Document Control No. _____

Environmental Restoration Program

EG&G MOUND-29-01-10-08--9703190002

OPERABLE UNIT 9

SURFACE WATER AND SEDIMENT INVESTIGATION REPORT

MOUND PLANT
MIAMISBURG, OHIO

September 1996

Technical Memorandum
(Revision 2)

U.S. Department of Energy
Ohio Field Office

Environmental Restoration Program
EG&G Mound Applied Technologies

MIAMISBURG
AREA OFFICE

Department of Energy

Ohio Field Office
Miamisburg Area Office
P.O. Box 66
Miamisburg, Ohio 45343-0066

30 September 1996

Mr. Tim Fischer
U.S. Environmental Protection Agency (USEPA)
HSRM-6J
77 W. Jackson Blvd.
Chicago, Illinois 60604

Mr. Brian Nickel
Ohio Environmental Protection Agency (OEPA)
401 E. Fifth Street
Dayton, Ohio 45402-2911

Dear Mr. Fischer and Mr. Nickel:

Enclosed please find the Operable Unit 9 (OU9) Surface Water and Sediment Investigation Report, Revision 1, Technical Memorandum. As we have previously discussed, this revision contains validated pesticide data, pesticide/PCB results, and adjustments to tritium numbers in response to prior discussions with Mr. Brian Nickel. If no comments are received within two weeks of receipt, the report will be considered final and placed into the public reading room.

If there are any questions, please contact me at (513) 865-3597 or Debbie White, Environmental Specialist at (513) 865-5197.

Sincerely,

Art Kleinrath

Arthur W. Kleinrath
Project Engineer Team Leader

cc w/enclosure:
Ray Beaumier, OEPA Columbus
Lisa Anderson, OEPA SWDO
Ruth Vandegrift, ODH
Regina Bayer, CH2M Hill
Doug Draper, HAZWRAP
John Sands, EM-453, HQ
Debbie White, MB

REVIEWER'S COMMENTS

EG&G MOUND APPLIED TECHNOLOGIES

DOCUMENT: SURFACE WATER AND SEDIMENT INVESTIGATION REPORT, MOUND PLANT, MIAMISBURG, OHIO

DATE/VERSION OF REPORT: _____

REVIEWER NAME: _____

DATE OF REVIEW: _____

AGENCY/ COMPANY: _____

CRITIQUE AREA	CIRCLE GRADE FROM 1 (LOWEST) TO 5 (HIGHEST)				
FULFILLMENT OF INTENDED PURPOSE	1	2	3	4	5
COMMENTS:					
CONSISTENCY WITH APPLICABLE STANDARDS	1	2	3	4	5
COMMENTS:					
TECHNICAL ACCURACY AND MERIT	1	2	3	4	5
COMMENTS:					
TRANSCRIPTION ACCURACY	1	2	3	4	5
COMMENTS:					
APPROPRIATE USE OF QUALIFYING LANGUAGE REGARDING ASSUMPTIONS AND LIMITATIONS	1	2	3	4	5
COMMENTS:					
CLARITY OF LANGUAGE AND EXHIBITS	1	2	3	4	5
COMMENTS:					
APPROPRIATENESS OF AND CONSISTENCY IN FORMAT	1	2	3	4	5
COMMENTS:					
SPELLING, PUNCTUATION, AND GRAMMAR	1	2	3	4	5
COMMENTS:					
AESTHETIC APPEAL	1	2	3	4	5
COMMENTS:					
OVERALL GRADE	1	2	3	4	5
COMMENTS:					

Operable Unit 9 Surface Water and Sediment Investigation Report

Mound Plant
Environmental Restoration Program

September 1996
Revision 2

Table of Contents

Section **Page**

Acknowledgments ix

Preface x

Abbreviations and Acronyms xii

1.0 Introduction 1-1

1.1 Background Information 1-1
1.2 Scope of Report 1-3

2.0 Methods 2-1

2.1 Field Program 2-1
2.1.1 Access Agreement and Initial Site Visit *2-1*
2.1.2 Reconnaissance Field Investigation *2-1*
2.1.3 First Sampling Event (Fall) *2-2*
2.1.4 Second Sampling Event (Spring) *2-2*
2.1.5 Sample Collection Methods *2-2*
2.2 Laboratory Program 2-3
2.2.1 Scientific Supervision *2-3*
2.2.2 Laboratory Analyses *2-4*
2.2.3 Data Validation *2-4*
2.2.4 Data Assessment *2-5*

3.0 Analytical Results 3-1

3.1 Background 3-3
3.1.1 Sample Locations *3-3*
3.1.2 Background Analytical Results *3-11*
3.1.3 Statistical Methods *3-11*
3.1.4 Application of Background *3-25*
3.1.5 Application of Risk-Based Guideline Values *3-26*
3.2 Central Valley System 3-26
3.2.1 Introduction *3-26*
3.2.2 Sample Locations *3-26*
3.2.2.1 Pond Surface Water 3-26
3.2.2.2 Stream Surface Water 3-27
3.2.2.3 Pond Sediment 3-27
3.2.2.4 Stream Sediment 3-27
3.2.2.5 Subsurface Soils 3-27
3.2.3 Field Program Changes *3-31*
3.2.4 Discussion of Analytical Results *3-31*
3.2.4.1 Pond Surface Water 3-31
3.2.4.2 Stream Surface Water 3-31
3.2.4.3 Pond Sediment 3-32
3.2.4.4 Stream Sediments (Plant Drainage Ditch) 3-36
3.2.4.5 Subsurface Soil 3-38
3.3 Miami-Erie Canal, Overflow Creek, and NPDES Outfall 002 3-40
3.3.1 Introduction *3-40*

Section **Page**

3.3.2 Sample Locations *3-40*
3.3.2.1 Surface Water 3-40
3.3.2.2 Sediment 3-40
3.3.2.3 Subsurface Soil 3-40
3.3.3 Field Program Changes *3-43*
3.3.4 Discussion of Analytical Results *3-43*
3.3.4.1 Surface Water 3-43
3.3.4.2 Sediments 3-43
3.3.4.3 Subsurface Soil 3-45
3.4 Zone of Influence 3-48
3.4.1 Introduction *3-48*
3.4.2 Sample Locations *3-48*
3.4.3 Field Program Changes *3-49*
3.4.4 Discussion of Analytical Results *3-53*
3.4.4.1 Pond Surface Water 3-53
3.4.4.2 Stream Surface Water 3-53
3.4.4.3 Pond Sediment 3-53
3.4.4.4 Stream Sediment 3-53
3.5 Area Watersheds and Drainages 3-54
3.5.1 Introduction *3-54*
3.5.2 Sample Locations *3-54*
3.5.3 Field Program Changes *3-66*
3.5.4 Discussion of Analytical Results *3-66*
3.5.4.1 Surface Water 3-66
3.5.4.2 Sediment 3-66
3.6 The Great Miami River 3-67
3.6.1 River Sample Locations *3-67*
3.6.2 Discussion of Results *3-72*
3.6.3 NPDES Outfall 001 ..... *3-73*
3.7 New Property 3-73
3.7.1 Introduction *3-73*

4.0 Conclusions 4-1

4.1 Analytical Results 4-1
4.2 Risk-Based Guideline Values 4-1
4.3 Changes to Program Sampling Plans 4-2
4.4 Laboratory Program 4-3

5.0 References 5-1

List of Tables

Table No.		Page
1.1	OU9 Data Reports	1-2
3.1.1	Background Pond Sediment Parameters and Background Values	3-14
3.1.2	Background Pond Surface Water Parameters and Background Values	3-17
3.1.3	Background Stream Sediments Parameters and Background Values	3-20
3.1.4	Background Stream Surface Water Parameters and Background Values	3-22
3.1.5	Comparison with Risk-Based Guideline Values (pCi/g)	3-26
3.2.1	Summary of Pond Sediment Results Above Risk-Based Guideline Values	3-32
3.2.2	Pond Sediment Results Above Risk-Based Guideline Values by Area	3-33
3.2.3	Summary of Plant Drainage Ditch Sediment Results Above Risk-Based Guideline Values	3-36
3.2.4	Plant Drainage Ditch Sediment Results Above Risk-Based Guideline Values	3-37
3.2.5	Plant Drainage Ditch Subsurface Soil Results Above Risk-Based Guideline Values	3-39
3.3.1	Stream Sediment Results Above Risk-Based Guideline Values	3-44
3.3.2	Summary of Plutonium^{238} Sediment Concentrations	3-45
3.3.3	Subsurface Soil Results Above Risk-Based Guideline Values	3-47
3.6.1	Great Miami River Flow (Discharge) Data	3-72

List of Figures

Figure No. **Page**

3.1.1 Background Surface Water and Sediment Sampling Locations 3-4
3.1.2 Game Preserve Pond 3-5
3.1.3 Peterson Pond 3-6
3.1.4 Eaton Pond and Stream 3-7
3.1.5 Turkey Run Stream at Mill Road 3-8
3.1.6 Turkey Run Stream at State Route 380 3-9
3.1.7 Turkey Run Stream at Hackney Road 3-10
3.1.8 Background Statistics Data Analysis Logic 3-13
3.2.1 Asphalt Lined Pond 3-28
3.2.2 Retention Basin and Overflow Pond 3-29
3.2.3 Drainage Ditch 3-30
3.3.1 Miami-Erie Canal and NPDES Outfall 002 3-41
3.3.2 Miami-Erie Canal (Southern Section) and Overflow Creek 3-42
3.4.1 Union Road Pond and Stream 3-50
3.4.2 Sycamore Park Pond and Stream 3-51
3.4.3 Miamisburg Community Park South Pond 3-52
3.5.1 Area Watersheds and Drainages 3-55
3.5.2 Drainage A 3-56
3.5.3 Drainage B 3-57
3.5.4 Drainage C 3-59
3.5.5 Drainage D 3-60
3.5.6 Drainage E 3-61
3.5.7 Drainage F 3-62
3.5.8 Drainage G 3-63
3.5.9 Drainage H 3-64
3.5.10 Linden Road Pond 3-65
3.6.1 Great Miami River at Riprap Road 3-68
3.6.2 Great Miami River, USGS Gauging Station at Miamisburg 3-69
3.6.3 Great Miami River at Hutchings Power Plant 3-70
3.6.4 Great Miami River at Chautaugua Weir 3-71
3.7.1 New Property/Low Lying Area 3-75

List of Appendices

Appendix No. **Page**

A. Data Tables—Data Qualifiers—Definitions A-1
A.1 Computation of Background A.1-1
A.2 Central Valley System A.2-1
A.3 Miami-Erie Canal A.3-1
A.4 Zone of Influence A.4-1
A.5 Area Watersheds and Drainages A.5-1
A.6 Great Miami River Data A.6-1
A.7 New Property A.7-1

B. Quality Assurance
B.1 Quality Assurance Program B.1-1
B.1.1 Introduction B.1-1
B.1.2 Project Organization and Responsibility B.1-1
B.1.3 QA Objectives in Terms of Accuracy, Precision, Completeness, Representativeness & Comparability B.1-1
B.1.3.1 Accuracy B.1-1
B.1.3.1.1 PE Samples B.1-2
B.1.3.1.2 Matrix Spike Treads B.1-10
B.1.3.2 Precision B.1-29
B.1.3.3 Completeness B.1-32
B.1.3.4 Representativeness B.1-35
B.1.3.5 Comparability B.1-35
B.1.4 Sampling Procedures B.1-46
B.1.5 Sample Chain-of Custody Procedures B.1-46
B.1.6 Analytical Procedures B.1-46
B.1.7 Calibration Procedures B.1-47
B.1.8 Internal Quality Control Checks B.1-47
B.1.9 Data Reduction, Validation, and Reporting B.1-47
B.1.10 Performance and System Audits B.1-47
B.1.11 Preventive Maintenance B.1-48
B.1.12 Routine Procedures for Assessing Data Quality B.1-48
B.1.13 Corrective Actions B.1-48
B.1.14 Quality Assurance Reports to Management B.1-48
B.2 Data Quality Assessment: Fall B.2-1
B.2.1 Volatiles B.2-2
B.2.1.1 Water Samples B.2-2
B.2.1.2 Soil/Sediment Samples B.2-4
B.2.2 Semivolatiles B.2-7
B.2.2.1 Water Samples B.2-7
B.2.2.2 Soil/Sediment Samples B.2-9
B.2.3 Pesticides/PCBs B.2-12
B.2.3.1 Water Samples B.2-12
B.2.3.2 Soil/Sediment Samples B.2-15
B.2.4 Inorganic Analyses (Metals & Cyanide) B.2-19
B.2.4.1 Unfiltered Water Samples B.2-20
B.2.4.2 Filtered Water Samples B.2-21
B.2.4.3 Soil/Sediment Samples B.2-23

Appendix No. **Page**

B.2.5 Explosives B.2-26
B.2.5.1 Water Samples B.2-26
B.2.5.2 Soil/Sediment Samples B.2-28
B.2.6 General Chemistry (Anions and Miscellaneous Tests) B.2-28
B.2.6.1 Water Samples B.2-28
B.2.6.2 Soil/Sediment Samples B.2-30
B.2.7 Radiological Analyses B.2-31
B.2.7.1 Water Samples B.2-31
B.2.7.2 Soil/Sediment Samples B.2-33
B.3 Summary of Validation Qualifiers: Fall B.3-1
B.3.1 Summary of Appendix Purpose B.3-1
B.3.2 Description of Appendix Use B.3-1
B.4 Data Quality Assessment: Spring B.4-1
B.4.1 Volatiles B.4-2
B.4.1.1 Water Samples B.4-2
B.4.1.2 Soil/Sediment Samples B.4-4
B.4.2 Semi-Volatiles B.4-6
B.4.2.1 Water Samples B.4-6
B.4.2.2 Soil/Sediment Samples B.4-8
B.4.3 Pesticides/PCBs B.4-11
B.4.3.1 Water Samples B.4-11
B.4.3.2 Soil/Sediment Samples B.4-14
B.4.4 Inorganic Analyses (Metals & Cyanide) B.4-17
B.4.4.1 Unfiltered Water Samples B.4-18
B.4.4.2 Filtered Water Samples B.4-19
B.4.4.3 Soil/Sediment Samples B.4-21
B.4.5 Explosives B.4-24
B.4.5.1 Water Samples B.4-24
B.4.5.2 Soil/Sediment Samples B.4-25
B.4.6 General Chemistry (Anions and Miscellaneous Tests) B.4-26
B.4.6.1 Water Samples B.4-26
B.4.6.2 Soil/Sediment Samples B.4-29
B.4.7 Radiological Analyses B.4-30
B.4.7.1 Water Samples B.4-30
B.4.7.2 Soil Samples B.4-31
B.5 Summary of Validation Qualifiers: Spring B.5-1
B.5.1 Summary of Appendix Purpose B.5-1
B.5.2 Description of Appendix Use B.5-1
B.6 Assessment Qualification Summary B.6-1
B.6.1 Summary of Appendix Purpose B.6-1

C. Field Measurements and Geotechnical Data
C.1 Field Measurements C.1-1
C.2 Geotechnical Data C.2-1

D. Statistical Methods
D.1 Procedural Summary for Statistical Analysis of Surface Water and Sediment Investigation Data D.1-1
D.2 Data Treatment and Equations D.2-1

Data Supplement

VOLUME I

A. Surface Water Quality Sampling Forms
A.1 Fall 1994
A.2 Spring 1995

B. Sediment Deposition Forms
B.1 Fall 1994
B.2 Spring 1995

C. Sediment Headspace PID Reading Forms
C.1 Fall 1994
C.2 Spring 1995

D. Mound Plant Radioisotope Screening Results
D.1 Fall 1994
D.2 Spring 1995

E. Surface Water Flow Rate Measurement Forms
E.1 Fall 1994
E.2 Spring 1995

F. Field Logbooks
F.1 Logbook No. 410
F.2 Logbook No. 411
F.3 Logbook No. 412
F.4 Logbook No. 416
F.5 Logbook No. 417
F.6 Logbook No. 418
F.7 Logbook No. 419
F.8 Logbook No. 420
F.9 Logbook No. 421
F.10 Logbook No. 444

VOLUME II

G. Chains of Custody
G.1 Fall 1994 - Quanterra, Richland
G.2 Fall 1994 - Quanterra, Rocky Mountain
G.3 Fall 1994 - CompuChem
G.4 Spring 1995 - Quanterra, Richland
G.5 Spring 1995 - Quanterra, Rocky Mountain
G.6 Spring 1995 - CompuChem

H. Statistical Output Tables
H.1 Background (presented in Appendix A.1)
H.2 Central Valley System
H.3 Miami-Erie Canal, Overflow Creek, NPDES Outfall 002
H.4 Zone of Influence
H.5 Area Watersheds and Drainages
H.6 Great Miami River

Section

I. Corrective Action Reports (CARs) and Investigation-Specific Plan Change Notifications (ISPCNs)
I.1 CARs
I.2 ISPCNs

J. Data Results
J.1 Stored on MEIMS database at the Mound Plant ER Program Office

K. Raw Laboratory Data and Data Validation Reports
K.1 Delivered Separately - stored at the Mound Plant ER Program Office

Acknowledgments

This work was accomplished under the direction of Mr. Arthur Kleinrath of the U.S. Department of Energy (DOE). Mr. Kleinrath is the Remedial Project Manager for the Environmental Restoration Program at the Mound Plant.

The Surface Water and Sediment Investigation Team (the Team) consisted of personnel from the DOE Miamisburg Area Office; EG&G Mound Applied Technologies; Roy F. Weston, Inc.; Terran Corp.; CompuChem Environmental Corp.; and Quantalex.

Team personnel were:

James N. Rigano, EG&G	Operable Unit 9 Manager
Dennis Gault, EG&G	Field Engineer
Kevin W.H. Bate, WESTON	Principal Investigator
Craig A. Stoll, WESTON	Chemistry Task Manager
William M. Little, WESTON	Senior Technical Manager
C. William Criswell, WESTON	Senior Technical Reviewer

Preface

The U.S. Department of Energy (DOE), Miamisburg Area Office, oversees the operation of the Mound Plant in Miamisburg, Ohio. The plant, which started operation in 1949, is operated by EG&G Mound Applied Technologies. The facility supports the DOE weapons and energy programs by performing research, development, and production. However, production operations are being consolidated at other DOE sites, and the Department ultimately intends to sell or lease the facilities to private companies.

On 21 November 1989, the U.S. Environmental Protection Agency (EPA) placed the Mound Plant on the National Priorities List due to historic disposal practices and releases of chemicals to the environment. The National Priorities List identifies sites to be examined under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, also known as Superfund). DOE signed a CERCLA Section 120 Federal Facility Agreement with the EPA and later with the Ohio EPA. The agreement requires that DOE investigate the magnitude of chemical releases and take appropriate remedial actions. DOE assigned these duties to the Environmental Restoration (ER) Program.

The ER Program's responsibilities historically were divided among six operable units. Operable Unit 1 involved investigation and remediation of the historic Site Sanitary Landfill. Operable Unit 2 included investigation and remediation of environmental problems on the Main Hill at the Mound Plant. Operable Unit 4 included addressing releases of plutonium to the Miami-Erie Canal adjacent to the plant. Examining and remediating the South Property was assigned to Operable Unit 5. Operable Unit 6 consisted of overseeing the Decontamination and Decommissioning Program, and Operable Unit 9 involved investigating the possibility of chemical release beyond the plant boundary and items of common interest among all operable units. The ER Program eliminated Operable Units 3, 7, and 8 by reassigning those responsibilities to the other operable units.

Currently, the ER Program's responsibilities are divided into three operable units:

- Operable Unit 1 – remains as before with focus on the historic Site Sanitary Landfill.

- Onsite Areas – this unit includes most work activities inside the Mound Plant fenceline. These work activities include the evaluation, remediation, and verification activities in areas that were previously under separate CERCLA and Decontamination and Decommissioning programs (Operable Units 2, 5, and 6).

- Offsite Areas – this unit addresses the remediation of the plutonium contaminated soils and sediment in the Miami-Erie Canal. The area is located adjacent to the Mound Plant and within the City of Miamisburg. The contamination was caused by a ruptured waste process line in 1969. In addition, the offsite area includes the remaining investigations for Operable Unit 9. This will address the effects of any contamination attributable to Mound that may be found in the air, groundwater, soils, surface water, and sediments within a twenty (20) mile radius of the plant.

The ER Program conducted this Surface Water and Sediment Investigation under Operable Unit 9. The investigation was designed jointly by the Department of Energy and its contractors, U.S. EPA, and Ohio EPA. The investigation included streams, ponds, and drainages located both on and off Mound Plant property. This report presents the investigation findings.

Abbreviations and Acronyms

bgs	below ground surface
BVA	Buried Valley Aquifer
CCC	continuing calibration checks
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CLP	Contract Laboratory Program
CRDL	contract-required detection limit
CRQL	contract-required quantitation limit
DCB	dichlorobenzene decachlorobiphenyl
DCG	derived concentration guide
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
ER	Environmental Restoration (Program)
FIDLER	field instrument for the detection of low-energy radiation
GC	gas chromatograph
GFAA	graphite furnace atomic absorption
ICP	inductively coupled plasma
ICS	interference check sample
mg/kg	milligrams per kilogram
µg/kg	micrograms per kilogram
mg/L	milligrams per liter
µg/L	micrograms per liter
MCL	maximum contaminant level
MDA	minimum detectable activity
MS	mass spectrometry
NPDES	National Pollutant Discharge Elimination System
OU	operable unit
PCB	polychlorinated biphenyl
pCi/g	picocuries per gram
pCi/L	picocuries per liter
PE	performance evaluation
PETN	pentaerythritol tetranitrate (explosive)
PID	photoionization detector
PQL	practical quantitation limit
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
QCC	quality control check
RCRA	Resource Conservation and Recovery Act
RPD	relative percent difference
RSD	relative standard deviation
SOP	standard operating procedure
SVOC	semivolatile organic compound
TCMX	tetrachloro-m-xylene
TDS	total dissolved solids
TOC	total organic carbon
TSS	total suspended solids
USATHAMA	U.S. Army Toxic and Hazardous Materials Agency
VOC	volatile organic compound

SECTION 1

1.0 Introduction

As a part of the Operable Unit (OU) 9 (Site-wide) Remedial Investigation, field studies addressed the chemistry of the surface water and sediment on the Mound Plant Site.

As a part of the Operable Unit (OU) 9 (Site-wide) Remedial Investigation, field studies addressed the chemistry of the surface water and sediment on the Mound Plant Site. These studies included the nature and extent of surface water and sediment contamination outside the plant boundary. The investigation had two main purposes:

1. To define the surface water and sediment regimes within all watersheds on the Mound Site.

2. To define the nature and extent of associated site contamination that has the potential to move offsite.

Specifically, the objectives of the Surface Water and Sediment investigation were to:

1. Identify drainages originating on the Mound Plant site and near the site and sample surface water and sediment from these drainages.

2. Sample surface water and sediment for representative drainages within the zone of influence of Mound Plant air emissions.

3. Sample surface water and sediment for representative drainages outside the zone of influence of Mound Plant air emissions (i.e., background locations).

The field team collected samples during a comprehensive, two-season (Fall and Spring sampling effort. The purpose of this document is to report the data from this investigation.

The field team collected samples during a comprehensive, two-season (Fall and Spring) sampling effort. Fall sampling occurred from 4 September 1994 to 19 December 1994, and Spring sampling occurred from 17 April 1995 to 23 June 1995. The seasonal events provided a set of samples from a wet season (Spring) and another from a dry season (Fall) to give some indication of natural environmental variability. The purpose of this document is to report the data from this investigation.

1.1 Background Information

Background *is a description of the surface water and sediment quality outside the influence of Mound Plant.*

Because of the extensive scope of the OU9 investigations, the work was divided into phases. This *Surface Water and Sediment Investigation Report* is one of several documents that describe the OU9 investigations. Companion reports that provide additional analytical data from these investigations are presented in Table 1.1.

Table 1.1—OU9 Data Reports

Document Title	Information Relevant to This Investigation
DOE 1993b *Operable Unit 9, Seismic Refraction Survey Report*, September 1994 U.S. Department of Energy, Albuquerque Operations Office, Albuquerque, New Mexico. July 1993	Provided analytical data to identify bedrock geology for areas sampled in this program.
DOE 1994a. *Operable Unit 9, Hydrogeologic Investigation: Soil Chemistry Report*. September 1994.	Analytical data from prior onsite drilling and sampling program.
DOE 1994b. *Operable Unit 9, Ecological Characterization Report*. March 1994	Identified a portion of the sites for sampling in this program.
DOE 1994c. *Operable Unit 9, Background Soils Investigation: Soil Chemistry Report*. April 1994	Established background quality for named soils in the vicinity of Mound Plant.
DOE 1994d. *Operable Unit 9, Hydrogeologic Investigation: Buried Valley Aquifer Report*. U.S. Department of Energy, Albuquerque Operations Office, Albuquerque, New Mexico. September 1994.	Established characteristics of the geology and groundwater system for areas sampled in this program.
DOE 1995a. *Operable Unit 9, Hydrogeologic Investigation: Groundwater Sweeps Report*. April 1995.	Established background and local groundwater quality.
DOE 1995b. *Operable Unit 9, Regional Soils Report*. August 1995.	Provided additional analytical data from sites in the vicinity of Mound Plant. Established the zone of airborne influence of the Plant.
DOE 1995d *Operable Unit 9, Residential, Municipal, and Industrial Well Investigation Report*. U.S. Department of Energy, Miamisburg Area, Miamisburg, Ohio. September 1995.	Established water quality for local drinking water supplies.

The sampling and analysis program was carried out in accordance with the *OU9 Site-Wide RI/FS Work Plan* (DOE 1992a), which was designed jointly by DOE and its contractors, EPA, and Ohio EPA. The field team collected surface water and sediment samples from seven types of locations:

1. River, stream, and pond locations outside the area affected by plant emissions

2. The main Plant Drainage Ditch and associated sediment settling basins and ponds (storm water retention and discharge system) and National Pollutant Discharge Elimination System (NPDES) outfalls

3. The south part of the Miami-Erie Canal and the overflow ditch to the Great Miami River

4. Local and regional ponds, including seeps and streams affected by plant emissions

5. Watersheds originating and emerging from the Mound Plant

6. The Great Miami River above and below the plant

7. The new property

Complete descriptions of these sampling environments are provided in the Operable Unit 9, Site-Wide Work Plan *(DOE 1992a) and companion reports.*

Complete descriptions of these sampling environments are provided in the *Operable Unit 9, Site-Wide Work Plan* (DOE 1992a) and companion reports. The Site-Wide Work Plan (DOE 1992a) provides the background for the field studies as a whole, including the work plan rationale. The *OU9 Site-Wide Field Sampling Plan* (DOE 1992b) provides detailed instructions for location and methods of sample collection. The *OU9 Quality Assurance Project Plan* (QAPP) (DOE 1993a) provides guidance to ensure that the data obtained are of known quality and reliability.

The Surface Water and Sediment Investigation Team (the Team) consisted of personnel from the following organizations:

- U.S. Department of Energy Miamisburg Area Office (policy guidance)
- EG&G Mound Applied Technologies (program management and technical assistance)
- Roy F. Weston, Inc. (project management, field sampling, laboratory liaison, data management and reporting)
- Terran Corp. (field sampling)
- Quanterra
- CompuChem (chemical and radiological analyses)
- Quantalex (data validation)

1.2 Scope of Report

In accordance with the Site-Wide Work Plan (DOE 1992a), the Team developed this technical memorandum as part of the OU9 remedial investigations. The objectives of this report are to:

1. Document sample locations.

2. Tabulate background water and sediment chemistry results.

3. Tabulate results by area investigated.

4. Identify results that exceed background concentrations and Risk-Based Guideline Values.

This report describes the methodologies and results of work conducted. The report includes this introductory section, plus the information discussed in the following paragraphs.

Section 2, Methods, summarizes the field program and the laboratory program. The field program section references the appropriate planning documents, describes any deviations from the procedures for the sampling events, and provides maps of sample locations. The laboratory program section references appropriate planning documents, describes the results of the quality assurance and data assessment activities, and summarizes the data assessment.

Analytes *are elements or compounds that are the target of analysis.*

Section 3, Analytical Results, presents a determination of background quality, followed by an area-by-area discussion of analytical results above background. Results are compared to the *Risk-Based Guideline Values, Mound Plant, Miamisburg, Ohio (Final, Revision 3)* (HAZWRAP 1995). This section identifies specific areas of contamination and discusses the validity of the analytical data. This section also identifies background locations and concentrations.

Section 4, Conclusions, evaluates whether the analytical data obtained from the Fall 1994 and Spring 1995 sampling events provide a complete quality baseline and indicate any exceptions to this baseline.

The Appendices contain data tables (Appendix A), a discussion of the quality assurance program (Appendix B), field data (Appendix C) and a discussion of the statistical program (Appendix D).

A **Data Supplement** volume (available at Mound Plant - contact the CERCLA Community Relations office) contains all notebooks, field logs, chains of custody, and tabulated analytical results.

SECTION 2

2.0 Methods

The surface water and sediment investigation included the following:

- Sampling of surface waters and sediments from all drainages originating within the plant.
- Sampling ponds and streams within the zone of influence of Mound Plant air emissions.
- Sampling from background locations outside the zone of influence of Mound Plant air emissions.

The Team conducted field sampling activities in accordance with the requirements specified in the Site-Wide Work Plan (DOE 1992a), the Field Sampling Plan (DOE 1992b), and the QAPP (DOE 1993a). The following sections summarize the field methods and the laboratory program.

2.1 Field Program

The Team performed four separate investigation activities–the initial site visit, a reconnaissance field investigation, the first sampling event, and the second sampling event. The following subsections summarize these activities and the sample collection methods employed.

2.1.1 Access Agreement and Initial Site Visit

*An **Access Agreement** is formal, written permission to enter a property for sampling.*

Team representatives contacted each property owner for each sample location located outside Mound Plant boundaries. Property owners were contacted in writing (and in some cases by telephone) to obtain site access agreements and were provided with a summary of the sampling procedures and an approximate sample collection date. A Team representative visited each proposed sample location to confirm access and to sketch the site. The access agreement and initial site visit task occurred between March and October 1994.

2.1.2 Reconnaissance Field Investigation

*The **Reconnaissance Field Investigation** identified and described the ponds and drainages on and near Mound Plant.*

The reconnaissance field investigation was conducted during August and September 1994. The investigation identified the location of potential drainages, ponds, and/or seeps in each watershed using a detailed two foot contour interval topographic map. The investigation studied areas on the Mound property and within a one mile radius of the Mound Plant. The information collected during the reconnaissance investigation was used to select drainages and ponds for sampling.

The investigation was conducted in accordance with the Field Sampling Plan (DOE 1992b), except that the following items were deferred to the actual sampling event:

- Potential areas of volatile or radioactive contamination, using a photoionization detector (PID) or a field instrument for the detection of low-energy radiation (FIDLER).

- The average thickness of transported sediment deposits and the occurrence of stratification within a particular deposit.

2.1.3 First Sampling Event (Fall)

The Team collected surface water and sediment samples during the first (Fall) sampling event from 4 September to 19 December 1994.

The Team collected surface water and sediment samples during the first (Fall) sampling event from 4 September to 19 December 1994. Sixty-nine surface water locations and 136 sediment locations were sampled.

2.1.4 Second Sampling Event (Spring)

The Team collected surface water and sediment samples during the second (Spring) sampling event from 17 April to 23 June 1995.

The Team collected surface water and sediment samples during the second (Spring) sampling event from 17 April to 23 June 1995. Eighty surface water locations and 118 sediment locations were sampled during the Spring event.

2.1.5 Sample Collection Methods

Surface water and sediment samples were collected in accordance with the Field Sampling Plan (DOE 1992b) and ER Program Standard Operating Procedures (ER Program SOPs). Surface water samples were collected using a Kemmerer sampler. When water levels were too low, a clean laboratory sample jar was used. Sediment samples were collected using a hand auger, stainless steel scoop, or a dredge sampler. Sediment samples were collected from an approximate depth interval of 0 to 6 inches. Subsurface soil samples were collected from an approximate depth interval of 0.5 to 2.0 feet.

Sample collection activities during the Fall and Spring sampling events occasionally deviated from program procedures.

Sample collection activities during the Fall and Spring sampling events occasionally deviated from program procedures. The deviations are documented as Corrective Action Reports, which are included in the Data Supplement. A summary of deviations from program document specifications for each watershed, along with an explanation of each deviation, is presented in Appendix B. The deviations are primarily due to two causes:

- The relocation of sample areas to accommodate technical objectives.
- The lack of surface water or sediment media to be sampled (e.g., dry conditions or sediment washed out).

No adverse effects on data quality resulted from the deviations.

No adverse effects on data quality resulted from the deviations, because these changes or deviations were generally caused by changes in environmental conditions and not within the control of the sample team.

In accordance with the ER Program SOPs, field parameters were measured during sample collection activities. Each surface water sample was measured for temperature, pH, specific conductance, dissolved oxygen, redox potential, and alkalinity. Data Supplemental A presents tables of Fall and Spring field parameter measurements. Data Supplemental C presents field parameter log sheets.

The field team collected the surface water and sediment samples from each of the sample locations in accordance with the ER Program SOPs. Both analytical laboratories provided sample containers. All containers were cleaned and certified as clean by the manufacturer, according to EPA standards. The manufacturer's

statement of certification and analytical results accompanied each sample container lot.

The field team used two numbering systems to identify the samples. One of the numbering systems followed the QAPP (DOE 1993a) naming specification of MNDXX-YYYY-ZZZZ. MNDXX indicates the area identifier (e.g., MND22 is used to indicate a sediment). The next portion of the identifier, YYYY, designates the specific sample location. The last four digits, ZZZZ, serve to identify whether the sample is a field quality control sample and to assign a unique numerical identification to multiple samples which are collected from the same location. The QAPP (DOE 1993a) identifications were recorded next to the corresponding EG&G numeric sample IDs, and then entered into the database as a secondary sample ID.

The other numbering system was requested by EG&G per Investigation Specific Plan Change Notice (ISPCN) #013. The numbering system consists of nine digits. This numbering system was used on both the sample bottles and the chain of custody forms.

The EG&G numbering system was implemented as part of the development and use of a site specific database. The first three digits of the nine digit number are assigned by EG&G to designate the Operable Unit and the vendor (WESTON). The remaining six digits are simply sequentially assigned to samples.

The Team handled, packaged, and shipped the surface water and sediment samples according to the Environmental Restoration Standard Operating Procedures, the applicable Health and Safety Plans, and the International Air Transportation Association (IATA) regulations.

***Completeness** describes, as a percentage, whether enough data was collected to meet the program requirements. The program requirements for completeness were specified in the QAPP (DOE 1993a).*

The QAPP (DOE 1993a) sampling completeness goals require 90% of the planned samples to be collected. Appendix B.1 provides a detailed breakdown of the completeness of the sampling program. The sampling completeness goal was met for all types of analyses, except explosives. Because of an incorrect interpretation of the Work Plan, the field team did not meet the sampling frequency for explosives. Based on the absence of explosive analytes in other OU9 investigations, the missing data will not impact the value of the surface water and sediment investigation.

Additionally, the QAPP (DOE 1993a) specifies that all planned background samples must be collected, 100 percent. The QAPP (DOE 1993a) objective for background samples was met.

2.2 Laboratory Program

The chemistry program included scientific supervision, laboratory analyses, data validation, and data assessment.

The chemistry program included scientific supervision, laboratory analyses, data validation, and data assessment in accordance with the OU9 QAPP (DOE 1993a). Appendix B.1 discusses adherence to the quality assurance program and indicates any deviations. Appendices B.2 and B.4 provide a detailed summary of the data assessment. The following subsections summarize the information in Appendix B.

2.2.1 Scientific Supervision

Scientific supervision includes contracting approved laboratories, organizing sampling activities with the laboratories, supervising how the laboratories

performed, and checking and judging data. Two laboratories analyzed samples during the surface water and sediment investigation. Each laboratory demonstrated that it met the requirements of the QAPP (DOE 1993a).

CompuChem and Quanterra analyzed the samples. Quantalex, Inc., validated the data.

CompuChem Environmental Corporation performed the chemical analyses for both the Fall and Spring samples. Quanterra –Richland performed radiochemical analyses. Quantalex, Inc., performed data validation, which entailed making sure the laboratory followed required procedures and looking for data that might be of lesser quality or inaccurate. The scientists assigned by Quantalex to validate the data followed the requirements of the QAPP (DOE 1993a).

As specified in the QAPP (DOE 1993a), the laboratories were judged on how well they performed. This is based on information provided in their daily reports and in onsite audits, and by evaluating the laboratory on certain test samples.

2.2.2 Laboratory Analyses

The laboratories generally met the QAPP (DOE 1993a requirements.

The laboratories generally met the QAPP (DOE 1993a) requirements. However, there were deviations from the QAPP (DOE 1993a) requirements during the investigation: (1) plan changes, and (2) QC checks (QCCs) not meeting program requirements. The Team made plan changes because a QAPP (DOE 1993a) requirement was incomplete or too exact. For example, the QAPP (DOE 1993a) surrogate for explosives analysis could not be obtained by the laboratories. A surrogate is a non-target chemical added to a sample to help find out how much of a target chemical is recovered during the analysis. The amount of non-target chemical put in the sample helps to confirm how much of the target chemical is in the sample. The Team made a plan change to record the use of a different surrogate with the method. Appendix B.1 describes the plan changes.

The QCC problems found by the validators are reported in Appendix B.3 and B.5. The impact of these QCC problems on the data is described in Appendix B.2 and B.4.

Because QCCs did not meet program requirements, the data had to be labeled as perhaps not quite accurate and sometimes not usable. The QCC problems found by the validators are reported in Appendix B.3 and B.5. The impact of these QCC problems on the data is described in Appendix B.2 and B.4.

2.2.3 Data Validation

The Team performed data validation in accordance with the requirements of the QAPP (DOE 1993a). The data was validated to identify inaccurate or lesser quality data.

Many QAPP (DOE 1993a) validation guidelines had not been written or tested before. Thus, the Team identified several problems with the QAPP (DOE 1993a) during the Fall data validation. The problems ranged from application of improper standards resulting in the false rejection of usable data to the leaving out of worksheets for data validation. The Team corrected these problems through a combination of Corrective Action Reports and Plan Change Notices (presented in Appendices B.1 and B.2).

During data validation, the Team found that several data points for anions and pesticides were of lesser quality.

During data validation, the Team found that several data points for anions and pesticides were of lesser quality. These results were estimated because the laboratory system did not meet the QAPP (DOE 1993a) requirements for fine tuning or adjusting the laboratory instruments. During data validation, the Team rejected many

results for pesticides. Because of the large number of rejected pesticide results, the entire pesticide data set was validated. The fully validated pesticide data set was determined to contain more than 95% usable data and no further actions were required.

2.2.4 Data Assessment

Data assessment also included determining whether there are system wide problems, or if there were any differences between the method of sampling and the quality assurance program requirements.

The Team performed data assessment following the QAPP (DOE 1993a) requirements. The data assessment included deciding whether data thought to be less than totally accurate were usable. This assessment action does not change the validated results (except for correction of errors); it merely interprets and appropriately applies them. Data assessment also included determining whether there are system wide problems, or if there were any differences between the method of sampling and the quality assurance program requirements.

The analytical completeness goals (usable data) are 90% for field measurements, 95% for laboratory analysis, and 100% for collection and analysis of background samples. The laboratory completeness goal was met based on the submission of sample results and on the usable pesticide results. The usability of the data set is described in Appendix B.

As previously cited in Section 2.1.5, the sampling completeness goal was not met for explosives.

Because 100% data validation was not performed, except on pesticides, it is not possible to definitively determine data usability on a point-by-point basis. However, based on the samples which were validated, the data appears to be generally usable.

SECTION 3

3.0 Analytical Results

The analytical results of the investigation are presented in this section. The results presented in this section incorporate the data assessment qualifications as described in the table below. Appendix B.6 summarizes both the data validation and data assessment qualifiers. Data assessment qualifiers were added on the basis of trends in the data validation results or on the basis of systematic problems identified from the quality control results. The quality control results were obtained from the database.

Qualifier	
R	The 'R' qualifier was used during data validation and data assessment to flag unusable data points. The 'R' flagged data points were not evaluated as part of the background calculation and were not compared to background values.
U	The 'U' qualifier was used during data validation and data assessment to indicate a sample result should be treated as a non-detect at a specific value. The 'U' flagged data was treated as non-detect at the qualified value. If a 'U' flagged value exceeded a background limit, then the data point was considered usable.
J,UJ	The 'J' and 'UJ' qualifier is used to indicate there is an unusual amount of uncertainty associated with the sample result. However, the 'J' and 'UJ' qualified data were applied to the evaluations described in this report. The data was used in calculations to obtain background values and is included in the investigative data set.

The section is divided into a discussion of background, followed by separate discussions of the sample results from each area investigated. The areas investigated are as follows:

- Central Valley System (onsite locations)
- Miami-Erie Canal, Overflow Creek, and NPDES Outfall 002
- Zone of Influence
- Area Watersheds and Drainages
- The Great Miami River
- New Property

The information within each of the investigative areas is structured to present the following:

1. Introduction of the investigative area indicating the named elements.
2. Description of the sample locations.
3. Deviations from sample collection protocol from the Field Sampling Plan (DOE 1992b).
4. Discussion of analytical results.

The discussion of analytical results is a presentation of those parameters that yielded data above background levels. In instances where the data can be compared to Mound Plant Risk-Based Guideline Values (HAZWRAP 1995), summary is given.

The discussion of analytical results is a presentation of those parameters that yielded data above background levels. In instances where the data can be compared to Mound Plant Risk-Based Guideline Values (HAZWRAP 1995), a summary is given.

For onsite locations and the Miami-Erie Canal, Overflow Creek, and NPDES Outfall 002, guideline value comparisons are made using the Construction/Mound Employee Soil/Sediment and Recreational Soil/Sediment Scenarios for sediment and subsurface soils. The use of the scenarios is consistent with the Field Sampling Plan (DOE 1992b) which treats these areas as one system (i.e., the Storm Water Retention and Discharge System).

For offsite locations, the comparisons are made using the Recreational Soil/Sediment scenarios for sediment. For surface water from all areas, comparisons are made using the Recreational Surface Water scenario.

In general, comparison of data from the Fall 1994 sampling event to data from the Spring 1995 sampling event does not reliably indicate seasonal patterns. If there was a consistent pattern from one season to another, the variability would have been important information for use in the development of a risk assessment.

Three systematic data problems are identified during assessment: The pesticide results are assessed as unusable, the anion data are assessed as estimated, and results for benzo(b)fluoranthene and benzo(k)fluoranthene were assessed as estimated.

The data validation and assessment activities (Appendix B) reveal certain systematic problems that are important to an overall understanding of the data. Three systematic data problems are identified during assessment:

1. The pesticide data was heavily qualified due to potential problems with the accuracy of the results (Corrective Action Report-071). Because of these problems, 100 percent of the data was validated. Based on the results of the 100 percent validation, more than 95 percent of the data was determined to be usable.

2. The anion data are assessed as estimated. The anion data are assessed as estimated due to performance evaluation results, matrix spike recoveries, and other deficiencies, as identified in Appendix B. The anion results are possibly less accurate and precise than desired.

3. Results for benzo(b)fluoranthene and benzo(k)fluoranthene were assessed as estimated because the laboratory could not always tell the difference between the two compounds. Because of laboratory problems, the data may be less accurate and precise than desired.

These problems are extensively discussed in Appendices B.2 and B.4.

*"**Significant figures** are those digits in a number that are known with certainty, plus the first uncertain digit" (Fritz, 1979, p. 26).*

The data from the various sampling events and analytical sites vary widely in terms of magnitude, as well as precision and accuracy. The electronically stored data in the database were reported by the laboratory as raw values without consideration for the appropriate number of significant figures. As a consequence of this standard electronic reporting procedure, the database values do not exactly match the hardcopy results. Because the database was used to generate the data in this report, it was necessary to simplify the raw numbers for both consistency and ease of interpretation. We have adopted the uniform convention of displaying **two significant figures** for all values in the text and in tables accompanying text. Data presented in the appendices have not been rounded. Raw data are as reported from the laboratory.

3.1 Background

Background is defined as a description of the surface water and sediment quality outside the influence of Mound Plant.

Background is defined as a description of the surface water and sediment quality outside the zone of influence of the Mound Plant. The zone of influence for radiological parameters was established by the OU9 Regional Soils Investigation. The zone of influence can be determined by locating areas of non-detects in the Regional Soils Investigation results. Areas of non-detects are assumed to be outside the zone of influence. Background water quality and sediment quality are calculated separately for streams and ponds. Complete descriptions of these environments can be found in the Site-Wide Work Plan (DOE 1992a).

The objectives of this portion of the report are to:

1. Document background sample locations.
2. Tabulate background water and sediment chemistry results for analytes of interest.
3. Provide data that can be used to identify results in the balance of the study that exceed background concentrations.

3.1.1 Sample Locations

Background samples were collected from three ponds outside the Mound Plant zone of airborne influence.

To determine background, samples (both water and sediment) were collected from stream and pond locations outside the area affected by plant emissions. Figure 3.1.1 shows the locations of all the background sample sites.

The background pond sites are as follows:

1. The unnamed pond in the State Game Preserve 32 miles southeast of Mound Plant (Figure 3.1.2)
2. Peterson Pond (Figure 3.1.3)
3. Eaton Pond (Figure 3.1.4)

These are the sites identified in the Site-Wide Work Plan (DOE 1992a) and the Field Sampling Plan (DOE 1992b), except for Eaton Pond. The Field Sampling Plan identified Diamond Mill Road Pond and Stream as suitable background sample locations. However, the Diamond Mill Road site had been altered by construction and was no longer a viable sampling location. It was replaced by the Eaton site. Sample collection methods were as described in Section 2.1.

Background samples were collected from two streams outside the Mound Plant zone of influence

For streams, the background sites are:

1. Turkey Run Stream at three locations:
   - Mill Road (Figure 3.1.5)
   - State Route 380 (sediment only) (Figure 3.1.6)
   - Hackney Road (Figure 3.1.7)
2. Eaton Stream (Figure 3.1.4)

Sample collection methods are described in Section 2.1.

Sampling of the Great Miami River is a separate part of the study, reported in Section 3.6.

Figure 3.1.1 Background Surface Water & Sediment Sampling Locations

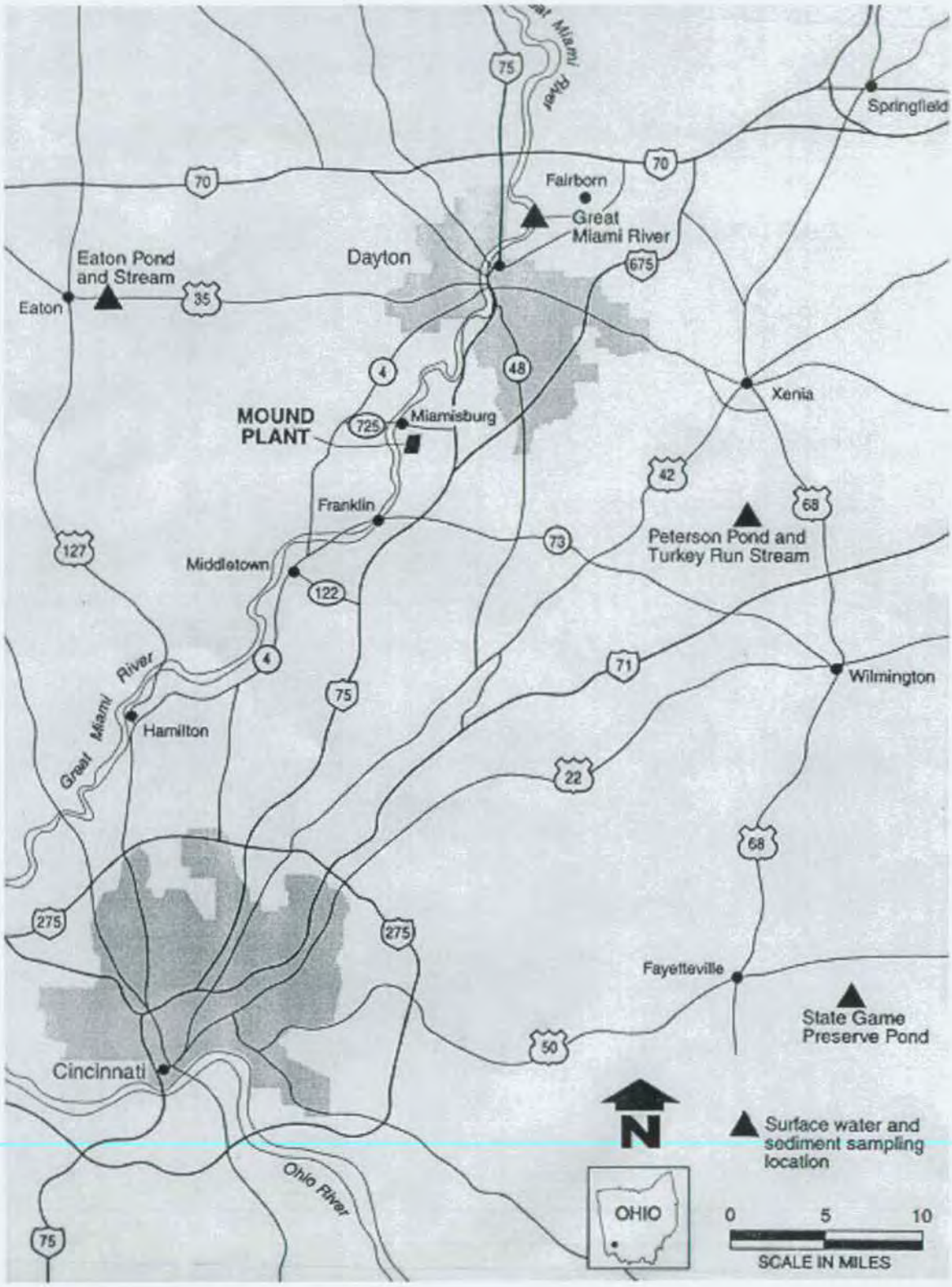


Figure 3.1.2 Game Preserve Pond

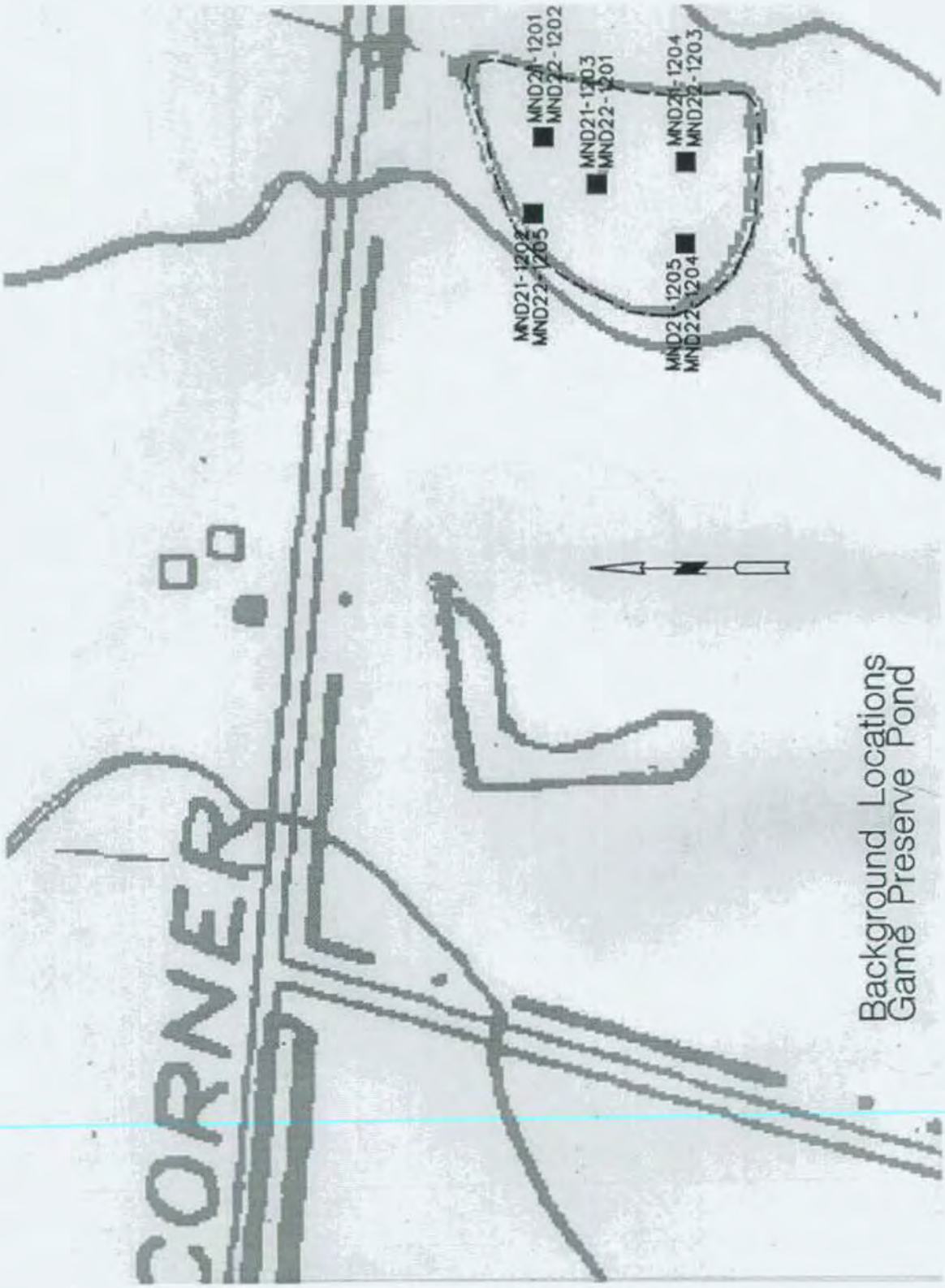


Figure 3.1.3 Peterson Pond

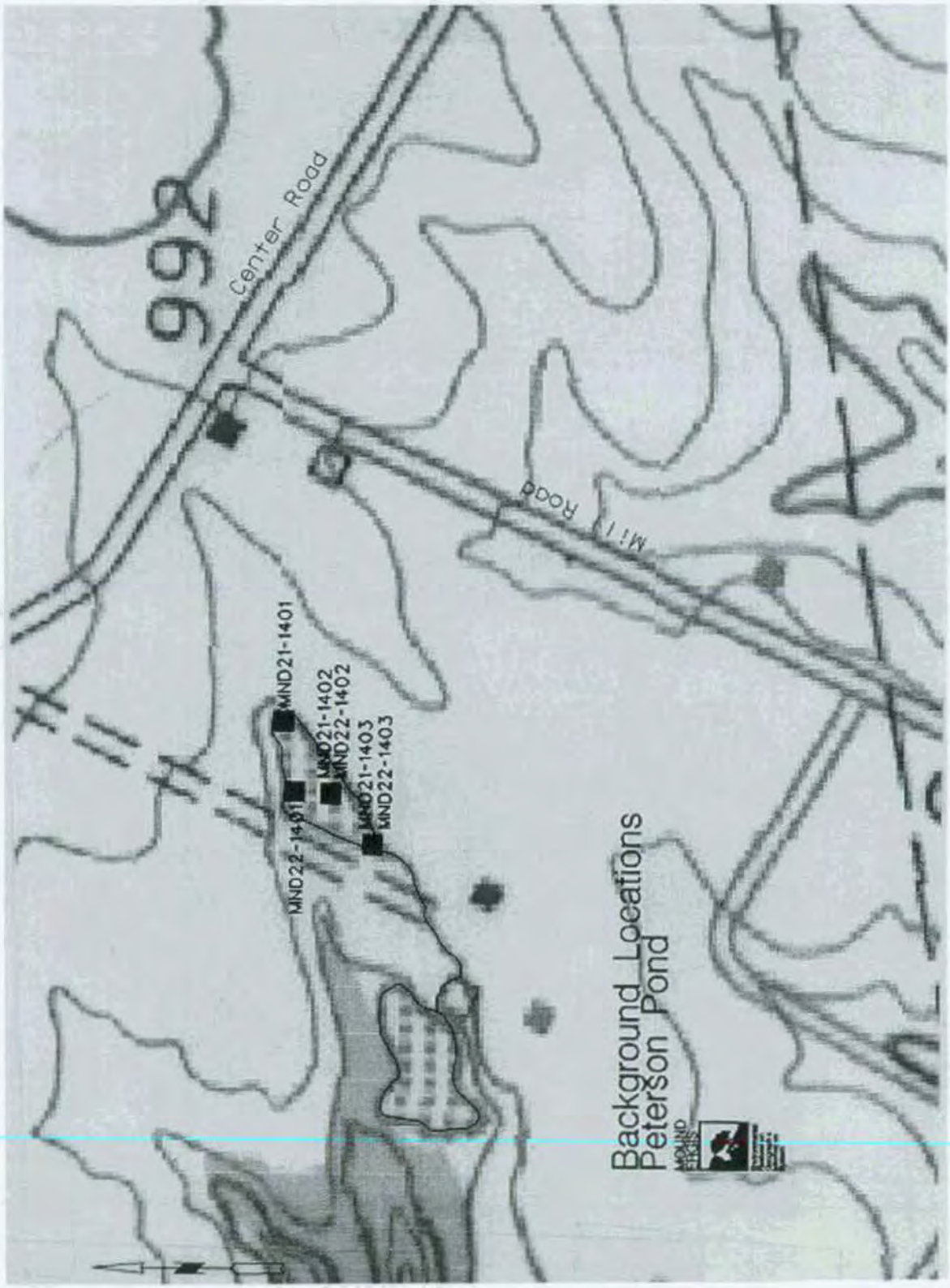


Figure 3.1.4 Eaton Pond and Stream

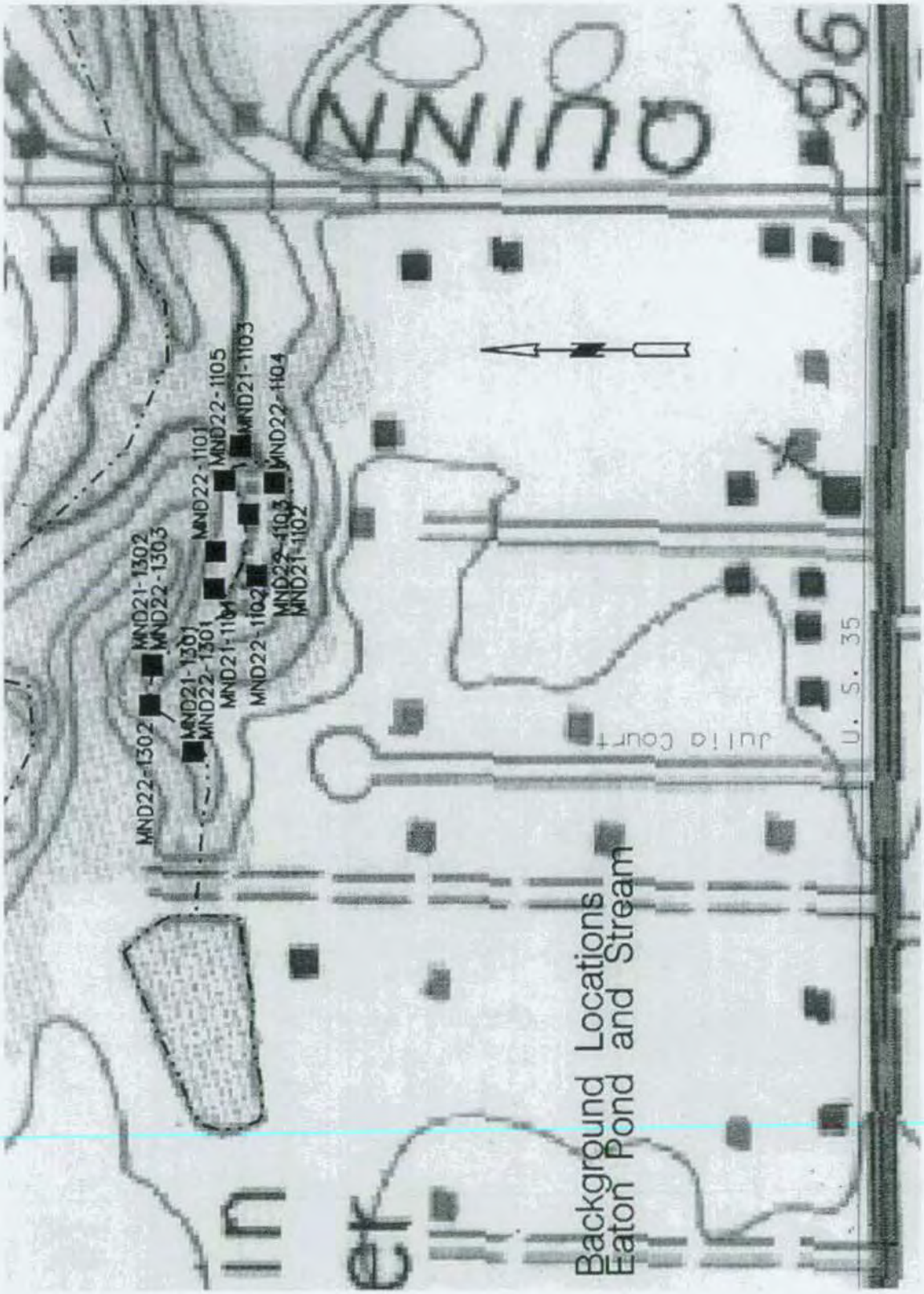


Figure 3.1.5 Turkey Run Stream at Mill Road

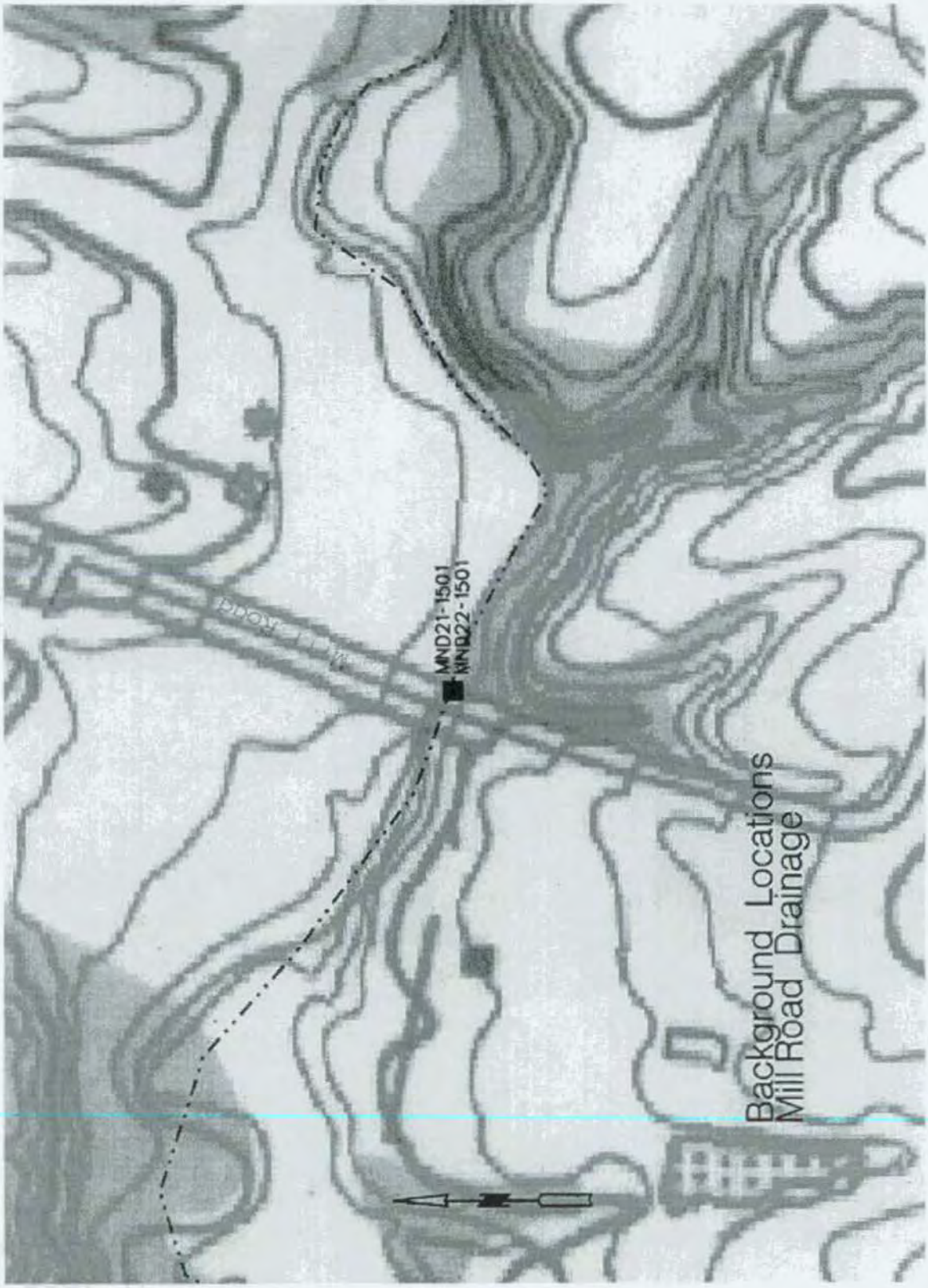


Figure 3.1.6 Turkey Run Stream at State Route 380

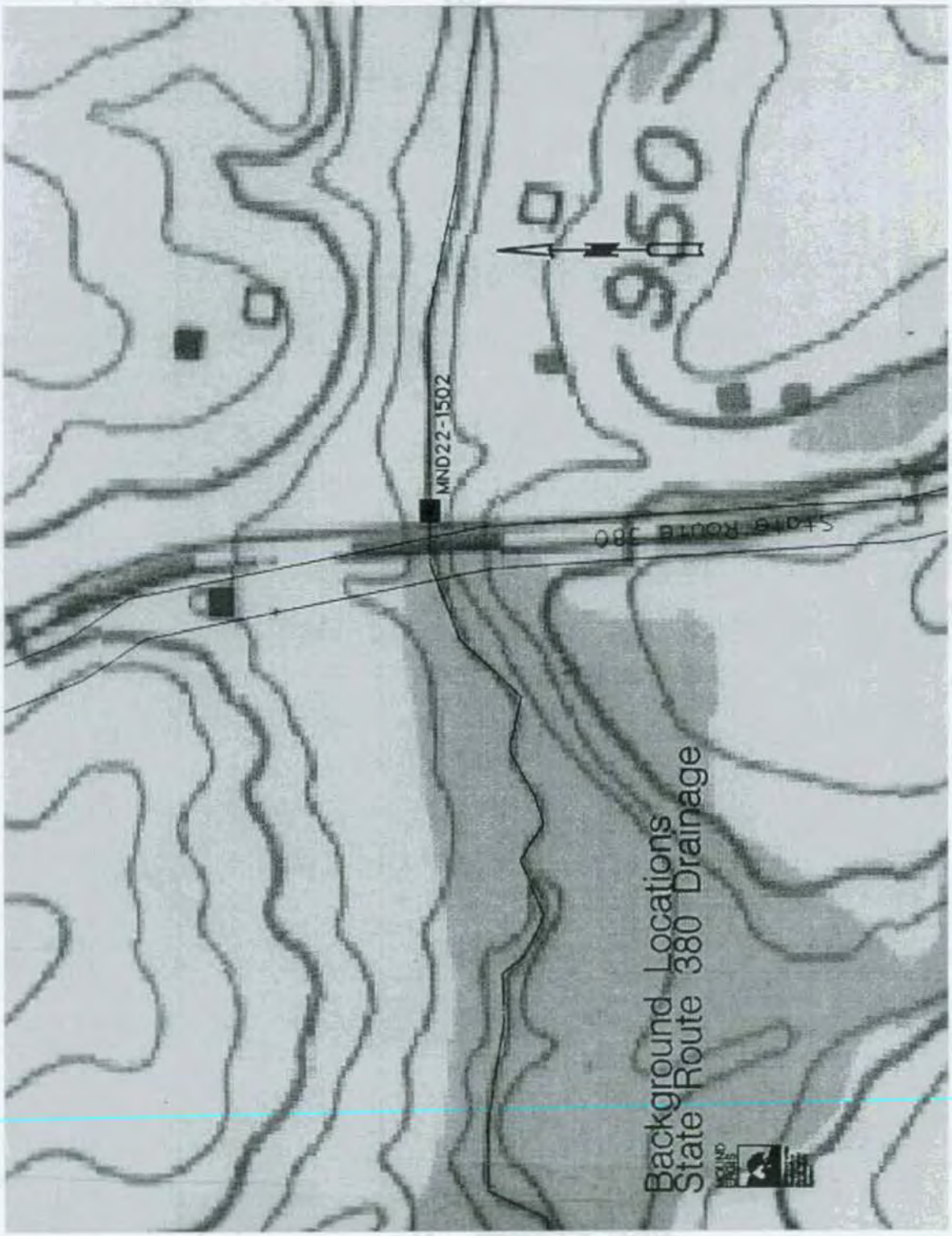
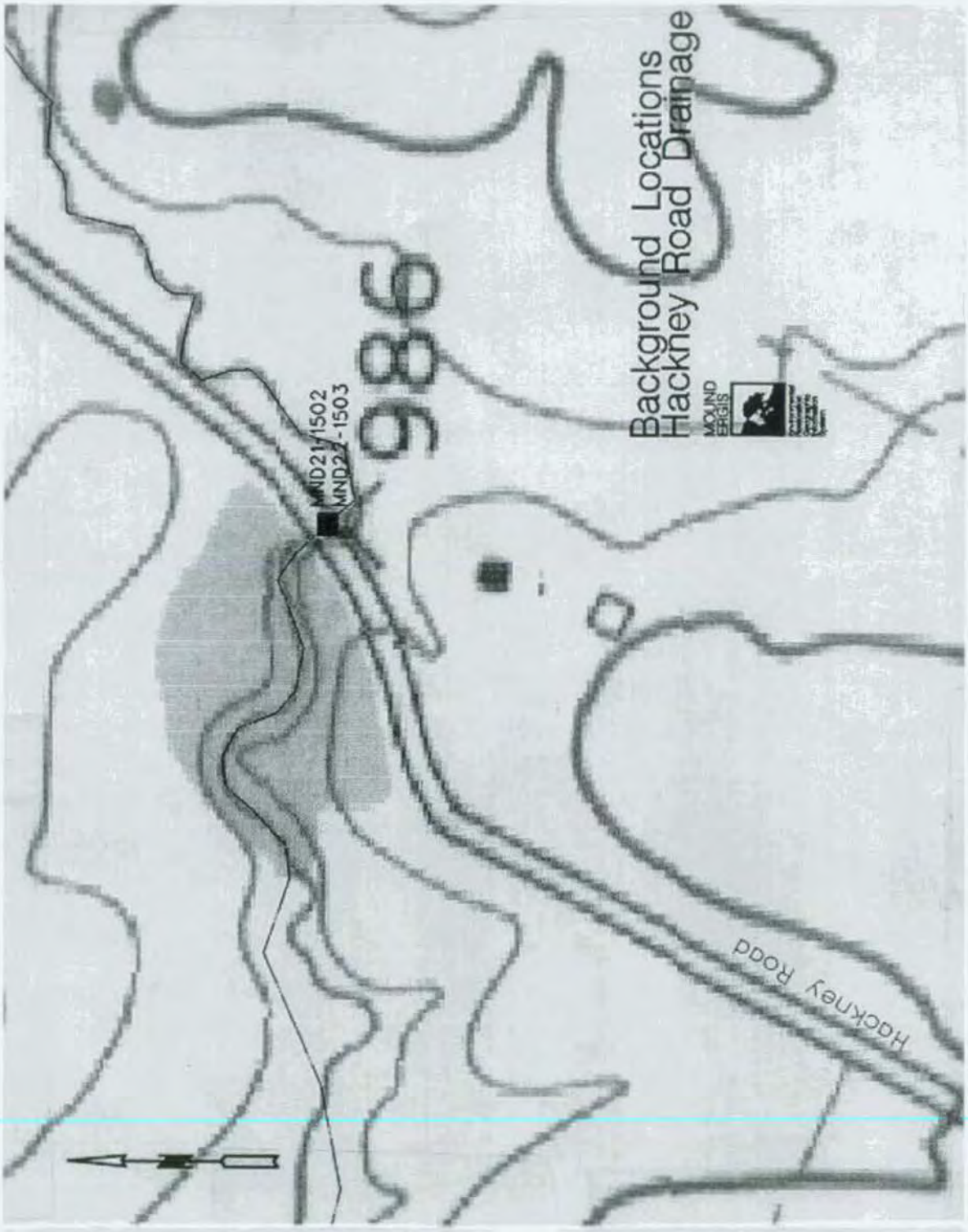


Figure 3.1.7 Turkey Run Stream at Hackney Road



3.1.2 Background Analytical Results

Chemical and analytical background is determined for four substrate classes.

The background values are the 95% Upper Tolerance Limits for each parameter.

The background values are presented in Tables 3.1.1 through 3.1.4, with a separate table for each substrate pond sediment, pond surface water, stream sediment and stream surface water. The background values are the 95% Upper Tolerance Limit for each parameter. Note that background values were not established for semivolatile, volatile, and explosive compounds. Background for these compounds is assumed to be zero.

The Mean Value or Median is included in a separate column for comparison purposes to the background number. All results presented in the tables are derived from the background location sampling. The Mean Value is the average of the set of results for that background parameter. The median is used in the background tables instead of the mean for situations where the statistical method did not stipulate the calculation of the mean, i.e., when the set of background results for a specific parameter includes less than four individual results. Further explanation of the statistical methods used to establish the background values is provided in the following sections. The results of the detailed computations establishing the background statistics are presented in Appendix A.1.

After examining the data, the Team elected to use the information as is, with minor exceptions. Exceptions were:

1. For the background stream surface water, a single chromium value of 112 µg/L, which was two orders of magnitude different from the balance of the data, was discarded.

2. For the background pond surface water, a single nickel value of 1740 µg/L, which was three orders of magnitude different from the balance of the data, was discarded.

The team concluded that the PCB variation was normal and not indicative of PCB contamination.

There is a problem with frequent high detection limits for many PCBs. The percent moisture is quite high in the affected samples (48%-85%). These high moisture percentages raised the detection limit by a factor of two to four. In addition, several of the samples were diluted by a factor of five. Therefore in the worst case, a detection limit that is normally about 40 ppb is raised by a factor of 20 to 1600 ppb. This variation in detection limits is the cause of the variability of the PCB data. Because the variability is apparently specific to the sample matrix (sediments), the team concluded that the PCB variation was normal and not indicative of PCB contamination.

3.1.3 Statistical Methods

The overall logic involved in the statistical analyses is shown on Figure 3.1.8. The statistical methods are described in Appendix D. The summary statistics are calculated using a commercial software package, Statgraphics™, using the fundamental equations that are in Appendix D.

The first data analysis is a series of goodness-of-fit tests to determine the underlying data distribution type, which governs the application of background, discussed in Section 3.1.4. The distribution type is determined by calculating the W statistic (for the Shapiro-Wilks test) using Statgraphics and then comparing that W value to W

values contained in Table A-7 of *Statistical Methods for Environmental Pollution Monitoring* (Gilbert 1987). The data set is tested first for normality and then for lognormality. If the population follows neither a normal nor lognormal distribution and has greater than three detections, it is considered non-parametric. The distribution is considered unknown (or undefined) if there are less than four detections.

The 95% Mean Confidence Interval and the other statistical measures described below were calculated directly by Statgraphics.

The 95% Mean Confidence Interval and the other statistical measures described below were calculated directly by Statgraphics. Appendix D presents the methods used to manipulate data, input to Statgraphics, and query hits.

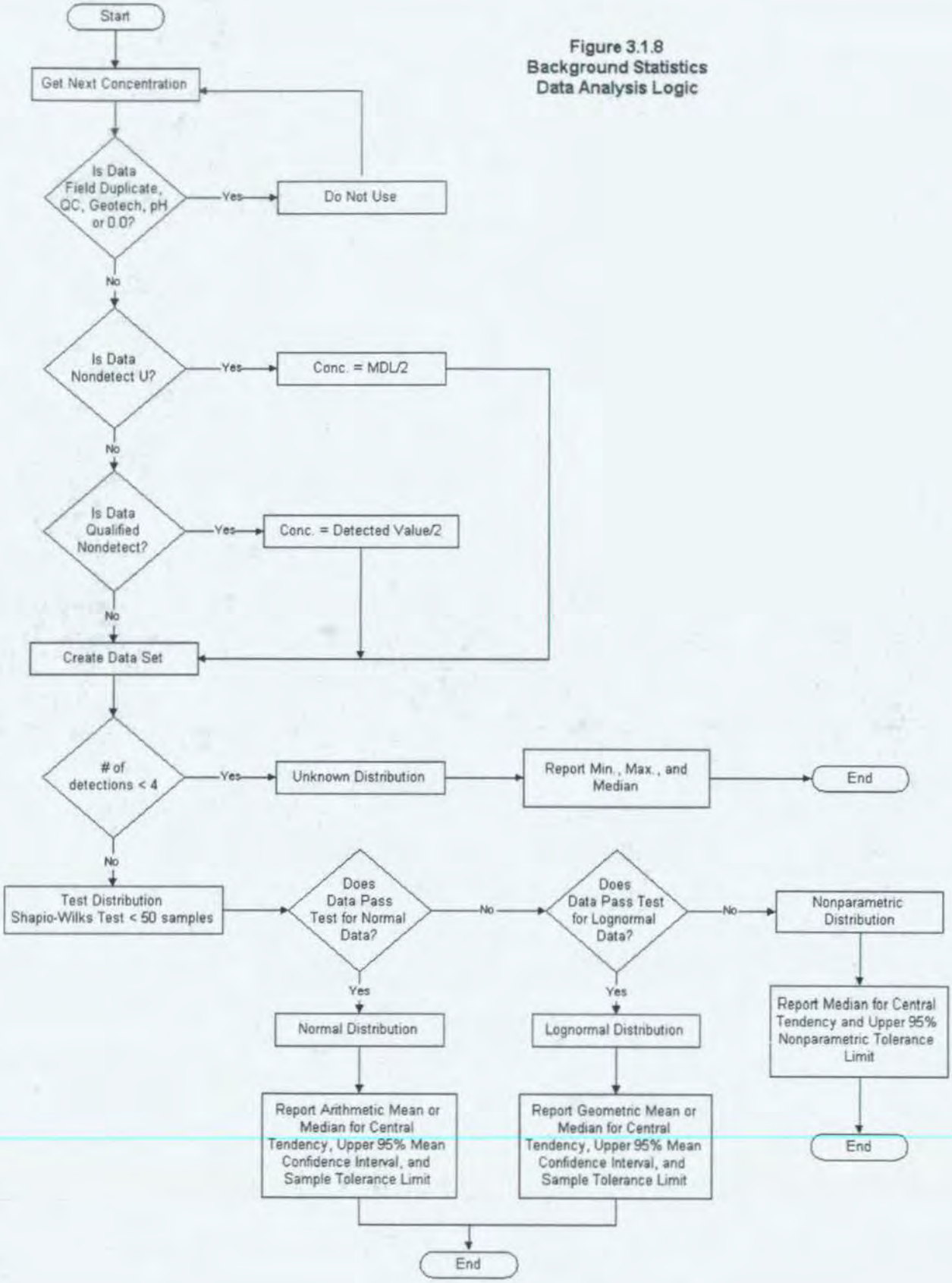


Figure 3.1.8
Background Statistics
Data Analysis Logic

Table 3.1.1—Mound Plant Surface Water and Sediment Background Pond Sediment Parameters and Background Values

Parameter Name	Mean Value	Background Value	Construction/Mound Employee-Soil/Sediment Guideline Value	Recreational-Soil/Sediment Guideline Value
Common Anions(mg/kg)				
Chloride	1.9E+03	1.2E+04	NA	NA
Fluoride	2.4E+01	2.0E+02	NA	NA
Nitrate-Nitrite-N	4.8E+01	3.5E+02	NA	NA
Sulfate	2.9E+03	1.8E+04	NA	NA
General Chemistry				
Organic Carbon	8.5E+03	1.6E+04	NA	NA
pH	7.0E+00	8.2E+00	NA	NA
Metals(mg/kg)				
Aluminum	9.9E+03	2.5E+04	NA	NA
Antimony	6.3E-01	1.7E+00	4.3E+02	1.3E+03
Arsenic	7.5E+00	1.6E+01	3.2E+02	9.5E+02
Barium	9.5E+01	1.8E+02	7.5E+04	7.7E+05
Beryllium	4.2E-01	1.1E+00	7.0E-01	6.0E+00
Bismuth	1.1E+00	2.2E+00	NA	NA
Cadmium	2.5E-01	1.1E+00	1.1E+03	1.1E+04
Calcium	3.5E+04	1.1E+05	NA	NA
Chromium	1.4E+01	2.9E+01	5.5E+03	3.2E+06
Cobalt	6.3E+00	1.4E+01	NA	NA
Copper	3.4E+01	1.0E+02	NA	NA
Cyanide	8.3E-01 *	----	2.2E+04	6.3E+04
Iron	1.8E+04	3.9E+04	NA	NA
Lead	1.8E+01	3.6E+01	NA	NA
Lithium	1.0E+01	2.8E+01	NA	NA
Magnesium	7.2E+03	2.4E+04	NA	NA
Manganese	3.6E+02	7.7E+02	1.4E+05	1.3E+06
Mercury	1.4E-01 *	----	3.2E+02	9.5E+02
Molybdenum	2.1E+00	8.8E+00	NA	NA
Nickel	1.1E+01	2.5E+01	2.2E+04	6.3E+04
Potassium	1.5E+03	3.5E+03	NA	NA
Selenium	8.5E-01	1.6E+00	NA	NA
Silver	1.5E-01 *	----	NA	1.6E+04
Sodium	6.5E+02	1.4E+03	NA	NA
Thallium	6.5E-01 *	----	NA	NA
Tin	3.2E+00	6.7E+00	NA	NA
Vanadium	2.4E+01	5.4E+01	NA	2.2E+04
Zinc	4.7E+01	9.2E+01	NA	NA
Pesticides(ug/kg)				
4,4'-DDD	1.1E+01	4.6E+00	NA	NA
4,4'-DDE	1.1E+01	3.9E+01	9.0E+00	7.6E+01
4,4'-DDT	4.6E+00 *	----	9.0E+00	7.6E+01
Aldrin	5.5E+00	2.3E+01	NA	NA
Alpha Chlordane	5.8E+00	2.5E+00	NA	NA

Table 3.1.1—Mound Plant Surface Water and Sediment Background Pond Sediment Parameters and Background Values

Parameter Name	Mean Value		Background Value	Construction/Mound Employee-Soil/Sediment Guideline Value	Recreational-Soil/Sediment Guideline Value
Alpha-BHC	2.5E+00	*	----	NA	NA
Aroclor-1016	4.9E+01	*	----	NA	NA
Aroclor-1221	1.0E+02	*	----	NA	NA
Aroclor-1232	4.9E+01	*	----	NA	NA
Aroclor-1242	4.9E+01	*	----	NA	NA
Aroclor-1248	4.9E+01	*	----	3.9E-01	3.4E+00
Aroclor-1254	4.9E+01	*	----	2.2E+01	1.6E+02
Aroclor-1260	4.9E+01	*	----	3.9E-01	3.4E+00
Beta-BHC	2.5E+00	*	----	1.7E+00	1.4E+01
Delta-BHC	2.5E+00	*	----	NA	NA
Dieldrin	1.1E+01		3.9E+01	1.9E-01	1.6E+00
Endosulfan I	2.5E+00	*	----	NA	NA
Endosulfan II	4.9E+00	*	----	NA	NA
Endosulfan Sulfate	1.1E+01		4.4E+00	NA	NA
Endrin	4.9E+00	*	----	NA	NA
Endrin Aldehyde	4.9E+00	*	----	NA	NA
Endrin Ketone	4.9E+00	*	----	NA	NA
Gamma Chlordane	6.0E+00		2.7E+00	NA	NA
Gamma-BHC (Lindane)	2.8E+00		2.1E+00	NA	NA
Heptachlor	2.5E+00	*	----	NA	NA
Heptachlor Epoxide	5.5E+00		2.4E+01	NA	NA
Methoxychlor	5.7E+01		2.5E+01	NA	NA
Toxaphene	2.5E+02	*	----	NA	NA
Radiological(pCi/g)					
Americium-241	2.6E-01	*	----	5.0E+00	7.8E+01
Bismuth-207	6.4E-02	*	----	1.8E-01	3.2E-01
Bismuth-210M	7.0E-02		----	NA	NA
Cesium-137	5.4E-01		1.6E+00	4.6E-01	8.4E-01
Cobalt-60	8.9E-02	*	----	1.0E-01	1.8E-01
Plutonium-238	6.6E-03		5.0E-03	5.5E+00	1.1E+02
Plutonium-239/240	1.2E-02		3.5E-02	5.5E+00	1.0E+02
Potassium-40	1.4E+01		2.2E+01	NA	NA
Radium-226	1.1E+00		1.6E+00	1.4E-01	2.6E-01
Strontium-90	1.5E-01		4.5E-01	3.0E+00	5.7E+02
Thorium-228	8.4E-01		1.6E+00	8.5E-01	1.7E+00
Thorium-230	1.0E+00		1.7E+00	4.4E+01	8.2E+02
Thorium-232	7.8E-01		1.5E+00	5.0E+01	9.5E+02
Tritium	1.5E-01	*	----	2.4E+04	4.5E+05
Uranium-234	9.6E-01		1.4E+00	3.7E+01	7.1E+02
Uranium-235	3.4E-02		7.2E-02	3.4E+00	6.6E+00
Uranium-238	1.0E+00		1.5E+00	1.1E+01	3.1E+01
Explosives(mg/kg)					
1,3,5-Trinitrobenzene	1.5E+00	*	----	NA	NA
1,3-Dinitrobenzene	1.0E+00	*	----	NA	NA
2,4,6-Trinitrotoluene	7.5E-01	*	----	NA	NA

Table 3.1.1—Mound Plant Surface Water and Sediment Background Pond Sediment Parameters and Background Values

Parameter Name	Mean Value		Background Value	Construction/Mound Employee-Soil/Sediment Guideline Value	Recreational-Soil/Sediment Guideline Value
2,4-Dinitrotoluene-exp	5.0E-01	*	----	NA	NA
2,6-Dintirotoluene-exp	1.3E+00	*	----	NA	NA
2-Amino-4,6-dinitrotoluene	1.0E+00	*	----	NA	NA
HMX	1.5E+00	*	----	5.5E+04	5.5E+05
Nitrobenzene-exp	1.0E+00	*	----	NA	NA
PETN	5.0E-01	*	----	NA	NA
RDX	1.2E+00	*	----	2.7E+01	3.3E+04
Tetryl	3.8E+00	*	----	NA	NA

---- = Not calculated for less than 4 detections

* = median instead of mean

na = not available

Note on Scientific Notation:

"In chemistry we find that we are often using very large and very small numbers, and for convenience we must be able to represent and use these numbers in a concise fashion. *In standard scientific notation the significant figures of a number are retained in a factor between 1.00. . . and 10.00. . . and the decimal point is given by a power of ten.*

For numbers greater than unity [one], we move the decimal point to the left until we reach a number that is between 1 and 10 and the power of ten is equal to the number of digits that the decimal point was moved. For example, we would rewrite 2,000,000 and 120 as follows:

$\underset{6\ 5\ 4\ 3\ 2\ 1}{2{,}000{,}000}$ becomes 2×10^6 $\underset{2\ 1}{120}$ becomes 1.2×10^2

For numbers less than unity [one], we move the decimal point to the right in the number until we reach a number that is between 1 and 10. The power of ten is equal to the number of digits that the decimal point was moved and a negative sign appears in the exponent [10^{-x}]. For example, we would rewrite 0.0006 and 0.0263 as follows:

$\underset{1\ 2\ 3\ 4}{0.0006}$ becomes 6×10^{-4} $\underset{1\ 2}{0.0263}$ becomes 2.63×10^{-2} "

from Bailar, John C., Jr., *et al. Chemistry*. Academic Press, Inc., London. 1978.

We often use the symbol E to indicate the power of ten as follows:

2.63×10^{-2} becomes 2.63E-2

Note on Calculation of the Mean and the Median:

The ***mean*** is the average of the set of results. The ***median*** is calculated differently. It is the middle value of a sample of results arranged in order of magnitude. If the number of results is an even number, the median is found by averaging the two middle results (Fritz 1979).

Table 3.1.2—Mound Plant Surface Water and Sediment Background Pond Surface Water Parameters and Background Values

Parameter Name	Mean Value		Background Value	Recreational–Surface Water Guideline Value
Common Anions(mg/L)				
Chloride	2.2E+01		7.7E+01	NA
Fluoride	9.5E-02	*	----	NA
Nitrate-Nitrite-N	2.5E-01		1.2E+00	NA
Sulfate	2.2E+01		6.8E+01	NA
General Chemistry				
Organic Carbon	7.5E+00		1.2E+01	NA
Alkalinity	1.0E+02		3.5E+02	NA
Nitrogen	5.3E-01		1.4E+00	NA
Phosphorous	1.5E-01		8.8E-01	NA
Metals (Unfiltered-ug/L)				
Aluminum	9.0E+02		1.6E+02	NA
Antimony	1.2E+00		3.2E+00	3.2E+03
Arsenic	1.9E+00		5.1E+00	2.4E+03
Barium	4.9E+01		1.5E+02	5.7E+05
Beryllium	7.5E-02	*	----	4.0E+04
Bismuth	1.4E+00	*	----	NA
Cadmium	1.5E-01	*	----	4.0E+03
Calcium	3.3E+04		9.3E+04	NA
Chromium	2.8E+00		1.3E+01	4.0E+04
Cobalt	3.0E-01	*		NA
Copper	3.0E+00		1.2E+01	NA
Cyanide	1.0E+01	*	----	2.4E+04
Iron	2.4E+03		9.4E+03	NA
Lead	1.8E+00		5.9E+00	NA
Lithium	3.0E+00		5.9E+00	NA
Magnesium	1.2E+04		3.7E+04	NA
Manganese	4.6E+02		2.9E+03	4.0E+04
Mercury	2.0E-01	*	----	2.4E+03
Molybdenum	2.5E+00		8.6E+00	NA
Nickel	8.2E+01		8.7E+02	1.6E+05
Potassium	2.1E+03		4.8E+03	NA
Selenium	1.4E+00	*	----	NA
Silver	2.8E-01		----	4.0E+04
Sodium	9.2E+03		3.0E+04	NA
Thallium	1.4E+00	*	----	NA
Tin	3.0E+00	*	----	NA
Vanadium	3.5E+00		1.6E+01	5.7E+04
Zinc	2.9E+01		8.0E+01	2.4E+06
Metals (Filtered ug/L)				
Aluminum	9.3E+01		3.1E+02	NA
Antimony	2.7E+00		7.8E+00	3.2E+03
Arsenic	1.1E+00	*	----	2.4E+03
Barium	3.2E+01		8.9E+01	5.7E+05
Beryllium	7.5E-02	*	----	4.0E+04
Bismuth	1.6E+00	*	----	NA
Cadmium	1.5E-01	*	----	4.0E+03
Calcium	3.5E+04		1.0E+05	NA
Chromium	4.5E-01	*	----	4.0E+04
Cobalt	2.8E-01	*	----	NA
Copper	2.7E+00		6.9E+00	NA
Cyanide	5.0E+00	*	----	2.4E+04
Iron	2.5E+02		1.0E+03	NA
Lead	9.5E-01	*	----	NA
Lithium	1.9E+00	*	----	NA
Magnesium	1.3E+04		4.1E+04	NA

Table 3.1.2—Mound Plant Surface Water and Sediment Background Pond Surface Water Parameters and Background Values

Parameter Name	Mean Value		Background Value	Recreational-Surface Water Guideline Value
Manganese	1.4E+02		5.7E+02	4.0E+04
Mercury	2.0E-01	*	----	2.4E+03
Molybdenum	3.3E+00		1.0E+01	NA
Nickel	70.E-01	*	----	1.6E+05
Potassium	2.2E+03		5.1E+03	NA
Selenium	1.4E+00	*	----	NA
Silver	2.8E-01	*	----	4.0E+04
Sodium	1.0E+04		3.4E+04	NA
Thallium	1.6E+00	*	----	NA
Tin	4.0E+00	*	----	NA
Vanadium	6.2E-01		1.5E+00	5.7E+04
Zinc	5.5E+00		2.1E+01	2.4E+06
Pesticides(ug/L)				
4,4'-DDD	5.0E-02	*	----	NA
4,4'-DDE	5.0E-02	*	----	4.0E+02
4,4'-DDT	5.0E-02	*	----	1.5E-01
Aldrin	2.5E-02	*	----	NA
Alpha Chlordane	2.5E-02	*	----	NA
Alpha-BHC	2.5E-02	*	----	NA
Aroclor-1016	2.5E-01	*	----	NA
Aroclor-1221	2.5E-01	*	----	NA
Aroclor-1232	2.5E-01	*	----	NA
Aroclor-1242	2.5E-01	*	----	NA
Aroclor-1248	2.5E-01	*	----	1.8E+01
Aroclor-1254	2.5E-01	*	----	1.2E+03
Aroclor-1260	2.5E-01	*	----	1.8E+01
Beta-BHC	2.5E-02	*	----	7.6E+01
Delta-BHC	2.5E-02	*	----	NA
Dieldrin	5.0E-02	*	----	8.6E+00
Endosulfan I	2.5E-02	*	----	NA
Endosulfan II	5.0E-02	*	----	NA
Endosulfan Sulfate	5.0E-02	*	----	NA
Endrin	5.0E-02	*	----	NA
Endrin Aldehyde	5.0E-02	*	----	NA
Endrin Ketone	5.0E-02	*	----	NA
Gamma Chlordane	2.5E-02	*	----	NA
Gamma-BHC (Lindane)	2.5E-02	*	----	NA
Heptachlor	2.5E-02	*	----	NA
Heptachlor Epoxide	2.5E-02	*	----	NA
Methoxychlor	2.5E-01	*	----	NA
Toxaphene	2.5E+00	*	----	NA
Radiological(pCi/L)				
Americium-241	1.1E-01	*	----	2.3E+02
Bismuth-207	3.4E+00	*	----	1.5E+04
Bismuth-210M	3.6E+00		9.1E+00	NA
Cesium-137	3.8E+00	*	----	2.4E+03
Cobalt-60	4.7E+00	*	----	4.1E+03
Plutonium-238	1.5E-01	*	----	2.6E+02
Plutonium-239/240	1.6E-01	*	----	2.4E+02
Potassium-40	1.3E+02	*	----	NA
Radium-226	8.3E-02	*	----	2.6E+02
Strontium-90	4.7E-01		1.0E+00	1.4E+03
Thorium-228	1.6E-01		2.9E-01	3.3E+02
Thorium-230	1.5E-01		3.1E-01	2.1E+03
Thorium-232	6.9E-02	*	----	2.3E+03
Tritium	1.4E+02	*	----	1.2E+05

Table 3.1.2—Mound Plant Surface Water and Sediment Background Pond Surface Water Parameters and Background Values

Parameter Name	Mean Value	Background Value	Recreational–Surface Water Guideline Value
Uranium-234	2.6E-01	5.2E-01	1.7E+03
Uranium-235	1.3E-01 *	----	1.6E+03
Uranium-238	2.5E-01	6.4E-01	1.2E+03

---- = Not calculated for less than 4 detections
* = median instead of mean

Note on Scientific Notation:

Please see definition in Table 3.1.1.

Note on Calculation of the Mean and the Median:

The ***mean*** is the average of the set of results. The ***median*** is calculated differently. It is the middle value of a sample of results arranged in order of magnitude. If the number of results is an even number, the median is found by averaging the two middle results (Fritz 1979).

Table 3.1.3 Mound Plant Surface Water and Sediment Background Stream Sediments Parameters and Background Values

Parameter Name	Mean Value		Background Value	Construction/Mound Employee-Soil/Sediment Guideline Value	Recreational-Soil/Sediment Guideline Value
Common Anions(mg/kg)					
Chloride	4.6E+03		4.1E+04	NA	NA
Fluoride	1.5E+01		1.3E+02	NA	NA
Nitrate-Nitrite-N	1.1E+02		8.2E+02	NA	NA
Sulfate	1.3E+04		8.4E+04	NA	NA
General Chemistry					
Organic Carbon	7.9E+03		2.5E+04	NA	NA
pH	7.8E+00		8.7E+00	NA	NA
Metals(mg/kg)			----		
Aluminum	4.9E+03		1.0E+04	NA	NA
Antimony	2.2E-01	*	----	4.3E+02	1.3E+03
Arsenic	9.3E+00		2.9E+01	3.2E+02	9.5E+02
Barium	7.1E+01		2.7E+02	7.5E+04	7.7E+05
Beryllium	2.0E-01		4.8E-01	7.0E-01	6.0E+00
Bismuth	5.2E-01		4.9E-01	NA	NA
Cadmium	2.5E-01		7.5E-01	1.1E+03	1.1E+04
Calcium	5.7E+04		1.3E+05	NA	NA
Chromium	8.5E+00		1.5E+01	5.5E+03	3.2E+06
Cobalt	6.0E+00		1.2E+01	NA	NA
Copper	1.6E+01		3.4E+01	NA	NA
Cyanide	3.4E-01	*	----	2.2E+04	6.3E+04
Iron	1.4E+04		3.0E+04	NA	NA
Lead	1.4E+01		3.6E+01	NA	NA
Lithium	6.6E+00		1.2E+01	NA	NA
Magnesium	2.4E+04		5.4E+04	NA	NA
Manganese	6.6E+02		2.8E+03	1.4E+05	1.3E+06
Mercury	6.5E-02	*	----	3.2E+02	9.5E+02
Molybdenum	2.0E+00		1.4E+00	NA	NA
Nickel	1.2E+01		1.9E+01	2.2E+04	6.3E+04
Potassium	9.6E+02		1.9E+03	NA	NA
Selenium	4.7E-01	*	----	NA	NA
Silver	9.3E-02	*	----	NA	1.6E+04
Sodium	4.4E+02		6.8E+02	NA	NA
Thallium	3.5E-01	*	----	NA	NA
Tin	1.3E+00		1.3E+00	NA	NA
Vanadium	1.5E+01		2.8E+01	NA	2.2E+04
Zinc	4.5E+01		9.3E+01	NA	NA
Pesticides(μg/kg)					
4,4'-DDD	1.8E+00		4.6E+00	NA	NA
4,4'-DDE	1.7E+00		3.8E+00	9.0E+00	7.6E+01
4,4'-DDT	2.1E+00	*	----	9.0E+00	7.6E+01
Aldrin	9.0E-01		2.2E+00	NA	NA
Alpha Chlordane	9.5E-01		2.3E+00	NA	NA
Alpha-BHC	1.1E+00	*	----	NA	NA
Aroclor-1016	2.2E+01	*	----	NA	NA
Aroclor-1221	4.4E+01	*	----	NA	NA
Aroclor-1232	2.2E+01	*	----	NA	NA
Aroclor-1242	2.2E+01	*	----	NA	NA
Aroclor-1248	2.2E+01	*	----	3.9E-01	3.4E+00
Aroclor-1254	2.2E+01	*	----	2.2E+01	1.6E+02
Aroclor-1260	2.2E+01	*	----	3.9E-01	3.4E+00
Beta-BHC	1.1E+00	*	----	1.7E+00	1.4E+01
Delta-BHC	1.1E+00	*	----	NA	NA
Dieldrin	6.4E+00		2.2E+01	1.9E-01	1.6E+00
Endosulfan I	1.1E+00	*	----	NA	NA
Endosulfan II	2.2E+00	*	----	NA	NA

Table 3.1.3 Mound Plant Surface Water and Sediment Background Stream Sediments Parameters and Background Values

Parameter Name	Mean Value		Background Value	Construction/Mound Employee-Soil/Sediment Guideline Value	Recreational-Soil/Sediment Guideline Value
Endosulfan Sulfate	2.2E+00	*	----	NA	NA
Endrin	2.1E+00	*	----	NA	NA
Endrin Aldehyde	2.1E+00	*	----	NA	NA
Endrin Ketone	2.2E+00	*	----	NA	NA
Gamma Chlordane	9.5E-01		1.0E+00	NA	NA
Gamma-BHC (Lindane)	1.1E+00	*	----	NA	NA
Heptachlor	1.1E+00	*	----	NA	NA
Heptachlor Epoxide	1.3E+00		3.0E+00	NA	NA
Methoxychlor	1.1E+01	*	----	NA	NA
Toxaphene	1.1E+02	*	----	NA	NA
Radiological (pCi/g)					
Americium-241	1.7E-01	*	----	5.0E+00	7.8E+01
Bismuth-207	3.3E-02	*	----	1.8E-01	3.2E-01
Bismuth-210M	4.8E-02	*	----	NA	NA
Cesium-137	3.6E-01		1.5E+00	4.6E-01	8.4E-01
Cobalt-60	4.5E-02	*	----	1.0E-01	1.8E-01
Plutonium-238	3.9E-03	*	----	5.5E+00	1.1E+02
Plutonium-239/240	6.8E-03	*	----	5.5E+00	1.0E+02
Potassium-40	1.1E+01		1.6E+01	NA	NA
Radium-226	9.3E-01		2.1E+00	1.4E-01	2.6E-01
Strontium-90	7.2E-02	*	----	3.0E+00	5.7E+02
Thorium-228	6.7E-01		1.8E+00	8.5E-01	1.7E+00
Thorium-230	1.0E+00	*	----	4.4E+01	8.2E+02
Thorium-232	6.0E-01		1.4E+00	5.0E+01	9.5E+02
Tritium	1.6E-01	*	----	2.4E+04	4.5E+05
Uranium-234	7.7E-01		1.2E+00	3.7E+01	7.1E+02
Uranium-235	3.8E-02		1.1E-01	3.4E+00	6.6E+00
Uranium-238	9.4E-01		1.4E+00	1.1E+01	3.1E+01

---- = Not calculated for less than 4 detections
* = median instead of mean

Note on Scientific Notation:

Please see definition in Table 3.1.1.

Note on Calculation of the Mean and the Median:

The ***mean*** is the average of the set of results. The ***median*** is calculated differently. It is the middle value of a sample of results arranged in order of magnitude. If the number of results is an even number, the median is found by averaging the two middle results (Fritz 1979).

Table 3.1.4—Mound Plant Surface Water and Sediment Background Stream Surface Water Parameters and Background Values

Parameter Name	Mean Value		Background Value	Recreational-Surface Water Guideline Values
Common Anions (mg/L)				
Chloride	4.9E+01		1.5E+02	NA
Fluoride	1.8E-01		1.0E-01	NA
Nitrate-Nitrite-N	4.3E+00		2.5E+01	NA
Sulfate	7.3E+01		2.8E+02	NA
General Chemistry				
Alkalinity	2.5E+02	*	----	NA
Ammonia	0.05*	*	----	NA
Dissolved Solids	5.3E+02		9.0E+02	NA
Nitrogen	9.1E-01		4.2E+00	NA
Organic Carbon	5.1E+00		1.4E+01	NA
Phosphorous	5.3E-01		2.6E+00	NA
Suspended Solids	1.4E+01		6.4E+01	NA
Metals (Unfiltered-ug/L)				
Aluminum	1.5E+02		3.6E+02	NA
Antimony	9.5E-01	*	----	3.2E+03
Arsenic	1.4E+00	*	----	2.4E+03
Barium	7.5E+01		1.3E+02	5.7E+05
Beryllium	1.0E-01	*	----	4.0E+04
Bismuth	1.6E+00	*	----	NA
Cadmium	1.5E-01	*	----	4.0E+03
Calcium	8.2E+04		1.2E+05	NA
Chromium	1.7E+01		1.1E+00	4.0E+04
Cobalt	3.0E-01	*	----	NA
Copper	3.2E+00		8.1E+00	NA
Cyanide	5.0E+00	*	----	2.4E+04
Iron	4.1E+02		1.7E+03	NA
Lead	1.2E+00	*	----	NA
Lithium	1.9*		----	NA
Magnesium	3.0E+04		4.4E+04	NA
Manganese	9.3E+01		4.6E+02	4.0E+04
Mercury	1.0E-01	*	----	2.4E+03
Molybdenum	5.2E+00		1.5E+01	NA
Nickel	1.2E+01		9.6E+01	1.6E+05
Potassium	3.3E+03		1.2E+04	NA
Selenium	1.1E+00	*	----	NA
Silver	0.25*		----	4.0E+04
Sodium	2.1E+04		6.5E+04	NA
Thallium	1.8E+00	*	----	NA
Tin	5.3E+00	*	----	NA
Vanadium	5.5E-01		5.5E-01	5.7E+04
Zinc	1.3E+01		4.0E+01	2.4E+06
Metals (Filtered-ug/L)				
Aluminum	9.6E+00	*	----	NA
Antimony	9.5E-01	*	----	3.2E+03
Arsenic	8.3E-01	*	----	2.4E+03
Barium	7.8E+01		1.5E+02	5.7E+05
Beryllium	1.0E-01	*	----	4.0E+04
Bismuth	1.5E+00	*	----	NA
Cadmium	1.5E-01	*	----	4.0E+03
Calcium	8.5E+04		1.3E+05	NA
Chromium	4.5E-01	*	----	4.0E+04
Cobalt	3.0E-01	*	----	NA
Copper	3.6E+00		9.3E+00	NA
Cyanide	5.0E+00	*	----	2.4E+04
Iron	7.9E+00	*	----	NA

Table 3.1.4—Mound Plant Surface Water and Sediment Background Stream Surface Water Parameters and Background Values

Parameter Name	Mean Value		Background Value	Recreational-Surface Water Guideline Values
Lead	9.5E-01	*	----	NA
Lithium	1.9E+00	*	----	NA
Magnesium	3.2E+04		4.6E+04	NA
Manganese	8.5E+01		5.3E+02	4.0E+04
Mercury	1.0E-01	*	----	2.4E+03
Molybdenum	2.7E+00		7.0E+00	NA
Nickel	1.1E+00	*	----	1.6E+05
Potassium	3.5E+03		1.4E+04	NA
Selenium	5.5E-01		----	NA
Silver	2.5E-01	*	----	4.0E+04
Sodium	2.4E+04		8.0E+04	NA
Thallium	1.1E+00	*	----	NA
Tin	3.0E+00	*	----	NA
Vanadium	2.2E-01	*	----	5.7E+04
Zinc	3.1E+00		8.0E+00	2.4E+06
Pesticides(ug/L)				
4,4'-DDD	5.0E-02	*	----	NA
4,4'-DDE	5.0E-01	*	----	4.0E+02
4,4'-DDT	5.0E-02	*	----	1.5E-01
Aldrin	2.5E-02	*	----	NA
Alpha Chlordane	2.5E-02	*	----	NA
Alpha-BHC	2.5E-02	*	----	NA
Aroclor-1016	2.5E-01	*	----	NA
Aroclor-1221	2.5E-01	*	----	NA
Aroclor-1232	2.5E-01	*	----	NA
Aroclor-1242	2.5E-01	*	----	NA
Aroclor-1248	2.5E-01	*	----	1.8E+01
Aroclor-1254	2.5E-01	*	----	1.2E+03
Aroclor-1260	2.5E-01	*	----	1.8E+01
Beta-BHC	2.5E-02	*	----	7.6E+01
Delta-BHC	2.5E-02	*	----	NA
Dieldrin	5.0E-02	*	----	8.6E+00
Endosulfan I	2.5E-02	*	----	NA
Endosulfan II	5.0E-02	*	----	NA
Endosulfan Sulfate	5.0E-02	*	----	NA
Endrin	5.0E-02	*	----	NA
Endrin Aldehyde	5.0E-02	*	----	NA
Endrin Ketone	5.0E-02	*	----	NA
Gamma Chlordane	2.5E-02	*	----	NA
Gamma-BHC (Lindane)	2.5E-02	*	----	NA
Heptachlor	2.5E-02	*	----	NA
Heptachlor Epoxide	2.5E-02	*	----	NA
Methoxychlor	2.5E-01	*	----	NA
Toxaphene	2.5E+00	*	----	NA
Radiological(pCi/L)				
Americium-241	1.1E-01	*	----	2.3E+02
Bismuth-207	3.3E+00	*	----	1.5E+04
Bismuth-210M	4.4E+00	*	----	NA
Cesium-137	3.8E+00	*	----	2.4E+03
Cobalt-60	4.9E+00	*	----	4.1E+03
Plutonium-238	1.3E-01	*	----	2.6E+02
Plutonium-239/240	1.3E-01	*	----	2.4E+02
Potassium-40	1.4E+02		1.8E+02	NA
Radium-226	1.6E-01		1.5E-01	2.6E+02
Strontium-90	2.3E-01	*	----	1.4E+03
Thorium-228	1.1E-01	*	----	3.3E+02

Table 3.1.4—Mound Plant Surface Water and Sediment Background Stream Surface Water Parameters and Background Values

Parameter Name	Mean Value		Background Value	Recreational–Surface Water Guideline Values
Thorium-230	9.5E-02	*	----	2.1E+03
Thorium-232	6.7E-02	*	----	2.3E+03
Tritium	1.5E+02	*	----	1.2E+05
Uranium-234	4.7E-01		1.3E+00	1.7E+03
Uranium-235	1.0E-01	*	----	1.6E+03
Uranium-238	3.6E-01		9.5E-01	1.2E+03

---- = Not calculated for less than 4 detections
* = median instead of mean

Note on Scientific Notation:

Please see definition in Table 3.1.1.

Note on Calculation of the Mean and the Median:

The ***mean*** is the average of the set of results. The ***median*** is calculated differently. It is the middle value of a sample of results arranged in order of magnitude. If the number of results is an even number, the median is found by averaging the two middle results (Fritz 1979).

3.1.4 Application of Background

The preferred method to determine if a value is above background is to compare the value to a tolerance limit.

The data presented in this report consist of hits determined to be above background levels. To compare the environmental data, the background data are treated in the manner prescribed in the Ohio *Final How Clean Is Clean Policy* (OEPA 1991). The preferred method to determine if a value is above background is to compare the value to a tolerance limit. The concentration of constituents in each area is compared with the tolerance limit for each constituent. If concentrations do not Fall within (below) the tolerance limit, this provides statistically significant evidence that they are above background levels. In this method, the 95% Upper Tolerance Limit is calculated and adopted as the background value. Variations in some parameters may be attributed to variations in geological and geochemical settings, thus actual background levels vary from location to location.

In this method, the 95% Upper Tolerance Limit is calculated and adopted as the background value.

Any set of data can be characterized by a measure of its central tendency (in this case, the arithmetic mean, m) and a measure of its variability (such as the standard deviation, s). The tolerance limit is calculated using data from the background sites by adding a measure of the variability to the mean. The appropriate parameter to describe variability in environmental systems is the standard deviation times a "tolerance factor, k, for one-sided normal tolerance intervals." A one-sided interval is calculated since there is no interest in a lower limit of background. The size of the tolerance factor, k, varies inversely with the number of samples considered. For example, for a sample size of 5, k = 4.202; for a sample size of 50, k shrinks to 2.065, indicating less uncertainty in the data. For the relevant range of sample sizes, k approaches a value of two as the sample size increases. Since the current background data consist of from seven to 26 observations, the k value ranges from 2.27 to 3.399. The upper tolerance limits for background are calculated by the formula:

$$\text{Upper Tolerance Limits} = k*s + m$$

The upper tolerance limits determined through the application of mean-plus-tolerance factor are adopted as the background levels.

The tolerance limits (background values) for each parameter determined in this manner are shown in Tables 3.1.1 through 3.1.4. The upper tolerance limits determined through the application of mean-plus-tolerance factor are adopted as the background levels.

For those parameters with less than four detections, appropriate statistical measures are not available and background is not well established. The observed variation in the data primarily reflect the variation in analytical detection limits, with little relationship to the natural occurrence of the constituent. In the balance of the report, only positive detections of analytes are discussed.

The background data presented are based on all available data.

The background data presented in this report are based on all available data. If additional data become available, a better determination of background may be possible. However, the current data set is sufficient to satisfy the goals of this sampling program.

3.1.5 Application of Risk-Based Guideline Values

For all samples discussed in the balance of the report, observed concentrations above background are compared to the Mound Plant Risk-Based Guideline Values (HAZWRAP 1995). Accordingly, the background levels are compared to the guideline values. The computed upper tolerance limits are all less than the relevant 10^{-6} Guideline Value for recreational exposure, with three exceptions. The upper tolerance limits of cesium^{137}, radium^{226}, and throium^{228} in background pond and stream sediments exceed their respective 10^{-6} guideline value (Table 3.1.5).

Background levels for Cs^{137}, Ra^{226}, and Th^{228} are above Risk-Based Guideline Values.

However, all are below the 10^{-5} level. Thus, any observation of Cs^{137}, Ra^{226}, or Th^{228} found to be above background will automatically exceed a risk level of 10^{-6}. The average Ra^{226} concentration in background sediments also exceeds the 10^{-6} level. The significance of a finding of a contaminant above a Guideline Value will depend upon the specific site conditions.

Table 3.1.5—Comparison with Risk-Based Guideline Values (pCi/g)

	Cesium^{137}		*Radium^{226}*		*Thorium^{228}*	
10^{-6} Guideline Value	0.84		0.26		0.85	
Sample Class	*Mean*	*UTL*	*Mean*	*UTL*	*Mean*	*UTL*
Background Pond Sediments	0.57	1.54	1.06	1.64	0.84	1.62
Background Stream Sediments	0.35	1.54	0.92	2.12	0.66	1.75

3.2 Central Valley System

3.2.1 Introduction

*The **Central Valley System** consists of the Asphalt Lined Pond, the Plant Drainage Ditch, the Overflow Pond, and the Retention Basins.*

The Central Valley System consists of the Asphalt Lined Pond, the Plant Drainage Ditch, the Overflow Pond and the Retention Basins. Previous documents, such as the Site-Wide Work Plan (DOE 1992a), referred to this as the stormwater retention and discharge system. The term "Central Valley System" is more descriptive and is used throughout this report.

Analytical results for soil, sediment, and surface water samples collected in the Central Valley System are compared to the background analyte concentrations established. Results that are above background levels are compared to the Mound Plant Risk-Based Guideline Values (HAZWRAP 1995) (see Tables 3.1.1 though 3.1.4). The Central Valley System surface water samples are compared to the Recreational-Surface Water scenario. The Central Valley System sediment and subsurface soils samples are compared to the Construction/Mound Employee-Soil/Sediment scenario.

3.2.2 Sample Locations

3.2.2.1 Pond Surface Water

Pond surface water samples were collected during the low and high flow sampling events from three Central Valley System ponds: the Asphalt Lined Pond, the Overflow Pond, and the Retention Basins. Surface water samples were collected

from four locations at the Asphalt Lined Pond, from three locations at the Retention Basin, and from five locations at the Overflow Pond during both events. Sample locations for each pond are presented in Figures 3.2.1 and 3.2.2.

3.2.2.2 Stream Surface Water

Stream surface water samples were collected during the low and high flow sampling events from the Central Valley System Plant Drainage Ditch at three locations. Samples were collected for analyses at locations MND21-2101, MND21-2102, and MND21-2103, as presented in Figure 3.2.3.

3.2.2.3 Pond Sediment

Pond sediment samples were collected during the low and high flow sampling events from three Central Valley System ponds: the Asphalt Lined Pond, the Overflow Pond, and the Retention Basins. Sediment samples were collected from five locations at the Asphalt Lined Pond, from five locations at the Overflow Pond, and from seven locations at the Retention Basins. During the Fall event, Asphalt Lined Pond sediment was composited into one sample. Sample locations for each pond are presented in Figures 3.2.1 and 3.2.2.

3.2.2.4 Stream Sediment

Stream sediment samples were collected during the Spring and the Fall sampling events from the Central Valley System Plant Drainage Ditch. Sediment samples were collected for analyses at eight locations during each sampling event as presented in Figure 3.2.3.

3.2.2.5 Subsurface Soils

Subsurface soil samples were collected during the Fall sampling event at three locations along the Central Valley System Plant Drainage Ditch.

Subsurface soil samples were collected during the Fall sampling event at three locations along the Central Valley System Plant Drainage Ditch, designated as locations MND23-4001, MND23-4002, and MND23-4003 (see Figure 3.2.3). Five subsurface soil samples were collected for analyses at MND23-4001 from five depth intervals between 5 and 25 feet below ground surface (bgs). Five samples were collected for analyses at MND23-4002 at four depth intervals between 3 and 22 feet bgs. Ten subsurface soil samples were collected at MND23-4003 from seven depth intervals between 5 and 36.5 feet bgs.

Figure 3.2.1 Asphalt Lined Pond

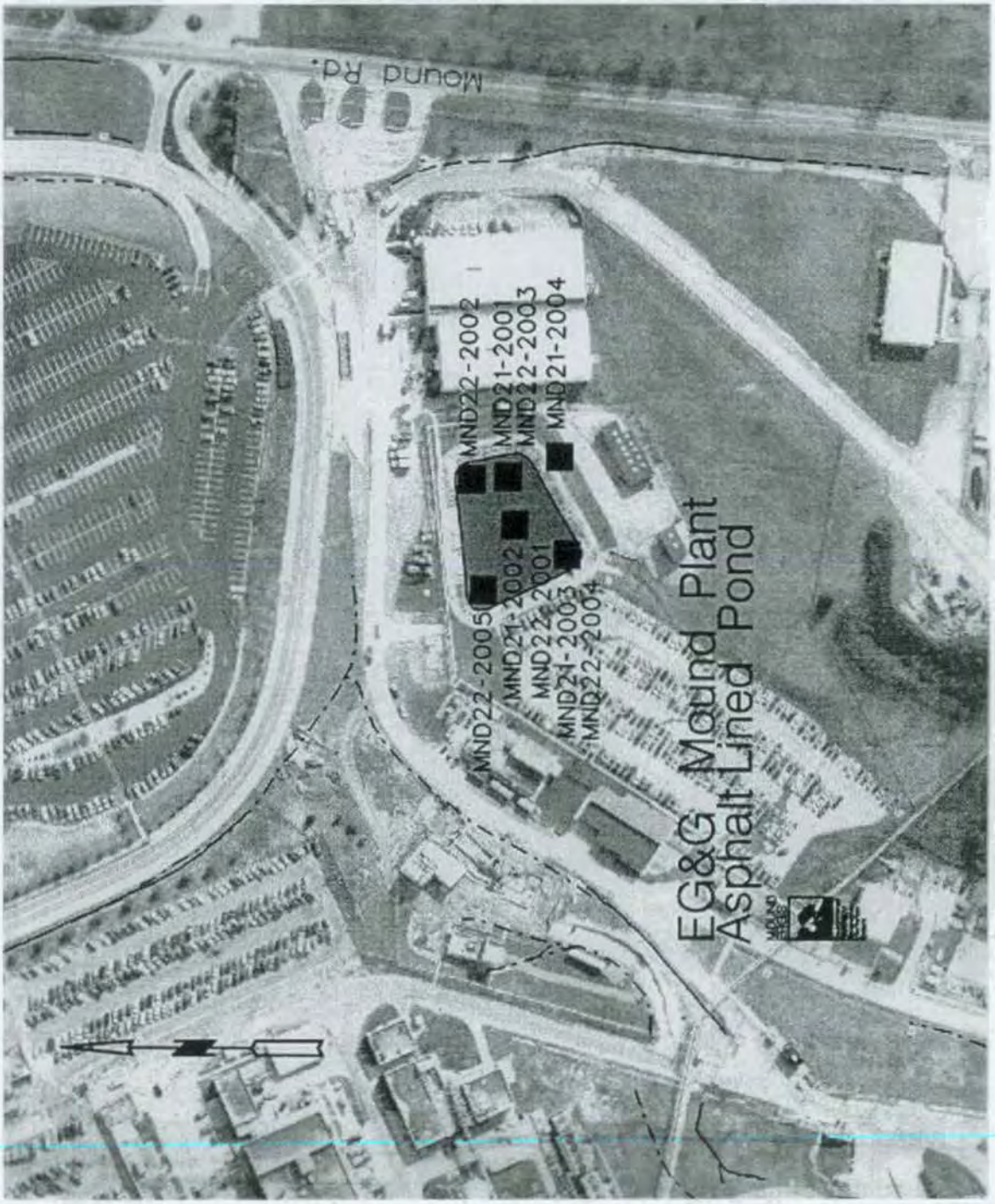


Figure 3.2.2 Retention Basins and Overflow Pond

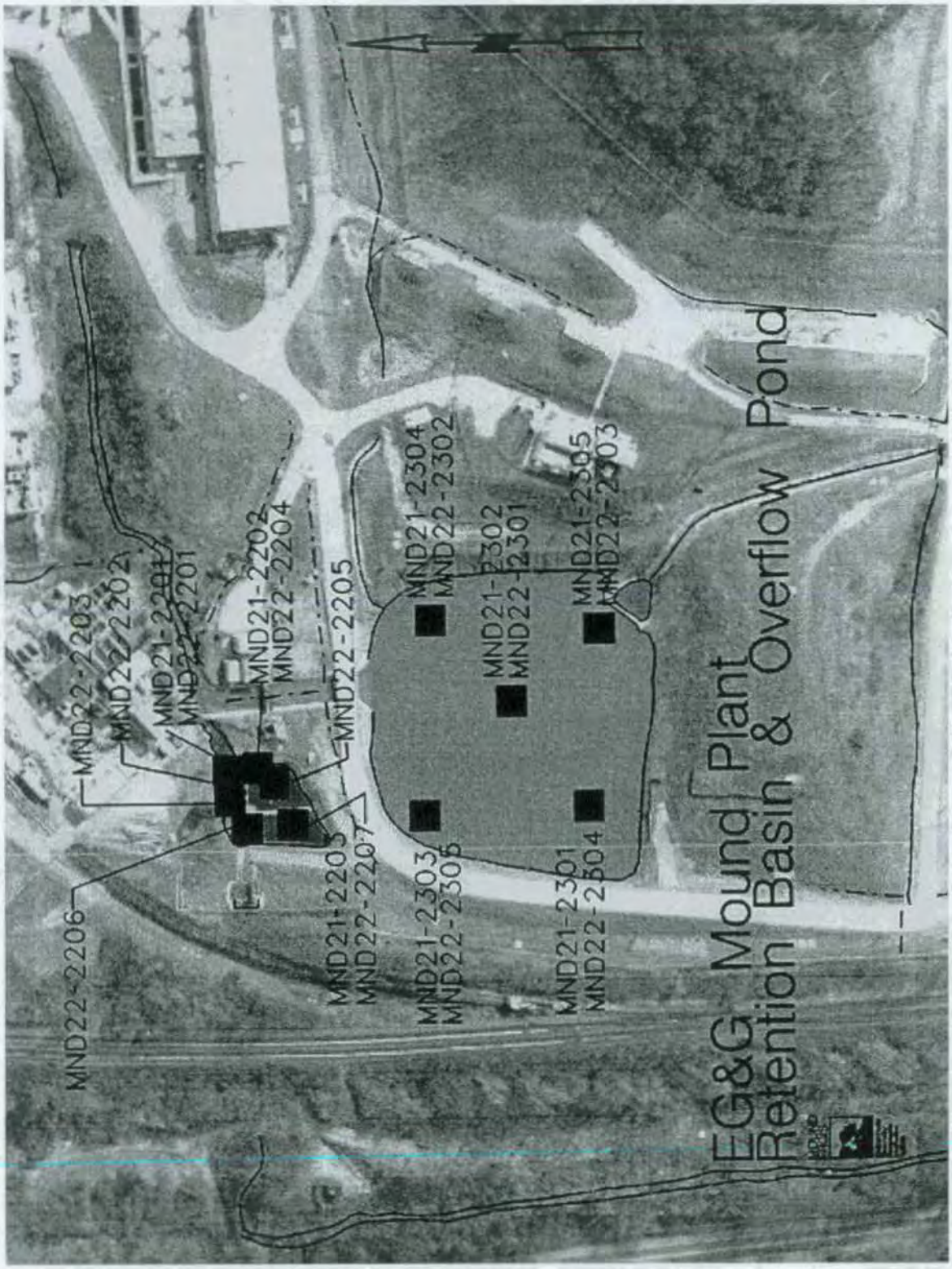


Figure 3.2.3 Drainage Ditch

3.2.3 Field Program Changes

Changes in the field program sampling plans are noted for the sampling conducted in the Central Valley System. Two changes are noted, one concerning sample collection at the Asphalt Lined Pond and one concerning sample collection at the Plant Drainage Ditch. The following text details the two changes in sampling plan specifications.

1. *Asphalt-Lined Pond*: The Field Sampling Plan (DOE 1992b) specifies five sediment samples be collected. During the Fall sampling event only a single composite sediment sample was collected from the Asphalt-Lined Pond, due to the limited quantity of sediment.

2. *Plant Drainage Ditch*: The Field Sampling Plan (DOE 1992b) specifies approximately 18 subsurface soil samples to be collected. Sixteen subsurface soil samples were collected during the Fall sampling event. Additional samples were not collected because the water table or bedrock was encountered at shallower depths than expected.

3.2.4 Discussion of Analytical Results

3.2.4.1 Pond Surface Water

Results of laboratory analyses for surface water samples collected at the Central Valley System ponds showed 51 analytes detected in the pond surface waters at concentrations above background levels. The analytes consist of 4 common anions, 4 explosives, 2 general chemistry, 23 metals, 9 radiological, 5 semivolatile, and 4 volatile compounds. Analytical results for all analytes detected at levels above background are presented in Table A.2.1 in Appendix A.

Only one analyte was detected at a concentration above the Mound Plant Risk-Based Guideline Value (HAZWRAP 1995).

Of the 51 analytes detected at concentrations above background levels, only one analyte (pentachlorophenol) was detected at a concentration above the Mound Plant Risk-Based Guideline Value (HAZWRAP 1995). Sample location 000337 from the Asphalt Lined Pond, as shown in Figure 3.2.1, had a concentration of 3.0 µg/L pentachlorophenol that exceeded the Guideline Value of 0.28 µg/L. This result was reported by the laboratory with a J qualifier. The J qualifier indicates that the detected concentration was below the method detection limit and is an estimated value.

3.2.4.2 Stream Surface Water

No analytes were detected at levels above the Mound Plant Risk-Based Guideline Values (HAZWRAP 1995).

Analytical results above background for surface water samples collected in the Plant Drainage Ditch are shown on Table A.2.2 in Appendix A. Results show a total of 26 analytes detected at levels above the background level. The analytes consist of 1 common anion, 2 explosives, 3 general chemistry, 14 metals, 2 radiological, 2 semivolatile, and 2 volatile compounds. No analytes were detected at levels above the Mound Plant Risk-Based Guideline Values (HAZWRAP 1995). These results reveal a general water chemistry similar to the Central Valley System pond water samples.

3.2.4.3 Pond Sediment

Analytical results for sediment samples collected at the three Central Valley System ponds show 64 analytes detected at levels above background. The analytes consist of 4 explosives, 1 general chemistry, 17 metals, 6 pesticides/PCBs, 8 radiological, 24 semivolatile, and 4 volatile compounds. Nine analytes were detected at levels above their respective Mound Plant Risk-Based Guideline Values (HAZWRAP 1995). Analytical results are presented in Table A.2.3 in Appendix A. Table 3.2.1 lists the results for analytes detected at levels above the Guideline Value. Figures 3.2.1 and 3.2.2 show sample locations.

Plutonium^{238} was detected at levels above the Risk-Based Guideline Value in each pond sediment sample collected.

Plutonium^{238} was detected at levels above the Mound Plant Risk-Based Guideline Value (HAZWRAP 1995) in all 30 pond sediment samples collected. Thorium^{228} was detected in each of the Asphalt Lined Pond sediments collected during the Spring sampling event at levels exceeding the Mound Plant Risk-Based Guideline Value (HAZWRAP 1995). Seven semivolatile compounds (all polynuclear aromatic hydrocarbons) were also detected at various sediment sample locations at levels exceeding the Mound Plant Risk-Based Guideline Values (HAZWRAP 1995) (see Table 3.2.1).

Table 3.2.1—Summary of Pond Sediment Results Above Risk-Based Guideline Values

Analyte	No. of Samples	Risk-Based Guideline Value	Concentration Range	Units
Plutonium238	30	5.50	15-257	pCi/g
Thorium228	5	0.85	2.2-9.4	pCi/g
Benzo(a)anthracene	4	4.10	4.2-12	mg/kg
Benzo(a)pyrene	29	0.41	0.44-15	mg/kg
Benzo(a)fluoranthene	8	4.10	4.2-26	mg/kg
Benzo(g,h,i)perylene	11	0.41	0.4-8.5	mg/kg
Dibenzo(a,h)anthracene	4	0.41	0.84-2.4	mg/kg
Indeno(1,2,3-cd)pyrene	1	4.10	7.7	mg/kg
Pyrene	1	32.00	37	mg/kg

A detailed description of the detected analytes above the Mound Plant Risk-Based Guideline Values (HAZWRAP 1995) by area is shown in Table 3.2.2.

Table 3.2.2—Pond Sediment Results Above Risk-Based Guideline Values by Area

Parameter	Station	Sample ID	Result	Lab Qualifier	Guideline Values	Units
Asphalt Lined Pond						
Benzo(a)anthracene	MND22-2001	000417	12		4.10	mg/kg
Benzo(a)pyrene	MND22-2001	000417	15		0.41	mg/kg
Benzo(a)pyrene	MND22-2001	900-000071	4.2		0.41	mg/kg
Benzo(b)fluoranthene	MND22-2001	000417	26	X	4.10	mg/kg
Benzo(b)fluoranthene	MND22-2001	900-000071	7	X	4.10	mg/kg
Benzo(g,h,i)perylene	MND22-2001	000417	8.5		0.41	mg/kg
Benzo(g,h,i)perylene	MND22-2001	900-000071	1.3	J	0.41	mg/kg
Dibenzo(a,h)anthracene	MND22-2001	000417	2.4	J	0.41	mg/kg
Indeno(1,2,3-cd)pyrene	MND22-2001	000417	7.7		4.10	mg/kg
Plutonium^{238}	MND22-2001	000417	242		5.50	pCi/g
Plutonium^{238}	MND22-2001	900-000071	224		5.50	pCi/g
Pyrene	MND22-2001	000417	37		32	mg/kg
Thorium^{228}	MND22-2001	000417	3.09		0.85	pCi/g
Benzo(a)pyrene	MND22-2002	000498	3.4		0.41	mg/kg
Benzo(b)fluoranthene	MND22-2002	000498	6.2	X	4.10	mg/kg
Benzo(g,h,i)perylene	MND22-2002	000498	1.5	J	0.41	mg/kg
Plutonium^{238}	MND22-2002	000498	196		5.50	pCi/g
Thorium^{228}	MND22-2002	000498	2.63		0.85	pCi/g
Benzo(a)anthracene	MND22-2003	000499	11		4.10	mg/kg
Benzo(a)pyrene	MND22-2003	000499	9.5		0.41	mg/kg
Benzo(b)fluoranthene	MND22-2003	000499	22	X	4.10	mg/kg
Benzo(g,h,i)perylene	MND22-2003	000499	3.7	J	0.41	mg/kg
Dibenzo(a,h)anthracene	MND22-2003	000499	1.3	J	0.41	mg/kg
Plutonium^{238}	MND22-2003	000499	257		5.50	pCi/g
Thorium^{228}	MND22-2003	000499	9.44		0.85	pCi/g
Benzo(a)anthracene	MND22-2004	000500	4.2		4.10	mg/kg
Benzo(a)pyrene	MND22-2004	000500	5.5		0.41	mg/kg
Benzo(b)fluoranthene	MND22-2004	000500	11	X	4.10	mg/kg
Benzo(g,h,i)perylene	MND22-2004	000500	3.5		0.41	mg/kg
Dibenzo(a,h)anthracene	MND22-2004	000500	0.99	J	0.41	mg/kg
Plutonium^{238}	MND22-2004	000500	163		5.50	pCi/g
Thorium^{228}	MND22-2004	000500	2.74		0.85	pCi/g
Benzo(a)anthracene	MND22-2005	000501	4.2		4.10	mg/kg
Benzo(a)pyrene	MND22-2005	000501	5.7		0.41	mg/kg
Benzo(b)fluoranthene	MND22-2005	000501	12	X	4.10	mg/kg
Benzo(g,h,i)perylene	MND22-2005	000501	3.2	J	0.41	mg/kg
Dibenzo(a,h)anthracene	MND22-2005	000501	0.84	J	0.41	mg/kg
Plutonium^{238}	MND22-2005	000501	139		5.50	pCi/g
Thorium^{228}	MND22-2005	000501	2.23		0.85	pCi/g
Retention Basins						
Benzo(a)pyrene	MND22-2201	000426	1.7		0.41	mg/kg
Benzo(a)pyrene	MND22-2201	900-000056	0.94		0.41	mg/kg
Benzo(g,h,i)perylene	MND22-2201	000426	0.69	J	0.41	mg/kg

Table 3.2.2—Pond Sediment Results Above Risk-Based Guideline Values by Area

Parameter	Station	Sample ID	Result	Lab Qualifier	Guideline Values	Units
Plutonium^{238}	MND22-2201	900-000056	43.7		5.50	pCi/g
Plutonium^{238}	MND22-2201	000426	30.7		5.50	pCi/g
Benzo(a)pyrene	MND22-2202	900-000057	1.7	D	0.41	mg/kg
Benzo(a)pyrene	MND22-2202	000427	0.65	J	0.41	mg/kg
Benzo(g,h,i)perylene	MND22-2202	000427	0.41	J	0.41	mg/kg
Plutonium^{238}	MND22-2202	900-000057	30.5		5.50	pCi/g
Plutonium^{238}	MND22-2202	000427	29		5.50	pCi/g
Benzo(a)pyrene	MND22-2203	900-000058	2.4	D	0.41	mg/kg
Benzo(a)pyrene	MND22-2203	000428	0.52	J	0.41	mg/kg
Benzo(b)fluoranthene	MND22-2203	900-000058	4.2	X	4.10	mg/kg
Benzo(g,h,i)perylene	MND22-2203	900-000058	0.72		0.41	mg/kg
Plutonium^{238}	MND22-2203	000428	35.1		5.50	pCi/g
Plutonium^{238}	MND22-2203	900-000058	26.3		5.50	pCi/g
Benzo(a)pyrene	MND22-2204	900-000059	0.75	J	0.41	mg/kg
Benzo(a)pyrene	MND22-2204	000429	0.71	J	0.41	mg/kg
Plutonium^{238}	MND22-2204	000429	31.1		5.50	pCi/g
Plutonium^{238}	MND22-2204	900-000059	28.8		5.50	pCi/g
Benzo(a)pyrene	MND22-2205	000430	0.9	J	0.41	mg/kg
Benzo(a)pyrene	MND22-2205	900-000060	0.56	J	0.41	mg/kg
Benzo(g,h,i)perylene	MND22-2205	000430	0.55	J	0.41	mg/kg
Plutonium^{238}	MND22-2205	000430	37.8		5.50	pCi/g
Plutonium^{238}	MND22-2205	900-000060	28.4		5.50	pCi/g
Benzo(a)pyrene	MND22-2206	000431	0.56	J	0.41	mg/kg
Benzo(a)pyrene	MND22-2206	900-000061	0.47	J	0.41	mg/kg
Plutonium^{238}	MND22-2206	900-000061	31.2		5.50	pCi/g
Plutonium^{238}	MND22-2206	000431	24.7		5.50	pCi/g
Benzo(a)pyrene	MND22-2207	000432	0.51	J	0.41	mg/kg
Benzo(a)pyrene	MND22-2207	900-000062	0.46	J	0.41	mg/kg
Plutonium^{238}	MND22-2207	000432	29.3		5.50	pCi/g
Plutonium^{238}	MND22-2207	900-000062	26.6		5.50	pCi/g
Overflow Pond						
Benzo(a)pyrene	MND22-2301	900-000039	0.49	J	0.41	mg/kg
Benzo(a)pyrene	MND22-2301	000409	0.44	J	0.41	mg/kg
Plutonium^{238}	MND22-2301	900-000039	27.2		5.50	pCi/g
Plutonium^{238}	MND22-2301	000409	23.1		5.50	pCi/g
Benzo(a)pyrene	MND22-2302	000497	2.1		0.41	mg/kg
Benzo(a)pyrene	MND22-2302	900-000037	1.2		0.41	mg/kg
Benzo(b)fluoranthene	MND22-2302	000497	4.9	X	4.10	mg/kg
Benzo(g,h,i)perylene	MND22-2302	000497	0.67	J	0.41	mg/kg
Plutonium^{238}	MND22-2302	000497	26.4		5.50	pCi/g
Plutonium^{238}	MND22-2302	900-000037	15.1		5.50	pCi/g
Benzo(a)pyrene	MND22-2303	900-000040	0.84		0.41	mg/kg
Benzo(a)pyrene	MND22-2303	000410	0.46	J	0.41	mg/kg
Plutonium^{238}	MND22-2303	000410	20.6		5.50	pCi/g

Table 3.2.2—Pond Sediment Results Above Risk-Based Guideline Values by Area

Parameter	Station	Sample ID	Result	Lab Qualifier	Guideline Values	Units
Plutonium^{238}	MND22-2303	900-000040	16.7		5.50	pCi/g
Benzo(a)pyrene	MND22-2304	000411	0.83	J	0.41	mg/kg
Benzo(a)pyrene	MND22-2304	900-000041	0.62	J	0.41	mg/kg
Plutonium^{238}	MND22-2304	900-000041	26.2		5.50	pCi/g
Plutonium^{238}	MND22-2304	000411	22.1		5.50	pCi/g
Benzo(a)pyrene	MND22-2305	900-000038	0.71	J	0.41	mg/kg
Plutonium^{238}	MND22-2305	000412	27.4		5.50	pCi/g
Plutonium^{238}	MND22-2305	900-000038	23.2		5.50	pCi/g

J = Value is estimated
D = Value is reported from a diluted sample
X = Special lab designation - value is estimated as discussed in Appendix B

3.2.4.4 Stream Sediments (Plant Drainage Ditch)

Plutonium^{238} was detected at 6 of the 8 sample locations in 11 samples at levels exceeding the Risk-Based Guideline Value.

Analytical results above background for sediment samples collected along the Plant Drainage Ditch are presented in Table A.2.4 in Appendix A. Results show 44 analytes detected at levels above background. The analytes consist of 2 explosives, 1 general chemistry, 13 metals, 8 pesticides/PCBs, 3 radiological, 16 semivolatile, and 1 volatile compound. Six analytes were also detected at levels above their respective Mound Plant Risk-Based Guideline Values (HAZWRAP 1995). Table 3.2.2 lists the results for analytes detected at levels above Risk-Based Guideline Value. Figure 3.2.3 shows sample locations for the stream sediments.

The semivolatile compound benzo(a)pyrene was detected at levels above the Risk-Based Guideline Value in ten of the sediment samples.

Sediment samples were collected during both low and high flow sampling events at eight sample locations along the ditch for a total of 16 samples. Plutonium^{238} was detected at 6 of the 8 sample locations (in 11 samples total) at levels exceeding the Mound Plant Risk-Based Guideline Value (HAZWRAP 1995). The semivolatile compound benzo(a)pyrene was detected at levels above the Risk-Based Guideline Value in 10 of the sediment samples. Four other semivolatile compounds were detected in two or fewer samples at levels above the Risk-Based Guideline Value (see Table 3.2.3).

Table 3.2.3—Summary of Plant Drainage Ditch Sediment Results Above Risk-Based Guideline Values

Analyte	No. of Samples	Risk-Based Guideline Value	Concentration Range	Units
Plutonium238	11	5.50	6.2-28	pCi/g
Benzo(a)pyrene	10	0.41	0.47-11	mg/kg
Benzo(a)anthracene	2	4.10	4.6-14	mg/kg
Benzo(a)fluoranthene	2	4.10	6.0-20	mg/kg
Dibenzo(a,h)anthracene	2	0.41	0.5-2	mg/kg
Indeno(1,2,3-cd)pyrene	1	4.10	7.5	mg/kg

A detailed description of the detected analytes above the Mound Plant Risk-Based Guideline Values (HAZWRAP 1995) is shown in Table 3.2.4.

Table 3.2.4—Plant Drainage Ditch Sediment Results Above Risk-Based Guideline Values

Parameter	Station	Sample ID	Result	Lab Qualifier	Guideline Value	Units
Benzo(a)anthracene	MND22-2101	900-000243	14	D	4.10	mg/kg
Benzo(a)pyrene	MND22-2101	900-000243	1.1	D	0.41	mg/kg
Benzo(a)pyrene	MND22-2101	000418	0.56		0.41	mg/kg
Benzo(b)fluoranthene	MND22-2101	900-000243	20	DX	4.10	mg/kg
Dibenzo(a,h)anthracene	MND22-2101	900-000243	2	DJ	0.41	mg/kg
Indeno(1,2,3-cd)pyrene	MND22-2101	900-000243	7.5	DJ	4.10	mg/kg
Benzo(a)pyrene	MND22-2102	900-000223	0.47		0.41	mg/kg
Benzo(a)anthracene	MND22-2103	000420	4.6	D	4.10	mg/kg
Benzo(a)pyrene	MND22-2103	000420	3.6	D	0.41	mg/kg
Benzo(a)pyrene	MND22-2103	900-000224	0.73		0.41	mg/kg
Benzo(b)fluoranthene	MND22-2103	000420	6	DX	4.10	mg/kg
Dibenzo(a,h)anthracene	MND22-2103	000420	0.5	DJ	0.41	mg/kg
Plutonium^{238}	MND22-2103	900-000224	23.7		5.50	pCi/g
Benzo(a)pyrene	MND22-2104	000421	1.8	D	0.41	mg/kg
Plutonium^{238}	MND22-2104	000421	27.6		5.50	pCi/g
Plutonium^{238}	MND22-2104	900-000244	9.13		5.50	pCi/g
Benzo(a)pyrene	MND22-2105	000422	1.1		0.41	mg/kg
Plutonium^{238}	MND22-2105	000422	12.5		5.50	pCi/g
Plutonium^{238}	MND22-2105	900-000226	6.24		5.50	pCi/g
Benzo(a)pyrene	MND22-2106	000423	0.56		0.41	mg/kg
Plutonium^{238}	MND22-2106	000423	9.62		5.50	pCi/g
Plutonium^{238}	MND22-2106	900-000228	8.87		5.50	pCi/g
Benzo(a)pyrene	MND22-2107	900-000245	0.5		0.41	mg/kg
Plutonium^{238}	MND22-2107	000424	15.3		5.50	pCi/g
Plutonium^{238}	MND22-2107	900-000245	8.91		5.50	pCi/g
Benzo(a)pyrene	MND22-2108	900-000229	0.49		0.41	mg/kg
Plutonium^{238}	MND22-2108	900-000229	21.2		5.50	pCi/g
Plutonium^{238}	MND22-2108	000425	14.7		5.50	pCi/g

J = Value is estimated
D = Value is reported from a diluted sample
X = Special lab designation - value is estimated as discussed in Appendix B

3.2.4.5 Subsurface Soil

Analytical results above detection limits for subsurface soil samples collected at three locations along the Plant Drainage Ditch during the Fall sampling event are shown on Table A.2.5 in Appendix A.

Only Radium^{226} and Thorium^{228} were detected at levels above their respective Risk-Based guideline values.

Results show 32 analytes detected at levels above minimum laboratory detection limits. Only radium^{226} and thorium^{228} were detected at levels above their respective Mound Plant Risk-Based Guideline Values (HAZWRAP 1995). Radium^{226} was detected in 16 samples at concentrations ranging from 0.58 to 1.3 pCi/g, which is above the Guideline Value of 0.14 pCi/g. Thorium^{228} was detected in three samples at a concentration range of 0.97 to 1.2 pCi/g, which is above the Guideline Value of 0.85 pCi/g. Figure 3.2.3 presents the sample locations for the subsurface soil samples.

A detailed description of the detected analytes above Mound Plant Risk-Based Guideline Values (HAZWRAP 1995) is shown in Table 3.2.5.

The OU9 Background Soils Investigation (DOE 1994c) determined that the soil background level (the 95% confidence interval of the mean) was 1.22 pCi/g for radium^{226} and 1.01 pCi/g for thorium^{228}. The radium^{226} and thorium^{228} concentration levels in the Plant Drainage Ditch subsurface soil samples are below the OU9 background soils levels.

Table 3.2.5—Plant Drainage Ditch Subsurface Soil Results Above Risk-Based Guideline Values

Parameter	Station	Sample ID	Result	Lab Qualifier	Guideline Value	Units
Radium^{226}	MND23-4001	900-000279	1.27		0.14	pCi/g
Radium^{226}	MND23-4001	900-000285	0.98		0.14	pCi/g
Radium^{226}	MND23-4001	900-000272	0.966		0.14	pCi/g
Radium^{226}	MND23-4001	900-000283	0.773		0.14	pCi/g
Radium^{226}	MND23-4001	900-000280	0.746		0.14	pCi/g
Thorium^{228}	MND23-4001	900-000283	1.18		0.85	pCi/g
Thorium^{228}	MND23-4001	900-000285	1.04		0.85	pCi/g
Radium^{226}	MND23-4002	900-000266	0.872		0.14	pCi/g
Radium^{226}	MND23-4002	900-000267	0.74		0.14	pCi/g
Radium^{226}	MND23-4002	900-000270	0.688		0.14	pCi/g
Radium^{226}	MND23-4002	900-000269	0.585		0.14	pCi/g
Thorium^{228}	MND23-4002	900-000267	0.97		0.85	pCi/g
Radium^{226}	MND23-4003	900-000286	1.01		0.14	pCi/g
Radium^{226}	MND23-4003	900-000293	1		0.14	pCi/g
Radium^{226}	MND23-4003	900-000289	0.938		0.14	pCi/g
Radium^{226}	MND23-4003	900-000290	0.907		0.14	pCi/g
Radium^{226}	MND23-4003	900-000292	0.87		0.14	pCi/g
Radium^{226}	MND23-4003	900-000294	0.668		0.14	pCi/g
Radium^{226}	MND23-4003	900-000288	0.629		0.14	pCi/g

J = Value is estimated
D = Value is reported from a diluted sample
X = Special lab designation - value is estimated as discussed in Appendix B

3.3 Miami-Erie Canal, Overflow Creek, and NPDES Outfall 002

3.3.1 Introduction

The Miami-Erie Canal, Overflow Creek, and NPDES Outfall 002 sample results are grouped for comparison and discussion.

Analytical results for surface water, sediment, and subsurface soil samples collected at the Miami-Erie Canal, Overflow Creek, and NPDES Outfall 002 are compared to background concentrations. Analytical results that are above background levels are also compared to the Mound Plant Risk-Based Guideline Values (HAZWRAP 1995).

Three Risk-Based scenarios are used for comparison to these results. Surface water results are compared to the Recreational Surface Water Scenario. Sediment and subsurface soil results are compared to the Construction/Mound Employee Soil/Sediment and Recreational Soil/Sediment Scenarios.

3.3.2 Sample Locations

3.3.2.1 Surface Water

Surface water samples were collected from the Miami-Erie Canal area during both the low and high flow sampling events. Samples were collected for analyses at six sample locations along the canal during the Spring and at five locations during the Fall. Sample locations are presented in Figure 3.3.1 (Miami Erie Canal proper and NPDES Outfall 002) and Figure 3.3.2 (southern section of Miami Erie Canal and Overflow Creek).

3.3.2.2 Sediment

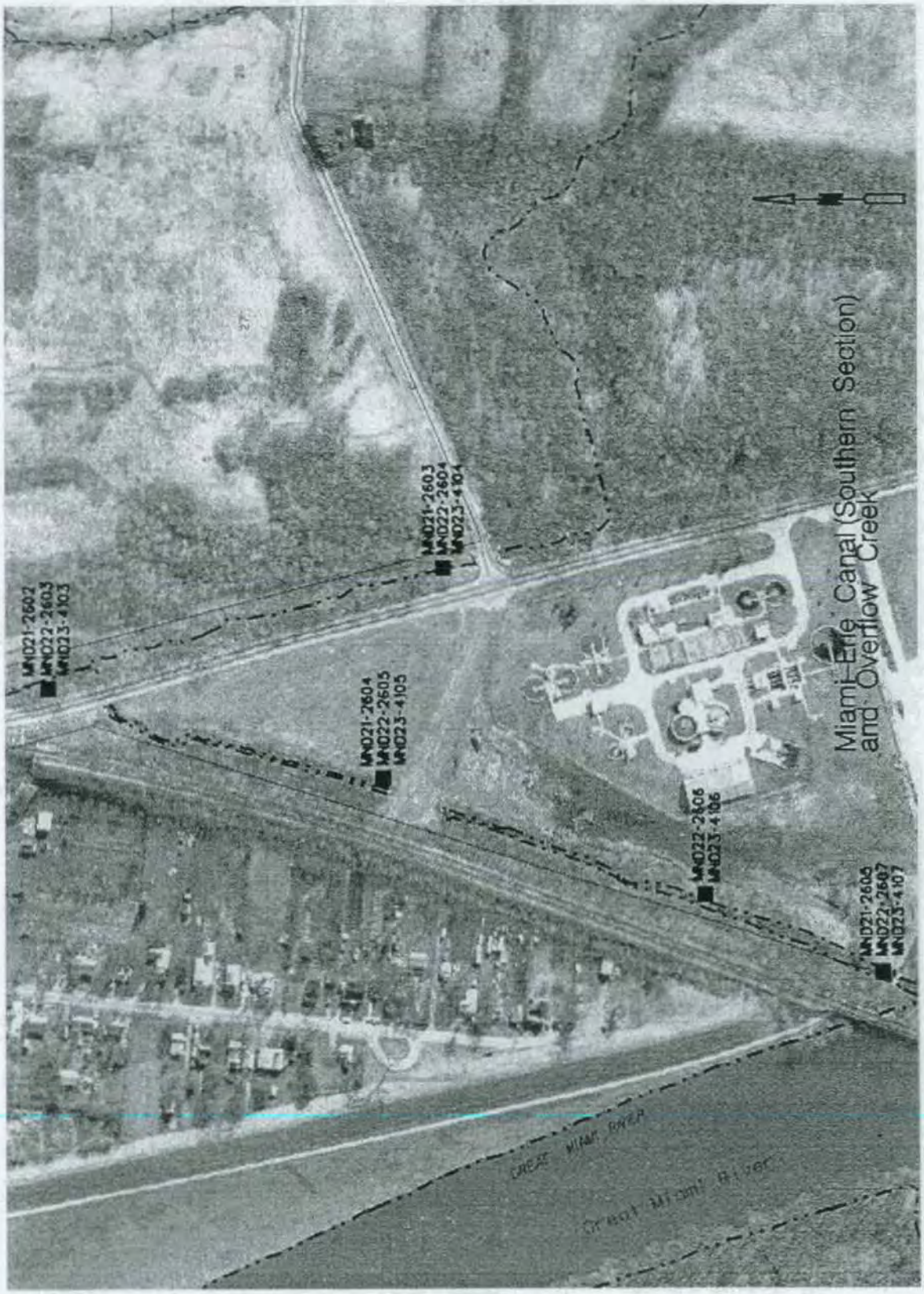
Sediment samples were collected for analyses at each of the eleven sample locations for both the low and high flow sampling events. Sediment samples were collected from an approximate depth interval of 0 to 6 inches. Figures 3.3.1 and 3.3.2 show the sediment sample locations.

3.3.2.3 Subsurface Soil

During the Fall sampling event, subsurface soil samples were collected for analyses at seven locations along the Miami-Erie Canal. One subsurface soil sample was collected from each location at an approximate depth of 0.5 to 2.0 feet. Figures 3.3.1 and 3.3.2 show the sample locations for subsurface sampling.

Figure 3.3.1 Miami-Erie Canal and NPDES Outfall 002

Figure 3.3.2 Miami-Erie Canal (Southern Section) and Overflow Creek



3.3.3 Field Program Changes

Three changes from field program sampling plans are noted, one concerning NPDES Outfall 002 and two concerning the Miami-Erie Canal. The following text details the three changes in sampling plan specifications:

1. *NPDES Outfall 002*: The Field Sampling Plan (DOE 1992b) specifies one surface water sample to be collected west of the railroad culvert. The surface water sample was collected inside the Mound Plant property fenceline, approximately 100 feet upstream of the location specified in the Field Sampling Plan (DOE 1992b). This was due to a misinterpretation of the Field Sampling Plan (DOE 1992b) sample location map. No loss of data generality or usability is expected.

2. *Miami-Erie Canal*: The Field Sampling Plan (DOE 1992b) identifies distinct sample locations. Actual sample locations were adjusted to correspond to the ecological assessment sample locations.

Miami-Erie Canal: The Field Sampling Plan (DOE 1992b) specifies that all analytical parameters should be obtained from the same location. Because of the presence of areas with high radioactivity, some geotechnical fractions were re-collected at an adjacent location several feet downstream from the original location. This additional sampling was performed to obtain samples with a level of radioactivity acceptable for shipment to the geotechnical laboratory.

3.3.4 Discussion of Analytical Results

3.3.4.1 Surface Water

Of the 28 analytes detected at concentrations above background level, none were above the Mound Plant Risk-Based Guideline Values (Recreational Exposure Scenario) (HAZWRAP 1995).

Analytical results for laboratory analyses of surface water samples collected from the Miami-Erie Canal, the Overflow Creek and NPDES Outfall 002 for both the low and high flow sampling events showed 29 analytes detected at concentrations above background levels. The analytes consist of 2 common anions, 1 explosive, 3 general chemistry, 16 metals, 5 radiological, 2 semivolatile, and 1 volatile organic compound. Analytical results tables for all analytes detected at levels above background are presented in Table A.3.1 in Appendix A.

Of the 28 analytes detected at concentrations above background level, none were above the Mound Plant Risk-Based Guideline Values (HAZWRAP 1995) (Recreational Exposure Scenario).

3.3.4.2 Sediments

Analytical results for sediment samples collected during the low and high flow sampling events at the Miami-Erie Canal, Overflow Creek and NPDES Outfall 002 indicate 65 analytes detected at concentrations above background levels. The analytes consist of 4 explosives, 19 metals, 6 pesticides/PCBs, 10 radiological, 22 semivolatile, and 4 volatile compounds. Six analytes were detected at various sample locations at concentrations above the Mound Plant Risk-Based Guideline Values (HAZWRAP 1995) for the Construction/Mound Employee Exposure Scenario. Three analytes were detected at various sample locations at concentrations above the Mound Plant Risk-Based Guidelines Values (HAZWRAP 1995) for the

Recreational Soil/Sediment Scenario. Analytical results for analytes detected at concentrations above background are presented in Table A.3.2 in Appendix A. Table 3.3.1 presents the analytes detected at concentrations above the Guideline Values.

Table 3.3.1—Stream Sediment Results Above Risk-Based Guideline Values

Parameter	Station	Sample ID	Result	Lab Qualifier	Guideline Value	Units
NPDES 002						
Plutonium^{238}	MND22-2401	000413	9.61		5.50	pCi/g
Thorium^{228}	MND22-2401	000413	1.63		0.85	pCi/g
Benzo(a)anthracene	MND22-2402	900-000131	4.6	D	4.10	mg/kg
Benzo(a)pyrene	MND22-2402	900-000131	3.9	D5	0.41	mg/kg
Benzo(b)fluoranthene	MND22-2402	900-000131	6.9	DX	4.10	mg/kg
Dibenzo(a,h)anthracene	MND22-2402	900-000131	0.66		0.41	mg/kg
Plutonium^{238}	MND22-2402	000414	8.22		5.50	pCi/g
Plutonium^{238}	MND22-2402	900-000131	29.5		5.50	pCi/g
Plutonium^{238}	MND22-2403	000415	7.95		5.50	pCi/g
Plutonium^{238}	MND22-2403	900-000132	8.4		5.50	pCi/g
Thorium^{228}	MND22-2403	900-000132	1.11		0.85	pCi/g
Plutonium^{238}	MND22-2404	000416	26.8		5.50	pCi/g
Plutonium^{238}	MND22-2404	900-000133	36.6		5.50	pCi/g
Miami Erie Canal						
Plutonium^{238}	MND22-2601	000433	40.1		5.50	pCi/g
Plutonium^{238}	MND22-2601	900-000067	38		5.50	pCi/g
Plutonium^{238}	MND22-2602	000434	591		5.50	pCi/g
Plutonium^{238}	MND22-2602	900-000068	844		5.50	pCi/g
Thorium^{228}	MND22-2602	000434	2.52		0.85	pCi/g
Plutonium^{238}	MND22-2603	900-000070	23.2		5.50	pCi/g
Overflow Creek						
Plutonium^{238}	MND22-2605	000437	24.1		5.50	pCi/g
Plutonium^{238}	MND22-2605	900-000074	10.8		5.50	pCi/g
Plutonium^{238}	MND22-2606	000438	8.01		5.50	pCi/g
Plutonium^{238}	MND22-2606	900-000075	51.2		5.50	pCi/g
Plutonium^{238}	MND22-2607	900-000076	33.6		5.50	pCi/g

J = Value is estimated
D = Value is reported from a diluted sample
X = Special lab designation - value is estimated as discussed in Appendix B

Plutonium^{238} was detected in 17 samples from ten of the eleven sample locations along the Miami-Erie Canal, Overflow Creek and NPDES Outfall 002 at levels above the Risk-Based Guideline Value.

Sediment samples were collected at 11 locations during both the low and high flow sampling events. Figure 3.3.1 shows the sample locations and corresponding sample identifications. Plutonium^{238} was detected in 17 samples from 10 of the 11 sample locations along the Miami-Erie Canal, Overflow Creek and NPDES Outfall 002 at levels above the Mound Plant Risk-Based Guideline Value of 5.5pCi/g (HAZWRAP 1995) for the Construction/Mound Employee Scenario. Table 3.3.2 shows plutonium^{238} concentrations at all sample locations. Only one location MND22-2602, yielded results above the Mound Plant Risk-Based Guideline Value (HAZWRAP 1995) of 110 pCi/g for the Recreation Soil/Sediment Scenario.

Table 3.3.2—Summary of Plutonium^{238} Sediment Concentrations

Sample Location	Sample Area	Plutonium ^{238} (pCi/g)	
		Spring Event	Fall Event
MND22-2401	NPDES Outfall 002	9.6	4.0
MND22-2402	Miami-Erie Canal	8.2	30
MND22-2403	Miami-Erie Canal	8.0	8.4
MND22-2404	Miami-Erie Canal	27	37
MND22-2601	Miami-Erie Canal	40	38
MND22-2602	Miami-Erie Canal	590	844
MND22-2603	Miami-Erie Canal	2.9	23
MND22-2604	Miami-Erie Canal	Not Determined	0.6
MND22-2605	Overflow Creek	24	11
MND22-2606	Overflow Creek	8.0	51
MND22-2607	Overflow Creek	1.8	34

Plutonium^{238} concentrations in sediments exceeded the Mound Plant Risk-Based Guideline Value (HAZWRAP 1995) for the Construction/Mound Employee Scenario in samples from each location except MND22-2604. MND22-2604 (see Figure 3.3.1) is along the Miami-Erie Canal south of the Overflow Creek intersection with the canal.

In addition to plutonium^{238}, five other analytes were detected at three locations along the canal at concentrations above the Mound Plant Risk-Based Guideline Values (HAZWRAP 1995) for the Construction/Mound Employee Scenario. Two other analytes were detected at two locations along the canal at concentrations above the Mound Plant Risk-Based Guideline Values for the Recreational Soil/Sediment Scenario. A detailed description at the detected analytes above Risk-Based Guideline Values for both the Construction/Mound Employee and Recreational Soil/Sediment Scenarios by area is shown in Table 3.3.1.

3.3.4.3 Subsurface Soil

Analytical results for subsurface soil samples collected along the Miami-Erie Canal, Overflow Creek and Outfall 002 show 49 analytes detected at concentrations above background levels. Analytical results for analytes detected at concentrations above background are presented in Table A.3.3 in Appendix A.

Of the 49 analytes detected at concentrations above background levels, a total of six analytes were detected at concentrations above Mound Plant Risk-Based Guideline Values for the Construction/Mound Employee soil exposure scenario.

Of the 49 analytes detected at concentrations above background levels, six analytes were detected at concentrations above Mound Plant Risk-Based Guideline Values (HAZWRAP 1995) for the Construction/Mound Employee Soil Exposure Scenario. Three analytes (plutonium^{238}, radium ^{226}, thorium ^{228}) were detected above the Mound Plant Risk-Based Guideline Values (HAZWRAP 1995) for the Recreational Soil/Sediment Exposure Scenario. These analytes are shown by area in Table 3.3.3 and are described below:

- Plutonium^{238} was detected at five sample locations in the Miami-Erie Canal and Overflow Creek at concentrations ranging between 8.3 and 4,650 pCi/g. The highest concentrations of 4,650 pCi/g and 795 pCi/g were reported at locations MND23-4102 and MND23-4103, respectively.
- Americium^{241} and plutonium$^{239/240}$ were also detected in subsurface soils at MND23-4102 during the Fall sampling event at concentrations above the Mound Plant Risk-Based Guideline Value (HAZWRAP 1995) for the Construction/Mound Employee Scenario.
- Radium^{226} was detected at six sample locations at concentrations of 0.46 to 0.93 pCi/g, which exceeds the Mound Plant Risk-Based Guideline Value (HAZWRAP 1995) of 0.14 pCi/g for the Construction/Mound Employee Scenario and 0.26 pCi/g for the Recreational Scenario. None of the Miami-Erie Canal subsurface soils exceeded the radium^{226} background concentration of 1.22 pCi/g established in the OU9 Background Soils Investigation (DOE 1994c).
- Thorium^{228} was detected at two locations (MND23-4102 and MND23-4103) during the Fall sampling event at concentrations above the Mound Plant Risk-Based Guideline Value (HAZWRAP 1995) of 0.85 pCi/g for the Construction/Mound Employee Scenario and 1.7 pCi/g for the Recreational Scenario.
- A single semivolatile compound (benzo(a)pyrene) was detected at three locations (MND23-4101, MND23-4102 and MND23-4103) and ranged in concentration from 470 to 880 µg/kg, which exceeds the Mound Plant Risk-Based Guideline Value (HAZWRAP 1995) of 410 µg/kg for the Construction/Mound Employee Scenario.

Table 3.3.3—Subsurface Soil Results Above Risk-Based Guideline Values

Parameter	Station	Sample ID	Result	Lab Qualifier	Guideline Value	Units
Miami-Erie Canal						
Benzo(a)pyrene	MND23-4101	900-000086	0.88		0.41	mg/kg
Plutonium^{238}	MND23-4101	900-000086	73.6		5.50	pCi/g
Radium^{226}	MND23-4101	900-000086	0.465		0.14	pCi/g
Americium^{241}	MND23-4102	900-000101	8.41		4.95	pCi/g
Benzo(a)pyrene	MND23-4102	900-000101	0.47		0.41	mg/kg
Plutonium^{238}	MND23-4102	900-000101	4650		5.50	pCi/g
Plutonium$^{239/240}$	MND23-4102	900-000101	12.8		5.50	pCi/g
Radium^{226}	MND23-4102	900-000101	0.911		0.14	pCi/g
Thorium^{228}	MND23-4102	900-000101	24.9		0.85	pCi/g
Benzo(a)pyrene	MND23-4103	900-000089	0.54		0.41	mg/kg
Plutonium^{238}	MND23-4103	900-000089	795		5.50	pCi/g
Radium^{226}	MND23-4103	900-000089	0.932		0.14	pCi/g
Thorium^{228}	MND23-4103	900-000089	4.05		0.85	pCi/g
Radium^{226}	MND23-4104	900-000090	0.681		0.14	pCi/g
Overflow Creek						
Plutonium^{238}	MND23-4105	900-000091	8.3		5.50	pCi/g
Radium^{226}	MND23-4105	900-000091	0.84		0.14	pCi/g
Plutonium^{238}	MND23-4106	900-000092	29.3		5.50	pCi/g
Radium^{226}	MND23-4106	900-000092	0.472		0.14	pCi/g

J = Value is estimated
D = Value is reported from a diluted sample
X = Special lab designation - value is estimated as discussed in Appendix B

3.4 Zone of Influence

3.4.1 Introduction

Zone of Influence sampling location included two ponds, two streams, and the South Pond.

In accordance with the objectives of the Field Sampling Plan (DOE 1992b), surface water and sediment samples were collected from two ponds and two streams. The main objective was to evaluate the potential contamination resulting from deposition of airborne radionuclides in ponds and streams in the zone of influence. Historical investigations had identified a zone of influence for plutonium^{238}. This historical data, coupled with the OU9 Regional Soils Investigation results, established the zone of influence for radiological parameters. However, all samples were submitted for both chemical and radiological parameters, consistent with other parts of the investigation.

For the purpose of this investigation, the analytical results from samples collected in the South Pond in the Miamisburg Community Park were grouped with the zone of influence analytical results. The Team concluded that the South Pond samples were most compatible with those collected from the zone of influence ponds.

3.4.2 Sample Locations

The locations were chosen based on the following criteria:

1. One pond and one stream were chosen southwest of the Mound Plant and one pond and one stream were chosen northeast of the Mound Plant, since the zone of influence was found to follow a southwest to northeast direction.

2. The ponds and streams were chosen on the basis of preliminary results from the OU9 Regional Soils Investigation.

3. The ponds and streams were chosen on the basis of the potential for impact on the public.

4. The ponds and streams were chosen within a 3-mile radius of the Mound Plant.

The southwest pond and stream, also referred to as the Union Road Pond and Stream, are located near the junction of Union and Farmington Roads, approximately 1.5 miles from the Mound Plant. Figure 3.4.1 shows the sample locations. These sample locations are on private property. The pond and stream are a surface water system, where the pond collects surface water from agricultural runoff and feeds into the stream through a small weir. During times of low rainfall, the stream can run dry.

The northeast pond and stream, also referred to as the Sycamore Park pond and stream, are located near the junction of Heinke and Miamisburg-Centerville Roads, approximately 1.25 miles from the Mound Plant. Figure 3.4.2 presents the sample locations. These sample locations are on public property (City of Miamisburg, Sycamore Park). The pond and stream are a system, where the pond collects water from the surrounding area and feeds into the stream. This stream, unlike the Union Road Stream, is not as likely to run dry in times of low rainfall.

The South Pond in the Miamisburg Community Park is located approximately 400 feet northwest of the Mound Plant. Figure 3.4.3 presents the sample locations. These samples were taken to support the results of the OU9 Ecological Investigations.

3.4.3 Field Program Changes

Changes to the field program sampling plans were noted during the zone of influence sampling are as follows:

1. Initially, the Union Road Pond and Stream were identified as background sample locations. Sampling was initiated in Fall 1994 for background parameters only. However, in September 1994, the preliminary data from the OU9 Regional Soils Investigation indicated that the Union Road Pond and Stream were within the zone of influence for plutonium^{238}. Since the Field Sampling Plan (DOE 1992b) required volatile organic and semivolatile organic analyses for the zone of influence locations, the samples for these parameters were collected at a later date in the Fall 1994 sampling event.

2. During the Fall 1994 sampling event, only one sample for surface water was collected at the Union Road stream because of dry conditions. The Field Sampling Plan (DOE 1992b) specifies that two surface water samples were to be taken, one upstream and one downstream. However, only one sample was taken, in between the upstream and downstream locations.

Figure 3.4.1 Union Road Pond and Stream

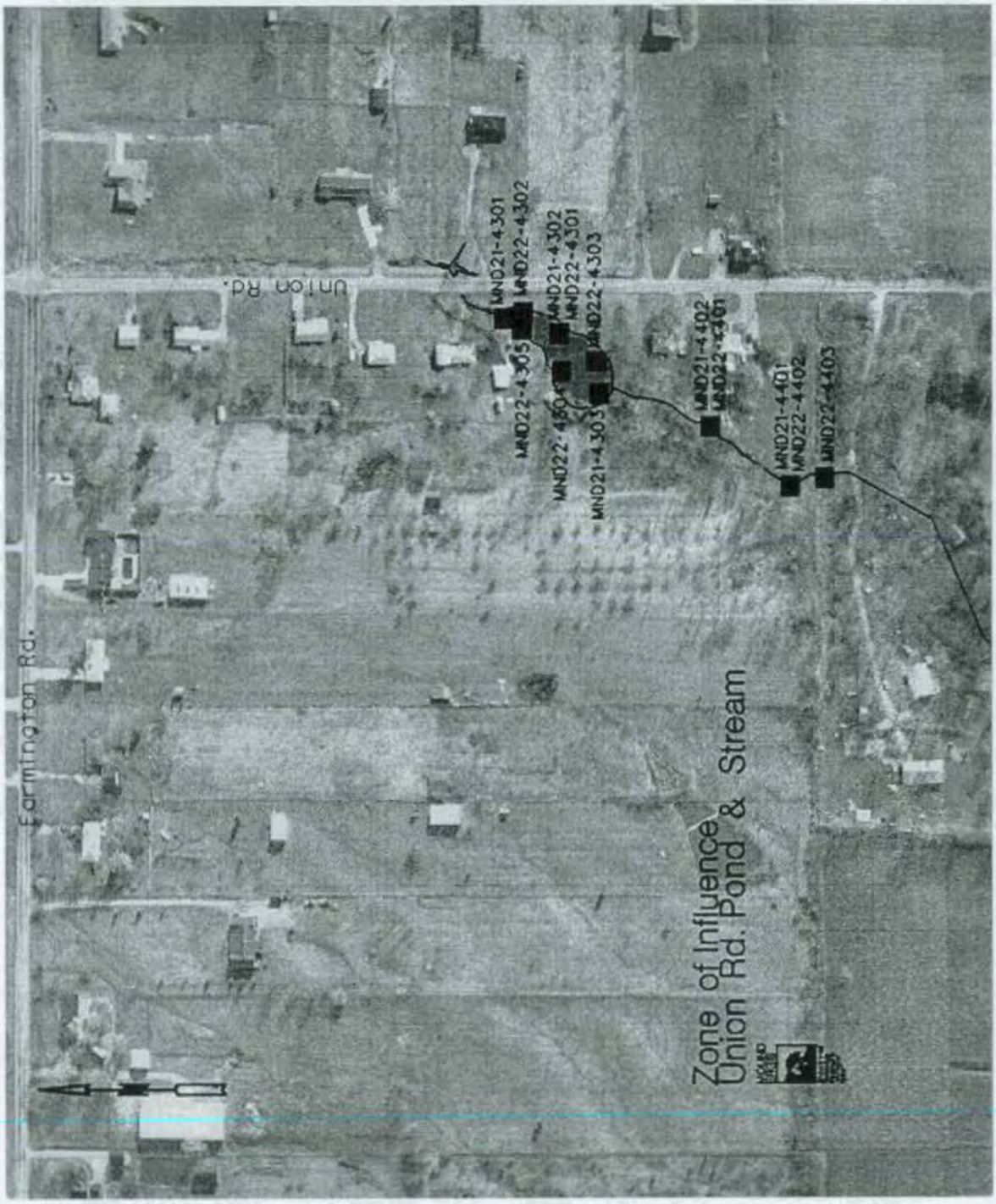
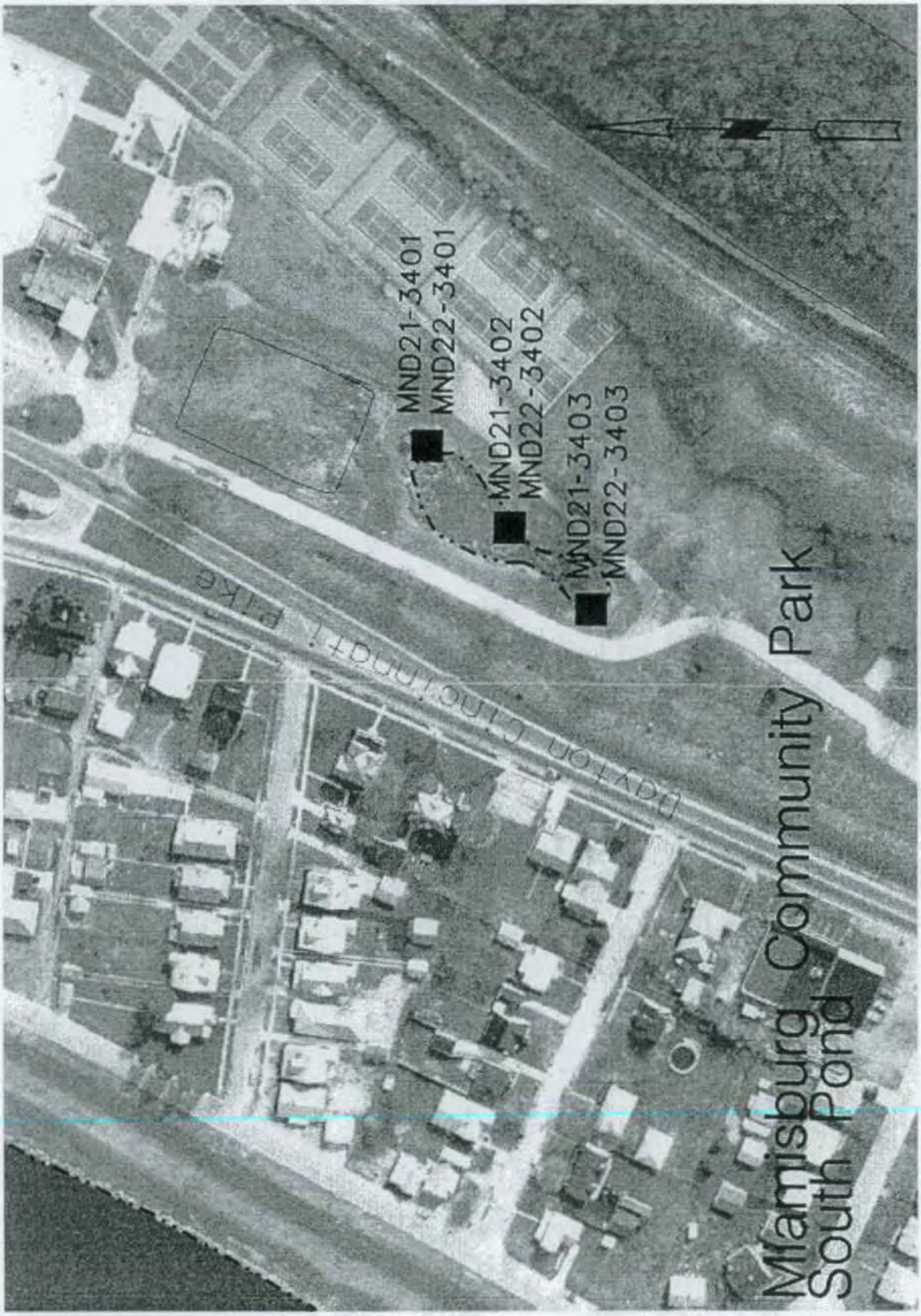


Figure 3.4.2 Sycamore Park Pond and Stream

Figure 3.4.3 Miamisburg Community Park South Pond



3.4.4 Discussion of Analytical Results

3.4.4.1 Pond Surface Water

Of the analytes detected, none were at concentrations above the Mound Plant Risk-based Guideline Values for the Recreational Surface Water Scenario.

Analytical results for surface water samples collected at the zone of influence ponds and the South Pond indicated 3 common anion, 1 general chemistry, 17 metal, 4 radiological, 3 semivolatile, and 3 volatile analytes detected above background levels. Analytical results for all pond surface water samples are presented in Table A.4.1 in Appendix A.

Of the analytes detected at concentrations above background levels, none were detected at concentrations above the Mound Plant Risk-Based Guideline Values for the Recreational Surface Water Scenario (HAZWRAP 1995).

3.4.4.2 Stream Surface Water

Of the analytes detected, none were at concentrations above the Mound Plant Risk-based Guideline Values for the Recreational Surface Water Scenario.

Analytical results for surface water samples collected at the zone of influence streams indicated 2 common anion, 1 general chemistry, 15 metal, 1 pesticide, 1 radiological, 6 semivolatile, and 1 volatile analytes detected above background levels. Analytical results for all stream surface water samples are presented in Table A.4.2 in Appendix A.

Of the analytes detected at concentrations above background levels, none were detected at concentrations above the Mound Plant Risk-Based Guideline Values for the Recreational Surface Water Scenario (HAZWRAP 1995).

3.4.4.3 Pond Sediment

Of the analytes detected, none were at concentrations above the Mound Plant Risk-based Guideline Values for the Recreational Soil/ Sediment Scenario.

Analytical results for sediment samples collected at the zone of influence ponds and the South Pond indicated 1 common anion, 6 metal, 2 pesticide, 5 radiological, 18 semivolatile, and 4 volatile analytes detected above background levels. Analytical results for all pond sediment samples are presented in Table A.4.3 in Appendix A.

Of the analytes detected at concentrations above background levels, none were detected at concentrations above the Mound Plant Risk-Based Guideline Values for the Recreational Soil/Sediment Scenario (HAZWRAP 1995).

3.4.4.4 Stream Sediment

Of the analytes detected, none were at concentrations above the Mound Plant Risk-based Guideline Values for the Recreational Soil/ Sediment Scenario.

Analytical results for sediment samples collected at the zone of influence streams indicated 1 common anion, 11 metal, 2 pesticide, 3 radiological, 17 semivolatile, and 4 volatile analytes detected above background levels. Analytical results for all stream sediment samples are presented in Table A.4.4 in Appendix A.

Of the analytes detected at concentrations above background levels, none were detected at concentrations above the Mound Plant Risk-Based Guideline Values for the Recreational Soil/Sediment Scenario (HAZWRAP 1995).

3.5 Area Watersheds and Drainages

3.5.1 Introduction

The Area Watersheds and Drainages portion of the investigation consists of eight drainages and one pond within an approximately 1-mile radius of the Mound Plant.

The data gathered during the reconnaissance survey (see section 2.1.2) was used to select drainages, ponds, or seeps within a 1-mile radius of the Mound Plant for the Area Watersheds and Drainages sampling. The Team identified eight drainages and one pond within an approximately 1-mile radius of the Mound Plant. These are shown in Figure 3.5.1.

Surface water and sediment samples were collected at three locations along each watershed. In general, one surface water and one sediment sample were collected at each location during the Fall and Spring sampling events for a total of six surface water and six sediment samples from each watershed.

Analytical results from the Area Watersheds and Drainages surface water and sediment samples were compared to the background analyte concentrations. Analytical results that exceed background levels were also evaluated with respect to the Mound Plant Risk-Based Guideline Values (HAZWRAP 1995). The Recreational Soil/Sediment and the Recreational Surface Water scenarios provide the most appropriate comparison values. When these Guideline Values are not available, the next most conservative Guideline Value was chosen.

3.5.2 Sample Locations

The Area Watershed and Drainages sampling areas are designated as Drainages A through H and the Linden Road Pond.

Drainage A, also referred to as the Cemetery Drainage system, is located approximately 3/4 miles northeast of the Mound Plant (Figure 3.5.2). The stream channel in the reach of concern varies in width from approximately 6 to 8 feet as it flows through residential Miamisburg. The drainage consists of two branches that merge before entering a tunnel beneath Park Street. To ensure representative sampling, samples were collected at the upstream end of each branch and just downstream of the merge. During the Fall event, the drainage produced water only during or shortly after rainfall, with dry conditions most common. During the Spring event, water was readily available.

Drainage B, also referred to as the Linden Road Drainage, is located approximately 3/4 miles east of the Mound Plant (Figure 3.5.3). The stream channel in the reach of concern varies in width from one to two feet at the upstream end to three to four feet at the downstream end as it flows through a residential area. The reach flows parallel to and then passes under Linden Road through a culvert. Sample locations were chosen along this reach at approximately equal intervals with the farthest downstream location just upstream of the culvert. Sample locations are shifted slightly toward the downstream end because of property access limitations. During both Fall and Spring events, the drainage produced water only during or shortly after rainfall with dry conditions most common.

Figure 3.5.1 Area Watersheds and Drainages

EG&G Mound Applied Technologies
OU9 Surface Water an Sediment Investigation
Reconnaissance Mapping Task
Area Watersheds and Drainages Sampling Task

Map of Area Watersheds and Drainages Within a 1-mile Radius
(radius originates from the Mound Plant locus)

Figure 3.5.2 Drainage A

Figure 3.5.3 Drainage B

Drainage C, also referred to as the Benner Road Drainage, begins at the intersection of Mound and Benner Roads approximately 3/4 mile south of the Mound Plant (Figure 3.5.4). The reach of concern flows through primarily agricultural and wooded areas before spilling into the Miami-Erie Canal approximately 100 yards south of the intersection of Benner Road and the Dayton-Cincinnati Pike. The upstream sample location produced water during both the Fall and Spring events. The remaining two locations held water only during or shortly after rainfall, with dry conditions most common.

Drainage D, also referred to as the Denny Property, is located approximately one mile southwest of the Mound Plant (Figure 3.5.5). The reach of concern is a tributary to the Great Miami River which begins approximately 1/4 mile west of the River. The drainage varies in width from approximately 1 to 3 feet as it flows through partially wooded hills and bluffs. A mound of black material resembling coal is near the upstream end of this drainage. The sample locations are uniformly spaced along the drainage.

Drainage E, also referred to as the Lower Miamisburg Road Drainage, is located approximately 1/4 mile west of the Mound Plant (Figure 3.5.6). The reach of concern is a tributary to the Great Miami River which begins approximately 1.5 miles west of the River. The drainage passes through residential areas and farmland and under several culverts before feeding into the Great Miami River. The drainage varies from 2 to 4 feet in width at its upstream end and from 10 to 15 feet at its downstream end. During both high and low flow events, the drainage held water only during or shortly after rainfall. Sample locations were shifted slightly toward the downstream end because of property access limitations.

Drainage F, also referred to as the West Floodplain, is located approximately 1/2 mile west of the Mound Plant (Figure 3.5.7). The reach of concern originates approximately 1/4 mile west of the Great Miami River. The drainage crosses the floodplain in the vicinity of Miamisburg well field before feeding into the river and varies in width from approximately 3 to 6 feet.

Drainage G, also referred to as the North Seeps Drainage, is located near the northwest border of the Mound Plant property (Figure 3.5.8). The stream channel in the reach of concern varies in width from 1 to 3 feet as it flows along the base of the steep bluff located on the northern side of the Mound Plant. The seeps located along the bluff appear to contribute significantly to the flow volume. Except for the northernmost sample location, which was usually dry, the drainage produced water during both the Fall and Spring events. The water was usually ponded and flowing at low rate. Sample locations are uniformly spaced along the drainage.

Drainage H, also referred to as the Golf Course Drainage, is located approximately 1/4 mile east of the Mound Plant (Figure 3.5.9). The reach of concern begins at the southern boundary of the Mound Golf Course and flows north into the bordering residential area. The drainage, which varies in width from approximately 2 to 8 feet, produced water during both the Fall and Spring events.

The Linden Road Pond is the only pond sampled under the Area Watersheds and Drainages task.

Linden Road Pond is located approximately 1 mile southeast of the Mound Plant and is surrounded by agricultural land (Figure 3.5.10). The pond produced small quantities of water during the low flow event and eventually became dry. Three surface water and three sediment samples were collected during the Fall and Spring events. During the high flow event, the pond was approximately 3 to 4 feet deep. The silty pond is circular, varying in diameter from approximately 25 to 30 feet.

Figure 3.5.4 Drainage C

Figure 3.5.5 Drainage D

Figure 3.5.6 Drainage E

Figure 3.5.7 Drainage F

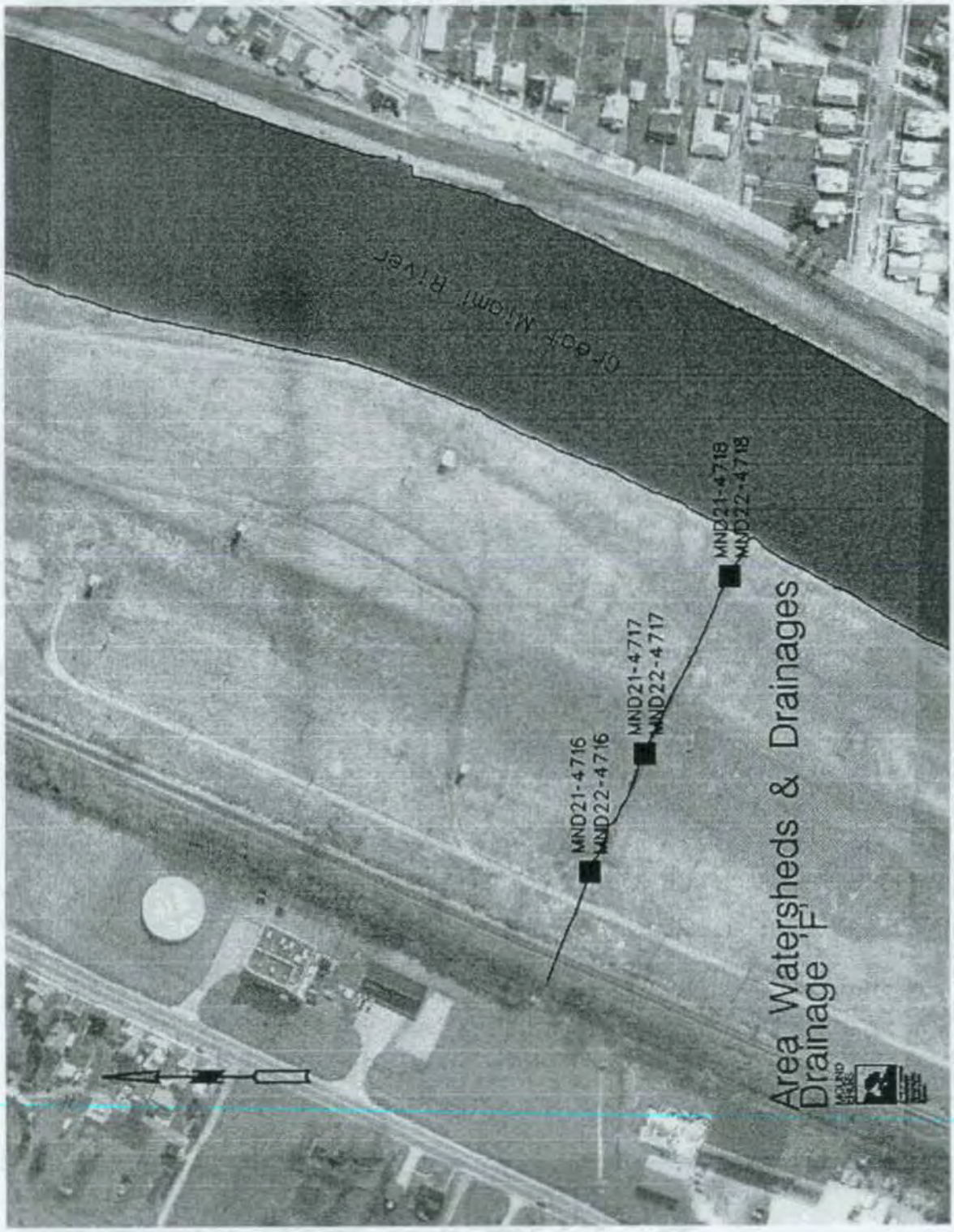
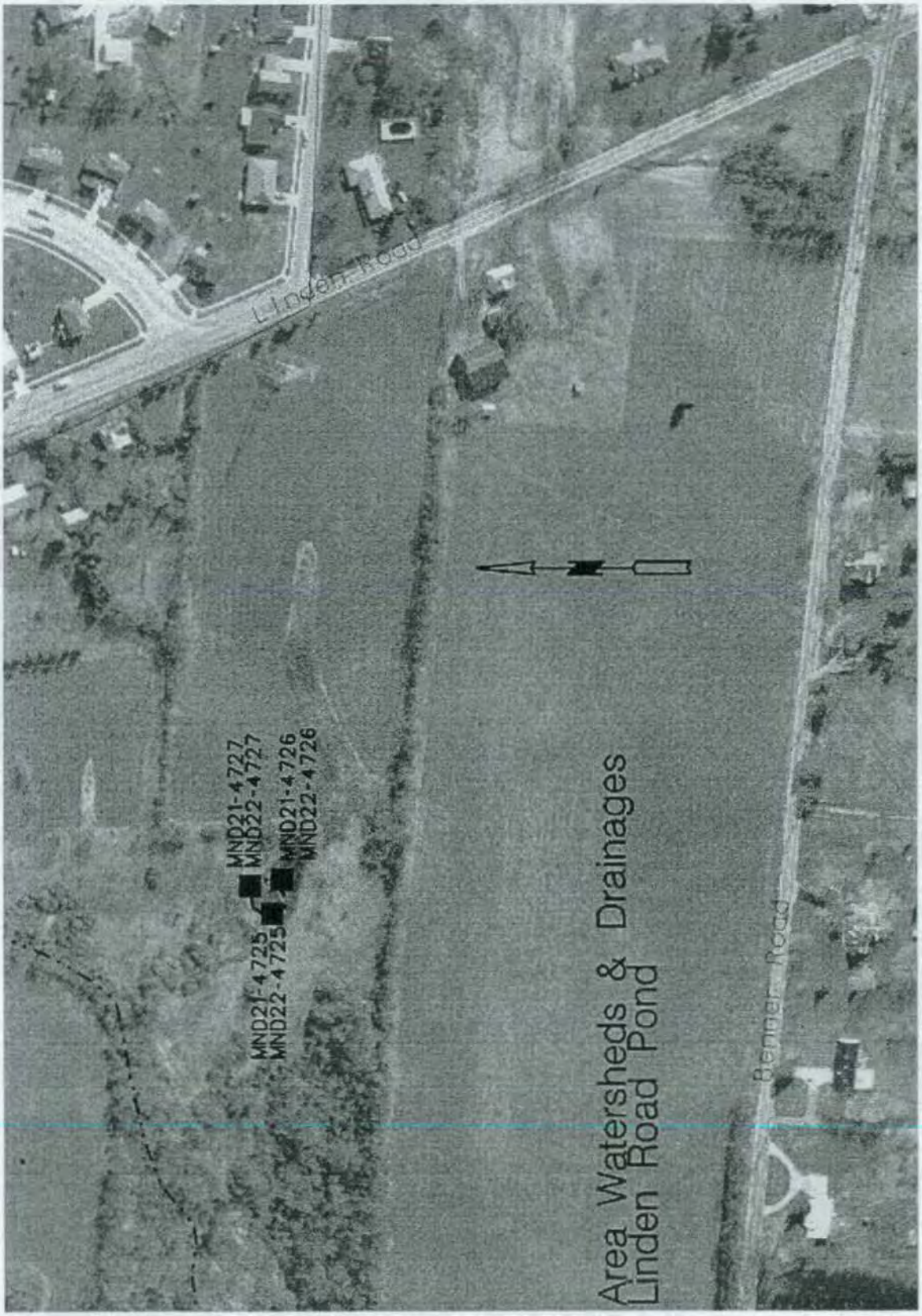


Figure 3.5.8 Drainage G

Figure 3.5.9 Drainage H

Figure 3.5.10 Linden Road Pond



3.5.3 Field Program Changes

Three changes from field program sampling plans are noted for the sampling conducted at the Area Watersheds and Drainages. The changes are as follows:

1. Dry conditions existed at nine surface water sample locations during the Fall (low flow) sampling event. The nine consisted of two Drainage A, three Drainage B, one Drainage C, one Drainage D, and two Drainage E locations.

2. During the Spring (high flow) event, a water treatment facility was identified as a discharge to Drainage F; therefore, surface water was not collected during this event.

3. One geotechnical fraction at Drainage F was resampled after the container leaked during shipment.

3.5.4 Discussion of Analytical Results

3.5.4.1 Surface Water

Of the analytes detected at concentrations above background levels, none were detected at concentrations above the Mound Plant Risk-Based Guideline Values.

Results of laboratory analysis of surface water samples collected at the Area Watersheds and Drainages show 3 common anion, 1 explosive, 26 metal, 9 radiological, 2 semivolatile and 2 volatile organic analytes detected at concentrations above background levels. Analytical results for all surface water analytes detected at levels above background are presented in Table A.5.1 in Appendix A.

Of the analytes detected at concentrations above background levels, none were detected at concentrations above the Mound Plant Risk-Based Guideline Values (HAZWRAP 1995).

3.5.4.2 Sediment

In all sediment samples Radium^{226} concentrations exceeded the Mound Plant Risk-Based Guideline Value.

Results of laboratory analysis of sediment samples collected at the Area Watersheds and Drainages show 1 common anion, 21 metal, 14 pesticide, 7 radiological, 23 semivolatile and 6 volatile organic analytes detected at concentrations above background levels. Analytical results for all sediment analytes detected at levels above background are presented in Table A.5.2 in Appendix A.

However, all of these values were below the stream sediment background value established for radium^{226} (2.1 pCi/g) for this investigation.

Of the analytes detected at concentrations above background levels, only radium^{226} exceeded the Mound Plant Risk-Based Guideline Value of 0.26 pCi/g (HAZWRAP 1995) in all samples collected during the low and high flow sampling events. Concentrations ranged from 0.38 to 1.7 pCi/g with the four largest values at Drainage G. However, all of these values were below the stream sediment background value established for radium^{226} (2.1 pCi/g) for this investigation.

3.6 The Great Miami River

3.6.1 River Sample Locations

Samples were collected from four sites along the Great Miami River, both above and below the plant.

The sampling program for the Great Miami River consisted of four sites:

1. A background site along the river approximately 17 miles north-northeast of Mound Plant, also identified as the Riprap Road site (Figure 3.6.1).

2. The U. S. Geological Survey (USGS) gauging station located above the Mound Plant on the east bank of the river, opposite downtown Miamisburg (Figure 3.6.2).

3. The pool above the Hutchings Power Plant weir located directly downriver of the Overflow Creek outlet (Figure 3.6.3).

4. The pool above a weir on the river near Chautaugua, Ohio, approximately 3 river miles downstream of the plant (Figure 3.6.4).

A fifth location, at Mile 56 on the Great Miami River, north of Middletown Ohio (9 river miles below the plant) was planned (DOE 1992), but not sampled, since the site was filled with cobbles and no sediment could be collected.

Although the Riprap Road site was designated as background for the Great Miami River, the Team elected not to use it as a background site. Instead, the Team evaluated stream conditions to identify systematic changes over the length of the river. Evaluating systematic downstream changes proved more useful than comparisons to background due to the limited size of the data set.

Sample collection methods are described in Section 2.1.5. Surface water samples were collected using a Kemmerer sampler. Sediment samples were collected with a small dredge.

USGS records were used for flow data.

During collection of samples on the Great Miami River, no attempt was made to measure or record flow conditions. Instead, data were obtained from USGS stream gauging program.

Stream flow data is useful when determining sediment transport and deposition characteristics for a river. Flow is measured at three locations of relevance to this program:

1. The Great Miami River at Taylorsville data is used for the Riprap Road site.

2. The Great Miami River at Miamisburg is the USGS gauging station opposite downtown Miamisburg, corresponding to the sampling site for this program.

3. The Great Miami River below Miamisburg is from a location just downstream of the Hutchings Power Plant weir. Data from this site is relevant to the Hutchings Power Plant and the Chautaugua sampling sites.

Figure 3.6.1 Great Miami River at Riprap Road

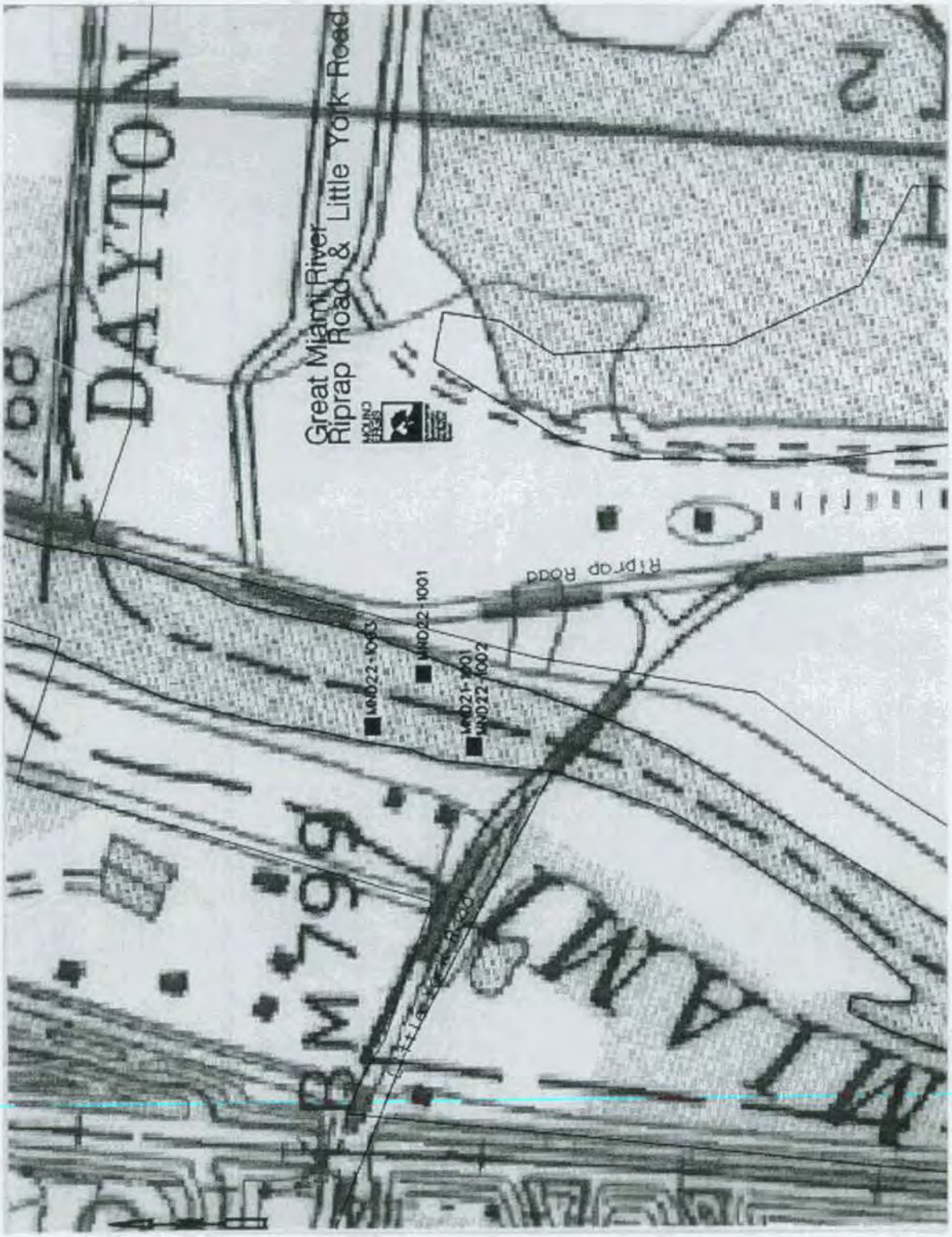


Figure 3.6.2 Great Miami River, USGS Gauging Station at Miamisburg

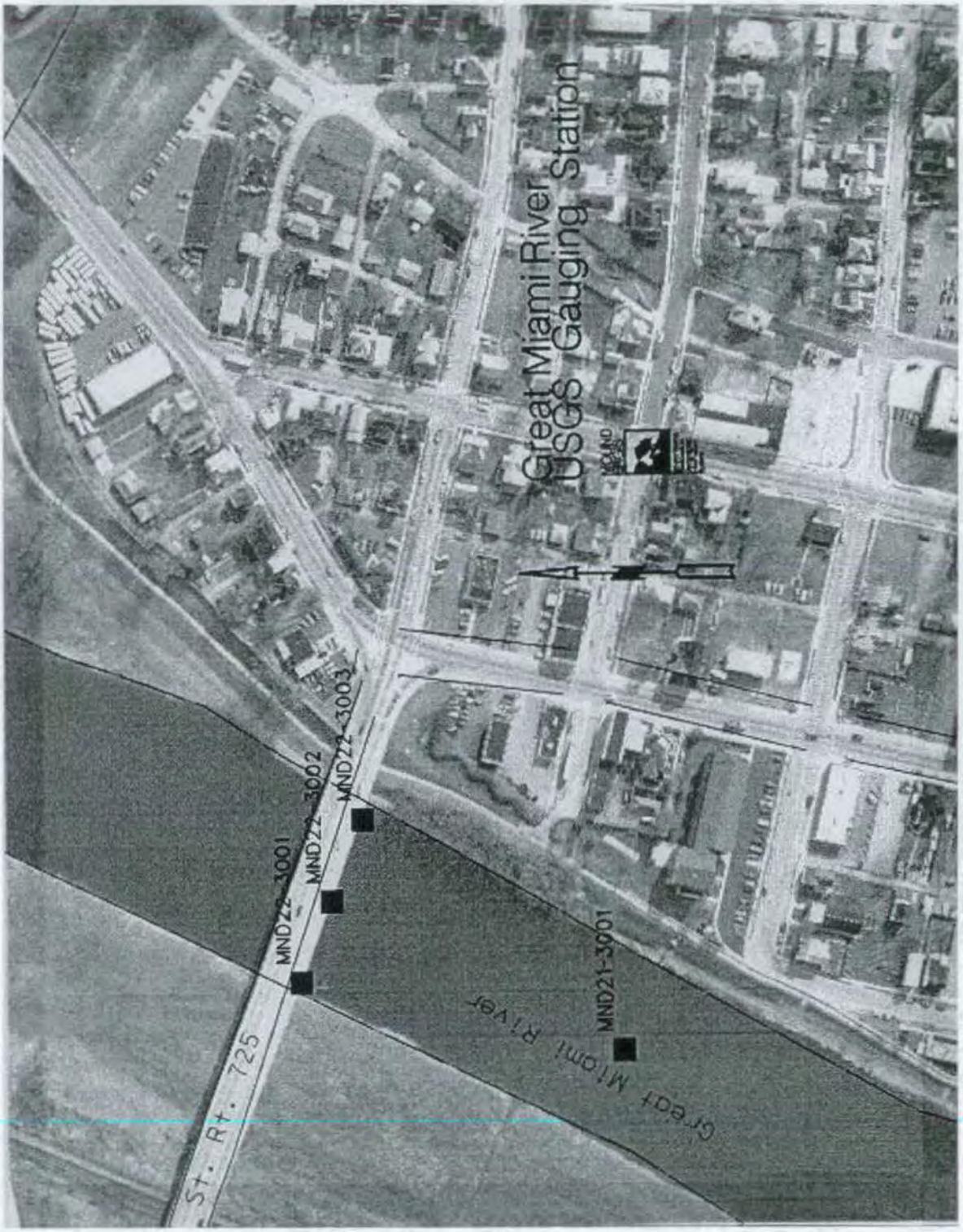


Figure 3.6.3 Great Miami River at Hutchings Power Plant

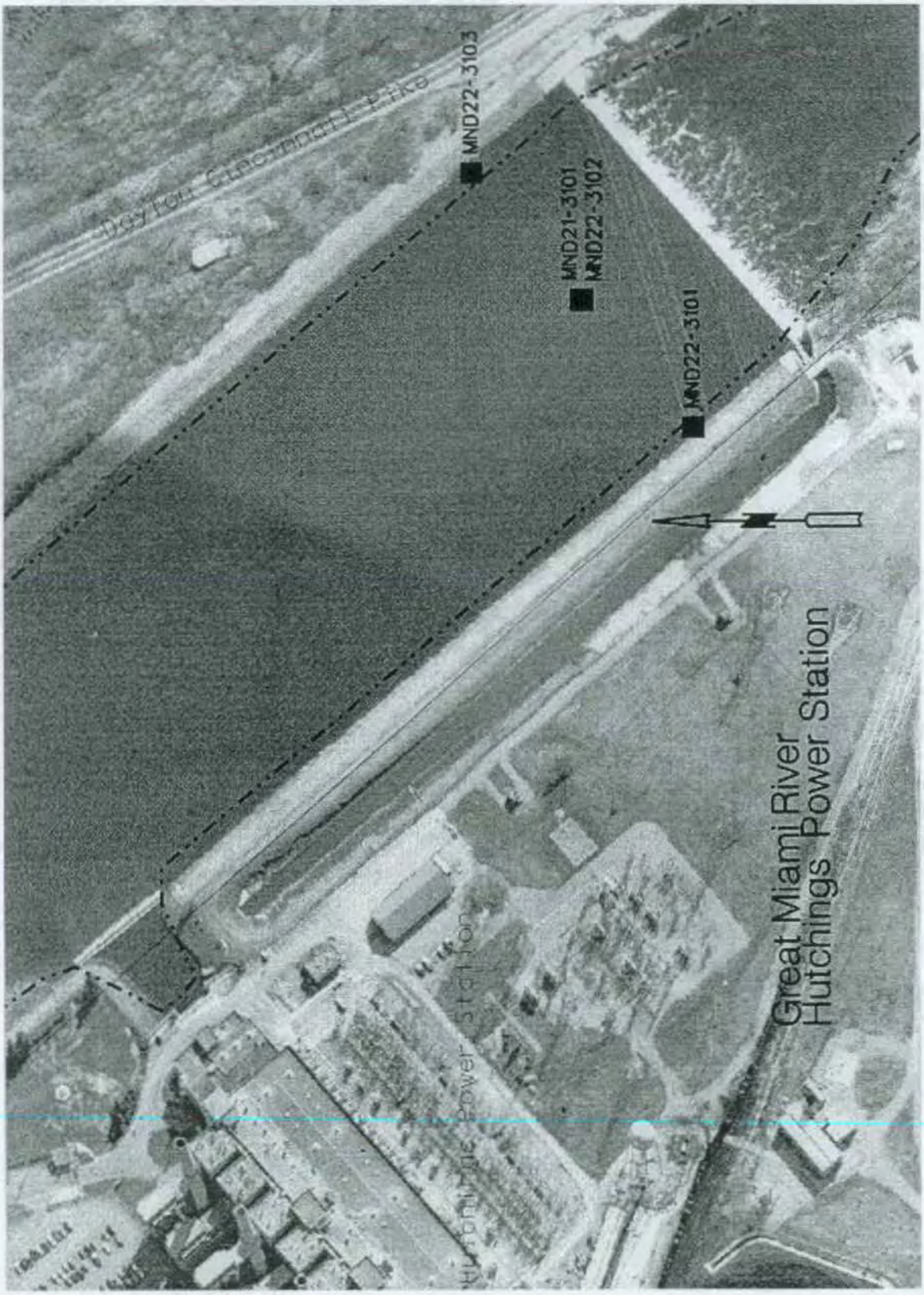


Figure 3.6.4 Great Miami River at Chautagua Weir

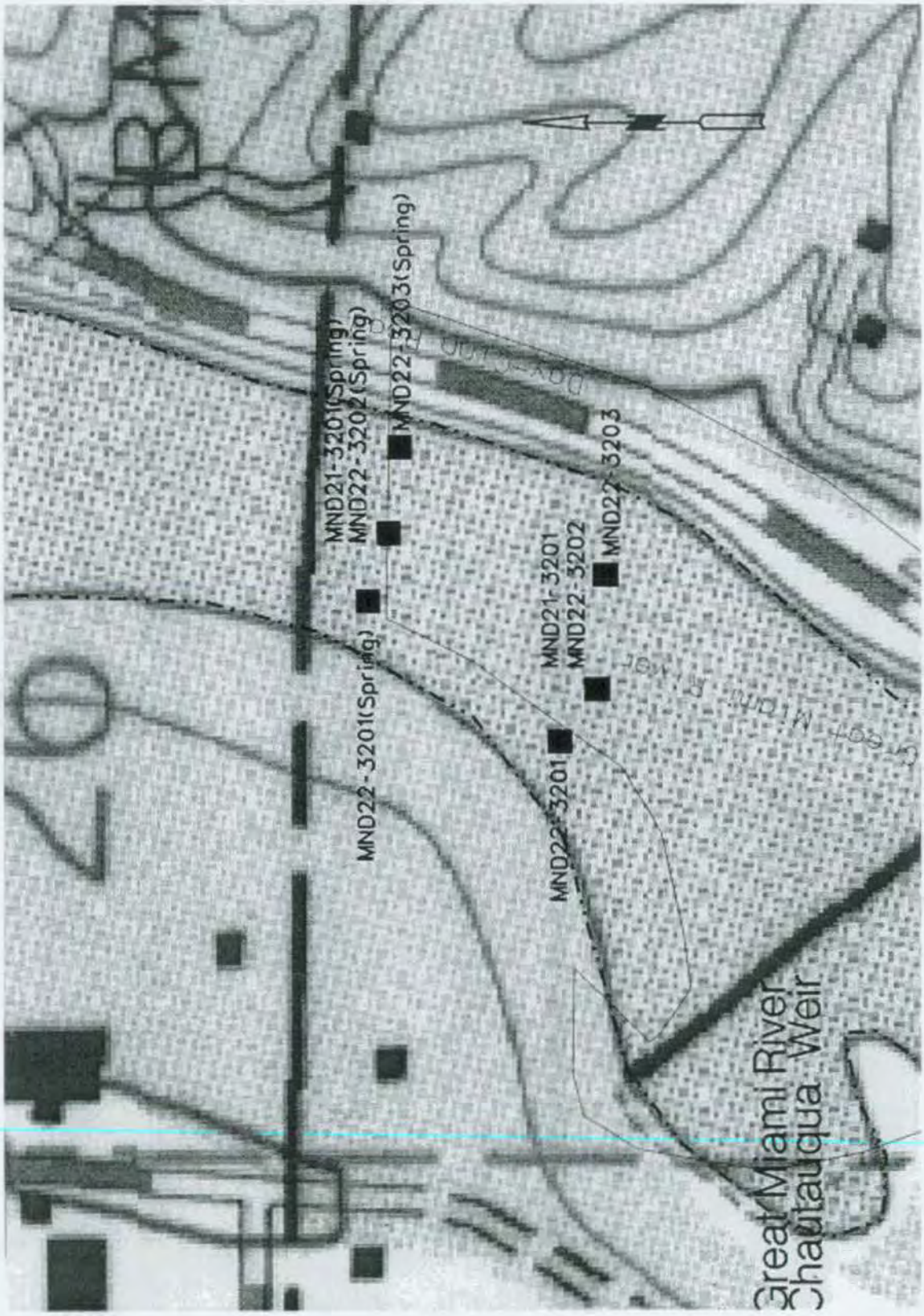


Table 3.6.1 presents flow data. In all cases, the flow rate selected from the USGS data was the mean daily flow (in cubic feet per second, cfs) on the day when the water sampling took place.

Table 3.6.1—Great Miami River Flow (Discharge) Data

Station	*Date*	*Flow (cfs)*
Riprap Road	28 September 94	90
	25 April 95	2,080
USGS Gauge	29 September 94	481
	19 April 95	6,550
Hutchings Station Weir	4 October 94	437
	24 April 95	7,480
Chautaugua Weir	29 September 94	478
	20 June 95	1,450

3.6.2 Discussion of Results

The analytical results from this portion of the sampling program are analyzed in the following manner.

Sediment Samples

- In determining Mound Plant impacts for each site, Fall and Spring sediment samples were collected at three locations, one near each bank and one near the midpoint of the stream. Actual sediment sampling points were at locations where sediment accumulations could be found. For example, sediment samples at the USGS gauging station were collected immediately (15 feet) downstream of the bridge abutments. The low and high flow values from the three sediment samples at each site were averaged and displayed for each parameter on Table A.6.1 (Appendix A).

- The series of average values was examined, from upstream to downstream, for apparent trends. There is wide variation, both downstream and between seasons. There is no consistent trend evident in the data.

Although there is some tendency for greater contaminant concentrations from the Hutchings site, this is a quiet water site where more fine-grained sediment has accumulated.

Although there is some tendency for greater contaminant concentrations from the Hutchings site, this is a quiet water site where more fine-grained sediment has accumulated. The other sites are in nearly free-flowing reaches of the stream, where the substrate is sand and gravel. Generally, contaminants are associated with fine-grained sediments.

Water Samples

- For each site, Fall and Spring water samples were collected from the mid-point of the channel. The values from the observations at each site are displayed for each parameter on Table A.6.2 (Appendix A).

- The series of values is examined, from upstream to down, for apparent trends. There is wide variation, both downstream and between seasons. There is no consistent trend evident in the data.

There is little evidence of systematic downstream changes in water or sediment quality.

In conclusion, there is little evidence of systematic downstream changes in water or sediment quality. Thus, no impact of Mound Plant operations on the Great Miami River can be demonstrated.

3.6.3 NPDES Outfall 001

In addition to the river samples discussed above, samples were taken at the Mound Plant NPDES Outfall 001 during both the low and high flow events. This outfall discharges to the Great Miami River immediately adjacent to the plant. Water samples were collected in the embayment between the actual outfall and the Great Miami River.

Water quality from samples taken adjacent to NPDES Outfall 001 is not substantially different from the river water itself.

Results of the sampling are shown on Table A.6.3 (Appendix A). They reveal a general water chemistry not substantially different from the river water itself. The tritium observations between low and high flow are substantially different. Additional sampling (and comparison with the plant's own NPDES monitoring) would be required to establish the relationship between these values and conditions at the plant.

3.7 New Property

3.7.1 Introduction

The original New Property sampling was revised and adopted into the OU5 New Property Field Investigation.

Sampling of surface water and sediment in the New Property was divided into three areas: Low-Lying Area, Ephemeral Stream, and Trunk Stream. The detailed sampling scheme outlined in the Field Sampling Plan (DOE 1992b) was revised and adopted into the scope of work for the OU5 New Property Field Investigation. This change in the scope of work was approved by U.S. EPA and Ohio EPA. The sampling was then removed from the scope of work for the OU9 Surface Water and Sediment Investigation. However, limited surface water and sediment sampling was conducted under OU9 to correlate with the OU9 Ecological Investigations.

The Field Sampling Plan (DOE 1992b) stipulated that sampling in the New Property be conducted to match locations established in the OU9 Ecological Investigations. This sampling was conducted to supplement data for a proposed ecological risk assessment. The following sample locations were chosen for this purpose:

New Property sampling sites under this investigation were chosen to supplement data for a proposed ecological risk assessment.

1. Two locations, one on the ephemeral stream and one on the trunk stream, were used in the OU9 Ecological Investigations as biological sampling stations. These are identified in the OU9 Ecological Characterization Report (DOE 1994b) as Aquatic Stations BB and EF. Sediment sampling was conducted at these locations in Fall 1994 and Spring 1995. Surface water was collected at these locations in Spring 1995 only. Dry conditions prevented collection of surface water during the Fall 1994 sampling event. Figure 3.7.1 presents these locations (MND21-4101/MND22-4101 and MND21-4102/MND22-4102).

2. Two samples were collected from the mesic grassland identified in the OU9 Ecological Assessment. This area is south of the Low-Lying Area and the ephemeral stream. Since no samples were identified in the Field Sampling Plan (DOE 1992b) for this area, surface soil samples were collected during the Fall 1994 event and submitted for analyses. Figure 3.7.1 presents these sample locations (MND22-4001 and MND22-4003).

3. One surface soil sample was collected to the west of the Low-Lying Area, parallel to the perimeter fence line. This area often retains rainwater during major storm events and receives runoff from the Low-Lying Area. This sample location may prove to be useful for future investigations. Figure 3.7.1 shows this location (MND22-4002).

Appendix A.7 tables present sample results for these New Property locations. All parameters with detects are included. Since these data were collected for purposes of correlation to an ecological risk assessment, no statistical treatment of the data was conducted.

Sampling in the New Property under OU5 occurred from June through August 1994. The following documents present the results of this investigation:

1. *New Property Phase I Field Report* (DOE 1994e)
2. *New Property Extended Phase Field Report* (DOE 1995c)
3. *New Property Remedial Investigation Report* (DOE 1996)

Figure 3.7.1 New Property/Low Lying Area

SECTION 4

4.0 Conclusions

4.1 Analytical Results

Qualitative comparison of data generated from this investigation indicated no discernible pattern of deposition within the zone of influence.

The discussion of analytical results is a presentation of parameters that yielded data above background levels. The investigation successfully established background data for comparison with data generated from the zone of influence, except for pesticides data. Qualitative comparison of data generated from this investigation indicated no discernible pattern of deposition within the zone of influence.

In general, comparison of data from the Fall 1994 sampling event to data from the Spring 1995 sampling event did not reliably indicate seasonal patterns.

In general, comparison of data from the Fall 1994 sampling event to data from the Spring 1995 sampling event did not reliably indicate seasonal patterns. If there was a consistent pattern from one season to another, the variability would have been important information for use in the development of a risk assessment.

4.2 Risk-Based Guideline Values

The Mound Plant Risk-based Guideline Values (HAZWRAP, 1995) were developed for the site with the goal of protecting human health. These values are used to determine whether existing chemical levels in the subsurface soil, sediment, and surface water are protective of human health.

In instances where the data could be compared to Mound Plant Risk-Based Guideline Values (HAZWRAP 1995), a summary is given. For onsite locations and the Miami-Erie Canal, Overflow Creek, and NPDES Outfall 002, comparisons were made using the Construction/Mound Employee Soil/Sediment and Recreational Soil/Sediment Scenarios for sediment and sub-surface soils. This use of the scenarios is consistent with the Field Sampling Plan (DOE 1992b) which treats these areas as one system (i.e., the Storm Water Retention and Discharge System).

For offsite locations, the comparisons were made using the Recreational Soil/Sediment Scenario for sediment. For surface water from all areas, comparisons were made using the Recreational Surface Water Scenario.

Background levels for Cs^{137}, Ra^{226}, and Th^{228} are above Risk-Based Guideline Values.

The background levels established for this investigation also were compared to the guideline values. The computed upper tolerance limits are all less than the relevant 10^{-6} Guideline Value for recreational exposure, with three exceptions. The upper tolerance limits of cesium^{137}, radium^{226}, and thorium^{228} in background pond and stream sediments exceed their respective 10^{-6} guideline value (see Table 3.1.5). However, all are below the 10^{-5} level. Thus, any observation of Cs^{137}, Ra^{226}, and Th^{228} found to be above background will automatically exceed a risk level of 10^{-6}. The average Ra^{226} concentration in background sediments also exceeds the 10^{-6} level.

Plutonium^{238} was a common contaminant in the Central Valley System and Miami-Erie-Canal, Overflow Creek, and NPDES Outfall 002 sampling locations.

Plutonium^{238} was a common contaminant in the Central Valley System and Miami-Erie-Canal, Overflow Creek, and NPDES Outfall 002 sampling locations. For samples taken within the boundaries of the Mound Plant, plutonium^{238} was detected at levels above the Mound Plant Risk-Based Guideline Value (HAZWRAP 1995) of 5.5 pCi/g for the Construction Mound Employee Scenario in all 30 pond sediment samples collected and in 6 of the 8 locations in the Plant Drainage Ditch (11 samples

total). Plutonium^{238} values ranged from 15 to 257 pCi/g in the ponds and 6 to 28 pCi/g in the Plant Drainage Ditch. Samples from the Asphalt-lined Pond contained the highest levels of plutonium^{238} onsite.

The results of sediment sampling in the Miami-Erie Canal, Overflow Creek, and NPDES Outfall 002 indicate that plutonium^{238} was detected in 17 samples from 10 of the 11 sample locations at levels above the Mound Plant Risk-Based Guideline Value (HAZWRAP 1995) of 5.5pCi/g for the Construction/Mound Employee Scenario. Only one location, MND22-2602, yielded results above the Mound Plant Risk-Based Guideline Value (HAZWRAP 1995) of 110 pCi/g for the Recreational Soil/Sediment Scenario. The values ranged from 0.6 to 844 pCi/g.

In subsurface soils, plutonium^{238} was detected at five sample locations in the Miami-Erie Canal and Overflow Creek at concentrations ranging between 8.3 and 4,650 pCi/g. The highest concentrations of 4,650 pCi/g and 795 pCi/g were reported at locations MND23-4102 and MND23-4103, respectively. However, plutonium^{238} was not detected above its guideline value in subsurface soils in the Plant Drainage Ditch.

Except for the Miami-Erie Canal, Overflow Creek, and NPDES Outfall 002 areas, no other offsite locations yielded results for plutonium^{238} greater than the established guideline values.

With the exception of two sampling locations in the Miami-Erie Canal, which indicated the highest levels of plutonium^{238} in both sediment and subsurface soils, no distinguishable pattern of downstream trends indicating migration of plutonium^{238} was apparent. In addition, no other offsite locations yielded results for plutonium^{238} greater than the established guideline values.

The guideline values for thorium^{228} and several semivolatile compounds were exceeded in areas of the Central Valley System and the Miami-Erie Canal. However, these results do not appear to be significant.

With the exception of radium^{226}, no analytical parameters were detected above their Mound Plant Risk-Based Guideline Value (HAZWRAP 1995) at the remaining offsite sampling areas.

With the exception of radium^{226}, no analytical parameters were detected above their Mound Plant Risk-Based Guideline Values (HAZWRAP 1995) at the remaining offsite sampling areas. These areas included pond and stream locations sampled under the Area Watersheds and Drainages task (within a one-mile radius from the Mound Plant) and the Zone of Influence task (within a three-mile radius from the Mound Plant).

4.3 Changes to Program Sampling Plans

Sampling plan protocol changes made during the field program are summarized in this report. A more detailed description of these changes (deviations) can be found in Appendix B. The changes are of two types:

1. Certain sample locations were moved to facilitate sample collection. There is no impact to representativeness or comparability, but an improvement in completeness.

2. Certain water samples could not be collected, due to dry conditions. This resulted in a loss of data and an unavoidable impact to completeness. Overall, the impacts are not significant.

4.4 Laboratory Program

The laboratories generally met the QAPP (DOE 1993a) requirements. However, there were deviations from the QAPP (DOE 1993a) requirements during the investigation:

1. Plan changes
2. QC checks (QCCs) not meeting program requirements

The Team made plan changes because the QAPP (DOE 1993a) requirement was incomplete or too exact.

The most significant QCC problems found by the validators deal with anions and pesticides

Because QCCs did not meet program requirements, some data had to be labeled as estimated and sometimes not usable. The most significant QCC problems found by the validators deal with anions and pesticides.

During data validation, the Team found that several data points for anions and pesticides were of lesser quality.

During data validation, the Team found that several data points for anions were of lesser quality. These results were estimated because the laboratory system did not meet the QAPP (DOE 1993a) requirements for fine tuning or adjusting the laboratory instruments. During the 10 percent data validation, the Team rejected many results for pesticides. Subsequently, the entire pesticide data set was validated and determined to be more than 95% usable.

The completeness goals (usable data) are 90% for sample collection, 90% for field measurements, 95% for laboratory analysis, and 100% for collection and analysis of background samples. The laboratory completeness goal was met based on the submission of sample results and on the usable pesticide results.

As previously cited in Section 2.1.5, the sampling completeness goal was not met for explosives.

Because 100% data validation was not performed, except for pesticides, it is not possible to definitively determine data usability on a point-by-point basis. However, based on the samples which were validated, the data appears to be generally usable.

SECTION 5

5.0 References

Bailar, John C., Jr., *et al. Chemistry*. Academic Press, Inc., London. 1978.

DOE 1990. U.S. Department of Energy Order 5400.5. *Radiation Protection of the Public and the Environment*. February 1990.

DOE 1992a. *Operable Unit 9, Site-Wide Work Plan*. U.S. Department of Energy, Albuquerque Field Office, Albuquerque, New Mexico. May 1992.

DOE 1992b. *Operable Unit 9, Field Sampling Plan*. U.S. Department of Energy, Albuquerque Field Office, Albuquerque, New Mexico. May 1992.

DOE 1993a. *Operable Unit 9, Site-Wide Quality Assurance Project Plan (Final, Revision 3)*. U.S. Department of Energy, Albuquerque Operations Office, Albuquerque, New Mexico. June 1993.

DOE 1993b. *Operable Unit 9, Seismic Refraction Survey Report*. U.S. Department of Energy, Albuquerque Operations Office, Albuquerque, New Mexico. July 1993.

DOE 1994a. *Operable Unit 9, Hydrogeologic Investigation: Soil Chemistry Report*. U.S. Department of Energy, Albuquerque Operations Office, Albuquerque, New Mexico. September 1994.

DOE 1994b. *Operable Unit 9, Ecological Characterization Report*. U.S. Department of Energy, Albuquerque Operations Office, Albuquerque, New Mexico. March 1994.

DOE 1994c. *Operable Unit 9, Background Soils Investigation: Soil Chemistry Report*. U.S. Department of Energy, Albuquerque Operations Office, Albuquerque, New Mexico. April 1994.

DOE 1994d. *Operable Unit 9, Hydrogeologic Investigation: Buried Valley Aquifer Report*. U.S. Department of Energy, Albuquerque Operations Office, Albuquerque, New Mexico. September 1994.

DOE 1994e. *Operable Unit 5, New Property Phase I Field Report*. U.S. Department of Energy, Ohio Field Office, Miamisburg, Ohio. December 1994.

DOE 1995a. *Operable Unit 9, Hydrogeologic Investigation: Groundwater Sweeps Report*. U.S. Department of Energy, Ohio Field Office, Miamisburg, Ohio. April 1995.

DOE 1995b. *Operable Unit 9, Regional Soils Report*. U.S. Department of Energy, Ohio Field Office, Miamisburg, Ohio. August 1995.

DOE 1995c. *Operable Unit 5, New Property Extended Phase I Field Report*. U.S. Department of Energy, Ohio Field Office, Miamisburg, Ohio. January 1995.

DOE 1995d. *Operable Unit 9, Residential, Municipal, and Industrial Well Investigation Report*.. U.S. Department of Energy, Miamisburg Area Office, Miamisburg, Ohio. September 1995.

DOE 1996. *Operable Unit 5, New Property Remedial Investigation Report*. U.S. Department of Energy, Ohio Field Office, Miamisburg, Ohio. February 1996.

EPA 1983a. *Methods for Chemical Analysis of Water and Wastes*. U.S. Environmental Protection Agency, EPA-600/4-79-020. March 1983.

EPA 1983b. *Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans*. QAMS-005/80. Office of Monitoring Systems and Quality Assurance, Office of Research and Development, U.S. Environmental Protection Agency, Washington, D.C. EPA-600/4-83-004. February 1983.

EPA 1986. "Test Methods for Evaluating Solid Waste." *Laboratory Manual Physical/Chemical Methods, SW-846,* Volumes 1A, 1B, and 1C, third edition. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, Washington, D.C. November 1986.

EPA 1989. *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Final Guidance*. U.S. Environmental Protection Agency, Office of Solid Waste, EPA/530-SW-89-026. February 1989

EPA 1990a. *U.S. EPA Contract Laboratory Program, Statement of Work for Organic Analysis, Multi-Media, Multi-Concentration*. Document No. ILM01.0 including revisions 1.1 through 1.8. U.S. Environmental Protection Agency. March 1990.

EPA 1990b. *U.S. EPA Contract Laboratory Program, Statement of Work for Inorganic Analysis, Multi-Media, Multi-Concentration*. Document No. ILM01.0. U.S. Environmental Protection Agency. March 1990.

Fritz, James S. And George H. Schenk. *Quantitative Analytical Chemistry, Fourth Edition*. Allyn and Bacon, Inc., Boston, 1979.

Gilbert, Richard O. *Statistical Methods for Environmental Pollution Monitoring*. Van Norstrand Reinhold, New York, 1987.

HAZWRAP 1995. *Risk-Based Guideline Values, Mound Plant, Miamisburg, Ohio (Final, Revision 3)*. Hazardous Waste Remedial Action Program. December 1995.

OEPA 1991. *Final How Clean is Clean Policy*. Ohio Environmental Protection Agency, Division of Emergency and Remedial Response. July 26, 1991.

APPENDICES

Operable Unit 9 Surface Water and Sediment Investigation Report

APPENDICES A through D

APPENDIX A

DATA TABLES—
DATA QUALIFIERS—
DEFINITIONS

A—Data Tables—Data Qualifiers—Definitions

General Data Qualifiers (Non-CLP)

-U- Indicates analyte was analyzed for but not detected. The associated sample quantitation limit will be the CRQL, corrected for dilution and for percent moisture.

Organic Data Qualifiers (CLP and Explosives)

-U- Indicates compound was analyzed for but not detected. The associated sample quantitation limit will be the CRQL, corrected for dilution and for percent moisture.

-J- Indicates an estimated value. This flag is used under the following circumstances: 1) when estimating a concentration for tentatively identified compounds (TICs) assuming a 1:1 response, 2) when the qualitative data indicated the presence of a compound that meets the volatile, semivolatile, and pesticide/Aroclor identification criteria, and the result is less than the CRQL but greater than zero.

-N- Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where identification is based on a mass spectral library search.

-P- Used for pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns.

-C- Applies to pesticide results where the identification has been confirmed by GC/MS.

-B- Used when the analyte is found in the associated blank as well as in the sample. This flag must be used for a TIC as well as for positively identified target compound.

-E- Identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.

-D- Identifies all compounds identified in an analysis at a secondary dilution factor.

-A- Indicates that a TIC is a suspected aldol-condensation product.

APPENDIX A.1

Appendix A-1

Computation of Background

A.1.1 Background Pond Sediment/Anions
A.1.2 Background Pond Sediment/Metals
A.1.3 Background Pond Sediment/General Chemistry
A.1.4 Background Pond Sediment/Pesticides
A.1.5 Background Pond Sediment/Radiological
A.1.6 Background Pond Surface Water/Anions
A.1.7 Background Pond Surface Water/Metals (Dissolved)
A.1.8 Background Pond Surface Water/Metals (Total)
A.1.9 Background Pond Surface Water/General Chemistry
A.1.10 Background Pond Surface Water/Pesticides
A.1.11 Background Pond Surface Water/Radiological
A.1.12 Background Stream Sediment /Anions
A.1.13 Background Stream Sediment /Metals
A.1.14 Background Stream Sediment /General Chemistry
A.1.15 Background Stream Sediment /Pesticides
A.1.16 Background Stream Sediment /Radiological
A.1.17 Background Stream Surface Water/Anions
A.1.18 Background Stream Surface Water/Metals (Dissolved)
A.1.19 Background Stream Surface Water/Metals (Total)
A.1.20 Background Stream Surface Water/General Chemistry
A.1.21 Background Stream Surface Water/Pesticides
A.1.22 Background Stream Surface Water/Radiological

EG&G Mound
Background Pond Sediment
Common Anions Analysis (mg/kg)

Table A.1.1 - Background Pond Sediment/Anions

	Chloride	Fluoride	Nitrate-Nitrite-N	Sulfate
Summary Statistics				
Sample detect :Total	15:26	19:26	10:26	25:26
Average (Arithmetic Mean)	1864.31	23.664	47.9182	2949.31
Median	64.4	4.175	2.13	271.5
Geometric mean	45.3382	3.3181	2.68679	316.101
Standard deviation	5194.72	87.9753	155.291	7878.35
Minimum	0.146	0.004	0.05	0.144
Maximum	18900	454	772	32900
Coefficient of Variation	278.64	371.768	324.075	267.125
95% Mean Confidence Interval				
Upper Limit	3962.51	59.19	110.642	6131.45
Lower Limit	-233.883	-11.87	-14.805	-232.83
+/-	2098	35.534	62.723	3182.14
Upper 95% Tolerance Limit				
Upper Limit	11837.3526	203.022031	355.19736	18155.3545
K Factor	2.27	2.27	2.27	2.27
Distribution Test				
Normal				
Shapiro-Wilkes W value	0.4009	0.2525	0.344	0.412
p-Value	7.90E-07	1.62E-12	1.72E-11	1.11E-10
Result	FALSE	FALSE	FALSE	FALSE
Lognormal				
Shapiro-Wilks W	0.9101	0.8487	0.9234	0.758
P-Value	0.027	0.00104	0.573	0.00015
Result	TRUE	TRUE	TRUE	FALSE
Non-Parameteric				TRUE
Unknown				

Notes:

[1] Summary statistics, 95 % mean confidence interval, and distribution type calculated using Statgraphics software package.

[2] Tolerance limit calculation:

95% Upper Tolerance limit = X+KS

Where X = Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution

K= Tolerance Factor (Table 5, "Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities", U.S. EPA, April 1989)

S = Standard Deviation

[3] $W_{.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987.

[4] Unknown distribution (< 4 detections) only min, max, median reported.

EG&G Mound
Background Pond Sediment
Metals Analysis (mg/kg)

Table A.1.2 - Background Pond Sediment/Metals

	Aluminum	Antimony	Arsenic	Barium	Beryllium	Bismuth	Cadmium	Calcium	Chromium	Cobalt
Summary Statistics										
Sample detect :Total	26:26	4:26	26:26	26:26	13:26	5:21	6:26	26:26	26:26	25:26
Average (Arithmetic Mean)	9897.69	1.04462	7.53462	94.7	0.4200	1.0570	0.326923	35430.1	13.5115	6.29192
Median	8025	0.93	7.05	91.8	0.3575	0.9500	0.18	8965	11.4	6.6
Geometric mean	8078.02	0.889471	6.91637	87.3554	0.3417	0.9838	0.221973	9221.88	12.047	5.23283
Standard deviation	7380.26	0.62461	3.74753	41.2704	0.2903	0.4770	0.437555	45697.1	7.31734	3.32958
Minimum	2040	0.37	4.2	31.1	0.1000	0.6500	0.09	616	4	0.59
Maximum	39200	2.7	20.9	251	1.4000	2.7000	2.2	152000	40.8	17
Coefficient of Variation	74.5655	59.7933	49.7375	43.5801	69.1230	45.1700	133.84	128.978	54.1562	52.9183
95% Mean Confidence Interval										
Upper Limit	12878.7	1.296	9.048	111.369	0.5373	1.2740	0.5036	53887.6	16.467	7.636
Lower Limit	6916.73	0.7923	6.02	78.03	0.3027	0.8390	0.1501	16972.6	10.556	4.947
+/-	2980.96	0.2522	1.513	16.669	0.1170	0.2170	0.1767	18457.6	2.955	1.344
Upper 95% Tolerance Limit										
Upper Limit	24831.2102	2.3073357	15.5568931	181.039208	1.0854	2.1880	1.17324985	112697.417	28.6573618	13.8500666
K Factor	2.27	2.27	2.27	2.27	2.2920	2.3710	2.27	2.27	2.27	2.27
Distribution Test										
Normal										
Shapiro-Wilkes W value	0.755	0.8769	0.7496	0.8291	0.8322	0.7530	0.5192	0.771	0.818	0.917
p-Value	0.0000139	0.0044	0.0000107	0.00039	0.0005	0.0001	2.60E-09	0.000027	0.0023	0.041
Result	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE
Lognormal										
Shapiro-Wilks W	0.979	0.949	0.907	0.946	0.9524	0.8937	0.855	0.884	0.974	0.839
P-Value	0.871	0.243	0.022	0.2019	0.2804	0.0239	0.0014	0.0066	0.861	0.006
Result	TRUE	TRUE	FALSE	TRUE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE
Non-Parameteric			TRUE		TRUE	TRUE	TRUE	TRUE		TRUE
Unknown										

EG&G Mound
Background Pond Sediment
Metals Analysis (mg/kg)

Table A.1.2 - Background Pond Sediment/Metals

	Copper	Cyanide	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel
Summary Statistics										
Sample detect :Total	26:26	0:26	26:26	26:26	19:21	26:26	26:26	0:26	9:21	26:26
Average (Arithmetric Mean)	34.45		17740.8	18.4154	10.7095	7220.23	358.269		2.0966	11.4577
Median	22.2	1.45	16200	16.7	7.7	3440	335.5	0.275	1.2000	10.2
Geometric mean	23.4062		15243.2	16.7641	8.67566	3608.97	314.237		1.3736	9.723
Standard deviation	33.5452		10368.8	7.95018	8.5523	8892.86	198.577		2.8240	6.56751
Minimum	5.3	0.78	3250	5.3	3.1	471	81	0.14	0.3700	1.7
Maximum	152	3.5	52200	36.2	36.1	31200	1100	0.7	13.3000	31.6
Coefficient of Variation	97.3737		58.4459	43.1714	79.857	123.166	55.4269		134.7200	57.3196
95% Mean Confidence Interval										
Upper Limit	47.999		21928.8	21.626	14.602	10812.1	438.471		3.3825	14.11
Lower Limit	20.9		13552.7	15.204	6.816	3628.32	278.062		0.8108	8.805
+/-	13.549		4188	3.211	3.892	3591.91	80.207		1.2850	2.652
Upper 95% Tolerance Limit										
Upper Limit	99.553804		38780.376	36.4623086	28.089381	23795.7622	765.00679		8.7923	24.6312477
K Factor	2.27		2.27	2.27	2.27	2.27	2.27		2.3710	2.27
Distribution Test										
Normal										
Shapiro-Wilkes W value	0.774		0.8563	0.953	0.7057	0.729	0.8277		0.5416	0.917
p-Value	0.00031		0.00152	0.295	0.00011	0.000004	0.000368		0.0000	0.0408
Result	FALSE		FALSE	TRUE	FALSE	FALSE	FALSE		FALSE	FALSE
Lognormal										
Shapiro-Wilks W	0.962		0.96		0.944	0.947	0.962		0.9297	0.967
P-Value	0.465		0.42		0.266	0.216	0.428		0.1321	0.587
Result	TRUE		TRUE	FALSE	TRUE	TRUE	TRUE		FALSE	TRUE
Non-Parameteric									TRUE	
Unknown		TRUE						TRUE		

EG&G Mound
Background Pond Sediment
Metals Analysis (mg/kg)

Table A.1.2 - Background Pond Sediment/Metals

	Potassium	Selenium	Silver	Sodium	Thallium	Tin	Vanadium	Zinc
Summary Statistics								
Sample detect :Total	26:26	23:26	0:26	26:26	0:26	8:21	26:26	26:26
Average (Arithmetric Mean)	1476.54	1.54462		654.654		4.37143	23.7846	46.8923
Median	1290	1.5	0.295	599	1.3	3.8	22.7	42.4
Geometric mean	1235.48	1.4187		557.462		4.10183	20.4562	42.5954
Standard deviation	1006.32	0.632956		387.934		1.62516	14.6059	21.9339
Minimum	485	0.55	0.12	200	0.7	1.7	4.8	13.1
Maximum	5080	2.9	1.8	1770	2.6	8.3	81.1	119
Coefficient of Variation	68.154	40.9783		59.2579		37.1768	61.4088	46.7751
95% Mean Confidence Interval								
Upper Limit	1883	1.8002		811.344		5.111	29.684	55.751
Lower Limit	1070.08	1.2889		497.96		3.631	17.885	38.033
+/-	406.462	0.225		156.69		0.739	5.899	8.859
Upper 95% Tolerance Limit								
Upper Limit	3519.8264	2.85551012		1438.07218		7.7909432	53.611593	92.385353
K Factor	2.27	2.27		2.27		2.27	2.27	2.27
Distribution Test								
Normal								
Shapiro-Wilkes W value	0.8028	0.907		0.897		0.928	0.789	0.8935
p-Value	0.000113	0.024		0.013		0.125	0.0000609	0.0109
Result	FALSE	FALSE		FALSE		TRUE	FALSE	FALSE
Lognormal								
Shapiro-Wilks W	0.968	0.928		0.976			0.963	0.982
P-Value	0.588	0.075		0.801			0.474	0.9109
Result	TRUE	TRUE		TRUE			TRUE	TRUE
Non-Parameteric								
Unknown			TRUE		TRUE			

Notes:

[1] Summary statistics, 95 % mean confidence interval, and distribution type calculated using Statgraphics software package.

[2] Tolerance limit calculation:

95% Upper Tolerance limit = X+KS

Where X = Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution

K= Tolerance Factor (Table 5, "Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities", U.S. EPA, April 1989)

S = Standard Deviation

[3] $W_{.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987.

[4] Unknown distribution (< 4 detections) only min, max, median reported.

Table A.1.3 - Background Pond Sediment/General Chemistry

	Organic Carbon (mg/kg)	ph
Summary Statistics		
Sample detect :Total	26:26	26:26
Average (Arithmetic Mean)	8527.48	7.03077
Median	7831.25	7.2
Geometric mean	8043.98	7.01024
Standard deviation	3343.23	0.530486
Minimum	4920	5.4
Maximum	19650	7.8
Coefficient of Variation	39.2054	7.54521
95% Mean Confidence Interval		
Upper Limit	9877.84	7.24
Lower Limit	7177.12	6.81
+/-	1350.36	0.214
Upper 95% Tolerance Limit		
Upper Limit	15633.1121	8.23497322
K Factor	2.27	2.27
Distribution Test		
Normal		
Shapiro-Wilkes W value	0.8086	0.92
p-Value	0.000148	0.0477
Result	FALSE	TRUE
Lognormal		
Shapiro-Wilks W	0.94	
P-Value	0.144	
Result	TRUE	
Non-Parameteric		
Unknown		

Notes:

[1] Summary statistics, 95 % mean confidence interval, and distribution type calculated using Statgraphics software package.

[2] Tolerance limit calculation:

95% Upper Tolerance limit = X+KS

Where X = Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution

K= Tolerance Factor (Table 5, "Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities", U.S. EPA, April 1989)

S = Standard Deviation

[3] $W_{.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987.

[4] Unknown distribution (< 4 detections) only min, max, median reported.

EG&G Mound
Background Pond Sediment
Pesticides Analysis (ug/Kg)

Table A.1.4 - Background Pond Sediment/Pesticides

	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	Alpha Chlordane	Alpha-BHC	Aroclor-1016	Aroclor-1221
Summary Statistics								
Sample detect Total	1:26	4:26	3:26	6:26	4:25	0:26	0:26	0:26
Average (Arithmetric Mean)	10.9950	21.4523		5.4900	5.8216			
Median	4.6250	9.7	9.25	2.1750	2.5000	5.05	97	200
Geometric mean	5.6230	7.45554		2.6500	3.0655			
Standard deviation	14.8612	30.1035		7.7000	7.7220			
Minimum	0.2900	0.14	0.58	0.3600	0.2900	2.7	52	100
Maximum	55.0000	110	110	28.0000	28.0000	56	1100	2200
Coefficient of Variation	135.1540	140.328		140.2610	132.6580			
95% Mean Confidence Interval								
Upper Limit	16.9984	33.611		8.6000	9.0094			
Lower Limit	4.9900	9.293		2.3790	2.6330			
+/-	6.0025	12.159		3.1100	3.1870			
Upper 95% Tolerance Limit								
Upper Limit		89.787245		23.1384				
K Factor		2.27		2.2920				
Distribution Test								
Normal								
Shapiro-Wilkes W value		0.668		0.6448	0.6490			
p-Value		4.35E-07		0.0000	2.1E-6			
Result		FALSE		FALSE	FALSE			
Lognormal								
Shapiro-Wilks W		0.879		0.9199	0.9191			
P-Value		0.0048		0.0470	0.0451			
Result		FALSE		FALSE	FALSE			
Non-Parameteric		TRUE		TRUE	TRUE			
Unknown		FALSE	TRUE			TRUE	TRUE	TRUE

EG&G Mound
Background Pond Sediment
Pesticides Analysis (ug/Kg)

Table A.1.4 - Background Pond Sediment/Pesticides

	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Beta-BHC	Delta-BHC	Dieldrin
Summary Statistics								
Sample detect Total	0:26	0:26	0:26	0:26	0:26	0.26	1:26	7.26
Average (Arithmetric Mean)								20.79
Median	97	97	97	97	97	5.05	5.05	9.25
Geometric mean								7.14881
Standard deviation								30.439
Minimum	52	52	52	52	52	2.7	0.37	0.24
Maximum	1100	1100	1100	1100	1100	56	56	110
Coefficient of Variation								146.412
95% Mean Confidence Interval								
Upper Limit								33.084
Lower Limit								8.49
+/-								12.29
Upper 95% Tolerance Limit								
Upper Limit								89.88653
K Factor								2.27
Distribution Test								
Normal								
Shapiro-Wilkes W value								0.668
p-Value								4.33E-07
Result								FALSE
Lognormal								
Shapiro-Wilks W								0.946
P-Value								0.206
Result								TRUE
Non-Parameteric								FALSE
Unknown	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	FALSE

EG&G Mound
Background Pond Sediment
Pesticides Analysis (ug/Kg)

Table A.1.4 - Background Pond Sediment/Pesticides

	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin Aldehyde	Endrin Ketone	Gamma Chlordane
Summary Statistics							
Sample detect :Total	1:26	0:26	3:26	1:26	0:26	1:26	2:25
Average (Arithmetric Mean)			10.7200				6.0160
Median	5.05	9.7	4.3500	9.7	9.7	9.7	2.6500
Geometric mean			4.7470				3.3410
Standard deviation			15.0220				7.6717
Minimum	0.11	5.2	0.2200	0.31	5.2	0.27	0.8500
Maximum	56	110	55.0000	110	110	110	28.0000
Coefficient of Variation			140.0120				127.5230
95% Mean Confidence Interval							
Upper Limit			16.7900				9.1820
Lower Limit			4.6600				2.8490
+/-			6.0670				3.1660
Upper 95% Tolerance Limit							
Upper Limit							
K Factor							
Distribution Test							
Normal							
Shapiro-Wilkes W value							
p-Value							
Result							
Lognormal							
Shapiro-Wilks W							
P-Value							
Result							
Non-Parameteric							
Unknown	TRUE	TRUE		TRUE	TRUE	TRUE	

EG&G Mound
Background Pond Sediment
Pesticides Analysis (ug/Kg)

Table A.1.4 - Background Pond Sediment/Pesticides

	Gamma-BHC (Lindane)	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene
Summary Statistics					
Sample detect :Total	1:26	2:26	6:25	3:26	0:26
Average (Arithmetric Mean)	2.8360		5.4756	56.5992	
Median	2.0750	5.05	1.9000	25.2500	505
Geometric mean	2.1487		2.2180	25.9630	
Standard deviation	3.2900		7.9150	76.2440	
Minimum	0.8500	0.2	0.1900	0.8300	270
Maximum	17.5000	56	28.0000	280.0000	5600
Coefficient of Variation	115.9900		144.5600	134.7180	
95% Mean Confidence Interval					
Upper Limit	4.1650		8.7430	87.3950	
Lower Limit	1.5070		2.2080	25.8032	
+/-	1.3280		3.2670	30.7900	
Upper 95% Tolerance Limit					
Upper Limit			23.6168		
K Factor			2.2920		
Distribution Test					
Normal					
Shapiro-Wilkes W value			0.6640		
p-Value			0.0000		
Result			FALSE		
Lognormal					
Shapiro-Wilks W			0.9436		
P-Value			0.1879		
Result			FALSE		
Non-Parameteric			TRUE		
Unknown		TRUE			TRUE

Notes:

[1] Summary statistics, 95 % mean confidence interval, and distribution type calculated using Statgraphics software package.

[2] Tolerance limit calculation:

95% Upper Tolerance limit = X+KS

Where X = Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution

K= Tolerance Factor (Table 5, "Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities", U.S. EPA, April 1989)

S = Standard Deviation

[3] $W_{.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987.

[4] Unknown distribution (< 4 detections) only min, max, median reported.

EG&G Mound
Background Pond Sediment
Radiological Analysis (Pci/G)

Table A.1.5 - Background Pond Sediment/Radiological

	Americium-241	Bismuth-207	Bismuth-210M	Cesium-137	Cobalt-60	Plutonium-238	Plutonium-239/240
Summary Statistics							
Sample detect :Total	0:23	0:23	5:23	6:23	0:23	0:26	7:23
Average (Arithmetric Mean)			0.13251	0.566478		0.0066	0.016952
Median	0.5242	0.127	0.1343	0.34	0.1788	0.0050	0.01177
Geometric mean				0.412537		0.0043	0.01263
Standard deviation			0.0696259	0.519056		0.0066	0.0133855
Minimum	0.136	0.07768	-0.045	0.172	0.0762	0.0009	0.00365
Maximum	1.71	0.188	0.232	2.06	0.2622	0.0259	0.0519
Coefficient of Variation			52.5441	91.6287		100.1560	78.9611
95% Mean Confidence Interval							
Upper Limit			0.162	0.7909		0.0093	0.022
Lower Limit			0.102	0.342		0.0039	0.011
+/-			0.0301	0.224		0.0026	0.0057
Upper 95% Tolerance Limit							
Upper Limit			0.296458721	1.548881424			0.04380483
K Factor			2.329	2.329			2.329
Distribution Test							
Normal							
Shapiro-Wilkes W value			0.874	0.732			0.8591
p-Value			0.0065	0.0000147			0.00319
Result			FALSE	FALSE			FALSE
Lognormal							
Shapiro-Wilks W			0.515	0.86			0.9617
P-Value			3.35E-08	0.0034			0.1982
Result			FALSE	FALSE			TRUE
Non-Parameteric			TRUE	TRUE			
Unknown	TRUE	TRUE			TRUE		

EG&G Mound
Background Pond Sediment
Radiological Analysis (Pci/G)

Table A.1.5 - Background Pond Sediment/Radiological

	Potassium-40	Radium-226	Strontium-90	Thorium-228	Thorium-230	Thorium-232	Tritium
Summary Statistics							
Sample detect :Total	23:23	23:23	11:23	23:23	23:23	23:23	0:21
Average (Arithmetric Mean)	13.8687	1.05696	0.252378	0.841348	1.01117	0.775391	0.1391
Median	14.5	1.04	0.159	0.862	0.963	0.765	0.1495
Geometric mean	13.2413	1.02694	0.175882	0.774429	0.96794	0.707497	0.1258
Standard deviation	3.30753	0.251332	0.286502	0.334119	0.295038	0.316049	0.0416
Minimum	3.06	0.563	0.0516	0.364	0.474	0.283	0.0195
Maximum	17.3	1.45	1.34	1.46	1.69	1.25	0.1780
Coefficient of Variation	23.8489	23.7788	113.521	39.7124	29.1778	40.76	29.8700
95% Mean Confidence Interval							
Upper Limit	15.299	1.165	0.376	0.985	1.138	0.912	0.1570
Lower Limit	12.43	0.948	0.128	0.696	0.883	0.638	0.1201
+/-	1.43	0.108	0.123	0.144	0.127	0.136	0.0189
Upper 95% Tolerance Limit							
Upper Limit	22.20323737	1.642312228	0.843145158	1.619511151	1.698313502	1.511469121	
K Factor	2.329	2.329	2.329	2.329	2.329	2.329	
Distribution Test							
Normal							
Shapiro-Wilkes W value	846	0.96	0.618	0.951	0.982	0.921	
p-Value	0.0017	0.464	2.69E-07	0.314	0.929	0.0716	
Result	FALSE	TRUE	FALSE	TRUE	TRUE	TRUE	
Lognormal							
Shapiro-Wilks W	0.641		0.927				
P-Value	5.70E-07		0.097				
Result	FALSE		TRUE				
Non-Parameteric	TRUE						
Unknown							

EG&G Mound
Background Pond Sediment
Radiological Analysis (Pci/G)

Table A.1.5 - Background Pond Sediment/Radiological

	Uranium-234	Uranium-235	Uranium-238
Summary Statistics			
Sample detect :Total	23:23	10:23	23:23
Average (Arithmetic Mean)	0.95913	0.0472826	1.0257
Median	0.93	0.0466	0.968
Geometric mean	0.937261	0.0442025	1.00683
Standard deviation	0.208215	0.0174002	0.20427
Minimum	0.491	0.022	0.671
Maximum	1.51	0.0794	1.46
Coefficient of Variation	21.7087	36.8005	19.9153
95% Mean Confidence Interval			
Upper Limit	1.049	0.0548	1.114
Lower Limit	0.869	0.039	0.937
+/-	0.09	0.0075	0.088
Upper 95% Tolerance Limit			
Upper Limit	1.444062735	0.087807666	1.48257483
K Factor	2.329	2.329	2.329
Distribution Test			
Normal			
Shapiro-Wilkes W value	0.951	0.926	0.799
p-Value	0.315	0.091	0.424
Result	TRUE	TRUE	FALSE
Lognormal			
Shapiro-Wilks W			0.974
P-Value			0.77
Result			TRUE
Non-Parameteric			
Unknown			

Notes:

[1] Summary statistics, 95 % mean confidence interval, and distribution type calculated using Statgraphics software package.

[2] Tolerance limit calculation:

95% Upper Tolerance limit = X+KS

Where X = Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution

K= Tolerance Factor (Table 5, "Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities", U.S. EPA, April 1989)

S = Standard Deviation

[3] $W_{.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987.

[4] Unknown distribution (< 4 detections) only min, max, median reported.

EG&G Mound
Background Pond Surface Water
Common Anions Analysis (mg/L)

Table A.1.6 - Background Pond Surface Water/Anions

	Chloride	Fluoride	Nitrate-Nitrite-N	Sulfate
Summary Statistics				
Sample detect :Total	12:22	0:22	5:22	22:22
Average (Arithmetic Mean)	21.7218	0.0867	0.254986	21.9368
Median	8.875	0.0953	0.08885	12.2
Geometric mean	7.03544	0.0838	0.078341	13.3607
Standard deviation	28.9216	0.0208	0.492443	23.2898
Minimum	1.5	0.0500	0.025	2.67
Maximum	69.7	0.1140	1.51	85
Coefficient of Variation	133.145	24.0600	193.125	106.167
95% Mean Confidence Interval				
Upper Limit	34.545	0.0959	0.4733241	32.2629
Lower Limit	8.89867	0.0770	0.0366491	11.6107
+/-	12.8231	0.0092	0.218337	10.3261
Upper 95% Tolerance Limit				
Upper Limit	76.84076		1.24609105	68.09173
K Factor	2.35		2.35	2.35
Distribution Test				
Normal				
Shapiro-Wilkes W value	0.65502		0.487273	0.76739
p-Value	1.37E-06		8.71E-09	7.93E-05
Result	FALSE		FALSE	FALSE
Lognormal				
Shapiro-Wilks W	0.780196		0.759454	0.959835
P-Value	0.000131841		5.81582E-05	0.480728
Result	FALSE		FALSE	TRUE
Non-Parameteric	TRUE		TRUE	FALSE
Unknown				FALSE

Notes

[1] Summary statistics, 95 % mean confidence interval, and distribution type calculated using Statgraphics software package

[2] Tolerance limit calculation:

95% Upper Tolerance limit = X+KS

Where X = Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution

K= Tolerance Factor (Table 5, "Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities", U.S. EPA, April 1989)

S = Standard Deviation

[3] $W_{.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987

[4] Unknown distribution (< 4 detections) only min, max, median reported

EG&G Mound
Background Pond Surface Water
Metals Analysis -Dissolved (ug/L)

Table A.1.7 - Background Pond Surface Water/Metals (Dissolved)

	Aluminum	Antimony	Arsenic	Barium	Beryllium	Bismuth	Cadmium	Calcium	Chromium	Cobalt	Copper
Summary Statistics											
Sample detect :Total	12:23	5:22	2:22	0:22	0:22	2:22	0:22	22:22	2:22	3:22	20:22
Average (Arithmetric Mean)	92.35	2.65682		32.4455				35099.5			2.65864
Median	63.5	0.95	1.1	21.2	0.075	1.6	0.15	22500	0.45	0.275	2
Geometric mean	59.5	1.68982		24.4541				22299.5			2.00434
Standard deviation	93.6	2.90243		29.0632				33345.1			1.80187
Minimum	9.6	0.95	0.8	8.3	0.05	1.3	0.15	6270	0.35	0.25	0.35
Maximum	424	9.3	4.4	103	0.1	103	0.25	94500	1.5	1.1	6.5
Coefficient of Variation	101.1	109.245		89.5757				95.0014			67.7742
95% Mean Confidence Interval											
Upper Limit	133	3.94369		45.3314				49884			3.45754
Lower Limit	52.06	1.36995		19.5595				20315.1			1.85973
+/-	40.47	1.28687		12.8859				14784.4			0.798906
Upper 95% Tolerance Limit											
Upper Limit	310.53	7.7707105		89.49852				100860.985			6.8930345
K Factor	2.329	2.35		2.35				2.35			2.35
Distribution Test											
Normal											
Shapiro-Wilkes W value		0.64062		0.705335				0.751915			0.931568
p-Value		8.53E-07		7.76817E-06				0.000043488			0.130467
Result		FALSE		FALSE				FALSE			TRUE
Lognormal											
Shapiro-Wilks W		0.652057		0.910448				0.846997			
P-Value		1.24274E-06		0.8459796				0.00226104			
Result		FALSE		FALSE				FALSE			
Non-Parameteric		TRUE		TRUE				TRUE			
Unknown			TRUE		TRUE	TRUE	TRUE		TRUE	TRUE	

EG&G Mound
Background Pond Surface Water
Metals Analysis -Dissolved (ug/L)

Table A.1.7 - Background Pond Surface Water/Metals (Dissolved)

	Cyanide	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium
Summary Statistics											
Sample detect :Total	1:21	17:22	0:22	0:22	22:22	22:22	0:22	9:22	1:22	22:22	1:22
Average (Arithmetric Mean)		254.191			12993.2	138.973		3.325	0.756	2195.41	
Median	5	38.8	0.95	1.9	9155	12.65	0.2	2.1	0.7	1855	1.35
Geometric mean		66.8584			7284.87	20.4944		1.95303	0.745	1767.53	
Standard deviation		420.95			13433.8	238.311		3.36019	0.155	1392.93	
Minimum	2.5	7.85	0.8	1.2	1990	1.9	0.2	0.45	0.65	565	0.55
Maximum	20.3	1710	8	3.8	35700	594	0.2	9.15	1.4	4380	1.95
Coefficient of Variation		165.604			103.391	171.481		101.058	20.54	63.4475	
95% Mean Confidence Interval											
Upper Limit		440.83			18949.4	244.634		4.81483	0.823	2813	
Lower Limit		67.5517			7036.95	33.3112		1.83517	0.689	1577.82	
+/-		186.639			5956.23	105.662		1.48983	0.067	617.593	
Upper 95% Tolerance Limit											
Upper Limit		1028.0325			40724.43	572.68085		9.9964465		5128.3855	
K Factor		2.35			2.35	2.35		2.35		2.35	
Distribution Test											
Normal											
Shapiro-Wilkes W value		0.638963			0.724981	0.571367		0.733632		0.839915	
p-Value		8.08E-07			1.58266E-05	9.75E-08		2.17969E-05		0.00164618	
Result		FALSE			FALSE	FALSE		FALSE		FALSE	
Lognormal											
Shapiro-Wilks W		0.894347			0.824409	0.841033		0.88335		0.891047	
P-Value		0.0208712			0.000833042	0.00173055		0.0122727		0.0177825	
Result		FALSE			FALSE	FALSE		FALSE		FALSE	
Non-Parameteric		TRUE			TRUE	TRUE		TRUE		TRUE	
Unknown	TRUE		TRUE	TRUE			TRUE		TRUE		TRUE

EG&G Mound
Background Pond Surface Water
Metals Analysis -Dissolved (ug/L)

Table A.1.7 - Background Pond Surface Water/Metals (Dissolved)

	Silver	Sodium	Thallium	Tin	Vanadium	Zinc
Summary Statistics						
Sample detect :Total	0:22	22:22	0:22	0:22	16:22	20:22
Average (Arithmetic Mean)		10003.2			0.621818	5.50455
Median	0.275	3170	1.575	3.95	0.66	3.55
Geometric mean		4461.81			0.520936	3.54593
Standard deviation		12959.3			0.340135	7.30391
Minimum	0.25	1400	0.7	2.95	0.2	0.7
Maximum	1.2	34200	13.5	28.15	1.3	35.2
Coefficient of Variation		129.551			54.7001	132.689
95% Mean Confidence Interval						
Upper Limit		15749			0.772626	8.74293
Lower Limit		4257.36			0.47101	2.26617
+/-		5745.83			0.150808	3.23838
Upper 95% Tolerance Limit						
Upper Limit		33624.355			1.45931725	20.7101185
K Factor		2.35			2.35	2.35
Distribution Test						
Normal						
Shapiro-Wilkes W value		0.638164			0.905081	0.553417
p-Value		7.82E-07			0.0352922	5.71E-08
Result		FALSE			FALSE	FALSE
Lognormal						
Shapiro-Wilks W		0.755269			0.848314	0.957377
P-Value		4.94704E-05			0.00239964	0.434094
Result		FALSE			FALSE	TRUE
Non-Parameteric		TRUE			TRUE	
Unknown	TRUE		TRUE	TRUE		

Notes:

[1] Summary statistics, 95 % mean confidence interval, and distribution type calculated using Statgraphics software package.

[2] Tolerance limit calculation:

95% Upper Tolerance limit = X+KS

Where X = Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution

K= Tolerance Factor (Table 5, "Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities", U.S. EPA, April 1989)

S = Standard Deviation

[3] $W_{.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987.

[4] Unknown distribution (< 4 detections) only min, max, median reported.

EG&G Mound
Background Pond Surface Water
Metals Analysis - Total (ug/L)

Table A.1.8 - Background Pond Surface Water/Metals (Total)

	Aluminum	Antimony	Arsenic	Barium	Beryllium	Bismuth	Cadmium	Calcium	Chromium	Cobalt
Summary Statistics										
Sample detect :Total	1:22	4:22	4:22	22:22	3:22	2:22	0:22	22:22	10:22	6:22
Average (Arithmetric Mean)	896.5	1.22727	1.89318	49.1409				32599.1	2.83273	
Median	160.5	0.95	1.1	29.2	0.075	1.4	0.15	21700	1.1	0.3
Geometric mean	193.3	1.04321	1.46733	35.2703				21119.3	1.24734	
Standard deviation	2052	0.977086	1.6975	47.6279				30459.7	4.89771	
Minimum	18.2	0.6	0.8	13.3	0.05	1	0.15	6410	0.45	0.2
Maximum	8050	4.9	6.2	218	0.47	26.95	0.25	92000	20.1	3
Coefficient of Variation	228	79.6144	89.6638	96.9212				93.4374	172.897	
95% Mean Confidence Interval										
Upper Limit	1806.6	1.66049	2.64581	70.258				46104.2	5.004251	
Lower Limit	-13.5	0.794056	1.14055	28.0238				19094	0.6612	
+/-	910.03	0.433217	0.75263	21.1171				13505.1	2.17153	
Upper 95% Tolerance Limit										
Upper Limit		3.2461521	5.089125	147.195865				93280.295	12.6096185	
K Factor		2.35	2.35	2.35				2.35	2.35	
Distribution Test										
Normal										
Shapiro-Wilkes W value		0.532108	0.610905	0.718289				0.767916	0.531007	
p-Value		3.07E-08	3.29E-07	1.239E-05				8.0939E-05	2.98E-08	
Result		FALSE	FALSE	FALSE				FALSE	FALSE	
Lognormal										
Shapiro-Wilks W		0.711415	0.733056	0.912995				0.851814	0.761922	
P-Value		9.6605E-06	2.1334E-05	0.0521464				0.00281227	6.4014E-05	
Result		FALSE	FALSE	TRUE				FALSE	FALSE	
Non-Parameteric		TRUE	TRUE					TRUE	TRUE	
Unknown					TRUE	TRUE	TRUE			TRUE

EG&G Mound
Background Pond Surface Water
Metals Analysis - Total (ug/L)

Table A.1.8 - Background Pond Surface Water/Metals (Total)

	Copper	Cyanide	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel
Summary Statistics										
Sample detect :Total	22:22	0:22	22:22	5:22	4:22	22:22	22:22	0:22	10:22	12:22
Average (Arithmetric Mean)	2.965		2414.8	1.80455	2.97727	11955.5	459.491		2.53864	81.5591
Median	1.55	10	986	0.875	1.9	9045	90.9	0.2	1.9	1.25
Geometric mean	1.64245		870.939	1.23353	2.5345	6877.39	128.863		1.46547	2.03335
Standard deviation	4.24555		3610.31	2.1387	1.72238	12104.2	1211.61		2.83729	370.436
Minimum	0.15	10	97.6	0.8	1.2	2050	26.9	0.2	0.3	0.7
Maximum	18.9	10	10800	7.5	6.3	34600	5790	0.2	9.15	1740
Coefficient of Variation	143.189		149.508	118.517	57.851	101.244	263.686		111.764	454.194
95% Mean Confidence Interval										
Upper Limit	4.84737		4015.53	2.75279	3.74094	17322.2	996.691		3.79662	245.802
Lower Limit	1.08263		814.074	0.856298	2.21361	6588.74	77.7093		1.28065	82.6835
+/-	1.88237		1600.73	0.948247	0.763663	5366.72	537.2		1.25799	164.243
Upper 95% Tolerance Limit										
Upper Limit	11.6194925		9355.1675	5.900945	5.947593	37489.87	2938.1835		8.5676315	871.7746
K Factor	2.35		2.35	2.35	2.35	2.35	2.35		2.35	2.35
Distribution Test										
Normal										
Shapiro-Wilkes W value	0.589872		0.628598	0.523667	0.844305	0.749958	0.358605		0.687424	0.226503
p-Value	1.71E-07		5.77E-07	2.41E-08	0.0020032	4.0352E-05	3.12E-10		4.1317E-06	1.46E-11
Result	FALSE		FALSE	FALSE	FALSE	FALSE	FALSE		FALSE	FALSE
Lognormal										
Shapiro-Wilks W	0.957146		0.927531	0.613996	0.876159	0.826488	0.887722		0.894777	0.630941
P-Value	0.429863		0.106988	3.62E-07	0.0087117	0.00091171	0.0151425		0.0213125	6.23E-07
Result	TRUE		TRUE	FALSE	FALSE	FALSE	FALSE		FALSE	FALSE
Non-Parameteric				TRUE	TRUE	TRUE	TRUE		TRUE	TRUE
Unknown		TRUE						TRUE		

EG&G Mound
Background Pond Surface Water
Metals Analysis - Total (ug/L)

Table A.1.8 - Background Pond Surface Water/Metals (Total)

	Potassium	Selenium	Silver	Sodium	Thallium	Tin	Vanadium	Zinc
Summary Statistics								
Sample detect :Total	22:22	1:22	5:22	22:22	1:22	0:22	20:22	22:22
Average (Arithmetric Mean)	2129.45			9185.45			3.47	28.5545
Median	1730	1.35	0.275	3190	1.35	2.95	1.25	17.65
Geometric mean	1743.5			4439.74			1.39595	17.4163
Standard deviation	1282.74			11540.8			6.19941	26.67
Minimum	562	0.55	0.25	1450	0.7	1.55	0.15	3.5
Maximum	4350	11.3	1.3	32600	1.8	28.15	19.4	102
Coefficient of Variation	60.238			125.642			178.657	93.4002
95% Mean Confidence Interval								
Upper Limit	2698.19			14302.4			6.21867	40.3794
Lower Limit	1560.72			4068.54			0.721329	16.7297
+/-	568.736			5116.92			2.74867	11.8248
Upper 95% Tolerance Limit								
Upper Limit	4757.939			30310.88			15.8186135	80.0908
K Factor	2.35			2.35			2.35	2.35
Distribution Test								
Normal								
Shapiro-Wilkes W value	0.89538			0.652004			0.484197	0.853206
p-Value	0.21948			1.2406E-06			8.01E-09	0.0029963
Result	FALSE			FALSE			FALSE	FALSE
Lognormal								
Shapiro-Wilks W	0.926297			0.763971			0.827585	0.924516
P-Value	0.100673			6.9342E-05			0.00095631	0.0921999
Result	TRUE			FALSE			FALSE	TRUE
Non-Parameteric				TRUE			TRUE	
Unknown		TRUE	TRUE		TRUE	TRUE		

Notes:

[1] Summary statistics, 95 % mean confidence interval, and distribution type calculated using Statgraphics software package.

[2] Tolerance limit calculation:

95% Upper Tolerance limit = X+KS

Where X = Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution

K= Tolerance Factor (Table 5, "Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities", U.S. EPA, April 1989)

S = Standard Deviation

[3] $W_{.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987.

[4] Unknown distribution (< 4 detections) only min, max, median reported.

EG&G Mound
Background Pond Surface Water
General Chemistry Analysis (mg/L)

Table A.1.9 - Background Pond Surface Water/General Chemistry

	Organic Carbon	Alkalinity	Nitrogen	Phosphorous
Summary Statistics				
Sample detect :Total	22:22	11:22	20:22	2:22
Average (Arithmetic Mean)	7.50091	99.5273	0.534091	0.148545
Median	7.945	65.5	0.462	0.05
Geometric mean	7.29679	63.9261	0.386432	0.065233
Standard deviation	1.71168	99.8603	0.447362	0.376139
Minimum	4.4	26.4	0.05	0.05
Maximum	10.3	257	2.16	1.78
Coefficient of Variation	22.8196	100.335	83.7614	253.215
95% Mean Confidence Interval				
Upper Limit	8.25983	166.614	0.732441	0.315317
Lower Limit	6.74199	32.4401	0.335741	0.0182258
+/-	0.758917	67.0872	0.19835	0.166771
Upper 95% Tolerance Limit				
Upper Limit	11.523358	346.6067445	1.4377327	0.88392665
K Factor	2.35	2.815	2.35	2.35
Distribution Test				
Normal				
Shapiro-Wilkes W value	0.939017	0.696605	0.776516	0.29265
p-Value	0.187388	0.000670149	0.000113789	6.50E-11
Result	TRUE	FALSE	FALSE	FALSE
Lognormal				
Shapiro-Wilks W		0.796032	0.922445	0.339377
P-Value		0.00951781	0.08322355	1.96E-10
Result		FALSE	TRUE	FALSE
Non-Parameteric		TRUE	FALSE	TRUE
Unknown			FALSE	

Notes:

[1] Summary statistics, 95 % mean confidence interval, and distribution type calculated using Statgraphics software package.

[2] Tolerance limit calculation:

95% Upper Tolerance limit = X+KS

Where X = Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution

K= Tolerance Factor (Table 5, "Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities", U.S. EPA, April 1989)

S = Standard Deviation

[3] $W_{.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987.

[4] Unknown distribution (< 4 detections) only min, max, median reported.

EG&G Mound
Background Pond Surface Water
Pesticides Analysis (ug/L)

Table A.1.10 - Background Pond Surface Water/Pesticides

	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	Alpha Chlordane	Alpha-BHC
Summary Statistics						
Sample detect :Total	3:22	0:22	0:22	0:22	0:22	1:22
Average (Arithmetric Mean)						
Median	0.05	0.05	0.05	0.025	0.025	0.025
Geometric mean						
Standard deviation						
Minimum	0	0	0	0	0	0
Maximum	0.05	0.05	0.05	0.025	0.025	0.025
Coefficient of Variation						
95% Mean Confidence Interval						
Upper Limit						
Lower Limit						
+/-						
Upper 95% Tolerance Limit						
Upper Limit						
K Factor						
Distribution Test						
Normal						
Shapiro-Wilkes W value						
p-Value						
Result						
Lognormal						
Shapiro-Wilks W						
P-Value						
Result						
Non-Parameteric						
Unknown	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE

EG&G Mound
Background Pond Surface Water
Pesticides Analysis (ug/L)

Table A.1.10 - Background Pond Surface Water/Pesticides

	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254
Summary Statistics						
Sample detect :Total	0:22	0:22	0:22	0:22	0:22	0:22
Average (Arithmetric Mean)						
Median	0.25	0.25	0.25	0.25	0.25	0.25
Geometric mean						
Standard deviation						
Minimum	0	0	0	0	0	0
Maximum	0.5	1	0.5	0.5	0.5	0.5
Coefficient of Variation						
95% Mean Confidence Interval						
Upper Limit						
Lower Limit						
+/-						
Upper 95% Tolerance Limit						
Upper Limit						
K Factor						
Distribution Test						
Normal						
Shapiro-Wilkes W value						
p-Value						
Result						
Lognormal						
Shapiro-Wilks W						
P-Value						
Result						
Non-Parameteric						
Unknown	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE

EG&G Mound
Background Pond Surface Water
Pesticides Analysis (ug/L)

Table A.1.10 - Background Pond Surface Water/Pesticides

	Aroclor-1260	Beta-BHC	Delta-BHC	Dieldrin	Endosulfan I	Endosulfan II
Summary Statistics						
Sample detect :Total	0:22	0:22	2:22	3:22	0:22	0:22
Average (Arithmetric Mean)						
Median	0.25	0.025	0.025	0.05	0.025	0.05
Geometric mean						
Standard deviation						
Minimum	0	0	0	0	0	0
Maximum	0.5	0.025	0.025	0.05	0.025	0.05
Coefficient of Variation						
95% Mean Confidence Interval						
Upper Limit						
Lower Limit						
+/-						
Upper 95% Tolerance Limit						
Upper Limit						
K Factor						
Distribution Test						
Normal						
Shapiro-Wilkes W value						
p-Value						
Result						
Lognormal						
Shapiro-Wilks W						
P-Value						
Result						
Non-Parameteric						
Unknown	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE

EG&G Mound
Background Pond Surface Water
Pesticides Analysis (ug/L)

Table A.1.10 - Background Pond Surface Water/Pesticides

	Endosulfan Sulfate	Endrin	Endrin Aldehyde	Endrin Ketone	Gamma Chlordane	Gamma-BHC (Lindane)
Summary Statistics						
Sample detect :Total	0:22	0:22	0:22	0:22	2:22	0:25
Average (Arithmetric Mean)						0.0570
Median	0.05	0.05	0.05	0.05	0.025	0.0250
Geometric mean						
Standard deviation						0.1652
Minimum	0	0	0	0	0	0.0000
Maximum	0.05	0.05	0.05	0.05	0.025	0.8500
Coefficient of Variation						289.9700
95% Mean Confidence Interval						
Upper Limit						0.1250
Lower Limit						0.0110
+/-						-0.0682
Upper 95% Tolerance Limit						
Upper Limit						
K Factor						
Distribution Test						
Normal						
Shapiro-Wilkes W value						
p-Value						
Result						
Lognormal						
Shapiro-Wilks W						
P-Value						
Result						
Non-Parameteric						
Unknown	TRUE	TRUE	TRUE	TRUE	TRUE	

EG&G Mound
Background Pond Surface Water
Pesticides Analysis (ug/L)

Table A.1.10 - Background Pond Surface Water/Pesticides

	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene
Summary Statistics				
Sample detect :Total	1:22	3:22	3:25	0:22
Average (Arithmetic Mean)			0.1941	
Median	0.025	0.025	0.2500	2.5
Geometric mean				
Standard deviation			0.1010	
Minimum	0	0	0.0000	0
Maximum	0.025	0.025	0.2500	2.5
Coefficient of Variation			52.5000	
95% Mean Confidence Interval				
Upper Limit			0.2360	
Lower Limit			0.1520	
+/-			0.0420	
Upper 95% Tolerance Limit				
Upper Limit				
K Factor				
Distribution Test				
Normal				
Shapiro-Wilkes W value				
p-Value				
Result				
Lognormal				
Shapiro-Wilks W				
P-Value				
Result				
Non-Parameteric				
Unknown	TRUE	TRUE		TRUE

Notes:

[1] Summary statistics, 95 % mean confidence interval, and distribution type calculated using Statgraphics software package.

[2] Tolerance limit calculation:

95% Upper Tolerance limit = X+KS

Where X = Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution

K= Tolerance Factor (Table 5, "Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities", U.S. EPA, April 1989)

S = Standard Deviation

[3] $W_{.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987.

[4] Unknown distribution (< 4 detections) only min, max, median reported.

EG&G Mound
Background Pond Surface Water
Radiological Analysis (pCi/L)

Table A.1.11 - Background Pond Surface Water/Radiological

	Americium-241	Bismuth-207	Bismuth-210M	Cesium-137	Cobalt-60	Plutonium-238	Plutonium-239/240
Summary Statistics							
Sample detect :Total	0:22	1:22	6:22	0:22	0:22	0:22	0:22
Average (Arithmetric Mean)			3.60725				
Median	0.11475	3.395	4.0925	3.8275	4.67	0.14625	0.159575
Geometric mean							
Standard deviation			2.13523				
Minimum	0.063	2.4735	-4.78	3.215	3.815	0.0725	0.0725
Maximum	0.1525	8.11	5.05	4.725	5.595	0.238	0.2315
Coefficient of Variation			59.1929				
95% Mean Confidence Interval							
Upper Limit			4.55396				
Lower Limit			2.66054				
+/-			0.946712				
Upper 95% Tolerance Limit							
Upper Limit			9.1102905				
K Factor			2.35				
Distribution Test							
Normal							
Shapiro-Wilkes W value			0.581917				
p-Value			1.34E-07				
Result			FALSE				
Lognormal							
Shapiro-Wilks W			0.482147				
P-Value			1.34E-08				
Result			FALSE				
Non-Parameteric			TRUE				
Unknown	TRUE	TRUE		TRUE	TRUE	TRUE	TRUE

EG&G Mound
Background Pond Surface Water
Radiological Analysis (pCi/L)

Table A.1.11 - Background Pond Surface Water/Radiological

	Potassium-40	Radium-226	Strontium-90	Thorium-228	Thorium-230	Thorium-232	Tritium
Summary Statistics							
Sample detect Total	0:21	0:22	12:22	8:22	8:22	1:22	0:22
Average (Arithmetric Mean)	129.1190	0.0938	0.466048	0.159618	0.145073		
Median	134.0000	0.0832	0.446	0.143025	0.11055	0.0685	141.9
Geometric mean	111.5520	0.0736	0.400142	0.151281	0.125947		
Standard deviation	59.2570	0.0667	0.27451	0.0585859	0.0860837		
Minimum	16.5000	0.0189	0.1785	0.0976	0.0635	0.02825	123.5
Maximum	221.0000	0.2885	1.18	0.337	0.333	0.276	155.5
Coefficient of Variation	45.8900	71.1100	58.9017	36.7038	59.3383		
95% Mean Confidence Interval							
Upper Limit	156.0930	0.1230	0.591003	0.848842	0.18324		
Lower Limit	102.1450	0.0642	0.341092	0.00245755	0.106905		
+/-	26.9700	0.0295	0.124956	0.0259756	0.0381674		
Upper 95% Tolerance Limit							
Upper Limit			1.0452405	0.288957865	0.312846695		
K Factor			2.35	2.35	2.35		
Distribution Test							
Normal							
Shapiro-Wilkes W value			0.874678	0.848842	0.801853		
p-Value			9.91E-03	0.00245755	0.000319573		
Result			FALSE	FALSE	FALSE		
Lognormal							
Shapiro-Wilks W			0.948511	0.94197	0.905877		
P-Value			0.313982	0.215948	0.0367019		
Result			TRUE	TRUE	FALSE		
Non-Parameteric					TRUE		
Unknown						TRUE	TRUE

EG&G Mound
Background Pond Surface Water
Radiological Analysis (pCi/L)

Table A.1.11 - Background Pond Surface Water/Radiological

	Uranium-234	Uranium-235	Uranium-238
Summary Statistics			
Sample detect :Total	7:22	0:22	11:22
Average (Arithmetic Mean)	0.26327		0.297802
Median	0.22625	0.134725	0.24575
Geometric mean	0.237356		0.252968
Standard deviation	0.124432		0.167241
Minimum	0.13675	0.0927	0.10655
Maximum	0.528	0.27345	0.588
Coefficient of Variation	47.2639		56.1584
95% Mean Confidence Interval			
Upper Limit	0.318441		0.370953
Lower Limit	0.2081		0.223652
+/-	0.0551701		0.0741506
Upper 95% Tolerance Limit			
Upper Limit	0.5186652		0.63876635
K Factor	2.35		2.35
Distribution Test			
Normal			
Shapiro-Wilkes W value	0.87593		0.884854
p-Value	0.00861775		0.013908
Result	FALSE		FALSE
Lognormal			
Shapiro-Wilks W	0.8912		0.910187
P-Value	0.179148		0.453913
Result	FALSE		FALSE
Non-Parameteric	TRUE		TRUE
Unknown		TRUE	

Notes:

[1] Summary statistics, 95 % mean confidence interval, and distribution type calculated using Statgraphics software package.

[2] Tolerance limit calculation:

95% Upper Tolerance limit = X+KS

Where X = Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution

K= Tolerance Factor (Table 5, "Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities", U.S. EPA, April 1989)

S = Standard Deviation

[3] $W_{.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987.

[4] Unknown distribution (< 4 detections) only min, max, median reported.

EG&G Mound

Background Stream Sediments

Common Anions Analysis (mg/Kg)

Table A.1.12 - Background Stream Sediment/Anions

	Chloride	Fluoride	Nitrate-Nitrite-N	Sulfate
Summary Statistic				
Sample detect Total	5:12	6:12	9:12	9:12
Average (Arithmetric Mean)	4617.98	15.1817	110.714	12978.9
Median	2.5	1.25	1.93	108
Geometric mean	20.1911	1.41239	5.30618	327.993
Standard Deviation	14831	46.8839	298.448	30628.6
Minimum	1.5	0.05	0.765	25
Maximum	51600	164	1040	101000
Coeff. of Variation	321.158	308.819	269.567	235.988
95% Mean Confidence Interval				
Upper Limit	14041.2	44.9704	300.339	32439.4
Lower Limit	-4805.23	-14.607	-78.9111	-6481.66
+/-	9423.21	29.7887	189.625	19460.5
Upper 95% Tolerance Limit				
Upper Limit	40580.116	129.52435	818.483728	83907.8496
K Factor	2.736	2.736	2.736	2.736
Distribution Type				
Normal				
Shapiro-Wilks W value	0.353	0.344828	0.429697	0.503913
p-Value	1.92E-07	1.61E-07	9.12E-07	4.5304E-06
Result	FALSE	FALSE	FALSE	FALSE
Lognormal				
Shapiro-Wilks W	0.776077	0.837447	0.776998	0.803084
p-Value	0.00400131	0.0235265	0.00410625	0.00862954
Result	FALSE	FALSE	FALSE	FALSE
Non-Parameteric	TRUE	TRUE	TRUE	TRUE
Unknown				

Notes:

[1] Summary statistic, 95% mean confidence interval, and distribution type calculated using Statgraphics software package

[2] Tolerance limits calculation:

95% Upper Tolerance limit=X+KS

Where: X= Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution

K=Tolerance Factor (Table 5, *"Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities", USEPA April 1989)*, and S=Standard Deviation

[3] $W_{0.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987

[4] Unknown distribution (<4 detections) only min, max, median reported

EG&G Mound
Background Stream Sediments
Metals-Total Analysis (mg/Kg)

Table A.1.13 - Background Stream Sediment/Metals

	Aluminum	Antimony	Arsenic	Barium	Beryllium	Bismuth	Cadmium	Calcium	Chromium	Cobalt	Copper
Summary Statistic											
Sample detect Total	12:12	1:12	12:12	12:12	6:12	1:9	12:12	12:12	12:12	12:12	12:12
Average (Arithmetric Mean)	4880.83		9.25833	71.3917	0.2100	0.5283	0.250417	56591.7	8.45833	5.975	15.5
Median	4725	0.215	7.15	40.95	0.2020	0.4950	0.2	45850	7.85	5.4	13.4
Geometric mean	4520.23		7.67513	50.8245	0.1890	0.5100	0.190355	51663.9	8.17254	5.65419	14.3513
Standard Deviation	1999.67		7.83355	82.2345	0.0970	0.1510	0.183606	27072.3	2.37581	2.11322	6.72431
Minimum	2640	0.145	3.2	15.3	0.0850	0.3650	0.05	31700	5.3	3.4	8.1
Maximum	8840	0.85	33.2	314	0.4000	0.7800	0.67	117000	13.5	9.8	30.3
Coeff. of Variation	40.9698		84.6108	115.188	46.3200	28.6900	73.3202	47.838	28.0884	35.3676	43.3827
95% Mean Confidence Interval											
Upper Limit	36151.36		14.2355	123.641	0.2718	0.6440	0.367075	7737922.6	9.96785	7.31768	19.7724
Lower Limit	3610.3		4.28112	19.1422	0.1480	0.4110	0.133759	3939.7	6.94881	4.63232	11.2276
+/-	1270.53		4.97721	52.2495	0.0610	0.1165	0.116658	17201	1.50952	1.34268	4.27243
Upper 95% Tolerance Limit											
Upper Limit	10351.9271		29.1077228	265.943592	0.4780692		0.75276302	125733.713	14.9585462	11.7567699	33.8977122
K Factor	2.736		2.736	2.736	2.7636		2.736	2.736	2.736	2.736	2.736
Distribution Type											
Normal											
Shapiro-Wilks W value	0.928537		0.586838	0.572564	0.9519		0.908677	0.83753	0.936255	0.918501	0.880917
p-Value	342852		3.0326E-05	2.1665E-05	0.6163		0.195458	0.0235847	0.421297	0.259235	0.0859589
Result	TRUE		FALSE	FALSE	FALSE		TRUE	FALSE	TRUE	TRUE	TRUE
Lognormal											
Shapiro-Wilks W			0.874622	0.834771	0.9738			0.900551			
p-Value			0.0712097	0.0217399	0.9032			0.15407			
Result			TRUE	FALSE	TRUE			TRUE			
Non-Parameteric				TRUE							
Unknown		TRUE									

EG&G Mound
Background Stream Sediments
Metals-Total Analysis (mg/Kg)

Table A.1.13 - Background Stream Sediment/Metals

	Cyanide	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium
Summary Statistic											
Sample detect Total	0.12	12.12	12.12	9.09	12.12	12.12	0.12	3.9	12.12	12.12	1.12
Average (Arithmetric Mean)		13995.8	13.825	6.63333	23558.3	661.833		1.9700	11.8667	963.417	
Median	0.3425	12350	10.65	6	18150	419	0.065	1.4000	10.45	901	0.4675
Geometric mean		12961.3	11.8914	6.42541	21273.1	443.295		1.6800	11.5636	909.469	
Standard Deviation		5853.32	8.87633	1.86145	12054.6	846.395		1.2300	2.97117	331.418	
Minimum	0.31	7960	5.7	4.6	12800	150	0.055	0.9000	9.4	456	0.135
Maximum	0.48	25100	31.7	10.5	52500	3260	0.095	4.0000	17.2	1490	0.76
Coeff. of Variation		41.8219	64.205	28.0621	51.1692	127.886		62.4020	25.038	34.4003	
95% Mean Confidence Interval											
Upper Limit		817714.9	19.4648	8.06417	231217.5	1199.61		2.9260	13.7545	1173.99	
Lower Limit		10276.8	8.18523	5.20249	15899.2	124.059		1.0290	9.97887	752.843	
+/-		3719.03	5.63977	1.4308	7659.15	537.775		0.9480	1.8878	210.573	
Upper 95% Tolerance Limit											
Upper Limit		30010.4835	36.1770389	12.275385	54254.4856	2759.03172			18.5791211	1870.17665	
K Factor		2.736	2.736	3.031	2.736	2.736			2.736	2.736	
Distribution Type											
Normal											
Shapiro-Wilks W value		0.887698	0.753974	0.910972	0.841633	0.559043			0.775294	0.952663	
p-Value		0.105244	0.00216293	0.317545	0.026628	1.5812E-05			0.00391412	0.626718	
Result		TRUE	FALSE	TRUE	FALSE	FALSE			FALSE	TRUE	
Lognormal											
Shapiro-Wilks W			0.889239		0.92037	0.913491			0.801871		
p-Value			0.110088		0.273312	0.22466			0.00833343		
Result			TRUE		TRUE	TRUE			FALSE		
Non-Parameteric									TRUE		
Unknown	TRUE						TRUE				TRUE

EG&G Mound
Background Stream Sediments
Metals-Total Analysis (mg/Kg)

Table A.1.13 - Background Stream Sediment/Metals

	Silver	Sodium	Thallium	Tin	Vanadium	Zinc
Summary Statistic						
Sample detect:Total	2:12	12:12	0:12	0:9	12:12	12:12
Average (Arithmetic Mean)		442		1.3200	15.4	44.7917
Median	0.0925	431.5	0.3475	1.3000	15.95	41.1
Geometric mean		435.069		1.2900	14.7632	42.0333
Standard Deviation		88.296		0.3360	4.54233	18.6443
Minimum	0.06	344	0.175	0.9500	8.1	24.2
Maximum	0.4	677	0.6	2.1000	23.1	92.7
Coeff. of Variation		19.9765		25.3300	29.4956	41.6245
95% Mean Confidence Interval						
Upper Limit		498.101		1.5800	18.2861	56.6377
Lower Limit		385.899		1.0690	12.53139	32.9456
+/-		56.1007		0.2580	2.88606	11.8461
Upper 95% Tolerance Limit						
Upper Limit		676.646856			27.8278149	93.0441048
K Factor		2.736			2.736	2.736
Distribution Type						
Normal						
Shapiro-Wilks W value		0.820678			0.957585	0.768228
p-Value		0.014378			0.69509	0.00321149
Result		FALSE			TRUE	FALSE
Lognormal						
Shapiro-Wilks W		0.891867				0.88551
p-Value		0.119145				0.0985948
Result		TRUE				TRUE
Non-Parameteric						
Unknown	TRUE		TRUE			

Notes:

[1] Summary statistic, 95% mean confidence interval, and distribution type calculated using Statgraphics software package.

[2] Tolerance limits calculation:

95% Upper Tolerance limit=X+KS

Where: X= Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution

K=Tolerance Factor (Table 5, *"Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities", USEPA April 1989), and* S=Standard Deviation

[3] $W_{0.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987.

[4] Unknown distribution (<4 detections) only min, max. median reported.

EG&G Mound
Background Stream Sediments
General Chemistry Analysis (mg/Kg & Units)

Table A.1.14 - Background Stream Sediment/General Chemistry

	Organic Carbon	pH
Summary Statistic		
Sample detect:Total	12:12	9:9
Average (Arithmetic Mean)	7916.36	7.76667
Median	7360	7.7
Geometric mean	5501.82	7.76076
Standard Deviation	6423.08	0.324037
Minimum	1370	7.4
Maximum	21100	8.4
Coeff. of Variation	81.1368	4.17215
95% Mean Confidence Interval		
Upper Limit	9824.35	8.01574
Lower Limit	3443.99	7.51759
+/-	3190.18	0.249078
Upper 95% Tolerance Limit		
Upper Limit	25489.90688	8.74882615
K Factor	2.736	3.031
Distribution Type		
Normal		
Shapiro-Wilks W value	0.881839	0.912041
p-Value	0.0883607	0.326515
Result	TRUE	TRUE
Lognormal		
Shapiro-Wilks W		
p-Value		
Result		
Non-Parameteric		
Unknown		

Notes:
[1] Summary statistic, 95% mean confidence interval, and distribution type calculated using Statgraphics software package.
[2] Tolerance limits calculation:
95% Upper Tolerance limit=X+KS
Where: X= Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution
K=Tolerance Factor (Table 5, *"Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities", USEPA April 1989),and* S=Standard Deviation
[3] $W_{0.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987.
[4] Unknown distribution (<4 detections) only min, max. median reported.

EG&G Mound
Background Stream Sediments
Pesticides Analysis (ug/Kg)

Table A.1.15 - Background Stream Sediment/Pesticides

	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	Alpha Chlordane	Alpha-BHC
Summary Statistic						
Sample detect:Total	4:12	4:12	2:12	4:12	4:12	1:12
Average (Arithmetic Mean)	1.7700	1.7100	1.9570	0.9025	0.9450	1.1230
Median	1.9750	1.8000	2.1000	0.9250	1.0000	1.1000
Geometric mean	1.4120	1.5200	1.4250	0.7740	0.8040	0.9870
Standard Deviation	1.0300	0.7670	1.1020	0.4640	0.4830	0.4050
Minimum	0.2900	0.5400	0.1400	0.3000	0.2700	0.1300
Maximum	3.3500	3.3500	3.3500	1.6000	1.7000	1.7000
Coeff. of Variation	57.9330	44.8000	56.3400	51.4700	51.2090	36.0700
95% Mean Confidence Interval						
Upper Limit	2.4320	2.2010	2.6580	1.1900	1.2500	1.3800
Lower Limit	1.1200	1.2200	1.2560	0.6070	0.6370	0.8650
+/-	0.6540	0.4870	0.7007	0.2950	0.3070	0.2570
Upper 95% Tolerance Limit						
Upper Limit	4.616508	3.808512		2.172004	2.2798188	
K Factor	2.7636	2.7360		2.7360	2.7636	
Distribution Type						
Normal						
Shapiro-Wilks W value	0.9371	0.9319		0.9137	0.9223	
p-Value	0.4302	0.3756		0.2261	0.2891	
Result	FALSE	FALSE		FALSE	FALSE	
Lognormal						
Shapiro-Wilks W	0.8782	0.8714		0.8769	0.8670	
p-Value	0.0793	0.0645		0.0764	0.0570	
Result	FALSE	FALSE		FALSE	FALSE	
Non-Parameteric	TRUE	TRUE		TRUE	TRUE	
Unknown						

EG&G Mound
Background Stream Sediments
Pesticides Analysis (ug/Kg)

Table A.1.15 - Background Stream Sediment/Pesticides

	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254
Summary Statistic						
Sample detect:Total	0:12	0:12	0:12	0:12	0:12	0:12
Average (Arithmetric Mean)						
Median	21.75	43.5	21.75	21.75	21.75	21.75
Geometric mean						
Standard Deviation						
Minimum	16.5	33.5	16.5	16.5	16.5	16.5
Maximum	33.5	70	33.5	33.5	33.5	33.5
Coeff. of Variation						
95% Mean Confidence Interval						
Upper Limit						
Lower Limit						
+/-						
Upper 95% Tolerance Limit						
Upper Limit						
K Factor						
Distribution Type						
Normal						
Shapiro-Wilks W value						
p-Value						
Result						
Lognormal						
Shapiro-Wilks W						
p-Value						
Result						
Non-Parameteric						
Unknown	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE

EG&G Mound
Background Stream Sediments
Pesticides Analysis (ug/Kg)

Table A.1.15 - Background Stream Sediment/Pesticides

	Aroclor-1260	Beta-BHC	Delta-BHC	Dieldrin	Endosulfan I	Endosulfan II
Summary Statistic						
Sample detect:Total	0:12	0:12	0:12	10:12	2:12	0:12
Average (Arithmetric Mean)				6.36583	1.0040	
Median	21.75	1.1	1.1	4.125	1.0500	2.175
Geometric mean				2.3584	0.8561	
Standard Deviation				7.27574	0.4490	
Minimum	16.5	0.85	0.85	0.12	0.1500	1.65
Maximum	33.5	1.7	1.7	21	1.7000	3.35
Coeff. of Variation				114.294	44.3050	
95% Mean Confidence Interval						
Upper Limit				10.9886	1.2860	
Lower Limit				1.74304	0.7215	
+/-				4.62279	0.2826	
Upper 95% Tolerance Limit						
Upper Limit				22.26482464		
K Factor				2.736		
Distribution Type						
Normal						
Shapiro-Wilks W value				0.804931		
p-Value				0.0091011		
Result				FALSE		
Lognormal						
Shapiro-Wilks W				0.90334		
p-Value				0.167236		
Result				TRUE		
Non-Parameteric						
Unknown	TRUE	TRUE	TRUE			TRUE

EG&G Mound
Background Stream Sediments
Pesticides Analysis (ug/Kg)

Table A.1.15 - Background Stream Sediment/Pesticides

	Endosulfan Sulfate	Endrin	Endrin Aldehyde	Endrin Ketone	Gamma Chlordane	Gamma-BHC (Lindane)
Summary Statistic						
Sample detect:Total	1:12	0:12	1:12	1:12	3:12	0:12
Average (Arithmetic Mean)	2.2640	2.2660	2.2040	2.2390	0.9510	
Median	2.1750	2.0750	2.1250	2.1750	1.0000	1.1
Geometric mean	2.0400	2.1600	2.0160	1.9040	0.7050	
Standard Deviation	0.7860	0.6740	0.7530	0.8330	0.5450	
Minimum	0.3700	1.1000	0.4500	0.1700	0.1000	0.85
Maximum	3.3500	3.3500	3.3500	3.3500	1.7000	1.7
Coeff. of Variation	34.7300	29.7400	34.1900	37.2100	57.3400	
95% Mean Confidence Interval						
Upper Limit	2.7630	2.6950	2.6820	2.7680	1.2900	
Lower Limit	1.7640	1.8300	1.7250	1.7090	0.6040	
+/-	0.4997	0.4280	0.4788	0.5290	0.3460	
Upper 95% Tolerance Limit						
Upper Limit						
K Factor						
Distribution Type						
Normal						
Shapiro-Wilks W value						
p-Value						
Result						
Lognormal						
Shapiro-Wilks W						
p-Value						
Result						
Non-Parameteric						
Unknown						TRUE

EG&G Mound
Background Stream Sediments
Pesticides Analysis (ug/Kg)

Table A.1.15 - Background Stream Sediment/Pesticides

	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene
Summary Statistic				
Sample detect Total	2:12	6:12	0:12	0:12
Average (Arithmetic Mean)	1.0090	1.30917	9.2660	
Median	1.0750	1.275	10.7500	110
Geometric mean	0.8040	1.1717	5.8310	
Standard Deviation	0.4739	0.606682	5.6700	
Minimum	0.1200	0.41	0.4950	85
Maximum	1.6000	2.4	17.0000	170
Coeff. of Variation	46.9600	46.3411	61.2500	
95% Mean Confidence Interval				
Upper Limit	1.3100	1.69463	12.8700	
Lower Limit	0.7080	0.923699	5.6500	
+/-	0.3011	0.385468	3.6060	
Upper 95% Tolerance Limit				
Upper Limit		2.969051952		
K Factor		2.736		
Distribution Type				
Normal				
Shapiro-Wilks W value		0.962034		
p-Value		0.756924		
Result		TRUE		
Lognormal				
Shapiro-Wilks W				
p-Value				
Result				
Non-Parameteric				
Unknown				TRUE

Notes
[1] Summary statistic, 95% mean confidence interval, and distribution type calculated using Statgraphics software package
[2] Tolerance limits calculation
95% Upper Tolerance limit=X+KS
Where: X= Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution
K=Tolerance Factor (Table 5, *"Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities"*, USEPA April 1989)
S=Standard Deviation
[3] $W_{0.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987
[4] Unknown distribution (<4 detections) only min, max, median reported

EG&G Mound
Background Stream Sediments
Radiological Analysis (Pci/G)

Table A.1.16 - Background Stream Sediment/Radiological

	Americium-241	Bismuth-207	Bismuth-210M	Cesium-137	Cobalt-60	Plutonium-238	Plutonium-239/240
Summary Statistic							
Sample detect Total	0:9	0:9	0:9	6:9	0:9	0:10	2:10
Average (Arithmetric Mean)				0.358249			
Median	0.16975	0.03265	0.047845	0.132	0.045305	0.00386	0.00675
Geometric mean				0.156494			
Standard Deviation				0.456694			
Minimum	0.04575	0.0201	0.02999	0.025045	0.028565	0.001455	0.00145
Maximum	0.36	0.088	0.11	1.19	0.113	0.01505	0.0327
Coeff. of Variation				127.479			
95% Mean Confidence Interval							
Upper Limit				0.709297			
Lower Limit				0.00720238			
+/-				0.351047			
Upper 95% Tolerance Limit							
Upper Limit				1.540733514			
K Factor				3.031			
Distribution Type							
Normal							
Shapiro-Wilks W value				0.734996			
p-Value				0.004055634			
Result				FALSE			
Lognormal							
Shapiro-Wilks W				0.931611			
p-Value				0.490447			
Result				TRUE			
Non-Parameteric							
Unknown	TRUE	TRUE	TRUE		TRUE	TRUE	TRUE

EG&G Mound
Background Stream Sediments
Radiological Analysis (Pci/G)

Table A.1.16 - Background Stream Sediment/Radiological

	Potassium-40	Radium-226	Strontium-90	Thorium-228	Thorium-230	Thorium-232	Tritium	Uranium-234
Summary Statistic								
Sample detect:Total	9:9	9:9	0:10	10:10	0:10	10:10	1:12	10:10
Average (Arithmetric Mean)	10.6878	0.925444		0.6655		0.5957	155.1090	0.766
Median	11.1	0.78	0.072	0.5935	1.0105	0.4625	0.1600	0.763
Geometric mean	10.5296	0.860648		0.582772		0.542135	0.1420	0.755393
Standard Deviation	1.89229	0.415602		0.373978		0.295268	536.9010	0.132798
Minimum	7.45	0.54	0.0505	0.257	0.667	0.322	0.0018	0.551
Maximum	12.8	1.84	0.119	1.34	2.03	1.18	1860.0000	0.975
Coeff. of Variation	17.7052	44.9084		56.1951		49.5666	346.1440	17.3366
95% Mean Confidence Interval								
Upper Limit	12.1423	1.24491		0.933028	1.5608	0.806923	496.2410	0.860998
Lower Limit	9.23323	0.605983		0.397972	0.835199	0.384477	-186.0220	0.671002
+/-	1.45455	0.319461		0.267528	0.362801	0.211223	341.1320	0.949983
Upper 95% Tolerance Limit								
Upper Limit	16.42333099	2.120337662		1.754149958		1.401660148		1.152574978
K Factor	3.031	3.031		2.911		2.911		2.911
Distribution Type								
Normal								
Shapiro-Wilks W value	0.930105	0.796829		0.860373		0.818621		0.982615
p-Value	0.476017	0.0192974		0.0739735		0.0241745		0.974647
Result	TRUE	FALSE		TRUE		FALSE		TRUE
Lognormal								
Shapiro-Wilks W		0.894203				0.89491		
p-Value		0.216483				0.208528		
Result		TRUE				TRUE		
Non-Parameteric								
Unknown			TRUE		TRUE			

EG&G Mound
Background Stream Sediments
Radiological Analysis (Pci/G)

Table A.1.16 - Background Stream Sediment/Radiological

	Uranium-235	Uranium-238
Summary Statistic		
Sample detect:Total	4:9	10:10
Average (Arithmetic Mean)	0.0375333	0.9391
Median	0.032	0.9105
Geometric mean	0.0317908	0.929335
Standard Deviation	0.0230865	0.149746
Minimum	0.0149	0.732
Maximum	0.07945	1.3
Coeff. of Variation	61.5093	15.9457
95% Mean Confidence Interval		
Upper Limit	0.0552792	1.04622
Lower Limit	0.0197874	0.831978
+/-	0.0177459	0.107122
Upper 95% Tolerance Limit		
Upper Limit	0.107508482	1.375010606
K Factor	3.031	2.911
Distribution Type		
Normal		
Shapiro-Wilks W value	0.880053	0.862614
p-Value	0.154604	0.0785308
Result	TRUE	TRUE
Lognormal		
Shapiro-Wilks W		
p-Value		
Result		
Non-Parameteric		
Unknown		

Notes:

[1] Summary statistic, 95% mean confidence interval, and distribution type calculated using Statgraphics software package.

[2] Tolerance limits calculation:

95% Upper Tolerance limit=X+KS

Where: X= Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution

K=Tolerance Factor (Table 5, *"Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities", USEPA April 1989), and* S=Standard Deviation

[3] $W_{0.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987.

[4] Unknown distribution (<4 detections) only min, max. median reported.

EG&G Mound
Background Stream Surface Water
Common Anions Analysis (mg/L)

Table A.1.17 - Background Stream Surface Water/Anions

	Chloride	Fluoride	Nitrate-Nitrite-N	Sulfate
Summary Statistics				
Sample detect :Total	7:7	3:07	5:7	7:7
Average (Arithmetric Mean)	49.4571	0.1845	4.28014	72.6571
Median	42.7	0.1090	0.392	31.6
Geometric mean	40.6885	0.1510	0.473513	50.2829
Standard deviation	30.8951	2.8240	7.11519	72.3044
Minimum	18	0.1370	0.025	26.4
Maximum	88.9	0.0800	17.3	189
Coefficient of Variation	62.4684	0.4230	166.237	99.5145
		74.5700		
95% Mean Confidence Interval				
Upper Limit	78.0304	0.3110	10.8606	139.528
Lower Limit	20.8839	0.0570	-2.30035	5.78655
+/-	28.5733	0.1273	6.58047	6.668706
Upper 95% Tolerance Limit				
Upper Limit	154.4695449		24.65804381	277.3626556
K Factor	3.399		3.399	3.399
Distribution Test				
Normal				
Shapiro-Wilkes W value	0.852083		0.670779	0.660462
p-Value	0.131703		0.001739	0.001341
Result	TRUE		FALSE	FALSE
Lognormal				
Shapiro-Wilks W			0.887598	0.704465
P-Value			0.272628	0.00403749
Result			TRUE	FALSE
Non-Parameteric			FALSE	TRUE
Unknown			FALSE	FALSE

Notes:
[1] Summary statistic, 95% mean confidence interval, and distribution type calculated using Statgraphics software package.
[2] Tolerance limits calculation:
95% Upper Tolerance limit=X+KS
Where: X= Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution
K=Tolerance Factor (Table 5, *"Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities", USEPA April 1989), and* S=Standard Deviation
[3] $W_{0.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987.
[4] Unknown distribution (<4 detections) only min, max. median reported.

EG&G Mound
Background Stream Surface Water
Metals-Dissolved Analysis (ug/L)

Table A.1.18 - Background Stream Surface Water/Metals (Dissolved)

	Aluminum	Antimony	Arsenic	Barium	Beryllium	Bismuth	Cadmium	Calcium	Chromium	Cobalt
Summary Statistics										
Sample detect :Total	2.6	1.6	1.6	6.6	0.6	1.6	0.6	6.6	1.6	1.6
Average (Arithmetric Mean)				78.4667				85400		
Median	9.6	0.95	0.825	75.7	0.1	1.45	0.15	81500	0.45	0.3
Geometric mean				76.581				84793.9		
Standard deviation				19.0043				11342		
Minimum	9.6	0.95	0.8	58.7	0.05	1.3	0.15	75100	0.45	0.25
Maximum	153	2.7	1.8	105	0.1	2.6	0.25	102000	1.3	1.1
Coefficient of Variation				24.2196				13.281		
95% Mean Confidence Interval										
Upper Limit				98.4105						
Lower Limit				58.5228						
+/-				19.9438						
Upper 95% Tolerance Limit										
Upper Limit				148.91564						
K Factor				3.707						
Distribution Test										
Normal										
Shapiro-Wilkes W value				0.892533						
p-Value				0.326419						
Result				TRUE						
Lognormal										
Shapiro-Wilks W										
P-Value										
Result										
Non-Parameteric										
Unknown	TRUE	TRUE	TRUE		TRUE	TRUE	TRUE	TRUE	TRUE	TRUE

EG&G Mound
Background Stream Surface Wa
Metals-Dissolved Analysis (ug/L

Table A.1.18 - Background Stream Surface Water/Metals (Dissolved)

	Copper	Cyanide	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel
Summary Statistics										
Sample detect :Total	6:6	1:6	1:6	0:6	0:6	6:6	6:6	0:6	5:6	2:06
Average (Arithmetric Mean)	3.56667					31516.7	84.7		2.725	1.0580
Median	3.8	5	7.85	0.95	1.9	30600	18.1	0.1	3.2	0.7250
Geometric mean	3.25038					31324	32.625		2.43189	0.9370
Standard deviation	1.55521					3872.17	134.953		1.1592	0.6290
Minimum	1.8	5	7.85	0.95	1.9	27800	9.6	0.1	0.85	0.6000
Maximum	5.5	12.8	13.6	1.15	3.8	37300	351	0.1	3.7	2.2000
Coefficient of Variation	43.6039					12.2861	159.33		42.5395	59.4900
95% Mean Confidence Interval										
Upper Limit	5.19876					135580.3	226.325		3.94151	1.7100
Lower Limit	1.93457					27453.1	-56.9246		1.50849	0.3970
+/-	1.63209					4063.6	141.625		1.21651	0.6600
Upper 95% Tolerance Limit										
Upper Limit	9.33183347					45870.8342	532.895771		7.0221544	
K Factor	3.707					3.707	3.707		3.707	
Distribution Test										
Normal										
Shapiro-Wilkes W value	0.89952					0.902945	0.659511		0.850468	
p-Value	0.359992					0.37769	0.0088985		0.150319	
Result	TRUE					TRUE	FALSE		TRUE	
Lognormal										
Shapiro-Wilks W							0.84803			
P-Value							0.143227			
Result							TRUE			
Non-Parameteric							FALSE			
Unknown		TRUE	TRUE	TRUE	TRUE		FALSE	TRUE		

EG&G Mound
Background Stream Surface Wa
Metals-Dissolved Analysis (ug/L

Table A.1.18 - Background Stream Surface Water/Metals (Dissolved)

	Potassium	Selenium	Silver	Sodium	Thallium	Tin	Vanadium	Zinc
Summary Statistics								
Sample detect :Total	6:6	0:6	0:6	6:6	1:6	0:6	1:06	6:6
Average (Arithmetric Mean)	3496.67			23963.3				3.13333
Median	2435	0.55	0.25	25600	1.1	2.95	0.222	2.85
Geometric mean	2807.57			18938				2.92174
Standard deviation	2990.64			15093.3				1.30486
Minimum	1480	0.55	0.25	6410	0.7	2.95	0.2	1.6
Maximum	9420	1.95	1.2	39600	18	5.25	0.71	5.4
Coefficient of Variation	85.5284			62.985				41.6446
95% Mean Confidence Interval								
Upper Limit	6635.16			39802.8				4.50271
Lower Limit	358.17			8123.84				1.76396
+/-	3138.5			15839.5				1.36937
Upper 95% Tolerance Limit								
Upper Limit	13893.8725			79914.1631				7.97044602
K Factor	3.707			3.707				3.707
Distribution Test								
Normal								
Shapiro-Wilkes W value	0.710919			0.859972				0.929936
p-Value	0.00785698			0.181984				0.587186
Result	FALSE			TRUE				TRUE
Lognormal								
Shapiro-Wilks W	0.88229							
P-Value	0.276683							
Result	TRUE							
Non-Parameteric	FALSE							
Unknown	FALSE	TRUE	TRUE		TRUE	TRUE	TRUE	

Notes:

[1] Summary statistic, 95% mean confidence interval, and distribution type calculated using Statgraphics software package.

[2] Tolerance limits calculation:

95% Upper Tolerance limit=X+KS

Where: X= Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution

K=Tolerance Factor (Table 5, *"Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities", USEPA April 1989), and* S=Standard Deviation

[3] $W_{0.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987.

[4] Unknown distribution (<4 detections) only min, max, median reported.

EG&G Mound
Background Stream Surface Water
Metals-Total Analysis (ug/L)

Table A.1.19 - Background Stream Surface Water/Metals (Total)

	Aluminum	Antimony	Arsenic	Barium	Beryllium	Bismuth	Cadmium	Calcium	Chromium
Summary Statistics									
Sample detect :Total	4:07	2:7	1:7	7:7	7:7	0:7	0:7	7:7	2:07
Average (Arithmetic Mean)	152.7860			75.0429	0.0785714			81900	8.7640
Median	148.0000	0.95	1.4	67	0.1	1.6	0.15	79100	1.1000
Geometric mean	140.7800			73.4671	0.0742997			81304.8	1.4900
Standard deviation	59.9700			17.024	0.0267261			10851.7	20.8300
Minimum	59.5000	0.6	0.8	57.4	0.05	1.3	0.15	70800	0.4500
Maximum	229.0000	6.2	1.6	99.3	0.1	26.95	0.25	99900	56.0000
Coefficient of Variation	39.2500			22.6857	34.0151			13.25	237.6800
95% Mean Confidence Interval									
Upper Limit	208.2530			90.7875				891936.2	28.0300
Lower Limit	97.3180			59.2983				71863.8	-10.5010
+/-	55.4600			15.7446				10036.2	19.2660
Upper 95% Tolerance Limit									
Upper Limit	356.62403			132.907476				118784.928	
K Factor	3.399			3.399				3.399	
Distribution Test									
Normal									
Shapiro-Wilkes W value	0.9703			0.86688				0.920233	
p-Value	0.9039			0.179956				0.488929	
Result	FALSE			TRUE				TRUE	
Lognormal									
Shapiro-Wilks W	0.9218								
P-Value	0.5014								
Result	FALSE								
Non-Parameteric	TRUE								
Unknown		TRUE	TRUE		TRUE	TRUE	TRUE		

EG&G Mound
Background Stream Surface Water
Metals-Total Analysis (ug/L)

Table A.1.19 - Background Stream Surface Water/Metals (Total)

	Cobalt	Copper	Cyanide	Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum
Summary Statistics										
Sample detect :Total	2:7	7:7	1:7	7:7	1:7	0:7	7:7	7:7	0:7	5:7
Average (Arithmetric Mean)		3.17143		406.429			29842.9	93.2286		5.21429
Median	0.3	2.6	5	199	1.15	1.9	29200	39.9	0.1	3.4
Geometric mean		2.91548		292.515			29595.8	50.1725		4.47095
Standard deviation		1.46255		430.973			4161.27	120.852		3.01838
Minimum	0.25	1.5	2.5	173	0.95	1.9	25000	16.5	0.1	1.8
Maximum	1.3	5.9	5.9	1330	2.5	3.8	35700	343	0.1	9.15
Coefficient of Variation		46.1164		106.039			13.9439	129.629		57.8867
95% Mean Confidence Interval										
Upper Limit		4.52406		805.013			333691.4	204.998		8.00583
Lower Limit		1.81879		7.84375			25994.3	48.5408		2.42275
+/-		1.35264		398.585			3848.55	111.769		2.79154
Upper 95% Tolerance Limit										
Upper Limit		8.14263745		1663.87723			43987.0567	460.948448		15.4737636
K Factor		3.399		3.399			3.399	3.399		3.399
Distribution Test										
Normal										
Shapiro-Wilkes W value		0.880819		0.633846			0.915743	0.714622		0.839989
p-Value		0.238728		0.00068444			0.45406	0.00519499		0.101248
Result		TRUE		FALSE			TRUE	FALSE		TRUE
Lognormal										
Shapiro-Wilks W				0.712901				0.881934		
P-Value				0.00497807				0.244056		
Result				FALSE				TRUE		
Non-Parameteric				TRUE						
Unknown	TRUE		TRUE		TRUE	TRUE			TRUE	

EG&G Mound
Background Stream Surface Water
Metals-Total Analysis (ug/L)

Table A.1.19 - Background Stream Surface Water/Metals (Total)

	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Tin	Vanadium	Zinc
Summary Statistics									
Sample detect :Total	4:7	7:7	1:7	0:7	7:7	1:7	0:7	3:7	7:7
Average (Arithmetic Mean)	11.8357	3324.29			20842.9				12.7429
Median	1.4	2300	1.1	0.25	17300	1.8	5.25	0.55	10.9
Geometric mean	2.14929	2691.4			16908.3				10.556
Standard deviation	27.6861	2598.26			13122.3				8.11888
Minimum	0.7	1290	0.55	0.25	6170	0.7	2.95	0.2	4.5
Maximum	74.6	8660	1.95	1.2	38300	18	28.15	0.71	26.5
Coefficient of Variation	233.92	78.16			62.9583			66.23	63.7132
95% Mean Confidence Interval									
Upper Limit	37.4412	5727.28			32979			1.21515	20.2516
Lower Limit	-13.7697	921.289			8706.71			0.416282	5.23413
+/-	25.6054	2403			12136.1			0.399432	7.50873
Upper 95% Tolerance Limit									
Upper Limit	95.5050539	11522.8857			65445.5977				40.3389731
K Factor	3.399	3.399			3.399				3.399
Distribution Test									
Normal									
Shapiro-Wilkes W value	0.479703	0.79754			0.896152				0.910775
p-Value	1.3401E-05	0.0385521			0.320749				0.417268
Result	FALSE	FALSE			TRUE				TRUE
Lognormal									
Shapiro-Wilks W	0.723434	0.940306							
P-Value	0.00645935	0.659055							
Result	FALSE	TRUE							
Non-Parameteric	TRUE								
Unknown			TRUE	TRUE		TRUE	TRUE	TRUE	

Notes:

[1] Summary statistic, 95% mean confidence interval, and distribution type calculated using Statgraphics software package.

[2] Tolerance limits calculation:

95% Upper Tolerance limit=X+KS

Where: X= Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution

K=Tolerance Factor (Table 5, *"Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities", USEPA April 1989)*

S=Standard Deviation

[3] $W_{0.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987.

[4] Unknown distribution (<4 detections) only min, max. median reported.

EG&G Mound
Background Stream Surface Water
General Chemistry Analysis (mg/L)

Table A.1.20 - Background Stream Surface Water/General Chemistry

	Alkalinity	Ammonia	Dissolved Solids	Nitrogen	Organic Carbon	Phosphorous	Suspended Solids
Summary Statistics							
Sample detect :Total	4.4	0.7	7.7	5.7	7.7	6.7	5.7
Average (Arithmetric Mean)			532	0.906286	5.10857	0.526143	14.4286
Median	278	0.05	537	0.724	3.86	0.231	11
Geometric mean			522.487	0.40721	4.63691	0.262989	8.67456
Standard deviation			107.271	0.982539	2.77395	0.673895	16.3896
Minimum	185	0.05	397	0.05	2.96	0.05	2
Maximum	363	0.05	686	2.81	10.95	1.85	50
Coefficient of Variation			20.1637	108.414	54.2999	128.082	113.591
95% Mean Confidence Interval							
Upper Limit			631.209	1.81499	7.67405	1.14939	29.5865
Lower Limit			432.791	-0.0024138	2.54309	-0.097172	-0.729322
+/-			99.2091	0.9087	2.54309	0.62325	15.1579
Upper 95% Tolerance Limit							
Upper Limit			896.614129	4.24593606	14.06556605	2.553558105	64.3828104
K Factor			3.399	3.399	3.399	3.399	3.399
Distribution Test							
Normal							
Shapiro-Wilkes W value			0.944734	0.858143	0.76665	0.743271	0.712947
p-Value			0.69815	0.14987	0.0185238	0.0105115	0.00498376
Result			TRUE	TRUE	FALSE	FALSE	FALSE
Lognormal							
Shapiro-Wilks W					0.885621	0.94463	0.882047
P-Value					0.262362	0.697234	0.2446
Result					TRUE	TRUE	TRUE
Non-Parameteric							
Unknown	TRUE	TRUE					

Notes:

[1] Summary statistic, 95% mean confidence interval, and distribution type calculated using Statgraphics software package.

[2] Tolerance limits calculation:

95% Upper Tolerance limit=X+KS

Where X= Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution

K=Tolerance Factor (Table 5, *"Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities, USEPA April 1989"*, and S=Standard Deviation

[3] $W_{0.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987.

[4] Unknown distribution (<4 detections) only min, max, median reported.

EG&G Mound
Background Stream Surface Water
Pesticides Analysis (ug/L)

Table A.1.21 - Background Stream Surface Water/Pesticides

	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	Alpha Chlordane	Alpha-BHC	Aroclor-1016
Summary Statistics							
Sample detect :Total	0:07	0:7	1:7	0:07	0:7	0:7	0:7
Average (Arithmetic Mean)	0.0500			0.0250			
Median		0.5	0.05		0.025	0.025	0.25
Geometric mean							
Standard deviation							
Minimum		0.5	0.003		0.025	0.025	0.25
Maximum		0.5	0.05		0.025	0.025	0.5
Coefficient of Variation							
95% Mean Confidence Interval							
Upper Limit							
Lower Limit							
+/-							
Upper 95% Tolerance Limit							
Upper Limit							
K Factor							
Distribution Test							
Normal							
Shapiro-Wilkes W value							
p-Value							
Result							
Lognormal							
Shapiro-Wilks W							
P-Value							
Result							
Non-Parameteric							
Unknown		TRUE	TRUE		TRUE	TRUE	TRUE

EG&G Mound
Background Stream Surface Water
Pesticides Analysis (ug/L)

Table A.1.21 - Background Stream Surface Water/Pesticides

	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Beta-BHC
Summary Statistics							
Sample detect :Total	0:7	0:7	0:7	0:7	0:7	0:7	0:7
Average (Arithmetric Mean)							
Median	0.25	0.25	0.25	0.25	0.25	0.25	0.025
Geometric mean							
Standard deviation							
Minimum	0.25	0.25	0.25	0.25	0.25	0.25	0.025
Maximum	1	0.5	0.5	0.5	0.5	0.5	0.025
Coefficient of Variation							
95% Mean Confidence Interval							
Upper Limit							
Lower Limit							
+/-							
Upper 95% Tolerance Limit							
Upper Limit							
K Factor							
Distribution Test							
Normal							
Shapiro-Wilkes W value							
p-Value							
Result							
Lognormal							
Shapiro-Wilks W							
P-Value							
Result							
Non-Parameteric							
Unknown	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE

EG&G Mound
Background Stream Surface Water
Pesticides Analysis (ug/L)

Table A.1.21 - Background Stream Surface Water/Pesticides

	Delta-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin Aldehyde
Summary Statistics							
Sample detect :Total	0:7	3:07	0:7	0:7	0:7	1:7	0:7
Average (Arithmetric Mean)		0.0434					
Median	0.025	0.0500	0.025	0.05	0.05	0.05	0.05
Geometric mean		0.0330					
Standard deviation		0.0200					
Minimum	0.025	0.0031	0.025	0.05	0.05	0.0013	0.05
Maximum	0.025	0.0690	0.025	0.05	0.05	0.05	0.05
Coefficient of Variation		47.7600					
95% Mean Confidence Interval							
Upper Limit		0.0626					
Lower Limit		0.0240					
+/-		0.0190					
Upper 95% Tolerance Limit							
Upper Limit							
K Factor							
Distribution Test							
Normal							
Shapiro-Wilkes W value							
p-Value							
Result							
Lognormal							
Shapiro-Wilks W							
P-Value							
Result							
Non-Parameteric							
Unknown	TRUE		TRUE	TRUE	TRUE	TRUE	TRUE

EG&G Mound
Background Stream Surface Water
Pesticides Analysis (ug/L)

Table A.1.21 - Background Stream Surface Water/Pesticides

	Endrin Ketone	Gamma Chlordane	amma-BHC (Lindane	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene
Summary Statistics							
Sample detect :Total	0:7	0:7	0:7	0:7	2:07	0:7	0:7
Average (Arithmetric Mean)					0.0190		
Median	0.05	0.025	0.025	0.025	0.0250	0.25	2.5
Geometric mean					0.0160		
Standard deviation					0.0090		
Minimum	0.05	0.025	0.025	0.025	0.0042	0.25	2.5
Maximum	0.05	0.025	0.025	0.025	0.0250	0.25	2.5
Coefficient of Variation					46.2800		
95% Mean Confidence Interval							
Upper Limit					0.0280		
Lower Limit					0.0110		
+/-					0.0080		
Upper 95% Tolerance Limit							
Upper Limit							
K Factor							
Distribution Test							
Normal							
Shapiro-Wilkes W value							
p-Value							
Result							
Lognormal							
Shapiro-Wilks W							
P-Value							
Result							
Non-Parameteric							
Unknown	TRUE	TRUE	TRUE	TRUE		TRUE	TRUE

Notes:

[1] Summary statistic, 95% mean confidence interval, and distribution type calculated using Statgraphics software package.

[2] Tolerance limits calculation:

95% Upper Tolerance limit=X+KS

Where: X= Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution

K=Tolerance Factor (Table 5, *"Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities, USEPA April 1989", and* S=Standard Deviation

[3] $W_{0.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987.

[4] Unknown distribution (<4 detections) only min, max. median reported.

EG&G Mound
Background Stream Surface Water
Radiological Analysis (pCi/L)

Table A.1.22 - Background Stream Surface Water/Radiological

	Americium-241	Bismuth-207	Bismuth-210M	Cesium-137	Cobalt-60	Plutonium-238	Plutonium-239/240
Summary Statistics							
Sample detect :Total	0:7	0:7	0:7	0:7	0:7	0:7	0:7
Average (Arithmetric Mean)							
Median	0.1095	3.34	4.355	3.815	4.9205	0.12735	0.1269
Geometric mean							
Standard deviation							
Minimum	0.0975	3.258	3.8135	3.37	4.0635	0.074	0.0915
Maximum	0.16025	3.687	4.8	4.095	5.45	0.14895	0.1489
Coefficient of Variation							
95% Mean Confidence Interval							
Upper Limit							
Lower Limit							
+/-							
Upper 95% Tolerance Limit							
Upper Limit							
K Factor							
Distribution Test							
Normal							
Shapiro-Wilkes W value							
p-Value							
Result							
Lognormal							
Shapiro-Wilks W							
P-Value							
Result							
Non-Parameteric							
Unknown	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE

EG&G Mound
Background Stream Surface Water
Radiological Analysis (pCi/L)

Table A.1.22 - Background Stream Surface Water/Radiological

	Potassium-40	Radium-226	Strontium-90	Thorium-228	Thorium-230	Thorium-232	Tritium
Summary Statistics							
Sample detect :Total	0:07	3:07	1:7	0:7	0:07	0:7	0:07
Average (Arithmetric Mean)	143.6070	0.1638			0.1010		139.2000
Median	183.5000	0.1495	0.2265	0.1109	0.0951	0.0665	150.0000
Geometric mean	105.0500	0.1560			0.0960		138.6180
Standard deviation	83.3060	0.0539			0.0320		13.5800
Minimum	20.6000	0.1030	0.168	0.09155	0.0590	0.0515	123.0000
Maximum	216.5000	0.2340	1.2	0.128	0.1665	0.12585	150.0000
Coefficient of Variation	58.0000	32.9250			32.6300		9.7600
95% Mean Confidence Interval							
Upper Limit	220.6530	0.2137			0.1310		151.7680
Lower Limit	66.5600	0.1130			0.0705		126.6320
+/-	77.0450	0.0498			0.0305		12.5600
Upper 95% Tolerance Limit							
Upper Limit							
K Factor							
Distribution Test							
Normal							
Shapiro-Wilkes W value							
p-Value							
Result							
Lognormal							
Shapiro-Wilks W							
P-Value							
Result							
Non-Parameteric							
Unknown			TRUE	TRUE		TRUE	

EG&G Mound
Background Stream Surface Water
Radiological Analysis (pCi/L)

Table A.1.22 - Background Stream Surface Water/Radiological

	Uranium-234	Uranium-235	Uranium-238
Summary Statistics			
Sample detect :Total	6:7	0:7	5:7
Average (Arithmetic Mean)	0.473071		0.3575
Median	0.534	0.10405	0.39
Geometric mean	0.419118		0.310949
Standard deviation	0.233326		0.174439
Minimum	0.1755	0.0665	0.118
Maximum	0.832	0.1605	0.538
Coefficient of Variation	49.3215		48.7941
95% Mean Confidence Interval			
Upper Limit	0.688863		0.518829
Lower Limit	0.25728		0.196171
+/-	0.215791		0.161329
Upper 95% Tolerance Limit			
Upper Limit	1.266146074		0.950418161
K Factor	3.399		3.399
Distribution Test			
Normal			
Shapiro-Wilkes W value	0.952366		0.884854
p-Value	0.764772		0.258466
Result	TRUE		TRUE
Lognormal			
Shapiro-Wilks W			
P-Value			
Result			
Non-Parameteric			
Unknown		TRUE	

Notes:

[1] Summary statistic, 95% mean confidence interval, and distribution type calculated using Statgraphics software package.

[2] Tolerance limits calculation:

95% Upper Tolerance limit=X+KS

Where: X= Arithmetic mean for normal distribution, geometric mean for lognormal distribution and median for non-parameteric distribution

K=Tolerance Factor (Table 5, *"Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities, USEPA April 1989"*

S=Standard Deviation

[3] $W_{0.05}$ value according to Table A-7, Statistical Methods for Environmental Pollution Monitoring, Gilbert, 1987.

[4] Unknown distribution (<4 detections) only min, max. median reported.

APPENDIX A.2

Appendix A-2

Central Valley System

Tables Indicating Detections Above Background

A.2.1 Pond Surface Water

A.2.2 Stream Surface Water

A.2.3 Pond Sediments

A.2.4 Stream Sediments

A.2.5 Subsurface Soils

Appendix A-2

Central Valley System

Tables Indicating Detections Above Background

A.2.1 Pond Surface Water

Table A.2.1 - Central Valley System Pond Surface Water

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-2001	000335	Common Anions		chloride	150	MG/L	no
MND21-2001	900000034	Common Anions		chloride	191	MG/L	no
MND21-2002	000336	Common Anions		chloride	147	MG/L	no
MND21-2002	900000035	Common Anions		chloride	191	MG/L	no
MND21-2003	000337	Common Anions		chloride	140	MG/L	no
MND21-2003	900000036	Common Anions		chloride	200	MG/L	no
MND21-2004	000338	Common Anions		chloride	159	MG/L	no
MND21-2004	900000033	Common Anions		chloride	200	MG/L	no
MND21-2201	000342	Common Anions		chloride	162	MG/L	no
MND21-2201	900000064	Common Anions		chloride	147	MG/L	no
MND21-2202	000343	Common Anions		chloride	499	MG/L	no
MND21-2202	900000065	Common Anions		chloride	154	MG/L	no
MND21-2203	000344	Common Anions		chloride	245	MG/L	no
MND21-2203	900000066	Common Anions		chloride	154	MG/L	no
MND21-2301	000330	Common Anions		chloride	244	MG/L	no
MND21-2301	900000053	Common Anions		chloride	153	MG/L	no
MND21-2302	000332	Common Anions		chloride	216	MG/L	no
MND21-2302	900000055	Common Anions		chloride	543	MG/L	no
MND21-2303	000329	Common Anions		chloride	222	MG/L	no
MND21-2303	900000054	Common Anions		chloride	156	MG/L	no
MND21-2304	000328	Common Anions		chloride	216	MG/L	no
MND21-2304	900000052	Common Anions		chloride	154	MG/L	no
MND21-2305	000331	Common Anions		chloride	222	MG/L	no
MND21-2305	900000050	Common Anions		chloride	147	MG/L	no
MND21-2203	900000066	Common Anions		fluoride	0.343	MG/L	no
MND21-2201	900000064	Common Anions		nitrate-nitrite-N	1.49	MG/L	no
MND21-2202	900000065	Common Anions		nitrate-nitrite-N	1.46	MG/L	no
MND21-2203	900000066	Common Anions		nitrate-nitrite-N	1.46	MG/L	no
MND21-2002	900000035	Common Anions		sulfate	76.4	MG/L	no
MND21-2003	900000036	Common Anions		sulfate	68.6	MG/L	no
MND21-2004	900000033	Common Anions		sulfate	75.2	MG/L	no
MND21-2201	900000064	Common Anions		sulfate	93	MG/L	no
MND21-2202	900000065	Common Anions		sulfate	78	MG/L	no
MND21-2203	000344	Common Anions		sulfate	74.2	MG/L	no
MND21-2203	900000066	Common Anions		sulfate	81	MG/L	no
MND21-2301	900000053	Common Anions		sulfate	96	MG/L	no
MND21-2302	900000055	Common Anions		sulfate	336	MG/L	no
MND21-2303	900000054	Common Anions		sulfate	98	MG/L	no
MND21-2304	900000052	Common Anions		sulfate	121	MG/L	no
MND21-2305	900000050	Common Anions		sulfate	98	MG/L	no
MND21-2301	900000053	Explosives	J	1,3-dinitrobenzene	0.93	UG/L	no
MND21-2302	900000055	Explosives	J	1,3-dinitrobenzene	0.24	UG/L	no
MND21-2304	900000052	Explosives	J	1,3-dinitrobenzene	0.93	UG/L	no
MND21-2002	900000035	Explosives		3,5-dinitroaniline	82	UG/L	no
MND21-2003	900000036	Explosives	J	HMX	1.1	UG/L	no
MND21-2201	900000064	Explosives	JB	HMX	2.3	UG/L	no
MND21-2302	900000055	Explosives	J	HMX	1.3	UG/L	no
MND21-2303	900000054	Explosives	J	HMX	1.3	UG/L	no
MND21-2304	000328	Explosives	J	HMX	0.5	UG/L	no
MND21-2305	000331	Explosives	J	HMX	0.46	UG/L	no
MND21-2201	900000064	Explosives	B	RDX	7.5	UG/L	no

Table A.2.1 - Central Valley System Pond Surface Water

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-2202	900000065	Explosives	B	RDX	10	UG/L	no
MND21-2203	900000066	Explosives	B	RDX	11	UG/L	no
MND21-2301	900000053	Explosives		RDX	11	UG/L	no
MND21-2303	900000054	Explosives		RDX	10	UG/L	no
MND21-2304	900000052	Explosives		RDX	7.4	UG/L	no
MND21-2305	900000050	Explosives		RDX	7.9	UG/L	no
MND21-2201	000342	General Chemistry		Alkalinity	365	MG/L	no
MND21-2202	000343	General Chemistry		Alkalinity	350	MG/L	no
MND21-2203	000344	General Chemistry		Alkalinity	368	MG/L	no
MND21-2004	000338	General Chemistry		organic carbon	12.52	MG/L	no
MND21-2004	900000033	General Chemistry		organic carbon	18.9	MG/L	no
MND21-2302	900000055	General Chemistry		organic carbon	12.48	MG/L	no
MND21-2302	900000055	Metals		aluminum	10400	UG/L	no
MND21-2003	000337	Metals	B	antimony	4.1	UG/L	no
MND21-2004	000338	Metals	B	antimony	6.5	UG/L	no
MND21-2302	000332	Metals		antimony	15.9	UG/L	no
MND21-2302	900000055	Metals	B	antimony	9.9	UG/L	yes
MND21-2303	900000054	Metals	B	antimony	9.7	UG/L	yes
MND21-2304	900000052	Metals		antimony	10.2	UG/L	yes
MND21-2004	000338	Metals	B	arsenic	1.8	UG/L	yes
MND21-2302	900000055	Metals	B	barium	157	UG/L	no
MND21-2201	000342	Metals	B	beryllium	0.25	UG/L	no
MND21-2201	000342	Metals	B	beryllium	0.2	UG/L	yes
MND21-2301	000330	Metals	B	beryllium	0.21	UG/L	yes
MND21-2302	000332	Metals	B	beryllium	0.34	UG/L	no
MND21-2302	900000055	Metals	B	beryllium	0.13	UG/L	no
MND21-2201	000342	Metals	B	cadmium	0.3	UG/L	no
MND21-2301	000330	Metals	B	cadmium	0.88	UG/L	no
MND21-2302	900000055	Metals	B	cadmium	0.36	UG/L	no
MND21-2202	000343	Metals		calcium	111000	UG/L	no
MND21-2302	900000055	Metals		calcium	196000	UG/L	no
MND21-2201	900000064	Metals		chromium	0.89	UG/L	yes
MND21-2202	900000065	Metals		chromium	1.10	UG/L	yes
MND21-2203	900000066	Metals		chromium	0.76	UG/L	yes
MND21-2301	900000053	Metals		chromium	0.81	UG/L	yes
MND21-2302	900000055	Metals		chromium	13.2	UG/L	no
MND21-2302	900000055	Metals	B	chromium	0.8	UG/L	yes
MND21-2302	900000055	Metals		chromium	0.80	UG/L	yes
MND21-2303	900000054	Metals	B	chromium	1.2	UG/L	yes
MND21-2305	900000050	Metals	B	chromium	0.76	UG/L	yes
MND21-2001	000335	Metals	B	copper	9	UG/L	yes
MND21-2001	000335	Metals	B	copper	6.4	UG/L	no
MND21-2001	900000034	Metals	B	copper	10.8	UG/L	yes
MND21-2001	900000034	Metals	B	copper	9.4	UG/L	no
MND21-2002	000336	Metals	B	copper	7.4	UG/L	no
MND21-2002	000336	Metals	B	copper	6.2	UG/L	yes
MND21-2002	900000035	Metals	B	copper	10.6	UG/L	yes
MND21-2002	900000035	Metals	B	copper	8.3	UG/L	no
MND21-2003	000337	Metals	B	copper	7.6	UG/L	no
MND21-2003	000337	Metals	B	copper	6.3	UG/L	yes
MND21-2003	900000036	Metals	B	copper	14.8	UG/L	yes

Table A.2.1 - Central Valley System Pond Surface Water

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-2003	900000036	Metals	B	copper	8.7	UG/L	no
MND21-2004	000338	Metals	B	copper	7.2	UG/L	yes
MND21-2004	000338	Metals	B	copper	6.7	UG/L	no
MND21-2004	900000033	Metals		copper	35.3	UG/L	no
MND21-2004	900000033	Metals		copper	29	UG/L	yes
MND21-2201	000342	Metals		copper	74.8	UG/L	no
MND21-2201	000342	Metals		copper	48.3	UG/L	yes
MND21-2201	900000064	Metals		copper	133	UG/L	no
MND21-2201	900000064	Metals	B	copper	15.7	UG/L	yes
MND21-2202	000343	Metals		copper	50.6	UG/L	no
MND21-2202	000343	Metals		copper	26.1	UG/L	yes
MND21-2202	900000065	Metals		copper	54.9	UG/L	no
MND21-2202	900000065	Metals		copper	35	UG/L	yes
MND21-2203	000344	Metals		copper	43.3	UG/L	no
MND21-2203	000344	Metals		copper	26.9	UG/L	yes
MND21-2203	900000066	Metals		copper	57.1	UG/L	no
MND21-2203	900000066	Metals		copper	31.5	UG/L	yes
MND21-2301	000330	Metals	B	copper	15.2	UG/L	no
MND21-2301	900000053	Metals	B	copper	19.9	UG/L	no
MND21-2301	900000053	Metals	B	copper	12.2	UG/L	yes
MND21-2302	900000055	Metals	B	copper	15.2	UG/L	no
MND21-2303	000329	Metals	B	copper	12	UG/L	no
MND21-2303	900000054	Metals	B	copper	19.9	UG/L	no
MND21-2303	900000054	Metals	B	copper	19.1	UG/L	yes
MND21-2304	000328	Metals	B	copper	12.7	UG/L	no
MND21-2304	000328	Metals	B	copper	7	UG/L	yes
MND21-2304	900000052	Metals	B	copper	23.4	UG/L	no
MND21-2304	900000052	Metals	B	copper	20.4	UG/L	yes
MND21-2305	900000050	Metals		copper	146	UG/L	no
MND21-2305	900000050	Metals		copper	75.1	UG/L	yes
MND21-2201	000342	Metals		cyanide	10.3	UG/L	no
MND21-2302	900000055	Metals		iron	13900	UG/L	no
MND21-2203	900000066	Metals		lead	20.1	UG/L	no
MND21-2301	000330	Metals		lead	13.2	UG/L	no
MND21-2302	900000055	Metals		lead	6.5	UG/L	no
MND21-2001	000335	Metals	B	lithium	5.3	UG/L	yes
MND21-2001	900000034	Metals	B	lithium	6.9	UG/L	yes
MND21-2001	900000034	Metals	B	lithium	6.5	UG/L	no
MND21-2002	000336	Metals	B	lithium	4.8	UG/L	yes
MND21-2002	900000035	Metals	B	lithium	6.2	UG/L	yes
MND21-2003	000337	Metals	B	lithium	5	UG/L	yes
MND21-2003	900000036	Metals	B	lithium	8	UG/L	yes
MND21-2003	900000036	Metals	B	lithium	7.2	UG/L	no
MND21-2004	000338	Metals	B	lithium	4.4	UG/L	yes
MND21-2004	900000033	Metals	B	lithium	7.3	UG/L	no
MND21-2004	900000033	Metals	B	lithium	7.2	UG/L	yes
MND21-2201	000342	Metals	B	lithium	5.7	UG/L	yes
MND21-2202	000343	Metals	B	lithium	6.7	UG/L	yes
MND21-2203	000344	Metals	B	lithium	6.4	UG/L	yes
MND21-2301	000330	Metals	B	lithium	5.6	UG/L	yes
MND21-2302	000332	Metals	B	lithium	5.9	UG/L	yes

Table A.2.1 - Central Valley System Pond Surface Water

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-2302	900000055	Metals	B	lithium	20.6	UG/L	no
MND21-2302	900000055	Metals	B	lithium	9.7	UG/L	yes
MND21-2303	000329	Metals	B	lithium	5.7	UG/L	yes
MND21-2304	000328	Metals	B	lithium	5.4	UG/L	yes
MND21-2305	000331	Metals	B	lithium	5.7	UG/L	yes
MND21-2302	900000055	Metals		magnesium	50800	UG/L	no
MND21-2001	900000034	Metals		molybdenum	1530	UG/L	yes
MND21-2001	000335	Metals		molybdenum	239	UG/L	yes
MND21-2002	000336	Metals		molybdenum	231	UG/L	yes
MND21-2002	000336	Metals		molybdenum	201	UG/L	no
MND21-2002	900000035	Metals		molybdenum	1470	UG/L	no
MND21-2002	900000035	Metals		molybdenum	1460	UG/L	yes
MND21-2003	000337	Metals		molybdenum	241	UG/L	yes
MND21-2003	000337	Metals		molybdenum	220	UG/L	no
MND21-2003	900000036	Metals		molybdenum	1590	UG/L	yes
MND21-2003	900000036	Metals		molybdenum	1340	UG/L	no
MND21-2004	000338	Metals		molybdenum	192	UG/L	yes
MND21-2004	000338	Metals		molybdenum	187	UG/L	no
MND21-2004	900000033	Metals		molybdenum	1830	UG/L	no
MND21-2004	900000033	Metals		molybdenum	1760	UG/L	yes
MND21-2201	000342	Metals		molybdenum	294	UG/L	yes
MND21-2201	000342	Metals		molybdenum	252	UG/L	no
MND21-2201	900000064	Metals		molybdenum	131	UG/L	yes
MND21-2201	900000064	Metals		molybdenum	113	UG/L	no
MND21-2202	000343	Metals		molybdenum	303	UG/L	yes
MND21-2202	000343	Metals		molybdenum	279	UG/L	no
MND21-2202	900000065	Metals		molybdenum	226	UG/L	yes
MND21-2202	900000065	Metals		molybdenum	218	UG/L	no
MND21-2203	000344	Metals		molybdenum	338	UG/L	yes
MND21-2203	000344	Metals		molybdenum	312	UG/L	no
MND21-2203	900000066	Metals		molybdenum	221	UG/L	no
MND21-2203	900000066	Metals		molybdenum	209	UG/L	yes
MND21-2301	000330	Metals		molybdenum	152	UG/L	yes
MND21-2301	000330	Metals		molybdenum	132	UG/L	no
MND21-2301	900000053	Metals		molybdenum	237	UG/L	yes
MND21-2301	900000053	Metals		molybdenum	212	UG/L	no
MND21-2302	000332	Metals		molybdenum	122	UG/L	yes
MND21-2302	900000055	Metals	B	molybdenum	19.4	UG/L	no
MND21-2302	900000055	Metals	B	molybdenum	12.9	UG/L	yes
MND21-2302	000332	Metals		molybdenum	119	UG/L	no
MND21-2303	000329	Metals		molybdenum	122	UG/L	yes
MND21-2303	000329	Metals		molybdenum	114	UG/L	no
MND21-2303	900000054	Metals		molybdenum	251	UG/L	yes
MND21-2303	900000054	Metals		molybdenum	214	UG/L	no
MND21-2303	000329	Metals		molybdenum	122	UG/L	yes
MND21-2304	000328	Metals		molybdenum	128	UG/L	yes
MND21-2304	000328	Metals		molybdenum	116	UG/L	no
MND21-2304	900000052	Metals		molybdenum	235	UG/L	yes
MND21-2304	900000052	Metals		molybdenum	210	UG/L	no
MND21-2304	000328	Metals		molybdenum	128	UG/L	yes
MND21-2305	000331	Metals		molybdenum	112	UG/L	yes

Table A.2.1 - Central Valley System Pond Surface Water

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-2305	000331	Metals		molybdenum	107	UG/L	no
MND21-2305	900000050	Metals		molybdenum	198	UG/L	yes
MND21-2305	900000050	Metals		molybdenum	159	UG/L	no
MND21-2201	000342	Metals	B	nickel	1.6	UG/L	yes
MND21-2201	900000064	Metals	B	nickel	2.3	UG/L	yes
MND21-2202	000343	Metals		nickel	1.80	UG/L	yes
MND21-2301	000330	Metals	B	nickel	1.9	UG/L	yes
MND21-2302	900000055	Metals	B	nickel	14.7	UG/L	no
MND21-2304	000328	Metals	B	nickel	2.2	UG/L	yes
MND21-2305	000331	Metals	B	nickel	2.1	UG/L	yes
MND21-2001	900000034	Metals		potassium	7420	UG/L	yes
MND21-2001	900000034	Metals		potassium	6470	UG/L	no
MND21-2002	900000035	Metals		potassium	7410	UG/L	yes
MND21-2002	900000035	Metals		potassium	6950	UG/L	no
MND21-2003	900000036	Metals		potassium	7490	UG/L	yes
MND21-2003	900000036	Metals		potassium	6490	UG/L	no
MND21-2004	900000033	Metals		potassium	6690	UG/L	yes
MND21-2004	900000033	Metals		potassium	6580	UG/L	no
MND21-2202	000343	Metals		potassium	5070	UG/L	no
MND21-2202	900000065	Metals	B	potassium	4300	UG/L	no
MND21-2302	900000055	Metals		potassium	22000	UG/L	no
MND21-2302	900000055	Metals		potassium	11900	UG/L	yes
MND21-2301	000330	Metals	B	selenium	1.6	UG/L	no
MND21-2305	000331	Metals	B	selenium	1.8	UG/L	no
MND21-2001	900000034	Metals	B	silver	2.4	UG/L	no
MND21-2002	900000035	Metals	B	silver	0.66	UG/L	no
MND21-2003	000337	Metals	B	silver	1	UG/L	no
MND21-2003	900000036	Metals	B	silver	0.62	UG/L	no
MND21-2004	900000033	Metals	B	silver	0.4	UG/L	no
MND21-2001	000335	Metals		sodium	121000	UG/L	yes
MND21-2001	000335	Metals		sodium	108000	UG/L	no
MND21-2001	900000034	Metals		sodium	276000	UG/L	yes
MND21-2001	900000034	Metals		sodium	244000	UG/L	no
MND21-2002	000336	Metals		sodium	119000	UG/L	yes
MND21-2002	000336	Metals		sodium	106000	UG/L	no
MND21-2002	900000035	Metals		sodium	267000	UG/L	yes
MND21-2002	900000035	Metals		sodium	264000	UG/L	no
MND21-2003	000337	Metals		sodium	122000	UG/L	yes
MND21-2003	000337	Metals		sodium	110000	UG/L	no
MND21-2003	900000036	Metals		sodium	285000	UG/L	yes
MND21-2003	900000036	Metals		sodium	248000	UG/L	no
MND21-2004	000338	Metals		sodium	128000	UG/L	yes
MND21-2004	000338	Metals		sodium	107000	UG/L	no
MND21-2004	900000033	Metals		sodium	303000	UG/L	no
MND21-2004	900000033	Metals		sodium	299000	UG/L	yes
MND21-2201	000342	Metals		sodium	228000	UG/L	yes
MND21-2201	000342	Metals		sodium	209000	UG/L	no
MND21-2201	900000064	Metals		sodium	231000	UG/L	yes
MND21-2201	900000064	Metals		sodium	206000	UG/L	no
MND21-2202	000343	Metals		sodium	294000	UG/L	yes
MND21-2202	000343	Metals		sodium	293000	UG/L	no

Table A.2.1 - Central Valley System Pond Surface Water

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-2202	900000065	Metals		sodium	254000	UG/L	yes
MND21-2202	900000065	Metals		sodium	244000	UG/L	no
MND21-2203	000344	Metals		sodium	252000	UG/L	yes
MND21-2203	000344	Metals		sodium	233000	UG/L	no
MND21-2203	900000066	Metals		sodium	249000	UG/L	no
MND21-2203	900000066	Metals		sodium	236000	UG/L	yes
MND21-2301	000330	Metals		sodium	180000	UG/L	yes
MND21-2301	000330	Metals		sodium	155000	UG/L	no
MND21-2301	900000053	Metals		sodium	201000	UG/L	yes
MND21-2301	900000053	Metals		sodium	189000	UG/L	no
MND21-2302	000332	Metals		sodium	156000	UG/L	yes
MND21-2302	000332	Metals		sodium	144000	UG/L	no
MND21-2302	900000055	Metals		sodium	380000	UG/L	no
MND21-2302	900000055	Metals		sodium	292000	UG/L	yes
MND21-2303	000329	Metals		sodium	156000	UG/L	yes
MND21-2303	000329	Metals		sodium	139000	UG/L	no
MND21-2303	900000054	Metals		sodium	213000	UG/L	yes
MND21-2303	900000054	Metals		sodium	188000	UG/L	no
MND21-2304	000328	Metals		sodium	156000	UG/L	yes
MND21-2304	000328	Metals		sodium	138000	UG/L	no
MND21-2304	900000052	Metals		sodium	204000	UG/L	yes
MND21-2304	900000052	Metals		sodium	190000	UG/L	no
MND21-2305	000331	Metals		sodium	155000	UG/L	yes
MND21-2305	000331	Metals		sodium	132000	UG/L	no
MND21-2305	900000050	Metals		sodium	234000	UG/L	yes
MND21-2305	900000050	Metals		sodium	213000	UG/L	no
MND21-2004	000338	Metals	B	thallium	1.8	UG/L	yes
MND21-2201	900000064	Metals		vanadium	1.6	UG/L	no
MND21-2302	900000055	Metals		vanadium	19	UG/L	no
MND21-2305	900000050	Metals		vanadium	2.20	UG/L	no
MND21-2302	900000055	Metals		zinc	110	UG/L	no
MND21-2202	900000065	Radiological		cesium-137	11.1	PCI/L	no
MND21-2001	000335	Radiological		plutonium-238	0.819	PCI/L	no
MND21-2001	900000034	Radiological		plutonium-238	1.09	PCI/L	no
MND21-2002	000336	Radiological		plutonium-238	1.02	PCI/L	no
MND21-2002	900000035	Radiological		plutonium-238	1.59	PCI/L	no
MND21-2003	000337	Radiological		plutonium-238	0.837	PCI/L	no
MND21-2003	900000036	Radiological		plutonium-238	0.679	PCI/L	no
MND21-2004	000338	Radiological		plutonium-238	0.815	PCI/L	no
MND21-2004	900000033	Radiological		plutonium-238	0.562	PCI/L	no
MND21-2201	000342	Radiological		plutonium-238	0.564	PCI/L	no
MND21-2201	900000064	Radiological		plutonium-238	1.14	PCI/L	no
MND21-2202	000343	Radiological		plutonium-238	1.2	PCI/L	no
MND21-2202	900000065	Radiological		plutonium-238	0.75	PCI/L	no
MND21-2203	000344	Radiological		plutonium-238	0.291	PCI/L	no
MND21-2203	900000066	Radiological		plutonium-238	0.523	PCI/L	no
MND21-2302	000332	Radiological		plutonium-238	0.361	PCI/L	no
MND21-2302	900000055	Radiological		plutonium-238	1.58	PCI/L	no
MND21-2303	900000054	Radiological		plutonium-238	0.294	PCI/L	no
MND21-2304	000328	Radiological		plutonium-238	0.689	PCI/L	no
MND21-2305	900000050	Radiological		plutonium-238	0.899	PCI/L	no

Table A.2.1 - Central Valley System Pond Surface Water

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-2304	000328	Radiological		plutonium-239/240	0.589	PCI/L	no
MND21-2302	900000055	Radiological		radium-226	0.704	PCI/L	no
MND21-2202	000343	Radiological		thorium-230	0.328	PCI/L	no
MND21-2202	900000065	Radiological		thorium-232	0.312	PCI/L	no
MND21-2302	900000055	Radiological		thorium-232	0.396	PCI/L	no
MND21-2001	000335	Radiological		tritium	1490	PCI/L	no
MND21-2001	900000034	Radiological		tritium	477	PCI/L	no
MND21-2002	000336	Radiological		tritium	1470	PCI/L	no
MND21-2002	900000035	Radiological		tritium	278	PCI/L	no
MND21-2003	000337	Radiological		tritium	1290	PCI/L	no
MND21-2003	900000036	Radiological		tritium	305	PCI/L	no
MND21-2004	000338	Radiological		tritium	1420	PCI/L	no
MND21-2004	900000033	Radiological		tritium	418	PCI/L	no
MND21-2201	000342	Radiological		tritium	2110	PCI/L	no
MND21-2201	900000064	Radiological		tritium	3930	PCI/L	no
MND21-2202	000343	Radiological		tritium	2290	PCI/L	no
MND21-2202	900000065	Radiological		tritium	3570	PCI/L	no
MND21-2203	000344	Radiological		tritium	1890	PCI/L	no
MND21-2203	900000066	Radiological		tritium	3630	PCI/L	no
MND21-2301	000330	Radiological		tritium	1810	PCI/L	no
MND21-2301	900000053	Radiological		tritium	3090	PCI/L	no
MND21-2302	000332	Radiological		tritium	1990	PCI/L	no
MND21-2302	900000055	Radiological		tritium	1100	PCI/L	no
MND21-2303	000329	Radiological		tritium	1780	PCI/L	no
MND21-2303	900000054	Radiological		tritium	3170	PCI/L	no
MND21-2304	000328	Radiological		tritium	1950	PCI/L	no
MND21-2304	900000052	Radiological		tritium	3070	PCI/L	no
MND21-2305	000331	Radiological		tritium	1930	PCI/L	no
MND21-2305	900000050	Radiological		tritium	3960	PCI/L	no
MND21-2001	900000034	Radiological		uranium-234	0.817	PCI/L	no
MND21-2202	000343	Radiological		uranium-234	0.582	PCI/L	no
MND21-2203	000344	Radiological		uranium-234	0.581	PCI/L	no
MND21-2203	900000066	Radiological		uranium-234	0.703	PCI/L	no
MND21-2301	000330	Radiological		uranium-234	0.688	PCI/L	no
MND21-2303	000329	Radiological		uranium-234	0.748	PCI/L	no
MND21-2304	000328	Radiological		uranium-234	0.646	PCI/L	no
MND21-2001	900000034	Radiological		uranium-238	0.834	PCI/L	no
MND21-2002	900000035	Radiological		uranium-238	0.68	PCI/L	no
MND21-2003	900000036	Radiological		uranium-238	0.838	PCI/L	no
MND21-2202	900000065	Radiological		uranium-238	0.908	PCI/L	no
MND21-2304	000328	Radiological		uranium-238	0.66	PCI/L	no
MND21-2001	000335	Semi-Volatile Organics	J	benzoic acid	1	UG/L	no
MND21-2002	900000035	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	2	UG/L	no
MND21-2003	900000036	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	1	UG/L	no
MND21-2201	000342	Semi-Volatile Organics	J	di-n-butyl phthalate	1	UG/L	no
MND21-2301	000330	Semi-Volatile Organics	BJ	diethyl phthalate	2	UG/L	no
MND21-2003	000337	Semi-Volatile Organics	J	pentachlorophenol	3	UG/L	no
MND21-2202	000343	Volatile Organics	J	2-butanone	6	UG/L	no
MND21-2203	000344	Volatile Organics	JB	4-methyl-2-pentanone	1	UG/L	no
MND21-2002	000336	Volatile Organics	J	acetone	4	UG/L	no
MND21-2003	900000036	Volatile Organics		acetone	17	UG/L	no

Table A.2.1 - Central Valley System Pond Surface Water

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-2301	000330	Volatile Organics	J	acetone	2	UG/L	no
MND21-2304	000328	Volatile Organics	J	acetone	3	UG/L	no
MND21-2304	900000052	Volatile Organics		acetone	13	UG/L	no
MND21-2203	000344	Volatile Organics		hexane	15	UG/L	no

Appendix A-2

Central Valley System

Tables Indicating Detections Above Background

A.2.2 Stream Surface Water

Table A.2.2 - Central Valley System Stream Surface Water

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-2101	000339	Common Anions		chloride	209	MG/L	no
MND21-2101	900000230	Common Anions		chloride	185	MG/L	no
MND21-2102	000340	Common Anions		chloride	252	MG/L	no
MND21-2102	900000231	Common Anions		chloride	175	MG/L	no
MND21-2103	000341	Common Anions		chloride	164	MG/L	no
MND21-2103	900000233	Common Anions		chloride	165	MG/L	no
MND21-2101	900000230	Explosives	JB	HMX	1.1	UG/L	no
MND21-2103	000341	Explosives	J	HMX	4.7	UG/L	no
MND21-2103	900000233	Explosives	J	HMX	0.84	UG/L	no
MND21-2103	000341	Explosives		PETN	5.6	UG/L	no
MND21-2101	000339	General Chemistry		Alkalinity	320	MG/L	no
MND21-2102	000340	General Chemistry		Alkalinity	419	MG/L	no
MND21-2103	000341	General Chemistry		Alkalinity	400	MG/L	no
MND21-2101	000339	General Chemistry		ammonia	0.163	MG/L	no
MND21-2102	000340	General Chemistry		ammonia	0.108	MG/L	no
MND21-2103	000341	General Chemistry		ammonia	0.22	MG/L	no
MND21-2103	900000233	General Chemistry		ammonia	0.214	MG/L	no
MND21-2102	000340	General Chemistry		Dissolved Solids	1080	MG/L	no
MND21-2103	900000233	Metals		aluminum	143	UG/L	yes
MND21-2103	900000233	Metals	B	antimony	4.9	UG/L	yes
MND21-2102	000340	Metals	B	beryllium	0.26	UG/L	yes
MND21-2103	000341	Metals	B	beryllium	0.21	UG/L	yes
MND21-2102	000340	Metals		chromium	1.70	UG/L	no
MND21-2103	000341	Metals		chromium	1.10	UG/L	no
MND21-2103	900000233	Metals	B	cobalt	0.67	UG/L	no
MND21-2101	000339	Metals	B	copper	11.5	UG/L	no
MND21-2101	000339	Metals	B	copper	9.7	UG/L	yes
MND21-2101	900000230	Metals		copper	67.3	UG/L	no
MND21-2101	900000230	Metals		copper	51.1	UG/L	yes
MND21-2102	000340	Metals	B	copper	22.8	UG/L	no
MND21-2102	000340	Metals	B	copper	19	UG/L	yes
MND21-2102	900000231	Metals		copper	29.3	UG/L	no
MND21-2102	900000231	Metals	B	copper	19.8	UG/L	yes
MND21-2103	000341	Metals		copper	94.4	UG/L	no
MND21-2103	000341	Metals		copper	92.6	UG/L	yes
MND21-2103	900000233	Metals		copper	48.7	UG/L	no
MND21-2103	900000233	Metals		copper	39.9	UG/L	yes
MND21-2101	000339	Metals	B	iron	70	UG/L	yes
MND21-2101	900000230	Metals	B	iron	77.1	UG/L	yes
MND21-2102	000340	Metals	B	iron	42.5	UG/L	yes
MND21-2102	900000231	Metals	B	iron	67	UG/L	yes
MND21-2103	000341	Metals	B	iron	23.9	UG/L	yes
MND21-2103	900000233	Metals		iron	141	UG/L	yes
MND21-2102	000340	Metals	B	lead	2	UG/L	no
MND21-2103	000341	Metals		lead	3.2	UG/L	no
MND21-2101	000339	Metals	B	lithium	4.7	UG/L	yes
MND21-2102	000340	Metals	B	lithium	8.1	UG/L	yes
MND21-2103	000341	Metals	B	lithium	6.4	UG/L	yes
MND21-2103	900000233	Metals	B	lithium	10	UG/L	yes
MND21-2101	000339	Metals		molybdenum	177	UG/L	yes

Table A.2.2 - Central Valley System Stream Surface Water

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-2101	000339	Metals		molybdenum	155	UG/L	no
MND21-2101	900000230	Metals		molybdenum	1840	UG/L	no
MND21-2101	900000230	Metals		molybdenum	1820	UG/L	yes
MND21-2102	000340	Metals		molybdenum	1060	UG/L	yes
MND21-2102	000340	Metals		molybdenum	899	UG/L	no
MND21-2102	900000231	Metals		molybdenum	612	UG/L	yes
MND21-2102	900000231	Metals		molybdenum	686	UG/L	no
MND21-2103	000341	Metals		molybdenum	304	UG/L	yes
MND21-2103	000341	Metals		molybdenum	276	UG/L	no
MND21-2103	900000233	Metals		molybdenum	158	UG/L	yes
MND21-2103	900000233	Metals		molybdenum	138	UG/L	no
MND21-2103	000341	Metals		molybdenum	304	UG/L	yes
MND21-2102	000340	Metals	B	nickel	1.9	UG/L	yes
MND21-2103	000341	Metals	B	nickel	1.7	UG/L	yes
MND21-2101	000339	Metals		selenium	2	UG/L	no
MND21-2101	000339	Metals		sodium	244000	UG/L	yes
MND21-2101	000339	Metals		sodium	237000	UG/L	no
MND21-2101	900000230	Metals		sodium	407000	UG/L	yes
MND21-2101	900000230	Metals		sodium	403000	UG/L	no
MND21-2102	000340	Metals		sodium	342000	UG/L	yes
MND21-2102	000340	Metals		sodium	305000	UG/L	no
MND21-2102	900000231	Metals		sodium	272000	UG/L	yes
MND21-2102	900000231	Metals		sodium	260000	UG/L	no
MND21-2103	000341	Metals		sodium	249000	UG/L	yes
MND21-2103	000341	Metals		sodium	224000	UG/L	no
MND21-2103	900000233	Metals		sodium	198000	UG/L	yes
MND21-2103	900000233	Metals		sodium	195000	UG/L	no
MND21-2103	900000233	Metals		vanadium	1.00	UG/L	no
MND21-2101	900000230	Metals	B	zinc	10.5	UG/L	yes
MND21-2103	000341	Metals	B	zinc	11.7	UG/L	yes
MND21-2103	900000233	Metals		zinc	109	UG/L	no
MND21-2103	900000233	Metals	B	zinc	12.4	UG/L	yes
MND21-2102	900000231	Radiological		plutonium-238	0.601	PCI/L	no
MND21-2103	000341	Radiological		plutonium-238	0.342	PCI/L	no
MND21-2103	900000233	Radiological		plutonium-238	0.223	PCI/L	no
MND21-2101	000339	Radiological		tritium	1530	PCI/L	no
MND21-2101	900000230	Radiological		tritium	1510	PCI/L	no
MND21-2102	000340	Radiological		tritium	1760	PCI/L	no
MND21-2102	900000231	Radiological		tritium	1720	PCI/L	no
MND21-2103	000341	Radiological		tritium	2450	PCI/L	no
MND21-2103	900000233	Radiological		tritium	6130	PCI/L	no
MND21-2101	900000230	Semi-Volatile Organics	J	benzoic acid	1	UG/L	no
MND21-2101	000339	Semi-Volatile Organics	J	di-n-butyl phthalate	1	UG/L	no
MND21-2101	000339	Volatile Organics	J	acetonitrile	43	UG/L	no
MND21-2101	000339	Volatile Organics	J	acrylonitrile	3	UG/L	no
MND21-2101	000339	Volatile Organics	J	toluene	1	UG/L	no

Appendix A-2

Central Valley System

Tables Indicating Detections Above Background

A.2.3 Pond Sediments

Table A.2.3 - Central Valley System Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2305	900000038	Explosives	J	1,3-dinitrobenzene	0.2	MG/KG
MND22-2201	900000056	Explosives	J	1,3-dinitrobenzene	0.098	MG/KG
MND22-2305	900000038	Explosives	J	2,4-dinitrotoluene	0.2	MG/KG
MND22-2305	900000038	Explosives	J	HMX	0.41	MG/KG
MND22-2205	900000060	Explosives	J	HMX	0.58	MG/KG
MND22-2305	900000038	Explosives	J	RDX	0.71	MG/KG
MND22-2304	900000040	Explosives	J	RDX	0.45	MG/KG
MND22-2302	900000037	Explosives	J	RDX	0.76	MG/KG
MND22-2207	900000062	Explosives	J	RDX	0.63	MG/KG
MND22-2205	900000060	Explosives	J	RDX	0.35	MG/KG
MND22-2204	900000059	Explosives	J	RDX	0.71	MG/KG
MND22-2203	900000058	Explosives	J	RDX	0.79	MG/KG
MND22-2202	900000057	Explosives	J	RDX	0.74	MG/KG
MND22-2201	900000056	Explosives	J	RDX	1.2	MG/KG
MND22-2001	900000071	Explosives	J	RDX	0.74	MG/KG
MND22-2302	000497	General Chemistry		organic carbon	19300	MG/KG
MND22-2203	000428	General Chemistry		organic carbon	16400	MG/KG
MND22-2202	000427	General Chemistry		organic carbon	16500	MG/KG
MND22-2005	000501	General Chemistry		organic carbon	20825	MG/KG
MND22-2004	000500	General Chemistry		organic carbon	22350	MG/KG
MND22-2003	000499	General Chemistry		organic carbon	26625	MG/KG
MND22-2002	000498	General Chemistry		organic carbon	31800	MG/KG
MND22-2001	000417	General Chemistry		organic carbon	17200	MG/KG
MND22-2003	000499	Metals		antimony	4.5	MG/KG
MND22-2301	000409	Metals	B	bismuth	3.7	MG/KG
MND22-2202	000427	Metals	B	bismuth	3.2	MG/KG
MND22-2005	000501	Metals	B	bismuth	3.8	MG/KG
MND22-2207	000432	Metals	B	cadmium	1.3	MG/KG
MND22-2205	000430	Metals	B	cadmium	1.2	MG/KG
MND22-2204	000429	Metals	B	cadmium	1.2	MG/KG
MND22-2005	000501	Metals	B	cadmium	2	MG/KG
MND22-2004	000500	Metals	B	cadmium	2.2	MG/KG
MND22-2003	000499	Metals		cadmium	1.6	MG/KG
MND22-2001	000417	Metals	B	cadmium	1.7	MG/KG
MND22-2001	900000071	Metals	B	cadmium	2.5	MG/KG
MND22-2003	000499	Metals		calcium	124000	MG/KG
MND22-2001	900000071	Metals		calcium	113000	MG/KG
MND22-2207	000432	Metals		chromium	32.4	MG/KG
MND22-2201	000426	Metals		chromium	37.8	MG/KG
MND22-2305	000412	Metals		copper	124	MG/KG
MND22-2305	900000038	Metals		copper	124	MG/KG
MND22-2304	000410	Metals		copper	122	MG/KG
MND22-2304	900000040	Metals		copper	145	MG/KG
MND22-2303	000411	Metals		copper	116	MG/KG
MND22-2303	900000041	Metals		copper	102	MG/KG
MND22-2302	000497	Metals		copper	131	MG/KG
MND22-2301	000409	Metals		copper	119	MG/KG
MND22-2301	900000039	Metals		copper	106	MG/KG
MND22-2207	000432	Metals		copper	480	MG/KG
MND22-2207	900000062	Metals		copper	739	MG/KG
MND22-2206	000431	Metals		copper	399	MG/KG

Table A.2.3 - Central Valley System Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2206	900000061	Metals		copper	663	MG/KG
MND22-2205	000430	Metals		copper	517	MG/KG
MND22-2205	900000060	Metals		copper	419	MG/KG
MND22-2204	000429	Metals		copper	499	MG/KG
MND22-2204	900000059	Metals		copper	547	MG/KG
MND22-2203	000428	Metals		copper	263	MG/KG
MND22-2203	900000058	Metals		copper	382	MG/KG
MND22-2202	000427	Metals		copper	465	MG/KG
MND22-2202	900000057	Metals		copper	230	MG/KG
MND22-2201	000426	Metals		copper	332	MG/KG
MND22-2201	900000056	Metals		copper	371	MG/KG
MND22-2005	000501	Metals		copper	238	MG/KG
MND22-2004	000500	Metals		copper	311	MG/KG
MND22-2001	000417	Metals		copper	233	MG/KG
MND22-2001	900000071	Metals		copper	327	MG/KG
MND22-2305	900000038	Metals		lead	96.1	MG/KG
MND22-2205	000430	Metals		lead	38.3	MG/KG
MND22-2204	000429	Metals		lead	39.4	MG/KG
MND22-2203	900000058	Metals		lead	57.2	MG/KG
MND22-2202	000427	Metals		lead	36.5	MG/KG
MND22-2201	000426	Metals		lead	41.4	MG/KG
MND22-2005	000501	Metals		lead	93.8	MG/KG
MND22-2004	000500	Metals		lead	100	MG/KG
MND22-2003	000499	Metals		lead	42.1	MG/KG
MND22-2002	000498	Metals		lead	47.1	MG/KG
MND22-2001	000417	Metals		lead	92	MG/KG
MND22-2001	900000071	Metals		lead	140	MG/KG
MND22-2302	900000037	Metals		magnesium	27700	MG/KG
MND22-2204	900000059	Metals		magnesium	27900	MG/KG
MND22-2003	000499	Metals		magnesium	65800	MG/KG
MND22-2207	000432	Metals		mercury	0.49	MG/KG
MND22-2207	900000062	Metals		mercury	0.42	MG/KG
MND22-2206	000431	Metals		mercury	0.26	MG/KG
MND22-2206	900000061	Metals		mercury	0.36	MG/KG
MND22-2205	000430	Metals		mercury	0.41	MG/KG
MND22-2204	000429	Metals		mercury	0.39	MG/KG
MND22-2204	900000059	Metals		mercury	0.28	MG/KG
MND22-2203	900000058	Metals		mercury	0.28	MG/KG
MND22-2202	000427	Metals		mercury	0.38	MG/KG
MND22-2201	000426	Metals		mercury	0.48	MG/KG
MND22-2201	900000056	Metals		mercury	0.28	MG/KG
MND22-2001	900000071	Metals		mercury	0.38	MG/KG
MND22-2305	000412	Metals		molybdenum	13.5	MG/KG
MND22-2305	900000038	Metals		molybdenum	12.4	MG/KG
MND22-2304	000410	Metals		molybdenum	13.3	MG/KG
MND22-2304	900000040	Metals		molybdenum	13.8	MG/KG
MND22-2303	000411	Metals	B	molybdenum	8.3	MG/KG
MND22-2303	900000041	Metals		molybdenum	11.8	MG/KG
MND22-2302	000497	Metals		molybdenum	12.8	MG/KG
MND22-2302	900000037	Metals		molybdenum	12.9	MG/KG
MND22-2301	000409	Metals		molybdenum	12.3	MG/KG

Table A.2.3 - Central Valley System Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2301	900000039	Metals		molybdenum	12.2	MG/KG
MND22-2207	000432	Metals		molybdenum	19.2	MG/KG
MND22-2207	900000062	Metals		molybdenum	75.8	MG/KG
MND22-2206	000431	Metals		molybdenum	41.4	MG/KG
MND22-2206	900000061	Metals		molybdenum	49.5	MG/KG
MND22-2205	000430	Metals		molybdenum	66.7	MG/KG
MND22-2205	900000060	Metals		molybdenum	64.8	MG/KG
MND22-2204	000429	Metals		molybdenum	41	MG/KG
MND22-2204	900000059	Metals		molybdenum	80.3	MG/KG
MND22-2203	000428	Metals		molybdenum	10.7	MG/KG
MND22-2203	900000058	Metals		molybdenum	93.3	MG/KG
MND22-2202	000427	Metals		molybdenum	54.2	MG/KG
MND22-2202	900000057	Metals		molybdenum	35.8	MG/KG
MND22-2201	000426	Metals		molybdenum	31	MG/KG
MND22-2201	900000056	Metals		molybdenum	85.3	MG/KG
MND22-2005	000501	Metals		molybdenum	28.3	MG/KG
MND22-2004	000500	Metals		molybdenum	159	MG/KG
MND22-2002	000498	Metals		molybdenum	13.3	MG/KG
MND22-2001	000417	Metals		molybdenum	65.7	MG/KG
MND22-2001	900000071	Metals		molybdenum	27.6	MG/KG
MND22-2305	900000038	Metals		nickel	25.8	MG/KG
MND22-2301	000409	Metals		nickel	27.7	MG/KG
MND22-2205	000430	Metals		nickel	29.2	MG/KG
MND22-2203	000428	Metals		nickel	52.9	MG/KG
MND22-2305	000412	Metals		potassium	4370	MG/KG
MND22-2305	900000038	Metals		potassium	4510	MG/KG
MND22-2304	900000040	Metals		potassium	4450	MG/KG
MND22-2303	900000041	Metals		potassium	4200	MG/KG
MND22-2302	900000037	Metals		potassium	3590	MG/KG
MND22-2301	000409	Metals		potassium	3640	MG/KG
MND22-2301	900000039	Metals		potassium	4960	MG/KG
MND22-2207	900000062	Metals		potassium	3840	MG/KG
MND22-2305	000412	Metals	B	silver	2.5	MG/KG
MND22-2305	900000038	Metals	B	silver	2.8	MG/KG
MND22-2304	000410	Metals	B	silver	1.9	MG/KG
MND22-2304	900000040	Metals	B	silver	2.3	MG/KG
MND22-2303	000411	Metals	B	silver	2.2	MG/KG
MND22-2303	900000041	Metals	B	silver	1.8	MG/KG
MND22-2302	000497	Metals	B	silver	2	MG/KG
MND22-2302	900000037	Metals	B	silver	1.6	MG/KG
MND22-2301	000409	Metals	B	silver	3	MG/KG
MND22-2301	900000039	Metals	B	silver	2.4	MG/KG
MND22-2207	000432	Metals		silver	24	MG/KG
MND22-2207	900000062	Metals		silver	9.5	MG/KG
MND22-2206	000431	Metals	B	silver	3.2	MG/KG
MND22-2206	900000061	Metals		silver	9.4	MG/KG
MND22-2205	000430	Metals		silver	9.2	MG/KG
MND22-2205	900000060	Metals	B	silver	3.1	MG/KG
MND22-2204	000429	Metals		silver	8.3	MG/KG
MND22-2204	900000059	Metals	B	silver	3.1	MG/KG
MND22-2203	000428	Metals	B	silver	2.3	MG/KG

Table A.2.3 - Central Valley System Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2203	900000058	Metals	B	silver	3.8	MG/KG
MND22-2202	000427	Metals	B	silver	5.1	MG/KG
MND22-2202	900000057	Metals		silver	6.7	MG/KG
MND22-2201	000426	Metals		silver	12.7	MG/KG
MND22-2201	900000056	Metals	B	silver	3.3	MG/KG
MND22-2305	000412	Metals	B	sodium	1550	MG/KG
MND22-2301	000409	Metals	B	sodium	1520	MG/KG
MND22-2207	000432	Metals	B	sodium	1880	MG/KG
MND22-2207	900000062	Metals	B	sodium	1970	MG/KG
MND22-2206	900000061	Metals	B	sodium	1850	MG/KG
MND22-2205	000430	Metals		sodium	4190	MG/KG
MND22-2205	900000060	Metals	B	sodium	1650	MG/KG
MND22-2204	000429	Metals		sodium	3300	MG/KG
MND22-2204	900000059	Metals	B	sodium	1630	MG/KG
MND22-2203	000428	Metals		sodium	2590	MG/KG
MND22-2203	900000058	Metals	B	sodium	1890	MG/KG
MND22-2202	000427	Metals		sodium	5060	MG/KG
MND22-2201	000426	Metals	B	sodium	1740	MG/KG
MND22-2005	000501	Metals	B	sodium	2580	MG/KG
MND22-2004	000500	Metals	B	sodium	4010	MG/KG
MND22-2001	000417	Metals	B	sodium	3160	MG/KG
MND22-2001	900000071	Metals	B	sodium	1750	MG/KG
MND22-2304	000410	Metals	B	tin	8.6	MG/KG
MND22-2207	000432	Metals	B	tin	8.9	MG/KG
MND22-2205	000430	Metals	B	tin	10.8	MG/KG
MND22-2204	000429	Metals	B	tin	10.2	MG/KG
MND22-2202	000427	Metals	B	tin	10.1	MG/KG
MND22-2201	000426	Metals	B	tin	8.8	MG/KG
MND22-2005	000501	Metals	B	tin	18.1	MG/KG
MND22-2004	000500	Metals	B	tin	17.9	MG/KG
MND22-2001	000417	Metals	B	tin	14.4	MG/KG
MND22-2305	000412	Metals		zinc	241	MG/KG
MND22-2305	900000038	Metals		zinc	246	MG/KG
MND22-2304	000410	Metals		zinc	240	MG/KG
MND22-2304	900000040	Metals		zinc	259	MG/KG
MND22-2303	000411	Metals		zinc	234	MG/KG
MND22-2303	900000041	Metals		zinc	188	MG/KG
MND22-2302	000497	Metals		zinc	193	MG/KG
MND22-2302	900000037	Metals		zinc	135	MG/KG
MND22-2301	000409	Metals		zinc	242	MG/KG
MND22-2301	900000039	Metals		zinc	216	MG/KG
MND22-2207	000432	Metals		zinc	308	MG/KG
MND22-2207	900000062	Metals		zinc	291	MG/KG
MND22-2206	000431	Metals		zinc	163	MG/KG
MND22-2206	900000061	Metals		zinc	278	MG/KG
MND22-2205	000430	Metals		zinc	318	MG/KG
MND22-2205	900000060	Metals		zinc	200	MG/KG
MND22-2204	000429	Metals		zinc	322	MG/KG
MND22-2204	900000059	Metals		zinc	227	MG/KG
MND22-2203	000428	Metals		zinc	200	MG/KG
MND22-2203	900000058	Metals		zinc	252	MG/KG

Table A.2.3 - Central Valley System Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2202	000427	Metals		zinc	274	MG/KG
MND22-2202	900000057	Metals		zinc	169	MG/KG
MND22-2201	000426	Metals		zinc	269	MG/KG
MND22-2201	900000056	Metals		zinc	192	MG/KG
MND22-2005	000501	Metals		zinc	981	MG/KG
MND22-2004	000500	Metals		zinc	1140	MG/KG
MND22-2003	000499	Metals		zinc	323	MG/KG
MND22-2002	000498	Metals		zinc	399	MG/KG
MND22-2001	000417	Metals		zinc	892	MG/KG
MND22-2001	900000071	Metals		zinc	1100	MG/KG
MND22-2305	000412	Pesticides and/or PCBs		alpha-BHC	8.3	UG/KG
MND22-2301	000409	Pesticides and/or PCBs	P	alpha-BHC	11	UG/KG
MND22-2206	000431	Pesticides and/or PCBs	P	alpha-BHC	7.8	UG/KG
MND22-2204	000429	Pesticides and/or PCBs	P	alpha-BHC	6.7	UG/KG
MND22-2203	000428	Pesticides and/or PCBs		alpha-BHC	6.5	UG/KG
MND22-2202	000427	Pesticides and/or PCBs	P	alpha-BHC	11	UG/KG
MND22-2201	000426	Pesticides and/or PCBs		alpha-BHC	12	UG/KG
MND22-2203	000428	Pesticides and/or PCBs		alpha-chlordane	2.8	UG/KG
MND22-2202	000427	Pesticides and/or PCBs		alpha-chlordane	2.9	UG/KG
MND22-2201	000426	Pesticides and/or PCBs		alpha-chlordane	4.6	UG/KG
MND22-2206	900000061	Pesticides and/or PCBs	J	Aroclor-1254	98	UG/KG
MND22-2202	000427	Pesticides and/or PCBs		Aroclor-1254	140	UG/KG
MND22-2202	900000057	Pesticides and/or PCBs		Aroclor-1254	120	UG/KG
MND22-2201	900000056	Pesticides and/or PCBs		Aroclor-1254	140	UG/KG
MND22-2302	900000037	Pesticides and/or PCBs	P	Aroclor-1260	99	UG/KG
MND22-2204	900000059	Pesticides and/or PCBs		Aroclor-1260	240	UG/KG
MND22-2203	900000058	Pesticides and/or PCBs	P	endosulfan I	8.3	UG/KG
MND22-2202	900000057	Pesticides and/or PCBs		endosulfan I	9	UG/KG
MND22-2201	900000056	Pesticides and/or PCBs	P	endosulfan I	4.9	UG/KG
MND22-2302	000497	Pesticides and/or PCBs		gamma-chlordane	3.5	UG/KG
MND22-2207	900000062	Pesticides and/or PCBs		gamma-chlordane	3.7	UG/KG
MND22-2205	900000060	Pesticides and/or PCBs		gamma-chlordane	4.6	UG/KG
MND22-2002	000498	Radiological		americium-241	0.688	PCI/G
MND22-2001	900000071	Radiological		americium-241	0.575	PCI/G
MND22-2305	000412	Radiological		plutonium-238	27.4	PCI/G
MND22-2305	900000038	Radiological		plutonium-238	23.2	PCI/G
MND22-2304	000410	Radiological		plutonium-238	20.6	PCI/G
MND22-2304	900000040	Radiological		plutonium-238	16.7	PCI/G
MND22-2303	000411	Radiological		plutonium-238	22.1	PCI/G
MND22-2303	900000041	Radiological		plutonium-238	26.2	PCI/G
MND22-2302	000497	Radiological		plutonium-238	26.4	PCI/G
MND22-2302	900000037	Radiological		plutonium-238	15.1	PCI/G
MND22-2301	000409	Radiological		plutonium-238	23.1	PCI/G
MND22-2301	900000039	Radiological		plutonium-238	27.2	PCI/G
MND22-2207	000432	Radiological		plutonium-238	29.3	PCI/G
MND22-2207	900000062	Radiological		plutonium-238	26.6	PCI/G
MND22-2206	000431	Radiological		plutonium-238	24.7	PCI/G
MND22-2206	900000061	Radiological		plutonium-238	31.2	PCI/G
MND22-2205	000430	Radiological		plutonium-238	37.8	PCI/G
MND22-2205	900000060	Radiological		plutonium-238	28.4	PCI/G
MND22-2204	000429	Radiological		plutonium-238	31.1	PCI/G

Table A.2.3 - Central Valley System Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2204	900000059	Radiological		plutonium-238	28.8	PCI/G
MND22-2203	000428	Radiological		plutonium-238	35.1	PCI/G
MND22-2203	900000058	Radiological		plutonium-238	26.3	PCI/G
MND22-2202	000427	Radiological		plutonium-238	29	PCI/G
MND22-2202	900000057	Radiological		plutonium-238	30.5	PCI/G
MND22-2201	000426	Radiological		plutonium-238	30.7	PCI/G
MND22-2201	900000056	Radiological		plutonium-238	43.7	PCI/G
MND22-2005	000501	Radiological		plutonium-238	139	PCI/G
MND22-2004	000500	Radiological		plutonium-238	163	PCI/G
MND22-2003	000499	Radiological		plutonium-238	257	PCI/G
MND22-2002	000498	Radiological		plutonium-238	196	PCI/G
MND22-2001	000417	Radiological		plutonium-238	242	PCI/G
MND22-2001	900000071	Radiological		plutonium-238	224	PCI/G
MND22-2305	000412	Radiological		plutonium-239/240	0.081	PCI/G
MND22-2305	900000038	Radiological		plutonium-239/240	0.129	PCI/G
MND22-2304	000410	Radiological		plutonium-239/240	0.124	PCI/G
MND22-2304	900000040	Radiological		plutonium-239/240	0.634	PCI/G
MND22-2303	000411	Radiological		plutonium-239/240	0.0696	PCI/G
MND22-2303	900000041	Radiological		plutonium-239/240	0.0682	PCI/G
MND22-2302	000497	Radiological		plutonium-239/240	0.0917	PCI/G
MND22-2302	900000037	Radiological		plutonium-239/240	0.0426	PCI/G
MND22-2301	000409	Radiological		plutonium-239/240	0.0799	PCI/G
MND22-2301	900000039	Radiological		plutonium-239/240	0.0502	PCI/G
MND22-2207	000432	Radiological		plutonium-239/240	0.103	PCI/G
MND22-2207	900000062	Radiological		plutonium-239/240	0.0646	PCI/G
MND22-2206	000431	Radiological		plutonium-239/240	0.268	PCI/G
MND22-2206	900000061	Radiological		plutonium-239/240	0.11	PCI/G
MND22-2205	000430	Radiological		plutonium-239/240	0.23	PCI/G
MND22-2205	900000060	Radiological		plutonium-239/240	0.0662	PCI/G
MND22-2204	000429	Radiological		plutonium-239/240	0.361	PCI/G
MND22-2204	900000059	Radiological		plutonium-239/240	0.0613	PCI/G
MND22-2203	900000058	Radiological		plutonium-239/240	0.0895	PCI/G
MND22-2202	000427	Radiological		plutonium-239/240	0.206	PCI/G
MND22-2202	900000057	Radiological		plutonium-239/240	0.16	PCI/G
MND22-2201	000426	Radiological		plutonium-239/240	0.134	PCI/G
MND22-2201	900000056	Radiological		plutonium-239/240	0.106	PCI/G
MND22-2005	000501	Radiological		plutonium-239/240	0.599	PCI/G
MND22-2004	000500	Radiological		plutonium-239/240	0.89	PCI/G
MND22-2003	000499	Radiological		plutonium-239/240	0.747	PCI/G
MND22-2002	000498	Radiological		plutonium-239/240	0.878	PCI/G
MND22-2001	000417	Radiological		plutonium-239/240	0.751	PCI/G
MND22-2001	900000071	Radiological		plutonium-239/240	0.621	PCI/G
MND22-2305	900000038	Radiological		potassium-40	26.2	PCI/G
MND22-2303	000411	Radiological		potassium-40	23.8	PCI/G
MND22-2303	900000041	Radiological		potassium-40	23.4	PCI/G
MND22-2301	000409	Radiological		potassium-40	25.9	PCI/G
MND22-2301	900000039	Radiological		potassium-40	24.4	PCI/G
MND22-2005	000501	Radiological		thorium-228	2.23	PCI/G
MND22-2004	000500	Radiological		thorium-228	2.74	PCI/G
MND22-2003	000499	Radiological		thorium-228	9.44	PCI/G
MND22-2002	000498	Radiological		thorium-228	2.63	PCI/G

Table A.2.3 - Central Valley System Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2001	000417	Radiological		thorium-228	3.09	PCI/G
MND22-2305	900000038	Radiological		thorium-230	1.75	PCI/G
MND22-2304	900000040	Radiological		thorium-230	1.84	PCI/G
MND22-2301	900000039	Radiological		thorium-230	1.75	PCI/G
MND22-2207	900000062	Radiological		thorium-230	1.85	PCI/G
MND22-2206	900000061	Radiological		thorium-230	1.92	PCI/G
MND22-2204	000429	Radiological		thorium-230	1.71	PCI/G
MND22-2204	900000059	Radiological		thorium-230	1.9	PCI/G
MND22-2203	900000058	Radiological		thorium-230	2.15	PCI/G
MND22-2202	000427	Radiological		thorium-230	2.03	PCI/G
MND22-2202	900000057	Radiological		thorium-230	1.7	PCI/G
MND22-2201	900000056	Radiological		thorium-230	2.1	PCI/G
MND22-2305	000412	Radiological		tritium	0.868	PCI/G
MND22-2304	000410	Radiological		tritium	1.34	PCI/G
MND22-2303	000411	Radiological		tritium	0.769	PCI/G
MND22-2302	000497	Radiological		tritium	0.777	PCI/G
MND22-2301	000409	Radiological		tritium	0.866	PCI/G
MND22-2207	000432	Radiological		tritium	2.05	PCI/G
MND22-2206	000431	Radiological		tritium	1.74	PCI/G
MND22-2005	000501	Radiological		tritium	0.854	PCI/G
MND22-2004	000500	Radiological		tritium	1.09	PCI/G
MND22-2002	000498	Radiological		tritium	0.873	PCI/G
MND22-2001	000417	Radiological		tritium	1.01	PCI/G
MND22-2301	900000039	Radiological		uranium-235	0.0952	PCI/G
MND22-2305	900000038	Semi-Volatile Organics	J	2-benzyl-4-chlorophenol	200	UG/KG
MND22-2304	900000040	Semi-Volatile Organics	J	2-benzyl-4-chlorophenol	180	UG/KG
MND22-2303	900000041	Semi-Volatile Organics	J	2-benzyl-4-chlorophenol	110	UG/KG
MND22-2301	900000039	Semi-Volatile Organics	J	2-benzyl-4-chlorophenol	110	UG/KG
MND22-2207	000432	Semi-Volatile Organics	J	2-benzyl-4-chlorophenol	130	UG/KG
MND22-2205	000430	Semi-Volatile Organics	J	2-benzyl-4-chlorophenol	240	UG/KG
MND22-2202	900000057	Semi-Volatile Organics	J	2-benzyl-4-chlorophenol	200	UG/KG
MND22-2201	000426	Semi-Volatile Organics	J	2-benzyl-4-chlorophenol	180	UG/KG
MND22-2201	900000056	Semi-Volatile Organics	J	2-benzyl-4-chlorophenol	220	UG/KG
MND22-2005	000501	Semi-Volatile Organics	J	2-benzyl-4-chlorophenol	2100	UG/KG
MND22-2004	000500	Semi-Volatile Organics	J	2-benzyl-4-chlorophenol	2200	UG/KG
MND22-2002	000498	Semi-Volatile Organics	J	2-benzyl-4-chlorophenol	270	UG/KG
MND22-2001	000417	Semi-Volatile Organics	J	2-benzyl-4-chlorophenol	1700	UG/KG
MND22-2001	900000071	Semi-Volatile Organics	J	2-benzyl-4-chlorophenol	1300	UG/KG
MND22-2204	900000059	Semi-Volatile Organics	J	4-methylphenol	99	UG/KG
MND22-2005	000501	Semi-Volatile Organics	J	4-methylphenol	1600	UG/KG
MND22-2002	000498	Semi-Volatile Organics	J	4-methylphenol	290	UG/KG
MND22-2001	000417	Semi-Volatile Organics		4-methylphenol	1600	UG/KG
MND22-2304	900000040	Semi-Volatile Organics	J	acenaphthene	80	UG/KG
MND22-2302	000497	Semi-Volatile Organics	J	acenaphthene	270	UG/KG
MND22-2302	900000037	Semi-Volatile Organics	J	acenaphthene	290	UG/KG
MND22-2203	000428	Semi-Volatile Organics	J	acenaphthene	75	UG/KG
MND22-2203	900000058	Semi-Volatile Organics	DJ	acenaphthene	300	UG/KG
MND22-2202	900000057	Semi-Volatile Organics	DJ	acenaphthene	190	UG/KG
MND22-2201	000426	Semi-Volatile Organics	J	acenaphthene	190	UG/KG
MND22-2201	900000056	Semi-Volatile Organics	J	acenaphthene	89	UG/KG
MND22-2004	000500	Semi-Volatile Organics	J	acenaphthene	450	UG/KG

Table A.2.3 - Central Valley System Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2003	000499	Semi-Volatile Organics	J	acenaphthene	1200	UG/KG
MND22-2002	000498	Semi-Volatile Organics	J	acenaphthene	370	UG/KG
MND22-2001	000417	Semi-Volatile Organics	J	acenaphthene	2600	UG/KG
MND22-2305	900000038	Semi-Volatile Organics	J	anthracene	90	UG/KG
MND22-2304	900000040	Semi-Volatile Organics	J	anthracene	140	UG/KG
MND22-2303	000411	Semi-Volatile Organics	J	anthracene	130	UG/KG
MND22-2302	000497	Semi-Volatile Organics	J	anthracene	390	UG/KG
MND22-2302	900000037	Semi-Volatile Organics	J	anthracene	400	UG/KG
MND22-2301	900000039	Semi-Volatile Organics	J	anthracene	79	UG/KG
MND22-2205	000430	Semi-Volatile Organics	J	anthracene	150	UG/KG
MND22-2205	900000060	Semi-Volatile Organics	J	anthracene	92	UG/KG
MND22-2204	000429	Semi-Volatile Organics	J	anthracene	120	UG/KG
MND22-2204	900000059	Semi-Volatile Organics	J	anthracene	130	UG/KG
MND22-2203	000428	Semi-Volatile Organics	J	anthracene	130	UG/KG
MND22-2203	900000058	Semi-Volatile Organics	DJ	anthracene	690	UG/KG
MND22-2202	000427	Semi-Volatile Organics	J	anthracene	130	UG/KG
MND22-2202	900000057	Semi-Volatile Organics	DJ	anthracene	420	UG/KG
MND22-2201	000426	Semi-Volatile Organics	J	anthracene	340	UG/KG
MND22-2201	900000056	Semi-Volatile Organics	J	anthracene	190	UG/KG
MND22-2005	000501	Semi-Volatile Organics	J	anthracene	390	UG/KG
MND22-2004	000500	Semi-Volatile Organics	J	anthracene	730	UG/KG
MND22-2003	000499	Semi-Volatile Organics	J	anthracene	2800	UG/KG
MND22-2002	000498	Semi-Volatile Organics	J	anthracene	1000	UG/KG
MND22-2001	000417	Semi-Volatile Organics		anthracene	1700	UG/KG
MND22-2001	900000071	Semi-Volatile Organics	J	anthracene	450	UG/KG
MND22-2305	000412	Semi-Volatile Organics	J	benzo(a)anthracene	310	UG/KG
MND22-2305	900000038	Semi-Volatile Organics	J	benzo(a)anthracene	470	UG/KG
MND22-2304	000410	Semi-Volatile Organics	J	benzo(a)anthracene	360	UG/KG
MND22-2304	900000040	Semi-Volatile Organics	J	benzo(a)anthracene	540	UG/KG
MND22-2303	000411	Semi-Volatile Organics	J	benzo(a)anthracene	820	UG/KG
MND22-2303	900000041	Semi-Volatile Organics	J	benzo(a)anthracene	420	UG/KG
MND22-2302	000497	Semi-Volatile Organics		benzo(a)anthracene	2500	UG/KG
MND22-2302	900000037	Semi-Volatile Organics		benzo(a)anthracene	1500	UG/KG
MND22-2301	000409	Semi-Volatile Organics	J	benzo(a)anthracene	450	UG/KG
MND22-2301	900000039	Semi-Volatile Organics	J	benzo(a)anthracene	460	UG/KG
MND22-2207	000432	Semi-Volatile Organics	J	benzo(a)anthracene	480	UG/KG
MND22-2207	900000062	Semi-Volatile Organics	J	benzo(a)anthracene	360	UG/KG
MND22-2206	000431	Semi-Volatile Organics	J	benzo(a)anthracene	490	UG/KG
MND22-2206	900000061	Semi-Volatile Organics	J	benzo(a)anthracene	380	UG/KG
MND22-2205	000430	Semi-Volatile Organics	J	benzo(a)anthracene	820	UG/KG
MND22-2205	900000060	Semi-Volatile Organics	J	benzo(a)anthracene	530	UG/KG
MND22-2204	000429	Semi-Volatile Organics	J	benzo(a)anthracene	670	UG/KG
MND22-2204	900000059	Semi-Volatile Organics	J	benzo(a)anthracene	670	UG/KG
MND22-2203	000428	Semi-Volatile Organics	J	benzo(a)anthracene	510	UG/KG
MND22-2203	900000058	Semi-Volatile Organics	D	benzo(a)anthracene	2200	UG/KG
MND22-2202	000427	Semi-Volatile Organics	J	benzo(a)anthracene	630	UG/KG
MND22-2202	900000057	Semi-Volatile Organics	D	benzo(a)anthracene	1600	UG/KG
MND22-2201	000426	Semi-Volatile Organics		benzo(a)anthracene	1800	UG/KG
MND22-2201	900000056	Semi-Volatile Organics	J	benzo(a)anthracene	770	UG/KG
MND22-2005	000501	Semi-Volatile Organics		benzo(a)anthracene	4200	UG/KG
MND22-2004	000500	Semi-Volatile Organics		benzo(a)anthracene	4200	UG/KG

Table A.2.3 - Central Valley System Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2003	000499	Semi-Volatile Organics		benzo(a)anthracene	11000	UG/KG
MND22-2002	000498	Semi-Volatile Organics		benzo(a)anthracene	3300	UG/KG
MND22-2001	000417	Semi-Volatile Organics		benzo(a)anthracene	12000	UG/KG
MND22-2001	900000071	Semi-Volatile Organics		benzo(a)anthracene	3300	UG/KG
MND22-2305	000412	Semi-Volatile Organics	J	benzo(a)pyrene	350	UG/KG
MND22-2305	900000038	Semi-Volatile Organics	J	benzo(a)pyrene	710	UG/KG
MND22-2304	000410	Semi-Volatile Organics	J	benzo(a)pyrene	460	UG/KG
MND22-2304	900000040	Semi-Volatile Organics		benzo(a)pyrene	840	UG/KG
MND22-2303	000411	Semi-Volatile Organics	J	benzo(a)pyrene	830	UG/KG
MND22-2303	900000041	Semi-Volatile Organics	J	benzo(a)pyrene	620	UG/KG
MND22-2302	000497	Semi-Volatile Organics		benzo(a)pyrene	2100	UG/KG
MND22-2302	900000037	Semi-Volatile Organics		benzo(a)pyrene	1200	UG/KG
MND22-2301	000409	Semi-Volatile Organics	J	benzo(a)pyrene	440	UG/KG
MND22-2301	900000039	Semi-Volatile Organics	J	benzo(a)pyrene	490	UG/KG
MND22-2207	000432	Semi-Volatile Organics	J	benzo(a)pyrene	510	UG/KG
MND22-2207	900000062	Semi-Volatile Organics	J	benzo(a)pyrene	460	UG/KG
MND22-2206	000431	Semi-Volatile Organics	J	benzo(a)pyrene	560	UG/KG
MND22-2206	900000061	Semi-Volatile Organics	J	benzo(a)pyrene	470	UG/KG
MND22-2205	000430	Semi-Volatile Organics	J	benzo(a)pyrene	900	UG/KG
MND22-2205	900000060	Semi-Volatile Organics	J	benzo(a)pyrene	560	UG/KG
MND22-2204	000429	Semi-Volatile Organics	J	benzo(a)pyrene	710	UG/KG
MND22-2204	900000059	Semi-Volatile Organics	J	benzo(a)pyrene	750	UG/KG
MND22-2203	000428	Semi-Volatile Organics	J	benzo(a)pyrene	520	UG/KG
MND22-2203	900000058	Semi-Volatile Organics	D	benzo(a)pyrene	2400	UG/KG
MND22-2202	000427	Semi-Volatile Organics	J	benzo(a)pyrene	650	UG/KG
MND22-2202	900000057	Semi-Volatile Organics	D	benzo(a)pyrene	1700	UG/KG
MND22-2201	000426	Semi-Volatile Organics		benzo(a)pyrene	1700	UG/KG
MND22-2201	900000056	Semi-Volatile Organics		benzo(a)pyrene	940	UG/KG
MND22-2005	000501	Semi-Volatile Organics		benzo(a)pyrene	5700	UG/KG
MND22-2004	000500	Semi-Volatile Organics		benzo(a)pyrene	5500	UG/KG
MND22-2003	000499	Semi-Volatile Organics		benzo(a)pyrene	9500	UG/KG
MND22-2002	000498	Semi-Volatile Organics		benzo(a)pyrene	3400	UG/KG
MND22-2001	000417	Semi-Volatile Organics		benzo(a)pyrene	15000	UG/KG
MND22-2001	900000071	Semi-Volatile Organics		benzo(a)pyrene	4200	UG/KG
MND22-2305	000412	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	730	UG/KG
MND22-2305	900000038	Semi-Volatile Organics	X	benzo(b)fluoranthene	1300	UG/KG
MND22-2304	000410	Semi-Volatile Organics	X	benzo(b)fluoranthene	990	UG/KG
MND22-2304	900000040	Semi-Volatile Organics	X	benzo(b)fluoranthene	1600	UG/KG
MND22-2303	000411	Semi-Volatile Organics	X	benzo(b)fluoranthene	1700	UG/KG
MND22-2303	900000041	Semi-Volatile Organics	X	benzo(b)fluoranthene	1200	UG/KG
MND22-2302	000497	Semi-Volatile Organics	X	benzo(b)fluoranthene	4900	UG/KG
MND22-2302	900000037	Semi-Volatile Organics	X	benzo(b)fluoranthene	2200	UG/KG
MND22-2301	000409	Semi-Volatile Organics	X	benzo(b)fluoranthene	890	UG/KG
MND22-2301	900000039	Semi-Volatile Organics	X	benzo(b)fluoranthene	1000	UG/KG
MND22-2207	000432	Semi-Volatile Organics	X	benzo(b)fluoranthene	970	UG/KG
MND22-2207	900000062	Semi-Volatile Organics	JX	benzo(b)fluoranthene	770	UG/KG
MND22-2206	000431	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	1100	UG/KG
MND22-2206	900000061	Semi-Volatile Organics	JX	benzo(b)fluoranthene	830	UG/KG
MND22-2205	000430	Semi-Volatile Organics	X	benzo(b)fluoranthene	1700	UG/KG
MND22-2205	900000060	Semi-Volatile Organics	X	benzo(b)fluoranthene	1000	UG/KG
MND22-2204	000429	Semi-Volatile Organics	X	benzo(b)fluoranthene	1300	UG/KG

Table A.2.3 - Central Valley System Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2204	900000059	Semi-Volatile Organics	X	benzo(b)fluoranthene	1200	UG/KG
MND22-2203	000428	Semi-Volatile Organics	X	benzo(b)fluoranthene	980	UG/KG
MND22-2203	900000058	Semi-Volatile Organics	X	benzo(b)fluoranthene	4200	UG/KG
MND22-2202	000427	Semi-Volatile Organics	X	benzo(b)fluoranthene	1200	UG/KG
MND22-2202	900000057	Semi-Volatile Organics	X	benzo(b)fluoranthene	3200	UG/KG
MND22-2201	000426	Semi-Volatile Organics	X	benzo(b)fluoranthene	3500	UG/KG
MND22-2201	900000056	Semi-Volatile Organics	X	benzo(b)fluoranthene	1700	UG/KG
MND22-2005	000501	Semi-Volatile Organics	X	benzo(b)fluoranthene	12000	UG/KG
MND22-2004	000500	Semi-Volatile Organics	X	benzo(b)fluoranthene	11000	UG/KG
MND22-2003	000499	Semi-Volatile Organics	X	benzo(b)fluoranthene	22000	UG/KG
MND22-2002	000498	Semi-Volatile Organics	X	benzo(b)fluoranthene	6200	UG/KG
MND22-2001	000417	Semi-Volatile Organics	X	benzo(b)fluoranthene	26000	UG/KG
MND22-2001	900000071	Semi-Volatile Organics	X	benzo(b)fluoranthene	7000	UG/KG
MND22-2305	000412	Semi-Volatile Organics	J	benzo(g,h,i)perylene	290	UG/KG
MND22-2305	900000038	Semi-Volatile Organics	J	benzo(g,h,i)perylene	120	UG/KG
MND22-2304	000410	Semi-Volatile Organics	J	benzo(g,h,i)perylene	190	UG/KG
MND22-2304	900000040	Semi-Volatile Organics	J	benzo(g,h,i)perylene	210	UG/KG
MND22-2303	000411	Semi-Volatile Organics	J	benzo(g,h,i)perylene	390	UG/KG
MND22-2303	900000041	Semi-Volatile Organics	J	benzo(g,h,i)perylene	170	UG/KG
MND22-2302	000497	Semi-Volatile Organics	J	benzo(g,h,i)perylene	670	UG/KG
MND22-2302	900000037	Semi-Volatile Organics	J	benzo(g,h,i)perylene	400	UG/KG
MND22-2301	000409	Semi-Volatile Organics	J	benzo(g,h,i)perylene	270	UG/KG
MND22-2207	000432	Semi-Volatile Organics	J	benzo(g,h,i)perylene	350	UG/KG
MND22-2207	900000062	Semi-Volatile Organics	J	benzo(g,h,i)perylene	120	UG/KG
MND22-2206	000431	Semi-Volatile Organics	J	benzo(g,h,i)perylene	350	UG/KG
MND22-2206	900000061	Semi-Volatile Organics	J	benzo(g,h,i)perylene	110	UG/KG
MND22-2205	000430	Semi-Volatile Organics	J	benzo(g,h,i)perylene	550	UG/KG
MND22-2205	900000060	Semi-Volatile Organics	J	benzo(g,h,i)perylene	160	UG/KG
MND22-2204	000429	Semi-Volatile Organics	J	benzo(g,h,i)perylene	390	UG/KG
MND22-2204	900000059	Semi-Volatile Organics	J	benzo(g,h,i)perylene	230	UG/KG
MND22-2203	000428	Semi-Volatile Organics	J	benzo(g,h,i)perylene	360	UG/KG
MND22-2203	900000058	Semi-Volatile Organics		benzo(g,h,i)perylene	720	UG/KG
MND22-2202	000427	Semi-Volatile Organics	J	benzo(g,h,i)perylene	410	UG/KG
MND22-2202	900000057	Semi-Volatile Organics	J	benzo(g,h,i)perylene	150	UG/KG
MND22-2201	000426	Semi-Volatile Organics	J	benzo(g,h,i)perylene	690	UG/KG
MND22-2201	900000056	Semi-Volatile Organics	J	benzo(g,h,i)perylene	240	UG/KG
MND22-2005	000501	Semi-Volatile Organics	J	benzo(g,h,i)perylene	3200	UG/KG
MND22-2004	000500	Semi-Volatile Organics		benzo(g,h,i)perylene	3500	UG/KG
MND22-2003	000499	Semi-Volatile Organics	J	benzo(g,h,i)perylene	3700	UG/KG
MND22-2002	000498	Semi-Volatile Organics	J	benzo(g,h,i)perylene	1500	UG/KG
MND22-2001	000417	Semi-Volatile Organics		benzo(g,h,i)perylene	8500	UG/KG
MND22-2001	900000071	Semi-Volatile Organics	J	benzo(g,h,i)perylene	1300	UG/KG
MND22-2305	000412	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	650	UG/KG
MND22-2305	900000038	Semi-Volatile Organics	X	benzo(k)fluoranthene	2600	UG/KG
MND22-2304	000410	Semi-Volatile Organics	X	benzo(k)fluoranthene	880	UG/KG
MND22-2304	900000040	Semi-Volatile Organics	X	benzo(k)fluoranthene	2400	UG/KG
MND22-2303	000411	Semi-Volatile Organics	X	benzo(k)fluoranthene	1800	UG/KG
MND22-2303	900000041	Semi-Volatile Organics	X	benzo(k)fluoranthene	1800	UG/KG
MND22-2302	000497	Semi-Volatile Organics	X	benzo(k)fluoranthene	4500	UG/KG
MND22-2302	900000037	Semi-Volatile Organics	X	benzo(k)fluoranthene	3900	UG/KG
MND22-2301	000409	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	790	UG/KG

Table A.2.3 - Central Valley System Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2301	900000039	Semi-Volatile Organics	X	benzo(k)fluoranthene	1600	UG/KG
MND22-2207	000432	Semi-Volatile Organics	X	benzo(k)fluoranthene	970	UG/KG
MND22-2207	900000062	Semi-Volatile Organics	X	benzo(k)fluoranthene	1400	UG/KG
MND22-2206	000431	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	1100	UG/KG
MND22-2206	900000061	Semi-Volatile Organics	X	benzo(k)fluoranthene	1500	UG/KG
MND22-2205	000430	Semi-Volatile Organics	X	benzo(k)fluoranthene	1700	UG/KG
MND22-2205	900000060	Semi-Volatile Organics	X	benzo(k)fluoranthene	1900	UG/KG
MND22-2204	000429	Semi-Volatile Organics	X	benzo(k)fluoranthene	1300	UG/KG
MND22-2204	900000059	Semi-Volatile Organics	X	benzo(k)fluoranthene	2300	UG/KG
MND22-2203	000428	Semi-Volatile Organics	X	benzo(k)fluoranthene	970	UG/KG
MND22-2203	900000058	Semi-Volatile Organics	DX	benzo(k)fluoranthene	7600	UG/KG
MND22-2202	000427	Semi-Volatile Organics	X	benzo(k)fluoranthene	1200	UG/KG
MND22-2202	900000057	Semi-Volatile Organics	DX	benzo(k)fluoranthene	5900	UG/KG
MND22-2201	000426	Semi-Volatile Organics	X	benzo(k)fluoranthene	2900	UG/KG
MND22-2201	900000056	Semi-Volatile Organics	X	benzo(k)fluoranthene	3200	UG/KG
MND22-2005	000501	Semi-Volatile Organics	X	benzo(k)fluoranthene	11000	UG/KG
MND22-2004	000500	Semi-Volatile Organics	X	benzo(k)fluoranthene	11000	UG/KG
MND22-2003	000499	Semi-Volatile Organics	X	benzo(k)fluoranthene	18000	UG/KG
MND22-2002	000498	Semi-Volatile Organics	X	benzo(k)fluoranthene	6100	UG/KG
MND22-2001	000417	Semi-Volatile Organics	X	benzo(k)fluoranthene	31000	UG/KG
MND22-2001	900000071	Semi-Volatile Organics	X	benzo(k)fluoranthene	15000	UG/KG
MND22-2305	000412	Semi-Volatile Organics	BJ	benzoic acid	190	UG/KG
MND22-2305	900000038	Semi-Volatile Organics	J	benzoic acid	120	UG/KG
MND22-2304	900000040	Semi-Volatile Organics	J	benzoic acid	110	UG/KG
MND22-2303	000411	Semi-Volatile Organics	J	benzoic acid	120	UG/KG
MND22-2303	900000041	Semi-Volatile Organics	J	benzoic acid	130	UG/KG
MND22-2302	000497	Semi-Volatile Organics	BJ	benzoic acid	130	UG/KG
MND22-2301	900000039	Semi-Volatile Organics	J	benzoic acid	82	UG/KG
MND22-2207	000432	Semi-Volatile Organics	J	benzoic acid	84	UG/KG
MND22-2206	000431	Semi-Volatile Organics	J	benzoic acid	160	UG/KG
MND22-2205	000430	Semi-Volatile Organics	J	benzoic acid	130	UG/KG
MND22-2204	900000059	Semi-Volatile Organics	J	benzoic acid	110	UG/KG
MND22-2202	900000057	Semi-Volatile Organics	J	benzoic acid	180	UG/KG
MND22-2201	000426	Semi-Volatile Organics	J	benzoic acid	120	UG/KG
MND22-2005	000501	Semi-Volatile Organics	BJ	benzoic acid	960	UG/KG
MND22-2004	000500	Semi-Volatile Organics	J	benzoic acid	1400	UG/KG
MND22-2003	000499	Semi-Volatile Organics	BJ	benzoic acid	520	UG/KG
MND22-2001	000417	Semi-Volatile Organics	J	benzoic acid	1400	UG/KG
MND22-2305	000412	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	360	UG/KG
MND22-2305	900000038	Semi-Volatile Organics		bis(2-ethylhexyl)phthalate	1100	UG/KG
MND22-2304	000410	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	390	UG/KG
MND22-2304	900000040	Semi-Volatile Organics		bis(2-ethylhexyl)phthalate	850	UG/KG
MND22-2303	000411	Semi-Volatile Organics		bis(2-ethylhexyl)phthalate	1500	UG/KG
MND22-2303	900000041	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	590	UG/KG
MND22-2302	000497	Semi-Volatile Organics		bis(2-ethylhexyl)phthalate	900	UG/KG
MND22-2302	900000037	Semi-Volatile Organics		bis(2-ethylhexyl)phthalate	620	UG/KG
MND22-2301	000409	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	430	UG/KG
MND22-2301	900000039	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	540	UG/KG
MND22-2207	000432	Semi-Volatile Organics		bis(2-ethylhexyl)phthalate	930	UG/KG
MND22-2207	900000062	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	300	UG/KG
MND22-2206	000431	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	450	UG/KG

Table A.2.3 - Central Valley System Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2206	900000061	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	660	UG/KG
MND22-2205	000430	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	870	UG/KG
MND22-2205	900000060	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	470	UG/KG
MND22-2204	000429	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	670	UG/KG
MND22-2204	900000059	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	380	UG/KG
MND22-2203	000428	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	330	UG/KG
MND22-2203	900000058	Semi-Volatile Organics		bis(2-ethylhexyl)phthalate	1200	UG/KG
MND22-2202	000427	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	400	UG/KG
MND22-2202	900000057	Semi-Volatile Organics		bis(2-ethylhexyl)phthalate	1800	UG/KG
MND22-2201	000426	Semi-Volatile Organics		bis(2-ethylhexyl)phthalate	1500	UG/KG
MND22-2201	900000056	Semi-Volatile Organics		bis(2-ethylhexyl)phthalate	800	UG/KG
MND22-2005	000501	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	2800	UG/KG
MND22-2004	000500	Semi-Volatile Organics		bis(2-ethylhexyl)phthalate	2800	UG/KG
MND22-2002	000498	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	960	UG/KG
MND22-2001	000417	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	4900	UG/KG
MND22-2001	900000071	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	2100	UG/KG
MND22-2305	900000038	Semi-Volatile Organics	J	butyl benzyl phthalate	120	UG/KG
MND22-2304	900000040	Semi-Volatile Organics	J	butyl benzyl phthalate	87	UG/KG
MND22-2302	900000037	Semi-Volatile Organics	J	butyl benzyl phthalate	83	UG/KG
MND22-2301	900000039	Semi-Volatile Organics	J	butyl benzyl phthalate	100	UG/KG
MND22-2205	900000060	Semi-Volatile Organics	J	butyl benzyl phthalate	93	UG/KG
MND22-2202	900000057	Semi-Volatile Organics	J	butyl benzyl phthalate	82	UG/KG
MND22-2001	000417	Semi-Volatile Organics	J	butyl benzyl phthalate	170	UG/KG
MND22-2304	900000040	Semi-Volatile Organics	J	carbazole	140	UG/KG
MND22-2303	000411	Semi-Volatile Organics	J	carbazole	120	UG/KG
MND22-2302	000497	Semi-Volatile Organics	J	carbazole	300	UG/KG
MND22-2302	900000037	Semi-Volatile Organics	J	carbazole	240	UG/KG
MND22-2205	000430	Semi-Volatile Organics	J	carbazole	120	UG/KG
MND22-2204	000429	Semi-Volatile Organics	J	carbazole	110	UG/KG
MND22-2203	000428	Semi-Volatile Organics	J	carbazole	110	UG/KG
MND22-2203	900000058	Semi-Volatile Organics	DJ	carbazole	470	UG/KG
MND22-2202	000427	Semi-Volatile Organics	J	carbazole	120	UG/KG
MND22-2202	900000057	Semi-Volatile Organics	DJ	carbazole	290	UG/KG
MND22-2201	000426	Semi-Volatile Organics	J	carbazole	260	UG/KG
MND22-2201	900000056	Semi-Volatile Organics	J	carbazole	100	UG/KG
MND22-2005	000501	Semi-Volatile Organics	J	carbazole	380	UG/KG
MND22-2004	000500	Semi-Volatile Organics	J	carbazole	630	UG/KG
MND22-2003	000499	Semi-Volatile Organics	J	carbazole	4000	UG/KG
MND22-2002	000498	Semi-Volatile Organics	J	carbazole	580	UG/KG
MND22-2001	000417	Semi-Volatile Organics	J	carbazole	2800	UG/KG
MND22-2305	000412	Semi-Volatile Organics	J	chrysene	400	UG/KG
MND22-2305	900000038	Semi-Volatile Organics	J	chrysene	760	UG/KG
MND22-2304	000410	Semi-Volatile Organics	J	chrysene	510	UG/KG
MND22-2304	900000040	Semi-Volatile Organics		chrysene	820	UG/KG
MND22-2303	000411	Semi-Volatile Organics		chrysene	900	UG/KG
MND22-2303	900000041	Semi-Volatile Organics	J	chrysene	580	UG/KG
MND22-2302	000497	Semi-Volatile Organics		chrysene	2100	UG/KG
MND22-2302	900000037	Semi-Volatile Organics		chrysene	1500	UG/KG
MND22-2301	000409	Semi-Volatile Organics	J	chrysene	460	UG/KG
MND22-2301	900000039	Semi-Volatile Organics	J	chrysene	560	UG/KG
MND22-2207	000432	Semi-Volatile Organics	J	chrysene	530	UG/KG

Table A.2.3 - Central Valley System Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2207	900000062	Semi-Volatile Organics	J	chrysene	400	UG/KG
MND22-2206	000431	Semi-Volatile Organics	J	chrysene	620	UG/KG
MND22-2206	900000061	Semi-Volatile Organics	J	chrysene	470	UG/KG
MND22-2205	000430	Semi-Volatile Organics	J	chrysene	940	UG/KG
MND22-2205	900000060	Semi-Volatile Organics	J	chrysene	580	UG/KG
MND22-2204	000429	Semi-Volatile Organics	J	chrysene	800	UG/KG
MND22-2204	900000059	Semi-Volatile Organics	J	chrysene	710	UG/KG
MND22-2203	000428	Semi-Volatile Organics	J	chrysene	660	UG/KG
MND22-2203	900000058	Semi-Volatile Organics	D	chrysene	2600	UG/KG
MND22-2202	000427	Semi-Volatile Organics		chrysene	830	UG/KG
MND22-2202	900000057	Semi-Volatile Organics	D	chrysene	1900	UG/KG
MND22-2201	000426	Semi-Volatile Organics		chrysene	1700	UG/KG
MND22-2201	900000056	Semi-Volatile Organics		chrysene	820	UG/KG
MND22-2005	000501	Semi-Volatile Organics		chrysene	6200	UG/KG
MND22-2004	000500	Semi-Volatile Organics		chrysene	5900	UG/KG
MND22-2003	000499	Semi-Volatile Organics		chrysene	11000	UG/KG
MND22-2002	000498	Semi-Volatile Organics		chrysene	3800	UG/KG
MND22-2001	000417	Semi-Volatile Organics		chrysene	16000	UG/KG
MND22-2001	900000071	Semi-Volatile Organics		chrysene	4000	UG/KG
MND22-2305	900000038	Semi-Volatile Organics	JB	di-n-butyl phthalate	190	UG/KG
MND22-2304	000410	Semi-Volatile Organics	J	di-n-butyl phthalate	110	UG/KG
MND22-2304	900000040	Semi-Volatile Organics	JB	di-n-butyl phthalate	140	UG/KG
MND22-2303	900000041	Semi-Volatile Organics	JB	di-n-butyl phthalate	100	UG/KG
MND22-2302	000497	Semi-Volatile Organics	J	di-n-butyl phthalate	88	UG/KG
MND22-2302	900000037	Semi-Volatile Organics	JB	di-n-butyl phthalate	170	UG/KG
MND22-2301	900000039	Semi-Volatile Organics	JB	di-n-butyl phthalate	130	UG/KG
MND22-2207	900000062	Semi-Volatile Organics	JB	di-n-butyl phthalate	290	UG/KG
MND22-2206	900000061	Semi-Volatile Organics	JB	di-n-butyl phthalate	300	UG/KG
MND22-2205	900000060	Semi-Volatile Organics	JB	di-n-butyl phthalate	320	UG/KG
MND22-2204	900000059	Semi-Volatile Organics	JB	di-n-butyl phthalate	340	UG/KG
MND22-2203	900000058	Semi-Volatile Organics	DJB	di-n-butyl phthalate	370	UG/KG
MND22-2202	900000057	Semi-Volatile Organics	JB	di-n-butyl phthalate	250	UG/KG
MND22-2201	000426	Semi-Volatile Organics	J	di-n-butyl phthalate	92	UG/KG
MND22-2201	900000056	Semi-Volatile Organics	JB	di-n-butyl phthalate	200	UG/KG
MND22-2005	000501	Semi-Volatile Organics	J	di-n-butyl phthalate	640	UG/KG
MND22-2001	000417	Semi-Volatile Organics	J	di-n-butyl phthalate	190	UG/KG
MND22-2001	900000071	Semi-Volatile Organics	JB	di-n-butyl phthalate	430	UG/KG
MND22-2303	000411	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	120	UG/KG
MND22-2302	000497	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	160	UG/KG
MND22-2302	900000037	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	150	UG/KG
MND22-2207	000432	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	120	UG/KG
MND22-2206	000431	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	170	UG/KG
MND22-2205	000430	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	230	UG/KG
MND22-2204	000429	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	120	UG/KG
MND22-2203	000428	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	130	UG/KG
MND22-2203	900000058	Semi-Volatile Organics	DJ	dibenzo(a,h)anthracene	250	UG/KG
MND22-2202	000427	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	160	UG/KG
MND22-2201	000426	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	280	UG/KG
MND22-2005	000501	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	840	UG/KG
MND22-2004	000500	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	990	UG/KG
MND22-2003	000499	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	1300	UG/KG

Table A.2.3 - Central Valley System Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2002	000498	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	400	UG/KG
MND22-2001	000417	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	2400	UG/KG
MND22-2302	000497	Semi-Volatile Organics	J	dibenzofuran	130	UG/KG
MND22-2302	900000037	Semi-Volatile Organics	J	dibenzofuran	140	UG/KG
MND22-2203	900000058	Semi-Volatile Organics	DJ	dibenzofuran	150	UG/KG
MND22-2202	900000057	Semi-Volatile Organics	J	dibenzofuran	97	UG/KG
MND22-2201	000426	Semi-Volatile Organics	J	dibenzofuran	78	UG/KG
MND22-2004	000500	Semi-Volatile Organics	J	dibenzofuran	200	UG/KG
MND22-2003	000499	Semi-Volatile Organics	J	dibenzofuran	1000	UG/KG
MND22-2002	000498	Semi-Volatile Organics	J	dibenzofuran	280	UG/KG
MND22-2001	000417	Semi-Volatile Organics	J	dibenzofuran	1000	UG/KG
MND22-2305	000412	Semi-Volatile Organics	BJ	diethyl phthalate	83	UG/KG
MND22-2304	000410	Semi-Volatile Organics	BJ	diethyl phthalate	120	UG/KG
MND22-2305	000412	Semi-Volatile Organics	J	fluoranthene	550	UG/KG
MND22-2305	900000038	Semi-Volatile Organics		fluoranthene	1300	UG/KG
MND22-2304	000410	Semi-Volatile Organics	J	fluoranthene	760	UG/KG
MND22-2304	900000040	Semi-Volatile Organics		fluoranthene	1800	UG/KG
MND22-2303	000411	Semi-Volatile Organics		fluoranthene	1700	UG/KG
MND22-2303	900000041	Semi-Volatile Organics		fluoranthene	1100	UG/KG
MND22-2302	000497	Semi-Volatile Organics		fluoranthene	5000	UG/KG
MND22-2302	900000037	Semi-Volatile Organics		fluoranthene	3200	UG/KG
MND22-2301	000409	Semi-Volatile Organics		fluoranthene	820	UG/KG
MND22-2301	900000039	Semi-Volatile Organics		fluoranthene	1200	UG/KG
MND22-2207	000432	Semi-Volatile Organics		fluoranthene	1000	UG/KG
MND22-2207	900000062	Semi-Volatile Organics	J	fluoranthene	800	UG/KG
MND22-2206	000431	Semi-Volatile Organics	J	fluoranthene	1100	UG/KG
MND22-2206	900000061	Semi-Volatile Organics	J	fluoranthene	870	UG/KG
MND22-2205	000430	Semi-Volatile Organics		fluoranthene	1700	UG/KG
MND22-2205	900000060	Semi-Volatile Organics		fluoranthene	1100	UG/KG
MND22-2204	000429	Semi-Volatile Organics		fluoranthene	1500	UG/KG
MND22-2204	900000059	Semi-Volatile Organics		fluoranthene	1600	UG/KG
MND22-2203	000428	Semi-Volatile Organics		fluoranthene	1200	UG/KG
MND22-2203	900000058	Semi-Volatile Organics	D	fluoranthene	5000	UG/KG
MND22-2202	000427	Semi-Volatile Organics		fluoranthene	1400	UG/KG
MND22-2202	900000057	Semi-Volatile Organics	D	fluoranthene	3600	UG/KG
MND22-2201	000426	Semi-Volatile Organics		fluoranthene	3500	UG/KG
MND22-2201	900000056	Semi-Volatile Organics		fluoranthene	1700	UG/KG
MND22-2005	000501	Semi-Volatile Organics		fluoranthene	11000	UG/KG
MND22-2004	000500	Semi-Volatile Organics		fluoranthene	9700	UG/KG
MND22-2003	000499	Semi-Volatile Organics		fluoranthene	29000	UG/KG
MND22-2002	000498	Semi-Volatile Organics		fluoranthene	8100	UG/KG
MND22-2001	000417	Semi-Volatile Organics		fluoranthene	31000	UG/KG
MND22-2001	900000071	Semi-Volatile Organics		fluoranthene	6900	UG/KG
MND22-2304	900000040	Semi-Volatile Organics	J	fluorene	86	UG/KG
MND22-2303	000411	Semi-Volatile Organics	J	fluorene	90	UG/KG
MND22-2302	000497	Semi-Volatile Organics	J	fluorene	230	UG/KG
MND22-2302	900000037	Semi-Volatile Organics	J	fluorene	270	UG/KG
MND22-2203	000428	Semi-Volatile Organics	J	fluorene	77	UG/KG
MND22-2203	900000058	Semi-Volatile Organics	J	fluorene	290	UG/KG
MND22-2202	900000057	Semi-Volatile Organics	J	fluorene	180	UG/KG
MND22-2201	000426	Semi-Volatile Organics	J	fluorene	180	UG/KG

Table A.2.3 - Central Valley System Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2201	900000056	Semi-Volatile Organics	J	fluorene	90	UG/KG
MND22-2004	000500	Semi-Volatile Organics	J	fluorene	490	UG/KG
MND22-2003	000499	Semi-Volatile Organics	J	fluorene	2100	UG/KG
MND22-2002	000498	Semi-Volatile Organics	J	fluorene	620	UG/KG
MND22-2001	000417	Semi-Volatile Organics	J	fluorene	2300	UG/KG
MND22-2305	000412	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	210	UG/KG
MND22-2305	900000038	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	330	UG/KG
MND22-2304	000410	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	200	UG/KG
MND22-2304	900000040	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	350	UG/KG
MND22-2303	000411	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	400	UG/KG
MND22-2303	900000041	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	250	UG/KG
MND22-2302	000497	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	670	UG/KG
MND22-2302	900000037	Semi-Volatile Organics		indeno(1,2,3-cd)pyrene	760	UG/KG
MND22-2301	000409	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	310	UG/KG
MND22-2301	900000039	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	180	UG/KG
MND22-2207	000432	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	330	UG/KG
MND22-2207	900000062	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	190	UG/KG
MND22-2206	000431	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	350	UG/KG
MND22-2206	900000061	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	210	UG/KG
MND22-2205	000430	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	570	UG/KG
MND22-2205	900000060	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	270	UG/KG
MND22-2204	000429	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	460	UG/KG
MND22-2204	900000059	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	360	UG/KG
MND22-2203	000428	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	340	UG/KG
MND22-2203	900000058	Semi-Volatile Organics	DJ	indeno(1,2,3-cd)pyrene	1000	UG/KG
MND22-2202	000427	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	430	UG/KG
MND22-2202	900000057	Semi-Volatile Organics	DJ	indeno(1,2,3-cd)pyrene	760	UG/KG
MND22-2201	000426	Semi-Volatile Organics		indeno(1,2,3-cd)pyrene	800	UG/KG
MND22-2201	900000056	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	360	UG/KG
MND22-2005	000501	Semi-Volatile Organics		indeno(1,2,3-cd)pyrene	3300	UG/KG
MND22-2004	000500	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	3100	UG/KG
MND22-2003	000499	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	4000	UG/KG
MND22-2002	000498	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	1500	UG/KG
MND22-2001	000417	Semi-Volatile Organics		indeno(1,2,3-cd)pyrene	7700	UG/KG
MND22-2001	900000071	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	2300	UG/KG
MND22-2302	900000037	Semi-Volatile Organics	J	naphthalene	97	UG/KG
MND22-2203	900000058	Semi-Volatile Organics	J	naphthalene	89	UG/KG
MND22-2202	900000057	Semi-Volatile Organics	J	naphthalene	68	UG/KG
MND22-2303	000411	Semi-Volatile Organics		pentachlorophenol	3500	UG/KG
MND22-2003	000499	Semi-Volatile Organics	J	pentachlorophenol	1300	UG/KG
MND22-2305	000412	Semi-Volatile Organics	J	phenanthrene	200	UG/KG
MND22-2305	900000038	Semi-Volatile Organics	J	phenanthrene	370	UG/KG
MND22-2304	000410	Semi-Volatile Organics	J	phenanthrene	300	UG/KG
MND22-2304	900000040	Semi-Volatile Organics	J	phenanthrene	710	UG/KG
MND22-2303	000411	Semi-Volatile Organics	J	phenanthrene	680	UG/KG
MND22-2303	900000041	Semi-Volatile Organics	J	phenanthrene	340	UG/KG
MND22-2302	000497	Semi-Volatile Organics		phenanthrene	2700	UG/KG
MND22-2302	900000037	Semi-Volatile Organics		phenanthrene	2100	UG/KG
MND22-2301	000409	Semi-Volatile Organics	J	phenanthrene	270	UG/KG
MND22-2301	900000039	Semi-Volatile Organics	J	phenanthrene	460	UG/KG
MND22-2207	000432	Semi-Volatile Organics	J	phenanthrene	390	UG/KG

Table A.2.3 - Central Valley System Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2207	900000062	Semi-Volatile Organics	J	phenanthrene	310	UG/KG
MND22-2206	000431	Semi-Volatile Organics	J	phenanthrene	500	UG/KG
MND22-2206	900000061	Semi-Volatile Organics	J	phenanthrene	310	UG/KG
MND22-2205	000430	Semi-Volatile Organics	J	phenanthrene	800	UG/KG
MND22-2205	900000060	Semi-Volatile Organics	J	phenanthrene	520	UG/KG
MND22-2204	000429	Semi-Volatile Organics	J	phenanthrene	720	UG/KG
MND22-2204	900000059	Semi-Volatile Organics	J	phenanthrene	790	UG/KG
MND22-2203	000428	Semi-Volatile Organics		phenanthrene	690	UG/KG
MND22-2203	900000058	Semi-Volatile Organics		phenanthrene	3300	UG/KG
MND22-2202	000427	Semi-Volatile Organics	J	phenanthrene	750	UG/KG
MND22-2202	900000057	Semi-Volatile Organics	D	phenanthrene	2300	UG/KG
MND22-2201	000426	Semi-Volatile Organics		phenanthrene	1600	UG/KG
MND22-2201	900000056	Semi-Volatile Organics		phenanthrene	910	UG/KG
MND22-2005	000501	Semi-Volatile Organics		phenanthrene	3500	UG/KG
MND22-2004	000500	Semi-Volatile Organics		phenanthrene	5100	UG/KG
MND22-2003	000499	Semi-Volatile Organics		phenanthrene	20000	UG/KG
MND22-2002	000498	Semi-Volatile Organics		phenanthrene	4900	UG/KG
MND22-2001	000417	Semi-Volatile Organics		phenanthrene	19000	UG/KG
MND22-2001	900000071	Semi-Volatile Organics	J	phenanthrene	2600	UG/KG
MND22-2005	000501	Semi-Volatile Organics	J	phenol	460	UG/KG
MND22-2001	000417	Semi-Volatile Organics	J	phenol	350	UG/KG
MND22-2305	000412	Semi-Volatile Organics	J	pyrene	500	UG/KG
MND22-2305	900000038	Semi-Volatile Organics		pyrene	950	UG/KG
MND22-2304	000410	Semi-Volatile Organics	J	pyrene	680	UG/KG
MND22-2304	900000040	Semi-Volatile Organics		pyrene	1200	UG/KG
MND22-2303	000411	Semi-Volatile Organics		pyrene	2200	UG/KG
MND22-2303	900000041	Semi-Volatile Organics	J	pyrene	750	UG/KG
MND22-2302	000497	Semi-Volatile Organics		pyrene	3400	UG/KG
MND22-2302	900000037	Semi-Volatile Organics		pyrene	2300	UG/KG
MND22-2301	000409	Semi-Volatile Organics	J	pyrene	650	UG/KG
MND22-2301	900000039	Semi-Volatile Organics		pyrene	820	UG/KG
MND22-2207	000432	Semi-Volatile Organics		pyrene	1100	UG/KG
MND22-2207	900000062	Semi-Volatile Organics	J	pyrene	600	UG/KG
MND22-2206	000431	Semi-Volatile Organics	J	pyrene	1100	UG/KG
MND22-2206	900000061	Semi-Volatile Organics	J	pyrene	640	UG/KG
MND22-2205	000430	Semi-Volatile Organics		pyrene	2100	UG/KG
MND22-2205	900000060	Semi-Volatile Organics	J	pyrene	800	UG/KG
MND22-2204	000429	Semi-Volatile Organics		pyrene	1700	UG/KG
MND22-2204	900000059	Semi-Volatile Organics		pyrene	1000	UG/KG
MND22-2203	000428	Semi-Volatile Organics		pyrene	1500	UG/KG
MND22-2203	900000058	Semi-Volatile Organics	D	pyrene	3400	UG/KG
MND22-2202	000427	Semi-Volatile Organics		pyrene	1900	UG/KG
MND22-2202	900000057	Semi-Volatile Organics	D	pyrene	2400	UG/KG
MND22-2201	000426	Semi-Volatile Organics		pyrene	4100	UG/KG
MND22-2201	900000056	Semi-Volatile Organics		pyrene	1200	UG/KG
MND22-2005	000501	Semi-Volatile Organics		pyrene	11000	UG/KG
MND22-2004	000500	Semi-Volatile Organics		pyrene	16000	UG/KG
MND22-2003	000499	Semi-Volatile Organics		pyrene	23000	UG/KG
MND22-2002	000498	Semi-Volatile Organics		pyrene	8200	UG/KG
MND22-2001	000417	Semi-Volatile Organics		pyrene	37000	UG/KG
MND22-2001	900000071	Semi-Volatile Organics		pyrene	5200	UG/KG

Table A.2.3 - Central Valley System Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2305	900000038	Volatile Organics	J	2-butanone	8	UG/KG
MND22-2301	900000039	Volatile Organics	J	2-butanone	9	UG/KG
MND22-2205	900000060	Volatile Organics	J	2-butanone	7	UG/KG
MND22-2204	900000059	Volatile Organics	J	2-butanone	6	UG/KG
MND22-2203	900000058	Volatile Organics	J	2-butanone	15	UG/KG
MND22-2001	900000071	Volatile Organics	J	2-butanone	10	UG/KG
MND22-2305	900000038	Volatile Organics	B	acetone	48	UG/KG
MND22-2304	000410	Volatile Organics		acetone	39	UG/KG
MND22-2304	900000040	Volatile Organics	B	acetone	93	UG/KG
MND22-2303	900000041	Volatile Organics	B	acetone	35	UG/KG
MND22-2302	000497	Volatile Organics		acetone	34	UG/KG
MND22-2302	900000037	Volatile Organics	B	acetone	50	UG/KG
MND22-2301	000409	Volatile Organics		acetone	44	UG/KG
MND22-2301	900000039	Volatile Organics	B	acetone	250	UG/KG
MND22-2207	000432	Volatile Organics		acetone	72	UG/KG
MND22-2207	900000062	Volatile Organics	B	acetone	75	UG/KG
MND22-2206	000431	Volatile Organics		acetone	150	UG/KG
MND22-2206	900000061	Volatile Organics	B	acetone	51	UG/KG
MND22-2205	000430	Volatile Organics		acetone	82	UG/KG
MND22-2205	900000060	Volatile Organics	B	acetone	59	UG/KG
MND22-2204	900000059	Volatile Organics	B	acetone	140	UG/KG
MND22-2203	000428	Volatile Organics		acetone	35	UG/KG
MND22-2203	900000058	Volatile Organics	B	acetone	270	UG/KG
MND22-2202	000427	Volatile Organics		acetone	27	UG/KG
MND22-2202	900000057	Volatile Organics	B	acetone	63	UG/KG
MND22-2201	000426	Volatile Organics		acetone	120	UG/KG
MND22-2201	900000056	Volatile Organics	B	acetone	92	UG/KG
MND22-2005	000501	Volatile Organics		acetone	100	UG/KG
MND22-2004	000500	Volatile Organics		acetone	190	UG/KG
MND22-2003	000499	Volatile Organics		acetone	13	UG/KG
MND22-2002	000498	Volatile Organics		acetone	68	UG/KG
MND22-2001	000417	Volatile Organics		acetone	120	UG/KG
MND22-2002	000498	Volatile Organics	J	Hexane	2	UG/KG
MND22-2305	000412	Volatile Organics	B	methylene chloride	12	UG/KG
MND22-2305	900000038	Volatile Organics	B	methylene chloride	30	UG/KG
MND22-2304	000410	Volatile Organics	B	methylene chloride	59	UG/KG
MND22-2304	900000040	Volatile Organics	B	methylene chloride	16	UG/KG
MND22-2303	000411	Volatile Organics	JB	methylene chloride	11	UG/KG
MND22-2303	900000041	Volatile Organics	B	methylene chloride	21	UG/KG
MND22-2302	000497	Volatile Organics	B	methylene chloride	32	UG/KG
MND22-2302	900000037	Volatile Organics	B	methylene chloride	12	UG/KG
MND22-2301	000409	Volatile Organics	B	methylene chloride	20	UG/KG
MND22-2301	900000039	Volatile Organics	B	methylene chloride	15	UG/KG
MND22-2207	000432	Volatile Organics	B	methylene chloride	170	UG/KG
MND22-2207	900000062	Volatile Organics	B	methylene chloride	24	UG/KG
MND22-2206	000431	Volatile Organics	B	methylene chloride	22	UG/KG
MND22-2206	900000061	Volatile Organics	B	methylene chloride	82	UG/KG
MND22-2205	000430	Volatile Organics	JB	methylene chloride	14	UG/KG
MND22-2205	900000060	Volatile Organics	B	methylene chloride	91	UG/KG
MND22-2204	000429	Volatile Organics	B	methylene chloride	24	UG/KG
MND22-2204	900000059	Volatile Organics	B	methylene chloride	83	UG/KG

Table A.2.3 - Central Valley System Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2203	000428	Volatile Organics	JB	methylene chloride	9	UG/KG
MND22-2203	900000058	Volatile Organics	B	methylene chloride	85	UG/KG
MND22-2202	000427	Volatile Organics	JB	methylene chloride	8	UG/KG
MND22-2202	900000057	Volatile Organics	B	methylene chloride	35	UG/KG
MND22-2201	000426	Volatile Organics	B	methylene chloride	18	UG/KG
MND22-2201	900000056	Volatile Organics	B	methylene chloride	43	UG/KG
MND22-2005	000501	Volatile Organics	B	methylene chloride	26	UG/KG
MND22-2004	000500	Volatile Organics	B	methylene chloride	26	UG/KG
MND22-2003	000499	Volatile Organics	B	methylene chloride	10	UG/KG
MND22-2002	000498	Volatile Organics	B	methylene chloride	22	UG/KG
MND22-2001	000417	Volatile Organics	JB	methylene chloride	23	UG/KG
MND22-2001	900000071	Volatile Organics	B	methylene chloride	120	UG/KG

Appendix A-2

Central Valley System

Tables Indicating Detections Above Background

A.2.4 Stream Sediments

Table A.2.4 - Central Valley System Stream Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2105	900000226	Common Anions		fluoride	165	MG/KG
MND22-2108	900000229	Explosives	JB	HMX	0.66	MG/KG
MND22-2107	900000245	Explosives	JB	HMX	0.72	MG/KG
MND22-2106	900000228	Explosives	JB	HMX	1.4	MG/KG
MND22-2105	900000226	Explosives	JB	HMX	1.3	MG/KG
MND22-2103	900000224	Explosives	J	HMX	0.38	MG/KG
MND22-2102	900000223	Explosives	J	HMX	0.28	MG/KG
MND22-2101	900000243	Explosives	JB	HMX	0.76	MG/KG
MND22-2108	900000229	Explosives	J	RDX	0.94	MG/KG
MND22-2107	900000245	Explosives	J	RDX	0.29	MG/KG
MND22-2106	900000228	Explosives	J	RDX	2.2	MG/KG
MND22-2105	900000226	Explosives	J	RDX	2.4	MG/KG
MND22-2103	900000224	Explosives	JB	RDX	0.86	MG/KG
MND22-2102	900000223	Explosives	JB	RDX	0.79	MG/KG
MND22-2108	000425	General Chemistry		organic carbon	27200	MG/KG
MND22-2101	900000243	Metals	B	antimony	0.31	MG/KG
MND22-2108	900000229	Metals		chromium	46.4	MG/KG
MND22-2101	900000243	Metals		chromium	28.3	MG/KG
MND22-2108	900000229	Metals		copper	158	MG/KG
MND22-2107	000424	Metals		copper	39.8	MG/KG
MND22-2107	900000245	Metals		copper	90.9	MG/KG
MND22-2106	000423	Metals		copper	38.3	MG/KG
MND22-2106	900000228	Metals		copper	382	MG/KG
MND22-2105	900000226	Metals		copper	52.6	MG/KG
MND22-2104	000421	Metals		copper	32.8	MG/KG
MND22-2104	900000244	Metals		copper	33.9	MG/KG
MND22-2103	900000224	Metals		copper	43.4	MG/KG
MND22-2101	900000243	Metals		copper	39.1	MG/KG
MND22-2104	000421	Metals		cyanide	0.71	MG/KG
MND22-2105	900000226	Metals		lead	98.5	MG/KG
MND22-2104	900000244	Metals		lead	80.6	MG/KG
MND22-2101	900000243	Metals		lead	90.1	MG/KG
MND22-2107	900000245	Metals		mercury	0.53	MG/KG
MND22-2106	900000228	Metals		mercury	0.13	MG/KG
MND22-2103	900000224	Metals		mercury	0.12	MG/KG
MND22-2101	900000243	Metals		mercury	0.41	MG/KG
MND22-2101	900000243	Metals		molybdenum	6	MG/KG
MND22-2104	900000244	Metals	B	potassium	1920	MG/KG
MND22-2107	000424	Metals	B	silver	0.25	MG/KG
MND22-2107	900000245	Metals	B	silver	0.82	MG/KG
MND22-2106	000423	Metals	B	silver	0.19	MG/KG
MND22-2104	000421	Metals	B	silver	0.6	MG/KG
MND22-2104	900000244	Metals	B	silver	0.88	MG/KG
MND22-2103	000420	Metals	B	silver	0.51	MG/KG
MND22-2103	900000224	Metals	B	silver	0.97	MG/KG
MND22-2102	900000223	Metals	B	silver	0.64	MG/KG
MND22-2101	900000243	Metals	B	silver	0.52	MG/KG
MND22-2108	000425	Metals	B	sodium	747	MG/KG
MND22-2108	900000229	Metals	B	sodium	772	MG/KG
MND22-2107	900000245	Metals	B	sodium	695	MG/KG
MND22-2106	000423	Metals	B	sodium	739	MG/KG

Table A.2.4 - Central Valley System Stream Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2104	000421	Metals	B	sodium	832	MG/KG
MND22-2104	900000244	Metals	B	sodium	1180	MG/KG
MND22-2103	000420	Metals	B	sodium	840	MG/KG
MND22-2103	900000224	Metals	B	sodium	737	MG/KG
MND22-2102	000419	Metals	B	sodium	696	MG/KG
MND22-2102	900000223	Metals	B	sodium	671	MG/KG
MND22-2101	000418	Metals	B	sodium	742	MG/KG
MND22-2107	000424	Metals	B	tin	8	MG/KG
MND22-2107	900000245	Metals	B	tin	4.1	MG/KG
MND22-2106	000423	Metals	B	tin	3.1	MG/KG
MND22-2103	000420	Metals	B	tin	5.9	MG/KG
MND22-2108	900000229	Metals		zinc	101	MG/KG
MND22-2107	900000245	Metals		zinc	100	MG/KG
MND22-2104	000421	Metals		zinc	124	MG/KG
MND22-2104	900000244	Metals		zinc	82.9	MG/KG
MND22-2103	000420	Metals		zinc	90.4	MG/KG
MND22-2103	900000224	Metals		zinc	112	MG/KG
MND22-2102	900000223	Metals		zinc	113	MG/KG
MND22-2101	900000243	Metals		zinc	105	MG/KG
MND22-2103	900000224	Pesticides and/or PCBs	JP	4,4'-DDT	4.1	UG/KG
MND22-2105	000422	Pesticides and/or PCBs		Aroclor-1254	45	UG/KG
MND22-2102	900000223	Pesticides and/or PCBs	J	Aroclor-1254	32	UG/KG
MND22-2106	000423	Pesticides and/or PCBs	P	Aroclor-1260	44	UG/KG
MND22-2104	000421	Pesticides and/or PCBs		Aroclor-1260	150	UG/KG
MND22-2104	900000244	Pesticides and/or PCBs		Aroclor-1260	72	UG/KG
MND22-2103	900000224	Pesticides and/or PCBs	P	dieldin	50	UG/KG
MND22-2104	000421	Pesticides and/or PCBs	JP	endosulfan sulfate	2.5	UG/KG
MND22-2101	900000243	Pesticides and/or PCBs	JP	endrin ketone	6.8	UG/KG
MND22-2106	000423	Pesticides and/or PCBs	P	gamma-chlordane	2.6	UG/KG
MND22-2105	900000226	Pesticides and/or PCBs	P	gamma-chlordane	5.1	UG/KG
MND22-2104	000421	Pesticides and/or PCBs	JP	gamma-chlordane	1.5	UG/KG
MND22-2103	000420	Pesticides and/or PCBs	JP	gamma-chlordane	1.2	UG/KG
MND22-2103	900000224	Pesticides and/or PCBs	JPB	methoxychlor	100	UG/KG
MND22-2108	000425	Radiological		plutonium-238	14.7	PCI/G
MND22-2108	900000229	Radiological		plutonium-238	21.2	PCI/G
MND22-2107	000424	Radiological		plutonium-238	15.3	PCI/G
MND22-2107	900000245	Radiological		plutonium-238	8.91	PCI/G
MND22-2106	000423	Radiological		plutonium-238	9.62	PCI/G
MND22-2106	900000228	Radiological		plutonium-238	8.87	PCI/G
MND22-2105	000422	Radiological		plutonium-238	12.5	PCI/G
MND22-2105	900000226	Radiological		plutonium-238	6.24	PCI/G
MND22-2104	000421	Radiological		plutonium-238	27.6	PCI/G
MND22-2104	900000244	Radiological		plutonium-238	9.13	PCI/G
MND22-2103	000420	Radiological		plutonium-238	5.22	PCI/G
MND22-2103	900000224	Radiological		plutonium-238	23.7	PCI/G
MND22-2102	000419	Radiological		plutonium-238	1.12	PCI/G
MND22-2102	900000223	Radiological		plutonium-238	4.19	PCI/G
MND22-2101	000418	Radiological		plutonium-238	0.534	PCI/G
MND22-2101	900000243	Radiological		plutonium-238	0.236	PCI/G
MND22-2108	900000229	Radiological		plutonium-239/240	0.0731	PCI/G
MND22-2107	000424	Radiological		plutonium-239/240	0.0876	PCI/G

Table A.2.4 - Central Valley System Stream Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2107	900000245	Radiological		plutonium-239/240	0.029	PCI/G
MND22-2106	000423	Radiological		plutonium-239/240	0.0279	PCI/G
MND22-2106	900000228	Radiological		plutonium-239/240	0.0475	PCI/G
MND22-2105	000422	Radiological		plutonium-239/240	0.0529	PCI/G
MND22-2105	900000226	Radiological		plutonium-239/240	0.0445	PCI/G
MND22-2104	000421	Radiological		plutonium-239/240	0.0658	PCI/G
MND22-2104	900000244	Radiological		plutonium-239/240	0.0337	PCI/G
MND22-2103	900000224	Radiological		plutonium-239/240	0.181	PCI/G
MND22-2108	900000229	Radiological		tritium	0.845	PCI/G
MND22-2106	900000228	Radiological		tritium	0.699	PCI/G
MND22-2104	000421	Semi-Volatile Organics	J	2-methylnaphthalene	54	UG/KG
MND22-2103	000420	Semi-Volatile Organics	J	2-methylnaphthalene	110	UG/KG
MND22-2101	900000243	Semi-Volatile Organics	J	2-methylnaphthalene	410	UG/KG
MND22-2103	900000224	Semi-Volatile Organics	J	4-methylphenol	46	UG/KG
MND22-2108	000425	Semi-Volatile Organics	J	acenaphthene	73	UG/KG
MND22-2107	900000245	Semi-Volatile Organics	J	acenaphthene	73	UG/KG
MND22-2106	000423	Semi-Volatile Organics	J	acenaphthene	70	UG/KG
MND22-2105	000422	Semi-Volatile Organics	J	acenaphthene	240	UG/KG
MND22-2104	000421	Semi-Volatile Organics	J	acenaphthene	290	UG/KG
MND22-2103	000420	Semi-Volatile Organics		acenaphthene	660	UG/KG
MND22-2103	900000224	Semi-Volatile Organics	J	acenaphthene	93	UG/KG
MND22-2101	000418	Semi-Volatile Organics	J	acenaphthene	110	UG/KG
MND22-2101	900000243	Semi-Volatile Organics		acenaphthene	4100	UG/KG
MND22-2107	900000245	Semi-Volatile Organics	J	acenaphthylene	100	UG/KG
MND22-2108	000425	Semi-Volatile Organics	J	anthracene	130	UG/KG
MND22-2108	900000229	Semi-Volatile Organics	J	anthracene	52	UG/KG
MND22-2107	900000245	Semi-Volatile Organics	J	anthracene	160	UG/KG
MND22-2106	000423	Semi-Volatile Organics	J	anthracene	150	UG/KG
MND22-2105	000422	Semi-Volatile Organics		anthracene	500	UG/KG
MND22-2105	900000226	Semi-Volatile Organics	J	anthracene	48	UG/KG
MND22-2104	000421	Semi-Volatile Organics		anthracene	440	UG/KG
MND22-2103	000420	Semi-Volatile Organics		anthracene	1800	UG/KG
MND22-2103	900000224	Semi-Volatile Organics	J	anthracene	290	UG/KG
MND22-2102	900000223	Semi-Volatile Organics	J	anthracene	250	UG/KG
MND22-2101	000418	Semi-Volatile Organics	J	anthracene	120	UG/KG
MND22-2101	900000243	Semi-Volatile Organics	DJ	anthracene	6300	UG/KG
MND22-2108	000425	Semi-Volatile Organics		benzo(a)anthracene	400	UG/KG
MND22-2108	900000229	Semi-Volatile Organics		benzo(a)anthracene	550	UG/KG
MND22-2107	900000245	Semi-Volatile Organics		benzo(a)anthracene	650	UG/KG
MND22-2106	000423	Semi-Volatile Organics		benzo(a)anthracene	680	UG/KG
MND22-2106	900000228	Semi-Volatile Organics	J	benzo(a)anthracene	160	UG/KG
MND22-2105	000422	Semi-Volatile Organics		benzo(a)anthracene	1500	UG/KG
MND22-2105	900000226	Semi-Volatile Organics	J	benzo(a)anthracene	310	UG/KG
MND22-2104	000421	Semi-Volatile Organics	D	benzo(a)anthracene	1800	UG/KG
MND22-2104	900000244	Semi-Volatile Organics	J	benzo(a)anthracene	170	UG/KG
MND22-2103	000420	Semi-Volatile Organics	D	benzo(a)anthracene	4600	UG/KG
MND22-2103	900000224	Semi-Volatile Organics		benzo(a)anthracene	770	UG/KG
MND22-2102	000419	Semi-Volatile Organics	J	benzo(a)anthracene	180	UG/KG
MND22-2102	900000223	Semi-Volatile Organics		benzo(a)anthracene	600	UG/KG
MND22-2101	000418	Semi-Volatile Organics		benzo(a)anthracene	710	UG/KG
MND22-2101	900000243	Semi-Volatile Organics	D	benzo(a)anthracene	14000	UG/KG

Table A.2.4 - Central Valley System Stream Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2108	000425	Semi-Volatile Organics	J	benzo(a)pyrene	300	UG/KG
MND22-2108	900000229	Semi-Volatile Organics		benzo(a)pyrene	490	UG/KG
MND22-2107	900000245	Semi-Volatile Organics		benzo(a)pyrene	500	UG/KG
MND22-2106	000423	Semi-Volatile Organics		benzo(a)pyrene	560	UG/KG
MND22-2106	900000228	Semi-Volatile Organics	J	benzo(a)pyrene	96	UG/KG
MND22-2105	000422	Semi-Volatile Organics		benzo(a)pyrene	1100	UG/KG
MND22-2105	900000226	Semi-Volatile Organics	J	benzo(a)pyrene	250	UG/KG
MND22-2104	000421	Semi-Volatile Organics	D	benzo(a)pyrene	1800	UG/KG
MND22-2104	900000244	Semi-Volatile Organics	J	benzo(a)pyrene	150	UG/KG
MND22-2103	000420	Semi-Volatile Organics	D	benzo(a)pyrene	3600	UG/KG
MND22-2103	900000224	Semi-Volatile Organics		benzo(a)pyrene	730	UG/KG
MND22-2102	000419	Semi-Volatile Organics	J	benzo(a)pyrene	150	UG/KG
MND22-2102	900000223	Semi-Volatile Organics		benzo(a)pyrene	470	UG/KG
MND22-2101	000418	Semi-Volatile Organics		benzo(a)pyrene	560	UG/KG
MND22-2101	900000243	Semi-Volatile Organics	D	benzo(a)pyrene	11000	UG/KG
MND22-2108	000425	Semi-Volatile Organics	X	benzo(b)fluoranthene	520	UG/KG
MND22-2108	900000229	Semi-Volatile Organics	X	benzo(b)fluoranthene	1300	UG/KG
MND22-2107	900000245	Semi-Volatile Organics	X	benzo(b)fluoranthene	1100	UG/KG
MND22-2106	000423	Semi-Volatile Organics	X	benzo(b)fluoranthene	1200	UG/KG
MND22-2106	900000228	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	310	UG/KG
MND22-2105	000422	Semi-Volatile Organics	X	benzo(b)fluoranthene	2100	UG/KG
MND22-2105	900000226	Semi-Volatile Organics	X	benzo(b)fluoranthene	690	UG/KG
MND22-2104	000421	Semi-Volatile Organics	DX	benzo(b)fluoranthene	2800	UG/KG
MND22-2104	900000244	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	260	UG/KG
MND22-2103	000420	Semi-Volatile Organics	DX	benzo(b)fluoranthene	6000	UG/KG
MND22-2103	900000224	Semi-Volatile Organics	X	benzo(b)fluoranthene	1100	UG/KG
MND22-2102	000419	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	260	UG/KG
MND22-2102	900000223	Semi-Volatile Organics	X	benzo(b)fluoranthene	660	UG/KG
MND22-2101	000418	Semi-Volatile Organics	X	benzo(b)fluoranthene	1200	UG/KG
MND22-2101	900000243	Semi-Volatile Organics	DX	benzo(b)fluoranthene	20000	UG/KG
MND22-2108	000425	Semi-Volatile Organics	J	benzo(g,h,i)perylene	110	UG/KG
MND22-2108	900000229	Semi-Volatile Organics	J	benzo(g,h,i)perylene	170	UG/KG
MND22-2107	900000245	Semi-Volatile Organics	J	benzo(g,h,i)perylene	110	UG/KG
MND22-2106	000423	Semi-Volatile Organics	J	benzo(g,h,i)perylene	330	UG/KG
MND22-2105	000422	Semi-Volatile Organics		benzo(g,h,i)perylene	570	UG/KG
MND22-2105	900000226	Semi-Volatile Organics	J	benzo(g,h,i)perylene	75	UG/KG
MND22-2104	000421	Semi-Volatile Organics		benzo(g,h,i)perylene	990	UG/KG
MND22-2104	900000244	Semi-Volatile Organics	J	benzo(g,h,i)perylene	46	UG/KG
MND22-2103	000420	Semi-Volatile Organics	DJ	benzo(g,h,i)perylene	1100	UG/KG
MND22-2103	900000224	Semi-Volatile Organics	J	benzo(g,h,i)perylene	400	UG/KG
MND22-2102	000419	Semi-Volatile Organics	J	benzo(g,h,i)perylene	95	UG/KG
MND22-2101	000418	Semi-Volatile Organics	J	benzo(g,h,i)perylene	300	UG/KG
MND22-2101	900000243	Semi-Volatile Organics	DJ	benzo(g,h,i)perylene	3700	UG/KG
MND22-2108	000425	Semi-Volatile Organics	X	benzo(k)fluoranthene	550	UG/KG
MND22-2108	900000229	Semi-Volatile Organics	X	benzo(k)fluoranthene	1300	UG/KG
MND22-2107	900000245	Semi-Volatile Organics	X	benzo(k)fluoranthene	1100	UG/KG
MND22-2106	000423	Semi-Volatile Organics	X	benzo(k)fluoranthene	1200	UG/KG
MND22-2106	900000228	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	320	UG/KG
MND22-2105	000422	Semi-Volatile Organics	X	benzo(k)fluoranthene	2200	UG/KG
MND22-2105	900000226	Semi-Volatile Organics	X	benzo(k)fluoranthene	710	UG/KG
MND22-2104	000421	Semi-Volatile Organics	DX	benzo(k)fluoranthene	3000	UG/KG

Table A.2.4 - Central Valley System Stream Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2104	900000244	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	250	UG/KG
MND22-2103	000420	Semi-Volatile Organics	DX	benzo(k)fluoranthene	5700	UG/KG
MND22-2103	900000224	Semi-Volatile Organics	X	benzo(k)fluoranthene	1300	UG/KG
MND22-2102	000419	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	270	UG/KG
MND22-2102	900000223	Semi-Volatile Organics	X	benzo(k)fluoranthene	840	UG/KG
MND22-2101	000418	Semi-Volatile Organics	X	benzo(k)fluoranthene	1200	UG/KG
MND22-2101	900000243	Semi-Volatile Organics	DX	benzo(k)fluoranthene	20000	UG/KG
MND22-2106	900000228	Semi-Volatile Organics	J	benzoic Acid	60	UG/KG
MND22-2105	900000226	Semi-Volatile Organics	J	benzoic Acid	72	UG/KG
MND22-2108	900000229	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	69	UG/KG
MND22-2107	900000245	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	140	UG/KG
MND22-2106	900000228	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	150	UG/KG
MND22-2105	900000226	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	68	UG/KG
MND22-2104	900000244	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	96	UG/KG
MND22-2102	900000223	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	96	UG/KG
MND22-2101	900000243	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	530	UG/KG
MND22-2103	900000224	Semi-Volatile Organics	J	butyl benzyl phthalate	47	UG/KG
MND22-2108	000425	Semi-Volatile Organics	J	carbazole	63	UG/KG
MND22-2108	900000229	Semi-Volatile Organics	J	carbazole	19	UG/KG
MND22-2107	900000245	Semi-Volatile Organics	J	carbazole	120	UG/KG
MND22-2106	000423	Semi-Volatile Organics	J	carbazole	160	UG/KG
MND22-2105	000422	Semi-Volatile Organics	J	carbazole	220	UG/KG
MND22-2105	900000226	Semi-Volatile Organics	J	carbazole	55	UG/KG
MND22-2104	000421	Semi-Volatile Organics		carbazole	430	UG/KG
MND22-2103	000420	Semi-Volatile Organics	DJ	carbazole	630	UG/KG
MND22-2103	900000224	Semi-Volatile Organics	J	carbazole	120	UG/KG
MND22-2102	900000223	Semi-Volatile Organics	J	carbazole	90	UG/KG
MND22-2101	000418	Semi-Volatile Organics	J	carbazole	140	UG/KG
MND22-2101	900000243	Semi-Volatile Organics		carbazole	4100	UG/KG
MND22-2108	000425	Semi-Volatile Organics	J	chrysene	340	UG/KG
MND22-2108	900000229	Semi-Volatile Organics		chrysene	430	UG/KG
MND22-2107	900000245	Semi-Volatile Organics		chrysene	650	UG/KG
MND22-2106	000423	Semi-Volatile Organics		chrysene	720	UG/KG
MND22-2106	900000228	Semi-Volatile Organics	J	chrysene	120	UG/KG
MND22-2105	000422	Semi-Volatile Organics		chrysene	1200	UG/KG
MND22-2105	900000226	Semi-Volatile Organics	J	chrysene	340	UG/KG
MND22-2104	000421	Semi-Volatile Organics		chrysene	2500	UG/KG
MND22-2104	900000244	Semi-Volatile Organics	J	chrysene	160	UG/KG
MND22-2103	000420	Semi-Volatile Organics	D	chrysene	4300	UG/KG
MND22-2103	900000224	Semi-Volatile Organics		chrysene	890	UG/KG
MND22-2102	000419	Semi-Volatile Organics	J	chrysene	180	UG/KG
MND22-2102	900000223	Semi-Volatile Organics		chrysene	600	UG/KG
MND22-2101	000418	Semi-Volatile Organics		chrysene	740	UG/KG
MND22-2101	900000243	Semi-Volatile Organics	D	chrysene	13000	UG/KG
MND22-2107	900000245	Semi-Volatile Organics	J	di-n-butyl phthalate	41	UG/KG
MND22-2106	900000228	Semi-Volatile Organics	JB	di-n-butyl phthalate	63	UG/KG
MND22-2105	900000226	Semi-Volatile Organics	JB	di-n-butyl phthalate	43	UG/KG
MND22-2103	000420	Semi-Volatile Organics	J	di-n-butyl phthalate	44	UG/KG
MND22-2108	000425	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	49	UG/KG
MND22-2108	900000229	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	56	UG/KG
MND22-2107	900000245	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	74	UG/KG

Table A.2.4 - Central Valley System Stream Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2106	000423	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	95	UG/KG
MND22-2105	000422	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	170	UG/KG
MND22-2104	000421	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	240	UG/KG
MND22-2103	000420	Semi-Volatile Organics	DJ	dibenzo(a,h)anthracene	500	UG/KG
MND22-2103	900000224	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	220	UG/KG
MND22-2101	000418	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	90	UG/KG
MND22-2101	900000243	Semi-Volatile Organics	DJ	dibenzo(a,h)anthracene	2000	UG/KG
MND22-2108	000425	Semi-Volatile Organics	J	dibenzofuran	40	UG/KG
MND22-2106	000423	Semi-Volatile Organics	J	dibenzofuran	48	UG/KG
MND22-2105	000422	Semi-Volatile Organics	J	dibenzofuran	170	UG/KG
MND22-2104	000421	Semi-Volatile Organics	J	dibenzofuran	130	UG/KG
MND22-2103	000420	Semi-Volatile Organics	DJ	dibenzofuran	600	UG/KG
MND22-2103	900000224	Semi-Volatile Organics	J	dibenzofuran	43	UG/KG
MND22-2102	900000223	Semi-Volatile Organics	J	dibenzofuran	51	UG/KG
MND22-2101	000418	Semi-Volatile Organics	J	dibenzofuran	72	UG/KG
MND22-2101	900000243	Semi-Volatile Organics	DJ	dibenzofuran	2900	UG/KG
MND22-2108	000425	Semi-Volatile Organics	J	dimethyl phthalate	110	UG/KG
MND22-2108	000425	Semi-Volatile Organics		fluoranthene	950	UG/KG
MND22-2108	900000229	Semi-Volatile Organics		fluoranthene	680	UG/KG
MND22-2107	900000245	Semi-Volatile Organics		fluoranthene	1600	UG/KG
MND22-2106	000423	Semi-Volatile Organics		fluoranthene	1500	UG/KG
MND22-2106	900000228	Semi-Volatile Organics	J	fluoranthene	290	UG/KG
MND22-2105	000422	Semi-Volatile Organics		fluoranthene	3000	UG/KG
MND22-2105	900000226	Semi-Volatile Organics		fluoranthene	810	UG/KG
MND22-2104	000421	Semi-Volatile Organics	D	fluoranthene	4000	UG/KG
MND22-2104	900000244	Semi-Volatile Organics	J	fluoranthene	270	UG/KG
MND22-2103	000420	Semi-Volatile Organics	D	fluoranthene	11000	UG/KG
MND22-2103	900000224	Semi-Volatile Organics		fluoranthene	1900	UG/KG
MND22-2102	000419	Semi-Volatile Organics	J	fluoranthene	380	UG/KG
MND22-2102	900000223	Semi-Volatile Organics		fluoranthene	1300	UG/KG
MND22-2101	000418	Semi-Volatile Organics		fluoranthene	1800	UG/KG
MND22-2101	900000243	Semi-Volatile Organics	D	fluoranthene	34000	UG/KG
MND22-2108	000425	Semi-Volatile Organics	J	fluorene	64	UG/KG
MND22-2107	900000245	Semi-Volatile Organics	J	fluorene	61	UG/KG
MND22-2106	000423	Semi-Volatile Organics	J	fluorene	94	UG/KG
MND22-2105	000422	Semi-Volatile Organics	J	fluorene	300	UG/KG
MND22-2104	000421	Semi-Volatile Organics	J	fluorene	250	UG/KG
MND22-2103	000420	Semi-Volatile Organics	DJ	fluorene	920	UG/KG
MND22-2103	900000224	Semi-Volatile Organics	J	fluorene	97	UG/KG
MND22-2102	900000223	Semi-Volatile Organics	J	fluorene	110	UG/KG
MND22-2101	000418	Semi-Volatile Organics	J	fluorene	100	UG/KG
MND22-2101	900000243	Semi-Volatile Organics	DJ	fluorene	3900	UG/KG
MND22-2108	000425	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	120	UG/KG
MND22-2108	900000229	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	280	UG/KG
MND22-2107	900000245	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	270	UG/KG
MND22-2106	000423	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	260	UG/KG
MND22-2106	900000228	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	65	UG/KG
MND22-2105	000422	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	380	UG/KG
MND22-2105	900000226	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	130	UG/KG
MND22-2104	000421	Semi-Volatile Organics		indeno(1,2,3-cd)pyrene	890	UG/KG
MND22-2104	900000244	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	99	UG/KG

Table A.2.4 - Central Valley System Stream Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2103	000420	Semi-Volatile Organics	DJ	indeno(1,2,3-cd)pyrene	1400	UG/KG
MND22-2103	900000224	Semi-Volatile Organics		indeno(1,2,3-cd)pyrene	500	UG/KG
MND22-2102	000419	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	81	UG/KG
MND22-2101	000418	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	220	UG/KG
MND22-2101	900000243	Semi-Volatile Organics	DJ	indeno(1,2,3-cd)pyrene	7500	UG/KG
MND22-2104	000421	Semi-Volatile Organics	J	naphthalene	65	UG/KG
MND22-2103	000420	Semi-Volatile Organics	J	naphthalene	56	UG/KG
MND22-2101	900000243	Semi-Volatile Organics	J	naphthalene	320	UG/KG
MND22-2108	000425	Semi-Volatile Organics		phenanthrene	740	UG/KG
MND22-2108	900000229	Semi-Volatile Organics	J	phenanthrene	240	UG/KG
MND22-2107	900000245	Semi-Volatile Organics		phenanthrene	750	UG/KG
MND22-2106	000423	Semi-Volatile Organics		phenanthrene	970	UG/KG
MND22-2106	900000228	Semi-Volatile Organics	J	phenanthrene	140	UG/KG
MND22-2105	000422	Semi-Volatile Organics		phenanthrene	2800	UG/KG
MND22-2105	900000226	Semi-Volatile Organics		phenanthrene	450	UG/KG
MND22-2104	000421	Semi-Volatile Organics	D	phenanthrene	2500	UG/KG
MND22-2104	900000244	Semi-Volatile Organics	J	phenanthrene	160	UG/KG
MND22-2103	000420	Semi-Volatile Organics	D	phenanthrene	8300	UG/KG
MND22-2103	900000224	Semi-Volatile Organics		phenanthrene	1300	UG/KG
MND22-2102	000419	Semi-Volatile Organics	J	phenanthrene	250	UG/KG
MND22-2102	900000223	Semi-Volatile Organics		phenanthrene	1100	UG/KG
MND22-2101	000418	Semi-Volatile Organics		phenanthrene	1400	UG/KG
MND22-2101	900000243	Semi-Volatile Organics	D	phenanthrene	32000	UG/KG
MND22-2108	000425	Semi-Volatile Organics		pyrene	710	UG/KG
MND22-2108	900000229	Semi-Volatile Organics		pyrene	840	UG/KG
MND22-2107	900000245	Semi-Volatile Organics		pyrene	1300	UG/KG
MND22-2106	000423	Semi-Volatile Organics		pyrene	1300	UG/KG
MND22-2106	900000228	Semi-Volatile Organics	J	pyrene	310	UG/KG
MND22-2105	000422	Semi-Volatile Organics		pyrene	2600	UG/KG
MND22-2105	900000226	Semi-Volatile Organics		pyrene	560	UG/KG
MND22-2104	000421	Semi-Volatile Organics	D	pyrene	3900	UG/KG
MND22-2104	900000244	Semi-Volatile Organics	J	pyrene	280	UG/KG
MND22-2103	000420	Semi-Volatile Organics	D	pyrene	7500	UG/KG
MND22-2103	900000224	Semi-Volatile Organics		pyrene	1400	UG/KG
MND22-2102	000419	Semi-Volatile Organics	J	pyrene	320	UG/KG
MND22-2102	900000223	Semi-Volatile Organics		pyrene	1200	UG/KG
MND22-2101	000418	Semi-Volatile Organics		pyrene	1500	UG/KG
MND22-2101	900000243	Semi-Volatile Organics	D	pyrene	27000	UG/KG
MND22-2108	900000229	Volatile Organics	J	acetone	800	UG/KG
MND22-2105	900000226	Volatile Organics	J	acetone	490	UG/KG
MND22-2108	900000229	Volatile Organics	B	methylene-chloride	8400	UG/KG
MND22-2107	000424	Volatile Organics	B	methylene-chloride	14	UG/KG
MND22-2107	900000245	Volatile Organics	B	methylene-chloride	12	UG/KG
MND22-2106	000423	Volatile Organics	B	methylene-chloride	17	UG/KG
MND22-2106	900000228	Volatile Organics	B	methylene-chloride	220	UG/KG
MND22-2105	000422	Volatile Organics	B	methylene-chloride	58	UG/KG
MND22-2105	900000226	Volatile Organics	JB	methylene-chloride	710	UG/KG
MND22-2104	000421	Volatile Organics	B	methylene-chloride	100	UG/KG
MND22-2104	900000244	Volatile Organics	B	methylene-chloride	17	UG/KG
MND22-2103	000420	Volatile Organics	B	methylene-chloride	8	UG/KG
MND22-2103	900000224	Volatile Organics	B	methylene-chloride	9	UG/KG

Table A.2.4 - Central Valley System Stream Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2102	000419	Volatile Organics	B	methylene-chloride	20	UG/KG
MND22-2102	900000223	Volatile Organics	B	methylene-chloride	18	UG/KG
MND22-2101	000418	Volatile Organics	B	methylene-chloride	12	UG/KG
MND22-2101	900000243	Volatile Organics	B	methylene-chloride	22	UG/KG

Appendix A-2

Central Valley System

Tables Indicating Detections Above Background

A.2.5 Subsurface Soils

Table A.2.5 - Central Valley System Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4002	900000268	Common Anions		chloride	39.7000	MG/KG
MND23-4003	900000271	Common Anions		chloride	66.2	MG/KG
MND23-4003	900000288	Common Anions		chloride	45.1000	MG/KG
MND23-4003	900000289	Common Anions		chloride	48.1000	MG/KG
MND23-4003	900000291	Common Anions		chloride	33.8	MG/KG
MND23-4001	900000272	Common Anions		fluoride	0.875	MG/KG
MND23-4001	900000279	Common Anions		fluoride	0.9400	MG/KG
MND23-4001	900000280	Common Anions		fluoride	0.8740	MG/KG
MND23-4001	900000285	Common Anions		fluoride	1.5600	MG/KG
MND23-4002	900000267	Common Anions		fluoride	1.2100	MG/KG
MND23-4002	900000268	Common Anions		fluoride	0.8810	MG/KG
MND23-4003	900000271	Common Anions		fluoride	1.6	MG/KG
MND23-4003	900000286	Common Anions		fluoride	1.2100	MG/KG
MND23-4003	900000288	Common Anions		fluoride	0.9350	MG/KG
MND23-4003	900000289	Common Anions		fluoride	0.9890	MG/KG
MND23-4003	900000290	Common Anions		fluoride	1.14	MG/KG
MND23-4003	900000292	Common Anions		fluoride	1.4800	MG/KG
MND23-4003	900000293	Common Anions		fluoride	1.1700	MG/KG
MND23-4003	900000295	Common Anions		fluoride	0.9420	MG/KG
MND23-4003	900000291	Common Anions		fluoride	2.8	MG/KG
MND23-4002	900000266	Common Anions		nitrate-nitrite-N	0.5340	MG/KG
MND23-4002	900000270	Common Anions		nitrate-nitrite-N	3.5800	MG/KG
MND23-4003	900000290	Common Anions		nitrate-nitrite-N	0.05	MG/KG
MND23-4001	900000272	Common Anions		sulfate	79.2	MG/KG
MND23-4001	900000279	Common Anions		sulfate	90.6000	MG/KG
MND23-4001	900000280	Common Anions		sulfate	126.0000	MG/KG
MND23-4001	900000283	Common Anions		sulfate	73.9000	MG/KG
MND23-4001	900000285	Common Anions		sulfate	37.9000	MG/KG
MND23-4002	900000266	Common Anions		sulfate	71.8000	MG/KG
MND23-4002	900000267	Common Anions		sulfate	43.5000	MG/KG
MND23-4002	900000268	Common Anions		sulfate	27.5000	MG/KG
MND23-4002	900000269	Common Anions		sulfate	99.1000	MG/KG
MND23-4002	900000270	Common Anions		sulfate	36.900	MG/KG
MND23-4003	900000286	Common Anions		sulfate	61.9000	MG/KG
MND23-4003	900000288	Common Anions		sulfate	46.4000	MG/KG
MND23-4003	900000289	Common Anions		sulfate	58.1000	MG/KG
MND23-4003	900000290	Common Anions		sulfate	46.3	MG/KG
MND23-4003	900000292	Common Anions		sulfate	51.5000	MG/KG
MND23-4003	900000293	Common Anions		sulfate	40.1000	MG/KG
MND23-4003	900000294	Common Anions		sulfate	80.8000	MG/KG
MND23-4003	900000295	Common Anions		sulfate	59.5000	MG/KG
MND23-4003	900000286	Explosives	J	RDX	0.54	MG/KG
MND23-4001	900000282	General Chemistry		Dissolved Solids	416.0000	MG/L
MND23-4001	900000282	General Chemistry		nitrogen	0.1640	MG/L
MND23-4003	900000296	General Chemistry		nitrogen	0.1940	MG/L
MND23-4001	900000272	General Chemistry		organic carbon	13000.0000	MG/KG
MND23-4001	900000279	General Chemistry		organic carbon	7110.0000	MG/KG
MND23-4001	900000280	General Chemistry		organic carbon	7900.0000	MG/KG

Table A.2.5 - Central Valley System Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4001	900000283	General Chemistry		organic carbon	2240.0000	MG/KG
MND23-4001	900000285	General Chemistry		organic carbon	3180.0000	MG/KG
MND23-4001	900000285	General Chemistry		organic carbon	3700.0000	MG/KG
MND23-4001	900000285	General Chemistry		organic carbon	5830.0000	MG/KG
MND23-4001	900000285	General Chemistry		organic carbon	3460.0000	MG/KG
MND23-4001	900000285	General Chemistry		organic carbon	4040.0000	MG/KG
MND23-4002	900000266	General Chemistry		organic carbon	8300.0000	MG/KG
MND23-4002	900000267	General Chemistry		organic carbon	16600.0000	MG/KG
MND23-4002	900000268	General Chemistry		organic carbon	6150.0000	MG/KG
MND23-4002	900000269	General Chemistry		organic carbon	5860.0000	MG/KG
MND23-4002	900000270	General Chemistry		organic carbon	22500.0000	MG/KG
MND23-4003	900000271	General Chemistry		organic carbon	0.52	%
MND23-4003	900000271	General Chemistry		organic carbon	0.45	%
MND23-4003	900000271	General Chemistry		organic carbon	0.37	%
MND23-4003	900000271	General Chemistry		organic carbon	0.36	%
MND23-4003	900000271	General Chemistry		organic carbon	0.43	%
MND23-4003	900000286	General Chemistry		organic carbon	6620.0000	MG/KG
MND23-4003	900000286	General Chemistry		organic carbon	11400.0000	MG/KG
MND23-4003	900000286	General Chemistry		organic carbon	8610.0000	MG/KG
MND23-4003	900000286	General Chemistry		organic carbon	14500.0000	MG/KG
MND23-4003	900000286	General Chemistry		organic carbon	10300.0000	MG/KG
MND23-4003	900000288	General Chemistry		organic carbon	4080.0000	MG/KG
MND23-4003	900000288	General Chemistry		organic carbon	3170.0000	MG/KG
MND23-4003	900000288	General Chemistry		organic carbon	2270.0000	MG/KG
MND23-4003	900000288	General Chemistry		organic carbon	3240.0000	MG/KG
MND23-4003	900000288	General Chemistry		organic carbon	3190.0000	MG/KG
MND23-4003	900000289	General Chemistry		organic carbon	4770.0000	MG/KG
MND23-4003	900000289	General Chemistry		organic carbon	7470.0000	MG/KG
MND23-4003	900000289	General Chemistry		organic carbon	6800.0000	MG/KG
MND23-4003	900000289	General Chemistry		organic carbon	3030.0000	MG/KG
MND23-4003	900000289	General Chemistry		organic carbon	5520.0000	MG/KG
MND23-4003	900000290	General Chemistry		organic carbon	5410.0000	MG/KG
MND23-4003	900000290	General Chemistry		organic carbon	4010.0000	MG/KG
MND23-4003	900000290	General Chemistry		organic carbon	6400.0000	MG/KG
MND23-4003	900000290	General Chemistry		organic carbon	5380.0000	MG/KG
MND23-4003	900000290	General Chemistry		organic carbon	5300.0000	MG/KG
MND23-4003	900000292	General Chemistry		organic carbon	5900.0000	MG/KG
MND23-4003	900000292	General Chemistry		organic carbon	4550.0000	MG/KG
MND23-4003	900000292	General Chemistry		organic carbon	6460.0000	MG/KG
MND23-4003	900000292	General Chemistry		organic carbon	10100.0000	MG/KG
MND23-4003	900000292	General Chemistry		organic carbon	6750.0000	MG/KG
MND23-4003	900000293	General Chemistry		organic carbon	6450.0000	MG/KG
MND23-4003	900000293	General Chemistry		organic carbon	6080.0000	MG/KG
MND23-4003	900000293	General Chemistry		organic carbon	5120.0000	MG/KG
MND23-4003	900000293	General Chemistry		organic carbon	6980.0000	MG/KG
MND23-4003	900000293	General Chemistry		organic carbon	6160.0000	MG/KG
MND23-4003	900000294	General Chemistry		organic carbon	27200.0000	MG/KG
MND23-4003	900000294	General Chemistry		organic carbon	13500.0000	MG/KG

Table A.2.5 - Central Valley System Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4003	900000294	General Chemistry		organic carbon	16900.0000	MG/KG
MND23-4003	900000294	General Chemistry		organic carbon	24100.0000	MG/KG
MND23-4003	900000294	General Chemistry		organic carbon	20400.0000	MG/KG
MND23-4003	900000295	General Chemistry		organic carbon	10900.0000	MG/KG
MND23-4003	900000295	General Chemistry		organic carbon	9400.0000	MG/KG
MND23-4003	900000295	General Chemistry		organic carbon	10400.0000	MG/KG
MND23-4003	900000295	General Chemistry		organic carbon	7850.0000	MG/KG
MND23-4003	900000295	General Chemistry		organic carbon	9640.0000	MG/KG
MND23-4003	900000291	General Chemistry		organic carbon	4.7	%
MND23-4003	900000291	General Chemistry		organic carbon	4.6	%
MND23-4003	900000291	General Chemistry		organic carbon	4.3	%
MND23-4003	900000291	General Chemistry		organic carbon	4.0	%
MND23-4003	900000291	General Chemistry		organic carbon	4.4	%
MND23-4001	900000282	General Chemistry		Suspended Solids	120.0000	MG/L
MND23-4001	900000282	Metals		aluminum	294.00	UG/L
MND23-4001	900000272	Metals		aluminum	5720	MG/KG
MND23-4001	900000279	Metals		aluminum	5900	MG/KG
MND23-4001	900000280	Metals		aluminum	6370	MG/KG
MND23-4001	900000283	Metals		aluminum	12100	MG/KG
MND23-4001	900000285	Metals		aluminum	13900	MG/KG
MND23-4002	900000266	Metals		aluminum	5480	MG/KG
MND23-4002	900000267	Metals		aluminum	6590	MG/KG
MND23-4002	900000268	Metals		aluminum	7540	MG/KG
MND23-4002	900000269	Metals		aluminum	8370	MG/KG
MND23-4002	900000270	Metals		aluminum	3440	MG/KG
MND23-4003	900000296	Metals		aluminum	124.00	UG/L
MND23-4003	900000271	Metals		aluminum	5160	MG/KG
MND23-4003	900000286	Metals		aluminum	6160	MG/KG
MND23-4003	900000288	Metals		aluminum	7130	MG/KG
MND23-4003	900000289	Metals		aluminum	6670	MG/KG
MND23-4003	900000290	Metals		aluminum	6410	MG/KG
MND23-4003	900000292	Metals		aluminum	6490	MG/KG
MND23-4003	900000293	Metals		aluminum	5760	MG/KG
MND23-4003	900000294	Metals		aluminum	4240	MG/KG
MND23-4003	900000295	Metals		aluminum	6270	MG/KG
MND23-4003	900000291	Metals		aluminum	4800	MG/KG
MND23-4001	900000272	Metals		arsenic	4.40	MG/KG
MND23-4001	900000279	Metals		arsenic	4.60	MG/KG
MND23-4001	900000280	Metals		arsenic	4.40	MG/KG
MND23-4001	900000283	Metals		arsenic	2.60	MG/KG
MND23-4001	900000285	Metals		arsenic	3.60	MG/KG
MND23-4002	900000266	Metals		arsenic	3.30	MG/KG
MND23-4002	900000267	Metals		arsenic	3.10	MG/KG
MND23-4002	900000268	Metals		arsenic	3.40	MG/KG
MND23-4002	900000269	Metals		arsenic	3.40	MG/KG
MND23-4002	900000270	Metals		arsenic	3.90	MG/KG
MND23-4003	900000271	Metals		arsenic	4.8	MG/KG
MND23-4003	900000286	Metals		arsenic	3.90	MG/KG

Table A.2.5 - Central Valley System Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4003	900000288	Metals		arsenic	4.30	MG/KG
MND23-4003	900000289	Metals		arsenic	6	MG/KG
MND23-4003	900000290	Metals		arsenic	4.20	MG/KG
MND23-4003	900000292	Metals		arsenic	4.30	MG/KG
MND23-4003	900000293	Metals		arsenic	4	MG/KG
MND23-4003	900000294	Metals		arsenic	8.10	MG/KG
MND23-4003	900000295	Metals		arsenic	4.80	MG/KG
MND23-4003	900000291	Metals		arsenic	5.4	MG/KG
MND23-4001	900000282	Metals	B	barium	2.70	UG/L
MND23-4001	900000272	Metals	B	barium	25.40	MG/KG
MND23-4001	900000279	Metals	B	barium	42.20	MG/KG
MND23-4001	900000280	Metals	B	barium	34.90	MG/KG
MND23-4001	900000283	Metals	B	barium	31.70	MG/KG
MND23-4001	900000285	Metals	B	barium	35.50	MG/KG
MND23-4002	900000266	Metals		barium	90.30	MG/KG
MND23-4002	900000267	Metals	B	barium	21.70	MG/KG
MND23-4002	900000268	Metals	B	barium	29.30	MG/KG
MND23-4002	900000269	Metals		barium	227	MG/KG
MND23-4002	900000270	Metals	B	barium	35	MG/KG
MND23-4003	900000296	Metals	B	barium	0.80	UG/L
MND23-4003	900000271	Metals	B	barium	45.8	MG/KG
MND23-4003	900000286	Metals		barium	52.20	MG/KG
MND23-4003	900000288	Metals	B	barium	36.50	MG/KG
MND23-4003	900000289	Metals	B	barium	41.40	MG/KG
MND23-4003	900000290	Metals		barium	75.50	MG/KG
MND23-4003	900000292	Metals		barium	47.70	MG/KG
MND23-4003	900000293	Metals		barium	47.30	MG/KG
MND23-4003	900000294	Metals		barium	60.10	MG/KG
MND23-4003	900000295	Metals		barium	80.90	MG/KG
MND23-4003	900000291	Metals	B	barium	45.6	MG/KG
MND23-4001	900000272	Metals		beryllium	0.29	MG/KG
MND23-4001	900000279	Metals		beryllium	0.30	MG/KG
MND23-4001	900000280	Metals		beryllium	0.32	MG/KG
MND23-4001	900000283	Metals		beryllium	0.58	MG/KG
MND23-4001	900000285	Metals		beryllium	0.69	MG/KG
MND23-4002	900000266	Metals		beryllium	0.26	MG/KG
MND23-4002	900000267	Metals		beryllium	0.33	MG/KG
MND23-4002	900000268	Metals		beryllium	0.36	MG/KG
MND23-4002	900000269	Metals		beryllium	0.42	MG/KG
MND23-4002	900000270	Metals	B	beryllium	0.19	MG/KG
MND23-4003	900000271	Metals	B	beryllium	0.39	MG/KG
MND23-4003	900000286	Metals		beryllium	0.30	MG/KG
MND23-4003	900000288	Metals		beryllium	0.35	MG/KG
MND23-4003	900000289	Metals		beryllium	0.34	MG/KG
MND23-4003	900000290	Metals		beryllium	0.32	MG/KG
MND23-4003	900000292	Metals		beryllium	0.33	MG/KG
MND23-4003	900000293	Metals		beryllium	0.28	MG/KG
MND23-4003	900000294	Metals		beryllium	0.33	MG/KG

Table A.2.5 - Central Valley System Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4003	900000295	Metals		beryllium	0.32	MG/KG
MND23-4003	900000291	Metals	B	beryllium	0.60	MG/KG
MND23-4003	900000271	Metals		bismuth	101	MG/KG
MND23-4003	900000291	Metals		bismuth	82.3	MG/KG
MND23-4001	900000282	Metals	B	calcium	216.00	UG/L
MND23-4001	900000272	Metals		calcium	94900	MG/KG
MND23-4001	900000279	Metals		calcium	99300	MG/KG
MND23-4001	900000280	Metals		calcium	93100	MG/KG
MND23-4001	900000283	Metals		calcium	69900	MG/KG
MND23-4001	900000285	Metals		calcium	66600	MG/KG
MND23-4002	900000266	Metals		calcium	104000	MG/KG
MND23-4002	900000267	Metals		calcium	95000	MG/KG
MND23-4002	900000268	Metals		calcium	103000	MG/KG
MND23-4002	900000269	Metals		calcium	102000	MG/KG
MND23-4002	900000270	Metals		calcium	96200	MG/KG
MND23-4003	900000296	Metals	B	calcium	33.20	UG/L
MND23-4003	900000271	Metals		calcium	123000	MG/KG
MND23-4003	900000286	Metals		calcium	94800	MG/KG
MND23-4003	900000288	Metals		calcium	84800	MG/KG
MND23-4003	900000289	Metals		calcium	92500	MG/KG
MND23-4003	900000290	Metals		calcium	85500	MG/KG
MND23-4003	900000292	Metals		calcium	91700	MG/KG
MND23-4003	900000293	Metals		calcium	116000	MG/KG
MND23-4003	900000294	Metals		calcium	86000	MG/KG
MND23-4003	900000295	Metals		calcium	95800	MG/KG
MND23-4003	900000291	Metals		calcium	131000	MG/KG
MND23-4001	900000272	Metals		chromium	8.60	MG/KG
MND23-4001	900000279	Metals		chromium	8.60	MG/KG
MND23-4001	900000280	Metals		chromium	8.80	MG/KG
MND23-4001	900000283	Metals		chromium	14.50	MG/KG
MND23-4001	900000285	Metals		chromium	17.10	MG/KG
MND23-4002	900000266	Metals		chromium	8.10	MG/KG
MND23-4002	900000267	Metals		chromium	9.20	MG/KG
MND23-4002	900000268	Metals		chromium	10.80	MG/KG
MND23-4002	900000269	Metals		chromium	11.10	MG/KG
MND23-4002	900000270	Metals		chromium	5.90	MG/KG
MND23-4003	900000271	Metals		chromium	9.6	MG/KG
MND23-4003	900000286	Metals		chromium	9.30	MG/KG
MND23-4003	900000288	Metals		chromium	10.50	MG/KG
MND23-4003	900000289	Metals		chromium	9.80	MG/KG
MND23-4003	900000290	Metals		chromium	9.80	MG/KG
MND23-4003	900000292	Metals		chromium	9.10	MG/KG
MND23-4003	900000293	Metals		chromium	8.50	MG/KG
MND23-4003	900000294	Metals		chromium	7.80	MG/KG
MND23-4003	900000295	Metals		chromium	9.10	MG/KG
MND23-4003	900000291	Metals		chromium	6.9	MG/KG
MND23-4001	900000282	Metals	B	cobalt	0.52	UG/L
MND23-4001	900000272	Metals	B	cobalt	5.10	MG/KG

Table A.2.5 - Central Valley System Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4001	900000279	Metals	B	cobalt	4.70	MG/KG
MND23-4001	900000280	Metals	B	cobalt	5.30	MG/KG
MND23-4001	900000283	Metals	B	cobalt	9.80	MG/KG
MND23-4001	900000285	Metals	B	cobalt	11.20	MG/KG
MND23-4002	900000266	Metals	B	cobalt	3.50	MG/KG
MND23-4002	900000267	Metals	B	cobalt	8.90	MG/KG
MND23-4002	900000268	Metals	B	cobalt	6.20	MG/KG
MND23-4002	900000269	Metals	B	cobalt	6.40	MG/KG
MND23-4002	900000270	Metals	B	cobalt	3.70	MG/KG
MND23-4003	900000271	Metals	B	cobalt	4.7	MG/KG
MND23-4003	900000286	Metals	B	cobalt	4.30	MG/KG
MND23-4003	900000288	Metals	B	cobalt	5.60	MG/KG
MND23-4003	900000289	Metals	B	cobalt	5.70	MG/KG
MND23-4003	900000290	Metals	B	cobalt	5.30	MG/KG
MND23-4003	900000292	Metals	B	cobalt	5.60	MG/KG
MND23-4003	900000293	Metals	B	cobalt	5	MG/KG
MND23-4003	900000294	Metals	B	cobalt	3.70	MG/KG
MND23-4003	900000295	Metals	B	cobalt	5.30	MG/KG
MND23-4003	900000291	Metals	B	cobalt	5.4	MG/KG
MND23-4001	900000272	Metals		copper	11.20	MG/KG
MND23-4001	900000279	Metals		copper	11.90	MG/KG
MND23-4001	900000280	Metals		copper	11.50	MG/KG
MND23-4001	900000283	Metals		copper	10.90	MG/KG
MND23-4001	900000285	Metals		copper	18.30	MG/KG
MND23-4002	900000266	Metals		copper	9	MG/KG
MND23-4002	900000267	Metals		copper	12	MG/KG
MND23-4002	900000268	Metals		copper	11.20	MG/KG
MND23-4002	900000269	Metals		copper	13.30	MG/KG
MND23-4002	900000270	Metals		copper	9.80	MG/KG
MND23-4003	900000271	Metals		copper	15.4	MG/KG
MND23-4003	900000286	Metals		copper	13.40	MG/KG
MND23-4003	900000288	Metals		copper	13.80	MG/KG
MND23-4003	900000289	Metals		copper	13	MG/KG
MND23-4003	900000290	Metals		copper	12	MG/KG
MND23-4003	900000292	Metals		copper	13.10	MG/KG
MND23-4003	900000293	Metals		copper	11.60	MG/KG
MND23-4003	900000294	Metals		copper	14.80	MG/KG
MND23-4003	900000295	Metals		copper	12.10	MG/KG
MND23-4003	900000291	Metals		copper	17.5	MG/KG
MND23-4003	900000286	Metals		cyanide	1.40	MG/KG
MND23-4001	900000282	Metals		iron	174.00	UG/L
MND23-4001	900000272	Metals		iron	11900	MG/KG
MND23-4001	900000279	Metals		iron	11500	MG/KG
MND23-4001	900000280	Metals		iron	12600	MG/KG
MND23-4001	900000283	Metals		iron	19800	MG/KG
MND23-4001	900000285	Metals		iron	24900	MG/KG
MND23-4002	900000266	Metals		iron	8680	MG/KG
MND23-4002	900000267	Metals		iron	12200	MG/KG

Table A.2.5 - Central Valley System Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4002	900000268	Metals		iron	13300	MG/KG
MND23-4002	900000269	Metals		iron	14800	MG/KG
MND23-4002	900000270	Metals		iron	8570	MG/KG
MND23-4003	900000271	Metals		iron	13700	MG/KG
MND23-4003	900000286	Metals		iron	11900	MG/KG
MND23-4003	900000288	Metals		iron	12900	MG/KG
MND23-4003	900000289	Metals		iron	13900	MG/KG
MND23-4003	900000290	Metals		iron	12400	MG/KG
MND23-4003	900000292	Metals		iron	13000	MG/KG
MND23-4003	900000293	Metals		iron	11600	MG/KG
MND23-4003	900000294	Metals		iron	19000	MG/KG
MND23-4003	900000295	Metals		iron	12300	MG/KG
MND23-4003	900000291	Metals		iron	13000	MG/KG
MND23-4001	900000272	Metals		lead	5.30	MG/KG
MND23-4001	900000279	Metals		lead	5.80	MG/KG
MND23-4001	900000280	Metals		lead	5.40	MG/KG
MND23-4001	900000283	Metals		lead	4	MG/KG
MND23-4001	900000285	Metals		lead	5.20	MG/KG
MND23-4002	900000266	Metals		lead	5.80	MG/KG
MND23-4002	900000267	Metals		lead	4.80	MG/KG
MND23-4002	900000268	Metals		lead	5.20	MG/KG
MND23-4002	900000269	Metals		lead	5.20	MG/KG
MND23-4002	900000270	Metals		lead	4.60	MG/KG
MND23-4003	900000271	Metals		lead	4.7	MG/KG
MND23-4003	900000286	Metals		lead	5.30	MG/KG
MND23-4003	900000288	Metals		lead	5.10	MG/KG
MND23-4003	900000289	Metals		lead	13.30	MG/KG
MND23-4003	900000290	Metals		lead	4.40	MG/KG
MND23-4003	900000292	Metals		lead	4.70	MG/KG
MND23-4003	900000293	Metals		lead	6.10	MG/KG
MND23-4003	900000294	Metals		lead	5.60	MG/KG
MND23-4003	900000295	Metals		lead	5.30	MG/KG
MND23-4003	900000291	Metals		lead	7.6	MG/KG
MND23-4001	900000272	Metals		lithium	13.40	MG/KG
MND23-4001	900000279	Metals		lithium	12.60	MG/KG
MND23-4001	900000280	Metals		lithium	13.50	MG/KG
MND23-4001	900000283	Metals		lithium	23.30	MG/KG
MND23-4001	900000285	Metals		lithium	27.30	MG/KG
MND23-4002	900000266	Metals	B	lithium	10.30	MG/KG
MND23-4002	900000267	Metals		lithium	15.10	MG/KG
MND23-4002	900000268	Metals		lithium	15	MG/KG
MND23-4002	900000269	Metals		lithium	18.10	MG/KG
MND23-4002	900000270	Metals	B	lithium	6.90	MG/KG
MND23-4003	900000271	Metals	B	lithium	10.2	MG/KG
MND23-4003	900000286	Metals		lithium	13	MG/KG
MND23-4003	900000288	Metals		lithium	14.50	MG/KG
MND23-4003	900000289	Metals		lithium	14	MG/KG
MND23-4003	900000290	Metals		lithium	13.60	MG/KG

Table A.2.5 - Central Valley System Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4003	900000292	Metals		lithium	13.80	MG/KG
MND23-4003	900000293	Metals		lithium	12.10	MG/KG
MND23-4003	900000294	Metals	B	lithium	8.30	MG/KG
MND23-4003	900000295	Metals		lithium	13.80	MG/KG
MND23-4003	900000291	Metals	B	lithium	11.4	MG/KG
MND23-4001	900000282	Metals	B	magnesium	77.50	UG/L
MND23-4001	900000272	Metals		magnesium	38200	MG/KG
MND23-4001	900000279	Metals		magnesium	48100	MG/KG
MND23-4001	900000280	Metals		magnesium	39800	MG/KG
MND23-4001	900000283	Metals		magnesium	8030	MG/KG
MND23-4001	900000285	Metals		magnesium	23300	MG/KG
MND23-4002	900000266	Metals		magnesium	53500	MG/KG
MND23-4002	900000267	Metals		magnesium	36800	MG/KG
MND23-4002	900000268	Metals		magnesium	40500	MG/KG
MND23-4002	900000269	Metals		magnesium	36100	MG/KG
MND23-4002	900000270	Metals		magnesium	33000	MG/KG
MND23-4003	900000296	Metals	B	magnesium	9.00	UG/L
MND23-4003	900000271	Metals		magnesium	58000	MG/KG
MND23-4003	900000286	Metals		magnesium	43800	MG/KG
MND23-4003	900000288	Metals		magnesium	36600	MG/KG
MND23-4003	900000289	Metals		magnesium	40500	MG/KG
MND23-4003	900000290	Metals		magnesium	36600	MG/KG
MND23-4003	900000292	Metals		magnesium	43900	MG/KG
MND23-4003	900000293	Metals		magnesium	39300	MG/KG
MND23-4003	900000294	Metals		magnesium	34500	MG/KG
MND23-4003	900000295	Metals		magnesium	41800	MG/KG
MND23-4003	900000291	Metals		magnesium	46400	MG/KG
MND23-4001	900000282	Metals	B	manganese	1.70	UG/L
MND23-4001	900000272	Metals		manganese	259	MG/KG
MND23-4001	900000279	Metals		manganese	243	MG/KG
MND23-4001	900000280	Metals		manganese	247	MG/KG
MND23-4001	900000283	Metals		manganese	561	MG/KG
MND23-4001	900000285	Metals		manganese	557	MG/KG
MND23-4002	900000266	Metals		manganese	198	MG/KG
MND23-4002	900000267	Metals		manganese	282	MG/KG
MND23-4002	900000268	Metals		manganese	319	MG/KG
MND23-4002	900000269	Metals		manganese	409	MG/KG
MND23-4002	900000270	Metals		manganese	297	MG/KG
MND23-4003	900000296	Metals	B	manganese	0.40	UG/L
MND23-4003	900000271	Metals		manganese	443	MG/KG
MND23-4003	900000286	Metals		manganese	217	MG/KG
MND23-4003	900000288	Metals		manganese	268	MG/KG
MND23-4003	900000289	Metals		manganese	266	MG/KG
MND23-4003	900000290	Metals		manganese	254	MG/KG
MND23-4003	900000292	Metals		manganese	262	MG/KG
MND23-4003	900000293	Metals		manganese	269	MG/KG
MND23-4003	900000294	Metals		manganese	192	MG/KG
MND23-4003	900000295	Metals		manganese	294	MG/KG

Table A.2.5 - Central Valley System Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4003	900000291	Metals		manganese	301	MG/KG
MND23-4001	900000272	Metals		molybdenum	2.20	MG/KG
MND23-4001	900000279	Metals	B	molybdenum	2.10	MG/KG
MND23-4001	900000280	Metals		molybdenum	2.50	MG/KG
MND23-4001	900000283	Metals		molybdenum	2.20	MG/KG
MND23-4001	900000285	Metals	B	molybdenum	1.70	MG/KG
MND23-4002	900000266	Metals	B	molybdenum	1.60	MG/KG
MND23-4002	900000267	Metals	B	molybdenum	2	MG/KG
MND23-4002	900000268	Metals	B	molybdenum	1.80	MG/KG
MND23-4002	900000269	Metals		molybdenum	4.20	MG/KG
MND23-4002	900000270	Metals	B	molybdenum	2.20	MG/KG
MND23-4003	900000286	Metals	B	molybdenum	2.20	MG/KG
MND23-4003	900000288	Metals		molybdenum	2.80	MG/KG
MND23-4003	900000289	Metals		molybdenum	3.50	MG/KG
MND23-4003	900000290	Metals		molybdenum	2.90	MG/KG
MND23-4003	900000292	Metals		molybdenum	3.60	MG/KG
MND23-4003	900000293	Metals		molybdenum	3.20	MG/KG
MND23-4003	900000294	Metals		molybdenum	6.50	MG/KG
MND23-4003	900000295	Metals		molybdenum	2.40	MG/KG
MND23-4001	900000282	Metals	B	nickel	2.20	UG/L
MND23-4001	900000272	Metals		nickel	13	MG/KG
MND23-4001	900000279	Metals		nickel	12.60	MG/KG
MND23-4001	900000280	Metals		nickel	12.90	MG/KG
MND23-4001	900000283	Metals		nickel	19	MG/KG
MND23-4001	900000285	Metals		nickel	27.60	MG/KG
MND23-4002	900000266	Metals		nickel	10.20	MG/KG
MND23-4002	900000267	Metals		nickel	16.70	MG/KG
MND23-4002	900000268	Metals		nickel	14.40	MG/KG
MND23-4002	900000269	Metals		nickel	15.10	MG/KG
MND23-4002	900000270	Metals	B	nickel	8.40	MG/KG
MND23-4003	900000271	Metals		nickel	13.3	MG/KG
MND23-4003	900000286	Metals		nickel	13	MG/KG
MND23-4003	900000288	Metals		nickel	13.90	MG/KG
MND23-4003	900000289	Metals		nickel	15	MG/KG
MND23-4003	900000290	Metals		nickel	14	MG/KG
MND23-4003	900000292	Metals		nickel	14.30	MG/KG
MND23-4003	900000293	Metals		nickel	13.10	MG/KG
MND23-4003	900000294	Metals		nickel	10.90	MG/KG
MND23-4003	900000295	Metals		nickel	13.30	MG/KG
MND23-4003	900000291	Metals		nickel	12.5	MG/KG
MND23-4001	900000282	Metals	B	potassium	154.00	UG/L
MND23-4001	900000272	Metals		potassium	2660	MG/KG
MND23-4001	900000279	Metals		potassium	2990	MG/KG
MND23-4001	900000280	Metals		potassium	3180	MG/KG
MND23-4001	900000283	Metals		potassium	4950	MG/KG
MND23-4001	900000285	Metals		potassium	5800	MG/KG
MND23-4002	900000266	Metals		potassium	2580	MG/KG
MND23-4002	900000267	Metals		potassium	3070	MG/KG

Table A.2.5 - Central Valley System Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4002	900000268	Metals		potassium	3360	MG/KG
MND23-4002	900000269	Metals		potassium	4150	MG/KG
MND23-4002	900000270	Metals		potassium	1630	MG/KG
MND23-4003	900000296	Metals	B	potassium	124.00	UG/L
MND23-4003	900000271	Metals		potassium	1190	MG/KG
MND23-4003	900000286	Metals		potassium	2770	MG/KG
MND23-4003	900000288	Metals		potassium	3270	MG/KG
MND23-4003	900000289	Metals		potassium	3150	MG/KG
MND23-4003	900000290	Metals		potassium	2970	MG/KG
MND23-4003	900000292	Metals		potassium	3060	MG/KG
MND23-4003	900000293	Metals		potassium	2810	MG/KG
MND23-4003	900000294	Metals		potassium	1860	MG/KG
MND23-4003	900000295	Metals		potassium	2970	MG/KG
MND23-4003	900000291	Metals		potassium	1560	MG/KG
MND23-4001	900000282	Metals	B	sodium	551.00	UG/L
MND23-4001	900000272	Metals	B	sodium	299	MG/KG
MND23-4001	900000279	Metals	B	sodium	288	MG/KG
MND23-4001	900000280	Metals	B	sodium	269	MG/KG
MND23-4001	900000283	Metals	B	sodium	329	MG/KG
MND23-4001	900000285	Metals	B	sodium	329	MG/KG
MND23-4002	900000266	Metals	B	sodium	379	MG/KG
MND23-4002	900000267	Metals	B	sodium	355	MG/KG
MND23-4002	900000268	Metals	B	sodium	384	MG/KG
MND23-4002	900000269	Metals	B	sodium	376	MG/KG
MND23-4002	900000270	Metals	B	sodium	317	MG/KG
MND23-4003	900000296	Metals	B	sodium	639.00	UG/L
MND23-4003	900000286	Metals	B	sodium	509	MG/KG
MND23-4003	900000288	Metals	B	sodium	355	MG/KG
MND23-4003	900000289	Metals	B	sodium	282	MG/KG
MND23-4003	900000290	Metals	B	sodium	262	MG/KG
MND23-4003	900000292	Metals	B	sodium	282	MG/KG
MND23-4003	900000293	Metals	B	sodium	268	MG/KG
MND23-4003	900000294	Metals	B	sodium	329	MG/KG
MND23-4003	900000295	Metals	B	sodium	377	MG/KG
MND23-4003	900000291	Metals	B	sodium	166	MG/KG
MND23-4003	900000291	Metals	B	thallium	0.24	MG/KG
MND23-4001	900000282	Metals	B	vanadium	0.95	UG/L
MND23-4001	900000272	Metals		vanadium	11.70	MG/KG
MND23-4001	900000279	Metals		vanadium	12.20	MG/KG
MND23-4001	900000280	Metals		vanadium	12.80	MG/KG
MND23-4001	900000283	Metals		vanadium	15.60	MG/KG
MND23-4001	900000285	Metals		vanadium	20.20	MG/KG
MND23-4002	900000266	Metals		vanadium	12.30	MG/KG
MND23-4002	900000267	Metals		vanadium	12.20	MG/KG
MND23-4002	900000268	Metals		vanadium	14	MG/KG
MND23-4002	900000269	Metals		vanadium	14.40	MG/KG
MND23-4002	900000270	Metals		vanadium	8.40	MG/KG
MND23-4003	900000271	Metals	B	vanadium	11.5	MG/KG

Table A.2.5 - Central Valley System Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4003	900000286	Metals		vanadium	12.50	MG/KG
MND23-4003	900000288	Metals		vanadium	14.70	MG/KG
MND23-4003	900000289	Metals		vanadium	14.30	MG/KG
MND23-4003	900000290	Metals		vanadium	13.70	MG/KG
MND23-4003	900000292	Metals		vanadium	13.40	MG/KG
MND23-4003	900000293	Metals		vanadium	12.80	MG/KG
MND23-4003	900000294	Metals		vanadium	11.10	MG/KG
MND23-4003	900000295	Metals		vanadium	13.10	MG/KG
MND23-4003	900000291	Metals		vanadium	18.8	MG/KG
MND23-4001	900000282	Metals	B	zinc	1.60	UG/L
MND23-4001	900000272	Metals		zinc	30	MG/KG
MND23-4001	900000279	Metals		zinc	23.30	MG/KG
MND23-4001	900000280	Metals		zinc	32.80	MG/KG
MND23-4001	900000283	Metals		zinc	36.40	MG/KG
MND23-4001	900000285	Metals		zinc	47.20	MG/KG
MND23-4002	900000266	Metals		zinc	27.60	MG/KG
MND23-4002	900000267	Metals		zinc	46.30	MG/KG
MND23-4002	900000268	Metals		zinc	33.90	MG/KG
MND23-4002	900000269	Metals		zinc	33.40	MG/KG
MND23-4002	900000270	Metals		zinc	26.30	MG/KG
MND23-4003	900000271	Metals		zinc	42.4	MG/KG
MND23-4003	900000286	Metals		zinc	33.30	MG/KG
MND23-4003	900000288	Metals		zinc	31.80	MG/KG
MND23-4003	900000289	Metals		zinc	32.10	MG/KG
MND23-4003	900000290	Metals		zinc	33.60	MG/KG
MND23-4003	900000292	Metals		zinc	30.60	MG/KG
MND23-4003	900000293	Metals		zinc	30.60	MG/KG
MND23-4003	900000294	Metals		zinc	50.50	MG/KG
MND23-4003	900000295	Metals		zinc	33	MG/KG
MND23-4003	900000291	Metals		zinc	43.3	MG/KG
MND23-4001	900000272	Pesticides and/or PCBs	JP	4,4'-DDE	0.28	UG/KG
MND23-4001	900000272	Pesticides and/or PCBs	JP	4,4'-DDT	0.37	UG/KG
MND23-4001	900000279	Pesticides and/or PCBs	JP	4,4'-DDT	0.26	UG/KG
MND23-4002	900000267	Pesticides and/or PCBs	JP	4,4'-DDT	0.43	UG/KG
MND23-4002	900000268	Pesticides and/or PCBs	JP	4,4'-DDT	0.31	UG/KG
MND23-4002	900000269	Pesticides and/or PCBs	JP	4,4'-DDT	0.33	UG/KG
MND23-4003	900000288	Pesticides and/or PCBs	J	4,4'-DDT	0.14	UG/KG
MND23-4003	900000289	Pesticides and/or PCBs	J	4,4'-DDT	0.80	UG/KG
MND23-4003	900000293	Pesticides and/or PCBs	JP	4,4'-DDT	0.37	UG/KG
MND23-4003	900000294	Pesticides and/or PCBs	J	4,4'-DDT	0.43	UG/KG
MND23-4002	900000270	Pesticides and/or PCBs	JP	endosulfan I	0.096	UG/KG
MND23-4001	900000280	Pesticides and/or PCBs	JP	endosulfan II	0.46	UG/KG
MND23-4001	900000280	Pesticides and/or PCBs	JP	endrin aldehyde	0.18	UG/KG
MND23-4003	900000296	Pesticides and/or PCBs	J	gamma-BHC (lindane)	0.0015	UG/L
MND23-4001	900000285	Radiological		plutonium-238	.411	PCI/G
MND23-4002	900000266	Radiological		plutonium-238	1.86	PCI/G
MND23-4002	900000269	Radiological		plutonium-238	.209	PCI/G
MND23-4003	900000271	Radiological		plutonium-238	0.27	PCI/G

Table A.2.5 - Central Valley System Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4003	900000286	Radiological		plutonium-238	.414	PCI/G
MND23-4002	900000269	Radiological		plutonium-239/240	.0123	PCI/G
MND23-4001	900000282	Radiological		potassium-40	218	PCI/L
MND23-4001	900000272	Radiological		potassium-40	13.1	PCI/G
MND23-4001	900000279	Radiological		potassium-40	13.4	PCI/G
MND23-4001	900000280	Radiological		potassium-40	15	PCI/G
MND23-4001	900000283	Radiological		potassium-40	24.3	PCI/G
MND23-4001	900000285	Radiological		potassium-40	27.5	PCI/G
MND23-4002	900000266	Radiological		potassium-40	12.2	PCI/G
MND23-4002	900000267	Radiological		potassium-40	16.1	PCI/G
MND23-4002	900000268	Radiological		potassium-40	15.5	PCI/G
MND23-4002	900000269	Radiological		potassium-40	13.4	PCI/G
MND23-4002	900000270	Radiological		potassium-40	9.82	PCI/G
MND23-4003	900000296	Radiological		potassium-40	200	PCI/L
MND23-4003	900000271	Radiological		potassium-40	10.60	PCI/G
MND23-4003	900000286	Radiological		potassium-40	14.4	PCI/G
MND23-4003	900000288	Radiological		potassium-40	11	PCI/G
MND23-4003	900000289	Radiological		potassium-40	11.7	PCI/G
MND23-4003	900000290	Radiological		potassium-40	12.4	PCI/G
MND23-4003	900000292	Radiological		potassium-40	15.7	PCI/G
MND23-4003	900000293	Radiological		potassium-40	15.9	PCI/G
MND23-4003	900000294	Radiological		potassium-40	10.7	PCI/G
MND23-4003	900000295	Radiological		potassium-40	8.69	PCI/G
MND23-4003	900000291	Radiological		potassium-40	12.45	PCI/G
MND23-4001	900000282	Radiological		radium-226	.234	PCI/L
MND23-4001	900000272	Radiological		radium-226	.966	PCI/G
MND23-4001	900000279	Radiological		radium-226	1.27	PCI/G
MND23-4001	900000280	Radiological		radium-226	.746	PCI/G
MND23-4001	900000283	Radiological		radium-226	.773	PCI/G
MND23-4001	900000285	Radiological		radium-226	.98	PCI/G
MND23-4002	900000266	Radiological		radium-226	.872	PCI/G
MND23-4002	900000267	Radiological		radium-226	.74	PCI/G
MND23-4002	900000268	Radiological		radium-226	.801	PCI/G
MND23-4002	900000269	Radiological		radium-226	.585	PCI/G
MND23-4002	900000270	Radiological		radium-226	.688	PCI/G
MND23-4003	900000296	Radiological		radium-226	.16	PCI/L
MND23-4003	900000271	Radiological		radium-226	0.67	PCI/G
MND23-4003	900000286	Radiological		radium-226	1.01	PCI/G
MND23-4003	900000288	Radiological		radium-226	.629	PCI/G
MND23-4003	900000289	Radiological		radium-226	.938	PCI/G
MND23-4003	900000290	Radiological		radium-226	.907	PCI/G
MND23-4003	900000292	Radiological		radium-226	.87	PCI/G
MND23-4003	900000293	Radiological		radium-226	1	PCI/G
MND23-4003	900000294	Radiological		radium-226	.668	PCI/G
MND23-4003	900000295	Radiological		radium-226	1.13	PCI/G
MND23-4003	900000291	Radiological		radium-226	0.78	PCI/G
MND23-4001	900000272	Radiological		thorium-228	.503	PCI/G
MND23-4001	900000279	Radiological		thorium-228	.576	PCI/G

Table A.2.5 - Central Valley System Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4001	900000280	Radiological		thorium-228	.61	PCI/G
MND23-4001	900000283	Radiological		thorium-228	1.18	PCI/G
MND23-4001	900000285	Radiological		thorium-228	1.04	PCI/G
MND23-4002	900000266	Radiological		thorium-228	.513	PCI/G
MND23-4002	900000267	Radiological		thorium-228	.97	PCI/G
MND23-4002	900000268	Radiological		thorium-228	.779	PCI/G
MND23-4002	900000269	Radiological		thorium-228	.647	PCI/G
MND23-4002	900000270	Radiological		thorium-228	.371	PCI/G
MND23-4003	900000271	Radiological		thorium-228	0.43	PCI/G
MND23-4003	900000286	Radiological		thorium-228	.565	PCI/G
MND23-4003	900000288	Radiological		thorium-228	.623	PCI/G
MND23-4003	900000289	Radiological		thorium-228	.659	PCI/G
MND23-4003	900000290	Radiological		thorium-228	.599	PCI/G
MND23-4003	900000292	Radiological		thorium-228	.679	PCI/G
MND23-4003	900000293	Radiological		thorium-228	.594	PCI/G
MND23-4003	900000294	Radiological		thorium-228	.37	PCI/G
MND23-4003	900000295	Radiological		thorium-228	.574	PCI/G
MND23-4001	900000272	Radiological		thorium-230	.927	PCI/G
MND23-4001	900000279	Radiological		thorium-230	.94	PCI/G
MND23-4001	900000280	Radiological		thorium-230	.964	PCI/G
MND23-4001	900000283	Radiological		thorium-230	1.15	PCI/G
MND23-4001	900000285	Radiological		thorium-230	.726	PCI/G
MND23-4002	900000266	Radiological		thorium-230	1.14	PCI/G
MND23-4002	900000267	Radiological		thorium-230	1.34	PCI/G
MND23-4002	900000268	Radiological		thorium-230	1.12	PCI/G
MND23-4002	900000269	Radiological		thorium-230	.98	PCI/G
MND23-4002	900000270	Radiological		thorium-230	1.03	PCI/G
MND23-4003	900000271	Radiological		thorium-230	0.80	PCI/G
MND23-4003	900000286	Radiological		thorium-230	.941	PCI/G
MND23-4003	900000288	Radiological		thorium-230	1.04	PCI/G
MND23-4003	900000289	Radiological		thorium-230	.876	PCI/G
MND23-4003	900000290	Radiological		thorium-230	1.02	PCI/G
MND23-4003	900000292	Radiological		thorium-230	1.29	PCI/G
MND23-4003	900000293	Radiological		thorium-230	1.08	PCI/G
MND23-4003	900000294	Radiological		thorium-230	.778	PCI/G
MND23-4003	900000295	Radiological		thorium-230	1.04	PCI/G
MND23-4003	900000291	Radiological		thorium-230	0.60	PCI/G
MND23-4001	900000272	Radiological		thorium-232	.585	PCI/G
MND23-4001	900000279	Radiological		thorium-232	.529	PCI/G
MND23-4001	900000280	Radiological		thorium-232	.521	PCI/G
MND23-4001	900000283	Radiological		thorium-232	1.09	PCI/G
MND23-4001	900000285	Radiological		thorium-232	.762	PCI/G
MND23-4002	900000266	Radiological		thorium-232	.502	PCI/G
MND23-4002	900000267	Radiological		thorium-232	.776	PCI/G
MND23-4002	900000268	Radiological		thorium-232	.619	PCI/G
MND23-4002	900000269	Radiological		thorium-232	.417	PCI/G
MND23-4002	900000270	Radiological		thorium-232	.45	PCI/G
MND23-4003	900000271	Radiological		thorium-232	0.39	PCI/G

Table A.2.5 - Central Valley System Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4003	900000286	Radiological		thorium-232	.6	PCI/G
MND23-4003	900000288	Radiological		thorium-232	.484	PCI/G
MND23-4003	900000289	Radiological		thorium-232	.549	PCI/G
MND23-4003	900000290	Radiological		thorium-232	.557	PCI/G
MND23-4003	900000292	Radiological		thorium-232	.705	PCI/G
MND23-4003	900000293	Radiological		thorium-232	.683	PCI/G
MND23-4003	900000294	Radiological		thorium-232	.438	PCI/G
MND23-4003	900000295	Radiological		thorium-232	.6	PCI/G
MND23-4003	900000291	Radiological		thorium-232	0.26	PCI/G
MND23-4003	900000296	Radiological		tritium	399	PCI/L
MND23-4001	900000272	Radiological		uranium-234	.851	PCI/G
MND23-4001	900000279	Radiological		uranium-234	.757	PCI/G
MND23-4001	900000280	Radiological		uranium-234	1.01	PCI/G
MND23-4001	900000283	Radiological		uranium-234	.732	PCI/G
MND23-4001	900000285	Radiological		uranium-234	.79	PCI/G
MND23-4002	900000266	Radiological		uranium-234	.685	PCI/G
MND23-4002	900000267	Radiological		uranium-234	.84	PCI/G
MND23-4002	900000268	Radiological		uranium-234	.673	PCI/G
MND23-4002	900000269	Radiological		uranium-234	.655	PCI/G
MND23-4002	900000270	Radiological		uranium-234	.684	PCI/G
MND23-4003	900000271	Radiological		uranium-234	0.73	PCI/G
MND23-4003	900000286	Radiological		uranium-234	1.12	PCI/G
MND23-4003	900000288	Radiological		uranium-234	.964	PCI/G
MND23-4003	900000289	Radiological		uranium-234	.735	PCI/G
MND23-4003	900000290	Radiological		uranium-234	.967	PCI/G
MND23-4003	900000292	Radiological		uranium-234	.859	PCI/G
MND23-4003	900000293	Radiological		uranium-234	.806	PCI/G
MND23-4003	900000294	Radiological		uranium-234	.656	PCI/G
MND23-4003	900000295	Radiological		uranium-234	.856	PCI/G
MND23-4003	900000291	Radiological		uranium-234	0.89	PCI/G
MND23-4001	900000272	Radiological		uranium-235	.039	PCI/G
MND23-4001	900000283	Radiological		uranium-235	.0661	PCI/G
MND23-4002	900000269	Radiological		uranium-235	.0611	PCI/G
MND23-4003	900000290	Radiological		uranium-235	.037	PCI/G
MND23-4003	900000292	Radiological		uranium-235	.0654	PCI/G
MND23-4003	900000293	Radiological		uranium-235	.0756	PCI/G
MND23-4003	900000295	Radiological		uranium-235	.0671	PCI/G
MND23-4003	900000291	Radiological		uranium-235	0.07	PCI/G
MND23-4001	900000272	Radiological		uranium-238	.909	PCI/G
MND23-4001	900000279	Radiological		uranium-238	1.16	PCI/G
MND23-4001	900000280	Radiological		uranium-238	1.2	PCI/G
MND23-4001	900000283	Radiological		uranium-238	.897	PCI/G
MND23-4001	900000285	Radiological		uranium-238	.739	PCI/G
MND23-4002	900000266	Radiological		uranium-238	.79	PCI/G
MND23-4002	900000267	Radiological		uranium-238	.869	PCI/G
MND23-4002	900000268	Radiological		uranium-238	.785	PCI/G
MND23-4002	900000269	Radiological		uranium-238	.533	PCI/G
MND23-4002	900000270	Radiological		uranium-238	.939	PCI/G

Table A.2.5 - Central Valley System Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4003	900000271	Radiological		uranium-238	0.85	PCI/G
MND23-4003	900000286	Radiological		uranium-238	.969	PCI/G
MND23-4003	900000288	Radiological		uranium-238	1.17	PCI/G
MND23-4003	900000289	Radiological		uranium-238	1.04	PCI/G
MND23-4003	900000290	Radiological		uranium-238	.893	PCI/G
MND23-4003	900000292	Radiological		uranium-238	.768	PCI/G
MND23-4003	900000293	Radiological		uranium-238	.759	PCI/G
MND23-4003	900000294	Radiological		uranium-238	.589	PCI/G
MND23-4003	900000295	Radiological		uranium-238	1.03	PCI/G
MND23-4003	900000291	Radiological		uranium-238	0.93	PCI/G
MND23-4001	900000279	Semi-Volatile Organics	J	benzo(a)anthracene	19	UG/KG
MND23-4003	900000286	Semi-Volatile Organics	J	benzo(a)anthracene	68	UG/KG
MND23-4003	900000286	Semi-Volatile Organics	J	benzo(a)pyrene	52	UG/KG
MND23-4001	900000272	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	26	UG/KG
MND23-4003	900000286	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	72	UG/KG
MND23-4003	900000286	Semi-Volatile Organics	J	benzo(g,h,i)perylene	60	UG/KG
MND23-4001	900000272	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	27	UG/KG
MND23-4003	900000286	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	65	UG/KG
MND23-4001	900000282	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	2	UG/L
MND23-4002	900000266	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	95	UG/KG
MND23-4002	900000267	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	71	UG/KG
MND23-4002	900000268	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	98	UG/KG
MND23-4002	900000269	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	84	UG/KG
MND23-4002	900000270	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	110	UG/KG
MND23-4003	900000286	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	120	UG/KG
MND23-4003	900000291	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	48	UG/KG
MND23-4001	900000279	Semi-Volatile Organics	J	butyl benzyl phthalate	4	UG/KG
MND23-4003	900000286	Semi-Volatile Organics	J	butyl benzyl phthalate	74	UG/KG
MND23-4003	900000291	Semi-Volatile Organics	BJ	butyl benzyl phthalate	250	UG/KG
MND23-4001	900000279	Semi-Volatile Organics	J	chrysene	21	UG/KG
MND23-4003	900000286	Semi-Volatile Organics	J	chrysene	67	UG/KG
MND23-4002	900000266	Semi-Volatile Organics	J	di-n-octyl phthalate	64	UG/KG
MND23-4002	900000267	Semi-Volatile Organics	J	di-n-octyl phthalate	46	UG/KG
MND23-4002	900000268	Semi-Volatile Organics	J	di-n-octyl phthalate	53	UG/KG
MND23-4002	900000269	Semi-Volatile Organics	J	di-n-octyl phthalate	52	UG/KG
MND23-4002	900000270	Semi-Volatile Organics	J	di-n-octyl phthalate	86	UG/KG
MND23-4003	900000286	Semi-Volatile Organics	J	di-n-octyl phthalate	120	UG/KG
MND23-4003	900000286	Semi-Volatile Organics	J	dibenz(a,h)anthracene	56	UG/KG
MND23-4001	900000272	Semi-Volatile Organics	J	fluoranthene	53	UG/KG
MND23-4001	900000279	Semi-Volatile Organics	J	fluoranthene	39	UG/KG
MND23-4003	900000286	Semi-Volatile Organics	J	fluoranthene	37	UG/KG
MND23-4003	900000286	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	58	UG/KG
MND23-4001	900000272	Semi-Volatile Organics	J	phenanthrene	45	UG/KG
MND23-4001	900000279	Semi-Volatile Organics	J	phenanthrene	46	UG/KG
MND23-4001	900000272	Semi-Volatile Organics	J	pyrene	50	UG/KG
MND23-4001	900000279	Semi-Volatile Organics	J	pyrene	39	UG/KG
MND23-4003	900000286	Semi-Volatile Organics	J	pyrene	49	UG/KG
MND23-4001	900000282	Volatile Organics		acetonitrile	190	UG/L

Table A.2.5 - Central Valley System Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4001	900000280	Volatile Organics	J	acetonitrile	60	UG/KG
MND23-4001	900000282	Volatile Organics	J	acrylonitrile	49	UG/L
MND23-4002	900000266	Volatile Organics	J	acrylonitrile	10	UG/KG
MND23-4003	900000286	Volatile Organics	J	hexane	2	UG/KG
MND23-4003	900000288	Volatile Organics	J	hexane	3	UG/KG
MND23-4001	900000272	Volatile Organics	J	toluene	1	UG/KG
MND23-4003	900000271	Volatile Organics	J	toluene	3	UG/KG

APPENDIX A.3

Appendix A-3

Miami-Erie Canal

Tables Indicating Detections Above Background

A.3.1 Surface Water

A.3.2 Sediments

A.3.3 Subsurface Soils

Appendix A-3

Miami-Erie Canal

Tables Indicating Detections Above Background

A.3.1 Surface Water

Table A.3.1 - Miami Erie Canal, Overflow Creek
NPDES Outfall 002 - Surface Water Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-2401	000334	Common Anions		chloride	351	MG/L	yes
MND21-2601	000345	Common Anions		chloride	272	MG/L	yes
MND21-2602	000346	Common Anions		chloride	394	MG/L	yes
MND21-2604	000348	Common Anions		chloride	744	MG/L	yes
MND21-2604	900000082	Common Anions		chloride	156	MG/L	yes
MND21-2605	900000083	Common Anions		fluoride	0.545	MG/L	no
MND21-2601	900000078	Explosives	JB	RDX	3.9	UG/L	no
MND21-2604	900000082	Explosives	JB	RDX	5.3	UG/L	no
MND21-2401	000334	General Chemistry		Alkalinity	317	MG/L	no
MND21-2601	000345	General Chemistry		Alkalinity	375	MG/L	no
MND21-2602	000346	General Chemistry		Alkalinity	381	MG/L	no
MND21-2604	000348	General Chemistry		Alkalinity	350	MG/L	no
MND21-2605	000349	General Chemistry		Alkalinity	232	MG/L	no
MND21-2401	000334	General Chemistry		ammonia	0.36	MG/L	no
MND21-2601	000345	General Chemistry		ammonia	0.116	MG/L	no
MND21-2602	000346	General Chemistry		ammonia	0.184	MG/L	no
MND21-2604	000348	General Chemistry		ammonia	0.148	MG/L	no
MND21-2401	000334	General Chemistry		Dissolved Solids	996	MG/L	no
MND21-2601	000345	General Chemistry		Dissolved Solids	978	MG/L	no
MND21-2602	000346	General Chemistry		Dissolved Solids	1190	MG/L	no
MND21-2604	000348	General Chemistry		Dissolved Solids	1820	MG/L	no
MND21-2401	000334	Metals		aluminum	594	UG/L	no
MND21-2601	000345	Metals		aluminum	386	UG/L	no
MND21-2602	000346	Metals		aluminum	421	UG/L	no
MND21-2604	000348	Metals		aluminum	371	UG/L	no
MND21-2605	000349	Metals		aluminum	2050	UG/L	no
MND21-2602	900000080	Metals	B	antimony	2.6	UG/L	no
MND21-2605	000349	Metals	B	antimony	5.1	UG/L	no
MND21-2605	900000083	Metals	B	antimony	8.3	UG/L	yes
MND21-2401	000334	Metals	B	arsenic	1.7	UG/L	yes
MND21-2604	000348	Metals	B	barium	119	UG/L	yes
MND21-2604	000348	Metals	B	barium	110	UG/L	no
MND21-2401	000334	Metals	B	beryllium	0.22	UG/L	no
MND21-2604	000348	Metals		calcium	147000	UG/L	yes
MND21-2601	000345	Metals	B	cobalt	0.92	UG/L	yes
MND21-2605	000349	Metals	B	cobalt	0.89	UG/L	no
MND21-2605	000349	Metals	B	cobalt	0.7	UG/L	yes
MND21-2605	900000083	Metals	B	cobalt	0.72	UG/L	no
MND21-2401	000334	Metals		copper	28.5	UG/L	no
MND21-2401	000334	Metals	B	copper	15.9	UG/L	yes
MND21-2401	900000020	Metals		copper	52.1	UG/L	no
MND21-2401	900000020	Metals		copper	31.4	UG/L	yes
MND21-2601	000345	Metals		copper	48.8	UG/L	no
MND21-2601	000345	Metals		copper	31.1	UG/L	yes
MND21-2601	900000078	Metals		copper	71.8	UG/L	no
MND21-2601	900000078	Metals		copper	33.3	UG/L	yes
MND21-2602	000346	Metals	B	copper	21	UG/L	no
MND21-2602	000346	Metals	B	copper	11.5	UG/L	yes
MND21-2602	900000080	Metals		copper	33.3	UG/L	no
MND21-2602	900000080	Metals	B	copper	21.7	UG/L	yes

Table A.3.1 - Miami Erie Canal, Overflow Creek
NPDES Outfall 002 - Surface Water Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-2604	000348	Metals	B	copper	16.6	UG/L	no
MND21-2604	000348	Metals	B	copper	9.7	UG/L	yes
MND21-2604	900000082	Metals		copper	30.1	UG/L	no
MND21-2604	900000082	Metals	B	copper	16.8	UG/L	yes
MND21-2605	900000083	Metals	B	copper	7.9	UG/L	yes
MND21-2605	900000083	Metals	B	copper	6.5	UG/L	no
MND21-2601	000345	Metals		cyanide	47.7	UG/L	no
MND21-2605	900000083	Metals		cyanide	10.2	UG/L	yes
MND21-2401	000334	Metals	B	lithium	5.2	UG/L	yes
MND21-2601	000345	Metals	B	lithium	5.8	UG/L	yes
MND21-2604	000348	Metals	B	lithium	5.7	UG/L	yes
MND21-2605	000349	Metals	B	lithium	4	UG/L	yes
MND21-2605	900000083	Metals	B	lithium	7.7	UG/L	no
MND21-2401	000334	Metals		molybdenum	271	UG/L	yes
MND21-2401	900000020	Metals		molybdenum	342	UG/L	yes
MND21-2601	000345	Metals		molybdenum	322	UG/L	yes
MND21-2601	900000078	Metals		molybdenum	187	UG/L	yes
MND21-2602	000346	Metals		molybdenum	311	UG/L	yes
MND21-2602	900000080	Metals		molybdenum	77.9	UG/L	yes
MND21-2604	000348	Metals		molybdenum	247	UG/L	yes
MND21-2604	900000082	Metals		molybdenum	214	UG/L	yes
MND21-2605	000349	Metals		molybdenum	62.3	UG/L	yes
MND21-2605	900000083	Metals		molybdenum	46.3	UG/L	yes
MND21-2401	900000020	Metals	B	nickel	2.4	UG/L	yes
MND21-2601	900000078	Metals	B	nickel	1.5	UG/L	yes
MND21-2602	900000080	Metals	B	nickel	1.7	UG/L	yes
MND21-2604	900000082	Metals	B	nickel	2.1	UG/L	yes
MND21-2605	900000083	Metals	B	nickel	4.6	UG/L	yes
MND21-2604	000348	Metals		potassium	7450	UG/L	yes
MND21-2604	000348	Metals		potassium	6580	UG/L	no
MND21-2605	900000083	Metals		potassium	8150	UG/L	yes
MND21-2605	900000083	Metals		potassium	7430	UG/L	no
MND21-2401	900000020	Metals	B	silver	2.4	UG/L	no
MND21-2604	000348	Metals		sodium	377000	UG/L	yes
MND21-2604	000348	Metals		sodium	348000	UG/L	no
MND21-2601	900000078	Metals		vanadium	0.79	UG/L	no
MND21-2602	900000080	Metals		vanadium	1.2	UG/L	no
MND21-2604	900000082	Metals		vanadium	0.7	UG/L	no
MND21-2605	000349	Metals	B	vanadium	4.7	UG/L	no
MND21-2605	900000083	Metals	B	vanadium	2.3	UG/L	no
MND21-2401	000334	Radiological		plutonium-238	0.651	PCI/L	no
MND21-2601	900000078	Radiological		plutonium-238	0.647	PCI/L	no
MND21-2602	000346	Radiological		plutonium-238	4.78	PCI/L	no
MND21-2602	900000080	Radiological		plutonium-238	3.57	PCI/L	no
MND21-2604	000348	Radiological		plutonium-238	3.23	PCI/L	no
MND21-2604	900000082	Radiological		plutonium-238	3.64	PCI/L	no
MND21-2605	000349	Radiological		plutonium-238	1.65	PCI/L	no
MND21-2605	900000083	Radiological		plutonium-238	0.793	PCI/L	no
MND21-2401	900000020	Radiological		strontium-90	0.617	PCI/L	no
MND21-2401	900000020	Radiological		thorium-228	0.19	PCI/L	no

Table A.3.1 - Miami Erie Canal, Overflow Creek
NPDES Outfall 002 - Surface Water Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-2602	000346	Radiological		thorium-230	0.256	PCI/L	no
MND21-2401	000334	Radiological		tritium	2050	PCI/L	no
MND21-2401	900000020	Radiological		tritium	3370	PCI/L	no
MND21-2601	000345	Radiological		tritium	2220	PCI/L	no
MND21-2601	900000078	Radiological		tritium	3730	PCI/L	no
MND21-2602	000346	Radiological		tritium	2610	PCI/L	no
MND21-2602	900000080	Radiological		tritium	3830	PCI/L	no
MND21-2604	000348	Radiological		tritium	2260	PCI/L	no
MND21-2604	900000082	Radiological		tritium	3610	PCI/L	no
MND21-2605	000349	Radiological		tritium	466	PCI/L	no
MND21-2605	900000083	Radiological		tritium	499	PCI/L	no
MND21-2601	000345	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	2	UG/L	no
MND21-2401	900000020	Semi-Volatile Organics	J	phenol	2	UG/L	no
MND21-2601	900000078	Semi-Volatile Organics	J	phenol	2	UG/L	no
MND21-2401	900000020	Volatile Organics	J	chloromethane	2	UG/L	no

Appendix A-3

Miami-Erie Canal

Tables Indicating Detections Above Background

A.3.2 Sediments

Table A.3.2 - Miami Erie Canal Overflow Creek
NPDES Outfall 002 Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2602	900000068	Explosives	J	2-amino-4,6-dinitrotoluene	0.053	MG/KG
MND22-2605	900000074	Explosives	J	HMX	0.61	MG/KG
MND22-2607	900000076	Explosives	J	HMX	0.1	MG/KG
MND22-2602	900000068	Explosives	J	nitrobenzene	0.78	MG/KG
MND22-2401	900000130	Explosives	J	RDX	0.59	MG/KG
MND22-2402	900000131	Explosives	J	RDX	2.1	MG/KG
MND22-2403	900000132	Explosives	J	RDX	0.88	MG/KG
MND22-2404	900000133	Explosives	J	RDX	0.99	MG/KG
MND22-2601	900000067	Explosives	J	RDX	1.5	MG/KG
MND22-2602	900000068	Explosives	J	RDX	1.8	MG/KG
MND22-2603	900000070	Explosives	J	RDX	0.66	MG/KG
MND22-2605	900000074	Explosives	J	RDX	0.72	MG/KG
MND22-2606	900000075	Explosives	J	RDX	1.2	MG/KG
MND22-2607	900000076	Explosives	J	RDX	0.8	MG/KG
MND22-2403	000415	Metals		aluminum	11100	MG/KG
MND22-2403	900000132	Metals		aluminum	10400	MG/KG
MND22-2401	000413	Metals	B	antimony	0.6	MG/KG
MND22-2402	000414	Metals	B	antimony	0.61	MG/KG
MND22-2403	000415	Metals	B	antimony	0.59	MG/KG
MND22-2602	900000068	Metals	B	antimony	0.74	MG/KG
MND22-2604	000436	Metals	B	antimony	0.45	MG/KG
MND22-2605	000437	Metals	B	antimony	0.48	MG/KG
MND22-2606	000438	Metals	B	antimony	0.53	MG/KG
MND22-2607	900000076	Metals	B	antimony	0.7	MG/KG
MND22-2403	000415	Metals		beryllium	0.63	MG/KG
MND22-2403	900000132	Metals		beryllium	0.5	MG/KG
MND22-2602	000434	Metals		beryllium	0.58	MG/KG
MND22-2602	900000068	Metals		beryllium	0.58	MG/KG
MND22-2606	000438	Metals		beryllium	0.5	MG/KG
MND22-2606	900000075	Metals		beryllium	0.55	MG/KG
MND22-2602	000434	Metals	B	bismuth	2	MG/KG
MND22-2602	900000068	Metals	B	bismuth	1.5	MG/KG
MND22-2602	900000068	Metals	B	cadmium	1.1	MG/KG
MND22-2401	000413	Metals		chromium	31	MG/KG
MND22-2403	900000132	Metals		chromium	15.3	MG/KG
MND22-2404	900000133	Metals		chromium	16.1	MG/KG
MND22-2601	900000067	Metals		chromium	18.9	MG/KG
MND22-2602	000434	Metals		chromium	36.6	MG/KG
MND22-2602	900000068	Metals		chromium	84.1	MG/KG
MND22-2605	000437	Metals		chromium	17.7	MG/KG
MND22-2606	000438	Metals		chromium	15.2	MG/KG
MND22-2606	900000075	Metals		chromium	22.9	MG/KG
MND22-2607	900000076	Metals		chromium	18.7	MG/KG
MND22-2401	000413	Metals		copper	86.7	MG/KG
MND22-2402	900000131	Metals		copper	36.3	MG/KG
MND22-2404	000416	Metals		copper	41.7	MG/KG
MND22-2404	900000133	Metals		copper	43	MG/KG
MND22-2601	000433	Metals		copper	32.3	MG/KG
MND22-2602	000434	Metals		copper	62.9	MG/KG
MND22-2602	900000068	Metals		copper	126	MG/KG
MND22-2605	000437	Metals		copper	63.4	MG/KG

Table A.3.2 - Miami Erie Canal Overflow Creek
NPDES Outfall 002 Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2606	900000075	Metals		copper	73.1	MG/KG
MND22-2607	900000076	Metals		copper	51.1	MG/KG
MND22-2602	900000068	Metals		lead	36.9	MG/KG
MND22-2603	900000070	Metals		lead	224	MG/KG
MND22-2606	900000075	Metals		lead	57.5	MG/KG
MND22-2607	900000076	Metals		lead	37.4	MG/KG
MND22-2403	000415	Metals	B	lithium	14	MG/KG
MND22-2602	000434	Metals	B	lithium	14.2	MG/KG
MND22-2602	900000068	Metals	B	lithium	14.6	MG/KG
MND22-2606	900000075	Metals	B	lithium	14.4	MG/KG
MND22-2602	000434	Metals		mercury	0.83	MG/KG
MND22-2602	900000068	Metals		mercury	0.63	MG/KG
MND22-2401	000413	Metals		molybdenum	16.4	MG/KG
MND22-2401	900000130	Metals		molybdenum	13.1	MG/KG
MND22-2404	000416	Metals		molybdenum	7.2	MG/KG
MND22-2404	900000133	Metals		molybdenum	6.3	MG/KG
MND22-2602	900000068	Metals		molybdenum	9.6	MG/KG
MND22-2606	000438	Metals	B	molybdenum	4.1	MG/KG
MND22-2606	900000075	Metals		molybdenum	9.8	MG/KG
MND22-2602	000434	Metals		nickel	19.1	MG/KG
MND22-2403	000415	Metals		potassium	1910	MG/KG
MND22-2602	000434	Metals		potassium	2040	MG/KG
MND22-2602	900000068	Metals		potassium	2800	MG/KG
MND22-2603	900000070	Metals		potassium	1850	MG/KG
MND22-2606	900000075	Metals		potassium	2510	MG/KG
MND22-2607	900000076	Metals		potassium	2330	MG/KG
MND22-2401	000413	Metals		silver	9.7	MG/KG
MND22-2402	900000131	Metals	B	silver	0.92	MG/KG
MND22-2404	000416	Metals	B	silver	0.24	MG/KG
MND22-2404	900000133	Metals	B	silver	1.1	MG/KG
MND22-2601	000433	Metals	B	silver	0.13	MG/KG
MND22-2601	900000067	Metals	B	silver	0.62	MG/KG
MND22-2602	000434	Metals		silver	11.8	MG/KG
MND22-2602	900000068	Metals		silver	10.8	MG/KG
MND22-2605	000437	Metals		silver	4.5	MG/KG
MND22-2606	000438	Metals	B	silver	0.67	MG/KG
MND22-2606	900000075	Metals	B	silver	1.4	MG/KG
MND22-2401	000413	Metals	B	sodium	1050	MG/KG
MND22-2402	000414	Metals	B	sodium	704	MG/KG
MND22-2403	000415	Metals	B	sodium	814	MG/KG
MND22-2404	000416	Metals	B	sodium	820	MG/KG
MND22-2602	000434	Metals	B	sodium	882	MG/KG
MND22-2602	900000068	Metals	B	sodium	786	MG/KG
MND22-2605	000437	Metals	B	sodium	809	MG/KG
MND22-2606	000438	Metals	B	sodium	806	MG/KG
MND22-2606	900000075	Metals	B	sodium	909	MG/KG
MND22-2401	000413	Metals	B	tin	5.4	MG/KG
MND22-2401	900000130	Metals	B	tin	3.8	MG/KG
MND22-2402	900000131	Metals	B	tin	3.3	MG/KG
MND22-2403	900000132	Metals	B	tin	3.3	MG/KG
MND22-2404	900000133	Metals	B	tin	3.1	MG/KG

Table A.3.2 - Miami Erie Canal Overflow Creek
NPDES Outfall 002 Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2602	900000068	Metals	B	tin	4.8	MG/KG
MND22-2605	000437	Metals	B	tin	3.1	MG/KG
MND22-2607	000439	Metals	B	tin	4.2	MG/KG
MND22-2401	000413	Metals		zinc	151	MG/KG
MND22-2602	000434	Metals		zinc	125	MG/KG
MND22-2602	900000068	Metals		zinc	188	MG/KG
MND22-2606	900000075	Metals		zinc	95.3	MG/KG
MND22-2604	900000072	Pesticides and/or PCBs	J	4,4'-DDT	3.3	UG/KG
MND22-2605	900000074	Pesticides and/or PCBs		alpha-chlordane	2.8	UG/KG
MND22-2602	900000068	Pesticides and/or PCBs		Aroclor-1248	290	UG/KG
MND22-2401	000413	Pesticides and/or PCBs		Aroclor-1254	50	UG/KG
MND22-2404	900000133	Pesticides and/or PCBs	JP	Aroclor-1254	31	UG/KG
MND22-2602	000434	Pesticides and/or PCBs	P	Aroclor-1254	71	UG/KG
MND22-2602	900000068	Pesticides and/or PCBs	Y	Aroclor-1254	360	UG/KG
MND22-2607	900000076	Pesticides and/or PCBs	P	Aroclor-1254	63	UG/KG
MND22-2404	000416	Pesticides and/or PCBs	JP	delta-BHC	2.1	UG/KG
MND22-2402	900000131	Pesticides and/or PCBs	P	gamma-BHC (lindane)	4.3	UG/KG
MND22-2606	900000075	Pesticides and/or PCBs	P	gamma-BHC (lindane)	3.6	UG/KG
MND22-2602	900000068	Pesticides and/or PCBs	P	methoxychlor	110	UG/KG
MND22-2602	000434	Radiological		americium-241	0.644	PCI/G
MND22-2602	900000068	Radiological		americium-241	1.97	PCI/G
MND22-2401	000413	Radiological		plutonium-238	9.61	PCI/G
MND22-2401	900000130	Radiological		plutonium-238	3.95	PCI/G
MND22-2402	000414	Radiological		plutonium-238	8.22	PCI/G
MND22-2402	900000131	Radiological		plutonium-238	29.5	PCI/G
MND22-2403	000415	Radiological		plutonium-238	7.95	PCI/G
MND22-2403	900000132	Radiological		plutonium-238	8.4	PCI/G
MND22-2404	000416	Radiological		plutonium-238	26.8	PCI/G
MND22-2404	900000133	Radiological		plutonium-238	36.6	PCI/G
MND22-2601	000433	Radiological		plutonium-238	40.1	PCI/G
MND22-2601	900000067	Radiological		plutonium-238	38	PCI/G
MND22-2602	000434	Radiological		plutonium-238	591	PCI/G
MND22-2602	900000068	Radiological		plutonium-238	844	PCI/G
MND22-2603	000435	Radiological		plutonium-238	2.88	PCI/G
MND22-2603	900000070	Radiological		plutonium-238	23.2	PCI/G
MND22-2604	900000072	Radiological		plutonium-238	0.602	PCI/G
MND22-2605	000437	Radiological		plutonium-238	24.1	PCI/G
MND22-2605	900000074	Radiological		plutonium-238	10.8	PCI/G
MND22-2606	000438	Radiological		plutonium-238	8.01	PCI/G
MND22-2606	900000075	Radiological		plutonium-238	51.2	PCI/G
MND22-2607	000439	Radiological		plutonium-238	1.78	PCI/G
MND22-2607	900000076	Radiological		plutonium-238	33.6	PCI/G
MND22-2401	900000130	Radiological		plutonium-239/240	0.00863	PCI/G
MND22-2402	000414	Radiological		plutonium-239/240	0.0289	PCI/G
MND22-2402	900000131	Radiological		plutonium-239/240	0.0733	PCI/G
MND22-2403	000415	Radiological		plutonium-239/240	0.0535	PCI/G
MND22-2404	000416	Radiological		plutonium-239/240	0.0794	PCI/G
MND22-2404	900000133	Radiological		plutonium-239/240	0.124	PCI/G
MND22-2601	000433	Radiological		plutonium-239/240	0.104	PCI/G
MND22-2601	900000067	Radiological		plutonium-239/240	0.118	PCI/G
MND22-2602	000434	Radiological		plutonium-239/240	1.56	PCI/G

Table A.3.2 - Miami Erie Canal Overflow Creek
NPDES Outfall 002 Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2602	900000068	Radiological		plutonium-239/240	2.84	PCI/G
MND22-2603	000435	Radiological		plutonium-239/240	0.0187	PCI/G
MND22-2603	900000070	Radiological		plutonium-239/240	0.086	PCI/G
MND22-2605	000437	Radiological		plutonium-239/240	0.108	PCI/G
MND22-2605	900000074	Radiological		plutonium-239/240	0.23	PCI/G
MND22-2606	000438	Radiological		plutonium-239/240	0.0495	PCI/G
MND22-2606	900000075	Radiological		plutonium-239/240	0.247	PCI/G
MND22-2607	900000076	Radiological		plutonium-239/240	0.462	PCI/G
MND22-2403	900000132	Radiological		potassium-40	18.3	PCI/G
MND22-2602	000434	Radiological		potassium-40	18.2	PCI/G
MND22-2606	000438	Radiological		potassium-40	21.1	PCI/G
MND22-2602	000434	Radiological		thorium-228	2.52	PCI/G
MND22-2401	000413	Radiological		thorium-230	1.19	PCI/G
MND22-2402	000414	Radiological		thorium-230	1.07	PCI/G
MND22-2403	000415	Radiological		thorium-230	1.19	PCI/G
MND22-2403	900000132	Radiological		thorium-230	1.44	PCI/G
MND22-2404	000416	Radiological		thorium-230	1.17	PCI/G
MND22-2601	900000067	Radiological		thorium-230	1.11	PCI/G
MND22-2602	000434	Radiological		thorium-230	2.37	PCI/G
MND22-2602	900000068	Radiological		thorium-230	1.54	PCI/G
MND22-2605	900000074	Radiological		thorium-230	1.01	PCI/G
MND22-2606	000438	Radiological		thorium-230	1.19	PCI/G
MND22-2606	900000075	Radiological		thorium-230	1.17	PCI/G
MND22-2607	000439	Radiological		thorium-230	1.09	PCI/G
MND22-2607	900000076	Radiological		thorium-230	1.31	PCI/G
MND22-2605	900000074	Radiological		tritium	9.2	PCI/G
MND22-2602	000434	Radiological		uranium-234	2	PCI/G
MND22-2602	000434	Radiological		uranium-235	1.1	PCI/G
MND22-2602	000434	Radiological		uranium-238	1.57	PCI/G
MND22-2401	900000130	Semi-Volatile Organics	J	2-benzyl-4-chlorophenol	120	UG/KG
MND22-2402	900000131	Semi-Volatile Organics	J	2-benzyl-4-chlorophenol	78	UG/KG
MND22-2402	900000131	Semi-Volatile Organics		2-methylnaphthalene	760	UG/KG
MND22-2404	900000133	Semi-Volatile Organics	J	2-methylnaphthalene	43	UG/KG
MND22-2601	900000067	Semi-Volatile Organics	J	2-methylnaphthalene	74	UG/KG
MND22-2402	900000131	Semi-Volatile Organics		acenaphthene	3200	UG/KG
MND22-2602	000434	Semi-Volatile Organics	J	acenaphthene	83	UG/KG
MND22-2602	900000068	Semi-Volatile Organics	J	acenaphthene	150	UG/KG
MND22-2404	900000133	Semi-Volatile Organics	J	acenaphthylene	63	UG/KG
MND22-2401	900000130	Semi-Volatile Organics	J	anthracene	48	UG/KG
MND22-2402	900000131	Semi-Volatile Organics	DJ	anthracene	2000	UG/KG
MND22-2404	900000133	Semi-Volatile Organics	J	anthracene	130	UG/KG
MND22-2601	000433	Semi-Volatile Organics	J	anthracene	71	UG/KG
MND22-2602	000434	Semi-Volatile Organics	J	anthracene	96	UG/KG
MND22-2602	900000068	Semi-Volatile Organics	J	anthracene	260	UG/KG
MND22-2603	900000070	Semi-Volatile Organics	J	anthracene	320	UG/KG
MND22-2401	000413	Semi-Volatile Organics	J	benzo(a)anthracene	120	UG/KG
MND22-2401	900000130	Semi-Volatile Organics	J	benzo(a)anthracene	150	UG/KG
MND22-2402	000414	Semi-Volatile Organics	J	benzo(a)anthracene	42	UG/KG
MND22-2402	900000131	Semi-Volatile Organics	D	benzo(a)anthracene	4600	UG/KG
MND22-2403	900000132	Semi-Volatile Organics	J	benzo(a)anthracene	70	UG/KG
MND22-2404	900000133	Semi-Volatile Organics		benzo(a)anthracene	430	UG/KG

Table A.3.2 - Miami Erie Canal Overflow Creek
NPDES Outfall 002 Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2601	000433	Semi-Volatile Organics	J	benzo(a)anthracene	360	UG/KG
MND22-2601	900000067	Semi-Volatile Organics	J	benzo(a)anthracene	270	UG/KG
MND22-2602	000434	Semi-Volatile Organics		benzo(a)anthracene	640	UG/KG
MND22-2602	900000068	Semi-Volatile Organics		benzo(a)anthracene	1100	UG/KG
MND22-2603	000435	Semi-Volatile Organics	J	benzo(a)anthracene	59	UG/KG
MND22-2603	900000070	Semi-Volatile Organics	J	benzo(a)anthracene	400	UG/KG
MND22-2604	000436	Semi-Volatile Organics	J	benzo(a)anthracene	48	UG/KG
MND22-2604	900000072	Semi-Volatile Organics	J	benzo(a)anthracene	51	UG/KG
MND22-2605	000437	Semi-Volatile Organics	J	benzo(a)anthracene	80	UG/KG
MND22-2606	000438	Semi-Volatile Organics	J	benzo(a)anthracene	65	UG/KG
MND22-2606	900000075	Semi-Volatile Organics	J	benzo(a)anthracene	330	UG/KG
MND22-2607	000439	Semi-Volatile Organics	J	benzo(a)anthracene	49	UG/KG
MND22-2607	900000076	Semi-Volatile Organics	J	benzo(a)anthracene	340	UG/KG
MND22-2401	000413	Semi-Volatile Organics	J	benzo(a)pyrene	150	UG/KG
MND22-2401	900000130	Semi-Volatile Organics	J	benzo(a)pyrene	160	UG/KG
MND22-2402	900000131	Semi-Volatile Organics	DJ	benzo(a)pyrene	3900	UG/KG
MND22-2403	900000132	Semi-Volatile Organics	J	benzo(a)pyrene	57	UG/KG
MND22-2404	000416	Semi-Volatile Organics	J	benzo(a)pyrene	27	UG/KG
MND22-2404	900000133	Semi-Volatile Organics	J	benzo(a)pyrene	370	UG/KG
MND22-2601	000433	Semi-Volatile Organics		benzo(a)pyrene	440	UG/KG
MND22-2601	900000067	Semi-Volatile Organics	J	benzo(a)pyrene	260	UG/KG
MND22-2602	000434	Semi-Volatile Organics		benzo(a)pyrene	620	UG/KG
MND22-2602	900000068	Semi-Volatile Organics		benzo(a)pyrene	1300	UG/KG
MND22-2603	000435	Semi-Volatile Organics	J	benzo(a)pyrene	56	UG/KG
MND22-2603	900000070	Semi-Volatile Organics	J	benzo(a)pyrene	390	UG/KG
MND22-2604	000436	Semi-Volatile Organics	J	benzo(a)pyrene	69	UG/KG
MND22-2604	900000072	Semi-Volatile Organics	J	benzo(a)pyrene	47	UG/KG
MND22-2605	000437	Semi-Volatile Organics	J	benzo(a)pyrene	85	UG/KG
MND22-2606	000438	Semi-Volatile Organics	J	benzo(a)pyrene	67	UG/KG
MND22-2606	900000075	Semi-Volatile Organics	J	benzo(a)pyrene	330	UG/KG
MND22-2607	000439	Semi-Volatile Organics	J	benzo(a)pyrene	55	UG/KG
MND22-2607	900000076	Semi-Volatile Organics	J	benzo(a)pyrene	280	UG/KG
MND22-2401	000413	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	340	UG/KG
MND22-2401	900000130	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	230	UG/KG
MND22-2402	000414	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	65	UG/KG
MND22-2402	900000131	Semi-Volatile Organics	DX	benzo(b)fluoranthene	6900	UG/KG
MND22-2403	900000132	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	120	UG/KG
MND22-2404	000416	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	55	UG/KG
MND22-2404	900000133	Semi-Volatile Organics	X	benzo(b)fluoranthene	610	UG/KG
MND22-2601	000433	Semi-Volatile Organics	X	benzo(b)fluoranthene	610	UG/KG
MND22-2601	900000067	Semi-Volatile Organics	X	benzo(b)fluoranthene	520	UG/KG
MND22-2602	000434	Semi-Volatile Organics	X	benzo(b)fluoranthene	1000	UG/KG
MND22-2602	900000068	Semi-Volatile Organics	X	benzo(b)fluoranthene	2600	UG/KG
MND22-2603	000435	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	130	UG/KG
MND22-2603	900000070	Semi-Volatile Organics	X	benzo(b)fluoranthene	710	UG/KG
MND22-2604	000436	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	89	UG/KG
MND22-2604	900000072	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	83	UG/KG
MND22-2605	000437	Semi-Volatile Organics	J	benzo(b)fluoranthene	110	UG/KG
MND22-2605	900000074	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	76	UG/KG
MND22-2606	000438	Semi-Volatile Organics	JX	benzo(b)fluoranthene	140	UG/KG
MND22-2606	900000075	Semi-Volatile Organics	X	benzo(b)fluoranthene	630	UG/KG

Table A.3.2 - Miami Erie Canal Overflow Creek
NPDES Outfall 002 Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2607	000439	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	120	UG/KG
MND22-2607	900000076	Semi-Volatile Organics	X	benzo(b)fluoranthene	590	UG/KG
MND22-2401	000413	Semi-Volatile Organics	J	benzo(g,h,i)perylene	120	UG/KG
MND22-2401	900000130	Semi-Volatile Organics	J	benzo(g,h,i)perylene	200	UG/KG
MND22-2402	900000131	Semi-Volatile Organics		benzo(g,h,i)perylene	910	UG/KG
MND22-2404	900000133	Semi-Volatile Organics	J	benzo(g,h,i)perylene	81	UG/KG
MND22-2601	000433	Semi-Volatile Organics	J	benzo(g,h,i)perylene	330	UG/KG
MND22-2601	900000067	Semi-Volatile Organics	J	benzo(g,h,i)perylene	100	UG/KG
MND22-2602	000434	Semi-Volatile Organics		benzo(g,h,i)perylene	820	UG/KG
MND22-2602	900000068	Semi-Volatile Organics	J	benzo(g,h,i)perylene	280	UG/KG
MND22-2603	900000070	Semi-Volatile Organics	J	benzo(g,h,i)perylene	100	UG/KG
MND22-2604	000436	Semi-Volatile Organics	J	benzo(g,h,i)perylene	60	UG/KG
MND22-2605	000437	Semi-Volatile Organics	J	benzo(g,h,i)perylene	59	UG/KG
MND22-2606	000438	Semi-Volatile Organics	J	benzo(g,h,i)perylene	50	UG/KG
MND22-2606	900000075	Semi-Volatile Organics	J	benzo(g,h,i)perylene	77	UG/KG
MND22-2401	000413	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	370	UG/KG
MND22-2401	900000130	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	390	UG/KG
MND22-2402	000414	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	76	UG/KG
MND22-2402	900000131	Semi-Volatile Organics	DX	benzo(k)fluoranthene	11000	UG/KG
MND22-2403	900000132	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	200	UG/KG
MND22-2404	000416	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	64	UG/KG
MND22-2404	900000133	Semi-Volatile Organics	X	benzo(k)fluoranthene	1100	UG/KG
MND22-2601	000433	Semi-Volatile Organics	X	benzo(k)fluoranthene	710	UG/KG
MND22-2601	900000067	Semi-Volatile Organics	X	benzo(k)fluoranthene	860	UG/KG
MND22-2602	000434	Semi-Volatile Organics	X	benzo(k)fluoranthene	1200	UG/KG
MND22-2602	900000068	Semi-Volatile Organics	X	benzo(k)fluoranthene	4100	UG/KG
MND22-2603	000435	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	130	UG/KG
MND22-2603	900000070	Semi-Volatile Organics	X	benzo(k)fluoranthene	1200	UG/KG
MND22-2604	000436	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	95	UG/KG
MND22-2604	900000072	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	140	UG/KG
MND22-2605	000437	Semi-Volatile Organics	J	benzo(k)fluoranthene	52	UG/KG
MND22-2605	900000074	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	130	UG/KG
MND22-2606	000438	Semi-Volatile Organics	JX	benzo(k)fluoranthene	120	UG/KG
MND22-2606	900000075	Semi-Volatile Organics	X	benzo(k)fluoranthene	1000	UG/KG
MND22-2607	000439	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	99	UG/KG
MND22-2607	900000076	Semi-Volatile Organics	X	benzo(k)fluoranthene	960	UG/KG
MND22-2401	000413	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	390	UG/KG
MND22-2401	900000130	Semi-Volatile Organics	JB	bis(2-ethylhexyl)phthalate	82	UG/KG
MND22-2402	000414	Semi-Volatile Organics	BJ	bis(2-ethylhexyl)phthalate	390	UG/KG
MND22-2402	900000131	Semi-Volatile Organics	JB	bis(2-ethylhexyl)phthalate	170	UG/KG
MND22-2403	000415	Semi-Volatile Organics	BJ	bis(2-ethylhexyl)phthalate	74	UG/KG
MND22-2404	000416	Semi-Volatile Organics	BJ	bis(2-ethylhexyl)phthalate	100	UG/KG
MND22-2404	900000133	Semi-Volatile Organics	JB	bis(2-ethylhexyl)phthalate	61	UG/KG
MND22-2601	000433	Semi-Volatile Organics	BJ	bis(2-ethylhexyl)phthalate	120	UG/KG
MND22-2602	000434	Semi-Volatile Organics	BJ	bis(2-ethylhexyl)phthalate	260	UG/KG
MND22-2602	900000068	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	260	UG/KG
MND22-2603	000435	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	60	UG/KG
MND22-2605	000437	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	59	UG/KG
MND22-2606	000438	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	120	UG/KG
MND22-2606	900000075	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	91	UG/KG
MND22-2607	000439	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	140	UG/KG

Table A.3.2 - Miami Erie Canal Overflow Creek
NPDES Outfall 002 Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2607	900000076	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	130	UG/KG
MND22-2401	900000130	Semi-Volatile Organics	J	carbazole	46	UG/KG
MND22-2402	900000131	Semi-Volatile Organics		carbazole	1800	UG/KG
MND22-2602	000434	Semi-Volatile Organics	J	carbazole	100	UG/KG
MND22-2602	900000068	Semi-Volatile Organics	J	carbazole	190	UG/KG
MND22-2603	900000070	Semi-Volatile Organics	J	carbazole	130	UG/KG
MND22-2401	000413	Semi-Volatile Organics	J	chrysene	180	UG/KG
MND22-2401	900000130	Semi-Volatile Organics	J	chrysene	150	UG/KG
MND22-2402	000414	Semi-Volatile Organics	J	chrysene	51	UG/KG
MND22-2402	900000131	Semi-Volatile Organics	D	chrysene	4700	UG/KG
MND22-2403	900000132	Semi-Volatile Organics	J	chrysene	94	UG/KG
MND22-2404	900000133	Semi-Volatile Organics	J	chrysene	400	UG/KG
MND22-2601	000433	Semi-Volatile Organics	J	chrysene	320	UG/KG
MND22-2601	900000067	Semi-Volatile Organics	J	chrysene	340	UG/KG
MND22-2602	000434	Semi-Volatile Organics		chrysene	730	UG/KG
MND22-2602	900000068	Semi-Volatile Organics		chrysene	1400	UG/KG
MND22-2603	000435	Semi-Volatile Organics	J	chrysene	71	UG/KG
MND22-2603	900000070	Semi-Volatile Organics		chrysene	480	UG/KG
MND22-2604	000436	Semi-Volatile Organics	J	chrysene	40	UG/KG
MND22-2604	900000072	Semi-Volatile Organics	J	chrysene	51	UG/KG
MND22-2605	000437	Semi-Volatile Organics	J	chrysene	95	UG/KG
MND22-2605	900000074	Semi-Volatile Organics	J	chrysene	51	UG/KG
MND22-2606	000438	Semi-Volatile Organics	J	chrysene	97	UG/KG
MND22-2606	900000075	Semi-Volatile Organics	J	chrysene	430	UG/KG
MND22-2607	000439	Semi-Volatile Organics	J	chrysene	75	UG/KG
MND22-2607	900000076	Semi-Volatile Organics	J	chrysene	440	UG/KG
MND22-2401	900000130	Semi-Volatile Organics	JB	di-n-butyl phthalate	260	UG/KG
MND22-2402	900000131	Semi-Volatile Organics	JB	di-n-butyl phthalate	290	UG/KG
MND22-2403	900000132	Semi-Volatile Organics	JB	di-n-butyl phthalate	330	UG/KG
MND22-2404	900000133	Semi-Volatile Organics	JB	di-n-butyl phthalate	340	UG/KG
MND22-2602	900000068	Semi-Volatile Organics	J	di-n-butyl phthalate	310	UG/KG
MND22-2402	900000131	Semi-Volatile Organics		dibenzo(a,h)anthracene	660	UG/KG
MND22-2601	000433	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	71	UG/KG
MND22-2601	900000067	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	42	UG/KG
MND22-2602	900000068	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	160	UG/KG
MND22-2603	900000070	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	64	UG/KG
MND22-2402	900000131	Semi-Volatile Organics		dibenzofuran	1400	UG/KG
MND22-2404	900000133	Semi-Volatile Organics	J	dibenzofuran	63	UG/KG
MND22-2602	900000068	Semi-Volatile Organics	J	dibenzofuran	70	UG/KG
MND22-2603	900000070	Semi-Volatile Organics	J	dibenzofuran	43	UG/KG
MND22-2401	000413	Semi-Volatile Organics	J	fluoranthene	260	UG/KG
MND22-2401	900000130	Semi-Volatile Organics		fluoranthene	410	UG/KG
MND22-2402	000414	Semi-Volatile Organics	J	fluoranthene	73	UG/KG
MND22-2402	900000131	Semi-Volatile Organics	D	fluoranthene	12000	UG/KG
MND22-2403	900000132	Semi-Volatile Organics	J	fluoranthene	180	UG/KG
MND22-2404	000416	Semi-Volatile Organics	J	fluoranthene	76	UG/KG
MND22-2404	900000133	Semi-Volatile Organics		fluoranthene	920	UG/KG
MND22-2601	000433	Semi-Volatile Organics		fluoranthene	620	UG/KG
MND22-2601	900000067	Semi-Volatile Organics		fluoranthene	600	UG/KG
MND22-2602	000434	Semi-Volatile Organics		fluoranthene	1200	UG/KG
MND22-2602	900000068	Semi-Volatile Organics		fluoranthene	2100	UG/KG

Table A.3.2 - Miami Erie Canal Overflow Creek
NPDES Outfall 002 Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2603	000435	Semi-Volatile Organics	J	fluoranthene	110	UG/KG
MND22-2603	900000070	Semi-Volatile Organics		fluoranthene	850	UG/KG
MND22-2604	900000072	Semi-Volatile Organics	J	fluoranthene	100	UG/KG
MND22-2605	000437	Semi-Volatile Organics	J	fluoranthene	140	UG/KG
MND22-2605	900000074	Semi-Volatile Organics	J	fluoranthene	75	UG/KG
MND22-2606	000438	Semi-Volatile Organics	J	fluoranthene	150	UG/KG
MND22-2606	900000075	Semi-Volatile Organics		fluoranthene	640	UG/KG
MND22-2607	000439	Semi-Volatile Organics	J	fluoranthene	110	UG/KG
MND22-2607	900000076	Semi-Volatile Organics	J	fluoranthene	540	UG/KG
MND22-2402	900000131	Semi-Volatile Organics		fluorene	1600	UG/KG
MND22-2404	900000133	Semi-Volatile Organics	J	fluorene	120	UG/KG
MND22-2601	000433	Semi-Volatile Organics	J	fluorene	36	UG/KG
MND22-2602	000434	Semi-Volatile Organics	J	fluorene	67	UG/KG
MND22-2602	900000068	Semi-Volatile Organics	J	fluorene	120	UG/KG
MND22-2603	900000070	Semi-Volatile Organics	J	fluorene	87	UG/KG
MND22-2401	000413	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	100	UG/KG
MND22-2401	900000130	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	72	UG/KG
MND22-2402	900000131	Semi-Volatile Organics		indeno(1,2,3-cd)pyrene	2200	UG/KG
MND22-2404	900000133	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	190	UG/KG
MND22-2601	000433	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	320	UG/KG
MND22-2601	900000067	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	180	UG/KG
MND22-2602	000434	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	480	UG/KG
MND22-2602	900000068	Semi-Volatile Organics		indeno(1,2,3-cd)pyrene	540	UG/KG
MND22-2603	900000070	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	210	UG/KG
MND22-2605	000437	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	46	UG/KG
MND22-2606	000438	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	48	UG/KG
MND22-2606	900000075	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	160	UG/KG
MND22-2607	900000076	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	130	UG/KG
MND22-2402	900000131	Semi-Volatile Organics		naphthalene	2600	UG/KG
MND22-2401	000413	Semi-Volatile Organics	J	phenanthrene	61	UG/KG
MND22-2401	900000130	Semi-Volatile Organics	J	phenanthrene	340	UG/KG
MND22-2402	900000131	Semi-Volatile Organics	D	phenanthrene	12000	UG/KG
MND22-2403	900000132	Semi-Volatile Organics	J	phenanthrene	97	UG/KG
MND22-2404	900000133	Semi-Volatile Organics		phenanthrene	670	UG/KG
MND22-2601	000433	Semi-Volatile Organics	J	phenanthrene	300	UG/KG
MND22-2601	900000067	Semi-Volatile Organics		phenanthrene	540	UG/KG
MND22-2602	000434	Semi-Volatile Organics		phenanthrene	700	UG/KG
MND22-2602	900000068	Semi-Volatile Organics		phenanthrene	1100	UG/KG
MND22-2603	000435	Semi-Volatile Organics	J	phenanthrene	50	UG/KG
MND22-2603	900000070	Semi-Volatile Organics		phenanthrene	470	UG/KG
MND22-2604	900000072	Semi-Volatile Organics	J	phenanthrene	130	UG/KG
MND22-2605	000437	Semi-Volatile Organics	J	phenanthrene	65	UG/KG
MND22-2606	000438	Semi-Volatile Organics	J	phenanthrene	61	UG/KG
MND22-2606	900000075	Semi-Volatile Organics	J	phenanthrene	320	UG/KG
MND22-2607	000439	Semi-Volatile Organics	J	phenanthrene	65	UG/KG
MND22-2607	900000076	Semi-Volatile Organics	J	phenanthrene	210	UG/KG
MND22-2401	000413	Semi-Volatile Organics	J	pyrene	250	UG/KG
MND22-2401	900000130	Semi-Volatile Organics	J	pyrene	320	UG/KG
MND22-2402	000414	Semi-Volatile Organics	J	pyrene	70	UG/KG
MND22-2402	900000131	Semi-Volatile Organics	D	pyrene	10000	UG/KG
MND22-2403	900000132	Semi-Volatile Organics	J	pyrene	130	UG/KG

Table A.3.2 - Miami Erie Canal Overflow Creek
NPDES Outfall 002 Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2404	000416	Semi-Volatile Organics	J	pyrene	69	UG/KG
MND22-2404	900000133	Semi-Volatile Organics		pyrene	690	UG/KG
MND22-2601	000433	Semi-Volatile Organics		pyrene	800	UG/KG
MND22-2601	900000067	Semi-Volatile Organics		pyrene	640	UG/KG
MND22-2602	000434	Semi-Volatile Organics		pyrene	1800	UG/KG
MND22-2602	900000068	Semi-Volatile Organics		pyrene	2100	UG/KG
MND22-2603	000435	Semi-Volatile Organics	J	pyrene	97	UG/KG
MND22-2603	900000070	Semi-Volatile Organics		pyrene	800	UG/KG
MND22-2604	000436	Semi-Volatile Organics	J	pyrene	43	UG/KG
MND22-2604	900000072	Semi-Volatile Organics	J	pyrene	86	UG/KG
MND22-2605	000437	Semi-Volatile Organics	J	pyrene	150	UG/KG
MND22-2605	900000074	Semi-Volatile Organics	J	pyrene	72	UG/KG
MND22-2606	000438	Semi-Volatile Organics	J	pyrene	180	UG/KG
MND22-2606	900000075	Semi-Volatile Organics	J	pyrene	590	UG/KG
MND22-2607	000439	Semi-Volatile Organics	J	pyrene	140	UG/KG
MND22-2607	900000076	Semi-Volatile Organics	J	pyrene	530	UG/KG
MND22-2401	900000130	Volatile Organics	B	acetone	19	UG/KG
MND22-2402	900000131	Volatile Organics	B	acetone	14	UG/KG
MND22-2403	900000132	Volatile Organics	B	acetone	26	UG/KG
MND22-2404	900000133	Volatile Organics	B	acetone	38	UG/KG
MND22-2601	000433	Volatile Organics		acetone	210	UG/KG
MND22-2601	900000067	Volatile Organics	B	acetone	18	UG/KG
MND22-2602	000434	Volatile Organics		acetone	30	UG/KG
MND22-2602	900000068	Volatile Organics	B	acetone	31	UG/KG
MND22-2603	900000070	Volatile Organics	JB	acetone	12	UG/KG
MND22-2604	900000072	Volatile Organics	B	acetone	16	UG/KG
MND22-2605	900000074	Volatile Organics	B	acetone	15	UG/KG
MND22-2606	900000075	Volatile Organics	B	acetone	30	UG/KG
MND22-2401	900000130	Volatile Organics	J	acetonitrile	67	UG/KG
MND22-2401	900000130	Volatile Organics	J	acrylonitrile	8	UG/KG
MND22-2401	000413	Volatile Organics	B	methylene-chloride	15	UG/KG
MND22-2401	900000130	Volatile Organics	B	methylene-chloride	10	UG/KG
MND22-2402	000414	Volatile Organics	B	methylene-chloride	14	UG/KG
MND22-2402	900000131	Volatile Organics	B	methylene-chloride	29	UG/KG
MND22-2403	000415	Volatile Organics	B	methylene-chloride	11	UG/KG
MND22-2403	900000132	Volatile Organics	B	methylene-chloride	14	UG/KG
MND22-2404	000416	Volatile Organics	B	methylene-chloride	25	UG/KG
MND22-2404	900000133	Volatile Organics	B	methylene-chloride	12	UG/KG
MND22-2601	000433	Volatile Organics	B	methylene-chloride	150	UG/KG
MND22-2601	900000067	Volatile Organics	B	methylene-chloride	21	UG/KG
MND22-2602	000434	Volatile Organics	B	methylene-chloride	34	UG/KG
MND22-2602	900000068	Volatile Organics	B	methylene-chloride	9	UG/KG
MND22-2603	000435	Volatile Organics	JB	methylene-chloride	5	UG/KG
MND22-2603	900000070	Volatile Organics	B	methylene-chloride	11	UG/KG
MND22-2604	000436	Volatile Organics	JB	methylene-chloride	4	UG/KG
MND22-2604	900000072	Volatile Organics	B	methylene-chloride	13	UG/KG
MND22-2605	000437	Volatile Organics	B	methylene-chloride	6	UG/KG
MND22-2605	900000074	Volatile Organics	B	methylene-chloride	14	UG/KG
MND22-2606	000438	Volatile Organics	JB	methylene-chloride	4	UG/KG
MND22-2606	900000075	Volatile Organics	B	methylene-chloride	20	UG/KG
MND22-2607	000439	Volatile Organics	B	methylene-chloride	7	UG/KG

Table A.3.2 - Miami Erie Canal Overflow Creek
NPDES Outfall 002 Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-2607	900000076	Volatile Organics	B	methylene-chloride	9	UG/KG

Appendix A-3

Miami-Erie Canal

Tables Indicating Detections Above Background

A.3.3 Subsurface Soils

Table A.3.3 - Miami Erie Canal, Overflow Creek
NPDES Outfall 002 Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4102	900000101	Common Anions		chloride	107	MG/KG
MND23-4103	900000089	Common Anions		chloride	75.7	MG/KG
MND23-4105	900000091	Common Anions		chloride	195	MG/KG
MND23-4106	900000092	Common Anions		chloride	83.8	MG/KG
MND23-4107	900000093	Common Anions		chloride	83.8	MG/KG
MND23-4101	900000086	Common Anions		fluoride	3.92	MG/KG
MND23-4102	900000101	Common Anions		fluoride	5.13	MG/KG
MND23-4103	900000089	Common Anions		fluoride	2.92	MG/KG
MND23-4104	900000090	Common Anions		fluoride	3.2	MG/KG
MND23-4105	900000091	Common Anions		fluoride	3.3	MG/KG
MND23-4106	900000092	Common Anions		fluoride	3.81	MG/KG
MND23-4107	900000093	Common Anions		fluoride	5.63	MG/KG
MND23-4101	900000086	Common Anions		nitrate-nitrite-N	0.935	MG/KG
MND23-4104	900000090	Common Anions		nitrate-nitrite-N	5.9	MG/KG
MND23-4105	900000091	Common Anions		nitrate-nitrite-N	0.662	MG/KG
MND23-4106	900000092	Common Anions		nitrate-nitrite-N	1.09	MG/KG
MND23-4107	900000093	Common Anions		nitrate-nitrite-N	3.23	MG/KG
MND23-4101	900000086	Common Anions		sulfate	97.7	MG/KG
MND23-4102	900000101	Common Anions		sulfate	600	MG/KG
MND23-4103	900000089	Common Anions		sulfate	313	MG/KG
MND23-4104	900000090	Common Anions		sulfate	170	MG/KG
MND23-4105	900000091	Common Anions		sulfate	201	MG/KG
MND23-4106	900000092	Common Anions		sulfate	282	MG/KG
MND23-4107	900000093	Common Anions		sulfate	150	MG/KG
MND23-4101	900000086	Explosives	J	1,3,5-trinitrobenzene	0.021	MG/KG
MND23-4102	900000101	Explosives	J	1,3,5-trinitrobenzene	0.08	MG/KG
MND23-4105	900000091	Explosives	J	1,3,5-trinitrobenzene	0.08	MG/KG
MND23-4102	900000101	Explosives	J	2-amino-4,6-dinitrotoluen	0.46	MG/KG
MND23-4105	900000091	Explosives	J	2-amino-4,6-dinitrotoluen	0.45	MG/KG
MND23-4106	900000092	Explosives	J	2-amino-4,6-dinitrotoluen	0.22	MG/KG
MND23-4101	900000086	Explosives	J	HMX	0.31	MG/KG
MND23-4102	900000101	Explosives	J	HMX	0.72	MG/KG
MND23-4105	900000091	Explosives	J	HMX	1.3	MG/KG
MND23-4106	900000092	Explosives	J	HMX	0.48	MG/KG
MND23-4107	900000093	Explosives	J	HMX	0.4	MG/KG
MND23-4101	900000086	Explosives	J	RDX	0.41	MG/KG
MND23-4102	900000101	Explosives	J	RDX	1.3	MG/KG
MND23-4103	900000089	Explosives	J	RDX	0.65	MG/KG
MND23-4105	900000091	Explosives	J	RDX	1.2	MG/KG
MND23-4106	900000092	Explosives	J	RDX	0.93	MG/KG
MND23-4107	900000093	Explosives	J	RDX	0.73	MG/KG
MND23-4101	900000086	General Chemistry		organic carbon	2420.00	MG/KG
MND23-4102	900000101	General Chemistry		organic carbon	9050.00	MG/KG
MND23-4103	900000089	General Chemistry		organic carbon	6840.00	MG/KG
MND23-4104	900000090	General Chemistry		organic carbon	6110.00	MG/KG
MND23-4105	900000091	General Chemistry		organic carbon	11600.00	MG/KG
MND23-4106	900000092	General Chemistry		organic carbon	3260.00	MG/KG
MND23-4107	900000093	General Chemistry		organic carbon	11300.00	MG/KG
MND23-4101	900000086	Metals		aluminum	3450	MG/KG
MND23-4102	900000101	Metals		aluminum	8490	MG/KG

Table A.3.3 - Miami Erie Canal, Overflow Creek
NPDES Outfall 002 Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4103	900000089	Metals		aluminum	6850	MG/KG
MND23-4104	900000090	Metals		aluminum	4730	MG/KG
MND23-4105	900000091	Metals		aluminum	3820	MG/KG
MND23-4106	900000092	Metals		aluminum	2880	MG/KG
MND23-4107	900000093	Metals		aluminum	10900	MG/KG
MND23-4102	900000101	Metals	B	antimony	0.72	MG/KG
MND23-4104	900000090	Metals	B	antimony	0.54	MG/KG
MND23-4105	900000091	Metals	B	antimony	0.34	MG/KG
MND23-4101	900000086	Metals		arsenic	3.3	MG/KG
MND23-4102	900000101	Metals		arsenic	4.4	MG/KG
MND23-4103	900000089	Metals		arsenic	5.1	MG/KG
MND23-4104	900000090	Metals		arsenic	5	MG/KG
MND23-4105	900000091	Metals		arsenic	3.7	MG/KG
MND23-4106	900000092	Metals	B	arsenic	2.1	MG/KG
MND23-4107	900000093	Metals		arsenic	6.2	MG/KG
MND23-4101	900000086	Metals	B	barium	36.1	MG/KG
MND23-4102	900000101	Metals		barium	85.9	MG/KG
MND23-4103	900000089	Metals	B	barium	47.5	MG/KG
MND23-4104	900000090	Metals	B	barium	43.9	MG/KG
MND23-4105	900000091	Metals	B	barium	40.3	MG/KG
MND23-4106	900000092	Metals	B	barium	18	MG/KG
MND23-4107	900000093	Metals		barium	79.4	MG/KG
MND23-4101	900000086	Metals	B	beryllium	0.2	MG/KG
MND23-4102	900000101	Metals		beryllium	0.54	MG/KG
MND23-4103	900000089	Metals		beryllium	0.38	MG/KG
MND23-4104	900000090	Metals		beryllium	0.25	MG/KG
MND23-4105	900000091	Metals		beryllium	0.25	MG/KG
MND23-4106	900000092	Metals	B	beryllium	0.16	MG/KG
MND23-4107	900000093	Metals		beryllium	0.52	MG/KG
MND23-4102	900000101	Metals	B	bismuth	1.5	MG/KG
MND23-4103	900000089	Metals	B	bismuth	1.6	MG/KG
MND23-4102	900000101	Metals	B	cadmium	0.72	MG/KG
MND23-4103	900000089	Metals	B	cadmium	0.46	MG/KG
MND23-4101	900000086	Metals		calcium	89900	MG/KG
MND23-4102	900000101	Metals		calcium	62900	MG/KG
MND23-4103	900000089	Metals		calcium	62500	MG/KG
MND23-4104	900000090	Metals		calcium	136000	MG/KG
MND23-4105	900000091	Metals		calcium	67300	MG/KG
MND23-4106	900000092	Metals		calcium	63400	MG/KG
MND23-4107	900000093	Metals		calcium	46700	MG/KG
MND23-4101	900000086	Metals		chromium	15.2	MG/KG
MND23-4102	900000101	Metals		chromium	54.6	MG/KG
MND23-4103	900000089	Metals		chromium	50.9	MG/KG
MND23-4104	900000090	Metals		chromium	10.4	MG/KG
MND23-4105	900000091	Metals		chromium	9.2	MG/KG
MND23-4106	900000092	Metals		chromium	7.6	MG/KG
MND23-4107	900000093	Metals		chromium	21.2	MG/KG
MND23-4101	900000086	Metals	B	cobalt	4.3	MG/KG
MND23-4102	900000101	Metals	B	cobalt	7.6	MG/KG
MND23-4103	900000089	Metals	B	cobalt	6.1	MG/KG

Table A.3.3 - Miami Erie Canal, Overflow Creek
NPDES Outfall 002 Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4104	900000090	Metals	B	cobalt	4.6	MG/KG
MND23-4105	900000091	Metals	B	cobalt	5	MG/KG
MND23-4106	900000092	Metals	B	cobalt	2.8	MG/KG
MND23-4107	900000093	Metals	B	cobalt	6.7	MG/KG
MND23-4101	900000086	Metals		copper	18	MG/KG
MND23-4102	900000101	Metals		copper	87.2	MG/KG
MND23-4103	900000089	Metals		copper	40	MG/KG
MND23-4104	900000090	Metals		copper	8.3	MG/KG
MND23-4105	900000091	Metals		copper	22.5	MG/KG
MND23-4106	900000092	Metals		copper	14.7	MG/KG
MND23-4107	900000093	Metals		copper	66.5	MG/KG
MND23-4101	900000086	Metals		iron	9930	MG/KG
MND23-4102	900000101	Metals		iron	14800	MG/KG
MND23-4103	900000089	Metals		iron	13300	MG/KG
MND23-4104	900000090	Metals		iron	9870	MG/KG
MND23-4105	900000091	Metals		iron	12300	MG/KG
MND23-4106	900000092	Metals		iron	7080	MG/KG
MND23-4107	900000093	Metals		iron	16100	MG/KG
MND23-4101	900000086	Metals		lead	8.9	MG/KG
MND23-4102	900000101	Metals		lead	26.5	MG/KG
MND23-4103	900000089	Metals		lead	387	MG/KG
MND23-4104	900000090	Metals		lead	13.9	MG/KG
MND23-4105	900000091	Metals		lead	24.2	MG/KG
MND23-4106	900000092	Metals		lead	8	MG/KG
MND23-4107	900000093	Metals		lead	35.8	MG/KG
MND23-4101	900000086	Metals	B	lithium	6.7	MG/KG
MND23-4102	900000101	Metals	B	lithium	13.1	MG/KG
MND23-4103	900000089	Metals	B	lithium	9.7	MG/KG
MND23-4104	900000090	Metals	B	lithium	7.7	MG/KG
MND23-4105	900000091	Metals	B	lithium	5.5	MG/KG
MND23-4106	900000092	Metals	B	lithium	5	MG/KG
MND23-4107	900000093	Metals	B	lithium	14.1	MG/KG
MND23-4101	900000086	Metals		magnesium	31000	MG/KG
MND23-4102	900000101	Metals		magnesium	19600	MG/KG
MND23-4103	900000089	Metals		magnesium	8500	MG/KG
MND23-4104	900000090	Metals		magnesium	45500	MG/KG
MND23-4105	900000091	Metals		magnesium	18000	MG/KG
MND23-4106	900000092	Metals		magnesium	16300	MG/KG
MND23-4107	900000093	Metals		magnesium	15000	MG/KG
MND23-4101	900000086	Metals		manganese	373	MG/KG
MND23-4102	900000101	Metals		manganese	315	MG/KG
MND23-4103	900000089	Metals		manganese	337	MG/KG
MND23-4104	900000090	Metals		manganese	595	MG/KG
MND23-4105	900000091	Metals		manganese	376	MG/KG
MND23-4106	900000092	Metals		manganese	211	MG/KG
MND23-4107	900000093	Metals		manganese	355	MG/KG
MND23-4102	900000101	Metals		mercury	0.5	MG/KG
MND23-4103	900000089	Metals		mercury	0.27	MG/KG
MND23-4101	900000086	Metals	B	molybdenum	1.4	MG/KG
MND23-4102	900000101	Metals		molybdenum	4.9	MG/KG

Table A.3.3 - Miami Erie Canal, Overflow Creek
NPDES Outfall 002 Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4103	900000089	Metals	B	molybdenum	1.7	MG/KG
MND23-4104	900000090	Metals	B	molybdenum	1.1	MG/KG
MND23-4105	900000091	Metals	B	molybdenum	1.6	MG/KG
MND23-4106	900000092	Metals	B	molybdenum	4.3	MG/KG
MND23-4107	900000093	Metals	B	molybdenum	3.1	MG/KG
MND23-4101	900000086	Metals	B	nickel	8.1	MG/KG
MND23-4102	900000101	Metals		nickel	15.5	MG/KG
MND23-4103	900000089	Metals		nickel	11.9	MG/KG
MND23-4104	900000090	Metals	B	nickel	7.2	MG/KG
MND23-4105	900000091	Metals	B	nickel	7.8	MG/KG
MND23-4106	900000092	Metals	B	nickel	5.8	MG/KG
MND23-4107	900000093	Metals		nickel	15.3	MG/KG
MND23-4101	900000086	Metals	B	potassium	1080	MG/KG
MND23-4102	900000101	Metals		potassium	2270	MG/KG
MND23-4103	900000089	Metals		potassium	1900	MG/KG
MND23-4104	900000090	Metals		potassium	1830	MG/KG
MND23-4105	900000091	Metals		potassium	1270	MG/KG
MND23-4106	900000092	Metals	B	potassium	1010	MG/KG
MND23-4107	900000093	Metals		potassium	2860	MG/KG
MND23-4102	900000101	Metals		silver	7.5	MG/KG
MND23-4103	900000089	Metals		silver	5	MG/KG
MND23-4107	900000093	Metals	B	silver	1.2	MG/KG
MND23-4101	900000086	Metals	B	sodium	523	MG/KG
MND23-4102	900000101	Metals	B	sodium	675	MG/KG
MND23-4103	900000089	Metals	B	sodium	474	MG/KG
MND23-4104	900000090	Metals	B	sodium	347	MG/KG
MND23-4105	900000091	Metals	B	sodium	491	MG/KG
MND23-4106	900000092	Metals	B	sodium	410	MG/KG
MND23-4107	900000093	Metals	B	sodium	515	MG/KG
MND23-4102	900000101	Metals	B	tin	4.5	MG/KG
MND23-4103	900000089	Metals	B	tin	4.4	MG/KG
MND23-4101	900000086	Metals		vanadium	9.8	MG/KG
MND23-4102	900000101	Metals		vanadium	18.4	MG/KG
MND23-4103	900000089	Metals		vanadium	15.1	MG/KG
MND23-4104	900000090	Metals		vanadium	12.5	MG/KG
MND23-4105	900000091	Metals		vanadium	13.7	MG/KG
MND23-4106	900000092	Metals		vanadium	8.6	MG/KG
MND23-4107	900000093	Metals		vanadium	23.5	MG/KG
MND23-4101	900000086	Metals		zinc	56.3	MG/KG
MND23-4102	900000101	Metals		zinc	142	MG/KG
MND23-4103	900000089	Metals		zinc	98.1	MG/KG
MND23-4104	900000090	Metals		zinc	24.2	MG/KG
MND23-4105	900000091	Metals		zinc	40	MG/KG
MND23-4106	900000092	Metals		zinc	23.9	MG/KG
MND23-4107	900000093	Metals		zinc	90.2	MG/KG
MND23-4104	900000090	Pesticides and/or PCBs	JP	4,4'-DDE	1	UG/KG
MND23-4105	900000091	Pesticides and/or PCBs	J	4,4'-DDE	0.51	UG/KG
MND23-4106	900000092	Pesticides and/or PCBs	JP	4,4'-DDE	0.3	UG/KG
MND23-4104	900000090	Pesticides and/or PCBs	J	4,4'-DDT	1.2	UG/KG
MND23-4105	900000091	Pesticides and/or PCBs	JP	4,4'-DDT	1.4	UG/KG

Table A.3.3 - Miami Erie Canal, Overflow Creek
NPDES Outfall 002 Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4104	900000090	Pesticides and/or PCBs	J	aldrin	0.16	UG/KG
MND23-4103	900000089	Pesticides and/or PCBs	JP	alpha-BHC	0.18	UG/KG
MND23-4102	900000101	Pesticides and/or PCBs	P	alpha-chlordane	3	UG/KG
MND23-4105	900000091	Pesticides and/or PCBs		alpha-chlordane	4.7	UG/KG
MND23-4106	900000092	Pesticides and/or PCBs	J	alpha-chlordane	0.33	UG/KG
MND23-4102	900000101	Pesticides and/or PCBs		Aroclor-1254	120	UG/KG
MND23-4103	900000089	Pesticides and/or PCBs	P	Aroclor-1254	77	UG/KG
MND23-4106	900000092	Pesticides and/or PCBs	J	Aroclor-1254	38	UG/KG
MND23-4107	900000093	Pesticides and/or PCBs		Aroclor-1254	73	UG/KG
MND23-4101	900000086	Pesticides and/or PCBs	JP	dieldrin	1.6	UG/KG
MND23-4102	900000101	Pesticides and/or PCBs	P	dieldrin	7.5	UG/KG
MND23-4104	900000090	Pesticides and/or PCBs	J	dieldrin	0.6	UG/KG
MND23-4107	900000093	Pesticides and/or PCBs	JP	dieldrin	2.4	UG/KG
MND23-4105	900000091	Pesticides and/or PCBs	JP	gamma-BHC (lindane)	1.4	UG/KG
MND23-4101	900000086	Pesticides and/or PCBs	JP	gamma-chlordane	1.1	UG/KG
MND23-4105	900000091	Pesticides and/or PCBs		gamma-chlordane	3.6	UG/KG
MND23-4106	900000092	Pesticides and/or PCBs	J	gamma-chlordane	0.43	UG/KG
MND23-4104	900000090	Pesticides and/or PCBs	JP	heptachlor	0.41	UG/KG
MND23-4102	900000101	Pesticides and/or PCBs	JB	methoxychlor	6.9	UG/KG
MND23-4102	900000101	Radiological		americium-241	8.41	PCI/G
MND23-4103	900000089	Radiological		americium-241	1.52	PCI/G
MND23-4102	900000101	Radiological		cesium-137	0.366	PCI/G
MND23-4103	900000089	Radiological		cesium-137	0.325	PCI/G
MND23-4101	900000086	Radiological		plutonium-238	73.6	PCI/G
MND23-4102	900000101	Radiological		plutonium-238	4650	PCI/G
MND23-4103	900000089	Radiological		plutonium-238	795	PCI/G
MND23-4104	900000090	Radiological		plutonium-238	1.38	PCI/G
MND23-4105	900000091	Radiological		plutonium-238	8.3	PCI/G
MND23-4106	900000092	Radiological		plutonium-238	29.3	PCI/G
MND23-4101	900000086	Radiological		plutonium-239/240	0.265	PCI/G
MND23-4102	900000101	Radiological		plutonium-239/240	12.8	PCI/G
MND23-4103	900000089	Radiological		plutonium-239/240	1.84	PCI/G
MND23-4105	900000091	Radiological		plutonium-239/240	0.02	PCI/G
MND23-4106	900000092	Radiological		plutonium-239/240	0.103	PCI/G
MND23-4101	900000086	Radiological		potassium-40	6.03	PCI/G
MND23-4102	900000101	Radiological		potassium-40	18	PCI/G
MND23-4103	900000089	Radiological		potassium-40	20.8	PCI/G
MND23-4104	900000090	Radiological		potassium-40	10.8	PCI/G
MND23-4105	900000091	Radiological		potassium-40	12.5	PCI/G
MND23-4106	900000092	Radiological		potassium-40	5.47	PCI/G
MND23-4101	900000086	Radiological		radium-226	0.465	PCI/G
MND23-4102	900000101	Radiological		radium-226	0.911	PCI/G
MND23-4103	900000089	Radiological		radium-226	0.932	PCI/G
MND23-4104	900000090	Radiological		radium-226	0.681	PCI/G
MND23-4105	900000091	Radiological		radium-226	0.84	PCI/G
MND23-4106	900000092	Radiological		radium-226	0.472	PCI/G
MND23-4101	900000086	Radiological		thorium-228	0.624	PCI/G
MND23-4102	900000101	Radiological		thorium-228	24.9	PCI/G
MND23-4103	900000089	Radiological		thorium-228	4.05	PCI/G
MND23-4104	900000090	Radiological		thorium-228	0.699	PCI/G

Table A.3.3 - Miami Erie Canal, Overflow Creek
NPDES Outfall 002 Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4105	900000091	Radiological		thorium-228	0.588	PCI/G
MND23-4106	900000092	Radiological		thorium-228	0.334	PCI/G
MND23-4101	900000086	Radiological		thorium-230	0.822	PCI/G
MND23-4102	900000101	Radiological		thorium-230	1.82	PCI/G
MND23-4103	900000089	Radiological		thorium-230	1.83	PCI/G
MND23-4104	900000090	Radiological		thorium-230	0.768	PCI/G
MND23-4105	900000091	Radiological		thorium-230	0.779	PCI/G
MND23-4106	900000092	Radiological		thorium-230	0.689	PCI/G
MND23-4101	900000086	Radiological		thorium-232	0.391	PCI/G
MND23-4102	900000101	Radiological		thorium-232	1.06	PCI/G
MND23-4103	900000089	Radiological		thorium-232	0.956	PCI/G
MND23-4104	900000090	Radiological		thorium-232	0.38	PCI/G
MND23-4105	900000091	Radiological		thorium-232	0.394	PCI/G
MND23-4106	900000092	Radiological		thorium-232	0.277	PCI/G
MND23-4101	900000086	Radiological		uranium-234	0.689	PCI/G
MND23-4102	900000101	Radiological		uranium-234	2.19	PCI/G
MND23-4103	900000089	Radiological		uranium-234	1.29	PCI/G
MND23-4104	900000090	Radiological		uranium-234	0.733	PCI/G
MND23-4105	900000091	Radiological		uranium-234	0.653	PCI/G
MND23-4106	900000092	Radiological		uranium-234	0.448	PCI/G
MND23-4101	900000086	Radiological		uranium-235	0.0398	PCI/G
MND23-4106	900000092	Radiological		uranium-235	0.0436	PCI/G
MND23-4101	900000086	Radiological		uranium-238	0.832	PCI/G
MND23-4103	900000089	Radiological		uranium-238	1.05	PCI/G
MND23-4104	900000090	Radiological		uranium-238	0.677	PCI/G
MND23-4105	900000091	Radiological		uranium-238	0.599	PCI/G
MND23-4106	900000092	Radiological		uranium-238	0.475	PCI/G
MND23-4103	900000089	Semi-Volatile Organics	J	2-benzyl-4-chlorophenol	110	UG/KG
MND23-4103	900000089	Semi-Volatile Organics	J	2-methylnaphthalene	150	UG/KG
MND23-4102	900000101	Semi-Volatile Organics	J	acenaphthene	46	UG/KG
MND23-4103	900000089	Semi-Volatile Organics	J	acenaphthene	50	UG/KG
MND23-4101	900000086	Semi-Volatile Organics	J	acenaphthylene	48	UG/KG
MND23-4101	900000086	Semi-Volatile Organics	J	anthracene	98	UG/KG
MND23-4102	900000101	Semi-Volatile Organics	J	anthracene	86	UG/KG
MND23-4103	900000089	Semi-Volatile Organics	J	anthracene	52	UG/KG
MND23-4107	900000093	Semi-Volatile Organics	J	anthracene	60	UG/KG
MND23-4101	900000086	Semi-Volatile Organics		benzo(a)anthracene	720	UG/KG
MND23-4102	900000101	Semi-Volatile Organics		benzo(a)anthracene	510	UG/KG
MND23-4103	900000089	Semi-Volatile Organics		benzo(a)anthracene	650	UG/KG
MND23-4104	900000090	Semi-Volatile Organics	J	benzo(a)anthracene	65	UG/KG
MND23-4106	900000092	Semi-Volatile Organics	J	benzo(a)anthracene	44	UG/KG
MND23-4107	900000093	Semi-Volatile Organics	J	benzo(a)anthracene	320	UG/KG
MND23-4101	900000086	Semi-Volatile Organics		benzo(a)pyrene	880	UG/KG
MND23-4102	900000101	Semi-Volatile Organics		benzo(a)pyrene	470	UG/KG
MND23-4103	900000089	Semi-Volatile Organics		benzo(a)pyrene	540	UG/KG
MND23-4104	900000090	Semi-Volatile Organics	J	benzo(a)pyrene	69	UG/KG
MND23-4106	900000092	Semi-Volatile Organics	J	benzo(a)pyrene	44	UG/KG
MND23-4107	900000093	Semi-Volatile Organics	J	benzo(a)pyrene	400	UG/KG
MND23-4101	900000086	Semi-Volatile Organics	X	benzo(b)fluoranthene	1400	UG/KG
MND23-4102	900000101	Semi-Volatile Organics	X	benzo(b)fluoranthene	720	UG/KG

Table A.3.3 - Miami Erie Canal, Overflow Creek
NPDES Outfall 002 Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4103	900000089	Semi-Volatile Organics	X	benzo(b)fluoranthene	840	UG/KG
MND23-4104	900000090	Semi-Volatile Organics	JX	benzo(b)fluoranthene	130	UG/KG
MND23-4105	900000091	Semi-Volatile Organics	JX	benzo(b)fluoranthene	79	UG/KG
MND23-4106	900000092	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	95	UG/KG
MND23-4107	900000093	Semi-Volatile Organics	X	benzo(b)fluoranthene	810	UG/KG
MND23-4101	900000086	Semi-Volatile Organics	J	benzo(g,h,i)perylene	200	UG/KG
MND23-4102	900000101	Semi-Volatile Organics	J	benzo(g,h,i)perylene	210	UG/KG
MND23-4103	900000089	Semi-Volatile Organics	J	benzo(g,h,i)perylene	270	UG/KG
MND23-4107	900000093	Semi-Volatile Organics	J	benzo(g,h,i)perylene	120	UG/KG
MND23-4101	900000086	Semi-Volatile Organics	X	benzo(k)fluoranthene	2300	UG/KG
MND23-4102	900000101	Semi-Volatile Organics	X	benzo(k)fluoranthene	1500	UG/KG
MND23-4103	900000089	Semi-Volatile Organics	X	benzo(k)fluoranthene	1800	UG/KG
MND23-4104	900000090	Semi-Volatile Organics	JX	benzo(k)fluoranthene	220	UG/KG
MND23-4105	900000091	Semi-Volatile Organics	JX	benzo(k)fluoranthene	130	UG/KG
MND23-4106	900000092	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	160	UG/KG
MND23-4107	900000093	Semi-Volatile Organics	X	benzo(k)fluoranthene	1300	UG/KG
MND23-4102	900000101	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	160	UG/KG
MND23-4103	900000089	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	130	UG/KG
MND23-4104	900000090	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	41	UG/KG
MND23-4105	900000091	Semi-Volatile Organics		bis(2-ethylhexyl)phthalate	500	UG/KG
MND23-4107	900000093	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	350	UG/KG
MND23-4105	900000091	Semi-Volatile Organics		butyl benzyl phthalate	2100	UG/KG
MND23-4102	900000101	Semi-Volatile Organics	J	carbazole	54	UG/KG
MND23-4101	900000086	Semi-Volatile Organics		chrysene	680	UG/KG
MND23-4102	900000101	Semi-Volatile Organics		chrysene	490	UG/KG
MND23-4103	900000089	Semi-Volatile Organics		chrysene	820	UG/KG
MND23-4104	900000090	Semi-Volatile Organics	J	chrysene	76	UG/KG
MND23-4105	900000091	Semi-Volatile Organics	J	chrysene	46	UG/KG
MND23-4106	900000092	Semi-Volatile Organics	J	chrysene	60	UG/KG
MND23-4107	900000093	Semi-Volatile Organics	J	chrysene	470	UG/KG
MND23-4102	900000101	Semi-Volatile Organics	JB	di-n-butyl phthalate	85	UG/KG
MND23-4103	900000089	Semi-Volatile Organics	JB	di-n-butyl phthalate	84	UG/KG
MND23-4104	900000090	Semi-Volatile Organics	J	di-n-butyl phthalate	53	UG/KG
MND23-4105	900000091	Semi-Volatile Organics	J	di-n-butyl phthalate	100	UG/KG
MND23-4106	900000092	Semi-Volatile Organics	J	di-n-butyl phthalate	39	UG/KG
MND23-4101	900000086	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	89	UG/KG
MND23-4101	900000086	Semi-Volatile Organics		fluoranthene	1200	UG/KG
MND23-4102	900000101	Semi-Volatile Organics		fluoranthene	950	UG/KG
MND23-4103	900000089	Semi-Volatile Organics		fluoranthene	860	UG/KG
MND23-4104	900000090	Semi-Volatile Organics	J	fluoranthene	120	UG/KG
MND23-4105	900000091	Semi-Volatile Organics	J	fluoranthene	73	UG/KG
MND23-4106	900000092	Semi-Volatile Organics	J	fluoranthene	95	UG/KG
MND23-4107	900000093	Semi-Volatile Organics		fluoranthene	750	UG/KG
MND23-4101	900000086	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	380	UG/KG
MND23-4102	900000101	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	320	UG/KG
MND23-4103	900000089	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	260	UG/KG
MND23-4107	900000093	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	190	UG/KG
MND23-4103	900000089	Semi-Volatile Organics	J	naphthalene	51	UG/KG
MND23-4101	900000086	Semi-Volatile Organics		phenanthrene	470	UG/KG
MND23-4102	900000101	Semi-Volatile Organics		phenanthrene	440	UG/KG

Table A.3.3 - Miami Erie Canal, Overflow Creek
NPDES Outfall 002 Subsurface Soils

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND23-4103	900000089	Semi-Volatile Organics		phenanthrene	430	UG/KG
MND23-4104	900000090	Semi-Volatile Organics	J	phenanthrene	75	UG/KG
MND23-4107	900000093	Semi-Volatile Organics	J	phenanthrene	270	UG/KG
MND23-4101	900000086	Semi-Volatile Organics		pyrene	1200	UG/KG
MND23-4102	900000101	Semi-Volatile Organics		pyrene	760	UG/KG
MND23-4103	900000089	Semi-Volatile Organics		pyrene	920	UG/KG
MND23-4104	900000090	Semi-Volatile Organics	J	pyrene	120	UG/KG
MND23-4105	900000091	Semi-Volatile Organics	J	pyrene	69	UG/KG
MND23-4106	900000092	Semi-Volatile Organics	J	pyrene	97	UG/KG
MND23-4107	900000093	Semi-Volatile Organics		pyrene	690	UG/KG
MND23-4101	900000086	Volatile Organics	JB	acetone	5	UG/KG
MND23-4102	900000101	Volatile Organics	B	acetone	21	UG/KG
MND23-4103	900000089	Volatile Organics	B	acetone	15	UG/KG
MND23-4106	900000092	Volatile Organics	JB	acetone	5	UG/KG
MND23-4107	900000093	Volatile Organics	JB	acetone	9	UG/KG
MND23-4101	900000086	Volatile Organics	B	methylene chloride	12	UG/KG
MND23-4102	900000101	Volatile Organics	B	methylene chloride	10	UG/KG
MND23-4103	900000089	Volatile Organics	B	methylene chloride	12	UG/KG
MND23-4105	900000091	Volatile Organics	B	methylene chloride	32	UG/KG
MND23-4106	900000092	Volatile Organics	B	methylene chloride	21	UG/KG
MND23-4107	900000093	Volatile Organics	B	methylene chloride	17	UG/KG

APPENDIX A.4

Appendix A-4

Zone of Influence

Tables Indicating Detections Above Background

A.4.1 Pond Surface Water

A.4.2 Stream Surface Water

A.4.3 Pond Sediment

A.4.4 Stream Sediment

Appendix A-4

Zone of Influence

Tables Indicating Detections Above Background

A.4.1 Pond Surface Water

Table A.4.1 - Zone of Influence Pond Surface Water Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-4301	000372	Common Anions		chloride	255	MG/L	no
MND21-4301	900000023	Common Anions		chloride	227	MG/L	no
MND21-4302	000373	Common Anions		chloride	220	MG/L	no
MND21-4302	900000024	Common Anions		chloride	140	MG/L	no
MND21-4303	000374	Common Anions		chloride	225	MG/L	no
MND21-4303	900000025	Common Anions		chloride	140	MG/L	no
MND21-4501	000377	Common Anions		chloride	127	MG/L	no
MND21-4501	900000173	Common Anions		chloride	129	MG/L	no
MND21-4502	000378	Common Anions		chloride	125	MG/L	no
MND21-4502	900000172	Common Anions		chloride	127	MG/L	no
MND21-4503	000379	Common Anions		chloride	126	MG/L	no
MND21-4503	900000171	Common Anions		chloride	128	MG/L	no
MND21-4302	000373	Common Anions		nitrate-nitrite-N	1.34	MG/L	no
MND21-4303	000374	Common Anions		nitrate-nitrite-N	1.37	MG/L	no
MND21-4301	000372	Common Anions		sulfate	68.2	MG/L	no
MND21-4303	000374	Common Anions		sulfate	74.2	MG/L	no
MND21-4501	000377	Common Anions		sulfate	68.5	MG/L	no
MND21-4501	900000173	Common Anions		sulfate	74	MG/L	no
MND21-4502	000378	Common Anions		sulfate	78.8	MG/L	no
MND21-4502	900000172	Common Anions		sulfate	91	MG/L	no
MND21-4503	000379	Common Anions		sulfate	74.1	MG/L	no
MND21-3403	000371	General Chemistry		phosphorous	4.43	MG/L	no
MND21-3402	900000002	Metals	B	antimony	23.6	UG/L	yes
MND21-4302	000373	Metals	B	antimony	5.3	UG/L	no
MND21-4303	900000025	Metals	B	antimony	3.7	UG/L	no
MND21-3401	900000001	Metals	B	arsenic	3.4	UG/L	yes
MND21-4302	900000024	Metals	B	arsenic	7.4	UG/L	no
MND21-4302	900000024	Metals	B	arsenic	5.9	UG/L	yes
MND21-4303	900000025	Metals	B	arsenic	7.4	UG/L	no
MND21-4303	900000025	Metals	B	arsenic	5.8	UG/L	yes
MND21-4301	900000023	Metals	B	barium	106	UG/L	yes
MND21-4302	000373	Metals	B	barium	104	UG/L	yes
MND21-4303	000374	Metals	B	barium	105	UG/L	yes
MND21-4501	000377	Metals	B	barium	100	UG/L	yes
MND21-4501	900000173	Metals	B	barium	117	UG/L	yes
MND21-4502	000378	Metals	B	barium	100	UG/L	yes
MND21-4502	900000172	Metals	B	barium	111	UG/L	yes
MND21-4503	000379	Metals	B	barium	102	UG/L	yes
MND21-4503	900000171	Metals	B	barium	117	UG/L	yes
MND21-3403	000371	Metals	B	bismuth	65.1	UG/L	yes
MND21-4302	000373	Metals		calcium	97000	UG/L	no
MND21-4303	000374	Metals		calcium	93800	UG/L	no
MND21-3403	900000003	Metals	B	chromium	0.78	UG/L	yes
MND21-4301	000372	Metals	B	chromium	2.2	UG/L	yes
MND21-4301	900000023	Metals	B	chromium	0.73	UG/L	yes
MND21-4303	900000025	Metals	B	chromium	0.77	UG/L	yes
MND21-4502	900000172	Metals	B	chromium	0.81	UG/L	yes
MND21-4302	000373	Metals	B	cobalt	0.64	UG/L	yes
MND21-4501	000377	Metals	B	cobalt	0.97	UG/L	yes
MND21-4502	000378	Metals	B	cobalt	0.75	UG/L	yes

Table A.4.1 - Zone of Influence Pond Surface Water Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-4303	000374	Metals	B	Lead	2.4	UG/L	yes
MND21-4501	000377	Metals		Lead	2.7	UG/L	yes
MND21-3401	900000001	Metals	B	lithium	3.9	UG/L	yes
MND21-3402	900000002	Metals	B	lithium	3.5	UG/L	yes
MND21-3403	900000003	Metals	B	lithium	6.9	UG/L	no
MND21-3403	900000003	Metals	B	lithium	3.9	UG/L	yes
MND21-4302	000373	Metals	B	lithium	7.9	UG/L	yes
MND21-4501	900000173	Metals		magnesium	42200	UG/L	yes
MND21-4501	900000173	Metals		magnesium	40100	UG/L	no
MND21-4502	000378	Metals		magnesium	35700	UG/L	no
MND21-4502	900000172	Metals		magnesium	40100	UG/L	no
MND21-4502	900000172	Metals		magnesium	39400	UG/L	yes
MND21-4503	900000171	Metals		magnesium	42000	UG/L	yes
MND21-4301	000372	Metals	B	molybdenum	18.6	UG/L	yes
MND21-3401	000369	Metals		potassium	9200	UG/L	yes
MND21-3401	000369	Metals		potassium	8610	UG/L	no
MND21-3401	900000001	Metals		potassium	8510	UG/L	yes
MND21-3401	900000001	Metals		potassium	5640	UG/L	no
MND21-3402	000370	Metals		potassium	9160	UG/L	yes
MND21-3402	000370	Metals		potassium	7590	UG/L	no
MND21-3402	900000002	Metals		potassium	5950	UG/L	no
MND21-3402	900000002	Metals		potassium	5740	UG/L	yes
MND21-3403	000371	Metals		potassium	9770	UG/L	yes
MND21-3403	000371	Metals		potassium	8410	UG/L	no
MND21-3403	900000003	Metals		potassium	6250	UG/L	no
MND21-3403	900000003	Metals		potassium	5900	UG/L	yes
MND21-4302	900000024	Metals		potassium	5610	UG/L	no
MND21-4302	900000024	Metals		potassium	5360	UG/L	yes
MND21-4303	900000025	Metals		potassium	5660	UG/L	no
MND21-4303	900000025	Metals		potassium	5530	UG/L	yes
MND21-4501	900000173	Metals		potassium	5660	UG/L	yes
MND21-4501	900000173	Metals		potassium	5540	UG/L	no
MND21-4502	900000172	Metals		potassium	5520	UG/L	no
MND21-4502	900000172	Metals		potassium	5410	UG/L	yes
MND21-4503	900000171	Metals		potassium	5710	UG/L	yes
MND21-4503	900000171	Metals	B	potassium	4880	UG/L	no
MND21-4301	000372	Metals	B	selenium	2.7	UG/L	no
MND21-3401	900000001	Metals	B	silver	0.63	UG/L	no
MND21-3402	900000002	Metals	B	silver	0.8	UG/L	no
MND21-3403	900000003	Metals	B	silver	0.78	UG/L	no
MND21-4301	900000023	Metals	B	silver	0.54	UG/L	no
MND21-4302	900000024	Metals	B	silver	0.72	UG/L	no
MND21-4303	900000025	Metals	B	silver	0.64	UG/L	no
MND21-3401	900000001	Metals		sodium	297000	UG/L	yes
MND21-3401	900000001	Metals		sodium	30800	UG/L	no
MND21-3402	900000002	Metals		sodium	32600	UG/L	no
MND21-3403	900000003	Metals		sodium	33400	UG/L	no
MND21-3403	900000003	Metals		sodium	32800	UG/L	yes
MND21-4301	000372	Metals		sodium	595000	UG/L	yes
MND21-4301	000372	Metals		sodium	115000	UG/L	no

Table A.4.1 - Zone of Influence Pond Surface Water Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-4301	900000023	Metals		sodium	111000	UG/L	no
MND21-4301	900000023	Metals		sodium	109000	UG/L	yes
MND21-4302	000373	Metals		sodium	107000	UG/L	yes
MND21-4302	000373	Metals		sodium	105000	UG/L	no
MND21-4302	900000024	Metals		sodium	72100	UG/L	no
MND21-4302	900000024	Metals		sodium	71400	UG/L	yes
MND21-4303	000374	Metals		sodium	107000	UG/L	yes
MND21-4303	000374	Metals		sodium	101000	UG/L	no
MND21-4303	900000025	Metals		sodium	72900	UG/L	yes
MND21-4303	900000025	Metals		sodium	72000	UG/L	no
MND21-4501	000377	Metals		sodium	41200	UG/L	yes
MND21-4501	000377	Metals		sodium	36500	UG/L	no
MND21-4501	900000173	Metals		sodium	49300	UG/L	yes
MND21-4501	900000173	Metals		sodium	47300	UG/L	no
MND21-4502	000378	Metals		sodium	41300	UG/L	yes
MND21-4502	000378	Metals		sodium	40100	UG/L	no
MND21-4502	900000172	Metals		sodium	47000	UG/L	no
MND21-4502	900000172	Metals		sodium	46800	UG/L	yes
MND21-4503	000379	Metals		sodium	41500	UG/L	yes
MND21-4503	000379	Metals		sodium	36200	UG/L	no
MND21-4503	900000171	Metals		sodium	49500	UG/L	yes
MND21-4503	900000171	Metals		sodium	41000	UG/L	no
MND21-4503	000379	Metals	B	thallium	1.7	UG/L	no
MND21-3402	000370	Metals		tin	57.2	UG/L	yes
MND21-4301	000372	Metals		tin	69.9	UG/L	yes
MND21-3401	900000001	Radiological		americium-241	0.237	PCI/L	no
MND21-3401	000369	Radiological		tritium	658	PCI/L	no
MND21-3401	900000001	Radiological		tritium	704	PCI/L	no
MND21-3402	000370	Radiological		tritium	574	PCI/L	no
MND21-3402	900000002	Radiological		tritium	820	PCI/L	no
MND21-3403	000371	Radiological		tritium	628	PCI/L	no
MND21-3403	900000003	Radiological		tritium	846	PCI/L	no
MND21-4501	900000173	Radiological		tritium	301	PCI/L	no
MND21-3403	900000003	Radiological		uranium-234	0.641	PCI/L	no
MND21-4301	000372	Radiological		uranium-234	0.974	PCI/L	no
MND21-4302	000373	Radiological		uranium-234	1.06	PCI/L	no
MND21-4302	900000024	Radiological		uranium-234	0.75	PCI/L	no
MND21-4303	900000025	Radiological		uranium-234	0.534	PCI/L	no
MND21-4501	000377	Radiological		uranium-234	0.75	PCI/L	no
MND21-4501	900000173	Radiological		uranium-234	0.675	PCI/L	no
MND21-4302	000373	Radiological		uranium-238	0.641	PCI/L	no
MND21-4303	000374	Radiological		uranium-238	1.01	PCI/L	no
MND21-3401	900000001	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	4	UG/L	no
MND21-3403	900000003	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	1	UG/L	no
MND21-4303	900000025	Semi-Volatile Organics	J	diethyl phthalate	1	UG/L	no
MND21-3402	900000002	Semi-Volatile Organics	JB	phenol	3	UG/L	no
MND21-3401	900000001	Volatile Organics		acetonitrile	240	UG/L	no
MND21-4301	900000023	Volatile Organics	J	toluene	3	UG/L	no
MND21-4503	000379	Volatile Organics	J	xylenes, total	1	UG/L	no

Appendix A-4

Zone of Influence

Tables Indicating Detections Above Background

A.4.2 Stream Surface Water

Table A.4.2 - Zone of Influence Stream Surface Water Samples

Station	Sample ID	Fraction	Qual	Parameter	Result	Units	Filtered
MND21-4401	000375	Common Anions		chloride	223	MG/L	no
MND21-4402	000376	Common Anions		chloride	205	MG/L	no
MND21-4401	900000183	Common Anions		fluoride	1.5	MG/L	no
MND21-4401	900000183	General chemistry		organic carbon	44.3	MG/L	yes
MND21-4401	000375	Metals		aluminum	676	UG/L	no
MND21-4401	900000183	Metals		aluminum	37.7	UG/L	yes
MND21-4601	900000185	Metals		aluminum	112	UG/L	yes
MND21-4602	900000184	Metals		aluminum	90.6	UG/L	yes
MND21-4401	900000183	Metals	B	antimony	5.1	UG/L	yes
MND21-4401	900000183	Metals	B	antimony	1.2	UG/L	no
MND21-4401	900000183	Metals	B	arsenic	6.3	UG/L	no
MND21-4401	900000183	Metals	B	arsenic	5.4	UG/L	yes
MND21-4602	900000184	Metals	B	barium	135	UG/L	no
MND21-4401	900000183	Metals	B	beryllium	0.23	UG/L	yes
MND21-4401	900000183	Metals	B	chromium	4.2	UG/L	yes
MND21-4401	000375	Metals		chromium	1.40	UG/L	no
MND21-4601	900000185	Metals	B	chromium	0.9	UG/L	yes
MND21-4602	900000184	Metals	B	chromium	0.94	UG/L	yes
MND21-4401	000375	Metals	B	cobalt	0.81	UG/L	yes
MND21-4401	900000183	Metals	B	cobalt	2	UG/L	no
MND21-4401	900000183	Metals	B	cobalt	0.76	UG/L	yes
MND21-4402	000376	Metals	B	cobalt	0.82	UG/L	yes
MND21-4401	900000183	Metals	B	copper	14.6	UG/L	no
MND21-4401	900000183	Metals		iron	248	UG/L	yes
MND21-4601	000380	Metals		lead	2.7	UG/L	no
MND21-4602	000381	Metals		lead	2	UG/L	no
MND21-4401	900000183	Metals	B	molybdenum	7.9	UG/L	yes
MND21-4401	900000183	Metals		potassium	16300	UG/L	no
MND21-4401	900000183	Metals		potassium	15700	UG/L	yes
MND21-4401	000375	Metals		sodium	1E+05	UG/L	yes
MND21-4401	000375	Metals		sodium	86200	UG/L	no
MND21-4401	900000183	Metals		sodium	2E+05	UG/L	no
MND21-4401	900000183	Metals		sodium	2E+05	UG/L	yes
MND21-4402	000376	Metals		sodium	94300	UG/L	yes
MND21-4402	000376	Metals		sodium	91400	UG/L	no
MND21-4401	900000183	Metals	B	vanadium	3.2	UG/L	no
MND21-4401	000375	Metals	B	zinc	8.5	UG/L	yes
MND21-4401	900000183	Metals		zinc	101	UG/L	no
MND21-4401	900000183	Metals		zinc	31	UG/L	yes
MND21-4601	000380	Metals		zinc	30.2	UG/L	yes
MND21-4401	900000183	Pesticides and/or PCBs	J	endosulfan I	0.042	UG/L	no
MND21-4402	000376	Radiological		strontium-90	0.716	PCI/L	no
MND21-4601	000380	Radiological		strontium-90	60	PCI/L	no
MND21-4602	000381	Radiological		strontium-90	0.592	PCI/L	no
MND21-4401	900000183	Radiological		thorium-228	0.216	PCI/L	no
MND21-4401	900000183	Semi-Volatile organics	DJ	4-methylphenol	20	UG/L	no
MND21-4401	900000183	Semi-Volatile organics	DJ	benzoic acid	100	UG/L	no
MND21-4401	900000183	Semi-Volatile organics		benzyl alcohol	10	UG/L	no
MND21-4401	900000183	Semi-Volatile organics		bis(2-ethylhexyl)phthalate	11	UG/L	no
MND21-4401	900000183	Semi-Volatile organics	DJ	diethyl phthalate	5	UG/L	no

Table A.4.2 - Zone of Influence Stream Surface Water Samples

Station	Sample ID	Fraction	Qual	Parameter	Result	Units	Filtered
MND21-4402	000376	Semi-Volatile organics	BJ	phenol	1	UG/L	no
MND21-4402	000376	Volatile organics	J	xylenes, total	1	UG/L	no

Appendix A-4

Zone of Influence

Tables Indicating Detections Above Background

A.4.3 Pond Sediment

Table A.4.3 - Zone of Influence Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-4502	900000237	Common Anions		chloride	13000	MG/KG
MND22-4503	900000238	Common Anions		chloride	30500	MG/KG
MND22-4302	900000026	Explosives	J	HMX	1.4	MG/KG
MND22-3401	900000005	Explosives	J	RDX	0.64	MG/KG
MND22-4305	000480	Metals		cadmium	3.2	MG/KG
MND22-3401	000471	Metals	B	lithium	29.2	MG/KG
MND22-3402	000472	Metals		lithium	33.8	MG/KG
MND22-3402	900000006	Metals	B	lithium	33.3	MG/KG
MND22-3403	000473	Metals		lithium	30.7	MG/KG
MND22-4304	000483	Metals		manganese	775	MG/KG
MND22-3401	000471	Metals	B	nickel	25.9	MG/KG
MND22-3401	900000005	Metals		nickel	26	MG/KG
MND22-3402	000472	Metals		nickel	27.4	MG/KG
MND22-3402	900000006	Metals		nickel	28.8	MG/KG
MND22-3403	000473	Metals		nickel	27.5	MG/KG
MND22-3402	900000006	Metals		potassium	4870	MG/KG
MND22-3403	900000007	Metals		potassium	3650	MG/KG
MND22-4305	000480	Metals	B	silver	1	MG/KG
MND22-3401	000471	Metals		zinc	156	MG/KG
MND22-3401	900000005	Metals		zinc	274	MG/KG
MND22-3402	000472	Metals		zinc	142	MG/KG
MND22-3402	900000006	Metals		zinc	119	MG/KG
MND22-3403	000473	Metals		zinc	171	MG/KG
MND22-3403	900000007	Metals		zinc	95.5	MG/KG
MND22-4301	000479	Metals		zinc	126	MG/KG
MND22-4301	900000029	Metals		zinc	106	MG/KG
MND22-4303	000482	Metals		zinc	129	MG/KG
MND22-4304	000483	Metals		zinc	191	MG/KG
MND22-4502	000487	Metals		zinc	107	MG/KG
MND22-4503	000488	Metals		zinc	99.1	MG/KG
MND22-4305	000480	Pesticides and/or PCBs		4,4'-DDD	47	UG/KG
MND22-4305	000480	Pesticides and/or PCBs	JP	4,4'-DDT	3.1	UG/KG
MND22-3401	000471	Radiological		plutonium-238	0.524	PCI/G
MND22-3401	900000005	Radiological		plutonium-238	0.761	PCI/G
MND22-3402	000472	Radiological		plutonium-238	1.1	PCI/G
MND22-3402	900000006	Radiological		plutonium-238	0.752	PCI/G
MND22-3403	000473	Radiological		plutonium-238	1.69	PCI/G
MND22-3403	900000007	Radiological		plutonium-238	1.96	PCI/G
MND22-4501	000489	Radiological		plutonium-238	0.68	PCI/G
MND22-4501	900000239	Radiological		plutonium-238	0.364	PCI/G
MND22-4502	000487	Radiological		plutonium-238	0.778	PCI/G
MND22-4502	900000237	Radiological		plutonium-238	0.711	PCI/G
MND22-4503	000488	Radiological		plutonium-238	0.855	PCI/G
MND22-4503	900000238	Radiological		plutonium-238	0.598	PCI/G
MND22-3401	000471	Radiological		potassium-40	37.4	PCI/G
MND22-3401	900000005	Radiological		potassium-40	33.1	PCI/G
MND22-3402	000472	Radiological		potassium-40	38.6	PCI/G
MND22-3402	900000006	Radiological		potassium-40	32.8	PCI/G
MND22-3403	000473	Radiological		potassium-40	23.5	PCI/G
MND22-3403	900000007	Radiological		potassium-40	25.8	PCI/G
MND22-3401	900000005	Radiological		thorium-230	1.84	PCI/G

Table A.4.3 - Zone of Influence Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-3403	900000007	Radiological		thorium-230	1.82	PCI/G
MND22-3401	000471	Radiological		tritium	1	PCI/G
MND22-3402	000472	Radiological		tritium	1.69	PCI/G
MND22-3403	000473	Radiological		tritium	2.35	PCI/G
MND22-4501	900000239	Radiological		tritium	0.353	PCI/G
MND22-3402	900000006	Radiological		uranium-234	1.5	PCI/G
MND22-4501	900000239	Semi-Volatile Organics	J	anthracene	96	UG/KG
MND22-3401	000471	Semi-Volatile Organics	J	benzo(a)anthracene	370	UG/KG
MND22-3401	900000005	Semi-Volatile Organics	J	benzo(a)anthracene	270	UG/KG
MND22-3402	000472	Semi-Volatile Organics	J	benzo(a)anthracene	450	UG/KG
MND22-3402	900000006	Semi-Volatile Organics	J	benzo(a)anthracene	310	UG/KG
MND22-3403	000473	Semi-Volatile Organics	J	benzo(a)anthracene	490	UG/KG
MND22-3403	900000007	Semi-Volatile Organics	J	benzo(a)anthracene	440	UG/KG
MND22-4301	900000029	Semi-Volatile Organics	J	benzo(a)anthracene	210	UG/KG
MND22-4302	900000026	Semi-Volatile Organics	J	benzo(a)anthracene	100	UG/KG
MND22-4305	900000028	Semi-Volatile Organics	J	benzo(a)anthracene	100	UG/KG
MND22-4501	000489	Semi-Volatile Organics	J	benzo(a)anthracene	150	UG/KG
MND22-4501	900000239	Semi-Volatile Organics	J	benzo(a)anthracene	430	UG/KG
MND22-4502	900000237	Semi-Volatile Organics	J	benzo(a)anthracene	160	UG/KG
MND22-4503	900000238	Semi-Volatile Organics	J	benzo(a)anthracene	300	UG/KG
MND22-3401	000471	Semi-Volatile Organics	J	benzo(a)pyrene	330	UG/KG
MND22-3401	900000005	Semi-Volatile Organics	J	benzo(a)pyrene	350	UG/KG
MND22-3402	000472	Semi-Volatile Organics	J	benzo(a)pyrene	470	UG/KG
MND22-3402	900000006	Semi-Volatile Organics	J	benzo(a)pyrene	350	UG/KG
MND22-3403	000473	Semi-Volatile Organics	J	benzo(a)pyrene	570	UG/KG
MND22-3403	900000007	Semi-Volatile Organics	J	benzo(a)pyrene	530	UG/KG
MND22-4301	900000029	Semi-Volatile Organics	J	benzo(a)pyrene	150	UG/KG
MND22-4302	900000026	Semi-Volatile Organics	J	benzo(a)pyrene	300	UG/KG
MND22-4303	900000030	Semi-Volatile Organics	J	benzo(a)pyrene	67	UG/KG
MND22-4305	900000028	Semi-Volatile Organics	J	benzo(a)pyrene	110	UG/KG
MND22-4501	000489	Semi-Volatile Organics	J	benzo(a)pyrene	150	UG/KG
MND22-4501	900000239	Semi-Volatile Organics	J	benzo(a)pyrene	410	UG/KG
MND22-4502	900000237	Semi-Volatile Organics	J	benzo(a)pyrene	140	UG/KG
MND22-4503	900000238	Semi-Volatile Organics	J	benzo(a)pyrene	240	UG/KG
MND22-3401	000471	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	770	UG/KG
MND22-3401	900000005	Semi-Volatile Organics	J	benzo(b)fluoranthene	470	UG/KG
MND22-3402	000472	Semi-Volatile Organics	X	benzo(b)fluoranthene	1100	UG/KG
MND22-3402	900000006	Semi-Volatile Organics	J	benzo(b)fluoranthene	490	UG/KG
MND22-3403	000473	Semi-Volatile Organics	X	benzo(b)fluoranthene	1200	UG/KG
MND22-3403	900000007	Semi-Volatile Organics	X	benzo(b)fluoranthene	940	UG/KG
MND22-4301	900000029	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	340	UG/KG
MND22-4302	900000026	Semi-Volatile Organics	X	benzo(b)fluoranthene	560	UG/KG
MND22-4303	900000030	Semi-Volatile Organics	JX	benzo(b)fluoranthene	92	UG/KG
MND22-4304	900000031	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	100	UG/KG
MND22-4305	900000028	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	210	UG/KG
MND22-4501	000489	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	270	UG/KG
MND22-4501	900000239	Semi-Volatile Organics	X	benzo(b)fluoranthene	770	UG/KG
MND22-4502	900000237	Semi-Volatile Organics	J	benzo(b)fluoranthene	250	UG/KG
MND22-4503	900000238	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	500	UG/KG
MND22-3401	900000005	Semi-Volatile Organics	J	benzo(g,h,i)perylene	140	UG/KG
MND22-3402	000472	Semi-Volatile Organics	J	benzo(g,h,i)perylene	190	UG/KG

Table A.4.3 - Zone of Influence Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-3402	900000006	Semi-Volatile Organics	J	benzo(g,h,i)perylene	130	UG/KG
MND22-3403	000473	Semi-Volatile Organics	J	benzo(g,h,i)perylene	180	UG/KG
MND22-3403	900000007	Semi-Volatile Organics	J	benzo(g,h,i)perylene	240	UG/KG
MND22-4302	900000026	Semi-Volatile Organics	J	benzo(g,h,i)perylene	230	UG/KG
MND22-4305	900000028	Semi-Volatile Organics	J	benzo(g,h,i)perylene	92	UG/KG
MND22-4501	000489	Semi-Volatile Organics	J	benzo(g,h,i)perylene	98	UG/KG
MND22-4501	900000239	Semi-Volatile Organics	J	benzo(g,h,i)perylene	210	UG/KG
MND22-4503	900000238	Semi-Volatile Organics	J	benzo(g,h,i)perylene	380	UG/KG
MND22-3401	000471	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	730	UG/KG
MND22-3401	900000005	Semi-Volatile Organics	J	benzo(k)fluoranthene	280	UG/KG
MND22-3402	000472	Semi-Volatile Organics	X	benzo(k)fluoranthene	1100	UG/KG
MND22-3402	900000006	Semi-Volatile Organics	J	benzo(k)fluoranthene	320	UG/KG
MND22-3403	000473	Semi-Volatile Organics	X	benzo(k)fluoranthene	1200	UG/KG
MND22-3403	900000007	Semi-Volatile Organics	X	benzo(k)fluoranthene	1500	UG/KG
MND22-4301	900000029	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	360	UG/KG
MND22-4302	900000026	Semi-Volatile Organics	X	benzo(k)fluoranthene	880	UG/KG
MND22-4303	900000030	Semi-Volatile Organics	JX	benzo(k)fluoranthene	160	UG/KG
MND22-4304	900000031	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	180	UG/KG
MND22-4305	900000028	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	350	UG/KG
MND22-4501	000489	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	260	UG/KG
MND22-4501	900000239	Semi-Volatile Organics	X	benzo(k)fluoranthene	730	UG/KG
MND22-4502	900000237	Semi-Volatile Organics	J	benzo(k)fluoranthene	280	UG/KG
MND22-4503	900000238	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	450	UG/KG
MND22-3401	000471	Semi-Volatile Organics	J	benzoic acid	230	UG/KG
MND22-3401	900000005	Semi-Volatile Organics	J	benzoic acid	230	UG/KG
MND22-3402	000472	Semi-Volatile Organics	J	benzoic acid	240	UG/KG
MND22-3402	900000006	Semi-Volatile Organics	J	benzoic acid	220	UG/KG
MND22-3403	000473	Semi-Volatile Organics	J	benzoic acid	98	UG/KG
MND22-3403	900000007	Semi-Volatile Organics	J	benzoic acid	210	UG/KG
MND22-4501	000489	Semi-Volatile Organics	J	benzoic acid	93	UG/KG
MND22-4501	900000239	Semi-Volatile Organics	J	benzoic acid	390	UG/KG
MND22-4502	900000237	Semi-Volatile Organics	J	benzoic acid	200	UG/KG
MND22-4503	900000238	Semi-Volatile Organics	J	benzoic acid	170	UG/KG
MND22-3401	900000005	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	98	UG/KG
MND22-3402	000472	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	240	UG/KG
MND22-3403	000473	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	190	UG/KG
MND22-3403	900000007	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	220	UG/KG
MND22-4501	900000239	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	170	UG/KG
MND22-4502	900000237	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	280	UG/KG
MND22-4503	900000238	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	390	UG/KG
MND22-3401	000471	Semi-Volatile Organics	J	chrysene	400	UG/KG
MND22-3401	900000005	Semi-Volatile Organics	J	chrysene	360	UG/KG
MND22-3402	000472	Semi-Volatile Organics	J	chrysene	530	UG/KG
MND22-3402	900000006	Semi-Volatile Organics	J	chrysene	370	UG/KG
MND22-3403	000473	Semi-Volatile Organics	J	chrysene	590	UG/KG
MND22-3403	900000007	Semi-Volatile Organics	J	chrysene	490	UG/KG
MND22-4301	900000029	Semi-Volatile Organics	J	chrysene	220	UG/KG
MND22-4302	900000026	Semi-Volatile Organics		chrysene	490	UG/KG
MND22-4305	900000028	Semi-Volatile Organics	J	chrysene	130	UG/KG
MND22-4501	000489	Semi-Volatile Organics	J	chrysene	150	UG/KG
MND22-4501	900000239	Semi-Volatile Organics	J	chrysene	320	UG/KG

Table A.4.3 - Zone of Influence Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-4502	900000237	Semi-Volatile Organics	J	chrysene	160	UG/KG
MND22-4503	900000238	Semi-Volatile Organics	J	chrysene	230	UG/KG
MND22-3401	000471	Semi-Volatile Organics	J	di-n-butyl phthalate	160	UG/KG
MND22-3402	000472	Semi-Volatile Organics	J	di-n-butyl phthalate	210	UG/KG
MND22-3403	000473	Semi-Volatile Organics	J	di-n-butyl phthalate	170	UG/KG
MND22-4301	900000029	Semi-Volatile Organics	J	di-n-butyl phthalate	180	UG/KG
MND22-4302	000481	Semi-Volatile Organics	BJ	di-n-butyl phthalate	70	UG/KG
MND22-4302	900000026	Semi-Volatile Organics	JB	di-n-butyl phthalate	110	UG/KG
MND22-4302	900000026	Semi-Volatile Organics	J	di-n-butyl phthalate	43	UG/KG
MND22-4303	900000030	Semi-Volatile Organics	JB	di-n-butyl phthalate	120	UG/KG
MND22-4304	900000031	Semi-Volatile Organics	J	di-n-butyl phthalate	140	UG/KG
MND22-4305	900000028	Semi-Volatile Organics	JB	di-n-butyl phthalate	130	UG/KG
MND22-4502	900000237	Semi-Volatile Organics	JB	di-n-butyl phthalate	110	UG/KG
MND22-4503	900000238	Semi-Volatile Organics	JB	di-n-butyl phthalate	190	UG/KG
MND22-3403	000473	Semi-Volatile Organics	J	di-n-octyl phthalate	120	UG/KG
MND22-4302	900000026	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	50	UG/KG
MND22-3401	000471	Semi-Volatile Organics	J	fluoranthene	820	UG/KG
MND22-3401	900000005	Semi-Volatile Organics	J	fluoranthene	680	UG/KG
MND22-3402	000472	Semi-Volatile Organics	J	fluoranthene	920	UG/KG
MND22-3402	900000006	Semi-Volatile Organics	J	fluoranthene	710	UG/KG
MND22-3403	000473	Semi-Volatile Organics		fluoranthene	1100	UG/KG
MND22-3403	900000007	Semi-Volatile Organics	J	fluoranthene	910	UG/KG
MND22-4301	900000029	Semi-Volatile Organics	J	fluoranthene	310	UG/KG
MND22-4302	900000026	Semi-Volatile Organics		fluoranthene	670	UG/KG
MND22-4303	900000030	Semi-Volatile Organics	J	fluoranthene	98	UG/KG
MND22-4304	900000031	Semi-Volatile Organics	J	fluoranthene	100	UG/KG
MND22-4305	900000028	Semi-Volatile Organics	J	fluoranthene	230	UG/KG
MND22-4501	000489	Semi-Volatile Organics	J	fluoranthene	230	UG/KG
MND22-4501	900000239	Semi-Volatile Organics		fluoranthene	750	UG/KG
MND22-4502	900000237	Semi-Volatile Organics	J	fluoranthene	260	UG/KG
MND22-4503	900000238	Semi-Volatile Organics	J	fluoranthene	400	UG/KG
MND22-3401	000471	Semi-Volatile Organics	J	fluorene	72	UG/KG
MND22-3401	000471	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	130	UG/KG
MND22-3401	900000005	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	210	UG/KG
MND22-3402	000472	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	200	UG/KG
MND22-3402	900000006	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	230	UG/KG
MND22-3403	000473	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	210	UG/KG
MND22-3403	900000007	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	340	UG/KG
MND22-4301	900000029	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	130	UG/KG
MND22-4302	900000026	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	200	UG/KG
MND22-4305	900000028	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	92	UG/KG
MND22-4501	000489	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	82	UG/KG
MND22-4501	900000239	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	290	UG/KG
MND22-4503	900000238	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	170	UG/KG
MND22-4304	900000031	Semi-Volatile Organics	J	pentachlorophenol	520	UG/KG
MND22-3401	000471	Semi-Volatile Organics	J	phenanthrene	340	UG/KG
MND22-3401	900000005	Semi-Volatile Organics	J	phenanthrene	270	UG/KG
MND22-3402	000472	Semi-Volatile Organics	J	phenanthrene	350	UG/KG
MND22-3402	900000006	Semi-Volatile Organics	J	phenanthrene	290	UG/KG
MND22-3403	000473	Semi-Volatile Organics	J	phenanthrene	440	UG/KG
MND22-3403	900000007	Semi-Volatile Organics	J	phenanthrene	380	UG/KG

Table A.4.3 - Zone of Influence Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-4302	900000026	Semi-Volatile Organics		phenanthrene	610	UG/KG
MND22-4305	900000028	Semi-Volatile Organics	J	phenanthrene	120	UG/KG
MND22-4501	000489	Semi-Volatile Organics	J	phenanthrene	130	UG/KG
MND22-4501	900000239	Semi-Volatile Organics	J	phenanthrene	430	UG/KG
MND22-4502	900000237	Semi-Volatile Organics	J	phenanthrene	97	UG/KG
MND22-4503	900000238	Semi-Volatile Organics	J	phenanthrene	170	UG/KG
MND22-3401	000471	Semi-Volatile Organics	J	pyrene	700	UG/KG
MND22-3401	900000005	Semi-Volatile Organics	J	pyrene	500	UG/KG
MND22-3402	000472	Semi-Volatile Organics	J	pyrene	850	UG/KG
MND22-3402	900000006	Semi-Volatile Organics	J	pyrene	560	UG/KG
MND22-3403	000473	Semi-Volatile Organics	J	pyrene	840	UG/KG
MND22-3403	900000007	Semi-Volatile Organics	J	pyrene	730	UG/KG
MND22-4301	900000029	Semi-Volatile Organics	J	pyrene	350	UG/KG
MND22-4302	900000026	Semi-Volatile Organics		pyrene	700	UG/KG
MND22-4303	900000030	Semi-Volatile Organics	J	pyrene	47	UG/KG
MND22-4304	900000031	Semi-Volatile Organics	J	pyrene	83	UG/KG
MND22-4305	900000028	Semi-Volatile Organics	J	pyrene	230	UG/KG
MND22-4501	000489	Semi-Volatile Organics	J	pyrene	260	UG/KG
MND22-4501	900000239	Semi-Volatile Organics	J	pyrene	640	UG/KG
MND22-4502	900000237	Semi-Volatile Organics	J	pyrene	240	UG/KG
MND22-4503	900000238	Semi-Volatile Organics	J	pyrene	450	UG/KG
MND22-4303	000482	Volatile Organics	J	2-butanone	11	UG/KG
MND22-4502	000487	Volatile Organics	J	2-butanone	3	UG/KG
MND22-3403	000473	Volatile Organics	B	acetone	220	UG/KG
MND22-3402	000472	Volatile Organics	J	hexane	7	UG/KG
MND22-4301	000479	Volatile Organics	J	hexane	5	UG/KG
MND22-4302	000481	Volatile Organics	J	hexane	1	UG/KG
MND22-4304	000483	Volatile Organics	J	hexane	3	UG/KG
MND22-4501	000489	Volatile Organics	J	hexane	3	UG/KG
MND22-4502	000487	Volatile Organics	J	hexane	4	UG/KG
MND22-3401	000471	Volatile Organics	B	methylene chloride	240	UG/KG
MND22-3401	900000005	Volatile Organics	JB	methylene chloride	10	UG/KG
MND22-3402	000472	Volatile Organics	B	methylene chloride	190	UG/KG
MND22-3402	900000006	Volatile Organics	B	methylene chloride	17	UG/KG
MND22-3403	000473	Volatile Organics	B	methylene chloride	43	UG/KG
MND22-3403	900000007	Volatile Organics	JB	methylene chloride	8	UG/KG
MND22-4301	000479	Volatile Organics	JB	methylene chloride	28	UG/KG
MND22-4301	900000029	Volatile Organics	B	methylene chloride	29	UG/KG
MND22-4302	000481	Volatile Organics	JB	methylene chloride	11	UG/KG
MND22-4302	900000026	Volatile Organics	B	methylene chloride	26	UG/KG
MND22-4303	000482	Volatile Organics	JB	methylene chloride	20	UG/KG
MND22-4303	900000030	Volatile Organics	B	methylene chloride	45	UG/KG
MND22-4304	000483	Volatile Organics	JB	methylene chloride	15	UG/KG
MND22-4304	900000031	Volatile Organics	B	methylene chloride	25	UG/KG
MND22-4305	000480	Volatile Organics	JB	methylene chloride	10	UG/KG
MND22-4305	900000028	Volatile Organics	B	methylene chloride	63	UG/KG
MND22-4501	000489	Volatile Organics	B	methylene chloride	21	UG/KG
MND22-4501	900000239	Volatile Organics	DB	methylene chloride	70000	UG/KG
MND22-4502	000487	Volatile Organics	B	methylene chloride	18	UG/KG
MND22-4502	900000237	Volatile Organics	B	methylene chloride	25000	UG/KG
MND22-4503	000488	Volatile Organics	B	methylene chloride	15	UG/KG

Table A.4.3 - Zone of Influence Pond Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-4503	900000238	Volatile Organics	B	methylene chloride	14000	UG/KG

Appendix A-4

Zone of Influence

Tables Indicating Detections Above Background

A.4.4 Stream Sediment

Table A.4.4 - Zone of Influence Stream Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-4401	900000048	Metals		aluminum	12900	MG/KG
MND22-4601	000490	Metals		aluminum	13200	MG/KG
MND22-4402	900000046	Metals	B	antimony	0.29	MG/KG
MND22-4601	900000179	Metals	B	antimony	0.27	MG/KG
MND22-4602	000491	Metals		barium	594	MG/KG
MND22-4401	900000048	Metals		beryllium	0.56	MG/KG
MND22-4601	000490	Metals		beryllium	0.69	MG/KG
MND22-4601	000490	Metals	B	bismuth	1.4	MG/KG
MND22-4401	900000048	Metals	B	cadmium	0.56	MG/KG
MND22-4401	900000048	Metals		chromium	31.5	MG/KG
MND22-4601	000490	Metals		chromium	16.9	MG/KG
MND22-4401	900000048	Metals	B	lithium	13.3	MG/KG
MND22-4601	000490	Metals		lithium	35.7	MG/KG
MND22-4401	900000048	Metals		nickel	25.8	MG/KG
MND22-4601	000490	Metals		nickel	21.9	MG/KG
MND22-4401	900000048	Metals		potassium	2500	MG/KG
MND22-4601	000490	Metals		potassium	4240	MG/KG
MND22-4601	000490	Metals	B	thallium	0.35	MG/KG
MND22-4401	900000048	Metals	B	tin	3.1	MG/KG
MND22-4602	000491	Metals		tin	86	MG/KG
MND22-4401	900000048	Metals		vanadium	29.2	MG/KG
MND22-4403	900000049	Pesticides and/or PCBs		alpha-chlordane	9.8	UG/KG
MND22-4403	900000049	Pesticides and/or PCBs		gamma-chlordane	9.3	UG/KG
MND22-4401	900000048	Radiological		plutonium-238	0.00505	PCI/G
MND22-4603	900000182	Radiological		plutonium-239/240	0.0215	PCI/G
MND22-4402	900000046	Radiological		potassium-40	13.1	PCI/G
MND22-4601	000490	Radiological		potassium-40	26.7	PCI/G
MND22-4401	900000048	Radiological		thorium-230	1.31	PCI/G
MND22-4403	900000049	Radiological		thorium-230	1.21	PCI/G
MND22-4402	900000046	Semi-Volatile Organics	J	4-methylphenol	79	UG/KG
MND22-4602	000491	Semi-Volatile Organics	J	acenaphthylene	68	UG/KG
MND22-4602	000491	Semi-Volatile Organics	J	anthracene	170	UG/KG
MND22-4401	900000048	Semi-Volatile Organics	J	benzo(a)anthracene	45	UG/KG
MND22-4602	000491	Semi-Volatile Organics		benzo(a)anthracene	510	UG/KG
MND22-4602	000491	Semi-Volatile Organics		benzo(a)pyrene	410	UG/KG
MND22-4401	900000048	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	59	UG/KG
MND22-4602	000491	Semi-Volatile Organics	X	benzo(b)fluoranthene	670	UG/KG
MND22-4602	000491	Semi-Volatile Organics	J	benzo(g,h,i)perylene	220	UG/KG
MND22-4401	900000048	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	94	UG/KG
MND22-4602	000491	Semi-Volatile Organics	X	benzo(k)fluoranthene	630	UG/KG
MND22-4401	900000048	Semi-Volatile Organics		butyl benzyl phthalate	2900	UG/KG
MND22-4602	000491	Semi-Volatile Organics	J	carbazole	140	UG/KG
MND22-4401	900000048	Semi-Volatile Organics	J	chrysene	40	UG/KG
MND22-4602	000491	Semi-Volatile Organics		chrysene	480	UG/KG
MND22-4402	000484	Semi-Volatile Organics	BJ	di-n-butyl phthalate	150	UG/KG
MND22-4602	000491	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	68	UG/KG
MND22-4602	000491	Semi-Volatile Organics	J	dibenzofuran	82	UG/KG
MND22-4401	900000048	Semi-Volatile Organics	J	fluoranthene	100	UG/KG
MND22-4602	000491	Semi-Volatile Organics		fluoranthene	1100	UG/KG
MND22-4602	000491	Semi-Volatile Organics	J	fluorene	210	UG/KG
MND22-4602	000491	Semi-Volatile Organics	J	Indeno(1,2,3-cd)pyrene	210	UG/KG

Table A.4.4 - Zone of Influence Stream Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-4401	900000048	Semi-Volatile Organics	J	phenanthrene	67	UG/KG
MND22-4602	000491	Semi-Volatile Organics		phenanthrene	980	UG/KG
MND22-4402	900000046	Semi-Volatile Organics	J	phenol	60	UG/KG
MND22-4401	900000048	Semi-Volatile Organics	J	pyrene	100	UG/KG
MND22-4602	000491	Semi-Volatile Organics		pyrene	1000	UG/KG
MND22-4401	900000048	Volatile Organics	J	acrylonitrile	4	UG/KG
MND22-4602	900000180	Volatile Organics	J	acrylonitrile	15	UG/KG
MND22-4402	000484	Volatile Organics	J	hexane	2	UG/KG
MND22-4603	000492	Volatile Organics	J	hexane	1	UG/KG
MND22-4401	000485	Volatile Organics	JB	methylene chloride	9	UG/KG
MND22-4401	900000048	Volatile Organics	B	methylene chloride	33	UG/KG
MND22-4402	000484	Volatile Organics	JB	methylene chloride	14	UG/KG
MND22-4402	900000046	Volatile Organics	B	methylene chloride	51	UG/KG
MND22-4403	000486	Volatile Organics	B	methylene chloride	9	UG/KG
MND22-4403	900000049	Volatile Organics	B	methylene chloride	20	UG/KG
MND22-4601	000490	Volatile Organics	B	methylene chloride	13	UG/KG
MND22-4601	900000179	Volatile Organics	B	methylene chloride	8	UG/KG
MND22-4602	000491	Volatile Organics	B	methylene chloride	45	UG/KG
MND22-4602	900000180	Volatile Organics	B	methylene chloride	19	UG/KG
MND22-4603	000492	Volatile Organics	B	methylene chloride	14	UG/KG
MND22-4603	900000182	Volatile Organics	J	toluene	2	UG/KG

APPENDIX A.5

Appendix A-5

Area Watersheds and Drainages

Tables Indicating Detections Above Background

A.5.1 Surface Water

A.5.2 Sediment

Appendix A-5

Area Watersheds and Drainages

Tables Indicating Detections Above Background

A.5.1 Surface Water

Table A.5.1 - Area Watersheds and Drainages
Surface Water Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-4701	000303	Common Anions		chloride	215	MG/L	no
MND21-4719	000319	Common Anions		chloride	206	MG/L	no
MND21-4721	000321	Common Anions		chloride	196	MG/L	no
MND21-4721	900000143	Common Anions		chloride	532	MG/L	no
MND21-4723	000323	Common Anions		chloride	172	MG/L	no
MND21-4724	000324	Common Anions		chloride	437	MG/L	no
MND21-4724	900000190	Common Anions		chloride	301	MG/L	no
MND21-4716	900000129	Common Anions		fluoride	0.652	MG/L	no
MND21-4717	900000135	Common Anions		fluoride	0.802	MG/L	no
MND21-4718	900000136	Common Anions		fluoride	0.5880	MG/L	no
MND21-4722	900000149	Common Anions		fluoride	6.81	MG/L	no
MND21-4708	900000191	Common Anions		sulfate	300	MG/L	no
MND21-4712	900000202	Common Anions		sulfate	394	MG/L	no
MND21-4721	000321	Common Anions		sulfate	484	MG/L	no
MND21-4721	900000143	Explosives	J	HMX	0.3	MG/L	no
MND21-4703	000301	General Chemistry		alkalinity	477	MG/L	no
MND21-4706	000306	General Chemistry		alkalinity	293	MG/L	no
MND21-4707	000307	General Chemistry		alkalinity	322	MG/L	no
MND21-4708	000308	General Chemistry		alkalinity	280	MG/L	no
MND21-4709	000309	General Chemistry		alkalinity	301	MG/L	no
MND21-4722	000322	General Chemistry		alkalinity	302	MG/L	no
MND21-4723	000323	General Chemistry		alkalinity	350	MG/L	no
MND21-4724	000324	General Chemistry		alkalinity	296	MG/L	no
MND21-4703	900000158	General Chemistry		ammonia	0.122	MG/L	no
MND21-4710	000310	General Chemistry		ammonia	0.583	MG/L	no
MND21-4711	000312	General Chemistry		ammonia	0.379	MG/L	no
MND21-4712	000311	General Chemistry		ammonia	0.311	MG/L	no
MND21-4720	000320	General Chemistry		ammonia	0.144	MG/L	no
MND21-4721	900000143	General Chemistry		ammonia	0.618	MG/L	no
MND21-4723	900000150	General Chemistry		ammonia	0.265	MG/L	no
MND21-4724	000324	General Chemistry		ammonia	0.13	MG/L	no
MND21-4720	000320	General Chemistry		Dissolved Solids	1010	MG/L	no
MND21-4721	000321	General Chemistry		Dissolved Solids	1410	MG/L	no
MND21-4721	900000143	General Chemistry		Dissolved Solids	1920	MG/L	no
MND21-4724	000324	General Chemistry		Dissolved Solids	1130	MG/L	no
MND21-4724	900000190	General Chemistry		Dissolved Solids	1050	MG/L	no
MND21-4715	000315	General Chemistry		phosphorous	3.62	MG/L	no
MND21-4704	000304	General Chemistry		Suspended Solids	78	MG/L	no
MND21-4705	000305	General Chemistry		Suspended Solids	68	MG/L	no
MND21-4710	000310	General Chemistry		Suspended Solids	73	MG/L	no
MND21-4710	900000201	General Chemistry		Suspended Solids	242	MG/L	no
MND21-4712	900000202	General Chemistry		Suspended Solids	298	MG/L	no
MND21-4717	900000135	General Chemistry		Suspended Solids	126	MG/L	no
MND21-4719	000319	General Chemistry		Suspended Solids	68	MG/L	no
MND21-4720	000320	General Chemistry		Suspended Solids	240	MG/L	no
MND21-4721	000321	General Chemistry		Suspended Solids	940	MG/L	no
MND21-4721	900000143	General Chemistry		Suspended Solids	115000	MG/L	no
MND21-4723	000323	General Chemistry		Suspended Solids	66	MG/L	no
MND21-4725	000325	General Chemistry		Suspended Solids	72	MG/L	no
MND21-4725	900000252	General Chemistry		Suspended Solids	174	MG/L	no

Table A.5.1 - Area Watersheds and Drainages
Surface Water Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-4726	000326	General Chemistry		Suspended Solids	128	MG/L	no
MND21-4726	900000254	General Chemistry		Suspended Solids	1130	MG/L	no
MND21-4727	000327	General Chemistry		Suspended Solids	86	MG/L	no
MND21-4727	900000256	General Chemistry		Suspended Solids	1110	MG/L	no
MND21-4703	900000158	Metals		aluminum	1780	UG/L	no
MND21-4703	900000158	Metals		aluminum	113	UG/L	yes
MND21-4704	000304	Metals		aluminum	2330	UG/L	no
MND21-4705	000305	Metals		aluminum	2270	UG/L	no
MND21-4706	000306	Metals		aluminum	1030	UG/L	no
MND21-4707	900000166	Metals		aluminum	482	UG/L	no
MND21-4707	900000166	Metals		aluminum	132	UG/L	yes
MND21-4710	000310	Metals		aluminum	1500	UG/L	no
MND21-4710	900000201	Metals		aluminum	1160	UG/L	no
MND21-4710	900000201	Metals		aluminum	142	UG/L	yes
MND21-4711	000312	Metals		aluminum	1620	UG/L	no
MND21-4712	000311	Metals		aluminum	1340	UG/L	no
MND21-4712	900000202	Metals		aluminum	3930	UG/L	no
MND21-4713	000313	Metals		aluminum	2260	UG/L	no
MND21-4714	000314	Metals		aluminum	2480	UG/L	no
MND21-4715	000315	Metals		aluminum	2870	UG/L	no
MND21-4717	900000135	Metals		aluminum	2160	UG/L	no
MND21-4717	900000135	Metals		aluminum	124	UG/L	yes
MND21-4719	000319	Metals		aluminum	3060	UG/L	no
MND21-4720	000320	Metals		aluminum	7390	UG/L	no
MND21-4721	000321	Metals		aluminum	23000	UG/L	no
MND21-4721	900000143	Metals		aluminum	155000	UG/L	no
MND21-4722	000322	Metals		aluminum	935	UG/L	no
MND21-4722	900000149	Metals		aluminum	862	UG/L	no
MND21-4723	900000150	Metals		aluminum	513	UG/L	no
MND21-4723	000323	Metals		aluminum	1480	UG/L	no
MND21-4724	900000190	Metals		aluminum	392	UG/L	no
MND21-4724	900000190	Metals		aluminum	91.7	UG/L	yes
MND21-4725	000325	Metals		aluminum	3750	UG/L	no
MND21-4725	900000252	Metals		aluminum	4620	UG/L	no
MND21-4726	000326	Metals		aluminum	3020	UG/L	no
MND21-4726	900000254	Metals		aluminum	24100	UG/L	no
MND21-4727	000327	Metals		aluminum	1870	UG/L	no
MND21-4727	900000256	Metals		aluminum	18400	UG/L	no
MND21-4702	000302	Metals	B	antimony	2.7	UG/L	no
MND21-4703	900000158	Metals	B	antimony	1.3	UG/L	no
MND21-4704	000304	Metals	B	antimony	2.7	UG/L	no
MND21-4705	000305	Metals	B	antimony	2.1	UG/L	no
MND21-4706	000306	Metals	B	antimony	2.4	UG/L	no
MND21-4709	000309	Metals	B	antimony	4.1	UG/L	no
MND21-4710	000310	Metals	B	antimony	3.1	UG/L	no
MND21-4712	900000202	Metals	B	antimony	1.9	UG/L	yes
MND21-4714	000314	Metals	B	antimony	3.9	UG/L	no
MND21-4715	000315	Metals	B	antimony	2.2	UG/L	no
MND21-4716	900000129	Metals	B	antimony	6.1	UG/L	no
MND21-4717	900000135	Metals	B	antimony	1.6	UG/L	no

Table A.5.1 - Area Watersheds and Drainages
Surface Water Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-4718	900000136	Metals	B	antimony	2.8	UG/L	no
MND21-4719	000319	Metals	B	antimony	2.5	UG/L	no
MND21-4721	900000143	Metals	B	antimony	7.5	UG/L	no
MND21-4722	900000149	Metals	B	antimony	1.4	UG/L	no
MND21-4723	000323	Metals	B	antimony	3	UG/L	no
MND21-4723	900000150	Metals	B	antimony	4.6	UG/L	no
MND21-4725	000325	Metals	B	antimony	2.4	UG/L	no
MND21-4725	000325	Metals	B	antimony	2.1	UG/L	no
MND21-4702	000302	Metals	B	arsenic	1.9	UG/L	no
MND21-4703	900000158	Metals	B	arsenic	3.9	UG/L	no
MND21-4704	000304	Metals		arsenic	2.4	UG/L	no
MND21-4704	000304	Metals		arsenic	2.2	UG/L	no
MND21-4705	000305	Metals		arsenic	3	UG/L	yes
MND21-4705	000305	Metals		arsenic	2.6	UG/L	no
MND21-4706	000306	Metals	B	arsenic	1.8	UG/L	no
MND21-4707	900000166	Metals	B	arsenic	2.8	UG/L	no
MND21-4709	000309	Metals		arsenic	2.3	UG/L	no
MND21-4709	000309	Metals	B	arsenic	1.6	UG/L	yes
MND21-4710	000310	Metals	B	arsenic	1.8	UG/L	no
MND21-4711	000312	Metals	B	arsenic	1.7	UG/L	no
MND21-4712	900000202	Metals	B	arsenic	2.8	UG/L	no
MND21-4713	000313	Metals	B	arsenic	2.2	UG/L	no
MND21-4714	000314	Metals	B	arsenic	4.2	UG/L	no
MND21-4715	000315	Metals	B	arsenic	3.8	UG/L	no
MND21-4720	000320	Metals		arsenic	2.2	UG/L	no
MND21-4721	000321	Metals		arsenic	7.8	UG/L	no
MND21-4721	900000143	Metals	B	arsenic	19.4	UG/L	no
MND21-4722	000322	Metals	B	arsenic	2.4	UG/L	no
MND21-4722	900000149	Metals	B	arsenic	1.8	UG/L	no
MND21-4723	000323	Metals	B	arsenic	2	UG/L	no
MND21-4723	900000150	Metals	B	arsenic	3.6	UG/L	no
MND21-4723	900000150	Metals	B	arsenic	2.6	UG/L	yes
MND21-4725	000325	Metals		arsenic	3.9	UG/L	no
MND21-4725	000325	Metals	B	arsenic	1.9	UG/L	yes
MND21-4725	900000252	Metals	B	arsenic	3.9	UG/L	no
MND21-4726	000326	Metals		arsenic	3.4	UG/L	no
MND21-4726	000326	Metals	B	arsenic	2	UG/L	yes
MND21-4726	900000254	Metals		arsenic	11.9	UG/L	no
MND21-4726	900000254	Metals	B	arsenic	2.7	UG/L	yes
MND21-4727	000327	Metals		arsenic	2.3	UG/L	no
MND21-4727	900000256	Metals		arsenic	13.7	UG/L	no
MND21-4727	900000256	Metals	B	arsenic	3.2	UG/L	yes
MND21-4712	900000202	Metals	B	barium	109	UG/L	no
MND21-4721	900000143	Metals		barium	768	UG/L	no
MND21-4726	900000254	Metals		barium	249	UG/L	no
MND21-4727	900000256	Metals		barium	251	UG/L	no
MND21-4712	000311	Metals	B	beryllium	0.6	UG/L	no
MND21-4712	900000202	Metals	B	beryllium	0.2	UG/L	no
MND21-4719	000319	Metals	B	beryllium	0.27	UG/L	no
MND21-4720	000320	Metals	B	beryllium	0.44	UG/L	no

Table A.5.1 - Area Watersheds and Drainages
Surface Water Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-4721	000321	Metals		beryllium	1.2	UG/L	no
MND21-4721	900000143	Metals		beryllium	6.9	UG/L	no
MND21-4725	000325	Metals	B	beryllium	0.21	UG/L	no
MND21-4725	900000252	Metals	B	beryllium	0.12	UG/L	no
MND21-4726	900000254	Metals	B	beryllium	0.75	UG/L	no
MND21-4727	900000256	Metals	B	beryllium	0.89	UG/L	no
MND21-4721	900000143	Metals	B	bismuth	11.7	UG/L	no
MND21-4710	000310	Metals	B	cadmium	0.43	UG/L	no
MND21-4712	900000202	Metals	B	cadmium	0.87	UG/L	yes
MND21-4721	000321	Metals	B	cadmium	0.53	UG/L	no
MND21-4721	900000143	Metals		cadmium	19.4	UG/L	no
MND21-4725	900000252	Metals	B	cadmium	0.71	UG/L	no
MND21-4721	900000143	Metals		calcium	1820000	UG/L	no
MND21-4702	000302	Metals		chromium	2.20	UG/L	no
MND21-4703	900000158	Metals		chromium	1.80	UG/L	yes
MND21-4704	000304	Metals	B	chromium	3.3	UG/L	no
MND21-4705	000305	Metals	B	chromium	3.2	UG/L	no
MND21-4706	000306	Metals		chromium	2.90	UG/L	no
MND21-4707	900000166	Metals		chromium	0.97	UG/L	yes
MND21-4708	900000191	Metals		chromium	0.84	UG/L	yes
MND21-4710	000310	Metals		chromium	2.30	UG/L	no
MND21-4711	000312	Metals		chromium	2.00	UG/L	no
MND21-4712	900000202	Metals	B	chromium	2.5	UG/L	yes
MND21-4712	000311	Metals		chromium	1.90	UG/L	no
MND21-4713	000313	Metals	B	chromium	3.6	UG/L	no
MND21-4713	900000194	Metals		chromium	0.88	UG/L	yes
MND21-4714	000314	Metals	B	chromium	4.1	UG/L	no
MND21-4715	000315	Metals	B	chromium	4.3	UG/L	no
MND21-4716	900000129	Metals		chromium	0.93	UG/L	yes
MND21-4718	900000136	Metals		chromium	0.78	UG/L	yes
MND21-4719	000319	Metals	B	chromium	4.2	UG/L	no
MND21-4720	000320	Metals	B	chromium	8.2	UG/L	no
MND21-4721	000321	Metals		chromium	26.2	UG/L	no
MND21-4721	900000143	Metals		chromium	0.78	UG/L	yes
MND21-4722	000322	Metals		chromium	2.20	UG/L	no
MND21-4722	900000149	Metals		chromium	1.10	UG/L	yes
MND21-4723	000323	Metals	B	chromium	3	UG/L	no
MND21-4723	900000150	Metals		chromium	0.83	UG/L	yes
MND21-4724	000324	Metals	B	chromium	1.3	UG/L	yes
MND21-4724	000324	Metals		chromium	2.60	UG/L	no
MND21-4724	900000190	Metals		chromium	1.50	UG/L	yes
MND21-4725	000325	Metals	B	chromium	4.8	UG/L	no
MND21-4726	000326	Metals	B	chromium	3.4	UG/L	no
MND21-4726	900000254	Metals		chromium	26.6	UG/L	no
MND21-4727	900000256	Metals		chromium	19.4	UG/L	no
MND21-4727	000327	Metals		chromium	2.40	UG/L	no
MND21-4702	000302	Metals	B	cobalt	1.3	UG/L	yes
MND21-4702	000302	Metals	B	cobalt	1.2	UG/L	no
MND21-4703	900000158	Metals	B	cobalt	1.4	UG/L	no
MND21-4704	000304	Metals	B	cobalt	1.5	UG/L	no

Table A.5.1 - Area Watersheds and Drainages
Surface Water Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-4704	000304	Metals	B	cobalt	0.8	UG/L	yes
MND21-4705	000305	Metals	B	cobalt	1.2	UG/L	no
MND21-4707	000307	Metals	B	cobalt	0.84	UG/L	yes
MND21-4707	000307	Metals	B	cobalt	0.76	UG/L	no
MND21-4708	000308	Metals	B	cobalt	0.86	UG/L	no
MND21-4710	000310	Metals	B	cobalt	1.3	UG/L	yes
MND21-4710	000310	Metals	B	cobalt	0.97	UG/L	no
MND21-4710	900000201	Metals	B	cobalt	1.7	UG/L	no
MND21-4710	900000201	Metals	B	cobalt	0.8	UG/L	yes
MND21-4711	000312	Metals	B	cobalt	1.2	UG/L	no
MND21-4712	000311	Metals	B	cobalt	0.65	UG/L	no
MND21-4712	900000202	Metals	B	cobalt	3.2	UG/L	no
MND21-4713	000313	Metals	B	cobalt	0.94	UG/L	no
MND21-4714	000314	Metals	B	cobalt	1	UG/L	no
MND21-4714	000314	Metals	B	cobalt	0.64	UG/L	yes
MND21-4715	000315	Metals	B	cobalt	1.1	UG/L	no
MND21-4715	000315	Metals	B	cobalt	0.87	UG/L	yes
MND21-4717	900000135	Metals	B	cobalt	1.4	UG/L	no
MND21-4718	900000136	Metals	B	cobalt	0.61	UG/L	no
MND21-4719	000319	Metals	B	cobalt	2.2	UG/L	no
MND21-4719	000319	Metals	B	cobalt	1.3	UG/L	yes
MND21-4720	000320	Metals	B	cobalt	3.3	UG/L	no
MND21-4721	000321	Metals	B	cobalt	11	UG/L	no
MND21-4721	900000143	Metals		cobalt	163	UG/L	no
MND21-4721	900000143	Metals	B	cobalt	1.1	UG/L	yes
MND21-4722	000322	Metals	B	cobalt	0.67	UG/L	no
MND21-4723	000323	Metals	B	cobalt	0.87	UG/L	no
MND21-4723	000323	Metals	B	cobalt	0.75	UG/L	yes
MND21-4723	900000150	Metals	B	cobalt	0.59	UG/L	no
MND21-4725	000325	Metals	B	cobalt	2.3	UG/L	no
MND21-4725	000325	Metals	B	cobalt	0.92	UG/L	yes
MND21-4725	900000252	Metals	B	cobalt	1.6	UG/L	no
MND21-4726	000326	Metals	B	cobalt	1.7	UG/L	no
MND21-4726	000326	Metals	B	cobalt	0.67	UG/L	yes
MND21-4726	900000254	Metals	B	cobalt	7.1	UG/L	no
MND21-4726	900000254	Metals	B	cobalt	0.67	UG/L	yes
MND21-4727	000327	Metals	B	cobalt	0.86	UG/L	no
MND21-4727	000327	Metals	B	cobalt	0.78	UG/L	yes
MND21-4727	900000256	Metals	B	cobalt	8.4	UG/L	no
MND21-4727	900000256	Metals	B	cobalt	0.96	UG/L	yes
MND21-4712	900000202	Metals	B	copper	9.6	UG/L	no
MND21-4712	900000202	Metals	B	copper	8.7	UG/L	yes
MND21-4721	000321	Metals	B	copper	19.5	UG/L	no
MND21-4721	900000143	Metals		copper	205	UG/L	no
MND21-4721	900000143	Metals	B	copper	10	UG/L	no
MND21-4726	900000254	Metals	B	copper	16.4	UG/L	no
MND21-4727	900000256	Metals	B	copper	19.1	UG/L	no
MND21-4707	000307	Metals		cyanide	12.3	UG/L	no
MND21-4709	000309	Metals	0	cyanide	10	UG/L	no
MND21-4713	000313	Metals		cyanide	5.9	UG/L	no

Table A.5.1 - Area Watersheds and Drainages
Surface Water Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-4717	900000135	Metals		cyanide	11.6	UG/L	no
MND21-4721	900000143	Metals		cyanide	7	UG/L	no
MND21-4703	900000158	Metals		iron	2790	UG/L	no
MND21-4703	900000158	Metals	B	iron	41.9	UG/L	yes
MND21-4704	000304	Metals		iron	2520	UG/L	no
MND21-4705	000305	Metals		iron	2640	UG/L	no
MND21-4710	000310	Metals		iron	1730	UG/L	no
MND21-4710	900000201	Metals		iron	2020	UG/L	no
MND21-4711	000312	Metals		iron	2030	UG/L	no
MND21-4712	900000202	Metals		iron	5360	UG/L	no
MND21-4713	000313	Metals		iron	2620	UG/L	no
MND21-4714	000314	Metals		iron	2500	UG/L	no
MND21-4714	000314	Metals	B	iron	89.1	UG/L	yes
MND21-4715	000315	Metals		iron	3010	UG/L	no
MND21-4715	000315	Metals		iron	135	UG/L	yes
MND21-4717	900000135	Metals		iron	2580	UG/L	no
MND21-4719	000319	Metals		iron	3520	UG/L	no
MND21-4720	000320	Metals		iron	8590	UG/L	no
MND21-4721	000321	Metals		iron	29000	UG/L	no
MND21-4721	900000143	Metals		iron	305000	UG/L	no
MND21-4721	900000143	Metals	B	iron	13	UG/L	yes
MND21-4723	000323	Metals		iron	2250	UG/L	no
MND21-4725	000325	Metals		iron	4040	UG/L	no
MND21-4725	000325	Metals	B	iron	42.6	UG/L	yes
MND21-4725	900000252	Metals		iron	6390	UG/L	no
MND21-4726	000326	Metals		iron	3870	UG/L	no
MND21-4726	000326	Metals	B	iron	86.1	UG/L	yes
MND21-4726	900000254	Metals		iron	22900	UG/L	no
MND21-4726	900000254	Metals		iron	100	UG/L	yes
MND21-4727	000327	Metals		iron	1890	UG/L	no
MND21-4727	000327	Metals	B	iron	55.2	UG/L	yes
MND21-4727	900000256	Metals		iron	24000	UG/L	no
MND21-4727	900000256	Metals		iron	163	UG/L	yes
MND21-4702	000302	Metals		lead	2.4	UG/L	no
MND21-4703	900000158	Metals		lead	5.7	UG/L	no
MND21-4704	000304	Metals		lead	3.7	UG/L	no
MND21-4705	000305	Metals		lead	3.1	UG/L	no
MND21-4706	000306	Metals		lead	3.4	UG/L	no
MND21-4707	000307	Metals		lead	2.9	UG/L	no
MND21-4708	900000191	Metals	B	lead	2.4	UG/L	no
MND21-4710	000310	Metals		lead	9.6	UG/L	no
MND21-4710	900000201	Metals	B	lead	3.6	UG/L	no
MND21-4712	900000202	Metals	B	lead	3.7	UG/L	no
MND21-4713	000313	Metals	B	lead	2.5	UG/L	no
MND21-4714	000314	Metals	B	lead	3.5	UG/L	no
MND21-4714	000314	Metals	B	lead	1.9	UG/L	yes
MND21-4715	000315	Metals	B	lead	3.9	UG/L	no
MND21-4716	900000129	Metals		lead	15.6	UG/L	no
MND21-4717	900000135	Metals		lead	8.4	UG/L	no
MND21-4719	000319	Metals		lead	4.5	UG/L	no

Table A.5.1 - Area Watersheds and Drainages
Surface Water Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-4720	000320	Metals		lead	2.1	UG/L	no
MND21-4721	000321	Metals		lead	7.3	UG/L	no
MND21-4721	900000143	Metals		lead	92.9	UG/L	no
MND21-4721	900000143	Metals		lead	27.2	UG/L	yes
MND21-4722	000322	Metals	B	lead	2	UG/L	no
MND21-4722	900000149	Metals		lead	5.4	UG/L	no
MND21-4723	000323	Metals	B	lead	2.8	UG/L	no
MND21-4724	000324	Metals	B	lead	3.3	UG/L	no
MND21-4724	900000190	Metals	B	lead	2.4	UG/L	no
MND21-4725	000325	Metals		lead	3.8	UG/L	no
MND21-4726	000326	Metals		lead	4.1	UG/L	no
MND21-4726	000326	Metals		lead	2.7	UG/L	yes
MND21-4726	900000254	Metals	B	lead	5	UG/L	no
MND21-4727	000327	Metals		lead	7	UG/L	no
MND21-4727	000327	Metals		lead	4.7	UG/L	yes
MND21-4727	900000256	Metals		lead	10.4	UG/L	no
MND21-4710	000310	Metals	B	lithium	37.2	UG/L	no
MND21-4710	000310	Metals	B	lithium	36.3	UG/L	yes
MND21-4710	900000201	Metals	B	lithium	30.4	UG/L	no
MND21-4710	900000201	Metals	B	lithium	28.5	UG/L	yes
MND21-4712	900000202	Metals	B	lithium	72.1	UG/L	yes
MND21-4712	900000202	Metals	B	lithium	73	UG/L	no
MND21-4720	000320	Metals	B	lithium	47.2	UG/L	no
MND21-4720	000320	Metals	B	lithium	42.5	UG/L	yes
MND21-4721	000321	Metals		lithium	102	UG/L	no
MND21-4721	000321	Metals	B	lithium	75.6	UG/L	yes
MND21-4721	900000143	Metals		lithium	473	UG/L	no
MND21-4726	900000254	Metals	B	lithium	17.5	UG/L	no
MND21-4727	900000256	Metals	B	lithium	13.2	UG/L	no
MND21-4703	900000158	Metals		manganese	594	UG/L	no
MND21-4710	900000201	Metals		manganese	428	UG/L	no
MND21-4721	900000143	Metals		manganese	7860	UG/L	no
MND21-4721	900000143	Metals		manganese	600	UG/L	yes
MND21-4723	900000150	Metals		manganese	595	UG/L	no
MND21-4723	900000150	Metals		manganese	586	UG/L	yes
MND21-4726	900000254	Metals		manganese	1560	UG/L	no
MND21-4726	900000254	Metals		manganese	1080	UG/L	yes
MND21-4727	900000256	Metals		manganese	1720	UG/L	no
MND21-4727	900000256	Metals		manganese	1440	UG/L	yes
MND21-4721	900000143	Metals		mercury	0.23	UG/L	no
MND21-4726	000326	Metals		mercury	0.34	UG/L	no
MND21-4703	900000158	Metals	B	nickel	0.74	UG/L	yes
MND21-4707	000307	Metals		nickel	101	UG/L	no
MND21-4710	900000201	Metals	B	nickel	2.2	UG/L	yes
MND21-4712	900000202	Metals	B	nickel	5.5	UG/L	yes
MND21-4716	900000129	Metals	B	nickel	1.8	UG/L	yes
MND21-4718	900000136	Metals	B	nickel	0.91	UG/L	yes
MND21-4719	000319	Metals	B	nickel	1.6	UG/L	yes
MND21-4721	000321	Metals		nickel	132	UG/L	no
MND21-4721	000321	Metals	B	nickel	19.7	UG/L	yes

Table A.5.1 - Area Watersheds and Drainages
Surface Water Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-4721	900000143	Metals		nickel	269	UG/L	no
MND21-4721	900000143	Metals	B	nickel	3.1	UG/L	yes
MND21-4721	000321	Metals		nickel	19.70	UG/L	yes
MND21-4721	000321	Metals		nickel	132	UG/L	no
MND21-4721	900000143	Metals		nickel	269	UG/L	no
MND21-4722	900000149	Metals	B	nickel	1.4	UG/L	yes
MND21-4723	900000150	Metals	B	nickel	0.9	UG/L	yes
MND21-4724	900000190	Metals	B	nickel	0.85	UG/L	yes
MND21-4726	000326	Metals	B	nickel	1.4	UG/L	yes
MND21-4727	000327	Metals	B	nickel	4.8	UG/L	yes
MND21-4720	000320	Metals		potassium	15300	UG/L	no
MND21-4720	000320	Metals		potassium	15000	UG/L	yes
MND21-4721	000321	Metals		potassium	30800	UG/L	no
MND21-4721	000321	Metals		potassium	29000	UG/L	yes
MND21-4721	900000143	Metals		potassium	66300	UG/L	no
MND21-4721	900000143	Metals		potassium	13900	UG/L	yes
MND21-4704	000304	Metals	B	selenium	1.9	UG/L	no
MND21-4706	000306	Metals	B	selenium	1.6	UG/L	no
MND21-4709	000309	Metals	B	selenium	2	UG/L	no
MND21-4717	900000135	Metals		silver	15.5	UG/L	no
MND21-4701	000303	Metals		sodium	90100	UG/L	no
MND21-4701	000303	Metals		sodium	85100	UG/L	yes
MND21-4703	900000158	Metals		sodium	69600	UG/L	no
MND21-4713	900000194	Metals		sodium	74100	UG/L	no
MND21-4713	900000194	Metals		sodium	71600	UG/L	no
MND21-4719	000319	Metals		sodium	123000	UG/L	no
MND21-4719	000319	Metals		sodium	106000	UG/L	yes
MND21-4720	000320	Metals		sodium	72900	UG/L	no
MND21-4721	000321	Metals		sodium	105000	UG/L	no
MND21-4721	000321	Metals		sodium	87700	UG/L	yes
MND21-4721	900000143	Metals		sodium	136000	UG/L	no
MND21-4721	900000143	Metals		sodium	119000	UG/L	yes
MND21-4723	000323	Metals		sodium	69000	UG/L	no
MND21-4724	000324	Metals		sodium	217000	UG/L	no
MND21-4724	000324	Metals		sodium	187000	UG/L	yes
MND21-4724	900000190	Metals		sodium	137000	UG/L	no
MND21-4724	900000190	Metals		sodium	119000	UG/L	yes
MND21-4719	000319	Metals		thallium	3.7	UG/L	no
MND21-4721	000321	Metals		tin	70.9	UG/L	no
MND21-4703	900000158	Metals	B	vanadium	3.6	UG/L	no
MND21-4704	000304	Metals	B	vanadium	5.2	UG/L	no
MND21-4705	000305	Metals	B	vanadium	4.8	UG/L	no
MND21-4707	900000166	Metals	B	vanadium	1.1	UG/L	yes
MND21-4707	900000166	Metals		vanadium	0.94	UG/L	no
MND21-4708	900000191	Metals	B	vanadium	0.65	UG/L	no
MND21-4710	000310	Metals	B	vanadium	3.3	UG/L	no
MND21-4710	900000201	Metals	B	vanadium	2.3	UG/L	no
MND21-4710	900000201	Metals	B	vanadium	0.47	UG/L	yes
MND21-4712	900000202	Metals	B	vanadium	0.59	UG/L	yes
MND21-4712	900000202	Metals	B	vanadium	8	UG/L	no

Table A.5.1 - Area Watersheds and Drainages
Surface Water Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-4713	000313	Metals	B	vanadium	5.1	UG/L	no
MND21-4714	000314	Metals	B	vanadium	5.9	UG/L	no
MND21-4715	000315	Metals	B	vanadium	6.2	UG/L	no
MND21-4716	900000129	Metals		vanadium	1.10	UG/L	no
MND21-4717	900000135	Metals	B	vanadium	4.6	UG/L	no
MND21-4718	900000136	Metals		vanadium	0.85	UG/L	no
MND21-4719	000319	Metals	B	vanadium	6.2	UG/L	no
MND21-4720	000320	Metals		vanadium	10.8	UG/L	no
MND21-4721	000321	Metals		vanadium	33.3	UG/L	no
MND21-4721	900000143	Metals		vanadium	199	UG/L	no
MND21-4722	900000149	Metals	B	vanadium	1.8	UG/L	no
MND21-4722	900000149	Metals	B	vanadium	0.84	UG/L	no
MND21-4723	000323	Metals	B	vanadium	3.2	UG/L	no
MND21-4723	900000150	Metals		vanadium	1	UG/L	no
MND21-4724	900000190	Metals		vanadium	0.81	UG/L	no
MND21-4725	000325	Metals	B	vanadium	9.7	UG/L	no
MND21-4725	900000252	Metals	B	vanadium	0.92	UG/L	yes
MND21-4725	900000252	Metals		vanadium	10.5	UG/L	no
MND21-4726	000326	Metals	B	vanadium	7.7	UG/L	no
MND21-4726	900000254	Metals	B	vanadium	0.6	UG/L	yes
MND21-4726	900000254	Metals		vanadium	47.6	UG/L	no
MND21-4727	900000256	Metals	B	vanadium	1.1	UG/L	yes
MND21-4727	900000256	Metals		vanadium	41.1	UG/L	no
MND21-4706	000306	Metals		zinc	77	UG/L	no
MND21-4712	900000202	Metals	B	zinc	10.4	UG/L	yes
MND21-4719	000319	Metals		zinc	41.8	UG/L	no
MND21-4721	000321	Metals		zinc	107	UG/L	no
MND21-4721	900000143	Metals		zinc	648	UG/L	no
MND21-4721	900000143	Metals	B	zinc	11.9	UG/L	yes
MND21-4722	900000149	Metals	B	zinc	12.4	UG/L	yes
MND21-4725	000325	Metals		zinc	43.2	UG/L	no
MND21-4725	900000252	Metals		zinc	44.2	UG/L	no
MND21-4726	900000254	Metals		zinc	113	UG/L	no
MND21-4726	900000254	Metals	B	zinc	10.6	UG/L	yes
MND21-4727	900000256	Metals		zinc	110	UG/L	no
MND21-4727	900000256	Metals	B	zinc	11.8	UG/L	yes
MND21-4716	900000129	Radiological		americium-241	6.47	PCI/L	no
MND21-4710	900000201	Radiological		radium-226	0.591	PCI/L	no
MND21-4721	900000143	Radiological		radium-226	4.43	PCI/L	no
MND21-4725	900000252	Radiological		radium-226	0.287	PCI/L	no
MND21-4726	900000254	Radiological		radium-226	0.881	PCI/L	no
MND21-4727	900000256	Radiological		radium-226	1.15	PCI/L	no
MND21-4703	000301	Radiological		strontium-90	0.575	PCI/L	no
MND21-4705	000305	Radiological		strontium-90	3.33	PCI/L	no
MND21-4706	000306	Radiological		strontium-90	0.718	PCI/L	no
MND21-4708	000308	Radiological		strontium-90	0.37	PCI/L	no
MND21-4709	000309	Radiological		strontium-90	0.492	PCI/L	no
MND21-4712	900000202	Radiological		strontium-90	0.979	PCI/L	no
MND21-4713	000313	Radiological		strontium-90	0.735	PCI/L	no
MND21-4713	900000194	Radiological		strontium-90	0.712	PCI/L	no

Table A.5.1 - Area Watersheds and Drainages
Surface Water Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units	Filtered
MND21-4714	000314	Radiological		strontium-90	0.566	PCI/L	no
MND21-4719	000319	Radiological		strontium-90	0.484	PCI/L	no
MND21-4720	000320	Radiological		strontium-90	0.42	PCI/L	no
MND21-4723	000323	Radiological		strontium-90	0.55	PCI/L	no
MND21-4725	900000252	Radiological		strontium-90	0.755	PCI/L	no
MND21-4726	900000254	Radiological		strontium-90	0.663	PCI/L	no
MND21-4727	900000256	Radiological		strontium-90	0.817	PCI/L	no
MND21-4719	000319	Radiological		thorium-228	0.205	PCI/L	no
MND21-4723	000323	Radiological		thorium-228	0.212	PCI/L	no
MND21-4726	000326	Radiological		thorium-228	0.395	PCI/L	no
MND21-4726	000326	Radiological		thorium-230	0.465	PCI/L	no
MND21-4727	000327	Radiological		thorium-230	0.2	PCI/L	no
MND21-4719	000319	Radiological		thorium-232	0.124	PCI/L	no
MND21-4720	000320	Radiological		thorium-232	0.238	PCI/L	no
MND21-4726	000326	Radiological		thorium-232	0.323	PCI/L	no
MND21-4726	900000254	Radiological		thorium-232	0.271	PCI/L	no
MND21-4707	900000166	Radiological		tritium	539	PCI/L	no
MND21-4710	900000201	Radiological		tritium	285	PCI/L	no
MND21-4712	900000202	Radiological		tritium	105	PCI/L	no
MND21-4716	900000129	Radiological		tritium	337	PCI/L	no
MND21-4717	900000135	Radiological		tritium	291	PCI/L	no
MND21-4718	900000136	Radiological		tritium	263	PCI/L	no
MND21-4719	000319	Radiological		tritium	8160	PCI/L	no
MND21-4720	000320	Radiological		tritium	4970	PCI/L	no
MND21-4721	000321	Radiological		tritium	5200	PCI/L	no
MND21-4721	900000143	Radiological		tritium	21000	PCI/L	no
MND21-4722	900000149	Radiological		tritium	337	PCI/L	no
MND21-4723	900000150	Radiological		tritium	346	PCI/L	no
MND21-4724	000324	Radiological		tritium	331	PCI/L	no
MND21-4724	900000190	Radiological		tritium	382	PCI/L	no
MND21-4724	000324	Radiological		tritium	332.0	PCI/L	no
MND21-4712	900000202	Radiological		uranium-234	1.89	PCI/L	no
MND21-4720	000320	Radiological		uranium-234	1.33	PCI/L	no
MND21-4721	000321	Radiological		uranium-234	2.9	PCI/L	no
MND21-4721	900000143	Radiological		uranium-234	2.54	PCI/L	no
MND21-4726	900000254	Radiological		uranium-234	0.717	PCI/L	no
MND21-4710	000310	Radiological		uranium-238	0.959	PCI/L	no
MND21-4712	900000202	Radiological		uranium-238	1.46	PCI/L	no
MND21-4727	900000256	Radiological		uranium-238	1.06	PCI/L	no
MND21-4718	900000136	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	3	MG/L	no
MND21-4721	900000143	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	1	MG/L	no
MND21-4726	900000254	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	4	UG/L	no
MND21-4726	900000254	Semi-Volatile Organics	J	di-n-butyl phthalate	1	UG/L	no
MND21-4710	000310	Volatile Organics	J	acetonitrile	16	MG/L	no
MND21-4719	000319	Volatile Organics	J	acetonitrile	5	MG/L	no
MND21-4723	900000150	Volatile Organics	J	acetonitrile	4	MG/L	no
MND21-4713	000313	Volatile Organics	J	hexane	5	MG/L	no

Appendix A-5

Area Watersheds and Drainages

Tables Indicating Detections Above Background

A.5.2 Sediment

Table A.5.2 - Area Watersheds and Drainages
Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-4704	900000205	Common Anions		fluoride	239	MG/KG
MND22-4705	900000206	Common Anions		fluoride	195	MG/KG
MND22-4711	900000200	Common Anions		fluoride	336	MG/KG
MND22-4720	900000141	General Chemistry		organic carbon	27100	MG/KG
MND22-4708	900000177	Metals		aluminum	12200.00	MG/KG
MND22-4710	900000197	Metals		aluminum	11600.00	MG/KG
MND22-4719	900000144	Metals		aluminum	16600.00	MG/KG
MND22-4720	900000141	Metals		aluminum	17300.00	MG/KG
MND22-4721	000400	Metals		aluminum	10700	MG/KG
MND22-4721	900000138	Metals		aluminum	11300.00	MG/KG
MND22-4703	000382	Metals	B	antimony	0.46	MG/KG
MND22-4703	900000153	Metals	B	antimony	0.29	MG/KG
MND22-4714	900000154	Metals	B	antimony	0.31	MG/KG
MND22-4726	900000249	Metals	B	antimony	0.62	MG/KG
MND22-4703	900000153	Metals		arsenic	16	MG/KG
MND22-4725	900000247	Metals		barium	141	MG/KG
MND22-4726	900000249	Metals		barium	150	MG/KG
MND22-4727	900000251	Metals		barium	136	MG/KG
MND22-4704	900000205	Metals	B	beryllium	0.49	MG/KG
MND22-4705	000386	Metals		beryllium	0.62	MG/KG
MND22-4706	000387	Metals		beryllium	0.62	MG/KG
MND22-4707	000388	Metals		beryllium	1	MG/KG
MND22-4708	900000177	Metals		beryllium	0.64	MG/KG
MND22-4710	000392	Metals		beryllium	0.56	MG/KG
MND22-4710	900000197	Metals		beryllium	0.76	MG/KG
MND22-4711	900000200	Metals	B	beryllium	0.46	MG/KG
MND22-4718	900000128	Metals		beryllium	0.47	MG/KG
MND22-4719	000402	Metals		beryllium	0.57	MG/KG
MND22-4719	900000144	Metals		beryllium	0.92	MG/KG
MND22-4720	900000141	Metals		beryllium	0.92	MG/KG
MND22-4721	000400	Metals		beryllium	0.56	MG/KG
MND22-4721	900000138	Metals		beryllium	0.59	MG/KG
MND22-4724	900000175	Metals		beryllium	0.48	MG/KG
MND22-4724	900000175	Metals		beryllium	0.48	MG/KG
MND22-4725	000406	Metals		beryllium	0.48	MG/KG
MND22-4725	900000247	Metals	B	beryllium	0.83	MG/KG
MND22-4726	000407	Metals		beryllium	0.83	MG/KG
MND22-4726	900000249	Metals	B	beryllium	0.92	MG/KG
MND22-4727	000408	Metals		beryllium	0.57	MG/KG
MND22-4727	900000251	Metals	B	beryllium	0.86	MG/KG
MND22-4707	000388	Metals	B	bismuth	1.1	MG/KG
MND22-4708	000390	Metals	B	bismuth	1.2	MG/KG
MND22-4717	000398	Metals	B	bismuth	1.6	MG/KG
MND22-4719	000402	Metals	B	bismuth	1.2	MG/KG
MND22-4725	000406	Metals	B	bismuth	1.1	MG/KG
MND22-4726	000407	Metals	B	bismuth	1.7	MG/KG
MND22-4703	000382	Metals	B	cadmium	0.55	MG/KG
MND22-4704	000385	Metals	B	cadmium	0.63	MG/KG
MND22-4705	000386	Metals	B	cadmium	1.2	MG/KG
MND22-4706	000387	Metals	B	cadmium	1.1	MG/KG
MND22-4707	000388	Metals	B	cadmium	0.39	MG/KG

Table A.5.2 - Area Watersheds and Drainages
Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-4708	000389	Metals	B	cadmium	0.37	MG/KG
MND22-4716	000397	Metals	B	cadmium	0.6	MG/KG
MND22-4716	900000126	Metals	B	cadmium	0.56	MG/KG
MND22-4717	000398	Metals	B	cadmium	0.81	MG/KG
MND22-4717	900000127	Metals	B	cadmium	0.54	MG/KG
MND22-4718	900000128	Metals	B	cadmium	0.82	MG/KG
MND22-4719	000402	Metals	B	cadmium	0.94	MG/KG
MND22-4720	000401	Metals	B	cadmium	0.48	MG/KG
MND22-4721	000400	Metals	B	cadmium	1.3	MG/KG
MND22-4726	000407	Metals	B	cadmium	0.6	MG/KG
MND22-4701	900000176	Metals		chromium	10.1	MG/KG
MND22-4702	900000204	Metals		chromium	12	MG/KG
MND22-4704	900000205	Metals		chromium	10.2	MG/KG
MND22-4705	000386	Metals		chromium	12.1	MG/KG
MND22-4705	900000206	Metals		chromium	10.2	MG/KG
MND22-4706	000387	Metals		chromium	12.4	MG/KG
MND22-4708	000390	Metals		chromium	10.7	MG/KG
MND22-4708	900000177	Metals		chromium	16	MG/KG
MND22-4710	900000197	Metals		chromium	15.4	MG/KG
MND22-4711	900000200	Metals		chromium	10.2	MG/KG
MND22-4716	000397	Metals		chromium	12.5	MG/KG
MND22-4717	000398	Metals		chromium	14.5	MG/KG
MND22-4717	900000127	Metals		chromium	12.7	MG/KG
MND22-4718	900000128	Metals		chromium	15.2	MG/KG
MND22-4719	000402	Metals		chromium	11.5	MG/KG
MND22-4719	900000144	Metals		chromium	20.3	MG/KG
MND22-4720	900000141	Metals		chromium	20.7	MG/KG
MND22-4721	000400	Metals		chromium	14.8	MG/KG
MND22-4721	900000138	Metals		chromium	15	MG/KG
MND22-4724	000405	Metals		chromium	12.5	MG/KG
MND22-4724	900000175	Metals		chromium	12.2	MG/KG
MND22-4725	000406	Metals		chromium	11.5	MG/KG
MND22-4725	900000247	Metals		chromium	23.5	MG/KG
MND22-4726	000407	Metals		chromium	21.6	MG/KG
MND22-4726	900000249	Metals		chromium	26.2	MG/KG
MND22-4727	000408	Metals		chromium	12.6	MG/KG
MND22-4727	900000251	Metals		chromium	23.9	MG/KG
MND22-4701	900000176	Metals	B	cobalt	7.5	MG/KG
MND22-4704	900000205	Metals		cobalt	12.3	MG/KG
MND22-4705	000386	Metals	B	cobalt	8.9	MG/KG
MND22-4705	900000206	Metals	B	cobalt	8.2	MG/KG
MND22-4706	000387	Metals	B	cobalt	9.4	MG/KG
MND22-4708	900000177	Metals	B	cobalt	12.3	MG/KG
MND22-4710	000392	Metals	B	cobalt	7.4	MG/KG
MND22-4710	900000197	Metals	B	cobalt	10.1	MG/KG
MND22-4711	900000200	Metals	B	cobalt	7.6	MG/KG
MND22-4719	000402	Metals	B	cobalt	9.7	MG/KG
MND22-4719	900000144	Metals	B	cobalt	11.5	MG/KG
MND22-4720	900000141	Metals	B	cobalt	11.1	MG/KG
MND22-4721	000400	Metals	B	cobalt	11.7	MG/KG
MND22-4721	900000138	Metals	B	cobalt	10.3	MG/KG

Table A.5.2 - Area Watersheds and Drainages
Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-4725	000406	Metals	B	cobalt	7.8	MG/KG
MND22-4725	900000247	Metals	B	cobalt	8.1	MG/KG
MND22-4726	000407	Metals	B	cobalt	8.9	MG/KG
MND22-4726	900000249	Metals	B	cobalt	9.3	MG/KG
MND22-4727	000408	Metals	B	cobalt	8.2	MG/KG
MND22-4727	900000251	Metals	B	cobalt	8.6	MG/KG
MND22-4717	000398	Metals		copper	23.2	MG/KG
MND22-4717	900000127	Metals		copper	21.9	MG/KG
MND22-4718	900000128	Metals		copper	22.4	MG/KG
MND22-4719	900000144	Metals		copper	20.8	MG/KG
MND22-4721	000400	Metals		copper	21.6	MG/KG
MND22-4725	900000247	Metals		copper	20	MG/KG
MND22-4726	000407	Metals		copper	22.5	MG/KG
MND22-4726	900000249	Metals		copper	22.4	MG/KG
MND22-4727	900000251	Metals		copper	21.1	MG/KG
MND22-4708	000390	Metals		cyanide	0.78	MG/KG
MND22-4716	000397	Metals		cyanide	7.8	MG/KG
MND22-4718	000399	Metals		cyanide	3.1	MG/KG
MND22-4702	000383	Metals		lead	34.3	MG/KG
MND22-4702	900000204	Metals		lead	120	MG/KG
MND22-4704	000385	Metals		lead	64	MG/KG
MND22-4704	900000205	Metals		lead	32.5	MG/KG
MND22-4705	900000206	Metals		lead	27.8	MG/KG
MND22-4706	900000207	Metals		lead	24.8	MG/KG
MND22-4716	000397	Metals		lead	32.8	MG/KG
MND22-4717	000398	Metals		lead	49.2	MG/KG
MND22-4717	900000127	Metals		lead	49.3	MG/KG
MND22-4718	900000128	Metals		lead	35.2	MG/KG
MND22-4719	900000144	Metals		lead	37.1	MG/KG
MND22-4720	900000141	Metals		lead	30.5	MG/KG
MND22-4724	000405	Metals		lead	38.6	MG/KG
MND22-4724	900000175	Metals		lead	23.8	MG/KG
MND22-4726	000407	Metals		lead	19.9	MG/KG
MND22-4701	000384	Metals	B	lithium	8.7	MG/KG
MND22-4703	900000153	Metals	B	lithium	8.3	MG/KG
MND22-4705	000386	Metals	B	lithium	9.9	MG/KG
MND22-4706	000387	Metals	B	lithium	9.8	MG/KG
MND22-4708	000390	Metals	B	lithium	12.8	MG/KG
MND22-4708	900000169	Metals	B	lithium	9.4	MG/KG
MND22-4708	900000177	Metals	B	lithium	27.6	MG/KG
MND22-4710	000392	Metals	B	lithium	15.1	MG/KG
MND22-4710	900000197	Metals	B	lithium	19.9	MG/KG
MND22-4711	000393	Metals	B	lithium	13.5	MG/KG
MND22-4717	900000127	Metals	B	lithium	8.4	MG/KG
MND22-4718	900000128	Metals	B	lithium	10.8	MG/KG
MND22-4719	000402	Metals	B	lithium	14.2	MG/KG
MND22-4719	900000144	Metals	B	lithium	23.7	MG/KG
MND22-4720	900000141	Metals	B	lithium	24.7	MG/KG
MND22-4721	000400	Metals	B	lithium	27	MG/KG
MND22-4721	900000138	Metals	B	lithium	27.7	MG/KG
MND22-4724	000405	Metals	B	lithium	13.8	MG/KG

Table A.5.2 - Area Watersheds and Drainages
Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-4724	900000175	Metals	B	lithium	14.2	MG/KG
MND22-4725	900000247	Metals	B	lithium	16.5	MG/KG
MND22-4726	000407	Metals	B	lithium	16.4	MG/KG
MND22-4726	900000249	Metals	B	lithium	19	MG/KG
MND22-4727	000408	Metals	B	lithium	9	MG/KG
MND22-4727	900000251	Metals	B	lithium	16.7	MG/KG
MND22-4712	900000196	Metals		mercury	0.31	MG/KG
MND22-4720	900000141	Metals		mercury	0.16	MG/KG
MND22-4724	900000175	Metals		mercury	0.7	MG/KG
MND22-4705	000386	Metals		nickel	13.9	MG/KG
MND22-4706	000387	Metals		nickel	18	MG/KG
MND22-4708	900000177	Metals		nickel	21.8	MG/KG
MND22-4710	900000197	Metals		nickel	20.9	MG/KG
MND22-4711	900000200	Metals		nickel	18.7	MG/KG
MND22-4718	900000128	Metals		nickel	15.3	MG/KG
MND22-4719	000402	Metals		nickel	17.1	MG/KG
MND22-4719	900000144	Metals		nickel	22.2	MG/KG
MND22-4720	900000141	Metals		nickel	21.7	MG/KG
MND22-4721	000400	Metals		nickel	22.1	MG/KG
MND22-4721	900000138	Metals		nickel	20.4	MG/KG
MND22-4725	900000247	Metals	B	nickel	20.9	MG/KG
MND22-4726	000407	Metals		nickel	20.7	MG/KG
MND22-4726	900000249	Metals		nickel	22.7	MG/KG
MND22-4727	000408	Metals		nickel	14	MG/KG
MND22-4727	900000251	Metals		nickel	21	MG/KG
MND22-4701	000384	Metals		potassium	1350	MG/KG
MND22-4701	900000176	Metals		potassium	1330	MG/KG
MND22-4702	900000204	Metals		potassium	1660	MG/KG
MND22-4703	900000153	Metals		potassium	1210	MG/KG
MND22-4705	000386	Metals	B	potassium	1280	MG/KG
MND22-4705	900000206	Metals	B	potassium	1190	MG/KG
MND22-4706	900000207	Metals		potassium	1640	MG/KG
MND22-4707	900000165	Metals		potassium	1600	MG/KG
MND22-4708	000390	Metals		potassium	2150	MG/KG
MND22-4708	900000169	Metals		potassium	2420	MG/KG
MND22-4708	900000177	Metals		potassium	3990	MG/KG
MND22-4710	000392	Metals		potassium	1900	MG/KG
MND22-4710	900000197	Metals		potassium	3560	MG/KG
MND22-4711	000393	Metals		potassium	1550	MG/KG
MND22-4711	900000200	Metals		potassium	1820	MG/KG
MND22-4712	900000196	Metals		potassium	1610	MG/KG
MND22-4713	900000178	Metals		potassium	1180	MG/KG
MND22-4717	900000127	Metals	B	potassium	1830	MG/KG
MND22-4718	900000128	Metals		potassium	1990	MG/KG
MND22-4719	000402	Metals	B	potassium	1850	MG/KG
MND22-4719	900000144	Metals		potassium	5120	MG/KG
MND22-4720	900000141	Metals		potassium	4850	MG/KG
MND22-4721	000400	Metals		potassium	3100	MG/KG
MND22-4721	900000138	Metals		potassium	3870	MG/KG
MND22-4722	900000152	Metals		potassium	2350	MG/KG
MND22-4723	900000147	Metals	B	potassium	1210	MG/KG

Table A.5.2 - Area Watersheds and Drainages
Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-4724	000405	Metals		potassium	1460	MG/KG
MND22-4724	900000175	Metals		potassium	4170	MG/KG
MND22-4725	900000247	Metals		potassium	3320	MG/KG
MND22-4726	000407	Metals		potassium	2180	MG/KG
MND22-4726	900000249	Metals		potassium	3320	MG/KG
MND22-4727	900000251	Metals		potassium	2690	MG/KG
MND22-4707	000388	Metals	B	silver	0.12	MG/KG
MND22-4711	900000200	Metals	B	silver	1	MG/KG
MND22-4705	000386	Metals	B	sodium	562	MG/KG
MND22-4706	900000207	Metals	B	sodium	521	MG/KG
MND22-4707	000388	Metals	B	sodium	650	MG/KG
MND22-4708	000389	Metals	B	sodium	607	MG/KG
MND22-4708	000390	Metals	B	sodium	578	MG/KG
MND22-4710	000392	Metals	B	sodium	558	MG/KG
MND22-4710	900000197	Metals	B	sodium	634	MG/KG
MND22-4712	000391	Metals	B	sodium	595	MG/KG
MND22-4712	900000196	Metals	B	sodium	598	MG/KG
MND22-4716	000397	Metals	B	sodium	549	MG/KG
MND22-4717	000398	Metals	B	sodium	685	MG/KG
MND22-4719	000402	Metals	B	sodium	639	MG/KG
MND22-4722	900000152	Metals	B	sodium	554	MG/KG
MND22-4724	000405	Metals	B	sodium	587	MG/KG
MND22-4724	900000175	Metals	B	sodium	518	MG/KG
MND22-4725	900000247	Metals	B	sodium	550	MG/KG
MND22-4726	900000249	Metals	B	sodium	551	MG/KG
MND22-4701	900000176	Metals		tin	85.1	MG/KG
MND22-4708	000390	Metals	B	tin	3.1	MG/KG
MND22-4716	000397	Metals	B	tin	3.1	MG/KG
MND22-4717	000398	Metals	B	tin	4.8	MG/KG
MND22-4717	900000127	Metals	B	tin	6.6	MG/KG
MND22-4718	900000128	Metals	B	tin	3.9	MG/KG
MND22-4726	900000249	Metals	B	tin	5.3	MG/KG
MND22-4727	900000251	Metals	B	tin	5.7	MG/KG
MND22-4704	900000205	Metals		vanadium	18.9	MG/KG
MND22-4705	000386	Metals		vanadium	21.5	MG/KG
MND22-4706	000387	Metals		vanadium	21.1	MG/KG
MND22-4708	900000177	Metals		vanadium	18.7	MG/KG
MND22-4710	900000197	Metals		vanadium	23.1	MG/KG
MND22-4718	900000128	Metals		vanadium	20.2	MG/KG
MND22-4719	900000144	Metals		vanadium	28.8	MG/KG
MND22-4720	900000141	Metals		vanadium	31.4	MG/KG
MND22-4725	000406	Metals		vanadium	21.3	MG/KG
MND22-4725	900000247	Metals		vanadium	42.5	MG/KG
MND22-4726	000407	Metals		vanadium	38.8	MG/KG
MND22-4726	900000249	Metals		vanadium	45.9	MG/KG
MND22-4727	000408	Metals		vanadium	23.6	MG/KG
MND22-4727	900000251	Metals		vanadium	41	MG/KG
MND22-4701	900000176	Metals		zinc	58.4	MG/KG
MND22-4702	900000204	Metals		zinc	97.7	MG/KG
MND22-4704	000385	Metals		zinc	66.3	MG/KG
MND22-4704	900000205	Metals		zinc	73.1	MG/KG

Table A.5.2 - Area Watersheds and Drainages
Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-4705	000386	Metals		zinc	69	MG/KG
MND22-4706	000387	Metals		zinc	59.7	MG/KG
MND22-4714	000395	Metals		zinc	58.8	MG/KG
MND22-4716	000397	Metals		zinc	85.5	MG/KG
MND22-4716	900000126	Metals		zinc	61.8	MG/KG
MND22-4717	000398	Metals		zinc	111	MG/KG
MND22-4717	900000127	Metals		zinc	110	MG/KG
MND22-4718	900000128	Metals		zinc	94.1	MG/KG
MND22-4719	000402	Metals		zinc	61.5	MG/KG
MND22-4719	900000144	Metals		zinc	69	MG/KG
MND22-4720	900000141	Metals		zinc	65.8	MG/KG
MND22-4721	000400	Metals		zinc	56.8	MG/KG
MND22-4724	000405	Metals		zinc	56.7	MG/KG
MND22-4725	900000247	Metals		zinc	74	MG/KG
MND22-4726	000407	Metals		zinc	86.3	MG/KG
MND22-4726	900000249	Metals		zinc	79.6	MG/KG
MND22-4727	900000251	Metals		zinc	74.6	MG/KG
MND22-4705	000386	Pesticides and/or PCBs		4,4'-DDD	4.9	UG/KG
MND22-4712	900000196	Pesticides and/or PCBs		4,4'-DDD	6.8	UG/KG
MND22-4703	000382	Pesticides and/or PCBs	JP	4,4'-DDT	2.7	UG/KG
MND22-4704	900000205	Pesticides and/or PCBs	P	4,4'-DDT	6.4	UG/KG
MND22-4706	000387	Pesticides and/or PCBs	P	4,4'-DDT	34	UG/KG
MND22-4708	900000169	Pesticides and/or PCBs	JP	4,4'-DDT	1.6	UG/KG
MND22-4716	000397	Pesticides and/or PCBs	JP	4,4'-DDT	3.1	UG/KG
MND22-4711	000393	Pesticides and/or PCBs	P	alpha-BHC	3.1	UG/KG
MND22-4716	000397	Pesticides and/or PCBs	JP	alpha-BHC	1.2	UG/KG
MND22-4702	000383	Pesticides and/or PCBs	P	alpha-chlordane	7.8	UG/KG
MND22-4703	900000153	Pesticides and/or PCBs	P	alpha-chlordane	4.6	UG/KG
MND22-4704	000385	Pesticides and/or PCBs	P	alpha-chlordane	8	UG/KG
MND22-4705	000386	Pesticides and/or PCBs	P	alpha-chlordane	9.8	UG/KG
MND22-4706	000387	Pesticides and/or PCBs	P	alpha-chlordane	3.6	UG/KG
MND22-4717	000398	Pesticides and/or PCBs	P	alpha-chlordane	3	UG/KG
MND22-4722	900000152	Pesticides and/or PCBs	P	alpha-chlordane	2.7	UG/KG
MND22-4723	000403	Pesticides and/or PCBs	P	alpha-chlordane	5.5	UG/KG
MND22-4702	900000204	Pesticides and/or PCBs		Aroclor-1254	81	UG/KG
MND22-4721	900000138	Pesticides and/or PCBs	J	Aroclor-1254	12	UG/KG
MND22-4705	000386	Pesticides and/or PCBs		dieldrin	28	UG/KG
MND22-4724	000405	Pesticides and/or PCBs		endosulfan II	4.8	UG/KG
MND22-4717	900000127	Pesticides and/or PCBs	JP	endrin	2.8	UG/KG
MND22-4724	900000175	Pesticides and/or PCBs	J	endrin	3.2	UG/KG
MND22-4722	000404	Pesticides and/or PCBs		endrin aldehyde	4.8	UG/KG
MND22-4724	900000175	Pesticides and/or PCBs	JP	endrin aldehyde	2.7	UG/KG
MND22-4702	900000204	Pesticides and/or PCBs		endrin ketone	6.3	UG/KG
MND22-4724	000405	Pesticides and/or PCBs	P	endrin ketone	12	UG/KG
MND22-4704	000385	Pesticides and/or PCBs	PB	gamma-chlordane	5.6	UG/KG
MND22-4705	000386	Pesticides and/or PCBs	PB	gamma-chlordane	7.3	UG/KG
MND22-4706	000387	Pesticides and/or PCBs	PB	gamma-chlordane	3	UG/KG
MND22-4722	900000152	Pesticides and/or PCBs	JP	gamma-chlordane	1.8	UG/KG
MND22-4724	000405	Pesticides and/or PCBs	JP	heptachlor	1.9	UG/KG
MND22-4702	900000204	Pesticides and/or PCBs	JP	heptachlor epoxide	1.7	UG/KG
MND22-4724	000405	Pesticides and/or PCBs		methoxychlor	82	UG/KG

Table A.5.2 - Area Watersheds and Drainages
Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-4702	900000204	Radiological		plutonium-238	0.0922	PCI/G
MND22-4704	000385	Radiological		plutonium-238	0.0641	PCI/G
MND22-4704	900000205	Radiological		plutonium-238	0.0307	PCI/G
MND22-4705	000386	Radiological		plutonium-238	0.0619	PCI/G
MND22-4705	900000206	Radiological		plutonium-238	0.0616	PCI/G
MND22-4706	000387	Radiological		plutonium-238	0.015	PCI/G
MND22-4706	900000207	Radiological		plutonium-238	0.0187	PCI/G
MND22-4712	000391	Radiological		plutonium-238	0.0081	PCI/G
MND22-4719	000402	Radiological		plutonium-238	0.117	PCI/G
MND22-4719	900000144	Radiological		plutonium-238	0.109	PCI/G
MND22-4720	900000141	Radiological		plutonium-238	0.168	PCI/G
MND22-4722	000404	Radiological		plutonium-238	0.0466	PCI/G
MND22-4722	900000152	Radiological		plutonium-238	0.0394	PCI/G
MND22-4723	000403	Radiological		plutonium-238	0.116	PCI/G
MND22-4723	900000147	Radiological		plutonium-238	0.00435	PCI/G
MND22-4724	000405	Radiological		plutonium-238	0.036	PCI/G
MND22-4724	900000175	Radiological		plutonium-238	0.0508	PCI/G
MND22-4725	900000247	Radiological		plutonium-238	0.0205	PCI/G
MND22-4726	000407	Radiological		plutonium-238	0.0107	PCI/G
MND22-4726	900000249	Radiological		plutonium-238	0.0136	PCI/G
MND22-4727	000408	Radiological		plutonium-238	0.0177	PCI/G
MND22-4727	900000251	Radiological		plutonium-238	0.0331	PCI/G
MND22-4705	900000206	Radiological		plutonium-239/240	0.013	PCI/G
MND22-4719	900000144	Radiological		plutonium-239/240	0.007	PCI/G
MND22-4725	900000247	Radiological		plutonium-239/240	0.0137	PCI/G
MND22-4727	900000251	Radiological		plutonium-239/240	0.00679	PCI/G
MND22-4705	900000206	Radiological		potassium-40	16.6	PCI/G
MND22-4706	000387	Radiological		potassium-40	23.2	PCI/G
MND22-4710	000392	Radiological		potassium-40	18	PCI/G
MND22-4711	000393	Radiological		potassium-40	18.4	PCI/G
MND22-4711	900000200	Radiological		potassium-40	31.5	PCI/G
MND22-4719	000402	Radiological		potassium-40	26.6	PCI/G
MND22-4719	900000144	Radiological		potassium-40	31.3	PCI/G
MND22-4720	000401	Radiological		potassium-40	27.5	PCI/G
MND22-4720	900000141	Radiological		potassium-40	25.6	PCI/G
MND22-4721	000400	Radiological		potassium-40	30.7	PCI/G
MND22-4721	900000138	Radiological		potassium-40	35.9	PCI/G
MND22-4724	000405	Radiological		potassium-40	17.3	PCI/G
MND22-4725	000406	Radiological		potassium-40	16.4	PCI/G
MND22-4725	900000247	Radiological		potassium-40	19.9	PCI/G
MND22-4726	900000249	Radiological		potassium-40	20.9	PCI/G
MND22-4727	000408	Radiological		potassium-40	17.5	PCI/G
MND22-4727	900000251	Radiological		potassium-40	19.7	PCI/G
MND22-4704	000385	Radiological		thorium-230	1.05	PCI/G
MND22-4706	000387	Radiological		thorium-230	1.34	PCI/G
MND22-4707	000388	Radiological		thorium-230	1.46	PCI/G
MND22-4708	000389	Radiological		thorium-230	1.32	PCI/G
MND22-4710	900000197	Radiological		thorium-230	1.04	PCI/G
MND22-4716	000397	Radiological		thorium-230	1.94	PCI/G
MND22-4716	900000126	Radiological		thorium-230	1.27	PCI/G
MND22-4717	900000127	Radiological		thorium-230	1.33	PCI/G

Table A.5.2 - Area Watersheds and Drainages
Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-4718	900000128	Radiological		thorium-230	1.16	PCI/G
MND22-4719	900000144	Radiological		thorium-230	1.04	PCI/G
MND22-4720	900000141	Radiological		thorium-230	1.04	PCI/G
MND22-4721	900000138	Radiological		thorium-230	1.04	PCI/G
MND22-4722	000404	Radiological		thorium-230	1.08	PCI/G
MND22-4723	900000147	Radiological		thorium-230	1.1	PCI/G
MND22-4725	000406	Radiological		thorium-230	1.07	PCI/G
MND22-4725	900000247	Radiological		thorium-230	1.79	PCI/G
MND22-4726	000407	Radiological		thorium-230	1.33	PCI/G
MND22-4726	900000249	Radiological		thorium-230	1.81	PCI/G
MND22-4727	900000251	Radiological		thorium-230	2.04	PCI/G
MND22-4719	900000144	Radiological		tritium	0.716	PCI/G
MND22-4720	900000141	Radiological		tritium	0.577	PCI/G
MND22-4725	900000247	Radiological		uranium-234	1.4	PCI/G
MND22-4726	000407	Radiological		uranium-234	1.22	PCI/G
MND22-4726	900000249	Radiological		uranium-234	1.24	PCI/G
MND22-4727	900000251	Radiological		uranium-234	2.1	PCI/G
MND22-4725	900000247	Radiological		uranium-238	1.65	PCI/G
MND22-4726	900000249	Radiological		uranium-238	1.39	PCI/G
MND22-4727	900000251	Radiological		uranium-238	2.43	PCI/G
MND22-4725	900000247	Semi-Volatile Organics	J	4-chloro-3-methylphenol	270	UG/KG
MND22-4721	000400	Semi-Volatile Organics	J	4-methylphenol	200	UG/KG
MND22-4713	000394	Semi-Volatile Organics	J	acenaphthene	230	UG/KG
MND22-4716	000397	Semi-Volatile Organics	J	acenaphthene	79	UG/KG
MND22-4713	000394	Semi-Volatile Organics	J	acenaphthylene	46	UG/KG
MND22-4713	000394	Semi-Volatile Organics	J	anthracene	380	UG/KG
MND22-4714	900000154	Semi-Volatile Organics	J	anthracene	40	UG/KG
MND22-4716	000397	Semi-Volatile Organics	J	anthracene	140	UG/KG
MND22-4717	900000127	Semi-Volatile Organics	J	anthracene	130	UG/KG
MND22-4713	000394	Semi-Volatile Organics		benzo(a)anthracene	1800	UG/KG
MND22-4714	900000154	Semi-Volatile Organics	J	benzo(a)anthracene	330	UG/KG
MND22-4716	000397	Semi-Volatile Organics		benzo(a)anthracene	550	UG/KG
MND22-4716	900000126	Semi-Volatile Organics	J	benzo(a)anthracene	90	UG/KG
MND22-4717	900000127	Semi-Volatile Organics	J	benzo(a)anthracene	690	UG/KG
MND22-4718	900000128	Semi-Volatile Organics	J	benzo(a)anthracene	300	UG/KG
MND22-4719	900000144	Semi-Volatile Organics	J	benzo(a)anthracene	95	UG/KG
MND22-4720	900000141	Semi-Volatile Organics	J	benzo(a)anthracene	68	UG/KG
MND22-4721	900000138	Semi-Volatile Organics	J	benzo(a)anthracene	46	UG/KG
MND22-4713	000394	Semi-Volatile Organics		benzo(a)pyrene	1400	UG/KG
MND22-4714	900000154	Semi-Volatile Organics	J	benzo(a)pyrene	190	UG/KG
MND22-4716	000397	Semi-Volatile Organics		benzo(a)pyrene	630	UG/KG
MND22-4716	900000126	Semi-Volatile Organics	J	benzo(a)pyrene	99	UG/KG
MND22-4717	900000127	Semi-Volatile Organics		benzo(a)pyrene	890	UG/KG
MND22-4718	900000128	Semi-Volatile Organics	J	benzo(a)pyrene	460	UG/KG
MND22-4719	900000144	Semi-Volatile Organics	J	benzo(a)pyrene	66	UG/KG
MND22-4720	900000141	Semi-Volatile Organics	J	benzo(a)pyrene	51	UG/KG
MND22-4706	000387	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	47	UG/KG
MND22-4713	000394	Semi-Volatile Organics	X	benzo(b)fluoranthene	2200	UG/KG
MND22-4714	900000154	Semi-Volatile Organics	X	benzo(b)fluoranthene	660	UG/KG
MND22-4716	000397	Semi-Volatile Organics	X	benzo(b)fluoranthene	1300	UG/KG
MND22-4716	900000126	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	180	UG/KG

Table A.5.2 - Area Watersheds and Drainages
Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-4717	900000127	Semi-Volatile Organics	X	benzo(b)fluoranthene	1600	UG/KG
MND22-4718	900000128	Semi-Volatile Organics	X	benzo(b)fluoranthene	870	UG/KG
MND22-4719	900000144	Semi-Volatile Organics	JX	benzo(b)fluoranthene	200	UG/KG
MND22-4720	900000141	Semi-Volatile Organics	JX	benzo(b)fluoranthene	140	UG/KG
MND22-4721	900000138	Semi-Volatile Organics	XJ	benzo(b)fluoranthene	50	UG/KG
MND22-4713	000394	Semi-Volatile Organics		benzo(g,h,i)perylene	890	UG/KG
MND22-4716	000397	Semi-Volatile Organics		benzo(g,h,i)perylene	490	UG/KG
MND22-4717	900000127	Semi-Volatile Organics	J	benzo(g,h,i)perylene	270	UG/KG
MND22-4706	000387	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	49	UG/KG
MND22-4713	000394	Semi-Volatile Organics	X	benzo(k)fluoranthene	2400	UG/KG
MND22-4714	900000154	Semi-Volatile Organics	X	benzo(k)fluoranthene	1100	UG/KG
MND22-4716	000397	Semi-Volatile Organics	X	benzo(k)fluoranthene	1200	UG/KG
MND22-4716	900000126	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	320	UG/KG
MND22-4717	900000127	Semi-Volatile Organics	X	benzo(k)fluoranthene	2900	UG/KG
MND22-4718	900000128	Semi-Volatile Organics	X	benzo(k)fluoranthene	1500	UG/KG
MND22-4719	900000144	Semi-Volatile Organics	JX	benzo(k)fluoranthene	330	UG/KG
MND22-4720	900000141	Semi-Volatile Organics	JX	benzo(k)fluoranthene	230	UG/KG
MND22-4721	900000138	Semi-Volatile Organics	XJ	benzo(k)fluoranthene	81	UG/KG
MND22-4716	000397	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	180	UG/KG
MND22-4717	900000127	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	340	UG/KG
MND22-4718	900000128	Semi-Volatile Organics	J	bis(2-ethylhexyl)phthalate	220	UG/KG
MND22-4713	000394	Semi-Volatile Organics	J	carbazole	210	UG/KG
MND22-4716	000397	Semi-Volatile Organics	J	carbazole	120	UG/KG
MND22-4717	900000127	Semi-Volatile Organics	J	carbazole	86	UG/KG
MND22-4713	000394	Semi-Volatile Organics		chrysene	1300	UG/KG
MND22-4714	900000154	Semi-Volatile Organics	J	chrysene	310	UG/KG
MND22-4716	000397	Semi-Volatile Organics		chrysene	670	UG/KG
MND22-4716	900000126	Semi-Volatile Organics	J	chrysene	110	UG/KG
MND22-4717	900000127	Semi-Volatile Organics		chrysene	710	UG/KG
MND22-4718	900000128	Semi-Volatile Organics	J	chrysene	440	UG/KG
MND22-4719	900000144	Semi-Volatile Organics	J	chrysene	120	UG/KG
MND22-4720	900000141	Semi-Volatile Organics	J	chrysene	85	UG/KG
MND22-4721	900000138	Semi-Volatile Organics	J	chrysene	51	UG/KG
MND22-4701	000384	Semi-Volatile Organics	J	di-n-butyl phthalate	88	UG/KG
MND22-4713	000394	Semi-Volatile Organics	JB	di-n-butyl phthalate	110	UG/KG
MND22-4718	900000128	Semi-Volatile Organics	J	di-n-butyl phthalate	100	UG/KG
MND22-4713	000394	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	340	UG/KG
MND22-4716	000397	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	160	UG/KG
MND22-4717	900000127	Semi-Volatile Organics	J	dibenzo(a,h)anthracene	100	UG/KG
MND22-4713	000394	Semi-Volatile Organics	J	dibenzofuran	150	UG/KG
MND22-4716	000397	Semi-Volatile Organics	J	dibenzofuran	54	UG/KG
MND22-4706	000387	Semi-Volatile Organics	J	fluoranthene	54	UG/KG
MND22-4713	000394	Semi-Volatile Organics		fluoranthene	3200	UG/KG
MND22-4714	900000154	Semi-Volatile Organics		fluoranthene	500	UG/KG
MND22-4716	000397	Semi-Volatile Organics		fluoranthene	1100	UG/KG
MND22-4716	900000126	Semi-Volatile Organics	J	fluoranthene	270	UG/KG
MND22-4717	900000127	Semi-Volatile Organics		fluoranthene	1600	UG/KG
MND22-4718	900000128	Semi-Volatile Organics		fluoranthene	810	UG/KG
MND22-4719	900000144	Semi-Volatile Organics	J	fluoranthene	190	UG/KG
MND22-4720	900000141	Semi-Volatile Organics	J	fluoranthene	140	UG/KG
MND22-4721	000400	Semi-Volatile Organics	J	fluoranthene	62	UG/KG

Table A.5.2 - Area Watersheds and Drainages
Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-4721	900000138	Semi-Volatile Organics	J	fluoranthene	110	UG/KG
MND22-4713	000394	Semi-Volatile Organics	J	fluorene	260	UG/KG
MND22-4716	000397	Semi-Volatile Organics	J	fluorene	100	UG/KG
MND22-4713	000394	Semi-Volatile Organics		indeno(1,2,3-cd)pyrene	790	UG/KG
MND22-4714	900000154	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	100	UG/KG
MND22-4716	000397	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	400	UG/KG
MND22-4716	900000126	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	52	UG/KG
MND22-4717	900000127	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	450	UG/KG
MND22-4718	900000128	Semi-Volatile Organics	J	indeno(1,2,3-cd)pyrene	230	UG/KG
MND22-4713	000394	Semi-Volatile Organics	J	naphthalene	70	UG/KG
MND22-4713	000394	Semi-Volatile Organics		phenanthrene	1900	UG/KG
MND22-4714	900000154	Semi-Volatile Organics	J	phenanthrene	240	UG/KG
MND22-4716	000397	Semi-Volatile Organics		phenanthrene	910	UG/KG
MND22-4716	900000126	Semi-Volatile Organics	J	phenanthrene	200	UG/KG
MND22-4717	900000127	Semi-Volatile Organics		phenanthrene	880	UG/KG
MND22-4718	900000128	Semi-Volatile Organics	J	phenanthrene	330	UG/KG
MND22-4719	900000144	Semi-Volatile Organics	J	phenanthrene	91	UG/KG
MND22-4720	900000141	Semi-Volatile Organics	J	phenanthrene	65	UG/KG
MND22-4706	000387	Semi-Volatile Organics	J	pyrene	46	UG/KG
MND22-4713	000394	Semi-Volatile Organics		pyrene	3300	UG/KG
MND22-4714	900000154	Semi-Volatile Organics		pyrene	440	UG/KG
MND22-4716	000397	Semi-Volatile Organics		pyrene	1300	UG/KG
MND22-4716	900000126	Semi-Volatile Organics	J	pyrene	200	UG/KG
MND22-4717	900000127	Semi-Volatile Organics		pyrene	1000	UG/KG
MND22-4718	900000128	Semi-Volatile Organics	J	pyrene	550	UG/KG
MND22-4719	900000144	Semi-Volatile Organics	J	pyrene	180	UG/KG
MND22-4720	900000141	Semi-Volatile Organics	J	pyrene	120	UG/KG
MND22-4721	900000138	Semi-Volatile Organics	J	pyrene	100	UG/KG
MND22-4726	000407	Volatile Organics		2-butanone	18	UG/KG
MND22-4701	000384	Volatile Organics	JB	acetone	11	UG/KG
MND22-4701	900000176	Volatile Organics	JB	acetone	9	UG/KG
MND22-4702	000383	Volatile Organics	JB	acetone	8	UG/KG
MND22-4702	900000204	Volatile Organics		acetone	12	UG/KG
MND22-4703	000382	Volatile Organics	B	acetone	15	UG/KG
MND22-4704	000385	Volatile Organics	J	acetone	13	UG/KG
MND22-4704	900000205	Volatile Organics	J	acetone	11	UG/KG
MND22-4705	000386	Volatile Organics	J	acetone	8	UG/KG
MND22-4706	900000207	Volatile Organics		acetone	19	UG/KG
MND22-4708	000389	Volatile Organics	B	acetone	13	UG/KG
MND22-4708	000390	Volatile Organics	B	acetone	17	UG/KG
MND22-4708	900000169	Volatile Organics		acetone	16	UG/KG
MND22-4708	900000177	Volatile Organics		acetone	18	UG/KG
MND22-4710	900000197	Volatile Organics		acetone	38	UG/KG
MND22-4711	900000200	Volatile Organics	J	acetone	11	UG/KG
MND22-4712	900000196	Volatile Organics		acetone	13	UG/KG
MND22-4713	000394	Volatile Organics	B	acetone	12	UG/KG
MND22-4713	900000178	Volatile Organics		acetone	16	UG/KG
MND22-4714	000395	Volatile Organics	JB	acetone	8	UG/KG
MND22-4714	900000154	Volatile Organics	JB	acetone	9	UG/KG
MND22-4715	000396	Volatile Organics	JB	acetone	8	UG/KG
MND22-4715	900000155	Volatile Organics	B	acetone	11	UG/KG

Table A.5.2 - Area Watersheds and Drainages
Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-4716	000397	Volatile Organics	B	acetone	32	UG/KG
MND22-4716	900000126	Volatile Organics	B	acetone	14	UG/KG
MND22-4717	000398	Volatile Organics	B	acetone	51	UG/KG
MND22-4718	000399	Volatile Organics	B	acetone	26	UG/KG
MND22-4718	900000128	Volatile Organics	B	acetone	34	UG/KG
MND22-4721	000400	Volatile Organics		acetone	18	UG/KG
MND22-4721	900000138	Volatile Organics	B	acetone	23	UG/KG
MND22-4722	000404	Volatile Organics	B	acetone	32	UG/KG
MND22-4722	900000152	Volatile Organics	JB	acetone	11	UG/KG
MND22-4723	000403	Volatile Organics	B	acetone	17	UG/KG
MND22-4723	900000147	Volatile Organics	B	acetone	23	UG/KG
MND22-4724	000405	Volatile Organics	B	acetone	12	UG/KG
MND22-4724	900000175	Volatile Organics	B	acetone	33	UG/KG
MND22-4725	900000247	Volatile Organics		acetone	41	UG/KG
MND22-4726	000407	Volatile Organics	B	acetone	55	UG/KG
MND22-4726	900000249	Volatile Organics		acetone	38	UG/KG
MND22-4727	900000251	Volatile Organics	B	acetone	58	UG/KG
MND22-4702	000383	Volatile Organics	JB	acetonitrile	35	UG/KG
MND22-4702	900000204	Volatile Organics	JB	acetonitrile	67	UG/KG
MND22-4703	000382	Volatile Organics	JB	acetonitrile	52	UG/KG
MND22-4704	900000205	Volatile Organics	JB	acetonitrile	51	UG/KG
MND22-4705	900000206	Volatile Organics	JB	acetonitrile	55	UG/KG
MND22-4706	900000207	Volatile Organics	J	acetonitrile	66	UG/KG
MND22-4708	900000169	Volatile Organics	B	acetonitrile	250	UG/KG
MND22-4708	900000177	Volatile Organics	JB	acetonitrile	110	UG/KG
MND22-4710	900000197	Volatile Organics	JB	acetonitrile	120	UG/KG
MND22-4711	900000200	Volatile Organics	JB	acetonitrile	71	UG/KG
MND22-4712	900000196	Volatile Organics	JB	acetonitrile	82	UG/KG
MND22-4713	900000178	Volatile Organics	JB	acetonitrile	66	UG/KG
MND22-4716	000397	Volatile Organics		acetonitrile	150	UG/KG
MND22-4720	000401	Volatile Organics	J	acetonitrile	120	UG/KG
MND22-4702	000383	Volatile Organics	J	acrylonitrile	6	UG/KG
MND22-4703	000382	Volatile Organics	J	acrylonitrile	7	UG/KG
MND22-4716	000397	Volatile Organics	J	acrylonitrile	20	UG/KG
MND22-4720	000401	Volatile Organics	J	acrylonitrile	20	UG/KG
MND22-4705	000386	Volatile Organics	J	hexane	3	UG/KG
MND22-4717	000398	Volatile Organics	J	hexane	5	UG/KG
MND22-4724	000405	Volatile Organics	J	hexane	2	UG/KG
MND22-4701	000384	Volatile Organics	JB	methylene-chloride	8	UG/KG
MND22-4701	900000176	Volatile Organics	B	methylene-chloride	14	UG/KG
MND22-4702	000383	Volatile Organics	B	methylene-chloride	22	UG/KG
MND22-4702	900000204	Volatile Organics	B	methylene-chloride	13	UG/KG
MND22-4703	000382	Volatile Organics	B	methylene-chloride	16	UG/KG
MND22-4703	900000153	Volatile Organics	B	methylene-chloride	13	UG/KG
MND22-4704	000385	Volatile Organics	B	methylene-chloride	11	UG/KG
MND22-4704	900000205	Volatile Organics	B	methylene-chloride	12	UG/KG
MND22-4705	000386	Volatile Organics	B	methylene-chloride	12	UG/KG
MND22-4705	900000206	Volatile Organics	B	methylene-chloride	22	UG/KG
MND22-4706	000387	Volatile Organics	B	methylene-chloride	8	UG/KG
MND22-4706	900000207	Volatile Organics	B	methylene-chloride	13	UG/KG
MND22-4707	000388	Volatile Organics	B	methylene-chloride	32	UG/KG

Table A.5.2 - Area Watersheds and Drainages
Sediment Samples

Station	Sample ID	Fraction	Qual	Parameter	Results	Units
MND22-4707	900000165	Volatile Organics	B	methylene-chloride	22	UG/KG
MND22-4708	000389	Volatile Organics	B	methylene-chloride	19	UG/KG
MND22-4708	000390	Volatile Organics	B	methylene-chloride	15	UG/KG
MND22-4708	900000169	Volatile Organics	B	methylene-chloride	11	UG/KG
MND22-4708	900000177	Volatile Organics	B	methylene-chloride	15	UG/KG
MND22-4710	000392	Volatile Organics	JB	methylene-chloride	5	UG/KG
MND22-4710	900000197	Volatile Organics	B	methylene-chloride	49	UG/KG
MND22-4711	000393	Volatile Organics	B	methylene-chloride	24	UG/KG
MND22-4711	900000200	Volatile Organics	B	methylene-chloride	17	UG/KG
MND22-4712	000391	Volatile Organics	B	methylene-chloride	25	UG/KG
MND22-4712	900000196	Volatile Organics	B	methylene-chloride	15	UG/KG
MND22-4713	000394	Volatile Organics	B	methylene-chloride	13	UG/KG
MND22-4713	900000178	Volatile Organics	B	methylene-chloride	16	UG/KG
MND22-4714	000395	Volatile Organics	JB	methylene-chloride	10	UG/KG
MND22-4715	000396	Volatile Organics	JB	methylene-chloride	12	UG/KG
MND22-4715	900000155	Volatile Organics	B	methylene-chloride	16	UG/KG
MND22-4716	000397	Volatile Organics	B	methylene-chloride	36	UG/KG
MND22-4716	900000126	Volatile Organics	B	methylene-chloride	17	UG/KG
MND22-4717	000398	Volatile Organics	B	methylene-chloride	250	UG/KG
MND22-4717	900000127	Volatile Organics	B	methylene-chloride	28	UG/KG
MND22-4718	000399	Volatile Organics	B	methylene-chloride	12	UG/KG
MND22-4718	900000128	Volatile Organics	B	methylene-chloride	19	UG/KG
MND22-4719	000402	Volatile Organics	B	methylene-chloride	12	UG/KG
MND22-4719	900000144	Volatile Organics	B	methylene-chloride	29	UG/KG
MND22-4720	000401	Volatile Organics	B	methylene-chloride	10	UG/KG
MND22-4720	900000141	Volatile Organics	B	methylene-chloride	31	UG/KG
MND22-4721	000400	Volatile Organics	B	methylene-chloride	39	UG/KG
MND22-4721	900000138	Volatile Organics	B	methylene-chloride	20	UG/KG
MND22-4722	000404	Volatile Organics	B	methylene-chloride	100	UG/KG
MND22-4722	900000152	Volatile Organics	B	methylene-chloride	29	UG/KG
MND22-4723	000403	Volatile Organics	B	methylene-chloride	77	UG/KG
MND22-4723	900000147	Volatile Organics	B	methylene-chloride	22	UG/KG
MND22-4724	000405	Volatile Organics	B	methylene-chloride	87	UG/KG
MND22-4724	900000175	Volatile Organics	B	methylene-chloride	29	UG/KG
MND22-4725	000406	Volatile Organics	B	methylene-chloride	8	UG/KG
MND22-4725	900000247	Volatile Organics	B	methylene-chloride	27	UG/KG
MND22-4726	000407	Volatile Organics	B	methylene-chloride	11	UG/KG
MND22-4726	900000249	Volatile Organics	JB	methylene-chloride	11	UG/KG
MND22-4727	000408	Volatile Organics	B	methylene-chloride	12	UG/KG
MND22-4727	900000251	Volatile Organics	B	methylene-chloride	22	UG/KG
MND22-4721	000400	Volatile Organics	J	toluene	3	UG/KG

APPENDIX A.6

Appendix A-6

Great Miami River Data

A.6.1 Great Miami River Sediment Trends

A.6.2 Great Miami River Surface Water Trends

A.6.3 NPDES Outfall 001

Table A.6.1 - Great Miami River Sediment Trends

			AVERAGE				
	MND22-		GMR Rip Rap Road 1001,1002,1003	USGS Gage Station 3001,3002,3003	Hutching's Weir 3101,3102,3103	Chautauqua Weir 3201,3203,3203	Overall average
common anions **(mg/kg)**							
	Chloride	S	2.50	2.50	2.50	53.23	15.18
	Chloride	F	32.90	71.37	67.37	57.93	57.39
	Fluoride	S	1.77	2.25	2.83	3.68	2.63
	Fluoride	F	2.12	3.49	2.91	1.33	2.46
	Nitrate-Nitrite-N	S	1.00	1.00	1.00	1.00	1.00
	Nitrate-Nitrite-N	F	1.01	1.56	1.33	0.71	1.15
	Sulfate	S	104.33	114.93	134.20	25.00	94.62
	Sulfate	F	49.80	128.33	187.60	101.73	116.87
explosives **(mg/kg)**							
	1,3,5-Trinitrobenzene	F	0.75	0.57		0.53	0.61
	1,3-Dinitrobenzene	F	0.75	0.75		0.75	0.75
	2,4,6-Trinitrotoluene	F	0.75	0.75		0.75	0.75
	2,4-Dinitrotoluene-exp	F	0.25	0.29		0.25	0.26
	2,6-Dinitrotoluene-exp	F	0.75	0.75		0.75	0.75
	2-Amino-4,6-dinitrotoluene	F	0.75	0.75		0.75	0.75
	HMX	F	1.50	1.50		1.50	1.50
	Nitrobenzene-exp	F	0.75	0.75		0.75	0.75
	PETN	F	0.50	0.50		0.50	0.50
	RDX	F	1.25	1.25		1.25	1.25
	Tetryl	F	1.25	1.25		1.25	1.25
general chemistry **(mg/kg)**							
	Organic Carbon	S	11438.33	2577.50	13122.50	10246.67	9346.25
	Organic Carbon	F	17566.67	4720.00	10463.33	23166.67	13979.17
Metals **(mg/kg)**							
	Aluminum	S	3056.67	6630.00	8556.67	6186.67	6107.50
	Aluminum	F	1810.00	8013.33	2646.67	2405.84	3718.96
	Antimony	S	0.25	0.15	0.59	0.16	0.28
	Antimony	F	0.14	0.21	0.19	0.32	0.21
	Arsenic	S	4.33	4.43	6.20	3.40	4.59
	Arsenic	F	2.50	4.12	2.77	2.37	2.94
	Barium	S	44.13	44.70	124.77	57.10	67.68

Table A.6.1 - Great Miami River Sediment Trends

			AVERAGE				
	MND22-		GMR Rip Rap Road 1001,1002,1003	USGS Gage Station 3001,3002,3003	Hutching's Weir 3101,3102,3103	Chautauqua Weir 3201,3203,3203	Overall average
	Nickel	F	4.77	15.53	7.10	5.40	8.20
	Potassium	S	543.33	1338.00	1744.00	1332.00	1239.33
	Potassium	F	581.33	1800.00	498.00	558.22	859.39
	Selenium	S	0.36	0.48	0.50	0.50	0.46
	Selenium	F	0.46	0.76	0.27	0.11	0.40
	Silver	S	0.07	0.29	1.18	0.31	0.46
	Silver	F	0.29	0.05	0.05	0.06	0.11
	Sodium	S	425.67	243.00	353.00	279.33	325.25
	Sodium	F	291.33	336.67	254.33	357.84	310.04
	Thallium	S	0.19	0.44	0.64	0.48	0.43
	Thallium	F	0.43	0.15	0.14	0.14	0.21
	Tin	S	0.77	1.72	22.20	3.87	7.14
	Tin	F	1.23	0.63	1.56	2.00	1.36
	Vanadium	S	8.00	15.83	19.93	14.60	14.59
	Vanadium	F	6.67	13.32	6.82	6.71	8.38
	Zinc	F	48.53	78.33	166.87	39.73	83.37
	Zinc	S	24.50	45.57	46.93	31.04	37.01
other **(units)**							
	pH	S	7.73				7.73
	pH	F	8.03				8.03
Pesticides/PCBs **(ug/kg)**							
	4,4'-DDD	S	1.36	1.15	2.32	0.35	1.30
	4,4'-DDD	F	0.82	2.22	2.41	4.45	2.47
	4,4'-DDE	S	0.38	0.78	7.85	0.75	2.44
	4,4'-DDE	F	1.45	0.89	0.74	1.59	1.17
	4,4'-DDT	S	1.04	0.84	21.70	1.06	6.16
	4,4'-DDT	F	2.00	1.38	1.68	2.17	1.81
	Aldrin	S	0.89	0.98	4.18	0.44	1.62
	Aldrin	F	0.83	0.98	0.99	0.85	0.91
	Alpha Chlordane	S	1.52	1.13	7.03	1.73	2.85
	Alpha Chlordane	F	0.35	4.48	1.52	1.60	1.99
	Alpha-BHC	S	1.22	0.98	3.81	0.35	1.59

Table A.6.1 - Great Miami River Sediment Trends

			AVERAGE				
	MND22-		GMR Rip Rap Road 1001,1002,1003	USGS Gage Station 3001,3002,3003	Hutching's Weir 3101,3102,3103	Chautauqua Weir 3201,3203,3203	Overall average
	Alpha-BHC	F	1.03	0.76	1.52	0.88	1.05
	Aroclor-1016	S	23.50	19.00	79.83	22.50	36.21
	Aroclor-1016	F	20.00	20.33	29.33	21.67	22.83
	Aroclor-1221	S	48.33	38.67	161.00	46.33	73.58
	Aroclor-1221	F	40.33	41.17	59.67	44.00	46.29
	Aroclor-1232	S	23.50	19.00	79.83	22.50	36.21
	Aroclor-1232	F	20.00	20.33	29.33	21.67	22.83
	Aroclor-1242	S	23.50	19.00	372.00	22.50	109.25
	Aroclor-1242	F	20.00	20.33	29.33	21.67	22.83
	Aroclor-1248	S	23.50	19.00	79.83	22.50	36.21
	Aroclor-1248	F	20.00	20.33	29.33	21.67	22.83
	Aroclor-1254	S	64.83	19.00	199.00	22.50	76.33
	Aroclor-1254	F	20.00	20.33	92.67	21.67	38.67
	Aroclor-1260	S	23.50	19.00	79.83	33.07	38.85
	Aroclor-1260	F	20.00	20.33	29.33	21.67	22.83
	Beta-BHC	S	1.22	0.98	4.18	0.90	1.82
	Beta-BHC	F	1.03	1.05	1.52	1.12	1.18
	Delta-BHC	S	1.22	0.98	3.87	1.17	1.81
	Delta-BHC	F	1.03	1.05	1.22	1.12	1.10
	Dieldrin	S	1.97	1.38	7.98	0.44	2.94
	Dieldrin	F	0.93	0.38	2.93	1.99	1.56
	Endosulfan I	S	1.22	0.98	4.18	1.17	1.89
	Endosulfan I	F	1.03	1.05	0.90	1.12	1.03
	Endosulfan II	S	2.35	1.90	7.98	0.92	3.29
	Endosulfan II	F	2.00	2.03	2.93	2.17	2.28
	Endosulfan Sulfate	S	2.35	1.49	7.98	2.25	3.52
	Endosulfan Sulfate	F	1.25	4.00	2.93	1.70	2.47
	Endrin	S	2.35	1.46	7.98	2.25	3.51
	Endrin	F	2.00	1.17	2.93	2.17	2.07
	Endrin Aldehyde	S	1.79	1.38	38.00	2.25	10.85
	Endrin Aldehyde	F	1.44	4.00	1.08	4.30	2.71
	Endrin Ketone	S	2.35	1.51	3.45	2.25	2.39

Table A.6.1 - Great Miami River Sediment Trends

			AVERAGE				
	MND22-		GMR Rip Rap Road 1001,1002,1003	USGS Gage Station 3001,3002,3003	Hutching's Weir 3101,3102,3103	Chautauqua Weir 3201,3203,3203	Overall average
	Barium	F	21.50	36.53	36.10	29.77	30.98
	Beryllium	S	0.17	0.38	0.39	0.28	0.31
	Beryllium	F	0.11	0.41	0.14	0.14	0.20
	Bismuth	S	0.34	0.39	0.84	0.41	0.50
	Bismuth	F	0.38	0.53	0.25	0.33	0.37
	Cadmium	S	0.44	0.56	2.00	0.26	0.82
	Cadmium	F	0.22	0.12	0.28	0.05	0.17
	Calcium	S	74800.00	71910.00	59800.00	67500.00	68502.50
	Calcium	F	94566.67	65966.67	56166.67	63834.00	70133.50
	Chromium	S	12.07	12.13	42.40	9.43	19.01
	Chromium	F	6.10	13.09	8.07	6.10	8.34
	Cobalt	S	3.20	5.10	5.57	3.80	4.42
	Cobalt	F	1.93	7.64	2.30	1.80	3.42
	Copper	S	10.63	15.23	132.57	8.70	41.78
	Copper	F	3.67	13.67	12.27	9.17	9.69
	Cyanide	S	0.34	0.31	2.17	0.33	0.79
	Cyanide	F	0.30	0.28	0.25	0.24	0.27
	Iron	S	7356.67	15700.00	13880.00	9736.67	11668.33
	Iron	F	5303.33	16666.67	5553.33	5181.53	8176.22
	Lead	S	11.43	110.80	49.03	11.00	45.57
	Lead	F	5.03	9.03	29.97	10.80	13.71
	Lithium	S	5.23	9.00	10.63	7.73	8.15
	Lithium	F	3.37	15.87	4.15	3.77	6.79
	Magnesium	S	24133.33	19866.67	21033.33	27966.67	23250.00
	Magnesium	F	39200.00	19333.33	24160.00	24051.83	26686.29
	Manganese	S	193.67	255.33	294.33	237.33	245.17
	Manganese	F	195.67	428.00	166.33	212.45	250.61
	Mercury	S	0.06	0.06	0.21	0.13	0.11
	Mercury	F	0.06	0.05	0.06	0.04	0.05
	Molybedenum	S	1.40	2.10	1.78	1.28	1.64
	Molybedenum	F	0.72	0.92	0.93	0.52	0.77
	Nickel	S	9.40	14.07	24.93	9.03	14.36

Table A.6.1 - Great Miami River Sediment Trends

			AVERAGE				
	MND22-		GMR Rip Rap Road 1001,1002,1003	USGS Gage Station 3001,3002,3003	Hutching's Weir 3101,3102,3103	Chautauqua Weir 3201,3203,3203	Overall average
	Endrin Ketone	F	2.00	1.73	2.93	2.17	2.21
	Gamma Chlordane	S	0.55	1.29	1.20	1.99	1.26
	Gamma Chlordane	F	1.03	4.50	1.57	1.12	2.05
	Gamma-BHC (Lindane)	S	1.22	0.98	2.20	0.26	1.17
	Gamma-BHC (Lindane)	F	0.50	2.05	1.52	2.30	1.59
	Heptachlor	S	1.22	0.98	1.10	1.17	1.12
	Heptachlor	F	1.03	2.05	0.95	1.12	1.29
	Heptachlor Epoxide	S	1.22	0.47	4.18	1.17	1.76
	Heptachlor Epoxide	F	1.03	1.38	3.13	0.97	1.63
	Methoxychlor	S	12.17	9.83	38.20	20.00	20.05
	Methoxychlor	F	0.97	7.02	30.43	5.43	10.96
	Toxaphene	S	121.67	98.33	418.33	116.67	188.75
	Toxaphene	F	103.33	105.00	151.67	111.67	117.92
Radiological **(pCi/g)**							
	Americium-241	S	0.16	0.33	0.36	0.07	0.23
	Americium-241	F	0.08	0.17	0.16	0.19	0.15
	Bismuth-207	S	0.05	0.05	0.05	0.03	0.04
	Bismuth-207	F	0.03	0.04	0.05	0.04	0.04
	Bismuth-210M	S	0.06	0.07	0.07	0.04	0.06
	Bismuth-210M	F	0.04	0.05	0.07	0.05	0.05
	Cesium-137	S	0.06	0.06	0.07	0.04	0.06
	Cesium-137	F	0.04	0.05	0.09	0.05	0.06
	Cobalt-60	S	0.07	0.07	0.07	0.04	0.06
	Cobalt-60	F	0.04	0.06	0.07	0.06	0.06
	Plutonium-238	S	0.01	0.03	0.19	0.03	0.07
	Plutonium-238	F	0.00	0.01	0.04	0.01	0.02
	Plutonium-239/240	S	0.01	0.02	0.01	0.01	0.01
	Plutonium-239/240	F	0.00	0.00	0.01	0.00	0.00
	Potassium-40	S	12.08	15.71	9.29	10.67	11.94
	Potassium-40	F	6.62	10.09	11.82	9.21	9.43
	Radium-226	S	0.72	0.48	0.62	0.58	0.60
	Radium-226	F	0.43	0.57	0.94	0.86	0.70

Table A.6.1 - Great Miami River Sediment Trends

		AVERAGE				
MND22-		GMR Rip Rap Road 1001,1002,1003	USGS Gage Station 3001,3002,3003	Hutching's Weir 3101,3102,3103	Chautauqua Weir 3201,3203,3203	Overall average
Strontium-90	S	0.28	0.18	0.07	0.10	0.16
Strontium-90	F	0.03	0.02	0.02	0.03	0.03
Thorium-228	S	0.33	0.47	0.41	0.39	0.40
Thorium-228	F	0.69	0.85	0.74	1.36	0.91
Thorium-230	S	0.80	0.58	0.78	0.57	0.68
Thorium-230	F	1.74	1.08	1.37	2.31	1.62
Thorium-232	S	0.36	0.46	0.44	0.38	0.41
Thorium-232	F	0.70	0.74	0.68	1.19	0.83
Tritium	S	0.15	0.15	0.15	0.14	0.15
Tritium	F	0.12	0.12		0.12	0.12
Uranium-234	S	0.77	0.87	0.77	0.65	0.76
Uranium-234	F	0.70	0.84	0.61	0.99	0.79
Uranium-235	S	0.03	0.02	0.02	0.03	0.03
Uranium-235	F	0.02	0.03	0.04	0.04	0.03
Uranium-238	S	0.92	0.82	0.77	0.62	0.78
Uranium-238	F	0.63	0.77	0.72	1.01	0.78
semi-volatile organics **(ug/kg)**						
1,2,4-Trichlorobenzene	S	460.00	198.33	228.33	228.33	278.75
1,2,4-Trichlorobenzene	F	400.00	205.00	296.67	220.00	280.42
1,2-Dichlorobenzene	S	460.00	198.33	228.33	228.33	278.75
1,2-Dichlorobenzene	F	400.00	205.00	296.67	220.00	280.42
1,3-Dichlorobenzene	S	460.00	198.33	228.33	228.33	278.75
1,3-Dichlorobenzene	F	400.00	205.00	296.67	220.00	280.42
1,4-Dichlorobenzene	S	460.00	198.33	228.33	228.33	278.75
1,4-Dichlorobenzene	F	400.00	205.00	296.67	220.00	280.42
2,2'-oxybis (1-chloropropane)	S	460.00	198.33	228.33	228.33	278.75
2,2'-oxybis (1-chloropropane)	F	400.00	205.00	296.67	220.00	280.42
2,4,5-Trichlorophenol	S	1100.00	483.33	536.67	548.33	667.08
2,4,5-Trichlorophenol	F	966.67	488.33	721.67	533.33	677.50
2,4,6-Trichlorophenol	S	460.00	198.33	228.33	228.33	278.75
2,4,6-Trichlorophenol	F	400.00	205.00	296.67	220.00	280.42
2,4-Dichlorophenol	S	460.00	198.33	228.33	228.33	278.75

Table A.6.1 - Great Miami River Sediment Trends

			AVERAGE				
	MND22-		GMR Rip Rap Road 1001,1002,1003	USGS Gage Station 3001,3002,3003	Hutching's Weir 3101,3102,3103	Chautauqua Weir 3201,3203,3203	Overall average
	2,4-Dichlorophenol	F	400.00	205.00	296.67	220.00	280.42
	2,4-Dimethylphenol	S	460.00	198.33	228.33	228.33	278.75
	2,4-Dimethylphenol	F	400.00	205.00	296.67	220.00	280.42
	2,4-Dinitrophenol	S	1100.00	483.33	536.67	548.33	667.08
	2,4-Dinitrophenol	F	966.67	488.33	721.67	533.33	677.50
	2,4-Dinitrotoluene	S	460.00	198.33	228.33	228.33	278.75
	2,4-Dinitrotoluene	F	400.00	205.00	296.67	220.00	280.42
	2,6-Dinitrotoluene	S	460.00	198.33	228.33	228.33	278.75
	2,6-Dinitrotoluene	F	400.00	205.00	296.67	220.00	280.42
	2-Benzyl-4-Chlorophenol	S	460.00	198.33	228.33	228.33	278.75
	2-Benzyl-4-Chlorophenol	F	400.00	205.00	296.67	220.00	280.42
	2-Chloronaphthalene	S	460.00	198.33	228.33	228.33	278.75
	2-Chloronaphthalene	F	400.00	205.00	296.67	220.00	280.42
	2-Chlorophenol	S	460.00	198.33	228.33	228.33	278.75
	2-Chlorophenol	F	400.00	205.00	296.67	220.00	280.42
	2-Methylnaphthalene	S	460.00	198.33	228.33	228.33	278.75
	2-Methylnaphthalene	F	400.00	313.33	296.67	220.00	307.50
	2-Methylphenol	S	460.00	198.33	228.33	228.33	278.75
	2-Methylphenol	F	400.00	205.00	296.67	220.00	280.42
	2-Nitroaniline	S	1100.00	483.33	536.67	548.33	667.08
	2-Nitroaniline	F	966.67	488.33	721.67	533.33	677.50
	2-Nitrophenol	S	460.00	198.33	228.33	228.33	278.75
	2-Nitrophenol	F	400.00	205.00	296.67	220.00	280.42
	3,3'-Dichlorobenzidine	S	460.00	198.33	228.33	228.33	278.75
	3,3'-Dichlorobenzidine	F	400.00	205.00	296.67	220.00	280.42
	3-Nitroaniline	S	1100.00	483.33	536.67	548.33	667.08
	3-Nitroaniline	F	966.67	488.33	721.67	533.33	677.50
	4,6-Dinitro-o-Cresol	S	1100.00	483.33	536.67	548.33	667.08
	4,6-Dinitro-o-Cresol	F	966.67	488.33	721.67	533.33	677.50
	4-Bromophenyl-phenyl Ether	S	460.00	198.33	228.33	228.33	278.75
	4-Bromophenyl-phenyl Ether	F	400.00	205.00	296.67	220.00	280.42
	4-chloro-3-methylphenol	S	460.00	198.33	228.33	228.33	278.75

Table A.6.1 - Great Miami River Sediment Trends

			AVERAGE				
	MND22-		GMR Rip Rap Road 1001,1002,1003	USGS Gage Station 3001,3002,3003	Hutching's Weir 3101,3102,3103	Chautauqua Weir 3201,3203,3203	Overall average
	4-chloro-3-methylphenol	F	400.00	205.00	296.67	220.00	280.42
	4-Chloroaniline	S	460.00	198.33	228.33	228.33	278.75
	4-Chloroaniline	F	400.00	205.00	296.67	220.00	280.42
	4-Chlorophenyl-phenylether	S	460.00	198.33	228.33	228.33	278.75
	4-Chlorophenyl-phenylether	F	400.00	205.00	296.67	220.00	280.42
	4-Methylphenol	S	460.00	198.33	228.33	228.33	278.75
	4-Methylphenol	F	400.00	149.00	296.67	220.00	266.42
	4-Nitroaniline	S	1100.00	483.33	536.67	548.33	667.08
	4-Nitroaniline	F	966.67	488.33	721.67	533.33	677.50
	4-Nitrophenol	S	1100.00	483.33	536.67	548.33	667.08
	4-Nitrophenol	F	966.67	488.33	721.67	533.33	677.50
	Acenaphthene	S	373.33	168.33	228.33	175.00	236.25
	Acenaphthene	F	286.67	803.33	296.67	220.00	401.67
	Acenaphthylene	S	460.00	198.33	228.33	228.33	278.75
	Acenaphthylene	F	303.33	355.33	296.67	220.00	293.83
	Anthracene	S	142.67	168.33	67.00	208.33	146.58
	Anthracene	F	385.00	1533.33	296.67	172.33	596.83
	Benzo(a)anthracene	S	480.00	213.33	330.33	531.67	388.83
	Benzo(a)anthracene	F	502.33	3400.00	276.67	240.00	1104.75
	Benzo(a)pyrene	S	383.33	180.00	360.00	498.33	355.42
	Benzo(a)pyrene	F	506.00	3433.33	253.33	253.33	1111.50
	Benzo(b)fluoranthene	S	683.33	253.33	586.67	913.67	609.25
	Benzo(b)fluoranthene	F	786.00	5150.67	526.67	267.67	1682.75
	Benzo(g,h,i)perylene	S	366.67	130.33	253.33	325.00	268.83
	Benzo(g,h,i)perylene	F	480.00	1400.00	186.67	170.00	559.17
	Benzo(k)fluoranthene	S	460.00	270.00	623.33	777.67	532.75
	Benzo(k)fluoranthene	F	400.00	8259.00	813.33	374.00	2461.58
	Benzoic Acid	S	2233.33	966.67	1100.00	1100.00	1350.00
	Benzoic Acid	F	52.00	649.00	1450.00	757.00	727.00
	Benzyl Alcohol	S	460.00	198.33	228.33	228.33	278.75
	Benzyl Alcohol	F	400.00	205.00	296.67	220.00	280.42
	Bis(2-chloroethoxy)methane	S	460.00	198.33	228.33	228.33	278.75

Table A.6.1 - Great Miami River Sediment Trends

			AVERAGE				
	MND22-		GMR Rip Rap Road 1001,1002,1003	USGS Gage Station 3001,3002,3003	Hutching's Weir 3101,3102,3103	Chautauqua Weir 3201,3203,3203	Overall average
	Bis(2-chloroethoxy)methane	F	400.00	205.00	296.67	220.00	280.42
	Bis(2-chloroethyl)ether	S	460.00	198.33	228.33	228.33	278.75
	Bis(2-chloroethyl)ether	F	400.00	205.00	296.67	220.00	280.42
	Bis(2-ethylhexyl)phthalate	S	460.00	148.33	285.00	436.67	332.50
	Bis(2-ethylhexyl)phthalate	F	400.00	566.67	191.33	300.00	364.50
	Butyl Benzyl Phthalate	S	460.00	198.33	228.33	228.33	278.75
	Butyl Benzyl Phthalate	F	400.00	205.00	296.67	220.00	280.42
	Carbazole	S	420.00	148.67	107.00	205.00	220.17
	Carbazole	F	272.00	730.00	296.67	220.00	379.67
	Chrysene	S	413.33	198.67	406.67	598.33	404.25
	Chrysene	F	441.67	3366.67	320.00	250.00	1094.58
	Di-n-butyl Phthalate	S	290.00	266.67	230.33	228.33	253.83
	Di-n-butyl Phthalate	F	230.00	366.67	296.67	280.00	293.33
	Di-n-octyl Phthalate	S	460.00	198.33	228.33	228.33	278.75
	Di-n-octyl Phthalate	F	400.00	205.00	296.67	220.00	280.42
	Dibenzo(a,h)anthracene	S	396.67	198.33	163.00	195.00	238.25
	Dibenzo(a,h)anthracene	F	320.00	623.33	235.00	220.00	349.58
	Dibenzofuran	S	376.67	158.33	228.33	157.67	230.25
	Dibenzofuran	F	284.00	690.00	296.67	220.00	372.67
	Diethyl Phthalate	S	460.00	198.33	228.33	228.33	278.75
	Diethyl Phthalate	F	400.00	205.00	296.67	220.00	280.42
	Dimethyl Phthalate	S	460.00	198.33	228.33	228.33	278.75
	Dimethyl Phthalate	F	400.00	205.00	296.67	220.00	280.42
	Fluoranthene	S	1016.67	350.00	634.33	911.00	728.00
	Fluoranthene	F	1133.33	7122.00	536.67	323.67	2278.92
	Fluorene	S	396.67	178.33	228.33	185.00	247.08
	Fluorene	F	333.33	1233.33	296.67	164.00	506.83
	Hexachlorobenzene	S	460.00	198.33	228.33	228.33	278.75
	Hexachlorobenzene	F	400.00	205.00	296.67	220.00	280.42
	Hexachlorobutadiene	S	460.00	198.33	228.33	228.33	278.75
	Hexachlorobutadiene	F	400.00	205.00	296.67	220.00	280.42
	Hexachlorocyclopentadiene	S	460.00	198.33	228.33	228.33	278.75

Table A.6.1 - Great Miami River Sediment Trends

			AVERAGE				
	MND22-		GMR Rip Rap Road 1001,1002,1003	USGS Gage Station 3001,3002,3003	Hutching's Weir 3101,3102,3103	Chautauqua Weir 3201,3203,3203	Overall average
	Hexachlorocyclopentadiene	F	400.00	205.00	296.67	220.00	280.42
	Hexachloroethane	S	460.00	198.33	228.33	228.33	278.75
	Hexachloroethane	F	400.00	205.00	296.67	220.00	280.42
	Indeno(1,2,3-cd)pyrene	S	356.67	128.33	253.33	321.67	265.00
	Indeno(1,2,3-cd)pyrene	F	474.67	1600.00	196.33	186.67	614.42
	Isophorone	S	460.00	198.33	228.33	228.33	278.75
	Isophorone	F	400.00	205.00	296.67	220.00	280.42
	N-Nitroso-di-n-propylamine	S	460.00	198.33	228.33	228.33	278.75
	N-Nitroso-di-n-propylamine	F	400.00	205.00	296.67	220.00	280.42
	N-Nitrosodiphenylamine	S	460.00	198.33	228.33	228.33	278.75
	N-Nitrosodiphenylamine	F	400.00	205.00	296.67	220.00	280.42
	Naphthalene	S	360.00	198.33	228.33	228.33	253.75
	Naphthalene	F	400.00	400.00	296.67	220.00	329.17
	Nitrobenzene	S	460.00	198.33	228.33	228.33	278.75
	Nitrobenzene	F	400.00	205.00	296.67	220.00	280.42
	Pentachlorophenol	S	1100.00	483.33	536.67	548.33	667.08
	Pentachlorophenol	F	966.67	488.33	721.67	533.33	677.50
	Phenanthrene	S	940.00	281.67	221.00	665.00	526.92
	Phenanthrene	F	752.00	5500.00	186.33	270.00	1677.08
	Phenol	S	460.00	198.33	228.33	228.33	278.75
	Phenol	F	400.00	205.00	296.67	220.00	280.42
	Pyrene	S	916.67	346.67	542.33	1189.00	748.67
	Pyrene	F	813.33	6447.67	440.00	300.00	2000.25
volatile organics **(ug/kg)**							
	1,1,1-Trichloroethane	S	14.33	3.00	3.50	3.50	6.08
	1,1,1-Trichloroethane	F	6.00	3.00	4.67	3.33	4.25
	1,1,2,2-Tetrachloroethane	S	14.33	3.00	3.50	3.50	6.08
	1,1,2,2-Tetrachloroethane	F	6.00	3.00	4.67	3.33	4.25
	1,1,2-Trichloro-1,2,2-trifluoroethane	S	14.33	5.83	6.83	6.83	8.46
	1,1,2-Trichloro-1,2,2-trifluoroethane	F	12.00	6.17	9.00	6.83	8.50
	1,1,2-Trichloroethane	S	14.33	3.00	3.50	3.50	6.08
	1,1,2-Trichloroethane	F	6.00	3.00	4.67	3.33	4.25

Table A.6.1 - Great Miami River Sediment Trends

			AVERAGE				
	MND22-		GMR Rip Rap Road 1001,1002,1003	USGS Gage Station 3001,3002,3003	Hutching's Weir 3101,3102,3103	Chautauqua Weir 3201,3203,3203	Overall average
	1,1-Dichloroethane	S	14.33	3.00	3.50	3.50	6.08
	1,1-Dichloroethane	F	6.00	3.00	4.67	3.33	4.25
	1,1-Dichloroethene	S	14.33	3.00	3.50	3.50	6.08
	1,1-Dichloroethene	F	6.00	3.00	4.67	3.33	4.25
	1,2-Dichloroethane	S	14.33	3.00	3.50	3.50	6.08
	1,2-Dichloroethane	F	6.00	3.00	4.67	3.33	4.25
	1,2-Dichloroethene	S	14.33	3.00	3.50	3.50	6.08
	1,2-Dichloroethene	F	6.00	3.00	4.67	3.33	4.25
	1,2-Dichloropropane	S	14.33	3.00	3.50	3.50	6.08
	1,2-Dichloropropane	F	6.00	3.00	4.67	3.33	4.25
	1,2-Diethylbenzene	S	28.67	12.00	13.83	13.83	17.08
	1,2-Diethylbenzene	F	24.33	12.33	18.00	13.17	16.96
	1,3-cis-Dichloropropene	S	14.33	3.00	3.50	3.50	6.08
	1,3-cis-Dichloropropene	F	6.00	3.00	4.67	3.33	4.25
	1,3-trans-Dichloropropene	S	14.33	3.00	3.50	3.50	6.08
	1,3-trans-Dichloropropene	F	6.00	3.00	4.67	3.33	4.25
	2-Butanone	S	14.33	5.83	6.83	6.83	8.46
	2-Butanone	F	12.00	6.17	8.50	6.83	8.38
	2-Hexanone	S	14.33	5.83	6.83	6.83	8.46
	2-Hexanone	F	12.00	6.17	9.00	6.83	8.50
	4-Methyl-2-pentanone	S	14.33	5.83	6.83	6.83	8.46
	4-Methyl-2-pentanone	F	12.00	6.17	9.00	6.83	8.50
	Acetone	S	12.33	5.83	11.17	11.33	10.17
	Acetone	F	12.33	17.33	34.33	66.00	32.50
	Acetonitrile	S	116.33	58.33	68.33	68.33	77.83
	Acetonitrile	F	96.67	61.67	71.67	68.33	74.58
	Acrylonitrile	S	93.00	58.33	68.33	68.33	72.00
	Acrylonitrile	F	82.00	61.67	67.00	68.33	69.75
	Benzene	S	14.33	3.00	3.50	3.50	6.08
	Benzene	F	6.00	3.00	4.67	3.33	4.25
	Bromodichloromethane	S	14.33	3.00	3.50	3.50	6.08
	Bromodichloromethane	F	6.00	3.00	4.67	3.33	4.25

Table A.6.1 - Great Miami River Sediment Trends

			AVERAGE				
	MND22-		GMR Rip Rap Road 1001,1002,1003	USGS Gage Station 3001,3002,3003	Hutching's Weir 3101,3102,3103	Chautauqua Weir 3201,3203,3203	Overall average
	Bromoform	S	14.33	3.00	3.50	3.50	6.08
	Bromoform	F	6.00	3.00	4.67	3.33	4.25
	Bromomethane	S	14.33	5.83	6.83	6.83	8.46
	Bromomethane	F	12.00	6.17	9.00	6.83	8.50
	Carbon Disulfide	S	14.33	3.00	3.50	3.50	6.08
	Carbon Disulfide	F	6.00	3.00	4.67	3.33	4.25
	Carbon Tetrachloride	S	14.33	3.00	3.50	3.50	6.08
	Carbon Tetrachloride	F	6.00	3.00	4.67	3.33	4.25
	Chlorobenzene	S	14.33	3.00	3.50	3.50	6.08
	Chlorobenzene	F	6.00	3.00	4.67	3.33	4.25
	Chloroethane	S	14.33	5.83	6.83	6.83	8.46
	Chloroethane	F	12.00	6.17	9.00	6.83	8.50
	Chloroform	S	14.33	3.00	3.50	3.50	6.08
	Chloroform	F	6.00	3.00	4.67	3.33	4.25
	Chloromethane	S	14.33	5.83	6.83	6.83	8.46
	Chloromethane	F	12.00	6.17	9.00	6.83	8.50
	Dibromochloromethane	S	14.33	3.00	3.50	3.50	6.08
	Dibromochloromethane	F	6.00	3.00	4.67	3.33	4.25
	Ethylbenzene	S	14.33	3.00	3.50	3.50	6.08
	Ethylbenzene	F	6.00	3.00	4.67	3.33	4.25
	Hexane	S	14.33	4.50	6.83	6.83	8.12
	Hexane	F	12.00	6.17	9.00	6.83	8.50
	Iodomethane	S	14.33	5.83	6.83	6.83	8.46
	Iodomethane	F	12.00	6.17	9.00	6.83	8.50
	Methylene Chloride	S	25.67	27.00	20.00	14.67	21.83
	Methylene Chloride	F	24.00	34.67	17.33	543.33	154.83
	Styrene	S	14.33	3.00	3.50	3.50	6.08
	Styrene	F	6.00	3.00	4.67	3.33	4.25
	Tetrachloroethene	S	14.33	3.00	3.50	3.50	6.08
	Tetrachloroethene	F	6.00	3.00	4.67	3.33	4.25
	Toluene	S	14.33	3.00	12.83	3.50	8.42
	Toluene	F	6.00	3.00	4.67	3.33	4.25

Table A.6.1 - Great Miami River Sediment Trends

			AVERAGE				
	MND22-		GMR Rip Rap Road 1001,1002,1003	USGS Gage Station 3001,3002,3003	Hutching's Weir 3101,3102,3103	Chautauqua Weir 3201,3203,3203	Overall average
	Trichloroethene	S	14.33	3.00	3.50	3.50	6.08
	Trichloroethene	F	6.00	3.00	4.67	3.33	4.25
	Vinyl Acetate	S	14.33	5.83	6.83	6.83	8.46
	Vinyl Acetate	F	12.00	6.17	9.00	6.83	8.50
	Vinyl Chloride	S	14.33	5.83	6.83	6.83	8.46
	Vinyl Chloride	F	12.00	6.17	9.00	6.83	8.50
	Xylenes, Total	S	14.33	3.00	3.50	3.50	6.08
	Xylenes, Total	F	6.00	3.00	4.67	3.33	4.25

Table A.6.2 - Great Miami River Surface Water Trends

			AVERAGE								
	MND22-		GMR Rip Rap Road 1001		USGS Gage Station 3001		Hutching's Weir 3101		Chautauqua Weir 3201		Overall average
Common Anions **(mg/L)**											
	Chloride	F	60.6		128		122		126		109.15
	Chloride	S	49.1		55.8		66.2		64.7		58.95
	Fluoride	F	0.59		0.474		0.617		0.65		0.58275
	Fluoride	S	0.242		0.265		0.224		0.307		0.2595
	Nitrate-Nitrite-N	F	0.87		4.87		3.85		4.55		3.535
	Nitrate-Nitrite-N	S	4.4		0.627		5.89		3.87		3.69675
	Sulfate	F	92		113		101		101		101.75
	Sulfate	S	100		56.2		95.5		48.3		75
Explosives **(ug/L)**											
	1,3,5-Trinitrobenzene	F	0.33	J							0.33
	1,3-Dinitrobenzene	F	15	U							15
	2,4,6-Trinitrotoluene	F	3	U							3
	2,4-Dinitrotoluene	F	0.5	U							0.5
	2,6-Dinitrotoluene	F	3.1	B							3.1
	2-Amino-4,6-dinitrotoluene	F	3	U							3
	HMX	F	20	U							20
	Nitrobenzene	F	15	U							15
	PETN	F	1	U							1
	RDX	F	0.72	JB							0.72
	Tetryl	F	3	U							3
General Chemistry **(mg/L)**											
	Alkalinity	S	165		273		157		326		230.25
	Ammonia	F	0.1	U	0.1	U	0.1	U	0.1	U	0.1
	Ammonia	S	0.1	U	0.1	U	0.1	U	0.1	U	0.1
	Dissolved Solids	F	670		650		652		629		650.25
	Dissolved Solids	S	680		466		364		490		500
	Nitrogen	F	0.614		0.865		0.579		0.864		0.7305
	Nitrogen	S	0.447		0.547		0.982		0.128		0.526
	Organic Carbon	F	4.79		5.56		5.77		5.91		5.5075
	Organic Carbon	S	6.65		6.4		6.98		4.96		6.2475

Table A.6.2 - Great Miami River Surface Water Trends

			AVERAGE								
MND22-			GMR Rip Rap Road 1001		USGS Gage Station 3001		Hutching's Weir 3101		Chautauqua Weir 3201		Overall average
	Phosphorous	F	0.437		0.659		0.51		0.613		0.55475
	Phosphorous	S	0.1	U	0.1	U	0.1	U	1.48		0.445
	Suspended Solids	F	32		23		52		28		33.75
	Suspended Solids	S	74		30		100		37		60.25
Metals (Filtered) **(ug/L)**											
	Aluminum	F	100		116		97.4		81.9		98.825
	Aluminum	S	42.9		117	B	56.1		86.3		75.575
	Antimony	F	6.9	B	1.7	B	6.3	B	1.2	U	4.025
	Antimony	S	3.8	B	2.6	B	1.9	U	2.7	B	2.75
	Arsenic	F	1.7	U	1.7	U	1.7	U	1.7	U	1.7
	Arsenic	S	1.9	U	1.9	B	1.9	U	1.8	B	1.875
	Barium	F	84.6	B	85.3	B	83	B	81.5	B	83.6
	Barium	S	57.5	B	76.3	B	54.6	B	86.8	B	68.8
	Beryllium	F	0.1	U	0.1	U	0.1	U	0.1	U	0.1
	Beryllium	S	0.2	U	0.2	U	0.2	U	0.1	U	0.175
	Bismuth	F	3.2	U	3.2	U	3.2	U	3.2	U	3.2
	Bismuth	S	67.5	B	53.9	U	53.9	U	3.4	U	44.675
	Cadmium	F	0.3	U	0.3	U	0.3	U	0.3	U	0.3
	Cadmium	S	0.3	U	0.3	U	0.3	U	0.55	B	0.3625
	Calcium	F	67300		73800		75900		72600		72400
	Calcium	S	62800		74500		61300		81100		69925
	Chromium	F	0.7	U	1.2	B	1.3	B	1.6	B	1.2
	Chromium	S	0.9	U	1.6	B	0.9	U	0.7	U	1.025
	Cobalt	F	0.5	U	0.5	U	0.5	U	0.5	B	0.5
	Cobalt	S	0.6	U	1.3	B	0.87	B	0.85	B	0.905
	Copper	F	3.1	B	2.4	B	5.7	B	36.5		11.925
	Copper	S	2.1	B	2.1	B	2.5	B	4	B	2.675
	Cyanide	F	10	U	10.7		10	U	10	U	10.175
	Cyanide	S	5	U	10	U	5	U	10	U	7.5
	Iron	F	7	U	7	U	7	U	7	U	7
	Iron	S	15.7	U	58.3	B	44.6	B	9.7	U	32.075

Table A.6.2 - Great Miami River Surface Water Trends

	MND22-		AVERAGE								
			GMR Rip Rap Road 1001		USGS Gage Station 3001		Hutching's Weir 3101		Chautauqua Weir 3201		Overall average
	Lead	F	1.6	U	3.9	B	1.6	U	1.6	U	2.175
	Lead	S	1.9	U	3	B	1.9	U	1.6	U	2.1
	Lithium	F	7.6	U	7.6	U	7.6	U	7.6	U	7.6
	Lithium	S	3.8	U	5.7	B	3.8	U	5.2	B	4.625
	Magnesium	F	28900		30800		33100		30300		30775
	Magnesium	S	20800		27400		20100		30600		24725
	Manganese	F	1.7	B	3.9	B	2	B	2.3	B	2.475
	Manganese	S	4.5	B	9	B	5.9	B	0.55	B	4.9875
	Mercury	F	0.2	U	0.2	U	0.2	U	0.2	U	0.2
	Mercury	S	0.2	U	0.2	U	0.2	U	0.2	U	0.2
	Molybedenum	F	14.9	B	8.1	B	9.5	B	8.5	B	10.25
	Molybedenum	S	18.3	U	18.3	U	18.3	U	6.7	B	15.4
	Nickel	F	2.2	B	4.6	B	4.8	B	4.2	B	3.95
	Nickel	S	1.4	U	1.4	U	1.4	U	2.4	U	1.65
	Potassium	F	5770		8090		7930		7870		7415
	Potassium	S	2790	B	4070	B	3260	B	3880	B	3500
	Selenium	F	2.8	U	2.8	U	2.8	U	2.8	U	2.8
	Selenium	S	2.7	U	2.7	U	2.7	U	1.2	B	2.325
	Silver	F	2.4	U	2.4	U	2.4	U	2.4	U	2.4
	Silver	S	0.5	U	0.5	U	0.5	U	0.6	U	0.525
	Sodium	F	35400		76200		76300		75500		65850
	Sodium	S	9940		31500		16200		38200		23960
	Thallium	F	3.6	U	3.6	U	3.6	U	3.6	U	3.6
	Thallium	S	1.4	U	18	U	7	U	1.4	U	6.95
	Tin	F	10.5	U	10.5	U	10.5	U	10.5	U	10.5
	Tin	S	56.3	U	56.3	U	56.3	U	5	U	43.475
	Vanadium	F	1.6	B	1.3	B	1.4	B	1.5	B	1.45
	Vanadium	S	1.4	B	1.5	B	1.3	B	1.4	B	1.4
	Zinc	F	1.8	B	4	B	3	B	2.2	B	2.75
	Zinc	S	4.8	B	9.7	B	8.8	B	35.6		14.725
Metals (Unfiltered) **(ug/L)**											

Table A.6.2 - Great Miami River Surface Water Trends

MND22-		AVERAGE								
		GMR Rip Rap Road 1001		USGS Gage Station 3001		Hutching's Weir 3101		Chautauqua Weir 3201		Overall average
Aluminum	F	647		550		981		740		729.5
Aluminum	S	2230		484		4160		875		1937.25
Antimony	F	1.2	U	1.2	U	1.2	U	1.2	U	1.2
Antimony	S	1.9	U	1.9	U	1.9	U	4.2	B	2.475
Arsenic	F	3.1	B	2.8	U	2.8	U	2.8	U	2.875
Arsenic	S	3.3		3.3	B	2	B	1.6	U	2.55
Barium	F	82.1	B	85.2	B	106	B	103	B	94.075
Barium	S	69.9	B	75.3	B	78.7	B	98.6	B	80.625
Beryllium	F	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Beryllium	S	0.2	U	0.2	U	0.2	U	0.2	U	0.2
Bismuth	F	3.2	U	3.2	U	3.2	U	3.2	U	3.2
Bismuth	S	2.6	U			2.6	U	2.6	U	2.6
Cadmium	F	0.3	U	0.3	U	0.3	U	0.3	U	0.3
Cadmium	S	0.3	U	0.3	U	0.3	U	0.3	U	0.3
Calcium	F	61300		69300		87800		85800		76050
Calcium	S	60500		74800		59700		79200		68550
Chromium	F	1.1	B	1.7	B	2.9	B	2.4	B	2.025
Chromium	S	3.3	B	2.6	B	5.9	B	2.2	B	3.5
Cobalt	F	0.69	B	0.58	B	0.85	B	0.8	B	0.73
Cobalt	S	1.3	B	0.91	B	1.8	B	2.1	B	1.5275
Copper	F	3.7	B	3.2	B	3.7	B	3.6	B	3.55
Copper	S	5.4	B	3.5	B	6.9	B	7.2	B	5.75
Cyanide	F	10	U	10	U	10	U	10	U	10
Cyanide	S	10	U	5	U	10	U	10	U	8.75
Iron	F	643		472		982		742		709.75
Iron	S	2180		538		3760		1000		1869.5
Lead	F	2.3	U	5.5		3.9	B	2.8	B	3.625
Lead	S	2.7		3.1	B	4.7	B	2.9		3.35
Lithium	F	7.6	U	7.6	U	8.6	B	7.7	B	7.875
Lithium	S	3.8	U			13.6	B	5.2	B	7.533333333
Magnesium	F	26300		29200		38400		36100		32500

Table A.6.2 - Great Miami River Surface Water Trends

	MND22-		AVERAGE								
			GMR Rip Rap Road 1001		USGS Gage Station 3001		Hutching's Weir 3101		Chautauqua Weir 3201		Overall average
	Magnesium	S	20100		26900		19900		30100		24250
	Manganese	F	58.1		31.5		46.9		45.8		45.575
	Manganese	S	55		37.1		67.9		47.7		51.925
	Mercury	F	0.2	U	0.2	U	0.2	U	0.2	U	0.2
	Mercury	S	0.2	U	0.2	U	0.2	U	0.2	U	0.2
	Molybedenum	F	12.5	B	7.4	B	10.9	B	9.7	B	10.125
	Molybedenum	S	4.3	B			5.3	B	7.4	B	5.666666667
	Nickel	F	3.6	B	5.4	B	6	B	6.1	B	5.275
	Nickel	S	4	B	3.5	B	6	B	4.7	B	4.55
	Potassium	F	5640		7780		9340		9300		8015
	Potassium	S	2930	B	3480	B	3730	B	3800	B	3485
	Selenium	F	3.9	U	3.9	U	3.9	U	3.9	U	3.9
	Selenium	S	2.7	U	2.7	U	2.7	U	2.2		2.575
	Silver	F	2.4	U	2.4	U	2.4	U	2.4	U	2.4
	Silver	S	0.5	U	0.5	U	0.5	U	0.5	U	0.5
	Sodium	F	34700		71400		84500		85700		69075
	Sodium	S	9460		30000		15200		36800		22865
	Thallium	F	3.6	U	36	U	36	U	36	U	27.9
	Thallium	S	7	U	3.6	U	3.6	U	1.4	U	3.9
	Tin	F	10.5	U	10.5	U	10.5	U	10.5	U	10.5
	Tin	S	5.9	U			5.9	U	5.9	U	5.9
	Vanadium	F	2.5	B	2.1	B	3.3	B	3	B	2.725
	Vanadium	S	6	B	2.2	B	10.1		4.1	B	5.6
	Zinc	F	16.9	B	16.8	B	24.5		60.2		29.6
	Zinc	S	10.3	B	14.9	B	20.8		23.8		17.45
Pesticides/PCBs **(ug/L)**											
	4,4'-DDD	F	0.1	U	0.1	U	0.1	U	0.1	U	0.1
	4,4'-DDD	S	0.1	U	0.1	U	0.1	U	0.1	U	0.1
	4,4'-DDE	F	0.1	U	0.1	U	0.1	U	0.1	U	0.1
	4,4'-DDE	S	0.1	U	0.1	U	0.1	U	0.1	U	0.1
	4,4'-DDT	F	0.1	U	0.1	U	0.1	U	0.1	U	0.1

Table A.6.2 - Great Miami River Surface Water Trends

MND22-		AVERAGE										
		GMR Rip Rap Road 1001		USGS Gage Station 3001		Hutching's Weir 3101		Chautauqua Weir 3201		Overall average
4,4'-DDT	S	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Aldrin	F	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Aldrin	S	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Alpha-BHC	F	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Alpha-BHC	S	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Alpha Chlordane	F	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Alpha Chlordane	S	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Aroclor-1016	F	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Aroclor-1016	S	1	U	0.5	U	1	U	0.5	U	0.75
Aroclor-1221	F	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Aroclor-1221	S	2	U	0.5	U	2	U	0.5	U	1.25
Aroclor-1232	F	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Aroclor-1232	S	1	U	0.5	U	1	U	0.5	U	0.75
Aroclor-1242	F	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Aroclor-1242	S	1	U	0.5	U	1	U	0.5	U	0.75
Aroclor-1248	F	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Aroclor-1248	S	1	U	0.5	U	1	U	0.5	U	0.75
Aroclor-1254	F	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Aroclor-1254	S	1	U	0.5	U	1	U	0.5	U	0.75
Aroclor-1260	F	0.5	U	0.5	U	0.5	U	0.5	U	0.5
Aroclor-1260	S	1	U	0.5	U	1	U	0.5	U	0.75
Beta-BHC	F	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Beta-BHC	S	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Delta-BHC	F	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Delta-BHC	S	0.05	U	0.00056	JP	0.05	U	0.05	U	0.03764
Dieldrin	F	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Dieldrin	S	0.0012	JB	0.0031	JP	0.0024	JP	0.0015	JP	0.00205
Endosulfan I	F	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Endosulfan I	S	0.05	U	0.05	U	0.05	U	0.05	U	0.05
Endosulfan II	F	0.1	U	0.1	U	0.1	U	0.1	U	0.1
Endosulfan II	S	0.1	U	0.1	U	0.1	U	0.1	U	0.1

Table A.6.2 - Great Miami River Surface Water Trends

	MND22-		AVERAGE								
			GMR Rip Rap Road 1001		USGS Gage Station 3001		Hutching's Weir 3101		Chautauqua Weir 3201		Overall average
	Endosulfan Sulfate	F	0.1	U	0.1	U	0.1	U	0.1	U	0.1
	Endosulfan Sulfate	S	0.1	U	0.1	U	0.0097	JB	0.1	U	0.077425
	Endrin	F	0.1	U	0.1	U	0.1	U	0.1	U	0.1
	Endrin	S	0.0013	JP	0.1	U	0.1	U	0.1	U	0.075325
	Endrin Aldehyde	F	0.1	U	0.1	U	0.1	U	0.1	U	0.1
	Endrin Aldehyde	S	0.1	U	0.1	U	0.1	U	0.1	U	0.1
	Endrin Ketone	F	0.1	U	0.1	U	0.1	U	0.1	U	0.1
	Endrin Ketone	S	0.1	U	0.1	U	0.1	U	0.1	U	0.1
	Gamma-BHC (Lindane)	F	0.0029	JP	0.01	JP	0.0047	JP	0.0092	JP	0.0067
	Gamma-BHC (Lindane)	S	0.00052	JP	0.0052	JP	0.05	U	0.0036	JP	0.01483
	Gamma Chlordane	F	0.05	U	0.05	U	0.05	U	0.05	U	0.05
	Gamma Chlordane	S	0.05	U	0.05	U	0.05	U	0.05	U	0.05
	Heptachlor	F	0.05	U	0.05	U	0.05	U	0.05	U	0.05
	Heptachlor	S	0.05	U	0.05	U	0.05	U	0.05	U	0.05
	Heptachlor Epoxide	F	0.05	U	0.05	U	0.05	U	0.006	JP	0.039
	Heptachlor Epoxide	S	0.05	U	0.05	U	0.0042	JP	0.05	U	0.03855
	Methoxychlor	F	0.5	U	0.5	U	0.5	U	0.5	U	0.5
	Methoxychlor	S	0.5	U	0.0081	JP	0.5	U	0.5	U	0.377025
	Toxaphene	F	5	U	5	U	5	U	5	U	5
	Toxaphene	S	5	U	5	U	5	U	5	U	5
Radiological **(pCi/L)**											
	Americium-241	F	0.261	U	0.273	U	0.221	U	0.3041	U	0.264775
	Americium-241	S	0.2118	U	0.1714	U	0.257	U	0.201	U	0.2103
	Bismuth-207	F	7.029	U	6.48	U	6.4	U	6.41	U	6.57975
	Bismuth-207	S	7.29	U	7.98	U	7.02	U	7.101	U	7.34775
	Bismuth-210M	F	7.9	U	8.36	U	6.973	U	7.85	U	7.77075
	Bismuth-210M	S	7.373	U	9.08	U	8.735	U	9.85	U	8.7595
	Cesium-137	F	7.98	U	6.461	U	6.473	U	7.77	U	7.171
	Cesium-137	S	7.096	U	7.08	U	7.62	U	8.19	U	7.4965
	Cobalt-60	F	9.281	U	9.037	U	7.87	U	7.07	U	8.3145
	Cobalt-60	S	11.2	U	8.003	U	11	U	10.8	U	10.25075

Table A.6.2 - Great Miami River Surface Water Trends

MND22-			AVERAGE								
			GMR Rip Rap Road 1001		USGS Gage Station 3001		Hutching's Weir 3101		Chautauqua Weir 3201		Overall average
	Plutonium-238	F	0.175	U	0.385	U	0.154	U	0.3516	U	0.2664
	Plutonium-238	S	0.219	U	0.206	U	0.14	U	0.175	U	0.185
	Plutonium-239/240	F	0.443	U	0.3261	U	0.154	U	0.122	U	0.261275
	Plutonium-239/240	S	0.2486	U	0.2062	U	0.2079	U	0.175	U	0.209425
	Potassium-40	F	23		235		295		2.82		138.955
	Potassium-40	S	342		310		355		287		323.5
	Radium-226	F	0.24		0.193		0.238		0.154		0.20625
	Radium-226	S	0.267		0.232		0.325		0.276		0.275
	Strontium-90	F	0.552	U	0.5943	U	0.51	U	0.548	U	0.551075
	Strontium-90	S	0.428	U	0.625	U	0.382	U	0.511	U	0.4865
	Thorium-228	F	0.228	U	0.219	U	0.14	U	0.1889	U	0.193975
	Thorium-228	S	0.173	U	0.1505	U	0.152	U	0.448	U	0.230875
	Thorium-230	F	0.205	U	0.1891	U	0.233	U	0.1633	U	0.1976
	Thorium-230	S	0.148	U	0.166	U	0.11		0.24	U	0.166
	Thorium-232	F	0.121	U	0.2147	U	0.2051	U	0.11	U	0.1627
	Thorium-232	S	0.1481	U	0.1659	U	0.0996	U	0.162	U	0.1439
	Tritium	F	243.3	U	251	U	3.7		251	U	187.25
	Tritium	S	0.301	U	0.301	U	0.301	U	0.3046	U	0.3019
	Uranium-234	F	0.693		0.396		0.511		0.36		0.49
	Uranium-234	S	0.843		0.903		0.838		1.44		1.006
	Uranium-235	F	0.3518	U	0.281	U	0.307	U	0.255	U	0.2987
	Uranium-235	S	0.2568	U	0.2897	U	0.22	U	0.131	U	0.224375
	Uranium-238	F	0.47		0.514		0.864		0.688		0.634
	Uranium-238	S	0.57		0.903		0.589		0.725		0.69675
Semi-Volatile Organics **(ug/L)**											
	1,2,4-Trichlorobenzene	F	10	U	10	U	10	U	10	U	10
	1,2,4-Trichlorobenzene	S	5	U	5	U	5	U	5	U	5
	1,2-Dichlorobenzene	F	10	U	10	U	10	U	10	U	10
	1,2-Dichlorobenzene	S	5	U	5	U	5	U	5	U	5
	1,3-Dichlorobenzene	F	10	U	10	U	10	U	10	U	10
	1,3-Dichlorobenzene	S	5	U	5	U	5	U	5	U	5

Table A.6.2 - Great Miami River Surface Water Trends

MND22-		AVERAGE										
		GMR Rip Rap Road 1001		USGS Gage Station 3001		Hutching's Weir 3101		Chautauqua Weir 3201		Overall average
1,4-Dichlorobenzene	F	10	U	10	U	10	U	10	U	10
1,4-Dichlorobenzene	S	5	U	5	U	5	U	5	U	5
2,2'-oxybis (1-chloropropane)	F	10	U	10	U	10	U	10	U	10
2,2'-oxybis (1-chloropropane)	S	5	U	5	U	5	U	5	U	5
2,4,5-Trichlorophenol	F	25	U	25	U	25	U	25	U	25
2,4,5-Trichlorophenol	S	5	U	5	U	5	U	5	U	5
2,4,6-Trichlorophenol	F	10	U	10	U	10	U	10	U	10
2,4,6-Trichlorophenol	S	5	U	5	U	5	U	5	U	5
2,4-Dichlorophenol	F	10	U	10	U	10	U	10	U	10
2,4-Dichlorophenol	S	5	U	5	U	5	U	5	U	5
2,4-Dimethylphenol	F	10	U	10	U	10	U	10	U	10
2,4-Dimethylphenol	S	5	U	5	U	5	U	5	U	5
2,4-Dinitrophenol	F	25	U	25	U	25	U	25	U	25
2,4-Dinitrophenol	S	20	U	20	U	20	U	20	U	20
2,4-Dinitrotoluene	F	10	U	10	U	10	U	10	U	10
2,4-Dinitrotoluene	S	5	U	5	U	5	U	5	U	5
2,6-Dinitrotoluene	F	10	U	10	U	10	U	10	U	10
2,6-Dinitrotoluene	S	5	U	5	U	5	U	5	U	5
2-Benzyl-4-Chlorophenol	F	10	U	10	U	10	U	10	U	10
2-Benzyl-4-Chlorophenol	S	10	U	10	U	10	U	10	U	10
2-Chloronaphthalene	F	10	U	10	U	10	U	10	U	10
2-Chloronaphthalene	S	5	U	5	U	5	U	5	U	5
2-Chlorophenol	F	10	U	10	U	10	U	10	U	10
2-Chlorophenol	S	5	U	5	U	5	U	5	U	5
2-Methylnaphthalene	F	10	U	10	U	10	U	10	U	10
2-Methylnaphthalene	S	5	U	5	U	5	U	5	U	5
2-Methylphenol	F	10	U	10	U	10	U	10	U	10
2-Methylphenol	S	5	U	5	U	5	U	5	U	5
2-Nitroaniline	F	25	U	25	U	25	U	25	U	25
2-Nitroaniline	S	20	U	20	U	20	U	20	U	20
2-Nitrophenol	F	10	U	10	U	10	U	10	U	10

Table A.6.2 - Great Miami River Surface Water Trends

MND22-		AVERAGE										
		GMR Rip Rap Road 1001		USGS Gage Station 3001		Hutching's Weir 3101		Chautauqua Weir 3201		Overall average
2-Nitrophenol	S	5	U	5	U	5	U	5	U	5
3,3'-Dichlorobenzidine	F	10	U	10	U	10	U	10	U	10
3,3'-Dichlorobenzidine	S	5	U	5	U	5	U	5	U	5
3-Nitroaniline	F	25	U	25	U	25	U	25	U	25
3-Nitroaniline	S	20	U	20	U	20	U	20	U	20
4,6-Dinitro-o-Cresol	F	25	U	25	U	25	U	25	U	25
4,6-Dinitro-o-Cresol	S	20	U	20	U	20	U	20	U	20
4-Bromophenyl-phenyl Ether	F	10	U	10	U	10	U	10	U	10
4-Bromophenyl-phenyl Ether	S	5	U	5	U	5	U	5	U	5
4-chloro-3-methylphenol	F	10	U	10	U	10	U	10	U	10
4-chloro-3-methylphenol	S	5	U	5	U	5	U	5	U	5
4-Chloroaniline	F	10	U	10	U	10	U	10	U	10
4-Chloroaniline	S	5	U	5	U	5	U	5	U	5
4-Chlorophenyl-phenylether	F	10	U	10	U	10	U	10	U	10
4-Chlorophenyl-phenylether	S	5	U	5	U	5	U	5	U	5
4-Methylphenol	F	10	U	10	U	10	U	10	U	10
4-Methylphenol	S	5	U	5	U	5	U	5	U	5
4-Nitroaniline	F	25	U	25	U	25	U	25	U	25
4-Nitroaniline	S	20	U	20	U	20	U	20	U	20
4-Nitrophenol	F	25	U	25	U	25	U	25	U	25
4-Nitrophenol	S	20	U	20	U	20	U	20	U	20
Acenaphthene	F	10	U	10	U	10	U	10	U	10
Acenaphthene	S	5	U	5	U	5	U	5	U	5
Acenaphthylene	F	10	U	10	U	10	U	10	U	10
Acenaphthylene	S	5	U	5	U	5	U	5	U	5
Anthracene	F	10	U	10	U	10	U	10	U	10
Anthracene	S	5	U	5	U	5	U	5	U	5
Benzo(a)anthracene	F	10	U	10	U	10	U	10	U	10
Benzo(a)anthracene	S	5	U	5	U	5	U	5	U	5
Benzo(a)pyrene	F	10	U	10	U	10	U	10	U	10
Benzo(a)pyrene	S	5	U	5	U	5	U	5	U	5

Table A.6.2 - Great Miami River Surface Water Trends

MND22-		AVERAGE								
		GMR Rip Rap Road 1001		USGS Gage Station 3001		Hutching's Weir 3101		Chautauqua Weir 3201		Overall average
Benzo(b)fluoranthene	F	10	U	10	U	10	U	10	U	10
Benzo(b)fluoranthene	S	5	U	5	U	5	U	5	U	5
Benzo(g,h,i)perylene	F	10	U	10	U	10	U	10	U	10
Benzo(g,h,i)perylene	S	5	U	5	U	5	U	5	U	5
Benzo(k)fluoranthene	F	10	U	10	U	10	U	10	U	10
Benzo(k)fluoranthene	S	5	U	5	U	5	U	5	U	5
Benzoic Acid	F	50	U	50	U	50	U	50	U	50
Benzoic Acid	S	50	U	50	U	50	U	50	U	50
Benzyl Alcohol	F	10	U	10	U	10	U	10	U	10
Benzyl Alcohol	S	10	U	10	U	10	U	10	U	10
Bis(2-chloroethoxy)methane	F	10	U	10	U	10	U	10	U	10
Bis(2-chloroethoxy)methane	S	5	U	5	U	5	U	5	U	5
Bis(2-chloroethyl)ether	F	10	U	10	U	10	U	10	U	10
Bis(2-chloroethyl)ether	S	5	U	5	U	5	U	5	U	5
Bis(2-ethylhexyl)phthalate	F	2	JB	1	JB	1	J	10	U	3.5
Bis(2-ethylhexyl)phthalate	S	5	U	5	U	5	U	5	U	5
Butyl Benzyl Phthalate	F	10	U	10	U	10	U	10	U	10
Butyl Benzyl Phthalate	S	5	U	5	U	5	U	5	U	5
Carbazole	F	10	U	10	U	10	U	10	U	10
Carbazole	S	5	U	5	U	5	U	5	U	5
Chrysene	F	10	U	10	U	10	U	10	U	10
Chrysene	S	5	U	5	U	5	U	5	U	5
Di-n-butyl Phthalate	F	10	U	10	U	1	J	10	U	7.75
Di-n-butyl Phthalate	S	5	U	5	U	5	U	5	U	5
Di-n-octyl Phthalate	F	10	U	10	U	10	U	10	U	10
Di-n-octyl Phthalate	S	5	U	5	U	5	U	5	U	5
Dibenzo(a,h)anthracene	F	10	U	10	U	10	U	10	U	10
Dibenzo(a,h)anthracene	S	5	U	5	U	5	U	5	U	5
Dibenzofuran	F	10	U	10	U	10	U	10	U	10
Dibenzofuran	S	5	U	5	U	5	U	5	U	5
Diethyl Phthalate	F	10	U	10	U	10	U	10	U	10

Table A.6.2 - Great Miami River Surface Water Trends

MND22-		AVERAGE										
		GMR Rip Rap Road 1001		USGS Gage Station 3001		Hutching's Weir 3101		Chautauqua Weir 3201		Overall average
Diethyl Phthalate	S	5	U	5	U	5	U	5	U	5
Dimethyl Phthalate	F	10	U	10	U	10	U	10	U	10
Dimethyl Phthalate	S	5	U	5	U	5	U	5	U	5
Fluoranthene	F	10	U	10	U	10	U	10	U	10
Fluoranthene	S	5	U	5	U	5	U	5	U	5
Fluorene	F	10	U	10	U	10	U	10	U	10
Fluorene	S	5	U	5	U	5	U	5	U	5
Hexachlorobenzene	F	10	U	10	U	10	U	10	U	10
Hexachlorobenzene	S	5	U	5	U	5	U	5	U	5
Hexachlorobutadiene	F	10	U	10	U	10	U	10	U	10
Hexachlorobutadiene	S	5	U	5	U	5	U	5	U	5
Hexachlorocyclopentadiene	F	10	U	10	U	10	U	10	U	10
Hexachlorocyclopentadiene	S	5	U	5	U	5	U	5	U	5
Hexachloroethane	F	10	U	10	U	10	U	10	U	10
Hexachloroethane	S	5	U	5	U	5	U	5	U	5
Indeno(1,2,3-cd)pyrene	F	10	U	10	U	10	U	10	U	10
Indeno(1,2,3-cd)pyrene	S	5	U	5	U	5	U	5	U	5
Isophorone	F	10	U	10	U	10	U	10	U	10
Isophorone	S	5	U	5	U	5	U	5	U	5
N-Nitroso-di-n-propylamine	F	10	U	10	U	10	U	10	U	10
N-Nitroso-di-n-propylamine	S	5	U	5	U	5	U	5	U	5
N-Nitrosodiphenylamine	F	10	U	10	U	10	U	10	U	10
N-Nitrosodiphenylamine	S	5	U	5	U	5	U	5	U	5
Naphthalene	F	10	U	10	U	10	U	10	U	10
Naphthalene	S	5	U	5	U	5	U	5	U	5
Nitrobenzene	F	10	U	10	U	10	U	10	U	10
Nitrobenzene	S	5	U	5	U	5	U	5	U	5
Pentachlorophenol	F	25	U	25	U	25	U	25	U	25
Pentachlorophenol	S	20	U	20	U	20	U	20	U	20
Phenanthrene	F	10	U	10	U	10	U	10	U	10
Phenanthrene	S	5	U	5	U	5	U	5	U	5

Table A.6.2 - Great Miami River Surface Water Trends

MND22-			AVERAGE									
			GMR Rip Rap Road 1001		USGS Gage Station 3001		Hutching's Weir 3101		Chautauqua Weir 3201		Overall average
	Phenol	F	10	U	10	U	10	U	10	U	10
	Phenol	S	5	U	5	U	5	U	5	U	5
	Pyrene	F	10	U	10	U	10	U	10	U	10
	Pyrene	S	5	U	5	U	5	U	5	U	5
Volatile Organics **(ug/L)**											
	1,1,1-Trichloroethane	F	5	U	5	U	5	U	5	U	5
	1,1,1-Trichloroethane	S	5	U	5	U	5	U	5	U	5
	1,1,2,2-Tetrachloroethane	F	5	U	5	U	5	U	5	U	5
	1,1,2,2-Tetrachloroethane	S	5	U	5	U	5	U	5	U	5
	1,1,2-Trichloro-1,2,2-trifluoroeth	F	5	U	5	U	5	U	5	U	5
	1,1,2-Trichloro-1,2,2-trifluoroeth	S	5	U	5	U	5	U	5	U	5
	1,1,2-Trichloroethane	F	5	U	5	U	5	U	5	U	5
	1,1,2-Trichloroethane	S	5	U	5	U	5	U	5	U	5
	1,1-Dichloroethane	F	5	U	5	U	5	U	5	U	5
	1,1-Dichloroethane	S	5	U	5	U	5	U	5	U	5
	1,1-Dichloroethene	F	5	U	5	U	5	U	5	U	5
	1,1-Dichloroethene	S	5	U	5	U	5	U	5	U	5
	1,2-Dichloroethane	F	5	U	5	U	5	U	5	U	5
	1,2-Dichloroethane	S	5	U	5	U	5	U	5	U	5
	1,2-Dichloroethene	F	5	U	5	U	5	U	5	U	5
	1,2-Dichloroethene	S	5	U	5	U	5	U	5	U	5
	1,2-Dichloropropane	F	5	U	5	U	5	U	5	U	5
	1,2-Dichloropropane	S	5	U	5	U	5	U	5	U	5
	1,2-Diethylbenzene	F	5	U	5	U	5	U	5	U	5
	1,2-Diethylbenzene	S	5	U	5	U	5	U	5	U	5
	1,3-cis-Dichloropropene	F	5	U	5	U	5	U	5	U	5
	1,3-cis-Dichloropropene	S	5	U	5	U	5	U	5	U	5
	1,3-trans-Dichloropropene	F	5	U	5	U	5	U	5	U	5
	1,3-trans-Dichloropropene	S	5	U	5	U	5	U	5	U	5
	2-Butanone	F	10	U	10	U	10	U	10	U	10
	2-Butanone	S	10	U	10	U	10	U	10	U	10

Table A.6.2 - Great Miami River Surface Water Trends

MND22-		AVERAGE								
		GMR Rip Rap Road 1001		USGS Gage Station 3001		Hutching's Weir 3101		Chautauqua Weir 3201		Overall average
2-Hexanone	F	10	U	10	U	10	U	10	U	10
2-Hexanone	S	10	U	10	U	10	U	10	U	10
4-Methyl-2-pentanone	F	10	U	10	U	10	U	10	U	10
4-Methyl-2-pentanone	S	10	U	10	U	10	U	10	U	10
Acetone	F	10	U	10	U	10	U	10	U	10
Acetone	S	10	U	11		11		10	U	10.5
Acetonitrile	F	100	U	100	U	100	U	100	U	100
Acetonitrile	S	100	U	100	U	100	U	100	U	100
Acrylonitrile	F	100	U	100	U	100	U	100	U	100
Acrylonitrile	S	100	U	100	U	100	U	100	U	100
Benzene	F	5	U	5	U	5	U	5	U	5
Benzene	S	5	U	5	U	5	U	5	U	5
Bromodichloromethane	F	5	U	5	U	5	U	5	U	5
Bromodichloromethane	S	5	U	5	U	5	U	5	U	5
Bromoform	F	5	U	5	U	5	U	5	U	5
Bromoform	S	5	U	5	U	5	U	5	U	5
Bromomethane	F	10	U	10	U	10	U	10	U	10
Bromomethane	S	10	U	10	U	10	U	10	U	10
Carbon Disulfide	F	5	U	5	U	5	U	5	U	5
Carbon Disulfide	S	5	U	5	U	5	U	5	U	5
Carbon Tetrachloride	F	5	U	5	U	5	U	5	U	5
Carbon Tetrachloride	S	5	U	5	U	5	U	5	U	5
Chlorobenzene	F	5	U	5	U	5	U	1	J	4
Chlorobenzene	S	5	U	5	U	5	U	5	U	5
Chloroethane	F	10	U	10	U	10	U	10	U	10
Chloroethane	S	10	U	10	U	10	U	10	U	10
Chloroform	F	5	U	5	U	5	U	5	U	5
Chloroform	S	5	U	5	U	5	U	5	U	5
Chloromethane	F	10	U	10	U	10	U	10	U	10
Chloromethane	S	10	U	10	U	10	U	10	U	10
Dibromochloromethane	F	5	U	5	U	5	U	5	U	5

Table A.6.2 - Great Miami River Surface Water Trends

			AVERAGE										
	MND22-		GMR Rip Rap Road 1001		USGS Gage Station 3001		Hutching's Weir 3101		Chautauqua Weir 3201		Overall average
	Dibromochloromethane	S	5	U	5	U	5	U	5	U	5
	Ethylbenzene	F	5	U	5	U	5	U	5	U	5
	Ethylbenzene	S	5	U	5	U	5	U	5	U	5
	Hexane	F	10	U	10	U	10	U	10	U	10
	Hexane	S	10	U	10	U	10	U	10	U	10
	Iodomethane	F	5.00	U	5	U	5	U	5	U	5
	Iodomethane	S	5	U	10	U	10	U	5	U	7.5
	Methylene Chloride	F	1	JB	1	JB	1	JB	3	JB	1.5
	Methylene Chloride	S	5	U	3	J	3	JB	5	U	4
	Styrene	F	5	U	5	U	5	U	5	U	5
	Styrene	S	5	U	5	U	5	U	5	U	5
	Tetrachloroethene	F	5	U	5	U	5	U	5	U	5
	Tetrachloroethene	S	5	U	5	U	5	U	5	U	5
	Toluene	F	5	U	5	U	5	U	1	J	4
	Toluene	S	5	U	5	U	5	U	5	U	5
	Trichloroethene	F	5	U	5	U	5	U	5	U	5
	Trichloroethene	S	5	U	5	U	5	U	5	U	5
	Vinyl Acetate	F	10	U	10	U	10	U	10	U	10
	Vinyl Acetate	S	10	U	10	U	10	U	10	U	10
	Vinyl Chloride	F	10	U	10	U	10	U	10	U	10
	Vinyl Chloride	S	10	U	10	U	10	U	10	U	10
	Xylenes, Total	F	5	U	5	U	5	U	5	U	5
	Xylenes, Total	S	5	U	5	U	5	U	5	U	5

Table A.6.3 - NPDES Outfall 001

Fraction	MND21-2501	Sampling Event	Parameter Value	Lab Qualifier
Common Anions **(mg/L)**				
	chloride	Fall	136	
	chloride	Spring	122	
	fluoride	Fall	0.26	
	fluoride	Spring	0.18	U
	nitrate-nitrite-N	Fall	6.30	
	nitrate-nitrite-N	Spring	13.70	
	sulfate	Fall	56.60	
	sulfate	Spring	45.90	
Explosives **(ug/L)**				
	1,3,5-trinitrobenzene	Fall	15	U
	1,3,5-trinitrobenzene	Spring	15	U
	1,3-dinitrobenzene	Fall	15	U
	1,3-dinitrobenzene	Spring	15	U
	2,4,6-trinitrotoluene	Fall	3.00	U
	2,4,6-trinitrotoluene	Spring	3.00	U
	2,4-dinitrotoluene	Fall	0.50	U
	2,4-dinitrotoluene	Spring	0.50	U
	2,6-dinitrotoluene	Fall	0.50	U
	2,6-dinitrotoluene	Spring	0.50	U
	2-amino-4,6-dinitrotoluene	Fall	3.00	U
	2-amino-4,6-dinitrotoluene	Spring	3.00	U
	HMX	Fall	20.00	U
	HMX	Spring	20	U
	nitrobenzene	Fall	15	U
	nitrobenzene	Spring	15	U
	PETN	Fall	---	---
	PETN	Spring	1.00	U
	RDX	Fall	6.00	U
	RDX	Spring	6.00	U
	tetryl	Fall	3.00	U
	tetryl	Spring	3.00	U
General Chemistry **(mg/L)**				
	Alkalinity	Spring	160	
	ammonia	Fall	0.17	
	ammonia	Spring	0.00	U
	Dissolved Solids	Fall	729.00	
	Dissolved Solids	Spring	521.00	
	nitrogen	Fall	0.10	U
	nitrogen	Spring	0.10	U
	phosphorous	Fall	0.19	
	phosphorous	Spring	3.15	
	Suspended Solids	Fall	4.00	
	Suspended Solids	Spring	4.00	
	organic carbon	Fall	5.51	
	organic carbon	Spring	4.35	

Table A.6.3 - NPDES Outfall 001

Fraction	MND21-2501	Sampling Event	Parameter Value	Lab Qualifier
Metals (Filtered) **(ug/L)**				
	aluminum	Fall	8.10	U
	aluminum	Spring	19.20	U
	antimony	Fall	1.20	U
	antimony	Spring	1.90	U
	arsenic	Fall	2.80	U
	arsenic	Spring	2.00	
	barium	Fall	6.00	B
	barium	Spring	17.90	B
	beryllium	Fall	0.10	U
	beryllium	Spring	0.20	U
	bismuth	Fall	3.20	U
	bismuth	Spring	53.90	U
	cadmium	Fall	0.30	U
	cadmium	Spring	0.30	U
	calcium	Fall	7,780.00	
	calcium	Spring	27,700.00	
	chromium	Fall	0.72	U
	chromium	Spring	0.90	U
	cobalt	Fall	0.50	U
	cobalt	Spring	0.60	U
	copper	Fall	48.40	
	copper	Spring	33.20	
	cyanide	Fall	10.00	U
	cyanide	Spring	10.00	U
	iron	Fall	63.00	B
	iron	Spring	15.70	U
	lead	Fall	1.60	U
	lead	Spring	1.90	U
	lithium	Fall	4.60	U
	lithium	Spring	3.80	U
	magnesium	Fall	1,910.00	B
	magnesium	Spring	6,510.00	
	manganese	Fall	2.40	B
	manganese	Spring	6.00	B
	mercury	Fall	0.20	U
	mercury	Spring	0.20	U
	molybedenum	Fall	365.00	
	molybedenum	Spring	18.30	U
	nickel	Fall	5.60	U
	nickel	Spring	2.10	B
	potassium	Fall	7,060.00	
	potassium	Spring	6,140.00	
	selenium	Fall	3.90	U
	selenium	Spring	1.10	U
	silver	Fall	2.40	U
	silver	Spring	0.50	U

Table A.6.3 - NPDES Outfall 001

Fraction	MND21-2501	Sampling Event	Parameter Value	Lab Qualifier
	sodium	Fall	252,000.00	
	sodium	Spring	129,000.00	
	thallium	Fall	36.00	U
	thallium	Spring	1.40	U
	tin	Fall	10.50	U
	tin	Spring	62.90	
	vanadium	Fall	0.40	U
	vanadium	Spring	3.40	U
	zinc	Fall	26.40	
	zinc	Spring	18.90	B
Metals (Unfiltered) **(ug/L)**				
	aluminum	Fall	10.70	U
	aluminum	Spring	124.00	U
	antimony	Fall	1.20	U
	antimony	Spring	4.90	B
	arsenic	Fall	2.80	U
	arsenic	Spring	2.40	
	barium	Fall	5.80	B
	barium	Spring	14.30	B
	beryllium	Fall	0.10	U
	beryllium	Spring	0.20	U
	bismuth	Fall	2.00	U
	bismuth	Spring	53.90	U
	cadmium	Fall	0.30	U
	cadmium	Spring	0.30	U
	calcium	Fall	6,900.00	
	calcium	Spring	23,000.00	
	chromium	Fall	1.00	U
	chromium	Spring	1.20	U
	cobalt	Fall	0.40	U
	cobalt	Spring	0.60	U
	copper	Fall	49.90	
	copper	Spring	35.70	
	cyanide	Fall	10.00	U
	cyanide	Spring	10.00	U
	iron	Fall	93.10	B
	iron	Spring	171.00	
	lead	Fall	1.60	U
	lead	Spring	1.90	U
	lithium	Fall	5.60	U
	lithium	Spring	3.80	U
	magnesium	Fall	1,690.00	B
	magnesium	Spring	5,070.00	
	manganese	Fall	3.10	B
	manganese	Spring	9.00	B
	mercury	Fall	0.20	U
	mercury	Spring	0.20	U

Table A.6.3 - NPDES Outfall 001

Fraction	MND21-2501	Sampling Event	Parameter Value	Lab Qualifier
	molybedenum	Fall	228.00	
	molybedenum	Spring	18.30	U
	nickel	Fall	3.30	U
	nickel	Spring	2.00	B
	potassium	Fall	6,330.00	
	potassium	Spring	5,120.00	
	selenium	Fall	3.90	U
	selenium	Spring	1.10	U
	silver	Fall	0.99	B
	silver	Spring	0.50	U
	sodium	Fall	215,000.00	
	sodium	Spring	123,000.00	
	thallium	Fall	36.00	U
	thallium	Spring	1.40	U
	tin	Fall	3.10	U
	tin	Spring	56.30	U
	vanadium	Fall	0.30	U
	vanadium	Spring	3.40	U
	zinc	Fall	72.80	
	zinc	Spring	29.40	
Pesticides/PCBs **(ug/L)**				
	4,4'-DDD	Fall	0.10	U
	4,4'-DDD	Spring	0.10	U
	4,4'-DDE	Fall	0.10	U
	4,4'-DDE	Spring	0.10	U
	4,4'-DDT	Fall	0.10	U
	4,4'-DDT	Spring	0.10	U
	aldrin	Fall	0.050	U
	aldrin	Spring	0.050	U
	alpha-BHC	Fall	0.050	U
	alpha-BHC	Spring	0.050	U
	alpha-chlordane	Fall	0.050	U
	alpha-chlordane	Spring	0.050	U
	Aroclor-1016	Fall	0.50	U
	Aroclor-1016	Spring	0.50	U
	Aroclor-1221	Fall	0.50	U
	Aroclor-1221	Spring	0.50	U
	Aroclor-1232	Fall	0.50	U
	Aroclor-1232	Spring	0.50	U
	Aroclor-1242	Fall	0.50	U
	Aroclor-1242	Spring	0.50	U
	Aroclor-1248	Fall	0.50	U
	Aroclor-1248	Spring	0.50	U
	Aroclor-1254	Fall	0.50	U
	Aroclor-1254	Spring	0.50	U
	Aroclor-1260	Fall	0.50	U
	Aroclor-1260	Spring	0.50	U

Table A.6.3 - NPDES Outfall 001

Fraction	MND21-2501	Sampling Event	Parameter Value	Lab Qualifier
	beta-BHC	Fall	0.050	U
	beta-BHC	Spring	0.050	U
	delta-BHC	Fall	0.050	U
	delta-BHC	Spring	0.050	U
	dieldrin	Fall	0.10	U
	dieldrin	Spring	0.10	U
	endosulfan I	Fall	0.050	U
	endosulfan I	Spring	0.050	U
	endosulfan II	Fall	0.10	U
	endosulfan II	Spring	0.10	U
	endosulfan sulfate	Fall	0.10	U
	endosulfan sulfate	Spring	0.10	U
	endrin	Fall	0.10	U
	endrin	Spring	0.10	U
	endrin aldehyde	Fall	0.10	U
	endrin aldehyde	Spring	0.10	U
	endrin ketone	Fall	0.10	U
	endrin ketone	Spring	0.10	U
	gamma-BHC (lindane)	Fall	0.050	U
	gamma-BHC (lindane)	Spring	0.050	U
	gamma-chlordane	Fall	0.050	U
	gamma-chlordane	Spring	0.050	U
	heptachlor	Fall	0.050	U
	heptachlor	Spring	0.050	U
	heptachlor epoxide	Fall	0.050	U
	heptachlor epoxide	Spring	0.050	U
	methoxychlor	Fall	0.50	U
	methoxychlor	Spring	0.50	U
	toxaphene	Fall	5.0	U
	toxaphene	Spring	5.0	U
Radiological **(pCi/L)**				
	americium-241	Fall	.252	U
	americium-241	Spring	.137	U
	bismuth-207	Fall	5.511	U
	bismuth-207	Spring	9.7	U
	bismuth-210M	Fall	.833	
	bismuth-210M	Spring	11.1	U
	cesium-137	Fall	7.121	U
	cesium-137	Spring	10.3	U
	cobalt-60	Fall	9.16	U
	cobalt-60	Spring	9.473	U
	plutonium-238	Fall	.313	U
	plutonium-238	Spring	.192	U
	plutonium-239/240	Fall	.186	U
	plutonium-239/240	Spring	.191	U
	potassium-40	Fall	10.5	
	potassium-40	Spring	422	

Table A.6.3 - NPDES Outfall 001

Fraction	MND21-2501	Sampling Event	Parameter Value	Lab Qualifier
	radium-226	Fall	.101	U
	radium-226	Spring	.162	U
	strontium-90	Fall	.804	
	strontium-90	Spring	.317	U
	thorium-228	Fall	.143	U
	thorium-228	Spring	.319	U
	thorium-230	Fall	.281	U
	thorium-230	Spring	.167	U
	thorium-232	Fall	.0567	U
	thorium-232	Spring	.167	U
	tritium	Fall	4510	
	tritium	Spring	0.1990	
	uranium-234	Fall	0.568	
	uranium-234	Spring	.275	
	uranium-235	Fall	0.448	U
	uranium-235	Spring	.2214	U
	uranium-238	Fall	0.304	U
	uranium-238	Spring	.274	U
Semi-Volatile Organics **(ug/L)**				
	1,2,4-trichlorobenzene	Fall	10	U
	1,2-dichlorobenzene	Fall	10	U
	1,3-dichlorobenzene	Fall	10	U
	1,4-dichlorobenzene	Fall	10	U
	2,2'-oxybis (1-chloropropane)	Fall	10	U
	2,4,5-trichlorophenol	Fall	25	U
	2,4,6-trichlorophenol	Fall	10	U
	2,4-dichlorophenol	Fall	10	U
	2,4-dimethylphenol	Fall	10	U
	2,4-dinitrophenol	Fall	25	U
	2,4-dinitrotoluene	Fall	10	U
	2,6-dinitrotoluene	Fall	10	U
	2-benzyl-4-chlorophenol	Fall	10	U
	2-chloronaphthalene	Fall	10	U
	2-chlorophenol	Fall	10	U
	2-methylnaphthalene	Fall	10	U
	2-methylphenol	Fall	10	U
	2-nitroaniline	Fall	25	U
	2-nitrophenol	Fall	10	U
	3,3'-dichlorobenzidine	Fall	10	U
	3-nitroaniline	Fall	25	U
	4,6-dinitro-o-cresol	Fall	25	U
	4-bromophenyl-phenyl ether	Fall	10	U
	4-chloro-3-methylphenol	Fall	10	U
	4-chloroaniline	Fall	10	U
	4-chlorophenyl-phenylether	Fall	10	U
	4-methylphenol	Fall	10	U
	4-nitroaniline	Fall	25	U

Table A.6.3 - NPDES Outfall 001

Fraction	MND21-2501	Sampling Event	Parameter Value	Lab Qualifier
	4-nitrophenol	Fall	25	U
	acenaphthene	Fall	10	U
	acenaphthylene	Fall	10	U
	anthracene	Fall	10	U
	benzo(a)anthracene	Fall	10	U
	benzo(a)pyrene	Fall	10	U
	benzo(b)fluoranthene	Fall	10	U
	benzo(g,h,i)perylene	Fall	10	U
	benzo(k)fluoranthene	Fall	10	U
	benzoic acid	Fall	50	U
	benzyl alcohol	Fall	10	U
	bis(2-chloroethoxy)methane	Fall	10	U
	bis(2-chloroethyl)ether	Fall	10	U
	bis(2-ethylhexyl)phthalate	Fall	10	U
	butyl benzyl phthalate	Fall	10	U
	carbazole	Fall	10	U
	chrysene	Fall	10	U
	di-n-butyl phthalate	Fall	10	U
	di-n-octyl phthalate	Fall	10	U
	dibenzo(a,h)anthracene	Fall	10	U
	dibenzofuran	Fall	10	U
	diethyl phthalate	Fall	10	U
	dimethyl phthalate	Fall	10	U
	fluoranthene	Fall	10	U
	fluorene	Fall	10	U
	hexachlorobenzene	Fall	10	U
	hexachlorobutadiene	Fall	10	U
	hexachlorocyclopentadiene	Fall	10	U
	hexachloroethane	Fall	10	U
	indeno(1,2,3-cd)pyrene	Fall	10	U
	isophorone	Fall	10	U
	N-nitroso-di-n-propylamine	Fall	10	U
	N-nitrosodiphenylamine	Fall	10	U
	naphthalene	Fall	10	U
	nitrobenzene	Fall	10	U
	pentachlorophenol	Fall	25	U
	phenanthrene	Fall	10	U
	phenol	Fall	2	U
	pyrene	Fall	10	U
Volatile Organics **(ug/L)**				
	1,1,1-trichloroethane	Fall	5	U
	1,1,1-trichloroethane	Spring	5	U
	1,1,2,2-tetrachloroethane	Fall	5	U
	1,1,2,2-tetrachloroethane	Spring	5	U
	1,1,2-trichloro-1,2,2-trifluoroethane	Fall	5	U
	1,1,2-trichloro-1,2,2-trifluoroethane	Spring	5	U
	1,1,2-trichloroethane	Fall	5	U

Table A.6.3 - NPDES Outfall 001

Fraction	MND21-2501	Sampling Event	Parameter Value	Lab Qualifier
	1,1,2-trichloroethane	Spring	5	U
	1,1-dichloroethane	Fall	5	U
	1,1-dichloroethane	Spring	5	U
	1,1-dichloroethene	Fall	5	U
	1,1-dichloroethene	Spring	5	U
	1,2-dichloroethane	Fall	5	U
	1,2-dichloroethane	Spring	5	U
	1,2-dichloroethene	Fall	5	U
	1,2-dichloroethene	Spring	5	U
	1,2-dichloropropane	Fall	5	U
	1,2-dichloropropane	Spring	5	U
	1,2-diethylbenzene	Fall	5	U
	1,2-diethylbenzene	Spring	5	U
	1,3-cis-dichloropropene	Fall	5	U
	1,3-cis-dichloropropene	Spring	5	U
	1,3-trans-dichloropropene	Fall	5	U
	1,3-trans-dichloropropene	Spring	5	U
	2-butanone	Fall	10	U
	2-butanone	Spring	10	U
	2-hexanone	Fall	10	U
	2-hexanone	Spring	10	U
	4-methyl-2-pentanone	Fall	10	U
	4-methyl-2-pentanone	Spring	10	U
	acetone	Fall	10	U
	acetone	Spring	10	U
	acetonitrile	Fall	100	U
	acetonitrile	Spring	100	U
	acrylonitrile	Fall	100	U
	acrylonitrile	Spring	100	U
	benzene	Fall	5	U
	benzene	Spring	5	U
	bromodichloromethane	Fall	5	U
	bromodichloromethane	Spring	5	U
	bromoform	Fall	5	U
	bromoform	Spring	5	U
	bromomethane	Fall	10	U
	bromomethane	Spring	10	U
	carbon disulfide	Fall	5	U
	carbon disulfide	Spring	5	U
	carbon tetrachloride	Fall	5	U
	carbon tetrachloride	Spring	5	U
	chlorobenzene	Fall	5	U
	chlorobenzene	Spring	5	U
	chloroethane	Fall	10	U
	chloroethane	Spring	10	U
	chloroform	Fall	5	U
	chloroform	Spring	5	U

Table A.6.3 - NPDES Outfall 001

Fraction	MND21-2501	Sampling Event	Parameter Value	Lab Qualifier
	chloromethane	Fall	2	J
	chloromethane	Spring	10	U
	dibromochloromethane	Fall	5	U
	dibromochloromethane	Spring	5	U
	ethylbenzene	Fall	5	U
	ethylbenzene	Spring	5	U
	hexane	Fall	10	U
	hexane	Spring	10	U
	iodomethane	Fall	5	U
	iodomethane	Spring	5	U
	methylene chloride	Fall	1	U
	methylene chloride	Spring	5	U
	styrene	Fall	5	U
	styrene	Spring	5	U
	tetrachloroethene	Fall	5	U
	tetrachloroethene	Spring	5	U
	toluene	Fall	5	U
	toluene	Spring	5	U
	trichloroethene	Fall	5	U
	trichloroethene	Spring	5	U
	vinyl acetate	Fall	10	U
	vinyl acetate	Spring	10	U
	vinyl chloride	Fall	10	U
	vinyl chloride	Spring	10	U
	xylenes, Total	Fall	5	U
	xylenes, Total	Spring	5	U

APPENDIX A.7

Appendix A-7

New Property

A.7.1 Ephermeral Stream Surface Water Samples

A.7.2 Ephermeral Stream Sediment Samples

A.7.3 Low-Lying Area Sediment Samples

Table A.7.1 - New Property
Ephemeral Stream Surface Water Samples

Station	Sample ID	Date Col	Med_desc	Fraction	Parameter	Results	Units	Qual	Det L	Filtered
MND21-4101	000495	26-May-95	Surface Water	Common Anions	chloride	206.0000	MG/L			no
MND21-4102	000496	26-May-95	Surface Water	Common Anions	chloride	129.0000	MG/L			no
MND21-4101	000495	26-May-95	Surface Water	Common Anions	sulfate	36.0000	MG/L			no
MND21-4102	000496	26-May-95	Surface Water	Common Anions	sulfate	51.9000	MG/L			no
MND21-4101	000495	26-May-95	Surface Water	General Chemistry	Alkalinity	273.0000	MG/L			no
MND21-4102	000496	26-May-95	Surface Water	General Chemistry	Alkalinity	288.0000	MG/L			no
MND21-4101	000495	26-May-95	Surface Water	General Chemistry	Dissolved Solids	704.0000	MG/L			no
MND21-4102	000496	26-May-95	Surface Water	General Chemistry	Dissolved Solids	641.0000	MG/L			no
MND21-4101	000495	26-May-95	Surface Water	General Chemistry	organic carbon	2.5000	MG/L			no
MND21-4101	000495	26-May-95	Surface Water	General Chemistry	organic carbon	2.5400	MG/L			no
MND21-4101	000495	26-May-95	Surface Water	General Chemistry	organic carbon	2.5400	MG/L			no
MND21-4101	000495	26-May-95	Surface Water	General Chemistry	organic carbon	2.5400	MG/L			no
MND21-4101	000495	26-May-95	Surface Water	General Chemistry	organic carbon	2.5700	MG/L			no
MND21-4102	000496	26-May-95	Surface Water	General Chemistry	organic carbon	3.0000	MG/L			no
MND21-4102	000496	26-May-95	Surface Water	General Chemistry	organic carbon	3.0300	MG/L			no
MND21-4102	000496	26-May-95	Surface Water	General Chemistry	organic carbon	3.0600	MG/L			no
MND21-4102	000496	26-May-95	Surface Water	General Chemistry	organic carbon	3.0700	MG/L			no
MND21-4102	000496	26-May-95	Surface Water	General Chemistry	organic carbon	3.1500	MG/L			no
MND21-4101	000495	26-May-95	Surface Water	General Chemistry	phosphorous	2.2200	MG/L			no
MND21-4102	000496	26-May-95	Surface Water	General Chemistry	phosphorous	0.3930	MG/L			no
MND21-4101	000495	26-May-95	Surface Water	General Chemistry	Suspended Solids	24.0000	MG/L			no
MND21-4102	000496	26-May-95	Surface Water	General Chemistry	Suspended Solids	26.0000	MG/L			no
MND21-4101	000495	26-May-95	Surface Water	Metals	aluminum	950.00	UG/L		19.2	no
MND21-4102	000496	26-May-95	Surface Water	Metals	aluminum	213.00	UG/L		19.2	no
MND21-4101	000495	26-May-95	Surface Water	Metals	antimony	2.10	UG/L	B	1.9	no
MND21-4101	000495	26-May-95	Surface Water	Metals	antimony	2.80	UG/L	B	1.9	yes
MND21-4102	000496	26-May-95	Surface Water	Metals	antimony	2.00	UG/L	B	1.9	no
MND21-4101	000495	26-May-95	Surface Water	Metals	barium	48.70	UG/L	B	0.2	yes
MND21-4101	000495	26-May-95	Surface Water	Metals	barium	48.90	UG/L	B	0.2	no
MND21-4102	000496	26-May-95	Surface Water	Metals	barium	39.60	UG/L	B	0.2	no
MND21-4102	000496	26-May-95	Surface Water	Metals	barium	43.40	UG/L	B	0.2	yes
MND21-4101	000495	26-May-95	Surface Water	Metals	calcium	101000.00	UG/L		28.5	yes
MND21-4101	000495	26-May-95	Surface Water	Metals	calcium	92600.00	UG/L		28.5	no
MND21-4102	000496	26-May-95	Surface Water	Metals	calcium	110000.00	UG/L		28.5	yes
MND21-4102	000496	26-May-95	Surface Water	Metals	calcium	99100.00	UG/L		28.5	no
MND21-4101	000495	26-May-95	Surface Water	Metals	chromium	1.70	UG/L	B	0.9	no
MND21-4101	000495	26-May-95	Surface Water	Metals	cobalt	0.73	UG/L	B	0.6	no
MND21-4101	000495	26-May-95	Surface Water	Metals	cobalt	1.20	UG/L	B	0.6	yes
MND21-4101	000495	26-May-95	Surface Water	Metals	copper	1.20	UG/L	B	0.7	yes
MND21-4101	000495	26-May-95	Surface Water	Metals	copper	5.10	UG/L	B	0.7	no
MND21-4102	000496	26-May-95	Surface Water	Metals	copper	1.30	UG/L	B	0.7	yes
MND21-4102	000496	26-May-95	Surface Water	Metals	copper	1.60	UG/L	B	0.7	no
MND21-4101	000495	26-May-95	Surface Water	Metals	iron	1050.00	UG/L		15.7	no
MND21-4102	000496	26-May-95	Surface Water	Metals	iron	192.00	UG/L		15.7	no
MND21-4101	000495	26-May-95	Surface Water	Metals	lead	1.90	UG/L	B	1.9	no
MND21-4102	000496	26-May-95	Surface Water	Metals	lithium	4.90	UG/L	B	3.8	yes
MND21-4101	000495	26-May-95	Surface Water	Metals	magnesium	19600.00	UG/L		4.0	no
MND21-4101	000495	26-May-95	Surface Water	Metals	magnesium	21400.00	UG/L		4.0	yes
MND21-4102	000496	26-May-95	Surface Water	Metals	magnesium	23200.00	UG/L		4.0	no
MND21-4102	000496	26-May-95	Surface Water	Metals	magnesium	25900.00	UG/L		4.0	yes
MND21-4101	000495	26-May-95	Surface Water	Metals	manganese	27.70	UG/L		0.3	no
MND21-4101	000495	26-May-95	Surface Water	Metals	manganese	6.00	UG/L	B	0.3	yes
MND21-4102	000496	26-May-95	Surface Water	Metals	manganese	1.00	UG/L	B	0.3	yes
MND21-4102	000496	26-May-95	Surface Water	Metals	manganese	6.30	UG/L	B	0.3	no
MND21-4101	000495	26-May-95	Surface Water	Metals	nickel	44.10	UG/L		1.4	no
MND21-4101	000495	26-May-95	Surface Water	Metals	potassium	1620.00	UG/L	B	16.7	yes
MND21-4101	000495	26-May-95	Surface Water	Metals	potassium	1720.00	UG/L	B	16.7	no
MND21-4102	000496	26-May-95	Surface Water	Metals	potassium	1870.00	UG/L	B	16.7	no
MND21-4102	000496	26-May-95	Surface Water	Metals	potassium	2300.00	UG/L	B	16.7	yes
MND21-4101	000495	26-May-95	Surface Water	Metals	selenium	1.60	UG/L	B	1.1	no
MND21-4101	000495	26-May-95	Surface Water	Metals	sodium	102000.00	UG/L		202.0	yes
MND21-4101	000495	26-May-95	Surface Water	Metals	sodium	90700.00	UG/L		202.0	no
MND21-4102	000496	26-May-95	Surface Water	Metals	sodium	47800.00	UG/L		202.0	no
MND21-4102	000496	26-May-95	Surface Water	Metals	sodium	54600.00	UG/L		202.0	yes
MND21-4101	000495	26-May-95	Surface Water	Metals	vanadium	3.60	UG/L	B	0.4	no
MND21-4101	000495	26-May-95	Surface Water	Metals	zinc	55.80	UG/L		1.4	no
MND21-4101	000495	26-May-95	Surface Water	Metals	zinc	2.30	UG/L	B	1.4	yes
MND21-4102	000496	26-May-95	Surface Water	Metals	zinc	2.00	UG/L	B	1.4	yes
MND21-4102	000496	26-May-95	Surface Water	Metals	zinc	6.30	UG/L	B	1.4	no
MND21-4101	000495	26-May-95	Surface Water	Pesticides and/or PC	delta-BHC	0.0017	UG/L	J	0.05	no
MND21-4102	000496	26-May-95	Surface Water	Radiological	strontium-90	429	PCI/L		347	no
MND21-4101	000495	26-May-95	Surface Water	Radiological	uranium-234	458	PCI/L		186	no
MND21-4102	000496	26-May-95	Surface Water	Radiological	uranium-234	43	PCI/L		283	no

Table A.7.2 - New Property
Ephemeral Stream Sediment Samples

Station	Sample ID	Date Col	Fraction	Parameter	Results	Units	Qual	Det L
MND22-4102	900000159	17-Oct-94	Common Anions	chloride	78.7000	MG/KG		
MND22-4101	900000160	17-Oct-94	Common Anions	fluoride	4.0000	MG/KG		
MND22-4102	900000159	17-Oct-94	Common Anions	fluoride	3.4300	MG/KG		
MND22-4101	000478	26-May-95	Common Anions	nitrate-nitrite-N	4.4700	MG/KG		
MND22-4101	000651	26-May-95	Common Anions	nitrate-nitrite-N	3.4500	MG/KG		
MND22-4101	900000160	17-Oct-94	Common Anions	nitrate-nitrite-N	2.5600	MG/KG		
MND22-4102	000477	26-May-95	Common Anions	nitrate-nitrite-N	4.1100	MG/KG		
MND22-4101	000478	26-May-95	Common Anions	sulfate	169.0000	MG/KG		
MND22-4101	000651	26-May-95	Common Anions	sulfate	155.0000	MG/KG		
MND22-4101	900000160	17-Oct-94	Common Anions	sulfate	134.0000	MG/KG		
MND22-4102	000477	26-May-95	Common Anions	sulfate	229.0000	MG/KG		
MND22-4102	900000159	17-Oct-94	Common Anions	sulfate	204.0000	MG/KG		
MND22-4101	000478	26-May-95	General Chemistry	organic carbon	12400.0000	MG/KG		
MND22-4101	000478	26-May-95	General Chemistry	organic carbon	14400.0000	MG/KG		
MND22-4101	000478	26-May-95	General Chemistry	organic carbon	15000.0000	MG/KG		
MND22-4101	000478	26-May-95	General Chemistry	organic carbon	16200.0000	MG/KG		
MND22-4101	000478	26-May-95	General Chemistry	organic carbon	16800.0000	MG/KG		
MND22-4101	000651	26-May-95	General Chemistry	organic carbon	11800.0000	MG/KG		
MND22-4101	000651	26-May-95	General Chemistry	organic carbon	15800.0000	MG/KG		
MND22-4101	000651	26-May-95	General Chemistry	organic carbon	16000.0000	MG/KG		
MND22-4101	000651	26-May-95	General Chemistry	organic carbon	17200.0000	MG/KG		
MND22-4101	000651	26-May-95	General Chemistry	organic carbon	19000.0000	MG/KG		
MND22-4101	900000160	17-Oct-94	General Chemistry	organic carbon	2900.0000	MG/KG		50.0
MND22-4101	900000160	17-Oct-94	General Chemistry	organic carbon	5380.0000	MG/KG		50.0
MND22-4101	900000160	17-Oct-94	General Chemistry	organic carbon	5780.0000	MG/KG		50.0
MND22-4101	900000160	17-Oct-94	General Chemistry	organic carbon	6170.0000	MG/KG		50.0
MND22-4101	900000160	17-Oct-94	General Chemistry	organic carbon	6690.0000	MG/KG		50.0
MND22-4102	000477	26-May-95	General Chemistry	organic carbon	12700.0000	MG/KG		
MND22-4102	000477	26-May-95	General Chemistry	organic carbon	13500.0000	MG/KG		
MND22-4102	000477	26-May-95	General Chemistry	organic carbon	14600.0000	MG/KG		
MND22-4102	000477	26-May-95	General Chemistry	organic carbon	14900.0000	MG/KG		
MND22-4102	000477	26-May-95	General Chemistry	organic carbon	18700.0000	MG/KG		
MND22-4102	900000159	17-Oct-94	General Chemistry	organic carbon	6060.0000	MG/KG		50.0
MND22-4102	900000159	17-Oct-94	General Chemistry	organic carbon	8550.0000	MG/KG		50.0
MND22-4102	900000159	17-Oct-94	General Chemistry	organic carbon	9150.0000	MG/KG		50.0
MND22-4102	900000159	17-Oct-94	General Chemistry	organic carbon	9380.0000	MG/KG		50.0
MND22-4102	900000159	17-Oct-94	General Chemistry	organic carbon	9600.0000	MG/KG		50.0
MND22-4101	000478	26-May-95	Metals	aluminum	6330.00	MG/KG		19.2
MND22-4101	000651	26-May-95	Metals	aluminum	7330.00	MG/KG		19.2
MND22-4101	900000160	17-Oct-94	Metals	aluminum	8570.00	MG/KG		
MND22-4102	000477	26-May-95	Metals	aluminum	8670.00	MG/KG		19.2
MND22-4102	900000159	17-Oct-94	Metals	aluminum	9670.00	MG/KG		
MND22-4101	000478	26-May-95	Metals	arsenic	9.20	MG/KG		1.6
MND22-4101	000651	26-May-95	Metals	arsenic	6.60	MG/KG		1.6
MND22-4101	900000160	17-Oct-94	Metals	arsenic	6.00	MG/KG		
MND22-4102	000477	26-May-95	Metals	arsenic	6.10	MG/KG		1.6
MND22-4102	900000159	17-Oct-94	Metals	arsenic	6.30	MG/KG		
MND22-4101	000478	26-May-95	Metals	barium	68.80	MG/KG		0.2
MND22-4101	000651	26-May-95	Metals	barium	59.90	MG/KG		0.2
MND22-4101	900000160	17-Oct-94	Metals	barium	53.70	MG/KG		
MND22-4102	000477	26-May-95	Metals	barium	82.90	MG/KG		0.2
MND22-4102	900000159	17-Oct-94	Metals	barium	79.20	MG/KG		
MND22-4101	900000160	17-Oct-94	Metals	beryllium	0.42	MG/KG		
MND22-4102	900000159	17-Oct-94	Metals	beryllium	0.63	MG/KG		
MND22-4101	000478	26-May-95	Metals	calcium	62000.00	MG/KG		28.5
MND22-4101	000651	26-May-95	Metals	calcium	30200.00	MG/KG		28.5
MND22-4101	900000160	17-Oct-94	Metals	calcium	71900.00	MG/KG		
MND22-4102	000477	26-May-95	Metals	calcium	14000.00	MG/KG		28.5
MND22-4102	900000159	17-Oct-94	Metals	calcium	22200.00	MG/KG		
MND22-4101	000478	26-May-95	Metals	chromium	9.20	MG/KG		0.9
MND22-4101	000651	26-May-95	Metals	chromium	11.40	MG/KG		0.9
MND22-4101	900000160	17-Oct-94	Metals	chromium	11.20	MG/KG		
MND22-4102	000477	26-May-95	Metals	chromium	15.20	MG/KG		0.9
MND22-4102	900000159	17-Oct-94	Metals	chromium	12.90	MG/KG		
MND22-4101	000478	26-May-95	Metals	cobalt	10.50	MG/KG	B	0.6
MND22-4101	000651	26-May-95	Metals	cobalt	10.20	MG/KG	B	0.6

Table A.7.2 - New Property
Ephemeral Stream Sediment Samples

Station	Sample ID	Date Col	Fraction	Parameter	Results	Units	Qual	Det L
MND22-4101	900000160	17-Oct-94	Metals	cobalt	8.50	MG/KG	B	
MND22-4102	000477	26-May-95	Metals	cobalt	11.10	MG/KG	B	0.6
MND22-4102	900000159	17-Oct-94	Metals	cobalt	12.00	MG/KG		
MND22-4101	000478	26-May-95	Metals	copper	11.30	MG/KG		0.7
MND22-4101	000651	26-May-95	Metals	copper	12.80	MG/KG		0.7
MND22-4101	900000160	17-Oct-94	Metals	copper	11.00	MG/KG		
MND22-4102	000477	26-May-95	Metals	copper	16.90	MG/KG		0.7
MND22-4102	900000159	17-Oct-94	Metals	copper	15.30	MG/KG		
MND22-4101	000478	26-May-95	Metals	iron	14700.00	MG/KG		15.7
MND22-4101	000651	26-May-95	Metals	iron	16900.00	MG/KG		15.7
MND22-4101	900000160	17-Oct-94	Metals	iron	16700.00	MG/KG		
MND22-4102	000477	26-May-95	Metals	iron	20500.00	MG/KG		15.7
MND22-4102	900000159	17-Oct-94	Metals	iron	21100.00	MG/KG		
MND22-4101	000478	26-May-95	Metals	lead	13.90	MG/KG		1.9
MND22-4101	000651	26-May-95	Metals	lead	16.30	MG/KG		1.9
MND22-4101	900000160	17-Oct-94	Metals	lead	16.00	MG/KG		
MND22-4102	000477	26-May-95	Metals	lead	14.80	MG/KG		1.9
MND22-4102	900000159	17-Oct-94	Metals	lead	19.00	MG/KG		
MND22-4101	000478	26-May-95	Metals	lithium	8.40	MG/KG	B	3.8
MND22-4101	000651	26-May-95	Metals	lithium	9.80	MG/KG	B	3.8
MND22-4101	900000160	17-Oct-94	Metals	lithium	11.60	MG/KG	B	
MND22-4102	000477	26-May-95	Metals	lithium	12.20	MG/KG	B	3.8
MND22-4102	900000159	17-Oct-94	Metals	lithium	12.00	MG/KG	B	
MND22-4101	000478	26-May-95	Metals	magnesium	15600.00	MG/KG		4.0
MND22-4101	000651	26-May-95	Metals	magnesium	7950.00	MG/KG		4.0
MND22-4101	900000160	17-Oct-94	Metals	magnesium	10400.00	MG/KG		
MND22-4102	000477	26-May-95	Metals	magnesium	3310.00	MG/KG		4.0
MND22-4102	900000159	17-Oct-94	Metals	magnesium	8630.00	MG/KG		
MND22-4101	000478	26-May-95	Metals	manganese	1250.00	MG/KG		0.3
MND22-4101	000651	26-May-95	Metals	manganese	820.00	MG/KG		0.3
MND22-4101	900000160	17-Oct-94	Metals	manganese	765.00	MG/KG		
MND22-4102	000477	26-May-95	Metals	manganese	979.00	MG/KG		0.3
MND22-4102	900000159	17-Oct-94	Metals	manganese	1120.00	MG/KG		
MND22-4101	900000160	17-Oct-94	Metals	molybdenum	0.56	MG/KG	B	
MND22-4101	000478	26-May-95	Metals	nickel	15.30	MG/KG		1.4
MND22-4101	000651	26-May-95	Metals	nickel	14.90	MG/KG		1.4
MND22-4101	900000160	17-Oct-94	Metals	nickel	12.40	MG/KG		
MND22-4102	000477	26-May-95	Metals	nickel	18.30	MG/KG		1.4
MND22-4102	900000159	17-Oct-94	Metals	nickel	18.30	MG/KG		
MND22-4101	000478	26-May-95	Metals	potassium	1130.00	MG/KG	B	16.7
MND22-4101	000651	26-May-95	Metals	potassium	1180.00	MG/KG	B	16.7
MND22-4101	900000160	17-Oct-94	Metals	potassium	2530.00	MG/KG		
MND22-4102	000477	26-May-95	Metals	potassium	1320.00	MG/KG	B	16.7
MND22-4102	900000159	17-Oct-94	Metals	potassium	1680.00	MG/KG		
MND22-4101	000478	26-May-95	Metals	sodium	527.00	MG/KG	B	202.0
MND22-4101	000651	26-May-95	Metals	sodium	530.00	MG/KG	B	202.0
MND22-4101	900000160	17-Oct-94	Metals	sodium	386.00	MG/KG	B	
MND22-4102	000477	26-May-95	Metals	sodium	389.00	MG/KG	B	202.0
MND22-4102	900000159	17-Oct-94	Metals	sodium	429.00	MG/KG	B	
MND22-4101	000478	26-May-95	Metals	vanadium	16.60	MG/KG		0.4
MND22-4101	000651	26-May-95	Metals	vanadium	19.70	MG/KG		0.4
MND22-4101	900000160	17-Oct-94	Metals	vanadium	17.60	MG/KG		
MND22-4102	000477	26-May-95	Metals	vanadium	21.00	MG/KG		0.4
MND22-4102	900000159	17-Oct-94	Metals	vanadium	21.00	MG/KG		
MND22-4101	000478	26-May-95	Metals	zinc	40.50	MG/KG		1.4
MND22-4101	000651	26-May-95	Metals	zinc	42.80	MG/KG		1.4
MND22-4101	900000160	17-Oct-94	Metals	zinc	31.70	MG/KG		
MND22-4102	000477	26-May-95	Metals	zinc	49.00	MG/KG		1.4
MND22-4102	900000159	17-Oct-94	Metals	zinc	40.10	MG/KG		
MND22-4101	000478	26-May-95	Other	% clay	17	%		
MND22-4101	000651	26-May-95	Other	% clay	17	%		
MND22-4101	900000160	17-Oct-94	Other	% clay	7.0	%		
MND22-4102	000477	26-May-95	Other	% clay	30	%		
MND22-4102	900000159	17-Oct-94	Other	% clay	23	%		
MND22-4101	000478	26-May-95	Other	% gravel	12	%		
MND22-4101	000651	26-May-95	Other	% gravel	9.0	%		

Table A.7.2 - New Property
Ephemeral Stream Sediment Samples

Station	Sample ID	Date Col	Fraction	Parameter	Results	Units	Qual	Det L
MND22-4101	900000160	17-Oct-94	Other	% gravel	54	%		
MND22-4102	000477	26-May-95	Other	% gravel	6.0	%		
MND22-4102	900000159	17-Oct-94	Other	% gravel	10	%		
MND22-4101	000478	26-May-95	Other	% sand	49	%		
MND22-4101	000651	26-May-95	Other	% sand	46	%		
MND22-4101	900000160	17-Oct-94	Other	% sand	30	%		
MND22-4102	000477	26-May-95	Other	% sand	22	%		
MND22-4102	900000159	17-Oct-94	Other	% sand	36	%		
MND22-4101	000478	26-May-95	Other	% silt	22	%		
MND22-4101	000651	26-May-95	Other	% silt	28	%		
MND22-4101	900000160	17-Oct-94	Other	% silt	9.0	%		
MND22-4102	000477	26-May-95	Other	% silt	42	%		
MND22-4102	900000159	17-Oct-94	Other	% silt	31	%		
MND22-4101	000478	26-May-95	Other	pH	7.7	UNITS		--
MND22-4101	000651	26-May-95	Other	pH	7.6	UNITS		--
MND22-4101	900000160	17-Oct-94	Other	pH	8.0	UNITS		--
MND22-4102	000477	26-May-95	Other	pH	7.9	UNITS		--
MND22-4102	900000159	17-Oct-94	Other	pH	8.1	UNITS		--
MND22-4101	000478	26-May-95	Radiological	plutonium-238	.0173	PCI/G		.00901
MND22-4101	000651	26-May-95	Radiological	plutonium-238	.0249	PCI/G		.00337
MND22-4101	000478	26-May-95	Radiological	potassium-40	14.3	PCI/G		NA
MND22-4101	000651	26-May-95	Radiological	potassium-40	16.5	PCI/G		NA
MND22-4101	900000160	17-Oct-94	Radiological	potassium-40	15.3	PCI/G		NA
MND22-4102	000477	26-May-95	Radiological	potassium-40	21.8	PCI/G		NA
MND22-4102	900000159	17-Oct-94	Radiological	potassium-40	17.1	PCI/G		NA
MND22-4101	000478	26-May-95	Radiological	radium-226	.743	PCI/G		NA
MND22-4101	000651	26-May-95	Radiological	radium-226	.87	PCI/G		NA
MND22-4101	900000160	17-Oct-94	Radiological	radium-226	.744	PCI/G		.519
MND22-4102	000477	26-May-95	Radiological	radium-226	1.2	PCI/G		NA
MND22-4102	900000159	17-Oct-94	Radiological	radium-226	1.08	PCI/G		.592
MND22-4101	000478	26-May-95	Radiological	thorium-228	.762	PCI/G		.0229
MND22-4101	000651	26-May-95	Radiological	thorium-228	.21	PCI/G		.0194
MND22-4101	900000160	17-Oct-94	Radiological	thorium-228	.784	PCI/G		.0128
MND22-4102	000477	26-May-95	Radiological	thorium-228	.977	PCI/G		.0261
MND22-4102	900000159	17-Oct-94	Radiological	thorium-228	.834	PCI/G		.00692
MND22-4101	000478	26-May-95	Radiological	thorium-230	.867	PCI/G		.0195
MND22-4101	000651	26-May-95	Radiological	thorium-230	.316	PCI/G		.0172
MND22-4101	900000160	17-Oct-94	Radiological	thorium-230	.83	PCI/G		.0108
MND22-4102	000477	26-May-95	Radiological	thorium-230	.832	PCI/G		.0275
MND22-4102	900000159	17-Oct-94	Radiological	thorium-230	1.05	PCI/G		.00675
MND22-4101	000478	26-May-95	Radiological	thorium-232	.701	PCI/G		.0242
MND22-4101	000651	26-May-95	Radiological	thorium-232	.226	PCI/G		.0102
MND22-4101	900000160	17-Oct-94	Radiological	thorium-232	.708	PCI/G		.0108
MND22-4102	000477	26-May-95	Radiological	thorium-232	.761	PCI/G		.0222
MND22-4102	900000159	17-Oct-94	Radiological	thorium-232	.841	PCI/G		.00675
MND22-4101	900000160	17-Oct-94	Radiological	tritium	.0326	PCI/G		NA
MND22-4102	900000159	17-Oct-94	Radiological	tritium	.0353	PCI/G		NA
MND22-4101	000478	26-May-95	Radiological	uranium-234	.726	PCI/G		.0142
MND22-4101	000651	26-May-95	Radiological	uranium-234	.787	PCI/G		.0774
MND22-4101	900000160	17-Oct-94	Radiological	uranium-234	.57	PCI/G		.0381
MND22-4102	000477	26-May-95	Radiological	uranium-234	.784	PCI/G		.0271
MND22-4102	900000159	17-Oct-94	Radiological	uranium-234	.871	PCI/G		.0627
MND22-4101	000478	26-May-95	Radiological	uranium-235	.0259	PCI/G		.0212
MND22-4101	000651	26-May-95	Radiological	uranium-235	.0769	PCI/G		.052
MND22-4102	000477	26-May-95	Radiological	uranium-235	.0535	PCI/G		.0161
MND22-4101	000478	26-May-95	Radiological	uranium-238	.599	PCI/G		.024
MND22-4101	000651	26-May-95	Radiological	uranium-238	.904	PCI/G		.052
MND22-4101	900000160	17-Oct-94	Radiological	uranium-238	.688	PCI/G		.0329
MND22-4102	000477	26-May-95	Radiological	uranium-238	0.802	PCI/G		.0239
MND22-4102	900000159	17-Oct-94	Radiological	uranium-238	1.15	PCI/G		.0649

Table A.7.3 - New Property
Low-Lying Area Sediment Samples

Station	Sample Id	Date Col	Fraction	Parameter	Results	Units	Qual	Det L
MND22-4001	900000162	17-Oct-94	Common Anions	chloride	41.6000	MG/KG		
MND22-4002	900000164	18-Oct-94	Common Anions	chloride	42.0000	MG/KG		3.0
MND22-4003	900000168	18-Oct-94	Common Anions	chloride	39.4000	MG/KG		3.0
MND22-4001	900000162	17-Oct-94	Common Anions	fluoride	3.3600	MG/KG		
MND22-4002	900000163	18-Oct-94	Common Anions	fluoride	3.9900	MG/KG		
MND22-4002	900000164	18-Oct-94	Common Anions	fluoride	3.4100	MG/KG		0.1
MND22-4003	900000168	18-Oct-94	Common Anions	fluoride	3.1700	MG/KG		0.1
MND22-4001	900000162	17-Oct-94	Common Anions	nitrate-nitrite-N	1.3600	MG/KG		
MND22-4002	900000163	18-Oct-94	Common Anions	nitrate-nitrite-N	0.7640	MG/KG		
MND22-4003	900000168	18-Oct-94	Common Anions	nitrate-nitrite-N	1.9100	MG/KG		0.05
MND22-4001	900000162	17-Oct-94	Common Anions	sulfate	186.0000	MG/KG		
MND22-4002	900000163	18-Oct-94	Common Anions	sulfate	135.0000	MG/KG		
MND22-4002	900000164	18-Oct-94	Common Anions	sulfate	176.0000	MG/KG		2.0
MND22-4003	900000168	18-Oct-94	Common Anions	sulfate	161.0000	MG/KG		2.0
MND22-4001	900000162	17-Oct-94	General Chemistry	organic carbon	10800.000	MG/KG		50.0
MND22-4001	900000162	17-Oct-94	General Chemistry	organic carbon	11300.000	MG/KG		50.0
MND22-4001	900000162	17-Oct-94	General Chemistry	organic carbon	11500.000	MG/KG		50.0
MND22-4001	900000162	17-Oct-94	General Chemistry	organic carbon	12500.000	MG/KG		50.0
MND22-4001	900000162	17-Oct-94	General Chemistry	organic carbon	7710.0000	MG/KG		50.0
MND22-4002	900000163	18-Oct-94	General Chemistry	organic carbon	12600.000	MG/KG		50.0
MND22-4002	900000163	18-Oct-94	General Chemistry	organic carbon	13000.000	MG/KG		50.0
MND22-4002	900000163	18-Oct-94	General Chemistry	organic carbon	14000.000	MG/KG		50.0
MND22-4002	900000163	18-Oct-94	General Chemistry	organic carbon	15000.000	MG/KG		50.0
MND22-4002	900000163	18-Oct-94	General Chemistry	organic carbon	15400.000	MG/KG		50.0
MND22-4002	900000164	18-Oct-94	General Chemistry	organic carbon	10800.000	MG/KG		50.0
MND22-4002	900000164	18-Oct-94	General Chemistry	organic carbon	11400.000	MG/KG		50.0
MND22-4002	900000164	18-Oct-94	General Chemistry	organic carbon	11900.000	MG/KG		50.0
MND22-4002	900000164	18-Oct-94	General Chemistry	organic carbon	12700.000	MG/KG		50.0
MND22-4002	900000164	18-Oct-94	General Chemistry	organic carbon	16600.000	MG/KG		50.0
MND22-4003	900000168	18-Oct-94	General Chemistry	organic carbon	11000.000	MG/KG		50.0
MND22-4003	900000168	18-Oct-94	General Chemistry	organic carbon	13200.000	MG/KG		50.0
MND22-4003	900000168	18-Oct-94	General Chemistry	organic carbon	15400.000	MG/KG		50.0
MND22-4003	900000168	18-Oct-94	General Chemistry	organic carbon	17300.000	MG/KG		50.0
MND22-4003	900000168	18-Oct-94	General Chemistry	organic carbon	9120.0000	MG/KG		50.0
MND22-4001	900000162	17-Oct-94	Metals	aluminum	15300.00	MG/KG		
MND22-4002	900000163	18-Oct-94	Metals	aluminum	7860.00	MG/KG		
MND22-4002	900000164	18-Oct-94	Metals	aluminum	11300.00	MG/KG		
MND22-4003	900000168	18-Oct-94	Metals	aluminum	12000.00	MG/KG		
MND22-4002	900000163	18-Oct-94	Metals	antimony	0.34	MG/KG	B	
MND22-4001	900000162	17-Oct-94	Metals	arsenic	5.80	MG/KG		
MND22-4002	900000163	18-Oct-94	Metals	arsenic	8.40	MG/KG		
MND22-4002	900000164	18-Oct-94	Metals	arsenic	17.90	MG/KG		
MND22-4003	900000168	18-Oct-94	Metals	arsenic	7.20	MG/KG		
MND22-4001	900000162	17-Oct-94	Metals	barium	111.00	MG/KG		
MND22-4002	900000163	18-Oct-94	Metals	barium	67.50	MG/KG		
MND22-4002	900000164	18-Oct-94	Metals	barium	70.90	MG/KG		
MND22-4003	900000168	18-Oct-94	Metals	barium	63.40	MG/KG		
MND22-4001	900000162	17-Oct-94	Metals	beryllium	0.85	MG/KG		
MND22-4002	900000163	18-Oct-94	Metals	beryllium	0.56	MG/KG		
MND22-4002	900000164	18-Oct-94	Metals	beryllium	0.61	MG/KG		
MND22-4003	900000168	18-Oct-94	Metals	beryllium	0.62	MG/KG		
MND22-4001	900000162	17-Oct-94	Metals	bismuth	0.76	MG/KG	B	
MND22-4003	900000168	18-Oct-94	Metals	bismuth	0.85	MG/KG	B	
MND22-4001	900000162	17-Oct-94	Metals	calcium	4340.00	MG/KG		
MND22-4002	900000163	18-Oct-94	Metals	calcium	4880.00	MG/KG		
MND22-4002	900000164	18-Oct-94	Metals	calcium	4790.00	MG/KG		

Table A.7.3 - New Property
Low-Lying Area Sediment Samples

Station	Sample Id	Date Col	Fraction	Parameter	Results	Units	Qual	Det L
MND22-4003	900000168	18-Oct-94	Metals	calcium	47900.00	MG/KG		
MND22-4001	900000162	17-Oct-94	Metals	chromium	18.50	MG/KG		
MND22-4002	900000163	18-Oct-94	Metals	chromium	11.20	MG/KG		
MND22-4002	900000164	18-Oct-94	Metals	chromium	14.80	MG/KG		
MND22-4003	900000168	18-Oct-94	Metals	chromium	15.90	MG/KG		
MND22-4001	900000162	17-Oct-94	Metals	cobalt	11.60	MG/KG	B	
MND22-4002	900000163	18-Oct-94	Metals	cobalt	8.90	MG/KG	B	
MND22-4002	900000164	18-Oct-94	Metals	cobalt	8.20	MG/KG	B	
MND22-4003	900000168	18-Oct-94	Metals	cobalt	10.70	MG/KG	B	
MND22-4001	900000162	17-Oct-94	Metals	copper	21.50	MG/KG		
MND22-4002	900000163	18-Oct-94	Metals	copper	17.70	MG/KG		
MND22-4002	900000164	18-Oct-94	Metals	copper	18.60	MG/KG		
MND22-4003	900000168	18-Oct-94	Metals	copper	21.70	MG/KG		
MND22-4001	900000162	17-Oct-94	Metals	iron	23700.00	MG/KG		
MND22-4002	900000163	18-Oct-94	Metals	iron	18400.00	MG/KG		
MND22-4002	900000164	18-Oct-94	Metals	iron	19900.00	MG/KG		
MND22-4003	900000168	18-Oct-94	Metals	iron	25300.00	MG/KG		
MND22-4001	900000162	17-Oct-94	Metals	lead	24.80	MG/KG		
MND22-4002	900000163	18-Oct-94	Metals	lead	29.40	MG/KG		
MND22-4002	900000164	18-Oct-94	Metals	lead	25.70	MG/KG		
MND22-4003	900000168	18-Oct-94	Metals	lead	17.00	MG/KG		
MND22-4001	900000162	17-Oct-94	Metals	lithium	17.70	MG/KG	B	
MND22-4002	900000163	18-Oct-94	Metals	lithium	7.80	MG/KG	B	
MND22-4002	900000164	18-Oct-94	Metals	lithium	11.10	MG/KG	B	
MND22-4003	900000168	18-Oct-94	Metals	lithium	22.40	MG/KG	B	
MND22-4001	900000162	17-Oct-94	Metals	magnesium	3470.00	MG/KG		
MND22-4002	900000163	18-Oct-94	Metals	magnesium	3460.00	MG/KG		
MND22-4002	900000164	18-Oct-94	Metals	magnesium	3590.00	MG/KG		
MND22-4003	900000168	18-Oct-94	Metals	magnesium	13000.00	MG/KG		
MND22-4001	900000162	17-Oct-94	Metals	manganese	1140.00	MG/KG		
MND22-4002	900000163	18-Oct-94	Metals	manganese	689.00	MG/KG		
MND22-4002	900000164	18-Oct-94	Metals	manganese	614.00	MG/KG		
MND22-4003	900000168	18-Oct-94	Metals	manganese	500.00	MG/KG		
MND22-4001	900000162	17-Oct-94	Metals	molybdenum	1.00	MG/KG	B	
MND22-4002	900000163	18-Oct-94	Metals	molybdenum	2.30	MG/KG	B	
MND22-4002	900000164	18-Oct-94	Metals	molybdenum	2.20	MG/KG	B	
MND22-4003	900000168	18-Oct-94	Metals	molybdenum	1.60	MG/KG	B	
MND22-4001	900000162	17-Oct-94	Metals	nickel	21.40	MG/KG		
MND22-4002	900000163	18-Oct-94	Metals	nickel	15.50	MG/KG		
MND22-4002	900000164	18-Oct-94	Metals	nickel	17.30	MG/KG		
MND22-4003	900000168	18-Oct-94	Metals	nickel	23.70	MG/KG		
MND22-4001	900000162	17-Oct-94	Metals	potassium	3430.00	MG/KG		
MND22-4002	900000163	18-Oct-94	Metals	potassium	1360.00	MG/KG		
MND22-4002	900000164	18-Oct-94	Metals	potassium	2200.00	MG/KG		
MND22-4003	900000168	18-Oct-94	Metals	potassium	2800.00	MG/KG		
MND22-4001	900000162	17-Oct-94	Metals	sodium	208.00	MG/KG	B	
MND22-4002	900000163	18-Oct-94	Metals	sodium	108.00	MG/KG	B	
MND22-4002	900000164	18-Oct-94	Metals	sodium	132.00	MG/KG	B	
MND22-4003	900000168	18-Oct-94	Metals	sodium	364.00	MG/KG	B	
MND22-4001	900000162	17-Oct-94	Metals	vanadium	30.20	MG/KG		
MND22-4002	900000163	18-Oct-94	Metals	vanadium	20.50	MG/KG		
MND22-4002	900000164	18-Oct-94	Metals	vanadium	28.30	MG/KG		
MND22-4003	900000168	18-Oct-94	Metals	vanadium	21.00	MG/KG		
MND22-4001	900000162	17-Oct-94	Metals	zinc	62.20	MG/KG		
MND22-4002	900000163	18-Oct-94	Metals	zinc	47.50	MG/KG		
MND22-4002	900000164	18-Oct-94	Metals	zinc	51.50	MG/KG		

Table A.7.3 - New Property
Low-Lying Area Sediment Samples

Station	Sample Id	Date Col	Fraction	Parameter	Results	Units	Qual	Det L
MND22-4003	900000168	18-Oct-94	Metals	zinc	74.10	MG/KG		
MND22-4001	900000162	17-Oct-94	Other	% clay	35	%		
MND22-4002	900000163	18-Oct-94	Other	% clay	24	%		
MND22-4002	900000164	18-Oct-94	Other	% clay	25	%		
MND22-4003	900000168	18-Oct-94	Other	% clay	54	%		
MND22-4001	900000162	17-Oct-94	Other	% gravel	0.0	%		
MND22-4002	900000163	18-Oct-94	Other	% gravel	4.0	%		
MND22-4002	900000164	18-Oct-94	Other	% gravel	2.0	%		
MND22-4003	900000168	18-Oct-94	Other	% gravel	0.0	%		
MND22-4001	900000162	17-Oct-94	Other	% sand	11	%		
MND22-4002	900000163	18-Oct-94	Other	% sand	28	%		
MND22-4002	900000164	18-Oct-94	Other	% sand	29	%		
MND22-4003	900000168	18-Oct-94	Other	% sand	2.0	%		
MND22-4001	900000162	17-Oct-94	Other	% silt	54	%		
MND22-4002	900000163	18-Oct-94	Other	% silt	44	%		
MND22-4002	900000164	18-Oct-94	Other	% silt	44	%		
MND22-4003	900000168	18-Oct-94	Other	% silt	44	%		
MND22-4001	900000162	17-Oct-94	Other	pH	7.4	UNITS		--
MND22-4002	900000163	18-Oct-94	Other	pH	7.6	UNITS		--
MND22-4002	900000164	18-Oct-94	Other	pH	7.5	UNITS		--
MND22-4003	900000168	18-Oct-94	Other	pH	7.9	UNITS		--
MND22-4001	900000162	17-Oct-94	Pesticides and/or PCBs	4,4'-DDE	0.25	UG/KG	J	
MND22-4002	900000163*	18-Oct-94	Pesticides and/or PCBs	4,4'-DDE	0.54	UG/KG	J	
MND22-4003	900000168	18-Oct-94	Pesticides and/or PCBs	4,4'-DDE	0.48	UG/KG	JP	
MND22-4001	900000162	17-Oct-94	Pesticides and/or PCBs	aldrin	0.14	UG/KG	J	
MND22-4002	900000163	18-Oct-94	Pesticides and/or PCBs	aldrin	0.20	UG/KG	JP	
MND22-4003	900000168	18-Oct-94	Pesticides and/or PCBs	aldrin	0.22	UG/KG	J	
MND22-4003	900000168	18-Oct-94	Pesticides and/or PCBs	alpha-chlordane	1.1	UG/KG	JP	
MND22-4002	900000164	18-Oct-94	Pesticides and/or PCBs	dieldrin	0.25	UG/KG	J	
MND22-4003	900000168	18-Oct-94	Pesticides and/or PCBs	dieldrin	0.96	UG/KG	JP	
MND22-4001	900000162	17-Oct-94	Pesticides and/or PCBs	endosulfan II	7.1	UG/KG	P	
MND22-4003	900000168	18-Oct-94	Pesticides and/or PCBs	gamma-chlordane	0.93	UG/KG	JP	
MND22-4001	900000162	17-Oct-94	Pesticides and/or PCBs	methoxychlor	0.65	UG/KG	J	
MND22-4001	900000162	17-Oct-94	Radiological	cesium-137	.384	PCI/G		NA
MND22-4002	900000163	18-Oct-94	Radiological	cesium-137	.331	PCI/G		NA
MND22-4002	900000164	18-Oct-94	Radiological	cesium-137	.368	PCI/G		NA
MND22-4001	900000162	17-Oct-94	Radiological	plutonium-238	.0255	PCI/G		.00874
MND22-4002	900000163	18-Oct-94	Radiological	plutonium-238	.013	PCI/G		.00743
MND22-4002	900000164	18-Oct-94	Radiological	plutonium-238	.0231	PCI/G		.00391
MND22-4003	900000168	18-Oct-94	Radiological	plutonium-238	1.29	PCI/G		.00327
MND22-4001	900000162	17-Oct-94	Radiological	potassium-40	22.7	PCI/G		NA
MND22-4002	900000163	18-Oct-94	Radiological	potassium-40	15.6	PCI/G		NA
MND22-4002	900000164	18-Oct-94	Radiological	potassium-40	18.3	PCI/G		NA
MND22-4003	900000168	18-Oct-94	Radiological	potassium-40	27.4	PCI/G		NA
MND22-4001	900000162	17-Oct-94	Radiological	radium-226	1.44	PCI/G		.764
MND22-4002	900000163	18-Oct-94	Radiological	radium-226	1.25	PCI/G		.628
MND22-4002	900000164	18-Oct-94	Radiological	radium-226	1.17	PCI/G		.644
MND22-4003	900000168	18-Oct-94	Radiological	radium-226	1.33	PCI/G		.722
MND22-4001	900000162	17-Oct-94	Radiological	strontium-90	.158	PCI/G		.157
MND22-4001	900000162	17-Oct-94	Radiological	thorium-228	1.13	PCI/G		.0148
MND22-4002	900000163	18-Oct-94	Radiological	thorium-228	.818	PCI/G		.00622
MND22-4002	900000164	18-Oct-94	Radiological	thorium-228	.871	PCI/G		.0126
MND22-4003	900000168	18-Oct-94	Radiological	thorium-228	1.12	PCI/G		.0108
MND22-4001	900000162	17-Oct-94	Radiological	thorium-230	1.42	PCI/G		.00704
MND22-4002	900000163	18-Oct-94	Radiological	thorium-230	1.29	PCI/G		.00976
MND22-4002	900000164	18-Oct-94	Radiological	thorium-230	1.51	PCI/G		.00662

Table A.7.3 - New Property
Low-Lying Area Sediment Samples

Station	Sample Id	Date Col	Fraction	Parameter	Results	Units	Qual	Det L
MND22-4003	900000168	18-Oct-94	Radiological	thorium-230	1.27	PCI/G		.00823
MND22-4001	900000162	17-Oct-94	Radiological	thorium-232	1.12	PCI/G		.0113
MND22-4002	900000163	18-Oct-94	Radiological	thorium-232	.655	PCI/G		.00976
MND22-4002	900000164	18-Oct-94	Radiological	thorium-232	.775	PCI/G		.0106
MND22-4003	900000168	18-Oct-94	Radiological	thorium-232	1.1	PCI/G		.00512
MND22-4001	900000162	17-Oct-94	Radiological	tritium	.0489	PCI/G		NA
MND22-4002	900000163	18-Oct-94	Radiological	tritium	.0383	PCI/G		NA
MND22-4002	900000164	18-Oct-94	Radiological	tritium	.0488	PCI/G		NA
MND22-4003	900000168	18-Oct-94	Radiological	tritium	.0647	PCI/G		NA
MND22-4001	900000162	17-Oct-94	Radiological	uranium-234	.936	PCI/G		.0468
MND22-4002	900000163	18-Oct-94	Radiological	uranium-234	1.4	PCI/G		.147
MND22-4002	900000164	18-Oct-94	Radiological	uranium-234	.869	PCI/G		.0474
MND22-4003	900000168	18-Oct-94	Radiological	uranium-234	.885	PCI/G		.0409
MND22-4001	900000162	17-Oct-94	Radiological	uranium-235	.0316	PCI/G		.0214
MND22-4001	900000162	17-Oct-94	Radiological	uranium-238	.939	PCI/G		.0317
MND22-4002	900000163	18-Oct-94	Radiological	uranium-238	1.12	PCI/G		.119
MND22-4002	900000164	18-Oct-94	Radiological	uranium-238	.825	PCI/G		.0409
MND22-4003	900000168	18-Oct-94	Radiological	uranium-238	.965	PCI/G		.0409
MND22-4001	900000162	17-Oct-94	Volatile Organics	methylene chloride	10	UG/KG	B	5
MND22-4002	900000163	18-Oct-94	Volatile Organics	methylene chloride	10	UG/KG	B	5
MND22-4002	900000164	18-Oct-94	Volatile Organics	methylene chloride	8	UG/KG	B	5
MND22-4003	900000168	18-Oct-94	Volatile Organics	methylene chloride	11	UG/KG	B	5

APPENDIX B.1

APPENDIX B
QUALITY ASSURANCE

Appendix B-1

QUALITY ASSURANCE PROGRAM

B.1 Quality Assurance Program

The following subsections discuss any deviations to applicable sections of the Operable Unit 9 QAPP. The QAPP was revised in April 1995, revision 4, in the middle of the Surface Water and Sediment program. The revision update did not significantly change key quality assurance or control requirements, except for the frequency of data validation. The work performed for the Surface Water and Sediment investigation conformed to changes in revision 4 of the QAPP. The subsections are organized in the same order and numbered similarly to the sections in the QAPP.

B.1.1 Introduction

There were no reportable events related to this section of the QAPP.

B.1.2 Project Organization and Responsibility

During the OU9 surface water and sediment investigation, there were four personnel changes to the list of original assignments presented in Section 2.1 of the QAPP (Revision 4). The WESTON project manager, Mr. John W. Thorsen, was replaced by Mr. William Little. The WESTON alternate project manager, Mr. John Price, was replaced by Mr. Gordon Horn. The WESTON Quality Assurance Officer, Mr. Jake Alexander, was replaced by Ms. Martha Mitchell. In addition, the EG&G OU9 Environmental Restoration (ER) Program Manager, Ms. Katherine Koehler, was replaced by Mr. James Rigano prior to the surface water and sediment investigation. WESTON believes that these key personnel changes did not significantly affect the quality of the data produced during the surface water and sediment investigation.

B.1.3 Quality Assurance Objectives in Terms of Accuracy, Precision, Completeness, Representativeness, & Comparability

B.1.3.1 Accuracy

Accuracy of measurement data is defined as the degree of comparability of a measurement, x, with an accepted reference or true value, T. It is the measure of how closely the analysis represents the true value. The accuracy is usually expressed as $\left(\frac{x}{T}\right)100$. For the surface water and sediment investigation, accuracy was measured through the evaluation of performance evaluation (PE) samples, laboratory control samples (blank spikes), surrogates, calibration checks, and matrix spikes.

B.1.3.1.1 PE Samples

*A **performance evaluation** sample contains known amounts of target analytes, and is secretly given to the lab for analysis. The lab results are then compared to the known results.*

During the surface water and sediment investigation, WESTON submitted five PE water samples to CompuChem Environmental Corporation. Environmental Resource Associates (ERA) in Aurora, Colorado, prepared four of these samples as double-blind samples. One double blind PE sample was submitted during the Fall 1994 sampling program and three were submitted during the Spring 1995 sampling program. In addition to the four double blind PE samples, a PE ampule was submitted to the laboratory by EG&G.

Fall 1994 PE Sample

*A **double blind** PE sample is a sample that the laboratory does not know is a PE sample and does not know the analyte concentrations prior to analysis.*

The Fall 1994 double blind PE sample, 900-000081, was submitted for inorganic (metals), anion, semi-volatile organic, volatile organic, explosive, and pesticide analyses. The CompuChem results for the Fall 1994 double blind PE sample were quite poor for metals, anions, semi-volatiles, and volatiles. The results ranged from 45 percent of metals results within the acceptance range to 73 percent for the semi-volatiles. The results are summarized in Table B.1.1. The laboratory investigated the source of these problems and as possible, initiated corrective actions. The investigation indicated that most of the results which were outside the acceptance criteria could not be attributed to systematic failure. The laboratory surmised poor results may have been the result of an error during sample preparation. Because only one PE sample was submitted to the laboratory for analysis, it was not possible to conclude the poor performance indicates a systematic laboratory failure.

PE Ampule

Due to the number of parameters outside acceptance limits in the Fall 1994 PE sample, a blind PE ampule was submitted to CompuChem for inorganic (metals), semi-volatile organic, volatile organic, and pesticide analysis. The CompuChem results on the PE sample are summarized in Table B.1.2 and were excellent. Based on these results, it was concluded that the poor performance on the Fall PE sample could not be attributed to a systematic deficiency. However, recognizing that successful analysis of a PE ampule may not be representative of typical laboratory performance, the focus of the Spring 1995 project assessment was changed from a general assessment of laboratory operations to an in-depth evaluation of the organic and inorganic sample preparation areas. The results of the laboratory assessments are discussed in Section B.1.10.

Spring 1995 PE Samples

Three PE samples were submitted during the spring sampling event. The first sample included a complete set of analytes, and the other two PE samples were for partial analyte lists. The second column of Table B.1.1 includes the results for the PE sample submitted for the full set of analytes. The results for the two partial analyte lists have been combined in the third result column in Table B.1.1.

The double blind results for the first PE sample, 900-000618, submitted during the spring sampling event were acceptable for all analyses, except anions. Only 44% of the anion results were reported within acceptable limits. Additionally, the laboratory did not report results for nitroaromatic explosives. According to the laboratory deficiency report, there was insufficient sample volume for the explosives analysis.

The second and third sets of double blind PE samples were identified as samples 900-000648 and 900-000658. Only 63% of the SVOC results were reported within acceptance limits. However, three results for benzo(a)pyrene, benzo(g,h,i)perylene, and dibenzofuran were within tenths of a microgram of being within acceptance limits.

Conclusion

Based on the PE results for the fall and spring sampling events no definitive performance trend is evident.

There is insufficient data to conclude that anions or semi-volatile results were systematically poor. However, because of the degree and number of anion results outside acceptance limits in sample 900-000618 and 900-000081, data users are cautioned to accept the anion results as estimated (J, UJ).

Table B.1.1–Summary of Double Blind PE Results

Analytes	Units	Fall 1994 Sampling Results			Spring 1995 Sampling Results (1)			Spring 1995 Sampling Results (2)		
		Certified Value	Acceptance Range	Reported Value	Certified Value	Acceptance Range	Reported Value	Certified Value	Acceptance Range	Reported Value
ammonia	mg/L	4.43	3.54-5.32	4.47	8.78	7.37-10.2	*6.28*	10.5	8.82-12.2	9.94
chloride	mg/L	128	102-154	138	134	125-144	142	134	125-144	136
cyanide	mg/L	0.219	0.175-0.263	***0.066***	0.219	0.160-0.278	0.192	0.147	0.107-0.187	0.138
fluoride	mg/L	5.95	4.76-7.14	5.43	5.3	4.51-6.10	***6.67***	5.3	4.51-6.10	5.66
nitrate/nitrite	mg/L	8.11	6.49-9.73	8.46	5.49	4.88-6.09	5.29	7.68	6.84-8.52	6.96
sulfate	mg/L	113	90.4-136	***142***	99.4	85.5-113	***150***	99.4	85.5-113	90.3
total dissolved solids	mg/L	740	592-888	738	729	634-824	751	729	634-824	721
total nitrogen	mg/L	5.71	4.57-6.85	***2.04***	5.49	4.88-6.09	***7.91***	7.68	6.84-8.52	***4.66***
total phosphorus	mg/L	5.72	4.58-6.86	***3.07***	6.64	5.65-7.64	***4.86***	13.7	11.6-15.8	14.8
2,4-dinitrotoluene (explosive)	µg/L	56.6	29.0-86.8	58.6	91.9	35.8-108	**	91.9	35.8-108	82
2,6-dinitrotoluene (explosive)	µg/L	71.8	26.1-85.4	71.8	NR	NR	NR	NR	NR	NR
nitrobenzene (explosive)	µg/L	NR	NR	NR	NR	NR	NR	36.4	17.6-47.7	45
aluminum	mg/L	706	579-833	***938***	411	337-485	405	189	155-223	***242***
antimony	mg/L	91.2	68.4-108	***113***	77.8	58.4-97.3	71.2	94.7	71.0-118	96
arsenic	mg/L	67.9	50.9-80.1	66.7	122	91.5-144	120	73.7	55.3-87.0	81.9
barium	mg/L	106	86.9-125	***131***	167	137-197	152	421	345-497	405
beryllium	mg/L	94.4	77.4-111	***115***	134	110-158	121	63.2	51.8-74.6	59.4
cadmium	mg/L	111	91.0-131	130	128	105-151	115	132	108-156	124
chromium	mg/L	309	253-365	***367***	222	182-262	199	405	332-478	387
cobalt	mg/L	117	95.9-138	***142***	167	137-197	150	216	177-255	204
copper	mg/L	533	437-629	509	95	77.9-112	85.8	162	133-191	157
iron	mg/L	317	260-374	***430***	187	155-223	219	468	384-552	466
lead	mg/L	478	392-564	472	211	173-249	188	91.6	75.1-108	89.4
manganese	mg/L	91.7	75.2-108	***112***	333	273-393	302	221	181-261	208
mercury	mg/L	7.22	5.42-9.03	***4.5***	3.89	2.92-4.86	3.1	11.6	8.7-14.5	8.7
molybdenum	mg/L	456	63.8-91.8	88	378	310-446	345	118	96.8-139	117
nickel	mg/L	92.3	374-538	536	344	282-406	306	409	335-483	403
selenium	mg/L	92.3	69.2-109	88.6	73.2	54.9-86.4	58.2	88.4	66.3-104	95.6
silver	mg/L	78.8	64.5-92.7	73	56.1	46.0-66.2	49.6	163	134-192	153

Table B.1.1–Summary of Double Blind PE Results

Analytes	Units	Fall 1994 Sampling Results			Spring 1995 Sampling Results (1)			Spring 1995 Sampling Results (2)		
		Certified Value	Acceptance Range	Reported Value	Certified Value	Acceptance Range	Reported Value	Certified Value	Acceptance Range	Reported Value
thallium	mg/L	104	78.0-123	96.7	57.8	43.4-72.3	56.7	111	83.3-139	94.7
vanadium	mg/L	228	187-269	***271***	206	169-243	184	103	84.5-122	96.6
zinc	mg/L	444	364-524	***593***	172	141-203	170	195	160-230	194
4,4'-DDD	µg/L	4.37	2.84-5.72	2.9	1.7	1.07-2.18	**0.92**	1.7	1.07-218	1.1
4,4'-DDE	µg/L	0.909	0.504-1.16	0.54	2.11	1.19-2.68	***0.86***	2.11	1.19-2.68	***0.81***
4,4'-DDT	µg/L	3.9	2.27-4.91	***2.2***	7.19	4.16-9.13	4.5	7.19	4.16-9.13	4.5
α-chlordane	µg/L	NR	NR	NR	4.66	2.54-5.87	3.1	4.66	2.54-5.87	3
aldrin	µg/L	2.03	1.04-2.42	***1***	1.82	0.939-2.18	1.2	1.82	0.939-2.18	1.2
β-BHC	µg/L	6.9	3.59-8.63	4.7	6.68	3.37-8.55	4.8	6.68	3.37-8.55	4.8
dieldrin	µg/L	3.08	1.84-4.07	2.3	6.48	3.96-8.42	***3.8***	6.48	3.96-8.42	4.1
endrin	µg/L	4.99	3.11-6.44	3.5	5.09	3.12-6.57	3.7	5.09	3.12-6.57	3.6
γ-BHC (lindane)	µg/L	NR	NR	NR	1.48	0.765-1.89	0.79	1.48	0.765-1.89	1.1
heptachlor	µg/L	0.477	0.218-0.601	0.31	2.4	1.10-2.98	1.4	2.4	1.10-2.98	1.4
heptachlor epoxide	µg/L	NR	NR	NR	9.11	5.57-11.3	6	9.11	5.57-11.3	6.2
methoxychlor	µg/L	4.35	2.42-5.74	3.2	4	2.21-5.36	2.6	4	2.21-5.36	4.5
1,2,4-trichlorobenzene	µg/L	35.1	11.3-41.4	18	43.9	12.7-51.8	34	43.9	12.7-51.8	21
1,2-dichlorobenzene	µg/L	53.4	14.0-60.3	***ND***	55.3	13.2-63.6	35	55.3	13.2-63.6	27
1,4-dichlorobenzene	µg/L	39.6	13.7-44.4	17	170	45.6-194	110	170	45.6-194	65
2,2'-oxybis(1-chloropropane)	µg/L	NR	NR	NR	121	43.6-201	77	121	43.6-201	59
2,4,5-trichlorophenol	µg/L	60.7	28.5-64.9	***26***	NR	NR	NR	NR	NR	NR
2,4,6-trichlorophenol	µg/L	52.9	23.2-59.2	30	70.3	30.9-79.4	63	70.3	30.9-79.4	34
2,4-dinitrophenol	µg/L	111	37.9-129	62	79.7	26.9-97.2	***ND***	79.7	26.9-97.2	*ND*
2,4-dinitrotoluene	µg/L	71.8	26.1-85.4	37	91.9	35.8-108	69	91.9	35.8-108	44
2,6-dinitrotoluene	µg/L	56.6	29.0-86.8	31	NR	NR	NR	NR	NR	NR
2-chloronapthalene	µg/L	NR	NR	NR	81	34.7-94.8	56	81	34.7-94.8	38
2-chlorophenol	µg/L	NR	NR	NR	63.6	28.0-70.6	45	63.6	28.0-70.6	32
2-methylphenol	µg/L	126	38.6-150	59	109	35.1-129	71	109	35.1-129	52
3-methylphenol	µg/L	53.3	14.3-62.4	32	NR	NR	NR	123	34.3-141	61(*)
4-chloro-3-methylphenol	µg/L	88.1	45.3-100	52	NR	NR	NR	NR	NR	NR

Table B.1.1–Summary of Double Blind PE Results

Analytes	Units	Fall 1994 Sampling Results			Spring 1995 Sampling Results (1)			Spring 1995 Sampling Results (2)		
		Certified Value	Acceptance Range	Reported Value	Certified Value	Acceptance Range	Reported Value	Certified Value	Acceptance Range	Reported Value
anthracene	µg/L	86.3	40.4-100	***32***	54.3	25.1-63.5	37	54.3	25.1-63.5	***21***
benzo(a)anthracene	µg/L	46.7	20.3-54.6	***18***	NR	NR	NR	NR	NR	NR
benzo(a)pyrene	µg/L	NR	NR	NR	23.1	10.9-29.3	14	23.1	10.9-29.3	***10***
benzo(b) fluoranthene	µg/L	103	35.6-130	40	NR	NR	NR	NR	NR	NR
benzo(g,h,i)pyrene	µg/L	NR	NR	NR	42.6	18.4-61.3	24	42.6	18.4-61.3	***18***
bis(2-ethylhexyl)phthalate	µg/L	100	38.5-128	39	36.1	13.6-46.2	25	36.1	13.6-46.2	15
chrysene	µg/L	32.1	14.9-39.2	***13***	28	13.3-34.2	18	28	13.3-34.2	***11***
dibenzofuran	µg/L	23.8	11.4-27.4	13	74.2	36.2-83.8	61	74.2	36.2-83.8	***36***
hexachlorobenzene	µg/L	101	55.0-117	***34***	NR	NR	NR	NR	NR	NR
isophorone	µg/L	91.1	39.8-105	52	NR	NR	NR	NR	NR	NR
N-nitroso-di-n-propylamine	µg/L	NR	NR	NR	44.9	20.6-55.2	26	44.9	20.6-55.2	***ND***
naphthalene	µg/L	68.8	26.0-77.5	32	72	36.4-82.8	55	72	26.4-82.8	35
nitrobenzene	µg/L	NR	NR	NR	36.4	17.6-47.7	28	36.4	17.6-47.7	20
pentachlorophenol	µg/L	76.9	24.0-96.9	35	43.4	13.2-54.3	36	43.4	13.2-54.3	***11***
pyrene	µg/L	29.8	13.1-37.8	14	52	24.1-64.0	46	52	24.1-64	28
1,1,1-trichloroethane	µg/L	19.9	13.9-23.9	16	83.7	59.1-100	71	18.4	12.9-22.1	15
1,1,2-trichlorethane	µg/L	140	108-179	130	NR	NR	NR	NR	NR	NR
1,1-dibromoethene	µg/L	80.3	54.8-96.0	***52***	NR	NR	NR	NR	NR	NR
1,2-dichloroethane	µg/L	30.2	23.3-37.8	28	91.9	70.9-115	71	52.5	40.5-65.6	47
2-butanone	µg/L	99.9	75	***ND***	NR	NR	NR	NR	NR	NR
4-methyl-2-pentanone	µg/L	20.1	11.6-27.9	***ND***	68.4	37.8-94.4	***36***	141	81.1-196	100
benzene	µg/L	9.94	7.68-12.3	9	14.9	11.4-18.6	14	34.8	26.9-43.2	31
bromodichloromethane	µg/L	37.5	28.9-46.9	***49***	88.5	67.5-112	110	24.7	19.0-30.9	27
bromoform	µg/L	125	91.9-163	***86***	120	87.1-155	97	44	32.1-56.8	41
carbon tetrachloride	µg/L	53.6	38.5-68.1	***36***	50.2	36.6-63.3	42	110	79.1-140	89
chlorobenzene	µg/L	181	138-219	150	20.4	15.7-24.7	20	129	98.6-156	110
chlorodibromomethane	µg/L	NR	NR	NR	NR	NR	NR	60.5	45.7-75.0	57
1,2-dichlorobenzene	µg/L	NR	NR	NR	NR	NR	NR	60.4	45.8-73.1	NR
1,3-dichlorobenzene	µg/L	NR	NR	NR	NR	NR	NR	81.1	60.6-98.9	NR

Table B.1.1–Summary of Double Blind PE Results

Analytes	Units	Fall 1994 Sampling Results			Spring 1995 Sampling Results (1)			Spring 1995 Sampling Results (2)		
		Certified Value	Acceptance Range	Reported Value	Certified Value	Acceptance Range	Reported Value	Certified Value	Acceptance Range	Reported Value
1,4-dichlorobenzene	µg/L	NR	NR	NR	NR	NR	NR	129	98.0-160	NR
ethylbenzene	µg/L	9.08	6.69-11.2	***6***	88.4	65.7-108	76	58.9	43.5-73.0	55
methylene chloride	µg/L	68.9	46.8-91.6	58	101	68.8-133	87	23.4	15.9-31.1	25
p-xylene	µg/L	71.9	44.2-92.8	53	NR	NR	NR	NR	NR	NR
styrene	µg/L	14	9.69-17.2	***9***	NR	NR	NR	NR	NR	NR
tetrachloroethene	µg/L	90.2	65.8-110	***65***	50.1	36.9-61.1	48	30.1	21.9-36.7	32
toluene	µg/L	149	115-180	130	33	25.2-55.9	31	127	97.9-154	110
trichloroethene	µg/L	15	11.1-18.2	13	46.2	34.4-55.9	41	58.3	43.3-70.5	51
chloroform	µg/L	NR	NR	NR	92.1	68.7-114	76	74.1	55.9-91.1	64

(1) Results from 900-000618
(2) Results from partial target list PE samples 900-000648 and 900-000658
** Fraction not analyzed by lab.
(*) Reported by lab as 4-methyl phenol.
NR-Not reported or not required.

Table B.1.2–Fall Ampule Results

Analyte	Units	Certified Value	Acceptance Range	Reported Value
aluminum	mg/L	320	262-376	359
antimony	mg/L	183	137-216	180
arsenic	mg/L	149	112-176	145
barium	mg/L	530	436-626	516
beryllium	mg/L	74	60.7-87.3	67.2
boron	mg/L	178	134-212	NA
cadmium	mg/L	79.7	65.4-94.0	78.4
chromium	mg/L	181	148-214	181
cobalt	mg/L	330	271-389	321
copper	mg/L	377	309-446	380
iron	mg/L	288	236-340	329
lead	mg/L	111	81-131	110
manganese	mg/L	121	99.2 -143	119
mercury	mg/L	4.55	3.41-5.89	3.9
molybdenum	mg/L	260	221-317	254
nickel	mg/L	211	173-249	217
selenium	mg/L	147	110-173	137
silver	mg/L	109	89.4-129	106
strontium	mg/L	250	205-296	NA
thallium	mg/L	90.7	68.0-107	87.2
vanadium	mg/L	315	258-372	309
zinc	mg/L	324	256-382	274
4,4'-DDD	µg/L	2.63	0.815-3.71	1.8
4,4'-DDE	µg/L	9.33	2.80-13.5	5.4
aldrin	µg/L	0.997	0.419-1.22	0.73
α-BHC	µg/L	7.28	2.69-9.76	4.7
β-BHC	µg/L	5.67	0.964-8.33	4.4
dieldrin	µg/L	3.95	1.42-5.77	3
endrin	µg/L	8.62	2.59-12.7	6.3
heptachlor	µg/L	2.69	0.915-2.99	2
heptachlor epoxide	µg/L	4.97	1.84-7.06	3.4
methoxychlor	µg/L	2.39	1.12-2.87	2.4
1,2,4-trichlorobenzene	µg/L	76.7	33.7-109	61
1,2-dichlorobenzene	µg/L	31.1	9.95-40.1	24
2,4,5-trichlorophenol	µg/L	75.2	27.8-108	54
2,4,6-trichlorophenol	µg/L	109	40.3-157	77
2,4-dinitrotoluene	µg/L	176	68.6-245	150
2-chloronapthalene	µg/L	75.1	45.1-88.6	54
2-methylnapthalene	µg/L	19.8	10.1-22.2	19
2-methylphenol	µg/L	57.1	20.6-65.7	41
3-methylphenol	µg/L	140	42.0-182	120*
4-chlorophenyl-phenylether	µg/L	89.5	22.4-141	63
acenaphthylene	µg/L	41.3	13.6-59.9	29
anthracene	µg/L	24.8	6.7-33.0	16
benzo(a) anthracene	µg/L	99.5	32.8-142	67

Table B.1.2–Fall Ampule Results

Analyte	Units	Certified Value	Acceptance Range	Reported Value
bis(2-ethylhexyl)phthalate	µg/L	132	21.1-209	98
chrysene	µg/L	152	25.8-255	120
dibenzofuran	µg/L	55.4	31.1-62.6	38
diethylphthalate	µg/L	92.1	14.7-105	66
dimethylphthalate	µg/L	51.8	8.29-58.0	37
indeno(1,2,3-cd)pyrene	µg/L	40	6.00-68.4	25
N-nitrosodimethylamine	µg/L	84.4	12.2-97.4	NA
naphthalene	µg/L	145	30.5-193	120
pentachlorophenol	µg/L	91.7	12.8-161	67
pyrene	µg/L	37.2	19.3-42.8	27
1,1,1-trichloroethane	µg/L	91.9	47.7-149	91
1,2-dichlorobenzene	µg/L	89.8	58.0-158	69
1,2-dichloroethane	µg/L	105	51.6-163	100
1,2-dichloropropane	µg/L	74.8	22.9-117	72
1,3-dichlorobenzene	µg/L	128	75.5-200	110
2-hexanone	µg/L	154	23.1-277	130
4-methyl-2-pentanone	µg/L	33.5	10.1-53.6	31
benzene	µg/L	38	14.1-57.4	36
bromodichloromethane	µg/L	58.1	19.6-87.0	62
bromoform	µg/L	45.4	20.4-76.7	49
carbon tetrachloride	µg/L	82.9	68.0-118	82
chlorobenzene	µg/L	31.6	11.7-60.4	28
ethylbenzene	µg/L	42.2	15.5-68.4	40
methylene chloride	µg/L	128	45.2-285	140
styrene	µg/L	21.2	11.2-28.7	21
tetrachloroethene	µg/L	63.4	40.6-83.5	61
toluene	µg/L	104	40.0-160	99
trichloroethene	µg/L	68.7	48.8-100	67
xylene	µg/L	84.1	65.6-109	80

(*) Reported as 4-methylphenol by laboratory
NA Not analyzed

B.1.3.1.2 Matrix Spike Trends

A matrix spike is performed by the laboratory. The laboratory adds specific target analytes at known concentrations to a portion of the sample and then analyzes the sample. The laboratory compares the spiked sample results to the expected results to determine whether the sample matrix, soil or water, interferes with the analysis.

The matrix spike data are used to evaluate whether a sample matrix may interfere with the accurate and precise quantification of selected target analytes. If the matrix spike is determined to have poor accuracy (evaluated as percent recovery) or poor precision (evaluated as the relative percent difference between the spike and spike duplicate), the sample results are qualified. If the selected sample's matrix is considered similar to other samples, then the other samples are often qualified similarly. In the case of the surface water and sediment investigation, the sample locations were distant from each other and the sample matrices may be dissimilar. Because of the possible dissimilar matrices, poor matrix spike performance was not attributed to all the samples in a sample batch. WESTON, however, reviewed the matrix spike data for poor performance trends during each of the programs (Fall and Spring sampling events).

A subset (5 percent) of the samples collected for analysis was submitted with an additional request to the laboratory to perform a matrix spike. The data set shown in Table B.1.3, Summary of Water Matrix Spike Performance (Fall 1994), and Table B.1.4, Summary of Soil Matrix Spike Performance (Fall 1994), summarize the average matrix spike recoveries reported by the laboratory for the fall sample data and the standard deviations for the spike recoveries. Table B.1.5, Summary of Water Matrix Spike Performance (Spring 1995), and Table B.1.6, Summary of Soil Matrix Spike performance (Spring 1995), summarize the average matrix spike recoveries reported by the laboratory for the spring sample data and the standard deviations for the spike recoveries.

Large standard deviations indicate significant variable spike recoveries. High standard deviations were associated primarily with naturally occurring metals and anions. In the tables summarizing the standard deviations, some data points were selectively eliminated, as indicated in the footnotes. The eliminated data points represent isolated performance outliers and are not representative of the overall program. The elimination of the data points enabled the average and standard deviations for the majority of the spiked samples to be evaluated and used to evaluate the program performance.

The following observations describe the reported matrix spike data:

General

CompuChem failed to analyze many of the samples as matrix spike pairs as requested on the chain-of custody. The laboratory did, however, meet the matrix spike frequency requirement as shown in the completeness section of this report, Section B.1.3.3, by selecting other samples for spike analysis. The impact to the program due to this failure was minimal.

Additionally, CompuChem routinely failed to analyze a PETN spike with the nitroaromatic explosives spike. For the fall and spring water samples, no matrix performance data for PETN are available. For the soil samples, sufficient PETN analyses were performed to evaluate matrix performance. The impact of the lost water PETN matrix spike data can not be evaluated. However, the samples were spiked with nitroglycerin as a surrogate, and the surrogate recovery should be a good indicator of matrix performance.

Aluminum and iron were not included in the soil matrix spike. The loss of the matrix spike data can not be assessed.

Fall–Water

1. All the sulfate and two nitrogen recoveries were reported at zero percent. After reviewing the sulfate and nitrogen data, WESTON attributed the poor recovery to the spiking level used by the laboratory. In many cases the samples were spiked at 25 percent of their concentration. Small spike concentrations relative to the sample concentration are often lost due to the natural variability of the sample. Based on the raw data, the matrix spike performance is not representative of analytical performance.

2. The average thallium recoveries for filtered and unfiltered water ranged from 33 to 36 percent. These low recoveries with relatively small standard deviations represent a matrix suppression. Thallium results in the samples may be suppressed by as much as 60 or 70 percent and should be evaluated accordingly, as estimated (J, UJ).

3. The standard deviation for 4-nitrophenol was somewhat higher than the other analytes. The higher standard deviation for this compound is not unusual. Nitroaromatic compounds are often more difficult to accurately quantitate by GC/MS.

4. The standard deviation for 1,3,5-trinitrobenzene (TNB) was significantly higher than the standard deviation for the other explosive matrix spike compounds. Because of the small number of matrix spikes analyzed for explosives in water, there is no evidence of a trend. Because the standard deviations for the other explosive matrix spike analytes were small, the TNB variance is probably an anomaly.

Fall–Soils

1. The antimony average recovery was suppressed to 48 percent and the standard deviation was 22 percent. These matrix spike results may indicate a slight bias. Antimony results should be evaluated as estimated (J, UJ) with a potential negative bias of 50 percent.

2. High standard deviations were also reported for lead and manganese. The higher variation was probably caused by the heterogeneity of the soil sample. Because these analytes are typically present in the soil, the natural variation of these elements in the soil may have biased the data slightly. The data are usable as presented.

3. Thorium^{230}, uranium^{234}, and uranium^{238} were determined to have high standard deviations for the matrix spike results. After reviewing the data, WESTON was unable to identify one or two outliers which may have caused the high standard deviation associated with thorium^{230} and uranium^{234}. WESTON's review did indicate the high standard deviations may be attributable to five or six of the 20 matrix spike results reported by the laboratory. Based on the frequency of these questionable recoveries, the reported sample results for these isotopes should be qualified estimated (J, UJ).

Spring–Water

1. The standard deviation for N-nitroso-diphenylamine was higher than the other semi-volatile matrix spike analytes. The higher standard deviation is not unexpected since laboratories often have trouble quantitating nitroaromatic compounds. Based on the other nitroaromatic spike analyte, 4-nitrophenol, no definitive deficiency is evident.

2. The standard deviations for explosives were very high and the matrix spike recoveries were low. WESTON reviewed the data and found that only two matrix spike pairs were performed. One of the spike pairs was reported with very low recoveries. The laboratory control sample associated with the poor matrix spike recovery was acceptable. Because of the limited data, no programmatic impact could be identified.

3. The aluminum and iron standard deviations in the unfiltered water samples were higher than for the other analytes. The deviations is probably attributable to uneven distribution of the particulate in the samples. Because aluminum and iron are naturally occurring in the soils, the uneven distribution of particulates may have increased variability of the determined sample concentrations. The positive results should be treated as estimated (J, UJ).

4. Thallium recoveries were better in the spring water samples than the fall samples, but were still suppressed by about 40 percent. Because of the apparent matrix suppression, the results should be treated as qualified estimated (J, UJ).

Spring–Soils

1. The average antimony recovery was better than the fall recovery, but was still suppressed. Based on the spring data, the suppression was minimal (30 percent) and warrants no special evaluation.

2. A very high standard deviation and recovery was reported for manganese. Manganese is naturally occurring in the samples and appears to have been very unevenly distributed in the spike samples. The high standard deviation indicates manganese results in the spring samples should be treated as estimated.

Table B.1.3—Summary of Water (Total and Dissolved) Matrix Spike Performance (Fall 1994)
Page 1 of 4

Volatiles—CLP OLM 1.8 SOW 3/90					
Analyte	Average Recovery (%)	Standard Deviation (%)	Analyte	Average Recovery (%)	Standard Deviation (%)
trichloroethene	98.0	5.7	1,1-dichloroethene	97.6	8.5
chlorobenzene	98.0	3.7	benzene	95.3	2.4
toluene	100.0	4.1	acrylonitrile	96.4	17.2
acetonitrile	116.0	24.3			
Semi-volatiles—CLP OLM 1.8 SOW 3/90					
1,2,4-trichlorobenzene	72.3	8.0	1,4-dichlorobenzene	69.3	8.1
2-chlorophenol	75.1	6.8	4 -chloro-3-methylphenol	84.5	7.7
4-nitrophenol	72.3	20.5	acenaphthene	69.4	8.2
N-nitroso-diphenylamine	87.5	10.8	pentachlorophenol	74.8	15.7
phenol	76.5	10.7	pyrene	64.1	14.9
2,4-dinitrotoluene	79.6	7.1			

Table B.1.3—Summary of Water (Total and Dissolved) Matrix Spike Performance (Fall 1994)
Page 2 of 4

Pesticides/PCBs—CLP OLM 1.8 SOW 3/90					
Analyte	Average Recovery (%)	Standard Deviation (%)	Analyte	Average Recovery (%)	Standard Deviation (%)
lindane	53.5	7.9	endrin[8]	54.9	14.9
dieldrin[7]	51.8	9.8	aldrin	40.8	8.1
DDT	57.1	12.5	heptachlor	52.0	8.7
Explosives—Method 8330					
1,3,5-TNB	93.0	51.1	1,3-DNB	82	12.6
2,4,6-TNT	79.8	9.2	2,4-DNT	83.3	14.6
RDX	81.0	13.2	PETN	NR	NR
Anions					
total phosphorus[5]	102.7	2.6	total kjeldahl nitrogen[2]	48.6	50.1
nitrate-nitrite[1]	95.0	5.1	fluoride	114.5	5.9
chloride[3]	101.8	4.6	ammonia[4]	98.6	17.6
cyanide (total)	94.4	3.7	cyanide (dissolved)	94.8	4.9
total organic carbon	95.5	5.6	sulfate[6]	0	0

[1]nitrate-nitrite: Eliminated 900-000082 (0%). Average percent recovery was 71% with standard deviation 41.
[2]total nitrogen: Eliminated 900-000183 (0%,0%) and 900-000276 (0%, 0%). Average percent recovery was 48.6 with a standard deviation of 50.1. The 0 percent recovery was caused by spiking far below analyte concentration in the sample.
[3]chloride: Eliminated 900-000082 (0%). Average percent recovery was 76.4 with a standard deviation of 44.
[4]ammonia: Eliminated 900-000082 (0%). Average percent recovery was 86.3 with a standard deviation of 36.5.
[5]phosphorus: Eliminated 900-000082 (0%). Average percent recovery was 77 with a standard deviation of 44.5.
[6]sulfate: The 0 percent recoveries were caused by the laboratory spiking at concentrations significantly less than the concentration of sulfate in the sample.
[7]dieldrin: Eliminated 900-000166 (0%). Average percent recovery was 44.8 with a standard deviation of 19.2.
[8]endrin: Eliminated 900-000166 (0%). Average percent recovery was 48.0 with a standard deviation of 22.9.

Table B.1.3—Summary of Water (Total and Dissolved) Matrix Spike Performance (Fall 1994)
Page 3 of 4

Metals—CLP ILM3.0					
Analyte	Average Recovery (%)	Standard Deviation (%)	Analyte	Average Recovery (%)	Standard Deviation (%)
aluminum (total)[1]	94.1	9.4	aluminum (dissolved)	92.3	4.6
antimony (total)	93.7	3.1	antimony (dissolved)	101.0	4.1
arsenic (total)	97.9	1.9	arsenic (dissolved)	110.0	10.8
barium (total)	92.1	2.8	barium (dissolved)	96.7	5.0
beryllium (total)	90.3	2.0	beryllium (dissolved)	95.6	5.0
bismuth (total)	94.1	2.3	bismuth (dissolved)	101.0	4.0
cadmium (total)	90.9	1.2	cadmium (dissolved)	96.8	4.5
chromium (total)	91.0	1.8	chromium (dissolved)	96.0	4.9
cobalt (total)	92.0	2.4	cobalt (dissolved)	98.1	4.9
copper (total)	91.2	1.7	copper (dissolved)	96.2	3.1
iron (total)[2]	104.0	7.6	iron (dissolved)	102	8.5
lead (total)	73.9	20.9	lead (dissolved)	105	26.0
lithium (total)	93.9	3.0	lithium (dissolved)	97.2	2.2
manganese (total)	95.7	8.3	manganese (dissolved)	98.4	4.7
mercury (total)	109.0	13.1	mercury (dissolved)	108.0	5.3
molybdenum (total)	90.6	3.8	molybdenum (dissolved)	96.6	4.4

[1]aluminum: Eliminated 900-000256 (577%). Average percent of recovery was 215 with a standard deviation of 209.
[2]iron: Eliminated 900-000256 (549%). Average percent of recovery was 215 with a standard deviation of 193.

Table B.1.3—Summary of Water (Total and Dissolved) Matrix Spike Performance (Fall 1994)
Page 4 of 4

Metals—Cont'd					
Analyte	**Average Recovery (%)**	**Standard Deviation (%)**	**Analyte**	**Average Recovery (%)**	**Standard Deviation (%)**
nickel (total)	90.5	1.1	nickel (dissolved)	96.7	4.4
selenium (total)	68.2	22.4	selenium (dissolved)	69.2	8.2
silver (total)	89.2	0.9	silver (dissolved)	94.9	3.7
thallium (total)	32.6	17.6	thallium (dissolved)	35.6	13.6
tin (total)	90.4	4.5	tin (dissolved)	96.6	4.5
vanadium (total)	92.2	2.4	vanadium (dissolved)	97.7	4.7
zinc (total)	81.9	4.7	zinc (dissolved)	87.6	4.2
Radiological					
[1]americium^{241}	94.1	15.3	plutonium$^{239/240}$	99.8	15.3
radium^{226}	104	10.8	strontium^{90}	101	10.2
[2]thorium^{230}	100	12.3	[3]tritium	95.5	5.0
[4]uranium^{234}	104	17.7	uranium^{238}	102	15.6

[1]americium^{241}: Eliminated 900-000129 (2.1%). Average percent recovery was 88.9 with a standard deviation of 25.8.
[2]thorium^{230}: Eliminated 900-000054 (1330%). Average percent recovery was 156.2 with a standard deviation of 256.4.
[3]tritium: Eliminated 900-000054 (204%). Average percent recovery was 103 with a standard deviation of 28.4.
[4]uranium^{234}: Eliminated 900-000223 (188%). Average percent recovery was 109 with a standard deviation of 25.8

Table B.1.4—Summary of Soil Matrix Spike Performance (Fall 1994)
Page 1 of 4

Volatiles—Method CLP OLM 1.8 SOW 3/90					
Analyte	Average Recovery (%)	Standard Deviation (%)	Analyte	Average Recovery (%)	Standard Deviation (%)
trichloroethane	91.2	8.9	1,1-dichloroethene	92.9	15.2
chlorobenzene	96.1	9.1	benzene	94.0	9.5
toluene	102	16.5	acrylonitrile	99.5	24.8
acetonitrile	125	44.9			
Semi-volatiles—CLP OLM 1.8 SOW 3/90					
1,2,4-trichlorobenzene	81.0	14.4	1,4-dichlorobenzene	71.5	15.6
2-chlorophenol	74.9	12.2	4 -chloro-3-methylphenol	90.8	13.5
4-nitrophenol	66.3	17.5	acenaphthene	72.4	23.3
N-nitroso-diphenylamine	78.1	13.1	pentachlorophenol	74.0	18.1
phenol	78.0	12.0	pyrene[1]	82.0	10.6
2,4-dinitrotoluene	78.0	15.4			

[1]pyrene: Eliminated 900-000113 (-64%, 11%) and 900-000223 (4%), Average percent of recovery was 60.9 with a standard deviation of 44%.

Table B.1.4—Summary of Soil Matrix Spike Performance (Fall 1994)
Page 2 of 4

Pesticides/PCBs—CLP OLM 1.8 SOW 3/90					
Analyte	Average Recovery (%)	Standard Deviation (%)	Analyte	Average Recovery (%)	Standard Deviation (%)
lindane[4]	74.6	9.97	endrin[3]	77.6	10.0
dieldrin	73.2	13.6	aldrin	67.4	11.5
DDT	77.8	11.0	heptachlor[5]	79.0	11.7
Explosives—Method 8330					
1,3,5-TNB	92.9	8.4	2,4-DNT	87.1	13.2
2,4,6-TNT	87.5	4.9	RDX	93.7	11.1
2,6-DNT	99.5	12.7	PETN	87.7	13.9
Anions					
nitrate-nitrite	94.6	14.3	fluoride[1]	111	14.6
chloride	109	7.8	sulfate[2]	74.5	9.4
cyanide	92.8	16.2	total organic carbon	94.3	16.8

[1]fluoride: Eliminated results for 900-000173 (0%). Average percent of recovery was 95, with a standard deviation of 41.
[2]sulfate: Eliminated results for 900-000147 (~1500%) Average percent of recovery was 251 with a standard deviation of 469.
[3]endrin: Eliminated results for 900-000251 (4%). Average percent recovery was 73.9 with a standard deviation of 18.8.
[4]lindane: Eliminated results for 900-000251 (0%) and 900-000113 (18%, 23%). Average percent recovery was 60.3 with a standard deviation of 28.6.
[5]heptachlor: Eliminated results for 900-000113 (0%). Average percent recovery was 74.6 with a standard deviation of 21.4.

Table B.1.4—Summary of Soil Matrix Spike Performance (Fall 1994)
Page 3 of 4

Metals—CLP ILM 3.0			
Analyte	Average Recovery (%)	Standard Deviation (%)	
antimony	47.8	21.6	
arsenic	72.9	18.5	
barium	92.2	3.4	
beryllium	84.0	2.6	
bismuth	96.7	9.3	
cadmium	86.0	4.15	
chromium	81.0	12.8	
cobalt	88.6	3.0	
copper[1]	91.1	4.7	
lead[2]	77.7	26.8	
lithium	95.9	10.3	
manganese[3]	112.4	39.1	
mercury[4]	97.2	10.9	
molybdenum	88.8	5.3	

[1]copper: Eliminated 900-000223 (2441%). Average percent of recovery was 482% with a standard deviation of 876.
[2]lead: Eliminated 900-000223 (323%). Average percent of recovery was 119% with a standard deviation of 94.8.
[3]manganese: Eliminated 900-000223 (-42%). Average percent of recovery was 87% with a standard deviation of 67.
[4]mercury: Eliminated 900-000223 (0%). Average percent of recovery was 81% with a standard deviation of 37.6.

Table B.1.4—Summary of Soil Matrix Spike Performance (Fall 1994)
Page 4 of 4

Metals—Cont'd					
Analyte	**Average Recovery (%)**	**Standard Deviation (%)**			
nickel	87.5	3.3			
selenium	64.3	14.0			
silver	88.4	3.2			
[1]thallium	74.1	7.9			
tin	92.8	6.4			
vanadium	90.5	3.8			
zinc	80.0	10.5			
Radiological					
plutonium$^{239/240}$	108	14.5	strontium^{90}	100	7.7
[2]thorium^{230}	140	68.7	[3]tritium	93.7	7.4
[4]uranium^{234}	150	84.0	[5]uranium^{238}	136	68.2

[1]thallium: Eliminated 900-000147 (20%). Average percent recovery was 65.12 with a standard deviation of 21.4.
[2]thorium^{230} Unable to identify outliers clearly.
[3]tritium: Eliminated 900-000058 (1822%) and 900-000238 (620%). Average percent recovery was 298 with a standard deviation of 484.
[4]uranium^{234}: Unable to identify outliers clearly.
[5]uranium^{238}: Eliminated 900-000159 (689%). Average percent recovery was 164 with a standard deviation of 133.

Table B.1.5—Summary of Water (Total & Dissolved) Matrix Spike Performance (Spring 1995)
Page 1 of 4

Volatiles—CLP OLM 1.8 SOW 3/90					
Analyte	Average Recovery (%)	Standard Deviation (%)	Analyte	Average Recovery (%)	Standard Deviation (%)
trichloroethene	91.7	2.8	1,1-dichloroethene	90.9	8.7
chlorobenzene	92.9	2.6	benzene	94.7	3.7
toluene	93.4	2.2	acrylonitrile	103.2	11.9
acetonitrile	93.0	17.4			
Semi-volatiles—CLP OLM 1.8 SOW 3/90					
1,2,4-trichlorobenzene	78.0	7.6	1,4-dichlorobenzene	72.7	8.8
2-chlorophenol	75.5	6.2	4 -chloro-3-methylphenol	85.5	7.5
4-nitrophenol	90.0	8.7	acenaphthene	80.5	6.2
N-nitroso-diphenylamine	79.5	18.0	pentachlorophenol	92.2	10.2
phenol	77.8	7.9	pyrene	89.5	7.7
2,4-dinitrotoluene	81.5	8.3			

Table B.1.5—Summary of Water (Total & Dissolved) Matrix Spike Performance (Spring 1995)
Page 2 of 4

Pesticides/PCBs—CLP OLM 1.8 SOW 3/90					
Analyte	Average Recovery (%)	Standard Deviation (%)	Analyte	Average Recovery (%)	Standard Deviation (%)
lindane	75.0	4.5	endrin	76.2	4.5
dieldrin	75.9	5.1	aldrin	72.5	6.2
DDT	76.5	5.9	heptachlor	70.2	5.1
Explosives—Method 8330					
1,3,5-TNB	51.8	38.3	2,4-DNT	54.0	38.5
2,4,6-TNT	48.2	34.3	RDX	51.0	38.6
2,6-DNT	56.0	42.1	PETN	NR	NR
Anions					
total phosphorus[2]	78.1	25.1	total kjeldahl nitrogen[3]	98.5	8.1
nitrate-nitrite[1]	85.1	17.8	fluoride	99.4	5.96
chloride	98.5	3.4	ammonia	113	23.8
cyanide (total)	90.1	11.9	cyanide (dissolved)	98.8	5.8
total organic carbon	103	5.0	sulfate	85.1	23.4

[1]nitrate/nitrite: Eliminated 900-000307 (8%). Average percent recovery was 75.5 with a standard deviation of 30.5.
[2]total phosphorus: Eliminated 900-000350 (0%, 0%). Average percent recovery was 58.6 with a standard deviation of 40.2.
[3]total nitrogen: Eliminated 900-000350 (241%, 226%). Average percent recovery was 132 with a standard deviation of 59.07.

Table B.1.5—Summary of Water (Total and Dissolved) Matrix Spike Performance (Spring 1995)
Page 3 of 4

Metals—CLP ILM3.0					
Analyte	Average Recovery (%)	Standard Deviation (%)	Analyte	Average Recovery (%)	Standard Deviation (%)
aluminum (total)	118	29.7	aluminum (dissolved)	94.4	3.3
antimony (total)	92.1	1.9	antimony (dissolved)	96.8	3.4
arsenic (total)	99.0	7.5	arsenic (dissolved)	103	3.3
barium (total)	92.8	2.3	barium (dissolved)	102	1.7
beryllium (total)[1]	89.2	2.2	beryllium (dissolved)	94.3	0.6
bismuth (total)	98.6	3.6	bismuth (dissolved)	100	8.7
cadmium (total)	89.8	2.3	cadmium (dissolved)	97.1	0.5
chromium (total)	90.2	2.6	chromium (dissolved)	97.0	0.7
cobalt (total)	90.6	1.8	cobalt (dissolved)	98.3	0.9
copper (total)	92.9	2.2	copper (dissolved)	98.6	4.0
iron (total)	130.0	39.8	iron (dissolved)	99.7	2.7
lead (total)	91.4	2.0	lead (dissolved)	99.4	0.6
lithium (total)	96.5	4.4	lithium (dissolved)	102	1.8
manganese (total)	91.5	2.0	manganese (dissolved)	99.2	1.0
mercury (total)	99.6	9.8	mercury (dissolved)	102	11.5
molybdenum (total)	94.4	8.1	molybdenum (dissolved)	100	1.3

[1]beryllium: Eliminated 900-000310 (4000%). Previous percent recovery and standard deviation not calculated.

Table B.1.5—Summary of Water (Total & Dissolved) Matrix Spike Performance (Spring 1995)
Page 4 of 4

Metals—Cont'd					
Analyte	Average Recovery (%)	Standard Deviation (%)	Analyte	Average Recovery (%)	Standard Deviation (%)
nickel (total)	89.9	2.6	nickel (dissolved)	91.5	8.5
selenium (total)	93.9	6.8	selenium (dissolved)	89.3	14.7
silver (total)	90.2	3.0	silver (dissolved)	94.8	3.3
thallium (total)	63.0	6.5	thallium (dissolved)	57.9	36.3
tin (total)	88.4	1.7	tin (dissolved)	103	8.7
vanadium (total)	91.6	2.2	vanadium (dissolved)	100	1.4
zinc (total)	94.6	2.9	zinc (dissolved)	103	5.6
Radiological					
[1]americium^{241}	95.8	10.4	plutonium$^{239/240}$	103	16.4
radium^{226}	99.4	13.2	strontium^{90}	97.4	6.1
thorium^{230}	86.4	12.3	tritium	96.2	5.1
uranium^{234}	105	13.5	uranium^{238}	96.9	17.2

[1]americium^{241}: Eliminated 900-000379 (235). Average percent recovery was 106 with a standard deviation of 43.

Table B.1.6—Summary of Soil Matrix Spike Performance (Spring 1995)
Page 1 of 4

Volatiles—CLP OLM 1.8 SOW 3/90					
Analyte	Average Recovery (%)	Standard Deviation (%)	Analyte	Average Recovery (%)	Standard Deviation (%)
trichloroethene	107	13.8	1,1-dichloroethene	89.0	14.1
toluene	109	12.3	benzene	111	10.5
chlorobenzene	109.3	11.5	acrylonitrile	108	36.4
acetonitrile	75.1	25.9			
Semi-volatiles—CLP OLM 1.8 SOW 3/90					
1,2,4-trichlorobenzene	62.7	19.4	1,4-dichlorobenzene	53.6	12.9
2-chlorophenol	56.7	8.2	4 -chloro-3-methylphenol	67.4	15.1
4-nitrophenol	57.8	14.5	acenaphthene	63.2	18.3
N-nitroso-diphenylamine	59.9	21.0	pentachlorophenol	51.4	19.6
phenol	56.5	8.7	pyrene[1]	66.2	21.7
2,4-dinitrotoluene	59.7	18.9			

[1]pyrene: Eliminated 900-000426 (22%, -12%). Average percent recovery was 50.9 with a standard deviation of 33.6.

Table B.1.6—Summary of Soil Matrix Spike Performance (Spring 1995)
Page 2 of 4

Pesticides/PCBs—CLP OLM 1.8 SOW 3/90					
Analyte	Average Recovery (%)	Standard Deviation (%)	Analyte	Average Recovery (%)	Standard Deviation (%)
lindane	71.8	7.2	endrin	80.8	12.0
dieldrin	78.7	17.3	aldrin	68.1	13.5
DDT	77.8	12.7	heptachlor	70.2	10.4
Explosives—Method 8330					
1,3,5-TNB	131	12.1	2,4-DNT	128	12.7
2,4,6-TNT	110	5.8	RDX	113.0	4.3
2,6-DNT	131	12.9	PETN	90.7	4.5
Anions					
nitrate-nitrite[1]	116	13.9	fluoride	100	9.1
chloride	109	8.8	sulfate	86.8	14.5
cyanide[2]	83.4	15.8	total organic carbon	90.0	13.1

[1]nitrate/nitrite: Eliminated 900-000382 (0%, 0%). Average percent recovery was 92.7 with a standard deviation 48.0.
[2]cyanide: Eliminated 900-000426 (35%). Average percent recovery was 73.7 with a standard deviation of 24.

Table B.1.6—Summary of Soil Matrix Spike Performance (Spring 1995)
Page 3 of 4

Metals—CLP ILM3.0			
Analyte	Average Recovery (%)	Standard Deviation (%)	
antimony	66.9	16.0	
arsenic	94.9	16.5	
barium	92.1	5.8	
beryllium	82.6	2.8	
bismuth	99.7	9.5	
cadmium	85.9	2.4	
chromium	88.8	2.0	
cobalt	89.0	3.0	
copper	93.1	5.9	
lead	87.1	15.0	
lithium	96.4	9.0	
manganese	184	110.0	
mercury	102	12.9	
molybdenum	91.6	3.8	

Table B.1.6 – Summary of Soil Matrix Spike Performance (Spring 1995)
Page 4 of 4

Metals – Cont'd					
Analyte	Average Recovery (%)	Standard Deviation (%)			
nickel	84.1	9.4			
selenium	73.5	15.0			
silver	87.7	6.2			
thallium	71.5	8.1			
tin	96.5	7.3			
vanadium	91.6	2.5			
zinc	93.4	12.1			
Radiological					
plutonium$^{239/240}$	101	10.9	strontium^{90}	97.4	7.6
thorium^{230}	95.8	21	tritium	101	19.5
uranium^{234}	105	22.6	uranium^{238}	82.8	22.7

[1]thorium^{230}: Eliminated 900-000415 (201%). Average percent recovery was 101 with a standard deviation of 30.
[2]uranium^{234}: Eliminated 900-000384 (14%), and 900-000472 (37%). Average percent recovery was 97.4 with a standard deviation of 32.

B.1.3.2 Precision

Precision is a measure of mutual agreement among individual measurements of the same property, usually under similarly prescribed conditions. It is a measure of how close repeated analyses agree with each other. Precision is expressed as the standard deviation among a group of measurements or as a relative percent difference between two measurements. For the surface water and sediment investigation, precision was evaluated based on laboratory duplicates, field duplicates, and matrix spike pairs, and on the relative standard deviation from calibration curves. The surface water and sediment investigation included the QAPP-specified frequency of laboratory duplicates, field duplicates, and matrix spike pairs. Appendices B.2 and B.4 summarize the precision results for this investigation based on data validation. In addition to validating the samples to evaluate precision, WESTON also queried the field duplicate data from the Mound Environmental Information Management System (MEIMS) database. The results of the field duplicate evaluation by WESTON are summarized below.

Field Duplicates

The OU9 QAPP provides guidelines for evaluating the relative percent differences between water field duplicates. However, the QAPP does not provide guidelines for evaluating the relative percent difference for soil/sediment field duplicates nor for evaluating whether deficient field duplicate percent differences indicate a potential systematic deficiency. This section describes the guidelines applied to evaluate the soil/sediments and whether a systematic impact is indicated by the data.

Evaluation Criteria

Because of the inherent heterogeneous nature of soil and sediment samples, WESTON decided soil field duplicate relative percent differences greater than 50 percent may indicate a potential precision bias.

The following additional criteria were applied to both the soil and the water relative percent differences to determine whether the program precision was impacted.

1. If the laboratory qualified both results (J) for organic analytes, or (B) for metals, the relative percent difference was not evaluated. Sample results reported below the reporting limit are often highly variable by definition, and incorporating these results into the process would bias the determination of whether the data were systematically impacted.

2. The results which passed criteria 1 were then further evaluated to determine whether a systematic deficiency was present. If only one or two data points passed criteria 1, then these data points were not further evaluated on the basis that the sample set was too small to be statistically representative. If more than two points passed criteria 1, and more than half of these points exceeded either 50 percent for soils or the QAPP specified limits for waters, the precision of the data for the analyte may have been systematically affected.

Fall Water Samples

Following the guidelines described in this section of the report, WESTON determined the analytes listed in Table B.1.7 may exhibit poor systematic precision.

Only the analytes in the unfiltered water fraction exhibited poor precision characteristics.

Table B.1.7—Analytes in Fall Water Samples with Poor Precision

aluminum (total)	potassium^{40}	uranium^{238}
iron (total)	radium^{226}	zinc (total)
potassium (total)	thorium^{230}	

Aluminum, iron, and potassium are common at very high levels in the sediments and soils. Because of the high levels in the sediments and soils for these analytes, it is not surprising that the analytical precision for these analytes in the unfiltered water samples exceeded criteria. The imprecision was probably the result of unevenly distributed particulate material. Based on this probable cause, it is reasonable to treat the reported results for these analytes as estimated. However, the imprecision probably does not impact the data usability.

Uranium^{238} was not well represented in the field duplicate data, and should not be treated as a systematically impacted value. Many of the values reported for uranium^{238} were near, within a factor of two, of the reporting limit. Values which are close to an analytical reporting limit are often variable.

The results for potassium^{40} and thorium^{230} which resulted in relative percent differences above the acceptance criteria were all reported below the QAPP reporting limit. The variability of this data may be attributable to the relatively low activities.

The results for radium^{226} which resulted in relative percent differences above the acceptance criteria were all reported at very low levels, 0.04-0.26 pCi/L. The values are less than the QAPP reporting limit and may be near the MDA. Consequently, the value may be naturally variable.

No explanation for the zinc variation in the water samples is apparent from the review of the electronically queried data. The positive zinc results should be treated as estimated (J, UJ). The possible error cannot be estimated.

Fall Soil Samples

Following the guidelines described in this section of the report, WESTON determined the analytes listed in Table B.1.8 may have exhibited poor systematic precision.

Table B.1.8—Fall Soil Analytes with Poor Precision

acetone	Aroclor 1254	benzo(a)anthracene
benzo(a)pyrene	benzo(b)fluoranthene	benzo(k)fluoranthene
chrysene	fluoranthene	indeno(1,2,3-cd)pyrene
phenanthrene	pyrene	plutonium^{238}
plutonium$^{239/240}$	chloride	nitrate
molybdenum		

Acetone is a common laboratory contaminant and many of the field duplicate results for acetone were qualified (B) by the laboratory. The (B) qualifier indicates that the associated blank was contaminated with acetone. The poor field duplicate RPDs for acetone are probably attributable to laboratory contamination. Assuming the

precision deficiencies are the result of laboratory contamination, acetone results should be treated as estimated values.

Three samples, 900-000244, 900-000068, and 900-000088, were repeatedly associated with poor relative percent differences for the following polynuclear aromatic analytes: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene.

The poor precision for plutonium is attributable to the extremely low levels reported in the field duplicates. Because the activity of plutonium in the field duplicate samples was close to the MDA, the results were more variable. The variation is natural and not indicative of poor systematic precision.

No explanation for the Aroclor-1254, chloride, nitrate, and molybdenum variation in the soil samples was apparent from the review of the electronically queried data. The positive sample results should be treated as estimated (J, UJ). The potential error cannot be determined.

Spring Water Samples

Following the guidelines described in this section of the report, WESTON determined the analytes listed in Table B.1.9 may have exhibited poor systematic precision.

Table B.1.9—Spring Water Analytes with Poor Precision

total nitrogen	total phosphorus	potassium (total)
potassium^{40}	uranium^{238}	zinc (total)

Inorganic potassium is common at very high levels in the sediments and soils. Because of the high levels of potassium in the sediments and soils, it is not surprising that there were problems with precision for inorganic potassium in the unfiltered water samples. The imprecision was probably the result of unevenly distributed particulate material. Based on this probable cause, the potassium results should be treated as estimated. The imprecision should not impact data usability.

Uranium^{238} was not well represented in the field duplicate data, and should not be treated as a systematically impacted value. Many of the values reported for uranium^{238} were near, within a factor of two, of the reporting limit. The variation is natural and not indicative of poor systematic precision.

The results for potassium^{40} which resulted in relative percent differences above the acceptance criteria were all reported below the QAPP reporting limit. The variability of this data may be attributable to the relatively low activities.

No explanation for the nitrogen, phosphorus and zinc variation in the water samples was apparent from the review of the electronically queried data. The positive sample results should be treated as estimated (J, UJ). The potential error cannot be determined.

Spring Soil Samples

Following the guidelines described in this section of the report, WESTON determined the analytes listed in Table B.1.10 may have exhibited poor systematic precision.

Table B.1.10—Spring Soil Analytes with Poor Precision

acetone	methylene chloride	calcium
tritium	fluoride	fluoranthene
magnesium	pyrene	

Acetone and methylene chloride are common laboratory contaminants and many of the field duplicate results for these analytes were qualified (B) by the laboratory. The (B) qualifier is used indicate that the associated laboratory blank was contaminated with the qualified analyte. The poor field duplicate RPD's for methylene chloride and acetone are probably the result of laboratory contamination. Acetone and methylene chloride results should be treated as estimated values.

Calcium and magnesium were present at very high levels in the soils and are naturally occurring. The variations for these analytes are attributable to the heterogeneous nature of soils and not unexpected. The results for these analytes can be treated as estimates.

The tritium variation may be the result of high moisture content (>75%) in the sediment samples. Many of these samples were "slurry like" during sampling and settled during storage at the laboratory into a soil layer and an aqueous layer. If the water content was significantly different between sample aliquots, the tritium results which are proportional to water content, would also be significantly different and result in poor precision. The water-saturated sediment samples may have caused both the field team and the laboratory to not obtain a representative sample. Because the variation is probably caused by an inherent problem with the sample matrix, the data are usable as reported.

No explanation for the fluoranthene, pyrene, and fluoride variation in the soil samples was apparent from the review of the electronically queried data. The positive sample results should be treated as estimated (J, UJ). The potential error cannot be determined.

B.1.3.3 Completeness

Completeness is a measure of the amount of data obtained from a measurement system that achieves the project goals, compared to the amount expected under normal conditions. Completeness is affected by unexpected conditions that may occur during the data collection process. Examples of occurrences that reduce the amount of data collected include the following: a dry monitoring well, an instrument breakdown, or a loss of a sample extract in the laboratory. For the surface water and sediment investigation, WESTON calculated the completeness for sample collection, field measurements, and laboratory analyses according to the procedure outlined in Table 3.4 in the OU 9 QAPP. Results of the calculations are presented in Table B.1.11 for the field work and in Table B.1.12 for the laboratory work.

Table B.1.11—Field Sampling Completeness

Analysis Type	Planned Locations			Unplanned Locations	Total Samples	Field Blanks	Ambient Blanks	Sample Bank Blank	Trip Blanks	Field Duplicates	Matrix Spike
	Expected	Sampled	Percent								
Fall 1994 Sediment & Soil Sample Collection											
Radiological[1]	146	136	93	0	136	0	0	0	0	11	6
Volatiles	139	129	93	0	129	0	0	0	0	11	6
Semi-volatiles	109	101	93	0	101	0	0	0	0	11	5
Pesticides/PCB	147	137	93	0	137	0	0	0	0	10	6
Explosives	88	82	93	0	82	0	0	0	0	8	4
Inorganics	147	137	93	0	137	0	0	0	0	11	6
Anions[2]	147	137	93	0	137	0	0	0	0	11	6
Fall 1994 Surface Water Sample Collection											
Radiological[1]	81	67	83	2	69	8	0	0	0	7	4
Volatiles	60	56	93	2	58	8	6	0	37	6	3
Semi-volatiles	49	47	96	2	49	8	0	0	0	5	3
Pesticides/PCB	81	67	83	2	69	8	0	0	0	5	4
Explosives	34	32	94	0	32	8	0	0	0	5	1
Inorganics	81	67	83	2	69	8	0	0	0	7	4
Anions[2]	81	67	83	2	69	8	0	0	0	7	4
Field parameters	81	67	83	2	69	0	0	0	0	0	0
Spring 1995 Sediment Sample Collection											
Radiological[1]	115	113	98	0	113	12	0	0	0	12	6
Volatiles	96	94	98	0	94	11	6	6	8	9	6
Semi-volatiles	63	61	97	0	61	12	0	0	0	6	4
Pesticides/PCB	114	112	98	0	112	12	0	0	0	12	6
Explosives	46	46	100	0	46	12	0	0	0	6	3
Inorganics	115	113	98	0	113	12	0	0	0	12	6
Anions[2]	115	113	98	0	113	12	0	0	0	12	6
Spring 1995 Surface Water Sample Collection											
Radiological[1]	81	77	95	2	79	8	0	0	0	8	4
Volatiles	66	62	94	2	64	7	5	4	44	6	4
Semi-volatiles	36	34	94	2	36	8	0	0	0	4	3
Pesticides/PCB	79	75	95	2	77	8	0	0	0	8	4
Explosives	29	29	100	0	29	7	0	0	0	4	2
Inorganics	81	77	95	2	79	8	0	0	0	8	4
Anions[2]	81	77	95	2	79	8	0	0	0	8	4
Field parameters	81	77	95	2	79	0	0	0	0	0	0

[1]Radiological: Completeness was based on plutonium^{238}. It was assumed that if plutonium^{238} was analyzed and reported, all other radiological parameters were also performed, except tritium (see CAR #003).

[2]Anions: Completeness was based on chloride. It was assumed that if chloride was analyzed and reported, all other anions and general chemistry tests were performed.

Note 1: The discrepancy between expected and sampled is documented in CAR #067. The deficiencies were generally attributable to no sample material at the designated locations.

Note 2: Several locations were eliminated from the project scope by EG&G and are documented in CAR #067. Eliminated locations were not included as expected sample locations.

Table B.1.12—Laboratory Completeness

Analysis Type	Submitted Samples	Lab Results	Percent Complete	Requested Matrix Spike	Analyzed Matrix Spikes
Fall 1994 Sediment & Soil Samples					
Radiological[1]	136	136	100%	6	>>6
Volatiles	129	129	100%	6	9
Semi-volatiles	101	101	100%	5	7
Pesticides/PCB[3]	137	137	95.6%	6	9
Explosives	82	84	102%	4	5
Inorganics	137	137	100%	5	9
Anions[2]	137	137	100%	5	10
Fall 1994 Surface Water Sample Collection					
Radiological[1]	69	69	100%	4	>>4
Volatiles	58	58	100%	3	4
Semi-volatiles	49	49	100%	3	5
Pesticides/PCB[3]	69	69	99.7%	4	4
Explosives	32	31	97%	1	4
Inorganics	69	69	100%	4	4
Anions[2]	69	69	100%	4	4
Spring 1995 Sediment & Soil Sample Collection					
Radiological[1]	113	113	100%	6	>>6
Volatiles	94	94	100%	6	7
Semi-volatiles	61	61	100%	4	4
Pesticides/PCB[3]	112	112	96.2%	6	6
Explosives	46	46	100%	3	3
Inorganics	113	113	100%	6	5
Anions[2]	113	113	100%	6	5
Spring 1995 Surface Water Sample Collection					
Radiological[1]	79	79	100%	4	>>4
Volatiles	64	64	100%	4	5
Semi-volatiles	36	35	97%	3	3
Pesticides/PCB[3]	77	77	99.9%	4	4
Explosives	29	29	100%	2	2
Inorganics	79	79	100%	4	4
Anions[2]	79	79	100%	4	4

[1]Radiological: Completeness was based on plutonium^{238}. It was assumed that if plutonium^{238} was analyzed and reported, all other radiological parameters were also performed, except tritium (see CAR #003).

[2]Anions: Completeness was based on chloride. It was assumed that if chloride was analyzed and reported, all other anions and general chemistry tests were performed.

[3]Pesticides: In 1996, all pesticide results were validated due to severe systematic problems identified during data assessment. Unlike the other percentages for completeness, the pesticide percent completeness accurately represents data usability.

NOTE: This table only shows completeness in terms of data received from the laboratory, and not in terms of usability. Because 100% data validation was not performed, definitive data usability could not be calculated.

B.1.3.4 Representativeness

Representativeness expresses the degree to which data accurately and precisely represent characteristics of a population, parameter, variation, sampling point, process condition, or environmental condition. Data representativeness for this project is achieved by implementing approved sampling procedures and analytical methods that will generate data representative of the site conditions. Sampling and analysis were performed by the procedures described in the OU 9 QAPP with only minor deviations as noted in Table B.1.14, Plan Change Notification Summaries; Table B.1.15, Investigation Specific Plan Change Notice Summaries; and Table B.1.16, Corrective Action Report Summaries. The tables itemize the impact of the program deviations.

B.1.3.5 Comparability

Comparability expresses the confidence with which one data set can be compared with another. Comparability of data sets generated from this investigation is obtained through the implementation of specific protocols for sampling and analysis, by the use of traceable reference materials for laboratory standards, by expressing results in comparable concentration units, and by participation of the laboratories in external PE programs. These protocols are defined in the OU 9 QAPP.

Several deviations to the OU 9 QAPP occurred during the analysis of the analytes and were recorded on either Plan Change Notifications or Corrective Action Reports.

WESTON considers that none of the deviations affected the usability or future comparability of the data. Tables B.1.15 through B.1.16 summarize the deviations and any potential impacts.

In addition to the changes documented as plan changes, EG&G lowered the reporting limits for several radionuclides in their subcontract to the laboratory. Table B.1.13 lists the reporting limit changes.

Table B.1.13–Revised Radioisotope Reporting Limits

Radioisotope	Reporting Limit (pCi/g)
plutonium isotopes	0.01
thorium isotopes	0.10
uranium isotopes	0.10
strontium^{90}	0.50

Split Samples

EG&G Mound also initiated a split sampling program during the surface water and sediment investigation. The split sampling program was designed to collect data on the comparability of data between laboratories.

WESTON evaluated the split sample results queried from the database against the requirements used for field duplicates. In general there were insufficient split sample data to draw definitive conclusions. Based on the limited data set, WESTON made the following observations:

1. There were too few positive water results or too few split water samples to identify any pattern or potential observation.
2. The soil inorganic (metals) results were generally comparable. Because metals are naturally present in the samples, there were more positive data points for metals than the other analytes and a possible performance pattern was better defined.
3. The soil radiological analytes were also generally comparable. Interestingly, only plutonium and thorium exceeded the 50 percent relative percent difference criteria for soil field duplicates.
4. The soil semi-volatile analytes, primarily Polynuclear Aromatic Hydrocarbons (PAH), exceeded the 50 percent criteria. The variability may be attributable to their environmental distribution relative to the sampling procedures.
5. The anions results also generally exceeded 50 percent criteria for soils.

Because of the extremely limited data set, these observations are unusable for qualifying data. However, these observations may be usable for improving the split sample process at EG&G Mound.

Table B.1.14–Plan Change Notification Summaries OU9 QAPP
(Table includes all notifications from inception of OU9 QAPP, revision 3)

Change Number	Date	Description	Impact
PCN-300	2 Sep 93	The chain-of-custody form used during the project was revised and was no longer identical to the QAPP specification. The plan change was implemented to document the use of the revised chain-of-custody form.	No impact to the data quality.
PCN-301	2 Sep 93	The QAPP-specified sample identification system was incorrect and not compatible with the WESTON electronic database. The revised sample identification system for the groundwater investigation was documented in this plan change.	No impact to the data quality.
PCN-302	25 Sep 93	Revision 3 of the QAPP specified the use of 4-nitrobutene as a PETN surrogate. However, in preparation for analyzing PETN, the laboratory was unable to obtain 4-nitrobutene. The laboratory recommended the use of nitroglycerin instead of 4-nitrobutene.	Since 4-nitrobutene had not been previously used as a PETN surrogate during the OU 9 program, the use of a nitroglycerin did not impact the data quality.
PCN-303	25 Sep 93	The worksheets specified in the QAPP for radiological analysis contained several deficiencies that were identified during the EG&G Mound Hydrogeologic Investigation data validation effort. The radiological worksheets were updated to correct these deficiencies and this plan change documents the implementation of the revised forms.	No impact to the data quality.
PCN-304	18 Oct 93	The method specified for explosives in the QAPP changed in Revision 3 from a USATHAMA method to an EPA method. However, some USATHAMA calibration requirements were accidentally left in the QAPP. This plan change documents the correction of the explosives calibration criteria to the EPA method criteria.	The error was corrected before the samples were analyzed and the data quality was not impacted.
PCN-305	28 Jan 94	Following the September 1993 assessment, the audit team identified the rigid checklist structure as a problem and recommended the checklist be revised. The QAPP laboratory audit checklist was modified per a quality assessment evaluation and is documented in the plan change.	No impact to the data quality.

Table B.1.14–Plan Change Notification Summaries (Cont'd)

Change Number	Date	Description	Impact
PCN-306	9 Feb 94	The data validation worksheets for explosives were not updated in Revision 3 of the QAPP to match EPA method 8330, nor were data validation worksheets for method 8021 and 8030 specified in the QAPP. This plan change documents the correction of the method 8330 worksheets, and the inclusion of method 8021 and 8030 worksheets into the QAPP.	No impact to the data quality.
PCN-307	21 Feb 94	When acrolein was added as an 8030 surrogate through an investigation specific plan change, the recovery limits were not included. This plan change was implemented to extend the addition of the surrogate to the program and to specify the recovery limits for the surrogate recovery.	No impact to the data quality.
PCN-308	21 Feb 94	Laboratory data completeness forms for methods 8021 and 8030 were generated. Prior to developing these forms, the laboratory had to line out the inappropriate items listed on the CLP volatile organic analysis data completeness checklist.	No impact to the data quality.
PCN-309	3 Mar 94	Section 4.12 in Appendix H, data validation guidelines for method 8021, was modified to include surrogate qualification criteria. The surrogate guidelines had not been implemented prior to this investigation, and were found to be too general. This plan change documents the change of the surrogate qualification guidelines for method 8021.	No impact to the data quality.
PCN-310	9 Mar 94	Not applicable to surface water/sediment investigation.	No impact to the data quality.
PCN-311	9 Mar 94	Not applicable to surface water/sediment investigation.	No impact to the data quality.
PCN-312	30 Mar 94	Amended the WESTON Quality Assurance Management Plan to permit the use of Investigation-Specific Plan Change Notices and Plan Change Notices.	No impact to the data quality.
PCN-313	2 Mar 94	The Quality Assurance Officer, Marty Mitchell, specified in the OU 9 QAPP was replaced by Jake Alexander.	No impact to the data quality.
PCN-314	9 Sep 93	Added data validation guidelines for use with laboratory control sample recoveries for organic CLP analysis.	No impact to the data quality.
PCN-315	23 Aug 94	The explosives data validation worksheets developed under PCN-306 included separate forms for nitroaromatic explosive compounds and PETN, a special explosive compound. While the use of two sets of forms did not impact the quality of the validation, it did result in two reports and was very inefficient. This plan change documents the inclusion of PETN on the nitroaromatic worksheets and the elimination of the PETN only worksheets.	No impact to the data quality.

Table B.1.14–Plan Change Notification Summaries (Cont'd)

Change Number	Date	Description	Impact
PCN-316	21 Sep 94	Not applicable to program.	NA
PCN-317	26 Aug 94	The blank data validation guidelines for radiological analyses were revised due to the rejection of usable data. See CAR C049.	No impact to the data quality.
PCN-318	1 Jul 94	Not applicable to program.	NA
PCN-319	1 Sep 94	Not applicable to program.	NA
PCN-320	14 Oct 94	Not applicable to program.	NA
PCN-321	29 Jun 94	QAPP established an LCS validation which resulted in rejection of usable data. This PCN (321) revises the criteria. (See CAR C059).	No impact to the data quality.
PCN-322	15 Mar 95	Effective 5 December 1994, WESTON QAO has changed from Mr. Jake Alexander to Mr. Krishnan.	No impact.
PCN-323	26 Jun 95	SOP 6.7 contains equation - standard deviation (confusing). Standard deviation = (X/5)1/2. Could be considered (X divided by 5) multiplied by ½. Should be calculated as square root of X divided by 5.	No impact.
PCN-324	6 Jun 95	Added specification for split sample identification.	No impact.
PCN-325	9 Jun 95	EG&G Mound revised their screening procedure. The QAPP alludes to screening requirement, but does not cite specific procedure.	No impact.
PCN-326	2 Jan 96	Marty Mitchell named as the QAO. Replaced Mr. Krishnan.	No impact.
PCN-327	19 Feb 96	John Price replaces William Little as WESTON project manager.	No impact.

CLP-Contract Laboratory Program
EPA-U.S. Environmental Protection Agency
LCS-laboratory control sample
NA-Not Applicable
QAPP-Quality Assurance Program Plan
USATHAMA-U.S. Army Toxic and Hazardous Materials Agency
VOC-volatile organic compound

NOTE: A plan change is not required for a QAPP revision and was not issued. However, it is appropriate to note that the OU9-QAPP was revised in April 1995. The revision includes a significant change to data validation. The revised QAPP only required 10% data validation.

Table B.1.15–Investigation Specific Plan Change Notification Summaries

Change Number	Date	Description	Impact
ISPCN-001	21 Sep 94	SOW 001 & SOW 002, Table 3.3 Changes to PETN analyses, including surrogate and wavelength.	No impact. Change supported by lab verification test.
ISPCN-002	21 Sep 94	Table 4.1, Table 3.2 Requested change for EPA method 365.3 vs. 365.1 in analysis of total phosphorus.	No impact.
ISPCN-003	21 Sep 94	Table 4.1, Table 3.2 Requested change for EPA method E351.2 vs. E351.3 in performance of total kjeldahl nitrogen.	No impact.
ISPCN-004	21 Sep 94	Appendix B, Mod A Requested Induction Coupled Plasma (ICP) spectroscopy for analyses of potassium.	No impact.
ISPCN-005	21 Sep 94	Table VI.1, Appendix B., Mod C Must drop analyte (yttrium) from the lanthanide analyses series because target cannot be measured.	No corrective action possible.
ISPCN-006	22 Sep 94	Appendix B, Mod A Smith-Hieftje background correction instead of Zeeman correction for GFAA analyses	No impact on data quality.
ISPCN-007	21 Sep 94	Table VI.1 Sr-90 analyzed by scintillation instead of beta gas flow proportional analysis.	Only affected split sample. No impact on primary data quality.
ISPCN-008	22 Sep 94	Appendix C Request thermal distillation vs. cryogenic distillation to perform tritium preparation procedure.	Only affected split sample. No impact on primary data quality.
ISPCN-009	14 Oct 94	Section 6 Sample preparation variations for CLP pesticide and semi-volatile analyses.	Changes approved under USEPA CLP contract.
ISPCN-010	16 Sep 94	Unlike all other OU-9 Investigations lab assessments, CompuChem Environmental Lab could not pulverize or crush soil samples prior to rad sample and prep analysis.	May reduce split sample comparability. No effect on primary data.
ISPCN-011	14 Oct 94	Section 6 and Appendix C Request that lab(s) be permitted to use two HPLC columns in series.	No impact on data quality.

Table B.1.15–Investigation Specific Plan Change Notification Summaries (Cont'd)

Change Number	Date	Description	Impact
ISPCN-012	24 Oct 94	Geotechnical lab assessment has been determined unnecessary.	No impact to data quality.
ISPCN-013	17 Apr 95	Sample code changed from hyphenated 9-digit code to six digit code.	No impact to data quality.
ISPCN-014	17 Apr 95	Split samples will not be collected during the high flow sampling activity.	No impact. Split samples not required by QAPP
ISPCN-015	24 Oct 94	Geotechnical lab assessment will not be performed.	See ISPCN-012
ISPCN-016	1 Sep 94	5-gallon buckets that are not certified clean acceptable.	No impact on geotechnical data quality.
ISPCN-017	24 Apr 95	Initiated for clarification purposes only. Samples marked with check in MS box & MSD box will include: Portion for regular analysis; portion matrix spike analysis; and portion for duplicate analysis.	No impact.
ISPCN-018	24 Apr 95	Initiated for clarification purposes only. Ambient blanks and sample bank blanks will be collected at frequency of one in every twenty samples. Followed on a per matrix basis.	No impact.
ISPCN-019	28 Apr 95	Checklists required by various field procedures not appropriate to SW&SED Investigation. Ones that are appropriate are to be implemented.	No impact.
ISPCN-020	28 Apr 95	QAPP requires field blanks taken for water samples only. Field blanks will continue to be used for both water and soil matrices.	No impact.
ISPCN-021	28 Apr 95	QAPP specifies calibration of the pH meter using two buffers. Calibration of pH meter is conducted using three buffers.	No impact.
ISPCN-022	28 Apr 95	QAPP specifies using a YSI 5739 instrument for measurement of dissolved oxygen.	Instrument change does not impact data quality.
ISPCN-023	28 Apr 95	QAPP specifies use of a HACH One portable pH meter to measure redox potential. Instrument used for measurement of redox potential incorporated in YSI 3500 meter, not one specified in SOP 2.2.	Instrument change does not impact data quality.
ISPCN-024	28 Apr 95	On 17 April 1995, Jim Rigano requested WESTON not to collect split samples. In May 1995, response to poor audit results of CompuChem, Rigano requested WESTON resume split sample collection.	Split samples not required by QAPP. No impact.
ISPCN-025	28 Apr 95	Some forms required to be used by QAPP SOP 2.2 are not applicable to SW&SED investigation. Forms in SOP 2.2 not being used are Appendix 5.4 and 5.5.	No impact.
ISPCN-026	28 Apr 95	At the time Jim Rigano specified split samples should be collected to monitor lab performance, a criteria for analytical results was not specified.	No impact. Split samples are not required.

Table B.1.16–Corrective Action Report Summaries

Change Number	Date	Description	Impact
CAR-001	21 Sep 94	Quanterra-Denver performs sulfate method 375.4	Affects split sample analysis. No impact on primary data.
CAR-002	21 Sep 94	Quanterra-Denver performs sulfate method 375.4	Error corrected. No impact.
CAR-003	21 Sep 94	Sediment samples submitted for tritium were received by lab with a sediment and aqueous layer.	Significant corrective action. See CAR for details.
CAR-004	21 Sep 94	Matrix Spike frequency not meet for first set of 20 samples.	MS/MSD date slightly less representative.
CAR-005	21 Sep 94	Frequency not met for first field batch of split samples. Only one sample collected for a batch of 20 samples.	No split sample requirement in QAPP. No impact.
CAR-006	23 Sep 94	Incorrectly numbered VOC sample on Chain of Custody.	No impact. Error corrected.
CAR-007	27 Sep 94	Improper changes made to Chain of Custodies.	No impact. Error corrected.
CAR-008	13 Oct 94	Geotechnical fraction contaminated during shipment o lab. Lid came off and vermiculite contaminated soil.	No impact. Error corrected.
CAR-009	2 Nov 94	Final Letter/Assessment Report (to CompuChem) contained typographical errors and incorrect header and version specification.	Minor documentation error. No impact.
CAR-010	27 Jan 95	Double blind PE sample submitted to CompuChem. Lab failed to accurately quantitate analytes. CompuChem failed to achieve this for metals, anions, SVOCs, and VOCs.	See section B.1.3.1.1.
CAR-011	18 Oct 94	Chemical lab samples received at lab at temperature above requirement.	Samples were received at 14°C. Impact minimal.
CAR-012	27 Oct 94	Matrix spike frequency not met per Sampling Plan.	No impact. Lab notified to perform required MS/MSD.
CAR-013	26 Oct 94	Matrix spike frequency not met for field batch 003.	No impact. Lab notified to perform required MS/MSD.
CAR-014	2 Nov 94	COC did not list correct code for volatiles analysis.	No impact.
CAR-015	22 Nov 94	Samplers collected insufficient volume for required analyses at stations 000276 and 000277.	Re-collected sample. No impact.
CAR-016	22 Nov 94	COC did not indicate all analyses required at stations.	Error corrected. No impact.
CAR-017	22 Nov 94	COC Request for Analysis form for samples 900-000247, 900-000248, 900-000249, and 900-000251 did not specify full list of analytical testing required.	Error corrected. No impact.
CAR-018	19 Dec 94	Volatiles analyses for samples 900-000284, 900-000287, and 900-000297 should not be performed.	No data quality impact.

Table B.1.16–Corrective Action Report Summaries (Cont'd)

Change Number	Date	Description	Impact
CAR-019	22 Nov 94	The field team collected two samples from same location.	No impact. One analysis canceled.
CAR-020	22 Nov 94	COC specified analysis which were not required.	No data quality impact.
CAR-021	22 Nov 94	COC did not specify all required analyses for samples.	Error corrected. No impact.
CAR-022	23 Nov 94	Lab reported that COCs for samples 900-000263, 900-000264, and 900-000265 requested semi-volatiles. Pesticides were required instead of semi-volatiles.	Error corrected. No impact.
CAR-023	23 Jan 95	Metal and anion fractions submitted in wrong container. QAPP was not followed.	No data quality impact.
CAR-024	23 Jan 95	Fraction for chemical analysis not submitted by field team (900-000096).	Lost data point.
CAR-025	23 Jan 95	Sample fractions were not submitted to Quanterra-Richland.	Two data points lost.
CAR-026	13 Feb 95	Sample bank blanks were not collected per the QAPP.	Unable to assess whether the sample handling area impacted VOC levels in samples.
CAR-027	13 Feb 95	Ambient blanks were not collected at the correct frequency indicated in the QAPP.	Unable to assess whether ambient conditions at sample collection point may have contributed to VOC level in Fall Soils.
CAR-028	13 Feb 95	Frequency not met for soil/sediment samples.	Less precision and accuracy data.
CAR-029	13 Feb 95	Only four split samples collected for 72 waters.	No data quality impact.
CAR-030	13 Feb 95	Only thirteen split samples collected for 137 soil samples.	No data quality impact.
CAR-031	6 Mar 95	James Rigano (EG&G) canceled analysis of explosives for 900-000227. Split sample was transferred to Quanterra-St. Louis lab for analysis due to the level of activity, and St. Louis lab was not approved for explosives.	No data quality impact.
CAR-032	21 Apr 95	Use of entire nine digit identification results in corruption in EDD's.	Increased EDD loading effort.
CAR-033	21 Apr 95	Chain of custody for sample 900-00366 (VOCs) did not indicate sample matrix.	Error corrected. No impact.
CAR-034	24 Apr 95	COC-sample 900-000322 (Semi-VOCs) has overwrite not initialed, dated. 900-000611 (Semi-VOCs & Pests/PCBs) initialed not dated.	No impact.
CAR-035	21 Apr 95	Vials were received pre-preserved with HCl from the supplier (Baxter).	No impact.
CAR-036	20 Apr 95	Plastic bottles not provided. Glass bottles were provided.	No impact.
CAR-037	21 Apr 95	Rad samples sent to Quanterra-Denver. Geo-tech samples sent to Quanterra-Richland.	Error corrected. Delay.

Table B.1.16–Corrective Action Report Summaries (Cont'd)

Change Number	Date	Description	Impact
CAR-038	21 Apr 95	Time not recorded on COC when relinquished.	No impact.
CAR-039	21 Apr 95	Trip blanks were only being submitted for water samples.	Unable to assess whether soil samples may have been contaminated with VOCs during shipping.
CAR-040	24 Apr 95	Copies of field logbooks are not being sent to Cincinnati office.	No impact.
CAR-041	28 Apr 95	COC not filled out per requirement.	No impact.
CAR-042	1 May 95	COC not completed per requirement. Samples did not include analysis code or number of containers.	No impact.
CAR-043	3 May 95	COC not completed as required. Did not indicate preservatives used for each container.	No impact.
CAR-044	5 May 95	COC not completed as required. Did not indicate samples for MS/MSD.	Error corrected. No impact.
CAR-045	24 May 95	COC sample 307 did not include check marks in boxes; samples 364, 365, and 643 no indication test codes.	Error corrected. No impact.
CAR-046	26 May 95	COC which included sample 000647 did not include a time relinquished.	No impact.
CAR-047	31 May 95	Holding times were not met for samples 630, 631, and 350.	Error corrected. No impact.
CAR-048	9 Jun 95	COC not completed as required. 334 & 342 did not included analyses codes.	Error corrected. No impact.
CAR-049	15 Jun 95	COC includes sample 310 for volatiles, matrix of some of the samples not indicated.	Error corrected. No impact.
CAR-050	15 Jun 95	COC chemical analysis not completed correctly.	Error corrected. No impact.
CAR-051	26 Jun 95	Audit report for Quanterra-Richland completed on 26 June 1995. Due on 19 June 1995 based on QAMP.	No impact.
CAR-052	7 Dec 95	Database unable to link some MS/MSD results with MS/MSD results with appropriate blank and CCS results. Affects very limited number of samples.	Minimal impact.
CAR-053	4 Dec 95	CompuChem failed to correctly calculate anion concentrations for majority of fall sediment/soil samples.	Delay
CAR-054	4 Dec 95	Radiological matrix spike data in MEIMS database associated with sample randomly selected from SDG.	Delay
CAR-055	29 Nov 95	SAIC performed Level II data validation of Fall samples and portion of Spring samples.	Unnecessary for review.
CAR-056	29 Nov 95	CompuChem did not perform SVOC analysis as specified on COC for samples 900-000333 and 900-000647.	Lost data points

Table B.1.16–Corrective Action Report Summaries (Cont'd)

Change Number	Date	Description	Impact
CAR-057	29 Nov 95	CompuChem did not perform TDS/TSS analysis on COC for samples 900-000343 and 900-000344.	Lost data points.
CAR-058	14 Feb 96	Tritium in soil reported as pCi/L instead of pCi/g.	Error corrected. No impact.
CAR-059	14 Feb 96	Anion results reported as mg/L instead of mg/kg.	Error corrected. No impact.
CAR-060	14 Feb 96	Inorganic (metals) data results were miscalculated.	Error corrected. No impact.
CAR-061	11 Mar 96	Incorrect pesticide surrogate recoveries in MEIMS database.	Error corrected. No impact.
CAR-062	12 Mar 96	Samples were re-collected, but database was unable to maintain separate collection date for re-collected samples. Consequently, database holding time reports are incorrect.	Corrected in report.
CAR-063	19 Mar 96	Explosives results not received for sample 900-000125.	Lost data point.
CAR-064	19 Mar 96	Unrequested analysis performed on samples 900-000243 and 900-000245 for explosives.	No impact.
CAR-065	19 Mar 96	Radiological fraction for sample 900-000073 mis-identified. Fraction results are really for 900-000093.	No impact. Error corrected.
CAR-066	18 Mar 96	COC for inorganic analyses of 900-000149 was incorrect.	No impact. Lab properly performed required analyses.
CAR-067	19 Mar 96	List of sampling deviations, i.e., samples which could not be collected, etc.	No corrective actions possible.
CAR-068	29 Jul 96	Tritium results were identified to be incorrect in the database by OEPA.	The correct results were used in the report. Only the database was impacted.
CAR-069	18 Sep 96	Tritium results used for the SW&SED report (April 1996) were incorrect.	The report was corrected for the September 1996 release.
CAR-070	27 Mar 96	Database contained incorrect MS/MSD recoveries.	Corrections were provided to database administrator. No impact on report.
CAR-071	31 Jul 96	Significant problems with pesticides based on 10 percent validation.	Validated 100 percent and revise report. No impact.
CAR-072	18 Sep 96	SAIC reviewed SW&Sed report and provided a list of possible problems (omissions).	Problems were assessed and corrected, if necessary, in the September 1996 revision of the SW&Sed report.
CAR-073	27 Sep 96	A few analytes reported above background in Appendix A of the SW&Sed report were identified by comparing analyte results to the background 95% mean confidence interval instead of the 95% upper tolerance limit.	The tables were revised based on the background 95% upper tolerance limit.

B.1.4 Sampling Procedures

During the fall and spring sampling events, the field team followed the sampling procedures as specified in the OU 9 QAPP. WESTON quality assurance personnel observed and audited field sampling, collection, handling, and shipping procedures for data quality assurance. Tables B.1.14 through B.1.16 summarize the deviations that occurred during specific sampling procedures.

B.1.5 Sample Chain-of-Custody Procedures

A few deviations from the sample custody procedures occurred during the program (e.g. entry errors on the chain-of-custody). WESTON, however, identified, documented, and corrected these deviations so that they had no impact on the sample custody (see Table B.1.16, Corrective Action Report Summaries). WESTON conducted laboratory project assessments (i.e. site visits) to verify the implementation of the appropriate custody procedures in the laboratory.

B.1.6 Analytical Procedures

In general, the laboratories conformed systematically to the analytical procedures as prescribed in the OU 9 QAPP. However, laboratory nonconformance reports, project assessments, and the validation of the laboratory data indicated systematic exceptions. The deviations noted during the fall and spring events included:

1. CompuChem failed to consistently analyze matrix spike pairs as indicated on the chain-of-custody.
2. CompuChem only added one explosives' surrogate to about half the samples. When the error was identified, the laboratory used two surrogates as required.
3. CompuChem failed to report Quality Control Check deficiencies (i.e., matrix spike recoveries outside acceptance limits) prior to delivering the hard copy data.
4. CompuChem failed to analyze a PETN water matrix spike.
5. CompuChem failed to analyze an aluminum and iron soil sample matrix spike.

Additional method variations occurred during both the fall and spring sampling events; these changes (described in Table B.1.15 Investigation-Specific Plan Change Notice Summaries, and in Table B.1.14 Plan Change Notification Summaries) did not affect the usability of the data. For example, the laboratory requested permission to use a surrogate other than 4-nitrobutene for method 8330, explosives analysis. Since the compound was commercially unavailable, the change ensured the extraction and analyses process could be evaluated.

For the purpose of this report, the contract-required detection limit (CRDL) and contract-required quantification limit (CRQL) are used interchangeably to reference the QAPP-specified quantification limits, to which the laboratory was contractually held.

B.1.7 Calibration Procedures

In general, the laboratories used the laboratory calibration procedures as required by the OU 9 QAPP. Appendices B.2 and B.4 describe the specific deviations from the calibration procedures for each analysis.

B.1.8 Internal Quality Control Checks (QCC)

There were no changes made to, nor deviations from, this section of the QAPP.

B.1.9 Data Reduction, Validation, and Reporting

In general, the laboratory correctly calculated results and organized the hard copy data reports. The laboratory failed on numerous occasions to provide an electronic deliverable and complete hard copy of the data with the correct values, as specified in the OU 9 QAPP. Both errors in the electronic-deliverable and validated hard copy data were submitted to the laboratory for corrections. The laboratory corrected all data deliverables. Data validation was performed according to Appendix H of the OU 9 QAPP. However, the frequency of the data validation was reduced from 100 percent to 10 percent as specified in the April 1995 revision of the QAPP.

B.1.10 Performance and System Audits

Table B.1.17 summarizes the performance and system audits conducted in support of the surface water and sediment investigation. Prior to EG&G Mound initiating subcontracts with the laboratories, a pre-qualification audit was performed at the laboratory's facilities. When the laboratory audit findings and observations had been satisfactorily addressed, the laboratories were approved for participation in the EG&G Mound Program. The difference between a pre-qualification audit and a performance audit is the focus of the audit. A pre-qualification audit evaluates the ability of the laboratory to meet program requirements. A performance audit (project assessment) evaluates the laboratory's compliance to contract requirements for actual samples, and if the laboratory is found to be non-compliant, may result in severe contractual penalties being enforced by EG&G.

Table B.1.17–Audits

Type of Audit	Laboratory	Date of Assessment
Performance	CompuChem	6 October 1994
Performance	Quanterra-Richland	13 October 1994
Performance	CompuChem	7 May 1995
Follow-Up	CompuChem	15 May 1995
Performance	Quanterra-Richland	19 May 1995
Performance	Quanterra-Denver	16 May 1995

During the investigation, three laboratories were used for sample analysis: CompuChem Environmental Corporation, Quanterra-Denver, and Quanterra-Richland. WESTON performed project assessments at CompuChem Environmental Corporation and Quanterra-Richland during both the fall and the spring sampling event. Because Quanterra-Denver was only performing split sample analyses, a

project assessment was determined to be unnecessary. However, Quanterra-Denver was audited during the spring sampling event as part of EG&G Mound's laboratory qualification program against the QAPP pre-qualification checklist. The dates of the audits, including Quanterra-Denver, are shown in Table B.1.17.

With the exception of the spring audit of CompuChem Environmental Corporation, the audits did not identify significant deficiencies and the implemented corrective actions resulted in very minimal impact to the data quality. The spring audit of CompuChem identified several severe deficiencies. Corrective actions were taken by both CompuChem and EG&G Mound to ensure the usability and comparability of the data. These corrective actions were judged by EG&G and WESTON to adequately protect the data usability for the purposes of the surface water and sediment investigation.

B.1.11 Preventive Maintenance

During the pre-qualification assessment and subsequent project assessments of the laboratories, WESTON determined that the preventive maintenance program was acceptable.

B.1.12 Routine Procedures for Assessing Data Quality

WESTON assessed the data quality based on the guidelines provided in Section 9.2 of the OU 9 QAPP. Appendices B.2 and B.4 summarize the conclusions of the data assessment. Unlike previous reports, the data assessments in Appendices B.2 and B.4 are focused on identifying systematic deficiencies and not data usability on a sample by sample evaluation.

B.1.13 Corrective Actions

Table B.1.16 summarizes the corrective actions required as a result of noncompliance to the OU 9 QAPP, the Sampling and Analysis Plan, the Work Plan, or the EG&G Mound contract with WESTON. WESTON evaluated these deficiencies and determined that they had minimal impact on the data quality for the surface water and sediment investigation. Appendices B.2 and B.4 of this report address laboratory-generated non-compliances and corrective actions.

B.1.14 Quality Assurance Reports to Management

WESTON provided quality assurance reports to EG&G Mound's management in the form of weekly status reports, laboratory and field assessment reports, corrective action reports, and change notices to the OU 9 QAPP and Work Plan, as required in the OU 9 QAPP. Appendices B.2 and B.4 provide a quality assessment, which is also a specified element of a quality assurance report to management.

APPENDIX B.2

Appendix B-2

DATA QUALITY ASSESSMENT: FALL

B.2 Data Quality Assessment: Fall

Appendix B.2. addresses assessment of data qualifications assigned during data validation. Data validation was performed on 10 percent of the samples. Based on the assigned qualifications and the frequency of the qualifications, assumptions have been made on the quality of the entire data set. Additionally, the Mound Environmental Information Management System (MEIMS) database was queried for quality control check results. The queried results were then evaluated to confirm and/or identify systematic deficiencies.

Validators use quality control checks (QCCs) to monitor sampling and analysis at a process level. When QCCs are outside specified criteria, a corrective action should be taken. When a corrective action is not possible or is not taken, the validators can often use QCCs to evaluate the possible error associated with the reported results. QCCs are typically evaluated during data validation and applied to the affected samples. Examples of QCCs include surrogate recoveries, matrix spike recoveries, and percent differences for calibration curves. When validators noted that QCCs were outside criteria, the validator applied the data qualifiers and subqualifiers following the guidelines presented in Appendix H of the OU 9 QAPP. Table B.2.1 identifies the qualifiers used. The qualified data and the significance of the qualifications were then assessed to determine whether the qualification impacts the use of the data for the intended purpose.

Separate subsections present the qualifications for each laboratory analysis. Appendix B.3 contains tables summarizing the qualifications. Although the summary tables may seem extensive for the number of validated samples, actually only a few analytes have been affected. For example, semi-volatiles include 67 individual analytes. When only one or two analytes are qualified, the percentage of qualified data is actually very small. In addition, many of the qualifications are minor and have a negligible impact on the data usability.

The following assessment of data usability of qualified results is limited to the data usage described in this report. The validators used the deficient QCCs to estimate the potential bias. The estimate typically takes the form of a multiplication factor that is applied to the reported result. The assigned factor has been used to establish a probable upper limit to the sample concentration. If the upper limit should exceed an established limit, then the data point is inconclusive and unusable. For other data uses, however, it may be inappropriate to accept all the QCCs as indicators of performance.

The results of the data assessment and a discussion of the data validation qualifiers are presented in the following text. The text is subdivided to match the method of analysis performed and reported by the laboratory. Each analysis subsection is further divided by sample matrix, i.e. organic

volatile analysis is discussed as a section and the section is presented in two subsections: Water samples and soil/sediment samples.

Table B.2.1—Data Validation Qualifiers

Qualifier	Description of Data Qualifier
U	Indicates that the analyte was analyzed for but not detected above the reported sample quantitation limit.
J	Indicates the associated value is an estimated quantity.
UJ	The analyte was not detected above the reported sample quantitation limit; however, the reported sample quantitation limit is an approximate value.
R	Sample result was rejected based on validation criteria.

Electronic Data Review

In addition to the qualifications made on the basis of the data validation, the quality control data stored in the MEIMS database was queried and evaluated. Because of limitations with the entry and retrieval of blank data from MEIMS, the following subjective guidelines were applied to evaluate the systematic presence of contaminants:

1. If a contaminant was reported in more than three lab blanks, the contaminant was identified as a potential systematic deficiency.

2. If the contaminant was present in more than 50 percent of the field blanks, trip blanks, or ambient blanks, the contaminant was identified as a potential systematic deficiency.

If a contaminant was identified as a systematic contaminant, the average concentration of the analyte in the affected blank type was calculated. The largest average value for each systematic contaminant was selected from the blanks, and used to establish an estimate of contamination levels for the program.

B.2.1 Volatiles

B.2.1.1 Water samples

WESTON submitted 58 water samples for organic volatile analysis by CLP SOW OLM1.8. Of the 58 samples, eight were submitted for data validation. During data validation, the validators identified three types of QCC deficiencies:

1. Initial calibration Relative Standard Deviation (RSD) outside acceptance criteria
2. Continuing calibration Percent Differences (%D) outside acceptance criteria
3. Blank contamination

During WESTON's review of the quality control check data in the MEIMS database, only one other QCC deficiency was identified:

1. Exceeded holding time

Initial Calibration Relative Standard Deviation

The laboratory uses the relative standard deviation (RSD) to evaluate the linearity of a calibration curve. When the RSD exceeds 30, the accuracy of the calibration curve may be affected. The RSD criterion was exceeded for two analytes: acetone and 2-butanone. Validators qualified the affected analyte results estimated (J, UJ). Both of these analytes are common laboratory contaminants and ambient concentrations of these analytes may have contributed to the inaccuracy of the calibration curve. Acetone exceeded criteria in four of the eight samples with RSDs of 33.2 percent and 36.3 percent. Because acetone also exceeded continuing calibration criteria and is a common laboratory contaminant, it appears the acetone results may be systematically deficient. Given the degree of variation in the acetone percent RSDs outside criteria, the data are probably usable as estimated (J, UJ). Acetone concentrations within 60 percent of an action limit should probably be treated as inconclusive data points. The other analyte (2-butanone) does not appear to be systematically deficient and no special considerations should be applied when evaluating the sample results.

Continuing Calibration Percent Difference

The laboratory analyzes continuing calibration checks every twelve hours and at the end of an analytical sequence to confirm the continued stability of the calibration curve. The QAPP specifies that the percent difference calculated from the continuing calibration check must be equal to or less than 25 percent. During data validation, four analytes were qualified estimated (J, UJ) due to exceeding the percent difference criteria: acetone, 2-butanone, 2-hexanone, and bromoform. Acetone was qualified in three samples with percent differences from 67.3 to 25.7. Based on the frequency of data qualifications for both continuing calibration and initial calibration, it appears that only acetone may be systemically deficient and should be treated as estimated (J, UJ). The potential degree of bias for acetone may be as large as 70 percent of the reported value. Given the generally high risk values for acetone, the bias probably does not impact the usability of the data. Acetone concentrations within 60 percent of an action limit should probably be treated as inconclusive data. The other qualified compounds do not appear to be systematically deficient and no special considerations should be applied when evaluating the sample results.

Blank Contamination

Data results were qualified non-detect (U) for methylene chloride during data validation. Methylene chloride blank contamination was observed in field blanks, trip blanks, and method blanks. The contamination levels ranged from 1 µg/L to 7 µg/L. Data results which were less than ten times the blank contamination in the associated blank were qualified non-detect (U).

Five analytes were found in the queried blank data: Methylene chloride, acetone, 1,2-diethylbenzene, chloroform, and acetonitrile. Methylene chloride and acetone were systematically identified in all types of blanks. Chloroform was systematically present in field blanks, trip blanks, and ambient blanks. Table B.2.2 lists the systematic contaminants, the average concentration, and the sample action level. Sample results below the action limit in Table B.2.2 should be treated as qualified non-detects (U).

Table B.2.2—Blank Contaminants

Analyte	Average Concentration (mg/L)	Action Limit (mg/L)
methylene chloride	3	30
acetone	16.5	165
chloroform	5.4	27

Holding Time

Water samples submitted for volatile organic analyses must be analyzed within fourteen days of collection. Based on the database, three samples were analyzed outside holding times. The samples identifications, the number of days past holding, and the usability of the data are listed in Table B.2.3. The database is unable to differentiate collect date from re-collect date (see CAR# 062) and generated a defective holding time report for a few results. The holding times which were calculated based on the date of extraction analysis of the re-collected sample and the date of collection of the original sample fraction have an asterisk (*) in the usability column. The incorrectly reported holding times are included in this section to insure future data users are aware of the deficiency and do not incorrectly rely on the complete holding time reports these few results. The samples listed in the table were re-collected, and are usable.

Table B.2.3—Summary of Exceeded Holding Times

Sample IDs	*Days Past Holding*	*Usability*
900-000023	40	Usable
900-000024	40	Usable
900-000025	48	Usable

B.2.1.2 Soil/Sediment Samples

WESTON submitted 129 soil/sediment samples for organic volatile analysis by CLP SOW OLM1.8. Of the 129 samples, fifteen were submitted for data validation. During data validation, the validators identified three types of QCC deficiencies:

1. Initial calibration Relative Standard Deviation (RSD) outside criteria
2. Continuing calibration Percent Difference (%D) outside criteria
3. Blank contamination
4. Exceeded holding times

During WESTON's review of the quality control check data in the MEIMS database, two other QCC deficiencies were identified:

1. Exceeded holding times for samples not validated
2. Surrogate recoveries outside acceptance criteria

Initial Calibration Relative Standard Deviation

The laboratory uses the Relative Standard Deviation (RSD) to evaluate the linearity of a calibration curve. When the RSD exceeds 30, the accuracy of the calibration curve may be affected. The criteria was repeatedly exceeded for methylene chloride and acetone. Validator qualified the affected analyte results estimated (J, UJ). Both methylene chloride and acetone are common laboratory contaminants and their presence in ambient laboratory conditions would cause initial calibration curve inaccuracy. The RSD for methylene chloride in the validated samples ranged from 85 to 85.4, and the RSD for acetone in the validated samples ranged from 31 to 121. Based on these deficiencies, the presence of these analytes in laboratory blanks, and the continuing calibration deficiencies for these analytes, the data are probably systematically impacted. Because RSD is a measure of linearity, it is not possible to extrapolate the direction or degree of bias. For the purpose of evaluating these analytes against action limits, the data user should consider results within 60 percent of the action limit to be suspect.

Continuing Calibration Percent Difference

The laboratory analyzes continuing calibration checks every twelve hours and at the end of an analytical sequence to confirm the continued stability of the calibration curve. The QAPP specifies that the percent difference calculated from the continuing calibration check must be equal to or less than 25 percent. Seven analytes, associated with the validated samples, were determined to be outside criteria: methylene chloride, acetone, 2-butanone, 1,2-dichloroethane, chloromethane, acetonitrile, and vinyl chloride. Validators qualified the affected analyte results estimated (J, UJ). Both acetone and methylene chloride were reported outside criteria in over 70 percent of the validated samples. Based on the frequency that methylene chloride and acetone were outside of the acceptance criteria, the deficiencies for these compounds noted in the initial calibrations, and their presence in the laboratory blanks, the data are probably systematically impacted. For the purposes of evaluating methylene chloride and acetone against action limits, the data user should consider results within 60 percent of the action limit to be suspect.

In addition to acetone and methylene chloride, five samples were qualified due to acetonitrile percent differences and four samples were qualified due to 2-butanone percent differences. The percent differences for acetonitrile outside acceptance limits ranged from 30.4 to 37.5. The percent differences outside the acceptance criteria for 2-butanone ranged from 25 percent to 33 percent. Given the frequency acetonitrile and 2-butanone were qualified and the range of the percent differences, the data usability is probably not significantly impacted.

The other analytes, 1,2-dichloroethane, chloromethane, and vinyl chloride, which exceeded criteria did not result in a significant number of

qualifications, and are not believed to represent a systematic impact to the data usability.

Blank Contamination

Nearly every sample was qualified during data validation due to blank contamination with methylene chloride and acetone. The sample results which were less than ten times the associated blank concentration for acetone or methylene chloride were qualified non-detect (U). Methylene chloride concentrations ranged from 7 µg/L to 33 µg/L and acetone concentrations ranged from 9 µg/L to 53 µg/L. Only one sample was qualified non-detect (U) due to acetonitrile in the blank at 40 µg/L.

Seven analytes were found in the queried blank data: Acetone, methylene chloride, acetonitrile, acrylonitrile, chloroform, chloromethane, acetone, and 1,2-diethylbenzene. Methylene chloride was present systematically in all types of blanks. Acetone was present systematically in the laboratory blanks. Table B.2.4 lists the systematic contaminants, the average concentration, and the sample action limits. Sample results below the action limit in Table B.2.4 should be treated as qualified non-detect (U).

Table B.2.4—Blank Contaminants

Analyte	Average Concentration (mg/kg)	Action Limit (mg/kg)
methylene chloride	11	110
acetone	13.5	135

Holding Times

Soil samples submitted for volatile organic analysis must be analyzed within fourteen days of collection. Based on the EG&G Mound database, 13 samples were analyzed outside holding time. The sample identifications, the number of days past holding, and usability of the data are listed in Table B.2.5. The database is unable to differentiate collect date from re-collect date (see CAR# 062) and generated a defective holding time report for a few results. The holding times which were calculated based on the date of extraction analysis of the re-collected sample and the date of collection of the original sample fraction have an asterisk (*) in the usability column. The incorrectly reported holding times are included in this section to insure future data users are aware of the deficiency and do not incorrectly rely on the complete holding time reports these few results.

Table B.2.5—Summary of Exceeded Holding Times

Sample IDs	*Days Past Holding*	*Usability*
900-000031	1	Usable
900-000291	1	Usable
900-000169	4	Usable
900-000016	5	Usable
900-000170	10	Unusable
900-000046	33	Usable*

Table B.2.5—Summary of Exceeded Holding Times

Sample IDs	*Days Past Holding*	*Usability*
900-000048	33	Usable*
900-000049	33	Usable*
900-000030	34	Usable*
900-000026	35	Usable*
900-000027	35	Usable*
900-000028	35	Usable*
900-000029	50	Usable*

Surrogate Recoveries

Surrogate recoveries are used to evaluate the sample extraction and analysis process on a sample by sample basis. Surrogate recoveries outside acceptance limits may indicate a sample processing error within the laboratory or an interference by the sample matrix. Five samples were associated with queried surrogate recoveries outside acceptance limits. Two samples, 900-000237 and 900-000239, had low recovery for toluene-d8 at 78 percent and 81 percent, respectively. Because only one of three surrogates was slightly below the acceptance limit, the data usability is probably unaffected. The other samples 900-000215, 900-000249, and 900-000251 were associated with surrogate recoveries slightly higher than the acceptance limits. Again, because the surrogate recoveries were only slightly greater than the acceptance limit, the data are usable.

B.2.2 Semi-volatiles

B.2.2.1 Water samples

WESTON submitted 49 water samples for organic semi-volatile analysis by CLP SOW OLM1.8. Of the 49 samples, seven were submitted for data validation. During data validation, the validators identified three types of QCC deficiencies:

1. The initial calibration Relative Standard Deviation (RSD) exceeded criteria
2. The continuing calibration Percent Difference (%D) exceeded criteria
3. Exceeded holding times

During WESTON's review of the quality control check data in the MEIMS database, two other QCC deficiencies were identified:

1. Surrogate recoveries outside acceptance limits
2. Method blank contamination

Initial Calibration Relative Standard Deviation

The laboratory uses the Relative Standard Deviation (RSD) to evaluate the linearity of a calibration curve. When the RSD exceeds 30, the accuracy of the calibration curve may be affected. The criteria was exceeded for three

analytes: 4-chloroaniline, N-Nitrosodiphenylamine, and benzoic acid. The validator qualified the affected analytes estimated (J, UJ). Of the seven validated samples, six of the samples were associated with deficient 4-chloroaniline RSDs. The RSDs for 4-chloroaniline ranged from 53.2 to 64. Based on the frequency of this deficiency, the data for 4-chloroaniline may be systematically impacted by deficient RSDs.

Additionally, three samples were associated with deficient N-Nitrosodiphenylamine RSDs and one sample was associated with a deficient RSD for benzoic acid. Based on the accompanying continuing calibration qualifications for N-Nitrosodiphenylamine, a significant portion of the data set may be impacted by deficient RSDs for N-Nitrosodiphenylamine.

Since only one sample was qualified for benzoic acid, the data set was probably not systematically impacted for benzoic acid. Because RSD is a measure of linearity, it is not possible to extrapolate the direction or degree of bias. For the purpose of evaluating these systematically deficient analytes against action limits, the data user should consider results within 60 percent of the action limit to be inconclusive.

Continuing Calibration Percent Differences

The laboratory analyzes continuing calibration checks every twelve hours and at the end of an analytical sequence to confirm the continued stability of the calibration curve. The QAPP specifies that the percent difference calculated from the continuing calibration check must be equal to or less than 25 percent. Seven analytes were qualified estimated (J, UJ) by the validators due to deficient percent differences: 4-chloroaniline, N-Nitrosodiphenylamine, benzoic acid, 4-nitrophenol, hexachlorobenzene, 2,4-dinitrophenol, and di-n-octylphthalate. Of the seven validated samples, N-Nitrosodiphenylamine was outside criteria in six samples. N-Nitrosodiphenylamine percent differences ranged from -34 to 41 percent. Based on the number of validated samples associated with the deficient N-Nitrosodiphenylamine percent differences, N-Nitrosodiphenylamine is systematically deficient and the entire data set may be impacted. Data results for N-Nitrosodiphenylamine may be biased either positively or negatively by 40 percent, and the potential bias should be considered when comparing the data to action limits. The remaining analytes were only outside criteria in two or fewer samples, and are not systematically impacted.

Holding Time

Water samples submitted for semi-volatile analysis must be extracted within seven days of collection. During data validation, the sample results for 900-000081 were qualified estimated (J, UJ), due to an exceeded holding time. Sample 900-000081 was the blind PE sample and exceeded holding time by two days.

Additionally, the MEIMS database was queried to determine whether other samples were extracted and/or analyzed outside the specified holding time. The results of the database query are listed in Table B.2.6.

Based on the database, eleven samples were extracted past the holding time. The sample identifications, the number of days past holding, and the data usability are listed in Table B.2.6. The database is unable to differentiate collect date from re-collect date (see CAR# 062) and generated a defective holding time report for a few results. The holding times which were calculated based on the date of extraction analysis of the re-collected sample and the date of collection of the original sample fraction have an asterisk (*) in the usability column. The incorrectly reported holding times are included in this section to insure future data users are aware of the deficiency and do not incorrectly rely on the complete holding time reports these few results.

Table B.2.6—Summary of Exceeded Holding Times

Sample IDs	*Days Past Holding*	*Usability*
900-000219	1	Usable
900-000220	1	Usable
900-000221	1	Usable
900-000222	1	Usable
900-000036	5	Usable
900-000066	6	Usable
900-000064	7	Usable
900-000065	7	Usable
900-000023	41	Usable*
900-000025	41	Usable*
900-000024	55	Usable*
900-000081	2	Usable

Surrogate Recoveries

Surrogate recoveries are used to evaluate the sample extraction and analysis process on a sample by sample basis. Surrogate recoveries outside acceptance limits may indicate a sample processing error within the laboratory or an interference by the sample matrix. Two samples, 900-000036 and 900-000053, were reported with surrogate recoveries outside acceptance limits. Because two or fewer of the six surrogates were below acceptance limits and the deficient recoveries ranged from 28 to 38 percent, the associated sample data were probably not significantly impacted and are usable.

Blank Contamination

Five analytes were found in the queried blank data: di-n-butylphthalate, benzoic acid, butylbenzyl phthalate, phenol, and bis(2-ethylhexyl)phthalate. Based on the frequency of blank contamination, no systematic contaminants were identified.

B.2.2.2 Soil/Sediment Samples

WESTON submitted 101 soil/sediment samples for organic semi-volatile analysis by CLP SOW OLM1.8. Of the 101 samples, eleven were submitted

for data validation. During data validation, the validators identified five types of QCC deficiencies:

1. The initial calibration Relative Standard Deviation (RSD) exceeded criteria
2. The continuing calibration Percent Difference (%D) exceeded criteria
3. The Relative Percent Difference (RPD) between field duplicates was exceeded
4. The method blank was contaminated with di-n-butylphthalate
5. The laboratory was unable to differentiate benzo(b)fluoranthene from benzo(k)fluoranthene.

During WESTON's review of the quality control check data in the MEIMS database, two other QCC deficiencies were identified:

1. Exceeded holding time
2. Surrogate recoveries outside acceptance limits

Initial Calibration Relative Standard Deviation

The laboratory uses the Relative Standard Deviation (RSD) to evaluate the linearity of a calibration curve. When the RSD exceeds 30, the accuracy of the calibration curve may be affected. The criteria was exceeded for seven analytes: N-Nitrosodiphenylamine, 4-chloroaniline, 3,3'-dichlorobenzidine, 3-nitroaniline, 2-nitroaniline, 2,4-dinitrophenol, and benzoic acid. Validators qualified the affected analytes estimated (J,UJ). 4-Chloroaniline was qualified in eight of the eleven samples. The 4-chloroaniline RSDs which were outside the acceptance criteria ranged from 47.5 to 55.7 percent. Based on the frequency that 4-chloroaniline was qualified due RSD and the qualifications which were also made due to continuing calibration deficiencies, all 4-chloroaniline results may be impacted and should be evaluated as estimated (J, UJ). The remaining six compounds exceeded criteria in three or fewer samples and the data does not support a potential systematic impact to the data set.

Continuing Calibration Percent Differences

The laboratory analyzes continuing calibration checks every twelve hours and at the end of an analytical sequence to confirm the continued stability of the calibration curve. The QAPP specifies that the percent difference calculated from the continuing calibration check must be equal to or less than 25 percent. Twelve analytes were qualified due to deficient percent differences and are listed in Table B.2.7.

Table B.2.7—Analytes With Deficient CCC's

2,2-oxybis (1-chloropropane)	4-chloroaniline
4-nitrophenol	benzoic acid
bis(2-ethylhexyl)phthalate	butylbenzylphthalate
di-n-octylphthalate	hexachloroaniline
hexachlorobenzene	hexachlorobutadiene
hexachlorocyclopentadiene	N-nitrosodiphenylamine
nitrophenol	pentachlorophenol

Only two of the twelve analytes were qualified in more than four samples: 4-chloroaniline and N-nitrosodiphenylamine. 4-chloroaniline percent differences ranged from -68.5 to 74.5, and resulted in the qualification of five samples. N-nitrosodiphenylamine percent differences ranged from -28.7 to 67.2, and resulted in the qualification of eight samples. Based on the number of samples qualified due to exceeded percent differences and exceeded initial calibration relative percent differences for these two analytes, all the soil/sediment results for 4-chloroaniline and N-nitrosodiphenylamine may be impacted and should be evaluated as estimated (J, UJ).

Relative Percent Differences between Field Duplicates

Only one sample of the eleven samples validated was qualified during data validation due to the relative percent difference between two samples exceeding criteria. Sample 900-000243 was qualified estimated (J, UJ) for 4-chloro-3-methylphenol. Field duplicate precision for the program is extensively discussed in Appendix B.1.

Method Blank Contamination

Five of the eleven samples were qualified non-detect (U) during data validation for di-n-butylphthalate due to contamination in the method blank. Di-n-butylphthalate is a common laboratory contaminant and was detected at 44 µg/kg to 69 µg/kg. Based on the number of samples qualified, and knowing that di-n-butylphthalate is a common laboratory contaminant, all the sample results for di-n-butylphthalate may be biased high due to laboratory contamination.

Five analytes were found in the queried blank data: di-n-butylphthalate, benzoic acid, butylbenzyl phthalate, phenol, and bis(2-ethylhexyl)phthalate. Di-n-butylphthalate was found to be systematically present in the laboratory blanks at an average concentration of 55 µg/kg. Sample results below 550 µg/kg should be treated as qualified non-detects (U).

Analyte Identification

During data validation, eight of the eleven samples were qualified estimated (J) due to co-elution of benzo(b)fluoranthene and benzo(k)fluoranthene. Because these analytes co-eluted and have similar spectra, the laboratory was unable to differentiate the analytes. Because of this deficiency, the positive results may be biased high by as much as twice the actual concentration. The deficiency is systematic in both fall and spring data. Results for benzo(b)fluoranthene and benzo(k)fluoranthene should be treated as estimated (J).

Holding Time

Soil samples must be extracted within fourteen days of collection. Based on the MEIMS database, ten samples were not extracted within the required holding time. The sample identifications, the number of days past holding, and usability of the data are listed in Table B.2.8. The database is unable to differentiate collect date from re-collect date (see CAR# 062) and generated a defective holding time report for a few results. The holding times which

were calculated based on the date of extraction analysis of the re-collected sample and the date of collection of the original sample fraction have an asterisk (*) in the usability column. The incorrectly reported holding times are included in this section to insure future data users are aware of the deficiency and do not incorrectly rely on the complete holding time reports these few results. Only sample 900-000250 was actually extracted past holding time. The semi-volatile results for sample 900-000250 are usable but should be treated as estimated (J).

Table B.2.8—Summary of Exceeded Holding Times

Sample IDs	*Days Past Holding*	*Usability*
900-000250	11	Usable
900-000046	29	Usable*
900-000048	29	Usable*
900-000049	29	Usable*
900-000026	34	Usable*
900-000027	34	Usable*
900-000028	34	Usable*
900-000030	34	Usable*
900-000031	35	Usable*
900-000029	49	Usable*

Surrogate Recoveries

Surrogate recoveries are used to evaluate the sample extraction and analysis process on a sample by sample basis. Surrogate recoveries outside acceptance limits may indicate a sample processing error within the laboratory or an interference by the sample matrix. Three soil samples were reported with surrogate recoveries outside acceptance limits. One of the three samples, 900-000124, was associated with three low surrogate recoveries. The low surrogate recoveries ranged from 14 percent for 1,2-dichlorobenzene-d4 to 22 percent for 2-fluorophenol. Because three of six surrogates had low recoveries in sample 900-000124, the associated sample data are of marginal value and should be evaluated as severely negatively biased. The other two samples, 900-000211 and 900-00024, were associated with surrogate recoveries slightly greater than the acceptance criteria. Because these recoveries were only slightly above criteria for two or fewer surrogates, the data are usable without qualification.

B.2.3 Pesticides/PCBs

B.2.3.1 Water samples

WESTON submitted 69 water samples for organic pesticide analysis by CLP SOW OLM1.8. All of the samples were submitted for data validation per CAR-071. During data validation, the validators identified five types of QCC deficiencies:

1. Surrogate recoveries were outside acceptance criteria

2. The difference between the primary and confirmation analysis exceeded criteria
3. The holding times were exceeded
4. Percent relative standard deviation was above the acceptance criteria
5. Matrix spike recovery was below the acceptance criteria

Surrogate Recoveries

Surrogates are used to measure extraction and analysis efficiency. The QAPP specifies an acceptance range of 60-150 percent. The samples with two or more surrogate results outside the QAPP acceptance limits are listed in Table B.2.9. Field duplicate samples and field blank samples are indicated in the table with the suffix '(FD)' or '(FB)', respectively. Because the surrogates are reported for both primary and secondary analysis, the suffix '1' or '2' has been added to the surrogate name to clarify whether the recovery is from the primary or secondary analysis. Surrogate recoveries which were acceptable are identified as "NA" in the table.

Table B.2.9—Results Outside QAPP Acceptance Limits

Sample ID	Surrogate Recoveries			
	TCMX1	TCMX2	DCB1	DCB2
900-000008	NA	NA	54	58
900-000019	42	45	53	54
900-000020	55	57	NA	NA
900-000021(FD)	55	55	NA	NA
900-000032(FB)	NA	NA	**14**	**16**
900-000050	55	56	NA	NA
900-000051(FD)	43	44	57	59
900-000052	**20**	**20**	**15**	**25**
900-000053	30	32	37	38
900-000054	**0**	**0**	**0**	**0**
900-000055	53	54	NA	NA
900-000077(FB)	53	55	**16**	**18**
900-000080	55	58	NA	NA
900-000081	NA	NA	15000	NA
900-000081RE	57	25000	NA	NA
900-000107	NA	NA	51	58
900-000118(FB)	NA	NA	**27**	32
900-000134(FB)	NA	NA	**22**	**25**
900-000150	NA	58	48	53
900-000156(FB)	NA	NA	44	50
900-000183	NA	NA	46	48
900-000190	NA	NA	**23**	44
900-000198(FB)	NA	NA	58	56
900-000212	54	58	54	58
900-000230	51	280	33	38
900-000231	52	360	36	37
900-000232(FD)	54	320	36	42
900-000233	51	56	59	NA
900-000253(FD)	54	57	NA	NA

Table B.2.9—Results Outside QAPP Acceptance Limits

Sample ID	Surrogate Recoveries			
	TCMX1	TCMX2	DCB1	DCB2
900-000256	41	58	58	NA
900-000282(FB)	54	NA	34	36
900-000296(FB)	53	NA	41	46

The majority of the samples listed in Table B.2.9 had surrogate recoveries below the acceptance limits indicating a potential negative bias. In some cases, i.e. samples 900-000230, 900-000231, and 900-000232, three of the surrogate recoveries were low and one surrogate recovery was high which is also probably indicative of a negative bias. The initial sample results for 900-000052 and 900-000054 had very poor recoveries and were rejected (R). Both samples 900-000052 and 900-000054 were re-analyzed outside holding time with acceptable recoveries. The re-analyses should be used. Samples 900-000032 and 900-000077 had poor recoveries for DCB, but were not rejected because the recoveries were clearly impacted by the sample matrix as noted in the validation reports. Finally, 9000-000081 was the PE sample and the high recoveries are probably due to overlapping target analyte peaks. No action is required for 900-000081.

Difference between Columns

Because analyte identification by Gas Chromatography is dependent on the amount of time an analyte is retained on a chromatography column and because non-target analytes will sometimes elute at the same retention time as a target analyte, it is necessary to confirm an analyte's identity and concentration on a second column. If the target analyte is present on both columns, then there is confirmation of the analyte's presence. If the difference between the determined concentration on each column is significant, then there is uncertainty whether the analyte was accurately quantitated on either column and/or whether the compound is actually present in the sample. When both the primary and confirmation results were less than the contract reporting limit and the difference between columns exceeded the acceptance criteria, the data were qualified non-detect (U) at the reporting limit. When one or both of the results were greater than the reporting limit and the differences between columns exceeded the acceptance criteria, the data were qualified rejected (R) for the affected analyte.

Only one sample result for endosulfan sulfate in sample 900-000081 was rejected (R) during data validation. Sample 900-000081 was the PE sample and did actually contain the analyte. The other sample results qualified for not meeting the column difference criteria were raised to the CRQL and qualified non-detect (U). The samples qualified non-detect at the reporting limit are usable.

Holding Time

Water samples submitted for pesticide/PCB analysis must be extracted within seven days of collection. During data validation, only three samples were extracted outside of holding time. One of the samples, 900-000081, is the PE sample and the other two samples were re-extracted due to surrogate

recovery problems. The results for these samples were qualified estimated (J,UJ) by the validators. The sample identifications, number of days past holding time, and the data usability are listed in Table B.2.10.

Table B.2.10—Summary of Exceeded Holding Times

Sample IDs	*Days Past Holding*	*Usability*
900-000052 (RE)	11	Usable
900-000054 (RE)	18	Usable
900-000081	2	Usable
900-000081(RE)	2	Usable

Percent Relative Standard Deviation

The laboratory uses the relative standard deviation (RSD) to evaluate the linearity of a calibration curve. When the RSD exceeds 20 percent, the accuracy of the calibration curve may be affected. The RSD criterion was exceeded for endrin aldehyde in five samples. Validators qualified the affected analyte results estimated (UJ). Because the results were reported non-detect, the increased variability probably does not impact data usability. The five affected samples were: 900-000107, 900-000108, 900-000114, 900-000118, and 900-000119.

Matrix Spike Recovery

The matrix spike recovery for two compounds was outside acceptance limits in sample 900-000166. The compounds, dieldrin and endrin, were qualified rejected (R) during data validation in sample 900-000166. These data are unusable.

B.2.3.2 Soil/Sediment Samples

WESTON submitted 137 soil/sediment samples for organic pesticide analysis by CLP SOW OLM1.8. All of the 137 soil/sediment samples, were validated per CAR-071. During data validation, the validators identified 8 types of QCC deficiencies:

1. The difference between the primary and confirmation analysis exceeded criteria.
2. The initial calibration relative percent difference exceeded criteria.
3. Surrogate recoveries were outside acceptance criteria.
4. The relative percent difference between field duplicates exceeded criteria.
5. The method blank was contaminated.
6. The matrix spike recovery exceeded criteria.
7. Percent relative standard deviation was above the acceptance criteria.
8. The compound identification criteria was not met.

Difference Between Columns

Because analyte identification by Gas Chromatography is dependent on the amount of time an analyte is retained on a chromatography column and because non-target analytes will sometimes elute at the same retention time

as a target analyte, it is necessary to confirm an analyte's identity and concentration on a second column. If the target analyte is present on both columns, then there is confirmation of the analyte's presence. If the difference between the determined concentration on each column is significant, then there is uncertainty whether the analyte was accurately quantitated on either column and/or whether the compound is actually present in the sample. When both the primary and confirmation results were less than the contract reporting limit and the difference between columns exceeded the acceptance criteria, the data were qualified non-detect (U) at the reporting limit. When one or both of the results were greater than the reporting limit and the differences between columns exceeded the acceptance criteria, the data were qualified rejected (R) for the affected analyte.

A large number of analyte results were qualified rejected (R) due to differences between columns. A total of 164 investigative results were rejected due to the result not meeting the percent difference requirement. The number of rejected data points per analyte are listed in Table B.2.11. The other sample results qualified for not meeting the column difference criteria were raised to the CRQL and qualified non-detect (U). The samples qualified non-detect at the reporting limit are usable.

Table B.2.11 - List of Rejected Analytes due to Column Difference in Investigative Samples

Analyte	Number Rejected	Analyte	Number Rejected
4,4'-DDD	6	4,4'-DDE	3
4,4'-DDT	6	α-BHC	6
α-chlordane	22	aldrin	3
δ-BHC	4	dieldrin	9
endosulfan I	5	endosulfan II	3
endosulfan sulfate	9	endrin	1
endrin aldehyde	19	endrin ketone	6
γ-BHC	12	γ-chlordane	19
heptachlor	8	heptachlor epoxide	12
methoxychlor	6	β-BHC	5

Initial Calibration Relative Standard Deviation

The laboratory uses the Relative Standard Deviation (RSD) to evaluate the linearity of the calibration curve. When the RSD exceeds 20 percent, the accuracy of the calibration curve may be affected. The criteria was exceeded for four analytes: aldrin, endrin aldehyde, heptachlor epoxide and methoxychlor. Ten of the samples were qualified estimated non-detect (UJ) for endrin aldehyde due to exceeded RSDs, two of the samples were qualified estimated non-detect (UJ) for aldrin, two of the samples were qualified estimated non-detect (UJ) for heptachlor epoxide and four of the samples were qualified estimated non-detect for methoxychlor. Because the results were reported non-detect, the potential inaccuracy does not significantly impact the result nor the usability of the data.

Continuing Calibration Check

The laboratory uses the relative percent difference (RPD) between the initial calibration and continuing calibration readings to evaluate the linearity of the calibration curve over time. When the relative percent difference exceeds 30, the accuracy of the calibration may be affected. The criteria was exceeded for 4,4'-DDE in two samples. The results in these samples were qualified estimated non-detect (UJ). Because the results were reported non-detect, the potential inaccuracy does not significantly impact the result nor the usability of the data.

Surrogate Recoveries

Surrogates are used to measure extraction and analysis efficiency. The QAPP specifies an acceptance criteria of 60-150 percent. The samples with two or more surrogate results outside the QAPP acceptance limits are listed in Table B.2.12. Field duplicate samples are indicated with the suffix '(FD)' in the table. Because the surrogates are reported for both primary and secondary analysis, the suffix '1' or '2' has been added to the surrogate name to clarify whether the recovery is from the primary or secondary analysis. Surrogate recoveries which were acceptable are identified as "NA" in the table.

Table B.2.12—Results Outside Acceptance Limits

	Surrogate Recoveries			
Sample ID	**TCMX1**	**TCMX2**	**DCB1**	**DCB2**
900-000016	NA	390	NA	170
900-000017	**3**	57	NA	NA
900-000038	37	57	NA	NA
900-000048	51	56	NA	NA
900-000056	39	42	57	NA
900-000057	45	46	NA	NA
900-000058	36	44	49	55
900-000059	34	40	NA	NA
900-000060	36	41	NA	NA
900-000061	35	37	NA	NA
900-000062	40	41	NA	NA
900-000063(FD)	38	39	NA	NA
900-000069(FD)	48	36	NA	NA
900-000071	48	46	NA	244
900-000089	54	55	NA	NA
900-000111	57	NA	190	NA
900-000123(FD)	**26**	**29**	**29**	34
900-000127	38	41	NA	NA
900-000141	40	45	NA	NA
900-000145(FD)	41	47	NA	NA
900-000153	55	NA	55	NA
900-000154	NA	NA	39	58

Table B.2.12—Results Outside Acceptance Limits

Sample ID	Surrogate Recoveries			
	TCMX1	TCMX2	DCB1	DCB2
900-000155	NA	NA	41	380
900-000159	56	NA	**10**	160
900-000160	NA	NA	54	280
900-000163	57	NA	41	57
900-000168	59	NA	58	320
900-000175	NA	NA	54	180
900-000210	47	49	51	57
900-000216	56	59	NA	NA
900-000224	NA	153	58	**28**
900-000225(FD)	NA	NA	38	410
900-000237	49	59	NA	NA
900-000243	**22**	33	NA	NA
900-000245	**26**	52	50	NA
900-000247	**0**	56	NA	NA
900-000248(FD)	**0**	56	NA	NA
900-000249	**19**	55	NA	NA
900-000251	**0**	52	NA	NA
900-000259	52	NA	**24**	NA
900-000283	59	NA	**21**	NA
900-000288	57	59	NA	NA
900-000289	55	58	NA	NA

The majority of the surrogate recoveries below acceptance limits ranged between 30 and 59 percent. The associated sample results should be treated as estimated with a potential low bias. A few of the samples were associated with recoveries above the acceptance limit. Because the secondary column recoveries were biased high, it is not possible to determine whether the associated data are biased positively or negatively. The results associated with the high recoveries should be treated as estimated values. The samples highlighted in bold in the table have recoveries which are less than 30 percent. Only investigative sample 900-000251 was rejected (R) due to poor recovery. All other investigative samples were qualified estimated (J, UJ) during data validation and are usable.

Relative Percent Difference between Field Duplicates

The relative percent difference between field duplicates is determined to evaluate the precision of the sampling and analysis tasks. During data validation, only sample 900-000027 was qualified estimated (J, UJ) due to exceeded relative percent differences. In addition to reviewing the data validation reports, WESTON also examined the electronic data for field duplicates. The programmatic field duplicate results are presented in Appendix B.1.

Method Blank Contamination

Method blanks are used to determine whether samples may have been contaminated during analysis in the laboratory. During the analysis of the fall soil samples, several blanks were contaminated with low levels of pesticides. Because of the low level of method blank contamination, 24 results were qualified non-detect (U) for select analytes. The majority (21) of the sample results were qualified non-detect (U) for methoxychlor. Methoxychlor was detected at concentrations of 0.36 µg/kg to 11 µg/kg in the blanks. Two of the sample results were qualified for 4,4'-DDT which was detected at 0.17 µg/kg in the blank. One result was qualified non-detect (U) for each of the following analytes: heptachlor at 0.14 µg/kg in the method blank, endrin aldehyde at 0.18 µg/kg in the method blank, and γ-chlordane at 0.048 µg/kg in the method blank. The data are usable as qualified.

Matrix Spike Recovery

Only two samples, 900-000251 and 900-000113, were qualified during data validation due to matrix spike recoveries. For sample 900-000251, the result for γ-BHC was qualified rejected (R) and the result for endrin was qualified estimated (J) due to low matrix spike recovery. Additionally, heptachlor was qualified rejected (R) in sample 900-000113 due to low recovery.

B.2.4 Inorganic Analyses (Metals and cyanide)

Compound Identification

Criteria determined in the laboratory method must be met to properly identify each compound. The data validators found that in three samples 900-000068, 900-000069 and 900-000089, these criteria were not met for three compounds: the dieldrin, endosulfan I and endosulfan II. Analytes identified in Table B.2.13 for the indicated sample ID should have been reported non-detected (U).

Table B.2.13—Summary of False Positives

Sample ID	Analyte
900-000068	dieldrin
900-000068	endosulfan I
900-000069	endosulfan I
900-000089	endosulfan II

This section is divided into three subsections: unfiltered water samples, filtered water samples, and soil samples. Because the unfiltered and filtered waters were analyzed separately and the quality control checks are specific to each matrix, the water samples are discussed separately.

B.2.4.1 Unfiltered Water Samples

WESTON submitted 69 unfiltered water samples for inorganic analyses by CLP SOW ILM03.0. Of the 69 unfiltered water samples, nine were submitted for data validation. During data validation, the validators identified five types of QCC deficiencies:

1. Blank contamination
2. Analytical spike recovery outside acceptance criteria
3. Relative percent differences for field duplicates outside acceptance criteria
4. Percent differences for serial dilutions greater than ten percent
5. Matrix spike recovery outside acceptance criteria

Blank Contamination

Three types of blanks are introduced between sample collection and sample analyses: method blanks (MB), continuing calibration blanks (CCB) and field blanks (FB). During data validation sample results were qualified non-detect (U) due to contamination in each of these types of blanks, as shown in Table B.2.14. If more than 30% of blanks for a specific blank type were contaminated by the same analyte(s), then the analyte(s) was/were considered a possible systematic contaminant(s) and an action level was determined. The action level was determined by averaging the contaminant concentrations and applying the 5x rule.

Table B.2.14—Blank Contaminants (Unfiltered/Total)

ICP Method Blank		Calibration Blank		Field Blank	
Element	*Amount*	*Element*	*Amount*	*Element*	*Amount*
aluminum	102.7µg/L	antimony	-1.3µg/L	aluminum	72.7µg/L 72.7µg/L 163µg/L 230µg/L 230µg/L
		bismuth	-4.4µg/L	calcium	112µg/L
		chromium	2.2µg/L 2.2µg/L 2.4µg/L 2.4µg/L	chromium	1.0µg/L 1.0µg/L 1.1µg/L
		copper	-0.7µg/L	copper	2.4µg/L
		iron	55.1µg/L 55.1µg/L	iron	99.1µg/L
		lithium	13.9µg/L	magnesium	27.5µg/L
		manganese	1.0µg/L	manganese	1.5µg/L
		molybdenum	1.2µg/L	nickel	1.0µg/L 1.0µg/L
		nickel	1.7µg/L 5.9µg/L 5.9µg/L	potassium	211µg/L
		vanadium	-1.0µg/L -1.0µg/L	sodium	44µg/L
		zinc	1.3µg/L 7.4µg/L 7.4µg/L	zinc	2.9µg/L 3.5µg/L

Based on the information in Table B.2.14 and Appendix B.3, aluminum was systematically present in the field blank, while total chromium was systematically present in the continuing calibration blank. The other analytes do not occur at high enough frequency to conclude that the analytes were systematically present during the program. Sample concentrations for total aluminum at concentrations less than 1150 µg/L and total chromium at concentrations less than 12 µg/L should be treated as qualified non-detect (U). If a qualified concentration is greater than an action limit, then the result is inconclusive for the purpose of determining the extent and level of contamination.

GFAA Post Digestion Analytical Spike Recoveries

Based on the data validation qualifications, it appears that the GFAA post digestion analytical spike recoveries for total lead, selenium, and thallium were systematically out of control and appear to be biased low. Therefore, all total lead, selenium, and thallium results should be treated as qualified estimated (J, UJ) when determining the extent and level of contamination.

Field Duplicates

Field duplicates are used to monitor field sampling precision and laboratory reproducibility. The relative percent difference (RPD) between duplicates was greater than 35 percent for zinc. This was probably due to inconsistency of sample preparation. The zinc field duplicate outlier did not impact the field sampling and analytical precision of the data set.

Serial Dilution

The serial dilution, an ICP quality control check, was not within the acceptance criterion in six laboratory batches. These reported results may be less accurate. The affected analytes include aluminum, magnesium, molybdenum, potassium, sodium and zinc. It is not possible to estimate whether the reported results are biased or to what extent the results may be affected in the associated batches. None of the serial dilution outliers appear to be systematic.

Matrix Spike Recovery

Three total metals (lead, selenium and thallium) had matrix spike recoveries outside the quality control limits. However, the recoveries do not indicate a systematic deficiency. Matrix spikes are also evaluated in Appendix B.1 at a program level.

B.2.4.2. Filtered Water Samples

WESTON submitted 69 investigative filtered water samples for inorganic analysis by CLP SOW ILM03.0. Of the 69 filtered water samples, eight were submitted for data validation. During data validation, the validators identified five types of QCC deficiencies:

1. Blank contamination
2. Analytical spike recovery outside acceptance criteria

3. Relative percent differences for field duplicates outside acceptance criteria
4. Percent differences for serial dilutions greater than ten percent
5. Matrix spike recovery outside acceptance criteria

Blank Contamination

Three types of blanks are introduced between sample collection and sample analysis: method blanks (MB), continuing calibration blanks (CCB) and field blanks (FB). During data validation sample results were qualified non-detect (U) due to contamination in each of these types of blanks, as shown in Table B.2.15. If more than 30% of blanks for a specific blank type were contaminated by the same analyte(s), then the analyte(s) was/were considered a possible systematic contaminant(s) and an action level was determined. The action level was determined by averaging the contaminant concentrations and applying the 5x rule.

Table B.2.15—Blank Contaminants (Filtered/Dissolved)

ICP Method Blank		Calibration Blank		Field Blank	
Element	*Amount*	*Element*	*Amount*	*Element*	*Amount*
aluminum	149.7µg/L 10.7µg/L	antimony	-1.3µg/L -4.0µg/L	aluminum	150µg/L 163µg/L
iron	5.32µg/L	Arsenic	-2.7µg/L	antimony	12µg/L
nickel	-1.05µg/L	bismuth	-4.4µg/L -4.4µg/L	barium	1.7µg/L
zinc	5.32µg/L	chromium	2.2µg/L	chromium	1.1µg/L 1.3µg/L
		copper	-0.7µg/L -0.7µg/L	copper	2.1µg/L 2.4µg/L
		iron	55.1µg/L 55.1µg/L	iron	1.99µg/L 99.1µg/L
		manganese	1µg/L 1µg/L	manganese	1.5µg/L 1.9µg/L
		molybdenum	1.2µg/L	molybdenum	1µg/L
		nickel	-1.7µg/L 1.7µg/L 5.9µg/L 5.9µg/L	silver	13.4µg/L
		vanadium	-1.0µg/L	zinc	3.5µg/L 24.5µg/L
		zinc	7.4µg/L 7.4µg/L		

Based on the information in Table B.2.15 and Appendix B.3, nickel was systematically present in the calibration blank. The other analytes do not occur at high enough frequency to conclude that the analytes were systematically present during the program. Sample concentrations for dissolved nickel at concentrations less than 29.5 µg/L should be treated as qualified non-detect (U). If a qualified concentration is greater than an action limit, then the result is inconclusive for the purpose of determining the extent and level of contamination.

GFAA Post Digestion Analytical Spike Recoveries

The GFAA analytical spike recoveries for lead and selenium were outside the acceptance criteria for six out of eight of the validated samples, while the thallium recoveries were for all of the validated samples. Based on the validator qualifications, the GFAA post digestion analytical spike recoveries for dissolved lead, selenium, and thallium were systematically out of control. Since all recoveries for these outliers were less than 85 percent, dissolved lead, selenium and thallium results appear to be biased low. Therefore, all dissolved lead, selenium, and thallium results should be treated as qualified estimated (J, UJ) when determining the extent and level of contamination.

Field Duplicates

The relative percent difference (RPD) between field duplicates was greater than 35 percent for three metals and their frequency was one outlier occurrence per metal. This was probably due to inconsistency of sample preparation. The dissolved antimony, chromium, and lithium field duplicate relative percent differences of 200 percent are a result of non-detected values for the analyte in one sample and low level values of the analyte in another sample. These relative percent difference outliers are not indicative of a systematic problem with laboratory precision or field sampling technique.

Serial Dilution

The serial dilution analysis, an ICP quality control check must agree within a ten percent difference of the original determination after correction for dilution. The check was not within the acceptance criterion in five laboratory batches. These reported results may be less accurate. The affected analytes include dissolved aluminum, copper, magnesium, molybdenum, potassium, and sodium. It is not possible to estimate whether the reported results are biased or to what extent the results may be affected in the associated batches. The occurrence of serial dilution outliers was 57 percent (four out of seven) for dissolved copper. The dissolved copper serial dilution outliers appear to be systematic. Therefore, all dissolved copper results should be treated as qualified estimated (J) when determining the extent and level of contamination.

Matrix Spike Recoveries

Three dissolved metals (lead, selenium and thallium) had matrix spike recoveries outside the quality control limits. All recoveries were low (47 to 65 percent) and their occurrences were 14 percent (one out of seven) for each metal. Based on the data validation, the recoveries do not appear to be indicative of a systematic problem. Matrix spikes are also evaluated in Appendix B.1 at a program level.

B.2.4.3 Soil/Sediment Samples

WESTON submitted 137 soil/sediment samples for inorganic analysis by CLP SOW ILM03.0. Of the 137 soil/sediment samples, 14 were submitted

for data validation. During data validation, the validators identified six types of QCC deficiencies:

1. Blank contamination
2. Analytical spike recovery outside acceptance criteria
3. Relative percent differences for field duplicates outside the acceptance criteria
4. Percent differences for serial dilutions greater than ten percent
5. ICP interference check sample results were outside the control limits
6. Laboratory control standard recovery results outside acceptance criteria

Blank Contamination

Three types of blanks are introduced between sample collection and sample analysis: method blanks (MB), continuing calibration blanks (CCB) and preparation blanks (PB). During data validation sample results were qualified non-detect (U) due to contamination in each of these types of blanks, as shown on Table B.2.16. If more than 30% of blanks for a specific blank type were contaminated by the same analyte(s), then the analyte(s) was/were considered a possible systematic contaminant(s) and an action level was determined. The action level was determined by averaging the contaminant concentrations and applying the 5x rule.

Table B.2.16—Blank Contamination

ICP Method Blank		GFAA Prep Blank		Calibration Blank	
Element	*Amount*	*Element*	*Amount*	*Element*	*Amount*
sodium	263.7mg/kg -334.9mg/kg	cadmium	0.068mg/kg 0.068mg/kg	antimony	1.4mg/kg 1.6mg/kg 1.8mg/kg
				beryllium	0.2mg/kg 0.2mg/kg 0.3mg/kg
				bismuth	-3.7mg/kg -3.7mg/kg -3.7mg/kg
				cadmium	0.4mg/kg
				lithium	3.4mg/kg
				molybdenum	1.7mg/kg
				silver	-1.2mg/kg -1.2mg/kg

Based on the information in Table B.2.16 and Appendix B.3, none of the soil metal analytes occurred at a high enough frequency to conclude that the analytes were systematically present during the program.

GFAA Post Digestion Analytical Spike Recovery

The GFAA analytical spike recoveries for lead, selenium and thallium were outside acceptance limits and the affected results were qualified estimated (J, UJ) by validators.

The GFAA analytical spike recoveries for selenium were outside the acceptance criteria for 64 percent (nine out of fourteen) of the validated samples, and the thallium recoveries were outside acceptance criteria for 79

percent (eleven out of fourteen) of the validated samples. Based on the validation qualifications, the soil analytical spike recoveries for selenium and thallium were systematically out of control. Since all recoveries for these outliers were less than 85 percent, selenium and thallium results appear to be biased low. Therefore, all soil selenium and thallium results should be treated as qualified estimated (J, UJ) when determining the extent and level of contamination.

Field Duplicates

The bismuth field duplicate relative percent differences of 200 percent were due to non-detected values for the analyte in one sample and low level values of the analyte in another sample. These relative percent difference outliers are not indicative of a systematic problem with laboratory precision or field sampling technique. The other two analytes showing field duplicate relative percent differences outside the quality control limits (lithium and molybdenum) were infrequent and did not impact the field sampling and analytical precision for the data set.

Serial Dilution

The serial dilution, an ICP quality control check must agree within a ten percent difference of the original determination after correction for dilution. The check was not within the acceptance criterion in five laboratory batches. These reported results may be less accurate. The affected analytes include barium, cadmium, calcium, chromium, copper, iron, magnesium, manganese, nickel, and vanadium. It is not possible to estimate whether the reported results are biased or to what extent the results may be affected in the associated batches. The occurrences of serial dilution outliers were 43 percent (six out of fourteen) for calcium and 29 percent (four out of fourteen) for chromium. The calcium and chromium serial dilution outliers appear to be systematic. Therefore, all calcium and chromium soil results should be treated as qualified estimated (J) when determining the extent and level of contamination.

ICP Interference Check Sample

The ICP interference check sample (ICS) showed antimony, bismuth, chromium, copper, molybdenum, nickel, sodium and zinc present in the ICP solution at levels greater than the IDL or with absolute values greater than the IDL. However, the presence of antimony, bismuth, chromium, copper, nickel, molybdenum, sodium and zinc ICS outliers in soil varied from seven percent occurrence (one out of fourteen) to 21 percent (three out of fourteen) occurrence. These outliers were considered infrequent, and not indicative of a systematic deficiency.

Laboratory Control Standard

The soil laboratory control standard results for calcium in one laboratory batch were outside the acceptance criterion. The frequency of this deficiency indicates there is not a systematic data impact. The reported results for the affected lab batch may be biased low.

B.2.5 Explosives

B.2.5.1 Water Samples

WESTON submitted 32 water samples for explosives analyses by method 8330. Of the 32 water samples, four were submitted for data validation. During data validation, the validators identified five types of QCC deficiencies:

1. The method blank was contaminated
2. The relative percent difference between field duplicates exceeded acceptance criteria
3. The continuing calibration check Percent Difference (%D) exceeded acceptance limits
4. The laboratory control sample recovery exceeded acceptance limits
5. The holding time was exceeded

During WESTON's review of the quality control check data in the MEIMS database, one other QCC deficiency was identified:

1. Surrogate recoveries outside acceptance limits

Method Blank Contamination

Three samples were qualified non-detect (U) due to laboratory blank contamination. One sample was qualified for 2-amino-4,6-dinitrotoluene, the second one for 2,6-dinitrotoluene, and the third one for RDX.

Five analytes were found in the queried blank data: 1,3,5-trinitrobenzene, 2-amino-4,6-dinitrotoluene, RDX, HMX, and 2,6-dinitrotoluene. RDX and 2,6-dinitrotoluene were systematically present in the laboratory blank. 1,3,5-trinitrobenzene was systematically present in the field blanks.

Because fewer explosive analyses were performed on the water than other types of analyses, the evaluation criteria was tightened for identifying systematic contamination in lab blanks. 2-amino-4,6-dinitrotoluene was detected in three lab blanks and is also considered a systematic contaminant. Table B.2.17 lists the systematic contaminants, the average concentration, and the sample action level. Sample results below the action limit in Table B.2.17 should be qualified non-detect (U).

Table B.2.17—Blank Contaminants

Analyte	Average Concentration (µg/L)	Action Limit (µg/L)
1,3,5-TNB	0.29	1.5
RDX	0.42	2.1
2,6-dinitrotoluene	3.6	18
2-amino-4,6-dinitrotoluene	1.7	8.5

Relative Percent Difference (RPD) between Field Duplicates

The Relative Percent Difference between field duplicates was exceeded for one validated sample. Sample 900-000020 was qualified estimated non-detect for 2-amino-4,6-dinitrotoluene. In addition to reviewing the data validation reports, WESTON also reviewed the field duplicate data contained in the MEIMS database. The results of the database review are presented in Appendix B.1.

Continuing Calibration Check Percent Difference (%D)

The laboratory is required to verify the stability of their calibration curve after every ten samples, and the stability is evaluated in terms of percent difference. One sample was qualified estimated (J) during data validation for PETN due to a percent difference of -51.4 percent. A negative percent difference indicates a possible negative bias. Because only one sample was qualified, the deficiency is assumed to be random and not systematic.

Laboratory Control Sample Recovery

The laboratory control sample is used to evaluate sample extraction and analytical performance. The data from a control sample is particularly useful when the associated sample matrix spike data fails a criteria. When a matrix spike fails, the control sample data can be used to substantiate the system was in control and the failure was the direct result of matrix interferences. Two samples were qualified estimated (J) due to analyte recoveries above the acceptance limits. Both samples were qualified due to higher than expected recovery of 2,6-dinitrotoluene in the laboratory control sample. The positive recoveries indicate that the associated sample data may be biased high for the qualified analyte. Based on only two samples being qualified, the deficiency is probably not systematic.

Holding Time

Only sample 900-000081 was qualified estimated (J, UJ) during data validation due to an exceeded holding time and the results were acceptable. Sample 900-000081 was the blind PE sample submitted during the Fall sampling event. Based on the MEIMS database, no other samples failed to meet the holding time criteria.

Surrogate Recoveries

The surrogate recoveries for explosives in water were queried from the database. Two recoveries for 3,5-dinitroaniline were identified below the minimum acceptable QAPP recovery of 50%. The affected sample identification numbers and associated recoveries are listed in Table B.2.18. The reported sample results should be evaluated as estimated (J, UJ) concentrations with a potential negative bias.

Table B.2.18—Results Outside Acceptance Limits

Sample ID	Surrogate	Recovery (%)
900-000143	3,5-dinitroaniline	41
900-000151	3,5-dinitroaniline	43

B.2.5.2 Soil/Sediment Samples

WESTON submitted 82 soil/sediments samples for explosives analyses. Of the 82 soil/sediment samples, seven were submitted for data validation. During data validation, the validators only identified one QCC deficiency. Sample 900-000027 was qualified estimated (UJ) because the relative percent difference between the field duplicates exceeded the acceptance criteria for HMX. Because only one field duplicate exceeded criteria, no systematic impact is likely.

Five analytes were found in the queried blank data: 1,3,5-trinitrobenzene, 1,3-dinitrobenzene, RDX, HMX, and 2,6-dinitrotoluene. HMX and 1,3,5-trinitrobenzene were determined to be a systematic contaminant. Table B.2.19 lists the systematic contaminants, the average concentration, and sample action level. Sample results less than the action limit should be treated as qualified non-detects (U).

Table B.2.19—Blank Contaminants

Analyte	Average Concentration (µg/L)	Action Limit (µg/L)
HMX	0.74	3.7
1,3,5-trinitrotoluene	0.29	1.45

B.2.6 General Chemistry (Anions and Miscellaneous Tests)

B.2.6.1 Water Samples

WESTON submitted 69 water samples for anions analyses. The surface water samples were submitted the following analyses: total organic carbon, chloride, sulfate, nitrate/nitrite, fluoride, total phosphorus, total nitrogen, ammonia, total dissolved solids, and total suspended solids. Of the 69 water samples, nine were submitted for data validation. During data validation, the validators identified two types of QCC deficiencies:

1. Samples analyzed outside holding time
2. Samples analyzed without a valid ICV/CCV

During WESTON's review of the quality control check data in the MEIMS database, one other QCC deficiency was identified:

1. Blank contamination

Holding Time

Table B.2.20 summarizes the sample identification and associated general chemistry analyses which were extracted outside of holding time based both on data validation and the queried database results. Because anions are not susceptible to evaporation nor typically susceptible to extensive biological

degradation, the impact from the exceeded holding times is probably minimal.

Table B.2.20—Anions in Water Analyzed Outside Holding Time

Parameter	*Sample ID*	*Days Past Hold*	*Parameter*	*Sample ID*	*Days Past Hold*
fluoride	900000079	1	nitrate/nitrite	900000221	40
fluoride	900000082	1	nitrate/nitrite	900000222	40
fluoride	900000083	1	nitrate/nitrite	900000230	45
fluoride	900000219	16	nitrate/nitrite	900000231	45
fluoride	900000220	16	nitrate/nitrite	900000232	45
fluoride	900000221	16	nitrate/nitrite	900000233	45
fluoride	900000222	16	nitrate/nitrite	900000252	38
fluoride	900000233	21	nitrate/nitrite	900000253	38
fluoride	900000252	14	nitrate/nitrite	900000254	38
fluoride	900000253	14	nitrate/nitrite	900000256	38
fluoride	900000254	14	nitrate/nitrite	900000273	37
fluoride	900000256	14	nitrate/nitrite	900000274	37
fluoride	900000273	13	nitrate/nitrite	900000275	37
fluoride	900000274	13	nitrate/nitrite	900000276	33
fluoride	900000275	13	nitrate/nitrite	900000277	33
nitrogen	900000050	3	phosphorus	900000050	3
nitrogen	900000051	3	phosphorus	900000051	3
nitrogen	900000052	3	phosphorus	900000052	3
nitrogen	900000053	3	phosphorus	900000053	3
nitrogen	900000054	3	phosphorus	900000054	3
nitrogen	900000055	3	phosphorus	900000055	3
nitrogen	900000064	2	phosphorus	900000064	2
nitrogen	900000065	2	phosphorus	900000065	2
nitrogen	900000066	1	phosphorus	900000066	1
nitrogen	900000078	7	phosphorus	900000078	7
nitrogen	900000079	7	phosphorus	900000079	7
nitrogen	900000080	4	phosphorus	900000080	4
nitrogen	900000082	7	phosphorus	900000082	7
nitrogen	900000083	7	phosphorus	900000083	7
nitrogen	900000107	1	phosphorus	900000107	1
nitrogen	900000108	1	phosphorus	900000108	1
nitrogen	900000150	1	phosphorus	900000150	1
nitrogen	900000151	1	phosphorus	900000151	1
nitrate/nitrite	900000212	46	total dissolved solids	900000082	11
nitrate/nitrite	900000219	40	total dissolved solids	900000212	1
nitrate/nitrite	900000220	40			

No ICV/CCV

Four samples were qualified estimated (J, UJ) due to no ICV/CCV for nitrate/nitrite. Based on the frequency of this deficiency, a possible systematic problem may exist. The water nitrate/nitrite values should be treated a estimated (J).

Blank Contamination

Five field blanks were reported with sulfate, total suspended solids (TSS), and total dissolved solids (TDS) contamination in the database. Based on the frequency of contamination, a possible systematic problem exists. Table B.2.21 lists the affected analysis, the average concentration of the contaminant and the sample action limit. Because one of the five results for TDS and TSS was clearly an outlier, the average concentration for TSS and TDS are based on only four of the results. Sample results less than the action limit should be treated as qualified non-detects (U).

Table B.2.21—Blank Contaminants

Analyte	Average Concentration (mg/L)	Action Limit (mg/L)
sulfate	2.8	14
TDS	18	90
TSS	5.2	26

B.2.6.2 Soil/Sediment Samples

WESTON submitted 137 soil/sediment samples for anions analyses. The soil/sediment samples were submitted the following analyses: total organic carbon, chloride, sulfate, nitrate/nitrite, and fluoride. Of the 137 soil/sediment samples, seven were submitted for data validation.

During data validation, the validators identified two types of QCC deficiencies:

1. Samples were extracted outside holding time
2. Samples were analyzed without a valid ICV/CCV

During WESTON's review of the quality control check data in the MEIMS database, one other QCC deficiency was identified:

1. Blank contamination

Holding Time

Table B.2.22 summarizes the sample identification and associated general chemistry analyses which were extracted outside of holding time. The table includes both exceeded holding times identified by data validation and exceeded holding times identified by the MEIMS database. Because anions are not susceptible to evaporation nor typically susceptible to extensive biological degradation, the impact from the exceeded holding times is probably minimal.

Table B.2.22–Anions in Soil Analyzed Outside Holding Time

Parameter	*Sample ID*	*Days Past Hold*	*Parameter*	*Sample ID*	*Days Past Hold*
chloride	900000030	3	nitrate/nitrite	900000178	57
chloride	900000117	5	nitrate/nitrite	900000179	63

Table B.2.22–Anions in Soil Analyzed Outside Holding Time

Parameter	Sample ID	Days Past Hold	Parameter	Sample ID	Days Past Hold
chloride	900000213	35	nitrate/nitrite	900000180	63
fluoride	900000030	6	nitrate/nitrite	900000196	56
fluoride	900000117	3	nitrate/nitrite	900000197	56
fluoride	900000142	15	nitrate/nitrite	900000250	1
fluoride	900000169	11	sulfate	900000030	6
fluoride	900000175	11	sulfate	900000117	5
fluoride	900000176	11	sulfate	900000178	49
fluoride	900000177	11	sulfate	900000142	15
fluoride	900000178	11	sulfate	900000196	18
fluoride	900000179	11	sulfate	900000213	36
fluoride	900000180	11	sulfate	900000250	1
fluoride	900000196	11	total organic carbon	900000102	7
fluoride	900000197	11	total organic carbon	900000104	2
fluoride	900000213	29	total organic carbon	900000105	2
fluoride	900000250	1	total organic carbon	900000106	2
nitrate/nitrite	900000030	2	total organic carbon	900000112	1
nitrate/nitrite	900000142	15	total organic carbon	900000169	3
nitrate/nitrite	900000169	66	total organic carbon	900000217	1
nitrate/nitrite	900000175	62	total organic carbon	900000218	1
nitrate/nitrite	900000176	62	total organic carbon	900000250	1
nitrate/nitrite	900000177	57			

No ICV/CCV

Two samples were qualified estimated (J, UJ) due to no ICV/CCV for nitrate/nitrite. Based on the infrequent qualifications, no systematic deficiency is evident.

Blank Contamination

Based on the database query, five field blanks were contaminated with sulfate at an average concentration of 2.8 mg/L. Samples results less than 14 mg/kg should be treated as qualified non-detects (U).

B.2.7 Radiological Analyses

B.2.7.1 Water Samples

WESTON submitted 69 water samples for radiological analyses. Of the 69 samples submitted for radiological analyses, eight were submitted for data validation. During data validation, the validators only qualified two of the eight samples: 900-000194 and 900-000054. The samples were qualified for the following reasons:

1. The matrix spike sample exceeded criteria was exceeded
2. The standard deviation difference between samples was exceeded
3. The laboratory control sample exceeded acceptance criteria.

During WESTON's review of the quality control check data in the MEIMS database, one other deficiency was identified:

1. Method blank contamination

Matrix Spike

A matrix spike is analyzed to determine whether the inherit characteristics of a water sample may interfere with the accurate determination of a analyte's activity. The uranium^{234} criteria was exceeded in both sample 900-000194 and sample 900-000054, and the associated isotope activities were qualified estimated (J). Sample 900-000054 was also qualified estimated (J) for tritium due to matrix spike performance. Based on the frequency of this deficiency, no systematic deficiency is indicated and the data set is usable.

Standard Deviation Difference between Samples

The laboratory performs duplicate analyses to evaluate the precision of their analysis procedure. The difference between laboratory duplicates of water samples was exceeded for potassium^{40} in sample 900-000054, and the associated sample result was qualified estimated (J). Because only one of the validated samples was qualified due to a duplicate criteria being exceeded, no systematic deficiency is indicated and the data set is usable.

Laboratory Control Spike

Laboratory control samples (LCS) are introduced to evaluate general analysis technique based on a sample matrix free of analytical interferences. When spike isotopes are not recovered within the acceptance range, the deficiency may indicate a systematic bias affecting an entire sample batch. During data validation, uranium^{234} and uranium^{238} results in sample 900-000194 were qualified estimated (J) due to exceeded LCS criteria. Table B.2.23 lists the other samples analyzed in the laboratory batches associated with this deficiency. The results for uranium^{234} and uranium^{238} for the sample listed in Table B.2.23 should be treated as estimated (J, UJ).

Table B.2.23—Samples Affected by LCS

Analytical Batch: 3779	Analytical Batch: 3504
900-000194	900-000054
900-000191	900-000055
900-000198	900-000050
	900-000064
	900-000051
	900-000052
	900-000053
	900-000065

Blank Contamination

Several analytes were found in the queried blank data: thorium^{228}, plutonium$^{239/240}$, strontium-90, thorium^{230}, thorium^{232}, uranium^{234}, uranium^{235}, tritium, radium^{226}, and potassium^{40}.

Of these analytes, potassium^{40} was systematically found in the field blanks. Thorium^{230} was systematically found in the laboratory blanks. Table B.2.24 lists the analyte, the average concentration, and the sample action limit. Sample results less than action limit should be treated as qualified non-detects (U).

Table B.2.24—Blank Contaminants

Analyte	Average Concentration (pCi/L)	Action Limit (pCi/L)
potassium^{40}	204 pCi/L	1020 pCi/L
thorium^{230}	0.15	0.75

B.2.7.2 Soil/Sediment Samples

WESTON submitted 136 soil/sediment samples for radiological analyses. Of the 136 samples submitted for radiological analyses, fifteen were submitted for data validation. During data validation only eight of the samples were qualified. The samples were qualified for the following reasons:

1. The sample fraction was dried prior to tritium analysis
2. The laboratory control sample criteria was exceeded
3. The matrix spike criteria was exceeded
4. The standard deviation for a laboratory duplicate was exceeded

During WESTON's review of the quality control check data in the MEIMS database, on other deficiency was identified:

1. Method blank contamination

Dried Sample Fraction

The laboratory reported that several samples in laboratory batch 4334 appeared to have been dried prior to receipt by the laboratory. Laboratory batch 4334 included sample 900-000265 which was validated. Because the sample may have been dried prior to tritium analysis, the tritium result for 900-000265 was qualified rejected (R). Based on the laboratory case narrative, several other samples (Table B.2.25) in the laboratory batch may have been similarly affected and the tritium data are probably unusable and should be treated as rejected (R). These samples were re-collected in the Fall of 1995 and re-analyzed for tritium.

Table B.2.25—Samples in Lab Batch 4334

900-000260	900-000261	900-000262
900-000263	900-000264	

Laboratory Control Sample

Laboratory control samples (LCS) are introduced to evaluate general analysis technique based on a sample matrix free of analytical interferences. When spike isotopes are not recovered within the acceptance range, the deficiency may indicate a systematic bias affecting an entire sample batch. Three samples were qualified estimated (J) based on the standard deviation for the laboratory control sample exceeding 3σ for uranium^{238}. The standard deviation for the outliers ranged from 3.23 σ to 3.2 σ. Because only three of fifteen samples were qualified for uranium^{238}, the deficiency is probably not systematic and does not represent a significant impact to the data set. The samples in the same analytical batch as the qualified samples are listed in Table B.2.26 and the associated sample results for uranium^{238} should be treated as estimated (J, UJ).

Table B.2.26—Uranium^{238} Results Affected by LCS

Batch: 41138008	*Batch: 40950506*
900-000213	900-000037
900-000243	900-000038
900-000223	900-000039
900-000224	900-000040
900-000225	900-000041
900-000214	900-000056
900-000215	900-000057
900-000244	900-000058
900-000245	

Matrix Spike Data

A matrix spike is analyzed to determine whether the inherit characteristics of a soil/sediment sample may interfere with the accurate determination of an analyte's activity. Only sample 900-000090 was qualified due to a matrix spike exceeding criteria. The sample was qualified estimated (J) for tritium. Because only one of the fifteen samples was qualified, there is no evidence of systematic sample interferences.

Standard Deviation Difference between Samples

The laboratory performs duplicate analyses to evaluate the precision of their analytical procedure. The difference between laboratory duplicates of soil/sediment samples was exceeded for potassium^{40} in three samples and for uranium^{238} in one sample. The data associated with these deficiencies were qualified estimated (J). The potassium^{40} outliers ranged from 6.0σ to 7.2σ. Because only three of the fifteen soil/sediment samples were qualified for deficient potassium^{40} duplicate results and only one sample was qualified for uranium^{238}, the data set is probably not systematically impacted, and the data are usable.

Blank Contamination

Eleven isotopes were found in the queried blank data: plutonium^{238}, plutonium$^{239/240}$, thorium^{228}, thorium^{230}, thorium^{232}, tritium, uranium-235, uranium^{238}, potassium^{40}, and radium^{226}. WESTON reviewed the frequency of blank contamination and identified the following potential systematic contaminants: plutonium^{238}, thorium^{228}, and thorium^{230} in the laboratory blanks, and potassium^{40} in the field blanks. Table B.2.27 lists the systematic contaminants, the average concentration, and the sample action level. Sample results less than the action limit should be treated as qualified non-detects (U). Because of differences between the method of analysis for potassium^{40} in water and potassium^{40} in soil, a simple 5x multiplier doesn't establish an appropriate soil action limit. Therefore, all potassium^{40} results should be treated as estimated (J).

Table B.2.27—Blank Contaminants

Isotope	Average Concentration (pCi/g)	Action Limit (pCi/g)
plutonium^{238}	0.02	0.10
thorium^{228}	0.04	0.20
thorium^{230}	0.06	0.24
potassium^{40}	204	NA

APPENDIX B.3

Appendix B-3

SUMMARY OF VALIDATION QUALIFIERS: FALL

B.3 Summary of Validation Qualifiers: Fall

B.3.1 Contents

Appendix B.3 contains a per sample data qualification summary (Tables B.3.1 through B.3.7) of fall sample results. The summary provides a data user sufficient information to quickly re-assess a qualified data point, given a change to a data use or to an action limit. The appendix provides a list of qualified data points, the applied qualifier and the reason qualified. All of the tables are subject to final error checking.

B.3.2 Description of Appendix Use

When an action limit has been assigned to an analyte and an analyte value in one of the samples being evaluated is qualified, the data user can reference this table to better understand the effect on the data. For example, if an action limit for chloride was set at 4.0 mg/L and a sample result was qualified estimated (J) at 2.5 mg/L, the data user could check the qualification in the appendix and might find an entry such as:

MND00-0000-0001 J MSR-Chloride (50%)

This entry indicates that the reported value may be biased low by 50 percent. To compare the result to an action limit, the data user would divide the reported result (2.5mg/L) by 0.5, resulting in 5mg/L. Because the result is greater than the action limit, the data point is suspect and unsuitable for evaluating the extent of contamination. If the percent recovery had been 83%, the data point would have been considered usable.

Table B.3.8 lists the symbols used in this Appendix to identify quality control deficiencies.

Table B.3.1–Fall 1994 Volatile Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
S	900-000154	J	%D - 1,2-dichloroethane (-29)
S	900-000027	J	%D - 2-butanone (33.6)
S	900-000030	J	%D - 2-butanone (33.6)
S	900-000178	J	%D - 2-butanone (25)
S	900-000196	J	%D - 2-butanone (25)
S	900-000027	J	%D - acetone (80)
S	900-000030	J	%D - acetone (80)
S	900-000056	UJ	%D - acetone (27.6)
S	900-000071	UJ	%D - acetone (27.6)
S	900-000090	UJ	%D - acetone (59)
S	900-000117	UJ	%D - acetone (53)
S	900-000127	UJ	%D - acetone (48)
S	900-000154	J	%D - acetone (70.2)
S	900-000178	J	%D - acetone (25)
S	900-000196	J	%D - acetone (25)
S	900-000178	J	%D - acetonitrile (36)
S	900-000196	J	%D - acetonitrile (36)
S	900-000213	UJ	%D - acetonitrile (37.5)
S	900-000243	J	%D - acetonitrile (37.5)
S	900-000247	J	%D - acetonitrile (30.4)
S	900-000178	J	%D - chloromethane (-47)
S	900-000196	J	%D - chloromethane (-47)
S	900-000213	UJ	%D - chloromethane (34.9)
S	900-000243	J	%D - chloromethane (34.9)
S	900-000247	J	%D - chloromethane (29.4)
S	900-000027	J	%D - methylene chloride (57.7)
S	900-000030	J	%D - methylene chloride (57.7)
S	900-000090	UJ	%D - methylene chloride (40.5)
S	900-000154	J	%D - methylene chloride (45)
S	900-000247	J	%D - toluene (25.9)
S	900-000178	J	%D - vinyl chloride (-25)
S	900-000196	J	%D - vinyl chloride (-25)
S	900-000213	UJ	%D - vinyl chloride (27.3)
S	900-000243	J	%D - vinyl chloride (27.3)
S	900-000027	J	%RSD - acetone (120.9)
S	900-000030	J	%RSD - acetone (120.9)
S	900-000056	UJ	%RSD - acetone (43)
S	900-000071	UJ	%RSD - acetone (43)
S	900-000090	UJ	%RSD - acetone (120.9)
S	900-000117	UJ	%RSD - acetone (43)
S	900-000127	U	%RSD - acetone (43)
S	900-000154	J	%RSD - acetone (120)
S	900-000178	J	%RSD - acetone (31)
S	900-000196	J	%RSD - acetone (31)
S	900-000213	UJ	%RSD - acetone (31.3)
S	900-000243	J	%RSD - acetone (31.3)
S	900-000247	J	%RSD - acetone (31.3)
S	900-000027	J	%RSD - methylene chloride (85.4)
S	900-000030	J	%RSD - methylene chloride (85.4)

Table B.3.1–Fall 1994 Volatile Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
S	900-000090	UJ	%RSD - methylene chloride (85.4)
S	900-000154	J	%RSD - methylene chloride (85)
S	900-000027	U	MB - acetone (53 µg/kg)
S	900-000030	U	MB - acetone (53 µg/kg)
S	900-000056	U	MB - acetone (12 µg/kg)
S	900-000071	U	MB - acetone (12 µg/kg)
S	900-000090	U	MB - acetone (6 µg/kg)
S	900-000117	U	MB - acetone (14 µg/kg)
S	900-000127	U	MB - acetone (15 µg/kg)
S	900-000154	U	MB - acetone (10 µg/kg)
S	900-000213	U	MB - acetone (13 µg/kg)
S	900-000196	U	MB - acetonitrile (40 µg/kg)
S	900-000027	U	MB - methylene chloride (12 µg/kg)
S	900-000030	U	MB - methylene chloride (12 µg/kg)
S	900-000056	U	MB - methylene chloride (9 µg/kg)
S	900-000071	U	MB - methylene chloride (9 µg/kg)
S	900-000090	U	MB - methylene chloride (13 µg/kg)
S	900-000127	U	MB - methylene chloride (33 µg/kg)
S	900-000154	U	MB - methylene chloride (20 µg/kg)
S	900-000178	U	MB - methylene chloride (8 µg/kg)
S	900-000196	U	MB - methylene chloride (8 µg/kg)
S	900-000213	U	MB - methylene chloride (7 µg/kg)
S	900-000243	U	MB - methylene chloride (7 µg/kg)
S	900-000247	U	MB - methylene chloride (11 µg/kg)
W	900-000020	UJ	%D - 2-butanone (56.8)
W	900-000194	UJ	%D - 2-butanone (32.2)
W	900-000020	UJ	%D - 2-hexanone (46.5)
W	900-000194	UJ	%D - 2-hexanone (35.1)
W	900-000020	UJ	%D - acetone (67.3)
W	900-000183	J	%D - acetone (25.7)
W	900-000194	UJ	%D - acetone (54.9)
W	900-000256	UJ	%D - bromoform (25.2)
W	900-000081	J	%RSD - 2-butanone (30.9)
W	900-000054	J	%RSD - acetone (36.3)
W	900-000081	J	%RSD - acetone (36.3)
W	900-000135	J	%RSD - acetone (36.3)
W	900-000183	J	%RSD - acetone (33.2)
W	900-000194	J	%RSD - acetone (33.2)
W	900-000034	U	FB - methylene chloride (2 µg/L)
W	900-000135	U	MB - methylene chloride (1 µg/L)
W	900-000183	U	MB - methylene chloride (7 µg/L)
W	900-000194	U	MB - methylene chloride (5 µg/L)
W	900-000054	U	TB - methylene chloride (3 µg/L)
W	900-000256	U	TB - methylene chloride (3 µg/L)

Table B.3.2–Fall 1994 Semi-Volatile Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
S	900-000154	UJ	%D - 2,2-oxybis(1-chloropropane) (31.8)
S	900-000027	UJ	%D - 4-chloroaniline (-68.5)
S	900-000030	UJ	%D - 4-chloroaniline (-68.5)
S	900-000056	UJ	%D - 4-chloroaniline (67.3)
S	900-000071	UJ	%D - 4-chloroaniline (74.5)
S	900-000154	UJ	%D - 4-chloroaniline (50.5)
S	900-000071	UJ	%D - 4-nitrophenol (25.7)
S	900-000243	UJ	%D - 4-nitrophenol (37.1)
S	900-000056	UJ	%D - Benzoic acid (36)
S	900-000243	UJ	%D - Benzoic acid (36.5)
S	900-000127	UJ	%D - Bis(2-ethylhexyl)phthalate (-44.5)
S	900-000127	UJ	%D - Butylbenzylphthalate (-40.6)
S	900-000127	UJ	%D - Di-n-octylphthalate (-43)
S	900-000071	UJ	%D - Hexachloroaniline (26)
S	900-000027	UJ	%D - Hexachlorobenzene (-28.3)
S	900-000030	UJ	%D - Hexachlorobenzene (-28.3)
S	900-000056	UJ	%D - Hexachlorobenzene (25.1)
S	900-000027	UJ	%D - Hexachlorobutadiene (-31.2)
S	900-000030	UJ	%D - Hexachlorobutadiene (-31.2)
S	900-000027	UJ	%D - Hexachlorocyclopentadiene (-30.7)
S	900-000030	UJ	%D - Hexachlorocyclopentadiene (-30.7)
S	900-000243	UJ	%D - Hexachlorocyclopentadiene (33.6)
S	900-000027	UJ	%D - N-Nitrosodiphenylamine (-28.7)
S	900-000030	UJ	%D - N-Nitrosodiphenylamine (-28.7)
S	900-000056	UJ	%D - N-Nitrosodiphenylamine (39.2)
S	900-000071	UJ	%D - N-Nitrosodiphenylamine (27)
S	900-000090	UJ	%D - N-Nitrosodiphenylamine (48.9)
S	900-000117	UJ	%D - N-Nitrosodiphenylamine (40.8)
S	900-000127	UJ	%D - N-Nitrosodiphenylamine (44.1)
S	900-000154	UJ	%D - N-Nitrosodiphenylamine (67.2)
S	900-000056	UJ	%D - Nitrophenol (25.7)
S	900-000154	UJ	%D - Pentachlorophenol (25.9)
S	900-000243	UJ	%RSD - 2,4-dinitrophenol (37.4)
S	900-000127	UJ	%RSD - 2-nitroaniline (-29.8)
S	900-000154	UJ	%RSD - 3,3'-dichlorobenzidine (31.2)
S	900-000127	UJ	%RSD - 3-nitroaniline (-30.1)
S	900-000027	UJ	%RSD - 4-chloroaniline (54.9)
S	900-000030	UJ	%RSD - 4-chloroaniline (54.9)
S	900-000056	UJ	%RSD - 4-chloroaniline (54.9)
S	900-000071	UJ	%RSD - 4-chloroaniline (54.9)
S	900-000090	UJ	%RSD - 4-chloroaniline (55)
S	900-000117	UJ	%RSD - 4-chloroaniline (55.7)
S	900-000127	UJ	%RSD - 4-chloroaniline (55)
S	900-000154	UJ	%RSD - 4-chloroaniline (47.5)
S	900-000090	UJ	%RSD - Benzoic acid (33.3)
S	900-000127	UJ	%RSD - Benzoic acid (33.3)
S	900-000213	UJ	%RSD - Benzoic acid (44.6)
S	900-000090	UJ	%RSD - N-Nitrosodiphenylamine (39.4)
S	900-000117	UJ	%RSD - N-Nitrosodiphenylamine (40.1)

Table B.3.2–Fall 1994 Semi-Volatile Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
S	900-000127	UJ	%RSD - N-Nitrosodiphenylamine (39.4)
S	900-000243	J	FDRPD - 4-chloro-3-methylphenol (200)
S	900-000027	J	ID - Benzo(b)fluoranthene
S	900-000030	J	ID - Benzo(b)fluoranthene
S	900-000056	J	ID - Benzo(b)fluoranthene
S	900-000071	J	ID - Benzo(b)fluoranthene
S	900-000090	J	ID - Benzo(b)fluoranthene
S	900-000117	J	ID - Benzo(b)fluoranthene
S	900-000127	J	ID - Benzo(b)fluoranthene
S	900-000243	J	ID - Benzo(b)fluoranthene
S	900-000027	J	ID - Benzo(k)fluoranthene
S	900-000030	J	ID - Benzo(k)fluoranthene
S	900-000056	J	ID - Benzo(k)fluoranthene
S	900-000071	J	ID - Benzo(k)fluoranthene
S	900-000090	J	ID - Benzo(k)fluoranthene
S	900-000117	J	ID - Benzo(k)fluoranthene
S	900-000127	J	ID - Benzo(k)fluoranthene
S	900-000243	J	ID - Benzo(k)fluoranthene
S	900-000027	U	MB - Di-n-butylphthalate (53 μg/kg)
S	900-000030	U	MB - Di-n-butylphthalate (53 μg/kg)
S	900-000056	U	MB - Di-n-butylphthalate (69 μg/kg)
S	900-000071	U	MB - Di-n-butylphthalate (69 μg/kg)
S	900-000117	U	MB - Di-n-butylphthalate (44 μg/kg)
W	900-000135	J	%D - 2,4-dinitrophenol (-32.7)
W	900-000020	UJ	%D - 4-chloroaniline (-81.1)
W	900-000034	UJ	%D - 4-chloroaniline (-82.1)
W	900-000054	J	%D - 4-chloroaniline (-67.3)
W	900-000135	J	%D - 4-nitroaniline (-26)
W	900-000054	J	%D - 4-nitrophenol (25.7)
W	900-000054	J	%D - Benzoic acid (36.2)
W	900-000135	J	%D - Di-n-octylphthalate (-26.3)
W	900-000054	J	%D - Hexachlorobenzene (-25.1)
W	900-000020	UJ	%D - N-Nitrosodiphenylamine (-27.1)
W	900-000034	UJ	%D - N-Nitrosodiphenylamine (-30.8)
W	900-000054	J	%D - N-Nitrosodiphenylamine (-34.2)
W	900-000081	J	%D - N-Nitrosodiphenylamine (41.4)
W	900-000135	J	%D - N-Nitrosodiphenylamine (40.0)
W	900-000183	UJ	%D - N-Nitrosodiphenylamine (40.7)
W	900-000020	UJ	%RSD - 4-chloroaniline (64)
W	900-000034	UJ	%RSD - 4-chloroaniline (64)
W	900-000054	J	%RSD - 4-chloroaniline (54.9)
W	900-000081	J	%RSD - 4-chloroaniline (55.7)
W	900-000135	J	%RSD - 4-chloroaniline (55.7)
W	900-000183	UJ	%RSD - 4-chloroaniline (53.2)
W	900-000256	UJ	%RSD - Benzoic acid (34)
W	900-000081	J	%RSD - N-nitrosodiphenylamine (40.1)
W	900-000135	J	%RSD - N-nitrosodiphenylamine (40.1)
W	900-000183	UJ	%RSD - N-nitrosodiphenylamine (38.4)
W	900-000081	J	HT - 2 days

Table B.3.3–Fall 1994 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000245	UJ	%D - 4,4'-DDE (30)	Inaccuracy ±30%
S	900-000165	UJ	%RSD - aldrin (22)	Inaccuracy
S	900-000200	UJ	%RSD - aldrin (22)	Inaccuracy
S	900-000046	UJ	%RSD - endrin aldehyde (26)	Inaccuracy
S	900-000067	UJ	%RSD - endrin aldehyde (26)	Inaccuracy
S	900-000070	UJ	%RSD - endrin aldehyde (26)	Inaccuracy
S	900-000072	UJ	%RSD - endrin aldehyde (26)	Inaccuracy
S	900-000074	UJ	%RSD - endrin aldehyde (26)	Inaccuracy
S	900-000086	UJ	%RSD - endrin aldehyde (26)	Inaccuracy
S	900-000090	UJ	%RSD - endrin aldehyde (26)	Inaccuracy
S	900-000091	UJ	%RSD - endrin aldehyde (26)	Inaccuracy
S	900-000092	UJ	%RSD - endrin aldehyde (26)	Inaccuracy
S	900-000107	UJ	%RSD - endrin aldehyde (26)	Inaccuracy
S	900-000165	UJ	%RSD - heptachlor epoxide (23)	Inaccuracy
S	900-000200	UJ	%RSD - heptachlor epoxide (23)	Inaccuracy
S	900-000169	UJ	%RSD - methoxychlor (21)	Inaccuracy
S	900-000177	UJ	%RSD - methoxychlor (21)	Inaccuracy
S	900-000196	UJ	%RSD - methoxychlor (21)	Inaccuracy
S	900-000197	UJ	%RSD - methoxychlor (21)	Inaccuracy
S	900-000243	UJ	%D - 4,4'-DDE (30)	Inaccuracy ±30%
S	900-000068	U	CID - dieldrin	Usable
S	900-000068	U	CID - endosulfan I	Usable
S	900-000069 (FD)	U	CID - endosulfan I	Usable
S	900-000089	U	CID - endosulfan II	Usable
S	900-000006	U	CRPD - 4,4'-DDD (350)	Usable
S	900-000015	U	CRPD - 4,4'-DDD (433)	Usable
S	900-000027 (FD)	U	CRPD - 4,4'-DDD (131)	Usable
S	900-000029	U	CRPD - 4,4'-DDD (251)	Usable
S	900-000039	R	CRPD - 4,4'-DDD (818)	Unusable
S	900-000040	R	CRPD - 4,4'-DDD (577)	Unusable
S	900-000049	R	CRPD - 4,4'-DDD (200)	Unusable
S	900-000068	U	CRPD - 4,4'-DDD (220)	Usable
S	900-000069 (FD)	R	CRPD - 4,4'-DDD (254)	Unusable
S	900-000072	U	CRPD - 4,4'-DDD (103)	Usable
S	900-000074	U	CRPD - 4,4'-DDD (191)	Usable
S	900-000091	U	CRPD - 4,4'-DDD (262)	Usable
S	900-000102	U	CRPD - 4,4'-DDD (233)	Usable
S	900-000105 (FD)	U	CRPD - 4,4'-DDD (117)	Usable
S	900-000106	U	CRPD - 4,4'-DDD (108)	Usable
S	900-000115	R	CRPD - 4,4'-DDD (369)	Unusable
S	900-000126	U	CRPD - 4,4'-DDD (228)	Usable
S	900-000127	U	CRPD - 4,4'-DDD (607)	Usable
S	900-000128	U	CRPD - 4,4'-DDD (446)	Usable
S	900-000145 (FD)	U	CRPD - 4,4'-DDD (353)	Usable
S	900-000154	R	CRPD - 4,4'-DDD (285.7)	Unusable
S	900-000176	U	CRPD - 4,4'-DDD (273)	Usable
S	900-000197	R	CRPD - 4,4'-DDD (>1000)	Unusable
S	900-000205	U	CRPD - 4,4'-DDD (429)	Usable
S	900-000206	U	CRPD - 4,4'-DDD (168)	Usable

Table B.3.3–Fall 1994 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000217	U	CRPD - 4,4'-DDD (831)	Usable
S	900-000239	U	CRPD - 4,4'-DDD (133)	Usable
S	900-000006	U	CRPD - 4,4'-DDE (162)	Usable
S	900-000007	U	CRPD - 4,4'-DDE (105)	Usable
S	900-000038	U	CRPD - 4,4'-DDE (214)	Usable
S	900-000039	U	CRPD - 4,4'-DDE (248)	Usable
S	900-000040	U	CRPD - 4,4'-DDE (528)	Usable
S	900-000041	U	CRPD - 4,4'-DDE (178)	Usable
S	900-000058	U	CRPD - 4,4'-DDE (493)	Usable
S	900-000069 (FD)	R	CRPD - 4,4'-DDE (106)	Unusable
S	900-000074	U	CRPD - 4,4'-DDE (335)	Usable
S	900-000105 (FD)	U	CRPD - 4,4'-DDE (211)	Usable
S	900-000116	U	CRPD - 4,4'-DDE (368)	Usable
S	900-000120	R	CRPD - 4,4'-DDE (>1000)	Unusable
S	900-000124	U	CRPD - 4,4'-DDE (359)	Usable
S	900-000126	U	CRPD - 4,4'-DDE (129)	Usable
S	900-000131	U	CRPD - 4,4'-DDE (264)	Usable
S	900-000141	U	CRPD - 4,4'-DDE (283)	Usable
S	900-000177	U	CRPD - 4,4'-DDE (132)	Usable
S	900-000178	U	CRPD - 4,4'-DDE (281)	Usable
S	900-000179	U	CRPD - 4,4'-DDE (424)	Usable
S	900-000182	U	CRPD - 4,4'-DDE (245)	Usable
S	900-000226	R	CRPD - 4,4'-DDE (400)	Unusable
S	900-000229	R	CRPD - 4,4'-DDE (>1000)	Unusable
S	900-000237	U	CRPD - 4,4'-DDE (104)	Usable
S	900-000238	U	CRPD - 4,4'-DDE (203)	Usable
S	900-000239	U	CRPD - 4,4'-DDE (100)	Usable
S	900-000243	U	CRPD - 4,4'-DDE (163.6)	Usable
S	900-000280	U	CRPD - 4,4'-DDE (>1000)	Usable
S	900-000005	U	CRPD - 4,4'-DDT (596)	Usable
S	900-000040	U	CRPD - 4,4'-DDT (656)	Usable
S	900-000057	R	CRPD - 4,4'-DDT (181)	Unusable
S	900-000058	R	CRPD - 4,4'-DDT (>1000)	Unusable
S	900-000060	R	CRPD - 4,4'-DDT (770)	Unusable
S	900-000062	U	CRPD - 4,4'-DDT (268)	Usable
S	900-000071	R	CRPD - 4,4'-DDT (872)	Unusable
S	900-000089	U	CRPD - 4,4'-DDT (140)	Usable
S	900-000124	U	CRPD - 4,4'-DDT (154)	Usable
S	900-000128	U	CRPD - 4,4'-DDT (556)	Usable
S	900-000141	U	CRPD - 4,4'-DDT (465)	Usable
S	900-000152	U	CRPD - 4,4'-DDT (104)	Usable
S	900-000153	U	CRPD - 4,4'-DDT (218)	Usable
S	900-000178	R	CRPD - 4,4-DDT (427.8)	Unusable
S	900-000179	U	CRPD - 4,4'-DDT (188)	Usable
S	900-000204	U	CRPD - 4,4'-DDT (446)	Usable
S	900-000206	U	CRPD - 4,4'-DDT (175)	Usable
S	900-000208	U	CRPD - 4,4'-DDT (231)	Usable
S	900-000209 (FD)	U	CRPD - 4,4'-DDT (596)	Usable
S	900-000226	R	CRPD - 4,4'-DDT (436)	Unusable

Table B.3.3–Fall 1994 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000228	U	CRPD - 4,4'-DDT (189)	Usable
S	900-000229	U	CRPD - 4,4'-DDT (228)	Usable
S	900-000238	U	CRPD - 4,4'-DDT (389)	Usable
S	900-000239	U	CRPD - 4,4'-DDT (130)	Usable
S	900-000245	U	CRPD - 4,4'-DDT (490)	Usable
S	900-000262	U	CRPD - 4,4'-DDT (125)	Usable
S	900-000266	U	CRPD - 4,4'-DDT (114)	Usable
S	900-000270	U	CRPD - 4,4'-DDT (133)	Usable
S	900-000280	U	CRPD - 4,4'-DDT (186)	Usable
S	900-000037	U	CRPD - α-BHC (189)	Usable
S	900-000038	U	CRPD - α-BHC (852)	Usable
S	900-000039	U	CRPD - α-BHC (179)	Usable
S	900-000041	U	CRPD - α-BHC (157)	Usable
S	900-000056	R	CRPD - α-BHC (300)	Unusable
S	900-000071	R	CRPD - α-BHC (922)	Unusable
S	900-000092	R	CRPD - α-BHC (>1000)	Unusable
S	900-000127	U	CRPD - α-BHC (300)	Usable
S	900-000138	U	CRPD - α-BHC (136)	Usable
S	900-000182	R	CRPD - α-BHC (>1000)	Unusable
S	900-000210	U	CRPD - α-BHC (500)	Usable
S	900-000248 (FD)	R	CRPD - α-BHC (>1000)	Unusable
S	900-000249	R	CRPD - α-BHC (>1000)	Unusable
S	900-000251	R	CRPD - α-BHC (154)	Unusable
S	900-000294	U	CRPD - α-BHC (140)	Usable
S	900-000037	R	CRPD - α-chlordane (>1000)	Unusable
S	900-000038	R	CRPD - α-chlordane (>1000)	Unusable
S	900-000039	R	CRPD - α-chlordane (>1000)	Unusable
S	900-000040	R	CRPD - α-chlordane (>1000)	Unusable
S	900-000041	R	CRPD - α-chlordane (>1000)	Unusable
S	900-000056	R	CRPD - α-chlordane (400)	Unusable
S	900-000057	U	CRPD - α-chlordane (582)	Usable
S	900-000061	U	CRPD - α-chlordane (134)	Usable
S	900-000063 (FD)	U	CRPD - α-chlordane (149)	Usable
S	900-000067	U	CRPD - α-chlordane (232)	Usable
S	900-000068	R	CRPD - α-chlordane (>1000)	Unusable
S	900-000069 (FD)	R	CRPD - α-chlordane (>1000)	Unusable
S	900-000071	R	CRPD - α-chlordane	Unusable
S	900-000089	R	CRPD - α-chlordane (291)	Unusable
S	900-000093	U	CRPD - α-chlordane (158)	Usable
S	900-000105 (FD)	U	CRPD - α-chlordane (155)	Usable
S	900-000106	U	CRPD - α-chlordane (315)	Usable
S	900-000126	R	CRPD - α-chlordane (229)	Unusable
S	900-000127	R	CRPD - α-chlordane (333)	Unusable
S	900-000128	R	CRPD - α-chlordane (427)	Unusable
S	900-000133	U	CRPD - α-chlordane (322)	Usable
S	900-000175	R	CRPD - α-chlordane (367)	Unusable
S	900-000176	R	CRPD - α-chlordane (245)	Unusable
S	900-000178	U	CRPD - α-chlordane (345)	Usable
S	900-000204	R	CRPD - α-chlordane (438)	Unusable

Table B.3.3–Fall 1994 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000205	R	CRPD - α-chlordane (128)	Unusable
S	900-000206	R	CRPD - α-chlordane (129)	Unusable
S	900-000225 (FD)	R	CRPD - α-chlordane (412)	Unusable
S	900-000226	R	CRPD - α-chlordane (220)	Unusable
S	900-000229	U	CRPD - α-chlordane (790)	Usable
S	900-000239	U	CRPD - α-chlordane (813)	Usable
S	900-000243	R	CRPD - α-chlordane (4233)	Unusable
S	900-000244	R	CRPD - α-chlordane (>1000)	Unusable
S	900-000248 (FD)	U	CRPD - α-chlordane (213)	Usable
S	900-000259	R	CRPD - α-chlordane (213)	Unusable
S	900-000262	U	CRPD - α-chlordane (452)	Usable
S	900-000263	U	CRPD - α-chlordane (145)	Usable
S	900-000264	U	CRPD - α-chlordane (150)	Usable
S	900-000030	U	CRPD - aldrin (609)	Usable
S	900-000040	U	CRPD - aldrin (112)	Usable
S	900-000041	U	CRPD - aldrin (683)	Usable
S	900-000061	U	CRPD - aldrin (>1000)	Usable
S	900-000105 (FD)	U	CRPD - aldrin (110)	Usable
S	900-000120	U	CRPD - aldrin (203)	Usable
S	900-000128	U	CRPD - aldrin (216)	Usable
S	900-000130	U	CRPD - aldrin (823)	Usable
S	900-000154	R	CRPD - aldrin (233)	Unusable
S	900-000155	U	CRPD - aldrin (127)	Usable
S	900-000169	U	CRPD - aldrin (215)	Usable
S	900-000175	R	CRPD - aldrin (856)	Unusable
S	900-000177	U	CRPD - aldrin (138)	Usable
S	900-000178	U	CRPD - aldrin (112)	Usable
S	900-000204	R	CRPD - aldrin (>1000)	Unusable
S	900-000244	U	CRPD - aldrin (209)	Usable
S	900-000260	U	CRPD - aldrin (156)	Usable
S	900-000261 (FD)	U	CRPD - aldrin (229)	Usable
S	900-000276	U	CRPD - aldrin (750)	Usable
S	900-000046	R	CRPD - β-BHC (>1000)	Unusable
S	900-000075	R	CRPD - β-BHC (>1000)	Unusable
S	900-000090	R	CRPD - β-BHC (999)	Unusable
S	900-000092	R	CRPD - β-BHC (>1000)	Unusable
S	900-000093	R	CRPD - β-BHC (>1000)	Unusable
S	900-000164 (FD)	R	CRPD - β-BHC (1000)	Unusable
S	900-000005	U	CRPD - δ-BHC (>1000)	Usable
S	900-000030	R	CRPD - δ-BHC (7160)	Unusable
S	900-000031	R	CRPD - δ-BHC (>1000)	Unusable
S	900-000068	U	CRPD - δ-BHC (295)	Usable
S	900-000069 (FD)	U	CRPD - δ-BHC (479)	Usable
S	900-000122	U	CRPD - δ-BHC (302)	Usable
S	900-000152	R	CRPD - δ-BHC (519)	Unusable
S	900-000215	R	CRPD - δ-BHC (>1000)	Unusable
S	900-000228	U	CRPD - δ-BHC (267)	Usable
S	900-000244	U	CRPD - δ-BHC (103)	Usable
S	900-000005	U	CRPD - dieldrin (179)	Usable

Table B.3.3–Fall 1994 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000007	U	CRPD - dieldrin (251)	Usable
S	900-000026	U	CRPD - dieldrin (164)	Usable
S	900-000027 (FD)	U	CRPD - dieldrin (275)	Usable
S	900-000029	U	CRPD - dieldrin (159)	Usable
S	900-000030	U	CRPD - dieldrin (148)	Usable
S	900-000031	U	CRPD - dieldrin (156)	Usable
S	900-000038	U	CRPD - dieldrin (136)	Usable
S	900-000048	U	CRPD - dieldrin (129)	Usable
S	900-000049	R	CRPD - dieldrin (794)	Unusable
S	900-000058	R	CRPD - dieldrin (335)	Unusable
S	900-000059	U	CRPD - dieldrin (617)	Usable
S	900-000091	U	CRPD - dieldrin (140)	Usable
S	900-000092	U	CRPD - dieldrin (181)	Usable
S	900-000111	R	CRPD - dieldrin (>1000)	Unusable
S	900-000112	U	CRPD - dieldrin (163)	Usable
S	900-000113	R	CRPD - dieldrin (151)	Unusable
S	900-000116	U	CRPD - dieldrin (567)	Usable
S	900-000126	U	CRPD - dieldrin (260)	Usable
S	900-000128	U	CRPD - dieldrin (438)	Usable
S	900-000131	U	CRPD - dieldrin (127)	Usable
S	900-000132	U	CRPD - dieldrin (536)	Usable
S	900-000153	R	CRPD - dieldrin (606)	Unusable
S	900-000165	U	CRPD - dieldrin (210)	Usable
S	900-000176	R	CRPD - dieldrin (982)	Unusable
S	900-000178	R	CRPD - dieldrin (133.3)	Unusable
S	900-000209 (FD)	U	CRPD - dieldrin (286)	Usable
S	900-000210	U	CRPD - dieldrin (121)	Usable
S	900-000224	R	CRPD - dieldrin (220)	Unusable
S	900-000226	R	CRPD - dieldrin (188)	Unusable
S	900-000249	U	CRPD - dieldrin (300)	Usable
S	900-000007	R	CRPD - endosulfan I (>1000)	Unusable
S	900-000058	R	CRPD - endosulfan I (274)	Unusable
S	900-000120	U	CRPD - endosulfan I (162)	Usable
S	900-000124	R	CRPD - endosulfan I (609)	Unusable
S	900-000130	R	CRPD - endosulfan I (504)	Unusable
S	900-000131	R	CRPD - endosulfan I (192)	Unusable
S	900-000132	U	CRPD - endosulfan I (145)	Usable
S	900-000060	U	CRPD - endosulfan II (610)	Usable
S	900-000062	U	CRPD - endosulfan II (286)	Usable
S	900-000226	R	CRPD - endosulfan II (>1000)	Unusable
S	900-000228	R	CRPD - endosulfan II (877)	Unusable
S	900-000229	U	CRPD - endosulfan II (>1000)	Usable
S	900-000245	U	CRPD - endosulfan II (207)	Usable
S	900-000266	R	CRPD - endosulfan II (>1000)	Unusable
S	900-000270	U	CRPD - endosulfan II (560)	Usable
S	900-000013	U	CRPD - endosulfan sulfate (673)	Usable
S	900-000026	U	CRPD - endosulfan sulfate (584)	Usable
S	900-000030	U	CRPD - endosulfan sulfate (117)	Usable
S	900-000031	U	CRPD - endosulfan sulfate (184)	Usable

Table B.3.3–Fall 1994 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000088 (FD)	R	CRPD - endosulfan sulfate (>1000)	Unusable
S	900-000101	R	CRPD - endosulfan sulfate (>1000)	Unusable
S	900-000105 (FD)	U	CRPD - endosulfan sulfate (317)	Usable
S	900-000111	R	CRPD - endosulfan sulfate (660)	Unusable
S	900-000113	R	CRPD - endosulfan sulfate (289)	Unusable
S	900-000115	R	CRPD - endosulfan sulfate (293)	Unusable
S	900-000116	R	CRPD - endosulfan sulfate (323)	Unusable
S	900-000179	U	CRPD - endosulfan sulfate (339)	Usable
S	900-000223	R	CRPD - endosulfan sulfate (999)	Unusable
S	900-000226	U	CRPD - endosulfan sulfate (389)	Usable
S	900-000228	U	CRPD - endosulfan sulfate (307)	Usable
S	900-000229	U	CRPD - endosulfan sulfate (312)	Usable
S	900-000244	R	CRPD - endosulfan sulfate (>1000)	Unusable
S	900-000267	R	CRPD - endosulfan sulfate (>1000)	Unusable
S	900-000280	R	CRPD - endosulfan sulfate (880)	Unusable
S	900-000016	J	CRPD - endrin (174)	Usable
S	900-000058	U	CRPD - endrin (473)	Usable
S	900-000062	U	CRPD - endrin (270)	Usable
S	900-000074	U	CRPD - endrin (300)	Usable
S	900-000075	U	CRPD - endrin (>1000)	Usable
S	900-000086	U	CRPD - endrin (205)	Usable
S	900-000126	U	CRPD - endrin (103)	Usable
S	900-000127	U	CRPD - endrin (321)	Usable
S	900-000205	R	CRPD - endrin (317)	Unusable
S	900-000206	U	CRPD - endrin (392)	Usable
S	900-000207	U	CRPD - endrin (117)	Usable
S	900-000208	U	CRPD - endrin (141)	Usable
S	900-000249	U	CRPD - endrin (>1000)	Usable
S	900-000251	U	CRPD - endrin (108)	Usable
S	900-000005	U	CRPD - endrin aldehyde (164)	Usable
S	900-000037	R	CRPD - endrin aldehyde (304)	Unusable
S	900-000039	R	CRPD - endrin aldehyde (246)	Unusable
S	900-000040	R	CRPD - endrin aldehyde (376)	Unusable
S	900-000041	U	CRPD - endrin aldehyde (263)	Usable
S	900-000060	U	CRPD - endrin aldehyde (208)	Usable
S	900-000063 (FD)	U	CRPD - endrin aldehyde (133)	Usable
S	900-000071	R	CRPD - endrin aldehyde	Unusable
S	900-000075	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000076	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000089	R	CRPD - endrin aldehyde (539)	Unusable
S	900-000093	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000101	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000104	U	CRPD - endrin aldehyde (476)	Usable
S	900-000105 (FD)	U	CRPD - endrin aldehyde (445)	Usable
S	900-000111	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000113	R	CRPD - endrin aldehyde (520)	Unusable
S	900-000116	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000122	U	CRPD - endrin aldehyde (>1000)	Usable
S	900-000126	U	CRPD - endrin aldehyde (515)	Usable

Table B.3.3–Fall 1994 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000127	U	CRPD - endrin aldehyde (746)	Usable
S	900-000153	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000154	R	CRPD - endrin aldehyde (99.9)	Unusable
S	900-000155	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000159	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000168	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000176	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000178	R	CRPD - endrin aldehyde (233.3)	Unusable
S	900-000180	U	CRPD - endrin aldehyde (103)	Usable
S	900-000204	U	CRPD - endrin aldehyde (118)	Usable
S	900-000211	U	CRPD - endrin aldehyde (116)	Usable
S	900-000229	U	CRPD - endrin aldehyde (111)	Usable
S	900-000251	U	CRPD - endrin aldehyde (999)	Usable
S	900-000005	U	CRPD - endrin ketone (221)	Usable
S	900-000026	U	CRPD - endrin ketone (937)	Usable
S	900-000028	U	CRPD - endrin ketone (262)	Usable
S	900-000037	U	CRPD - endrin ketone (105)	Usable
S	900-000039	U	CRPD - endrin ketone (224)	Usable
S	900-000041	U	CRPD - endrin ketone (173)	Usable
S	900-000060	U	CRPD - endrin ketone (433)	Usable
S	900-000061	U	CRPD - endrin ketone (315)	Usable
S	900-000062	U	CRPD - endrin ketone (136)	Usable
S	900-000063 (FD)	U	CRPD - endrin ketone (394)	Usable
S	900-000088 (FD)	R	CRPD - endrin ketone (546)	Unusable
S	900-000101	U	CRPD - endrin ketone (506)	Usable
S	900-000113	U	CRPD - endrin ketone (115)	Usable
S	900-000153	R	CRPD - endrin ketone (>1000)	Unusable
S	900-000154	R	CRPD - endrin ketone (572.4)	Unusable
S	900-000155	R	CRPD - endrin ketone (>1000)	Unusable
S	900-000162	U	CRPD - endrin ketone (300)	Usable
S	900-000169	U	CRPD - endrin ketone (239)	Usable
S	900-000178	R	CRPD - endrin ketone (>1000)	Unusable
S	900-000178	R	CRPD - endrin ketone (997.9)	Unusable
S	900-000206	U	CRPD - endrin ketone (113)	Usable
S	900-000226	U	CRPD - endrin ketone (156)	Usable
S	900-000243	R	CRPD - endrin ketone (547)	Unusable
S	900-000245	U	CRPD - endrin ketone (273)	Usable
S	900-000259	U	CRPD - endrin ketone (344)	Usable
S	900-000028	U	CRPD - γ-BHC (606)	Usable
S	900-000030	U	CRPD - γ-BHC (112)	Usable
S	900-000040	R	CRPD - γ-BHC (714)	Unusable
S	900-000067	U	CRPD - γ-BHC (300)	Usable
S	900-000070	R	CRPD - γ-BHC (>1000)	Unusable
S	900-000074	U	CRPD - γ-BHC (>1000)	Usable
S	900-000076	R	CRPD - γ-BHC (560)	Unusable
S	900-000086	R	CRPD - γ-BHC (>1000)	Unusable
S	900-000088 (FD)	R	CRPD - γ-BHC (452)	Unusable
S	900-000089	U	CRPD - γ-BHC (233)	Usable
S	900-000090	R	CRPD - γ-BHC (900)	Unusable

Table B.3.3–Fall 1994 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000092	U	CRPD - γ-BHC (596)	Usable
S	900-000093	R	CRPD - γ-BHC (132)	Unusable
S	900-000101	R	CRPD - γ-BHC (723)	Unusable
S	900-000104	U	CRPD - γ-BHC (582)	Usable
S	900-000105 (FD)	U	CRPD - γ-BHC (245)	Usable
S	900-000113	R	CRPD - γ-BHC (>1000)	Unusable
S	900-000115	R	CRPD - γ-BHC (633)	Unusable
S	900-000130	U	CRPD - γ-BHC (319)	Usable
S	900-000133	U	CRPD - γ-BHC (132)	Usable
S	900-000153	R	CRPD - γ-BHC (>1000)	Unusable
S	900-000169	U	CRPD - γ-BHC (345)	Usable
S	900-000178	R	CRPD - γ-BHC (>1000)	Unusable
S	900-000178	R	CRPD - γ-BHC (999.9)	Unusable
S	900-000006	R	CRPD - γ-chlordane (681)	Unusable
S	900-000026	U	CRPD - γ-chlordane (112)	Usable
S	900-000028	U	CRPD - γ-chlordane (108)	Usable
S	900-000039	U	CRPD - γ-chlordane (170)	Usable
S	900-000041	U	CRPD - γ-chlordane (142)	Usable
S	900-000056	R	CRPD - γ-chlordane (156)	Unusable
S	900-000057	R	CRPD - γ-chlordane (546)	Unusable
S	900-000059	R	CRPD - γ-chlordane (267)	Unusable
S	900-000061	U	CRPD - γ-chlordane (454)	Usable
S	900-000067	U	CRPD - γ-chlordane (193)	Usable
S	900-000068	R	CRPD - γ-chlordane (300)	Unusable
S	900-000069 (FD)	R	CRPD - γ-chlordane (144)	Unusable
S	900-000070	U	CRPD - γ-chlordane (150)	Usable
S	900-000075	R	CRPD - γ-chlordane (185)	Unusable
S	900-000089	R	CRPD - γ-chlordane (497)	Unusable
S	900-000090	R	CRPD - γ-chlordane (417)	Unusable
S	900-000093	U	CRPD - γ-chlordane (650)	Usable
S	900-000101	R	CRPD - γ-chlordane (179)	Unusable
S	900-000113	R	CRPD - γ-chlordane (129)	Unusable
S	900-000122	U	CRPD - γ-chlordane (233)	Usable
S	900-000123 (FD)	U	CRPD - γ-chlordane (180)	Usable
S	900-000126	R	CRPD - γ-chlordane (325)	Unusable
S	900-000127	U	CRPD - γ-chlordane (146)	Usable
S	900-000128	U	CRPD - γ-chlordane (142)	Usable
S	900-000141	U	CRPD - γ-chlordane (108)	Usable
S	900-000153	R	CRPD - γ-chlordane (175)	Unusable
S	900-000165	U	CRPD - γ-chlordane (224)	Usable
S	900-000179	R	CRPD - γ-chlordane (>1000)	Unusable
S	900-000205	R	CRPD - γ-chlordane (551)	Unusable
S	900-000206	R	CRPD - γ-chlordane (400)	Unusable
S	900-000223	R	CRPD - γ-chlordane (236)	Unusable
S	900-000225 (FD)	R	CRPD - γ-chlordane (188)	Unusable
S	900-000244	R	CRPD - γ-chlordane (191)	Unusable
S	900-000249	R	CRPD - γ-chlordane (>1000)	Unusable
S	900-000251	R	CRPD - γ-chlordane (999)	Unusable
S	900-000262	U	CRPD - γ-chlordane (108)	Usable

Table B.3.3–Fall 1994 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000264	U	CRPD - γ-chlordane (317)	Usable
S	900-000265	U	CRPD - γ-chlordane (596)	Usable
S	900-000006	U	CRPD - heptachlor (255)	Usable
S	900-000026	U	CRPD - heptachlor (740)	Usable
S	900-000028	U	CRPD - heptachlor (113)	Usable
S	900-000029	U	CRPD - heptachlor (450)	Usable
S	900-000030	U	CRPD - heptachlor (598)	Usable
S	900-000041	U	CRPD - heptachlor (293)	Usable
S	900-000070	U	CRPD - heptachlor (240)	Usable
S	900-000071	R	CRPD - heptachlor	Unusable
S	900-000091	U	CRPD - heptachlor (144)	Usable
S	900-000124	R	CRPD - heptachlor (954)	Unusable
S	900-000141	R	CRPD - heptachlor (>1000)	Unusable
S	900-000144	U	CRPD - heptachlor (567)	Usable
S	900-000152	U	CRPD - heptachlor (121)	Usable
S	900-000153	R	CRPD - heptachlor (>1000)	Unusable
S	900-000155	U	CRPD - heptachlor (196)	Usable
S	900-000159	U	CRPD - heptachlor (159)	Usable
S	900-000163	U	CRPD - heptachlor (567)	Usable
S	900-000164 (FD)	U	CRPD - heptachlor (600)	Usable
S	900-000176	R	CRPD - heptachlor (>1000)	Unusable
S	900-000196	R	CRPD - heptachlor (154.5)	Unusable
S	900-000204	R	CRPD - heptachlor (>1000)	Unusable
S	900-000243	R	CRPD - heptachlor (2385)	Unusable
S	900-000268 (FD)	U	CRPD - heptachlor (144)	Usable
S	900-000056	R	CRPD - heptachlor epoxide (442)	Unusable
S	900-000061	U	CRPD - heptachlor epoxide (212)	Usable
S	900-000062	U	CRPD - heptachlor epoxide (318)	Usable
S	900-000070	U	CRPD - heptachlor epoxide (120)	Usable
S	900-000071	R	CRPD - heptachlor epoxide (214)	Unusable
S	900-000091	U	CRPD - heptachlor epoxide (270)	Usable
S	900-000113	R	CRPD - heptachlor epoxide (380)	Unusable
S	900-000120	R	CRPD - heptachlor epoxide (262)	Unusable
S	900-000130	U	CRPD - heptachlor epoxide (121)	Usable
S	900-000145 (FD)	U	CRPD - heptachlor epoxide (177)	Usable
S	900-000153	R	CRPD - heptachlor epoxide (122)	Unusable
S	900-000155	R	CRPD - heptachlor epoxide (186)	Unusable
S	900-000159	R	CRPD - heptachlor epoxide (>1000)	Unusable
S	900-000176	R	CRPD - heptachlor epoxide (182)	Unusable
S	900-000178	R	CRPD - heptachlor epoxide (358.3)	Unusable
S	900-000206	U	CRPD - heptachlor epoxide (300)	Usable
S	900-000217	R	CRPD - heptachlor epoxide (504)	Unusable
S	900-000218	U	CRPD - heptachlor epoxide (243)	Usable
S	900-000223	R	CRPD - heptachlor epoxide (999)	Unusable
S	900-000251	U	CRPD - heptachlor epoxide (999)	Usable
S	900-000280	R	CRPD - heptachlor epoxide (>1000)	Unusable
S	900-000013	U	CRPD - methoxychlor (286)	Usable
S	900-000015	U	CRPD - methoxychlor (200)	Usable
S	900-000037	U	CRPD - methoxychlor (336)	Usable

Table B.3.3–Fall 1994 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000067	U	CRPD - methoxychlor (317)	Usable
S	900-000069 (FD)	R	CRPD - methoxychlor (124)	Unusable
S	900-000075	U	CRPD - methoxychlor (147)	Usable
S	900-000089	U	CRPD - methoxychlor (117)	Usable
S	900-000093	U	CRPD - methoxychlor (135)	Usable
S	900-000111	U	CRPD - methoxychlor (>1000)	Usable
S	900-000124	R	CRPD - methoxychlor (114)	Unusable
S	900-000131	U	CRPD - methoxychlor (548)	Usable
S	900-000138	U	CRPD - methoxychlor (156)	Usable
S	900-000153	R	CRPD - methoxychlor (>1000)	Unusable
S	900-000154	R	CRPD - methoxychlor (244.8)	Unusable
S	900-000155	U	CRPD - methoxychlor (678)	Usable
S	900-000169	U	CRPD - methoxychlor (132)	Usable
S	900-000178	R	CRPD - methoxychlor (436)	Unusable
S	900-000204	R	CRPD - methoxychlor (459)	Unusable
S	900-000210	U	CRPD - methoxychlor (108)	Usable
S	900-000211	U	CRPD - methoxychlor (213)	Usable
S	900-000224	R	CRPD - methoxychlor (790)	Unusable
S	900-000225 (FD)	U	CRPD - methoxychlor (182)	Usable
S	900-000249	U	CRPD - methoxychlor (637)	Usable
S	900-000260	U	CRPD - methoxychlor (429)	Usable
S	900-000266	U	CRPD - methoxychlor (180)	Usable
S	900-000270	U	CRPD - methoxychlor (119)	Usable
S	900-000027 (FD)	UJ	FDRPD - 4,4'-DDT (200)	Inaccuracy
S	900-000027 (FD)	UJ	FDRPD - dieldrin (200)	Inaccuracy
S	900-000027 (FD)	UJ	FDRPD - endosulfan II (62)	Inaccuracy
S	900-000027 (FD)	UJ	FDRPD - endosulfan sulfate (200)	Inaccuracy
S	900-000027 (FD)	UJ	FDRPD - endrin ketone (200)	Inaccuracy
S	900-000027 (FD)	UJ	FDRPD - γ-chlordane (200)	Inaccuracy
S	900-000027 (FD)	UJ	FDRPD - heptachlor (200)	Inaccuracy
S	900-000027 (FD)	UJ	FDRPD - heptachlor epoxide (200)	Inaccuracy
S	900-000249	U	MB - 4,4'-DDT (0.17 μg/kg)	Raised reporting limit
S	900-000251	U	MB - 4,4'-DDT (0.17μg/kg)	Raised reporting limit
S	900-000251	U	MB - endrin aldehyde (0.18 μg/kg)	Raised reporting limit
S	900-000251	U	MB - γ-chlordane (0.048 μg/kg)	Raised reporting limit
S	900-000164 (FD)	U	MB - heptachlor (0.14 μg/kg)	Raised reporting limit
S	900-000047	U	MB - methoxychlor (11 μg/kg)	Raised reporting limit
S	900-000070	U	MB - methoxychlor (3.2 μg/kg)	Raised reporting limit
S	900-000072	U	MB - methoxychlor (3.2 μg/kg)	Raised reporting limit
S	900-000074	U	MB - methoxychlor (3.2 μg/kg)	Raised reporting limit
S	900-000076	U	MB - methoxychlor (3.2 μg/kg)	Raised reporting limit
S	900-000086	U	MB - methoxychlor (3.2 μg/kg)	Raised reporting limit
S	900-000090	U	MB - methoxychlor (3.25 μg/kg)	Raised reporting limit
S	900-000091	U	MB - methoxychlor (3.2 μg/kg)	Raised reporting limit
S	900-000091	U	MB - methoxychlor (3.2 μg/kg)	Raised reporting limit
S	900-000092	U	MB - methoxychlor (3.2 μg/kg)	Raised reporting limit
S	900-000102	U	MB - methoxychlor (2.0 μg/kg)	Raised reporting limit
S	900-000104	U	MB - methoxychlor (2.0 μg/kg)	Raised reporting limit
S	900-000105 (FD)	U	MB - methoxychlor (2.0 μg/kg)	Raised reporting limit

Table B.3.3–Fall 1994 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000106	U	MB - methoxychlor (2.0 μg/kg)	Raised reporting limit
S	900-000113	U	MB - methoxychlor (2.0 μg/kg)	Raised reporting limit
S	900-000115	U	MB - methoxychlor (2.0 μg/kg)	Raised reporting limit
S	900-000116	U	MB - methoxychlor (2.0 μg/kg)	Raised reporting limit
S	900-000145 (FD)	U	MB - methoxychlor (1.0 μg/kg)	Raised reporting limit
S	900-000261 (FD)	U	MB - methoxychlor (0.36 μg/kg)	Raised reporting limit
S	900-000263	U	MB - methoxychlor (0.36 μg/kg)	Raised reporting limit
S	900-000268 (FD)	U	MB - methoxychlor (2.4 μg/kg)	Raised reporting limit
S	900-000251	J	MSR - endrin (4)	Usable
S	900-000251	R	MSR - γ-BHC (0)	Unusable
S	900-000113	R	MSR - heptachlor (0)	Unusable
S	900-000016	J	SR - DCB (170) ; TCMX (390)	High bias
S	900-000056	J	SR - DCB (57) ; TCMX (39,42)	
S	900-000058	J, UJ	SR - DCB (55,49) ; TCMX (36,44)	Possible low bias
S	900-000071	J	SR - DCB (244) ; TCMX (48,46)	Usable
S	900-000111	J, UJ	SR - DCB (190) ; TCMX (57)	Inaccuracy
S	900-000123 (FD)	UJ	SR - DCB (29,34) ;TCMX (26,29)	Low bias possible
S	900-000153	J, UJ	SR - DCB (55) ; TCMX (55)	Possible low bias
S	900-000154	J, UJ	SR - DCB (58, 39)	Low bias
S	900-000155	J, UJ	SR - DCB (380,41)	Inaccuracy
S	900-000159	J, UJ	SR - DCB (160,10) ;TCMX (56)	Inaccuracy
S	900-000160	J, UJ	SR - DCB (280,54)	Inaccuracy
S	900-000163	J, UJ	SR - DCB (41,57) ;TCMX (57)	Possible low bias
S	900-000168	J, UJ	SR - DCB (320,58) ; TCMX (59)	Inaccuracy
S	900-000175	J, UJ	SR - DCB (180,54)	Inaccuracy
S	900-000210	J, UJ	SR - DCB (51,57) ; TCMX (49,47)	Low bias possible
S	900-000224	J, UJ	SR - DCB (58, 28) ; TCMX (153)	Low bias
S	900-000225 (FD)	J, UJ	SR - DCB (38, 410)	Low bias possible
S	900-000245	J, UJ	SR - DCB (50) ;TCMX (26,52)	Low bias
S	900-000259	J, UJ	SR - DCB (24) ; TCMX (52)	Low bias
S	900-000283	J, UJ	SR - DCB (21) ;TCMX (59)	Possible low bias
S	900-000017	J, UJ	SR - TCMX (57,3)	Low bias
S	900-000038	J, UJ	SR - TCMX (57,37)	Low bias
S	900-000048	J, UJ	SR - TCMX (51,56)	Low bias
S	900-000057	J, UJ	SR - TCMX (45,46)	Low bias
S	900-000059	J, UJ	SR - TCMX (34,40)	Low bias
S	900-000060	J, UJ	SR - TCMX (36,41)	Low bias
S	900-000061	J, UJ	SR - TCMX (37,35)	Low bias
S	900-000062	J, UJ	SR - TCMX (41,40)	Low bias
S	900-000063 (FD)	J, UJ	SR - TCMX (38,39)	Low bias
S	900-000069 (FD)	J, UJ	SR - TCMX (48,36)	Usable
S	900-000089	J, UJ	SR - TCMX (55,54)	Usable
S	900-000127	UJ	SR - TCMX (41, 38)	Low bias
S	900-000141	J, UJ	SR - TCMX (45,40)	Low bias
S	900-000145 (FD)	J, UJ	SR - TCMX (47,41)	Low bias
S	900-000216	J, UJ	SR - TCMX (59, 56)	Low bias
S	900-000237	J, UJ	SR - TCMX (59, 49)	Low bias
S	900-000243	UJ	SR - TCMX (33, 22)	Low bias
S	900-000247	UJ	SR - TCMX (56, 0)	Low bias

Table B.3.3–Fall 1994 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000248 (FD)	R	SR - TCMX (0,56)	Non-detects unusable
S	900-000249	J, UJ	SR - TCMX (55,19)	Low bias
S	900-000251	R	SR - TCMX (52,0)	Unusable
S	900-000288	J, UJ	SR - TCMX (59, 57)	Low bias
S	900-000289	J, UJ	SR - TCMX (58, 55)	Low bias
W	900-000108 (FD)	UJ	%RSD - endrin aldehyde (26)	Inaccuracy
W	900-000114	UJ	%RSD - endrin aldehyde (26)	Inaccuracy
W	900-000118 (FB)	UJ	%RSD - endrin aldehyde (26)	Inaccuracy
W	900-000119	UJ	%RSD - endrin aldehyde (26)	Inaccuracy
W	900-000001	U	CRPD - 4,4'-DDD (>1000)	Usable
W	900-000002	U	CRPD - 4,4'-DDD (>1000)	Usable
W	900-000035	U	CRPD - 4,4'-DDD (249)	Usable
W	900-000083	U	CRPD - 4,4'-DDD (140)	Usable
W	900-000035	U	CRPD - 4,4'-DDT (300)	Usable
W	900-000184	U	CRPD - 4,4'-DDT (>1000)	Usable
W	900-000185	U	CRPD - 4,4'-DDT (233)	Usable
W	900-000296 (FB)	U	CRPD - 4,4'-DDT (140)	Usable
W	900-000230	U	CRPD - α-BHC (125)	Usable
W	900-000151 (FD)	U	CRPD - aldrin (515)	Usable
W	900-000277	U	CRPD - aldrin (870)	Usable
W	900-0000052(RE)	U	CRPD - δ-BHC (680)	Usable
W	900-000230	U	CRPD - dieldrin (>1000)	Usable
W	900-000277	U	CRPD - dieldrin (317)	Usable
W	900-000032 (FB)	U	CRPD - endosulfan sulfate (146)	Usable
W	900-000081	R	CRPD - endosulfan sulfate (828.6)	Usable
W	900-000143	U	CRPD - endosulfan sulfate (717)	Usable
W	900-000230	U	CRPD - endosulfan sulfate (515)	Usable
W	900-000231	U	CRPD - endosulfan sulfate (585)	Usable
W	900-000151 (FD)	U	CRPD - endrin ketone (>1000)	Usable
W	900-000183	U	CRPD - γ-chlordane (207)	Usable
W	900-000119	U	CRPD - heptachlor epoxide (133)	Usable
W	900-000277	U	CRPD - heptachlor epoxide (786)	Usable
W	900-000253 (FD)	U	CRPD - methoxychlor (144)	Usable
W	900-000254	U	CRPD - methoxychlor (328)	Usable
W	900-000274	U	CRPD - methoxychlor (181)	Usable
W	900-000275	U	CRPD - methoxychlor (126)	Usable
W	900-000052(RE)	J, UJ	HT - 11 days	Possible low bias, usable
W	900-000054(RE)	UJ	HT - 18 days	Possible low bias, usable
W	900-000081	UJ	HT - 2 days *(PE sample)*	Usable
W	900-000081DL	UJ	HT - 2 days *(PE sample)*	Usable
W	900-000166	R	MSR - dieldrin (0)	Unusable
W	900-000166	R	MSR - eldrin (0)	Unusable
W	900-000008	UJ	SR - DCB (58, 54)	Possible low bias
W	900-000032 (FB)	UJ	SR - DCB (14, 16) Matrix interference	Possible low bias
W	900-000107	J, UJ	SR - DCB (51, 58)	Possible low bias
W	900-000118 (FB)	UJ	SR - DCB (27,32)	Possible low bias
W	900-000134 (FB)	UJ	SR - DCB (22, 25)	Possible low bias
W	900-000156 (FB)	J, UJ	SR - DCB (44, 50)	Possible low bias
W	900-000183	J, UJ	SR - DCB (48, 46)	Possible low bias

Table B.3.3–Fall 1994 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
W	900-000190	J, UJ	SR - DCB (44, 23)	Possible low bias
W	900-000198 (FB)	J, UJ	SR - DCB (58, 56)	Possible low bias
W	900-000019	UJ	SR - TCMX (42, 45); DCB(53,54)	Possible low bias
W	900-000020	UJ	SR - TCMX (55, 57)	Possible low bias
W	900-000021 (FD)	UJ	SR - TCMX (55, 55)	Possible low bias
W	900-000050	UJ	SR - TCMX (55, 56)	Possible low bias
W	900-000051 (FD)	UJ	SR - TCMX (43, 44); DCB (57, 59)	Possible low bias
W	900-000052	R	SR - TCMX (20, 20); DCB (25, 15)	Unusable
W	900-000053	UJ	SR - TCMX (32, 30); DCB (37, 38)	Possible low bias
W	900-000054	R	SR - TCMX(0,0);DCB(0,0)	Unusable
W	900-000055	UJ	SR - TCMX (53, 54)	Possible low bias
W	900-000077 (FB)	UJ	SR - TCMX (53, 55); DCB (16, 18)	Possible low bias
W	900-000080	UJ	SR - TCMX (55, 58)	Possible low bias
W	900-000081	J	SR - TCMX (15000)	Possible Inaccuracy
W	900-000081DL	J	SR - TCMX (57, 25000)	Possible Inaccuracy
W	900-000150	J, UJ	SR - TCMX (58);DCB(48,53)	Possible low bias
W	900-000212	J, UJ	SR - TCMX (58, 54);DCB(58,54)	Possible low bias
W	900-000230	J, UJ	SR - TCMX (51, 280);DCB(33,38)	Possible low bias
W	900-000231	J, UJ	SR - TCMX (52, 360);DCB(36,37)	Possible low bias
W	900-000232 (FD)	J, UJ	SR - TCMX (54, 320);DCB(36,42)	Possible low bias
W	900-000233	UJ	SR - TCMX (51, 56); DCB (59)	Possible low bias
W	900-000253 (FD)	UJ	SR - TCMX (57, 54)	Possible low bias
W	900-000256	J, UJ	SR - TCMX (58, 41);DCB(58)	Possible low bias
W	900-000282 (FB)	J, UJ	SR - TCMX (54);DCB(34,36)	Possible low bias
W	900-000296 (FB)	J, UJ	SR - TCMX (53);DCB(41,46)	Possible low bias

Table B.3.4–Fall 1994 Explosives Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
S	900-000027	UJ	FDRPD - HMX (200)
W	900-000054	J	%D - PETN (-51.4)
W	900-000020	UJ	FDRPD - 2-amino-4,6-dinitrotoluene (200)
W	900-000081	J	HT -1 day
W	900-000054	J	LCS - 2,6-dinitrotoluene (366)
W	900-000081	J	LCS - 2,6-dinitrotoluene (199)
W	900-000054	U	MB - 2,6-dinitrotoluene (3.3 μg/L)
W	900-000034	U	MB - 2-amino-4,6-dinitrotoluene (2.0 μg/L)
W	900-000081	U	MB - RDX (0.46 μg/L)

Table B.3.5–Fall 1994 Inorganic Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
S	900-000030	J	ASR - lead (82.7)
S	900-000154	J	ASR - lead (84)
S	900-000027	J	ASR - selenium (81.8)
S	900-000056	UJ	ASR - selenium (84)
S	900-000090	UJ	ASR - selenium (83)
S	900-000117	UJ	ASR - selenium (75)
S	900-000154	UJ	ASR - selenium (76.6)
S	900-000178	UJ	ASR - selenium (69.2)
S	900-000213	J	ASR - selenium (81.9)
S	900-000243	UJ	ASR - selenium (84)
S	900-000265	UJ	ASR - selenium (51)
S	900-000027	J	ASR - thallium (71.3)
S	900-000030	J	ASR - thallium (77)
S	900-000056	UJ	ASR - thallium (72)
S	900-000071	UJ	ASR - thallium (73)
S	900-000090	UJ	ASR - thallium (75)
S	900-000117	UJ	ASR - thallium (70)
S	900-000154	UJ	ASR - thallium (62.6)
S	900-000178	UJ	ASR - thallium (64.6)
S	900-000196	UJ	ASR - thallium (61.8)
S	900-000243	UJ	ASR - thallium (61)
S	900-000265	UJ	ASR - thallium (78)
S	900-000090	U	CCB - antimony (1.6 mg/kg)
S	900-000154	U	CCB - antimony (1.4 mg/kg)
S	900-000243	U	CCB - antimony (1.8 mg/kg)
S	900-000056	U	CCB - beryllium (0.2 mg/kg)
S	900-000071	U	CCB - beryllium (0.4 mg/kg)
S	900-000127	U	CCB - beryllium (0.3 mg/kg)
S	900-000243	UJ	CCB - bismuth (-3.7 mg/kg)
S	900-000247	UJ	CCB - bismuth (-3.7 mg/kg)
S	900-000265	UJ	CCB - bismuth (-3.7 mg/kg)
S	900-000056	U	CCB - cadmium (0.4 mg/kg)
S	900-000030	U	CCB - lithium (3.4 mg/kg)
S	900-000247	U	CCB - molybdenum (1.7 mg/kg)
S	900-000027	UJ	CCB - silver (-1.2 mg/kg)
S	900-000030	UJ	CCB - silver (-1.2 mg/kg)
S	900-000027	J	FDRPD - bismuth (200)
S	900-000027	J	FDRPD - lithium (54.6)
S	900-000027	J	FDRPD - molybdenum (56.1)
S	900-000178	UJ	ICS - antimony
S	900-000196	UJ	ICS - antimony
S	900-000090	J	ICS - barium
S	900-000154	J	ICS - calcium (Bi, Cr, Cu, Mo, Na)
S	900-000178	UJ	ICS - calcium
S	900-000178	UJ	ICS - chromium
S	900-000196	UJ	ICS - chromium
S	900-000178	UJ	ICS - copper
S	900-000196	UJ	ICS - copper
S	900-000090	J	ICS - molybdenum

Table B.3.5–Fall 1994 Inorganic Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
S	900-000178	UJ	ICS - molybdenum
S	900-000196	UJ	ICS - molybdenum
S	900-000178	J	ICS - nickel
S	900-000090	J	ICS - potassium
S	900-000178	J	ICS - sodium
S	900-000178	UJ	ICS - zinc
S	900-000196	UJ	ICS - zinc
S	900-000027	J	LCS - calcium (70.8)
S	900-000030	J	LCS - calcium (70.8)
S	900-000090	U	MB - sodium (304 mg/kg)
S	900-000247	U	MB - sodium (263.7 mg/kg)
S	900-000117	U	PB - cadmium (0.068 mg/kg)
S	900-000127	U	PB - cadmium (0.068 mg/kg)
S	900-000056	J	SD - barium (129)
S	900-000071	J	SD - barium (129)
S	900-000090	J	SD - barium (129)
S	900-000056	J	SD - cadmium (15.6)
S	900-000071	J	SD - cadmium (15.6)
S	900-000090	J	SD - cadmium (15.6)
S	900-000117	J	SD - calcium (13.6)
S	900-000127	J	SD - calcium (13.6)
S	900-000154	J	SD - calcium (11.9)
S	900-000178	J	SD - calcium (11.9)
S	900-000196	J	SD - calcium (11.9)
S	900-000213	J	SD - calcium (13.6)
S	900-000027	J	SD - chromium (41.4)
S	900-000030	J	SD - chromium (41.4)
S	900-000117	J	SD - chromium (13.6)
S	900-000127	J	SD - chromium (13.6)
S	900-000027	J	SD - copper (10.8)
S	900-000030	J	SD - copper (10.8)
S	900-000056	J	SD - iron (12.8)
S	900-000071	J	SD - iron (12.8)
S	900-000090	J	SD - iron (12.8)
S	900-000056	J	SD - magnesium (12.2)
S	900-000071	J	SD - magnesium (12.2)
S	900-000090	J	SD - magnesium (12.2)
S	900-000056	J	SD - manganese (12.2)
S	900-000071	J	SD - manganese (12.2)
S	900-000090	J	SD - manganese (12.2)
S	900-000027	J	SD - nickel (21.3)
S	900-000030	J	SD - nickel (21.3)
S	900-000056	J	SD - vanadium (11.2)
S	900-000071	J	SD - vanadium (11.2)
S	900-000090	J	SD - vanadium (11.2)
W	900-000020 (D)	UJ	ASR - lead (52)
W	900-000020 (T)	UJ	ASR - lead (46)
W	900-000034 (D)	UJ	ASR - lead (58)
W	900-000034 (T)	UJ	ASR - lead (52)

Table B.3.5–Fall 1994 Inorganic Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
W	900-000054 (D)	UJ	ASR - lead (78)
W	900-000054 (T)	J	ASR - lead (78)
W	900-000135 (D)	UJ	ASR - lead (83.6)
W	900-000194 (D)	UJ	ASR - lead (70)
W	900-000256 (D)	UJ	ASR - lead (48.1)
W	900-000276 (T)	UJ	ASR - lead (66)
W	900-000020 (D)	UJ	ASR - selenium (78)
W	900-000020 (T)	J	ASR - selenium (71)
W	900-000034 (T)	UJ	ASR - selenium (79)
W	900-000054 (D)	UJ	ASR - selenium (61.6)
W	900-000135 (D)	UJ	ASR - selenium (77)
W	900-000135 (T)	UJ	ASR - selenium (82.1)
W	900-000183 (D)	UJ	ASR - selenium (65)
W	900-000183 (T)	UJ	ASR - selenium (57)
W	900-000194 (D)	UJ	ASR - selenium (77)
W	900-000194 (T)	UJ	ASR - selenium (76)
W	900-000256 (D)	UJ	ASR - selenium (84.5)
W	900-000276 (T)	UJ	ASR - selenium (72)
W	900-000020 (D)	UJ	ASR - thallium (67)
W	900-000020 (T)	UJ	ASR - thallium (40)
W	900-000020 (T)	UJ	ASR - thallium (44)
W	900-000034 (D)	UJ	ASR - thallium (41)
W	900-000054 (D)	UJ	ASR - thallium (49)
W	900-000054 (T)	UJ	ASR - thallium (26.5)
W	900-000135 (D)	UJ	ASR - thallium (69)
W	900-000135 (T)	UJ	ASR - thallium (46)
W	900-000183 (D)	J	ASR - thallium (80)
W	900-000183 (T)	J	ASR - thallium (63)
W	900-000194 (D)	UJ	ASR - thallium (52)
W	900-000194 (T)	UJ	ASR - thallium (35)
W	900-000256 (D)	UJ	ASR - thallium (49.5)
W	900-000256 (T)	UJ	ASR - thallium (67.8)
W	900-000276 (T)	UJ	ASR - thallium (65)
W	900-000183 (D)	J	CCB - antimony (-1.3 μg/L)
W	900-000183 (T)	J	CCB - antimony (-1.3 μg/L)
W	900-000194 (D)	UJ	CCB - antimony (-4.0 μg/L)
W	900-000054 (D)	UJ	CCB - arsenic (-2.7 μg/L)
W	900-000020 (D)	UJ	CCB - bismuth (-4.4 μg/L)
W	900-000020 (T)	UJ	CCB - bismuth (-4.4 μg/L)
W	900-000034 (D)	UJ	CCB - bismuth (-4.4 μg/L)
W	900-000020 (T)	U	CCB - chromium (2.4 μg/L)
W	900-000034 (T)	U	CCB - chromium (2.4 μg/L)
W	900-000183 (D)	U	CCB - chromium (2.2 μg/L)
W	900-000183 (T)	U	CCB - chromium (2.2 μg/L)
W	900-000194 (T)	UJ	CCB - chromium (2.2 μg/L)
W	900-000183 (D)	J	CCB - copper (-0.7 μg/L)
W	900-000183 (T)	J	CCB - copper (-0.7 μg/L)
W	900-000194 (D)	UJ	CCB - copper (-0.7 μg/L)
W	900-000020 (D)	U	CCB - iron (55.1 μg/L)

Table B.3.5–Fall 1994 Inorganic Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
W	900-000020 (T)	U	CCB - iron (55.1 µg/L)
W	900-000034 (D)	U	CCB - iron (55.1 µg/L)
W	900-000034 (T)	U	CCB - iron (55.1 µg/L)
W	900-000256 (T)	U	CCB - lithium (13.9 µg/L)
W	900-000020 (D)	UJ	CCB - manganese (1.0 µg/L)
W	900-000020 (T)	UJ	CCB - manganese (1.0 µg/L)
W	900-000034 (D)	UJ	CCB - manganese (1.0 µg/L)
W	900-000256 (D)	U	CCB - molybdenum (1.2 µg/L)
W	900-000256 (T)	U	CCB - molybdenum (1.2 µg/L)
W	900-000020 (D)	U	CCB - nickel (5.9 mg/L)
W	900-000020 (T)	U	CCB - nickel (5.9 µg/L)
W	900-000034 (D)	U	CCB - nickel (5.9 µg/L)
W	900-000034 (T)	U	CCB - nickel (5.9 µg/L)
W	900-000183 (D)	J	CCB - nickel (1.7 µg/L)
W	900-000183 (T)	J	CCB - nickel (1.7 µg/L)
W	900-000256 (D)	UJ	CCB - nickel (-1.7 µg/L)
W	900-000183 (D)	J	CCB - vanadium (-1.0 µg/L)
W	900-000183 (T)	J	CCB - vanadium (-1.0 µg/L)
W	900-000194 (T)	UJ	CCB - vanadium (-1.0 µg/L)
W	900-000020 (D)	U	CCB - zinc (7.4 µg/L)
W	900-000020 (T)	U	CCB - zinc (7.4 µg/L)
W	900-000034 (D)	U	CCB - zinc (7.4 µg/L)
W	900-000034 (T)	U	CCB - zinc (7.4 µg/L)
W	900-000276 (T)	U	CCB - zinc (1.3 µg/L)
W	900-000081 (T)	UJ	FB- calcium (112 µg/L)
W	900-000020 (T)	U	FB - aluminum (72.7 µg/L)
W	900-000034 (T)	U	FB - aluminum (72.7 µg/L)
W	900-000054 (D)	UJ	FB - aluminum (150 µg/L)
W	900-000054 (T)	UJ	FB - aluminum (230 µg/L)
W	900-000081 (T)	UJ	FB - aluminum (230 µg/L)
W	900-000194 (D)	U	FB - aluminum (163 µg/L)
W	900-000194 (T)	U	FB - aluminum (163 µg/L)
W	900-000054 (D)	UJ	FB - antimony (12.0 µg/L)
W	900-000054 (D)	UJ	FB - barium (1.7 µg/L)
W	900-000054 (D)	UJ	FB - chromium (1.3 µg/L)
W	900-000054 (T)	UJ	FB - chromium (1.0 µg/L)
W	900-000135 (T)	UJ	FB - chromium (1.0 µg/L)
W	900-000194 (D)	U	FB - chromium (1.1 µg/L)
W	900-000194 (T)	U	FB - chromium (1.1 µg/L)
W	900-000135 (D)	UJ	FB - copper (2.1 µg/L)
W	900-000194 (D)	U	FB - copper (2.4 µg/L)
W	900-000194 (T)	U	FB - copper (2.4 µg/L)
W	900-000054 (D)	UJ	FB - iron (1.99 µg/L)
W	900-000194 (D)	U	FB - iron (99.1 µg/L)
W	900-000194 (T)	U	FB - iron (99.1 µg/L)
W	900-000081 (T)	UJ	FB - magnesium (27.5 µg/L)
W	900-000054 (D)	UJ	FB - manganese (1.9 µg/L)
W	900-000194 (D)	U	FB - manganese (1.5 µg/L)
W	900-000194 (T)	U	FB - manganese (1.5 µg/L)

Table B.3.5–Fall 1994 Inorganic Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
W	900-000135 (D)	UJ	FB - molybdenum (1.0 µg/L)
W	900-000054 (T)	UJ	FB - nickel (1.0 µg/L)
W	900-000135 (T)	UJ	FB - nickel (1.0 µg/L)
W	900-000081 (T)	UJ	FB - potassium (211 µg/L)
W	900-000135 (D)	UJ	FB - silver (13.4 µg/L)
W	900-000081 (T)	UJ	FB - sodium (044 µg/L)
W	900-000054 (D)	UJ	FB - zinc (24.5 µg/L)
W	900-000054 (T)	UJ	FB - zinc (2.9 µg/L)
W	900-000194 (D)	U	FB - zinc (3.5 µg/L)
W	900-000194 (T)	U	FB - zinc (3.5 µg/L)
W	900-000020 (D)	UJ	FDRPD - antimony (200)
W	900-000020 (D)	UJ	FDRPD - chromium (200)
W	900-000020 (D)	UJ	FDRPD - lithium (200)
W	900-000256 (T)	J	LRPD - zinc (24.1)
W	900-000183 (D)	U	MB - aluminum (10.7 µg/L)
W	900-000256 (D)	U	MB - aluminum (149.7 µg/L)
W	900-000276 (T)	U	MB - aluminum (102.7 µg/L)
W	900-000256 (D)	U	MB - iron (5.32 µg/L)
W	900-000194 (D)	UJ	MB - nickel (-1.05 µg/L)
W	900-000256 (D)	U	MB - zinc (5.32 µg/L)
W	900-000256 (D)	UJ	MSR - lead (51.8)
W	900-000256 (T)	J	MSR - lead (37.8)
W	900-000183 (D)	UJ	MSR - selenium (65)
W	900-000183 (T)	UJ	MSR - selenium (69)
W	900-000256 (T)	UJ	MSR - selenium (31.7)
W	900-000183 (T)	J	MSR - thallium (19)
W	900-000183 (T)	J	MSR - thallium (23)
W	900-000256 (D)	UJ	MSR - thallium (47)
W	900-000256 (T)	UJ	MSR - thallium (63.0)
W	900-000183 (T)	J	RPD - zinc (49)
W	900-000054 (D)	J	SD - aluminum (102.7)
W	900-000081 (T)	J	SD - aluminum (102.7)
W	900-000135 (D)	J	SD - aluminum (102.7)
W	900-000183 (T)	J	SD - aluminum (39)
W	900-000054 (D)	J	SD - copper (23.5)
W	900-000054 (D)	J	SD - copper (23.5)
W	900-000135 (D)	J	SD - copper (23.5)
W	900-000054 (D)	J	SD - magnesium (11.1)
W	900-000081 (T)	J	SD - magnesium (11.1)
W	900-000135 (D)	J	SD - magnesium (11.1)
W	900-000054 (D)	J	SD - molybdenum (14.3)
W	900-000081 (T)	J	SD - molybdenum (14.3)
W	900-000135 (D)	J	SD - molybdenum (14.3)
W	900-000054 (T)	J	SD - potassium (11.7)
W	900-000183 (D)	J	SD - potassium (13)
W	900-000183 (T)	J	SD - potassium (12)
W	900-000081 (J)	J	SD - sodium (11.3)
W	900-000194 (D)	J	SD - sodium (21)
W	900-000194 (T)	J	SD - sodium (16)

Table B.3.5–Fall 1994 Inorganic Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
W	900-000256 (D)	J	SD - sodium (17.4)
W	900-000256 (T)	J	SD - sodium (21.4)
W	900-000135 (T)	J	SD - zinc (78.9)

Table B.3.6–Fall 1994 Anion Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
S	900-000030	J	HT - chloride (3 days)
S	900-000117	J	HT - chloride (5 days)
S	900-000213	J	HT - chloride (35 days)
S	900-000030	J	HT - fluoride (6 days)
S	900-000117	J	HT - fluoride (3 days)
S	900-000178	J	HT - fluoride (30 days)
S	900-000196	J	HT - fluoride (29 days)
S	900-000213	J	HT - fluoride (29 days)
S	900-000030	J	HT - nitrate/nitrite (2 days)
S	900-000178	J	HT - nitrate/nitrite (57 days)
S	900-000196	J	HT - nitrate/nitrite (56 days)
S	900-000030	J	HT - sulfate (6 days)
S	900-000117	J	HT - sulfate (5 days)
S	900-000178	J	HT - sulfate (49 days)
S	900-000196	J	HT - sulfate (18 days)
S	900-000213	J	HT - sulfate (36 days)
S	900-000117	J	No ICV/CCV for nitrate/nitrite
S	900-000127	J	No ICV/CCV for nitrate/nitrite
W	900-000256	J	HT - fluoride (14 days)
W	900-000276	J	HT - nitrate/nitrite (33 days)
W	900-000054	J	HT - Total nitrogen (3 days)
W	900-000054	J	HT - Total nitrogen (3 days)
W	900-000054	J	HT - Total phosphorus (3 days)
W	900-000054	J	HT - Total phosphorus (3 days)
W	900-000054	J	No ICV/CCV for nitrate/nitrite
W	900-000054	J	No ICV/CCV for nitrate/nitrite
W	900-000081	J	No ICV/CCV for nitrate/nitrite
W	900-000135	J	No ICV/CCV for nitrate/nitrite
W	900-000135	J	No ICV/CCV for nitrate/nitrite
W	900-000256	J	No ICV/CCV for nitrate/nitrite

Table B.3.7–Fall 1994 Radiological Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
S	900-000056	J	LCS - uranium-238 (3.2 σ)
S	900-000213	J	LCS - uranium-238 (3.23 σ)
S	900-000243	J	LCS - uranium-238 (3.23 σ)
S	900-000178	J	LRPD - potassium-40 (6.05 σ)
S	900-000196	J	LRPD - potassium-40 (6.0 σ)
S	900-000090	J	MS - tritium (3.78 σ)
S	900-000256	J	RPD - potassium-40 (7.2 σ)
S	900-000243	J	RPD - uranium-238 (5.28 σ)
S	900-000265	R	tritium (dry samples)
W	900-000194	J	LCS - uranium-238 (3.2 σ)
W	900-000194	J	LCS -uranium-234 (3.01 σ)
W	900-000054	J	LRPD - potassium-40 (10 σ)
W	900-000194	J	MS - uranium-234 (3.12 σ)
W	900-000054	J	MSR - tritium (10.4 σ)
W	900-000054	J	MSR - uranium-234 (4.2 σ)

Table B.3.8–Symbol Definitions

Symbol	Definition
%D	Continuing calibration percent difference deficiency
%RSD	Initial calibration relative standard deviation deficiency
Anthracene ID	Anthracene was mis-identified by the laboratory
ASR	Inorganic analytical spike recovery deficiency
CCB	Inorganic continuing calibration blank was contaminated
CCC	Continuing calibration check
CID	Compound identification
CO	Co-elution problem
CORR	Inorganic correlation coefficient was below acceptance limits
CRPD	The column relative percent difference for a pesticide exceeded criteria
Error>>	The counting error for a radiological result exceeded the reported concentration
EXC	Result upper limit of calibration curve, and reported
FB	Field blank is contaminated
FDRPD	Field duplicate relative percent difference outside acceptance limits
HT	Holding time exceeded by laboratory
ICS	Interference Check Sample
ID	benzo(b)fluoranthene and benzo(k)fluoranthene co-elution
LCS	Laboratory control sample recovery deficiency
LRPD	Laboratory duplicate relative percent difference exceeded acceptance criteria
MB	Method blank contamination
MSR	Matrix spike recovery deficiency
PB	Prep Blank
SD	Inorganic ICP serial dilution exceeded 10 percent
SR	Surrogate recovery deficiency
TB	Trip blank contamination

APPENDIX B.4

Appendix B-4

DATA QUALITY ASSESSMENT: SPRING

B.4 Data Quality Assessment: Spring

Appendix B.4 addresses assessment of data qualifications assigned during data validation. Data validation was performed on 10 percent of the samples. Based on the assigned qualifications and the frequency of the qualifications, assumptions have been made on the quality of the entire data set. Additionally, the Mound Environmental Information Management System (MEIMS) database was queried for quality control check results. The queried results were then evaluated to confirm and/or identify systematic deficiencies.

Validators use quality control checks (QCCs) to monitor sampling and analysis at a process level. When QCCs are outside specified criteria, a corrective action should be taken. When a corrective action is not possible or is not taken, the validators can often use QCCs to evaluate the possible error associated with the reported results. QCCs are typically evaluated during data validation and applied to the affected samples. Examples of QCCs include surrogate recoveries, matrix spike recoveries, and percent differences for calibration curves. When validators noted that QCCs were outside criteria, the validator applied the data qualifiers and subqualifiers following the guidelines presented in Appendix H of the OU9 QAPP. Table B.4.1 identifies the qualifiers used. The qualified data and the significance of the qualifications were then assessed to determine whether the qualification impacts the use of the data for the intended purpose.

Separate subsections present the qualifications for each laboratory analysis. Appendix B.5 contains tables summarizing the qualifications. Although the summary tables may seem extensive for the number of validated samples, actually only a few analytes have been affected. For example, semi-volatiles include 67 individual analytes. When only one or two analytes are qualified, the percentage of qualified data is actually very small. In addition, many of the qualifications are minor and have a negligible impact on the data usability.

The following assessment of data usability of qualified results is limited to the data usage described in this report. The validators used the deficient QCCs to estimate the potential bias. The estimate typically takes the form of a multiplication factor that is applied to the reported result. The assigned factor has been used to establish a probable upper limit to the sample concentration. If the upper limit should exceed an established limit, then the data point is inconclusive and unusable. For other data uses, however, it may be inappropriate to accept all the QCCs as indicators of performance.

The results of the data assessment and a discussion of the data validation qualifiers are presented in the following text. The text is subdivided to match the method of analysis performed and reported by the laboratory. Each analysis subsection is further divided by sample matrix, i.e. organic

volatile analysis is discussed as a section and the section is presented in two subsections: Water samples and soil/sediment samples.

Table B.4.1—Data Validation Qualifiers

Qualifier	Description of Data Qualifier
U	Indicates that the analyte was analyzed for but not detected above the reported sample quantitation limit.
J	Indicates the associated value is an estimated quantity.
UJ	The analyte was not detected above the reported sample quantitation limit; however, the reported sample quantitation limit is an approximate value.
R	Sample result was rejected based on validation criteria.

Systematic Blank Contamination Evaluation

In addition to the qualifications made on the basis of the data validation, the quality control data stored in the Mound Environmental Information Management System (MEIMS) was queried and evaluated. Because of limitations with the entry and retrieval of blank data from MEIMS, WESTON applied the following subjective guidelines to evaluate the systematic presence of contaminants:

1. If a contaminant was reported in more than three lab blanks, the contaminant was identified as a potential systematic deficiency.

2. If the contaminant was present in more than 50 percent of the field blanks, trip blanks, or ambient blanks, the contaminant was identified as a potential systematic deficiency.

If a contaminant was identified as a systematic contaminant, the average concentration of the analyte in the affected blank type was calculated. The largest average value for each systematic contaminant was selected from the blanks, and used to establish an estimate of contamination levels for the program.

B.4.1 Volatiles

B.4.1.1 Water samples

WESTON submitted 64 water samples for organic volatile analysis by CLP SOW OLM1.8. Of the 64 samples, eight were submitted for data validation. During data validation, the validators identified three types of QCC deficiencies:

1. Initial calibration relative standard deviation outside acceptance criteria
2. Continuing calibration percent differences outside acceptance criteria
3. Blank contamination

Initial Calibration Relative Standard Deviation

The laboratory uses the relative standard deviation (RSD) to evaluate the linearity of a calibration curve. When the RSD exceeds 30, the accuracy of

the calibration curve may be affected. The RSD criteria was exceeded for two analytes: acetone and 1,2-diethylbenzene. The RSD for acetone was exceeded for all eight validated samples and indicates a systematic deficiency. The RSDs for acetone ranged from 26.7 to 37.6 percent. Given the degree of variation reported for the RSDs for acetone, the data results are probably usable and should be treated as estimated (J, UJ). Acetone results within 50 percent of an action limit should be treated as inconclusive. The other RSD deficiencies for 1,2-diethylbenzene were limited to two samples and are not indicative of a systematic deficiency.

Continuing Calibration Percent Difference

The laboratory analyzes continuing calibration checks every twelve hours and at the end of an analytical sequence to confirm the continued stability of the calibration curve. The QAPP specifies that the percent difference calculated from the continuing calibration check must be equal to or less than 25 percent. During data validation six analytes were qualified due to exceeding the percent difference criteria: acetone, methylene chloride, 2-butanone, 2-hexanone, 4-methyl-2-pentanone, and chloromethane. Acetone was qualified in five of the eight samples with percent differences ranging from 26.6 to 45.1 percent. 2-butanone and 2-hexanone were qualified in four samples with percent differences ranging from 40 to 93.5 percent and 29.8 to 54.2 percent respectively. Based on the frequency of data qualifications, only acetone, 2-butanone, and 2-hexanone may be systematically impacted. These results should be treated as estimated (J, UJ). The estimated degree of bias is approximately 50 percent. Because the percent differences are positive, it indicates that the associated sample results may be biased high. The other three analytes were only qualified in one or two samples, and no systematic deficiency is apparent.

Blank Contamination

Methylene chloride blank contamination was observed by validators in method blanks. The contamination levels ranged from 1 µg/L to 4 µg/L. Data results which were less than ten times the blank contamination in the associated blank were qualified non-detect (U).

Eight analytes were found in the queried blank data: 1,2-diethylbenzene, acetone, chloroform, methylene chloride, toluene, xylenes, acetonitrile, and 4-methyl-2-pentanone. Methylene chloride and acetone were systematically identified in all types of blanks. Chloroform was present in all types of blanks, except lab blanks. Table B.4.2 lists the systematic contaminants, the average concentration, and the sample action level. Sample results below the sample action level should be treated as qualified non-detects (U).

Table B.4.2—Blank Contaminants

Analyte	Average Concentration (µg/L)	Action Limit (µg/L)
methylene chloride	2.8	28
acetone	9.1	91
chloroform	5.4	27

B.4.1.2 Soil/Sediment Samples

WESTON submitted 94 soil/sediment samples for organic volatile analysis by CLP SOW OLM1.8. Of the 94 samples, eleven were submitted for data validation. During data validation, the validators identified five types of QCC deficiencies:

1. Initial calibration relative standard deviation outside criteria
2. Continuing calibration percent difference outside criteria
3. Field duplicate relative percent differences
4. Laboratory control sample recovery outside acceptance limits
5. Blank contamination

Initial Calibration Relative Standard Deviation

The laboratory uses the relative standard deviation (RSD) to evaluate the linearity of a calibration curve. When the RSD exceeds 30, the accuracy of the calibration curve may be affected. Only two analytes were qualified due to relative standard deviation deficiencies: acetone and methylene chloride. Nine of the eleven samples were qualified due to deficient acetone RSDs, and five of the eleven samples were qualified due to deficient methylene chloride RSDs. Both the acetone and methylene chloride deficiencies ranged from approximately 32 to 66 percent. Based on the frequency of these deficiencies for both the RSD and continuing calibration checks, the data has probably been systematically impacted and should be treated as estimated (J, UJ). Given the degree of variation in the percent RSDs, acetone and methylene chloride values within approximately 60 percent of an action should be treated as inconclusive data.

Continuing Calibration Percent Difference

The laboratory analyzes continuing calibration checks every twelve hours and at the end of an analytical sequence to confirm the continued stability of the calibration curve. The QAPP specifies that the percent difference calculated from the continuing calibration check must be equal to or less than 25 percent. During data validation, eleven analytes were qualified due to continuing calibration deficiencies: acetone, methylene chloride, 2-hexanone, 1,1,2,2-tetrachloromethane, 4-methyl-2-pentanone, acetonitrile, vinyl chloride, carbon disulfide, vinyl acetate, and chloromethane. Of the eleven analytes qualified, only three were qualified in more than two samples: acetone, methylene chloride, and 2-hexanone. Each of these analytes was qualified in three of the eleven samples. Because the 2-hexanone percent differences only exceeded the criteria by a maximum of 1 percent (%D=26 percent), the 2-hexanone data are probably not greatly impacted and no additional consideration is required. The percent differences for acetone and methylene chloride ranged from approximately 35 to 50 percent. Based on the frequency of qualification and the associated relative standard deviation, acetone and methylene chloride results have probably been systematically impacted and should be treated as estimated (J, UJ). Acetone and methylene chloride concentrations within 50 percent of an action limit should be evaluated as inconclusive data. The other analytes which were only qualified in a single sample, do not indicate a systematic data deficiency.

Field Duplicate Percent Differences

Two sample results were qualified due the percent difference criteria for field duplicates being exceeded. The criteria were exceeded for methylene chloride and acetone in sample 900-000433. Because the limited number of field duplicate pairs validated, there is insufficient data to conclude whether the deficiencies indicate a systematic problem. Field duplicate performance for the program is discussed in Appendix B.1.

Laboratory Control Sample

Two sample results for acetonitrile were qualified due to poor recovery (39%) of acetonitrile in the laboratory control sample. Because only two sample results were qualified and the samples were qualified on the basis of the same laboratory control sample recovery, the deficiency is not indicative of a systematic deficiency.

Method Blanks

Method blanks are used to verify target analytes are not being introduced by the laboratory. Methylene chloride was qualified in all of the samples due to method blank contamination ranging from 2 to 37 µg/kg. Acetone was qualified in three of the samples due to method blank contamination ranging from 8 to 13 µg/kg. Based on the frequency of these qualifications, the continuing calibration checks, the initial calibration checks, and the field duplicate results, both these analytes appear to be systematically contaminating the laboratory analyses.

Nine analytes were found in the queried in the blank data: 1,2-diethylbenzene, acetone, chloroform, methylene chloride, 4-methyl-2-pentanone, acetonitrile, xylenes, toluene and hexane. Methylene chloride and acetone were systematically present in all types of blanks. Chloroform was systematically present in all types of blanks, except lab blanks. Table B.4.3 lists the systematic contaminant, the average concentration, and the sample action limit. Sample results below the action limit should be treated as qualified non-detects (U).

Table B.4.3—Blank Contaminants

Analyte	Average Concentration (µg/L)	Action Limit (µg/L)
methylene chloride	10.2	102
acetone	18.2	182
chloroform	5.4	27

B.4.2 Semi-Volatiles

B.4.2.1 Water Samples

WESTON submitted 36 water samples for organic semi-volatile analysis by CLP SOW OLM1.8. Of the 36 samples, four were submitted for data validation. During data validation, the validators identified three types of QCC deficiencies:

1. The continuing calibration percent difference exceeded criteria
2. A holding time was exceeded
3. Method blank contamination

During WESTON's review of the quality control check data in MEIMS, only one other deficiency was identified:

1. Surrogate recoveries outside acceptance criteria.

Continuing Calibration Percent Difference

The laboratory analyzes continuing calibration checks every twelve hours and at the end of an analytical sequence to confirm the continued stability of the calibration curve. The QAPP specifies that the percent difference calculated from the continuing calibration check must be equal to or less than 25 percent. During data validation 15 analytes were qualified due to deficient percent differences. The deficient analytes and range for the associated percent differences outside criteria are listed in Table B.4.4.

Table B.4.4–Range for Percent Difference Outside Criteria

Analyte	*Minimum %D*	*Maximum %D*
2,2'-oxybis(1-chloropropane)	47	47
2-nitroaniline	25.7	40
3-nitroaniline	25.6	25.6
4-nitroaniline	25.4	25.4
4-nitrophenol	197	197
benzo(k) fluoranthene	25.9	25.9
benzoic acid	37	37
bis-(2-ethylhexyl)phthalate	30.4	46.6
butylbenzylphthalate	26.5	31.3
di-n-butylphthalate	42.8	42.8
di-n-octylphthalate	53	53
hexachlorobutadiene	28.7	28.5
hexachlorobenzene	35	35
n-nitroso-di-n-propylamine	33.9	33.9
pyrene	35	35

Of these 15 analytes, only four were qualified in more than one sample: 2-nitroaniline, bis-(2-ethylhexyl)phthalate, butylbenzylphthalate, and hexachlorobutadiene. The four analytes were qualified in two samples.

Because of the limited number of samples validated and the frequency of this deficiency, it is not possible clearly discern a systematic deficiency. Sample results for these compounds may be slightly biased and should be treated as estimated (J, UJ). As the data are used, positive results for these analytes which are near (result ± 50 percent) an action limit should be more closely evaluated.

Holding Time

Only one of the validated samples, 900-000376, was qualified for an exceeded holding time. The holding time was only exceeded by three days. Based on the database, four samples were extracted past the holding time. The sample identifications, the number of days past holding, and the data usability are listed in Table B.4.5. The results for 900-000350 and 900-000376 should be treated as estimated (J).

Table B.4.5—Summary of Exceeded Holding Times

Sample IDs	*Days Past Holding*	*Usability*
900-000350	9	Usable
900-000376	3	Usable
900-000350RE	35	Unusable
900-000340	48	Unusable

Method Blanks

Only one validated sample was qualified on the basis of a method blank, 900-000376. The method blank was reported to contain 1 µg/L of phenol. Because only one of the validated samples were qualified, the deficiency is not systematic. The qualified data point is usable.

Four analytes were found in the queried blank data: bis(2-ethylhexyl)phthalate, di-n-butylphthalate, diethylphthalate, and phenol. Only bis(2-ethylhexyl)phthalate was detected systematically at an average concentration of 3.1 µg/L in the field blanks. Sample results for bis(2-ethylhexyl)phthalate less than 31 µg/L should be treated as qualified non-detects (U).

Surrogate Recoveries

Surrogate recoveries are used to evaluate the sample extraction and analyses process on a sample by sample basis. Surrogate recoveries outside acceptance limits may indicate a sample processing error within the laboratory or an interference by the sample matrix. Six samples were reported with deficient recoveries, per Table B.4.6.

Table B.4.6—Deficient Surrogate Recoveries

Sample ID	2-Fluorophenol	2-Fluorobiphenyl	Nitrobenzene	Terphenyl	2,4,6-Tribromophenol
900-000332	111	NA	NA	NA	NA
900-000340	18	24	22	NA	NA
900-000343	NA	39	NA	NA	NA
900-000368	NA	NA	NA	147	NA
900-000372	NA	NA	NA	NA	129
900-000623	NA	NA	NA	150	NA

Of the six samples with recoveries outside acceptance criteria, only sample 900-000340 has more than one deficient surrogate recovery. Three of six surrogates in sample 900-000340 had low recoveries indicating a negative bias and should be treated as unusable (R). Based on the three low surrogates, sample 900-000340 may be significantly negatively biased. Because only one surrogate is outside criteria in the other five samples, the data for these five samples have probably not been impacted.

B.4.2.2 Soil/Sediment Samples

WESTON submitted 61 soil/sediment samples for organic semi-volatile analysis by CLP SOW OLM1.8. Of the 61 samples, eight were submitted for data validation. During data validation, the validators identified six types of QCC deficiencies:

1. The initial calibration percent relative standard deviation exceeded criteria
2. The continuing calibration percent difference exceeded criteria
3. Method blank contamination
4. Co-elution of benzo(b)anthracene and benzo(k)anthracene
5. Laboratory control sample outside acceptance limits
6. Exceeded calibration curve used to quantify sample results

During WESTON's review of the quality control check data in MEIMS, only two other deficiencies were identified:

1. Hold time was exceeded
2. Surrogate recoveries outside acceptance limits.

Initial Calibration Relative Standard Deviation

The laboratory uses the relative standard deviation (RSD) to evaluate the linearity of a calibration curve. When the RSD exceeds 30 percent, the accuracy of the calibration curve may be affected. Only two analytes were qualified due to relative standard deviation deficiencies: benzoic acid and 2-nitroaniline. Because only one sample was qualified, the data were probably not systematically impacted. The individually qualified results should be treated as estimated non-detect (UJ).

Continuing Calibration Percent Difference

The laboratory analyzes continuing calibration checks every twelve hours and at the end of an analytical sequence to confirm the continued stability of the calibration curve. The QAPP specifies that the percent difference calculated from the continuing calibration check must be equal to or less than 25 percent. During data validation 18 compounds were qualified due to continuing calibration deficiencies. The deficient analytes and range for the associated percent differences outside criteria are listed in Table B.4.7.

Table B.4.7—Range for Percent Difference Outside Criteria

Analyte	*Minimum %D*	*Maximum %D*
2,2'-oxybis(1-chloropropane)	48.4	52
2-nitroaniline	26.6	40.8
2,4-dinitrophenol	31	40.5
4-nitroaniline	38.2	38.2
4,6-dinitro-2-methylphenol	26.5	26.5
benzo(g,h,i)perylene	27	37
benzoic acid	31	31
bis(2-ethylhexyl)phthalate	26.9	46.6
butylbenzylphthalate	26.5	26.5
di-n-butylphthalate	33.9	42.8
diethylphthalate	57.6	57.6
di-n-octylphthalate	53	53
dibenz(g,h)anthracene	29.4	29.4
hexachlorobenzene	27	29.4
hexachlorocyclopentadiene	31	31
indeno(1,2,3-cd)pyrene	29.2	29.2
n-nitroso-di-n-propylmaine	33.9	33.9
pentachlorophenol	26.5	28
benzoic acid	37.3	37.3
2-nitroaniline	30.6	30.6

Of the 18 analytes, only eight were qualified in more than one of the validated samples, and only four were qualified in more than two samples. Based on the validation of eight samples, only the four analytes qualified in three samples each may indicate a systematic deficiency. The four analytes are: 2-nitroaniline, 2,4-dinitrophenol, bis(2-ethylhexyl)phthalate, and hexachlorobenzene. Hexachlorobenzene only exceeded the calibration requirement by 4.4 percent in the worst instance, and the reported value was probably not significantly biased. The other three analytes ranged up to about 50 percent (twice the acceptance limit) and should be treated as estimated (J, UJ). Based on this variation, results for these analytes which are within 50 percent of an action limit must be more closely examined to determine whether there is a potential calibration bias.

Method Blanks

Three analytes were identified during data validation to be present in method blanks and resulted in the associated sample results being qualified non-detect (U): bis(2-ethylhexyl)phthalate, di-n-butylphthalate, and benzoic acid. Di-n-butylphthalate was qualified in two samples. The other analytes were only qualified in one sample each. Based on this limited data set, di-n-butylphthalate may be a systematic contaminant. Di-n-butylphthalate was detected at a maximum concentration of 64 µg/kg.

Five analytes were found in the queried blank data: bis(2-ethylhexyl)phthalate, di-n-butylphthalate, phenol and benzoic acid. Bis(2-ethylhexyl)phthalate was systematically present in both field blanks, and laboratory blanks. The average concentration of bis(2-ethylhexyl)phthalate in the laboratory blanks was 101 µg/kg. Sample results less than 1010 µg/kg should be treated as qualified non-detects (U).

Analyte Identification

During data validation, two of the eight samples were qualified estimated (J) due to co-elution of benzo(b)fluoranthene and benzo(k)fluoranthene. This deficiency was also cited in Appendix B.2 for the Fall samples. Because these analytes co-eluted and have similar spectra, the laboratory was unable to differentiate the analytes. Because of this deficiency, the reported results may be biased high by as much as twice the actual concentration. The deficiency is systematic and affects all positive results for either benzo(b)fluoranthene or benzo(k)fluoranthene.

Laboratory Control Sample

One sample, 900-000433, was qualified estimated (J,UJ) due to the recovery in a laboratory control sample exceeding the acceptance criteria for 2,4-dinitrotoluene. The high recovery may indicate a potential positive bias to the qualified sample result. Because only one sample was qualified due to a deficient laboratory control sample, the deficiency is probably not systematic.

Exceeded Calibration Curve

One sample, 900-000420, was qualified estimated (J) because the laboratory reported results which exceeded the upper limit of their calibration curve. When the concentration in a sample exceeds the upper limit of a calibration curve, the laboratory is suppose to dilute the sample such that the determined concentration is within the calibration curve. Results which are determined outside the calibration curve are derived by extrapolating the calibration curve and may be prone to error. The qualified results should be treated as estimated results. Because only one sample was qualified for this reason, the deficiency is probably not systematic.

Holding Time

Soil samples must be extracted within fourteen days of collection and analyzed within 40 days of extraction. Based on the MEIMS database, six samples were not extracted within the required holding time, and one

sample, 900-000420, was not analyzed within holding time. The sample identifications, the number of days past holding, and usability of the data are listed in Table B.4.9.

Table B.4.9—Summary of Exceeded Holding Times

Sample Ids	*Days Past Holding*	*Usability*
900-000411	7	Usable
900-000417	8	Usable
*900-000420	7	Usable
900-000498	8	Usable
900-000499	8	Usable
900-000500	8	Usable
900-000501	8	Usable

Surrogate Recoveries

Surrogate recoveries are used to evaluate the sample extraction and analyses process on a sample by sample basis. Surrogate recoveries outside acceptance limits may indicate a sample processing error within the laboratory or an interference by the sample matrix. Only one sample exhibited systematically low surrogate recoveries, 900-000411. Four of the six surrogate recoveries ranged from 22 to 26 percent. These low recoveries indicate a potential matrix interference. Based on the systematically low surrogate recoveries for this sample, the associated sample data are of marginal value and should be treated as rejected (R).

B.4.3 Pesticides/PCBs

B.4.3.1 Water Samples

WESTON submitted 77 water samples for organic pesticide analysis by CLP SOW OLM1.8. All of the samples were submitted for data validation per CAR-071. During data validation, the validators identified eight types of QCC deficiencies:

1. The surrogate recovery failed to meet criteria
2. The holding times were exceeded
3. The difference between the primary and confirmation analysis exceeded criteria
4. Analytes were detected in the field blanks
5. Relative Standard Deviation (RSD) was outside acceptance limits
6. Compound was not properly identified
7. A sample result exceeded the calibration curve and was reported
8. Analytes were detected in the method blank

Surrogate Recoveries

Surrogates are used to measure extraction and analysis efficiency. As specified in the QAPP, the acceptable surrogate recovery range is 60-150 percent. The samples with two or more surrogate results outside the QAPP acceptance limits are listed in Table B.4.10. Field duplicate samples and

field blank samples are indicated in the table with the suffix '(FD)' and '(FB)', respectively. Because the surrogates are reported for both primary and secondary analysis, the suffix '1' or '2' has been added to the surrogate name to clarify whether the recovery is from the primary or secondary analysis. Surrogate recoveries which were acceptable are identified as "NA" in the table.

Table B.4.10—Results Outside QAPP Acceptance Limits

	Surrogate Recoveries			
Sample ID	**TCMX1**	**TCMX2**	**DCB1**	**DCB2**
900-000330	NA	190	180	200
900-000341	NA	NA	51	56
900-000343	51	55	NA	NA
900-000344	55	42	58	58
900-000376	**22**	**25**	**17**	**19**
900-000600(FB)	NA	NA	41	37
900-000602(FB)	NA	NA	**23**	**27**
900-000610(FB)	NA	NA	32	34
900-000623(FD)	51	55	56	54
900-000634(FB)	NA	NA	47	39
900-000635(FB)	NA	NA	53	47
900-000643(FB)	NA	NA	59	**22**
900-000647(FB)	NA	NA	42	49
900-000652(FB)	NA	NA	45	34
900-000656(FB)	NA	NA	58	52
900-000658	NA	52	48	53
900-000658DL	NA	NA	**0**	**0**
900-000665(FB)	NA	NA	33	35
900-000673(FB)	NA	NA	53	55
900-000693(FB)	NA	NA	50	58
900-000707(FB)	NA	NA	**22**	30
900-000708(FB)	NA	NA	**21**	**29**

All of the samples listed in Table B.4.10, except 900-000330, had recoveries below the acceptance limits indicating a potential negative bias. The 0 percent for sample 900-000658DL was not rejected because the low surrogate recoveries are expected with diluted samples. The surrogate recoveries for 900-0003330 were above the acceptance limits and the positive samples results may be biased high. During data validation, the results for the samples listed in Table B.4.10 were qualified estimated (J,UJ). For the purposes of the report, these data are usable.

Holding Time

Water samples submitted for pesticide/PCB analysis must be extracted within seven days of collection. During data validation, only six samples were extracted outside of holding time. The results for these samples were qualified estimated (J,UJ) by the validators. The sample identifications, number of days past holding time, and the data usability are listed in Table B.4.11. Field blanks are indicated in the table by the suffix '(FB)'. Sample 900-000658 was a PE sample. The exceeded holding time doesn't appear to have impacted the results for the PE sample. Because the exceeded PE

sample holding times did not seem to impact the PE result accuracy, the exceeded sample holding times probably did not impact the investigative sample results and the data should be considered usable.

Table B.4.11—Summary of Exceeded Holding Times

Sample Ids	*Days Past Holding Time*	*Usability*
900-000327	6	Usable
900-000364	1	Usable
900-000365	1	Usable
900-000600(FB)	1	Usable
900-000643(FB)	1	Usable
900-000658(PE)	1 and 4 (re-extraction)	Usable

Difference between Columns

Because analyte identification by Gas Chromatography is dependent on the amount of time an analyte is retained on a chromatography column and because non-target analytes will sometimes elute at the same retention time as a target analyte, it is necessary to confirm an analyte's identity and concentration on a second column. If the target analyte is present on both columns, then there is confirmation of the analyte's presence. If the difference between the determined concentration on each column is significant, then there is uncertainty whether the analyte was accurately quantitated on either column and/or whether the compound is actually present in the sample. When both the primary and confirmation results were less than the contract reporting limit and the difference between columns exceeded the acceptance criteria, the data were qualified non-detect (U) at the reporting limit. When one or both of the results were greater than the reporting limit and the differences between columns exceeded the acceptance criteria, the data were qualified rejected (R) for the affected analyte.

For the spring water samples, no sample results were rejected (R) due to not meeting the column difference criteria. However, several sample results were qualified non-detect (U) at the reporting limit. The samples qualified non-detect at the reporting limit are usable.

Field Blank Contamination

Three samples were qualified non-detect (U) at the Contract Required Quantitation Limit (CRQL) due to field blank contamination. The affected samples and analytes are listed in Table B.4.12. Sample 900-000655 is a field duplicate (FD). The data are usable as qualified.

Table B.4.12 - Summary of Samples Qualified for Field Blanks

Sample Id	Analyte
900-000339	heptachlor epoxide
900-000368	endosulfan sulfate
900-000655(FD)	dieldrin

Percent Relative Standard Deviation

The laboratory uses the relative standard deviation (RSD) to evaluate the linearity of a calibration curve. When the RSD exceeds 20%, the accuracy of the calibration curve may be affected. The RSD criterion was exceeded for heptachlor epoxide in sample 900-000367 and the validators qualified the result estimated (UJ). Because the results were reported non-detect, the increased variability probably does not impact data usability.

Compound Identification

The validators determined that 4,4'-DDD was not identified by the laboratory in sample 900-000618 (PE sample). Based on the chromatographic evidence DDT is present in the sample and should have been reported at 0.92 ug/L. The result was corrected in the database.

Exceeded Calibration Curve

The result for 4,4'-DDT in sample 900-000658 (PE sample) exceeded the working range of the calibration curve. The result was reported by the laboratory without diluting the sample and re-calculating the sample concentration. The result was qualified estimated (J) during data validation. Because the PE result for DDT was within the acceptance range, the accuracy of the extrapolated result appears to be unaffected.

Method Blank Contamination

Four sample results were qualified non-detect (U) for method blank contamination. Dieldrin was qualified non-detect (U) in samples 900-000377 and 900-000380, and 4,4'-DDT was qualified non-detect (U) in samples 900-000302 and 900-000372. The data are usable as qualified.

B.4.3.2 Soil/Sediment Samples

WESTON submitted 112 soil/sediment samples for organic pesticide analysis by CLP SOW OLM1.8. All of the samples were validated per CAR-071. During data validation, the validators identified seven types of QCC deficiencies:

1. The difference between the primary and confirmation analysis exceeded criteria.
2. The surrogate recovery failed to meet criteria.
3. Analytes were detected in the method blank.
4. The holding times were exceeded.
5. Relative standard deviation was outside acceptance limits.
6. Compound was not properly identified.
7. Moisture content was not used in soil analyses calculations.

Difference between Columns

Because analyte identification by Gas Chromatography is dependent on the amount of time an analyte is retained on a chromatography column and because non-target analytes will sometimes elute at the same retention time as a target analyte, it is necessary to confirm an analyte's identity and

concentration on a second column. If the target analyte is present on both columns, then there is confirmation of the analyte's presence. If the difference between the determined concentration on each column is significant, then there is uncertainty whether the analyte was accurately quantitated on either column and/or whether the compound is actually present in the sample. When both the primary and confirmation results were less than the contract reporting limit and the difference between columns exceeded the acceptance criteria, the data were qualified non-detect (U) at the reporting limit. When one or both of the results were greater than the reporting limit and the differences between columns exceeded the acceptance criteria, the data were qualified rejected (R) for the affected analyte.

A large number of analyte results were qualified rejected (R) due to differences between columns. A total of 118 investigative sample results were rejected due to the result not meeting the percent difference requirement. The number of rejected data points per analyte are listed in Table B.4.13. The other sample results qualified for not meeting the column difference criteria were raised to the CRQL and qualified non-detect (U). The samples qualified non-detect at the reporting limit are usable.

Table B.4.13 - List of Rejected Analytes due to Column Difference for Investigative Samples

Analyte	Number Rejected	Analyte	Number Rejected
4,4'-DDD	7	methoxychlor	2
4,4'-DDT	4	4,4'-DDE	4
α-chlordane	5	α-BHC	6
δ-BHC	3	aldrin	2
endosulfan I	6	dieldrin	8
endosulfan sulfate	9	endrin	2
endrin aldehyde	30	γ-chlordane	20
γ-BHC	6	heptachlor epoxide	3
heptachlor	1		

Surrogate Recoveries

Surrogates are used to measure extraction and analysis efficiency. The QAPP specifies an acceptance range of 60-150 percent. The samples with two or more surrogate results outside the QAPP acceptance limits are listed in Table B.4.14. Field duplicate samples are indicated in the table with the suffix '(FD)'. Because the surrogates are reported for both primary and secondary analysis, the suffix '1' or '2' has been added to the surrogate name to clarify whether the recovery is from the primary or secondary analysis. Surrogate recoveries which were acceptable are identified as "NA" in the table.

Table B.4.14—Results Outside QAPP Acceptance Limits

	Surrogate Recoveries			
Sample ID	TCMX1	TCMX2	DCB1	DCB2
900-000383	56	53	NA	NA
900-000397	55	270	NA	NA

Table B.4.14—Results Outside QAPP Acceptance Limits

	Surrogate Recoveries			
Sample ID	**TCMX1**	**TCMX2**	**DCB1**	**DCB2**
900-000398	54	58	NA	NA
900-000405	NA	NA	**17**	50
900-000409	41	42	NA	NA
900-000410	50	57	NA	NA
900-000412	42	52	NA	NA
900-000420	NA	NA	45	57
900-000421	NA	NA	**2**	32
900-000425	NA	NA	36	59
900-000426	46	51	NA	NA
900-000427	39	41	NA	NA
900-000428	42	43	NA	NA
900-000430	56	59	**0**	NA
900-000444	**25**	57	NA	NA
900-000448	55	56	NA	NA
900-000469RE	**25**	NA	43	54
900-000471	31	37	NA	NA
900-000472	32	47	NA	NA
900-000473	52	46	NA	NA
900-000497	47	48	NA	NA
900-000486	53	49	53	53
900-000601(FD)	55	58	NA	NA
900-000651(FD)	NA	NA	**0**	39
900-000674(FD)	38	42	54	57

During data validation, 25 samples were qualified estimated (J,UJ) due to surrogate recoveries outside acceptance criteria. The surrogate recoveries ranged from 0 percent to 270 percent. The majority of the recoveries were below criteria and indicate a potential negative bias. The samples with recoveries above and below the acceptance criteria indicate the potential for error, but it is not possible to determine the direction or extent of the error.

Method Blanks

Five of the validated soil/sediment samples were qualified non-detect (U) due to method blank contamination. Two of the samples, 900-000417 and 900-000478, were qualified non-detect (U) due to methoxychlor contamination at 0.094 µg/kg to 0.34 µg/kg in the associated method blank. Sample 900-000387 was qualified non-detect (U) for heptachlor due to blank contamination of 0.23 µg/kg. Another sample, 900-000385, was qualified non-detect (U) for heptachlor due to blank contamination of 0.23 ug/kg and for heptachlor epoxide due to blank contamination of 0.15 ug/kg. The final sample, 900-000391, was qualified non-detect (U) for 4,4'-DDT due to blank contamination of 0.17 ug/kg. The data are usable as qualified.

Holding Time

Soil/Sediment samples submitted for pesticide analysis must be extracted within 14 days of collection. During data validation, 9 samples were

qualified estimated (J, UJ) due to an exceeded holding time and are listed in Table B.4.15. The holding times were exceeded by no more than fifteen days. Due to the stability and low volatility of the target compounds, the data impact is probably minimal.

Table B.4.15—Summary of Exceeded Holding Times

Sample Ids	*Days Past Holding Time*	*Usability*
900-000456	10	Usable
900-000458	10	Usable
900-000479	15	Usable
900-000481	15	Usable
900-000482	15	Usable
900-000483	15	Usable
900-000484	15	Usable
900-000485	15	Usable
900-000636	10	Usable

Initial Calibration Relative Standard Deviation

The laboratory uses the Relative Standard Deviation (RSD) to evaluate the linearity of the calibration curve. When the RSD exceeds 20%, the accuracy of the calibration curve may be affected. The criteria was exceeded for heptachlor. Ten samples were qualified estimated non-detect (UJ) for heptachlor due to exceeded RSDs, and one sample (900-000432) was qualified estimated (J) for heptachlor due to an exceeded RSD. For the results that were reported non-detect, the increased variability probably does not impact data usability. The increased variability in the positive result for heptachlor in sample 900-000432 will probably have minimal impact on the usability of the data.

Compound Identification

The validators determined that endosulfan II in sample 900-000387 could not properly be identified and the result was rejected (R).

Moisture Content

The data validator noted all pesticide results in sample 900-000463 were not presented on a dry weight basis. The validator re-calculated all pesticide results for sample 900-000463 and presented them on a dry weight basis.

B.4.4 Inorganic Analyses (Metals and Cyanide)

This section is divided into three subsections: unfiltered water samples, filtered water samples, and soil samples. Because the unfiltered and filtered waters were analyzed separately and the quality control checks are specific to each matrix, the water samples are discussed separately.

B.4.4.1 Unfiltered Water Samples

WESTON submitted 79 unfiltered investigative water samples for inorganic analysis by CLP SOW ILM 03.0. Of the 79 water samples, nine were submitted for data validation. During data validation, the validators identified five types of QCC deficiencies:

1. Blank contamination
2. Analytical Spike recovery outside acceptance criteria
3. Relative percent differences for field duplicates outside acceptance criteria
4. Percent differences for serial dilutions greater than 10 percent
5. Matrix spike recoveries outside acceptance limits

Blank Contamination

Three types of blanks are introduced between sample collection and sample analysis: method blanks (MB), continuing calibration blanks (CCB), and field blanks (FB), as noted in Table B.4.16. During data validation sample results were qualified non-detect (U) due to contamination in each of these types of blanks. If more than 30% of blanks for a specific blank type were contaminated by the same analyte(s), then the analyte(s) was/were considered a possible systematic contaminant(s) and an action level was determined. The action level was determined by averaging the contaminant concentrations and applying the 5x rule.

Table B.4.16—Blank Contaminants (Unfiltered/Total)

ICP Method Blank		Calibration Blank		Field Blank	
Element	*Amount*	*Element*	*Amount*	*Element*	*Amount*
beryllium	-0.247µg/L	antimony	3.7µg/L	aluminum	66.2µg/L
		arsenic	1.7µg/L		74.4µg/L
		beryllium	0.2µg/L	iron	40.1µg/L
		bismuth	-2.9µg/L	zinc	4.5µg/L
		lithium	6.35µg/L		6.3µg/L
			6.4µg/L		
			6.4µg/L		
		vanadium	0.5µg/L		
			0.5µg/L		
			0.52µg/L		
			0.63µg/L		
		zinc	2.8µg/L		

Based on the information in Table B.4.16 and Appendix B.5, total vanadium and lithium was systematically present during laboratory analysis. The other analytes do not occur at high enough frequency to conclude that the analytes were systematically present during the program. Sample concentrations for total vanadium at concentrations less than 3.15 µg/L and total lithium concentration less than 32 µg/L should be treated as qualified non-detects (U). If a qualified concentration is greater than an action limit, then the result is inconclusive for the purpose of determining the extent and level of contamination.

GFAA Post Digestion Analytical Spike Recoveries

GFAA post digestion analytical spike recoveries for total selenium, arsenic, and thallium appear to be systematically out of control. Total selenium and thallium results appear to be biased low, while total arsenic results appear to be biased high. Therefore, all total selenium, thallium and arsenic results should be treated as qualified estimated (J, UJ) when determining the extent and level of contamination.

Field Duplicates

Field duplicates are used to monitor field sampling precision and laboratory reproducibility. The relative percent difference (RPD) between duplicates was greater than 35 percent for six metals. This was probably due to inconsistency of sample preparation. The total beryllium, cobalt, cyanide and lead field duplicate relative percent differences of 200 percent were due to non-detected values for the analyte in one sample and low level values of the analyte in another sample. The other analytes (total nickel, aluminum, vanadium and zinc) showing field duplicate relative percent differences outside the quality control limits were infrequent and do not impact the field sampling and analytical precision for the data set. Field duplicates were also evaluated programmatically in Appendix B.1.

Serial Dilution

Serial dilution, an ICP quality control check, was not within the acceptance criterion in four laboratory batches. The reported results associated with the serial dilution deficiency may be less accurate. The affected analytes include total aluminum and potassium. It is not possible to estimate whether the reported results are biased or to what extent the results may be affected in the associated batches. The total aluminum serial dilution outliers appear to be systematic. Therefore, all total aluminum results should be treated as qualified estimated (J) when determining the extent and level of contamination.

Matrix Spike Recoveries

The matrix spike recovery for total thallium in one sample was out of control. Because only one sample was qualified, there is no evidence of a systematic impact.

B.4.4.2 Filtered Water Samples

WESTON submitted 79 investigative filtered water samples for inorganic analysis by CLP SOW ILM03.0. Of the 79 filtered water samples, nine were submitted for data validation. During data validation, the validators identified five types of QCC deficiencies:

1. Blank contamination
2. Analytical spike recovery outside acceptance criteria
3. Relative percent differences for field duplicates outside acceptance criteria
4. Percent differences for serial dilutions greater than 10 percent
5. Matrix spike recovery outside acceptance criteria

Blank Contamination

Blank contamination was noted in the following types of blanks: method blanks, continuing calibration blanks and field blanks, as noted in Table B.4.17. During data validation, sample results were qualified non-detect (U) due to contamination in each of these types of blanks. If more than 30% of blanks for a specific blank type were contaminated by the same analyte(s), then the analyte(s) was/were considered a possible systematic contaminant(s) and an action level was determined. The action level was determined by averaging the contaminant concentrations and applying the 5x rule.

Table B.4.17—Blank Contaminants (Filtered/Dissolved)

ICP Method Blank		Calibration Blank		Field Blank	
Element	*Amount*	*Element*	*Amount*	*Element*	*Amount*
copper	-0.556µg/L	aluminum	-20.2µg/L 22.8µg/L	aluminum	66.2µg/L 119µg/L 126µg/L
		bismuth	87.6µg/L -136.2µg/L -136.2µg/L -136.2µg/L -136.2µg/L		
		molybdenum	1.2µg/L		
		vanadium	0.6µg/L 0.6µg/L 0.6µg/L 0.6µg/L 0.63µg/L		

Based on the information in Table B.4.17 and Appendix B.5, dissolved aluminum was systematically present in the field blank and bismuth and vanadium were systematically present in the calibration blanks. The other analytes do not occur at high enough frequency to conclude that the analytes were systematically present during the program. Sample concentrations for dissolved aluminum at or below 630 µg/L bismuth at or below 681 µg/L, and vanadium at or below 3.15 µg/L should be treated as qualified non-detects (U). If a qualified concentration is greater than an action limit, then the result is inconclusive for the purpose of determining the extent and level of contamination.

Analytical Spike Recoveries

The analytical spike recoveries for dissolved selenium and thallium appear to be systematically out of control. Dissolved selenium and thallium results appear to be biased low. Therefore, all dissolved selenium and thallium results should be treated as qualified as estimated (J, UJ) when determining the extent and level of contamination.

Field Duplicates

Field duplicates are used to monitor field sampling precision and laboratory reproducibility. The relative percent difference (RPD) between duplicates was greater than 35 percent for three metals. This was probably due to inconsistency of sample preparation. The dissolved cobalt, lead and zinc field

duplicate relative percent differences of 200 percent were due to non-detected values for the analyte in one sample and low level values for the analyte in another sample. The dissolved aluminum and copper field duplicate outlier did not impact the field sampling and analytical precision of the data set. Field duplicates are also evaluated programmatically in Appendix B.1.

Serial Dilution

The serial dilution, an ICP quality control check, was not within the acceptance criterion in five laboratory batches. These reported results may be less accurate. The affected analytes include dissolved barium, nickel and potassium. It is not possible to estimate whether the reported results are biased or to what extent the results may be affected in the associated batches. The dissolved barium and potassium serial dilution outliers appear to be systematic. Therefore, all dissolved barium and potassium should be treated as qualified estimated (J) when determining the extent and level of contamination.

Matrix Spike Recovery

The matrix spike recovery for thallium in one sample was outside acceptance limits. Because only one sample was qualified due to the deficiency, no systematic impact is indicated.

B.4.4.3 Soil/Sediment Samples

Weston submitted 113 soil/sediment samples for inorganic analysis by CLP SOW ILM 03.0. Of the 113 soil/sediment samples, 13 were submitted for data validation. During data validation, the validators identified seven types of QCC deficiencies:

1. Blank contamination
2. Analytical spike recovery outside acceptance criteria
3. Relative percent differences for field duplicates outside acceptance criteria
4. Percent differences for serial dilutions greater than 10 percent
5. ICP interference check sample results outside the control limits
6. Holding time for cyanide analyses outside acceptance criteria
7. Correlation coefficient for calibration outside acceptance criteria

Blank Contamination

Three types of blanks are introduced between sample collection and sample analysis: method blanks (MB), continuing calibration blanks (CCB) and field blanks (FB). During data validation sample results were qualified non-detect (U) due to contamination in method blanks and calibration blanks, as noted in Table B.4.18. If more than 30% of blanks for a specific blank type were contaminated by the same analyte(s), then the analyte(s) was/were considered a possible systematic contaminant(s) and an action level was determined. The action level was determined by averaging the contaminant concentrations and applying the 5x rule.

Table B.4.18—Blank Contaminants

ICP Method Blank		GFAA Method Blank		Calibration Blank	
Element	*Amount*	*Element*	*Amount*	*Element*	*Amount*
tin	-5.1mg/kg	thallium	-1.525mg/kg	arsenic	1.9mg/kg
nickel	38.6mg/kg	cadmium	0.32mg/kg	beryllium	0.2mg/kg
					0.3mg/kg
					0.3mg/kg
					0.3mg/kg
					0.3mg/kg
					0.3mg/kg
					0.3mg/kg
					0.4mg/kg
					0.4mg/kg
					1.5mg/kg
					3.0mg/kg
				bismuth	3.4mg/kg
					3.4mg/kg
					3.4mg/kg
					3.4mg/kg
					5.4mg/kg
				cadmium	0.3mg/kg
					0.4mg/kg
					0.4mg/kg
					0.4mg/kg
					0.6mg/kg
				cobalt	-0.67mg/kg
				lithium	9.1mg/kg
					9.1mg/kg
				molybdenum	1.4mg/kg
					2.1mg/kg
					2.1mg/kg
					2.3mg/kg
				tin	1.9mg/kg
					5.96mg/kg
					6.0mg/kg
					6.0mg/kg

Based on the information in Table B.4.18 and Appendix B.5, beryllium, bismuth, cadmium, molybdenum and tin were systematically present during the soil laboratory analyses. The other analytes (arsenic, cobalt, molybdenum, tin, nickel, thallium, and lithium) do not occur at high enough frequency to conclude that the analytes were systematically present during the program. Soil sample concentrations for beryllium at or below 3.0 mg/kg, bismuth at or below 5.4 mg/kg, cadmium at or below 0.6 mg/kg, molybdenum at or below 11.5 mg/kg, and tin at or below 30 mg/kg should be treated as qualified non-detects (U). If a qualified concentration is greater than an action limit, then the result is inconclusive for the purpose of determining the extent and level of contamination.

GFAA Post Digestion Analytical Spike Recovery

The GFAA post digestion analytical spike recoveries for soil selenium and thallium appear to be systematically out of control. Soil selenium and thallium results appear to be biased low. Therefore, all soil selenium and thallium results should be treated as qualified estimated (J, UJ) when determining the extent and level of contamination.

Field Duplicates

The soil antimony and bismuth field duplicate relative percent differences of 200 percent were due to non-detected values for the analyte in one sample and low level values of the analyte in another sample. The other seven soil analytes showing field duplicate relative percent differences outside the QC limits (arsenic, barium, calcium, iron, magnesium, manganese and silver) were infrequent and did not impact the field sampling and analytical precision for the data set. Field duplicates are also evaluated programmatically in Appendix B.1.

Serial Dilution

The serial dilution, an ICP QC check, was not within the acceptance criterion in nine laboratory batches. These reported results may be less accurate. The affected soil analytes include aluminum, barium, calcium, chromium, cobalt, copper, potassium, manganese and zinc. It is not possible to estimate whether the reported results are biased or to what extent the results may be affected in the associated batches. The soil calcium and potassium serial dilution outliers appear to be systematic. Therefore, all soil calcium and potassium results should be treated as qualified estimated (J) when determining the extent and level of contamination.

ICP Interference Check Sample

The ICP interference check sample (ICS) showed soil antimony, bismuth, cadmium, chromium, cobalt, copper, tin, vanadium, lead, silver, and sodium present in the ICP solution at levels either greater than the IDL or with absolute values greater than the IDL. Therefore, the possibility of false positives or false negatives exists for these ICP outliers. However, since the presence of these outliers was infrequent, the data was not impacted.

Holding Time

A single analyses for cyanide in soil was performed one day past holding time and was qualified estimate (J). The deficiency does not significantly impact the data quality, nor does it indicate a systematic problem.

Correlation Coefficient

A correlation coefficient is use to evaluate the quality of a calibration curve. One sample was qualified estimated (J) for selenium due to a correlation coefficient below acceptance limits. Based on the single qualification, the deficiency does not indicate a systematic problem.

B.4.5 Explosives

B.4.5.1 Water Samples

WESTON submitted 29 water samples for explosives analyses by modified Method 8330 Of the 29 water samples, four were submitted for data validation. During data validation, the validators identified three types of QCC deficiencies:

1. The laboratory control sample recovery exceeded acceptance limits
2. The holding time was exceeded
3. The surrogate recovery exceeded criteria

Laboratory Control Sample Recovery

The laboratory control sample is used to evaluate sample extraction and analytical performance. The data from a control sample is particularly useful when the associated sample matrix spike data fails a criteria. When a matrix spike fails, the control sample data can be used to substantiate the system was in control and the failure was the direct result of matrix interferences.

Two samples were qualified estimated (UJ) due to analyte recoveries below the acceptance limits. The LCS recoveries were low for 2,4,6-TNT (70 percent) in sample 900-000376 and for PETN (16 percent) in sample 900-000348. The low recoveries indicate that the associated sample data may be biased low for the qualified analyte.

Holding Time

Only sample 900-000322 was qualified estimated (UJ) during data validation due to an exceeded holding time. Additionally, the MEIMS database was queried to determine whether other samples were extracted and/or analyzed outside the specified holding time. No additional occurrences of exceeded holding times were noted.

Surrogate Recoveries

All four of the water samples submitted for data validation were qualified estimated (UJ) due to surrogate recovery. The surrogate recoveries ranged from 13 percent to 39 percent for the qualified sample. Surrogates were also reported electronically by the laboratory, and stored in the MEIMS database. The electronically recorded surrogate recoveries were also queried against an acceptance criteria of 50-150 percent. The PETN surrogate, nitroglycerin, exceeded the recovery criteria for 8 of the samples submitted. The surrogate 3,5-dinitroaniline, used for all other explosives, failed the recovery criteria for 23 of the samples analyzed. The high incidence of surrogate recovery failure may indicate a systematic deficiency. Table B.4.19 provides a summary of exceeded surrogate recoveries; two values indicate re-analysis recoveries. The high recoveries associated with samples 900-000372 and 900-000376 were disregarded since the re-extraction recoveries were acceptable. The re-extraction results should be used. Sample results associated with surrogate recoveries of less

than 50 percent should be evaluated as estimated (J, UJ) concentrations with a potential negative bias. Sample results associated with surrogate recoveries of less than 10 percent (highlighted in bold) should be considered as exhibiting an extreme negative bias and unusable (R).

Table B.4.19—Results Outside QAPP Acceptance Limits

	Surrogate Recoveries	
Sample ID	**3,5-dinitroaniline**	**nitroglycerin**
900-000310	**2**	**9 / 14**
900-000315	42	NA
900-000322	39	NA
900-000328	43	NA
900-000330	20 / 42	46 / 50
900-000332	48	NA
900-000333	12	NA
900-000334	34	NA
900-000336	15	NA
900-000338	**3 / 4**	**5 / 10**
900-000339	36	NA
900-000340	36	NA
900-000341	32	NA
900-000342	30	NA
900-000343	15	NA
900-000344	30	NA
900-000345	**10**	NA
900-000346	34	10 / 35
900-000348	13	13 / 13
900-000349	**3**	**11 / 12**
900-000372	42	68 / 997
900-000375	42	NA
900-000376	48	81 / 2405

Matrix Spike Recovery

No samples associated with a matrix spike sample were submitted for data validation. However, the electronically stored matrix spike data were reviewed. Two samples were collected as matrix spikes. One sample, 900-000310, exhibited low recoveries for all spike compounds, ranging from ten to 18 percent. Based on both the electronic data and the data validation reports, no systematic deficiency is apparent.

B.4.5.2 Soil/Sediment Samples

WESTON submitted 46 soil/sediments samples for explosives analyses by modified Method 8330 Of the 46 soil/sediment samples, seven were submitted for data validation. During data validation, the validators only identified one type of QCC deficiency within two samples.

1. The laboratory control sample recovery exceeded acceptance limits

During WESTON's review of the quality control check data in the MEIMS database, one other type of deficiency was identified:

1. Surrogate recoveries outside acceptance criteria

Laboratory Control Sample Recovery

The laboratory control sample is used to evaluate sample extraction and analytical performance. The data from a control sample is particularly useful when the associated sample matrix spike data fails a criteria. When a matrix spike fails, the control sample data can be used to substantiate the system was in control and the failure was the direct result of matrix interferences. Two analytes were qualified as rejected (R) due to recoveries below the acceptance limits. The LCS recoveries were low for tetryl (0 percent) in sample 900-000427 and for PETN (0 percent) in sample 900-000481. The low recoveries indicate that the associated sample data may be biased low for the qualified analyte

Surrogate Recoveries

The surrogate recoveries for explosives in soil were queried from the MEIMS database. Three samples were reported with recoveries less than the minimum acceptable QAPP recovery of 50 percent and four samples were reported with a recovery greater than the QAPP limit of 150 percent. The deficient recoveries and associated sample identifications are summarized in Table B.4.20. Based on the extremely low recoveries reported for sample 900-000429, 900-000430, and 900-000431, the results should be considered as unusable (R). The high recoveries associated with the other four samples indicate a potential positive bias and positive results for these samples should be treated as estimated (J) concentrations.

Table B.4.20—Results Outside QAPP Acceptance Limits

	Surrogate Recoveries	
Sample ID	3,5-dinitroaniline	nitroglycerin
900-000409	184	182
900-000410	205	233
900-000412	205	408
900-000674	NA	188
900-000429	0	0
900-000430	0	0
900-000431	0	0

B.4.6 General Chemistry (Anions and Miscellaneous Tests)

B.4.6.1 Water Samples

WESTON submitted 79 water samples for anions analyses. The surface water samples were submitted the following analyses: total organic carbon, chloride, sulfate, nitrate/nitrite, fluoride, total phosphorus, total nitrogen, ammonia, total dissolved solids, and total suspended solids. Of the 79 water

samples, nine were submitted for data validation. During data validation, the validators identified five types of QCC deficiencies:

1. The holding time was exceeded
2. The relative percent difference between field duplicates exceeded acceptance criteria
3. The relative percent difference between laboratory duplicates exceeded acceptance criteria
4. Blank contamination
5. The matrix spike recovery exceeded acceptance criteria

Holding Time

Three of the nine validated samples were qualified estimated (J) during data validation due to exceeded holding times. Additionally, the EG&G Mound database was queried to determine whether other samples were extracted and/or analyzed outside the specified holding time. Table B.4.21 summarizes the samples and associated general chemistry analyses which were extracted outside of holding time. Because anions are not susceptible to evaporation nor typically susceptible to extensive biological degradation, the impact from the exceeded holding times is probably minimal.

Table B.4.21—Summary of Exceeded Holding Times

Parameter	*Sample ID*	*Days Past Hold*	*Parameter*	*Sample ID*	*Days Past Hold*
nitrogen	900-000304	1	total dissolved solids	900-000364	1
total dissolved solids	900-000304	1	fluoride	900-000365	1
total suspended solids	900-000304	1	alkalinity	900-000365	1
nitrogen	900-000305	1	ammonia	900-000365	1
total dissolved solids	900-000305	1	total dissolved solids	900-000365	1
nitrogen	900-000306	1	total dissolved solids	900-000367	20
total dissolved solids	900-000306	1	total dissolved solids	900-000377	1
nitrogen	900-000309	7	total dissolved solids	900-000378	1
alkalinity	900-000330	14	total dissolved solids	900-000379	1
sulfate	900-000332	19	total dissolved solids	900-000380	1
alkalinity	900-000332	18	total dissolved solids	900-000381	1
nitrogen	900-000333	6	fluoride	900-000451	21
phosphorus	900-000334	1	sulfate	900-000451	3
phosphorus	900-000340	1	fluoride	900-000452	21
phosphorus	900-000341	1	sulfate	900-000452	3
phosphorus	900-000342	1	fluoride	900-000453	21
phosphorus	900-000343	1	sulfate	900-000453	3
phosphorus	900-000344	1	fluoride	900-000454	21
nitrate/nitrite	900-000348	19	sulfate	900-000454	3
nitrate/nitrite	900-000349	19	fluoride	900-000455	21
fluoride	900-000364	1	sulfate	900-000455	3
alkalinity	900-000364	1	nitrogen	900-000495	5
total suspended solids	900-000364	1	nitrogen	900-000496	5
ammonia	900-000364	1	nitrogen	900-000646	7

Relative Percent Differences Between Field Duplicates

The relative percent difference (RPD) between field duplicates is determined to evaluate the precision of the sampling and analysis tasks. During data validation, only sample 900-000376 was qualified as estimated (J) due to exceeded RPDs. An insufficient number of field duplicates were validated to determine whether there is a systematic deficiency.

Of the nine samples submitted for data validation, only one sample (900-000311) was qualified as estimated (J) by the validators for laboratory RPD outside of criteria. There is insufficient data to determine whether there is a systematic deficiency.

Blank Contamination

Only one of the nine samples were qualified as non-detect (U) during data validation due to a positive detection for total phosphorus, TDS, and ammonia in a field blank.

Seven analytes were found in the queried blank data: fluoride, alkalinity, ammonia, dissolved solids, nitrogen, phosphorus, and TOC. The data indicates that all the analytes may be systematically present. Fluoride was systematically present in the laboratory blanks, and the other analytes were in the field blanks. Table B.4.22 lists the contaminants, average concentration and sample action limits. Sample results less than action limit should be treated as qualified non-detects (U).

Table B.4.22—Blank Contaminants

Analyte	Average Concentration (mg/L)	Action Limit (mg/L)
fluoride	0.1	0.5
alkalinity	11.8	59
ammonia	0.2	1.0
dissolved solids*	8	40
nitrogen	0.4	2.0
TOC	1.4	7.0
phosphorus	2.5	12.5

* Two data points eliminated from the average calculation as outliers.

Matrix Spike Recovery

The MEIMS database was queried for electronically reported matrix spike data. Of the four matrix spike samples reported, chloride, fluoride, and organic carbon recoveries were all acceptable. Low recoveries for nitrate-nitrite were reported for both the MS and MSD of 900-000307 (8 percent, 44 percent) and the associated results are qualified as estimated (J/UJ). Two low recoveries for sulfate were reported, however the associated MS or MSD recovery was acceptable and the data was qualified as estimated (J). Alkalinity recoveries were low for three of the four samples, however only the results for sample 900-000377 were qualified as

rejected (8 percent, 5 percent). Ammonia recoveries for 900-000377 were high (160 percent, 146 percent) and the positive results were qualified estimated (J). Total nitrogen recoveries were high (241 percent, 227 percent) for 900-000350 and again positive results were qualified as estimated (J).

Recoveries for total phosphorus were below acceptance criteria in two samples. The MSD of 900-000310 was low (23.5 percent), however since the MS recovery was acceptable, no qualifications are necessary. Both the MS and MSD recoveries for 900-000350 were 0 percent. The LCS recoveries for the analysis were acceptable, indicating a possible matrix interference and the results have been qualified as rejected (R).

B.4.6.2 Soil/Sediment Samples

WESTON submitted 113 soil/sediment samples for anions analyses. The soil/sediment samples were submitted the following analyses: total organic carbon, chloride, sulfate, nitrate/nitrite, and fluoride. Of the 113 soil/sediment samples, 13 were submitted for data validation. During data validation, the validators identified two types of QCC deficiencies:

1. The holding time was exceeded
2. The relative percent difference between field duplicates exceeded acceptance criteria

During WESTON's review of the quality control check data in the MEIMS database, one other QCC deficiency was identified:

1. Method blank contamination

Holding Time

Eleven of the 13 validated samples were qualified estimated (J) during data validation due to exceeded holding times. Additionally, the MEIMS database was queried to determine whether other samples were extracted and/or analyzed outside the specified holding time. Table B.4.23 summarizes the sample id and associated general chemistry analyses which were extracted outside of holding time. Because anions are not susceptible to evaporation nor typically susceptible to extensive biological degradation, the impact from the exceeded holding times is probably minimal.

Table B.4.23—Summary of Exceeded Holding Times

Parameter	*Sample ID*	*Days Past Hold*	*Parameter*	*Sample ID*	*Days Past Hold*
total organic carbon	900-000406	31	fluoride	900-000481	10
total organic carbon	900-000407	31	sulfate	900-000481	11
total organic carbon	900-000408	31	fluoride	900-000452	21
total organic carbon	900-000420	16	sulfate	900-000452	7
total organic carbon	900-000425	16	nitrate/nitrite	900-000452	3
nitrate/nitrite	900-000401	3	fluoride	900-000420	14
fluoride	900-000401	40	fluoride	900-000391	10
fluoride	900-000497	17	sulfate	900-000391	7

Table B.4.23—Summary of Exceeded Holding Times

Parameter	*Sample ID*	*Days Past Hold*	*Parameter*	*Sample ID*	*Days Past Hold*
sulfate	900-000497	2	nitrate/nitrite	900-000391	3
fluoride	900-000427	15	chloride	900-000391	21
fluoride	900-000491	8	fluoride	900-000460	16
sulfate	900-000491	9	chloride	900-000501	3
nitrate/nitrite	900-000491	1	fluoride	900-000501	22
fluoride	900-000433	10	sulfate	900-000501	7
sulfate	900-000433	1			

Relative Percent Differences Between Field Duplicates

The relative percent difference (RPD) between field duplicates is determined to evaluate the precision of the sampling and analysis tasks. During data validation, only sample 900-000433 (fluoride, 64 percent) was qualified as estimated (J) due to exceeded RPDs.

Blank Contamination

Two analytes were found in the queried blank data: fluoride and Total Organic Carbon (TOC). Fluoride was not a systematic contaminant. TOC was systematically present in the field blank. Because of the difference between the TOC water and soil analyses, action limit can not be assigned. Low soil TOC results (<100 mg/kg, or four times the reporting limit) should be treated as estimated (J).

B.4.7 Radiological Analyses

B.4.7.1 Water Samples

WESTON submitted 79 water samples for radiological analysis by Quanterra—Richland. Of the 79 samples, nine were submitted for data validation. During data validation, the validators identified four types of QCC deficiencies:

1. The field duplicate standard deviation exceeded the QAPP criteria
2. The laboratory duplicate standard deviation exceeded the QAPP criteria
3. Method blank contamination
4. The counting error greatly exceeded the reported result.

Field Duplicates

Two samples, 900-000311 and 900-000391, were qualified due to the QAPP limit for a field duplicate standard deviation being exceeded. Sample 900-000311 was qualified because the criteria was exceeded for uranium^{234} and uranium^{238}. Sample 900-000391 was qualified because the criteria was exceeded for potassium^{40}. Based on the frequency of the qualifications, no systematic deficiencies are indicated.

Laboratory Duplicates

Six samples were qualified because the laboratory duplicate standard deviation criteria for potassium^{40} was exceeded. The standard deviations ranged from 7 to 38. The number of qualifications indicate that the precision for potassium^{40} in water was probably systematically impacted. The degree of the impact can't be estimated from the data. For the purposes of using the data, the data should be considered estimated (J, UJ). If a potassium^{40} result is near an action limit, then further data validation may be warranted.

Method Blank Contamination

Two samples were qualified due to method blank contamination. The associated method blank was contaminated with radium^{226} at a concentration of 0.31 pCi/L.

Six isotopes were found in the queried blank data: potassium^{40}, radium^{226}, strontium^{90}, plutonium$^{239/240}$, thorium^{228}, and thorium^{230}. Potassium^{40} was systematically present in the field blanks, and radium^{226} was systematically present in both field and laboratory blanks. Table B.4.24 lists the isotope, average activity, and sample action limit. Sample results less than the action limit should be treated as qualified non-detects (U).

Table B.4.24—Blank Contamination

Analyte	Average Concentration (pCi/L)	Action Limit (pCi/L)
radium^{226}	0.15	0.75
potassium^{40}	296	1480

Error Greater Than Sample Result

One sample result for potassium^{40} in sample 900-000381 was rejected due to the reported result being much smaller than the counting error. Because only one sample result was rejected on this basis, the data were probably not systematically impacted.

B.4.7.2 Soil Samples

WESTON submitted 113 soil samples for radiological analysis by Quanterra-Richland. Of the 113 samples, 13 were submitted for data validation. During data validation, the validators identified one QCC deficiency:

1. The field duplicate standard deviation exceeded the QAPP criteria

During WESTON's review of the quality control check data in the MIMS database, one other QCC deficiency was identified:

1. Blank contamination

Field Duplicate

One sample, 900-000433, was qualified estimated due to the field duplicate standard deviation for tritium exceeding the QAPP specified criteria. Because only one sample was qualified, the data were probably not systematically impacted by the deficiency.

Blank Contamination

Five isotopes were found in the queried blank data: potassium^{40}, radium^{226}, strontium^{90}, plutonium^{238}, and thorium^{232}. Potassium^{40} and radium^{226} were systematically present in the field blanks at 296 pCi/L and 0.12pCi/L, respectively. Because of differences in the methods of analyses between soil samples and water samples for these isotopes, a simple 5x multiplier does not establish an appropriate soil action limit. Therefore, all sample results for radium^{226} and potassium^{40} should be treated as estimated (J, UJ).

APPENDIX B.5

Appendix B-5

SUMMARY OF VALIDATION QUALIFIERS: SPRING

B.5 Summary of Validation Qualifiers: Spring

B.5.1 Contents

Appendix B.5 contains a per sample data qualification summary (Tables B.5.1 through B.5.7) of spring sample results. The summary provides a data user sufficient information to quickly re-assess a qualified data point, given a change to a data use or to an action limit. The appendix provides a list of qualified data points, the applied qualifier and the reason qualified. All of the tables are subject to final error checking.

B.5.2 Description of Appendix Use

When an action limit has been assigned to an analyte and an analyte value in one of the samples being evaluated is qualified, the data user can reference this table to better understand the effect on the data. For example, if an action limit for chloride was set at 4.0 mg/L and a sample result was qualified estimated (J) at 2.5 mg/L, the data user could check the qualification in the appendix and might find an entry such as:

MND00-0000-0001 J MSR-Chloride (50%)

This entry indicates that the reported value may be biased low by 50 percent. To compare the result to an action limit, the data user would divide the reported result (2.5mg/L) by 0.5, resulting in 5mg/L. Because the result is greater than the action limit, the data point is suspect and unsuitable for evaluating the extent of contamination. If the percent recovery had been 83%, the data point would have been considered usable.

Table B.5.8 lists the symbols used in this Appendix to identify quality control deficiencies.

Table B.5.1–Spring 1995 Volatile Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
S	900-000469	UJ	%D - 1,1,2,2-tetrachlomethane (37.3)
S	900-000401	UJ	%D - 2-butanone (28.3)
S	900-000481	UJ	%D - 2-butanone (28.3)
S	900-000469	UJ	%D - 2-hexanone (25.1)
S	900-000497	UJ	%D - 2-hexanone (26)
S	900-000501	UJ	%D - 2-hexanone (26)
S	900-000497	UJ	%D - 4-methyl-2-pentanone (27.7)
S	900-000501	UJ	%D - 4-methyl-2-pentanone (27.7)
S	900-000391	UJ	%D - acetone (50.4)
S	900-000401	UJ	%D - acetone (34.6)
S	900-000481	UJ	%D - acetone (34.6)
S	900-000497	UJ	%D - acetonitrile (31.9)
S	900-000501	UJ	%D - acetonitrile (31.7)
S	900-000391	UJ	%D - carbon disulfide (25.4)
S	900-000391	UJ	%D - chloromethane (25.7)
S	900-000469	UJ	%D - chloromethane (51.6)
S	900-000401	UJ	%D - methylene chloride (37.9)
S	900-000404	UJ	%D - methylene chloride (36.6)
S	900-000481	UJ	%D - methylene chloride (37.9)
S	900-000391	UJ	%D - vinyl acetate (30.5)
S	900-000469	UJ	%D - vinyl chloride (39.5)
S	900-000391	UJ	%RSD - acetone (41.9)
S	900-000401	UJ	%RSD - acetone (66.3)
S	900-000404	UJ	%RSD - acetone (62.5)
S	900-000420	UJ	%RSD - acetone (41.9)
S	900-000427	J	%RSD - acetone (41.9)
S	900-000433	J	%RSD - acetone (54.8)
S	900-000469	UJ	%RSD - acetone (62.5)
S	900-000481	UJ	%RSD - acetone (32.1)
S	900-000497	J	%RSD - acetone (41.9)
S	900-000401	UJ	%RSD - methylene chloride (32.1)
S	900-000404	UJ	%RSD - methylene chloride (45.8)
S	900-000433	UJ	%RSD - methylene chloride (34.3)
S	900-000469	UJ	%RSD - methylene chloride (45.8)
S	900-000481	UJ	%RSD - methylene chloride (66.3)
S	900-000491	UJ	%RSD - methylene chloride (40.3)
S	900-000433	J	FDRPD - acetone (200%)
S	900-000433	UJ	FDRPD - methylene chloride (175%)
S	900-000420	UJ	LCS - acetonitrile (39%)
S	900-000427	UJ	LCS - acetonitrile (39%)
S	900-000401	U	MB - acetone (8 μg/kg)
S	900-000404	U	MB - acetone (13 μg/kg)
S	900-000481	U	MB - acetone (8 μg/kg)
S	900-000391	U	MB - methylene chloride (8 μg/kg)
S	900-000401	U	MB - methylene chloride (7 μg/kg)
S	900-000404	U	MB - methylene chloride (18 μg/kg)
S	900-000420	U	MB - methylene chloride (2 μg/kg)
S	900-000427	U	MB - methylene chloride (2 μg/kg)
S	900-000433	U	MB - methylene chloride (37 μg/kg)

Table B.5.1–Spring 1995 Volatile Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
S	900-000469	U	MB - methylene chloride (17 μg/kg)
S	900-000481	U	MB - methylene chloride (7 μg/kg)
S	900-000491	U	MB - methylene chloride (5 μg/kg)
S	900-000497	U	MB - methylene chloride (3 μg/kg)
S	900-000501	U	MB - methylene chloride (3 μg/kg)
S	900-000501	J	RSD - acetone (41.9)
W	900-000311	UJ	%D - 2-butanone (40.1)
W	900-000339	UJ	%D - 2-butanone (40)
W	900-000348	UJ	%D - 2-butanone (57)
W	900-000381	UJ	%D - 2-butanone (93.5)
W	900-000311	UJ	%D - 2-hexanone (29.8)
W	900-000339	UJ	%D - 2-hexanone (29.8)
W	900-000348	UJ	%D - 2-hexanone (42.7)
W	900-000381	UJ	%D - 2-hexanone (54.2)
W	900-000311	UJ	%D - 4-methyl-2-pentanone (26.6)
W	900-000339	UJ	%D - 4-methyl-2-pentanone (26.6)
W	900-000303	UJ	%D - acetone (26.6)
W	900-000311	UJ	%D - acetone (30.4)
W	900-000339	UJ	%D - acetone (30.4)
W	900-000348	UJ	%D - acetone (45.1)
W	900-000376	UJ	%D - acetone (26.6.)
W	900-000381	UJ	%D - chloromethane (25.4)
W	**900-000322**	UJ	%D - methylene chloride (70.8)
W	900-000348	UJ	%RSD - 1,2-diethylbenzene (20.8)
W	900-000303	UJ	%RSD - acetone (35)
W	900-000348	UJ	%RSD - acetone (37.6)
W	900-000376	UJ	%RSD - acetone (35)
W	900-000381	UJ	%RSD - acetone (26.7)
W	900-000381	UJ	%RSD - acetone (35)
W	**900-000322**	U	MB - methylene chloride (4μg/L)
W	900-000339	U	MB - methylene chloride (1 μg/L)
W	900-000376	U	MB - methylene chloride (1 μg/L)
W	900-000311	UJ	RSD - 1,2-diethylbenzene (20.8)
W	900-000339	UJ	RSD - 1,2-diethylbenzene (20.8)
W	900-000311	UJ	RSD - acetone (37.6)
W	900-000339	UJ	RSD - acetone (37.6)
W	**900-000322**	U	TB - acetone (6μg/L)

Table B.5.2–Spring 1995 Semi-Volatile Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
S	900-000497	UJ	%D - 2,.4-dinitrophenol (31)
S	900-000420	UJ	%D - 2,2'-oxybis (1-chloropropane) (52)
S	900-000497	UJ	%D - 2,2'-oxybis (1-chloropropane) (48.4)
S	900-000420	UJ	%D - 2,4-dinitrophenol (42)
S	900-000469	UJ	%D - 2,4-dinitrophenol (40.5)
S	900-000481	UJ	%D - 2-nitroaniline (40.8)
S	900-000497	UJ	%D - 2-nitroaniline (26.6)
S	900-000469	UJ	%D - 4,6-dinitro 2-methylphenol (26.5)
S	900-000469	UJ	%D - 4-nitroaniline (38.2)
S	900-000433	J	%D - benzo(g,h,i)perylene (27)
S	900-000469	UJ	%D - benzo(g,h,i)perylene (37.0)
S	900-000420	UJ	%D - benzoic acid (31)
S	900-000420	J	%D - bis (2-ethylhexyl) phthalate (39)
S	900-000481	UJ	%D - bis (2-ethylhexyl) phthalate (46.6)
S	900-000497	J	%D - bis (2-ethylhexyl) phthalate (26.9)
S	900-000481	UJ	%D - butylbenzyl phthalate (26.5)
S	900-000481	UJ	%D - di-n-butylphthalate (42.8)
S	900-000497	J	%D - di-n-butylphthalate (33.9)
S	900-000481	UJ	%D - di-n-octylphthalate (53)
S	900-000469	UJ	%D - dibenz (g,h) anthracene (29.4)
S	900-000497	UJ	%D - diethylphthalate (57.6)
S	900-000420	UJ	%D - hexachlorobenzene (27)
S	900-000497	UJ	%D - hexachlorobenzene (29.4)
S	900-000469	UJ	%D - hexachlorocyclopentadiene (31)
S	900-000469	UJ	%D - indeno (1,2,3-cd) pyrene (29.2)
S	900-000481	UJ	%D - n-nitroso-di-n-propylamine (33.9)
S	900-000420	UJ	%D - pentachlorophenol (28)
S	900-000469	UJ	%D - pentachlorophenol (26.5)
S	900-000491	UJ	%RSD - 2-nitroaniline (30.6)
S	900-000469	UJ	%RSD - benzoic acid (37.3)
S	900-000469	U	anthracene ID
S	900-000420	J	EXC - benzo(a)anthracene
S	900-000420	J	EXC - benzo(a) pyrene
S	900-000420	J	EXC - benzo(b) fluoranthene
S	900-000420	J	EXC - benzo(k) fluoranthene
S	900-000420	J	EXC - chrysene
S	900-000420	J	EXC - fluoranthene
S	900-000420	J	EXC - phenanthrene
S	900-000420	J	EXC - pyrene
S	900-000420	J, UJ	ID-benzo(b)fluoranthene ID-benzo(k)fluoranthene
S	900-000491	R	ID-benzo(b)fluoranthene ID-benzo(k)fluoranthene
S	900-000497	X	ID-benzo(b)fluoranthene ID-benzo(k)fluoranthene
S	900-000433	J	LCS - 2,4-dinitrotoluene (98%) [fluorene]
S	900-000497	U	MB - benzoic Acid (220 μg/kg)
S	900-000433	U	MB - bis (2-ethylhexyl)phthalate (99 μg/kg)
S	900-000469	U	MB - di-n-butylphthalate (64 μg/kg)
S	900-000481	U	MB - di-n-butylphthalate (37 μg/kg)
W	900-000339	UJ	%D - 2,2'-oxybis (1-chloropropane) (47)
W	900-000348	UJ	%D - 2-nitroaniline (25.7)

Table B.5.2–Spring 1995 Semi-Volatile Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
W	900-000376	UJ	%D - 2-nitroaniline (40)
W	900-000348	UJ	%D - 3-nitroaniline (25.6)
W	900-000348	UJ	%D - 4-nitroaniline (25.4)
W	900-000348	UJ	%D - 4-nitrophenol (197)
W	900-000348	UJ	%D - benzo(k) fluoranthene (25.9)
W	900-000339	UJ	%D - benzoic acid (37)
W	900-000348	UJ	%D - bis-(2-ethylhexyl)phthalate (30.4)
W	900-000376	UJ	%D - bis-(2-ethylhexyl)phthalate (46.6)
W	900-000348	UJ	%D - butylbenzylphthalate (31.3)
W	900-000376	UJ	%D - butylbenzylphthalate (26.5)
W	900-000376	UJ	%D - di-n-butylphthalate (42.8)
W	900-000376	UJ	%D - di-n-octylphthalate (53.0)
W	900-000339	UJ	%D - hexachlorobenzene (35)
W	900-000339	UJ	%D - hexachlorobutadiene (28.7)
W	900-000348	UJ	%D - hexachlorobutadiene (28.5)
W	900-000376	UJ	%D - n-nitroso-di-n-propylamine (33.9)
W	900-000348	UJ	%D - pyrene (35.3)
W	900-000376	UJ	HT - 3 days
W	900-000376	U	MB - phenol (1 μg/L)

Table B.5.3–Spring 1995 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000413	UJ	%RSD - heptachlor (21)	Usable
S	900-000418	UJ	%RSD - heptachlor (21)	Usable
S	900-000419	UJ	%RSD - heptachlor (21)	Usable
S	900-000422	UJ	%RSD - heptachlor (21)	Usable
S	900-000423	UJ	%RSD - heptachlor (21)	Usable
S	900-000424	UJ	%RSD - heptachlor (21)	Usable
S	900-000429	UJ	%RSD - heptachlor (21)	Usable
S	900-000430	UJ	%RSD - heptachlor (21)	Usable
S	900-000431	UJ	%RSD - heptachlor (21)	Usable
S	900-000432	J	%RSD - heptachlor (21)	Usable
S	900-000684 (FD)	UJ	%RSD - heptachlor (21)	Usable
S	900-000387	R	CID - Endosulfan II	Unusable
S	900-000383	U	CRPD - 4,4'-DDD (157)	Usable
S	900-000385	R	CRPD - 4,4'-DDD (144)	Unusable
S	900-000397	R	CRPD - 4,4'-DDD (150)	Unusable
S	900-000398	R	CRPD - 4,4'-DDD (233)	Unusable
S	900-000402	U	CRPD - 4,4'-DDD (700)	Usable
S	900-000404	U	CRPD - 4,4'-DDD (999)	Usable
S	900-000409	R	CRPD - 4,4'-DDD (770)	Unusable
S	900-000410	U	CRPD - 4,4'-DDD (868)	Usable
S	900-000411	U	CRPD - 4,4'-DDD (383)	Usable
S	900-000412	U	CRPD - 4,4'-DDD (628)	Usable
S	900-000426	R	CRPD - 4,4'-DDD (429)	Unusable
S	900-000430	U	CRPD - 4,4'-DDD (658)	Usable
S	900-000435	U	CRPD - 4,4'-DDD (346)	Usable
S	900-000437	U	CRPD - 4,4'-DDD (341)	Usable
S	900-000438	U	CRPD - 4,4'-DDD (426)	Usable
S	900-000439	R	CRPD - 4,4'-DDD (994)	Unusable
S	900-000442	U	CRPD - 4,4'-DDD (532)	Usable
S	900-000444	U	CRPD - 4,4'-DDD (391)	Usable
S	900-000445	U	CRPD - 4,4'-DDD (291)	Usable
S	900-000457	U	CRPD - 4,4'-DDD (272)	Usable
S	900-000464	U	CRPD - 4,4'-DDD (287)	Usable
S	900-000466	U	CRPD - 4,4'-DDD (200)	Usable
S	900-000469	U	CRPD - 4,4'-DDD (345)	Usable
S	900-000471	U	CRPD - 4,4'-DDD (216)	Usable
S	900-000472	U	CRPD - 4,4'-DDD (138)	Usable
S	900-000473	U	CRPD - 4,4'-DDD (279)	Usable
S	900-000478	U	CRPD - 4,4'-DDD (102)	Usable
S	900-000497	R	CRPD - 4,4'-DDD (364)	Unusable
S	900-000499	U	CRPD - 4,4'-DDD (305)	Usable
S	900-000500	U	CRPD - 4,4'-DDD (427)	Usable
S	900-000601 (FD)	U	CRPD - 4,4'-DDD (336)	Usable
S	900-000674 (FD)	U	CRPD - 4,4'-DDD (336)	Usable
S	900-000691 (FD)	U	CRPD - 4,4'-DDD (464)	Usable
S	900-000709 (FD)	U	CRPD - 4,4'-DDD (133)	Usable
S	900-000382	U	CRPD - 4,4'-DDE (162)	Usable
S	900-000385	U	CRPD - 4,4'-DDE (175)	Usable
S	900-000394	U	CRPD - 4,4'-DDE (122)	Usable
S	900-000397	U	CRPD - 4,4'-DDE (342)	Usable

Table B.5.3–Spring 1995 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000399	U	CRPD - 4,4'-DDE (241)	Usable
S	900-000405	R	CRPD - 4,4'-DDE (532)	Unusable
S	900-000408	U	CRPD - 4,4'-DDE (383)	Usable
S	900-000409	U	CRPD - 4,4'-DDE (448)	Usable
S	900-000410	U	CRPD - 4,4'-DDE (>1000)	Usable
S	900-000411	U	CRPD - 4,4'-DDE (600)	Usable
S	900-000412	U	CRPD - 4,4'-DDE (942)	Usable
S	900-000413	U	CRPD - 4,4'-DDE (195)	Usable
S	900-000420	R	CRPD - 4,4'-DDE (106)	Unusable
S	900-000421	R	CRPD - 4,4'-DDE (103)	Unusable
S	900-000422	U	CRPD - 4,4'-DDE (232)	Usable
S	900-000425	R	CRPD - 4,4'-DDE (162)	Unusable
S	900-000432	U	CRPD - 4,4'-DDE (500)	Usable
S	900-000437	U	CRPD - 4,4'-DDE (400)	Usable
S	900-000439	U	CRPD - 4,4'-DDE (255)	Usable
S	900-000440	U	CRPD - 4,4'-DDE (281)	Usable
S	900-000442	U	CRPD - 4,4'-DDE (485)	Usable
S	900-000460	U	CRPD - 4,4'-DDE (207)	Usable
S	900-000465	U	CRPD - 4,4'-DDE (>1000)	Usable
S	900-000466	U	CRPD - 4,4'-DDE (633)	Usable
S	900-000485	U	CRPD - 4,4'-DDE (123)	Usable
S	900-000488	U	CRPD - 4,4'-DDE (226)	Usable
S	900-000489	U	CRPD - 4,4'-DDE (121)	Usable
S	900-000497	U	CRPD - 4,4'-DDE (312)	Usable
S	900-000620 (FD)	U	CRPD - 4,4'-DDE (495)	Usable
S	900-000651 (FD)	R	CRPD - 4,4'-DDE (166)	Unusable
S	900-000674 (FD)	U	CRPD - 4,4'-DDE (795)	Usable
S	900-000691 (FD)	U	CRPD - 4,4'-DDE (620)	Usable
S	900-000709 (FD)	U	CRPD - 4,4'-DDE (246)	Usable
S	900-000383	U	CRPD - 4,4'-DDT (468)	Usable
S	900-000384	U	CRPD - 4,4'-DDT (662)	Usable
S	900-000393	U	CRPD - 4,4'-DDT (136)	Usable
S	900-000398	R	CRPD - 4,4'-DDT (233)	Unusable
S	900-000403	U	CRPD - 4,4'-DDT (>1000)	Usable
S	900-000404	U	CRPD - 4,4'-DDT (443)	Usable
S	900-000405	U	CRPD - 4,4'-DDT (122)	Usable
S	900-000409	U	CRPD - 4,4'-DDT (810)	Usable
S	900-000410	U	CRPD - 4,4'-DDT (688)	Usable
S	900-000411	U	CRPD - 4,4'-DDT (>1000)	Usable
S	900-000412	U	CRPD - 4,4'-DDT (139)	Usable
S	900-000417	U	CRPD - 4,4'-DDT (131)	Usable
S	900-000418	U	CRPD - 4,4'-DDT (160)	Usable
S	900-000419	U	CRPD - 4,4'-DDT (678)	Usable
S	900-000425	U	CRPD - 4,4'-DDT (631)	Usable
S	900-000426	R	CRPD - 4,4'-DDT (665)	Unusable
S	900-000427	U	CRPD - 4,4'-DDT (200)	Usable
S	900-000432	U	CRPD - 4,4'-DDT (350)	Usable
S	900-000437	U	CRPD - 4,4'-DDT (138)	Usable
S	900-000438	U	CRPD - 4,4'-DDT (165)	Usable
S	900-000439	U	CRPD - 4,4'-DDT (771)	Usable

Table B.5.3–Spring 1995 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000441	U	CRPD - 4,4'-DDT (340)	Usable
S	900-000442	U	CRPD - 4,4'-DDT (471)	Usable
S	900-000462	U	CRPD - 4,4'-DDT (348)	Usable
S	900-000465	R	CRPD - 4,4'-DDT (420)	Unusable
S	900-000467	U	CRPD - 4,4'-DDT (520)	Usable
S	900-000468	R	CRPD - 4,4'-DDT (>1000)	Unusable
S	900-000472	U	CRPD - 4,4'-DDT (262)	Usable
S	900-000473	U	CRPD - 4,4'-DDT (213)	Usable
S	900-000478	U	CRPD - 4,4'-DDT (170)	Usable
S	900-000491	U	CRPD - 4,4'-DDT (110.3)	Usable
S	900-000499	U	CRPD - 4,4'-DDT (424)	Usable
S	900-000601 (FD)	U	CRPD - 4,4'-DDT (331)	Usable
S	900-000651 (FD)	U	CRPD - 4,4'-DDT (847)	Usable
S	900-000709 (FD)	U	CRPD - 4,4'-DDT (116)	Usable
S	900-000382	U	CRPD - α-BHC (260)	Usable
S	900-000391	U	CRPD - α-BHC (332)	Usable
S	900-000398	R	CRPD - α-BHC (534)	Unusable
S	900-000399	U	CRPD - α-BHC (>1000)	Usable
S	900-000413	U	CRPD - α-BHC (305)	Usable
S	900-000414	U	CRPD - α-BHC (433)	Usable
S	900-000416	R	CRPD - α-BHC (351)	Unusable
S	900-000417	U	CRPD - α-BHC (458)	Usable
S	900-000421	U	CRPD - α-BHC (244)	Usable
S	900-000423	U	CRPD - α-BHC (267)	Usable
S	900-000429	R	CRPD - α-BHC (>1000)	Unusable
S	900-000430	R	CRPD - α-BHC (>1000)	Unusable
S	900-000431	R	CRPD - α-BHC (>1000)	Unusable
S	900-000432	R	CRPD - α-BHC (695)	Unusable
S	900-000433	U	CRPD - α-BHC (483)	Usable
S	900-000466	U	CRPD - α-BHC (124)	Usable
S	900-000470	U	CRPD - α-BHC (358)	Usable
S	900-000486	U	CRPD - α-BHC (389)	Usable
S	900-000498	U	CRPD - α-BHC (182)	Usable
S	900-000499	U	CRPD - α-BHC (309)	Usable
S	900-000500	U	CRPD - α-BHC (>1000)	Usable
S	900-000620 (FD)	U	CRPD - α-BHC (745)	Usable
S	900-000636 (FD)	R	CRPD - α-BHC (>1000)	Unusable
S	900-000709 (FD)	U	CRPD - α-BHC (338)	Usable
S	900-000384	U	CRPD - α-chlordane (>1000)	Usable
S	900-000405	R	CRPD - α-chlordane (718)	Unusable
S	900-000411	U	CRPD - α-chlordane (369)	Usable
S	900-000412	U	CRPD - α-chlordane (382)	Usable
S	900-000413	R	CRPD - α-chlordane (136)	Unusable
S	900-000414	U	CRPD - α-chlordane (342)	Usable
S	900-000419	U	CRPD - α-chlordane (645)	Usable
S	900-000420	U	CRPD - α-chlordane (129)	Usable
S	900-000423	U	CRPD - α-chlordane (107)	Usable
S	900-000424	U	CRPD - α-chlordane (>1000)	Usable
S	900-000430	U	CRPD - α-chlordane (223)	Usable
S	900-000432	U	CRPD - α-chlordane (246)	Usable

Table B.5.3–Spring 1995 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000434	R	CRPD - α-chlordane (129)	Unusable
S	900-000435	U	CRPD - α-chlordane (421)	Usable
S	900-000438	U	CRPD - α-chlordane (115)	Usable
S	900-000439	U	CRPD - α-chlordane (328)	Usable
S	900-000443	U	CRPD - α-chlordane (209)	Usable
S	900-000444	R	CRPD - α-chlordane (>1000)	Unusable
S	900-000467	U	CRPD - α-chlordane (106)	Usable
S	900-000484	U	CRPD - α-chlordane (106)	Usable
S	900-000486	U	CRPD - α-chlordane (175)	Usable
S	900-000497	R	CRPD - α-chlordane (114)	Unusable
S	900-000651 (FD)	U	CRPD - α-chlordane (309)	Usable
S	900-000699 (FD)	U	CRPD - α-chlordane (829)	Usable
S	900-000386	U	CRPD - aldrin (570)	Usable
S	900-000397	U	CRPD - aldrin (838)	Usable
S	900-000400	U	CRPD - aldrin (118)	Usable
S	900-000405	R	CRPD - aldrin (>1000)	Unusable
S	900-000408	U	CRPD - aldrin (400)	Usable
S	900-000417	U	CRPD - aldrin (416)	Usable
S	900-000419	U	CRPD - aldrin (174)	Usable
S	900-000420	U	CRPD - aldrin (547)	Usable
S	900-000421	R	CRPD - aldrin (464)	Unusable
S	900-000422	U	CRPD - aldrin (282)	Usable
S	900-000423	U	CRPD - aldrin (128)	Usable
S	900-000430	U	CRPD - aldrin (107)	Usable
S	900-000431	U	CRPD - aldrin (192)	Usable
S	900-000437	U	CRPD - aldrin (265)	Usable
S	900-000441	U	CRPD - aldrin (164)	Usable
S	900-000443	U	CRPD - aldrin (103)	Usable
S	900-000458	U	CRPD - aldrin (338)	Usable
S	900-000459	U	CRPD - aldrin (233)	Usable
S	900-000465	U	CRPD - aldrin (111)	Usable
S	900-000482	U	CRPD - aldrin (112,144)	Usable
S	900-000487	U	CRPD - aldrin (127)	Usable
S	900-000498	U	CRPD - aldrin (125)	Usable
S	900-000500	U	CRPD - aldrin (233)	Usable
S	900-000501	U	CRPD - aldrin (700)	Usable
S	900-000651 (FD)	U	CRPD - aldrin (217)	Usable
S	900-000467	U	CRPD - β-BHC (131)	Usable
S	900-000401	R	CRPD - δ-BHC (308)	Usable
S	900-000402	U	CRPD - δ-BHC (>1000)	Usable
S	900-000419	U	CRPD - δ-BHC (307)	Usable
S	900-000420	R	CRPD - δ-BHC (1000)	Unusable
S	900-000424	U	CRPD - δ-BHC (117)	Usable
S	900-000436	U	CRPD - δ-BHC (678)	Usable
S	900-000470	R	CRPD - δ-BHC (>1000)	Unusable
S	900-000651 (FD)	R	CRPD - δ-BHC (>1000)	Unusable
S	900-000382	R	CRPD - dieldrin (225)	Unusable
S	900-000385	R	CRPD - dieldrin (150)	Unusable
S	900-000387	R	CRPD - dieldrin (178)	Unusable
S	900-000397	U	CRPD - dieldrin (>1000)	Usable

Table B.5.3–Spring 1995 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000398	R	CRPD - dieldrin (282)	Unusable
S	900-000399	U	CRPD - dieldrin (224)	Usable
S	900-000401	U	CRPD - dieldrin (214)	Usable
S	900-000402	U	CRPD - dieldrin (259)	Usable
S	900-000409	U	CRPD - dieldrin (868)	Usable
S	900-000410	U	CRPD - dieldrin (209)	Usable
S	900-000411	U	CRPD - dieldrin (200)	Usable
S	900-000412	U	CRPD - dieldrin (428)	Usable
S	900-000413	U	CRPD - dieldrin (105)	Usable
S	900-000414	U	CRPD - dieldrin (224)	Usable
S	900-000418	U	CRPD - dieldrin (>1000)	Usable
S	900-000419	U	CRPD - dieldrin (>1000)	Usable
S	900-000420	U	CRPD - dieldrin	Usable
S	900-000421	R	CRPD - dieldrin (>1000)	Unusable
S	900-000422	U	CRPD - dieldrin (178)	Usable
S	900-000423	R	CRPD - dieldrin (>1000)	Unusable
S	900-000424	U	CRPD - dieldrin (386)	Usable
S	900-000425	R	CRPD - dieldrin (>1000)	Unusable
S	900-000432	U	CRPD - dieldrin (146)	Usable
S	900-000433	U	CRPD - dieldrin (567)	Usable
S	900-000435	U	CRPD - dieldrin (114)	Usable
S	900-000436	U	CRPD - dieldrin (192)	Usable
S	900-000437	U	CRPD - dieldrin (400)	Usable
S	900-000438	U	CRPD - dieldrin (107)	Usable
S	900-000439	U	CRPD - dieldrin (167)	Usable
S	900-000463	U	CRPD - dieldrin (102)	Usable
S	900-000465	R	CRPD - dieldrin (110)	Unusable
S	900-000480	U	CRPD - dieldrin (147)	Usable
S	900-000500	U	CRPD - dieldrin (265)	Usable
S	900-000501	U	CRPD - dieldrin (999)	Usable
S	900-000636 (FD)	U	CRPD - dieldrin (250)	Usable
S	900-000684 (FD)	U	CRPD - dieldrin (144)	Usable
S	900-000691 (FD)	U	CRPD - dieldrin (321)	Usable
S	900-000699 (FD)	U	CRPD - dieldrin (267)	Usable
S	900-000394	R	CRPD - endosulfan I (261)	Unusable
S	900-000395	R	CRPD - endosulfan I (228)	Unusable
S	900-000396	R	CRPD - endosulfan I (300)	Unusable
S	900-000405	R	CRPD - endosulfan I (>1000)	Unusable
S	900-000407	R	CRPD - endosulfan I (>1000)	Unusable
S	900-000408	U	CRPD - endosulfan I (384)	Usable
S	900-000460	U	CRPD - endosulfan I (797)	Usable
S	900-000491	R	CRPD - endosulfan I (1400)	Unusable
S	900-000636 (FD)	U	CRPD - endosulfan I (200)	Usable
S	900-000382	U	CRPD - endosulfan II (271)	Usable
S	900-000389	U	CRPD - endosulfan II (107)	Usable
S	900-000417	U	CRPD - endosulfan II (817)	Usable
S	900-000420	U	CRPD - endosulfan II (1000)	Usable
S	900-000425	U	CRPD - endosulfan II (113)	Usable
S	900-000430	U	CRPD - endosulfan II (109)	Usable
S	900-000432	U	CRPD - endosulfan II (115)	Usable

Table B.5.3–Spring 1995 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000465	U	CRPD - endosulfan II (112)	Usable
S	900-000467	U	CRPD - endosulfan II (154)	Usable
S	900-000478	U	CRPD - endosulfan II (>1000)	Usable
S	900-000498	U	CRPD - endosulfan II (308)	Usable
S	900-000500	U	CRPD - endosulfan II (586)	Usable
S	900-000501	U	CRPD - endosulfan II (479)	Usable
S	900-000651 (FD)	U	CRPD - endosulfan II (>1000)	Usable
S	900-000684 (FD)	U	CRPD - endosulfan II (136)	Usable
S	900-000382	U	CRPD - endosulfan sulfate (199)	Usable
S	900-000394	R	CRPD - endosulfan sulfate (>1000)	Unusable
S	900-000395	R	CRPD - endosulfan sulfate (>1000)	Unusable
S	900-000396	R	CRPD - endosulfan sulfate (>1000)	Unusable
S	900-000400	U	CRPD - endosulfan sulfate (108)	Usable
S	900-000403	U	CRPD - endosulfan sulfate (650)	Usable
S	900-000404	U	CRPD - endosulfan sulfate (700)	Usable
S	900-000413	U	CRPD - endosulfan sulfate (239)	Usable
S	900-000417	R	CRPD - endosulfan sulfate (>1000)	Unusable
S	900-000419	U	CRPD - endosulfan sulfate (>1000)	Usable
S	900-000420	R	CRPD - endosulfan sulfate (1000)	Unusable
S	900-000421	R	CRPD - endosulfan sulfate (820)	Unusable
S	900-000422	U	CRPD - endosulfan sulfate (>1000)	Usable
S	900-000425	R	CRPD - endosulfan sulfate (>1000)	Unusable
S	900-000429	R	CRPD - endosulfan sulfate (>1000)	Unusable
S	900-000430	U	CRPD - endosulfan sulfate (371)	Usable
S	900-000431	U	CRPD - endosulfan sulfate (567)	Usable
S	900-000432	U	CRPD - endosulfan sulfate (>1000)	Usable
S	900-000437	U	CRPD - endosulfan sulfate (457)	Usable
S	900-000450	U	CRPD - endosulfan sulfate (145)	Usable
S	900-000461	U	CRPD - endosulfan sulfate (157)	Usable
S	900-000473	U	CRPD - endosulfan sulfate (573)	Usable
S	900-000478	R	CRPD - endosulfan sulfate (>1000)	Unusable
S	900-000494	U	CRPD - endosulfan sulfate (103)	Usable
S	900-000498	U	CRPD - endosulfan sulfate (574)	Usable
S	900-000605 (FD)	U	CRPD - endosulfan sulfate (336)	Usable
S	900-000620 (FD)	R	CRPD - endosulfan sulfate (>1000)	Unusable
S	900-000651 (FD)	R	CRPD - endosulfan sulfate (>1000)	Unusable
S	900-000684 (FD)	R	CRPD - endosulfan sulfate (>1000)	Unusable
S	900-000691 (FD)	U	CRPD - endosulfan sulfate (308)	Usable
S	900-000382	U	CRPD - endrin (724)	Usable
S	900-000396	U	CRPD - endrin (310)	Usable
S	900-000418	U	CRPD - endrin (800)	Usable
S	900-000425	R	CRPD - endrin (315)	Unusable
S	900-000432	U	CRPD - endrin (785)	Usable
S	900-000457	U	CRPD - endrin (270)	Usable
S	900-000471	U	CRPD - endrin (114)	Usable
S	900-000492	U	CRPD - endrin (362)	Usable
S	900-000497	R	CRPD - endrin (1000)	Unusable
S	900-000499	U	CRPD - endrin (173)	Usable
S	900-000394	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000395	R	CRPD - endrin aldehyde (>1000)	Unusable

Table B.5.3–Spring 1995 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000396	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000398	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000409	R	CRPD - endrin aldehyde (829)	Unusable
S	900-000410	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000412	U	CRPD - endrin aldehyde (483)	Usable
S	900-000413	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000416	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000418	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000420	R	CRPD - endrin aldehyde (1000)	Unusable
S	900-000421	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000422	U	CRPD - endrin aldehyde (359)	Usable
S	900-000423	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000424	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000426	R	CRPD - endrin aldehyde (496)	Unusable
S	900-000427	R	CRPD - endrin aldehyde (375)	Unusable
S	900-000428	R	CRPD - endrin aldehyde (576)	Unusable
S	900-000431	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000432	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000433	R	CRPD - endrin aldehyde (1000)	Unusable
S	900-000434	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000437	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000439	U	CRPD - endrin aldehyde (>1000)	Usable
S	900-000440	R	CRPD - endrin aldehyde (476)	Unusable
S	900-000463	U	CRPD - endrin aldehyde (130)	Usable
S	900-000468	R	CRPD - endrin aldehyde (329)	Unusable
S	900-000470	R	CRPD - endrin aldehyde (450)	Unusable
S	900-000472	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000480	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000486	U	CRPD - endrin aldehyde (166)	Usable
S	900-000489	U	CRPD - endrin aldehyde (160)	Usable
S	900-000490	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000492	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000497	R	CRPD - endrin aldehyde (1000)	Unusable
S	900-000499	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000601 (FD)	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000674 (FD)	U	CRPD - endrin aldehyde (>1000)	Usable
S	900-000684 (FD)	U	CRPD - endrin aldehyde (>1000)	Usable
S	900-000691 (FD)	R	CRPD - endrin aldehyde (>1000)	Unusable
S	900-000394	U	CRPD - endrin ketone (>1000)	Usable
S	900-000396	U	CRPD - endrin ketone (740)	Usable
S	900-000397	U	CRPD - endrin ketone (296)	Usable
S	900-000398	U	CRPD - endrin ketone (950)	Usable
S	900-000422	U	CRPD - endrin ketone (775)	Usable
S	900-000461	U	CRPD - endrin ketone (130)	Usable
S	900-000469	U	CRPD - endrin ketone (270)	Usable
S	900-000487	U	CRPD - endrin ketone (900)	Usable
S	900-000490	U	CRPD - endrin ketone (197)	Usable
S	900-000497	U	CRPD - endrin ketone (1000)	Usable
S	900-000499	U	CRPD - endrin ketone (415)	Usable
S	900-000620 (FD)	U	CRPD - endrin ketone (>1000)	Usable

Table B.5.3–Spring 1995 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000390	U	CRPD - γ-BHC (686)	Usable
S	900-000405	R	CRPD - γ-BHC (>1000)	Unusable
S	900-000425	R	CRPD - γ-BHC (>1000)	Unusable
S	900-000429	R	CRPD - γ-BHC (976)	Unusable
S	900-000452	U	CRPD - γ-BHC (251)	Usable
S	900-000454	U	CRPD - γ-BHC (207,155)	Usable
S	900-000455	U	CRPD - γ-BHC (207,155)	Usable
S	900-000465	R	CRPD - γ-BHC (900)	Unusable
S	900-000467	U	CRPD - γ-BHC (109)	Usable
S	900-000478	R	CRPD - γ-BHC (>1000)	Unusable
S	900-000487	U	CRPD - γ-BHC (340)	Usable
S	900-000488	U	CRPD - γ-BHC (456)	Usable
S	900-000498	U	CRPD - γ-BHC (>1000)	Usable
S	900-000501	R	CRPD - γ-BHC (999)	Unusable
S	900-000651 (FD)	R	CRPD - γ-BHC (>1000)	Unusable
S	900-000691 (FD)	U	CRPD - γ-BHC (373)	Usable
S	900-000382	R	CRPD - γ-chlordane (400)	Unusable
S	900-000383	R	CRPD - γ-chlordane (239)	Unusable
S	900-000393	U	CRPD - γ-chlordane (341)	Usable
S	900-000394	R	CRPD - γ-chlordane (123.4)	Unusable
S	900-000395	R	CRPD - γ-chlordane (164)	Unusable
S	900-000396	R	CRPD - γ-chlordane (238)	Unusable
S	900-000397	R	CRPD - γ-chlordane (157)	Unusable
S	900-000398	R	CRPD - γ-chlordane (119)	Unusable
S	900-000403	R	CRPD - γ-chlordane (158)	Unusable
S	900-000404	U	CRPD - γ-chlordane (334)	Usable
S	900-000409	U	CRPD - γ-chlordane (400)	Usable
S	900-000412	U	CRPD - γ-chlordane (521)	Usable
S	900-000417	U	CRPD - γ-chlordane (198)	Usable
S	900-000420	R	CRPD - γ-chlordane (133)	Unusable
S	900-000421	R	CRPD - γ-chlordane (407)	Unusable
S	900-000422	U	CRPD - γ-chlordane (144)	Usable
S	900-000423	R	CRPD - γ-chlordane (104)	Unusable
S	900-000425	U	CRPD - γ-chlordane (122)	Usable
S	900-000426	R	CRPD - γ-chlordane (>1000)	Unusable
S	900-000427	R	CRPD - γ-chlordane (999)	Unusable
S	900-000428	R	CRPD - γ-chlordane (360)	Unusable
S	900-000434	R	CRPD - γ-chlordane (327)	Unusable
S	900-000437	U	CRPD - γ-chlordane (104)	Usable
S	900-000439	U	CRPD - γ-chlordane (356)	Usable
S	900-000440	R	CRPD - γ-chlordane (291)	Unusable
S	900-000442	U	CRPD - γ-chlordane (131)	Usable
S	900-000443	U	CRPD - γ-chlordane (560)	Usable
S	900-000444	R	CRPD - γ-chlordane (417)	Unusable
S	900-000445	U	CRPD - γ-chlordane (325)	Usable
S	900-000459	U	CRPD - γ-chlordane (276)	Usable
S	900-000461	U	CRPD - γ-chlordane (139)	Usable
S	900-000468	R	CRPD - γ-chlordane (333)	Unusable
S	900-000469	R	CRPD - γ-chlordane (1000)	Unusable
S	900-000471	U	CRPD - γ-chlordane (208)	Usable

Table B.5.3–Spring 1995 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000480	U	CRPD - γ-chlordane (181)	Usable
S	900-000483	U	CRPD - γ-chlordane (130,358)	Usable
S	900-000484	U	CRPD - γ-chlordane (271)	Usable
S	900-000498	U	CRPD - γ-chlordane (240)	Usable
S	900-000499	R	CRPD - γ-chlordane (>1000)	Unusable
S	900-000500	U	CRPD - γ-chlordane (354)	Usable
S	900-000501	U	CRPD - γ-chlordane (29)	Usable
S	900-000620 (FD)	R	CRPD - γ-chlordane (365)	Unusable
S	900-000642 (FD)	U	CRPD - γ-chlordane (127)	Usable
S	900-000691 (FD)	U	CRPD - γ-chlordane (103)	Usable
S	900-000382	U	CRPD - heptachlor (156)	Usable
S	900-000383	U	CRPD - heptachlor (710)	Usable
S	900-000390	U	CRPD - heptachlor (259)	Usable
S	900-000403	R	CRPD - heptachlor (995)	Unusable
S	900-000417	U	CRPD - heptachlor (740)	Usable
S	900-000418	U	CRPD - heptachlor (793)	Usable
S	900-000425	U	CRPD - heptachlor (>1000)	Usable
S	900-000458	U	CRPD - heptachlor (169)	Usable
S	900-000469	U	CRPD - heptachlor (278)	Usable
S	900-000478	U	CRPD - heptachlor (>1000)	Usable
S	900-000498	U	CRPD - heptachlor (608)	Usable
S	900-000500	U	CRPD - heptachlor (809)	Usable
S	900-000501	U	CRPD - heptachlor (900)	Usable
S	900-000620 (FD)	R	CRPD - heptachlor (>1000)	Unusable
S	900-000651 (FD)	U	CRPD - heptachlor (>1000)	Usable
S	900-000383	R	CRPD - heptachlor epoxide (408)	Unusable
S	900-000389	U	CRPD - heptachlor epoxide (400)	Usable
S	900-000395	U	CRPD - heptachlor epoxide (103)	Usable
S	900-000402	U	CRPD - heptachlor epoxide (534)	Usable
S	900-000405	U	CRPD - heptachlor epoxide (767)	Usable
S	900-000411	U	CRPD - heptachlor epoxide (733)	Usable
S	900-000413	U	CRPD - heptachlor epoxide (214)	Usable
S	900-000417	U	CRPD - heptachlor epoxide (170)	Usable
S	900-000422	U	CRPD - heptachlor epoxide (163)	Usable
S	900-000425	U	CRPD - heptachlor epoxide (130)	Usable
S	900-000427	U	CRPD - heptachlor epoxide (207)	Usable
S	900-000429	U	CRPD - heptachlor epoxide (773)	Usable
S	900-000434	U	CRPD - heptachlor epoxide (623)	Usable
S	900-000472	R	CRPD - heptachlor epoxide (>1000)	Unusable
S	900-000478	U	CRPD - heptachlor epoxide (928)	Usable
S	900-000488	U	CRPD - heptachlor epoxide (146)	Usable
S	900-000494	R	CRPD - heptachlor epoxide (>1000)	Unusable
S	900-000498	U	CRPD - heptachlor epoxide (346)	Usable
S	900-000500	U	CRPD - heptachlor epoxide (270)	Usable
S	900-000620 (FD)	R	CRPD - heptachlor epoxide (574)	Unusable
S	900-000651 (FD)	U	CRPD - heptachlor epoxide (900)	Usable
S	900-000699 (FD)	U	CRPD - heptachlor epoxide (150)	Usable
S	900-000709 (FD)	U	CRPD - heptachlor epoxide (373)	Usable
S	900-000382	U	CRPD - methoxychlor (131)	Usable
S	900-000403	U	CRPD - methoxychlor (196)	Usable

Table B.5.3–Spring 1995 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000406	U	CRPD - methoxychlor (158)	Usable
S	900-000409	U	CRPD - methoxychlor (233)	Usable
S	900-000412	U	CRPD - methoxychlor (124)	Usable
S	900-000415	U	CRPD - methoxychlor (>1000)	Usable
S	900-000421	R	CRPD - methoxychlor (>1000)	Unusable
S	900-000425	U	CRPD - methoxychlor (352)	Usable
S	900-000426	U	CRPD - methoxychlor (411)	Usable
S	900-000428	U	CRPD - methoxychlor (158)	Usable
S	900-000429	U	CRPD - methoxychlor (>1000)	Usable
S	900-000432	U	CRPD - methoxychlor (773)	Usable
S	900-000465	R	CRPD - methoxychlor (250)	Unusable
S	900-000468	U	CRPD - methoxychlor (173)	Usable
S	900-000473	U	CRPD - methoxychlor (192)	Usable
S	900-000477	U	CRPD - methoxychlor (927)	Usable
S	900-000480	U	CRPD - methoxychlor (168)	Usable
S	900-000486	U	CRPD - methoxychlor (479)	Usable
S	900-000497	R	CRPD - methoxychlor (194)	
S	900-000499	U	CRPD - methoxychlor (103)	Usable
S	900-000651 (FD)	U	CRPD - methoxychlor (142)	Usable
S	900-000709 (FD)	U	CRPD - methoxychlor (129)	Usable
S	900-000479	J, UJ	HT - 15 days	Possible low bias
S	900-000482	J, UJ	HT - 15 days	Possible low bias
S	900-000483	J, UJ	HT - 15 days	Possible low bias
S	900-000484	J, UJ	HT - 15 days	Possible low bias
S	900-000485	J, UJ	HT - 15 days	Possible low bias
S	900-000456	J, UJ	HT - 10 days (analysis)	Possible low bias
S	900-000458	J, UJ	HT - 10 days (analysis)	Possible low bias
S	900-000636 (FD)	J, UJ	HT - 10 days (analysis)	Possible low bias
S	900-000481	UJ	HT - 15 days	Usable
S	900-000391	U	MB - 4,4'-DDT (0.17 μg/kg)	Raised reporting limit
S	900-000385	U	MB - heptachlor (0.23 μg/kg)	Raised reporting limit
S	900-000387	U	MB - heptachlor (0.23 μg/kg)	Raised reporting limit
S	900-000385	U	MB - heptachlor epoxide (0.15 μg/kg)	Raised reporting limit
S	900-000417	U	MB - methoxychlor (0.094 μg/kg)	Raised reporting limit
S	900-000478	U	MB - methoxychlor (0.34 μg/kg)	Raised reporting limit
S	900-000405	J, UJ	SR - DCB (17,50)	Possible low bias
S	900-000420	J, UJ	SR - DCB (57,45)	Possible low bias
S	900-000421	R	SR - DCB (2, 32)	Unusable
S	900-000425	J, UJ	SR - DCB (59,36)	Possible low bias
S	900-000430	J, UJ	SR - DCB (0) ;TCMX (56,59)	Possible low bias
S	900-000469RE	J	SR - DCB (43, 54) ;TCMX (25)	Possible low bias
S	900-000651 (FD)	UJ	SR - DCB (0, 39)	Possible low bias
S	900-000674 (FD)	J, UJ	SR - DCB (54,57) ;TCMX (38,42)	Possible low bias
S	900-000383	J, UJ	SR - TCMX (56, 53)	Possible low bias
S	900-000397	J, UJ	SR - TCMX (55, 270)	Possible low bias
S	900-000398	J, UJ	SR - TCMX (54, 58)	Possible low bias
S	900-000409	J, UJ	SR - TCMX (41,42)	Possible low bias
S	900-000410	J, UJ	SR - TCMX (50,57)	Possible low bias
S	900-000412	J, UJ	SR - TCMX (42,52)	Possible low bias
S	900-000426	J, UJ	SR - TCMX (46,51)	Possible low bias

Table B.5.3–Spring 1995 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
S	900-000427	J, UJ	SR - TCMX (41,39)	Possible low bias
S	900-000428	J, UJ	SR - TCMX (42,43)	Possible low bias
S	900-000444	J, UJ	SR - TCMX (25,57)	Possible low bias
S	900-000448	J, UJ	SR - TCMX (55, 56)	Possible low bias
S	900-000471	J, UJ	SR - TCMX (37,31)	Possible low bias
S	900-000472	J, UJ	SR - TCMX (47,32)	Possible low bias
S	900-000473	J, UJ	SR - TCMX (52,46)	Possible low bias
S	900-000486	J, UJ	SR - TCMX (53, 49) ;DCB (53,53)	Possible low bias
S	900-000497	J, UJ	SR - TCMX (47,48)	Possible low bias
S	900-000601 (FD)	J, UJ	SR - TCMX (58,55)	Possible low bias
W	900-000367	UJ	%RSD - heptachlor (23)	Inaccuracy
W	900-000618(PE)	-	CID - 4,4'-DDD (0.92 μg/L)	Data not reported
W	900-000313	U	CRPD - 4,4'-DDE (154)	Usable
W	900-000362	U	CRPD - 4,4'-DDD (559)	Usable
W	900-000363	U	CRPD - 4,4'-DDD (161)	Usable
W	900-000375	U	CRPD - 4,4'-DDD (460)	Usable
W	900-000379	U	CRPD - 4,4'-DDD (900)	Usable
W	900-000325	U	CRPD - α-BHC (400)	Usable
W	900-000326	U	CRPD - α-BHC (377)	Usable
W	900-000302	U	CRPD - α-chlordane (567)	Usable
W	900-000306	U	CRPD - α-chlordane (121)	Usable
W	900-000348	U	CRPD - aldrin (280)	Usable
W	900-000370	U	CRPD - β-BHC (>1000)	Usable
W	900-000495	U	CRPD - β-BHC (>1000)	Usable
W	900-000366	U	CRPD - δ-BHC (>1000)	Usable
W	900-000324	U	CRPD - dieldrin (267)	Usable
W	900-000328	U	CRPD - dieldrin (131.3)	Usable
W	900-000350	U	CRPD - dieldrin (133)	Usable
W	900-000363	U	CRPD - dieldrin (256)	Usable
W	900-000370	U	CRPD - dieldrin (239)	Usable
W	900-000600	U	CRPD - dieldrin (>1000)	Usable
W	900-000339	U	CRPD - endosulfan sulfate (126)	Usable
W	900-000350	U	CRPD - endrin (>1000)	Usable
W	900-000656	U	CRPD - endrin (809)	Usable
W	900-000311	U	CRPD - endrin aldehyde (280)	Usable
W	900-000330	U	CRPD - endrin aldehyde (150)	Usable
W	900-000345	U	CRPD - endrin ketone (>1000)	Usable
W	900-000301	U	CRPD - γ-BHC (632)	Usable
W	900-000322	U	CRPD - γ-BHC (353)	Usable
W	900-000345	U	CRPD - γ-BHC (203)	Usable
W	900-000346	U	CRPD - γ-BHC (220)	Usable
W	900-000350	U	CRPD - γ-BHC (535)	Usable
W	900-000354	U	CRPD - γ-BHC (>1000)	Usable
W	900-000355	U	CRPD - γ-BHC (483)	Usable
W	900-000358	U	CRPD - γ-BHC (996)	Usable
W	900-000367	U	CRPD - γ-BHC (131)	Usable
W	900-000370	U	CRPD - γ-BHC (125)	Usable
W	900-000377	U	CRPD - γ-BHC (125)	Usable
W	900-000603	U	CRPD - γ-BHC (>1000)	Usable
W	900-000302	U	CRPD - γ-chlordane (367)	Usable

Table B.5.3–Spring 1995 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
W	900-000303	U	CRPD - γ-chlordane (120)	Usable
W	900-000306	U	CRPD - γ-chlordane (300)	Usable
W	900-000322	U	CRPD - γ-chlordane (133)	Usable
W	900-000323	U	CRPD - γ-chlordane (488)	Usable
W	900-000349	U	CRPD - γ-chlordane (131)	Usable
W	900-000303	U	CRPD - heptachlor epoxide (525)	Usable
W	900-000322	U	CRPD - heptachlor epoxide (757)	Usable
W	900-000329	U	CRPD - heptachlor epoxide (129.4)	Usable
W	900-000335	U	CRPD - heptachlor epoxide (341)	Usable
W	900-000337	U	CRPD - heptachlor epoxide (244)	Usable
W	900-000339	U	CRPD - heptachlor epoxide (520)	Usable
W	900-000340	U	CRPD - heptachlor epoxide (600)	Usable
W	900-000349	U	CRPD - heptachlor epoxide (>1000)	Usable
W	900-000311	U	CRPD - methoxychlor (420)	Usable
W	900-000313	U	CRPD - methoxychlor (>1000)	Usable
W	900-000341	U	CRPD - methoxychlor (>1000)	Usable
W	900-000357	U	CRPD - methoxychlor (>1000)	Usable
W	900-000366	U	CRPD - methoxychlor (740)	Usable
W	900-000658	J	EXC - 4,4'-DDT	Inaccuracy (PE)
W	900-000655 (FD)	U	FB - dieldrin (0.0013 μg/l)	Raised reporting limit
W	900-000368	U	FB - endosulfan sulfate (0.0023 μg/L)	Raised reporting limit
W	900-000339	U	FB - heptachlor epoxide (0.0011μg/l)	Raised reporting limit
W	900-000364	J, UJ	HT - 1 day	No significant impact
W	900-000365	J, UJ	HT - 1 day	No significant impact
W	900-000643 (FB)	UJ	HT - 1 day	No significant impact
W	900-000658	J,UJ	HT - 1 day	No significant impact (PE)
W	900-000600 (FB)	UJ	HT - 4 days	Possible low bias
W	900-000658DL	J	HT - 4 days	Slight low bias possible (PE)
W	900-000327	UJ	HT - 6 days	Possible low bias
W	900-000302	U	MB - 4,4'-DDD (0.0054 μg/L)	Raised reporting limit
W	900-000372	U	MB - 4,4'-DDD (0.0054 μg/L)	Raised reporting limit
W	900-000377	U	MB - dieldrin (0.0026 μg/kg)	Raised reporting limit
W	900-000380	U	MB - dieldrin (0.0026 μg/kg)	Raised reporting limit
W	900-000330	J, UJ	SR - TCMX(190);DCB(200,180)	Possible high bias
W	900-000341	J, UJ	SR - DCB (51, 56)	Possible low bias
W	900-000600 (FB)	UJ	SR - DCB (41, 37)	Possible low bias
W	900-000602 (FB)	J, UJ	SR - DCB (23, 27)	Possible low bias
W	900-000610 (FB)	UJ	SR - DCB (32, 34)	Possible low bias
W	900-000634 (FB)	J, UJ	SR - DCB (47, 39)	Possible low bias
W	900-000635 (FB)	J, UJ	SR - DCB (53, 47)	Possible low bias
W	900-000643 (FB)	UJ	SR - DCB (59, 22)	Possible low bias
W	900-000647 (FB)	UJ	SR - DCB (42, 49)	Possible low bias
W	900-000652 (FB)	UJ	SR - DCB (45, 34)	Possible low bias
W	900-000656 (FB)	J, UJ	SR - DCB (58, 52)	Possible low bias
W	900-000658DL	J	SR - DCB (0,0)	Low bias possible (PE)
W	900-000665 (FB)	UJ	SR - DCB (33, 35)	Possible low bias
W	900-000673 (FB)	UJ	SR - DCB (53, 55)	Possible low bias
W	900-000693 (FB)	UJ	SR - DCB (50, 58)	Possible low bias
W	900-000707 (FB)	UJ	SR - DCB (22, 30)	Possible low bias
W	900-000708 (FB)	UJ	SR - DCB (21, 29)	Possible low bias

Table B.5.3–Spring 1995 Pesticide Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified	Impact
W	900-000343	UJ	SR - TCMX (51, 55)	Possible low bias
W	900-000344	UJ	SR - TCMX (55, 42);DCB(58,58)	Possible low bias
W	900-000376	UJ	SR - TCMX (22,25);DCB(17,19)	Possible low bias
W	900-000623 (FD)	UJ	SR - TCMX (51, 55);DCB(56,54)	Possible low bias
W	900-000658	J, UJ	SR - TCMX (52);DCB(48,53)	Low bias possible (PE)

Table B.5.4–Spring 1995 Explosives Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
S	900-000481	R	LCS - PETN (0%)
S	900-000427	R	LCS - tetryl (0%)
S	900-000427	R	MSR - tetryl (0%)
W	900-000322	UJ	HT - 8 days
W	900-000376	UJ	LCS - 2,4,6-TNT (70%)
W	900-000348	UJ	LCS - PETN (16%)
W	900-000322	UJ	SR - 2,4-DNT (73)
W	900-000322	UJ	SR - 3,5-DNB (39)
W	900-000339	UJ	SR - DNB (36%)
W	900-000348	UJ	SR - DNB (13%), NG (13%)
W	900-000376	UJ	SR - DNB (48)

Table B.5.5–Spring 1995 Inorganic Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
S	900-000391	UJ	ASR - selenium (61)
S	900-000401	UJ	ASR - selenium (49.9)
S	900-000404	UJ	ASR - selenium (83)
S	900-000420	UJ	ASR - selenium (67)
S	900-000433	J	ASR - selenium (80.5)
S	900-000460	UJ	ASR - selenium (77.1)
S	900-000469	UJ	ASR - selenium (62.7)
S	900-000481	UJ	ASR - selenium (70.6)
S	900-000497	UJ	ASR - selenium (72.4)
S	900-000501	UJ	ASR - selenium (54.5)
S	900-000391	UJ	ASR - thallium (52)
S	900-000401	UJ	ASR - thallium (83.8)
S	900-000420	UJ	ASR - thallium (64)
S	900-000427	UJ	ASR - thallium (62.8)
S	900-000433	J	ASR - thallium (64.9)
S	900-000469	UJ	ASR - thallium (61.6)
S	900-000491	UJ	ASR - thallium (82.5)
S	900-000501	UJ	ASR - thallium (75.4)
S	900-000427	U	CCB - arsenic (1.9 mg/kg)
S	900-000391	U	CCB - beryllium (0.4 mg/kg)
S	900-000401	U	CCB - beryllium (1.5 mg/kg)
S	900-000404	U	CCB - beryllium (0.3 mg/kg)
S	900-000420	U	CCB - beryllium (0.3 mg/kg)
S	900-000427	U	CCB - beryllium (0.2 mg/kg)
S	900-000433	U	CCB - beryllium (0.3 mg/kg)
S	900-000460	U	CCB - beryllium (3.0 mg/kg)
S	900-000469	U	CCB - beryllium (0.4 mg/kg)
S	900-000481	U	CCB - beryllium (0.3 mg/kg)
S	900-000491	U	CCB - beryllium (0.3 mg/kg)
S	900-000497	U	CCB - beryllium (0.3 mg/kg)
S	900-000501	U	CCB - beryllium (0.3 mg/kg)
S	900-000420	U	CCB - bismuth (3.4 mg/kg)
S	900-000427	U	CCB - bismuth (3.4 mg/kg)
S	900-000460	U	CCB - bismuth (3.4 mg/kg)
S	900-000497	U	CCB - bismuth (5.4 mg/kg)
S	900-000501	U	CCB - bismuth (3.4 mg/kg)
S	900-000427	U	CCB - cadmium (0.4 mg/kg)
S	900-000460	U	CCB - cadmium (0.4 mg/kg)
S	900-000469	U	CCB - cadmium (0.6 mg/kg)
S	900-000491	U	CCB - cadium (0.3 mg/kg)
S	900-000497	U	CCB - cadmium (0.4 mg/kg)
S	900-000452	J	CCB - cobalt (-0.67 mg/kg)
S	900-000404	U	CCB - lithium (9.1 mg/kg)
S	900-000469	U	CCB - lithium (9.1 mg/kg)
S	900-000391	U	CCB - molybdenum (2.1 mg/kg)
S	900-000433	U	CCB - molybdenum (1.4 mg/kg)
S	900-000469	U	CCB - molybdenum (2.3 mg/kg)
S	900-000481	U	CCB - molybdenum (2.1 mg/kg)
S	900-000420	U	CCB - tin (6.0 mg/kg)

Table B.5.5–Spring 1995 Inorganic Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
S	900-000460	U	CCB - tin (6.0 mg/kg)
S	900-000497	U	CCB - tin (6.0 mg/kg)
S	900-000501	U	CCB - tin (5.96 mg/kg)
S	900-000491	UJ	CORR - selenium (<0.995)
S	900-000433	J	FDRPD - antimony (200)
S	900-000433	J	FDRPD - arsenic (66.7)
S	900-000433	J	FDRPD - barium (117)
S	900-000433	J	FDRPD - bismuth (200)
S	900-000433	J	FDRPD - calcium (43)
S	900-000433	J	FDRPD - iron (65)
S	900-000433	J	FDRPD - magnesium (105)
S	900-000433	J	FDRPD - manganese (69)
S	900-000433	J	FDRPD - silver (70)
S	900-000497	UJ	HT - cyanide (1 day)
S	900-000469	UJ	ICS - antimony
S	900-000433	J	ICS - bismuth
S	900-000433	J	ICS - cadmium
S	900-000469	J	ICS - cadmium
S	900-000433	J	ICS - chromium
S	900-000469	J	ICS - cobalt
S	900-000433	J	ICS - copper
S	900-000433	J	ICS - lead
S	900-000469	J	ICS - lead
S	900-000469	UJ	ICS - silver
S	900-000469	J	ICS - sodium
S	900-000433	J	ICS - tin
S	900-000433	J	ICS - vanadium
S	900-000404	U	MB - cadmium (0.32 mg/kg)
S	900-000460	U	MB - nickel (38.6 mg/kg)
S	900-000391	J	MB - thallium (-1.525 mg/kg)
S	900-000433	J	MB - tin (-5.1 mg/kg)
S	900-000501	J	SD - aluminum (12.5)
S	900-000391	J	SD - barium (22.5)
S	900-000420	J	SD - barium (11.5)
S	900-000501	J	SD - barium (13.1)
S	900-000401	J	SD - calcium (12.4)
S	900-000404	J	SD - calcium (15.3)
S	900-000420	J	SD - calcium (16.9)
S	900-000460	J	SD - calcium (18.3)
S	900-000469	J	SD - calcium (12.4)
S	900-000491	J	SD - calcium (12.2)
S	900-000433	J	SD - chromium (999.9)
S	900-000433	J	SD - cobalt (26.6)
S	900-000469	J	SD - cobalt (11.2)
S	900-000420	J	SD - copper (16.1)
S	900-000481	J	SD - copper (38.5)
S	900-000433	J	SD - manganese (11.2)
S	900-000401	J	SD - potassium (20.8)
S	900-000404	J	SD - potassium (16.9)

Table B.5.5–Spring 1995 Inorganic Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
S	900-000427	J	SD - potassium (13.5)
S	900-000433	J	SD - potassium (13.2)
S	900-000469	J	SD - potassium (19.2)
S	900-000491	J	SD - potassium (22.8)
S	900-000497	J	SD - potassium (13.8)
S	900-000501	J	SD - potassium (18.3)
S	900-000460	J	SD - zinc (11.0)
W	900-000311(T)	UJ	ASR - arsenic (122)
W	900-000339(T)	UJ	ASR - arsenic (126)
W	900-000348(T)	UJ	ASR - arsenic (132)
W	900-000311(D)	J	ASR - selenium (80.8)
W	900-000322(D)	UJ	ASR - selenium (79.3)
W	900-000322(T)	UJ	ASR - selenium (65.4)
W	900-000339(D)	J	ASR - selenium (82.8)
W	900-000348(D)	J	ASR - selenium (73.0)
W	900-000351(T)	UJ	ASR - selenium (42)
W	900-000364(D)	UJ	ASR - selenium (84.1)
W	900-000381(D)	UJ	ASR - selenium (71)
W	900-000381(T)	UJ	ASR - selenium (84.4)
W	900-000303(D)	UJ	ASR - thallium (18.3)
W	900-000311(T)	UJ	ASR - thallium (77)
W	900-000322(D)	UJ	ASR - thallium (58.4)
W	900-000322(T)	UJ	ASR - thallium (52.9)
W	900-000339(D)	J	ASR - thallium (49.9)
W	900-000339(T)	UJ	ASR - thallium (48)
W	900-000348(D)	J	ASR - thallium (80.4)
W	900-000348(T)	UJ	ASR - thallium (69.5)
W	900-000351(D)	UJ	ASR - thallium (68.8)
W	900-000364(D)	UJ	ASR - thallium (79.2)
W	900-000376(D)	UJ	ASR - thallium (52.6)
W	900-000376(T)	UJ	ASR - thallium (58)
W	900-000381(D)	UJ	ASR - thallium (54.6)
W	900-000381(T)	UJ	ASR - thallium (64.9)
W	900-000322(D)	J	CCB - aluminum (-20.2 μg/L)
W	900-000351(D)	U	CCB - aluminum (22.8 μg/L)
W	900-000351(T)	U	CCB - antimony (3.7 μg/L)
W	900-000364(T)	U	CCB - arsenic (1.7 μg/L)
W	900-000351(T)	U	CCB - beryllium (0.2 μg/L)
W	900-000303(D)	UJ	CCB - bismuth (-136.2 μg/L)
W	900-000322(D)	J	CCB - bismuth (-136.2 μg/L)
W	900-000351(D)	U	CCB - bismuth (87.6 μg/L)
W	900-000376(D)	UJ	CCB - bismuth (-136.2 μg/L)
W	900-000381(D)	UJ	CCB - bismuth (-136.2 μg/L)
W	900-000381(T)	UJ	CCB - bismuth (-2.9 μg/L)
W	900-000303(T)	U	CCB - lithium (6.35 μg/L)
W	900-000322(T)	U	CCB - lithium (6.4μg/L)
W	900-000376(T)	U	CCB - lithium (6.4 μg/L)
W	900-000311(D)	U	CCB - molybdenum (1.2μg/L)
W	900-000303(D)	U	CCB - vanadium (0.63 μg/L)

Table B.5.5–Spring 1995 Inorganic Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
W	900-000303(T)	U	CCB - vanadium (0.52 µg/L)
W	900-000303(T)	U	CCB - vanadium (0.63 µg/L)
W	900-000311(T)	U	CCB - vanadium (0.5 µg/L)
W	900-000322(D)	U	CCB - vanadium (0.6 µg/L)
W	900-000322(T)	U	CCB - vanadium (0.5µg/L)
W	900-000351(D)	U	CCB - vanadium (0.6 µg/L)
W	900-000376(D)	U	CCB - vanadium (0.6 µg/L)
W	900-000381(D)	U	CCB - vanadium (0.6 µg/L)
W	900-000376(T)	U	CCB - zinc (2.8 µg/L)
W	900-000311(D)	U	FB - aluminum (119µg/L)
W	900-000339(D)	U	FB - aluminum (126µg/L)
W	900-000339(T)	U	FB - aluminum (74.4)
W	900-000381(D)	U	FB - aluminum (66.2 µg/L)
W	900-000381(T)	U	FB - aluminum (66.2 µg/L)
W	900-000381(T)	U	FB - iron (40.1 µg/L)
W	900-000311(T)	U	FB - zinc (4.5 µg/L)
W	900-000381(T)	U	FB - zinc (6.3 µg/L)
W	900-000311(D)	J	FDRPD - aluminum (37.1)
W	900-000376(T)	J	FDRPD - aluminum (26)
W	900-000311(T)	J	FDRPD - beryllium (200)
W	900-000311(D)	J	FDRPD - cobalt (200)
W	900-000311(T)	J	FDRPD - cobalt (200)
W	900-000376(D)	J	FDRPD - cobalt (200)
W	900-000376(D)	J	FDRPD - copper (26)
W	900-000311(T)	UJ	FDRPD - cyanide (200)
W	900-000311(T)	UJ	FDRPD - lead (200)
W	900-000376(D)	UJ	FDRPD - lead (200)
W	900-000311(T)	J	FDRPD - nickel (31.6)
W	900-000376(T)	J	FDRPD - vanadium (30.8)
W	900-000311(D)	J	FDRPD - zinc (200)
W	900-000311(T)	UJ	FDRPD - zinc (54.4)
W	900-000376(D)	J	FDRPD - zinc (200)
W	900-000311(T)	J	MB - beryllium (-0.247 µg/L)
W	900-000311(D)	U	MB - copper (0.556µg/L)
W	900-000381(D)	J	MSR - thallium (58.4)
W	900-000381(T)	R	MSR - thallium (29.8)
W	900-000311(T)	J	SD - aluminum (16.8)
W	900-000339(T)	J	SD - aluminum (16.8)
W	900-000348(T)	J	SD - aluminum (16.8)
W	900-000303(D)	J	SD - barium (150)
W	900-000311(D)	J	SD - barium (11.6)
W	900-000339(D)	J	SD - barium (11.6)
W	900-000348(D)	J	SD - barium (11.6)
W	900-000351(D)	J	SD - barium (12.1)
W	900-000364(D)	J	SD - nickel (100)
W	900-000303(T)	J	SD - potassium (13)
W	900-000322(D)	J	SD - potassium (18.3)
W	900-000322(T)	J	SD - potassium (11.6)
W	900-000351(D)	J	SD - potassium (32.4)

Table B.5.5–Spring 1995 Inorganic Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
W	900-000351(T)	J	SD - potassium (21.5)
W	900-000364(D)	J	SD - potassium (25)
W	900-000376(D)	U	SD - potassium (22.6)
W	900-000381(D)	J	SD - potassium (19.2)

Table B.5.6–Spring 1995 Anion Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
S	900-000433	J	FDRPD - fluoride (64)
S	900-000501	J	HT - chloride (3)
S	900-000420	J	HT - fluoride (14)
S	900-000427	J	HT - fluoride (15)
S	900-000433	J	HT - fluoride (10)
S	900-000452	J	HT - fluoride (21)
S	900-000460	J	HT - fluoride (16)
S	900-000481	J	HT - fluoride (10)
S	900-000491	J	HT - fluoride (8)
S	900-000497	J	HT - fluoride (17 days)
S	900-000501	J	HT - fluoride (22)
S	900-000452	J	HT - nitrate/nitrite (3)
S	900-000491	J	HT - nitrate/nitrite (1)
S	900-000433	J	HT - sulfate (1)
S	900-000452	J	HT - sulfate (7)
S	900-000481	J	HT - sulfate (11)
S	900-000491	J	HT - sulfate (9)
S	900-000497	J	HT - sulfate (2 days)
S	900-000501	J	HT - sulfate (7)
W	900-000311	U	FB - ammonia (0.34 μg/L)
W	900-000311	U	FB - phosphorus (0.16μg/L)
W	900-000311	U	FB - Total Dissolved Solids (0.14 μg/L)
W	900-000376	J	FDRPD - chloride (64.5)
W	900-000376	J	FDRPD - fluoride (154)
W	900-000364	J	HT - ammonia (1 day)
W	900-000391	J	HT - chloride (21)
W	900-000364	J	HT - fluoride (1 day)
W	900-000391	J	HT - fluoride (10)
W	900-000401	J	HT - fluoride (40 days)
W	900-000348	J	HT - nitrate (19 days)
W	900-000401	J	HT - nitrate (3 days)
W	900-000391	J	HT - nitrate/nitrite (3)
W	900-000391	J	HT - sulfate (7)
W	900-000420	J	HT - TOC (16 days)
W	900-000364	J	HT - Total Dissolved Solids (1 day)
W	900-000381	J	HT - Total Dissolved Solids (1 day)
W	900-000364	J	HT - Total Suspended Solids (1 day)
W	900-000311	J	LRPD - nitrogen (200)
W	900-000311	J	LRPD - phosphorus (49.5)
W	900-000311	J	LRPD - Total Dissolved Solids (141)
W	900-000311	J	LRPD - Total Suspended Solids (59)
W	900-000311	J	MSR - Alkalinity (58)
W	900-000364	J	MSR - Alkalinity (47)
W	900-000381	J	MSR - Alkalinity (301)
W	900-000381	J	MSR - ammonia (160)
W	900-000364	J	MSR - nitrate (8.3)
W	900-000311	J	MSR - phosphorus (25)
W	900-000381	J	MSR - sulfate (57)

Table B.5.7–Spring 1995 Radiological Data Validation Qualifications

Sample Matrix	Sample Identification	Validation Qualifier	Reason Qualified
S	900-000433	J	FDRPD - tritium (7.18σ)
W	900-000381	R	Error>>result for potassium^{40}
W	900-000391	J	FDRPD - potassium^{40}(5.5σ)
W	900-000311	J	FDRPD - uranium^{238} (11σ)
W	900-000311	J	FDRPD - uranium^{234} (7.8σ)
W	900-000303	J	LRPD - potassium^{40} (8.4σ)
W	900-000322	J	LRPD - potassium^{40}(7σ)
W	900-000339	J	LRPD - potassium^{40} (8.5σ)
W	900-000348	J	LRPD - potassium^{40} (38.1σ)
W	900-000348	J	LRPD - potassium^{40} (8.5σ)
W	900-000364	J	LRPD - potassium^{40}
W	900-000339	J	LRPD - uranium^{234} (6.9σ)
W	900-000351	R	MB - radium^{226} (0.31 pCi/L)
W	900-000364	R	MB - radium^{226} (0.31 pCi/L)

Table B.5.8–Symbol Definitions

Symbol	Definition
%D	Continuing calibration percent difference deficiency
%RSD	Initial calibration relative standard deviation deficiency
Anthracene ID	Anthracene was mis-identified by the laboratory
ASR	Inorganic analytical spike recovery deficiency
CCB	Inorganic continuing calibration blank was contaminated
CO	Co-elution problem
CORR	Inorganic correlation coefficient was below acceptance limits
CRPD	The column relative percent difference for a pesticide exceeded criteria
Error>>	The counting error for a radiological result exceeded the reported concentration
EXC	Result upper limit of calibration curve, and reported
FB	Field blank is contaminated
FDRPD	Field duplicate relative percent difference outside acceptance limits
HT	Holding time exceeded by laboratory
ICS	Interference Check Sample
ID	benzo(b)fluoranthene and benzo(k)fluoranthene co-elution
LCS	Laboratory control sample recovery deficiency
LRPD	Laboratory duplicate relative percent difference exceeded acceptance criteria
MB	Method blank contamination
MSR	Matrix spike recovery deficiency
PB	Prep Blank
SD	Inorganic ICP serial dilution exceeded 10 percent
SR	Surrogate recovery deficiency
TB	Trip blank contamination

APPENDIX B.6

Appendix B-6

ASSESSMENT QUALIFICATION SUMMARY

B.6 Assessment Qualification Summary

B.6.1 Contents

Appendix B.6 includes a summary of all the data qualifications assigned on the basis of the data assessment. Qualifications assigned on the basis of data assessment are based on trend analyses of the data validation results and quality control check reports printed from the database. The qualifications do not include the data validation qualifications. In the event, a sample has been assigned a different data validation qualifier than a data assessment qualifier, the data validation qualifier should be used.

The analyte column in Table B.6 is used to specify analyte-specific and class-specific qualifications. Class-specific qualifications apply to all analytes in the class. In the event two qualifiers are assigned to a class, the more conservative qualification is applicable.

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
Anions	NA	All	Both	J, UJ	NA
benzo(b) fluoranthene	NA	All	Both	J, UJ	NA
benzo(k) fluoranthene	NA	All	Both	J, UJ	NA
4,4'-DDD	900-000001	Water	Fall	U	Usable
4,4'-DDD	900-000002	Water	Fall	U	Usable
4,4'-DDT	900-000005	Soil	Fall	U	Usable
δ-BHC	900-000005	Soil	Fall	U	Usable
dieldrin	900-000005	Soil	Fall	U	Usable
endrin aldehyde	900-000005	Soil	Fall	U	Usable
endrin ketone	900-000005	Soil	Fall	U	Usable
δ-BHC	900-0000052(RE)	Water	Fall	U	Usable
4,4'-DDD	900-000006	Soil	Fall	U	Usable
4,4'-DDE	900-000006	Soil	Fall	U	Usable
γ-chlordane	900-000006	Soil	Fall	R	Unusable
heptachlor	900-000006	Soil	Fall	U	Usable
4,4'-DDE	900-000007	Soil	Fall	U	Usable
dieldrin	900-000007	Soil	Fall	U	Usable
endosulfan I	900-000007	Soil	Fall	R	Unusable
Pesticides	900-000008	Water	Fall	UJ	Possible low bias
endosulfan sulfate	900-000013	Soil	Fall	U	Usable
methoxychlor	900-000013	Soil	Fall	U	Usable
4,4'-DDD	900-000015	Soil	Fall	U	Usable
methoxychlor	900-000015	Soil	Fall	U	Usable
endrin	900-000016	Soil	Fall	J	Usable
Pesticides	900-000016	Soil	Fall	J	High bias
Pesticides	900-000017	Soil	Fall	J, UJ	Low bias
Pesticides	900-000019	Water	Fall	UJ	Possible low bias
Pesticides	900-000020	Water	Fall	UJ	Possible low bias
Pesticides	900-000021 (FD)	Water	Fall	UJ	Possible low bias
dieldrin	900-000026	Soil	Fall	U	Usable
endosulfan sulfate	900-000026	Soil	Fall	U	Usable
endrin ketone	900-000026	Soil	Fall	U	Usable
γ-chlordane	900-000026	Soil	Fall	U	Usable
heptachlor	900-000026	Soil	Fall	U	Usable
4,4'-DDD	900-000027 (FD)	Soil	Fall	U	Usable
dieldrin	900-000027 (FD)	Soil	Fall	U	Usable
4,4'-DDT	900-000027 (FD)	Soil	Fall	UJ	Inaccuracy
dieldrin	900-000027 (FD)	Soil	Fall	UJ	Inaccuracy
endosulfan II	900-000027 (FD)	Soil	Fall	UJ	Inaccuracy
endosulfan sulfate	900-000027 (FD)	Soil	Fall	UJ	Inaccuracy
endrin ketone	900-000027 (FD)	Soil	Fall	UJ	Inaccuracy
γ-chlordane	900-000027 (FD)	Soil	Fall	UJ	Inaccuracy
heptachlor	900-000027 (FD)	Soil	Fall	UJ	Inaccuracy
heptachlor epoxide	900-000027 (FD)	Soil	Fall	UJ	Inaccuracy
endrin ketone	900-000028	Soil	Fall	U	Usable
γ-BHC	900-000028	Soil	Fall	U	Usable
γ-chlordane	900-000028	Soil	Fall	U	Usable
heptachlor	900-000028	Soil	Fall	U	Usable

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
4,4'-DDD	900-000029	Soil	Fall	U	Usable
dieldrin	900-000029	Soil	Fall	U	Usable
heptachlor	900-000029	Soil	Fall	U	Usable
aldrin	900-000030	Soil	Fall	U	Usable
δ-BHC	900-000030	Soil	Fall	R	Unusable
dieldrin	900-000030	Soil	Fall	U	Usable
endosulfan sulfate	900-000030	Soil	Fall	U	Usable
γ-BHC	900-000030	Soil	Fall	U	Usable
heptachlor	900-000030	Soil	Fall	U	Usable
δ-BHC	900-000031	Soil	Fall	R	Unusable
dieldrin	900-000031	Soil	Fall	U	Usable
endosulfan sulfate	900-000031	Soil	Fall	U	Usable
endosulfan sulfate	900-000032 (FB)	Water	Fall	U	Usable
Pesticides	900-000032 (FB)	Water	Fall	UJ	Possible low bias
4,4'-DDD	900-000035	Water	Fall	U	Usable
4,4'-DDT	900-000035	Water	Fall	U	Usable
uranium ^{238}	900-000037	Soil	Fall	J, UJ	NA
α-BHC	900-000037	Soil	Fall	U	Usable
α-chlordane	900-000037	Soil	Fall	R	Unusable
endrin aldehyde	900-000037	Soil	Fall	R	Unusable
endrin ketone	900-000037	Soil	Fall	U	Usable
methoxychlor	900-000037	Soil	Fall	U	Usable
uranium ^{238}	900-000038	Soil	Fall	J, UJ	NA
4,4'-DDE	900-000038	Soil	Fall	U	Usable
α-BHC	900-000038	Soil	Fall	U	Usable
α-chlordane	900-000038	Soil	Fall	R	Unusable
dieldrin	900-000038	Soil	Fall	U	Usable
Pesticides	900-000038	Soil	Fall	J, UJ	Low bias
uranium ^{238}	900-000039	Soil	Fall	J, UJ	NA
4,4'-DDD	900-000039	Soil	Fall	R	Unusable
4,4'-DDE	900-000039	Soil	Fall	U	Usable
α-BHC	900-000039	Soil	Fall	U	Usable
α-chlordane	900-000039	Soil	Fall	R	Unusable
endrin aldehyde	900-000039	Soil	Fall	R	Unusable
endrin ketone	900-000039	Soil	Fall	U	Usable
γ-chlordane	900-000039	Soil	Fall	U	Usable
uranium ^{238}	900-000040	Soil	Fall	J, UJ	NA
4,4'-DDD	900-000040	Soil	Fall	R	Unusable
4,4'-DDE	900-000040	Soil	Fall	U	Usable
4,4'-DDT	900-000040	Soil	Fall	U	Usable
α-chlordane	900-000040	Soil	Fall	R	Unusable
aldrin	900-000040	Soil	Fall	U	Usable
endrin aldehyde	900-000040	Soil	Fall	R	Unusable
γ-BHC	900-000040	Soil	Fall	R	Unusable
uranium ^{238}	900-000041	Soil	Fall	J, UJ	NA
4,4'-DDE	900-000041	Soil	Fall	U	Usable
α-BHC	900-000041	Soil	Fall	U	Usable
α-chlordane	900-000041	Soil	Fall	R	Unusable

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
aldrin	900-000041	Soil	Fall	U	Usable
endrin aldehyde	900-000041	Soil	Fall	U	Usable
endrin ketone	900-000041	Soil	Fall	U	Usable
γ-chlordane	900-000041	Soil	Fall	U	Usable
heptachlor	900-000041	Soil	Fall	U	Usable
endrin aldehyde	900-000046	Soil	Fall	UJ	Inaccuracy
β-BHC	900-000046	Soil	Fall	R	Unusable
methoxychlor	900-000047	Soil	Fall	U	Raised reporting limit
dieldrin	900-000048	Soil	Fall	U	Usable
Pesticides	900-000048	Soil	Fall	J, UJ	Low bias
4,4'-DDD	900-000049	Soil	Fall	R	Unusable
dieldrin	900-000049	Soil	Fall	R	Unusable
uranium ^{234}, uranium ^{238}	900-000050	Water	Fall	J, UJ	NA
Pesticides	900-000050	Water	Fall	UJ	Possible low bias
uranium ^{234}, uranium ^{238}	900-000051	Water	Fall	J, UJ	NA
Pesticides	900-000051 (FD)	Water	Fall	UJ	Possible low bias
uranium ^{234}, uranium ^{238}	900-000052	Water	Fall	J, UJ	NA
Pesticides	900-000052	Water	Fall	R	Unusable
Pesticides	900-000052(RE)	Water	Fall	J, UJ	Possible low bias, usable
uranium ^{234}, uranium ^{238}	900-000053	Water	Fall	J, UJ	NA
Pesticides	900-000053	Water	Fall	UJ	Possible low bias
uranium ^{234}, uranium ^{238}	900-000054	Water	Fall	J, UJ	NA
Pesticides	900-000054	Water	Fall	R	Unusable
Pesticides	900-000054(RE)	Water	Fall	UJ	Possible low bias, usable
uranium ^{234}, uranium ^{238}	900-000055	Water	Fall	J, UJ	NA
Pesticides	900-000055	Water	Fall	UJ	Possible low bias
uranium ^{238}	900-000056	Soil	Fall	J, UJ	NA
α-BHC	900-000056	Soil	Fall	R	Unusable
α-chlordane	900-000056	Soil	Fall	R	Unusable
γ-chlordane	900-000056	Soil	Fall	R	Unusable
heptachlor epoxide	900-000056	Soil	Fall	R	Unusable
Pesticides	900-000056	Soil	Fall	J	Usable
uranium ^{238}	900-000057	Soil	Fall	J, UJ	NA
4,4'-DDT	900-000057	Soil	Fall	R	Unusable
α-chlordane	900-000057	Soil	Fall	U	Usable
γ-chlordane	900-000057	Soil	Fall	R	Unusable
Pesticides	900-000057	Soil	Fall	J, UJ	Low bias
uranium ^{238}	900-000058	Soil	Fall	J, UJ	NA
4,4'-DDE	900-000058	Soil	Fall	U	Usable
4,4'-DDT	900-000058	Soil	Fall	R	Unusable
dieldrin	900-000058	Soil	Fall	R	Unusable
endosulfan I	900-000058	Soil	Fall	R	Unusable
endrin	900-000058	Soil	Fall	U	Usable
Pesticides	900-000058	Soil	Fall	J, UJ	Possible low bias
dieldrin	900-000059	Soil	Fall	U	Usable
γ-chlordane	900-000059	Soil	Fall	R	Unusable
Pesticides	900-000059	Soil	Fall	J, UJ	Low bias
4,4'-DDT	900-000060	Soil	Fall	R	Unusable

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
endosulfan II	900-000060	Soil	Fall	U	Usable
endrin aldehyde	900-000060	Soil	Fall	U	Usable
endrin ketone	900-000060	Soil	Fall	U	Usable
Pesticides	900-000060	Soil	Fall	J, UJ	Low bias
α-chlordane	900-000061	Soil	Fall	U	Usable
aldrin	900-000061	Soil	Fall	U	Usable
endrin ketone	900-000061	Soil	Fall	U	Usable
γ-chlordane	900-000061	Soil	Fall	U	Usable
heptachlor epoxide	900-000061	Soil	Fall	U	Usable
Pesticides	900-000061	Soil	Fall	J, UJ	Low bias
4,4'-DDT	900-000062	Soil	Fall	U	Usable
endosulfan II	900-000062	Soil	Fall	U	Usable
endrin	900-000062	Soil	Fall	U	Usable
endrin ketone	900-000062	Soil	Fall	U	Usable
heptachlor epoxide	900-000062	Soil	Fall	U	Usable
Pesticides	900-000062	Soil	Fall	J, UJ	Low bias
α-chlordane	900-000063 (FD)	Soil	Fall	U	Usable
endrin aldehyde	900-000063 (FD)	Soil	Fall	U	Usable
endrin ketone	900-000063 (FD)	Soil	Fall	U	Usable
Pesticides	900-000063 (FD)	Soil	Fall	J, UJ	Low bias
uranium ^{234}, uranium ^{238}	900-000064	Water	Fall	J, UJ	NA
uranium ^{234}, uranium ^{238}	900-000065	Water	Fall	J, UJ	NA
endrin aldehyde	900-000067	Soil	Fall	UJ	Inaccuracy
α-chlordane	900-000067	Soil	Fall	U	Usable
γ-BHC	900-000067	Soil	Fall	U	Usable
γ-chlordane	900-000067	Soil	Fall	U	Usable
methoxychlor	900-000067	Soil	Fall	U	Usable
dieldrin	900-000068	Soil	Fall	U	Usable
endosulfan I	900-000068	Soil	Fall	U	Usable
4,4'-DDD	900-000068	Soil	Fall	U	Usable
α-chlordane	900-000068	Soil	Fall	R	Unusable
δ-BHC	900-000068	Soil	Fall	U	Usable
γ-chlordane	900-000068	Soil	Fall	R	Unusable
endosulfan I	900-000069 (FD)	Soil	Fall	U	Usable
4,4'-DDD	900-000069 (FD)	Soil	Fall	R	Unusable
4,4'-DDE	900-000069 (FD)	Soil	Fall	R	Unusable
α-chlordane	900-000069 (FD)	Soil	Fall	R	Unusable
δ-BHC	900-000069 (FD)	Soil	Fall	U	Usable
γ-chlordane	900-000069 (FD)	Soil	Fall	R	Unusable
methoxychlor	900-000069 (FD)	Soil	Fall	R	Unusable
Pesticides	900-000069 (FD)	Soil	Fall	J, UJ	Usable
endrin aldehyde	900-000070	Soil	Fall	UJ	Inaccuracy
γ-BHC	900-000070	Soil	Fall	R	Unusable
γ-chlordane	900-000070	Soil	Fall	U	Usable
heptachlor	900-000070	Soil	Fall	U	Usable
heptachlor epoxide	900-000070	Soil	Fall	U	Usable
methoxychlor	900-000070	Soil	Fall	U	Raised reporting limit
4,4'-DDT	900-000071	Soil	Fall	R	Unusable

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
α-BHC	900-000071	Soil	Fall	R	Unusable
α-chlordane	900-000071	Soil	Fall	R	Unusable
endrin aldehyde	900-000071	Soil	Fall	R	Unusable
heptachlor	900-000071	Soil	Fall	R	Unusable
heptachlor epoxide	900-000071	Soil	Fall	R	Unusable
Pesticides	900-000071	Soil	Fall	J	Usable
endrin aldehyde	900-000072	Soil	Fall	UJ	Inaccuracy
4,4'-DDD	900-000072	Soil	Fall	U	Usable
methoxychlor	900-000072	Soil	Fall	U	Raised reporting limit
endrin aldehyde	900-000074	Soil	Fall	UJ	Inaccuracy
4,4'-DDD	900-000074	Soil	Fall	U	Usable
4,4'-DDE	900-000074	Soil	Fall	U	Usable
endrin	900-000074	Soil	Fall	U	Usable
γ-BHC	900-000074	Soil	Fall	U	Usable
methoxychlor	900-000074	Soil	Fall	U	Raised reporting limit
β-BHC	900-000075	Soil	Fall	R	Unusable
endrin	900-000075	Soil	Fall	U	Usable
endrin aldehyde	900-000075	Soil	Fall	R	Unusable
γ-chlordane	900-000075	Soil	Fall	R	Unusable
methoxychlor	900-000075	Soil	Fall	U	Usable
endrin aldehyde	900-000076	Soil	Fall	R	Unusable
γ-BHC	900-000076	Soil	Fall	R	Unusable
methoxychlor	900-000076	Soil	Fall	U	Raised reporting limit
Pesticides	900-000077 (FB)	Water	Fall	UJ	Possible low bias
Pesticides	900-000080	Water	Fall	UJ	Possible low bias
endosulfan sulfate	900-000081	Water	Fall	R	Usable
Pesticides	900-000081	Water	Fall	UJ	Usable
Pesticides	900-000081	Water	Fall	J	Possible Inaccuracy
Pesticides	900-000081DL	Water	Fall	UJ	Usable
Pesticides	900-000081DL	Water	Fall	J	Possible Inaccuracy
4,4'-DDD	900-000083	Water	Fall	U	Usable
endrin aldehyde	900-000086	Soil	Fall	UJ	Inaccuracy
endrin	900-000086	Soil	Fall	U	Usable
γ-BHC	900-000086	Soil	Fall	R	Unusable
methoxychlor	900-000086	Soil	Fall	U	Raised reporting limit
endosulfan sulfate	900-000088 (FD)	Soil	Fall	R	Unusable
γ-BHC	900-000088 (FD)	Soil	Fall	R	Unusable
endrin ketone	900-000088 (FD)	Soil	Fall	R	Unusable
endosulfan II	900-000089	Soil	Fall	U	Usable
4,4'-DDT	900-000089	Soil	Fall	U	Usable
α-chlordane	900-000089	Soil	Fall	R	Unusable
endrin aldehyde	900-000089	Soil	Fall	R	Unusable
γ-BHC	900-000089	Soil	Fall	U	Usable
γ-chlordane	900-000089	Soil	Fall	R	Unusable
methoxychlor	900-000089	Soil	Fall	U	Usable
Pesticides	900-000089	Soil	Fall	J, UJ	Usable
β-BHC	900-000090	Soil	Fall	R	Unusable
γ-BHC	900-000090	Soil	Fall	R	Unusable

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
γ-chlordane	900-000090	Soil	Fall	R	Unusable
methoxychlor	900-000090	Soil	Fall	U	Raised reporting limit
endrin aldehyde	900-000090	Soil	Fall	UJ	Inaccuracy
endrin aldehyde	900-000091	Soil	Fall	UJ	Inaccuracy
4,4'-DDD	900-000091	Soil	Fall	U	Usable
dieldrin	900-000091	Soil	Fall	U	Usable
heptachlor	900-000091	Soil	Fall	U	Usable
heptachlor	900-000091	Soil	Fall	U	Usable
heptachlor epoxide	900-000091	Soil	Fall	U	Usable
methoxychlor	900-000091	Soil	Fall	U	Raised reporting limit
methoxychlor	900-000091	Soil	Fall	U	Raised reporting limit
endrin aldehyde	900-000091	Soil	Fall	UJ	Inaccuracy
endrin aldehyde	900-000092	Soil	Fall	UJ	Inaccuracy
α-BHC	900-000092	Soil	Fall	R	Unusable
β-BHC	900-000092	Soil	Fall	R	Unusable
dieldrin	900-000092	Soil	Fall	U	Usable
γ-BHC	900-000092	Soil	Fall	U	Usable
methoxychlor	900-000092	Soil	Fall	U	Raised reporting limit
α-chlordane	900-000093	Soil	Fall	U	Usable
β-BHC	900-000093	Soil	Fall	R	Unusable
endrin aldehyde	900-000093	Soil	Fall	R	Unusable
γ-BHC	900-000093	Soil	Fall	R	Unusable
γ-chlordane	900-000093	Soil	Fall	U	Usable
methoxychlor	900-000093	Soil	Fall	U	Usable
endosulfan sulfate	900-000101	Soil	Fall	R	Unusable
endrin aldehyde	900-000101	Soil	Fall	R	Unusable
endrin ketone	900-000101	Soil	Fall	U	Usable
γ-BHC	900-000101	Soil	Fall	R	Unusable
γ-chlordane	900-000101	Soil	Fall	R	Unusable
4,4'-DDD	900-000102	Soil	Fall	U	Usable
methoxychlor	900-000102	Soil	Fall	U	Raised reporting limit
endrin aldehyde	900-000104	Soil	Fall	U	Usable
γ-BHC	900-000104	Soil	Fall	U	Usable
methoxychlor	900-000104	Soil	Fall	U	Raised reporting limit
4,4'-DDD	900-000105 (FD)	Soil	Fall	U	Usable
4,4'-DDE	900-000105 (FD)	Soil	Fall	U	Usable
α-chlordane	900-000105 (FD)	Soil	Fall	U	Usable
aldrin	900-000105 (FD)	Soil	Fall	U	Usable
endosulfan sulfate	900-000105 (FD)	Soil	Fall	U	Usable
endrin aldehyde	900-000105 (FD)	Soil	Fall	U	Usable
γ-BHC	900-000105 (FD)	Soil	Fall	U	Usable
methoxychlor	900-000105 (FD)	Soil	Fall	U	Raised reporting limit
4,4'-DDD	900-000106	Soil	Fall	U	Usable
α-chlordane	900-000106	Soil	Fall	U	Usable
methoxychlor	900-000106	Soil	Fall	U	Raised reporting limit
endrin aldehyde	900-000107	Soil	Fall	UJ	Inaccuracy
Pesticides	900-000107	Water	Fall	J, UJ	Possible low bias
endrin aldehyde	900-000108 (FD)	Water	Fall	UJ	Inaccuracy

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
dieldrin	900-000111	Soil	Fall	R	Unusable
endosulfan sulfate	900-000111	Soil	Fall	R	Unusable
endrin aldehyde	900-000111	Soil	Fall	R	Unusable
methoxychlor	900-000111	Soil	Fall	U	Usable
Pesticides	900-000111	Soil	Fall	J, UJ	Inaccuracy
dieldrin	900-000112	Soil	Fall	U	Usable
dieldrin	900-000113	Soil	Fall	R	Unusable
endosulfan sulfate	900-000113	Soil	Fall	R	Unusable
endrin aldehyde	900-000113	Soil	Fall	R	Unusable
endrin ketone	900-000113	Soil	Fall	U	Usable
γ-BHC	900-000113	Soil	Fall	R	Unusable
γ-chlordane	900-000113	Soil	Fall	R	Unusable
heptachlor epoxide	900-000113	Soil	Fall	R	Unusable
methoxychlor	900-000113	Soil	Fall	U	Raised reporting limit
heptachlor	900-000113	Soil	Fall	R	Unusable
endrin aldehyde	900-000114	Water	Fall	UJ	Inaccuracy
4,4'-DDD	900-000115	Soil	Fall	R	Unusable
endosulfan sulfate	900-000115	Soil	Fall	R	Unusable
γ-BHC	900-000115	Soil	Fall	R	Unusable
methoxychlor	900-000115	Soil	Fall	U	Raised reporting limit
4,4'-DDE	900-000116	Soil	Fall	U	Usable
dieldrin	900-000116	Soil	Fall	U	Usable
endosulfan sulfate	900-000116	Soil	Fall	R	Unusable
endrin aldehyde	900-000116	Soil	Fall	R	Unusable
methoxychlor	900-000116	Soil	Fall	U	Raised reporting limit
endrin aldehyde	900-000118 (FB)	Water	Fall	UJ	Inaccuracy
Pesticides	900-000118 (FB)	Water	Fall	UJ	Possible low bias
endrin aldehyde	900-000119	Water	Fall	UJ	Inaccuracy
heptachlor epoxide	900-000119	Water	Fall	U	Usable
4,4'-DDE	900-000120	Soil	Fall	R	Unusable
aldrin	900-000120	Soil	Fall	U	Usable
endosulfan I	900-000120	Soil	Fall	U	Usable
heptachlor epoxide	900-000120	Soil	Fall	R	Unusable
δ-BHC	900-000122	Soil	Fall	U	Usable
endrin aldehyde	900-000122	Soil	Fall	U	Usable
γ-chlordane	900-000122	Soil	Fall	U	Usable
γ-chlordane	900-000123 (FD)	Soil	Fall	U	Usable
Pesticides	900-000123 (FD)	Soil	Fall	UJ	Usable
4,4'-DDE	900-000124	Soil	Fall	U	Usable
4,4'-DDT	900-000124	Soil	Fall	U	Usable
endosulfan I	900-000124	Soil	Fall	R	Unusable
heptachlor	900-000124	Soil	Fall	R	Unusable
methoxychlor	900-000124	Soil	Fall	R	Unusable
4,4'-DDD	900-000126	Soil	Fall	U	Usable
4,4'-DDE	900-000126	Soil	Fall	U	Usable
α-chlordane	900-000126	Soil	Fall	R	Unusable
dieldrin	900-000126	Soil	Fall	U	Usable
eldrin aldehyde	900-000126	Soil	Fall	U	Usable

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
endrin	900-000126	Soil	Fall	U	Usable
γ-chlordane	900-000126	Soil	Fall	R	Unusable
4-4'-DDD	900-000127	Soil	Fall	U	Usable
α-BHC	900-000127	Soil	Fall	U	Usable
α-chlordane	900-000127	Soil	Fall	R	Unusable
endrin	900-000127	Soil	Fall	U	Usable
endrin aldehyde	900-000127	Soil	Fall	U	Usable
γ-chlordane	900-000127	Soil	Fall	U	Usable
Pesticides	900-000127	Soil	Fall	UJ	Low bias
4,4'-DDD	900-000128	Soil	Fall	U	Usable
4,4'-DDT	900-000128	Soil	Fall	U	Usable
α-chlordane	900-000128	Soil	Fall	R	Unusable
aldrin	900-000128	Soil	Fall	U	Usable
dieldrin	900-000128	Soil	Fall	U	Usable
γ-chlordane	900-000128	Soil	Fall	U	Usable
aldrin	900-000130	Soil	Fall	U	Usable
endosulfan I	900-000130	Soil	Fall	R	Unusable
γ-BHC	900-000130	Soil	Fall	U	Usable
heptachlor epoxide	900-000130	Soil	Fall	U	Usable
4,4'-DDE	900-000131	Soil	Fall	U	Usable
dieldrin	900-000131	Soil	Fall	U	Usable
endosulfan I	900-000131	Soil	Fall	R	Unusable
methoxychlor	900-000131	Soil	Fall	U	Usable
dieldrin	900-000132	Soil	Fall	U	Usable
endosulfan I	900-000132	Soil	Fall	U	Usable
α-chlordane	900-000133	Soil	Fall	U	Usable
γ-BHC	900-000133	Soil	Fall	U	Usable
Pesticides	900-000134 (FB)	Water	Fall	UJ	Possible low bias
α-BHC	900-000138	Soil	Fall	U	Usable
methoxychlor	900-000138	Soil	Fall	U	Usable
4,4'-DDE	900-000141	Soil	Fall	U	Usable
4,4'-DDT	900-000141	Soil	Fall	U	Usable
γ-chlordane	900-000141	Soil	Fall	U	Usable
heptachlor	900-000141	Soil	Fall	R	Unusable
Pesticides	900-000141	Soil	Fall	J, UJ	Low bias
Explosives	900-000143	Water	Fall	J	Low bias 60%
endosulfan sulfate	900-000143	Water	Fall	U	Usable
heptachlor	900-000144	Soil	Fall	U	Usable
4,4'-DDD	900-000145 (FD)	Soil	Fall	U	Usable
heptachlor epoxide	900-000145 (FD)	Soil	Fall	U	Usable
Pesticides	900-000145 (FD)	Soil	Fall	J, UJ	Low bias
methoxychlor	900-000145 (FD)	Soil	Fall	U	Raised reporting limit
Pesticides	900-000150	Water	Fall	J, UJ	Possible low bias
Explosives	900-000151	Water	Fall	J	Low bias 60%
aldrin	900-000151 (FD)	Water	Fall	U	Usable
endrin ketone	900-000151 (FD)	Water	Fall	U	Usable
4,4'-DDT	900-000152	Soil	Fall	U	Usable
δ-BHC	900-000152	Soil	Fall	R	Unusable

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
heptachlor	900-000152	Soil	Fall	U	Usable
4,4'-DDT	900-000153	Soil	Fall	U	Usable
dieldrin	900-000153	Soil	Fall	R	Unusable
endrin aldehyde	900-000153	Soil	Fall	R	Unusable
endrin ketone	900-000153	Soil	Fall	R	Unusable
γ-BHC	900-000153	Soil	Fall	R	Unusable
γ-chlordane	900-000153	Soil	Fall	R	Unusable
heptachlor	900-000153	Soil	Fall	R	Unusable
heptachlor epoxide	900-000153	Soil	Fall	R	Unusable
methoxychlor	900-000153	Soil	Fall	R	Unusable
Pesticides	900-000153	Soil	Fall	J, UJ	Possible low bias
4-4'-DDD	900-000154	Soil	Fall	R	Unusable
aldrin	900-000154	Soil	Fall	R	Unusable
endrin aldehyde	900-000154	Soil	Fall	R	Unusable
endrin ketone	900-000154	Soil	Fall	R	Unusable
methoxychlor	900-000154	Soil	Fall	R	Unusable
Pesticides	900-000154	Soil	Fall	J, UJ	Low bias
aldrin	900-000155	Soil	Fall	U	Usable
endrin aldehyde	900-000155	Soil	Fall	R	Unusable
endrin ketone	900-000155	Soil	Fall	R	Unusable
heptachlor	900-000155	Soil	Fall	U	Usable
heptachlor epoxide	900-000155	Soil	Fall	R	Unusable
methoxychlor	900-000155	Soil	Fall	U	Usable
Pesticides	900-000155	Soil	Fall	J, UJ	Inaccuracy
Pesticides	900-000156 (FB)	Water	Fall	J, UJ	Possible low bias
endrin aldehyde	900-000159	Soil	Fall	R	Unusable
heptachlor	900-000159	Soil	Fall	U	Usable
heptachlor epoxide	900-000159	Soil	Fall	R	Unusable
Pesticides	900-000159	Soil	Fall	J, UJ	Inaccuracy
Pesticides	900-000160	Soil	Fall	J, UJ	Inaccuracy
endrin ketone	900-000162	Soil	Fall	U	Usable
heptachlor	900-000163	Soil	Fall	U	Usable
Pesticides	900-000163	Soil	Fall	J, UJ	Possible low bias
β-BHC	900-000164 (FD)	Soil	Fall	R	Unusable
heptachlor	900-000164 (FD)	Soil	Fall	U	Raised reporting limit
heptachlor	900-000164 (FD)	Soil	Fall	U	Usable
aldrin	900-000165	Soil	Fall	UJ	Inaccuracy
heptachlor epoxide	900-000165	Soil	Fall	UJ	Inaccuracy
dieldrin	900-000165	Soil	Fall	U	Usable
γ-chlordane	900-000165	Soil	Fall	U	Usable
dieldrin	900-000166	Water	Fall	R	Unusable
eldrin	900-000166	Water	Fall	R	Unusable
endrin aldehyde	900-000168	Soil	Fall	R	Unusable
Pesticides	900-000168	Soil	Fall	J, UJ	Inaccuracy
methoxychlor	900-000169	Soil	Fall	UJ	Inaccuracy
aldrin	900-000169	Soil	Fall	U	Usable
endrin ketone	900-000169	Soil	Fall	U	Usable
γ-BHC	900-000169	Soil	Fall	U	Usable

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
methoxychlor	900-000169	Soil	Fall	U	Usable
Volatiles	900-000170	Soil	Fall	R	Unusable
Semi-Volatile	900-000174	Soil	Fall	R	Unusable
α-chlordane	900-000175	Soil	Fall	R	Unusable
aldrin	900-000175	Soil	Fall	R	Unusable
Pesticides	900-000175	Soil	Fall	J, UJ	Inaccuracy
4,4'-DDD	900-000176	Soil	Fall	U	Usable
α-chlordane	900-000176	Soil	Fall	R	Unusable
dieldrin	900-000176	Soil	Fall	R	Unusable
endrin aldehyde	900-000176	Soil	Fall	R	Unusable
heptachlor	900-000176	Soil	Fall	R	Unusable
heptachlor epoxide	900-000176	Soil	Fall	R	Unusable
methoxychlor	900-000177	Soil	Fall	UJ	Inaccuracy
4,4'-DDE	900-000177	Soil	Fall	U	Usable
aldrin	900-000177	Soil	Fall	U	Usable
4,4'-DDE	900-000178	Soil	Fall	U	Usable
4,4'-DDT	900-000178	Soil	Fall	R	Unusable
α-chlordane	900-000178	Soil	Fall	R	Unusable
α-chlordane	900-000178	Soil	Fall	U	Usable
aldrin	900-000178	Soil	Fall	U	Usable
dieldrin	900-000178	Soil	Fall	R	Unusable
endrin aldehyde	900-000178	Soil	Fall	R	Unusable
endrin ketone	900-000178	Soil	Fall	R	Unusable
endrin ketone	900-000178	Soil	Fall	R	Unusable
γ-BHC	900-000178	Soil	Fall	R	Unusable
γ-BHC	900-000178	Soil	Fall	R	Unusable
heptachlor epoxide	900-000178	Soil	Fall	R	Unusable
methoxychlor	900-000178	Soil	Fall	R	Unusable
4,4'-DDE	900-000179	Soil	Fall	U	Usable
4,4'-DDT	900-000179	Soil	Fall	U	Usable
endosulfan sulfate	900-000179	Soil	Fall	U	Usable
γ-chlordane	900-000179	Soil	Fall	R	Unusable
endrin aldehyde	900-000180	Soil	Fall	U	Usable
4,4'-DDE	900-000182	Soil	Fall	U	Usable
α-BHC	900-000182	Soil	Fall	R	Unusable
γ-chlordane	900-000183	Water	Fall	U	Usable
Pesticides	900-000183	Water	Fall	J, UJ	Possible low bias
4,4'-DDT	900-000184	Water	Fall	U	Usable
4,4'-DDT	900-000185	Water	Fall	U	Usable
Pesticides	900-000190	Water	Fall	J, UJ	Possible low bias
uranium ^{234}, uranium ^{238}	900-000191	Water	Fall	J, UJ	NA
uranium ^{234}, uranium ^{238}	900-000194	Water	Fall	J, UJ	NA
heptachlor	900-000196	Soil	Fall	R	Unusable
methoxychlor	900-000196	Soil	Fall	UJ	Inaccuracy
methoxychlor	900-000197	Soil	Fall	UJ	Inaccuracy
4,4'-DDD	900-000197	Soil	Fall	R	Unusable
uranium ^{234}, uranium ^{238}	900-000198	Water	Fall	J, UJ	NA
Pesticides	900-000198 (FB)	Water	Fall	J, UJ	Possible low bias

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
aldrin	900-000200	Soil	Fall	UJ	Inaccuracy
heptachlor epoxide	900-000200	Soil	Fall	UJ	Inaccuracy
4,4'-DDT	900-000204	Soil	Fall	U	Usable
α-chlordane	900-000204	Soil	Fall	R	Unusable
aldrin	900-000204	Soil	Fall	R	Unusable
endrin aldehyde	900-000204	Soil	Fall	U	Usable
heptachlor	900-000204	Soil	Fall	R	Unusable
methoxychlor	900-000204	Soil	Fall	R	Unusable
4,4'-DDD	900-000205	Soil	Fall	U	Usable
α-chlordane	900-000205	Soil	Fall	R	Unusable
endrin	900-000205	Soil	Fall	R	Unusable
γ-chlordane	900-000205	Soil	Fall	R	Unusable
4,4'-DDD	900-000206	Soil	Fall	U	Usable
4,4'-DDT	900-000206	Soil	Fall	U	Usable
α-chlordane	900-000206	Soil	Fall	R	Unusable
endrin	900-000206	Soil	Fall	U	Usable
endrin ketone	900-000206	Soil	Fall	U	Usable
γ-chlordane	900-000206	Soil	Fall	R	Unusable
heptachlor epoxide	900-000206	Soil	Fall	U	Usable
endrin	900-000207	Soil	Fall	U	Usable
4,4'-DDT	900-000208	Soil	Fall	U	Usable
endrin	900-000208	Soil	Fall	U	Usable
4,4'-DDT	900-000209 (FD)	Soil	Fall	U	Usable
dieldrin	900-000209 (FD)	Soil	Fall	U	Usable
α-BHC	900-000210	Soil	Fall	U	Usable
dieldrin	900-000210	Soil	Fall	U	Usable
methoxychlor	900-000210	Soil	Fall	U	Usable
Pesticides	900-000210	Soil	Fall	J, UJ	Low bias possible
endrin aldehyde	900-000211	Soil	Fall	U	Usable
methoxychlor	900-000211	Soil	Fall	U	Usable
Pesticides	900-000212	Water	Fall	J, UJ	Possible low bias
uranium ^{238}	900-000213	Soil	Fall	J, UJ	NA
uranium ^{238}	900-000214	Soil	Fall	J, UJ	NA
uranium ^{238}	900-000215	Soil	Fall	J, UJ	NA
δ-BHC	900-000215	Soil	Fall	R	Unusable
Pesticides	900-000216	Soil	Fall	J, UJ	Low bias
4,4'-DDD	900-000217	Soil	Fall	U	Usable
heptachlor epoxide	900-000217	Soil	Fall	R	Unusable
heptachlor epoxide	900-000218	Soil	Fall	U	Usable
uranium ^{238}	900-000223	Soil	Fall	J, UJ	NA
γ-chlordane	900-000223	Soil	Fall	R	Unusable
endosulfan sulfate	900-000223	Soil	Fall	R	Unusable
heptachlor epoxide	900-000223	Soil	Fall	R	Unusable
uranium ^{238}	900-000224	Soil	Fall	J, UJ	NA
dieldrin	900-000224	Soil	Fall	R	Unusable
methoxychlor	900-000224	Soil	Fall	R	Unusable
Pesticides	900-000224	Soil	Fall	J, UJ	Low bias
uranium ^{238}	900-000225	Soil	Fall	J, UJ	NA

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
α-chlordane	900-000225 (FD)	Soil	Fall	R	Unusable
γ-chlordane	900-000225 (FD)	Soil	Fall	R	Unusable
methoxychlor	900-000225 (FD)	Soil	Fall	U	Usable
Pesticides	900-000225 (FD)	Soil	Fall	J, UJ	Low bias possible
4,4'-DDE	900-000226	Soil	Fall	R	Unusable
4,4'-DDT	900-000226	Soil	Fall	R	Unusable
α-chlordane	900-000226	Soil	Fall	R	Unusable
dieldrin	900-000226	Soil	Fall	R	Unusable
endosulfan II	900-000226	Soil	Fall	R	Unusable
endosulfan sulfate	900-000226	Soil	Fall	U	Usable
endrin ketone	900-000226	Soil	Fall	U	Usable
4,4'-DDT	900-000228	Soil	Fall	U	Usable
δ-BHC	900-000228	Soil	Fall	U	Usable
endosulfan II	900-000228	Soil	Fall	R	Unusable
endosulfan sulfate	900-000228	Soil	Fall	U	Usable
4,4'-DDE	900-000229	Soil	Fall	R	Unusable
4,4'-DDT	900-000229	Soil	Fall	U	Usable
α-chlordane	900-000229	Soil	Fall	U	Usable
endosulfan II	900-000229	Soil	Fall	U	Usable
endosulfan sulfate	900-000229	Soil	Fall	U	Usable
endrin aldehyde	900-000229	Soil	Fall	U	Usable
α-BHC	900-000230	Water	Fall	U	Usable
dieldrin	900-000230	Water	Fall	U	Usable
endosulfan sulfate	900-000230	Water	Fall	U	Usable
Pesticides	900-000230	Water	Fall	J, UJ	Possible low bias
endosulfan sulfate	900-000231	Water	Fall	U	Usable
Pesticides	900-000231	Water	Fall	J, UJ	Possible low bias
Pesticides	900-000232 (FD)	Water	Fall	J, UJ	Possible low bias
Pesticides	900-000233	Water	Fall	UJ	Possible low bias
4,4'-DDE	900-000237	Soil	Fall	U	Usable
Pesticides	900-000237	Soil	Fall	J, UJ	Low bias
4,4'-DDE	900-000238	Soil	Fall	U	Usable
4,4'-DDT	900-000238	Soil	Fall	U	Usable
4,4'-DDD	900-000239	Soil	Fall	U	Usable
4,4'-DDE	900-000239	Soil	Fall	U	Usable
4,4'-DDT	900-000239	Soil	Fall	U	Usable
α-chlordane	900-000239	Soil	Fall	U	Usable
uranium ^{238}	900-000243	Soil	Fall	J, UJ	NA
4,4'-DDE	900-000243	Soil	Fall	UJ	Usable
4,4'-DDE	900-000243	Soil	Fall	U	Usable
α-chlordane	900-000243	Soil	Fall	R	Unusable
endrin ketone	900-000243	Soil	Fall	R	Unusable
heptachlor	900-000243	Soil	Fall	R	Unusable
Pesticides	900-000243	Soil	Fall	UJ	Low bias
uranium ^{238}	900-000244	Soil	Fall	J, UJ	NA
α-chlordane	900-000244	Soil	Fall	R	Unusable
aldrin	900-000244	Soil	Fall	U	Usable
δ-BHC	900-000244	Soil	Fall	U	Usable

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
endosulfan sulfate	900-000244	Soil	Fall	R	Unusable
γ-chlordane	900-000244	Soil	Fall	R	Unusable
uranium ^{238}	900-000245	Soil	Fall	J, UJ	NA
4,4'-DDE	900-000245	Soil	Fall	UJ	Inaccuracy ±30%
4,4'-DDT	900-000245	Soil	Fall	U	Usable
endosulfan II	900-000245	Soil	Fall	U	Usable
endrin ketone	900-000245	Soil	Fall	U	Usable
Pesticides	900-000245	Soil	Fall	J, UJ	Low bias
Pesticides	900-000247	Soil	Fall	UJ	Low bias
α-BHC	900-000248 (FD)	Soil	Fall	R	Unusable
α-chlordane	900-000248 (FD)	Soil	Fall	U	Usable
Pesticides	900-000248 (FD)	Soil	Fall	R	Non-detects unusable
α-BHC	900-000249	Soil	Fall	R	Unusable
dieldrin	900-000249	Soil	Fall	U	Usable
endrin	900-000249	Soil	Fall	U	Usable
γ-chlordane	900-000249	Soil	Fall	R	Unusable
methoxychlor	900-000249	Soil	Fall	U	Usable
4,4'-DDT	900-000249	Soil	Fall	U	Raised reporting limit
Pesticides	900-000249	Soil	Fall	J, UJ	Low bias
α-BHC	900-000251	Soil	Fall	R	Unusable
endrin	900-000251	Soil	Fall	U	Usable
endrin aldehyde	900-000251	Soil	Fall	U	Usable
γ-chlordane	900-000251	Soil	Fall	R	Unusable
heptachlor epoxide	900-000251	Soil	Fall	U	Usable
4,4'-DDT	900-000251	Soil	Fall	U	Raised reporting limit
endrin aldehyde	900-000251	Soil	Fall	U	Raised reporting limit
γ-chlordane	900-000251	Soil	Fall	U	Raised reporting limit
endrin	900-000251	Soil	Fall	J	Usable
γ-BHC	900-000251	Soil	Fall	R	Unusable
Pesticides	900-000251	Soil	Fall	R	Unusable
methoxychlor	900-000253 (FD)	Water	Fall	U	Usable
Pesticides	900-000253 (FD)	Water	Fall	UJ	Possible low bias
methoxychlor	900-000254	Water	Fall	U	Usable
Pesticides	900-000256	Water	Fall	J, UJ	Possible low bias
α-chlordane	900-000259	Soil	Fall	R	Unusable
endrin ketone	900-000259	Soil	Fall	U	Usable
Pesticides	900-000259	Soil	Fall	J, UJ	Low bias
aldrin	900-000260	Soil	Fall	U	Usable
methoxychlor	900-000260	Soil	Fall	U	Usable
aldrin	900-000261 (FD)	Soil	Fall	U	Usable
methoxychlor	900-000261 (FD)	Soil	Fall	U	Raised reporting limit
4,4'-DDT	900-000262	Soil	Fall	U	Usable
α-chlordane	900-000262	Soil	Fall	U	Usable
γ-chlordane	900-000262	Soil	Fall	U	Usable
α-chlordane	900-000263	Soil	Fall	U	Usable
methoxychlor	900-000263	Soil	Fall	U	Raised reporting limit
α-chlordane	900-000264	Soil	Fall	U	Usable
γ-chlordane	900-000264	Soil	Fall	U	Usable

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
γ-chlordane	900-000265	Soil	Fall	U	Usable
4,4'-DDT	900-000266	Soil	Fall	U	Usable
endosulfan II	900-000266	Soil	Fall	R	Unusable
methoxychlor	900-000266	Soil	Fall	U	Usable
endosulfan sulfate	900-000267	Soil	Fall	R	Unusable
heptachlor	900-000268 (FD)	Soil	Fall	U	Usable
methoxychlor	900-000268 (FD)	Soil	Fall	U	Raised reporting limit
4,4'-DDT	900-000270	Soil	Fall	U	Usable
endosulfan II	900-000270	Soil	Fall	U	Usable
methoxychlor	900-000270	Soil	Fall	U	Usable
methoxychlor	900-000274	Water	Fall	U	Usable
methoxychlor	900-000275	Water	Fall	U	Usable
aldrin	900-000276	Soil	Fall	U	Usable
aldrin	900-000277	Water	Fall	U	Usable
dieldrin	900-000277	Water	Fall	U	Usable
heptachlor epoxide	900-000277	Water	Fall	U	Usable
4,4'-DDE	900-000280	Soil	Fall	U	Usable
4,4'-DDT	900-000280	Soil	Fall	U	Usable
endosulfan sulfate	900-000280	Soil	Fall	R	Unusable
heptachlor epoxide	900-000280	Soil	Fall	R	Unusable
Pesticides	900-000282 (FB)	Water	Fall	J, UJ	Possible low bias
Pesticides	900-000283	Soil	Fall	J, UJ	Possible low bias
Pesticides	900-000288	Soil	Fall	J, UJ	Low bias
Pesticides	900-000289	Soil	Fall	J, UJ	Low bias
α-BHC	900-000294	Soil	Fall	U	Usable
4,4'-DDT	900-000296 (FB)	Water	Fall	U	Usable
Pesticides	900-000296 (FB)	Water	Fall	J, UJ	Possible low bias
1,3,5-TNB	NA	Water	Fall	U	≤ 1.5 ug/L
1,3,5-TNB	NA	Soil	Fall	U	≤ 1.45 ug/L
2,6-DNT	NA	Water	Fall	U	≤18 ug/L
2a-4,6-DNT	NA	Water	Fall	U	≤ 8.5 ug/L
4-chloroaniline	NA	Water	Fall	J, UJ	60%
4-chloroaniline	NA	Soil	Fall	J, UJ	60%
acetone	NA	Water	Fall	J, UJ	60% Error
acetone	NA	Water	Fall	U	≤ 165 ug/L
acetone	NA	Soil	Fall	J	60%
acetone	NA	Soil	Fall	U	≤135 ug/kg
aluminum (total)	NA	Water	Fall	U	≤1150 ug/kg
antimony	NA	Soil	Fall	J, UJ	50% Low Bias
chloride	NA	Soil	Fall	J	NA
chloroform	NA	Water	Fall	U	≤ 27 ug/L
chloroform	NA	Soil	Fall	J	NA
chromium (total)	NA	Water	Fall	U	≤12 ug/L
copper (dissolved)	NA	Water	Fall	J	NA
di-n-butylphthalate	NA	Soil	Fall	U	≤550 ug/kg
HMX	NA	Soil	Fall	U	≤3.7 ug/L
lead (total)	NA	Water	Fall	J	NA
lead (dissolved)	NA	Water	Fall	J	NA

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
methylene chloride	NA	Water	Fall	U	≤ 30 ug/L
methylene chloride	NA	Soil	Fall	U	≤110 ug/kg
methylene chloride	NA	Soil	Fall	J	60%
molybdenum	NA	Soil	Fall	J	NA
N-nitrosodiphenylamine	NA	Water	Fall	J, UJ	60%
N-nitrosodiphenylamine	NA	Soil	Fall	J, UJ	60%
nickel (dissolved)	NA	Water	Fall	U	≤29.5 ug/L
nitrate	NA	Soil	Fall	J	NA
plutonium ^{238}	NA	Soil	Fall	U	≤0.10 pCi/g
potassium ^{40}	NA	Water	Fall	U	≤1020 pCi/L
potassium ^{40}	NA	Soil	Fall	J, UJ	NA
RDX	NA	Water	Fall	U	≤2.1 ug/L
selenium	NA	Soil	Fall	J	NA
selenium (total)	NA	Water	Fall	J	NA
selenium (dissolved)	NA	Water	Fall	J	NA
sulfate	NA	Water	Fall	U	≤14 mg/L
sulfate	NA	Soil	Fall	U	≤14 mg/L
TDS	NA	Water	Fall	U	≤90 mg/L
thallium	NA	Soil	Fall	J	NA
thallium (total)	NA	Water	Fall	J, UJ	60-70% Low Bias
thallium (dissolved)	NA	Water	Fall	J, UJ	60-70% Low Bias
thallium (total)	NA	Water	Fall	J	NA
thallium (dissolved)	NA	Water	Fall	J	NA
thorium ^{228}	NA	Soil	Fall	U	≤0.20 pCi/g
thorium ^{230}	NA	Soil	Fall	J	NA
thorium ^{230}	NA	Water	Fall	U	≤0.75 pCi/L
thorium ^{230}	NA	Soil	Fall	U	≤0.24 pCi/g
TSS	NA	Water	Fall	U	≤26 mg/L
uranium ^{234}	NA	Soil	Fall	J	NA
uranium ^{238}	NA	Soil	Fall	J	NA
zinc (total)	NA	Water	Fall	J	NA
γ-BHC	900-000301	Water	Spring	U	Usable
α-chlordane	900-000302	Water	Spring	U	Usable
γ-chlordane	900-000302	Water	Spring	U	Usable
4,4'-DDD	900-000302	Water	Spring	U	Raised reporting limit
γ-chlordane	900-000303	Water	Spring	U	Usable
γ-chlordane	900-000303	Water	Spring	U	Usable
heptachlor epoxide	900-000303	Water	Spring	U	Usable
heptachlor epoxide	900-000303	Water	Spring	U	Usable
α-chlordane	900-000306	Water	Spring	U	Usable
γ-chlordane	900-000306	Water	Spring	U	Usable
nitrate	900-000307	Water	Spring	J, UJ	Low bias
Explosives	900-000310	Water	Spring	R	Unusable
endrin aldehyde	900-000311	Water	Spring	U	Usable
methoxychlor	900-000311	Water	Spring	U	Usable
4,4'-DDE	900-000313	Water	Spring	U	Usable
methoxychlor	900-000313	Water	Spring	U	Usable
Explosives	900-000315	Water	Spring	J, UJ	NA

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
Explosives	900-000322	Water	Spring	J, UJ	NA
γ-BHC	900-000322	Water	Spring	U	Usable
γ-chlordane	900-000322	Water	Spring	U	Usable
heptachlor epoxide	900-000322	Water	Spring	U	Usable
γ-chlordane	900-000323	Water	Spring	U	Usable
dieldrin	900-000324	Water	Spring	U	Usable
α-BHC	900-000325	Water	Spring	U	Usable
α-BHC	900-000326	Water	Spring	U	Usable
Pesticides	900-000327	Water	Spring	UJ	Possible low bias
Explosives	900-000328	Water	Spring	J, UJ	NA
dieldrin	900-000328	Water	Spring	U	Usable
heptachlor epoxide	900-000329	Water	Spring	U	Usable
Explosives	900-000330	Water	Spring	J, UJ	NA
endrin aldehyde	900-000330	Water	Spring	U	Usable
Pesticides	900-000330	Water	Spring	J, UJ	Possible high bias
Explosives	900-000332	Water	Spring	J, UJ	NA
Explosives	900-000333	Water	Spring	J, UJ	NA
Explosives	900-000334	Water	Spring	J, UJ	NA
heptachlor epoxide	900-000335	Water	Spring	U	Usable
Explosives	900-000336	Water	Spring	J, UJ	NA
heptachlor epoxide	900-000337	Water	Spring	U	Usable
Explosives	900-000338	Water	Spring	R	Unusable
Explosives	900-000339	Water	Spring	J, UJ	NA
endosulfan sulfate	900-000339	Water	Spring	U	Usable
heptachlor epoxide	900-000339	Water	Spring	U	Usable
heptachlor epoxide	900-000339	Water	Spring	U	Raised reporting limit
Explosives	900-000340	Water	Spring	J, UJ	NA
Semi-Volatiles	900-000340	Water	Spring	R	Unusable
Semi-Volatiles	900-000340	Water	Spring	R	Unusable
heptachlor epoxide	900-000340	Water	Spring	U	Usable
Explosives	900-000341	Water	Spring	J, UJ	NA
methoxychlor	900-000341	Water	Spring	U	Usable
Pesticides	900-000341	Water	Spring	J, UJ	Possible low bias
Explosives	900-000342	Water	Spring	J, UJ	NA
Explosives	900-000343	Water	Spring	J, UJ	NA
Pesticides	900-000343	Water	Spring	UJ	Possible low bias
Explosives	900-000344	Water	Spring	J, UJ	NA
Pesticides	900-000344	Water	Spring	UJ	Possible low bias
Explosives	900-000345	Water	Spring	R	Unusable
endrin ketone	900-000345	Water	Spring	U	Usable
γ-BHC	900-000345	Water	Spring	U	Usable
Explosives	900-000346	Water	Spring	J, UJ	NA
γ-BHC	900-000346	Water	Spring	U	Usable
Explosives	900-000348	Water	Spring	J, UJ	NA
aldrin	900-000348	Water	Spring	U	Usable
Explosives	900-000349	Water	Spring	R	Unusable
γ-chlordane	900-000349	Water	Spring	U	Usable
heptachlor epoxide	900-000349	Water	Spring	U	Usable

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
nitrogen	900-000350	Water	Spring	J, UJ	NA
phosphorus	900-000350	Water	Spring	R	Unusable
dieldrin	900-000350	Water	Spring	U	Usable
endrin	900-000350	Water	Spring	U	Usable
γ-BHC	900-000350	Water	Spring	U	Usable
Semi-Volatiles	900-000350RE	Water	Spring	R	Unusable
γ-BHC	900-000354	Water	Spring	U	Usable
γ-BHC	900-000355	Water	Spring	U	Usable
methoxychlor	900-000357	Water	Spring	U	Usable
γ-BHC	900-000358	Water	Spring	U	Usable
4,4'-DDD	900-000362	Water	Spring	U	Usable
4,4'-DDD	900-000363	Water	Spring	U	Usable
dieldrin	900-000363	Water	Spring	U	Usable
Pesticides	900-000364	Water	Spring	J, UJ	Usable
Pesticides	900-000365	Water	Spring	J, UJ	Usable
δ-BHC	900-000366	Water	Spring	U	Usable
methoxychlor	900-000366	Water	Spring	U	Usable
heptachlor	900-000367	Water	Spring	UJ	Inaccuracy
γ-BHC	900-000367	Water	Spring	U	Usable
endosulfan sulfate	900-000368	Water	Spring	U	Raised reporting limit
β-BHC	900-000370	Water	Spring	U	Usable
dieldrin	900-000370	Water	Spring	U	Usable
γ-BHC	900-000370	Water	Spring	U	Usable
Explosives	900-000372	Water	Spring	J, UJ	NA
4,4'-DDD	900-000372	Water	Spring	U	Raised reporting limit
Explosives	900-000375	Water	Spring	J, UJ	NA
4,4'-DDD	900-000375	Water	Spring	U	Usable
Explosives	900-000376	Water	Spring	J, UJ	NA
Pesticides	900-000376	Water	Spring	UJ	Possible low bias
alkalinity	900-000377	Water	Spring	R	Unusable
ammonia	900-000377	Water	Spring	J, UJ	NA
γ-BHC	900-000377	Water	Spring	U	Usable
dieldrin	900-000377	Water	Spring	U	Raised reporting limit
4,4'-DDD	900-000379	Water	Spring	U	Usable
dieldrin	900-000380	Water	Spring	U	Raised reporting limit
4,4'-DDE	900-000382	Soil	Spring	U	Usable
α-BHC	900-000382	Soil	Spring	U	Usable
dieldrin	900-000382	Soil	Spring	R	Unusable
endosulfan II	900-000382	Soil	Spring	U	Usable
endosulfan sulfate	900-000382	Soil	Spring	U	Usable
endrin	900-000382	Soil	Spring	U	Usable
γ-chlordane	900-000382	Soil	Spring	R	Unusable
heptachlor	900-000382	Soil	Spring	U	Usable
methoxychlor	900-000382	Soil	Spring	U	Usable
4,4'-DDD	900-000383	Soil	Spring	U	Usable
4,4'-DDT	900-000383	Soil	Spring	U	Usable
γ-chlordane	900-000383	Soil	Spring	R	Unusable
heptachlor	900-000383	Soil	Spring	U	Usable

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
heptachlor epoxide	900-000383	Soil	Spring	R	Unusable
Pesticides	900-000383	Soil	Spring	J, UJ	Possible low bias
4,4'-DDT	900-000384	Soil	Spring	U	Usable
α-chlordane	900-000384	Soil	Spring	U	Usable
4,4'-DDD	900-000385	Soil	Spring	R	Unusable
4,4'-DDE	900-000385	Soil	Spring	U	Usable
dieldrin	900-000385	Soil	Spring	R	Unusable
heptachlor	900-000385	Soil	Spring	U	Raised reporting limit
heptachlor epoxide	900-000385	Soil	Spring	U	Raised reporting limit
aldrin	900-000386	Soil	Spring	U	Usable
Endosulfan II	900-000387	Soil	Spring	R	Unusable
dieldrin	900-000387	Soil	Spring	R	Unusable
heptachlor	900-000387	Soil	Spring	U	Raised reporting limit
endosulfan II	900-000389	Soil	Spring	U	Usable
heptachlor epoxide	900-000389	Soil	Spring	U	Usable
γ–BHC	900-000390	Soil	Spring	U	Usable
heptachlor	900-000390	Soil	Spring	U	Usable
α-BHC	900-000391	Soil	Spring	U	Usable
4,4'-DDT	900-000391	Soil	Spring	U	Raised reporting limit
4,4'-DDT	900-000393	Soil	Spring	U	Usable
γ-chlordane	900-000393	Soil	Spring	U	Usable
4,4'-DDE	900-000394	Soil	Spring	U	Usable
endosulfan I	900-000394	Soil	Spring	R	Unusable
endosulfan sulfate	900-000394	Soil	Spring	R	Unusable
endrin aldehyde	900-000394	Soil	Spring	R	Unusable
endrin ketone	900-000394	Soil	Spring	U	Usable
γ-chlordane	900-000394	Soil	Spring	R	Unusable
endosulfan I	900-000395	Soil	Spring	R	Unusable
endosulfan sulfate	900-000395	Soil	Spring	R	Unusable
endrin aldehyde	900-000395	Soil	Spring	R	Unusable
γ-chlordane	900-000395	Soil	Spring	R	Unusable
heptachlor epoxide	900-000395	Soil	Spring	U	Usable
endosulfan I	900-000396	Soil	Spring	R	Unusable
endosulfan sulfate	900-000396	Soil	Spring	R	Unusable
endrin	900-000396	Soil	Spring	U	Usable
endrin aldehyde	900-000396	Soil	Spring	R	Unusable
endrin ketone	900-000396	Soil	Spring	U	Usable
γ-chlordane	900-000396	Soil	Spring	R	Unusable
4,4'-DDD	900-000397	Soil	Spring	R	Unusable
4,4'-DDE	900-000397	Soil	Spring	U	Usable
aldrin	900-000397	Soil	Spring	U	Usable
dieldrin	900-000397	Soil	Spring	U	Usable
endrin ketone	900-000397	Soil	Spring	U	Usable
γ-chlordane	900-000397	Soil	Spring	R	Unusable
Pesticides	900-000397	Soil	Spring	J, UJ	Possible low bias
4,4'-DDD	900-000398	Soil	Spring	R	Unusable
4,4'-DDT	900-000398	Soil	Spring	R	Unusable
α-BHC	900-000398	Soil	Spring	R	Unusable

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
dieldrin	900-000398	Soil	Spring	R	Unusable
endrin aldehyde	900-000398	Soil	Spring	R	Unusable
endrin ketone	900-000398	Soil	Spring	U	Usable
γ-chlordane	900-000398	Soil	Spring	R	Unusable
Pesticides	900-000398	Soil	Spring	J, UJ	Possible low bias
4,4'-DDE	900-000399	Soil	Spring	U	Usable
α-BHC	900-000399	Soil	Spring	U	Usable
dieldrin	900-000399	Soil	Spring	U	Usable
aldrin	900-000400	Soil	Spring	U	Usable
endosulfan sulfate	900-000400	Soil	Spring	U	Usable
δ-BHC	900-000401	Soil	Spring	R	Usable
dieldrin	900-000401	Soil	Spring	U	Usable
4,4'-DDD	900-000402	Soil	Spring	U	Usable
δ-BHC	900-000402	Soil	Spring	U	Usable
dieldrin	900-000402	Soil	Spring	U	Usable
heptachlor epoxide	900-000402	Soil	Spring	U	Usable
4,4'-DDT	900-000403	Soil	Spring	U	Usable
endosulfan sulfate	900-000403	Soil	Spring	U	Usable
γ-chlordane	900-000403	Soil	Spring	R	Unusable
heptachlor	900-000403	Soil	Spring	R	Unusable
methoxychlor	900-000403	Soil	Spring	U	Usable
4,4'-DDD	900-000404	Soil	Spring	U	Usable
4,4'-DDT	900-000404	Soil	Spring	U	Usable
endosulfan sulfate	900-000404	Soil	Spring	U	Usable
γ-chlordane	900-000404	Soil	Spring	U	Usable
4,4'-DDE	900-000405	Soil	Spring	R	Unusable
4,4'-DDT	900-000405	Soil	Spring	U	Usable
α-chlordane	900-000405	Soil	Spring	R	Unusable
aldrin	900-000405	Soil	Spring	R	Unusable
endosulfan I	900-000405	Soil	Spring	R	Unusable
γ–BHC	900-000405	Soil	Spring	R	Unusable
heptachlor epoxide	900-000405	Soil	Spring	U	Usable
Pesticides	900-000405	Soil	Spring	J, UJ	Possible low bias
methoxychlor	900-000406	Soil	Spring	U	Usable
endosulfan I	900-000407	Soil	Spring	R	Unusable
4,4'-DDE	900-000408	Soil	Spring	U	Usable
aldrin	900-000408	Soil	Spring	U	Usable
endosulfan I	900-000408	Soil	Spring	U	Usable
Explosives	900-000409	Soil	Spring	J	NA
4,4'-DDD	900-000409	Soil	Spring	R	Unusable
4,4'-DDE	900-000409	Soil	Spring	U	Usable
4,4'-DDT	900-000409	Soil	Spring	U	Usable
dieldrin	900-000409	Soil	Spring	U	Usable
endrin aldehyde	900-000409	Soil	Spring	R	Unusable
γ-chlordane	900-000409	Soil	Spring	U	Usable
methoxychlor	900-000409	Soil	Spring	U	Usable
Pesticides	900-000409	Soil	Spring	J, UJ	Possible low bias
Explosives	900-000410	Soil	Spring	J	NA

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
4,4'-DDD	900-000410	Soil	Spring	U	Usable
4,4'-DDE	900-000410	Soil	Spring	U	Usable
4,4'-DDT	900-000410	Soil	Spring	U	Usable
dieldrin	900-000410	Soil	Spring	U	Usable
endrin aldehyde	900-000410	Soil	Spring	R	Unusable
Pesticides	900-000410	Soil	Spring	J, UJ	Possible low bias
Semi-Volatiles	900-000411	Soil	Spring	R	Unusable
4,4'-DDD	900-000411	Soil	Spring	U	Usable
4,4'-DDE	900-000411	Soil	Spring	U	Usable
4,4'-DDT	900-000411	Soil	Spring	U	Usable
α-chlordane	900-000411	Soil	Spring	U	Usable
dieldrin	900-000411	Soil	Spring	U	Usable
heptachlor epoxide	900-000411	Soil	Spring	U	Usable
Explosives	900-000412	Soil	Spring	J	NA
4,4'-DDD	900-000412	Soil	Spring	U	Usable
4,4'-DDE	900-000412	Soil	Spring	U	Usable
4,4'-DDT	900-000412	Soil	Spring	U	Usable
α-chlordane	900-000412	Soil	Spring	U	Usable
dieldrin	900-000412	Soil	Spring	U	Usable
endrin aldehyde	900-000412	Soil	Spring	U	Usable
γ-chlordane	900-000412	Soil	Spring	U	Usable
methoxychlor	900-000412	Soil	Spring	U	Usable
Pesticides	900-000412	Soil	Spring	J, UJ	Possible low bias
heptachlor	900-000413	Soil	Spring	UJ	Usable
4,4'-DDE	900-000413	Soil	Spring	U	Usable
α-BHC	900-000413	Soil	Spring	U	Usable
α-chlordane	900-000413	Soil	Spring	R	Unusable
dieldrin	900-000413	Soil	Spring	U	Usable
endosulfan sulfate	900-000413	Soil	Spring	U	Usable
endrin aldehyde	900-000413	Soil	Spring	R	Unusable
heptachlor epoxide	900-000413	Soil	Spring	U	Usable
α-BHC	900-000414	Soil	Spring	U	Usable
α-chlordane	900-000414	Soil	Spring	U	Usable
dieldrin	900-000414	Soil	Spring	U	Usable
methoxychlor	900-000415	Soil	Spring	U	Usable
α-BHC	900-000416	Soil	Spring	R	Unusable
endrin aldehyde	900-000416	Soil	Spring	R	Unusable
4,4'-DDT	900-000417	Soil	Spring	U	Usable
α-BHC	900-000417	Soil	Spring	U	Usable
aldrin	900-000417	Soil	Spring	U	Usable
endosulfan II	900-000417	Soil	Spring	U	Usable
endosulfan sulfate	900-000417	Soil	Spring	R	Unusable
γ-chlordane	900-000417	Soil	Spring	U	Usable
heptachlor	900-000417	Soil	Spring	U	Usable
heptachlor epoxide	900-000417	Soil	Spring	U	Usable
methoxychlor	900-000417	Soil	Spring	U	Raised reporting limit
heptachlor	900-000418	Soil	Spring	UJ	Usable
4,4'-DDT	900-000418	Soil	Spring	U	Usable

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
dieldrin	900-000418	Soil	Spring	U	Usable
endrin	900-000418	Soil	Spring	U	Usable
endrin aldehyde	900-000418	Soil	Spring	R	Unusable
heptachlor	900-000418	Soil	Spring	U	Usable
heptachlor	900-000419	Soil	Spring	UJ	Usable
4,4'-DDT	900-000419	Soil	Spring	U	Usable
α-chlordane	900-000419	Soil	Spring	U	Usable
aldrin	900-000419	Soil	Spring	U	Usable
δ-BHC	900-000419	Soil	Spring	U	Usable
dieldrin	900-000419	Soil	Spring	U	Usable
endosulfan sulfate	900-000419	Soil	Spring	U	Usable
4,4'-DDE	900-000420	Soil	Spring	R	Unusable
α-chlordane	900-000420	Soil	Spring	U	Usable
aldrin	900-000420	Soil	Spring	U	Usable
δ-BHC	900-000420	Soil	Spring	R	Unusable
dieldrin	900-000420	Soil	Spring	U	Usable
endosulfan II	900-000420	Soil	Spring	U	Usable
endosulfan sulfate	900-000420	Soil	Spring	R	Unusable
endrin aldehyde	900-000420	Soil	Spring	R	Unusable
γ-chlordane	900-000420	Soil	Spring	R	Unusable
Pesticides	900-000420	Soil	Spring	J, UJ	Possible low bias
4,4'-DDE	900-000421	Soil	Spring	R	Unusable
α-BHC	900-000421	Soil	Spring	U	Usable
aldrin	900-000421	Soil	Spring	R	Unusable
dieldrin	900-000421	Soil	Spring	R	Unusable
endosulfan sulfate	900-000421	Soil	Spring	R	Unusable
endrin aldehyde	900-000421	Soil	Spring	R	Unusable
γ-chlordane	900-000421	Soil	Spring	R	Unusable
methoxychlor	900-000421	Soil	Spring	R	Unusable
Pesticides	900-000421	Soil	Spring	R	Unusable
heptachlor	900-000422	Soil	Spring	UJ	Usable
4,4'-DDE	900-000422	Soil	Spring	U	Usable
aldrin	900-000422	Soil	Spring	U	Usable
dieldrin	900-000422	Soil	Spring	U	Usable
endosulfan sulfate	900-000422	Soil	Spring	U	Usable
endrin aldehyde	900-000422	Soil	Spring	U	Usable
endrin ketone	900-000422	Soil	Spring	U	Usable
γ-chlordane	900-000422	Soil	Spring	U	Usable
heptachlor epoxide	900-000422	Soil	Spring	U	Usable
heptachlor	900-000423	Soil	Spring	UJ	Usable
α-BHC	900-000423	Soil	Spring	U	Usable
α-chlordane	900-000423	Soil	Spring	U	Usable
aldrin	900-000423	Soil	Spring	U	Usable
dieldrin	900-000423	Soil	Spring	R	Unusable
endrin aldehyde	900-000423	Soil	Spring	R	Unusable
γ-chlordane	900-000423	Soil	Spring	R	Unusable
heptachlor	900-000424	Soil	Spring	UJ	Usable
α-chlordane	900-000424	Soil	Spring	U	Usable

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
δ-BHC	900-000424	Soil	Spring	U	Usable
dieldrin	900-000424	Soil	Spring	U	Usable
endrin aldehyde	900-000424	Soil	Spring	R	Unusable
4,4'-DDE	900-000425	Soil	Spring	R	Unusable
4,4'-DDT	900-000425	Soil	Spring	U	Usable
dieldrin	900-000425	Soil	Spring	R	Unusable
endosulfan II	900-000425	Soil	Spring	U	Usable
endosulfan sulfate	900-000425	Soil	Spring	R	Unusable
endrin	900-000425	Soil	Spring	R	Unusable
γ-BHC	900-000425	Soil	Spring	R	Unusable
γ-chlordane	900-000425	Soil	Spring	U	Usable
heptachlor	900-000425	Soil	Spring	U	Usable
heptachlor epoxide	900-000425	Soil	Spring	U	Usable
methoxychlor	900-000425	Soil	Spring	U	Usable
Pesticides	900-000425	Soil	Spring	J, UJ	Possible low bias
4,4'-DDD	900-000426	Soil	Spring	R	Unusable
4,4'-DDT	900-000426	Soil	Spring	R	Unusable
endrin aldehyde	900-000426	Soil	Spring	R	Unusable
γ-chlordane	900-000426	Soil	Spring	R	Unusable
methoxychlor	900-000426	Soil	Spring	U	Usable
Pesticides	900-000426	Soil	Spring	J, UJ	Possible low bias
4,4'-DDT	900-000427	Soil	Spring	U	Usable
endrin aldehyde	900-000427	Soil	Spring	R	Unusable
γ-chlordane	900-000427	Soil	Spring	R	Unusable
heptachlor epoxide	900-000427	Soil	Spring	U	Usable
Pesticides	900-000427	Soil	Spring	J, UJ	Possible low bias
endrin aldehyde	900-000428	Soil	Spring	R	Unusable
γ-chlordane	900-000428	Soil	Spring	R	Unusable
methoxychlor	900-000428	Soil	Spring	U	Usable
Pesticides	900-000428	Soil	Spring	J, UJ	Possible low bias
Explosives	900-000429	Soil	Spring	R	Unusable
heptachlor	900-000429	Soil	Spring	UJ	Usable
α-BHC	900-000429	Soil	Spring	R	Unusable
endosulfan sulfate	900-000429	Soil	Spring	R	Unusable
γ-BHC	900-000429	Soil	Spring	R	Unusable
heptachlor epoxide	900-000429	Soil	Spring	U	Usable
methoxychlor	900-000429	Soil	Spring	U	Usable
Explosives	900-000430	Soil	Spring	R	Unusable
heptachlor	900-000430	Soil	Spring	UJ	Usable
4,4'-DDD	900-000430	Soil	Spring	U	Usable
α-BHC	900-000430	Soil	Spring	R	Unusable
α-chlordane	900-000430	Soil	Spring	U	Usable
aldrin	900-000430	Soil	Spring	U	Usable
endosulfan II	900-000430	Soil	Spring	U	Usable
endosulfan sulfate	900-000430	Soil	Spring	U	Usable
Pesticides	900-000430	Soil	Spring	J, UJ	Possible low bias
Explosives	900-000431	Soil	Spring	R	Unusable
heptachlor	900-000431	Soil	Spring	UJ	Usable

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
α-BHC	900-000431	Soil	Spring	R	Unusable
aldrin	900-000431	Soil	Spring	U	Usable
endosulfan sulfate	900-000431	Soil	Spring	U	Usable
endrin aldehyde	900-000431	Soil	Spring	R	Unusable
heptachlor	900-000432	Soil	Spring	J	Usable
4,4'-DDE	900-000432	Soil	Spring	U	Usable
4,4'-DDT	900-000432	Soil	Spring	U	Usable
α-BHC	900-000432	Soil	Spring	R	Unusable
α-chlordane	900-000432	Soil	Spring	U	Usable
dieldrin	900-000432	Soil	Spring	U	Usable
endosulfan II	900-000432	Soil	Spring	U	Usable
endosulfan sulfate	900-000432	Soil	Spring	U	Usable
endrin	900-000432	Soil	Spring	U	Usable
endrin aldehyde	900-000432	Soil	Spring	R	Unusable
methoxychlor	900-000432	Soil	Spring	U	Usable
α-BHC	900-000433	Soil	Spring	U	Usable
dieldrin	900-000433	Soil	Spring	U	Usable
endrin aldehyde	900-000433	Soil	Spring	R	Unusable
α-chlordane	900-000434	Soil	Spring	R	Unusable
endrin aldehyde	900-000434	Soil	Spring	R	Unusable
γ-chlordane	900-000434	Soil	Spring	R	Unusable
heptachlor epoxide	900-000434	Soil	Spring	U	Usable
4,4'-DDD	900-000435	Soil	Spring	U	Usable
α-chlordane	900-000435	Soil	Spring	U	Usable
dieldrin	900-000435	Soil	Spring	U	Usable
δ-BHC	900-000436	Soil	Spring	U	Usable
dieldrin	900-000436	Soil	Spring	U	Usable
4,4'-DDD	900-000437	Soil	Spring	U	Usable
4,4'-DDE	900-000437	Soil	Spring	U	Usable
4,4'-DDT	900-000437	Soil	Spring	U	Usable
aldrin	900-000437	Soil	Spring	U	Usable
dieldrin	900-000437	Soil	Spring	U	Usable
endosulfan sulfate	900-000437	Soil	Spring	U	Usable
endrin aldehyde	900-000437	Soil	Spring	R	Unusable
γ-chlordane	900-000437	Soil	Spring	U	Usable
4,4'-DDD	900-000438	Soil	Spring	U	Usable
4,4'-DDT	900-000438	Soil	Spring	U	Usable
α-chlordane	900-000438	Soil	Spring	U	Usable
dieldrin	900-000438	Soil	Spring	U	Usable
4,4'-DDD	900-000439	Soil	Spring	R	Unusable
4,4'-DDE	900-000439	Soil	Spring	U	Usable
4,4'-DDT	900-000439	Soil	Spring	U	Usable
α-chlordane	900-000439	Soil	Spring	U	Usable
dieldrin	900-000439	Soil	Spring	U	Usable
endrin aldehyde	900-000439	Soil	Spring	U	Usable
γ-chlordane	900-000439	Soil	Spring	U	Usable
4,4'-DDE	900-000440	Soil	Spring	U	Usable
endrin aldehyde	900-000440	Soil	Spring	R	Unusable

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
γ-chlordane	900-000440	Soil	Spring	R	Unusable
4,4'-DDT	900-000441	Soil	Spring	U	Usable
aldrin	900-000441	Soil	Spring	U	Usable
4,4'-DDD	900-000442	Soil	Spring	U	Usable
4,4'-DDE	900-000442	Soil	Spring	U	Usable
4,4'-DDT	900-000442	Soil	Spring	U	Usable
γ-chlordane	900-000442	Soil	Spring	U	Usable
α-chlordane	900-000443	Soil	Spring	U	Usable
aldrin	900-000443	Soil	Spring	U	Usable
γ-chlordane	900-000443	Soil	Spring	U	Usable
4,4'-DDD	900-000444	Soil	Spring	U	Usable
α-chlordane	900-000444	Soil	Spring	R	Unusable
γ-chlordane	900-000444	Soil	Spring	R	Unusable
Pesticides	900-000444	Soil	Spring	J, UJ	Possible low bias
4,4'-DDD	900-000445	Soil	Spring	U	Usable
γ-chlordane	900-000445	Soil	Spring	U	Usable
Pesticides	900-000448	Soil	Spring	J, UJ	Possible low bias
endosulfan sulfate	900-000450	Soil	Spring	U	Usable
γ–BHC	900-000452	Soil	Spring	U	Usable
γ–BHC	900-000454	Soil	Spring	U	Usable
γ–BHC	900-000455	Soil	Spring	U	Usable
Pesticides	900-000456	Soil	Spring	J, UJ	Possible low bias
4,4'-DDD	900-000457	Soil	Spring	U	Usable
endrin	900-000457	Soil	Spring	U	Usable
aldrin	900-000458	Soil	Spring	U	Usable
heptachlor	900-000458	Soil	Spring	U	Usable
Pesticides	900-000458	Soil	Spring	J, UJ	Possible low bias
aldrin	900-000459	Soil	Spring	U	Usable
γ-chlordane	900-000459	Soil	Spring	U	Usable
4,4'-DDE	900-000460	Soil	Spring	U	Usable
endosulfan I	900-000460	Soil	Spring	U	Usable
endosulfan sulfate	900-000461	Soil	Spring	U	Usable
endrin ketone	900-000461	Soil	Spring	U	Usable
γ-chlordane	900-000461	Soil	Spring	U	Usable
4,4'-DDT	900-000462	Soil	Spring	U	Usable
dieldrin	900-000463	Soil	Spring	U	Usable
endrin aldehyde	900-000463	Soil	Spring	U	Usable
4,4'-DDD	900-000464	Soil	Spring	U	Usable
4,4'-DDE	900-000465	Soil	Spring	U	Usable
4,4'-DDT	900-000465	Soil	Spring	R	Unusable
aldrin	900-000465	Soil	Spring	U	Usable
dieldrin	900-000465	Soil	Spring	R	Unusable
endosulfan II	900-000465	Soil	Spring	U	Usable
γ–BHC	900-000465	Soil	Spring	R	Unusable
methoxychlor	900-000465	Soil	Spring	R	Unusable
4,4'-DDD	900-000466	Soil	Spring	U	Usable
4,4'-DDE	900-000466	Soil	Spring	U	Usable
α-BHC	900-000466	Soil	Spring	U	Usable

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
4,4'-DDT	900-000467	Soil	Spring	U	Usable
α-chlordane	900-000467	Soil	Spring	U	Usable
β-BHC	900-000467	Soil	Spring	U	Usable
endosulfan II	900-000467	Soil	Spring	U	Usable
γ–BHC	900-000467	Soil	Spring	U	Usable
4,4'-DDT	900-000468	Soil	Spring	R	Unusable
endrin aldehyde	900-000468	Soil	Spring	R	Unusable
γ-chlordane	900-000468	Soil	Spring	R	Unusable
methoxychlor	900-000468	Soil	Spring	U	Usable
4,4'-DDD	900-000469	Soil	Spring	U	Usable
endrin ketone	900-000469	Soil	Spring	U	Usable
γ-chlordane	900-000469	Soil	Spring	R	Unusable
heptachlor	900-000469	Soil	Spring	U	Usable
Pesticides	900-000469RE	Soil	Spring	J	Possible low bias
α-BHC	900-000470	Soil	Spring	U	Usable
δ-BHC	900-000470	Soil	Spring	R	Unusable
endrin aldehyde	900-000470	Soil	Spring	R	Unusable
4,4'-DDD	900-000471	Soil	Spring	U	Usable
endrin	900-000471	Soil	Spring	U	Usable
γ-chlordane	900-000471	Soil	Spring	U	Usable
Pesticides	900-000471	Soil	Spring	J, UJ	Possible low bias
4,4'-DDD	900-000472	Soil	Spring	U	Usable
4,4'-DDT	900-000472	Soil	Spring	U	Usable
endrin aldehyde	900-000472	Soil	Spring	R	Unusable
heptachlor epoxide	900-000472	Soil	Spring	R	Unusable
Pesticides	900-000472	Soil	Spring	J, UJ	Possible low bias
4,4'-DDD	900-000473	Soil	Spring	U	Usable
4,4'-DDT	900-000473	Soil	Spring	U	Usable
endosulfan sulfate	900-000473	Soil	Spring	U	Usable
methoxychlor	900-000473	Soil	Spring	U	Usable
Pesticides	900-000473	Soil	Spring	J, UJ	Possible low bias
methoxychlor	900-000477	Soil	Spring	U	Usable
4,4'-DDD	900-000478	Soil	Spring	U	Usable
4,4'-DDT	900-000478	Soil	Spring	U	Usable
endosulfan II	900-000478	Soil	Spring	U	Usable
endosulfan sulfate	900-000478	Soil	Spring	R	Unusable
γ–BHC	900-000478	Soil	Spring	R	Unusable
heptachlor	900-000478	Soil	Spring	U	Usable
heptachlor epoxide	900-000478	Soil	Spring	U	Usable
methoxychlor	900-000478	Soil	Spring	U	Raised reporting limit
Pesticides	900-000479	Soil	Spring	J, UJ	Possible low bias
dieldrin	900-000480	Soil	Spring	U	Usable
endrin aldehyde	900-000480	Soil	Spring	R	Unusable
γ-chlordane	900-000480	Soil	Spring	U	Usable
methoxychlor	900-000480	Soil	Spring	U	Usable
Pesticides	900-000481	Soil	Spring	UJ	Usable
aldrin	900-000482	Soil	Spring	U	Usable
Pesticides	900-000482	Soil	Spring	J, UJ	Possible low bias

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
γ-chlordane	900-000483	Soil	Spring	U	Usable
Pesticides	900-000483	Soil	Spring	J, UJ	Possible low bias
α-chlordane	900-000484	Soil	Spring	U	Usable
γ-chlordane	900-000484	Soil	Spring	U	Usable
Pesticides	900-000484	Soil	Spring	J, UJ	Possible low bias
4,4'-DDE	900-000485	Soil	Spring	U	Usable
Pesticides	900-000485	Soil	Spring	J, UJ	Possible low bias
α-BHC	900-000486	Soil	Spring	U	Usable
α-chlordane	900-000486	Soil	Spring	U	Usable
endrin aldehyde	900-000486	Soil	Spring	U	Usable
methoxychlor	900-000486	Soil	Spring	U	Usable
Pesticides	900-000486	Soil	Spring	J, UJ	Possible low bias
aldrin	900-000487	Soil	Spring	U	Usable
endrin ketone	900-000487	Soil	Spring	U	Usable
γ-BHC	900-000487	Soil	Spring	U	Usable
4,4'-DDE	900-000488	Soil	Spring	U	Usable
γ-BHC	900-000488	Soil	Spring	U	Usable
heptachlor epoxide	900-000488	Soil	Spring	U	Usable
4,4'-DDE	900-000489	Soil	Spring	U	Usable
endrin aldehyde	900-000489	Soil	Spring	U	Usable
endrin aldehyde	900-000490	Soil	Spring	R	Unusable
endrin ketone	900-000490	Soil	Spring	U	Usable
4,4'-DDT	900-000491	Soil	Spring	U	Usable
endosulfan I	900-000491	Soil	Spring	R	Unusable
endrin	900-000492	Soil	Spring	U	Usable
endrin aldehyde	900-000492	Soil	Spring	R	Unusable
endosulfan sulfate	900-000494	Soil	Spring	U	Usable
heptachlor epoxide	900-000494	Soil	Spring	R	Unusable
β-BHC	900-000495	Water	Spring	U	Usable
4,4'-DDD	900-000497	Soil	Spring	R	Unusable
4,4'-DDE	900-000497	Soil	Spring	U	Usable
α-chlordane	900-000497	Soil	Spring	R	Unusable
endrin	900-000497	Soil	Spring	R	Unusable
endrin aldehyde	900-000497	Soil	Spring	R	Unusable
endrin ketone	900-000497	Soil	Spring	U	Usable
methoxychlor	900-000497	Soil	Spring	R	Unusable
Pesticides	900-000497	Soil	Spring	J, UJ	Possible low bias
α-BHC	900-000498	Soil	Spring	U	Usable
aldrin	900-000498	Soil	Spring	U	Usable
endosulfan II	900-000498	Soil	Spring	U	Usable
endosulfan sulfate	900-000498	Soil	Spring	U	Usable
γ–BHC	900-000498	Soil	Spring	U	Usable
γ-chlordane	900-000498	Soil	Spring	U	Usable
heptachlor	900-000498	Soil	Spring	U	Usable
heptachlor epoxide	900-000498	Soil	Spring	U	Usable
4,4'-DDD	900-000499	Soil	Spring	U	Usable
4,4'-DDT	900-000499	Soil	Spring	U	Usable
α-BHC	900-000499	Soil	Spring	U	Usable

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
endrin	900-000499	Soil	Spring	U	Usable
endrin aldehyde	900-000499	Soil	Spring	R	Unusable
endrin ketone	900-000499	Soil	Spring	U	Usable
γ-chlordane	900-000499	Soil	Spring	R	Unusable
methoxychlor	900-000499	Soil	Spring	U	Usable
4,4'-DDD	900-000500	Soil	Spring	U	Usable
α-BHC	900-000500	Soil	Spring	U	Usable
aldrin	900-000500	Soil	Spring	U	Usable
dieldrin	900-000500	Soil	Spring	U	Usable
endosulfan II	900-000500	Soil	Spring	U	Usable
γ-chlordane	900-000500	Soil	Spring	U	Usable
heptachlor	900-000500	Soil	Spring	U	Usable
heptachlor epoxide	900-000500	Soil	Spring	U	Usable
aldrin	900-000501	Soil	Spring	U	Usable
dieldrin	900-000501	Soil	Spring	U	Usable
endosulfan II	900-000501	Soil	Spring	U	Usable
γ–BHC	900-000501	Soil	Spring	R	Unusable
γ-chlordane	900-000501	Soil	Spring	U	Usable
heptachlor	900-000501	Soil	Spring	U	Usable
dieldrin	900-000600	Water	Spring	U	Usable
Pesticides	900-000600 (FB)	Water	Spring	UJ	Possible low bias
Pesticides	900-000600 (FB)	Water	Spring	UJ	Possible low bias
4,4'-DDD	900-000601 (FD)	Soil	Spring	U	Usable
4,4'-DDT	900-000601 (FD)	Soil	Spring	U	Usable
endrin aldehyde	900-000601 (FD)	Soil	Spring	R	Unusable
Pesticides	900-000601 (FD)	Soil	Spring	J, UJ	Possible low bias
Pesticides	900-000602 (FB)	Water	Spring	J, UJ	Possible low bias
γ-BHC	900-000603	Water	Spring	U	Usable
endosulfan sulfate	900-000605 (FD)	Soil	Spring	U	Usable
Pesticides	900-000610 (FB)	Water	Spring	UJ	Possible low bias
4,4'-DDD	900-000618(PE)	Water	Spring	-	Data not reported!
4,4'-DDE	900-000620 (FD)	Soil	Spring	U	Usable
α-BHC	900-000620 (FD)	Soil	Spring	U	Usable
endosulfan sulfate	900-000620 (FD)	Soil	Spring	R	Unusable
endrin ketone	900-000620 (FD)	Soil	Spring	U	Usable
γ-chlordane	900-000620 (FD)	Soil	Spring	R	Unusable
heptachlor	900-000620 (FD)	Soil	Spring	R	Unusable
heptachlor epoxide	900-000620 (FD)	Soil	Spring	R	Unusable
Pesticides	900-000623 (FD)	Water	Spring	UJ	Possible low bias
Pesticides	900-000634 (FB)	Water	Spring	J, UJ	Possible low bias
Pesticides	900-000635 (FB)	Water	Spring	J, UJ	Possible low bias
α-BHC	900-000636 (FD)	Soil	Spring	R	Unusable
dieldrin	900-000636 (FD)	Soil	Spring	U	Usable
endosulfan I	900-000636 (FD)	Soil	Spring	U	Usable
Pesticides	900-000636 (FD)	Soil	Spring	J, UJ	Possible low bias
γ-chlordane	900-000642 (FD)	Soil	Spring	U	Usable
Pesticides	900-000643 (FB)	Water	Spring	UJ	No significant impact
Pesticides	900-000643 (FB)	Water	Spring	UJ	Possible low bias

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
Pesticides	900-000647 (FB)	Water	Spring	UJ	Possible low bias
4,4'-DDE	900-000651 (FD)	Soil	Spring	R	Unusable
4,4'-DDT	900-000651 (FD)	Soil	Spring	U	Usable
α-chlordane	900-000651 (FD)	Soil	Spring	U	Usable
aldrin	900-000651 (FD)	Soil	Spring	U	Usable
δ-BHC	900-000651 (FD)	Soil	Spring	R	Unusable
endosulfan II	900-000651 (FD)	Soil	Spring	U	Usable
endosulfan sulfate	900-000651 (FD)	Soil	Spring	R	Unusable
γ-BHC	900-000651 (FD)	Soil	Spring	R	Unusable
heptachlor	900-000651 (FD)	Soil	Spring	U	Usable
heptachlor epoxide	900-000651 (FD)	Soil	Spring	U	Usable
methoxychlor	900-000651 (FD)	Soil	Spring	U	Usable
Pesticides	900-000651 (FD)	Soil	Spring	UJ	Possible low bias
Pesticides	900-000652 (FB)	Water	Spring	UJ	Possible low bias
dieldrin	900-000655 (FD)	Water	Spring	U	Raised reporting limit
endrin	900-000656	Water	Spring	U	Usable
Pesticides	900-000656 (FB)	Water	Spring	J, UJ	Possible low bias
4,4'-DDT	900-000658	Water	Spring	J	Inaccuracy (PE)
Pesticides	900-000658	Water	Spring	J, UJ	No significant impact (PE)
Pesticides	900-000658	Water	Spring	J, UJ	Low bias possible (PE)
Pesticides	900-000658DL	Water	Spring	J	Slight low bias possible (PE)
Pesticides	900-000658DL	Water	Spring	J	Low bias possible (PE)
Pesticides	900-000665 (FB)	Water	Spring	UJ	Possible low bias
Pesticides	900-000673 (FB)	Water	Spring	UJ	Possible low bias
Explosives	900-000674		Spring	J	NA
4,4'-DDD	900-000674 (FD)	Soil	Spring	U	Usable
4,4'-DDE	900-000674 (FD)	Soil	Spring	U	Usable
endrin aldehyde	900-000674 (FD)	Soil	Spring	U	Usable
Pesticides	900-000674 (FD)	Soil	Spring	J, UJ	Possible low bias
heptachlor	900-000684 (FD)	Soil	Spring	UJ	Usable
dieldrin	900-000684 (FD)	Soil	Spring	U	Usable
endosulfan II	900-000684 (FD)	Soil	Spring	U	Usable
endosulfan sulfate	900-000684 (FD)	Soil	Spring	R	Unusable
endrin aldehyde	900-000684 (FD)	Soil	Spring	U	Usable
4,4'-DDD	900-000691 (FD)	Soil	Spring	U	Usable
4,4'-DDE	900-000691 (FD)	Soil	Spring	U	Usable
dieldrin	900-000691 (FD)	Soil	Spring	U	Usable
endosulfan sulfate	900-000691 (FD)	Soil	Spring	U	Usable
endrin aldehyde	900-000691 (FD)	Soil	Spring	R	Unusable
γ-BHC	900-000691 (FD)	Soil	Spring	U	Usable
γ-chlordane	900-000691 (FD)	Soil	Spring	U	Usable
Pesticides	900-000693 (FB)	Water	Spring	UJ	Possible low bias
α-chlordane	900-000699 (FD)	Soil	Spring	U	Usable
dieldrin	900-000699 (FD)	Soil	Spring	U	Usable
heptachlor epoxide	900-000699 (FD)	Soil	Spring	U	Usable
Pesticides	900-000707 (FB)	Water	Spring	UJ	Possible low bias
Pesticides	900-000708 (FB)	Water	Spring	UJ	Possible low bias
4,4'-DDD	900-000709 (FD)	Soil	Spring	U	Usable

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
4,4'-DDE	900-000709 (FD)	Soil	Spring	U	Usable
4,4'-DDT	900-000709 (FD)	Soil	Spring	U	Usable
α-BHC	900-000709 (FD)	Soil	Spring	U	Usable
heptachlor epoxide	900-000709 (FD)	Soil	Spring	U	Usable
methoxychlor	900-000709 (FD)	Soil	Spring	U	Usable
2,4-dinitrophenol	NA	Soil	Spring	J	50%
2-butanone	NA	Water	Spring	J, UJ	50%
2-hexanone	NA	Water	Spring	J, UJ	50%
2-nitroaniline	NA	Water	Spring	J, UJ	50%
2-nitroaniline	NA	Soil	Spring	J	50%
acetone	NA	Water	Spring	J, UJ	50%
acetone	NA	Water	Spring	U	≤91 ug/L
acetone	NA	Soil	Spring	J, UJ	60%
acetone	NA	Soil	Spring	U	≤182 ug/Kg
alkalinity	NA	Water	Spring	U	≤5.9 mg/L
aluminum (dissolved)	NA	Water	Spring	U	≤630 ug/L
aluminum (total)	NA	Water	Spring	J, UJ	NA
aluminum (total)	NA	Water	Spring	J	NA
ammonia	NA	Water	Spring	U	≤1.0 mg/L
arsenic (total)	NA	Water	Spring	J, UJ	NA
barium (dissolved)	NA	Water	Spring	J	NA
beryllium	NA	Soil	Spring	U	≤3.0 mg/Kg
bis(2-ethylhexyl) phthalate	NA	Water	Spring	J, UJ	50%
bis(2-ethylhexyl) phthalate	NA	Water	Spring	U	≤31ug/L
bis(2-ethylhexyl) phthalate	NA	Soil	Spring	J	50%
bis(2-ethylhexyl) phthalate	NA	Soil	Spring	U	≤1010 ug/Kg
bismuth (dissolved)	NA	Water	Spring	U	≤681 ug/L
bismuth (dissolved)	NA	Soil	Spring	U	≤5.4 mg/Kg
butyl benzyl phthalate	NA	Water	Spring	J, UJ	50%
cadmium (dissolved)	NA	Soil	Spring	U	≤0.6 mg/Kg
calcium	NA	Soil	Spring	J, UJ	NA
chloroform	NA	Water	Spring	U	≤27 ug/L
chloroform	NA	Soil	Spring	U	≤27 ug/Kg
Dissolved Soilds	NA	Water	Spring	U	≤40 mg/L
fluoranthene	NA	Soil	Spring	J	NA
fluoride	NA	Soil	Spring	J	NA
fluoride	NA	Water	Spring	U	≤0.5 mg/L
hexachlorobutadiene	NA	Water	Spring	J, UJ	50%
iron (total)	NA	Water	Spring	J	NA
lithium (total)	NA	Water	Spring	U	≤32 ug/L
manganese	NA	Soil	Spring	J	NA
methylene chloride	NA	Water	Spring	U	≤28 ug/L
methylene chloride	NA	Soil	Spring	J, UJ	60%
methylene chloride	NA	Soil	Spring	U	≤102 ug/Kg
molybdenum	NA	Soil	Spring	U	≤11.5 mg/Kg
nitrogen	NA	Water	Spring	J	NA
nitrogen	NA	Water	Spring	U	≤2.0 mg/L
phosphorus	NA	Water	Spring	J	NA

Table B.6-Summary

ANALYTE	SAMPLE ID	SAMPLE TYPE	EVENT	QUALIFIER	ERROR
phosphorus	NA	Water	Spring	U	≤12.5 mg/L
potassium	NA	Soil	Spring	J, UJ	NA
potassium (dissolved)	NA	Water	Spring	J	NA
potassium (total)	NA	Water	Spring	J	NA
potassium ^{40}	NA	Water	Spring	J	NA
potassium ^{40}	NA	Water	Spring	U	≤1480 pCi/L
potassium ^{40}	NA	Soil	Spring	J	NA
pyrene	NA	Soil	Spring	J	NA
radium ^{226}	NA	Water	Spring	U	≤0.75 pCi/L
radium ^{226}	NA	Soil	Spring	J	NA
selenium	NA	Soil	Spring	J, UJ	NA
selenium (dissolved)	NA	Water	Spring	J, UJ	NA
selenium (total)	NA	Water	Spring	J, UJ	NA
thallium	NA	Soil	Spring	J, UJ	NA
thallium (dissolved)	NA	Water	Spring	J, UJ	NA
thallium (total)	NA	Water	Spring	J, UJ	40% Low Bias
thallium (dissolved)	NA	Water	Spring	J, UJ	40% Low Bias
thallium (total)	NA	Water	Spring	J, UJ	NA
tin	NA	Soil	Spring	U	≤30 mg/Kg
TOC	NA	Water	Spring	U	≤7.0 mg/L
TOC	NA	Soil	Spring	J	≤100 mg/L
vanadium (total)	NA	Water	Spring	U	≤3.15 ug/L
vandadium (dissolved)	NA	Water	Spring	U	≤3.15 ug/L
zinc (total)	NA	Water	Spring	J	NA

APPENDIX C.1

APPENDIX C

FIELD MEASUREMENTS AND GEOTECHNICAL DATA

Appendix C-1

FIELD MEASUREMENTS

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-1001	000350	BG GREAT MIAMI RIVER-RIP RAP ROAD	Alkalinity	227	MG/L
MND21-1001	000350	BG GREAT MIAMI RIVER-RIP RAP ROAD	Alkalinity	161	MG/L
MND21-1001	000350	BG GREAT MIAMI RIVER-RIP RAP ROAD	Dissolved Oxygen	9.2	MG/L
MND21-1001	000350	BG GREAT MIAMI RIVER-RIP RAP ROAD	Dissolved Oxygen	10.2	MG/L
MND21-1001	000350	BG GREAT MIAMI RIVER-RIP RAP ROAD	Potential of Hydrogen	8.50	SU
MND21-1001	000350	BG GREAT MIAMI RIVER-RIP RAP ROAD	Potential of Hydrogen	7.95	SU
MND21-1001	000350	BG GREAT MIAMI RIVER-RIP RAP ROAD	Redox Potential	183	MVOLTS
MND21-1001	000350	BG GREAT MIAMI RIVER-RIP RAP ROAD	Redox Potential	181	MVOLTS
MND21-1001	000350	BG GREAT MIAMI RIVER-RIP RAP ROAD	Specific Conductance	0.747	UMHOS
MND21-1001	000350	BG GREAT MIAMI RIVER-RIP RAP ROAD	Specific Conductance	545	UMHOS
MND21-1001	000350	BG GREAT MIAMI RIVER-RIP RAP ROAD	Temperature	16.4	C
MND21-1001	000350	BG GREAT MIAMI RIVER-RIP RAP ROAD	Temperature	11.2	C
MND21-1001	900000107	BG GREAT MIAMI RIVER-RIP RAP ROAD	Alkalinity	227	MG/L
MND21-1001	900000107	BG GREAT MIAMI RIVER-RIP RAP ROAD	Alkalinity	161	MG/L
MND21-1001	900000107	BG GREAT MIAMI RIVER-RIP RAP ROAD	Dissolved Oxygen	9.2	MG/L
MND21-1001	900000107	BG GREAT MIAMI RIVER-RIP RAP ROAD	Dissolved Oxygen	10.2	MG/L
MND21-1001	900000107	BG GREAT MIAMI RIVER-RIP RAP ROAD	Potential of Hydrogen	8.50	SU
MND21-1001	900000107	BG GREAT MIAMI RIVER-RIP RAP ROAD	Potential of Hydrogen	7.95	SU
MND21-1001	900000107	BG GREAT MIAMI RIVER-RIP RAP ROAD	Redox Potential	183	MVOLTS
MND21-1001	900000107	BG GREAT MIAMI RIVER-RIP RAP ROAD	Redox Potential	181	MVOLTS
MND21-1001	900000107	BG GREAT MIAMI RIVER-RIP RAP ROAD	Specific Conductance	0.747	UMHOS
MND21-1001	900000107	BG GREAT MIAMI RIVER-RIP RAP ROAD	Specific Conductance	545	UMHOS
MND21-1001	900000107	BG GREAT MIAMI RIVER-RIP RAP ROAD	Temperature	16.4	C
MND21-1001	900000107	BG GREAT MIAMI RIVER-RIP RAP ROAD	Temperature	11.2	C
MND21-1001	900000108	BG GREAT MIAMI RIVER-RIP RAP ROAD	Alkalinity	227	MG/L
MND21-1001	900000108	BG GREAT MIAMI RIVER-RIP RAP ROAD	Alkalinity	161	MG/L
MND21-1001	900000108	BG GREAT MIAMI RIVER-RIP RAP ROAD	Dissolved Oxygen	9.2	MG/L
MND21-1001	900000108	BG GREAT MIAMI RIVER-RIP RAP ROAD	Dissolved Oxygen	10.2	MG/L
MND21-1001	900000108	BG GREAT MIAMI RIVER-RIP RAP ROAD	Potential of Hydrogen	8.50	SU
MND21-1001	900000108	BG GREAT MIAMI RIVER-RIP RAP ROAD	Potential of Hydrogen	7.95	SU
MND21-1001	900000108	BG GREAT MIAMI RIVER-RIP RAP ROAD	Redox Potential	183	MVOLTS
MND21-1001	900000108	BG GREAT MIAMI RIVER-RIP RAP ROAD	Redox Potential	181	MVOLTS
MND21-1001	900000108	BG GREAT MIAMI RIVER-RIP RAP ROAD	Specific Conductance	0.747	UMHOS
MND21-1001	900000108	BG GREAT MIAMI RIVER-RIP RAP ROAD	Specific Conductance	545	UMHOS
MND21-1001	900000108	BG GREAT MIAMI RIVER-RIP RAP ROAD	Temperature	16.4	C
MND21-1001	900000108	BG GREAT MIAMI RIVER-RIP RAP ROAD	Temperature	11.2	C
MND21-1101	000359	BACKGROUND-EATON POND	Alkalinity	314	MG/L
MND21-1101	000359	BACKGROUND-EATON POND	Alkalinity	269.5	MG/L
MND21-1101	000359	BACKGROUND-EATON POND	Dissolved Oxygen	4.1	MG/L
MND21-1101	000359	BACKGROUND-EATON POND	Dissolved Oxygen	11.1	MG/L
MND21-1101	000359	BACKGROUND-EATON POND	Potential of Hydrogen	7.75	SU
MND21-1101	000359	BACKGROUND-EATON POND	Potential of Hydrogen	7.82	SU
MND21-1101	000359	BACKGROUND-EATON POND	Potential of Hydrogen	8.15	SU
MND21-1101	000359	BACKGROUND-EATON POND	Redox Potential	144	MVOLTS
MND21-1101	000359	BACKGROUND-EATON POND	Redox Potential	119	MVOLTS
MND21-1101	000359	BACKGROUND-EATON POND	Specific Conductance	.909	UMHOS
MND21-1101	000359	BACKGROUND-EATON POND	Specific Conductance	804	UMHOS
MND21-1101	000359	BACKGROUND-EATON POND	Temperature	10.1	C
MND21-1101	000359	BACKGROUND-EATON POND	Temperature	19.0	C
MND21-1101	900000219	BACKGROUND-EATON POND	Alkalinity	314	MG/L
MND21-1101	900000219	BACKGROUND-EATON POND	Alkalinity	269.5	MG/L
MND21-1101	900000219	BACKGROUND-EATON POND	Dissolved Oxygen	4.1	MG/L
MND21-1101	900000219	BACKGROUND-EATON POND	Dissolved Oxygen	11.1	MG/L
MND21-1101	900000219	BACKGROUND-EATON POND	Potential of Hydrogen	7.75	SU
MND21-1101	900000219	BACKGROUND-EATON POND	Potential of Hydrogen	7.82	SU

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-1101	900000219	BACKGROUND-EATON POND	Potential of Hydrogen	8.15	SU
MND21-1101	900000219	BACKGROUND-EATON POND	Redox Potential	144	MVOLTS
MND21-1101	900000219	BACKGROUND-EATON POND	Redox Potential	119	MVOLTS
MND21-1101	900000219	BACKGROUND-EATON POND	Specific Conductance	.909	UMHOS
MND21-1101	900000219	BACKGROUND-EATON POND	Specific Conductance	804	UMHOS
MND21-1101	900000219	BACKGROUND-EATON POND	Temperature	10.1	C
MND21-1101	900000219	BACKGROUND-EATON POND	Temperature	19.0	C
MND21-1101	900000220	BACKGROUND-EATON POND	Alkalinity	314	MG/L
MND21-1101	900000220	BACKGROUND-EATON POND	Alkalinity	269.5	MG/L
MND21-1101	900000220	BACKGROUND-EATON POND	Dissolved Oxygen	4.1	MG/L
MND21-1101	900000220	BACKGROUND-EATON POND	Dissolved Oxygen	11.1	MG/L
MND21-1101	900000220	BACKGROUND-EATON POND	Potential of Hydrogen	7.75	SU
MND21-1101	900000220	BACKGROUND-EATON POND	Potential of Hydrogen	7.82	SU
MND21-1101	900000220	BACKGROUND-EATON POND	Potential of Hydrogen	8.15	SU
MND21-1101	900000220	BACKGROUND-EATON POND	Redox Potential	144	MVOLTS
MND21-1101	900000220	BACKGROUND-EATON POND	Redox Potential	119	MVOLTS
MND21-1101	900000220	BACKGROUND-EATON POND	Specific Conductance	.909	UMHOS
MND21-1101	900000220	BACKGROUND-EATON POND	Specific Conductance	804	UMHOS
MND21-1101	900000220	BACKGROUND-EATON POND	Temperature	10.1	C
MND21-1101	900000220	BACKGROUND-EATON POND	Temperature	19.0	C
MND21-1102	000360	BACKGROUND-EATON POND	Alkalinity	321.5	MG/L
MND21-1102	000360	BACKGROUND-EATON POND	Alkalinity	263.5	MG/L
MND21-1102	000360	BACKGROUND-EATON POND	Dissolved Oxygen	4.3	MG/L
MND21-1102	000360	BACKGROUND-EATON POND	Dissolved Oxygen	9.2	MG/L
MND21-1102	000360	BACKGROUND-EATON POND	Potential of Hydrogen	7.86	SU
MND21-1102	000360	BACKGROUND-EATON POND	Potential of Hydrogen	8.07	SU
MND21-1102	000360	BACKGROUND-EATON POND	Redox Potential	115	MVOLTS
MND21-1102	000360	BACKGROUND-EATON POND	Redox Potential	133	MVOLTS
MND21-1102	000360	BACKGROUND-EATON POND	Specific Conductance	.897	UMHOS
MND21-1102	000360	BACKGROUND-EATON POND	Specific Conductance	820	UMHOS
MND21-1102	000360	BACKGROUND-EATON POND	Temperature	10.7	C
MND21-1102	000360	BACKGROUND-EATON POND	Temperature	19.1	C
MND21-1102	900000221	BACKGROUND-EATON POND	Alkalinity	321.5	MG/L
MND21-1102	900000221	BACKGROUND-EATON POND	Alkalinity	263.5	MG/L
MND21-1102	900000221	BACKGROUND-EATON POND	Dissolved Oxygen	4.3	MG/L
MND21-1102	900000221	BACKGROUND-EATON POND	Dissolved Oxygen	9.2	MG/L
MND21-1102	900000221	BACKGROUND-EATON POND	Potential of Hydrogen	7.86	SU
MND21-1102	900000221	BACKGROUND-EATON POND	Potential of Hydrogen	8.07	SU
MND21-1102	900000221	BACKGROUND-EATON POND	Redox Potential	115	MVOLTS
MND21-1102	900000221	BACKGROUND-EATON POND	Redox Potential	133	MVOLTS
MND21-1102	900000221	BACKGROUND-EATON POND	Specific Conductance	.897	UMHOS
MND21-1102	900000221	BACKGROUND-EATON POND	Specific Conductance	820	UMHOS
MND21-1102	900000221	BACKGROUND-EATON POND	Temperature	10.7	C
MND21-1102	900000221	BACKGROUND-EATON POND	Temperature	19.1	C
MND21-1103	000361	BACKGROUND-EATON POND	Alkalinity	302.5	MG/L
MND21-1103	000361	BACKGROUND-EATON POND	Alkalinity	265.5	MG/L
MND21-1103	000361	BACKGROUND-EATON POND	Dissolved Oxygen	4.1	MG/L
MND21-1103	000361	BACKGROUND-EATON POND	Dissolved Oxygen	9.8	MG/L
MND21-1103	000361	BACKGROUND-EATON POND	Potential of Hydrogen	7.82	SU
MND21-1103	000361	BACKGROUND-EATON POND	Potential of Hydrogen	8.04	SU
MND21-1103	000361	BACKGROUND-EATON POND	Redox Potential	NR	MVOLTS
MND21-1103	000361	BACKGROUND-EATON POND	Redox Potential	153	MVOLTS
MND21-1103	000361	BACKGROUND-EATON POND	Specific Conductance	.899	UMHOS
MND21-1103	000361	BACKGROUND-EATON POND	Specific Conductance	807	UMHOS
MND21-1103	000361	BACKGROUND-EATON POND	Temperature	10.4	C

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-1103	000361	BACKGROUND-EATON POND	Temperature	18.3	C
MND21-1103	900000222	BACKGROUND-EATON POND	Alkalinity	302.5	MG/L
MND21-1103	900000222	BACKGROUND-EATON POND	Alkalinity	265.5	MG/L
MND21-1103	900000222	BACKGROUND-EATON POND	Dissolved Oxygen	4.1	MG/L
MND21-1103	900000222	BACKGROUND-EATON POND	Dissolved Oxygen	9.8	MG/L
MND21-1103	900000222	BACKGROUND-EATON POND	Potential of Hydrogen	7.82	SU
MND21-1103	900000222	BACKGROUND-EATON POND	Potential of Hydrogen	8.04	SU
MND21-1103	900000222	BACKGROUND-EATON POND	Redox Potential	NR	MVOLTS
MND21-1103	900000222	BACKGROUND-EATON POND	Redox Potential	153	MVOLTS
MND21-1103	900000222	BACKGROUND-EATON POND	Specific Conductance	.899	UMHOS
MND21-1103	900000222	BACKGROUND-EATON POND	Specific Conductance	807	UMHOS
MND21-1103	900000222	BACKGROUND-EATON POND	Temperature	10.4	C
MND21-1103	900000222	BACKGROUND-EATON POND	Temperature	18.3	C
MND21-1201	000354	BACKGROUND-GAME PRESERVE POND	Alkalinity	27.0	MG/L
MND21-1201	000354	BACKGROUND-GAME PRESERVE POND	Alkalinity	35.5	MG/L
MND21-1201	000354	BACKGROUND-GAME PRESERVE POND	Dissolved Oxygen	6.6	MG/L
MND21-1201	000354	BACKGROUND-GAME PRESERVE POND	Dissolved Oxygen	9.0	MG/L
MND21-1201	000354	BACKGROUND-GAME PRESERVE POND	Potential of Hydrogen	8.00	SU
MND21-1201	000354	BACKGROUND-GAME PRESERVE POND	Potential of Hydrogen	7.28	SU
MND21-1201	000354	BACKGROUND-GAME PRESERVE POND	Redox Potential	214	MVOLTS
MND21-1201	000354	BACKGROUND-GAME PRESERVE POND	Redox Potential	153	MVOLTS
MND21-1201	000354	BACKGROUND-GAME PRESERVE POND	Specific Conductance	0.081	UMHOS
MND21-1201	000354	BACKGROUND-GAME PRESERVE POND	Specific Conductance	82	UMHOS
MND21-1201	000354	BACKGROUND-GAME PRESERVE POND	Temperature	19.2	C
MND21-1201	000354	BACKGROUND-GAME PRESERVE POND	Temperature	17.7	C
MND21-1201	900000008	BACKGROUND-GAME PRESERVE POND	Alkalinity	27.0	MG/L
MND21-1201	900000008	BACKGROUND-GAME PRESERVE POND	Alkalinity	35.5	MG/L
MND21-1201	900000008	BACKGROUND-GAME PRESERVE POND	Dissolved Oxygen	6.6	MG/L
MND21-1201	900000008	BACKGROUND-GAME PRESERVE POND	Dissolved Oxygen	9.0	MG/L
MND21-1201	900000008	BACKGROUND-GAME PRESERVE POND	Potential of Hydrogen	8.00	SU
MND21-1201	900000008	BACKGROUND-GAME PRESERVE POND	Potential of Hydrogen	7.28	SU
MND21-1201	900000008	BACKGROUND-GAME PRESERVE POND	Redox Potential	214	MVOLTS
MND21-1201	900000008	BACKGROUND-GAME PRESERVE POND	Redox Potential	153	MVOLTS
MND21-1201	900000008	BACKGROUND-GAME PRESERVE POND	Specific Conductance	0.081	UMHOS
MND21-1201	900000008	BACKGROUND-GAME PRESERVE POND	Specific Conductance	82	UMHOS
MND21-1201	900000008	BACKGROUND-GAME PRESERVE POND	Temperature	19.2	C
MND21-1201	900000008	BACKGROUND-GAME PRESERVE POND	Temperature	17.7	C
MND21-1202	000355	BACKGROUND-GAME PRESERVE POND	Alkalinity	34.5	MG/L
MND21-1202	000355	BACKGROUND-GAME PRESERVE POND	Alkalinity	26.0	MG/L
MND21-1202	000355	BACKGROUND-GAME PRESERVE POND	Dissolved Oxygen	3	MG/L
MND21-1202	000355	BACKGROUND-GAME PRESERVE POND	Dissolved Oxygen	8.8	MG/L
MND21-1202	000355	BACKGROUND-GAME PRESERVE POND	Potential of Hydrogen	7.60	SU
MND21-1202	000355	BACKGROUND-GAME PRESERVE POND	Potential of Hydrogen	7.46	SU
MND21-1202	000355	BACKGROUND-GAME PRESERVE POND	Redox Potential	248	MVOLTS
MND21-1202	000355	BACKGROUND-GAME PRESERVE POND	Redox Potential	146	MVOLTS
MND21-1202	000355	BACKGROUND-GAME PRESERVE POND	Specific Conductance	.008	UMHOS
MND21-1202	000355	BACKGROUND-GAME PRESERVE POND	Specific Conductance	83	UMHOS
MND21-1202	000355	BACKGROUND-GAME PRESERVE POND	Temperature	19.4	C
MND21-1202	000355	BACKGROUND-GAME PRESERVE POND	Temperature	17.2	C
MND21-1202	900000009	BACKGROUND-GAME PRESERVE POND	Alkalinity	34.5	MG/L
MND21-1202	900000009	BACKGROUND-GAME PRESERVE POND	Alkalinity	26.0	MG/L
MND21-1202	900000009	BACKGROUND-GAME PRESERVE POND	Dissolved Oxygen	3	MG/L
MND21-1202	900000009	BACKGROUND-GAME PRESERVE POND	Dissolved Oxygen	8.8	MG/L
MND21-1202	900000009	BACKGROUND-GAME PRESERVE POND	Potential of Hydrogen	7.60	SU
MND21-1202	900000009	BACKGROUND-GAME PRESERVE POND	Potential of Hydrogen	7.46	SU

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-1202	900000009	BACKGROUND-GAME PRESERVE POND	Redox Potential	248	MVOLTS
MND21-1202	900000009	BACKGROUND-GAME PRESERVE POND	Redox Potential	146	MVOLTS
MND21-1202	900000009	BACKGROUND-GAME PRESERVE POND	Specific Conductance	.008	UMHOS
MND21-1202	900000009	BACKGROUND-GAME PRESERVE POND	Specific Conductance	83	UMHOS
MND21-1202	900000009	BACKGROUND-GAME PRESERVE POND	Temperature	19.4	C
MND21-1202	900000009	BACKGROUND-GAME PRESERVE POND	Temperature	17.2	C
MND21-1203	000356	BACKGROUND-GAME PRESERVE POND	Alkalinity	32.0	MG/L
MND21-1203	000356	BACKGROUND-GAME PRESERVE POND	Alkalinity	26.5	MG/L
MND21-1203	000356	BACKGROUND-GAME PRESERVE POND	Dissolved Oxygen	10.6	MG/L
MND21-1203	000356	BACKGROUND-GAME PRESERVE POND	Dissolved Oxygen	8.0	MG/L
MND21-1203	000356	BACKGROUND-GAME PRESERVE POND	Potential of Hydrogen	8.85	SU
MND21-1203	000356	BACKGROUND-GAME PRESERVE POND	Potential of Hydrogen	8.37	SU
MND21-1203	000356	BACKGROUND-GAME PRESERVE POND	Redox Potential	219	MVOLTS
MND21-1203	000356	BACKGROUND-GAME PRESERVE POND	Redox Potential	123	MVOLTS
MND21-1203	000356	BACKGROUND-GAME PRESERVE POND	Specific Conductance	0.086	UMHOS
MND21-1203	000356	BACKGROUND-GAME PRESERVE POND	Specific Conductance	83	UMHOS
MND21-1203	000356	BACKGROUND-GAME PRESERVE POND	Temperature	20.5	C
MND21-1203	000356	BACKGROUND-GAME PRESERVE POND	Temperature	16.8	C
MND21-1203	900000010	BACKGROUND-GAME PRESERVE POND	Alkalinity	32.0	MG/L
MND21-1203	900000010	BACKGROUND-GAME PRESERVE POND	Alkalinity	26.5	MG/L
MND21-1203	900000010	BACKGROUND-GAME PRESERVE POND	Dissolved Oxygen	10.6	MG/L
MND21-1203	900000010	BACKGROUND-GAME PRESERVE POND	Dissolved Oxygen	8.0	MG/L
MND21-1203	900000010	BACKGROUND-GAME PRESERVE POND	Potential of Hydrogen	8.85	SU
MND21-1203	900000010	BACKGROUND-GAME PRESERVE POND	Potential of Hydrogen	8.37	SU
MND21-1203	900000010	BACKGROUND-GAME PRESERVE POND	Redox Potential	219	MVOLTS
MND21-1203	900000010	BACKGROUND-GAME PRESERVE POND	Redox Potential	123	MVOLTS
MND21-1203	900000010	BACKGROUND-GAME PRESERVE POND	Specific Conductance	0.086	UMHOS
MND21-1203	900000010	BACKGROUND-GAME PRESERVE POND	Specific Conductance	83	UMHOS
MND21-1203	900000010	BACKGROUND-GAME PRESERVE POND	Temperature	20.5	C
MND21-1203	900000010	BACKGROUND-GAME PRESERVE POND	Temperature	16.8	C
MND21-1204	000357	BACKGROUND-GAME PRESERVE POND	Alkalinity	22.0	MG/L
MND21-1204	000357	BACKGROUND-GAME PRESERVE POND	Alkalinity	25.0	MG/L
MND21-1204	000357	BACKGROUND-GAME PRESERVE POND	Dissolved Oxygen	9.2	MG/L
MND21-1204	000357	BACKGROUND-GAME PRESERVE POND	Dissolved Oxygen	9.8	MG/L
MND21-1204	000357	BACKGROUND-GAME PRESERVE POND	Potential of Hydrogen	8.36	SU
MND21-1204	000357	BACKGROUND-GAME PRESERVE POND	Potential of Hydrogen	8.31	SU
MND21-1204	000357	BACKGROUND-GAME PRESERVE POND	Redox Potential	187	MVOLTS
MND21-1204	000357	BACKGROUND-GAME PRESERVE POND	Redox Potential	121	MVOLTS
MND21-1204	000357	BACKGROUND-GAME PRESERVE POND	Specific Conductance	.07	UMHOS
MND21-1204	000357	BACKGROUND-GAME PRESERVE POND	Specific Conductance	83	UMHOS
MND21-1204	000357	BACKGROUND-GAME PRESERVE POND	Temperature	20.4	C
MND21-1204	000357	BACKGROUND-GAME PRESERVE POND	Temperature	16.4	C
MND21-1204	900000011	BACKGROUND-GAME PRESERVE POND	Alkalinity	22.0	MG/L
MND21-1204	900000011	BACKGROUND-GAME PRESERVE POND	Alkalinity	25.0	MG/L
MND21-1204	900000011	BACKGROUND-GAME PRESERVE POND	Dissolved Oxygen	9.2	MG/L
MND21-1204	900000011	BACKGROUND-GAME PRESERVE POND	Dissolved Oxygen	9.8	MG/L
MND21-1204	900000011	BACKGROUND-GAME PRESERVE POND	Potential of Hydrogen	8.36	SU
MND21-1204	900000011	BACKGROUND-GAME PRESERVE POND	Potential of Hydrogen	8.31	SU
MND21-1204	900000011	BACKGROUND-GAME PRESERVE POND	Redox Potential	187	MVOLTS
MND21-1204	900000011	BACKGROUND-GAME PRESERVE POND	Redox Potential	121	MVOLTS
MND21-1204	900000011	BACKGROUND-GAME PRESERVE POND	Specific Conductance	.07	UMHOS
MND21-1204	900000011	BACKGROUND-GAME PRESERVE POND	Specific Conductance	83	UMHOS
MND21-1204	900000011	BACKGROUND-GAME PRESERVE POND	Temperature	20.4	C
MND21-1204	900000011	BACKGROUND-GAME PRESERVE POND	Temperature	16.4	C
MND21-1205	000358	BACKGROUND-GAME PRESERVE POND	Alkalinity	43.0	MG/L

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-1205	000358	BACKGROUND-GAME PRESERVE POND	Alkalinity	27.0	MG/L
MND21-1205	000358	BACKGROUND-GAME PRESERVE POND	Dissolved Oxygen	4.8	MG/L
MND21-1205	000358	BACKGROUND-GAME PRESERVE POND	Dissolved Oxygen	9.4	MG/L
MND21-1205	000358	BACKGROUND-GAME PRESERVE POND	Potential of Hydrogen	7.54	SU
MND21-1205	000358	BACKGROUND-GAME PRESERVE POND	Potential of Hydrogen	8.35	SU
MND21-1205	000358	BACKGROUND-GAME PRESERVE POND	Redox Potential	278	MVOLTS
MND21-1205	000358	BACKGROUND-GAME PRESERVE POND	Redox Potential	121	MVOLTS
MND21-1205	000358	BACKGROUND-GAME PRESERVE POND	Specific Conductance	0.89	UMHOS
MND21-1205	000358	BACKGROUND-GAME PRESERVE POND	Specific Conductance	83	UMHOS
MND21-1205	000358	BACKGROUND-GAME PRESERVE POND	Temperature	20.0	C
MND21-1205	000358	BACKGROUND-GAME PRESERVE POND	Temperature	16.8	C
MND21-1205	900000012	BACKGROUND-GAME PRESERVE POND	Alkalinity	43.0	MG/L
MND21-1205	900000012	BACKGROUND-GAME PRESERVE POND	Alkalinity	27.0	MG/L
MND21-1205	900000012	BACKGROUND-GAME PRESERVE POND	Dissolved Oxygen	4.8	MG/L
MND21-1205	900000012	BACKGROUND-GAME PRESERVE POND	Dissolved Oxygen	9.4	MG/L
MND21-1205	900000012	BACKGROUND-GAME PRESERVE POND	Potential of Hydrogen	7.54	SU
MND21-1205	900000012	BACKGROUND-GAME PRESERVE POND	Potential of Hydrogen	8.35	SU
MND21-1205	900000012	BACKGROUND-GAME PRESERVE POND	Redox Potential	278	MVOLTS
MND21-1205	900000012	BACKGROUND-GAME PRESERVE POND	Redox Potential	121	MVOLTS
MND21-1205	900000012	BACKGROUND-GAME PRESERVE POND	Specific Conductance	0.89	UMHOS
MND21-1205	900000012	BACKGROUND-GAME PRESERVE POND	Specific Conductance	83	UMHOS
MND21-1205	900000012	BACKGROUND-GAME PRESERVE POND	Temperature	20.0	C
MND21-1205	900000012	BACKGROUND-GAME PRESERVE POND	Temperature	16.8	C
MND21-1301	000362	BACKGROUND-EATON STREAM	Alkalinity	349.5	MG/L
MND21-1301	000362	BACKGROUND-EATON STREAM	Dissolved Oxygen	3	MG/L
MND21-1301	000362	BACKGROUND-EATON STREAM	Potential of Hydrogen	7.68	SU
MND21-1301	000362	BACKGROUND-EATON STREAM	Redox Potential	93	MVOLTS
MND21-1301	000362	BACKGROUND-EATON STREAM	Specific Conductance	959	UMHOS
MND21-1301	000362	BACKGROUND-EATON STREAM	Temperature	14.7	C
MND21-1302	000363	BACKGROUND-EATON STREAM	Alkalinity	294	MG/L
MND21-1302	000363	BACKGROUND-EATON STREAM	Alkalinity	324	MG/L
MND21-1302	000363	BACKGROUND-EATON STREAM	Dissolved Oxygen	2.4	MG/L
MND21-1302	000363	BACKGROUND-EATON STREAM	Dissolved Oxygen	5.2	MG/L
MND21-1302	000363	BACKGROUND-EATON STREAM	Potential of Hydrogen	7.60	SU
MND21-1302	000363	BACKGROUND-EATON STREAM	Potential of Hydrogen	7.31	SU
MND21-1302	000363	BACKGROUND-EATON STREAM	Redox Potential	55	MVOLTS
MND21-1302	000363	BACKGROUND-EATON STREAM	Redox Potential	11	MVOLTS
MND21-1302	000363	BACKGROUND-EATON STREAM	Specific Conductance	.830	UMHOS
MND21-1302	000363	BACKGROUND-EATON STREAM	Specific Conductance	941	UMHOS
MND21-1302	000363	BACKGROUND-EATON STREAM	Temperature	13.8	C
MND21-1302	000363	BACKGROUND-EATON STREAM	Temperature	12.5	C
MND21-1302	900000212	BACKGROUND-EATON STREAM	Alkalinity	294	MG/L
MND21-1302	900000212	BACKGROUND-EATON STREAM	Alkalinity	324	MG/L
MND21-1302	900000212	BACKGROUND-EATON STREAM	Dissolved Oxygen	2.4	MG/L
MND21-1302	900000212	BACKGROUND-EATON STREAM	Dissolved Oxygen	5.2	MG/L
MND21-1302	900000212	BACKGROUND-EATON STREAM	Potential of Hydrogen	7.60	SU
MND21-1302	900000212	BACKGROUND-EATON STREAM	Potential of Hydrogen	7.31	SU
MND21-1302	900000212	BACKGROUND-EATON STREAM	Redox Potential	55	MVOLTS
MND21-1302	900000212	BACKGROUND-EATON STREAM	Redox Potential	11	MVOLTS
MND21-1302	900000212	BACKGROUND-EATON STREAM	Specific Conductance	.830	UMHOS
MND21-1302	900000212	BACKGROUND-EATON STREAM	Specific Conductance	941	UMHOS
MND21-1302	900000212	BACKGROUND-EATON STREAM	Temperature	13.8	C
MND21-1302	900000212	BACKGROUND-EATON STREAM	Temperature	12.5	C
MND21-1401	000351	BACKGROUND-PETERSON POND	Alkalinity	114.5	MG/L
MND21-1401	000351	BACKGROUND-PETERSON POND	Alkalinity	71.5	MG/L

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-1401	000351	BACKGROUND-PETERSON POND	Dissolved Oxygen	9.2	MG/L
MND21-1401	000351	BACKGROUND-PETERSON POND	Dissolved Oxygen	6.4	MG/L
MND21-1401	000351	BACKGROUND-PETERSON POND	Potential of Hydrogen	8.07	SU
MND21-1401	000351	BACKGROUND-PETERSON POND	Potential of Hydrogen	7.38	SU
MND21-1401	000351	BACKGROUND-PETERSON POND	Redox Potential	207	MVOLTS
MND21-1401	000351	BACKGROUND-PETERSON POND	Redox Potential	152	MVOLTS
MND21-1401	000351	BACKGROUND-PETERSON POND	Specific Conductance	.285	UMHOS
MND21-1401	000351	BACKGROUND-PETERSON POND	Specific Conductance	221	UMHOS
MND21-1401	000351	BACKGROUND-PETERSON POND	Temperature	11.0	C
MND21-1401	000351	BACKGROUND-PETERSON POND	Temperature	16.9	C
MND21-1401	900000273	BACKGROUND-PETERSON POND	Alkalinity	114.5	MG/L
MND21-1401	900000273	BACKGROUND-PETERSON POND	Alkalinity	71.5	MG/L
MND21-1401	900000273	BACKGROUND-PETERSON POND	Dissolved Oxygen	9.2	MG/L
MND21-1401	900000273	BACKGROUND-PETERSON POND	Dissolved Oxygen	6.4	MG/L
MND21-1401	900000273	BACKGROUND-PETERSON POND	Potential of Hydrogen	8.07	SU
MND21-1401	900000273	BACKGROUND-PETERSON POND	Potential of Hydrogen	7.38	SU
MND21-1401	900000273	BACKGROUND-PETERSON POND	Redox Potential	207	MVOLTS
MND21-1401	900000273	BACKGROUND-PETERSON POND	Redox Potential	152	MVOLTS
MND21-1401	900000273	BACKGROUND-PETERSON POND	Specific Conductance	.285	UMHOS
MND21-1401	900000273	BACKGROUND-PETERSON POND	Specific Conductance	221	UMHOS
MND21-1401	900000273	BACKGROUND-PETERSON POND	Temperature	11.0	C
MND21-1401	900000273	BACKGROUND-PETERSON POND	Temperature	16.9	C
MND21-1402	000352	BACKGROUND-PETERSON POND	Alkalinity	115	MG/L
MND21-1402	000352	BACKGROUND-PETERSON POND	Alkalinity	68.5	MG/L
MND21-1402	000352	BACKGROUND-PETERSON POND	Dissolved Oxygen	9.6	MG/L
MND21-1402	000352	BACKGROUND-PETERSON POND	Dissolved Oxygen	6.6	MG/L
MND21-1402	000352	BACKGROUND-PETERSON POND	Potential of Hydrogen	8.12	SU
MND21-1402	000352	BACKGROUND-PETERSON POND	Potential of Hydrogen	7.63	SU
MND21-1402	000352	BACKGROUND-PETERSON POND	Redox Potential	170	MVOLTS
MND21-1402	000352	BACKGROUND-PETERSON POND	Redox Potential	154	MVOLTS
MND21-1402	000352	BACKGROUND-PETERSON POND	Specific Conductance	.284	UMHOS
MND21-1402	000352	BACKGROUND-PETERSON POND	Specific Conductance	219	UMHOS
MND21-1402	000352	BACKGROUND-PETERSON POND	Temperature	11.2	C
MND21-1402	000352	BACKGROUND-PETERSON POND	Temperature	16.5	C
MND21-1402	900000274	BACKGROUND-PETERSON POND	Alkalinity	115	MG/L
MND21-1402	900000274	BACKGROUND-PETERSON POND	Alkalinity	68.5	MG/L
MND21-1402	900000274	BACKGROUND-PETERSON POND	Dissolved Oxygen	9.6	MG/L
MND21-1402	900000274	BACKGROUND-PETERSON POND	Dissolved Oxygen	6.6	MG/L
MND21-1402	900000274	BACKGROUND-PETERSON POND	Potential of Hydrogen	8.12	SU
MND21-1402	900000274	BACKGROUND-PETERSON POND	Potential of Hydrogen	7.63	SU
MND21-1402	900000274	BACKGROUND-PETERSON POND	Redox Potential	170	MVOLTS
MND21-1402	900000274	BACKGROUND-PETERSON POND	Redox Potential	154	MVOLTS
MND21-1402	900000274	BACKGROUND-PETERSON POND	Specific Conductance	.284	UMHOS
MND21-1402	900000274	BACKGROUND-PETERSON POND	Specific Conductance	219	UMHOS
MND21-1402	900000274	BACKGROUND-PETERSON POND	Temperature	11.2	C
MND21-1402	900000274	BACKGROUND-PETERSON POND	Temperature	16.5	C
MND21-1403	000353	BACKGROUND-PETERSON POND	Alkalinity	NR	MG/L
MND21-1403	000353	BACKGROUND-PETERSON POND	Alkalinity	74.5	MG/L
MND21-1403	000353	BACKGROUND-PETERSON POND	Dissolved Oxygen	9.6	MG/L
MND21-1403	000353	BACKGROUND-PETERSON POND	Dissolved Oxygen	6.4	MG/L
MND21-1403	000353	BACKGROUND-PETERSON POND	Potential of Hydrogen	8.18	SU
MND21-1403	000353	BACKGROUND-PETERSON POND	Potential of Hydrogen	7.53	SU
MND21-1403	000353	BACKGROUND-PETERSON POND	Redox Potential	174	MVOLTS
MND21-1403	000353	BACKGROUND-PETERSON POND	Redox Potential	157	MVOLTS
MND21-1403	000353	BACKGROUND-PETERSON POND	Specific Conductance	.284	UMHOS

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-1403	000353	BACKGROUND-PETERSON POND	Specific Conductance	220	UMHOS
MND21-1403	000353	BACKGROUND-PETERSON POND	Temperature	11.5	C
MND21-1403	000353	BACKGROUND-PETERSON POND	Temperature	16.6	C
MND21-1403	900000275	BACKGROUND-PETERSON POND	Alkalinity	NR	MG/L
MND21-1403	900000275	BACKGROUND-PETERSON POND	Alkalinity	74.5	MG/L
MND21-1403	900000275	BACKGROUND-PETERSON POND	Dissolved Oxygen	9.6	MG/L
MND21-1403	900000275	BACKGROUND-PETERSON POND	Dissolved Oxygen	6.4	MG/L
MND21-1403	900000275	BACKGROUND-PETERSON POND	Potential of Hydrogen	8.18	SU
MND21-1403	900000275	BACKGROUND-PETERSON POND	Potential of Hydrogen	7.53	SU
MND21-1403	900000275	BACKGROUND-PETERSON POND	Redox Potential	174	MVOLTS
MND21-1403	900000275	BACKGROUND-PETERSON POND	Redox Potential	157	MVOLTS
MND21-1403	900000275	BACKGROUND-PETERSON POND	Specific Conductance	.284	UMHOS
MND21-1403	900000275	BACKGROUND-PETERSON POND	Specific Conductance	220	UMHOS
MND21-1403	900000275	BACKGROUND-PETERSON POND	Temperature	11.5	C
MND21-1403	900000275	BACKGROUND-PETERSON POND	Temperature	16.6	C
MND21-1501	000364	BACKGROUND-TURKEY RUN STREAM	Alkalinity	254	MG/L
MND21-1501	000364	BACKGROUND-TURKEY RUN STREAM	Alkalinity	210	MG/L
MND21-1501	000364	BACKGROUND-TURKEY RUN STREAM	Dissolved Oxygen	8	MG/L
MND21-1501	000364	BACKGROUND-TURKEY RUN STREAM	Dissolved Oxygen	16.3	MG/L
MND21-1501	000364	BACKGROUND-TURKEY RUN STREAM	Potential of Hydrogen	7.98	SU
MND21-1501	000364	BACKGROUND-TURKEY RUN STREAM	Potential of Hydrogen	8.17	SU
MND21-1501	000364	BACKGROUND-TURKEY RUN STREAM	Redox Potential	65	MVOLTS
MND21-1501	000364	BACKGROUND-TURKEY RUN STREAM	Redox Potential	176	MVOLTS
MND21-1501	000364	BACKGROUND-TURKEY RUN STREAM	Specific Conductance	.807	UMHOS
MND21-1501	000364	BACKGROUND-TURKEY RUN STREAM	Specific Conductance	613	UMHOS
MND21-1501	000364	BACKGROUND-TURKEY RUN STREAM	Temperature	10.1	C
MND21-1501	000364	BACKGROUND-TURKEY RUN STREAM	Temperature	13.1	C
MND21-1501	900000276	BACKGROUND-TURKEY RUN STREAM	Alkalinity	254	MG/L
MND21-1501	900000276	BACKGROUND-TURKEY RUN STREAM	Alkalinity	210	MG/L
MND21-1501	900000276	BACKGROUND-TURKEY RUN STREAM	Dissolved Oxygen	8	MG/L
MND21-1501	900000276	BACKGROUND-TURKEY RUN STREAM	Dissolved Oxygen	16.3	MG/L
MND21-1501	900000276	BACKGROUND-TURKEY RUN STREAM	Potential of Hydrogen	7.98	SU
MND21-1501	900000276	BACKGROUND-TURKEY RUN STREAM	Potential of Hydrogen	8.17	SU
MND21-1501	900000276	BACKGROUND-TURKEY RUN STREAM	Redox Potential	65	MVOLTS
MND21-1501	900000276	BACKGROUND-TURKEY RUN STREAM	Redox Potential	176	MVOLTS
MND21-1501	900000276	BACKGROUND-TURKEY RUN STREAM	Specific Conductance	.807	UMHOS
MND21-1501	900000276	BACKGROUND-TURKEY RUN STREAM	Specific Conductance	613	UMHOS
MND21-1501	900000276	BACKGROUND-TURKEY RUN STREAM	Temperature	10.1	C
MND21-1501	900000276	BACKGROUND-TURKEY RUN STREAM	Temperature	13.1	C
MND21-1502	000365	BACKGROUND-TURKEY RUN STREAM	Alkalinity	NR	MG/L
MND21-1502	000365	BACKGROUND-TURKEY RUN STREAM	Alkalinity	178.5	MG/L
MND21-1502	000365	BACKGROUND-TURKEY RUN STREAM	Dissolved Oxygen	6.2	MG/L
MND21-1502	000365	BACKGROUND-TURKEY RUN STREAM	Dissolved Oxygen	10.4	MG/L
MND21-1502	000365	BACKGROUND-TURKEY RUN STREAM	Potential of Hydrogen	7.51	SU
MND21-1502	000365	BACKGROUND-TURKEY RUN STREAM	Potential of Hydrogen	4.28	SU
MND21-1502	000365	BACKGROUND-TURKEY RUN STREAM	Redox Potential	116	MVOLTS
MND21-1502	000365	BACKGROUND-TURKEY RUN STREAM	Redox Potential	148	MVOLTS
MND21-1502	000365	BACKGROUND-TURKEY RUN STREAM	Specific Conductance	.641	UMHOS
MND21-1502	000365	BACKGROUND-TURKEY RUN STREAM	Specific Conductance	625	UMHOS
MND21-1502	000365	BACKGROUND-TURKEY RUN STREAM	Temperature	12.5	C
MND21-1502	000365	BACKGROUND-TURKEY RUN STREAM	Temperature	16.6	C
MND21-1502	900000277	BACKGROUND-TURKEY RUN STREAM	Alkalinity	NR	MG/L
MND21-1502	900000277	BACKGROUND-TURKEY RUN STREAM	Alkalinity	178.5	MG/L
MND21-1502	900000277	BACKGROUND-TURKEY RUN STREAM	Dissolved Oxygen	6.2	MG/L
MND21-1502	900000277	BACKGROUND-TURKEY RUN STREAM	Dissolved Oxygen	10.4	MG/L

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-1502	900000277	BACKGROUND-TURKEY RUN STREAM	Potential of Hydrogen	7.51	SU
MND21-1502	900000277	BACKGROUND-TURKEY RUN STREAM	Potential of Hydrogen	4.28	SU
MND21-1502	900000277	BACKGROUND-TURKEY RUN STREAM	Redox Potential	116	MVOLTS
MND21-1502	900000277	BACKGROUND-TURKEY RUN STREAM	Redox Potential	148	MVOLTS
MND21-1502	900000277	BACKGROUND-TURKEY RUN STREAM	Specific Conductance	641	UMHOS
MND21-1502	900000277	BACKGROUND-TURKEY RUN STREAM	Specific Conductance	625	UMHOS
MND21-1502	900000277	BACKGROUND-TURKEY RUN STREAM	Temperature	12.5	C
MND21-1502	900000277	BACKGROUND-TURKEY RUN STREAM	Temperature	16.6	C
MND21-2001	000335	SRDS-ASPHALT LINED POND	Alkalinity	406.5	MG/L
MND21-2001	000335	SRDS-ASPHALT LINED POND	Alkalinity	115.5	MG/L
MND21-2001	000335	SRDS-ASPHALT LINED POND	Dissolved Oxygen	13.8	MG/L
MND21-2001	000335	SRDS-ASPHALT LINED POND	Dissolved Oxygen	11.4	MG/L
MND21-2001	000335	SRDS-ASPHALT LINED POND	Potential of Hydrogen	9.47	SU
MND21-2001	000335	SRDS-ASPHALT LINED POND	Potential of Hydrogen	9.79	SU
MND21-2001	000335	SRDS-ASPHALT LINED POND	Redox Potential	212	MVOLTS
MND21-2001	000335	SRDS-ASPHALT LINED POND	Redox Potential	166	MVOLTS
MND21-2001	000335	SRDS-ASPHALT LINED POND	Specific Conductance	1.570	UMHOS
MND21-2001	000335	SRDS-ASPHALT LINED POND	Specific Conductance	850	UMHOS
MND21-2001	000335	SRDS-ASPHALT LINED POND	Temperature	26.0	C
MND21-2001	000335	SRDS-ASPHALT LINED POND	Temperature	19.4	C
MND21-2001	900000034	SRDS-ASPHALT LINED POND	Alkalinity	406.5	MG/L
MND21-2001	900000034	SRDS-ASPHALT LINED POND	Alkalinity	115.5	MG/L
MND21-2001	900000034	SRDS-ASPHALT LINED POND	Dissolved Oxygen	13.8	MG/L
MND21-2001	900000034	SRDS-ASPHALT LINED POND	Dissolved Oxygen	11.4	MG/L
MND21-2001	900000034	SRDS-ASPHALT LINED POND	Potential of Hydrogen	9.47	SU
MND21-2001	900000034	SRDS-ASPHALT LINED POND	Potential of Hydrogen	9.79	SU
MND21-2001	900000034	SRDS-ASPHALT LINED POND	Redox Potential	212	MVOLTS
MND21-2001	900000034	SRDS-ASPHALT LINED POND	Redox Potential	166	MVOLTS
MND21-2001	900000034	SRDS-ASPHALT LINED POND	Specific Conductance	1.570	UMHOS
MND21-2001	900000034	SRDS-ASPHALT LINED POND	Specific Conductance	850	UMHOS
MND21-2001	900000034	SRDS-ASPHALT LINED POND	Temperature	26.0	C
MND21-2001	900000034	SRDS-ASPHALT LINED POND	Temperature	19.4	C
MND21-2002	000336	SRDS-ASPHALT LINED POND	Alkalinity	411	MG/L
MND21-2002	000336	SRDS-ASPHALT LINED POND	Alkalinity	111.5	MG/L
MND21-2002	000336	SRDS-ASPHALT LINED POND	Dissolved Oxygen	7.8	MG/L
MND21-2002	000336	SRDS-ASPHALT LINED POND	Dissolved Oxygen	13.2	MG/L
MND21-2002	000336	SRDS-ASPHALT LINED POND	Potential of Hydrogen	9.41	SU
MND21-2002	000336	SRDS-ASPHALT LINED POND	Potential of Hydrogen	9.94	SU
MND21-2002	000336	SRDS-ASPHALT LINED POND	Redox Potential	203	MVOLTS
MND21-2002	000336	SRDS-ASPHALT LINED POND	Redox Potential	148	MVOLTS
MND21-2002	000336	SRDS-ASPHALT LINED POND	Specific Conductance	1.52	UMHOS
MND21-2002	000336	SRDS-ASPHALT LINED POND	Specific Conductance	840	UMHOS
MND21-2002	000336	SRDS-ASPHALT LINED POND	Temperature	25.4	C
MND21-2002	000336	SRDS-ASPHALT LINED POND	Temperature	19.6	C
MND21-2002	900000035	SRDS-ASPHALT LINED POND	Alkalinity	411	MG/L
MND21-2002	900000035	SRDS-ASPHALT LINED POND	Alkalinity	111.5	MG/L
MND21-2002	900000035	SRDS-ASPHALT LINED POND	Dissolved Oxygen	7.8	MG/L
MND21-2002	900000035	SRDS-ASPHALT LINED POND	Dissolved Oxygen	13.2	MG/L
MND21-2002	900000035	SRDS-ASPHALT LINED POND	Potential of Hydrogen	9.41	SU
MND21-2002	900000035	SRDS-ASPHALT LINED POND	Potential of Hydrogen	9.94	SU
MND21-2002	900000035	SRDS-ASPHALT LINED POND	Redox Potential	203	MVOLTS
MND21-2002	900000035	SRDS-ASPHALT LINED POND	Redox Potential	148	MVOLTS
MND21-2002	900000035	SRDS-ASPHALT LINED POND	Specific Conductance	1.52	UMHOS
MND21-2002	900000035	SRDS-ASPHALT LINED POND	Specific Conductance	840	UMHOS
MND21-2002	900000035	SRDS-ASPHALT LINED POND	Temperature	25.4	C

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-2002	900000035	SRDS-ASPHALT LINED POND	Temperature	19.6	C
MND21-2003	000337	SRDS-ASPHALT LINED POND	Alkalinity	410.5	MG/L
MND21-2003	000337	SRDS-ASPHALT LINED POND	Alkalinity	123.5	MG/L
MND21-2003	000337	SRDS-ASPHALT LINED POND	Dissolved Oxygen	11.8	MG/L
MND21-2003	000337	SRDS-ASPHALT LINED POND	Dissolved Oxygen	12.2	MG/L
MND21-2003	000337	SRDS-ASPHALT LINED POND	Potential of Hydrogen	9.38	SU
MND21-2003	000337	SRDS-ASPHALT LINED POND	Potential of Hydrogen	9.8	SU
MND21-2003	000337	SRDS-ASPHALT LINED POND	Redox Potential	201	MVOLTS
MND21-2003	000337	SRDS-ASPHALT LINED POND	Redox Potential	147	MVOLTS
MND21-2003	000337	SRDS-ASPHALT LINED POND	Specific Conductance	1.52	UMHOS
MND21-2003	000337	SRDS-ASPHALT LINED POND	Specific Conductance	843	UMHOS
MND21-2003	000337	SRDS-ASPHALT LINED POND	Temperature	26.6	C
MND21-2003	000337	SRDS-ASPHALT LINED POND	Temperature	19.8	C
MND21-2003	900000036	SRDS-ASPHALT LINED POND	Alkalinity	410.5	MG/L
MND21-2003	900000036	SRDS-ASPHALT LINED POND	Alkalinity	123.5	MG/L
MND21-2003	900000036	SRDS-ASPHALT LINED POND	Dissolved Oxygen	11.8	MG/L
MND21-2003	900000036	SRDS-ASPHALT LINED POND	Dissolved Oxygen	12.2	MG/L
MND21-2003	900000036	SRDS-ASPHALT LINED POND	Potential of Hydrogen	9.38	SU
MND21-2003	900000036	SRDS-ASPHALT LINED POND	Potential of Hydrogen	9.8	SU
MND21-2003	900000036	SRDS-ASPHALT LINED POND	Redox Potential	201	MVOLTS
MND21-2003	900000036	SRDS-ASPHALT LINED POND	Redox Potential	147	MVOLTS
MND21-2003	900000036	SRDS-ASPHALT LINED POND	Specific Conductance	1.52	UMHOS
MND21-2003	900000036	SRDS-ASPHALT LINED POND	Specific Conductance	843	UMHOS
MND21-2003	900000036	SRDS-ASPHALT LINED POND	Temperature	26.6	C
MND21-2003	900000036	SRDS-ASPHALT LINED POND	Temperature	19.8	C
MND21-2004	000338	SRDS-ASPHALT LINED POND	Alkalinity	435	MG/L
MND21-2004	000338	SRDS-ASPHALT LINED POND	Alkalinity	118.5	MG/L
MND21-2004	000338	SRDS-ASPHALT LINED POND	Alkalinity	10.9	MG/L
MND21-2004	000338	SRDS-ASPHALT LINED POND	Dissolved Oxygen	9.6	MG/L
MND21-2004	000338	SRDS-ASPHALT LINED POND	Potential of Hydrogen	9.29	SU
MND21-2004	000338	SRDS-ASPHALT LINED POND	Potential of Hydrogen	9.31	SU
MND21-2004	000338	SRDS-ASPHALT LINED POND	Redox Potential	197	MVOLTS
MND21-2004	000338	SRDS-ASPHALT LINED POND	Redox Potential	140	MVOLTS
MND21-2004	000338	SRDS-ASPHALT LINED POND	Specific Conductance	1.603	UMHOS
MND21-2004	000338	SRDS-ASPHALT LINED POND	Specific Conductance	909	UMHOS
MND21-2004	000338	SRDS-ASPHALT LINED POND	Temperature	26.5	C
MND21-2004	000338	SRDS-ASPHALT LINED POND	Temperature	19.3	C
MND21-2004	900000033	SRDS-ASPHALT LINED POND	Alkalinity	435	MG/L
MND21-2004	900000033	SRDS-ASPHALT LINED POND	Alkalinity	118.5	MG/L
MND21-2004	900000033	SRDS-ASPHALT LINED POND	Alkalinity	10.9	MG/L
MND21-2004	900000033	SRDS-ASPHALT LINED POND	Dissolved Oxygen	9.6	MG/L
MND21-2004	900000033	SRDS-ASPHALT LINED POND	Potential of Hydrogen	9.29	SU
MND21-2004	900000033	SRDS-ASPHALT LINED POND	Potential of Hydrogen	9.31	SU
MND21-2004	900000033	SRDS-ASPHALT LINED POND	Redox Potential	197	MVOLTS
MND21-2004	900000033	SRDS-ASPHALT LINED POND	Redox Potential	140	MVOLTS
MND21-2004	900000033	SRDS-ASPHALT LINED POND	Specific Conductance	1.603	UMHOS
MND21-2004	900000033	SRDS-ASPHALT LINED POND	Specific Conductance	909	UMHOS
MND21-2004	900000033	SRDS-ASPHALT LINED POND	Temperature	26.5	C
MND21-2004	900000033	SRDS-ASPHALT LINED POND	Temperature	19.3	C
MND21-2101	000339	SRDS-PLANT DRAINAGE DITCH	Alkalinity	607.5	MG/L
MND21-2101	000339	SRDS-PLANT DRAINAGE DITCH	Alkalinity	283	MG/L
MND21-2101	000339	SRDS-PLANT DRAINAGE DITCH	Dissolved Oxygen	9.8	MG/L
MND21-2101	000339	SRDS-PLANT DRAINAGE DITCH	Dissolved Oxygen	8.8	MG/L
MND21-2101	000339	SRDS-PLANT DRAINAGE DITCH	Potential of Hydrogen	8.43	SU
MND21-2101	000339	SRDS-PLANT DRAINAGE DITCH	Potential of Hydrogen	8.33	SU

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-2101	000339	SRDS-PLANT DRAINAGE DITCH	Redox Potential	199	MVOLTS
MND21-2101	000339	SRDS-PLANT DRAINAGE DITCH	Redox Potential	165	MVOLTS
MND21-2101	000339	SRDS-PLANT DRAINAGE DITCH	Specific Conductance	1.195	UMHOS
MND21-2101	000339	SRDS-PLANT DRAINAGE DITCH	Specific Conductance	1299	UMHOS
MND21-2101	000339	SRDS-PLANT DRAINAGE DITCH	Temperature	16.5	C
MND21-2101	000339	SRDS-PLANT DRAINAGE DITCH	Temperature	20.4	C
MND21-2101	900000230	SRDS-PLANT DRAINAGE DITCH	Alkalinity	607.5	MG/L
MND21-2101	900000230	SRDS-PLANT DRAINAGE DITCH	Alkalinity	283	MG/L
MND21-2101	900000230	SRDS-PLANT DRAINAGE DITCH	Dissolved Oxygen	9.8	MG/L
MND21-2101	900000230	SRDS-PLANT DRAINAGE DITCH	Dissolved Oxygen	8.8	MG/L
MND21-2101	900000230	SRDS-PLANT DRAINAGE DITCH	Potential of Hydrogen	8.43	SU
MND21-2101	900000230	SRDS-PLANT DRAINAGE DITCH	Potential of Hydrogen	8.33	SU
MND21-2101	900000230	SRDS-PLANT DRAINAGE DITCH	Redox Potential	199	MVOLTS
MND21-2101	900000230	SRDS-PLANT DRAINAGE DITCH	Redox Potential	165	MVOLTS
MND21-2101	900000230	SRDS-PLANT DRAINAGE DITCH	Specific Conductance	1.195	UMHOS
MND21-2101	900000230	SRDS-PLANT DRAINAGE DITCH	Specific Conductance	1299	UMHOS
MND21-2101	900000230	SRDS-PLANT DRAINAGE DITCH	Temperature	16.5	C
MND21-2101	900000230	SRDS-PLANT DRAINAGE DITCH	Temperature	20.4	C
MND21-2102	000340	SRDS-PLANT DRAINAGE DITCH	Alkalinity	394	MG/L
MND21-2102	000340	SRDS-PLANT DRAINAGE DITCH	Alkalinity	433.5	MG/L
MND21-2102	000340	SRDS-PLANT DRAINAGE DITCH	Dissolved Oxygen	8.4	MG/L
MND21-2102	000340	SRDS-PLANT DRAINAGE DITCH	Dissolved Oxygen	8.8	MG/L
MND21-2102	000340	SRDS-PLANT DRAINAGE DITCH	Potential of Hydrogen	8.45	SU
MND21-2102	000340	SRDS-PLANT DRAINAGE DITCH	Potential of Hydrogen	8.67	SU
MND21-2102	000340	SRDS-PLANT DRAINAGE DITCH	Potential of Hydrogen	8.45	SU
MND21-2102	000340	SRDS-PLANT DRAINAGE DITCH	Redox Potential	130	MVOLTS
MND21-2102	000340	SRDS-PLANT DRAINAGE DITCH	Redox Potential	130	MVOLTS
MND21-2102	000340	SRDS-PLANT DRAINAGE DITCH	Redox Potential	281	MVOLTS
MND21-2102	000340	SRDS-PLANT DRAINAGE DITCH	Specific Conductance	.739	UMHOS
MND21-2102	000340	SRDS-PLANT DRAINAGE DITCH	Specific Conductance	2180	UMHOS
MND21-2102	000340	SRDS-PLANT DRAINAGE DITCH	Temperature	16.5	C
MND21-2102	000340	SRDS-PLANT DRAINAGE DITCH	Temperature	20.5	C
MND21-2102	900000231	SRDS-PLANT DRAINAGE DITCH	Alkalinity	394	MG/L
MND21-2102	900000231	SRDS-PLANT DRAINAGE DITCH	Alkalinity	433.5	MG/L
MND21-2102	900000231	SRDS-PLANT DRAINAGE DITCH	Dissolved Oxygen	8.4	MG/L
MND21-2102	900000231	SRDS-PLANT DRAINAGE DITCH	Dissolved Oxygen	8.8	MG/L
MND21-2102	900000231	SRDS-PLANT DRAINAGE DITCH	Potential of Hydrogen	8.45	SU
MND21-2102	900000231	SRDS-PLANT DRAINAGE DITCH	Potential of Hydrogen	8.67	SU
MND21-2102	900000231	SRDS-PLANT DRAINAGE DITCH	Redox Potential	130	MVOLTS
MND21-2102	900000231	SRDS-PLANT DRAINAGE DITCH	Redox Potential	281	MVOLTS
MND21-2102	900000231	SRDS-PLANT DRAINAGE DITCH	Specific Conductance	.739	UMHOS
MND21-2102	900000231	SRDS-PLANT DRAINAGE DITCH	Specific Conductance	2180	UMHOS
MND21-2102	900000231	SRDS-PLANT DRAINAGE DITCH	Temperature	16.5	C
MND21-2102	900000231	SRDS-PLANT DRAINAGE DITCH	Temperature	20.5	C
MND21-2102	900000232	SRDS-PLANT DRAINAGE DITCH	Alkalinity	394	MG/L
MND21-2102	900000232	SRDS-PLANT DRAINAGE DITCH	Alkalinity	433.5	MG/L
MND21-2102	900000232	SRDS-PLANT DRAINAGE DITCH	Dissolved Oxygen	8.4	MG/L
MND21-2102	900000232	SRDS-PLANT DRAINAGE DITCH	Dissolved Oxygen	8.8	MG/L
MND21-2102	900000232	SRDS-PLANT DRAINAGE DITCH	Potential of Hydrogen	8.45	SU
MND21-2102	900000232	SRDS-PLANT DRAINAGE DITCH	Potential of Hydrogen	8.67	SU
MND21-2102	900000232	SRDS-PLANT DRAINAGE DITCH	Potential of Hydrogen	8.45	SU
MND21-2102	900000232	SRDS-PLANT DRAINAGE DITCH	Redox Potential	130	MVOLTS
MND21-2102	900000232	SRDS-PLANT DRAINAGE DITCH	Redox Potential	281	MVOLTS
MND21-2102	900000232	SRDS-PLANT DRAINAGE DITCH	Specific Conductance	.739	UMHOS
MND21-2102	900000232	SRDS-PLANT DRAINAGE DITCH	Specific Conductance	2180	UMHOS

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-2102	900000232	SRDS-PLANT DRAINAGE DITCH	Temperature	16.5	C
MND21-2102	900000232	SRDS-PLANT DRAINAGE DITCH	Temperature	20.5	C
MND21-2103	000341	SRDS-PLANT DRAINAGE DITCH	Alkalinity	315	MG/L
MND21-2103	000341	SRDS-PLANT DRAINAGE DITCH	Alkalinity	360.5	MG/L
MND21-2103	000341	SRDS-PLANT DRAINAGE DITCH	Dissolved Oxygen	9.2	MG/L
MND21-2103	000341	SRDS-PLANT DRAINAGE DITCH	Dissolved Oxygen	8.6	MG/L
MND21-2103	000341	SRDS-PLANT DRAINAGE DITCH	Potential of Hydrogen	8.29	SU
MND21-2103	000341	SRDS-PLANT DRAINAGE DITCH	Potential of Hydrogen	8.22	SU
MND21-2103	000341	SRDS-PLANT DRAINAGE DITCH	Redox Potential	49	MVOLTS
MND21-2103	000341	SRDS-PLANT DRAINAGE DITCH	Redox Potential	349	MVOLTS
MND21-2103	000341	SRDS-PLANT DRAINAGE DITCH	Specific Conductance	.009	UMHOS
MND21-2103	000341	SRDS-PLANT DRAINAGE DITCH	Specific Conductance	1408	UMHOS
MND21-2103	000341	SRDS-PLANT DRAINAGE DITCH	Temperature	13.6	C
MND21-2103	000341	SRDS-PLANT DRAINAGE DITCH	Temperature	17.9	C
MND21-2103	900000233	SRDS-PLANT DRAINAGE DITCH	Alkalinity	315	MG/L
MND21-2103	900000233	SRDS-PLANT DRAINAGE DITCH	Alkalinity	360.5	MG/L
MND21-2103	900000233	SRDS-PLANT DRAINAGE DITCH	Dissolved Oxygen	9.2	MG/L
MND21-2103	900000233	SRDS-PLANT DRAINAGE DITCH	Dissolved Oxygen	8.6	MG/L
MND21-2103	900000233	SRDS-PLANT DRAINAGE DITCH	Potential of Hydrogen	8.29	SU
MND21-2103	900000233	SRDS-PLANT DRAINAGE DITCH	Potential of Hydrogen	8.22	SU
MND21-2103	900000233	SRDS-PLANT DRAINAGE DITCH	Redox Potential	49	MVOLTS
MND21-2103	900000233	SRDS-PLANT DRAINAGE DITCH	Redox Potential	349	MVOLTS
MND21-2103	900000233	SRDS-PLANT DRAINAGE DITCH	Specific Conductance	.009	UMHOS
MND21-2103	900000233	SRDS-PLANT DRAINAGE DITCH	Specific Conductance	1408	UMHOS
MND21-2103	900000233	SRDS-PLANT DRAINAGE DITCH	Temperature	13.6	C
MND21-2103	900000233	SRDS-PLANT DRAINAGE DITCH	Temperature	17.9	C
MND21-2103	900000234	SRDS-PLANT DRAINAGE DITCH	Alkalinity	315	MG/L
MND21-2103	900000234	SRDS-PLANT DRAINAGE DITCH	Alkalinity	360.5	MG/L
MND21-2103	900000234	SRDS-PLANT DRAINAGE DITCH	Dissolved Oxygen	9.2	MG/L
MND21-2103	900000234	SRDS-PLANT DRAINAGE DITCH	Dissolved Oxygen	8.6	MG/L
MND21-2103	900000234	SRDS-PLANT DRAINAGE DITCH	Potential of Hydrogen	8.29	SU
MND21-2103	900000234	SRDS-PLANT DRAINAGE DITCH	Potential of Hydrogen	8.22	SU
MND21-2103	900000234	SRDS-PLANT DRAINAGE DITCH	Redox Potential	49	MVOLTS
MND21-2103	900000234	SRDS-PLANT DRAINAGE DITCH	Redox Potential	349	MVOLTS
MND21-2103	900000234	SRDS-PLANT DRAINAGE DITCH	Specific Conductance	.009	UMHOS
MND21-2103	900000234	SRDS-PLANT DRAINAGE DITCH	Specific Conductance	1408	UMHOS
MND21-2103	900000234	SRDS-PLANT DRAINAGE DITCH	Temperature	13.6	C
MND21-2103	900000234	SRDS-PLANT DRAINAGE DITCH	Temperature	17.9	C
MND21-2201	000342	SRDS-RETENTION BASIN	Alkalinity	345.5	MG/L
MND21-2201	000342	SRDS-RETENTION BASIN	Alkalinity	341.5	MG/L
MND21-2201	000342	SRDS-RETENTION BASIN	Dissolved Oxygen	9.6	MG/L
MND21-2201	000342	SRDS-RETENTION BASIN	Dissolved Oxygen	7.0	MG/L
MND21-2201	000342	SRDS-RETENTION BASIN	Potential of Hydrogen	8.66	SU
MND21-2201	000342	SRDS-RETENTION BASIN	Potential of Hydrogen	8.10	SU
MND21-2201	000342	SRDS-RETENTION BASIN	Redox Potential	225	MVOLTS
MND21-2201	000342	SRDS-RETENTION BASIN	Redox Potential	218	MVOLTS
MND21-2201	000342	SRDS-RETENTION BASIN	Specific Conductance	1.26	UMHOS
MND21-2201	000342	SRDS-RETENTION BASIN	Specific Conductance	1406	UMHOS
MND21-2201	000342	SRDS-RETENTION BASIN	Temperature	21.9	C
MND21-2201	000342	SRDS-RETENTION BASIN	Temperature	17.1	C
MND21-2201	900000064	SRDS-RETENTION BASIN	Alkalinity	345.5	MG/L
MND21-2201	900000064	SRDS-RETENTION BASIN	Alkalinity	341.5	MG/L
MND21-2201	900000064	SRDS-RETENTION BASIN	Dissolved Oxygen	9.6	MG/L
MND21-2201	900000064	SRDS-RETENTION BASIN	Dissolved Oxygen	7.0	MG/L
MND21-2201	900000064	SRDS-RETENTION BASIN	Potential of Hydrogen	8.66	SU

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-2201	900000064	SRDS-RETENTION BASIN	Potential of Hydrogen	8.10	SU
MND21-2201	900000064	SRDS-RETENTION BASIN	Redox Potential	225	MVOLTS
MND21-2201	900000064	SRDS-RETENTION BASIN	Redox Potential	218	MVOLTS
MND21-2201	900000064	SRDS-RETENTION BASIN	Specific Conductance	1.26	UMHOS
MND21-2201	900000064	SRDS-RETENTION BASIN	Specific Conductance	1406	UMHOS
MND21-2201	900000064	SRDS-RETENTION BASIN	Temperature	21.9	C
MND21-2201	900000064	SRDS-RETENTION BASIN	Temperature	17.1	C
MND21-2202	000343	SRDS-RETENTION BASIN	Alkalinity	364.5	MG/L
MND21-2202	000343	SRDS-RETENTION BASIN	Alkalinity	314.0	MG/L
MND21-2202	000343	SRDS-RETENTION BASIN	Dissolved Oxygen	7.2	MG/L
MND21-2202	000343	SRDS-RETENTION BASIN	Dissolved Oxygen	10.8	MG/L
MND21-2202	000343	SRDS-RETENTION BASIN	Potential of Hydrogen	7.92	SU
MND21-2202	000343	SRDS-RETENTION BASIN	Potential of Hydrogen	8.34	SU
MND21-2202	000343	SRDS-RETENTION BASIN	Redox Potential	202	MVOLTS
MND21-2202	000343	SRDS-RETENTION BASIN	Redox Potential	228	MVOLTS
MND21-2202	000343	SRDS-RETENTION BASIN	Specific Conductance	1.35	UMHOS
MND21-2202	000343	SRDS-RETENTION BASIN	Specific Conductance	2050	UMHOS
MND21-2202	000343	SRDS-RETENTION BASIN	Temperature	17.2	C
MND21-2202	000343	SRDS-RETENTION BASIN	Temperature	19.8	C
MND21-2202	900000065	SRDS-RETENTION BASIN	Alkalinity	364.5	MG/L
MND21-2202	900000065	SRDS-RETENTION BASIN	Alkalinity	314.0	MG/L
MND21-2202	900000065	SRDS-RETENTION BASIN	Dissolved Oxygen	7.2	MG/L
MND21-2202	900000065	SRDS-RETENTION BASIN	Dissolved Oxygen	10.8	MG/L
MND21-2202	900000065	SRDS-RETENTION BASIN	Potential of Hydrogen	7.92	SU
MND21-2202	900000065	SRDS-RETENTION BASIN	Potential of Hydrogen	8.34	SU
MND21-2202	900000065	SRDS-RETENTION BASIN	Redox Potential	202	MVOLTS
MND21-2202	900000065	SRDS-RETENTION BASIN	Redox Potential	228	MVOLTS
MND21-2202	900000065	SRDS-RETENTION BASIN	Specific Conductance	1.35	UMHOS
MND21-2202	900000065	SRDS-RETENTION BASIN	Specific Conductance	2050	UMHOS
MND21-2202	900000065	SRDS-RETENTION BASIN	Temperature	17.2	C
MND21-2202	900000065	SRDS-RETENTION BASIN	Temperature	19.8	C
MND21-2203	000344	SRDS-RETENTION BASIN	Alkalinity	361.0	MG/L
MND21-2203	000344	SRDS-RETENTION BASIN	Alkalinity	333.5	MG/L
MND21-2203	000344	SRDS-RETENTION BASIN	Dissolved Oxygen	11.4	MG/L
MND21-2203	000344	SRDS-RETENTION BASIN	Dissolved Oxygen	7.6	MG/L
MND21-2203	000344	SRDS-RETENTION BASIN	Potential of Hydrogen	8.13	SU
MND21-2203	000344	SRDS-RETENTION BASIN	Potential of Hydrogen	8.01	SU
MND21-2203	000344	SRDS-RETENTION BASIN	Redox Potential	228	MVOLTS
MND21-2203	000344	SRDS-RETENTION BASIN	Redox Potential	226	MVOLTS
MND21-2203	000344	SRDS-RETENTION BASIN	Specific Conductance	1.31	UMHOS
MND21-2203	000344	SRDS-RETENTION BASIN	Specific Conductance	1673	UMHOS
MND21-2203	000344	SRDS-RETENTION BASIN	Temperature	18.0	C
MND21-2203	000344	SRDS-RETENTION BASIN	Temperature	18.3	C
MND21-2203	900000066	SRDS-RETENTION BASIN	Alkalinity	361.0	MG/L
MND21-2203	900000066	SRDS-RETENTION BASIN	Alkalinity	333.5	MG/L
MND21-2203	900000066	SRDS-RETENTION BASIN	Dissolved Oxygen	11.4	MG/L
MND21-2203	900000066	SRDS-RETENTION BASIN	Dissolved Oxygen	7.6	MG/L
MND21-2203	900000066	SRDS-RETENTION BASIN	Potential of Hydrogen	8.13	SU
MND21-2203	900000066	SRDS-RETENTION BASIN	Potential of Hydrogen	8.01	SU
MND21-2203	900000066	SRDS-RETENTION BASIN	Redox Potential	228	MVOLTS
MND21-2203	900000066	SRDS-RETENTION BASIN	Redox Potential	226	MVOLTS
MND21-2203	900000066	SRDS-RETENTION BASIN	Specific Conductance	1.31	UMHOS
MND21-2203	900000066	SRDS-RETENTION BASIN	Specific Conductance	1673	UMHOS
MND21-2203	900000066	SRDS-RETENTION BASIN	Temperature	18.0	C
MND21-2203	900000066	SRDS-RETENTION BASIN	Temperature	18.3	C

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-2301	000328	SRDS-OVERFLOW POND	Alkalinity	284.0	MG/L
MND21-2301	000328	SRDS-OVERFLOW POND	Alkalinity	186.5	MG/L
MND21-2301	000328	SRDS-OVERFLOW POND	Dissolved Oxygen	13.8	MG/L
MND21-2301	000328	SRDS-OVERFLOW POND	Dissolved Oxygen	10.8	MG/L
MND21-2301	000328	SRDS-OVERFLOW POND	Potential of Hydrogen	9.57	SU
MND21-2301	000328	SRDS-OVERFLOW POND	Potential of Hydrogen	8.29	SU
MND21-2301	000328	SRDS-OVERFLOW POND	Redox Potential	141	MVOLTS
MND21-2301	000328	SRDS-OVERFLOW POND	Redox Potential	240	MVOLTS
MND21-2301	000328	SRDS-OVERFLOW POND	Specific Conductance	1.22	UMHOS
MND21-2301	000328	SRDS-OVERFLOW POND	Specific Conductance	1235	UMHOS
MND21-2301	000328	SRDS-OVERFLOW POND	Temperature	21.6	C
MND21-2301	000328	SRDS-OVERFLOW POND	Temperature	21.0	C
MND21-2301	900000052	SRDS-OVERFLOW POND	Alkalinity	284.0	MG/L
MND21-2301	900000052	SRDS-OVERFLOW POND	Alkalinity	186.5	MG/L
MND21-2301	900000052	SRDS-OVERFLOW POND	Dissolved Oxygen	13.8	MG/L
MND21-2301	900000052	SRDS-OVERFLOW POND	Dissolved Oxygen	10.8	MG/L
MND21-2301	900000052	SRDS-OVERFLOW POND	Potential of Hydrogen	9.57	SU
MND21-2301	900000052	SRDS-OVERFLOW POND	Potential of Hydrogen	8.29	SU
MND21-2301	900000052	SRDS-OVERFLOW POND	Redox Potential	141	MVOLTS
MND21-2301	900000052	SRDS-OVERFLOW POND	Redox Potential	240	MVOLTS
MND21-2301	900000052	SRDS-OVERFLOW POND	Specific Conductance	1.22	UMHOS
MND21-2301	900000052	SRDS-OVERFLOW POND	Specific Conductance	1235	UMHOS
MND21-2301	900000052	SRDS-OVERFLOW POND	Temperature	21.6	C
MND21-2301	900000052	SRDS-OVERFLOW POND	Temperature	21.0	C
MND21-2302	000332	SRDS-OVERFLOW POND	Alkalinity	138.0	MG/L
MND21-2302	000332	SRDS-OVERFLOW POND	Alkalinity	186.5	MG/L
MND21-2302	000332	SRDS-OVERFLOW POND	Dissolved Oxygen	7.8	MG/L
MND21-2302	000332	SRDS-OVERFLOW POND	Dissolved Oxygen	12.6	MG/L
MND21-2302	000332	SRDS-OVERFLOW POND	Potential of Hydrogen	7.70	SU
MND21-2302	000332	SRDS-OVERFLOW POND	Potential of Hydrogen	8.59	SU
MND21-2302	000332	SRDS-OVERFLOW POND	Redox Potential	-122	MVOLTS
MND21-2302	000332	SRDS-OVERFLOW POND	Redox Potential	213	MVOLTS
MND21-2302	000332	SRDS-OVERFLOW POND	Specific Conductance	2.33	UMHOS
MND21-2302	000332	SRDS-OVERFLOW POND	Specific Conductance	1221	UMHOS
MND21-2302	000332	SRDS-OVERFLOW POND	Temperature	29.3	C
MND21-2302	000332	SRDS-OVERFLOW POND	Temperature	21.9	C
MND21-2302	900000055	SRDS-OVERFLOW POND	Alkalinity	138.0	MG/L
MND21-2302	900000055	SRDS-OVERFLOW POND	Alkalinity	186.5	MG/L
MND21-2302	900000055	SRDS-OVERFLOW POND	Dissolved Oxygen	7.8	MG/L
MND21-2302	900000055	SRDS-OVERFLOW POND	Dissolved Oxygen	12.6	MG/L
MND21-2302	900000055	SRDS-OVERFLOW POND	Potential of Hydrogen	7.70	SU
MND21-2302	900000055	SRDS-OVERFLOW POND	Potential of Hydrogen	8.59	SU
MND21-2302	900000055	SRDS-OVERFLOW POND	Redox Potential	-122	MVOLTS
MND21-2302	900000055	SRDS-OVERFLOW POND	Redox Potential	213	MVOLTS
MND21-2302	900000055	SRDS-OVERFLOW POND	Specific Conductance	2.33	UMHOS
MND21-2302	900000055	SRDS-OVERFLOW POND	Specific Conductance	1221	UMHOS
MND21-2302	900000055	SRDS-OVERFLOW POND	Temperature	29.3	C
MND21-2302	900000055	SRDS-OVERFLOW POND	Temperature	21.9	C
MND21-2303	000329	SRDS-OVERFLOW POND	Alkalinity	280	MG/L
MND21-2303	000329	SRDS-OVERFLOW POND	Alkalinity	183	MG/L
MND21-2303	000329	SRDS-OVERFLOW POND	Dissolved Oxygen	9.4	MG/L
MND21-2303	000329	SRDS-OVERFLOW POND	Dissolved Oxygen	10.8	MG/L
MND21-2303	000329	SRDS-OVERFLOW POND	Potential of Hydrogen	9.54	SU
MND21-2303	000329	SRDS-OVERFLOW POND	Potential of Hydrogen	8.49	SU
MND21-2303	000329	SRDS-OVERFLOW POND	Redox Potential	118	MVOLTS

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-2303	000329	SRDS-OVERFLOW POND	Redox Potential	230	MVOLTS
MND21-2303	000329	SRDS-OVERFLOW POND	Specific Conductance	1.18	UMHOS
MND21-2303	000329	SRDS-OVERFLOW POND	Specific Conductance	1227	UMHOS
MND21-2303	000329	SRDS-OVERFLOW POND	Temperature	20.8	C
MND21-2303	000329	SRDS-OVERFLOW POND	Temperature	21.4	C
MND21-2303	900000054	SRDS-OVERFLOW POND	Alkalinity	280	MG/L
MND21-2303	900000054	SRDS-OVERFLOW POND	Alkalinity	183	MG/L
MND21-2303	900000054	SRDS-OVERFLOW POND	Dissolved Oxygen	9.4	MG/L
MND21-2303	900000054	SRDS-OVERFLOW POND	Dissolved Oxygen	10.8	MG/L
MND21-2303	900000054	SRDS-OVERFLOW POND	Potential of Hydrogen	9.54	SU
MND21-2303	900000054	SRDS-OVERFLOW POND	Potential of Hydrogen	8.49	SU
MND21-2303	900000054	SRDS-OVERFLOW POND	Redox Potential	118	MVOLTS
MND21-2303	900000054	SRDS-OVERFLOW POND	Redox Potential	230	MVOLTS
MND21-2303	900000054	SRDS-OVERFLOW POND	Specific Conductance	1.18	UMHOS
MND21-2303	900000054	SRDS-OVERFLOW POND	Specific Conductance	1227	UMHOS
MND21-2303	900000054	SRDS-OVERFLOW POND	Temperature	20.8	C
MND21-2303	900000054	SRDS-OVERFLOW POND	Temperature	21.4	C
MND21-2304	000330	SRDS-OVERFLOW POND	Alkalinity	280.5	MG/L
MND21-2304	000330	SRDS-OVERFLOW POND	Alkalinity	195.0	MG/L
MND21-2304	000330	SRDS-OVERFLOW POND	Dissolved Oxygen	9.2	MG/L
MND21-2304	000330	SRDS-OVERFLOW POND	Dissolved Oxygen	10.4	MG/L
MND21-2304	000330	SRDS-OVERFLOW POND	Potential of Hydrogen	9.53	SU
MND21-2304	000330	SRDS-OVERFLOW POND	Potential of Hydrogen	8.28	SU
MND21-2304	000330	SRDS-OVERFLOW POND	Redox Potential	138	MVOLTS
MND21-2304	000330	SRDS-OVERFLOW POND	Redox Potential	331	MVOLTS
MND21-2304	000330	SRDS-OVERFLOW POND	Specific Conductance	1.17	UMHOS
MND21-2304	000330	SRDS-OVERFLOW POND	Specific Conductance	1366	UMHOS
MND21-2304	000330	SRDS-OVERFLOW POND	Temperature	20.8	C
MND21-2304	000330	SRDS-OVERFLOW POND	Temperature	21.3	C
MND21-2304	900000053	SRDS-OVERFLOW POND	Alkalinity	280.5	MG/L
MND21-2304	900000053	SRDS-OVERFLOW POND	Alkalinity	195.0	MG/L
MND21-2304	900000053	SRDS-OVERFLOW POND	Dissolved Oxygen	9.2	MG/L
MND21-2304	900000053	SRDS-OVERFLOW POND	Dissolved Oxygen	10.4	MG/L
MND21-2304	900000053	SRDS-OVERFLOW POND	Potential of Hydrogen	9.53	SU
MND21-2304	900000053	SRDS-OVERFLOW POND	Potential of Hydrogen	8.28	SU
MND21-2304	900000053	SRDS-OVERFLOW POND	Redox Potential	138	MVOLTS
MND21-2304	900000053	SRDS-OVERFLOW POND	Redox Potential	331	MVOLTS
MND21-2304	900000053	SRDS-OVERFLOW POND	Specific Conductance	1.17	UMHOS
MND21-2304	900000053	SRDS-OVERFLOW POND	Specific Conductance	1366	UMHOS
MND21-2304	900000053	SRDS-OVERFLOW POND	Temperature	20.8	C
MND21-2304	900000053	SRDS-OVERFLOW POND	Temperature	21.3	C
MND21-2305	000331	SRDS-OVERFLOW POND	Alkalinity	34.0	MG/L
MND21-2305	000331	SRDS-OVERFLOW POND	Alkalinity	176	MG/L
MND21-2305	000331	SRDS-OVERFLOW POND	Dissolved Oxygen	10.4	MG/L
MND21-2305	000331	SRDS-OVERFLOW POND	Dissolved Oxygen	11.6	MG/L
MND21-2305	000331	SRDS-OVERFLOW POND	Potential of Hydrogen	9.08	SU
MND21-2305	000331	SRDS-OVERFLOW POND	Potential of Hydrogen	8.53	SU
MND21-2305	000331	SRDS-OVERFLOW POND	Redox Potential	147	MVOLTS
MND21-2305	000331	SRDS-OVERFLOW POND	Redox Potential	220	MVOLTS
MND21-2305	000331	SRDS-OVERFLOW POND	Specific Conductance	1.10	UMHOS
MND21-2305	000331	SRDS-OVERFLOW POND	Specific Conductance	1212	UMHOS
MND21-2305	000331	SRDS-OVERFLOW POND	Temperature	21.0	C
MND21-2305	000331	SRDS-OVERFLOW POND	Temperature	21.4	C
MND21-2305	900000050	SRDS-OVERFLOW POND	Alkalinity	34.0	MG/L
MND21-2305	900000050	SRDS-OVERFLOW POND	Alkalinity	176	MG/L

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-2305	900000050	SRDS-OVERFLOW POND	Dissolved Oxygen	10.4	MG/L
MND21-2305	900000050	SRDS-OVERFLOW POND	Dissolved Oxygen	11.6	MG/L
MND21-2305	900000050	SRDS-OVERFLOW POND	Potential of Hydrogen	9.08	SU
MND21-2305	900000050	SRDS-OVERFLOW POND	Potential of Hydrogen	8.53	SU
MND21-2305	900000050	SRDS-OVERFLOW POND	Redox Potential	147	MVOLTS
MND21-2305	900000050	SRDS-OVERFLOW POND	Redox Potential	220	MVOLTS
MND21-2305	900000050	SRDS-OVERFLOW POND	Specific Conductance	1.10	UMHOS
MND21-2305	900000050	SRDS-OVERFLOW POND	Specific Conductance	1212	UMHOS
MND21-2305	900000050	SRDS-OVERFLOW POND	Temperature	21.0	C
MND21-2305	900000050	SRDS-OVERFLOW POND	Temperature	21.4	C
MND21-2305	900000051	SRDS-OVERFLOW POND	Alkalinity	34.0	MG/L
MND21-2305	900000051	SRDS-OVERFLOW POND	Alkalinity	176	MG/L
MND21-2305	900000051	SRDS-OVERFLOW POND	Dissolved Oxygen	10.4	MG/L
MND21-2305	900000051	SRDS-OVERFLOW POND	Dissolved Oxygen	11.6	MG/L
MND21-2305	900000051	SRDS-OVERFLOW POND	Potential of Hydrogen	9.08	SU
MND21-2305	900000051	SRDS-OVERFLOW POND	Potential of Hydrogen	8.53	SU
MND21-2305	900000051	SRDS-OVERFLOW POND	Redox Potential	147	MVOLTS
MND21-2305	900000051	SRDS-OVERFLOW POND	Redox Potential	220	MVOLTS
MND21-2305	900000051	SRDS-OVERFLOW POND	Specific Conductance	1.10	UMHOS
MND21-2305	900000051	SRDS-OVERFLOW POND	Specific Conductance	1212	UMHOS
MND21-2305	900000051	SRDS-OVERFLOW POND	Temperature	21.0	C
MND21-2305	900000051	SRDS-OVERFLOW POND	Temperature	21.4	C
MND21-2401	000334	SRDS-NPDES OUTFALL 002	Alkalinity	369.0	MG/L
MND21-2401	000334	SRDS-NPDES OUTFALL 002	Alkalinity	300.0	MG/L
MND21-2401	000334	SRDS-NPDES OUTFALL 002	Dissolved Oxygen	7.4	MG/L
MND21-2401	000334	SRDS-NPDES OUTFALL 002	Dissolved Oxygen	8.2	MG/L
MND21-2401	000334	SRDS-NPDES OUTFALL 002	Potential of Hydrogen	8.43	SU
MND21-2401	000334	SRDS-NPDES OUTFALL 002	Potential of Hydrogen	8.31	SU
MND21-2401	000334	SRDS-NPDES OUTFALL 002	Redox Potential	077	MVOLTS
MND21-2401	000334	SRDS-NPDES OUTFALL 002	Redox Potential	245	MVOLTS
MND21-2401	000334	SRDS-NPDES OUTFALL 002	Specific Conductance	1.327	UMHOS
MND21-2401	000334	SRDS-NPDES OUTFALL 002	Specific Conductance	1770	UMHOS
MND21-2401	000334	SRDS-NPDES OUTFALL 002	Temperature	19.3	C
MND21-2401	000334	SRDS-NPDES OUTFALL 002	Temperature	21.7	C
MND21-2401	900000020	SRDS-NPDES OUTFALL 002	Alkalinity	369.0	MG/L
MND21-2401	900000020	SRDS-NPDES OUTFALL 002	Alkalinity	300.0	MG/L
MND21-2401	900000020	SRDS-NPDES OUTFALL 002	Dissolved Oxygen	7.4	MG/L
MND21-2401	900000020	SRDS-NPDES OUTFALL 002	Dissolved Oxygen	8.2	MG/L
MND21-2401	900000020	SRDS-NPDES OUTFALL 002	Potential of Hydrogen	8.43	SU
MND21-2401	900000020	SRDS-NPDES OUTFALL 002	Potential of Hydrogen	8.31	SU
MND21-2401	900000020	SRDS-NPDES OUTFALL 002	Redox Potential	077	MVOLTS
MND21-2401	900000020	SRDS-NPDES OUTFALL 002	Redox Potential	245	MVOLTS
MND21-2401	900000020	SRDS-NPDES OUTFALL 002	Specific Conductance	1.327	UMHOS
MND21-2401	900000020	SRDS-NPDES OUTFALL 002	Specific Conductance	1770	UMHOS
MND21-2401	900000020	SRDS-NPDES OUTFALL 002	Temperature	19.3	C
MND21-2401	900000020	SRDS-NPDES OUTFALL 002	Temperature	21.7	C
MND21-2401	900000021	SRDS-NPDES OUTFALL 002	Alkalinity	369.0	MG/L
MND21-2401	900000021	SRDS-NPDES OUTFALL 002	Alkalinity	300.0	MG/L
MND21-2401	900000021	SRDS-NPDES OUTFALL 002	Dissolved Oxygen	7.4	MG/L
MND21-2401	900000021	SRDS-NPDES OUTFALL 002	Dissolved Oxygen	8.2	MG/L
MND21-2401	900000021	SRDS-NPDES OUTFALL 002	Potential of Hydrogen	8.43	SU
MND21-2401	900000021	SRDS-NPDES OUTFALL 002	Potential of Hydrogen	8.31	SU
MND21-2401	900000021	SRDS-NPDES OUTFALL 002	Redox Potential	077	MVOLTS
MND21-2401	900000021	SRDS-NPDES OUTFALL 002	Redox Potential	245	MVOLTS
MND21-2401	900000021	SRDS-NPDES OUTFALL 002	Specific Conductance	1.327	UMHOS

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-2401	900000021	SRDS-NPDES OUTFALL 002	Specific Conductance	1770	UMHOS
MND21-2401	900000021	SRDS-NPDES OUTFALL 002	Temperature	19.3	C
MND21-2401	900000021	SRDS-NPDES OUTFALL 002	Temperature	21.7	C
MND21-2501	000333	SRDS-NPDES OUTFALL 001	Alkalinity	357.0	MG/L
MND21-2501	000333	SRDS-NPDES OUTFALL 001	Alkalinity	153.5	MG/L
MND21-2501	000333	SRDS-NPDES OUTFALL 001	Dissolved Oxygen	8.6	MG/L
MND21-2501	000333	SRDS-NPDES OUTFALL 001	Dissolved Oxygen	8.8	MG/L
MND21-2501	000333	SRDS-NPDES OUTFALL 001	Potential of Hydrogen	8.46	SU
MND21-2501	000333	SRDS-NPDES OUTFALL 001	Potential of Hydrogen	7.90	SU
MND21-2501	000333	SRDS-NPDES OUTFALL 001	Redox Potential	017	MVOLTS
MND21-2501	000333	SRDS-NPDES OUTFALL 001	Redox Potential	195	MVOLTS
MND21-2501	000333	SRDS-NPDES OUTFALL 001	Specific Conductance	1.343	UMHOS
MND21-2501	000333	SRDS-NPDES OUTFALL 001	Specific Conductance	751	UMHOS
MND21-2501	000333	SRDS-NPDES OUTFALL 001	Temperature	21.5	C
MND21-2501	000333	SRDS-NPDES OUTFALL 001	Temperature	17.5	C
MND21-2501	900000019	SRDS-NPDES OUTFALL 001	Alkalinity	357.0	MG/L
MND21-2501	900000019	SRDS-NPDES OUTFALL 001	Alkalinity	153.5	MG/L
MND21-2501	900000019	SRDS-NPDES OUTFALL 001	Dissolved Oxygen	8.6	MG/L
MND21-2501	900000019	SRDS-NPDES OUTFALL 001	Dissolved Oxygen	8.8	MG/L
MND21-2501	900000019	SRDS-NPDES OUTFALL 001	Potential of Hydrogen	8.46	SU
MND21-2501	900000019	SRDS-NPDES OUTFALL 001	Potential of Hydrogen	7.90	SU
MND21-2501	900000019	SRDS-NPDES OUTFALL 001	Redox Potential	017	MVOLTS
MND21-2501	900000019	SRDS-NPDES OUTFALL 001	Redox Potential	195	MVOLTS
MND21-2501	900000019	SRDS-NPDES OUTFALL 001	Specific Conductance	1.343	UMHOS
MND21-2501	900000019	SRDS-NPDES OUTFALL 001	Specific Conductance	751	UMHOS
MND21-2501	900000019	SRDS-NPDES OUTFALL 001	Temperature	21.5	C
MND21-2501	900000019	SRDS-NPDES OUTFALL 001	Temperature	17.5	C
MND21-2601	000345	SRDS-SOUTH MIAMI ERIE CANAL	Alkalinity	357.0	MG/L
MND21-2601	000345	SRDS-SOUTH MIAMI ERIE CANAL	Alkalinity	356.0	MG/L
MND21-2601	000345	SRDS-SOUTH MIAMI ERIE CANAL	Dissolved Oxygen	9.2	MG/L
MND21-2601	000345	SRDS-SOUTH MIAMI ERIE CANAL	Dissolved Oxygen	8.0	MG/L
MND21-2601	000345	SRDS-SOUTH MIAMI ERIE CANAL	Potential of Hydrogen	8.67	SU
MND21-2601	000345	SRDS-SOUTH MIAMI ERIE CANAL	Potential of Hydrogen	8.21	SU
MND21-2601	000345	SRDS-SOUTH MIAMI ERIE CANAL	Redox Potential	184	MVOLTS
MND21-2601	000345	SRDS-SOUTH MIAMI ERIE CANAL	Redox Potential	181	MVOLTS
MND21-2601	000345	SRDS-SOUTH MIAMI ERIE CANAL	Specific Conductance	1.318	UMHOS
MND21-2601	000345	SRDS-SOUTH MIAMI ERIE CANAL	Specific Conductance	1816	UMHOS
MND21-2601	000345	SRDS-SOUTH MIAMI ERIE CANAL	Temperature	20.2	C
MND21-2601	000345	SRDS-SOUTH MIAMI ERIE CANAL	Temperature	19.6	C
MND21-2601	900000078	SRDS-SOUTH MIAMI ERIE CANAL	Alkalinity	357.0	MG/L
MND21-2601	900000078	SRDS-SOUTH MIAMI ERIE CANAL	Alkalinity	356.0	MG/L
MND21-2601	900000078	SRDS-SOUTH MIAMI ERIE CANAL	Dissolved Oxygen	9.2	MG/L
MND21-2601	900000078	SRDS-SOUTH MIAMI ERIE CANAL	Dissolved Oxygen	8.0	MG/L
MND21-2601	900000078	SRDS-SOUTH MIAMI ERIE CANAL	Potential of Hydrogen	8.67	SU
MND21-2601	900000078	SRDS-SOUTH MIAMI ERIE CANAL	Potential of Hydrogen	8.21	SU
MND21-2601	900000078	SRDS-SOUTH MIAMI ERIE CANAL	Redox Potential	184	MVOLTS
MND21-2601	900000078	SRDS-SOUTH MIAMI ERIE CANAL	Redox Potential	181	MVOLTS
MND21-2601	900000078	SRDS-SOUTH MIAMI ERIE CANAL	Specific Conductance	1.318	UMHOS
MND21-2601	900000078	SRDS-SOUTH MIAMI ERIE CANAL	Specific Conductance	1816	UMHOS
MND21-2601	900000078	SRDS-SOUTH MIAMI ERIE CANAL	Temperature	20.2	C
MND21-2601	900000078	SRDS-SOUTH MIAMI ERIE CANAL	Temperature	19.6	C
MND21-2601	900000079	SRDS-SOUTH MIAMI ERIE CANAL	Alkalinity	357.0	MG/L
MND21-2601	900000079	SRDS-SOUTH MIAMI ERIE CANAL	Alkalinity	356.0	MG/L
MND21-2601	900000079	SRDS-SOUTH MIAMI ERIE CANAL	Dissolved Oxygen	9.2	MG/L
MND21-2601	900000079	SRDS-SOUTH MIAMI ERIE CANAL	Dissolved Oxygen	8.0	MG/L

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-2601	900000079	SRDS-SOUTH MIAMI ERIE CANAL	Potential of Hydrogen	8.67	SU
MND21-2601	900000079	SRDS-SOUTH MIAMI ERIE CANAL	Potential of Hydrogen	8.21	SU
MND21-2601	900000079	SRDS-SOUTH MIAMI ERIE CANAL	Redox Potential	184	MVOLTS
MND21-2601	900000079	SRDS-SOUTH MIAMI ERIE CANAL	Redox Potential	181	MVOLTS
MND21-2601	900000079	SRDS-SOUTH MIAMI ERIE CANAL	Specific Conductance	1.318	UMHOS
MND21-2601	900000079	SRDS-SOUTH MIAMI ERIE CANAL	Specific Conductance	1816	UMHOS
MND21-2601	900000079	SRDS-SOUTH MIAMI ERIE CANAL	Temperature	20.2	C
MND21-2601	900000079	SRDS-SOUTH MIAMI ERIE CANAL	Temperature	19.6	C
MND21-2602	000346	SRDS-SOUTH MIAMI ERIE CANAL	Alkalinity	359.0	MG/L
MND21-2602	000346	SRDS-SOUTH MIAMI ERIE CANAL	Alkalinity	365.5	MG/L
MND21-2602	000346	SRDS-SOUTH MIAMI ERIE CANAL	Dissolved Oxygen	8.4	MG/L
MND21-2602	000346	SRDS-SOUTH MIAMI ERIE CANAL	Dissolved Oxygen	7.2	MG/L
MND21-2602	000346	SRDS-SOUTH MIAMI ERIE CANAL	Potential of Hydrogen	8.35	SU
MND21-2602	000346	SRDS-SOUTH MIAMI ERIE CANAL	Potential of Hydrogen	8.30	SU
MND21-2602	000346	SRDS-SOUTH MIAMI ERIE CANAL	Redox Potential	232	MVOLTS
MND21-2602	000346	SRDS-SOUTH MIAMI ERIE CANAL	Redox Potential	284	MVOLTS
MND21-2602	000346	SRDS-SOUTH MIAMI ERIE CANAL	Specific Conductance	1.302	UMHOS
MND21-2602	000346	SRDS-SOUTH MIAMI ERIE CANAL	Specific Conductance	2200	UMHOS
MND21-2602	000346	SRDS-SOUTH MIAMI ERIE CANAL	Temperature	15.3	C
MND21-2602	000346	SRDS-SOUTH MIAMI ERIE CANAL	Temperature	19.3	C
MND21-2602	900000080	SRDS-SOUTH MIAMI ERIE CANAL	Alkalinity	359.0	MG/L
MND21-2602	900000080	SRDS-SOUTH MIAMI ERIE CANAL	Alkalinity	365.5	MG/L
MND21-2602	900000080	SRDS-SOUTH MIAMI ERIE CANAL	Dissolved Oxygen	8.4	MG/L
MND21-2602	900000080	SRDS-SOUTH MIAMI ERIE CANAL	Dissolved Oxygen	7.2	MG/L
MND21-2602	900000080	SRDS-SOUTH MIAMI ERIE CANAL	Potential of Hydrogen	8.35	SU
MND21-2602	900000080	SRDS-SOUTH MIAMI ERIE CANAL	Potential of Hydrogen	8.30	SU
MND21-2602	900000080	SRDS-SOUTH MIAMI ERIE CANAL	Redox Potential	232	MVOLTS
MND21-2602	900000080	SRDS-SOUTH MIAMI ERIE CANAL	Redox Potential	284	MVOLTS
MND21-2602	900000080	SRDS-SOUTH MIAMI ERIE CANAL	Specific Conductance	1.302	UMHOS
MND21-2602	900000080	SRDS-SOUTH MIAMI ERIE CANAL	Specific Conductance	2200	UMHOS
MND21-2602	900000080	SRDS-SOUTH MIAMI ERIE CANAL	Temperature	15.3	C
MND21-2602	900000080	SRDS-SOUTH MIAMI ERIE CANAL	Temperature	19.3	C
MND21-2604	000348	SRDS-SOUTH MIAMI ERIE CANAL	Alkalinity	367.5	MG/L
MND21-2604	000348	SRDS-SOUTH MIAMI ERIE CANAL	Alkalinity	338.0	MG/L
MND21-2604	000348	SRDS-SOUTH MIAMI ERIE CANAL	Dissolved Oxygen	9.2	MG/L
MND21-2604	000348	SRDS-SOUTH MIAMI ERIE CANAL	Dissolved Oxygen	8.4	MG/L
MND21-2604	000348	SRDS-SOUTH MIAMI ERIE CANAL	Potential of Hydrogen	8.64	SU
MND21-2604	000348	SRDS-SOUTH MIAMI ERIE CANAL	Potential of Hydrogen	8.47	SU
MND21-2604	000348	SRDS-SOUTH MIAMI ERIE CANAL	Redox Potential	182	MVOLTS
MND21-2604	000348	SRDS-SOUTH MIAMI ERIE CANAL	Redox Potential	364	MVOLTS
MND21-2604	000348	SRDS-SOUTH MIAMI ERIE CANAL	Specific Conductance	1.325	UMHOS
MND21-2604	000348	SRDS-SOUTH MIAMI ERIE CANAL	Specific Conductance	2770	UMHOS
MND21-2604	000348	SRDS-SOUTH MIAMI ERIE CANAL	Temperature	19.8	C
MND21-2604	000348	SRDS-SOUTH MIAMI ERIE CANAL	Temperature	19.1	C
MND21-2604	900000082	SRDS-SOUTH MIAMI ERIE CANAL	Alkalinity	367.5	MG/L
MND21-2604	900000082	SRDS-SOUTH MIAMI ERIE CANAL	Alkalinity	338.0	MG/L
MND21-2604	900000082	SRDS-SOUTH MIAMI ERIE CANAL	Dissolved Oxygen	9.2	MG/L
MND21-2604	900000082	SRDS-SOUTH MIAMI ERIE CANAL	Dissolved Oxygen	8.4	MG/L
MND21-2604	900000082	SRDS-SOUTH MIAMI ERIE CANAL	Potential of Hydrogen	8.64	SU
MND21-2604	900000082	SRDS-SOUTH MIAMI ERIE CANAL	Potential of Hydrogen	8.47	SU
MND21-2604	900000082	SRDS-SOUTH MIAMI ERIE CANAL	Redox Potential	182	MVOLTS
MND21-2604	900000082	SRDS-SOUTH MIAMI ERIE CANAL	Redox Potential	364	MVOLTS
MND21-2604	900000082	SRDS-SOUTH MIAMI ERIE CANAL	Specific Conductance	1.325	UMHOS
MND21-2604	900000082	SRDS-SOUTH MIAMI ERIE CANAL	Specific Conductance	2770	UMHOS
MND21-2604	900000082	SRDS-SOUTH MIAMI ERIE CANAL	Temperature	19.8	C

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-2604	900000082	SRDS-SOUTH MIAMI ERIE CANAL	Temperature	19.1	C
MND21-2605	000349	SRDS-SOUTH MIAMI ERIE CANAL	Alkalinity	243.0	MG/L
MND21-2605	000349	SRDS-SOUTH MIAMI ERIE CANAL	Alkalinity	238.0	MG/L
MND21-2605	000349	SRDS-SOUTH MIAMI ERIE CANAL	Dissolved Oxygen	8.2	MG/L
MND21-2605	000349	SRDS-SOUTH MIAMI ERIE CANAL	Dissolved Oxygen	6.4	MG/L
MND21-2605	000349	SRDS-SOUTH MIAMI ERIE CANAL	Potential of Hydrogen	8.96	SU
MND21-2605	000349	SRDS-SOUTH MIAMI ERIE CANAL	Potential of Hydrogen	8.25	SU
MND21-2605	000349	SRDS-SOUTH MIAMI ERIE CANAL	Redox Potential	156	MVOLTS
MND21-2605	000349	SRDS-SOUTH MIAMI ERIE CANAL	Redox Potential	489	MVOLTS
MND21-2605	000349	SRDS-SOUTH MIAMI ERIE CANAL	Specific Conductance	1.210	UMHOS
MND21-2605	000349	SRDS-SOUTH MIAMI ERIE CANAL	Specific Conductance	8	UMHOS
MND21-2605	000349	SRDS-SOUTH MIAMI ERIE CANAL	Temperature	18.8	C
MND21-2605	000349	SRDS-SOUTH MIAMI ERIE CANAL	Temperature	18.2	C
MND21-2605	900000083	SRDS-SOUTH MIAMI ERIE CANAL	Alkalinity	243.0	MG/L
MND21-2605	900000083	SRDS-SOUTH MIAMI ERIE CANAL	Alkalinity	238.0	MG/L
MND21-2605	900000083	SRDS-SOUTH MIAMI ERIE CANAL	Dissolved Oxygen	8.2	MG/L
MND21-2605	900000083	SRDS-SOUTH MIAMI ERIE CANAL	Dissolved Oxygen	6.4	MG/L
MND21-2605	900000083	SRDS-SOUTH MIAMI ERIE CANAL	Potential of Hydrogen	8.96	SU
MND21-2605	900000083	SRDS-SOUTH MIAMI ERIE CANAL	Potential of Hydrogen	8.25	SU
MND21-2605	900000083	SRDS-SOUTH MIAMI ERIE CANAL	Redox Potential	156	MVOLTS
MND21-2605	900000083	SRDS-SOUTH MIAMI ERIE CANAL	Redox Potential	489	MVOLTS
MND21-2605	900000083	SRDS-SOUTH MIAMI ERIE CANAL	Specific Conductance	1.210	UMHOS
MND21-2605	900000083	SRDS-SOUTH MIAMI ERIE CANAL	Specific Conductance	8	UMHOS
MND21-2605	900000083	SRDS-SOUTH MIAMI ERIE CANAL	Temperature	18.8	C
MND21-2605	900000083	SRDS-SOUTH MIAMI ERIE CANAL	Temperature	18.2	C
MND21-3001	000366	GREAT MIAMI RIVER-USGS GAGE STATION	Alkalinity	226.5	MG/L
MND21-3001	000366	GREAT MIAMI RIVER-USGS GAGE STATION	Alkalinity	206	MG/L
MND21-3001	000366	GREAT MIAMI RIVER-USGS GAGE STATION	Dissolved Oxygen	8.8	MG/L
MND21-3001	000366	GREAT MIAMI RIVER-USGS GAGE STATION	Dissolved Oxygen	10.8	MG/L
MND21-3001	000366	GREAT MIAMI RIVER-USGS GAGE STATION	Potential of Hydrogen	8.28	SU
MND21-3001	000366	GREAT MIAMI RIVER-USGS GAGE STATION	Potential of Hydrogen	8.54	SU
MND21-3001	000366	GREAT MIAMI RIVER-USGS GAGE STATION	Redox Potential	197	MVOLTS
MND21-3001	000366	GREAT MIAMI RIVER-USGS GAGE STATION	Redox Potential	104	MVOLTS
MND21-3001	000366	GREAT MIAMI RIVER-USGS GAGE STATION	Specific Conductance	1.012	UMHOS
MND21-3001	000366	GREAT MIAMI RIVER-USGS GAGE STATION	Specific Conductance	751	UMHOS
MND21-3001	000366	GREAT MIAMI RIVER-USGS GAGE STATION	Temperature	16.8	C
MND21-3001	000366	GREAT MIAMI RIVER-USGS GAGE STATION	Temperature	18.5	C
MND21-3001	900000114	GREAT MIAMI RIVER-USGS GAGE STATION	Alkalinity	226.5	MG/L
MND21-3001	900000114	GREAT MIAMI RIVER-USGS GAGE STATION	Alkalinity	206	MG/L
MND21-3001	900000114	GREAT MIAMI RIVER-USGS GAGE STATION	Dissolved Oxygen	8.8	MG/L
MND21-3001	900000114	GREAT MIAMI RIVER-USGS GAGE STATION	Dissolved Oxygen	10.8	MG/L
MND21-3001	900000114	GREAT MIAMI RIVER-USGS GAGE STATION	Potential of Hydrogen	8.28	SU
MND21-3001	900000114	GREAT MIAMI RIVER-USGS GAGE STATION	Potential of Hydrogen	8.54	SU
MND21-3001	900000114	GREAT MIAMI RIVER-USGS GAGE STATION	Redox Potential	197	MVOLTS
MND21-3001	900000114	GREAT MIAMI RIVER-USGS GAGE STATION	Redox Potential	104	MVOLTS
MND21-3001	900000114	GREAT MIAMI RIVER-USGS GAGE STATION	Specific Conductance	1.012	UMHOS
MND21-3001	900000114	GREAT MIAMI RIVER-USGS GAGE STATION	Specific Conductance	751	UMHOS
MND21-3001	900000114	GREAT MIAMI RIVER-USGS GAGE STATION	Temperature	16.8	C
MND21-3001	900000114	GREAT MIAMI RIVER-USGS GAGE STATION	Temperature	18.5	C
MND21-3101	000368	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Alkalinity	246	MG/L
MND21-3101	000368	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Alkalinity	151	MG/L
MND21-3101	000368	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Dissolved Oxygen	12.6	MG/L
MND21-3101	000368	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Dissolved Oxygen	10.8	MG/L
MND21-3101	000368	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Potential of Hydrogen	8.71	SU
MND21-3101	000368	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Potential of Hydrogen	7.99	SU

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-3101	000368	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Redox Potential	206	MVOLTS
MND21-3101	000368	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Redox Potential	114	MVOLTS
MND21-3101	000368	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Specific Conductance	0.996	UMHOS
MND21-3101	000368	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Specific Conductance	560	UMHOS
MND21-3101	000368	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Temperature	17.2	C
MND21-3101	000368	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Temperature	10.9	C
MND21-3101	900000125	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Alkalinity	246	MG/L
MND21-3101	900000125	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Alkalinity	151	MG/L
MND21-3101	900000125	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Dissolved Oxygen	12.6	MG/L
MND21-3101	900000125	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Dissolved Oxygen	10.8	MG/L
MND21-3101	900000125	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Potential of Hydrogen	8.71	SU
MND21-3101	900000125	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Potential of Hydrogen	7.99	SU
MND21-3101	900000125	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Redox Potential	206	MVOLTS
MND21-3101	900000125	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Redox Potential	114	MVOLTS
MND21-3101	900000125	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Specific Conductance	0.996	UMHOS
MND21-3101	900000125	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Specific Conductance	560	UMHOS
MND21-3101	900000125	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Temperature	17.2	C
MND21-3101	900000125	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Temperature	10.9	C
MND21-3201	000367	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Alkalinity	225.0	MG/L
MND21-3201	000367	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Alkalinity	240.0	MG/L
MND21-3201	000367	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Dissolved Oxygen	10.0	MG/L
MND21-3201	000367	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Dissolved Oxygen	10.6	MG/L
MND21-3201	000367	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Potential of Hydrogen	8.6	SU
MND21-3201	000367	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Potential of Hydrogen	8.64	SU
MND21-3201	000367	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Redox Potential	206	MVOLTS
MND21-3201	000367	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Redox Potential	171	MVOLTS
MND21-3201	000367	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Specific Conductance	1.000	UMHOS
MND21-3201	000367	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Specific Conductance	809	UMHOS
MND21-3201	000367	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Temperature	18.4	C
MND21-3201	000367	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Temperature	27.3	C
MND21-3201	900000119	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Alkalinity	225.0	MG/L
MND21-3201	900000119	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Alkalinity	240.0	MG/L
MND21-3201	900000119	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Dissolved Oxygen	10.0	MG/L
MND21-3201	900000119	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Dissolved Oxygen	10.6	MG/L
MND21-3201	900000119	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Potential of Hydrogen	8.6	SU
MND21-3201	900000119	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Potential of Hydrogen	8.64	SU
MND21-3201	900000119	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Redox Potential	206	MVOLTS
MND21-3201	900000119	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Redox Potential	171	MVOLTS
MND21-3201	900000119	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Specific Conductance	1.000	UMHOS
MND21-3201	900000119	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Specific Conductance	809	UMHOS
MND21-3201	900000119	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Temperature	18.4	C
MND21-3201	900000119	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	Temperature	27.3	C
MND21-3401	000369	SOUTH POND WITHIN CITY PARK	Alkalinity	188.0	MG/L
MND21-3401	000369	SOUTH POND WITHIN CITY PARK	Alkalinity	156	MG/L
MND21-3401	000369	SOUTH POND WITHIN CITY PARK	Dissolved Oxygen	8.8	MG/L
MND21-3401	000369	SOUTH POND WITHIN CITY PARK	Dissolved Oxygen	5.2	MG/L
MND21-3401	000369	SOUTH POND WITHIN CITY PARK	Potential of Hydrogen	7.74	SU
MND21-3401	000369	SOUTH POND WITHIN CITY PARK	Potential of Hydrogen	7.15	SU
MND21-3401	000369	SOUTH POND WITHIN CITY PARK	Redox Potential	229	MVOLTS
MND21-3401	000369	SOUTH POND WITHIN CITY PARK	Redox Potential	192	MVOLTS
MND21-3401	000369	SOUTH POND WITHIN CITY PARK	Specific Conductance	0.631	UMHOS
MND21-3401	000369	SOUTH POND WITHIN CITY PARK	Specific Conductance	535	UMHOS
MND21-3401	000369	SOUTH POND WITHIN CITY PARK	Temperature	20.0	C
MND21-3401	000369	SOUTH POND WITHIN CITY PARK	Temperature	17.2	C
MND21-3401	900000001	SOUTH POND WITHIN CITY PARK	Alkalinity	188.0	MG/L

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-3401	900000001	SOUTH POND WITHIN CITY PARK	Alkalinity	156	MG/L
MND21-3401	900000001	SOUTH POND WITHIN CITY PARK	Dissolved Oxygen	8.8	MG/L
MND21-3401	900000001	SOUTH POND WITHIN CITY PARK	Dissolved Oxygen	5.2	MG/L
MND21-3401	900000001	SOUTH POND WITHIN CITY PARK	Potential of Hydrogen	7.74	SU
MND21-3401	900000001	SOUTH POND WITHIN CITY PARK	Potential of Hydrogen	7.15	SU
MND21-3401	900000001	SOUTH POND WITHIN CITY PARK	Redox Potential	229	MVOLTS
MND21-3401	900000001	SOUTH POND WITHIN CITY PARK	Redox Potential	192	MVOLTS
MND21-3401	900000001	SOUTH POND WITHIN CITY PARK	Specific Conductance	0.631	UMHOS
MND21-3401	900000001	SOUTH POND WITHIN CITY PARK	Specific Conductance	535	UMHOS
MND21-3401	900000001	SOUTH POND WITHIN CITY PARK	Temperature	20.0	C
MND21-3401	900000001	SOUTH POND WITHIN CITY PARK	Temperature	17.2	C
MND21-3402	000370	SOUTH POND WITHIN CITY PARK	Alkalinity	190.5	MG/L
MND21-3402	000370	SOUTH POND WITHIN CITY PARK	Alkalinity	153.5	MG/L
MND21-3402	000370	SOUTH POND WITHIN CITY PARK	Dissolved Oxygen	11.0	MG/L
MND21-3402	000370	SOUTH POND WITHIN CITY PARK	Dissolved Oxygen	4.4	MG/L
MND21-3402	000370	SOUTH POND WITHIN CITY PARK	Potential of Hydrogen	7.87	SU
MND21-3402	000370	SOUTH POND WITHIN CITY PARK	Potential of Hydrogen	7.41	SU
MND21-3402	000370	SOUTH POND WITHIN CITY PARK	Redox Potential	282	MVOLTS
MND21-3402	000370	SOUTH POND WITHIN CITY PARK	Redox Potential	157	MVOLTS
MND21-3402	000370	SOUTH POND WITHIN CITY PARK	Specific Conductance	0.633	UMHOS
MND21-3402	000370	SOUTH POND WITHIN CITY PARK	Specific Conductance	537	UMHOS
MND21-3402	000370	SOUTH POND WITHIN CITY PARK	Temperature	19.9	C
MND21-3402	000370	SOUTH POND WITHIN CITY PARK	Temperature	17.2	C
MND21-3402	900000002	SOUTH POND WITHIN CITY PARK	Alkalinity	190.5	MG/L
MND21-3402	900000002	SOUTH POND WITHIN CITY PARK	Alkalinity	153.5	MG/L
MND21-3402	900000002	SOUTH POND WITHIN CITY PARK	Dissolved Oxygen	11.0	MG/L
MND21-3402	900000002	SOUTH POND WITHIN CITY PARK	Dissolved Oxygen	4.4	MG/L
MND21-3402	900000002	SOUTH POND WITHIN CITY PARK	Potential of Hydrogen	7.87	SU
MND21-3402	900000002	SOUTH POND WITHIN CITY PARK	Potential of Hydrogen	7.41	SU
MND21-3402	900000002	SOUTH POND WITHIN CITY PARK	Redox Potential	282	MVOLTS
MND21-3402	900000002	SOUTH POND WITHIN CITY PARK	Redox Potential	157	MVOLTS
MND21-3402	900000002	SOUTH POND WITHIN CITY PARK	Specific Conductance	0.633	UMHOS
MND21-3402	900000002	SOUTH POND WITHIN CITY PARK	Specific Conductance	537	UMHOS
MND21-3402	900000002	SOUTH POND WITHIN CITY PARK	Temperature	19.9	C
MND21-3402	900000002	SOUTH POND WITHIN CITY PARK	Temperature	17.2	C
MND21-3403	000371	SOUTH POND WITHIN CITY PARK	Alkalinity	188.5	MG/L
MND21-3403	000371	SOUTH POND WITHIN CITY PARK	Alkalinity	164.5	MG/L
MND21-3403	000371	SOUTH POND WITHIN CITY PARK	Dissolved Oxygen	7.8	MG/L
MND21-3403	000371	SOUTH POND WITHIN CITY PARK	Dissolved Oxygen	2.6	MG/L
MND21-3403	000371	SOUTH POND WITHIN CITY PARK	Potential of Hydrogen	7.80	SU
MND21-3403	000371	SOUTH POND WITHIN CITY PARK	Potential of Hydrogen	7.35	SU
MND21-3403	000371	SOUTH POND WITHIN CITY PARK	Redox Potential	284	MVOLTS
MND21-3403	000371	SOUTH POND WITHIN CITY PARK	Redox Potential	138	MVOLTS
MND21-3403	000371	SOUTH POND WITHIN CITY PARK	Specific Conductance	0.633	UMHOS
MND21-3403	000371	SOUTH POND WITHIN CITY PARK	Specific Conductance	546	UMHOS
MND21-3403	000371	SOUTH POND WITHIN CITY PARK	Temperature	20.0	C
MND21-3403	000371	SOUTH POND WITHIN CITY PARK	Temperature	16.7	C
MND21-3403	900000003	SOUTH POND WITHIN CITY PARK	Alkalinity	188.5	MG/L
MND21-3403	900000003	SOUTH POND WITHIN CITY PARK	Alkalinity	164.5	MG/L
MND21-3403	900000003	SOUTH POND WITHIN CITY PARK	Dissolved Oxygen	7.8	MG/L
MND21-3403	900000003	SOUTH POND WITHIN CITY PARK	Dissolved Oxygen	2.6	MG/L
MND21-3403	900000003	SOUTH POND WITHIN CITY PARK	Potential of Hydrogen	7.80	SU
MND21-3403	900000003	SOUTH POND WITHIN CITY PARK	Potential of Hydrogen	7.35	SU
MND21-3403	900000003	SOUTH POND WITHIN CITY PARK	Redox Potential	284	MVOLTS
MND21-3403	900000003	SOUTH POND WITHIN CITY PARK	Redox Potential	138	MVOLTS

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-3403	900000003	SOUTH POND WITHIN CITY PARK	Specific Conductance	0.633	UMHOS
MND21-3403	900000003	SOUTH POND WITHIN CITY PARK	Specific Conductance	546	UMHOS
MND21-3403	900000003	SOUTH POND WITHIN CITY PARK	Temperature	20.0	C
MND21-3403	900000003	SOUTH POND WITHIN CITY PARK	Temperature	16.7	C
MND21-4101	000495	NEW PROPERTY-EPHEMERAL STREAM	Alkalinity	257.0	MG/L
MND21-4101	000495	NEW PROPERTY-EPHEMERAL STREAM	Dissolved Oxygen	7.7	MG/L
MND21-4101	000495	NEW PROPERTY-EPHEMERAL STREAM	Potential of Hydrogen	7.38	SU
MND21-4101	000495	NEW PROPERTY-EPHEMERAL STREAM	Redox Potential	189	MVOLTS
MND21-4101	000495	NEW PROPERTY-EPHEMERAL STREAM	Specific Conductance	1213	UMHOS
MND21-4101	000495	NEW PROPERTY-EPHEMERAL STREAM	Temperature	12.5	C
MND21-4102	000496	NEW PROPERTY-EPHEMERAL STREAM	Alkalinity	279.0	MG/L
MND21-4102	000496	NEW PROPERTY-EPHEMERAL STREAM	Dissolved Oxygen	8.5	MG/L
MND21-4102	000496	NEW PROPERTY-EPHEMERAL STREAM	Potential of Hydrogen	8.20	SU
MND21-4102	000496	NEW PROPERTY-EPHEMERAL STREAM	Redox Potential	166	MVOLTS
MND21-4102	000496	NEW PROPERTY-EPHEMERAL STREAM	Specific Conductance	976	UMHOS
MND21-4102	000496	NEW PROPERTY-EPHEMERAL STREAM	Temperature	13.6	C
MND21-4301	000372	ZONE OF INFLUENCE POND ONE-UNION ROAD	Alkalinity	327.5	MG/L
MND21-4301	000372	ZONE OF INFLUENCE POND ONE-UNION ROAD	Alkalinity	330	MG/L
MND21-4301	000372	ZONE OF INFLUENCE POND ONE-UNION ROAD	Dissolved Oxygen	2.8	MG/L
MND21-4301	000372	ZONE OF INFLUENCE POND ONE-UNION ROAD	Dissolved Oxygen	10.6	MG/L
MND21-4301	000372	ZONE OF INFLUENCE POND ONE-UNION ROAD	Potential of Hydrogen	7.67	SU
MND21-4301	000372	ZONE OF INFLUENCE POND ONE-UNION ROAD	Potential of Hydrogen	8.05	SU
MND21-4301	000372	ZONE OF INFLUENCE POND ONE-UNION ROAD	Redox Potential	-026	MVOLTS
MND21-4301	000372	ZONE OF INFLUENCE POND ONE-UNION ROAD	Redox Potential	44	MVOLTS
MND21-4301	000372	ZONE OF INFLUENCE POND ONE-UNION ROAD	Specific Conductance	1.35	UMHOS
MND21-4301	000372	ZONE OF INFLUENCE POND ONE-UNION ROAD	Specific Conductance	1461	UMHOS
MND21-4301	000372	ZONE OF INFLUENCE POND ONE-UNION ROAD	Temperature	17.6	C
MND21-4301	000372	ZONE OF INFLUENCE POND ONE-UNION ROAD	Temperature	11.6	C
MND21-4301	900000023	ZONE OF INFLUENCE POND ONE-UNION ROAD	Alkalinity	327.5	MG/L
MND21-4301	900000023	ZONE OF INFLUENCE POND ONE-UNION ROAD	Alkalinity	330	MG/L
MND21-4301	900000023	ZONE OF INFLUENCE POND ONE-UNION ROAD	Dissolved Oxygen	2.8	MG/L
MND21-4301	900000023	ZONE OF INFLUENCE POND ONE-UNION ROAD	Dissolved Oxygen	10.6	MG/L
MND21-4301	900000023	ZONE OF INFLUENCE POND ONE-UNION ROAD	Potential of Hydrogen	7.67	SU
MND21-4301	900000023	ZONE OF INFLUENCE POND ONE-UNION ROAD	Potential of Hydrogen	8.05	SU
MND21-4301	900000023	ZONE OF INFLUENCE POND ONE-UNION ROAD	Redox Potential	-026	MVOLTS
MND21-4301	900000023	ZONE OF INFLUENCE POND ONE-UNION ROAD	Redox Potential	44	MVOLTS
MND21-4301	900000023	ZONE OF INFLUENCE POND ONE-UNION ROAD	Specific Conductance	1.35	UMHOS
MND21-4301	900000023	ZONE OF INFLUENCE POND ONE-UNION ROAD	Specific Conductance	1461	UMHOS
MND21-4301	900000023	ZONE OF INFLUENCE POND ONE-UNION ROAD	Temperature	17.6	C
MND21-4301	900000023	ZONE OF INFLUENCE POND ONE-UNION ROAD	Temperature	11.6	C
MND21-4302	000373	ZONE OF INFLUENCE POND ONE-UNION ROAD	Alkalinity	188.5	MG/L
MND21-4302	000373	ZONE OF INFLUENCE POND ONE-UNION ROAD	Alkalinity	283.5	MG/L
MND21-4302	000373	ZONE OF INFLUENCE POND ONE-UNION ROAD	Dissolved Oxygen	7.2	MG/L
MND21-4302	000373	ZONE OF INFLUENCE POND ONE-UNION ROAD	Dissolved Oxygen	11.0	MG/L
MND21-4302	000373	ZONE OF INFLUENCE POND ONE-UNION ROAD	Potential of Hydrogen	8.04	SU
MND21-4302	000373	ZONE OF INFLUENCE POND ONE-UNION ROAD	Potential of Hydrogen	7.92	SU
MND21-4302	000373	ZONE OF INFLUENCE POND ONE-UNION ROAD	Redox Potential	183	MVOLTS
MND21-4302	000373	ZONE OF INFLUENCE POND ONE-UNION ROAD	Redox Potential	131	MVOLTS
MND21-4302	000373	ZONE OF INFLUENCE POND ONE-UNION ROAD	Specific Conductance	0.862	UMHOS
MND21-4302	000373	ZONE OF INFLUENCE POND ONE-UNION ROAD	Specific Conductance	1356	UMHOS
MND21-4302	000373	ZONE OF INFLUENCE POND ONE-UNION ROAD	Temperature	21.5	C
MND21-4302	000373	ZONE OF INFLUENCE POND ONE-UNION ROAD	Temperature	12.7	C
MND21-4302	900000024	ZONE OF INFLUENCE POND ONE-UNION ROAD	Alkalinity	188.5	MG/L
MND21-4302	900000024	ZONE OF INFLUENCE POND ONE-UNION ROAD	Alkalinity	283.5	MG/L
MND21-4302	900000024	ZONE OF INFLUENCE POND ONE-UNION ROAD	Dissolved Oxygen	7.2	MG/L

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-4302	900000024	ZONE OF INFLUENCE POND ONE-UNION ROAD	Dissolved Oxygen	11.0	MG/L
MND21-4302	900000024	ZONE OF INFLUENCE POND ONE-UNION ROAD	Potential of Hydrogen	8.04	SU
MND21-4302	900000024	ZONE OF INFLUENCE POND ONE-UNION ROAD	Potential of Hydrogen	7.92	SU
MND21-4302	900000024	ZONE OF INFLUENCE POND ONE-UNION ROAD	Redox Potential	183	MVOLTS
MND21-4302	900000024	ZONE OF INFLUENCE POND ONE-UNION ROAD	Redox Potential	131	MVOLTS
MND21-4302	900000024	ZONE OF INFLUENCE POND ONE-UNION ROAD	Specific Conductance	0.862	UMHOS
MND21-4302	900000024	ZONE OF INFLUENCE POND ONE-UNION ROAD	Specific Conductance	1356	UMHOS
MND21-4302	900000024	ZONE OF INFLUENCE POND ONE-UNION ROAD	Temperature	21.5	C
MND21-4302	900000024	ZONE OF INFLUENCE POND ONE-UNION ROAD	Temperature	12.7	C
MND21-4303	000374	ZONE OF INFLUENCE POND ONE-UNION ROAD	Alkalinity	188.5	MG/L
MND21-4303	000374	ZONE OF INFLUENCE POND ONE-UNION ROAD	Alkalinity	287	MG/L
MND21-4303	000374	ZONE OF INFLUENCE POND ONE-UNION ROAD	Dissolved Oxygen	8.2	MG/L
MND21-4303	000374	ZONE OF INFLUENCE POND ONE-UNION ROAD	Dissolved Oxygen	11.2	MG/L
MND21-4303	000374	ZONE OF INFLUENCE POND ONE-UNION ROAD	Potential of Hydrogen	8.25	SU
MND21-4303	000374	ZONE OF INFLUENCE POND ONE-UNION ROAD	Potential of Hydrogen	7.98	SU
MND21-4303	000374	ZONE OF INFLUENCE POND ONE-UNION ROAD	Redox Potential	016	MVOLTS
MND21-4303	000374	ZONE OF INFLUENCE POND ONE-UNION ROAD	Redox Potential	122	MVOLTS
MND21-4303	000374	ZONE OF INFLUENCE POND ONE-UNION ROAD	Specific Conductance	0.863	UMHOS
MND21-4303	000374	ZONE OF INFLUENCE POND ONE-UNION ROAD	Specific Conductance	1350	UMHOS
MND21-4303	000374	ZONE OF INFLUENCE POND ONE-UNION ROAD	Temperature	22.2	C
MND21-4303	000374	ZONE OF INFLUENCE POND ONE-UNION ROAD	Temperature	12.7	C
MND21-4303	900000025	ZONE OF INFLUENCE POND ONE-UNION ROAD	Alkalinity	188.5	MG/L
MND21-4303	900000025	ZONE OF INFLUENCE POND ONE-UNION ROAD	Alkalinity	287	MG/L
MND21-4303	900000025	ZONE OF INFLUENCE POND ONE-UNION ROAD	Dissolved Oxygen	8.2	MG/L
MND21-4303	900000025	ZONE OF INFLUENCE POND ONE-UNION ROAD	Dissolved Oxygen	11.2	MG/L
MND21-4303	900000025	ZONE OF INFLUENCE POND ONE-UNION ROAD	Potential of Hydrogen	8.25	SU
MND21-4303	900000025	ZONE OF INFLUENCE POND ONE-UNION ROAD	Potential of Hydrogen	7.98	SU
MND21-4303	900000025	ZONE OF INFLUENCE POND ONE-UNION ROAD	Redox Potential	016	MVOLTS
MND21-4303	900000025	ZONE OF INFLUENCE POND ONE-UNION ROAD	Redox Potential	122	MVOLTS
MND21-4303	900000025	ZONE OF INFLUENCE POND ONE-UNION ROAD	Specific Conductance	0.863	UMHOS
MND21-4303	900000025	ZONE OF INFLUENCE POND ONE-UNION ROAD	Specific Conductance	1350	UMHOS
MND21-4303	900000025	ZONE OF INFLUENCE POND ONE-UNION ROAD	Temperature	22.2	C
MND21-4303	900000025	ZONE OF INFLUENCE POND ONE-UNION ROAD	Temperature	12.7	C
MND21-4401	000375	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Alkalinity	424	MG/L
MND21-4401	000375	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Alkalinity	584	MG/L
MND21-4401	000375	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Alkalinity	286	MG/L
MND21-4401	000375	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Dissolved Oxygen	4.2	MG/L
MND21-4401	000375	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Dissolved Oxygen	2.0	MG/L
MND21-4401	000375	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Dissolved Oxygen	10.6	MG/L
MND21-4401	000375	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Potential of Hydrogen	7.45	SU
MND21-4401	000375	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Potential of Hydrogen	7.22	SU
MND21-4401	000375	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Potential of Hydrogen	7.93	SU
MND21-4401	000375	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Redox Potential	274	MVOLTS
MND21-4401	000375	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Redox Potential	70	MVOLTS
MND21-4401	000375	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Redox Potential	117	MVOLTS
MND21-4401	000375	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Specific Conductance	1.29	UMHOS
MND21-4401	000375	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Specific Conductance	1.351	UMHOS
MND21-4401	000375	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Specific Conductance	1305	UMHOS
MND21-4401	000375	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Temperature	19.9	C
MND21-4401	000375	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Temperature	8.8	C
MND21-4401	000375	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Temperature	12.2	C
MND21-4401	900000045	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Alkalinity	424	MG/L
MND21-4401	900000045	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Alkalinity	584	MG/L
MND21-4401	900000045	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Alkalinity	286	MG/L
MND21-4401	900000045	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Dissolved Oxygen	4.2	MG/L

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-4401	900000045	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Dissolved Oxygen	2.0	MG/L
MND21-4401	900000045	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Dissolved Oxygen	10.6	MG/L
MND21-4401	900000045	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Potential of Hydrogen	7.45	SU
MND21-4401	900000045	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Potential of Hydrogen	7.22	SU
MND21-4401	900000045	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Potential of Hydrogen	7.93	SU
MND21-4401	900000045	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Redox Potential	274	MVOLTS
MND21-4401	900000045	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Redox Potential	70	MVOLTS
MND21-4401	900000045	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Redox Potential	117	MVOLTS
MND21-4401	900000045	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Specific Conductance	1.29	UMHOS
MND21-4401	900000045	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Specific Conductance	1.351	UMHOS
MND21-4401	900000045	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Specific Conductance	1305	UMHOS
MND21-4401	900000045	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Temperature	19.9	C
MND21-4401	900000045	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Temperature	8.8	C
MND21-4401	900000045	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Temperature	12.2	C
MND21-4401	900000183	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Alkalinity	424	MG/L
MND21-4401	900000183	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Alkalinity	584	MG/L
MND21-4401	900000183	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Alkalinity	286	MG/L
MND21-4401	900000183	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Dissolved Oxygen	4.2	MG/L
MND21-4401	900000183	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Dissolved Oxygen	2.0	MG/L
MND21-4401	900000183	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Dissolved Oxygen	10.6	MG/L
MND21-4401	900000183	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Potential of Hydrogen	7.45	SU
MND21-4401	900000183	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Potential of Hydrogen	7.22	SU
MND21-4401	900000183	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Potential of Hydrogen	7.93	SU
MND21-4401	900000183	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Redox Potential	274	MVOLTS
MND21-4401	900000183	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Redox Potential	70	MVOLTS
MND21-4401	900000183	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Redox Potential	117	MVOLTS
MND21-4401	900000183	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Specific Conductance	1.29	UMHOS
MND21-4401	900000183	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Specific Conductance	1.351	UMHOS
MND21-4401	900000183	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Specific Conductance	1305	UMHOS
MND21-4401	900000183	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Temperature	19.9	C
MND21-4401	900000183	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Temperature	8.8	C
MND21-4401	900000183	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Temperature	12.2	C
MND21-4402	000376	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Alkalinity	286.5	MG/L
MND21-4402	000376	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Dissolved Oxygen	10.4	MG/L
MND21-4402	000376	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Potential of Hydrogen	7.85	SU
MND21-4402	000376	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Redox Potential	190	MVOLTS
MND21-4402	000376	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Specific Conductance	1289	UMHOS
MND21-4402	000376	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Temperature	12.0	C
MND21-4501	000377	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Alkalinity	259.5	MG/L
MND21-4501	000377	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Alkalinity	241.5	MG/L
MND21-4501	000377	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Dissolved Oxygen	5.0	MG/L
MND21-4501	000377	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Dissolved Oxygen	10.4	MG/L
MND21-4501	000377	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Potential of Hydrogen	7.69	SU
MND21-4501	000377	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Potential of Hydrogen	7.99	SU
MND21-4501	000377	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Redox Potential	189	MVOLTS
MND21-4501	000377	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Redox Potential	127	MVOLTS
MND21-4501	000377	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Specific Conductance	.996	UMHOS
MND21-4501	000377	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Specific Conductance	986	UMHOS
MND21-4501	000377	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Temperature	13.9	C
MND21-4501	000377	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Temperature	14.4	C
MND21-4501	900000173	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Alkalinity	259.5	MG/L
MND21-4501	900000173	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Alkalinity	241.5	MG/L
MND21-4501	900000173	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Dissolved Oxygen	5.0	MG/L
MND21-4501	900000173	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Dissolved Oxygen	10.4	MG/L
MND21-4501	900000173	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Potential of Hydrogen	7.69	SU

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-4501	900000173	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Potential of Hydrogen	7.99	SU
MND21-4501	900000173	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Redox Potential	189	MVOLTS
MND21-4501	900000173	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Redox Potential	127	MVOLTS
MND21-4501	900000173	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Specific Conductance	.996	UMHOS
MND21-4501	900000173	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Specific Conductance	986	UMHOS
MND21-4501	900000173	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Temperature	13.9	C
MND21-4501	900000173	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Temperature	14.4	C
MND21-4502	000378	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Alkalinity	273	MG/L
MND21-4502	000378	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Alkalinity	254	MG/L
MND21-4502	000378	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Dissolved Oxygen	5.1	MG/L
MND21-4502	000378	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Dissolved Oxygen	9.8	MG/L
MND21-4502	000378	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Potential of Hydrogen	7.72	SU
MND21-4502	000378	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Potential of Hydrogen	8.04	SU
MND21-4502	000378	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Redox Potential	194	MVOLTS
MND21-4502	000378	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Redox Potential	140	MVOLTS
MND21-4502	000378	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Specific Conductance	.997	UMHOS
MND21-4502	000378	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Specific Conductance	996	UMHOS
MND21-4502	000378	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Temperature	14.0	C
MND21-4502	000378	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Temperature	15.0	C
MND21-4502	900000172	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Alkalinity	273	MG/L
MND21-4502	900000172	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Alkalinity	254	MG/L
MND21-4502	900000172	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Dissolved Oxygen	5.1	MG/L
MND21-4502	900000172	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Dissolved Oxygen	9.8	MG/L
MND21-4502	900000172	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Potential of Hydrogen	7.72	SU
MND21-4502	900000172	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Potential of Hydrogen	8.04	SU
MND21-4502	900000172	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Redox Potential	194	MVOLTS
MND21-4502	900000172	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Redox Potential	140	MVOLTS
MND21-4502	900000172	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Specific Conductance	.997	UMHOS
MND21-4502	900000172	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Specific Conductance	996	UMHOS
MND21-4502	900000172	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Temperature	14.0	C
MND21-4502	900000172	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Temperature	15.0	C
MND21-4503	000379	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Alkalinity	287	MG/L
MND21-4503	000379	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Alkalinity	249.5	MG/L
MND21-4503	000379	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Dissolved Oxygen	5.1	MG/L
MND21-4503	000379	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Dissolved Oxygen	11.6	MG/L
MND21-4503	000379	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Potential of Hydrogen	7.68	SU
MND21-4503	000379	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Potential of Hydrogen	8.0	SU
MND21-4503	000379	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Redox Potential	182	MVOLTS
MND21-4503	000379	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Redox Potential	118	MVOLTS
MND21-4503	000379	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Specific Conductance	.995	UMHOS
MND21-4503	000379	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Specific Conductance	997	UMHOS
MND21-4503	000379	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Temperature	13.8	C
MND21-4503	000379	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Temperature	14.4	C
MND21-4503	900000171	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Alkalinity	287	MG/L
MND21-4503	900000171	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Alkalinity	249.5	MG/L
MND21-4503	900000171	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Dissolved Oxygen	5.1	MG/L
MND21-4503	900000171	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Dissolved Oxygen	11.6	MG/L
MND21-4503	900000171	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Potential of Hydrogen	7.68	SU
MND21-4503	900000171	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Potential of Hydrogen	8.0	SU
MND21-4503	900000171	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Redox Potential	182	MVOLTS
MND21-4503	900000171	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Redox Potential	118	MVOLTS
MND21-4503	900000171	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Specific Conductance	.995	UMHOS
MND21-4503	900000171	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Specific Conductance	997	UMHOS
MND21-4503	900000171	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Temperature	13.8	C
MND21-4503	900000171	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	Temperature	14.4	C

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-4601	000380	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Alkalinity	290	MG/L
MND21-4601	000380	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Alkalinity	271.5	MG/L
MND21-4601	000380	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Dissolved Oxygen	8.6	MG/L
MND21-4601	000380	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Dissolved Oxygen	11.3	MG/L
MND21-4601	000380	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Potential of Hydrogen	7.92	SU
MND21-4601	000380	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Potential of Hydrogen	8.4	SU
MND21-4601	000380	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Redox Potential	146	MVOLTS
MND21-4601	000380	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Redox Potential	135	MVOLTS
MND21-4601	000380	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Specific Conductance	1.034	UMHOS
MND21-4601	000380	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Specific Conductance	1020	UMHOS
MND21-4601	000380	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Temperature	11.4	C
MND21-4601	000380	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Temperature	12.7	C
MND21-4601	900000185	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Alkalinity	290	MG/L
MND21-4601	900000185	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Alkalinity	271.5	MG/L
MND21-4601	900000185	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Dissolved Oxygen	8.6	MG/L
MND21-4601	900000185	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Dissolved Oxygen	11.3	MG/L
MND21-4601	900000185	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Potential of Hydrogen	7.92	SU
MND21-4601	900000185	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Potential of Hydrogen	8.4	SU
MND21-4601	900000185	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Redox Potential	146	MVOLTS
MND21-4601	900000185	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Redox Potential	135	MVOLTS
MND21-4601	900000185	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Specific Conductance	1.034	UMHOS
MND21-4601	900000185	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Specific Conductance	1020	UMHOS
MND21-4601	900000185	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Temperature	11.4	C
MND21-4601	900000185	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Temperature	12.7	C
MND21-4601	900000186	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Alkalinity	290	MG/L
MND21-4601	900000186	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Alkalinity	271.5	MG/L
MND21-4601	900000186	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Dissolved Oxygen	8.6	MG/L
MND21-4601	900000186	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Dissolved Oxygen	11.3	MG/L
MND21-4601	900000186	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Potential of Hydrogen	7.92	SU
MND21-4601	900000186	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Potential of Hydrogen	8.4	SU
MND21-4601	900000186	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Redox Potential	146	MVOLTS
MND21-4601	900000186	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Redox Potential	135	MVOLTS
MND21-4601	900000186	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Specific Conductance	1.034	UMHOS
MND21-4601	900000186	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Specific Conductance	1020	UMHOS
MND21-4601	900000186	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Temperature	11.4	C
MND21-4601	900000186	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Temperature	12.7	C
MND21-4602	000381	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Alkalinity	306.5	MG/L
MND21-4602	000381	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Alkalinity	268.5	MG/L
MND21-4602	000381	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Dissolved Oxygen	10.4	MG/L
MND21-4602	000381	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Dissolved Oxygen	11.6	MG/L
MND21-4602	000381	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Potential of Hydrogen	7.66	SU
MND21-4602	000381	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Potential of Hydrogen	8.47	SU
MND21-4602	000381	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Redox Potential	292	MVOLTS
MND21-4602	000381	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Redox Potential	138	MVOLTS
MND21-4602	000381	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Specific Conductance	1.033	UMHOS
MND21-4602	000381	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Specific Conductance	1012	UMHOS
MND21-4602	000381	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Temperature	11.2	C
MND21-4602	000381	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Temperature	11.9	C
MND21-4602	900000184	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Alkalinity	306.5	MG/L
MND21-4602	900000184	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Alkalinity	268.5	MG/L
MND21-4602	900000184	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Dissolved Oxygen	10.4	MG/L
MND21-4602	900000184	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Dissolved Oxygen	11.6	MG/L
MND21-4602	900000184	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Potential of Hydrogen	7.66	SU
MND21-4602	900000184	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Potential of Hydrogen	8.47	SU
MND21-4602	900000184	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Redox Potential	292	MVOLTS

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-4602	900000184	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Redox Potential	138	MVOLTS
MND21-4602	900000184	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Specific Conductance	1.033	UMHOS
MND21-4602	900000184	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Specific Conductance	1012	UMHOS
MND21-4602	900000184	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Temperature	11.2	C
MND21-4602	900000184	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	Temperature	11.9	C
MND21-4701	000303	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Alkalinity	251.5	MG/L
MND21-4701	000303	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Dissolved Oxygen	6.7	MG/L
MND21-4701	000303	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Potential of Hydrogen	7.58	SU
MND21-4701	000303	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Redox Potential	202	MVOLTS
MND21-4701	000303	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Specific Conductance	1254	UMHOS
MND21-4701	000303	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Temperature	12.7	C
MND21-4702	000302	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Alkalinity	172	MG/L
MND21-4702	000302	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Dissolved Oxygen	10.9	MG/L
MND21-4702	000302	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Potential of Hydrogen	8.06	SU
MND21-4702	000302	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Redox Potential	188	MVOLTS
MND21-4702	000302	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Specific Conductance	654	UMHOS
MND21-4702	000302	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Temperature	8.9	C
MND21-4703	000301	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Alkalinity	225.5	MG/L
MND21-4703	000301	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Alkalinity	283	MG/L
MND21-4703	000301	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Dissolved Oxygen	1.9	MG/L
MND21-4703	000301	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Dissolved Oxygen	9.8	MG/L
MND21-4703	000301	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Potential of Hydrogen	7.15	SU
MND21-4703	000301	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Potential of Hydrogen	8.55	SU
MND21-4703	000301	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Redox Potential	221	MVOLTS
MND21-4703	000301	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Redox Potential	162	MVOLTS
MND21-4703	000301	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Specific Conductance	0.977	UMHOS
MND21-4703	000301	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Specific Conductance	900	UMHOS
MND21-4703	000301	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Temperature	12.1	C
MND21-4703	000301	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Temperature	13.5	C
MND21-4703	900000158	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Alkalinity	225.5	MG/L
MND21-4703	900000158	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Alkalinity	283	MG/L
MND21-4703	900000158	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Dissolved Oxygen	1.9	MG/L
MND21-4703	900000158	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Dissolved Oxygen	9.8	MG/L
MND21-4703	900000158	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Potential of Hydrogen	7.15	SU
MND21-4703	900000158	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Potential of Hydrogen	8.55	SU
MND21-4703	900000158	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Redox Potential	221	MVOLTS
MND21-4703	900000158	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Redox Potential	162	MVOLTS
MND21-4703	900000158	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Specific Conductance	0.977	UMHOS
MND21-4703	900000158	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Specific Conductance	900	UMHOS
MND21-4703	900000158	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Temperature	12.1	C
MND21-4703	900000158	AREA WATERSHED DRAINAGE A (GRAVEYARD)	Temperature	13.5	C
MND21-4704	000304	AREA WATERSHED DRAINAGE B	Alkalinity	240.0	MG/L
MND21-4704	000304	AREA WATERSHED DRAINAGE B	Dissolved Oxygen	8.8	MG/L
MND21-4704	000304	AREA WATERSHED DRAINAGE B	Potential of Hydrogen	8.03	SU
MND21-4704	000304	AREA WATERSHED DRAINAGE B	Redox Potential	171	MVOLTS
MND21-4704	000304	AREA WATERSHED DRAINAGE B	Specific Conductance	614	UMHOS
MND21-4704	000304	AREA WATERSHED DRAINAGE B	Temperature	14.6	C
MND21-4705	000305	AREA WATERSHED DRAINAGE B	Alkalinity	261.5	MG/L
MND21-4705	000305	AREA WATERSHED DRAINAGE B	Dissolved Oxygen	8.3	MG/L
MND21-4705	000305	AREA WATERSHED DRAINAGE B	Potential of Hydrogen	8.00	SU
MND21-4705	000305	AREA WATERSHED DRAINAGE B	Redox Potential	136	MVOLTS
MND21-4705	000305	AREA WATERSHED DRAINAGE B	Specific Conductance	625	UMHOS
MND21-4705	000305	AREA WATERSHED DRAINAGE B	Temperature	14.7	C
MND21-4706	000306	AREA WATERSHED DRAINAGE B	Alkalinity	280.5	MG/L
MND21-4706	000306	AREA WATERSHED DRAINAGE B	Dissolved Oxygen	8.8	MG/L

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-4706	000306	AREA WATERSHED DRAINAGE B	Potential of Hydrogen	7.88	SU
MND21-4706	000306	AREA WATERSHED DRAINAGE B	Redox Potential	80	MVOLTS
MND21-4706	000306	AREA WATERSHED DRAINAGE B	Specific Conductance	688	UMHOS
MND21-4706	000306	AREA WATERSHED DRAINAGE B	Temperature	16.0	C
MND21-4707	000307	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Alkalinity	292.5	MG/L
MND21-4707	000307	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Alkalinity	285.5	MG/L
MND21-4707	000307	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Dissolved Oxygen	5.2	MG/L
MND21-4707	000307	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Dissolved Oxygen	9.2	MG/L
MND21-4707	000307	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Potential of Hydrogen	7.90	SU
MND21-4707	000307	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Potential of Hydrogen	8.24	SU
MND21-4707	000307	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Redox Potential	41	MVOLTS
MND21-4707	000307	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Redox Potential	179	MVOLTS
MND21-4707	000307	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Specific Conductance	.791	UMHOS
MND21-4707	000307	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Specific Conductance	844	UMHOS
MND21-4707	000307	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Temperature	11.2	C
MND21-4707	000307	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Temperature	15.3	C
MND21-4707	900000166	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Alkalinity	292.5	MG/L
MND21-4707	900000166	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Alkalinity	285.5	MG/L
MND21-4707	900000166	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Dissolved Oxygen	5.2	MG/L
MND21-4707	900000166	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Dissolved Oxygen	9.2	MG/L
MND21-4707	900000166	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Potential of Hydrogen	7.90	SU
MND21-4707	900000166	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Potential of Hydrogen	8.24	SU
MND21-4707	900000166	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Redox Potential	41	MVOLTS
MND21-4707	900000166	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Redox Potential	179	MVOLTS
MND21-4707	900000166	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Specific Conductance	.791	UMHOS
MND21-4707	900000166	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Specific Conductance	844	UMHOS
MND21-4707	900000166	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Temperature	11.2	C
MND21-4707	900000166	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Temperature	15.3	C
MND21-4708	000308	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Alkalinity	261	MG/L
MND21-4708	000308	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Alkalinity	264.5	MG/L
MND21-4708	000308	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Dissolved Oxygen	3.4	MG/L
MND21-4708	000308	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Dissolved Oxygen	9.4	MG/L
MND21-4708	000308	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Potential of Hydrogen	7.41	SU
MND21-4708	000308	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Redox Potential	204	MVOLTS
MND21-4708	000308	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Redox Potential	189	MVOLTS
MND21-4708	000308	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Specific Conductance	1.160	UMHOS
MND21-4708	000308	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Specific Conductance	8.43	SU
MND21-4708	000308	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Specific Conductance	714	UMHOS
MND21-4708	000308	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Temperature	9.4	C
MND21-4708	000308	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Temperature	14.5	C
MND21-4708	900000191	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Alkalinity	261	MG/L
MND21-4708	900000191	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Alkalinity	264.5	MG/L
MND21-4708	900000191	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Dissolved Oxygen	3.4	MG/L
MND21-4708	900000191	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Dissolved Oxygen	9.4	MG/L
MND21-4708	900000191	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Potential of Hydrogen	7.41	SU
MND21-4708	900000191	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Redox Potential	204	MVOLTS
MND21-4708	900000191	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Redox Potential	189	MVOLTS
MND21-4708	900000191	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Specific Conductance	1.160	UMHOS
MND21-4708	900000191	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Specific Conductance	8.43	SU
MND21-4708	900000191	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Specific Conductance	714	UMHOS
MND21-4708	900000191	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Temperature	9.4	C
MND21-4708	900000191	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Temperature	14.5	C
MND21-4709	000309	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Alkalinity	274.0	MG/L
MND21-4709	000309	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Dissolved Oxygen	7.6	MG/L
MND21-4709	000309	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Potential of Hydrogen	8.20	SU

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-4709	000309	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Redox Potential	167	MVOLTS
MND21-4709	000309	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Specific Conductance	877	UMHOS
MND21-4709	000309	AREA WATERSHED DRAINAGE C (BENNER ROAD)	Temperature	17.0	C
MND21-4710	000310	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Alkalinity	518.5	MG/L
MND21-4710	000310	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Alkalinity	229	MG/L
MND21-4710	000310	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Dissolved Oxygen	5.8	MG/L
MND21-4710	000310	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Dissolved Oxygen	7.6	MG/L
MND21-4710	000310	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Potential of Hydrogen	7.05	SU
MND21-4710	000310	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Potential of Hydrogen	7.23	SU
MND21-4710	000310	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Redox Potential	38	MVOLTS
MND21-4710	000310	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Redox Potential	168	MVOLTS
MND21-4710	000310	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Specific Conductance	1.235	UMHOS
MND21-4710	000310	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Specific Conductance	624	UMHOS
MND21-4710	000310	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Temperature	12.7	C
MND21-4710	000310	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Temperature	16.0	C
MND21-4710	900000201	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Alkalinity	518.5	MG/L
MND21-4710	900000201	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Alkalinity	229	MG/L
MND21-4710	900000201	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Dissolved Oxygen	5.8	MG/L
MND21-4710	900000201	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Dissolved Oxygen	7.6	MG/L
MND21-4710	900000201	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Potential of Hydrogen	7.05	SU
MND21-4710	900000201	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Potential of Hydrogen	7.23	SU
MND21-4710	900000201	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Redox Potential	38	MVOLTS
MND21-4710	900000201	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Redox Potential	168	MVOLTS
MND21-4710	900000201	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Specific Conductance	1.235	UMHOS
MND21-4710	900000201	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Specific Conductance	624	UMHOS
MND21-4710	900000201	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Temperature	12.7	C
MND21-4710	900000201	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Temperature	16.0	C
MND21-4711	000312	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Alkalinity	204	MG/L
MND21-4711	000312	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Dissolved Oxygen	8.0	MG/L
MND21-4711	000312	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Potential of Hydrogen	7.24	SU
MND21-4711	000312	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Redox Potential	176	MVOLTS
MND21-4711	000312	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Specific Conductance	5200	UMHOS
MND21-4711	000312	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Temperature	19.9	C
MND21-4712	000311	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Alkalinity	309	MG/L
MND21-4712	000311	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Alkalinity	208	MG/L
MND21-4712	000311	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Dissolved Oxygen	4.0	MG/L
MND21-4712	000311	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Dissolved Oxygen	8.8	MG/L
MND21-4712	000311	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Potential of Hydrogen	7.04	SU
MND21-4712	000311	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Potential of Hydrogen	7.71	SU
MND21-4712	000311	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Redox Potential	176	MVOLTS
MND21-4712	000311	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Redox Potential	209	MVOLTS
MND21-4712	000311	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Specific Conductance	1.082	UMHOS
MND21-4712	000311	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Specific Conductance	517	UMHOS
MND21-4712	000311	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Temperature	11.1	C
MND21-4712	000311	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Temperature	17.3	C
MND21-4712	900000202	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Alkalinity	309	MG/L
MND21-4712	900000202	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Alkalinity	208	MG/L
MND21-4712	900000202	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Dissolved Oxygen	4.0	MG/L
MND21-4712	900000202	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Dissolved Oxygen	8.8	MG/L
MND21-4712	900000202	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Potential of Hydrogen	7.04	SU
MND21-4712	900000202	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Potential of Hydrogen	7.71	SU
MND21-4712	900000202	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Redox Potential	176	MVOLTS
MND21-4712	900000202	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Redox Potential	209	MVOLTS
MND21-4712	900000202	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Specific Conductance	1.082	UMHOS
MND21-4712	900000202	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Specific Conductance	517	UMHOS

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-4712	900000202	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Temperature	11.1	C
MND21-4712	900000202	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	Temperature	17.3	C
MND21-4713	000313	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Alkalinity	306.5	MG/L
MND21-4713	000313	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Alkalinity	183.5	MG/L
MND21-4713	000313	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Dissolved Oxygen	3.8	MG/L
MND21-4713	000313	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Dissolved Oxygen	9.2	MG/L
MND21-4713	000313	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Potential of Hydrogen	7.52	SU
MND21-4713	000313	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Potential of Hydrogen	8.06	SU
MND21-4713	000313	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Redox Potential	174	MVOLTS
MND21-4713	000313	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Redox Potential	104	MVOLTS
MND21-4713	000313	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Specific Conductance	1.107	UMHOS
MND21-4713	000313	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Specific Conductance	664	UMHOS
MND21-4713	000313	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Temperature	10.1	C
MND21-4713	000313	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Temperature	15.2	C
MND21-4713	900000194	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Alkalinity	306.5	MG/L
MND21-4713	900000194	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Alkalinity	183.5	MG/L
MND21-4713	900000194	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Dissolved Oxygen	3.8	MG/L
MND21-4713	900000194	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Dissolved Oxygen	9.2	MG/L
MND21-4713	900000194	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Potential of Hydrogen	7.52	SU
MND21-4713	900000194	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Potential of Hydrogen	8.06	SU
MND21-4713	900000194	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Redox Potential	174	MVOLTS
MND21-4713	900000194	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Redox Potential	104	MVOLTS
MND21-4713	900000194	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Specific Conductance	1.107	UMHOS
MND21-4713	900000194	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Specific Conductance	664	UMHOS
MND21-4713	900000194	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Temperature	10.1	C
MND21-4713	900000194	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Temperature	15.2	C
MND21-4714	000314	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Alkalinity	171.5	MG/L
MND21-4714	000314	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Dissolved Oxygen	9.6	MG/L
MND21-4714	000314	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Potential of Hydrogen	8.20	SU
MND21-4714	000314	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Redox Potential	119	MVOLTS
MND21-4714	000314	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Specific Conductance	561	UMHOS
MND21-4714	000314	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Temperature	15.2	C
MND21-4715	000315	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Alkalinity	158.5	MG/L
MND21-4715	000315	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Dissolved Oxygen	9.7	MG/L
MND21-4715	000315	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Potential of Hydrogen	8.06	SU
MND21-4715	000315	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Redox Potential	178	MVOLTS
MND21-4715	000315	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Specific Conductance	518	UMHOS
MND21-4715	000315	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	Temperature	14.5	C
MND21-4716	900000129	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Alkalinity	249	MG/L
MND21-4716	900000129	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Dissolved Oxygen	9.5	MG/L
MND21-4716	900000129	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Potential of Hydrogen	7.99	SU
MND21-4716	900000129	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Redox Potential	207	MVOLTS
MND21-4716	900000129	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Specific Conductance	0.838	UMHOS
MND21-4716	900000129	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Temperature	14.1	C
MND21-4717	900000135	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Alkalinity	244.5	MG/L
MND21-4717	900000135	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Dissolved Oxygen	11.5	MG/L
MND21-4717	900000135	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Potential of Hydrogen	8.31	SU
MND21-4717	900000135	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Redox Potential	219	MVOLTS
MND21-4717	900000135	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Specific Conductance	0.844	UMHOS
MND21-4717	900000135	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Temperature	14.4	C
MND21-4718	900000136	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Alkalinity	236	MG/L
MND21-4718	900000136	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Dissolved Oxygen	13.4	MG/L
MND21-4718	900000136	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Potential of Hydrogen	8.39	SU
MND21-4718	900000136	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Redox Potential	234	MVOLTS
MND21-4718	900000136	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Specific Conductance	0.847	UMHOS

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-4718	900000136	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Temperature	11.8	C
MND21-4719	000319	AREA WATERSHED DRAINAGE G (SEEPS)	Alkalinity	209.5	MG/L
MND21-4719	000319	AREA WATERSHED DRAINAGE G (SEEPS)	Dissolved Oxygen	8.7	MG/L
MND21-4719	000319	AREA WATERSHED DRAINAGE G (SEEPS)	Potential of Hydrogen	7.79	SU
MND21-4719	000319	AREA WATERSHED DRAINAGE G (SEEPS)	Redox Potential	203	MVOLTS
MND21-4719	000319	AREA WATERSHED DRAINAGE G (SEEPS)	Specific Conductance	1224	UMHOS
MND21-4719	000319	AREA WATERSHED DRAINAGE G (SEEPS)	Temperature	12.0	C
MND21-4720	000320	AREA WATERSHED DRAINAGE G (SEEPS)	Alkalinity	193.5	MG/L
MND21-4720	000320	AREA WATERSHED DRAINAGE G (SEEPS)	Dissolved Oxygen	9.9	MG/L
MND21-4720	000320	AREA WATERSHED DRAINAGE G (SEEPS)	Potential of Hydrogen	8.04	SU
MND21-4720	000320	AREA WATERSHED DRAINAGE G (SEEPS)	Redox Potential	64	MVOLTS
MND21-4720	000320	AREA WATERSHED DRAINAGE G (SEEPS)	Specific Conductance	1328	UMHOS
MND21-4720	000320	AREA WATERSHED DRAINAGE G (SEEPS)	Temperature	13.8	C
MND21-4721	000321	AREA WATERSHED DRAINAGE G (SEEPS)	Alkalinity	229.5	MG/L
MND21-4721	000321	AREA WATERSHED DRAINAGE G (SEEPS)	Alkalinity	182.5	MG/L
MND21-4721	000321	AREA WATERSHED DRAINAGE G (SEEPS)	Dissolved Oxygen	9.9	MG/L
MND21-4721	000321	AREA WATERSHED DRAINAGE G (SEEPS)	Dissolved Oxygen	8.8	MG/L
MND21-4721	000321	AREA WATERSHED DRAINAGE G (SEEPS)	Potential of Hydrogen	7.40	SU
MND21-4721	000321	AREA WATERSHED DRAINAGE G (SEEPS)	Potential of Hydrogen	8.37	SU
MND21-4721	000321	AREA WATERSHED DRAINAGE G (SEEPS)	Redox Potential	169	MVOLTS
MND21-4721	000321	AREA WATERSHED DRAINAGE G (SEEPS)	Redox Potential	121	MVOLTS
MND21-4721	000321	AREA WATERSHED DRAINAGE G (SEEPS)	Specific Conductance	1.262	UMHOS
MND21-4721	000321	AREA WATERSHED DRAINAGE G (SEEPS)	Specific Conductance	1720	UMHOS
MND21-4721	000321	AREA WATERSHED DRAINAGE G (SEEPS)	Temperature	9.3	C
MND21-4721	000321	AREA WATERSHED DRAINAGE G (SEEPS)	Temperature	17.5	C
MND21-4721	900000143	AREA WATERSHED DRAINAGE G (SEEPS)	Alkalinity	229.5	MG/L
MND21-4721	900000143	AREA WATERSHED DRAINAGE G (SEEPS)	Alkalinity	182.5	MG/L
MND21-4721	900000143	AREA WATERSHED DRAINAGE G (SEEPS)	Dissolved Oxygen	9.9	MG/L
MND21-4721	900000143	AREA WATERSHED DRAINAGE G (SEEPS)	Dissolved Oxygen	8.8	MG/L
MND21-4721	900000143	AREA WATERSHED DRAINAGE G (SEEPS)	Potential of Hydrogen	7.40	SU
MND21-4721	900000143	AREA WATERSHED DRAINAGE G (SEEPS)	Potential of Hydrogen	8.37	SU
MND21-4721	900000143	AREA WATERSHED DRAINAGE G (SEEPS)	Redox Potential	169	MVOLTS
MND21-4721	900000143	AREA WATERSHED DRAINAGE G (SEEPS)	Redox Potential	121	MVOLTS
MND21-4721	900000143	AREA WATERSHED DRAINAGE G (SEEPS)	Specific Conductance	1.262	UMHOS
MND21-4721	900000143	AREA WATERSHED DRAINAGE G (SEEPS)	Specific Conductance	1720	UMHOS
MND21-4721	900000143	AREA WATERSHED DRAINAGE G (SEEPS)	Temperature	9.3	C
MND21-4721	900000143	AREA WATERSHED DRAINAGE G (SEEPS)	Temperature	17.5	C
MND21-4722	000322	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Alkalinity	273.5	MG/L
MND21-4722	000322	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Alkalinity	219.5	MG/L
MND21-4722	000322	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Dissolved Oxygen	5.3	MG/L
MND21-4722	000322	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Dissolved Oxygen	7.5	MG/L
MND21-4722	000322	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Potential of Hydrogen	7.74	SU
MND21-4722	000322	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Potential of Hydrogen	8.60	SU
MND21-4722	000322	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Redox Potential	162	MVOLTS
MND21-4722	000322	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Redox Potential	145	MVOLTS
MND21-4722	000322	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Specific Conductance	1.047	UMHOS
MND21-4722	000322	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Specific Conductance	890	UMHOS
MND21-4722	000322	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Temperature	10.7	C
MND21-4722	000322	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Temperature	11.2	C
MND21-4722	900000149	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Alkalinity	273.5	MG/L
MND21-4722	900000149	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Alkalinity	219.5	MG/L
MND21-4722	900000149	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Dissolved Oxygen	5.3	MG/L
MND21-4722	900000149	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Dissolved Oxygen	7.5	MG/L
MND21-4722	900000149	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Potential of Hydrogen	7.74	SU
MND21-4722	900000149	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Potential of Hydrogen	8.60	SU

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-4722	900000149	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Redox Potential	162	MVOLTS
MND21-4722	900000149	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Redox Potential	145	MVOLTS
MND21-4722	900000149	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Specific Conductance	1.047	UMHOS
MND21-4722	900000149	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Specific Conductance	890	UMHOS
MND21-4722	900000149	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Temperature	10.7	C
MND21-4722	900000149	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Temperature	11.2	C
MND21-4723	000323	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Alkalinity	325	MG/L
MND21-4723	000323	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Alkalinity	291.5	MG/L
MND21-4723	000323	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Dissolved Oxygen	2.8	MG/L
MND21-4723	000323	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Dissolved Oxygen	9.1	MG/L
MND21-4723	000323	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Potential of Hydrogen	7.43	SU
MND21-4723	000323	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Potential of Hydrogen	7.35	SU
MND21-4723	000323	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Redox Potential	150	MVOLTS
MND21-4723	000323	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Redox Potential	113	MVOLTS
MND21-4723	000323	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Specific Conductance	1.096	UMHOS
MND21-4723	000323	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Specific Conductance	1212	UMHOS
MND21-4723	000323	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Temperature	11.5	C
MND21-4723	000323	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Temperature	10.7	C
MND21-4723	900000150	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Alkalinity	325	MG/L
MND21-4723	900000150	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Alkalinity	291.5	MG/L
MND21-4723	900000150	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Dissolved Oxygen	2.8	MG/L
MND21-4723	900000150	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Dissolved Oxygen	9.1	MG/L
MND21-4723	900000150	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Potential of Hydrogen	7.43	SU
MND21-4723	900000150	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Potential of Hydrogen	7.35	SU
MND21-4723	900000150	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Redox Potential	150	MVOLTS
MND21-4723	900000150	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Redox Potential	113	MVOLTS
MND21-4723	900000150	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Specific Conductance	1.096	UMHOS
MND21-4723	900000150	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Specific Conductance	1212	UMHOS
MND21-4723	900000150	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Temperature	11.5	C
MND21-4723	900000150	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Temperature	10.7	C
MND21-4723	900000151	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Alkalinity	325	MG/L
MND21-4723	900000151	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Alkalinity	291.5	MG/L
MND21-4723	900000151	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Dissolved Oxygen	2.8	MG/L
MND21-4723	900000151	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Dissolved Oxygen	9.1	MG/L
MND21-4723	900000151	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Potential of Hydrogen	7.43	SU
MND21-4723	900000151	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Potential of Hydrogen	7.35	SU
MND21-4723	900000151	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Redox Potential	150	MVOLTS
MND21-4723	900000151	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Redox Potential	113	MVOLTS
MND21-4723	900000151	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Specific Conductance	1.096	UMHOS
MND21-4723	900000151	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Specific Conductance	1212	UMHOS
MND21-4723	900000151	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Temperature	11.5	C
MND21-4723	900000151	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Temperature	10.7	C
MND21-4724	000324	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Alkalinity	312	MG/L
MND21-4724	000324	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Alkalinity	223	MG/L
MND21-4724	000324	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Dissolved Oxygen	6.8	MG/L
MND21-4724	000324	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Dissolved Oxygen	11.0	MG/L
MND21-4724	000324	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Potential of Hydrogen	7.6	SU
MND21-4724	000324	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Potential of Hydrogen	8.53	SU
MND21-4724	000324	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Redox Potential	195	MVOLTS
MND21-4724	000324	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Redox Potential	102	MVOLTS
MND21-4724	000324	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Specific Conductance	1.67	UMHOS
MND21-4724	000324	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Specific Conductance	1825	UMHOS
MND21-4724	000324	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Temperature	7.7	C
MND21-4724	000324	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Temperature	12.9	C
MND21-4724	900000190	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Alkalinity	312	MG/L

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-4724	900000190	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Alkalinity	223	MG/L
MND21-4724	900000190	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Dissolved Oxygen	6.8	MG/L
MND21-4724	900000190	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Dissolved Oxygen	11.0	MG/L
MND21-4724	900000190	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Potential of Hydrogen	7.6	SU
MND21-4724	900000190	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Potential of Hydrogen	8.53	SU
MND21-4724	900000190	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Redox Potential	195	MVOLTS
MND21-4724	900000190	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Redox Potential	102	MVOLTS
MND21-4724	900000190	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Specific Conductance	1.67	UMHOS
MND21-4724	900000190	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Specific Conductance	1825	UMHOS
MND21-4724	900000190	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Temperature	7.7	C
MND21-4724	900000190	AREA WATERSHED DRAINAGE H (GOLF COURSE)	Temperature	12.9	C
MND21-4725	000325	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Alkalinity	137	MG/L
MND21-4725	000325	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Alkalinity	140.0	MG/L
MND21-4725	000325	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Dissolved Oxygen	8.0	MG/L
MND21-4725	000325	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Dissolved Oxygen	3.0	MG/L
MND21-4725	000325	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Potential of Hydrogen	7.74	SU
MND21-4725	000325	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Potential of Hydrogen	7.31	SU
MND21-4725	000325	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Redox Potential	209	MVOLTS
MND21-4725	000325	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Redox Potential	037	MVOLTS
MND21-4725	000325	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Specific Conductance	.952	UMHOS
MND21-4725	000325	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Specific Conductance	410	UMHOS
MND21-4725	000325	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Temperature	11.4	C
MND21-4725	000325	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Temperature	19.0	C
MND21-4725	900000252	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Alkalinity	137	MG/L
MND21-4725	900000252	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Alkalinity	140.0	MG/L
MND21-4725	900000252	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Dissolved Oxygen	8.0	MG/L
MND21-4725	900000252	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Dissolved Oxygen	3.0	MG/L
MND21-4725	900000252	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Potential of Hydrogen	7.74	SU
MND21-4725	900000252	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Potential of Hydrogen	7.31	SU
MND21-4725	900000252	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Redox Potential	209	MVOLTS
MND21-4725	900000252	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Redox Potential	037	MVOLTS
MND21-4725	900000252	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Specific Conductance	.952	UMHOS
MND21-4725	900000252	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Specific Conductance	410	UMHOS
MND21-4725	900000252	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Temperature	11.4	C
MND21-4725	900000252	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Temperature	19.0	C
MND21-4725	900000253	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Alkalinity	137	MG/L
MND21-4725	900000253	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Alkalinity	140.0	MG/L
MND21-4725	900000253	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Dissolved Oxygen	8.0	MG/L
MND21-4725	900000253	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Dissolved Oxygen	3.0	MG/L
MND21-4725	900000253	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Potential of Hydrogen	7.74	SU
MND21-4725	900000253	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Potential of Hydrogen	7.31	SU
MND21-4725	900000253	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Redox Potential	209	MVOLTS
MND21-4725	900000253	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Redox Potential	037	MVOLTS
MND21-4725	900000253	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Specific Conductance	.952	UMHOS
MND21-4725	900000253	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Specific Conductance	410	UMHOS
MND21-4725	900000253	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Temperature	11.4	C
MND21-4725	900000253	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Temperature	19.0	C
MND21-4726	000326	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Alkalinity	129	MG/L
MND21-4726	000326	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Alkalinity	132.5	MG/L
MND21-4726	000326	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Dissolved Oxygen	8.0	MG/L
MND21-4726	000326	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Dissolved Oxygen	2.0	MG/L
MND21-4726	000326	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Potential of Hydrogen	7.74	SU
MND21-4726	000326	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Potential of Hydrogen	7.22	SU
MND21-4726	000326	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Redox Potential	209	MVOLTS
MND21-4726	000326	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Redox Potential	023	MVOLTS

Table C.1 - Field Measurements

Station	Sample ID	Watershed	Parameter Name	Results	Units
MND21-4726	000326	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Specific Conductance	.952	UMHOS
MND21-4726	000326	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Specific Conductance	415	UMHOS
MND21-4726	000326	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Temperature	11.4	C
MND21-4726	000326	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Temperature	17.5	C
MND21-4726	900000254	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Alkalinity	129	MG/L
MND21-4726	900000254	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Alkalinity	132.5	MG/L
MND21-4726	900000254	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Dissolved Oxygen	8.0	MG/L
MND21-4726	900000254	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Dissolved Oxygen	2.0	MG/L
MND21-4726	900000254	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Potential of Hydrogen	7.74	SU
MND21-4726	900000254	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Potential of Hydrogen	7.22	SU
MND21-4726	900000254	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Redox Potential	209	MVOLTS
MND21-4726	900000254	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Redox Potential	023	MVOLTS
MND21-4726	900000254	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Specific Conductance	.952	UMHOS
MND21-4726	900000254	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Specific Conductance	415	UMHOS
MND21-4726	900000254	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Temperature	11.4	C
MND21-4726	900000254	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Temperature	17.5	C
MND21-4726	900000255	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Alkalinity	129	MG/L
MND21-4726	900000255	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Alkalinity	132.5	MG/L
MND21-4726	900000255	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Dissolved Oxygen	8.0	MG/L
MND21-4726	900000255	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Dissolved Oxygen	2.0	MG/L
MND21-4726	900000255	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Potential of Hydrogen	7.74	SU
MND21-4726	900000255	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Potential of Hydrogen	7.22	SU
MND21-4726	900000255	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Redox Potential	209	MVOLTS
MND21-4726	900000255	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Redox Potential	023	MVOLTS
MND21-4726	900000255	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Specific Conductance	.952	UMHOS
MND21-4726	900000255	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Specific Conductance	415	UMHOS
MND21-4726	900000255	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Temperature	11.4	C
MND21-4726	900000255	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Temperature	17.5	C
MND21-4727	000327	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Alkalinity	136	MG/L
MND21-4727	000327	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Alkalinity	134.0	MG/L
MND21-4727	000327	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Dissolved Oxygen	8.0	MG/L
MND21-4727	000327	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Dissolved Oxygen	2.4	MG/L
MND21-4727	000327	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Potential of Hydrogen	7.74	SU
MND21-4727	000327	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Potential of Hydrogen	7.36	SU
MND21-4727	000327	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Redox Potential	209	MVOLTS
MND21-4727	000327	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Redox Potential	069	MVOLTS
MND21-4727	000327	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Specific Conductance	.952	UMHOS
MND21-4727	000327	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Specific Conductance	413	UMHOS
MND21-4727	000327	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Temperature	11.4	C
MND21-4727	000327	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Temperature	16.6	C
MND21-4727	900000256	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Alkalinity	136	MG/L
MND21-4727	900000256	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Alkalinity	134.0	MG/L
MND21-4727	900000256	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Dissolved Oxygen	8.0	MG/L
MND21-4727	900000256	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Dissolved Oxygen	2.4	MG/L
MND21-4727	900000256	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Potential of Hydrogen	7.74	SU
MND21-4727	900000256	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Potential of Hydrogen	7.36	SU
MND21-4727	900000256	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Redox Potential	209	MVOLTS
MND21-4727	900000256	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Redox Potential	069	MVOLTS
MND21-4727	900000256	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Specific Conductance	.952	UMHOS
MND21-4727	900000256	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Specific Conductance	413	UMHOS
MND21-4727	900000256	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Temperature	11.4	C
MND21-4727	900000256	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	Temperature	16.6	C

APPENDIX C.2

Appendix C-2

GEOTECHNICAL DATA

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-1001	000440	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Clay	8.0	%
MND22-1001	000440	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Gravel	32	%
MND22-1001	000440	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Sand	41	%
MND22-1001	000440	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Silt	19	%
MND22-1001	000440	BG GREAT MIAMI RIVER-RIP RAP ROAD	pH	7.4	UNITS
MND22-1001	900000102	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Clay	0.0	%
MND22-1001	900000102	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Gravel	12	%
MND22-1001	900000102	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Sand	85	%
MND22-1001	900000102	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Silt	3.0	%
MND22-1001	900000102	BG GREAT MIAMI RIVER-RIP RAP ROAD	pH	8.0	UNITS
MND22-1002	000441	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Clay	1.0	%
MND22-1002	000441	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Gravel	3.0	%
MND22-1002	000441	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Sand	91	%
MND22-1002	000441	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Silt	5.0	%
MND22-1002	000441	BG GREAT MIAMI RIVER-RIP RAP ROAD	pH	8.0	UNITS
MND22-1002	900000104	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Clay	0.0	%
MND22-1002	900000104	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Gravel	8.0	%
MND22-1002	900000104	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Sand	85	%
MND22-1002	900000104	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Silt	7.0	%
MND22-1002	900000104	BG GREAT MIAMI RIVER-RIP RAP ROAD	pH	8.0	UNITS
MND22-1002	900000105	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Clay	0.0	
MND22-1002	900000105	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Gravel	9.0	%
MND22-1002	900000105	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Sand	86	%
MND22-1002	900000105	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Silt	5.0	%
MND22-1002	900000105	BG GREAT MIAMI RIVER-RIP RAP ROAD	pH	8.1	UNITS
MND22-1003	000442	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Clay	5.0	%
MND22-1003	000442	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Gravel	47	%
MND22-1003	000442	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Sand	37	%
MND22-1003	000442	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Silt	11	%
MND22-1003	000442	BG GREAT MIAMI RIVER-RIP RAP ROAD	pH	7.8	UNITS
MND22-1003	900000106	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Clay	3.0	%
MND22-1003	900000106	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Gravel	24	%
MND22-1003	900000106	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Sand	68	%
MND22-1003	900000106	BG GREAT MIAMI RIVER-RIP RAP ROAD	% Silt	5.0	%
MND22-1003	900000106	BG GREAT MIAMI RIVER-RIP RAP ROAD	pH	8.1	UNITS
MND22-1101	000451	BACKGROUND-EATON POND	% Clay	17	%
MND22-1101	000451	BACKGROUND-EATON POND	% Gravel	1.0	%
MND22-1101	000451	BACKGROUND-EATON POND	% Sand	12	%
MND22-1101	000451	BACKGROUND-EATON POND	% Silt	70	%
MND22-1101	000451	BACKGROUND-EATON POND	pH	7.3	UNITS
MND22-1101	900000213	BACKGROUND-EATON POND	% Clay	13	%
MND22-1101	900000213	BACKGROUND-EATON POND	% Gravel	4.0	%
MND22-1101	900000213	BACKGROUND-EATON POND	% Sand	32	%
MND22-1101	900000213	BACKGROUND-EATON POND	% Silt	51	%
MND22-1101	900000213	BACKGROUND-EATON POND	pH	7.6	UNITS
MND22-1101	900000214	BACKGROUND-EATON POND	% Clay	15	%
MND22-1101	900000214	BACKGROUND-EATON POND	% Gravel	5.0	%
MND22-1101	900000214	BACKGROUND-EATON POND	% Sand	32	%
MND22-1101	900000214	BACKGROUND-EATON POND	% Silt	48	%
MND22-1101	900000214	BACKGROUND-EATON POND	pH	7.8	UNITS
MND22-1102	000452	BACKGROUND-EATON POND	% Clay	16	%
MND22-1102	000452	BACKGROUND-EATON POND	% Gravel	1.0	%
MND22-1102	000452	BACKGROUND-EATON POND	% Sand	16	%
MND22-1102	000452	BACKGROUND-EATON POND	% Silt	67	%
MND22-1102	000452	BACKGROUND-EATON POND	pH	7.4	UNITS

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-1102	900000215	BACKGROUND-EATON POND	% Clay	16	%
MND22-1102	900000215	BACKGROUND-EATON POND	% Gravel	6.0	%
MND22-1102	900000215	BACKGROUND-EATON POND	% Sand	35	%
MND22-1102	900000215	BACKGROUND-EATON POND	% Silt	43	%
MND22-1102	900000215	BACKGROUND-EATON POND	pH	7.8	UNITS
MND22-1103	000453	BACKGROUND-EATON POND	% Clay	22	%
MND22-1103	000453	BACKGROUND-EATON POND	% Gravel	10	%
MND22-1103	000453	BACKGROUND-EATON POND	% Sand	15	%
MND22-1103	000453	BACKGROUND-EATON POND	% Silt	53	%
MND22-1103	000453	BACKGROUND-EATON POND	pH	7.5	UNITS
MND22-1103	900000216	BACKGROUND-EATON POND	pH	6.6	STD UN
MND22-1104	000454	BACKGROUND-EATON POND	% Clay	27	%
MND22-1104	000454	BACKGROUND-EATON POND	% Gravel	1.0	%
MND22-1104	000454	BACKGROUND-EATON POND	% Sand	12	%
MND22-1104	000454	BACKGROUND-EATON POND	% Silt	60	%
MND22-1104	000454	BACKGROUND-EATON POND	pH	7.2	UNITS
MND22-1104	900000217	BACKGROUND-EATON POND	pH	7.3	STD UN
MND22-1105	000455	BACKGROUND-EATON POND	% Clay	26	%
MND22-1105	000455	BACKGROUND-EATON POND	% Gravel	0.0	%
MND22-1105	000455	BACKGROUND-EATON POND	% Sand	13	%
MND22-1105	000455	BACKGROUND-EATON POND	% Silt	61	%
MND22-1105	000455	BACKGROUND-EATON POND	pH	7.3	UNITS
MND22-1105	900000218	BACKGROUND-EATON POND	pH	7.2	STD UN
MND22-1201	000493	BACKGROUND-GAME PRESERVE POND	% Clay	24	%
MND22-1201	000493	BACKGROUND-GAME PRESERVE POND	% Gravel	0.0	%
MND22-1201	000493	BACKGROUND-GAME PRESERVE POND	% Sand	11	%
MND22-1201	000493	BACKGROUND-GAME PRESERVE POND	% Silt	65	%
MND22-1201	000493	BACKGROUND-GAME PRESERVE POND	pH	6.9	UNITS
MND22-1201	900000015	BACKGROUND-GAME PRESERVE POND	% Clay	24	%
MND22-1201	900000015	BACKGROUND-GAME PRESERVE POND	% Gravel	0.0	%
MND22-1201	900000015	BACKGROUND-GAME PRESERVE POND	% Sand	11	%
MND22-1201	900000015	BACKGROUND-GAME PRESERVE POND	% Silt	65	%
MND22-1201	900000015	BACKGROUND-GAME PRESERVE POND	pH	6.3	UNITS
MND22-1202	000494	BACKGROUND-GAME PRESERVE POND	% Clay	28	%
MND22-1202	000494	BACKGROUND-GAME PRESERVE POND	% Gravel	0.0	%
MND22-1202	000494	BACKGROUND-GAME PRESERVE POND	% Sand	4.0	%
MND22-1202	000494	BACKGROUND-GAME PRESERVE POND	% Silt	68	%
MND22-1202	000494	BACKGROUND-GAME PRESERVE POND	pH	6.8	UNITS
MND22-1202	900000013	BACKGROUND-GAME PRESERVE POND	% Clay	25	%
MND22-1202	900000013	BACKGROUND-GAME PRESERVE POND	% Gravel	0.0	%
MND22-1202	900000013	BACKGROUND-GAME PRESERVE POND	% Sand	8.0	%
MND22-1202	900000013	BACKGROUND-GAME PRESERVE POND	% Silt	67	%
MND22-1202	900000013	BACKGROUND-GAME PRESERVE POND	pH	6.5	UNITS
MND22-1203	000448	BACKGROUND-GAME PRESERVE POND	% Clay	23	%
MND22-1203	000448	BACKGROUND-GAME PRESERVE POND	% Gravel	0.0	%
MND22-1203	000448	BACKGROUND-GAME PRESERVE POND	% Sand	11	%
MND22-1203	000448	BACKGROUND-GAME PRESERVE POND	% Silt	66	%
MND22-1203	000448	BACKGROUND-GAME PRESERVE POND	pH	6.8	UNITS
MND22-1203	900000016	BACKGROUND-GAME PRESERVE POND	% Clay	22	%
MND22-1203	900000016	BACKGROUND-GAME PRESERVE POND	% Gravel	0.0	%
MND22-1203	900000016	BACKGROUND-GAME PRESERVE POND	% Sand	10	%
MND22-1203	900000016	BACKGROUND-GAME PRESERVE POND	% Silt	68	%
MND22-1203	900000016	BACKGROUND-GAME PRESERVE POND	pH	5.4	UNITS
MND22-1204	000449	BACKGROUND-GAME PRESERVE POND	% Clay	30	%
MND22-1204	000449	BACKGROUND-GAME PRESERVE POND	% Gravel	0.0	%

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-1204	000449	BACKGROUND-GAME PRESERVE POND	% Sand	2.0	%
MND22-1204	000449	BACKGROUND-GAME PRESERVE POND	% Silt	68	%
MND22-1204	000449	BACKGROUND-GAME PRESERVE POND	pH	6.8	UNITS
MND22-1204	000605	BACKGROUND-GAME PRESERVE POND	% Clay	27	%
MND22-1204	000605	BACKGROUND-GAME PRESERVE POND	% Gravel	0.0	%
MND22-1204	000605	BACKGROUND-GAME PRESERVE POND	% Sand	1.0	%
MND22-1204	000605	BACKGROUND-GAME PRESERVE POND	% Silt	72	%
MND22-1204	000605	BACKGROUND-GAME PRESERVE POND	pH	7.0	UNITS
MND22-1204	900000017	BACKGROUND-GAME PRESERVE POND	% Clay	20	%
MND22-1204	900000017	BACKGROUND-GAME PRESERVE POND	% Gravel	0.0	%
MND22-1204	900000017	BACKGROUND-GAME PRESERVE POND	% Sand	1.0	%
MND22-1204	900000017	BACKGROUND-GAME PRESERVE POND	% Silt	79	%
MND22-1204	900000017	BACKGROUND-GAME PRESERVE POND	pH	6.3	UNITS
MND22-1205	000450	BACKGROUND-GAME PRESERVE POND	% Clay	20	%
MND22-1205	000450	BACKGROUND-GAME PRESERVE POND	% Gravel	0.0	%
MND22-1205	000450	BACKGROUND-GAME PRESERVE POND	% Sand	10	%
MND22-1205	000450	BACKGROUND-GAME PRESERVE POND	% Silt	70	%
MND22-1205	000450	BACKGROUND-GAME PRESERVE POND	pH	6.8	UNITS
MND22-1205	900000014	BACKGROUND-GAME PRESERVE POND	% Clay	17	%
MND22-1205	900000014	BACKGROUND-GAME PRESERVE POND	% Gravel	0.0	%
MND22-1205	900000014	BACKGROUND-GAME PRESERVE POND	% Sand	4.0	%
MND22-1205	900000014	BACKGROUND-GAME PRESERVE POND	% Silt	79	%
MND22-1205	900000014	BACKGROUND-GAME PRESERVE POND	pH	6.8	UNITS
MND22-1301	000456	BACKGROUND-EATON STREAM	% Clay	11	%
MND22-1301	000456	BACKGROUND-EATON STREAM	% Gravel	7.0	%
MND22-1301	000456	BACKGROUND-EATON STREAM	% Sand	43	%
MND22-1301	000456	BACKGROUND-EATON STREAM	% Silt	39	%
MND22-1301	000456	BACKGROUND-EATON STREAM	pH	7.7	UNITS
MND22-1302	000457	BACKGROUND-EATON STREAM	% Clay	11	%
MND22-1302	000457	BACKGROUND-EATON STREAM	% Gravel	18	%
MND22-1302	000457	BACKGROUND-EATON STREAM	% Sand	49	%
MND22-1302	000457	BACKGROUND-EATON STREAM	% Silt	22	%
MND22-1302	000457	BACKGROUND-EATON STREAM	pH	7.7	UNITS
MND22-1303	000458	BACKGROUND-EATON STREAM	% Clay	4.0	%
MND22-1303	000458	BACKGROUND-EATON STREAM	% Gravel	18	%
MND22-1303	000458	BACKGROUND-EATON STREAM	% Sand	60	%
MND22-1303	000458	BACKGROUND-EATON STREAM	% Silt	18	%
MND22-1303	000458	BACKGROUND-EATON STREAM	pH	7.6	UNITS
MND22-1303	000636	BACKGROUND-EATON STREAM	% Clay	6.0	%
MND22-1303	000636	BACKGROUND-EATON STREAM	% Gravel	16	%
MND22-1303	000636	BACKGROUND-EATON STREAM	% Sand	60	%
MND22-1303	000636	BACKGROUND-EATON STREAM	% Silt	18	%
MND22-1303	000636	BACKGROUND-EATON STREAM	pH	7.7	UNITS
MND22-1401	000443	BACKGROUND-PETERSON POND	% Clay	34	%
MND22-1401	000443	BACKGROUND-PETERSON POND	% Gravel	0.0	%
MND22-1401	000443	BACKGROUND-PETERSON POND	% Sand	2.0	%
MND22-1401	000443	BACKGROUND-PETERSON POND	% Silt	64	%
MND22-1401	000443	BACKGROUND-PETERSON POND	pH	7.6	UNITS
MND22-1401	900000259	BACKGROUND-PETERSON POND	pH	7.0	STD UN
MND22-1401	900000261	BACKGROUND-PETERSON POND	pH	7.1	STD UN
MND22-1402	000444	BACKGROUND-PETERSON POND	% Clay	41	%
MND22-1402	000444	BACKGROUND-PETERSON POND	% Gravel	0.0	%
MND22-1402	000444	BACKGROUND-PETERSON POND	% Sand	1.0	%
MND22-1402	000444	BACKGROUND-PETERSON POND	% Silt	58	%
MND22-1402	000444	BACKGROUND-PETERSON POND	pH	7.3	UNITS

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-1402	900000260	BACKGROUND-PETERSON POND	pH	7.4	STD UN
MND22-1403	000445	BACKGROUND-PETERSON POND	% Clay	41	%
MND22-1403	000445	BACKGROUND-PETERSON POND	% Gravel	0.0	%
MND22-1403	000445	BACKGROUND-PETERSON POND	% Sand	2.0	%
MND22-1403	000445	BACKGROUND-PETERSON POND	% Silt	57	%
MND22-1403	000445	BACKGROUND-PETERSON POND	pH	7.7	UNITS
MND22-1403	900000262	BACKGROUND-PETERSON POND	pH	7.2	STD UN
MND22-1501	000459	BACKGROUND-TURKEY RUN STREAM	% Clay	0.0	%
MND22-1501	000459	BACKGROUND-TURKEY RUN STREAM	% Gravel	16	%
MND22-1501	000459	BACKGROUND-TURKEY RUN STREAM	% Sand	78	%
MND22-1501	000459	BACKGROUND-TURKEY RUN STREAM	% Silt	6.0	%
MND22-1501	000459	BACKGROUND-TURKEY RUN STREAM	pH	8.4	UNITS
MND22-1501	000642	BACKGROUND-TURKEY RUN STREAM	% Clay	3.0	%
MND22-1501	000642	BACKGROUND-TURKEY RUN STREAM	% Gravel	1.0	%
MND22-1501	000642	BACKGROUND-TURKEY RUN STREAM	% Sand	89	%
MND22-1501	000642	BACKGROUND-TURKEY RUN STREAM	% Silt	7.0	%
MND22-1501	000642	BACKGROUND-TURKEY RUN STREAM	pH	8.6	UNITS
MND22-1501	900000263	BACKGROUND-TURKEY RUN STREAM	pH	8.1	STD UN
MND22-1502	000460	BACKGROUND-TURKEY RUN STREAM	% Clay	10	%
MND22-1502	000460	BACKGROUND-TURKEY RUN STREAM	% Gravel	7.0	%
MND22-1502	000460	BACKGROUND-TURKEY RUN STREAM	% Sand	53	%
MND22-1502	000460	BACKGROUND-TURKEY RUN STREAM	% Silt	30	%
MND22-1502	000460	BACKGROUND-TURKEY RUN STREAM	pH	7.4	UNITS
MND22-1502	900000264	BACKGROUND-TURKEY RUN STREAM	pH	7.4	STD UN
MND22-1503	000461	BACKGROUND-TURKEY RUN STREAM	% Clay	2.0	%
MND22-1503	000461	BACKGROUND-TURKEY RUN STREAM	% Gravel	1.0	%
MND22-1503	000461	BACKGROUND-TURKEY RUN STREAM	% Sand	85	%
MND22-1503	000461	BACKGROUND-TURKEY RUN STREAM	% Silt	12	%
MND22-1503	000461	BACKGROUND-TURKEY RUN STREAM	pH	7.9	UNITS
MND22-1503	900000265	BACKGROUND-TURKEY RUN STREAM	pH	7.7	STD UN
MND22-2001	000417	SRDS-ASPHALT LINED POND	% Clay	6.0	%
MND22-2001	000417	SRDS-ASPHALT LINED POND	% Gravel	0.0	%
MND22-2001	000417	SRDS-ASPHALT LINED POND	% Sand	35	%
MND22-2001	000417	SRDS-ASPHALT LINED POND	% Silt	71	%
MND22-2001	000417	SRDS-ASPHALT LINED POND	pH	7.3	UNITS
MND22-2001	900000071	SRDS-ASPHALT LINED POND	% Clay	6.0	%
MND22-2001	900000071	SRDS-ASPHALT LINED POND	% Gravel	2.0	%
MND22-2001	900000071	SRDS-ASPHALT LINED POND	% Sand	56	%
MND22-2001	900000071	SRDS-ASPHALT LINED POND	% Silt	36	%
MND22-2001	900000071	SRDS-ASPHALT LINED POND	Cation Exchange	8.5	MEQ/100
MND22-2001	900000071	SRDS-ASPHALT LINED POND	pH	8.0	UNITS
MND22-2001	900000071	SRDS-ASPHALT LINED POND	Specific Gravity	2.5	G/CC
MND22-2002	000498	SRDS-ASPHALT LINED POND	% Clay	9.0	%
MND22-2002	000498	SRDS-ASPHALT LINED POND	% Gravel	0.0	%
MND22-2002	000498	SRDS-ASPHALT LINED POND	% Sand	26	%
MND22-2002	000498	SRDS-ASPHALT LINED POND	% Silt	65	%
MND22-2002	000498	SRDS-ASPHALT LINED POND	pH	7.4	UNITS
MND22-2003	000499	SRDS-ASPHALT LINED POND	% Clay	0.0	%
MND22-2003	000499	SRDS-ASPHALT LINED POND	% Gravel	36	%
MND22-2003	000499	SRDS-ASPHALT LINED POND	% Sand	62	%
MND22-2003	000499	SRDS-ASPHALT LINED POND	% Silt	2.0	%
MND22-2003	000499	SRDS-ASPHALT LINED POND	pH	8.0	UNITS
MND22-2004	000500	SRDS-ASPHALT LINED POND	% Clay	10	%
MND22-2004	000500	SRDS-ASPHALT LINED POND	% Gravel	0.0	%
MND22-2004	000500	SRDS-ASPHALT LINED POND	% Sand	18	%

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-2004	000500	SRDS-ASPHALT LINED POND	% Silt	72	%
MND22-2004	000500	SRDS-ASPHALT LINED POND	pH	7.4	UNITS
MND22-2005	000501	SRDS-ASPHALT LINED POND	% Clay	10	%
MND22-2005	000501	SRDS-ASPHALT LINED POND	% Gravel	0.0	%
MND22-2005	000501	SRDS-ASPHALT LINED POND	% Sand	15	%
MND22-2005	000501	SRDS-ASPHALT LINED POND	% Silt	75	%
MND22-2005	000501	SRDS-ASPHALT LINED POND	pH	7.0	UNITS
MND22-2101	000418	SRDS-PLANT DRAINAGE DITCH	% Clay	2.0	%
MND22-2101	000418	SRDS-PLANT DRAINAGE DITCH	% Gravel	26	%
MND22-2101	000418	SRDS-PLANT DRAINAGE DITCH	% Sand	70	%
MND22-2101	000418	SRDS-PLANT DRAINAGE DITCH	% Silt	2.0	%
MND22-2101	000418	SRDS-PLANT DRAINAGE DITCH	pH	8.5	UNITS
MND22-2101	900000243	SRDS-PLANT DRAINAGE DITCH	% Clay	0.0	%
MND22-2101	900000243	SRDS-PLANT DRAINAGE DITCH	% Gravel	20	%
MND22-2101	900000243	SRDS-PLANT DRAINAGE DITCH	% Sand	76	%
MND22-2101	900000243	SRDS-PLANT DRAINAGE DITCH	% Silt	4.0	%
MND22-2101	900000243	SRDS-PLANT DRAINAGE DITCH	Cation Exchange	5.6	MEQ/100
MND22-2101	900000243	SRDS-PLANT DRAINAGE DITCH	pH	7.7	UNITS
MND22-2101	900000243	SRDS-PLANT DRAINAGE DITCH	Specific Gravity	2.7	G/CC
MND22-2102	000419	SRDS-PLANT DRAINAGE DITCH	% Clay	1.0	%
MND22-2102	000419	SRDS-PLANT DRAINAGE DITCH	% Gravel	33	%
MND22-2102	000419	SRDS-PLANT DRAINAGE DITCH	% Sand	64	%
MND22-2102	000419	SRDS-PLANT DRAINAGE DITCH	% Silt	2.0	%
MND22-2102	000419	SRDS-PLANT DRAINAGE DITCH	pH	8.1	UNITS
MND22-2102	900000223	SRDS-PLANT DRAINAGE DITCH	% Clay	0.0	%
MND22-2102	900000223	SRDS-PLANT DRAINAGE DITCH	% Gravel	43	%
MND22-2102	900000223	SRDS-PLANT DRAINAGE DITCH	% Sand	53	%
MND22-2102	900000223	SRDS-PLANT DRAINAGE DITCH	% Silt	4.0	%
MND22-2102	900000223	SRDS-PLANT DRAINAGE DITCH	Cation Exchange	1.6	MEQ/100
MND22-2102	900000223	SRDS-PLANT DRAINAGE DITCH	pH	8.5	UNITS
MND22-2102	900000223	SRDS-PLANT DRAINAGE DITCH	Specific Gravity	2.7	G/CC
MND22-2103	000420	SRDS-PLANT DRAINAGE DITCH	% Clay	3.0	%
MND22-2103	000420	SRDS-PLANT DRAINAGE DITCH	% Gravel	20	%
MND22-2103	000420	SRDS-PLANT DRAINAGE DITCH	% Sand	70	%
MND22-2103	000420	SRDS-PLANT DRAINAGE DITCH	% Silt	7.0	%
MND22-2103	000420	SRDS-PLANT DRAINAGE DITCH	pH	8.2	UNITS
MND22-2103	900000224	SRDS-PLANT DRAINAGE DITCH	% Clay	0.0	%
MND22-2103	900000224	SRDS-PLANT DRAINAGE DITCH	% Gravel	25	%
MND22-2103	900000224	SRDS-PLANT DRAINAGE DITCH	% Sand	66	%
MND22-2103	900000224	SRDS-PLANT DRAINAGE DITCH	% Silt	9.0	%
MND22-2103	900000224	SRDS-PLANT DRAINAGE DITCH	Cation Exchange	9.1	MEQ/100
MND22-2103	900000224	SRDS-PLANT DRAINAGE DITCH	pH	7.6	UNITS
MND22-2103	900000224	SRDS-PLANT DRAINAGE DITCH	Specific Gravity	2.7	G/CC
MND22-2103	900000225	SRDS-PLANT DRAINAGE DITCH	% Clay	0.0	%
MND22-2103	900000225	SRDS-PLANT DRAINAGE DITCH	% Gravel	30	%
MND22-2103	900000225	SRDS-PLANT DRAINAGE DITCH	% Sand	59	%
MND22-2103	900000225	SRDS-PLANT DRAINAGE DITCH	% Silt	11	%
MND22-2103	900000225	SRDS-PLANT DRAINAGE DITCH	Cation Exchange	10.2	MEQ/100
MND22-2103	900000225	SRDS-PLANT DRAINAGE DITCH	pH	7.5	UNITS
MND22-2103	900000225	SRDS-PLANT DRAINAGE DITCH	Specific Gravity	2.7	G/CC
MND22-2104	000421	SRDS-PLANT DRAINAGE DITCH	% Clay	7.0	%
MND22-2104	000421	SRDS-PLANT DRAINAGE DITCH	% Gravel	11	%
MND22-2104	000421	SRDS-PLANT DRAINAGE DITCH	% Sand	72	%
MND22-2104	000421	SRDS-PLANT DRAINAGE DITCH	% Silt	10	%
MND22-2104	000421	SRDS-PLANT DRAINAGE DITCH	pH	7.9	UNITS

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-2104	900000244	SRDS-PLANT DRAINAGE DITCH	% Clay	0.0	%
MND22-2104	900000244	SRDS-PLANT DRAINAGE DITCH	% Gravel	40	%
MND22-2104	900000244	SRDS-PLANT DRAINAGE DITCH	% Sand	56	%
MND22-2104	900000244	SRDS-PLANT DRAINAGE DITCH	% Silt	4.0	%
MND22-2104	900000244	SRDS-PLANT DRAINAGE DITCH	Cation Exchange	4.6	MEQ/100
MND22-2104	900000244	SRDS-PLANT DRAINAGE DITCH	pH	7.2	UNITS
MND22-2104	900000244	SRDS-PLANT DRAINAGE DITCH	Specific Gravity	2.7	G/CC
MND22-2105	000422	SRDS-PLANT DRAINAGE DITCH	% Clay	1.0	%
MND22-2105	000422	SRDS-PLANT DRAINAGE DITCH	% Gravel	36	%
MND22-2105	000422	SRDS-PLANT DRAINAGE DITCH	% Sand	60	%
MND22-2105	000422	SRDS-PLANT DRAINAGE DITCH	% Silt	3.0	%
MND22-2105	000422	SRDS-PLANT DRAINAGE DITCH	pH	8.1	UNITS
MND22-2105	900000226	SRDS-PLANT DRAINAGE DITCH	Cation Exchange	8.4	MEQ/100
MND22-2105	900000226	SRDS-PLANT DRAINAGE DITCH	Specific Gravity	2.7	G/CC
MND22-2106	000423	SRDS-PLANT DRAINAGE DITCH	% Clay	2.0	%
MND22-2106	000423	SRDS-PLANT DRAINAGE DITCH	% Gravel	40	%
MND22-2106	000423	SRDS-PLANT DRAINAGE DITCH	% Sand	57	%
MND22-2106	000423	SRDS-PLANT DRAINAGE DITCH	% Silt	1.0	%
MND22-2106	000423	SRDS-PLANT DRAINAGE DITCH	pH	8.4	UNITS
MND22-2106	900000228	SRDS-PLANT DRAINAGE DITCH	Cation Exchange	1.4	MEQ/100
MND22-2106	900000228	SRDS-PLANT DRAINAGE DITCH	Specific Gravity	2.7	G/CC
MND22-2107	000424	SRDS-PLANT DRAINAGE DITCH	% Clay	1.0	%
MND22-2107	000424	SRDS-PLANT DRAINAGE DITCH	% Gravel	43	%
MND22-2107	000424	SRDS-PLANT DRAINAGE DITCH	% Sand	54	%
MND22-2107	000424	SRDS-PLANT DRAINAGE DITCH	% Silt	2.0	%
MND22-2107	000424	SRDS-PLANT DRAINAGE DITCH	pH	8.4	UNITS
MND22-2107	000684	SRDS-PLANT DRAINAGE DITCH	% Clay	1.0	%
MND22-2107	000684	SRDS-PLANT DRAINAGE DITCH	% Gravel	36	%
MND22-2107	000684	SRDS-PLANT DRAINAGE DITCH	% Sand	62	%
MND22-2107	000684	SRDS-PLANT DRAINAGE DITCH	% Silt	1.0	%
MND22-2107	000684	SRDS-PLANT DRAINAGE DITCH	pH	8.3	UNITS
MND22-2107	900000245	SRDS-PLANT DRAINAGE DITCH	% Clay	0.0	%
MND22-2107	900000245	SRDS-PLANT DRAINAGE DITCH	% Gravel	10	%
MND22-2107	900000245	SRDS-PLANT DRAINAGE DITCH	% Sand	66	%
MND22-2107	900000245	SRDS-PLANT DRAINAGE DITCH	% Silt	24	%
MND22-2107	900000245	SRDS-PLANT DRAINAGE DITCH	Cation Exchange	7.4	MEQ/100
MND22-2107	900000245	SRDS-PLANT DRAINAGE DITCH	pH	7.6	UNITS
MND22-2107	900000245	SRDS-PLANT DRAINAGE DITCH	Specific Gravity	2.7	G/CC
MND22-2108	000425	SRDS-PLANT DRAINAGE DITCH	% Clay	1.0	%
MND22-2108	000425	SRDS-PLANT DRAINAGE DITCH	% Gravel	37	%
MND22-2108	000425	SRDS-PLANT DRAINAGE DITCH	% Sand	57	%
MND22-2108	000425	SRDS-PLANT DRAINAGE DITCH	% Silt	5.0	%
MND22-2108	000425	SRDS-PLANT DRAINAGE DITCH	pH	8.6	UNITS
MND22-2108	900000229	SRDS-PLANT DRAINAGE DITCH	Cation Exchange	5.0	MEQ/100
MND22-2108	900000229	SRDS-PLANT DRAINAGE DITCH	Specific Gravity	2.7	G/CC
MND22-2201	000426	SRDS-RETENTION BASIN	% Clay	22	%
MND22-2201	000426	SRDS-RETENTION BASIN	% Gravel	1.0	%
MND22-2201	000426	SRDS-RETENTION BASIN	% Sand	13	%
MND22-2201	000426	SRDS-RETENTION BASIN	% Silt	64	%
MND22-2201	000426	SRDS-RETENTION BASIN	pH	7.4	UNITS
MND22-2201	900000056	SRDS-RETENTION BASIN	% Clay	12	%
MND22-2201	900000056	SRDS-RETENTION BASIN	% Gravel	0.0	%
MND22-2201	900000056	SRDS-RETENTION BASIN	% Sand	21	%
MND22-2201	900000056	SRDS-RETENTION BASIN	% Silt	67	%
MND22-2201	900000056	SRDS-RETENTION BASIN	Cation Exchange	12.7	MEQ/100

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-2201	900000056	SRDS-RETENTION BASIN	pH	7.5	UNITS
MND22-2201	900000056	SRDS-RETENTION BASIN	Specific Gravity	2.6	G/CC
MND22-2202	000427	SRDS-RETENTION BASIN	% Clay	25	%
MND22-2202	000427	SRDS-RETENTION BASIN	% Gravel	0.0	%
MND22-2202	000427	SRDS-RETENTION BASIN	% Sand	11	%
MND22-2202	000427	SRDS-RETENTION BASIN	% Silt	64	%
MND22-2202	000427	SRDS-RETENTION BASIN	pH	7.2	UNITS
MND22-2202	900000057	SRDS-RETENTION BASIN	% Clay	12	%
MND22-2202	900000057	SRDS-RETENTION BASIN	% Gravel	0.0	%
MND22-2202	900000057	SRDS-RETENTION BASIN	% Sand	20	%
MND22-2202	900000057	SRDS-RETENTION BASIN	% Silt	68	%
MND22-2202	900000057	SRDS-RETENTION BASIN	Cation Exchange	11.8	MEQ/100
MND22-2202	900000057	SRDS-RETENTION BASIN	pH	7.6	UNITS
MND22-2202	900000057	SRDS-RETENTION BASIN	Specific Gravity	2.6	G/CC
MND22-2203	000428	SRDS-RETENTION BASIN	% Clay	22	%
MND22-2203	000428	SRDS-RETENTION BASIN	% Gravel	1.0	%
MND22-2203	000428	SRDS-RETENTION BASIN	% Sand	14	%
MND22-2203	000428	SRDS-RETENTION BASIN	% Silt	63	%
MND22-2203	000428	SRDS-RETENTION BASIN	pH	7.1	UNITS
MND22-2203	900000058	SRDS-RETENTION BASIN	% Clay	11	%
MND22-2203	900000058	SRDS-RETENTION BASIN	% Gravel	0.0	%
MND22-2203	900000058	SRDS-RETENTION BASIN	% Sand	24	%
MND22-2203	900000058	SRDS-RETENTION BASIN	% Silt	65	%
MND22-2203	900000058	SRDS-RETENTION BASIN	Cation Exchange	11.2	MEQ/100
MND22-2203	900000058	SRDS-RETENTION BASIN	pH	7.4	UNITS
MND22-2203	900000058	SRDS-RETENTION BASIN	Specific Gravity	2.6	G/CC
MND22-2204	000429	SRDS-RETENTION BASIN	% Clay	29	%
MND22-2204	000429	SRDS-RETENTION BASIN	% Gravel	0.0	%
MND22-2204	000429	SRDS-RETENTION BASIN	% Sand	14	%
MND22-2204	000429	SRDS-RETENTION BASIN	% Silt	57	%
MND22-2204	000429	SRDS-RETENTION BASIN	pH	7.3	UNITS
MND22-2204	900000059	SRDS-RETENTION BASIN	% Clay	13	%
MND22-2204	900000059	SRDS-RETENTION BASIN	% Gravel	0.0	%
MND22-2204	900000059	SRDS-RETENTION BASIN	% Sand	18	%
MND22-2204	900000059	SRDS-RETENTION BASIN	% Silt	69	%
MND22-2204	900000059	SRDS-RETENTION BASIN	Cation Exchange	3.9	MEQ/100
MND22-2204	900000059	SRDS-RETENTION BASIN	pH	7.1	UNITS
MND22-2204	900000059	SRDS-RETENTION BASIN	Specific Gravity	2.6	G/CC
MND22-2205	000430	SRDS-RETENTION BASIN	% Clay	29	%
MND22-2205	000430	SRDS-RETENTION BASIN	% Gravel	0.0	%
MND22-2205	000430	SRDS-RETENTION BASIN	% Sand	7.0	%
MND22-2205	000430	SRDS-RETENTION BASIN	% Silt	64	%
MND22-2205	000430	SRDS-RETENTION BASIN	pH	7.4	UNITS
MND22-2205	900000060	SRDS-RETENTION BASIN	% Clay	12	%
MND22-2205	900000060	SRDS-RETENTION BASIN	% Gravel	0.0	%
MND22-2205	900000060	SRDS-RETENTION BASIN	% Sand	17	%
MND22-2205	900000060	SRDS-RETENTION BASIN	% Silt	71	%
MND22-2205	900000060	SRDS-RETENTION BASIN	Cation Exchange	10.5	MEQ/100
MND22-2205	900000060	SRDS-RETENTION BASIN	pH	7.4	UNITS
MND22-2205	900000060	SRDS-RETENTION BASIN	Specific Gravity	2.6	G/CC
MND22-2206	000431	SRDS-RETENTION BASIN	% Clay	38	%
MND22-2206	000431	SRDS-RETENTION BASIN	% Gravel	0.0	%
MND22-2206	000431	SRDS-RETENTION BASIN	% Sand	3.0	%
MND22-2206	000431	SRDS-RETENTION BASIN	% Silt	59	%
MND22-2206	000431	SRDS-RETENTION BASIN	pH	7.0	UNITS

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-2206	900000061	SRDS-RETENTION BASIN	% Clay	18	%
MND22-2206	900000061	SRDS-RETENTION BASIN	% Gravel	0.0	%
MND22-2206	900000061	SRDS-RETENTION BASIN	% Sand	6.0	%
MND22-2206	900000061	SRDS-RETENTION BASIN	% Silt	76	%
MND22-2206	900000061	SRDS-RETENTION BASIN	Cation Exchange	13.4	MEQ/100
MND22-2206	900000061	SRDS-RETENTION BASIN	pH	7.3	UNITS
MND22-2206	900000061	SRDS-RETENTION BASIN	Specific Gravity	2.6	G/CC
MND22-2207	000432	SRDS-RETENTION BASIN	% Clay	40	%
MND22-2207	000432	SRDS-RETENTION BASIN	% Gravel	0.0	%
MND22-2207	000432	SRDS-RETENTION BASIN	% Sand	3.0	%
MND22-2207	000432	SRDS-RETENTION BASIN	% Silt	57	%
MND22-2207	000432	SRDS-RETENTION BASIN	pH	7.8	UNITS
MND22-2207	900000062	SRDS-RETENTION BASIN	% Clay	22	%
MND22-2207	900000062	SRDS-RETENTION BASIN	% Gravel	0.0	%
MND22-2207	900000062	SRDS-RETENTION BASIN	% Sand	3.0	%
MND22-2207	900000062	SRDS-RETENTION BASIN	% Silt	75	%
MND22-2207	900000062	SRDS-RETENTION BASIN	Cation Exchange	29.1	MEQ/100
MND22-2207	900000062	SRDS-RETENTION BASIN	pH	7.4	UNITS
MND22-2207	900000062	SRDS-RETENTION BASIN	Specific Gravity	2.6	G/CC
MND22-2207	900000063	SRDS-RETENTION BASIN	% Clay	15	%
MND22-2207	900000063	SRDS-RETENTION BASIN	% Gravel	0.0	%
MND22-2207	900000063	SRDS-RETENTION BASIN	% Sand	5.0	%
MND22-2207	900000063	SRDS-RETENTION BASIN	% Silt	80	%
MND22-2207	900000063	SRDS-RETENTION BASIN	Cation Exchange	31.9	MEQ/100
MND22-2207	900000063	SRDS-RETENTION BASIN	pH	7.5	UNITS
MND22-2207	900000063	SRDS-RETENTION BASIN	Specific Gravity	2.6	G/CC
MND22-2301	000409	SRDS-OVERFLOW POND	% Clay	50	%
MND22-2301	000409	SRDS-OVERFLOW POND	% Gravel	0.0	%
MND22-2301	000409	SRDS-OVERFLOW POND	% Sand	1.0	%
MND22-2301	000409	SRDS-OVERFLOW POND	% Silt	49	%
MND22-2301	000409	SRDS-OVERFLOW POND	pH	7.8	UNITS
MND22-2301	900000039	SRDS-OVERFLOW POND	% Clay	42	%
MND22-2301	900000039	SRDS-OVERFLOW POND	% Gravel	0.0	%
MND22-2301	900000039	SRDS-OVERFLOW POND	% Sand	1.0	%
MND22-2301	900000039	SRDS-OVERFLOW POND	% Silt	57	%
MND22-2301	900000039	SRDS-OVERFLOW POND	Cation Exchange	39.3	MEQ/100
MND22-2301	900000039	SRDS-OVERFLOW POND	pH	7.9	UNITS
MND22-2301	900000039	SRDS-OVERFLOW POND	Specific Gravity	2.7	G/CC
MND22-2302	000497	SRDS-OVERFLOW POND	% Clay	24	%
MND22-2302	000497	SRDS-OVERFLOW POND	% Gravel	0.0	%
MND22-2302	000497	SRDS-OVERFLOW POND	% Sand	26	%
MND22-2302	000497	SRDS-OVERFLOW POND	% Silt	50	%
MND22-2302	000497	SRDS-OVERFLOW POND	pH	7.6	UNITS
MND22-2302	900000037	SRDS-OVERFLOW POND	% Clay	17	%
MND22-2302	900000037	SRDS-OVERFLOW POND	% Gravel	4.0	%
MND22-2302	900000037	SRDS-OVERFLOW POND	% Sand	17	%
MND22-2302	900000037	SRDS-OVERFLOW POND	% Silt	62	%
MND22-2302	900000037	SRDS-OVERFLOW POND	Cation Exchange	31.3	MEQ/100
MND22-2302	900000037	SRDS-OVERFLOW POND	pH	8.9	UNITS
MND22-2302	900000037	SRDS-OVERFLOW POND	Specific Gravity	2.6	G/CC
MND22-2303	000411	SRDS-OVERFLOW POND	% Clay	42	%
MND22-2303	000411	SRDS-OVERFLOW POND	% Gravel	0.0	%
MND22-2303	000411	SRDS-OVERFLOW POND	% Sand	2.0	%
MND22-2303	000411	SRDS-OVERFLOW POND	% Silt	56	%
MND22-2303	000411	SRDS-OVERFLOW POND	pH	7.8	UNITS

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-2303	900000041	SRDS-OVERFLOW POND	% Clay	29	%
MND22-2303	900000041	SRDS-OVERFLOW POND	% Gravel	0.0	%
MND22-2303	900000041	SRDS-OVERFLOW POND	% Sand	2.0	%
MND22-2303	900000041	SRDS-OVERFLOW POND	% Silt	69	%
MND22-2303	900000041	SRDS-OVERFLOW POND	Cation Exchange	18.3	MEQ/100
MND22-2303	900000041	SRDS-OVERFLOW POND	pH	7.8	UNITS
MND22-2303	900000041	SRDS-OVERFLOW POND	Specific Gravity	2.7	G/CC
MND22-2304	000410	SRDS-OVERFLOW POND	% Clay	44	%
MND22-2304	000410	SRDS-OVERFLOW POND	% Gravel	0.0	%
MND22-2304	000410	SRDS-OVERFLOW POND	% Sand	1.0	%
MND22-2304	000410	SRDS-OVERFLOW POND	% Silt	55	%
MND22-2304	000410	SRDS-OVERFLOW POND	pH	7.9	UNITS
MND22-2304	000674	SRDS-OVERFLOW POND	% Clay	45	%
MND22-2304	000674	SRDS-OVERFLOW POND	% Gravel	0.0	%
MND22-2304	000674	SRDS-OVERFLOW POND	% Sand	1.0	%
MND22-2304	000674	SRDS-OVERFLOW POND	% Silt	54	%
MND22-2304	000674	SRDS-OVERFLOW POND	pH	7.6	UNITS
MND22-2304	900000040	SRDS-OVERFLOW POND	% Clay	30	%
MND22-2304	900000040	SRDS-OVERFLOW POND	% Gravel	0.0	%
MND22-2304	900000040	SRDS-OVERFLOW POND	% Sand	5.0	%
MND22-2304	900000040	SRDS-OVERFLOW POND	% Silt	65	%
MND22-2304	900000040	SRDS-OVERFLOW POND	Cation Exchange	17.6	MEQ/100
MND22-2304	900000040	SRDS-OVERFLOW POND	pH	7.8	UNITS
MND22-2304	900000040	SRDS-OVERFLOW POND	Specific Gravity	2.6	G/CC
MND22-2305	000412	SRDS-OVERFLOW POND	% Clay	52	%
MND22-2305	000412	SRDS-OVERFLOW POND	% Gravel	0.0	%
MND22-2305	000412	SRDS-OVERFLOW POND	% Sand	1.0	%
MND22-2305	000412	SRDS-OVERFLOW POND	% Silt	47	%
MND22-2305	000412	SRDS-OVERFLOW POND	pH	7.8	UNITS
MND22-2305	900000038	SRDS-OVERFLOW POND	% Clay	42	%
MND22-2305	900000038	SRDS-OVERFLOW POND	% Gravel	0.0	%
MND22-2305	900000038	SRDS-OVERFLOW POND	% Sand	1.0	%
MND22-2305	900000038	SRDS-OVERFLOW POND	% Silt	57	%
MND22-2305	900000038	SRDS-OVERFLOW POND	Cation Exchange	34.5	MEQ/100
MND22-2305	900000038	SRDS-OVERFLOW POND	pH	7.6	UNITS
MND22-2305	900000038	SRDS-OVERFLOW POND	Specific Gravity	2.7	G/CC
MND22-2401	000413	SRDS-NPDES OUTFALL 002	% Clay	6.0	%
MND22-2401	000413	SRDS-NPDES OUTFALL 002	% Gravel	36	%
MND22-2401	000413	SRDS-NPDES OUTFALL 002	% Sand	52	%
MND22-2401	000413	SRDS-NPDES OUTFALL 002	% Silt	6.0	%
MND22-2401	000413	SRDS-NPDES OUTFALL 002	pH	8.0	UNITS
MND22-2401	900000130	SRDS-NPDES OUTFALL 002	% Clay	0.0	%
MND22-2401	900000130	SRDS-NPDES OUTFALL 002	% Gravel	8.0	%
MND22-2401	900000130	SRDS-NPDES OUTFALL 002	% Sand	87	%
MND22-2401	900000130	SRDS-NPDES OUTFALL 002	% Silt	5.0	%
MND22-2401	900000130	SRDS-NPDES OUTFALL 002	Cation Exchange	1.4	MEQ/100
MND22-2401	900000130	SRDS-NPDES OUTFALL 002	pH	8.0	UNITS
MND22-2401	900000130	SRDS-NPDES OUTFALL 002	Specific Gravity	2.8	G/CC
MND22-2402	000414	SRDS-NPDES OUTFALL 002	% Clay	19	%
MND22-2402	000414	SRDS-NPDES OUTFALL 002	% Gravel	16	%
MND22-2402	000414	SRDS-NPDES OUTFALL 002	% Sand	30	%
MND22-2402	000414	SRDS-NPDES OUTFALL 002	% Silt	35	%
MND22-2402	000414	SRDS-NPDES OUTFALL 002	pH	7.6	UNITS
MND22-2403	000415	SRDS-NPDES OUTFALL 002	% Clay	15	%
MND22-2403	000415	SRDS-NPDES OUTFALL 002	% Gravel	38	%

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-2403	000415	SRDS-NPDES OUTFALL 002	% Sand	24	%
MND22-2403	000415	SRDS-NPDES OUTFALL 002	% Silt	23	%
MND22-2403	000415	SRDS-NPDES OUTFALL 002	pH	7.7	UNITS
MND22-2404	000416	SRDS-NPDES OUTFALL 002	% Clay	15	%
MND22-2404	000416	SRDS-NPDES OUTFALL 002	% Gravel	20	%
MND22-2404	000416	SRDS-NPDES OUTFALL 002	% Sand	43	%
MND22-2404	000416	SRDS-NPDES OUTFALL 002	% Silt	22	%
MND22-2404	000416	SRDS-NPDES OUTFALL 002	pH	7.9	UNITS
MND22-2404	900000133	SRDS-NPDES OUTFALL 002	% Clay	13	%
MND22-2404	900000133	SRDS-NPDES OUTFALL 002	% Gravel	15	%
MND22-2404	900000133	SRDS-NPDES OUTFALL 002	% Sand	53	%
MND22-2404	900000133	SRDS-NPDES OUTFALL 002	% Silt	19	%
MND22-2404	900000133	SRDS-NPDES OUTFALL 002	Cation Exchange	15.8	MEQ/100
MND22-2404	900000133	SRDS-NPDES OUTFALL 002	Specific Gravity	2.7	G/CC
MND22-2601	000433	SRDS-SOUTH MIAMI ERIE CANAL	% Clay	1.0	%
MND22-2601	000433	SRDS-SOUTH MIAMI ERIE CANAL	% Gravel	63	%
MND22-2601	000433	SRDS-SOUTH MIAMI ERIE CANAL	% Sand	34	%
MND22-2601	000433	SRDS-SOUTH MIAMI ERIE CANAL	% Silt	2.0	%
MND22-2601	000433	SRDS-SOUTH MIAMI ERIE CANAL	pH	7.9	UNITS
MND22-2601	000709	SRDS-SOUTH MIAMI ERIE CANAL	% Clay	2.0	%
MND22-2601	000709	SRDS-SOUTH MIAMI ERIE CANAL	% Gravel	53	%
MND22-2601	000709	SRDS-SOUTH MIAMI ERIE CANAL	% Sand	41	%
MND22-2601	000709	SRDS-SOUTH MIAMI ERIE CANAL	% Silt	4.0	%
MND22-2601	000709	SRDS-SOUTH MIAMI ERIE CANAL	pH	8.2	UNITS
MND22-2601	900000067	SRDS-SOUTH MIAMI ERIE CANAL	% Clay	12	%
MND22-2601	900000067	SRDS-SOUTH MIAMI ERIE CANAL	% Gravel	7.0	%
MND22-2601	900000067	SRDS-SOUTH MIAMI ERIE CANAL	% Sand	53	%
MND22-2601	900000067	SRDS-SOUTH MIAMI ERIE CANAL	% Silt	28	%
MND22-2601	900000067	SRDS-SOUTH MIAMI ERIE CANAL	Cation Exchange	12.5	MEQ/100
MND22-2601	900000067	SRDS-SOUTH MIAMI ERIE CANAL	pH	8.6	UNITS
MND22-2601	900000067	SRDS-SOUTH MIAMI ERIE CANAL	Specific Gravity	2.7	G/CC
MND22-2602	000434	SRDS-SOUTH MIAMI ERIE CANAL	% Clay	19	%
MND22-2602	000434	SRDS-SOUTH MIAMI ERIE CANAL	% Gravel	0.0	%
MND22-2602	000434	SRDS-SOUTH MIAMI ERIE CANAL	% Sand	19	%
MND22-2602	000434	SRDS-SOUTH MIAMI ERIE CANAL	% Silt	62	%
MND22-2602	000434	SRDS-SOUTH MIAMI ERIE CANAL	pH	7.9	UNITS
MND22-2603	000435	SRDS-SOUTH MIAMI ERIE CANAL	% Clay	7.0	%
MND22-2603	000435	SRDS-SOUTH MIAMI ERIE CANAL	% Gravel	0.0	%
MND22-2603	000435	SRDS-SOUTH MIAMI ERIE CANAL	% Sand	83	%
MND22-2603	000435	SRDS-SOUTH MIAMI ERIE CANAL	% Silt	10	%
MND22-2603	000435	SRDS-SOUTH MIAMI ERIE CANAL	pH	7.5	UNITS
MND22-2603	900000070	SRDS-SOUTH MIAMI ERIE CANAL	% Clay	14	%
MND22-2603	900000070	SRDS-SOUTH MIAMI ERIE CANAL	% Gravel	2.0	%
MND22-2603	900000070	SRDS-SOUTH MIAMI ERIE CANAL	% Sand	65	%
MND22-2603	900000070	SRDS-SOUTH MIAMI ERIE CANAL	% Silt	19	%
MND22-2603	900000070	SRDS-SOUTH MIAMI ERIE CANAL	Cation Exchange	9.4	MEQ/100
MND22-2603	900000070	SRDS-SOUTH MIAMI ERIE CANAL	pH	7.7	UNITS
MND22-2603	900000070	SRDS-SOUTH MIAMI ERIE CANAL	Specific Gravity	2.7	G/CC
MND22-2604	000436	SRDS-SOUTH MIAMI ERIE CANAL	% Clay	9.0	%
MND22-2604	000436	SRDS-SOUTH MIAMI ERIE CANAL	% Gravel	9.0	%
MND22-2604	000436	SRDS-SOUTH MIAMI ERIE CANAL	% Sand	66	%
MND22-2604	000436	SRDS-SOUTH MIAMI ERIE CANAL	% Silt	16	%
MND22-2604	000436	SRDS-SOUTH MIAMI ERIE CANAL	pH	7.7	UNITS
MND22-2604	000699	SRDS-SOUTH MIAMI ERIE CANAL	% Clay	8.0	%
MND22-2604	000699	SRDS-SOUTH MIAMI ERIE CANAL	% Gravel	11	%

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-2604	000699	SRDS-SOUTH MIAMI ERIE CANAL	% Sand	65	%
MND22-2604	000699	SRDS-SOUTH MIAMI ERIE CANAL	% Silt	16	%
MND22-2604	000699	SRDS-SOUTH MIAMI ERIE CANAL	pH	7.8	UNITS
MND22-2604	900000072	SRDS-SOUTH MIAMI ERIE CANAL	% Clay	4.0	%
MND22-2604	900000072	SRDS-SOUTH MIAMI ERIE CANAL	% Gravel	34	%
MND22-2604	900000072	SRDS-SOUTH MIAMI ERIE CANAL	% Sand	53	%
MND22-2604	900000072	SRDS-SOUTH MIAMI ERIE CANAL	% Silt	9.0	%
MND22-2604	900000072	SRDS-SOUTH MIAMI ERIE CANAL	Cation Exchange	7.2	MEQ/100
MND22-2604	900000072	SRDS-SOUTH MIAMI ERIE CANAL	pH	7.9	UNITS
MND22-2604	900000072	SRDS-SOUTH MIAMI ERIE CANAL	Specific Gravity	2.6	G/CC
MND22-2605	000437	SRDS-SOUTH MIAMI ERIE CANAL	% Clay	14	%
MND22-2605	000437	SRDS-SOUTH MIAMI ERIE CANAL	% Gravel	22	%
MND22-2605	000437	SRDS-SOUTH MIAMI ERIE CANAL	% Sand	44	%
MND22-2605	000437	SRDS-SOUTH MIAMI ERIE CANAL	% Silt	20	%
MND22-2605	000437	SRDS-SOUTH MIAMI ERIE CANAL	pH	7.5	UNITS
MND22-2605	000691	SRDS-SOUTH MIAMI ERIE CANAL	% Clay	10	%
MND22-2605	000691	SRDS-SOUTH MIAMI ERIE CANAL	% Gravel	30	%
MND22-2605	000691	SRDS-SOUTH MIAMI ERIE CANAL	% Sand	43	%
MND22-2605	000691	SRDS-SOUTH MIAMI ERIE CANAL	% Silt	17	%
MND22-2605	000691	SRDS-SOUTH MIAMI ERIE CANAL	pH	7.6	UNITS
MND22-2605	900000074	SRDS-SOUTH MIAMI ERIE CANAL	% Clay	2.0	%
MND22-2605	900000074	SRDS-SOUTH MIAMI ERIE CANAL	% Gravel	22	%
MND22-2605	900000074	SRDS-SOUTH MIAMI ERIE CANAL	% Sand	70	%
MND22-2605	900000074	SRDS-SOUTH MIAMI ERIE CANAL	% Silt	6.0	%
MND22-2605	900000074	SRDS-SOUTH MIAMI ERIE CANAL	pH	8.4	UNITS
MND22-2605	900000074	SRDS-SOUTH MIAMI ERIE CANAL	Specific Gravity	2.7	G/CC
MND22-2606	000438	SRDS-SOUTH MIAMI ERIE CANAL	% Clay	31	%
MND22-2606	000438	SRDS-SOUTH MIAMI ERIE CANAL	% Gravel	1.0	%
MND22-2606	000438	SRDS-SOUTH MIAMI ERIE CANAL	% Sand	34	%
MND22-2606	000438	SRDS-SOUTH MIAMI ERIE CANAL	% Silt	34	%
MND22-2606	000438	SRDS-SOUTH MIAMI ERIE CANAL	pH	7.6	UNITS
MND22-2606	900000075	SRDS-SOUTH MIAMI ERIE CANAL	% Clay	11	%
MND22-2606	900000075	SRDS-SOUTH MIAMI ERIE CANAL	% Gravel	17	%
MND22-2606	900000075	SRDS-SOUTH MIAMI ERIE CANAL	% Sand	40	%
MND22-2606	900000075	SRDS-SOUTH MIAMI ERIE CANAL	% Silt	32	%
MND22-2606	900000075	SRDS-SOUTH MIAMI ERIE CANAL	Cation Exchange	14.1	MEQ/100
MND22-2606	900000075	SRDS-SOUTH MIAMI ERIE CANAL	pH	7.9	UNITS
MND22-2606	900000075	SRDS-SOUTH MIAMI ERIE CANAL	Specific Gravity	2.6	G/CC
MND22-2607	000439	SRDS-SOUTH MIAMI ERIE CANAL	% Clay	16	%
MND22-2607	000439	SRDS-SOUTH MIAMI ERIE CANAL	% Gravel	18	%
MND22-2607	000439	SRDS-SOUTH MIAMI ERIE CANAL	% Sand	42	%
MND22-2607	000439	SRDS-SOUTH MIAMI ERIE CANAL	% Silt	24	%
MND22-2607	000439	SRDS-SOUTH MIAMI ERIE CANAL	pH	7.8	UNITS
MND22-2607	900000076	SRDS-SOUTH MIAMI ERIE CANAL	% Clay	16	%
MND22-2607	900000076	SRDS-SOUTH MIAMI ERIE CANAL	% Gravel	0.0	%
MND22-2607	900000076	SRDS-SOUTH MIAMI ERIE CANAL	% Sand	20	%
MND22-2607	900000076	SRDS-SOUTH MIAMI ERIE CANAL	% Silt	64	%
MND22-2607	900000076	SRDS-SOUTH MIAMI ERIE CANAL	pH	7.7	UNITS
MND22-2607	900000076	SRDS-SOUTH MIAMI ERIE CANAL	Specific Gravity	2.6	G/CC
MND22-3001	000462	GREAT MIAMI RIVER-USGS GAGE STATION	% Clay	8.0	%
MND22-3001	000462	GREAT MIAMI RIVER-USGS GAGE STATION	% Gravel	50	%
MND22-3001	000462	GREAT MIAMI RIVER-USGS GAGE STATION	% Sand	32	%
MND22-3001	000462	GREAT MIAMI RIVER-USGS GAGE STATION	% Silt	10	%
MND22-3001	000462	GREAT MIAMI RIVER-USGS GAGE STATION	pH	8.5	UNITS
MND22-3002	000463	GREAT MIAMI RIVER-USGS GAGE STATION	% Clay	9.0	%

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-3002	000463	GREAT MIAMI RIVER-USGS GAGE STATION	% Gravel	61	%
MND22-3002	000463	GREAT MIAMI RIVER-USGS GAGE STATION	% Sand	21	%
MND22-3002	000463	GREAT MIAMI RIVER-USGS GAGE STATION	% Silt	9.0	%
MND22-3002	000463	GREAT MIAMI RIVER-USGS GAGE STATION	pH	8.1	UNITS
MND22-3002	900000112	GREAT MIAMI RIVER-USGS GAGE STATION	% Clay	4.0	%
MND22-3002	900000112	GREAT MIAMI RIVER-USGS GAGE STATION	% Gravel	43	%

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-3002	900000112	GREAT MIAMI RIVER-USGS GAGE STATION	% Sand	50	%
MND22-3002	900000112	GREAT MIAMI RIVER-USGS GAGE STATION	% Silt	3.0	%
MND22-3002	900000112	GREAT MIAMI RIVER-USGS GAGE STATION	pH	8.7	UNITS
MND22-3003	000464	GREAT MIAMI RIVER-USGS GAGE STATION	% Clay	24	%
MND22-3003	000464	GREAT MIAMI RIVER-USGS GAGE STATION	% Gravel	18	%
MND22-3003	000464	GREAT MIAMI RIVER-USGS GAGE STATION	% Sand	26	%
MND22-3003	000464	GREAT MIAMI RIVER-USGS GAGE STATION	% Silt	32	%
MND22-3003	000464	GREAT MIAMI RIVER-USGS GAGE STATION	pH	8.4	UNITS
MND22-3003	900000111	GREAT MIAMI RIVER-USGS GAGE STATION	% Clay	1.0	%
MND22-3003	900000111	GREAT MIAMI RIVER-USGS GAGE STATION	% Gravel	29	%
MND22-3003	900000111	GREAT MIAMI RIVER-USGS GAGE STATION	% Sand	66	%
MND22-3003	900000111	GREAT MIAMI RIVER-USGS GAGE STATION	% Silt	4.0	%
MND22-3003	900000111	GREAT MIAMI RIVER-USGS GAGE STATION	pH	8.4	UNITS
MND22-3101	000468	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	% Clay	8.0	%
MND22-3101	000468	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	% Gravel	36	%
MND22-3101	000468	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	% Sand	42	%
MND22-3101	000468	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	% Silt	14	%
MND22-3101	000468	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	pH	7.9	UNITS
MND22-3101	900000124	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Cation Exchange	18.4	MEQ/100
MND22-3102	000469	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	% Clay	1.0	%
MND22-3102	000469	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	% Gravel	46	%
MND22-3102	000469	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	% Sand	52	%
MND22-3102	000469	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	% Silt	1.0	%
MND22-3102	000469	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	pH	8.6	UNITS
MND22-3102	900000122	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Cation Exchange	0.93	MEQ/100
MND22-3102	900000122	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	pH	7.9	UNITS
MND22-3102	900000123	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Cation Exchange	1.1	MEQ/100
MND22-3102	900000123	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	pH	8.0	UNITS
MND22-3103	000470	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	% Clay	16	%
MND22-3103	000470	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	% Gravel	3.0	%
MND22-3103	000470	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	% Sand	34	%
MND22-3103	000470	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	% Silt	18	%
MND22-3103	000470	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	pH	7.9	UNITS
MND22-3103	900000120	GREAT MIAMI RIVER-HUTCHING'S POWER STATION WEIR	Cation Exchange	16.2	MEQ/100
MND22-3201	000465	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Clay	15	%
MND22-3201	000465	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Gravel	0.0	%
MND22-3201	000465	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Sand	50	%
MND22-3201	000465	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Silt	35	%
MND22-3201	000465	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	pH	7.2	UNITS
MND22-3201	900000117	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Clay	31	%
MND22-3201	900000117	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Gravel	11	%
MND22-3201	900000117	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Sand	24	%
MND22-3201	900000117	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Silt	34	%
MND22-3201	900000117	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	pH	7.6	UNITS
MND22-3202	000466	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Clay	1.0	%
MND22-3202	000466	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Gravel	42	%
MND22-3202	000466	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Sand	56	%
MND22-3202	000466	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Silt	1.0	%
MND22-3202	000466	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	pH	7.8	UNITS
MND22-3202	900000116	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Clay	12	%
MND22-3202	900000116	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Gravel	32	%
MND22-3202	900000116	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Sand	42	%
MND22-3202	900000116	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Silt	14	%
MND22-3202	900000116	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	pH	8.1	UNITS
MND22-3203	000467	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Clay	7.0	%

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-3203	000467	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Gravel	42	%
MND22-3203	000467	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Sand	38	%
MND22-3203	000467	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Silt	13	%
MND22-3203	000467	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	pH	8.1	UNITS
MND22-3203	900000115	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Clay	0.0	%
MND22-3203	900000115	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Gravel	2.0	%
MND22-3203	900000115	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Sand	93	%
MND22-3203	900000115	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	% Silt	5.0	%
MND22-3203	900000115	GREAT MIAMI RIVER-CHAUTAUQUA WEIR	pH	8.0	UNITS
MND22-3401	000471	SOUTH POND WITHIN CITY PARK	% Clay	59	%
MND22-3401	000471	SOUTH POND WITHIN CITY PARK	% Clay	12	%
MND22-3401	000471	SOUTH POND WITHIN CITY PARK	% Gravel	0.0	%
MND22-3401	000471	SOUTH POND WITHIN CITY PARK	% Gravel	7.0	%
MND22-3401	000471	SOUTH POND WITHIN CITY PARK	% Sand	12	%
MND22-3401	000471	SOUTH POND WITHIN CITY PARK	% Sand	60	%
MND22-3401	000471	SOUTH POND WITHIN CITY PARK	% Silt	29	%
MND22-3401	000471	SOUTH POND WITHIN CITY PARK	% Silt	21	%
MND22-3401	000471	SOUTH POND WITHIN CITY PARK	pH	7.1	UNITS
MND22-3401	000471	SOUTH POND WITHIN CITY PARK	pH	7.0	UNITS
MND22-3401	900000005	SOUTH POND WITHIN CITY PARK	% Clay	51	%
MND22-3401	900000005	SOUTH POND WITHIN CITY PARK	% Gravel	0.0	%
MND22-3401	900000005	SOUTH POND WITHIN CITY PARK	% Sand	6.0	%
MND22-3401	900000005	SOUTH POND WITHIN CITY PARK	% Silt	43	%
MND22-3401	900000005	SOUTH POND WITHIN CITY PARK	Cation Exchange	40.8	MEQ/100
MND22-3401	900000005	SOUTH POND WITHIN CITY PARK	pH	7.2	UNITS
MND22-3401	900000005	SOUTH POND WITHIN CITY PARK	Specific Gravity	2.7	G/CC
MND22-3402	000472	SOUTH POND WITHIN CITY PARK	% Clay	65	%
MND22-3402	000472	SOUTH POND WITHIN CITY PARK	% Clay	9.0	%
MND22-3402	000472	SOUTH POND WITHIN CITY PARK	% Gravel	4.0	%
MND22-3402	000472	SOUTH POND WITHIN CITY PARK	% Gravel	2.0	%
MND22-3402	000472	SOUTH POND WITHIN CITY PARK	% Sand	3.0	%
MND22-3402	000472	SOUTH POND WITHIN CITY PARK	% Sand	72	%
MND22-3402	000472	SOUTH POND WITHIN CITY PARK	% Silt	28	%
MND22-3402	000472	SOUTH POND WITHIN CITY PARK	% Silt	17	%
MND22-3402	000472	SOUTH POND WITHIN CITY PARK	pH	7.4	UNITS
MND22-3402	000472	SOUTH POND WITHIN CITY PARK	pH	7.1	UNITS
MND22-3402	900000006	SOUTH POND WITHIN CITY PARK	% Clay	64	%
MND22-3402	900000006	SOUTH POND WITHIN CITY PARK	% Gravel	0.0	%
MND22-3402	900000006	SOUTH POND WITHIN CITY PARK	% Sand	3.0	%
MND22-3402	900000006	SOUTH POND WITHIN CITY PARK	% Silt	33	%
MND22-3402	900000006	SOUTH POND WITHIN CITY PARK	Cation Exchange	42.7	MEQ/100
MND22-3402	900000006	SOUTH POND WITHIN CITY PARK	pH	7.2	UNITS
MND22-3402	900000006	SOUTH POND WITHIN CITY PARK	Specific Gravity	2.7	G/CC
MND22-3403	000473	SOUTH POND WITHIN CITY PARK	% Clay	46	%
MND22-3403	000473	SOUTH POND WITHIN CITY PARK	% Clay	24	%
MND22-3403	000473	SOUTH POND WITHIN CITY PARK	% Gravel	0.0	%
MND22-3403	000473	SOUTH POND WITHIN CITY PARK	% Gravel	2.0	%
MND22-3403	000473	SOUTH POND WITHIN CITY PARK	% Sand	11	%
MND22-3403	000473	SOUTH POND WITHIN CITY PARK	% Sand	32	%
MND22-3403	000473	SOUTH POND WITHIN CITY PARK	% Silt	43	%
MND22-3403	000473	SOUTH POND WITHIN CITY PARK	% Silt	42	%
MND22-3403	000473	SOUTH POND WITHIN CITY PARK	pH	7.2	UNITS
MND22-3403	000473	SOUTH POND WITHIN CITY PARK	pH	7.0	UNITS
MND22-3403	000601	SOUTH POND WITHIN CITY PARK	% Clay	38	%
MND22-3403	000601	SOUTH POND WITHIN CITY PARK	% Clay	24	%

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-3403	000601	SOUTH POND WITHIN CITY PARK	% Gravel	15	%
MND22-3403	000601	SOUTH POND WITHIN CITY PARK	% Gravel	18	%
MND22-3403	000601	SOUTH POND WITHIN CITY PARK	% Sand	4.0	%
MND22-3403	000601	SOUTH POND WITHIN CITY PARK	% Sand	17	%
MND22-3403	000601	SOUTH POND WITHIN CITY PARK	% Silt	43	%
MND22-3403	000601	SOUTH POND WITHIN CITY PARK	% Silt	41	%
MND22-3403	000601	SOUTH POND WITHIN CITY PARK	pH	7.2	UNITS
MND22-3403	000601	SOUTH POND WITHIN CITY PARK	pH	7.1	UNITS
MND22-3403	900000007	SOUTH POND WITHIN CITY PARK	% Clay	37	%
MND22-3403	900000007	SOUTH POND WITHIN CITY PARK	% Gravel	0.0	%
MND22-3403	900000007	SOUTH POND WITHIN CITY PARK	% Sand	5.0	%
MND22-3403	900000007	SOUTH POND WITHIN CITY PARK	% Silt	58	%
MND22-3403	900000007	SOUTH POND WITHIN CITY PARK	Cation Exchange	36.8	MEQ/100
MND22-3403	900000007	SOUTH POND WITHIN CITY PARK	pH	7.2	UNITS
MND22-3403	900000007	SOUTH POND WITHIN CITY PARK	Specific Gravity	2.7	G/CC
MND22-4001	900000162	NEW PROPERTY-LOW LYING AREA	% Clay	35	%
MND22-4001	900000162	NEW PROPERTY-LOW LYING AREA	% Gravel	0.0	%
MND22-4001	900000162	NEW PROPERTY-LOW LYING AREA	% Sand	11	%
MND22-4001	900000162	NEW PROPERTY-LOW LYING AREA	% Silt	54	%
MND22-4001	900000162	NEW PROPERTY-LOW LYING AREA	pH	7.4	UNITS
MND22-4002	900000163	NEW PROPERTY-LOW LYING AREA	% Clay	24	%
MND22-4002	900000163	NEW PROPERTY-LOW LYING AREA	% Gravel	4.0	%
MND22-4002	900000163	NEW PROPERTY-LOW LYING AREA	% Sand	28	%
MND22-4002	900000163	NEW PROPERTY-LOW LYING AREA	% Silt	44	%
MND22-4002	900000163	NEW PROPERTY-LOW LYING AREA	pH	7.6	UNITS
MND22-4002	900000164	NEW PROPERTY-LOW LYING AREA	% Clay	25	%
MND22-4002	900000164	NEW PROPERTY-LOW LYING AREA	% Gravel	2.0	%
MND22-4002	900000164	NEW PROPERTY-LOW LYING AREA	% Sand	29	%
MND22-4002	900000164	NEW PROPERTY-LOW LYING AREA	% Silt	44	%
MND22-4002	900000164	NEW PROPERTY-LOW LYING AREA	pH	7.5	UNITS
MND22-4003	900000168	NEW PROPERTY-LOW LYING AREA	% Clay	54	%
MND22-4003	900000168	NEW PROPERTY-LOW LYING AREA	% Gravel	0.0	%
MND22-4003	900000168	NEW PROPERTY-LOW LYING AREA	% Sand	2.0	%
MND22-4003	900000168	NEW PROPERTY-LOW LYING AREA	% Silt	44	%
MND22-4003	900000168	NEW PROPERTY-LOW LYING AREA	pH	7.9	UNITS
MND22-4101	000478	NEW PROPERTY-EPHEMERAL STREAM	% Clay	17	%
MND22-4101	000478	NEW PROPERTY-EPHEMERAL STREAM	% Gravel	12	%
MND22-4101	000478	NEW PROPERTY-EPHEMERAL STREAM	% Sand	49	%
MND22-4101	000478	NEW PROPERTY-EPHEMERAL STREAM	% Silt	22	%
MND22-4101	000478	NEW PROPERTY-EPHEMERAL STREAM	pH	7.7	UNITS
MND22-4101	000651	NEW PROPERTY-EPHEMERAL STREAM	% Clay	17	%
MND22-4101	000651	NEW PROPERTY-EPHEMERAL STREAM	% Gravel	9.0	%
MND22-4101	000651	NEW PROPERTY-EPHEMERAL STREAM	% Sand	46	%
MND22-4101	000651	NEW PROPERTY-EPHEMERAL STREAM	% Silt	28	%
MND22-4101	000651	NEW PROPERTY-EPHEMERAL STREAM	pH	7.6	UNITS
MND22-4101	900000160	NEW PROPERTY-EPHEMERAL STREAM	% Clay	7.0	%
MND22-4101	900000160	NEW PROPERTY-EPHEMERAL STREAM	% Gravel	54	%
MND22-4101	900000160	NEW PROPERTY-EPHEMERAL STREAM	% Sand	30	%
MND22-4101	900000160	NEW PROPERTY-EPHEMERAL STREAM	% Silt	9.0	%
MND22-4101	900000160	NEW PROPERTY-EPHEMERAL STREAM	pH	8.0	UNITS
MND22-4102	000477	NEW PROPERTY-EPHEMERAL STREAM	% Clay	30	%
MND22-4102	000477	NEW PROPERTY-EPHEMERAL STREAM	% Gravel	6.0	%
MND22-4102	000477	NEW PROPERTY-EPHEMERAL STREAM	% Sand	22	%
MND22-4102	000477	NEW PROPERTY-EPHEMERAL STREAM	% Silt	42	%
MND22-4102	000477	NEW PROPERTY-EPHEMERAL STREAM	pH	7.9	UNITS

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-4102	900000159	NEW PROPERTY-EPHEMERAL STREAM	% Clay	23	%
MND22-4102	900000159	NEW PROPERTY-EPHEMERAL STREAM	% Gravel	10	%
MND22-4102	900000159	NEW PROPERTY-EPHEMERAL STREAM	% Sand	36	%
MND22-4102	900000159	NEW PROPERTY-EPHEMERAL STREAM	% Silt	31	%
MND22-4102	900000159	NEW PROPERTY-EPHEMERAL STREAM	pH	8.1	UNITS
MND22-4301	000479	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Clay	24	%
MND22-4301	000479	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Gravel	O.O	%
MND22-4301	000479	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Sand	11	%
MND22-4301	000479	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Silt	65	%
MND22-4301	000479	ZONE OF INFLUENCE POND ONE-UNION ROAD	pH	7.2	UNITS
MND22-4301	900000029	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Clay	31	%
MND22-4301	900000029	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Gravel	0.0	%
MND22-4301	900000029	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Sand	3.0	%
MND22-4301	900000029	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Silt	66	%
MND22-4301	900000029	ZONE OF INFLUENCE POND ONE-UNION ROAD	pH	7.1	UNITS
MND22-4302	000481	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Clay	9.0	%
MND22-4302	000481	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Gravel	7.0	%
MND22-4302	000481	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Sand	53	%
MND22-4302	000481	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Silt	31	%
MND22-4302	000481	ZONE OF INFLUENCE POND ONE-UNION ROAD	pH	7.2	UNITS
MND22-4302	900000026	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Clay	15	%
MND22-4302	900000026	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Gravel	0.0	%
MND22-4302	900000026	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Sand	27	%
MND22-4302	900000026	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Silt	58	%
MND22-4302	900000026	ZONE OF INFLUENCE POND ONE-UNION ROAD	pH	7.2	UNITS
MND22-4302	900000027	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Clay	12	%
MND22-4302	900000027	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Gravel	0.0	%
MND22-4302	900000027	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Sand	50	%
MND22-4302	900000027	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Silt	38	%
MND22-4302	900000027	ZONE OF INFLUENCE POND ONE-UNION ROAD	pH	6.9	UNITS
MND22-4303	000482	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Clay	23	%
MND22-4303	000482	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Gravel	0.0	%
MND22-4303	000482	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Sand	11	%
MND22-4303	000482	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Silt	66	%
MND22-4303	000482	ZONE OF INFLUENCE POND ONE-UNION ROAD	pH	7.2	UNITS
MND22-4303	900000030	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Clay	29	%
MND22-4303	900000030	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Gravel	0.0	%
MND22-4303	900000030	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Sand	4.0	%
MND22-4303	900000030	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Silt	67	%
MND22-4303	900000030	ZONE OF INFLUENCE POND ONE-UNION ROAD	pH	7.1	UNITS
MND22-4304	000483	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Clay	34	%
MND22-4304	000483	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Gravel	0.0	%
MND22-4304	000483	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Sand	8.0	%
MND22-4304	000483	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Silt	58	%
MND22-4304	000483	ZONE OF INFLUENCE POND ONE-UNION ROAD	pH	7.2	UNITS
MND22-4304	900000031	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Clay	31	%
MND22-4304	900000031	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Gravel	0.0	%
MND22-4304	900000031	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Sand	3.0	%
MND22-4304	900000031	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Silt	66	%
MND22-4304	900000031	ZONE OF INFLUENCE POND ONE-UNION ROAD	pH	7.0	UNITS
MND22-4305	000480	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Clay	8.0	%
MND22-4305	000480	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Gravel	23	%
MND22-4305	000480	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Sand	39	%
MND22-4305	000480	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Silt	30	%
MND22-4305	000480	ZONE OF INFLUENCE POND ONE-UNION ROAD	pH	7.4	UNITS

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-4305	900000028	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Clay	11	%
MND22-4305	900000028	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Gravel	0.0	%
MND22-4305	900000028	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Sand	53	%
MND22-4305	900000028	ZONE OF INFLUENCE POND ONE-UNION ROAD	% Silt	36	%
MND22-4305	900000028	ZONE OF INFLUENCE POND ONE-UNION ROAD	pH	7.0	UNITS
MND22-4401	000485	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Clay	7.0	%
MND22-4401	000485	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Gravel	17	%
MND22-4401	000485	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Sand	56	%
MND22-4401	000485	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Silt	20	%
MND22-4401	000485	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	pH	7.5	UNITS
MND22-4401	900000048	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Clay	15	%
MND22-4401	900000048	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Gravel	3.0	%
MND22-4401	900000048	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Sand	45	%
MND22-4401	900000048	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Silt	37	%
MND22-4401	900000048	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	pH	7.3	UNITS
MND22-4402	000484	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Clay	12	%
MND22-4402	000484	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Gravel	22	%
MND22-4402	000484	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Sand	46	%
MND22-4402	000484	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Silt	20	%
MND22-4402	000484	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	pH	8.0	UNITS
MND22-4402	900000046	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Clay	6.0	%
MND22-4402	900000046	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Gravel	52	%
MND22-4402	900000046	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Sand	26	%
MND22-4402	900000046	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Silt	16	%
MND22-4402	900000046	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	pH	8.2	UNITS
MND22-4402	900000047	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Clay	15	%
MND22-4402	900000047	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Gravel	18	%
MND22-4402	900000047	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Sand	30	%
MND22-4402	900000047	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Silt	37	%
MND22-4402	900000047	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	pH	8.4	UNITS
MND22-4402	900000096	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Clay	12	%
MND22-4402	900000096	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Gravel	17	%
MND22-4402	900000096	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Sand	39	%
MND22-4402	900000096	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Silt	32	%
MND22-4402	900000096	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Cation Exchange	7.3	MEQ/100
MND22-4402	900000096	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	pH	7.5	UNITS
MND22-4402	900000096	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	Specific Gravity	2.7	G/CC
MND22-4403	000486	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Clay	5.0	%
MND22-4403	000486	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Gravel	23	%
MND22-4403	000486	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Sand	54	%
MND22-4403	000486	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Silt	18	%
MND22-4403	000486	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	pH	7.5	UNITS
MND22-4403	900000049	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Clay	0.0	%
MND22-4403	900000049	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Gravel	20	%
MND22-4403	900000049	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Sand	71	%
MND22-4403	900000049	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	% Silt	9.0	%
MND22-4403	900000049	ZONE OF INFLUENCE STREAM ONE-UNION ROAD	pH	8.3	UNITS
MND22-4501	000489	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	% Clay	18	%
MND22-4501	000489	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	% Gravel	1.0	%
MND22-4501	000489	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	% Sand	17	%
MND22-4501	000489	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	% Silt	64	%
MND22-4501	000489	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	pH	7.4	UNITS
MND22-4502	000487	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	% Clay	18	%
MND22-4502	000487	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	% Gravel	2.0	%
MND22-4502	000487	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	% Sand	24	%

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-4502	000487	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	% Silt	56	%
MND22-4502	000487	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	pH	7.5	UNITS
MND22-4503	000488	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	% Clay	20	%
MND22-4503	000488	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	% Gravel	0.0	%
MND22-4503	000488	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	% Sand	3.0	%
MND22-4503	000488	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	% Silt	77	%
MND22-4503	000488	ZONE OF INFLUENCE POND TWO-SYCAMORE PARK	pH	7.4	UNITS
MND22-4601	000490	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Clay	16	%
MND22-4601	000490	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Gravel	28	%
MND22-4601	000490	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Sand	39	%
MND22-4601	000490	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Silt	17	%
MND22-4601	000490	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	pH	8.6	UNITS
MND22-4601	900000179	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Clay	0.0	%
MND22-4601	900000179	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Gravel	43	%
MND22-4601	900000179	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Sand	54	%
MND22-4601	900000179	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Silt	3.0	%
MND22-4601	900000179	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	pH	8.6	UNITS
MND22-4602	000491	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Clay	0.0	%
MND22-4602	000491	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Gravel	50	%
MND22-4602	000491	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Sand	48	%
MND22-4602	000491	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Silt	2.0	%
MND22-4602	000491	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	pH	8.7	UNITS
MND22-4602	900000180	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Clay	10	%
MND22-4602	900000180	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Gravel	23	%
MND22-4602	900000180	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Sand	37	%
MND22-4602	900000180	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Silt	30	%
MND22-4602	900000180	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	pH	8.3	UNITS
MND22-4603	000492	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Clay	2.0	%
MND22-4603	000492	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Gravel	43	%
MND22-4603	000492	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Sand	50	%
MND22-4603	000492	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Silt	5.0	%
MND22-4603	000492	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	pH	8.3	UNITS
MND22-4603	000629	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Clay	2.0	%
MND22-4603	000629	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Gravel	37	%
MND22-4603	000629	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Sand	56	%
MND22-4603	000629	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Silt	5.0	%
MND22-4603	000629	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	pH	8.5	UNITS
MND22-4603	900000182	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Clay	2.0	%
MND22-4603	900000182	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Gravel	37	%
MND22-4603	900000182	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Sand	55	%
MND22-4603	900000182	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	% Silt	6.0	%
MND22-4603	900000182	ZONE OF INFLUENCE STREAM TWO-SYCAMORE PARK	pH	8.3	UNITS
MND22-4701	000384	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Clay	15	%
MND22-4701	000384	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Gravel	9.0	%
MND22-4701	000384	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Sand	39	%
MND22-4701	000384	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Silt	37	%
MND22-4701	000384	AREA WATERSHED DRAINAGE A (GRAVEYARD)	pH	7.7	UNITS
MND22-4701	900000176	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Clay	1.0	%
MND22-4701	900000176	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Gravel	35	%
MND22-4701	900000176	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Sand	60	%
MND22-4701	900000176	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Silt	4.0	%
MND22-4701	900000176	AREA WATERSHED DRAINAGE A (GRAVEYARD)	pH	8.1	UNITS
MND22-4702	000383	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Clay	0.0	%
MND22-4702	000383	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Gravel	36	%
MND22-4702	000383	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Sand	60	%

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-4702	000383	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Silt	4.0	%
MND22-4702	000383	AREA WATERSHED DRAINAGE A (GRAVEYARD)	pH	8.3	UNITS
MND22-4702	000620	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Clay	0.0	%
MND22-4702	000620	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Gravel	46	%
MND22-4702	000620	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Sand	50	%
MND22-4702	000620	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Silt	4.0	%
MND22-4702	000620	AREA WATERSHED DRAINAGE A (GRAVEYARD)	pH	8.3	UNITS
MND22-4702	900000204	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Clay	1.0	%
MND22-4702	900000204	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Gravel	35	%
MND22-4702	900000204	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Sand	53	%
MND22-4702	900000204	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Silt	12	%
MND22-4702	900000204	AREA WATERSHED DRAINAGE A (GRAVEYARD)	pH	8.3	UNITS
MND22-4703	000382	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Clay	1.0	%
MND22-4703	000382	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Gravel	48	%
MND22-4703	000382	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Sand	48	%
MND22-4703	000382	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Silt	3.0	%
MND22-4703	000382	AREA WATERSHED DRAINAGE A (GRAVEYARD)	pH	8.1	UNITS
MND22-4703	900000153	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Clay	11	%
MND22-4703	900000153	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Gravel	16	%
MND22-4703	900000153	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Sand	49	%
MND22-4703	900000153	AREA WATERSHED DRAINAGE A (GRAVEYARD)	% Silt	24	%
MND22-4703	900000153	AREA WATERSHED DRAINAGE A (GRAVEYARD)	pH	8.3	UNITS
MND22-4704	000385	AREA WATERSHED DRAINAGE B	% Clay	19	%
MND22-4704	000385	AREA WATERSHED DRAINAGE B	% Gravel	9.0	%
MND22-4704	000385	AREA WATERSHED DRAINAGE B	% Sand	38	%
MND22-4704	000385	AREA WATERSHED DRAINAGE B	% Silt	34	%
MND22-4704	000385	AREA WATERSHED DRAINAGE B	pH	7.7	UNITS
MND22-4704	900000205	AREA WATERSHED DRAINAGE B	% Clay	3.0	%
MND22-4704	900000205	AREA WATERSHED DRAINAGE B	% Gravel	37	%
MND22-4704	900000205	AREA WATERSHED DRAINAGE B	% Sand	50	%
MND22-4704	900000205	AREA WATERSHED DRAINAGE B	% Silt	1.0	%
MND22-4704	900000205	AREA WATERSHED DRAINAGE B	pH	8.4	UNITS
MND22-4705	000386	AREA WATERSHED DRAINAGE B	% Clay	19	%
MND22-4705	000386	AREA WATERSHED DRAINAGE B	% Gravel	10	%
MND22-4705	000386	AREA WATERSHED DRAINAGE B	% Sand	38	%
MND22-4705	000386	AREA WATERSHED DRAINAGE B	% Silt	33	%
MND22-4705	000386	AREA WATERSHED DRAINAGE B	pH	7.9	UNITS
MND22-4705	900000206	AREA WATERSHED DRAINAGE B	% Clay	11	%
MND22-4705	900000206	AREA WATERSHED DRAINAGE B	% Gravel	2.0	%
MND22-4705	900000206	AREA WATERSHED DRAINAGE B	% Sand	50	%
MND22-4705	900000206	AREA WATERSHED DRAINAGE B	% Silt	37	%
MND22-4705	900000206	AREA WATERSHED DRAINAGE B	pH	8.1	UNITS
MND22-4706	000387	AREA WATERSHED DRAINAGE B	% Clay	34	%
MND22-4706	000387	AREA WATERSHED DRAINAGE B	% Gravel	12	%
MND22-4706	000387	AREA WATERSHED DRAINAGE B	% Sand	25	%
MND22-4706	000387	AREA WATERSHED DRAINAGE B	% Silt	29	%
MND22-4706	000387	AREA WATERSHED DRAINAGE B	pH	8.0	UNITS
MND22-4706	900000207	AREA WATERSHED DRAINAGE B	% Clay	6.0	%
MND22-4706	900000207	AREA WATERSHED DRAINAGE B	% Gravel	31	%
MND22-4706	900000207	AREA WATERSHED DRAINAGE B	% Sand	50	%
MND22-4706	900000207	AREA WATERSHED DRAINAGE B	% Silt	13	%
MND22-4706	900000207	AREA WATERSHED DRAINAGE B	pH	7.7	UNITS
MND22-4707	000388	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Clay	5.0	%
MND22-4707	000388	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Gravel	43	%
MND22-4707	000388	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Sand	45	%

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-4707	000388	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Silt	7.0	%
MND22-4707	000388	AREA WATERSHED DRAINAGE C (BENNER ROAD)	pH	8.4	UNITS
MND22-4707	900000165	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Clay	3.0	%
MND22-4707	900000165	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Gravel	39	%
MND22-4707	900000165	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Sand	52	%
MND22-4707	900000165	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Silt	6.0	%
MND22-4707	900000165	AREA WATERSHED DRAINAGE C (BENNER ROAD)	pH	8.0	UNITS
MND22-4708	000390	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Clay	11	%
MND22-4708	000390	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Gravel	31	%
MND22-4708	000390	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Sand	44	%
MND22-4708	000390	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Silt	14	%
MND22-4708	000390	AREA WATERSHED DRAINAGE C (BENNER ROAD)	pH	8.2	UNITS
MND22-4708	900000177	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Clay	41	%
MND22-4708	900000177	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Gravel	6.0	%
MND22-4708	900000177	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Sand	10	%
MND22-4708	900000177	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Silt	43	%
MND22-4708	900000177	AREA WATERSHED DRAINAGE C (BENNER ROAD)	pH	8.1	UNITS
MND22-4709	000389	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Clay	0.0	%
MND22-4709	000389	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Gravel	46	%
MND22-4709	000389	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Sand	51	%
MND22-4709	000389	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Silt	3.0	%
MND22-4709	000389	AREA WATERSHED DRAINAGE C (BENNER ROAD)	pH	8.8	UNITS
MND22-4709	900000169	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Clay	6.0	%
MND22-4709	900000169	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Gravel	11	%
MND22-4709	900000169	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Sand	52	%
MND22-4709	900000169	AREA WATERSHED DRAINAGE C (BENNER ROAD)	% Silt	31	%
MND22-4709	900000169	AREA WATERSHED DRAINAGE C (BENNER ROAD)	pH	8.3	UNITS
MND22-4710	000392	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Clay	15	%
MND22-4710	000392	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Gravel	24	%
MND22-4710	000392	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Sand	41	%
MND22-4710	000392	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Silt	20	%
MND22-4710	000392	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	pH	7.8	UNITS
MND22-4710	900000197	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Clay	31	%
MND22-4710	900000197	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Gravel	0.0	%
MND22-4710	900000197	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Sand	11	%
MND22-4710	900000197	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Silt	58	%
MND22-4710	900000197	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	pH	7.4	UNITS
MND22-4711	000393	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Clay	18	%
MND22-4711	000393	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Gravel	7.0	%
MND22-4711	000393	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Sand	41	%
MND22-4711	000393	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Silt	34	%
MND22-4711	000393	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	pH	7.4	UNITS
MND22-4711	900000200	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Clay	5.0	%
MND22-4711	900000200	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Clay	5.0	%
MND22-4711	900000200	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Gravel	49	%
MND22-4711	900000200	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Gravel	49	%
MND22-4711	900000200	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Sand	36	%
MND22-4711	900000200	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Sand	36	%
MND22-4711	900000200	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Silt	10	%
MND22-4711	900000200	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Silt	10	%
MND22-4711	900000200	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	pH	8.5	UNITS
MND22-4711	900000200	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	pH	8.5	UNITS
MND22-4712	000391	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Clay	3.0	%
MND22-4712	000391	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Gravel	42	%
MND22-4712	000391	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Sand	52	%

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-4712	000391	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Silt	3.0	%
MND22-4712	000391	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	pH	8.4	UNITS
MND22-4712	900000196	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Clay	2.0	%
MND22-4712	900000196	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Gravel	40	%
MND22-4712	900000196	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Sand	54	%
MND22-4712	900000196	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	% Silt	4.0	%
MND22-4712	900000196	AREA WATERSHED DRAINAGE D (DENNY PROPERTY)	pH	8.7	UNITS
MND22-4713	000394	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Clay	1.0	%
MND22-4713	000394	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Gravel	27	%
MND22-4713	000394	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Sand	64	%
MND22-4713	000394	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Silt	8.0	%
MND22-4713	000394	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	pH	8.1	UNITS
MND22-4713	900000178	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Clay	1.0	%
MND22-4713	900000178	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Gravel	37	%
MND22-4713	900000178	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Sand	58	%
MND22-4713	900000178	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Silt	4.0	%
MND22-4713	900000178	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	pH	8.2	UNITS
MND22-4714	000395	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Clay	3.0	%
MND22-4714	000395	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Gravel	34	%
MND22-4714	000395	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Sand	57	%
MND22-4714	000395	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Silt	6.0	%
MND22-4714	000395	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	pH	8.0	UNITS
MND22-4714	900000154	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Clay	0.0	%
MND22-4714	900000154	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Gravel	54	%
MND22-4714	900000154	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Sand	46	%
MND22-4714	900000154	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Silt	0.0	%
MND22-4714	900000154	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	pH	8.2	UNITS
MND22-4715	000396	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Clay	4.0	%
MND22-4715	000396	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Gravel	31	%
MND22-4715	000396	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Sand	58	%
MND22-4715	000396	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Silt	7.0	%
MND22-4715	000396	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	pH	7.8	UNITS
MND22-4715	900000155	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Clay	2.0	%
MND22-4715	900000155	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Gravel	38	%
MND22-4715	900000155	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Sand	54	%
MND22-4715	900000155	AREA WATERSHED DRAINAGE E (DRAIN. WEST OF RIVER)	% Silt	6.0	%
MND22-4716	000397	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Clay	7.0	%
MND22-4716	000397	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Gravel	8.0	%
MND22-4716	000397	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Sand	72	%
MND22-4716	000397	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Silt	13	%
MND22-4716	000397	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	pH	8.3	UNITS
MND22-4716	900000126	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Clay	22	%
MND22-4716	900000126	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Gravel	0.0	%
MND22-4716	900000126	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Sand	30	%
MND22-4716	900000126	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Silt	48	%
MND22-4716	900000126	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Maximum Dry Density	110	G/CC
MND22-4716	900000126	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Minimum Dry Density	16	G/CC
MND22-4716	900000126	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Organic Content	29.7	%
MND22-4716	900000126	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Permeability	0.0013	L/MIN
MND22-4716	900000126	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	pH	8.0	UNITS
MND22-4717	000398	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Clay	17	%
MND22-4717	000398	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Gravel	1.0	%
MND22-4717	000398	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Sand	31	%
MND22-4717	000398	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Silt	51	%
MND22-4717	000398	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	pH	7.9	UNITS

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-4717	900000127	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Clay	15	%
MND22-4717	900000127	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Gravel	4.0	%
MND22-4717	900000127	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Sand	39	%
MND22-4717	900000127	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Silt	42	%
MND22-4717	900000127	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Maximum Dry Density	110	PCF
MND22-4717	900000127	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Minimum Dry Density	16	PCF
MND22-4717	900000127	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Moisture	28.4	%
MND22-4717	900000127	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Organic Content	4.3	%
MND22-4717	900000127	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Permeability	0.000000	CM/S
MND22-4717	900000127	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	pH	7.3	UNITS
MND22-4718	000399	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Clay	15	%
MND22-4718	000399	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Gravel	0.0	%
MND22-4718	000399	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Sand	53	%
MND22-4718	000399	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Silt	32	%
MND22-4718	000399	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	pH	8.0	UNITS
MND22-4718	900000128	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Clay	17	%
MND22-4718	900000128	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Gravel	0.0	%
MND22-4718	900000128	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Sand	45	%
MND22-4718	900000128	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	% Silt	38	%
MND22-4718	900000128	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Maximum Dry Density	110	G/CC
MND22-4718	900000128	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Minimum Dry Density	18	G/CC
MND22-4718	900000128	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Organic Content	49.0	%
MND22-4718	900000128	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	pH	7.6	UNITS
MND22-4718	900000128	AREA WATERSHED DRAINAGE F (WEST FLOODPLAIN)	Saturated Hydraulic Con	0.0013	L/MIN
MND22-4719	000402	AREA WATERSHED DRAINAGE G (SEEPS)	% Clay	42	%
MND22-4719	000402	AREA WATERSHED DRAINAGE G (SEEPS)	% Gravel	0.0	%
MND22-4719	000402	AREA WATERSHED DRAINAGE G (SEEPS)	% Sand	6.0	%
MND22-4719	000402	AREA WATERSHED DRAINAGE G (SEEPS)	% Silt	52	%
MND22-4719	000402	AREA WATERSHED DRAINAGE G (SEEPS)	pH	8.1	UNITS
MND22-4719	900000144	AREA WATERSHED DRAINAGE G (SEEPS)	Moisture	NA	%
MND22-4719	900000144	AREA WATERSHED DRAINAGE G (SEEPS)	Organic Content	12.3	%
MND22-4719	900000144	AREA WATERSHED DRAINAGE G (SEEPS)	pH	7.3	UNITS
MND22-4719	900000145	AREA WATERSHED DRAINAGE G (SEEPS)	Moisture	NA	%
MND22-4719	900000145	AREA WATERSHED DRAINAGE G (SEEPS)	Organic Content	12.5	%
MND22-4719	900000145	AREA WATERSHED DRAINAGE G (SEEPS)	pH	7.5	UNITS
MND22-4720	000401	AREA WATERSHED DRAINAGE G (SEEPS)	% Clay	33	%
MND22-4720	000401	AREA WATERSHED DRAINAGE G (SEEPS)	% Gravel	3.0	%
MND22-4720	000401	AREA WATERSHED DRAINAGE G (SEEPS)	% Sand	23	%
MND22-4720	000401	AREA WATERSHED DRAINAGE G (SEEPS)	% Silt	41	%
MND22-4720	000401	AREA WATERSHED DRAINAGE G (SEEPS)	pH	7.9	UNITS
MND22-4720	900000141	AREA WATERSHED DRAINAGE G (SEEPS)	Moisture	NA	%
MND22-4720	900000141	AREA WATERSHED DRAINAGE G (SEEPS)	Organic Content	13.6	%
MND22-4720	900000141	AREA WATERSHED DRAINAGE G (SEEPS)	pH	7.5	UNITS
MND22-4721	000400	AREA WATERSHED DRAINAGE G (SEEPS)	% Clay	33	%
MND22-4721	000400	AREA WATERSHED DRAINAGE G (SEEPS)	% Gravel	0.0	%
MND22-4721	000400	AREA WATERSHED DRAINAGE G (SEEPS)	% Sand	3.0	%
MND22-4721	000400	AREA WATERSHED DRAINAGE G (SEEPS)	% Silt	64	%
MND22-4721	000400	AREA WATERSHED DRAINAGE G (SEEPS)	pH	7.3	UNITS
MND22-4721	900000138	AREA WATERSHED DRAINAGE G (SEEPS)	Moisture	NA	%
MND22-4721	900000138	AREA WATERSHED DRAINAGE G (SEEPS)	Organic Content	6.2	%
MND22-4721	900000138	AREA WATERSHED DRAINAGE G (SEEPS)	pH	7.3	UNITS
MND22-4722	000404	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Clay	6.0	%
MND22-4722	000404	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Gravel	9.0	%
MND22-4722	000404	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Sand	74	%
MND22-4722	000404	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Silt	11	%

Table C.2 - Geotechnical Data

Station	Sample ID	Watershed	Parameter Name	Result	Units
MND22-4722	000404	AREA WATERSHED DRAINAGE H (GOLF COURSE)	pH	8.0	UNITS
MND22-4722	900000152	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Clay	4.0	%
MND22-4722	900000152	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Gravel	43	%
MND22-4722	900000152	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Sand	48	%
MND22-4722	900000152	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Silt	5.0	%
MND22-4722	900000152	AREA WATERSHED DRAINAGE H (GOLF COURSE)	pH	8.1	UNITS
MND22-4723	000403	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Clay	5.0	%
MND22-4723	000403	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Gravel	39	%
MND22-4723	000403	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Sand	50	%
MND22-4723	000403	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Silt	6.0	%
MND22-4723	000403	AREA WATERSHED DRAINAGE H (GOLF COURSE)	pH	8.4	UNITS
MND22-4723	900000147	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Clay	20	%
MND22-4723	900000147	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Gravel	19	%
MND22-4723	900000147	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Sand	27	%
MND22-4723	900000147	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Silt	34	%
MND22-4723	900000147	AREA WATERSHED DRAINAGE H (GOLF COURSE)	pH	7.6	UNITS
MND22-4724	000405	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Clay	5.0	%
MND22-4724	000405	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Gravel	31	%
MND22-4724	000405	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Sand	52	%
MND22-4724	000405	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Silt	12	%
MND22-4724	000405	AREA WATERSHED DRAINAGE H (GOLF COURSE)	pH	8.1	UNITS
MND22-4724	900000175	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Clay	4.0	%
MND22-4724	900000175	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Gravel	39	%
MND22-4724	900000175	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Sand	50	%
MND22-4724	900000175	AREA WATERSHED DRAINAGE H (GOLF COURSE)	% Silt	7.0	%
MND22-4724	900000175	AREA WATERSHED DRAINAGE H (GOLF COURSE)	pH	8.8	UNITS
MND22-4725	000406	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	% Clay	32	%
MND22-4725	000406	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	% Gravel	2.0	%
MND22-4725	000406	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	% Sand	21	%
MND22-4725	000406	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	% Silt	45	%
MND22-4725	000406	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	pH	8.0	UNITS
MND22-4726	000407	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	% Clay	47	%
MND22-4726	000407	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	% Gravel	4.0	%
MND22-4726	000407	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	% Sand	6.0	%
MND22-4726	000407	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	% Silt	43	%
MND22-4726	000407	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	pH	7.5	UNITS
MND22-4726	900000250	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	pH	6.9	STD UN
MND22-4727	000408	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	% Clay	44	%
MND22-4727	000408	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	% Gravel	0.0	%
MND22-4727	000408	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	% Sand	7.0	%
MND22-4727	000408	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	% Silt	49	%
MND22-4727	000408	AREA WATERSHED DRAINAGE-LINDEN ROAD POND	pH	7.6	UNITS

APPENDIX D.1

APPENDIX D
STATISTICAL METHODS

Appendix D-1

Procedural Summary for Statistical Analysis of Surface Water and Sediment Investigation Data

Appendix D-1 - Procedural Summary For Statistical Analysis

I. Data download from Mound Environmental Information Management System (MEIMS)
   1. To run MEIMS type "analdata" from DOS Mound subdirectory or select Mound icon from Windows
   2. Select QUERY icon
      a. Select desired chemical data
      b. Select PROJECT icon
      c. Choose project (Surface Water and Sediment Investigation)
      d. To query specific sample id #s at this point select SAMPLES instead of PROJECT
      e. Select "check mark" icon
   3. Select MEDIA icon
      a. Choose surface water, sediment or soil matrix from scroll-down list
      b. Choose grab from the sample type scroll-down list
      c. Select "check mark" icon
   4. Select SPATIAL icon
      a. Select SAMPLING LOCATIONS icon
      b. Choose desired sample locations (MND...)
      c. Select "check mark" icon
   5. Review data query for completeness
   6. Select EXPORT icon
      a. Choose information for export (detection limit, lab qualifier, parameter, results, sample id, station, units, etc.)
      b. Choose Excel Version 2.0 from file type scroll down list
      c. Create filename according to SW&SED directory tree (i.e. bkpdsed.xls = background/pond/sediment)
      d. Select "check mark" icon
      e. Select EXIT icon

II. Data review
   1. Load excel file
   2. Choose Subtotal under data heading
   3 Examine data for inconsistencies, variations
   3. Remove duplicate entries and other determinate data entry errors

III. Statistical analysis of downloaded data
   1. Load Excel file into Statgraphics
      a. Maximize datafile icon
   2. Select Sort under File on toolbar
      a. Use scroll down list to Sort by primary (par_name) and secondary (sampl_id)
   3. Change format of "results" column from character to numeric using Modify Column under Edit on toolbar
   4. Divide all undetect results by one-half and create new column named "results2" containing these values and detect results
      Note: the above four items can be performed effectively using Excel also
   5. Run a One Variable Analysis for a desired compound
      a. Select: Describe... Numeric Data... One Variable Analysis on Toolbar

b. Select: Data = results2
c. Select: par_nam = (desired parameter)
d. Choose Procedure Summary, Summary Statistics for output
e. Choose ALL summary statistics by clicking right mouse button on Summary Statistics screen (count, average, median, mode, geo-mean, variance, standard deviation, standard error, min, max, range, lower quartile, upper quartile, interquartile range, skewness, standard skewness, Kurtosis, stnd Kurtosis, coeff icient of variance, sum)

6. Distribution Type and Upper Tolerance Limit
   a. Determine distribution type
      i. Select: Special... Quality Control... Process Capability Analysis
      ii. Select: Test for Normality under Tabular Options Box (yellow)
      iii. Compare Statgraphics W value to W value in Table A-7 of Statistical Methods for Environmental Pollution Monitoring to test null hypothesis
      iv. If data is not normal, log data and test null hypothesis again
      v. If data is not normal or lognormal assume non-parametric distribution for populations with greater than 4 detections. Populations with less than 4 detections are classified as unknown (undefined)
   b. Compute Upper Tolerance Limit (UTL)
      i. Select: Special... Quality Control... Process Capability Analysis
      ii. Enter "results2" for DATA
      iii. Enter max. from Summary Statistics for USL
      iv. For NOMINAL enter average (arithmetic mean) for normal distribution, enter geometric mean for lognormal distribution, enter median for nonparametric distribution
      v. Enter min. from Summary Statistics for LSL
      vi. Select: par_nam = (desired parameter) for Selection criteria
      vii. Select OK icon
      viii. Select: Normal Tolerance Limits
      ix. Save above outputs as text file in Statgraphics to be retrieved in Excel

IV. Determination of Detections Greater than Upper Tolerance Limits
1. Load Excel file containing non-background sample population (i.e. awdstrsw.xls = area watershed drainage/streams/surface water)
2. Change result values from character to numeric
   a. Create one column to the right of Results column and name it Numresults
   b. Use the VALUE function to convert Results column from character to numeric and place these values in the Numresults column
3. Select: Data... Filter... Autofilter from toolbar
4. Filter desired parameter from filter list at par_nam column
5. Filter values greater than (>) UTL using the Custom choice from the filter list
6. Save file containing hits according to established file nomenclature

APPENDIX D.2

Appendix D-2

Data Treatment and Equations

Parameter name and units of measure

Units of measure must be consistent for all values under each individual parameter.

Samples (Detects: Total)

"Detects" or "hits" are results that have a parameter value qualifier other than "U" or "NA." Parameters that have no "detects" are not reported. Values equal to zero, pH, QC, recovery, and "not applicable" samples are not used and are, therefore, not included in the "Total" (see flow chart).

Nondetects

If a chemical is analyzed for but not detected (i.e., value qualifier is "U"), the value used in calculations is the detection limit divided by 2.0. If the detection limit is unknown, then the value used is the reported parameter value divided by 2.0. If the detection limit is zero, the program will abort.

Minimum, Maximum, Median

Minimum, Maximum, and Median sample values are determined for each parameter in set of data values. Only "hits" are used for MIN/MAX. If there is only one "hit" and there are one or more "nondetects," then a "U" is reported for the MIN. If there is only one "hit" and there are no "nondetects," then a "---" is reported for the MIN.

Geometric Mean

The geometric mean uses the natural log (ln). If the data contains values less than or equal to zero, then a "---" is reported.

$$\exp\left(\frac{\sum_{i=1}^{n} \ln X_i}{n}\right)$$

Arithmetic Mean

The arithmetic mean uses the sum of the sample concentrations divided by the number of samples. (See explanation of samples above.)

$$\frac{\sum_{i=1}^{n} X_i}{n}$$

Standard Deviation

Calculated for all distributions.

LOGNORMAL

$$\exp\left[\frac{\sum_{i=1}^{n}\left(\ln X_i - \frac{\sum_{i=1}^{n}\ln X_i}{n}\right)^2}{n-1}\right]^{\frac{1}{2}}$$

NORMAL

Unknown (if number of samples >1).

NONPARAMETRIC

$$\sqrt{\frac{\sum_{i=1}^{n}\left(X_i - \overline{X}\right)^2}{n-1}}\ , \quad \overline{X} = \frac{\sum_{i=1}^{n} X_i}{n}$$

95% Confidence Interval

LOGNORMAL

$$\exp\left(\overline{X} \pm \frac{t_{(0.025,\,n-1)}\,x\,S}{\sqrt{n}}\right)$$

$\overline{X}$	- Geometric Mean (without antilog)
$t_{(0.025,\,n-1)}$	- Student's t-statistic for 95% confidence interval and n-1 degrees of freedom
S	- Standard Deviation for Lognormal Distribution (without antilog)
n	- Number of samples

NORMAL

$$\overline{X} \pm \frac{t_{(0.025,\,n-1)}\,x\,S}{\sqrt{n}}$$

$\overline{X}$	- Arithmetic Mean
$t_{(0.025,\,n-1)}$	- Student's t-statistic for 95% confidence interval and n-1 degrees of freedom
S	- Standard Deviation for normal distribution
n	- Number of samples

NONPARAMETRIC

One-Sided Distribution-Free Confidence Bounds for a Percentile. (Hahn and Meeker, 1991.)

Distribution Type

Normal
Lognormal
Nonparametric
Unknown

Determined using: (see flow chart)

Shapiro-Wilk's Test (1965) n < 50

Also known as the W test. (R.O. Gilbert, 1987.)

D'Agostino's Test (1971) n $ 50

Also known as the D test. (R.O. Gilbert, 1987.)

NORMAL ONE-SIDED TOLERANCE LIMITS

$$TL = \overline{X} + KS$$

TL	- Tolerance Limit
$\overline{X}$	- Mean
S	- Standard Deviation
K	- Tolerance Factor

LOGNORMAL ONE-SIDED TOLERANCE LIMITS

$$TL = \overline{X} + KS$$

TL	- Tolerance Limit
$\overline{X}$	- Geometric Mean
$\overline{S}$	- Standard Deviation for log of data

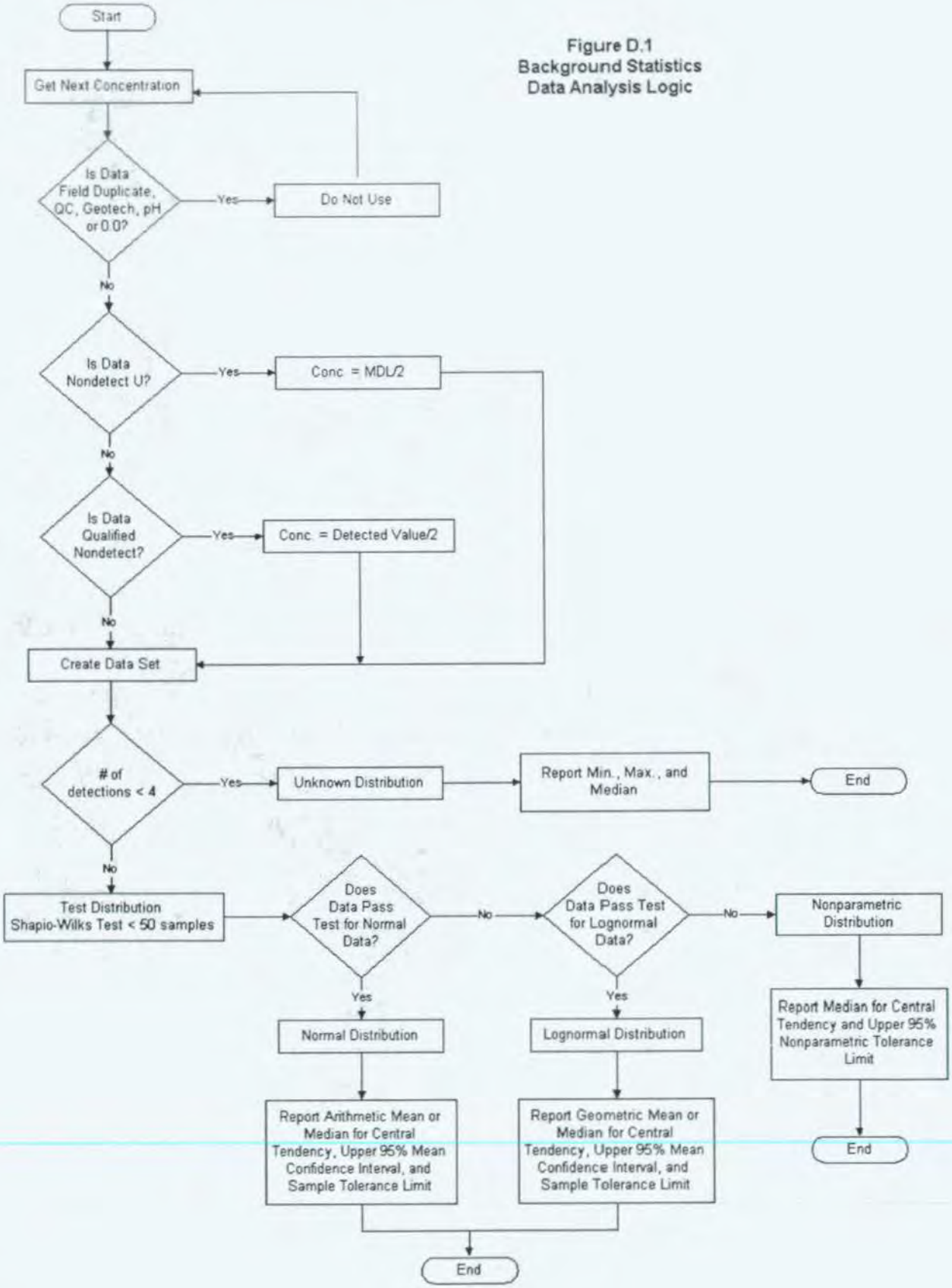


Figure D.1
Background Statistics
Data Analysis Logic