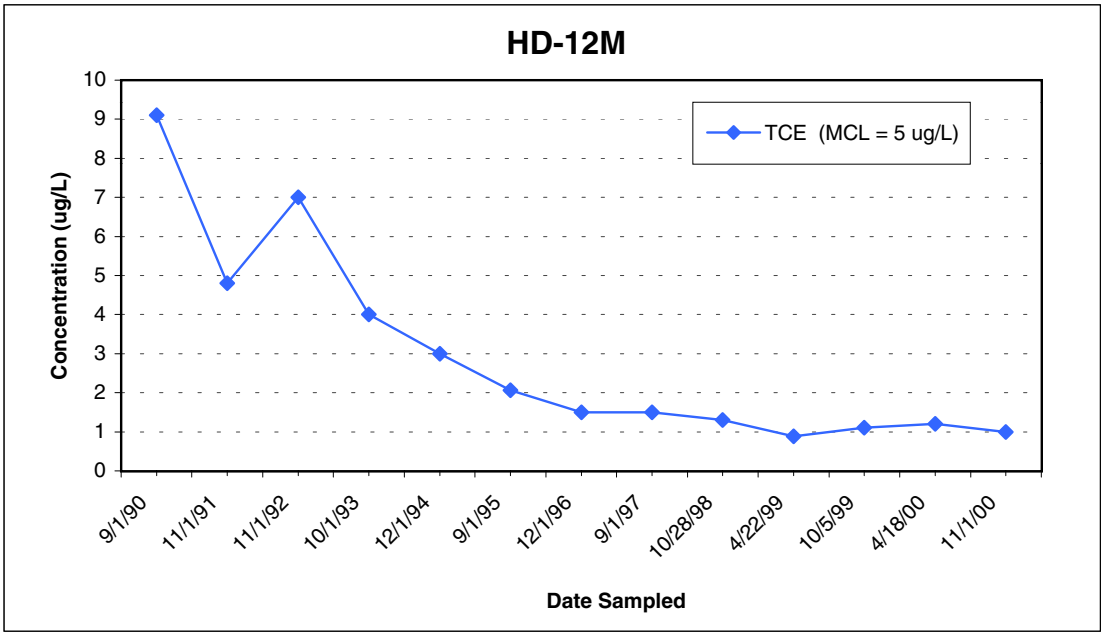


n:\3\777097\LTM\Octobr00\Draft\Figures\LTM\Oct00Gra_BS5-OU8.xls\OU5(1)

FIGURE 6-28

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU5 (FAA-A)
WPAFB - LTM Program

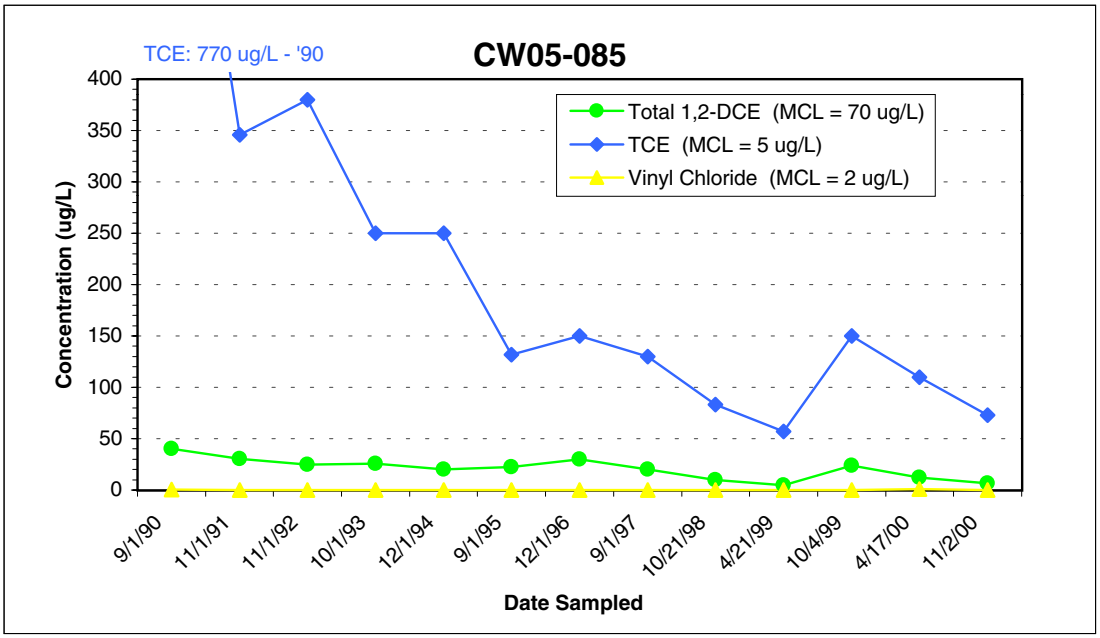


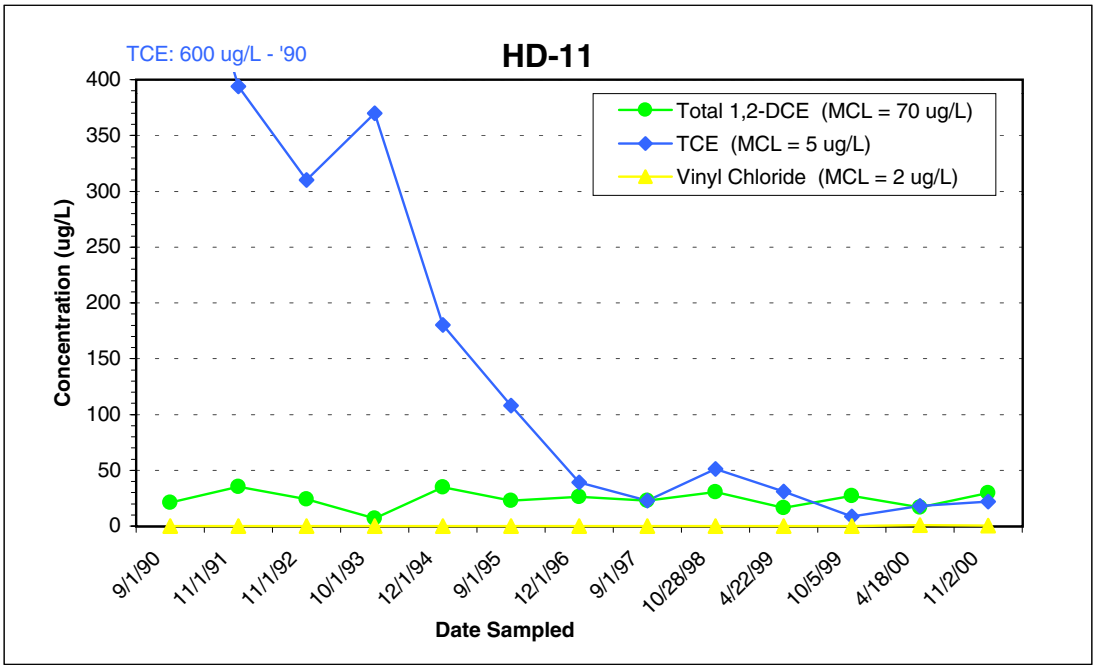


n:\3\777097\LTM\Octobr00\Draft\Figures\LTM\Oct00Gra_BS5-OU8.xls\OU5(2)

FIGURE 6-29

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU5 (FAA-A)
WPAFB - LTM Program

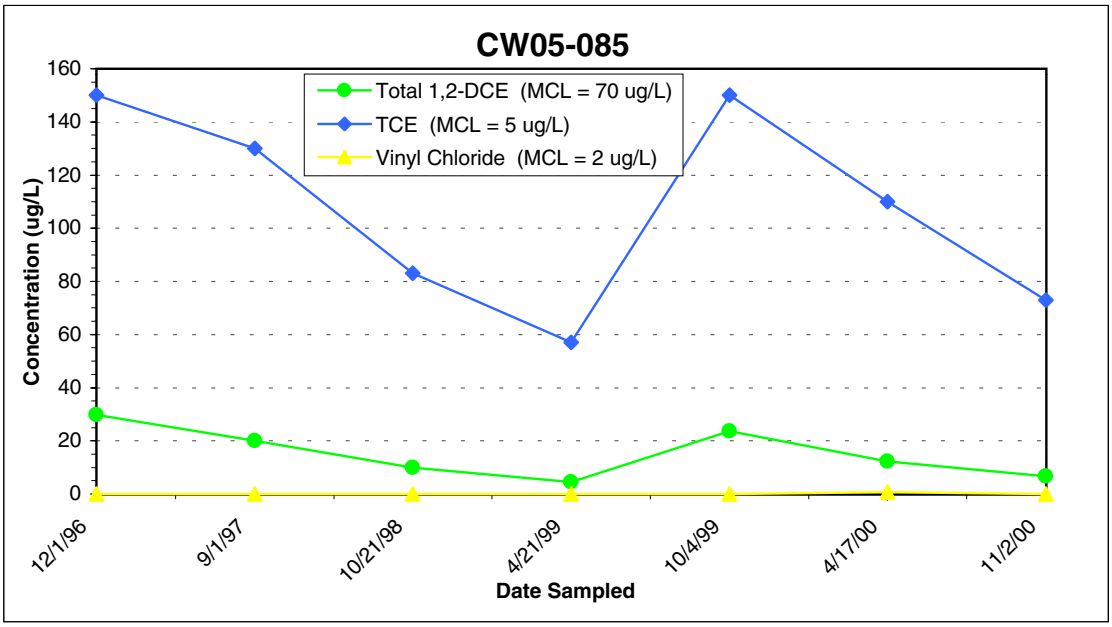




n:\3\777097\LTM\Octobr00\Draft\Figures\LTM\Oct00Gra_BS5-OU8.xls\OU5(3)

FIGURE 6-30

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU5 (FAA-A)
WPAFB - LTM Program



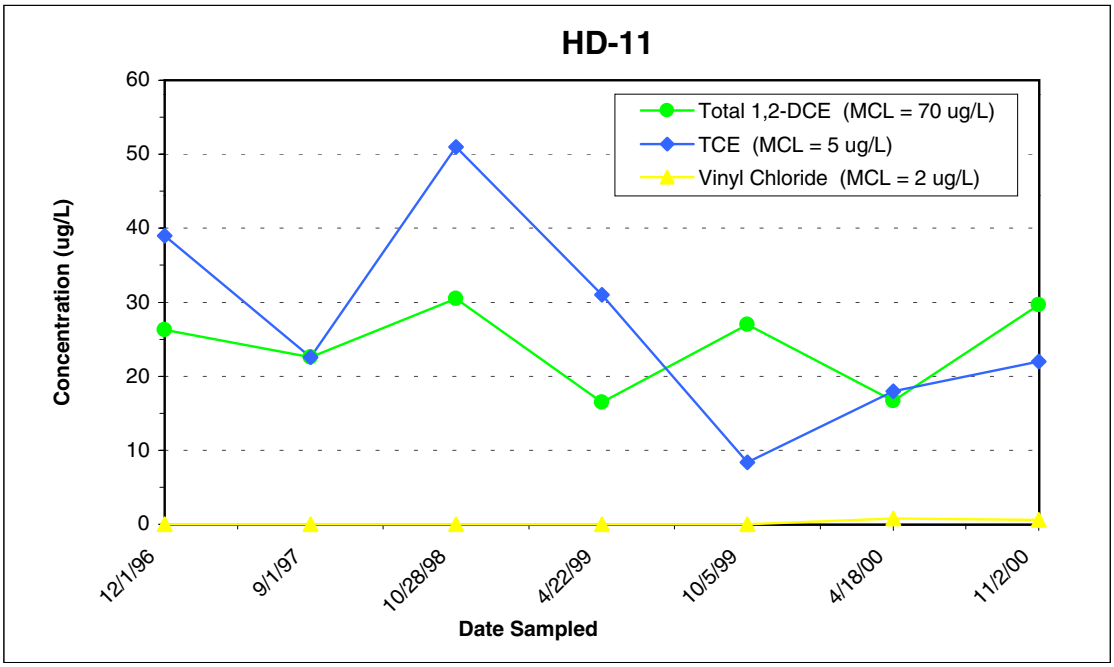
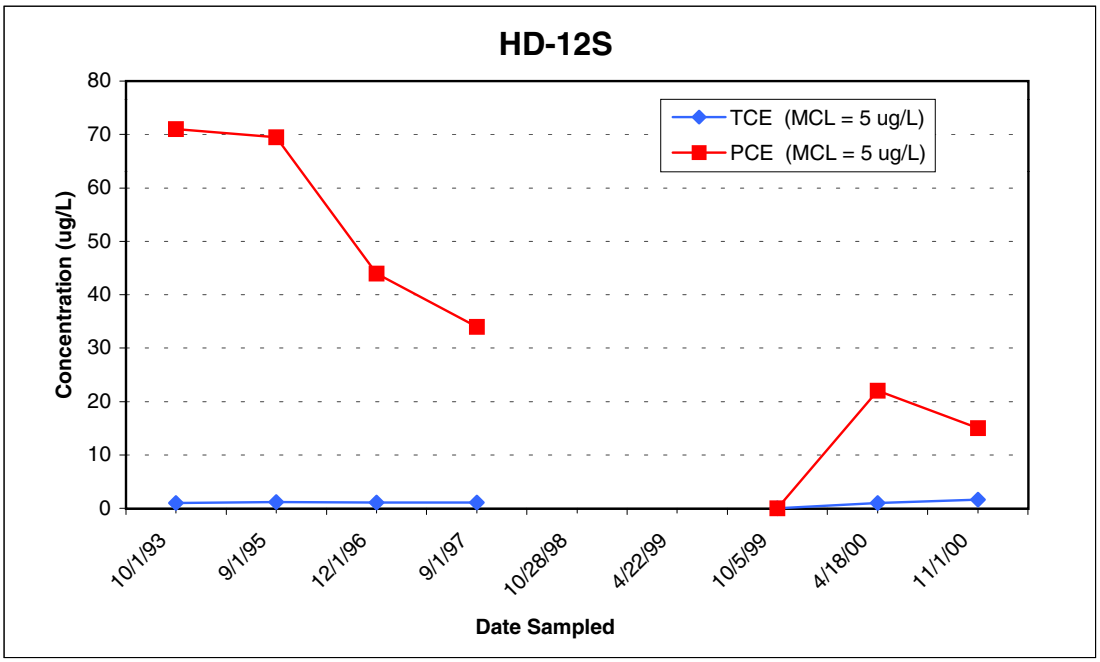
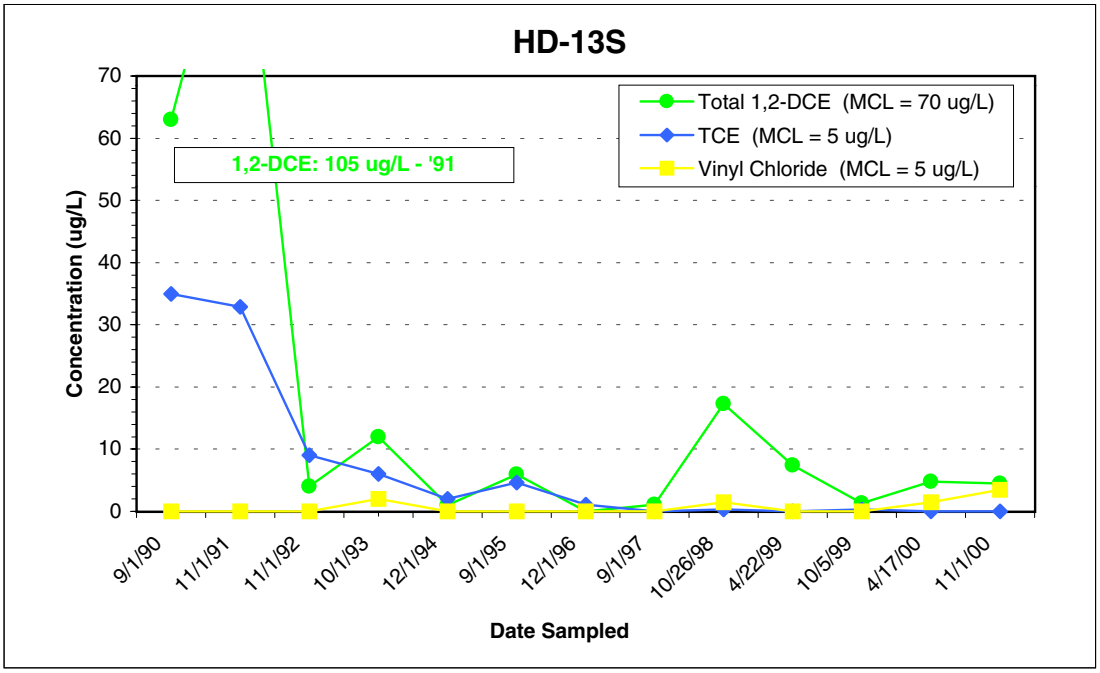


FIGURE 6-30a

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU5 (FAA-A)
WPAFB - LTM Program

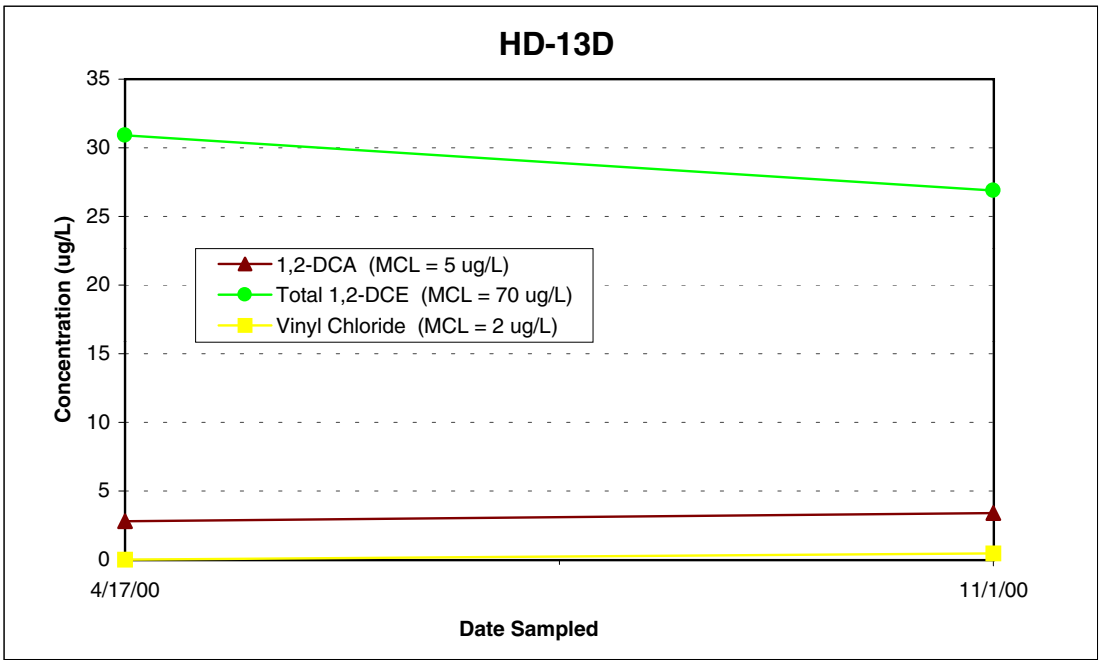


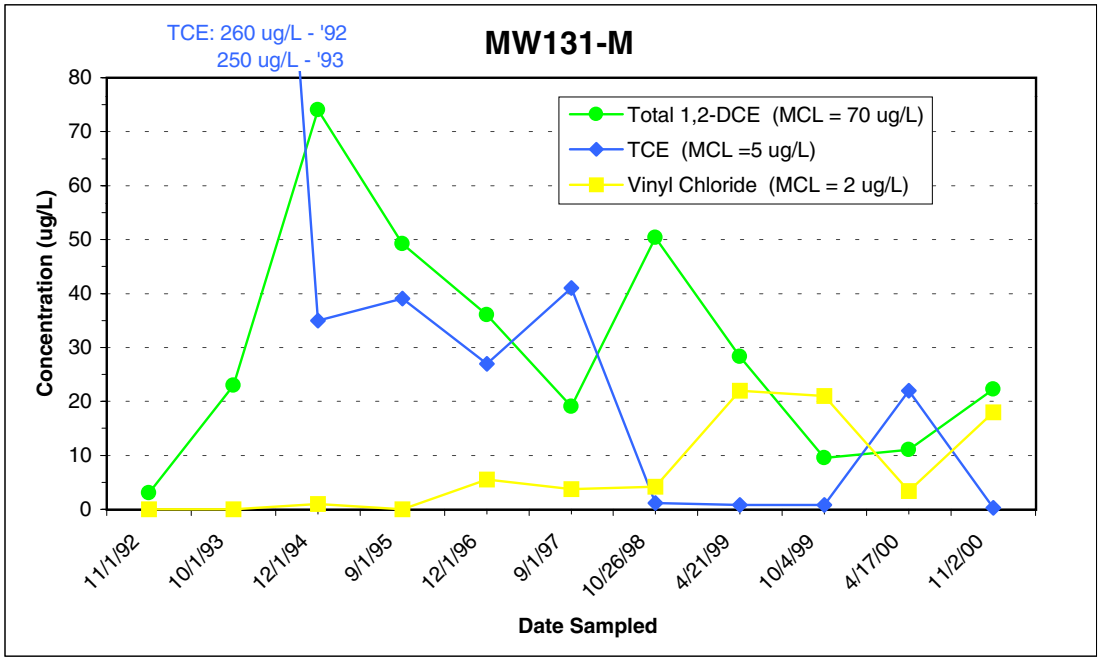


n:\3\777097\LTM\Octobr00\Draft\Figures\LTM\Oct00Gra_BS5-OU8.xls\OU5(4)

FIGURE 6-31

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU5 (FAA-A)
WPAFB - LTM Program

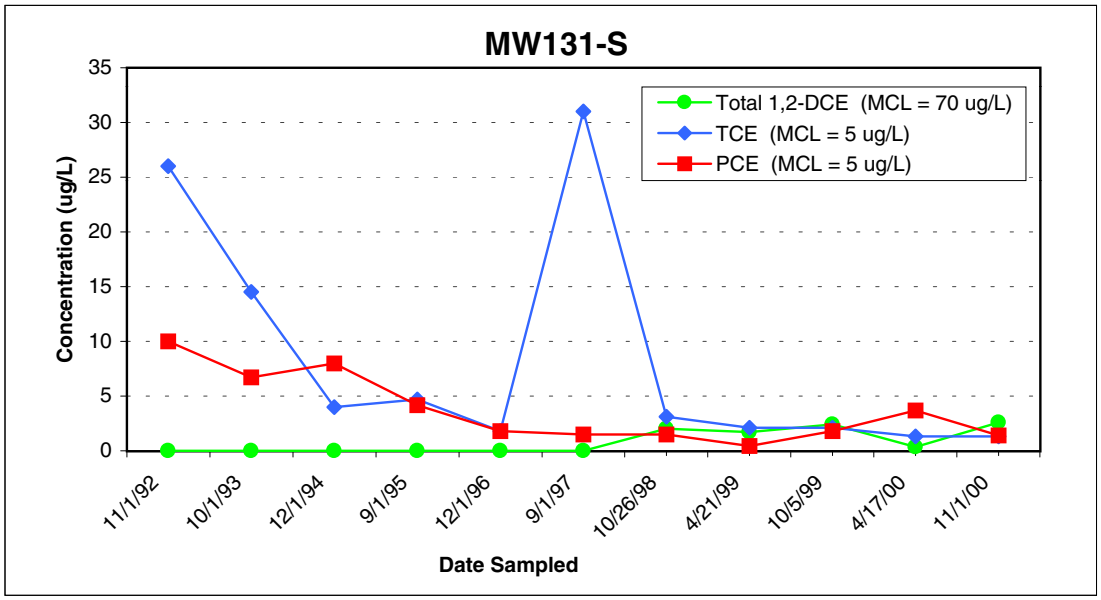




n:\3\777097\LTM\Octobr00\Draft\Figures\LTM\Oct00Gra_BS5-OU8.xls\OU5(5)

FIGURE 6-32

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU5 (FAA-A)
WPAFB - LTM Program



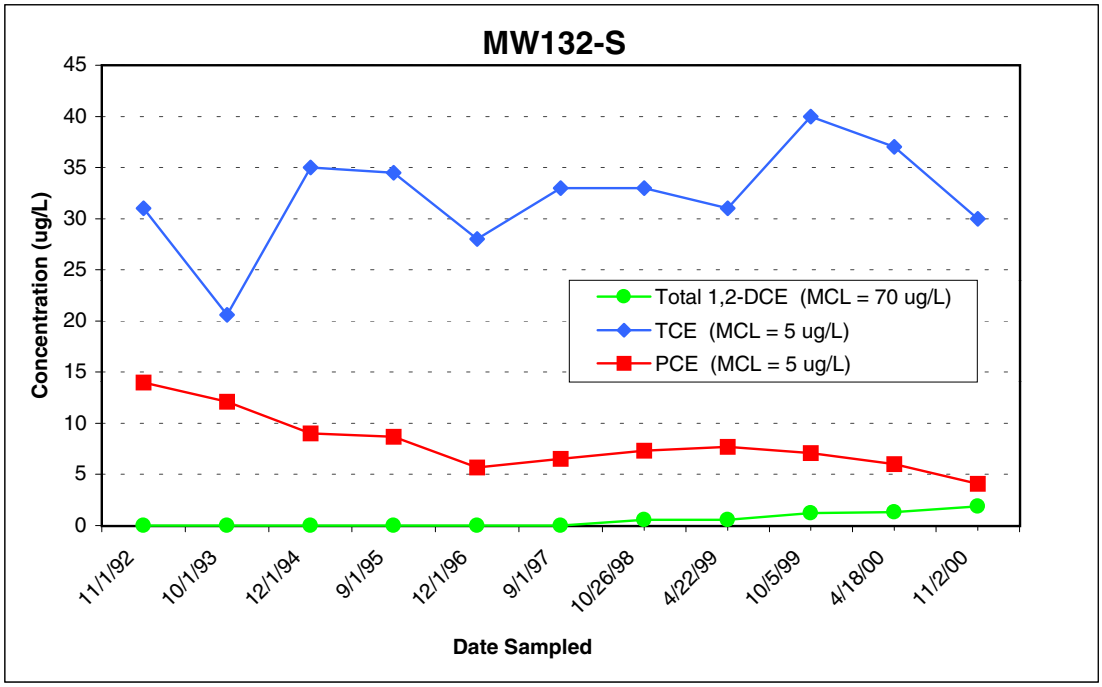
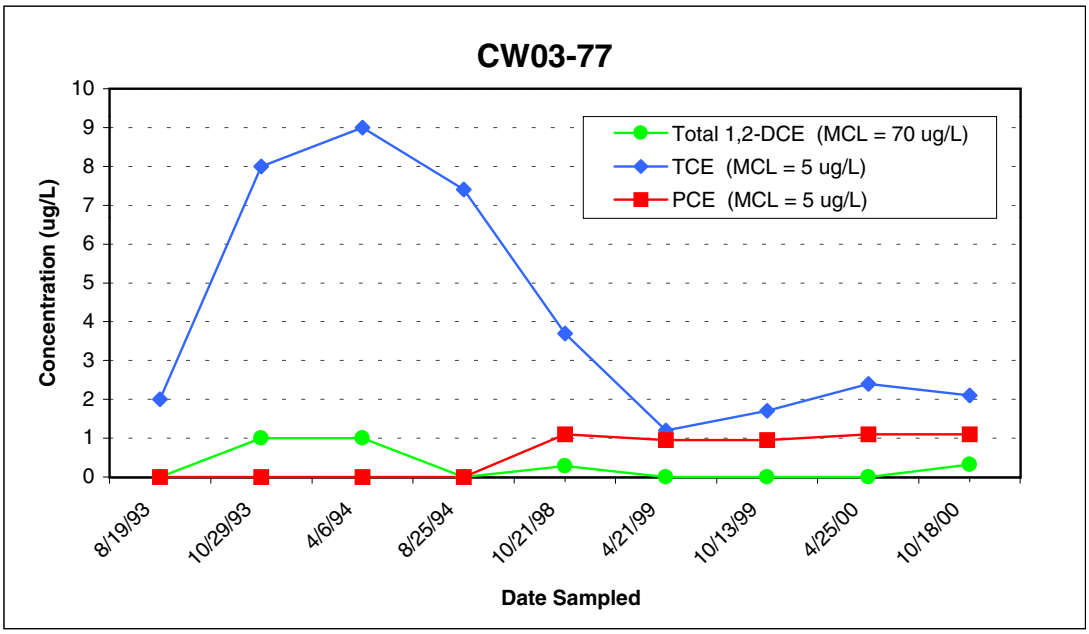


FIGURE 6-33

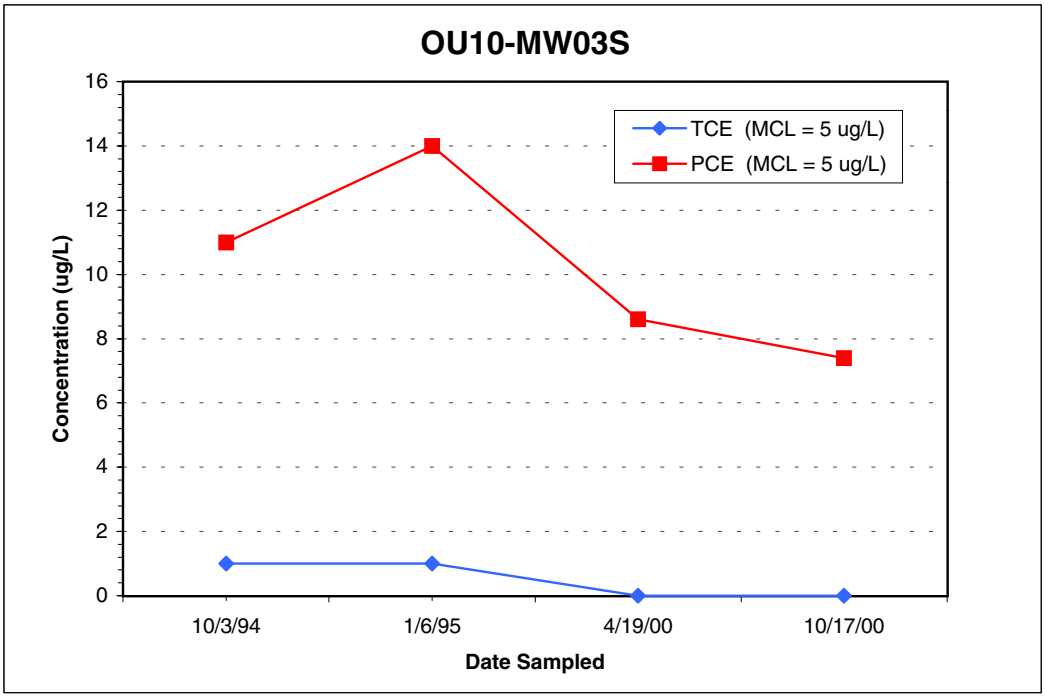
LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU8
WPAFB - LTM Program



n:\3\777097\LTM\Octobr00\Draft\Figures\LTM\Oct00Gra_BS5-OU8.xls\OU8

FIGURE 6-34

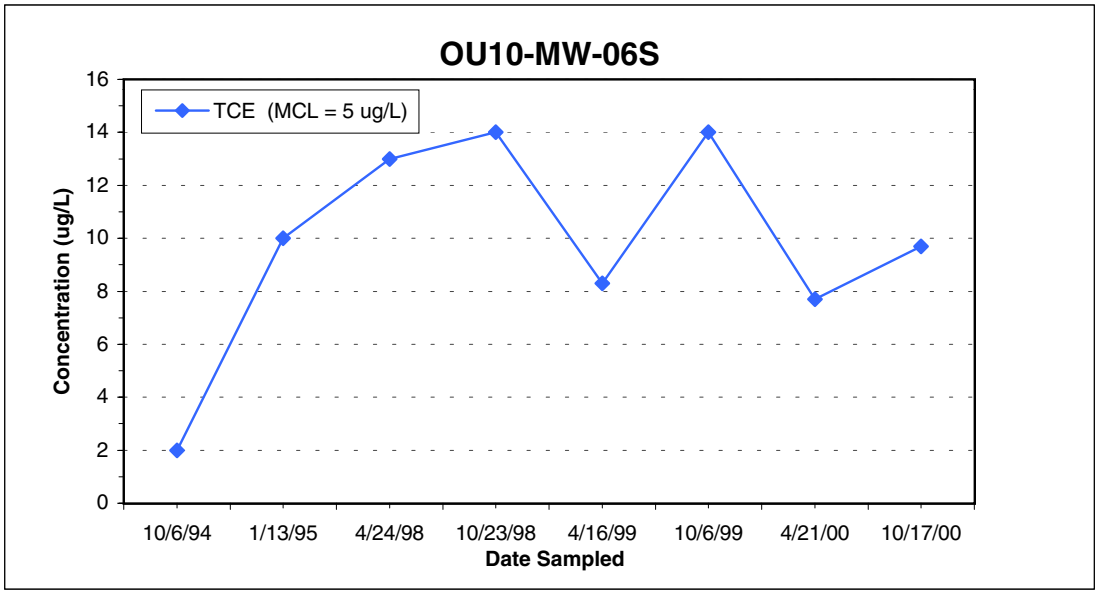
LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU10
WPAFB - LTM Program

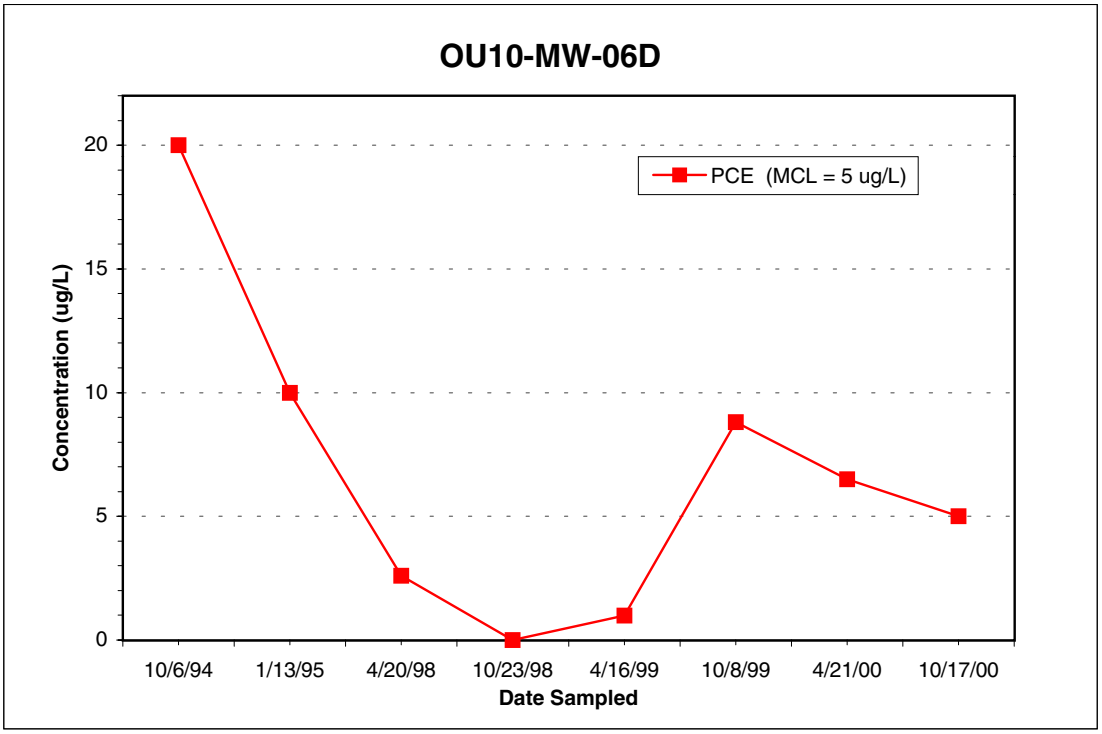


n:\3\777097\LTM\Octobr00\Draft\Figures\LTM\Oct00Gra_OU8-10.xls\OU10(1)

FIGURE 6-35

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU10
WPAFB - LTM Program

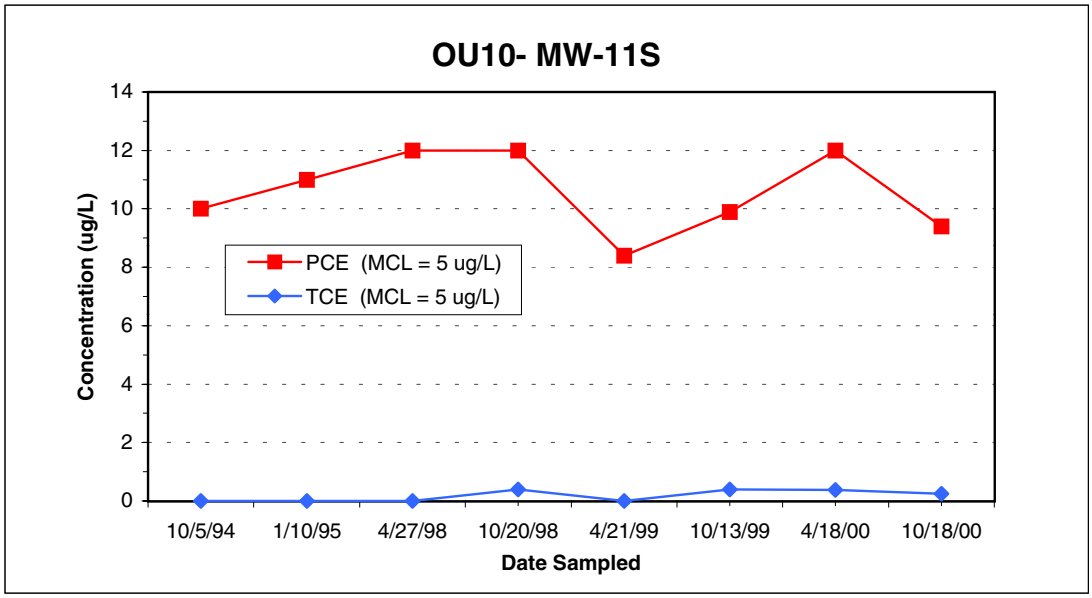


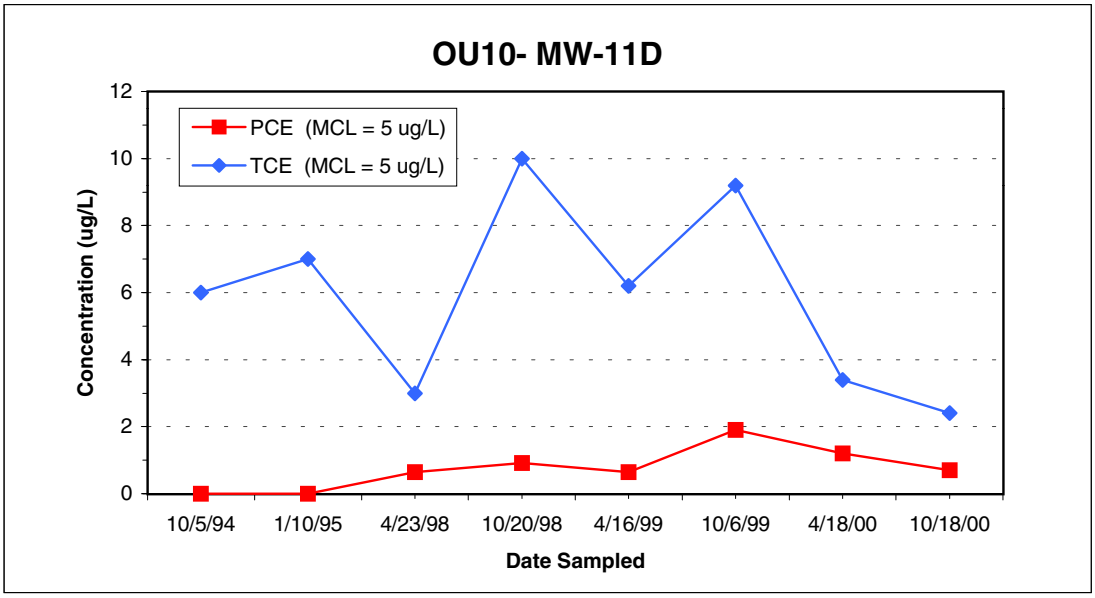


n:\3\777097\LTM\Octobr00\Draft\Figures\LTM\Oct00Gra_OU8-10.xls\OU10(2)

FIGURE 6-36

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU10
WPAFB - LTM Program

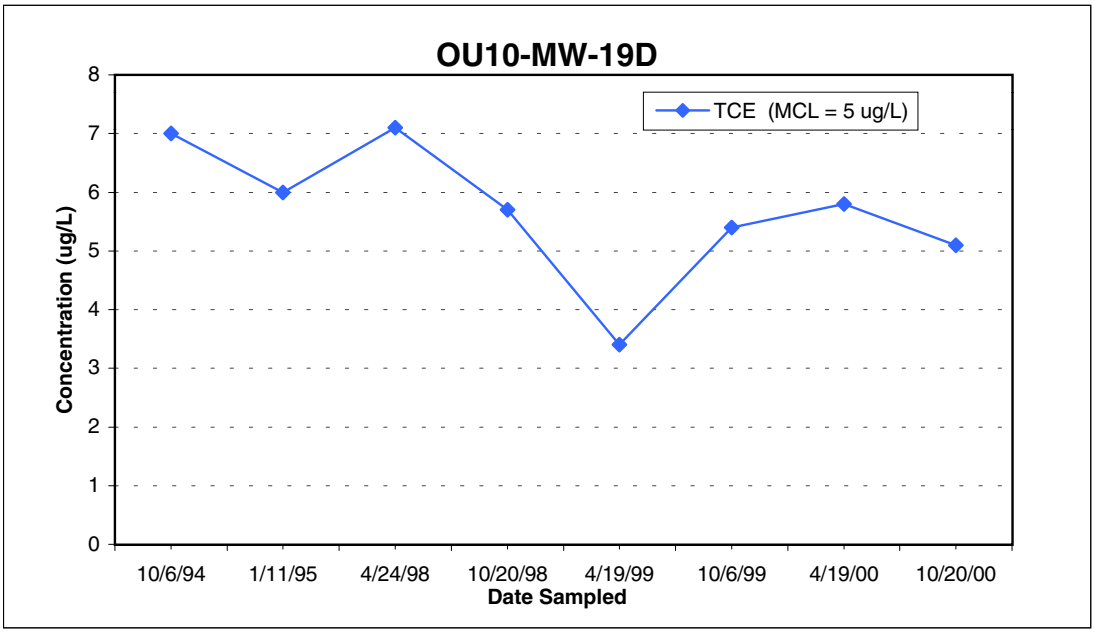


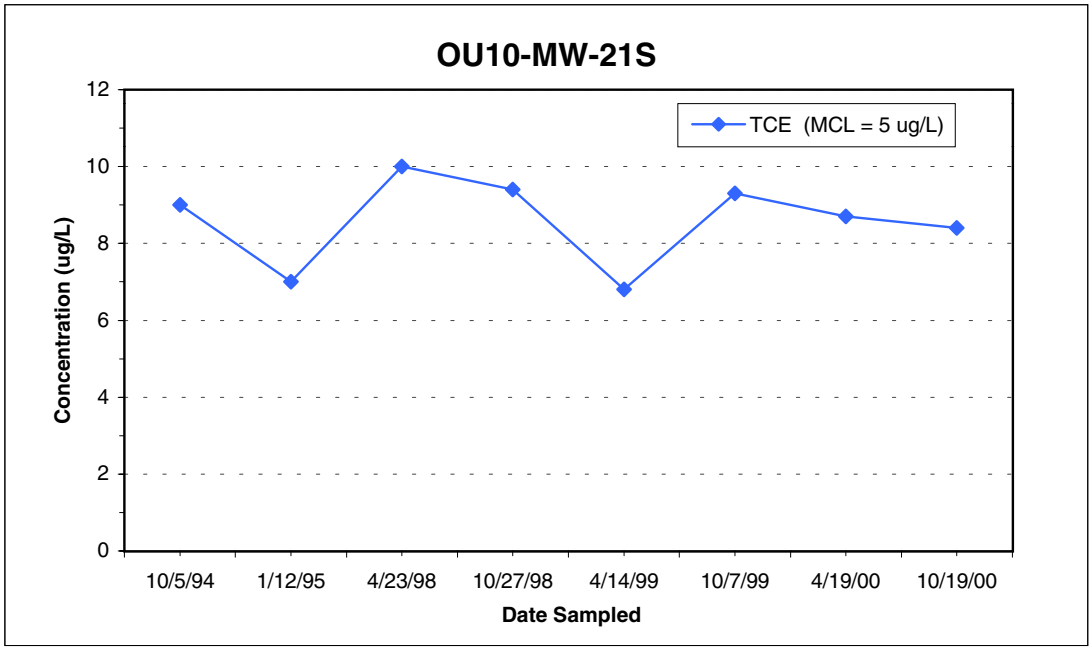


n:\3\777097\LTM\Octobr00\Draft\Figures\LTM\Oct00Gra_OU8-10.xls\OU10(3)

FIGURE 6-37

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU10
WPAFB - LTM Program

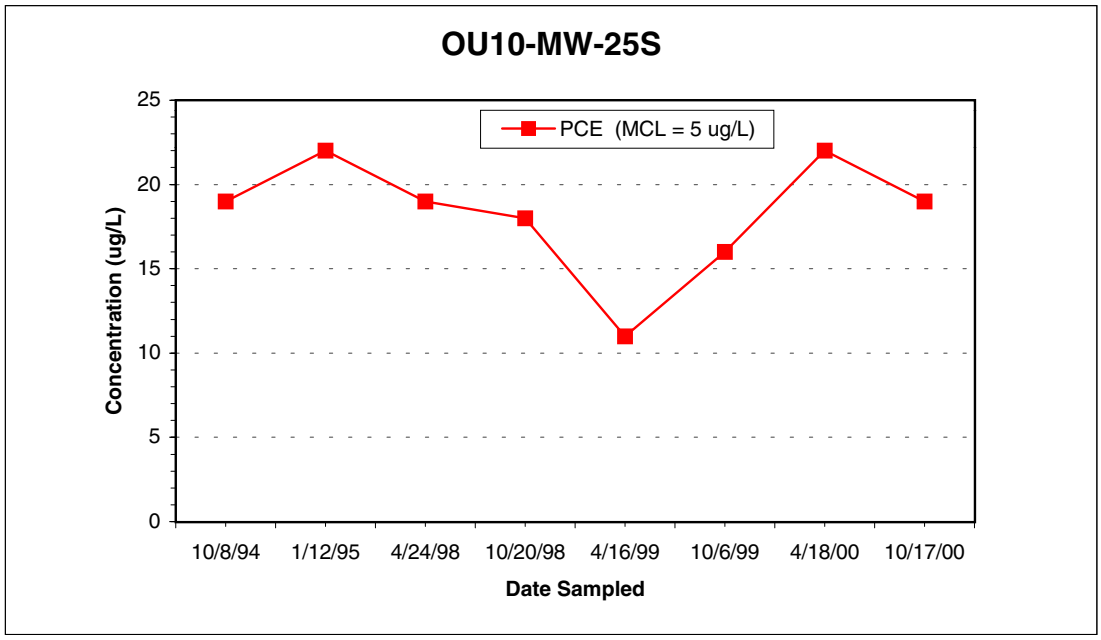




n:\3\777097\LTM\Octobr00\Draft\Figures\LTM\Oct00Gra_OU8-10.xls\OU10(4)

FIGURE 6-38

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU10
WPAFB - LTM Program



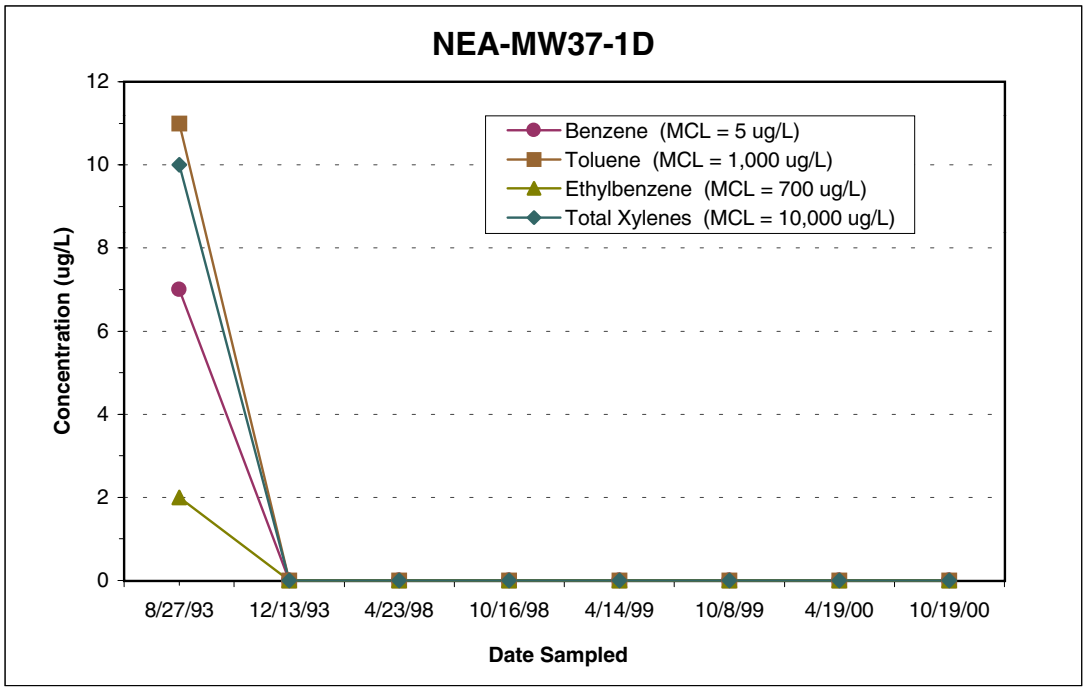
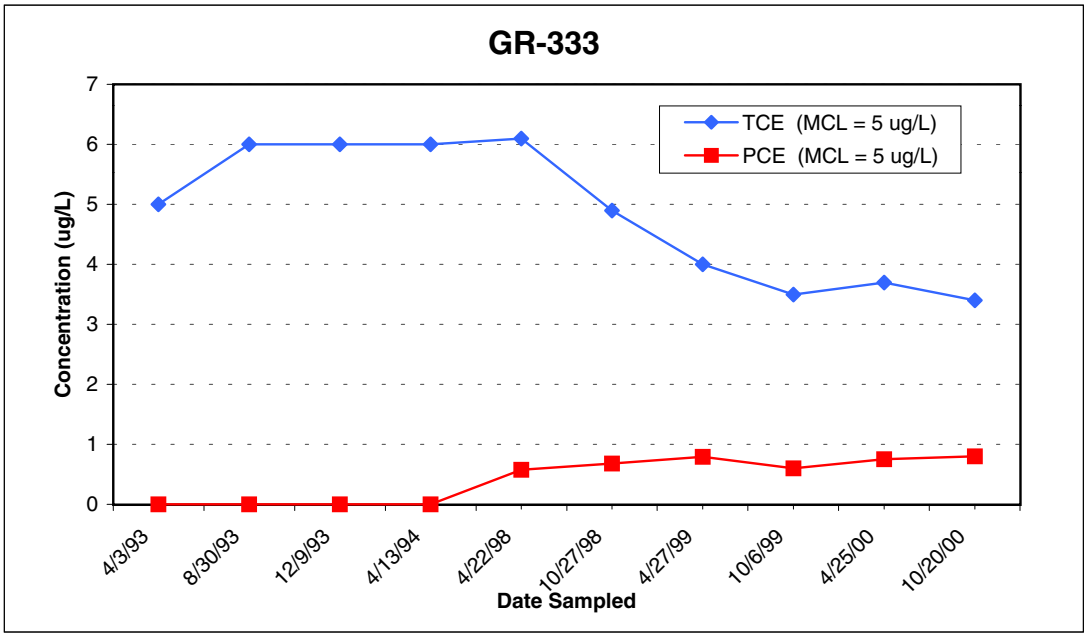
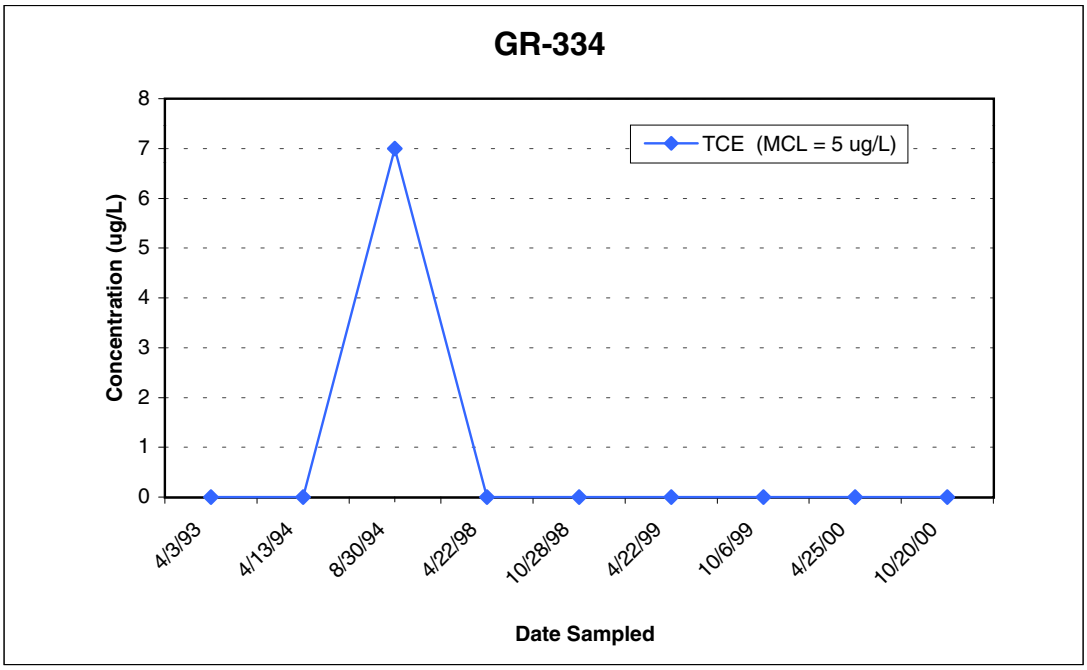


FIGURE 6-39

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU10
WPAFB - LTM Program

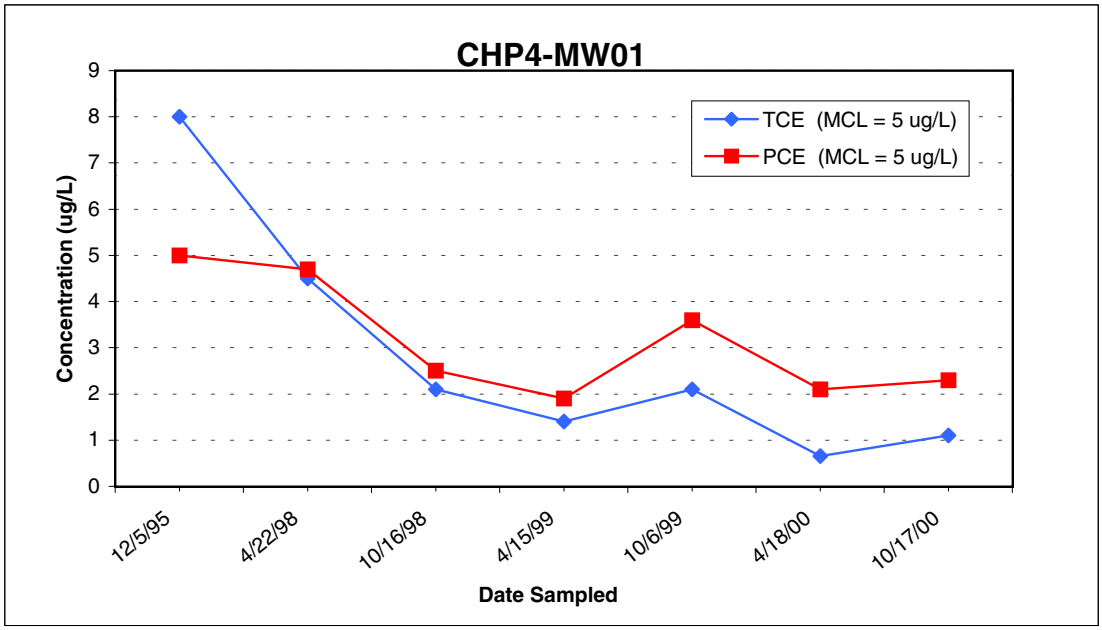


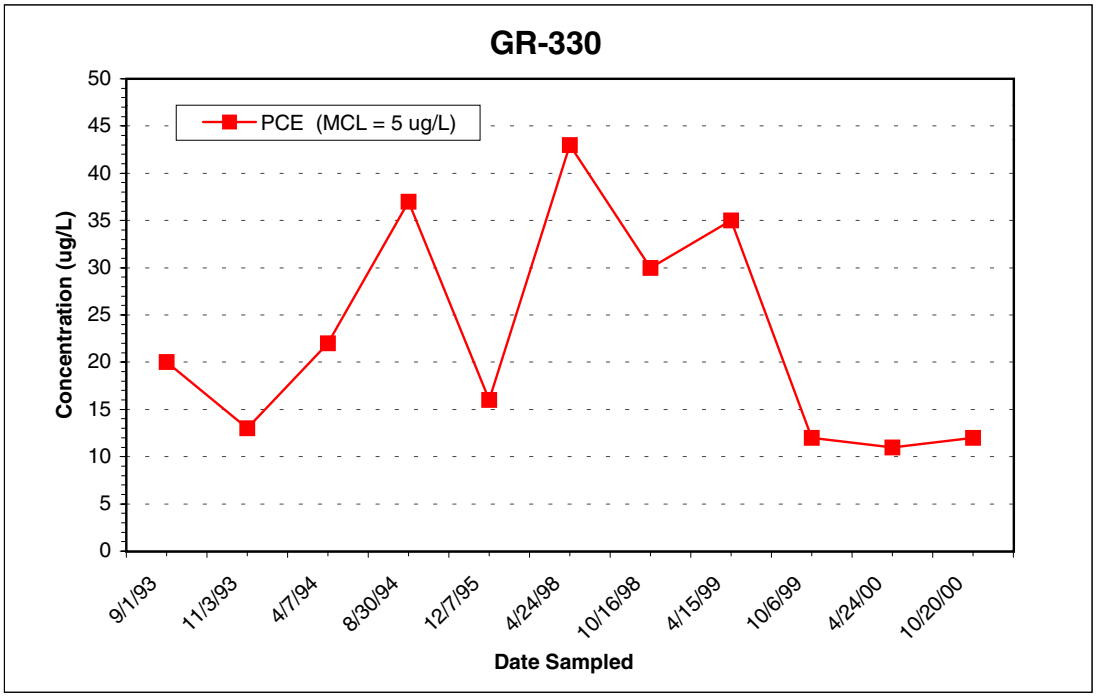


n:\3\777097\LTM\Octobr00\Draft\Figures\LTM\Oct00Gra_OU8-10.xls\OU10(6)

FIGURE 6-40

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU10 (CHP4)
WPAFB - LTM Program

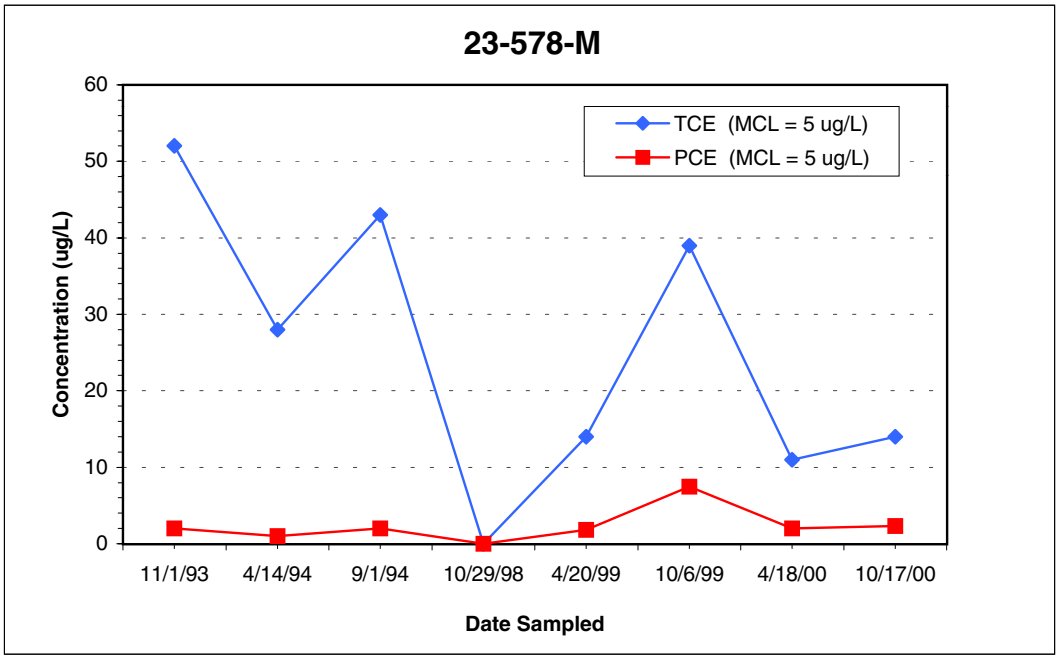




n:\3\777097\LTM\Octobr00\Draft\Figures\LTM\Oct00Gra_OU8-10.xls\OU10(7)

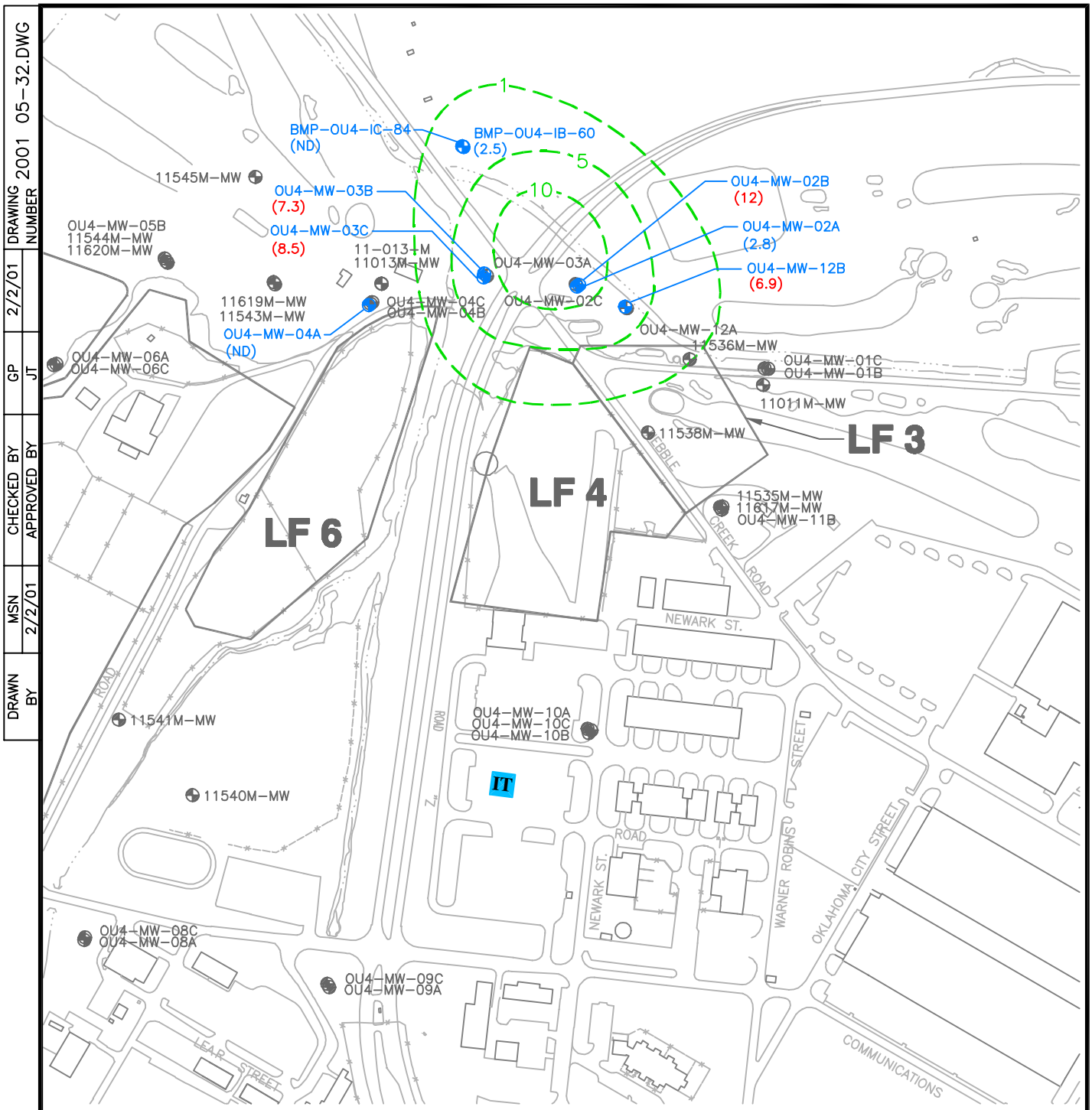
FIGURE 6-41

LONG-TERM MONITORING GRAPHS:
Chemicals of Primary Concern
Area: OU10 (CHP4)
WPAFB - LTM Program



n:\3\777097\LTM\Octobr00\Draft\Figures\LTM\Oct00Gra_OU8-10.xls\OU10(8)

FIGURE 6-42



0 100 200 300 400 800 FEET

N

LEGEND

- MONITORING WELLS WITH VOCs ANALYSIS
- IRP SITES (LOCATIONS APPROXIMATE)
- 15 — TCE CONCENTRATION ISOPLETH (ppb) (DASHED WHERE INFERRED)
- (2.6) TCE GROUNDWATER CONCENTRATIONS (ppb) [RED=>MCL]
- (ND) NOT DETECTED

Figure 7-1
OU4 TCE Groundwater Concentrations Isopleth Map: October 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN	CHECKED BY	GP	2/2/01	DRAWING NUMBER 2001 05-32.DWG
	2/2/01	APPROVED BY	JT		

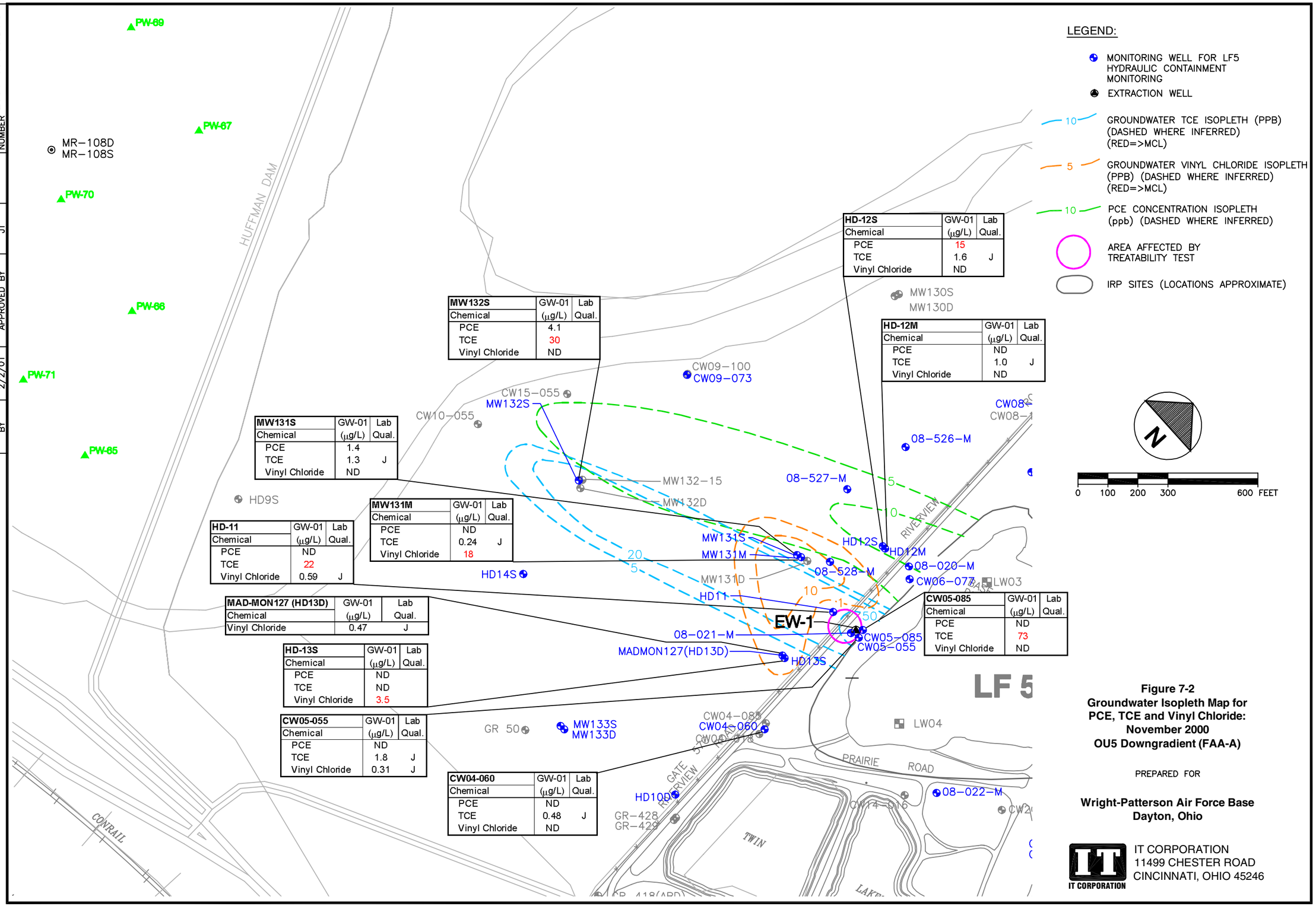


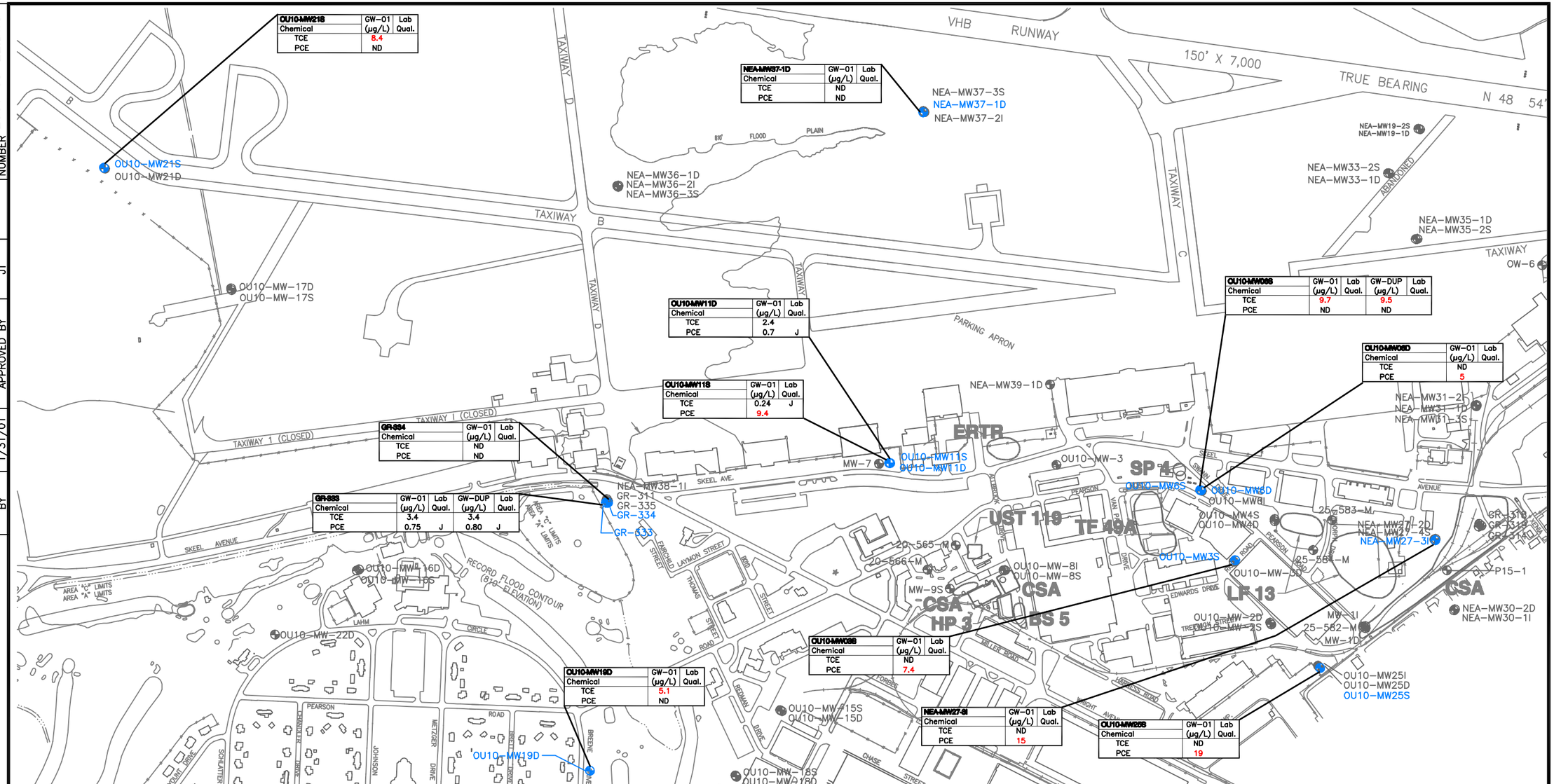
Figure 7-2
Groundwater Isopleth Map for PCE, TCE and Vinyl Chloride: November 2000
OU5 Downgradient (FAA-A)

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN 2/2/01	CHECKED BY / APPROVED BY	GP JT	2/26/01	DRAWING NUMBER 2001 05-33.DWG



OU10-MW21S	GW-01	Lab
Chemical	(µg/L)	Qual.
TCE	8.4	
PCE	ND	

NEA-MW37-1D	GW-01	Lab
Chemical	(µg/L)	Qual.
TCE	ND	
PCE	ND	

OU10-MW11D	GW-01	Lab
Chemical	(µg/L)	Qual.
TCE	2.4	
PCE	0.7	J

OU10-MW11S	GW-01	Lab
Chemical	(µg/L)	Qual.
TCE	0.24	J
PCE	9.4	

GR-334	GW-01	Lab
Chemical	(µg/L)	Qual.
TCE	ND	
PCE	ND	

GR-333	GW-01	Lab	GW-DUP	Lab
Chemical	(µg/L)	Qual.	(µg/L)	Qual.
TCE	3.4		3.4	
PCE	0.75	J	0.80	J

OU10-MW6S	GW-01	Lab	GW-DUP	Lab
Chemical	(µg/L)	Qual.	(µg/L)	Qual.
TCE	9.7		9.5	
PCE	ND		ND	

OU10-MW6D	GW-01	Lab
Chemical	(µg/L)	Qual.
TCE	ND	
PCE	5	

OU10-MW19D	GW-01	Lab
Chemical	(µg/L)	Qual.
TCE	5.1	
PCE	ND	

OU10-MW8S	GW-01	Lab
Chemical	(µg/L)	Qual.
TCE	ND	
PCE	7.4	

NEA-MW27-3I	GW-01	Lab
Chemical	(µg/L)	Qual.
TCE	ND	
PCE	15	

OU10-MW25S	GW-01	Lab
Chemical	(µg/L)	Qual.
TCE	ND	
PCE	19	

LEGEND

- MONITORING WELLS WITH VOCS ANALYSIS
- IRP SITES (LOCATIONS APPROXIMATE)
- 5 — TCE ISOPLETH (ppb) (DASHED WHERE INFERRED)
- 5 — PCE ISOPLETH (ppb) (DASHED WHERE INFERRED)
- (3.7) TCE GROUNDWATER CONCENTRATION (ppb) [RED=>MCL]
- (1.2) PCE GROUNDWATER CONCENTRATION (ppb) [RED=>MCL]
- (ND) NOT DETECTED

Figure 7-3

OU10 PCE and TCE Groundwater Isopleth Map: October 2000

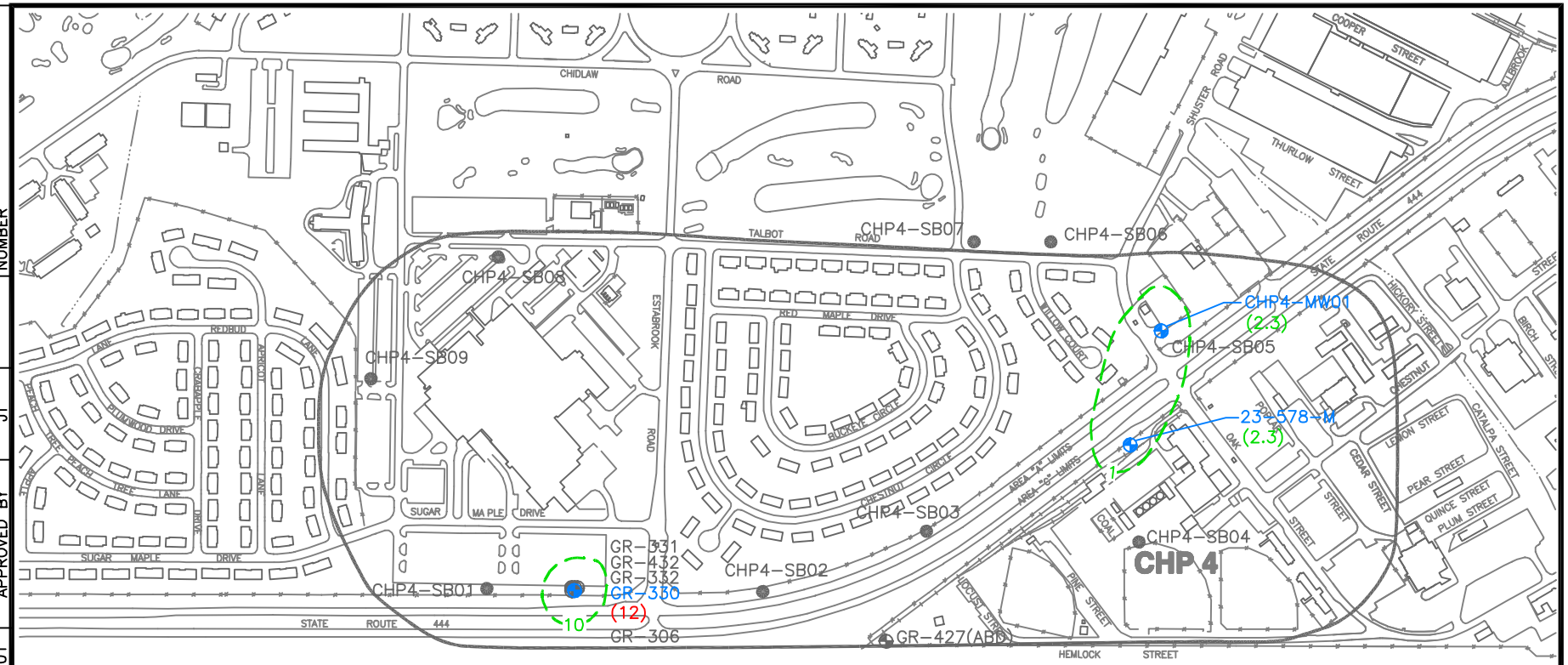
PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246

DRAWN BY	MSN	CHECKED BY	GP	DRAWING NUMBER
	1/31/01	APPROVED BY	JT	1/31/01

2001 05-22.DWG



N

0 200 400 600 1200 FEET

LEGEND

- MONITORING WELLS WITH VOCS ANALYSIS
- IRP SITES (LOCATIONS APPROXIMATE)
- (2.0) PCE GROUNDWATER CONCENTRATION (ppb)
- 10 PCE CONCENTRATION ISOPLETH (ppb) (DASHED WHERE INFERRED)

Figure 7-4

Central Heating Plant 4 / OU10
PCE Isopleth Maps:
October 2000

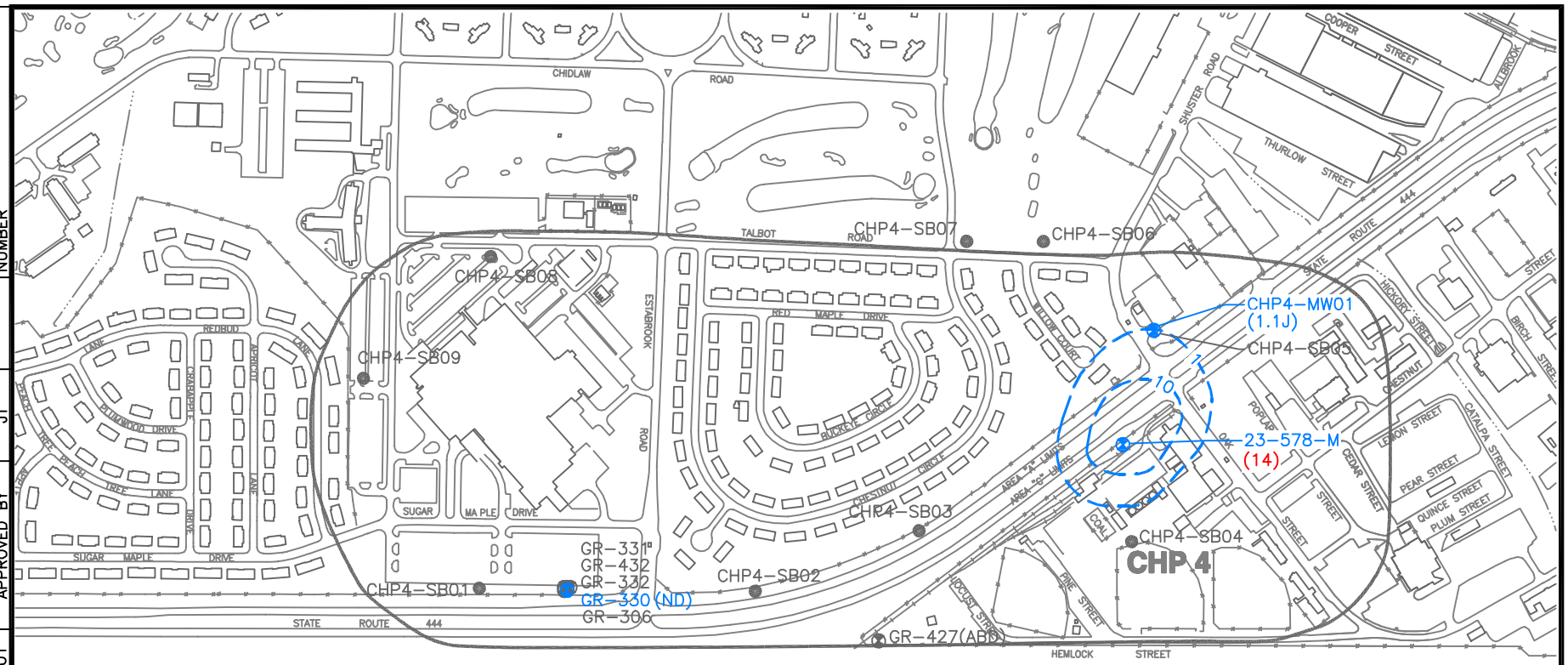
PREPARED FOR

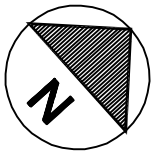
Wright-Patterson Air Force Base
Dayton, Ohio

INTERNATIONAL TECHNOLOGY CORPORATION

DRAWN BY	MSN	CHECKED BY	GP	2/3/01	DRAWING NUMBER 2001 05-35.DWG
	2/3/01	APPROVED BY	JT		

DRAWN BY	MSN	CHECKED BY	GP	2/3/01	DRAWING NUMBER 2001 05-36.DWG
	2/3/01	APPROVED BY	JT		





0 200 400 600 1200 FEET

LEGEND

- MONITORING WELLS WITH VOCS ANALYSIS
- IRP SITES (LOCATIONS APPROXIMATE)
- (2.0) TCE GROUNDWATER CONCENTRATION (ppb) [RED=>MCL]
- 10 TCE CONCENTRATION ISOPLETH (ppb) (DASHED WHERE INFERRED)

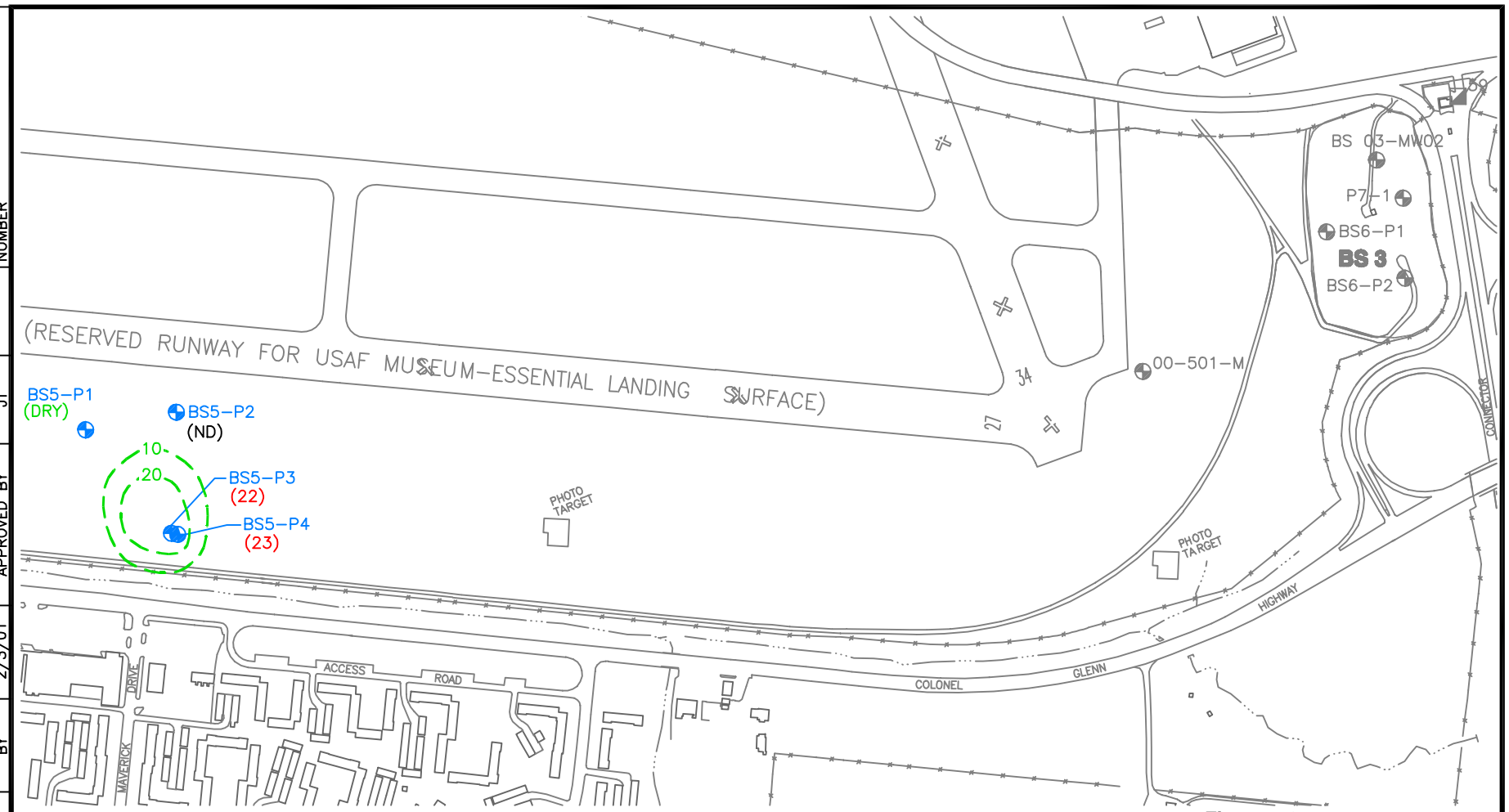
Figure 7-5

Central Heating Plant 4 / OU10
TCE Isopleth Maps:
October 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

IT CORPORATION
11499 CHESTER ROAD
CINCINNATI, OHIO 45246



LEGEND:

- EXISTING MONITORING WELLS WITH VOCs ANALYSIS
- (ND) NOT DETECTED
- (2.0) PCE GROUNDWATER CONCENTRATION (mg/L) (ppb) [RED=>MCL]
- 20 PCE CONCENTRATION ISOPLETH (mg/L) (ppb) (DASHED WHERE INFERRED)

N

0 100 200 300 400 500 1000 FEET

Figure 7-6

Burial Site 5
PCE Groundwater Concentration Isopleth Map:
October 2000

PREPARED FOR

Wright-Patterson Air Force Base
Dayton, Ohio

INTERNATIONAL TECHNOLOGY CORPORATION

DRAWN BY	MSN	CHECKED BY	GP	2/3/01	DRAWING NUMBER 2001 05-37.DWG
	2/3/01	APPROVED BY	JT		