



Department of Energy

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APR 30 2018

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Division of Waste Management
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Dear Mr. Begley, Ms. Corkran, and Ms. Webb:

**U.S. DEPARTMENT OF ENERGY PADUCAH GASEOUS DIFFUSION PLANT
FEDERAL FACILITY AGREEMENT SEMIANNUAL PROGRESS REPORT FOR
THE FIRST HALF OF FISCAL YEAR 2018, PADUCAH, KENTUCKY,
DOE/LX/07-2428/V1**

Enclosed is the *U.S. Department of Energy Paducah Gaseous Diffusion Plant Federal Facility Agreement Semiannual Progress Report for the First Half of Fiscal Year 2018, Paducah, Kentucky*, DOE/LX/07-2428/V1, and associated certification page. This report is required by Sections XXIII and XXXII.F of the Federal Facility Agreement and Part IV, *Corrective Action*, of the Hazardous Waste Management Facility Permit.

Please note that during the week of November 20, 2017, required sampling events associated with the Northeast Plume Containment System at C-765 and Comprehensive Environmental Response, Compensation, and Liability Act Outfall (C001) inadvertently were missed. Review of the analytical data taken at the C001 between October 10, 2017, and December 2017 indicate that trichloroethene concentrations have been non-detect, making it unlikely that an exceedance at C001 occurred during the week of November 20, 2017. Details regarding this issue and analytical data can be found on page 22 of the FFA Semiannual Report.

If you have any questions or require additional information, please contact me at (270) 441-6862.

Sincerely,


Tracey Duncan
Federal Facility Agreement Manager
Portsmouth/Paducah Project Office

Enclosures:

1. Certification Page
2. FFA Semiannual Progress Report for the First Half of Fiscal Year 2018

e-copy w/enclosures:

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CERTIFICATION

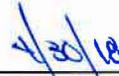
Document Identification: *U.S. Department of Energy Paducah Gaseous Diffusion Plant Federal Facility Agreement Semiannual Progress Report for the First Half of Fiscal Year 2018, Paducah, Kentucky, DOE/LX/07-2428/V1, dated April 2018*

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Four Rivers Nuclear Partnership, LLC



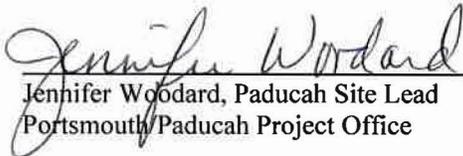
Myrna E. Redfield, Deputy Program Manager
Four Rivers Nuclear Partnership, LLC



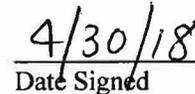
Date Signed

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

U.S. Department of Energy



Jennifer Woodard, Paducah Site Lead
Portsmouth Paducah Project Office



Date Signed

**DOE/LX/07-2428/V1
Secondary Document**

**U.S. Department of Energy
Paducah Gaseous Diffusion Plant
Federal Facility Agreement
Semiannual Progress Report for the
First Half of Fiscal Year 2018
Paducah, Kentucky**



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**DOE/LX/07-2428/V1
Secondary Document**

**U.S. Department of Energy
Paducah Gaseous Diffusion Plant
Federal Facility Agreement
Semiannual Progress Report for the
First Half of Fiscal Year 2018
Paducah, Kentucky**

Date Issued—April 2018

U.S. DEPARTMENT OF ENERGY
Office of Environmental Management

Prepared by
FOUR RIVERS NUCLEAR PARTNERSHIP, LLC,
managing the
Deactivation and Remediation Project at the
Paducah Gaseous Diffusion Plant
under Contract DE-EM0004895

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ACRONYMS

AR	Administrative Record
BGOU	Burial Grounds Operable Unit
CAB	Citizens Advisory Board
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CRP	Community Relations Plan
DOE	U.S. Department of Energy
EIC	Environmental Information Center
EPA	U.S. Environmental Protection Agency
EW	extraction well
FFA	Federal Facility Agreement
FFS	Fluor Federal Services, Inc.
FRNP	Four Rivers Nuclear Partnership, LLC
FS	feasibility study
FY	fiscal year
GDP	gaseous diffusion plant
GWOU	Groundwater Operable Unit
IRA	interim remedial action
KDEP	Kentucky Department for Environmental Protection
MW	monitoring well
NEPCS	Northeast Plume Containment System
NTU	nephelometric turbidity unit
NWPGS	Northwest Plume Groundwater System
O&M	operation and maintenance
OU	operable unit
PGDP	Paducah Gaseous Diffusion Plant
RI	remedial investigation
ROD	record of decision
SMP	Site Management Plan
SOU	Soils Operable Unit
SST	Swift & Staley Team
SWMU	solid waste management unit
SWOU	Surface Water Operable Unit
VOC	volatile organic compound
WAG	waste area group

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**FEDERAL FACILITY AGREEMENT
SEMIANNUAL REPORT
FIRST HALF OF FISCAL YEAR 2018**

**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 10/01/2017–03/31/2018**

INTRODUCTION

The Paducah Gaseous Diffusion Plant (PGDP) was placed on the National Priorities List (NPL) on May 31, 1994. In accordance with Section 120 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the U.S. Department of Energy (DOE) entered into a Federal Facility Agreement (FFA) with the U.S. Environmental Protection Agency (EPA) and Kentucky on February 13, 1998. The FFA established one set of consistent requirements for achieving comprehensive site remediation in accordance with the Resource Conservation and Recovery Act and CERCLA, including stakeholder involvement.

In past Site Management Plans (SMPs), site cleanup activities were divided into (1) pre-gaseous diffusion plant (GDP) shutdown scope, (2) post-GDP shutdown scope, and (3) Comprehensive Sitewide Operable Unit (CSOU) scope. The pre-GDP shutdown scope was associated with media-specific operable units (OUs) initiated prior to shutdown of the operating GDP (i.e., Pre-GDP shutdown Activities). Site cleanup activities in the D1/R1 fiscal year (FY) 2018 SMP are integrated and no longer distinguish between pre-GDP and post-GDP scope. The following are the current OUs.

- C-400 Complex OU
- Groundwater OU (GWOU)
- Surface Water OU (SWOU)
- Soils OU (SOU)
- Burial Grounds OU (BGOU)
- Facility Decontamination and Decommissioning OU
- Lagoons OU
- Depleted Uranium Hexafluoride (DUF₆) Footprint Underlying Soils
- Soils and Slabs OU
- Comprehensive Site OU

Section XXIII of the FFA requires that DOE prepare a regulatory progress report that describes the actions that DOE has taken during the previous six months to implement FFA requirements, as well as the schedules¹ of activities to be taken during the upcoming six months. Activities that have taken place after the reporting period end date are not included in this report, but will be included in the reporting period in which they occur. Projects and activities reported in this update are grouped by the OUs listed in Table 1.

¹ Schedules are included for information and planning purposes only; enforceable schedules are established in the SMP.

Table 1. Operable Units and Corresponding Report Topics

Operable Unit	Project/Activities
C-400 Complex Operable Unit	<ul style="list-style-type: none"> • C-400 Demolition Removal Action • C-400 Final Remedial Action
Groundwater Operable Unit	<ul style="list-style-type: none"> • C-400 Interim Remedial Action (IRA) • Southwest Plume Sources Remedial Action • Dissolved-Phase Plumes Remedial Action • Northeast Plume IRA • Northwest Plume IRA
Burial Grounds Operable Unit	<ul style="list-style-type: none"> • Burial Grounds Operable Unit • C-749 Uranium Burial Ground Solid Waste Management Unit (SWMU) 2
Surface Water Operable Unit	<ul style="list-style-type: none"> • Remedial Action
Soils Operable Unit	<ul style="list-style-type: none"> • Remedial Action
Additional Reporting	<ul style="list-style-type: none"> • Waste Area Groups (WAGs) 1 and 7 • Community Relations Plan (CRP) • SMP • CERCLA Waste Disposal Alternatives Evaluation • CERCLA Five-Year Review

Each section of this update has been divided into nine sections as follows:

- I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan)
- II. Schedules of activities to be performed during next reporting period (including projected work/crucial phases of construction)
- III. Identity and assigned tasks of DOE contractors for work to be performed during this reporting period
- IV. Statement of the manner and extent to which the requirements and time schedules are being met
- V. Primary/Secondary Document Tracking System
 - A) Documents under review and/or preparation for this reporting period
 - B) Due dates for completion of review/modification tasks
- VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay)
- VII. Summary of all contacts with local community, public interest groups, or state government
- VIII. Changes in relevant personnel
- IX. Actual cost for operation and maintenance (O&M), if appropriate

Each section satisfies a reporting requirement for the FFA semiannual report or the Hazardous Waste Facility Permit and has been formatted in accordance with the template found in Appendix D of the FFA.

This report includes six appendices as follows:

- Appendix A contains Northeast and Northwest Plumes Water Withdrawal Reports for this reporting period.
- Appendix B contains Figures B.1 through B.25, as referenced in the Northeast and Northwest Plume updates. Appendix B also contains a summary of data through December 2017 associated with the CERCLA outfall for Northeast Plume and data associated with the Northeast Plume Optimization transect monitoring wells (MWs).
- Appendix C contains a map depicting MW locations for the C-746-K Landfill; a figure summarizing the trichloroethene (TCE) concentrations in these wells over time; and a summary of the C-746-K Landfill groundwater monitoring data from May 1994 through December 2017. These data currently are collected semiannually. Sampling of these MWs is outlined in the Record of Decision (ROD) for WAGs 1 and 7.
- Appendix D contains updates to the Administrative Record (AR) index since the last progress report. This is required by the Paducah FFA (Section XXXII.F).
- Appendix E contains a map depicting the C-400 MW locations and a summary of the C-400 groundwater MW data trending TCE and technetium-99 (Tc-99) from June 2009 through December 2017.
- Appendix F contains a map depicting the C-749 Uranium Burial Ground (SWMU 2) groundwater MWs and a summary of the SWMU 2 trends for TCE and Tc-99 for reporting dates 1993 through December 2017.

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**FEDERAL FACILITY AGREEMENT
SEMIANNUAL REPORT
FIRST HALF OF FISCAL YEAR 2018**

**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 10/01/2017–03/31/2018**

C-400 COMPLEX OPERABLE UNIT

The C-400 Complex OU was established in a *Memorandum of Agreement on the C-400 Complex under the Federal Facility Agreement for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, signed August 8, 2018; the agreement then was incorporated into the *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2018*, DOE/LX/07-2418&D1/R1 Errata. The following two projects are included in the C-400 Complex OU:

- C-400 Demolition Removal Action
- C-400 Final Remedial Action

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**FEDERAL FACILITY AGREEMENT
SEMIANNUAL REPORT
FIRST HALF OF FISCAL YEAR 2018**

**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 10/01/2017–03/31/2018**

C-400 COMPLEX OPERABLE UNIT: C-400 Demolition Removal Action

There are two projects that make up the scope of the OU. This C-400 Demolition Removal Action is a CERCLA non-time critical removal action that will result in the demolition and disposal of the C-400 Cleaning Building structure down to the building slab. The building's foundation and concrete slab floor will remain in place at the end of the removal action.

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

- Developed and submitted the D1 version of the *Removal Notification for Demolition of the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2420&D1 to EPA and Kentucky Department for Environmental Protection (KDEP) on January 10, 2018.
- Received EPA comments on the D1 version of the *Removal Notification for Demolition of the C-400 Cleaning Building in the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2420&D1, and incorporated them into the D2 version, which was submitted for approval by EPA on March 8, 2018, as the D2 version of the *Removal Notification for Demolition of the C-400 Cleaning Building in the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2420&D2.
- KDEP approved the D1 version of the *Removal Notification for Demolition of the C-400 Cleaning Building Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2420&D1.
- Initiated development of the D1 *Engineering Evaluation/Cost Analysis for Demolition of the C-400 Cleaning Building in the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2425&D1.
- Initiated development of the D1 version of the *Action Memorandum for the C-400 Cleaning Building Non-Time-Critical Removal Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2427&D1.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

- Attain EPA approval of the D2 version of the *Removal Notification for Demolition of the C-400 Cleaning Building in the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*.

- Complete and submit the D1 and D2 versions of the *Engineering Evaluation/Cost Analysis for Demolition of the C-400 Cleaning Building in the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, to EPA and KDEP.
- Complete development and submittal of the D1 version of the *Action Memorandum for the C-400 Cleaning Building Non-Time-Critical Removal Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*.
- Initiate development of the *Removal Action Work Plan for Demolition of the C-400 Cleaning Building in the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

Reporting responsibility for the work to be performed in support of the C-400 Complex OU belongs to Four Rivers Nuclear Partnership, LLC (FRNP). FRNP also provides programmatic and technical support, analytical services, and business management services. Swift & Staley Team (SST) manages the AR and the Environmental Information Center (EIC) for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

The requirements for the Removal Action for the Demolition of the C-400 Cleaning Building in the C-400 Complex OU subproject are being met consistent with the *Memorandum of Agreement on the C-400 Complex under the Federal Facility Agreement for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* (MOA).

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

- D2 version of the *Removal Notification for Demolition of the C-400 Cleaning Building in the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*
- D1 version of the *Engineering Evaluation/Cost Analysis for Demolition of the C-400 Cleaning Building in the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*
- D1 version of the *Action Memorandum for the C-400 Cleaning Building Non-Time-Critical Removal Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*

B) Due dates for completion of review/modification tasks:

- Completion of EPA review of the D2 version of the *Removal Notification for Demolition of the C-400 Cleaning Building in the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, by May 7, 2018.
- D1 version of the *Engineering Evaluation/Cost Analysis for Demolition of the C-400 Cleaning Building in the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, will be submitted consistent with the FY 2018 SMP.

- D1 version of the *Action Memorandum for the C-400 Cleaning Building Non-Time-Critical Removal Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, will be submitted consistent with the FY 2018 SMP.
- D1 version of the *Removal Action Work Plan for Demolition of the C-400 Cleaning Building in the C-400 Complex Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, will be submitted consistent with the FY 2018 SMP.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

None.

VII. Summary of all contacts with local community, public interest groups, or state government:

DOE provided routine updates on the subproject to the Paducah Site Citizens Advisory Board (CAB), FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

During this reporting period (October 20, 2017), DOE prime contractor changed from Fluor Federal Services, Inc., (FFS) to FRNP.

IX. Actual cost for O&M, if appropriate:

None.

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**FEDERAL FACILITY AGREEMENT
SEMIANNUAL REPORT
FIRST HALF OF FISCAL YEAR 2018**

**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 10/01/2017–03/31/2018**

C-400 COMPLEX OPERABLE UNIT: C-400 Final Remedial Action

There are two projects that make up the scope of the OU. This project, the C-400 Final Remedial Action, will investigate the C-400 Complex OU and associated SWMUs, evaluate potential remedial alternatives, develop decision documents selecting an alternative(s), and design and implement the remedial alternative(s).

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

- Developed and submitted the C-400 Complex OU Scoping Document to EPA and KDEP for review and comment on February 15, 2018.
- Initiated scoping for the remedial investigation (RI)/feasibility study (FS) of the C-400 Complex OU with the FFA parties.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

- Continue the scoping of the RI/FS for the C-400 Complex OU with the FFA parties.
- Initiate development of the RI/FS Work Plan for the C-400 Complex OU.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

Reporting responsibility for the work to be performed in support of the C-400 Complex OU belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

Requirements for the C-400 Complex Remedial Action are being met consistent with the MOA.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

D1 version of the *Scoping Document for the C-400 Complex Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2424&D1

B) Due dates for completion of review/modification tasks:

None.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

None.

VII. Summary of all contacts with local community, public interest groups, or state government:

DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and congressional staff.

VIII. Changes in relevant personnel:

None.

IX. Actual cost for O&M, if appropriate:

None.

**FEDERAL FACILITY AGREEMENT
SEMIANNUAL REPORT
FIRST HALF OF FISCAL YEAR 2018**

**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 10/01/2017–03/31/2018**

GROUNDWATER OPERABLE UNIT

The scope of the GWOU includes performing investigations, conducting baseline risk assessments, evaluating removal/remedial alternatives, and selecting and implementation of actions necessary to achieve protection of human health and the environment from exposure to groundwater contamination that could result in an unacceptable risk.

Within the GWOU are these projects: C-400 IRA, Southwest Plume Sources Remediation, Dissolved-Phase Plumes, Northeast Plume IRA, and Northwest Plume IRA.

The overall objective of the GWOU is to remove/mitigate ongoing sources and to remediate the groundwater to target contaminant concentrations. The predominant contaminant of concern in the groundwater of all three plumes is TCE. Table 2 provides an overall picture of the TCE mass removed [TCE values may contain other volatile organic compounds (VOCs)] by various actions.

Table 2. Cumulative TCE Removed at Paducah

Source Area	Cumulative TCE Removed (gal)*
Northwest Plume Pump-and-Treat	3,564***
Northeast Plume Pump-and-Treat	318***
C-400 Six-Phase Treatability Study	1,900
C-400 Phase I	535
C-400 Phase IIa	1,137
Southwest Plume (SWMU 1)	24**
Other sources (i.e., SWMU 91–LASAGNA™)	246
Total	7,724

*Cumulative through March 31, 2018, except as otherwise noted. TCE values may contain other VOCs.

**Removed during deep soil mixing operations.

***Cumulative through December 31, 2017.

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**FEDERAL FACILITY AGREEMENT
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FIRST HALF OF FISCAL YEAR 2018**

**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 10/01/2017–03/31/2018**

GROUNDWATER OPERABLE UNIT PROJECT: C-400 IRA

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

Developed and submitted the D1 version of the *Remedial Action Completion Report for the Interim Remedial Action for the Groundwater Operable Unit for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2417&D1, to EPA and KDEP for review and approval on February 6, 2018.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

- Receive EPA and KDEP comments on the D1 version of the *Remedial Action Completion Report for the Interim Remedial Action for the Groundwater Operable Unit for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2417&D1.
- Develop and submit a D2 version of the *Remedial Action Completion Report for the Interim Remedial Action for the Groundwater Operable Unit for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2417&D2, that addresses comment received from EPA and KDEP reviews.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

Reporting responsibility for the work to be performed in support of the C-400 IRA belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

The requirements for the C-400 IRA are being met consistent with the *Memorandum of Agreement for Resolution of the Formal Dispute Regarding the Non-Concurrence by EPA and KDEP on the DOE Milestone Modification Request for Submittal of the Revised Proposed Plan for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2407&D1.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

- Developed and submitted the D1 version of the *Remedial Action Completion Report for the Interim Remedial Action for the Groundwater Operable Unit for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2417&D1.

B) Due dates for completion of review/modification tasks:

- Comments from EPA and KDEP on the D1 version of the *Remedial Action Completion Report for the Interim Remedial Action for the Groundwater Operable Unit for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2417&D1, are due May 7, 2018.
- A revised D2 version of the *Remedial Action Completion Report for the Interim Remedial Action for the Groundwater Operable Unit for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2417&D2, addressing comments that are received will be due to EPA and KDEP 60 days after receipt of comments from KDEP and EPA.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

None.

VII. Summary of all contacts with local community, public interest groups, or state government:

DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

During this reporting period (October 20, 2017), DOE prime contractor changed from FFS to FRNP.

IX. Actual cost for O&M, if appropriate:

Sampling of the C-400 wells has been incorporated into the Environmental Monitoring Program. O&M cost is not tracked separately.

**FEDERAL FACILITY AGREEMENT
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**Facility: Paducah Gaseous Diffusion Plant
Plant EPA I.D. No.: KY8-890-008-982
Reporting Period: 10/01/2017–03/31/2018**

GROUNDWATER OPERABLE UNIT PROJECT: Southwest Plume Sources

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

SWMU 1

- Performed semiannual sampling of SWMU 1 MWs, as required by the *Remedial Action Work Plan for In Situ Source Treatment by Deep Soil Mixing of the Southwest Groundwater Plume Volatile Organic Source at the C-747-C Oil Landfarm (Solid Waste Management Unit 1) at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-1287&D2.*

SWMUs 211-A and 211-B

- No activities were scheduled for this project during this reporting period.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

SWMU 1

- Continue with SWMU 1 semiannual sampling of monitoring wells and annual inspections.

SWMUs 211-A and 211-B

- Establish path forward for SWMUs 211-A and 211-B with EPA and KDEP based on DOE, EPA, and KDEP senior manager's decision concerning site reprioritization documented in the MOA.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

Reporting responsibility for the work to be performed in support of the Southwest Plume Sources belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

- The requirements for the SWMU 1 portion of the Southwest Plume sources remedial action subproject have been met consistent with the SMP and as agreed to by the FFA parties.

- The requirements for the SWMUs 211-A and 211-B portion of the Southwest Plume subproject are being met consistent with the SMP and as agreed to by the FFA parties.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

None.

B) Due dates for completion of review/modification tasks:

None.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

DOE, EPA, and KDEP have entered into tri-party discussions to determine the appropriate response actions (e.g., path forward of SWMU 211-A, invalidation of the Conceptual Site Model at SWMU 211-B) for SWMUs 211-A and 211-B. Decisions that will result from these discussions are necessary to complete the Final Characterization Notification for SWMUs 211-A and 211-B adequately. DOE will schedule the tri-party discussions as requested by EPA and KDEP.

VII. Summary of all contacts with local community, public interest groups, or state government:

DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

During this reporting period (October 20, 2017), DOE prime contractor changed from FFS to FRNP.

IX. Actual cost for O&M, if appropriate:

None.

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GROUNDWATER OPERABLE UNIT PROJECT: Dissolved-Phase Plumes

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

- The Modeling Working Group met during this reporting period on December 13, 2017, and January 25, 2018.
- The Modeling Working Group developed and submitted on January 10, 2018, for Modeling Group internal review the draft white paper *Assessment of Sitewide Groundwater Flow Model Using Data from the Northeast Plume Optimization Project*, FRNP-RPT-0013.
- The Modeling Working Group developed and reviewed the draft *Site-Specific Soil Screening Levels and Site-Specific Dilution Attenuation Factors at the Paducah Site*. The review period was initiated on February 12, 2018, and was completed on March 19, 2018.

II. Schedule of activities during upcoming reporting period (including projected work/crucial phases of construction):

Additional meetings of the Modeling Working Group are being planned for the next reporting period.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

Reporting responsibility for the work to be performed in support of the Dissolved Phase Plume belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

No requirements are scheduled for this project during the upcoming reporting period. The Modeling Working Group will continue to support Paducah Site projects.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

None.

B) Due dates for completion of review/modification tasks:

None.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

None.

VII. Summary of all contacts with local community, public interest groups, or state government:

DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff, as applicable.

VIII. Changes in relevant personnel:

During this reporting period (October 20, 2017), DOE prime contractor changed from FFS to FRNP.

IX. Actual cost for O&M, if appropriate:

Not applicable.

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GROUNDWATER OPERABLE UNIT PROJECT: Northeast Plume IRA

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

- Completed start-up and testing for the Northeast Plume system on October 10, 2017. The system was declared fully operational on October 10, 2017. Subsequently, tests consistent with Remedial Action Work Plan to optimize TCE mass removal were initiated.
- During this reporting period, the Northeast Plume Containment System (NEPCS) treated 55,979,996 gal of contaminated groundwater and achieved an average operational efficiency of 77.6%. The average system treatment rate for the reporting period was 214 gal/min. Operational online efficiencies for the reporting period for C-765 were as follows: October 2017, 68.2%; November 2017, 98.9%; December 2017, 99.9%; January 2018, 99.8%; February 2018, 65.2%; March 2018, 57.1%. Operational online efficiencies for the reporting period for C-765-A were as follows: October 2017, 66.5%; November 2017, 53.8%; December 2017, 100.0%; January 2018, 99.8%; February 2018, 74.9%; March 2018, 48.1%. The reduced operational up time in October primarily was the result of planned shutdowns of the system during start-up and testing of the NEPCS. The reduced operational up time in February and March primarily was the result of planned shutdowns of the system during hydraulic assessment of the NEPCS.
- Submitted the *Postconstruction Report for the Northeast Plume Optimization at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2419&D1, for review and comment on January 5, 2018.
- Received EPA comments on the *Postconstruction Report for the Northeast Plume Optimization at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2419&D1, on March 21, 2018.
- Submitted the Northeast Plume Transect Well Baseline Determination to EPA and KDEP for review and comment on March 2, 2018.
- Received KDEP and EPA concurrence on the Northeast Plume Transect Well Baseline Determination on March 22, 2018, and March 30, 2018, respectively.
- Initiated hydraulic monitoring testing of the Northeast Plume optimization on February 15, 2018. Hydraulic monitoring testing was ongoing as of the end of the reporting period.

A) Process Operations:

The NEPCS consists of two extraction wells (EWs), transfer piping, two treatment units for air stripping and suspended solids removal, and MW network. The old EWs, EW331 and EW332, equalization tank, and old transfer piping have been placed in standby mode.

B) Process Testing:

Operation of the NEPCS began February 28, 1997. As of March 31, 2018, the NEPCS has processed a total of approximately 1,769,423,502, gal of water. The monthly withdrawal volumes this reporting period are presented in Appendix A, Table A.1, of this report. This table includes a summary of the withdrawn water volumes and average daily rates.

C) NEPCS Influent, Effluent, and Extraction Well Testing:

Due to sample analysis time and the data assessment process, the analytical data included in this report lags operational data by three months. This report presents analytical data from July through December 2017.

In accordance with the O&M Plan, samples are to be collected at C-765-A, C-765, and C001 on a weekly basis unless the facility is shut down, at which time sampling is suspended temporarily. On November 20, 2017, the project notified the sampling organization via e-mail that the C-746-A treatment system was shut down due to failed equipment and that the duration of shutdown was uncertain. As a result of the notification, the sampling organization cancelled sampling activities scheduled for November 20, 2017, and deactivated the sampling chain-of-custody forms for C-765-A, C-765, and C001. While the C-765-A treatment system remained shut down from November 16, 2017–November 30, 2017, the C-765 treatment system remained operational and flow continued at C001. As a result of miscommunication, it was assumed that the entire system was shut down the week of November 20, 2017, (not just C-765-A), and the required sampling events scheduled at C-765 and C001 were missed inadvertently for the week.

Review of the analytical data taken at the CERCLA Outfall (C001) between October 10, 2017, and December 2017 (as shown in Table 3b) shows maximum TCE concentrations have been non-detect, making it unlikely that an exceedance at C001 occurred during the week of November 20, 2017. In addition, a review of both the Northeast and Northwest analytical data from the beginning of the FRNP contract to present confirmed all other weekly samples were obtained when the systems were operating.

The influent flow is a composite from two EWs. Influent TCE analytical data from 1997 through the end of December 2017 are presented in Appendix B. Environmental samples were collected monthly from the treatment system influent and weekly from the treatment system effluent for the period of July through December 2017. High, low, and average influent and effluent TCE concentrations for these months are presented in Tables 3a and 3b. Table 3a presents concentrations prior to start-up of the system, and Table 3b presents concentrations after start-up of the system on October 10, 2017.

**Table 3a. TCE Concentrations for Northeast Plume
(before 10/10/2017)**

	TCE (µg/L)		
	High	Low	Average
Influent (Equalization Tank—prior to 10/10/2017)	115	104	110
Effluent (CERCLA Outfall—prior to 10/10/2017)	3.42	1.97	2.87

**Table 3b. TCE Concentrations for Northeast Plume
(after 10/10/2017)**

	TCE (µg/L)		
	High	Low	Average
Influent C-765 (EW234)	243	186	206
Influent C-765-A (EW235)	177	150	162
Effluent from C-765	1.21	< 1	< 1
Effluent from C-765-A	< 1	< 1	< 1
Combined Effluent (CERCLA Outfall—after 10/10/2017)	< 1	< 1	< 1

As presented in Table 3a and 3b, the NEPCS continued to remove TCE effectively. The system operated with an average removal efficiency of approximately 97.4% prior to start-up of the system for TCE. After start-up of the system, the systems operated with an average removal efficiency of > 99% for EW234 and for EW235 for TCE.

The EWs were sampled quarterly during this reporting period. For the period July through December 2017, EW234 had an average TCE concentration of 206 µg/L, while EW235 had an average concentration of 162 µg/L.

Treated groundwater for the Northeast Plume is discharged to a CERCLA outfall, and data associated with the CERCLA outfall are included as part of Appendix B of this report.

D) Maintenance Activities:

Routine Maintenance Activities:

Daily, monthly, quarterly, and annual routine maintenance activities were conducted in accordance with the *Northwest/Northeast Plume Daily Operational Data Collection and Maintenance*, CP4-ER-0017.

- On October 1, 2017–October 10, 2017, the Northeast Plume system shut down for 231 hours for Optimization Project upgrade work.
- On January 24, 2018, C-765-A system was shut down for 45 minutes for maintenance on the sump pump at EW235.

- On February 7, 2018, C-765 system shut down for 1 hour to replace the Variable Frequency Drive Ethernet cable and Ethernet switch.
- On February 19, 2018–February 25, 2018, both Northeast Plume systems were shut down for 161 hours to initiate the hydraulic assessment. In accordance with the O&M Plan, both EWs were shut down to allow the aquifer to return to ambient conditions.
- On February 26, 2018, C-765-A remained shut down for 7 hours to support the hydraulic assessment.
- On February 26, 2018–March 10 2018, C-765 remained shut down for 295 hours to support the hydraulic assessment.
- On March 6, 2018–March 22, 2018, C-765-A was shut down for 384 hours to support the hydraulic assessment.
- On March 18, 2018–March 22, 2018, C-765 was shut down for 96 hours to support the hydraulic assessment.
- On March 26, 2018, C-765-A was shut down for 1.5 hours to perform quarterly maintenance.
- On March 27, 2018, C-765-A was shut down for 1 hour to perform planned maintenance.

Non-routine Maintenance Activities:

- On October 17, 2017, both Northeast Plume systems shut down for 2 hours due to power surge.
- On October 22, 2017, C-765-A system shut down for 7 hours and again on October 23, 2017 for 9 hours, both times due to communication failure.
- On October 28, 2017, C-765 system shut down for 3.5 hours due to a variable frequency drive fault.
- On November 2, 2017, C-765-A system shut down for 1 hour due to communication failure.
- On November 3, 2017, both Northeast Plume systems shut down for 4.5 hours due to storms.
- On November 5, 2017, C-765 system shut down for 1 hour due to communication failure.
- On November 7, 2017, C-765 system shut down for 15 minutes due to communication failure.
- On November 16, 2017, the C-765-A system was shut down and remained down until November 30, 2017, for a total of 327 hours because of a motor starter/overload assembly failure and replacement on the air stripper blower. The variable frequency drive and Ethernet switch also were replaced during this downtime.

- On November 18, 2017, C-765 system shut down for 2 hours due to storms.
- On December 29, 2017, C-765 system shut down for 1 hour due to communication failure.
- On January 2, 2018, C-765 system shut down for 45 minutes due to communication failure.
- On January 22, 2018, C-765 system shut down for 45 minutes due to communication failure.
- On January 27, 2018, C-765-A system shut down for 1 hour due to high level in EW vault.

E) Effectiveness Monitoring—Monitoring Well Results:

Figure B.1, included in Appendix B, shows locations of the MWs and EWs. Figure B.2 shows the location of the MWs with the top of McNairy topography. Figures B.3 shows system influent TCE concentrations, and Figure B.4 includes a summary of the TCE in the Northeast Plume EWs. Figure B.5 shows the estimated cumulative amount of TCE removed since the NEPCS began operations in 1997. Figures B.6 through B.10 presented in Appendix B, show TCE, concentrations and Tc-99 activities in MWs downgradient and upgradient and of the EWs.

MW292 is located approximately 1,200 ft upgradient of the old pumping wells (now in standby mode) to provide an early detection point for Tc-99 migration. During the third and fourth quarters of calendar year 2017, Tc-99 maximum activity at MW292 was 40.5 and 39.3 pCi/L, respectively.

F) Modification of the NEPCS Operations or Configuration:

Start-up and testing activities were completed, and the Northeast Plume containment system became fully operational on October 10, 2017.

II. Schedule of activities during upcoming reporting period (including projected work/crucial phases of construction):

- Complete hydraulic monitoring testing of Northeast Plume optimization.
- Evaluate and develop summary of the hydraulic monitoring testing to be provided in next reporting period's semiannual report.
- Receive KDEP comments on the *Postconstruction Report for the Northeast Plume Optimization at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2419&D1.
- Develop and submit for review and approval the revised *Postconstruction Report for the Northeast Plume Optimization at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2419&D2, to address EPA and KDEP comments.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

Reporting responsibility for the work to be performed in support of the Northeast Plume IRA belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

The effluent concentration goal of 30 µg/L for TCE was met during the reporting period. The NEPCS remained operational 77.6% of the time during this reporting period.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

Postconstruction Report for the Northeast Plume Optimization at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2419&D1, was under development during this reporting period.

B) Due dates for completion of review/modification tasks:

EPA comments on *Postconstruction Report for the Northeast Plume Optimization at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2419&D1*, were received on March 21, 2018. A revised *Postconstruction Report for the Northeast Plume Optimization at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2419&D2*, addressing comments received will be due to EPA and KDEP 60 days after receipt of comments from KDEP.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

None.

VII. Summary of all contacts with local community, public interest groups, or state government:

DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

During this reporting period (October 20, 2017), DOE prime contractor changed from FFS to FRNP.

IX. Actual cost for O&M, if appropriate:

Actual costs for O&M of the Northwest/Northeast Plume facilities are tracked jointly. The total operating cost for the reporting period was \$378,000.

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GROUNDWATER OPERABLE UNIT PROJECT: Northwest Plume IRA

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

During this reporting period, the Northwest Plume Groundwater System (NWPGS) treated 49,196,392 gal of contaminated groundwater with an average monthly operational efficiency of 98.0%. The average system treatment rate for the reporting period was approximately 188 gal/min. Operational efficiencies for the reporting period were as follows: October 2017, 99.9%; November 2017, 100.0%; December 2017, 89.1%; January 2018, 100.0%; February 2018, 99.7%; March 2018, 99.5%.

A) Process Operations:

The NWPGS consists of two EWs (EW232 and EW233) located just north of PGDP and underground transfer pipeline for moving contaminated groundwater. The treatment facility has an operational capacity of 220 gal/min and utilizes air stripping for removal of TCE in groundwater, ion exchange for removal of Tc-99 in groundwater, and vapor phase carbon for capturing TCE from exhaust of the air stripper. Treated groundwater from the transfer pipeline is released to a tributary flowing to Outfall 001. An MW network is used to evaluate performance.

B) Process Testing:

Operation of the NWPGS began on August 28, 1995. As of March 31, 2018, the NWPGS has processed a total of approximately 2,247,539,653 gal of water. The monthly withdrawal volumes for the reporting period are presented in Appendix A, Table A.2, of this report. This table includes a summary of the withdrawn water volumes and average daily rates.

C) NWPGS Influent, Effluent, and Extraction Well Testing:

Due to sample analysis time and the data assessment process, the analytical data included in this report lags operational data by three months. This report presents analytical data from July through December 2017.

Figure B.11, included in Appendix B, shows locations of the Northwest Plume MWs. Figure B.12 shows the location of the MWs with the top of McNairy topography. Influent TCE and Tc-99 analytical data are presented in Appendix B on Figures B.13 and B.14. Figures B.15 and B.16 include a summary of the TCE and Tc-99 concentrations of the effluent versus time at the Northwest Treatment System. Figure B.17 shows the cumulative estimated amount of TCE removed since the NWPGS began operations in 1995. The influent

sample results, compared to the NWPGS effluent results, indicated that the NWPGS continues to remove TCE and Tc-99 effectively.

For radionuclides, all reported values, including negative values, are used to derive averages. Negative Tc-99 results may be reported due to a statistical determination of the counts seen by a detector, minus a background count. High, low, and average influent and effluent TCE and Tc-99 concentrations from July through December 2017 are presented in Table 4.

**Table 4. TCE and Tc-99 Concentrations for Northwest Plume
(July through December 2017)**

	TCE (µg/L)			Tc-99 (pCi/L)		
	High	Low	Average	High	Low	Average
Influent	2,110	1,470	1,839	273	139	220
Effluent	4.87	1.77	2.58	15.5	< 1	< 1

The treatment system influent was sampled monthly. The effluent was sampled weekly. These sampling frequencies were conducted in accordance with the O&M Plan for the Northwest Plume Groundwater System IRA D4/R5. As presented in Table 4, the NWPGS continued to remove TCE and Tc-99 effectively. The system operated with an average removal efficiency of 100% for TCE and 99.9% for Tc-99.

The average TCE effluent concentration for this reporting period was 2.58 µg/L, which is less than the treatment goal of 5 µg/L. The average Tc-99 effluent value was < 1 pCi/L, which is less than the operational goal of 900 pCi/L, during the reporting period.

High, low, and average sample results for this reporting period at the EWs are shown in Table 5. EW232 and EW233 were sampled quarterly in accordance with the O&M Plan for the Northwest Plume.

**Table 5. TCE and Tc-99 Concentrations for Northwest Plume EWs
(October 2017 through March 2018)**

	TCE (µg/L)			Tc-99 (pCi/L)		
	High	Low	Average	High	Low	Average
EW232	451	288	344	128	52.2	82.9
EW233	3,690	2,570	3,130	530	400	465

D) Treatment Media:

Ion Exchange Resins:

NWPGS is equipped with four ion exchange columns used for Tc-99 removal. Purolite A-520-E resin is used in the columns, which are arranged in a lead/lag configuration in a trailer. No resin changes were required during this reporting period.

Activated Carbon Media:

NWPGS is equipped with two carbon columns containing granular activated carbon for adsorption of VOCs from the vapor-phase effluent of the air stripper unit. The O&M Plan requires that spent carbon be replaced every 6 months. The last carbon changeouts were completed on September 19, 2017, and March 19, 2018. The next carbon changeout is projected for the end of September 2018.

E) Maintenance Activities:

Routine Maintenance Activities:

Daily, monthly, quarterly, and annual routine maintenance activities were conducted in accordance with the *Northwest/Northeast Plume Daily Operational Data Collection and Maintenance*, CP4-ER-0017, and *Monthly, Quarterly, and Annual Maintenance at the C-612 Northwest Plume Groundwater System*, CP4-ER-0016.

- On December 18, 2017, the Northwest Plume system was shut down for 1.5 hours for planned quarterly maintenance.
- On March 12, 2018, the Northwest Plume system shut down for 15 minutes for planned quarterly maintenance.
- On March 19, 2018, the Northwest Plume system shut down for 3.25 hours for carbon changeout.

Non-routine Maintenance Activities:

- On October 11, 2017, the Northwest Plume system shut down for 0.5 hour due to a high alarm on sump.
- On December 24, 2017, the system shut down due to low pressure in the air stripper pump and was restarted on December 27, 2017, for a total downtime of 79.75 hours.
- On February 23, 2018, the Northwest Plume system shut down for 2 hours due to heavy rain water infiltration in the vaults.

F) Effectiveness Monitoring—Monitoring Well Results:

Figures B.18 through B.25 presented in Appendix B, show TCE and Tc-99 concentrations in MWs at the south and north fields of the Northwest Plume and the EWs, respectively. These graphs show all data since monitoring began in 1995 and indicate the position of the MWs relative to the extraction.

G) Modification of the NWPGS Operations or Configuration:

None.

II. Schedules of activities during upcoming reporting period (including projected work/crucial phases of construction):

The project team will continue to conduct and document the necessary tasks required for equipment maintenance, calibration, and operation, as specified in the *Operations and Maintenance Plan for the Northwest Plume Groundwater System Interim Remedial Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/07-1253&D4/R5.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

Reporting responsibility for the work to be performed in support of the Northwest Plume IRA belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

The average NWPGS water effluent concentrations met the operational goals of 5 µg/L for TCE and 900 pCi/L for Tc-99, during the reporting period. The NWPGS has remained 98% operational during this reporting period.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

None.

B) Due dates for completion of review/modification tasks:

None.

VI. Anticipated problems/delays (provide summary of problems, schedule, and reason for delay, and actions taken to prevent or mitigate delay):

None.

VII. Summary of all contacts with local community, public interest groups, or state government:

DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

During this reporting period (October 20, 2017), DOE prime contractor changed from FFS to FRNP.

IX. Actual cost for O&M, if appropriate:

Actual costs for O&M of the Northwest/Northeast Plume facilities are tracked jointly. The total operating cost for the reporting period was \$378,000.

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BURIAL GROUNDS OPERABLE UNIT

The scope of the BGOU includes an RI, baseline human health risk assessment, evaluation of remedial alternatives, remedy selection, and implementation of actions, as necessary, for protection of human health and the environment for the following burial grounds: C-749 (SWMU 2); C-404 (SWMU 3); C-747/C-748-B (SWMU 4); C-746-F (SWMU 5); C-747-B (SWMU 6); C-747-A (SWMUs 7 and 30), which includes the area beneath C-747-A (SWMU 12); the residential/inert borrow area (SWMU 145); and the C-746-S&T Landfills (SWMUs 9 and 10, respectively).

This section also includes information on the sampling activities being conducted at the C-749 Uranium Burial Ground, as required in the *Record of Decision for Interim Remedial Action at Solid Waste Management Units 2 and 3 of Waste Area Group 22 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, signed in 1995.

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BURIAL GROUNDS OPERABLE UNIT PROJECT: C-749 (SWMU 2); C-404 (SWMU 3); C-747/C-748-B (SWMU 4); C-746-F (SWMU 5); C-747-B (SWMU 6); C-747-A (SWMUs 7 and 30), which includes the area beneath C-747-A (SWMU 12); the Residential/Inert Borrow Area (SWMU 145); and the C-746-S&T Landfills (SWMUs 9 and 10)

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

- Addressed KDEP and EPA comments on the D1 version of the *Feasibility Study for Solid Waste Management Unit 4 of the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, and issued a D2 version on January 29, 2018.
- Addressed KDEP and EPA conditions on the D2 version of the *Feasibility Study for Solid Waste Management Unit 4 of the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2408&D2, which were received on February 28, 2018.
- On March 26, 2018, revised and resubmitted the D2/R1 version of the *Feasibility Study for Solid Waste Management Unit 4 of the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* for approval by KDEP and EPA.
- KDEP and EPA approved the D2/R1 version of the *Feasibility Study for Solid Waste Management Unit 4 of the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky* on March 29, 2018.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

None.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

Reporting responsibility for the work to be performed in support of the BGOU belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

The requirements and time schedules are being met.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation during this reporting period:

- D1 version of *Feasibility Study for Solid Waste Management Unit 4 of the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*
- D2 version of *Feasibility Study for Solid Waste Management Unit 4 of the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*
- D2/R1 version of *Feasibility Study for Solid Waste Management Unit 4 of the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*

B) Due dates for completion of review/modification tasks:

None.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

None.

VII. Summary of all contacts with local community, public interest groups, or state government:

DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

During this reporting period (October 20, 2017), DOE prime contractor changed from FFS to FRNP.

IX. Actual cost for O&M, if appropriate:

None. [Refer to the following section of this report for information regarding O&M costs for the IRA at the C-749 Uranium Burial Ground (SWMU 2).]

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BURIAL GROUNDS OPERABLE UNIT PROJECT: C-749 Uranium Burial Ground (SWMU 2)

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

Continued groundwater monitoring at the C-749 Uranium Burial Ground, as required by the *Record of Decision for Interim Remedial Action at Solid Waste Management Unit 2 and 3 of Waste Area Group 22 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/06-1351&D1. The results for the groundwater monitoring from May 1993, through December 2017, have been included as part of this report. The results of the groundwater monitoring trends from 1996 through December 2017 are presented in Appendix F.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

Groundwater monitoring will continue at the C-749 Uranium Burial Ground, as required by the ROD.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

Reporting responsibility for the work to be performed in support of C-749 Uranium Burial Ground belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE and maintains existing burial ground cover.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

The requirements and time schedules are being met.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation during this reporting period:

None.

B) Due dates for completion of review/modification tasks:

None.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

None.

VII. Summary of all contacts with local community, public interest groups, or state government:

None.

VIII. Changes in relevant personnel:

During this reporting period (October 20, 2017), DOE prime contractor changed from FFS to FRNP.

IX. Actual cost for O&M, if appropriate:

Sampling of the C-749 Uranium Burial Ground has been incorporated into the Environmental Monitoring Program. O&M cost is not tracked separately.

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SURFACE WATER OPERABLE UNIT

The SWOU includes the Surface Water Removal Action and Surface Water Remedial Action projects. Additionally, O&M is performed on North-South Diversion Ditch Sections 1 and 2 and institutional controls, as required by the *Operations and Maintenance Plan for Sections 1 and 2 of the North-South Diversion Ditch*, DOE/OR/07-2057&D2, and *Operations and Maintenance Plan for the Surface Water Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/07-1904&D1; and O&M activities for the C-613 Basin are maintained in accordance with the *Operations and Maintenance Plan for the Northwest Storm Water Control Facility at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/07-2044&D1/R4, respectively. Inspection reports are filed in the Document Management Center, managed by SST.

Per the *Operations and Maintenance Plan for the Northwest Storm Water Control Facility at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/07-2044&D1/R4, the relationship of turbidity to total suspended solids is compared on a quarterly basis. An update to the existing linear regression model was performed in March 2018, and the current maximum discharge limit for turbidity is 92 nephelometric turbidity units (NTUs), with a 30-day average not to exceed 43 NTU.

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SURFACE WATER OPERABLE UNIT PROJECT: Remedial Action

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

No activities were scheduled for this project during this reporting period.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

No activities are scheduled for this project during the upcoming reporting period.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

Reporting responsibility for the work to be performed in support of the SWOU Remedial Action belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

No activities are scheduled for this project during the upcoming reporting period.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

No activities were scheduled for this project during this reporting period.

B) Due dates for completion of review/modification tasks:

No activities are scheduled for this project during the upcoming reporting period.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

None.

VII. Summary of all contacts with local community, public interest groups, or state government:

DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

During this reporting period (October 20, 2017), DOE prime contractor changed from FFS to FRNP.

IX. Actual cost for O&M, if appropriate:

O&M activities have been incorporated into the Environmental Monitoring Program. O&M cost is not tracked separately.

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SOILS OPERABLE UNIT

The Soils OU has been implemented in a phased approach consisting of remedial and removal.

The original scope of the Soils OU consisted of 86 SWMUs/AOCs; three inactive facilities (SWMUs 181, SWMU 40, and SWMU 19); and the soil/rubble areas that have been identified to date. The scope of the removal action for two of the three inactive facilities has been completed, except excavation of contaminated soil at the C-403 Neutralization Tank (SWMU 40). SWMU 40 will be addressed as part of the C-400 OU Complex. The scope for the soil/rubble areas also has been completed. During the development of the RI/FS Work Plan/Report, it was determined that only 63 of the 86 SWMUs/AOCs included within the original scope could be addressed under this OU, based upon accessibility. Those SWMUs/AOCs identified as inaccessible will be addressed as part of the Soils and Slabs OU scope. The Soils OU scope focuses on accessible plant surface soils (ground surface to 10 ft bgs and 16 ft bgs in the vicinity of pipelines) not associated with PGDP operations. Sequencing of the work will be determined based on OU-specific circumstances, as mutually agreed upon by the FFA parties.

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SOILS OPERABLE UNIT PROJECT: Remedial Action

I. Work performed during this reporting period (including summaries of findings and any deviations from the work plan):

SWMU 1

- EPA provided conditional concurrence (1 condition) on October 16, 2017, on the *Addendum to the Soils Operable Unit Remedial Investigation Report for Solid Waste Management Unit 1 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-0358&D2/R1/A2/R1*. KDEP had provided conditional concurrence on September 6, 2017.
- Developed and submitted to EPA and KDEP on October 20, 2017, the *Addendum to the Soils Operable Unit Remedial Investigation Report for Solid Waste Management Unit 1 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-0358&D2/R1/A2/R2*.
- EPA and KDEP provided concurrence October 26, 2017, and October 23, 2017, respectively, on the *Addendum to the Soils Operable Unit Remedial Investigation Report for Solid Waste Management Unit 1 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-0358&D2/R1/A2/R2*.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

No activities were scheduled for this project during this reporting period.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

Reporting responsibility for the work to be performed in support of the SOU RI belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

The requirements and schedules are being met for the SOU consistent with the SMP and as agreed to by the FFA parties.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

- *Addendum to the Soils Operable Unit Remedial Investigation Report for Solid Waste Management Unit 1 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-0358&D2/R1/A2/R2*, was developed and submitted to EPA and KDEP for review during this reporting period.

B) Due dates for completion of review/modification tasks:

None.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

None.

VII. Summary of all contacts with local community, public interest groups, or state government:

DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

During this reporting (October 20, 2017), DOE prime contractor changed from FFS to FRNP.

IX. Actual cost for O&M, if appropriate:

None.

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ADDITIONAL REPORTING

Presented in this Additional Reporting section are updates for the following:

- WAGs 1 and 7 (C-746-K Landfill, TCE Spill Sites, Underground Storage Tanks, and Kentucky Ordnance Works sites);
- CRP;
- SMP;
- CERCLA Waste Disposal Alternatives Evaluation; and
- CERCLA Five-Year Review.

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**PROJECT: WAGs 1 and 7 (C-746-K Landfill, TCE Spill Sites,
Underground Storage Tanks, and Kentucky Ordnance Works Sites)**

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

Continued monitoring around the C-746-K Landfill and in Bayou Creek, as required by the *Record of Decision for Waste Area Groups 1 and 7 at PGDP, Paducah, Kentucky*, DOE/OR/06-1470&D3. WAGs 1 and 7 ROD requires these data to be submitted semiannually. The results of the groundwater monitoring data from May 1994 through December 2017 are presented graphically in Appendix C.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

Monitoring will continue around C-746-K Landfill and in Bayou Creek, as required by the ROD. This monitoring is conducted and reported in accordance with other site programs, such as the Environmental Monitoring Program and Kentucky Pollutant Discharge Elimination System Permit.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

Reporting responsibility for the work to be performed in support of the WAGs 1 and 7 belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

The requirements and time schedules are being met.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

None.

B) Due dates for completion of review/modification tasks:

None.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

None.

VII. Summary of all contacts with local community, public interest groups, or state government:

None.

VIII. Changes in relevant personnel:

During this reporting period (October 20, 2017), DOE prime contractor changed from FFS to FRNP.

IX. Actual cost for O&M, if appropriate:

Sampling of the surface water for the C-746-K Landfill has been incorporated into the Environmental Monitoring Program. O&M cost is not tracked separately.

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**Facility: Paducah Gaseous Diffusion Plant
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PROJECT: Community Relations Plan

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

- Worked with EPA and KDEP on reporting the results of the community survey that was conducted in September 2017, with the results to be documented in the 2018 revision of the *Community Relations Plan under the Federal Facility Agreement at the U.S. Department of Energy Paducah Gaseous Diffusion Plant*.
- Began incorporating the 2017 Community Survey Report into the 2018 CRP.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

Issue to EPA and KDEP for review the 2018 CRP by June 30, 2018.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

Reporting responsibility for the work to be performed in support of the CRP belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

The requirements and time schedules are being met. Informal approval of the 2017 Community Survey Report has been received from EPA and KDEP.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

None.

B) Due dates for completion of review/modification tasks:

The next D1 *Community Relations Plan under the Federal Facility Agreement at the U.S. Department of Energy Paducah Gaseous Diffusion Plant*, is due to EPA and KDEP no later than June 30, 2018.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

None.

VII. Summary of all contacts with local community, public interest groups, or state government:

DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

During this reporting period (October 20, 2017), DOE prime contractor changed from FFS to FRNP.

IX. Actual cost for O&M, if appropriate:

Not applicable.

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PROJECT: Site Management Plan

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

- Continued formal scoping discussions of the FY 2018 SMP with EPA and KDEP during the month of October. Ten total scoping meetings were held between July and October of 2017.
- Submitted the D1 *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2018*, DOE/LX/07-2418&D1, to EPA and KDEP on November 15, 2017.
- Received a joint letter from EPA and KDEP on December 15, 2017, directing DOE to resubmit the D1 *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2018*, DOE/LX/07-2418&D1, to EPA and KDEP by January 16, 2018, consistent with Section XVII of the Paducah Federal Facility Agreement and agreements in the *Memorandum of Agreement on the C-400 Complex under the Federal Facility Agreement for the Paducah Gaseous Diffusion Plant*, signed August 8, 2017.
- Submitted D1/R1 *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2018*, DOE/LX/07-2418&D1/R1, to EPA and KDEP on January 16, 2018.
- Received approval from DOE Headquarters to release the dates associated with the Paducah Lifecycle Baseline on January 22, 2018.
- Submitted an errata to the D1/R1 *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2018*, DOE/LX/07-2418&D1/R1, (Errata) to EPA and KDEP on January 23, 2018. This erratum included planning dates past 2032 in Appendix 5 for the out-year projects.
- Received a schedule notification from EPA on February 22, 2018, notifying DOE of EPA's extension for provision of comments on the errata to the D1/R1 *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2018*, DOE/LX/07-2418&D1/R1, (Errata) to March 2, 2018.
- Received KDEP and EPA comments on the errata to the D1/R1 *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2018*, DOE/LX/07-2418&D1/R1, (Errata) on February 22, 2018, and March 2, 2018, respectively.

- Submitted a schedule notification on March 9, 2018, notifying EPA and KDEP of DOE's extension for submittal of the *D2 Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2018*, DOE/LX/07-2418&D2, to April 16, 2018.
- Held a comment resolution meeting with EPA and KDEP on March 29, 2018, and scheduled a follow-up comment resolution meeting for April 4, 2018.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

- Develop and submit the *D2 Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2018*, DOE/LX/07-2418&D2, to EPA and KDEP on or before April 16, 2018.
- Begin scoping and development of the *D1 Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2019*.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

Reporting responsibility for the work to be performed in support of the SMP belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

FFA Section XVIII requires issuance of the SMP by November 15 of each year.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

- The *D1 Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2018*, DOE/LX/07-2418&D1, has been under development during this reporting period.
- The *D1 Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2018*, DOE/LX/07-2418&D1, has been under EPA and KDEP review during this reporting period.
- The *D1/R1 Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2018*, DOE/LX/07-2418&D1/R1, has been under development during this reporting period.
- The *D1/R1 Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2017*, DOE/LX/07-2410&D1/R1, has been under EPA and KDEP review during this reporting period.
- The errata to the *D1/R1 Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2018*, DOE/LX/07-2418&D1/R1, (Errata) has been under development during this reporting period.

- The errata to the D1/R1 *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2018*, DOE/LX/07-2418&D1/R1, (Errata) has been under EPA and KDEP review during this reporting period.
- The D2 *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2018*, DOE/LX/07-2418&D2, has been under development during this reporting period.

B) Due dates for completion of review/modification tasks:

- D2 *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2018*, DOE/LX/07-2418&D2, is due to EPA and KDEP no later than April 16, 2018.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

The requirements and time schedules are being met; however, issues associated with provision of planning dates and enforceable out-year milestones have resulted in the development and review of additional versions of the FY 2018 SMP. This has resulted in an overall impact to finalizing the FY 2018 SMP. Delays in finalizing the FY 2018 SMP also may impact scoping of the FY 2019 SMP.

VII. Summary of all contacts with local community, public interest groups, or state government:

DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

During this reporting period (October 20, 2017), DOE prime contractor changed from FFS to FRNP.

IX. Actual cost for O&M, if appropriate:

Not applicable.

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**Facility: Paducah Gaseous Diffusion Plant
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Reporting Period: 10/01/2017–03/31/2018**

PROJECT: CERCLA Waste Disposal Alternatives Evaluation

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

Completed Dispute Resolution Committee-level dispute resolution by resolving conditions received on the *Remedial Investigation/Feasibility Study Report for CERCLA Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-0244&D2*. The MOA was signed on February 7, 2018.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

As specified in the MOA, develop the revised Remedial Investigation/Feasibility Study Report for CERCLA Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-0244&D2/R1, and submit to EPA and KDEP for review and approval in accordance with the date established by the FFA parties as part of dispute resolution.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

Reporting responsibility for the work to be performed in support of CERCLA waste disposal belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

DOE initially invoked informal dispute on the *Remedial Investigation/Feasibility Study Report for CERCLA Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-0244&D2*, on May 19, 2014, and March 27, 2015. Previous enforceable milestone dates had been stayed during the dispute period, and new enforceable milestone dates have been established as part of dispute resolution.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

- The *Remedial Investigation/Feasibility Study Report for CERCLA Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-0244&D2*, had been placed on hold during the dispute period. When the MOA was signed, development of the revised report was initiated.

B) Due dates for completion of review/modification tasks:

- As specified in the MOA signed on February 7, 2018, the *Remedial Investigation/Feasibility Study Report for CERCLA Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-0244&D2/R1, will be submitted to EPA and KDEP within 90 days (i.e., May 8, 2018).

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

None.

VII. Summary of all contacts with local community, public interest groups, or state government:

DOE has provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

During this reporting period (October 20, 2017), DOE prime contractor changed from FFS to FRNP.

IX. Actual cost for O&M, if appropriate:

Not applicable.

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Reporting Period: 10/01/2017–03/31/2018**

PROJECT: CERCLA Five-Year Review

I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):

C-400 Vapor Intrusion Work Plan

- Field work commenced on September 11, 2017, and again on January 26, 2018, implementing the *C-400 Vapor Intrusion Study Work Plan to Support the Additional Actions for the CERCLA Five-Year Review at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2403&D2/R2. Sampling was completed on February 12, 2018.
- Began development of report containing results of the field work, implementing the *C-400 Vapor Intrusion Study Work Plan to Support the Additional Actions for the CERCLA Five-Year Review at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2403&D2/R2.
- Started the development of the 2018 CERCLA Five-Year Review that encompasses work conducted from January 2013 through December 2017.

II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):

- Develop and submit report containing results of the field work, implementing the *C-400 Vapor Intrusion Study Work Plan to Support the Additional Actions for the CERCLA Five-Year Review at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2403&D2/R2.
- Develop and submit the 2018 CERCLA Five-Year Review.

III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

Reporting responsibility for the work to be performed in support of the Five-Year Review belongs to FRNP. FRNP also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC for DOE.

IV. Statement of the manner and extent to which the requirements and time schedules are being met:

- The 2013 Five-Year Review encompasses the interim and final remedial actions that DOE has taken under the OUs identified at the Paducah Site, plus the Water Policy removal action, Surface Water Interim Corrective Measures, and Surface Water On-Site Sediment Removal.

It covers activities associated with response actions from January 2008 through December 2012. The previous CERCLA Five-Year Review at the Paducah Site was conducted in 2008 for the period January 2003 through December 2007.

- The requirements and time schedules are being met; however, extensions related to the *Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1289&D2/R1/A2/R1, and the *C-400 Vapor Intrusion Study Work Plan to Support the Additional Actions for the CERCLA Five-Year Review at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2403&D2, have resulted in an overall impact to the schedule for the Five-Year Review.

V. Primary/Secondary Document Tracking System:

A) Documents under review and/or preparation for this reporting period:

- The 2013 *Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1289&D2/R1/A3, which contains the report for the *C-400 Vapor Intrusion Study Work Plan to Support the Additional Actions for the CERCLA Five-Year Review at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2403&D2/R2, has been under development during this reporting period.
- The 2018 *Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2426&D1, has been under development during this reporting period.

B) Due dates for completion of review/modification tasks:

- The report for the *C-400 Vapor Intrusion Study Work Plan to Support the Additional Actions for the CERCLA Five-Year Review at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2403&D2/R2, is due 90 days after receipt of final laboratory data. Final data was received on February 27, 2018.
- The 2018 *Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2426&D1, for 2018 is due July 31, 2018.

VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

None.

VII. Summary of all contacts with local community, public interest groups, or state government:

DOE provided routine updates on the subproject to the Paducah Site CAB, FFA project managers, FFA senior managers, local elected officials, and/or congressional staff.

VIII. Changes in relevant personnel:

During this reporting period (October 10, 2017), DOE prime contractor changed from FFS to FRNP.

IX. Actual cost for O&M, if appropriate:

Not applicable.

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APPENDIX A
NORTHEAST AND NORTHWEST PLUME
WATER WITHDRAWAL REPORTS

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**Table A.1. Northeast Plume Containment System Water Withdrawal Reporting Form
(Gallons of Water Pumped)**

Day	October 2017	November 2017	December 2017	January 2018	February 2018	March 2018
1	No flow	397,271	409,247	390,378	399,733	186,871
2	No flow	388,903	409,247	390,378	402,543	177,924
3	No flow	375,856	409,247	386,122	402,543	177,924
4	No flow	375,856	409,246	402,953	402,543	177,924
5	No flow	375,856	396,309	396,070	402,544	177,923
6	No flow	375,855	387,257	396,070	391,925	173,226
7	No flow	379,172	400,523	396,070	360,663	No flow
8	No flow	383,596	400,798	396,069	443,558	No flow
9	No flow	402,246	400,798	381,757	379,976	No flow
10	No flow	397,498	400,798	405,038	379,976	No flow
11	463,462	397,498	400,799	385,805	379,976	No flow
12	385,845	397,498	378,334	402,450	379,974	430,841
13	388,290	397,496	407,226	402,450	392,411	227,620
14	388,290	385,244	380,079	402,450	406,598	204,902
15	388,290	396,466	399,896	402,450	383,091	219,181
16	388,289	409,102	399,896	402,449	391,025	158,920
17	315,890	212,775	399,896	380,052	391,025	158,920
18	372,648	212,775	399,894	395,524	391,025	158,920
19	372,986	212,775	382,926	389,881	391,022	158,921
20	372,145	212,776	400,575	389,881	No flow	No flow
21	372,145	208,347	394,081	389,881	No flow	No flow
22	372,145	214,783	394,343	389,881	No flow	116,023
23	372,145	214,783	394,343	392,787	No flow	373,879
24	372,146	214,783	394,343	403,482	No flow	373,879
25	410,639	214,783	394,343	388,722	No flow	373,879
26	386,704	214,783	394,343	393,573	No flow	373,878
27	387,384	214,785	394,344	393,573	185,920	391,167
28	387,384	218,128	420,545	393,573	180,914	368,756
29	387,384	217,902	390,378	393,570		375,021
30	387,385	211,514	390,378	400,669		375,021
31	395,875		390,378	397,076		375,021
Monthly Total	8,067,471	9,231,105	12,324,810	12,231,084	7,838,985	6,286,541
Daily Average	260,241	307,704	397,575	394,551	279,964	202,792

Total =	55,979,996
Average =	307,582

**Table A.2. Northwest Plume Groundwater System Water Withdrawal Reporting Form
(Gallons of Water Pumped)**

Day	October 2017	November 2017	December 2017	January 2018	February 2018	March 2018
1	283,785	286,120	282,058	279,714	281,370	295,100
2	283,785	278,060	282,058	279,714	283,195	278,413
3	287,610	285,621	282,058	275,840	283,195	278,413
4	275,060	285,621	282,056	286,760	283,195	278,413
5	283,660	285,621	277,690	276,151	283,195	278,411
6	285,573	285,617	279,580	276,151	265,070	288,840
7	285,573	271,420	282,930	276,151	286,320	284,330
8	285,573	276,830	284,508	276,147	291,920	276,070
9	285,571	286,760	284,508	265,130	276,548	279,713
10	283,250	282,368	284,508	284,630	276,548	279,713
11	276,040	282,368	284,506	275,730	276,548	279,713
12	281,060	282,368	269,550	177,474	276,546	279,711
13	281,981	282,366	281,440	177,474	277,840	284,500
14	281,981	274,580	278,100	177,474	279,330	280,750
15	281,981	278,650	281,270	177,474	276,280	289,580
16	281,977	291,200	281,270	177,474	281,110	282,678
17	274,190	280,783	281,270	252,200	281,110	282,678
18	287,350	280,783	281,270	265,590	281,110	282,678
19	284,520	280,783	269,320	281,780	281,110	282,676
20	281,428	280,781	284,840	281,780	280,970	243,260
21	281,428	282,120	281,020	281,780	281,130	285,420
22	281,428	279,977	86,470	281,780	276,650	287,830
23	281,428	279,977	86,470	275,670	239,905	287,506
24	281,428	279,977	86,470	281,490	239,905	287,506
25	288,700	279,977	86,470	282,440	239,905	287,506
26	281,670	279,977	86,470	279,678	239,905	287,502
27	281,428	279,975	86,470	279,678	264,580	278,350
28	281,428	278,890	236,470	279,678	281,420	273,960
29	281,428	288,400	279,714	279,676		286,874
30	281,426	277,200	279,714	279,540		286,874
31	281,710		279,714	275,530		286,874
Monthly Total	8,755,450	8,445,170	7,490,242	8,097,778	7,665,910	8,741,842
Daily Average	282,434	281,506	241,621	261,219	273,783	281,995

Total =	49,196,392
Average =	270,310

APPENDIX B

**NORTHEAST PLUME AND NORTHWEST PLUME GRAPHS
AND MAPS (FIGURES B.1 THROUGH B.25)**

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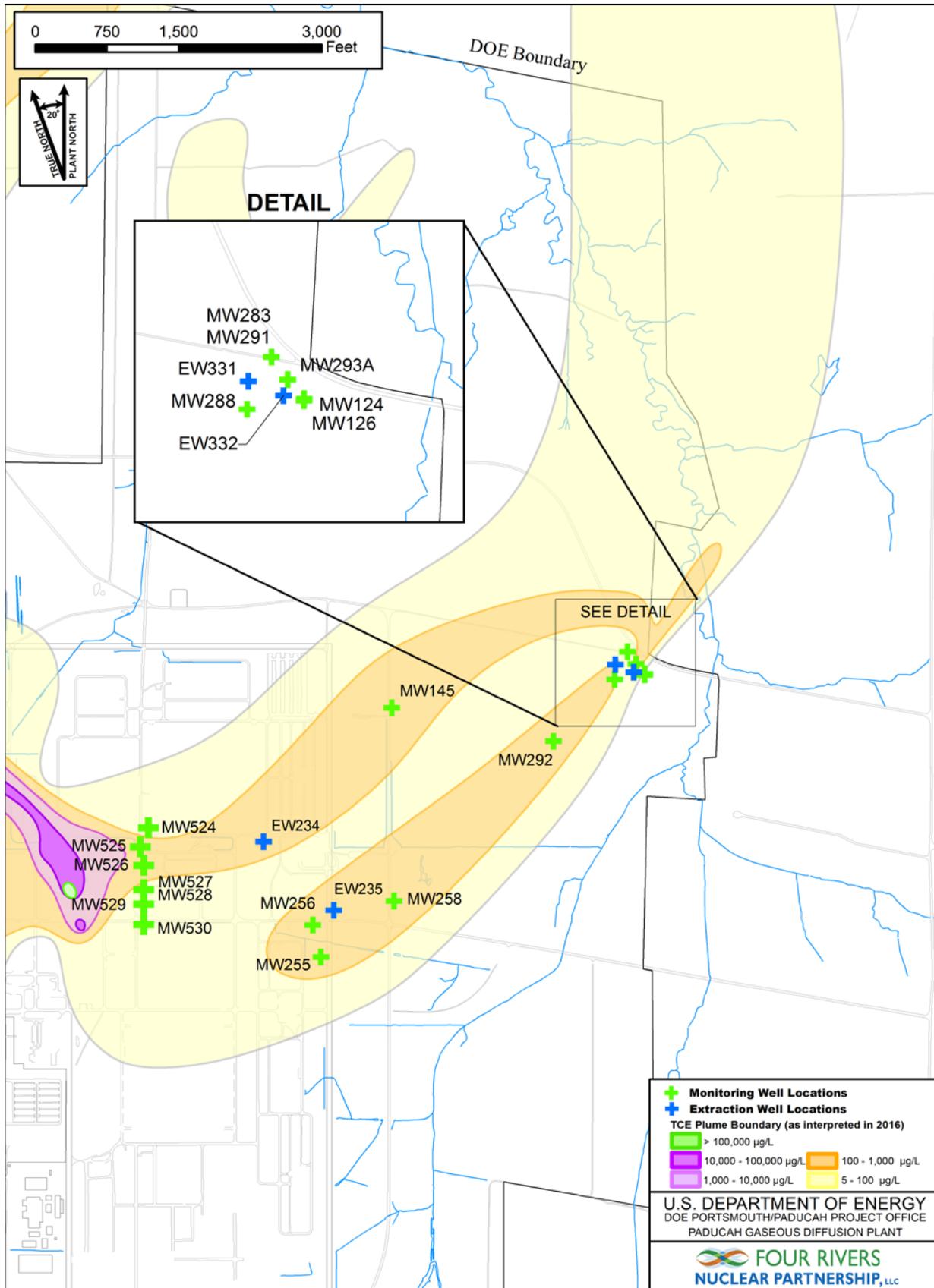


FIGURE No. S:\Env Services\Environmental Stewardship\ERP - Risk\GIS\FFA_SA_20180424_NEP.mxd
DATE 4/24/2018

Figure B.1. Northeast Plume Groundwater Wells and Extraction Wells

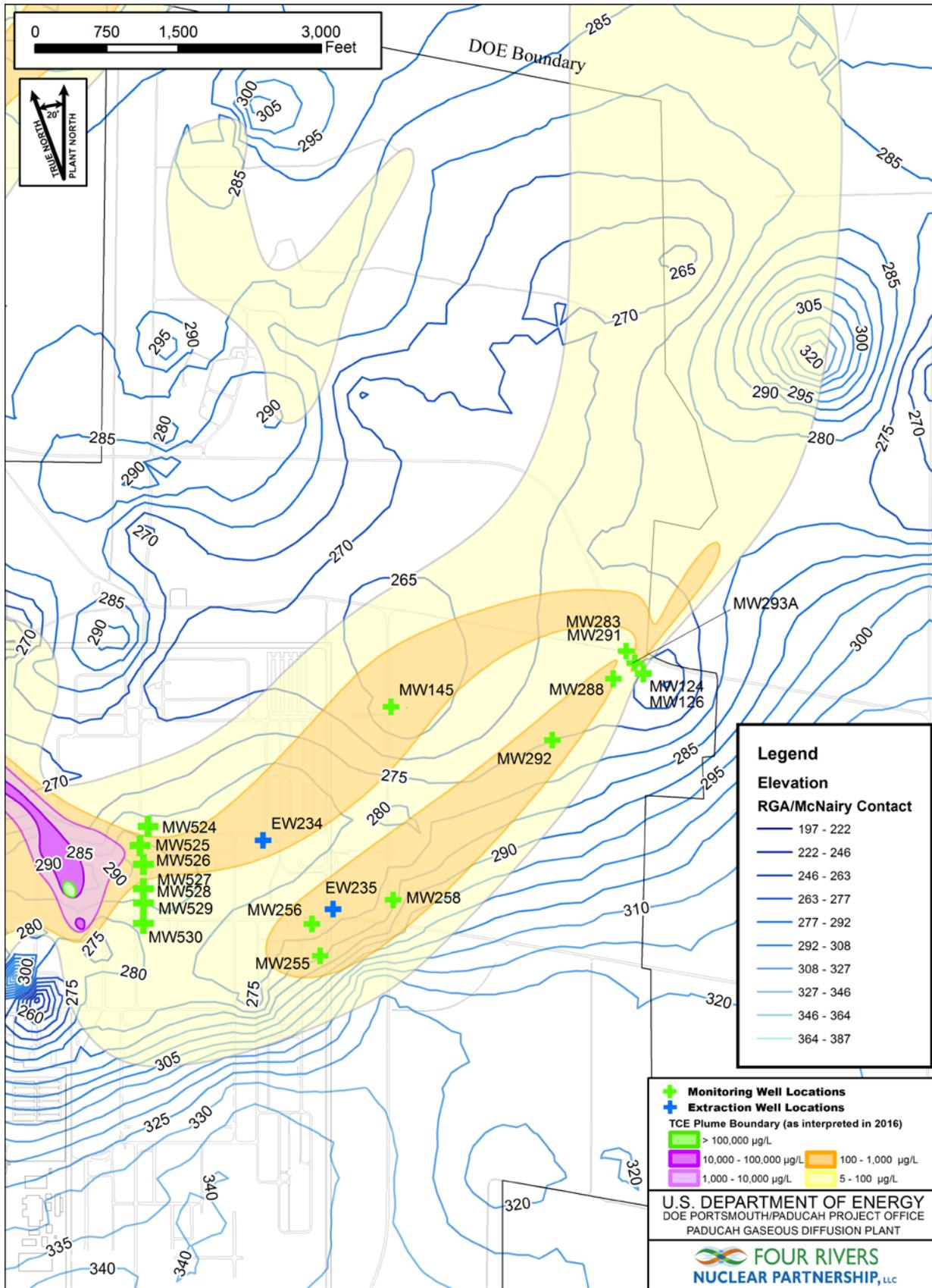
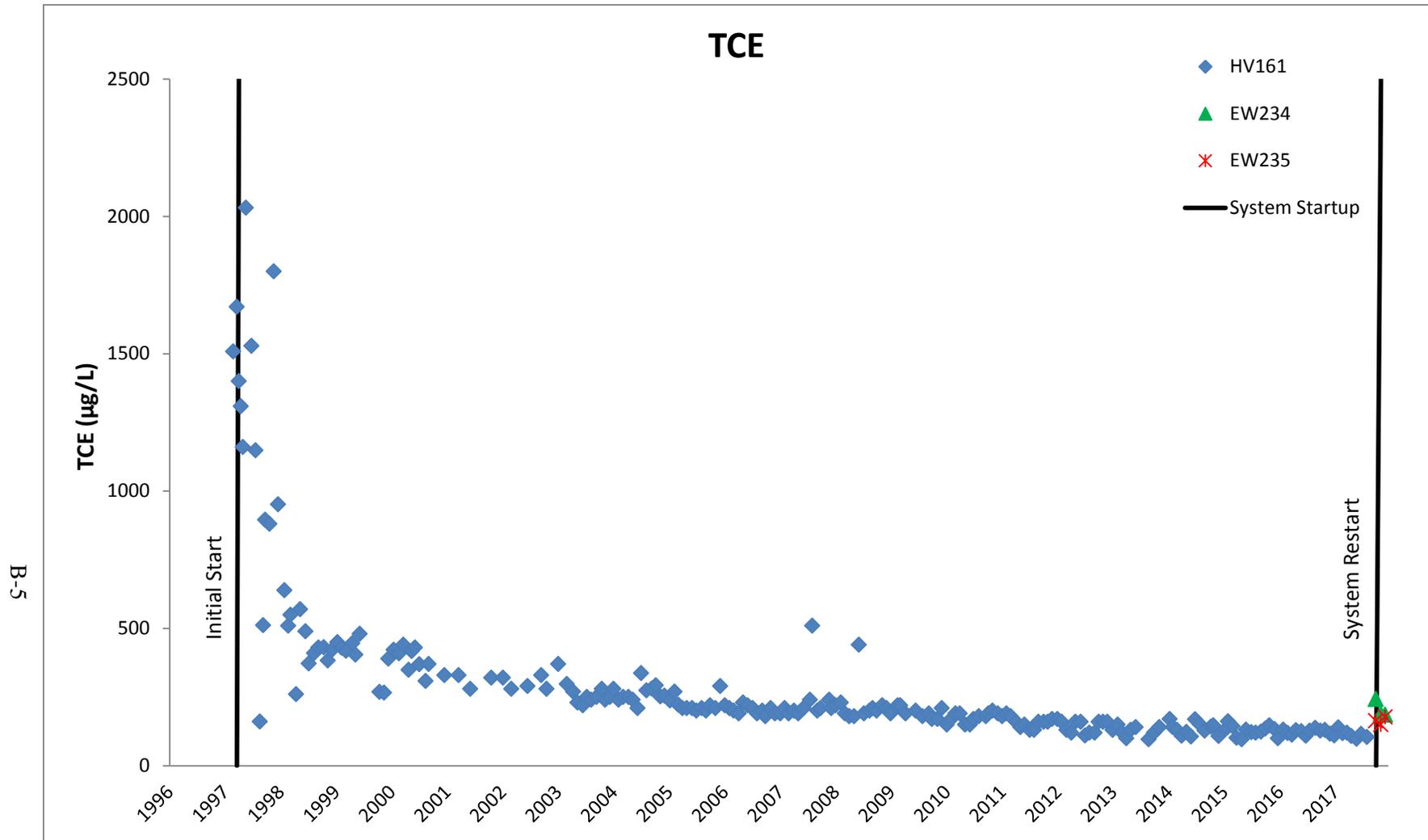


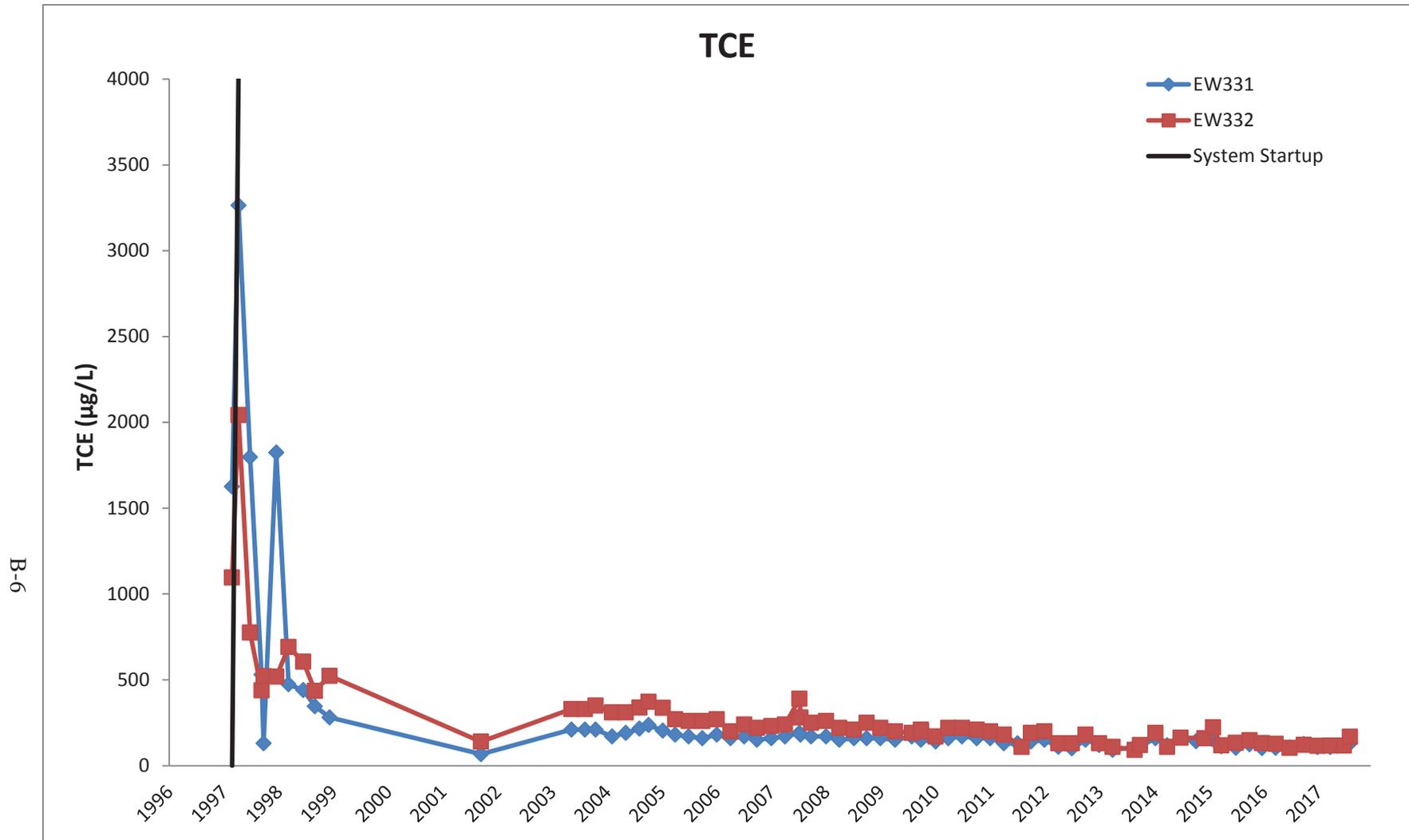
FIGURE No. S:\Env Services\Environmental Stewardship\ERP - Risk\GIS\FFA_SA_20180424_NEP_RGA.mxd
DATE 4/24/2018

Figure B.2. Northeast Plume with McNairy Topography



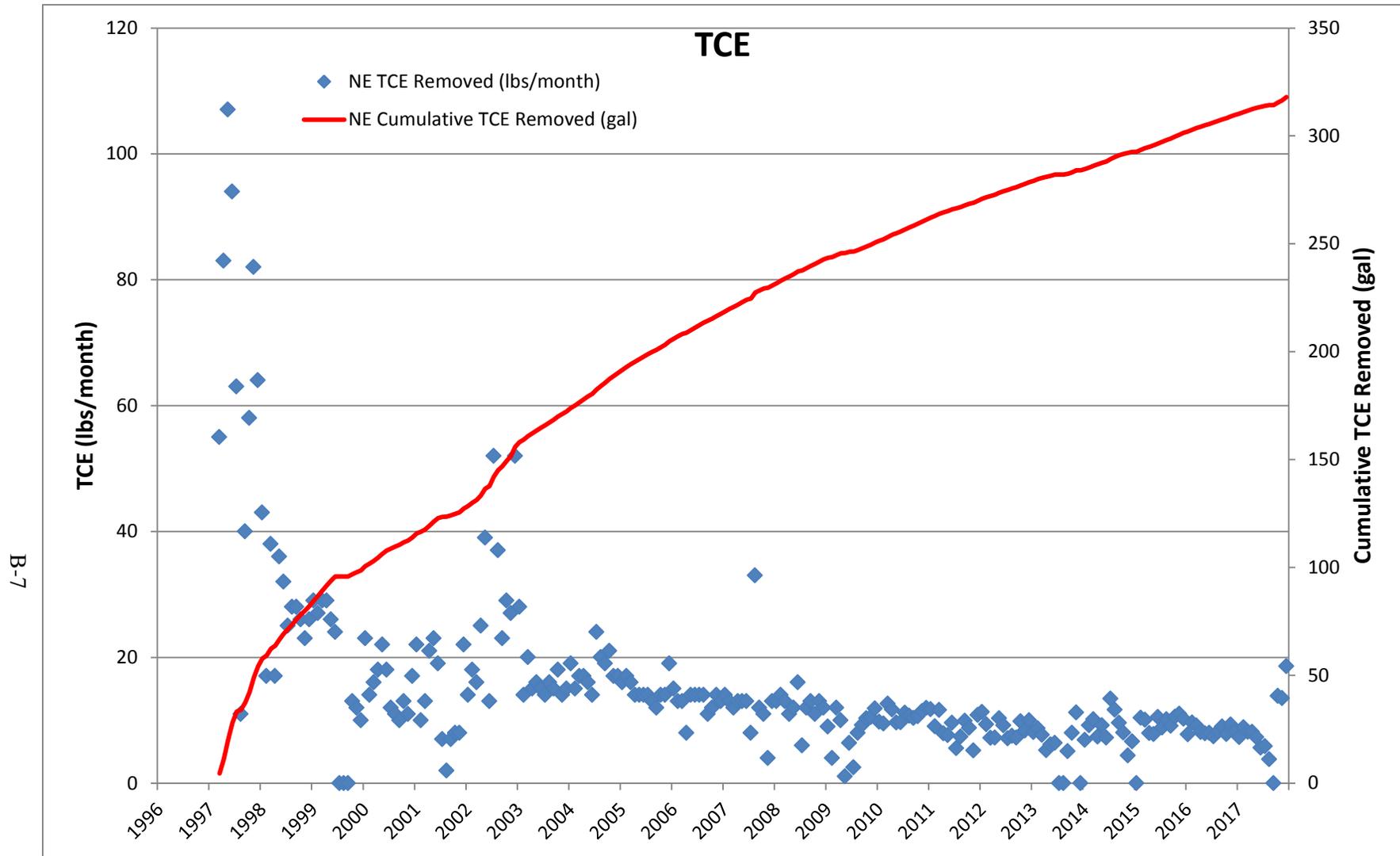
NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.3. Northeast Plume Containment System Influent TCE Concentrations



NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.4. Northeast Plume—TCE Concentrations in Extraction Wells (before 10/10/2017)



NOTE: Data rejected by validation or assessment are not included on the graph.

Figure B.5. Northeast Plume Containment System TCE Removed

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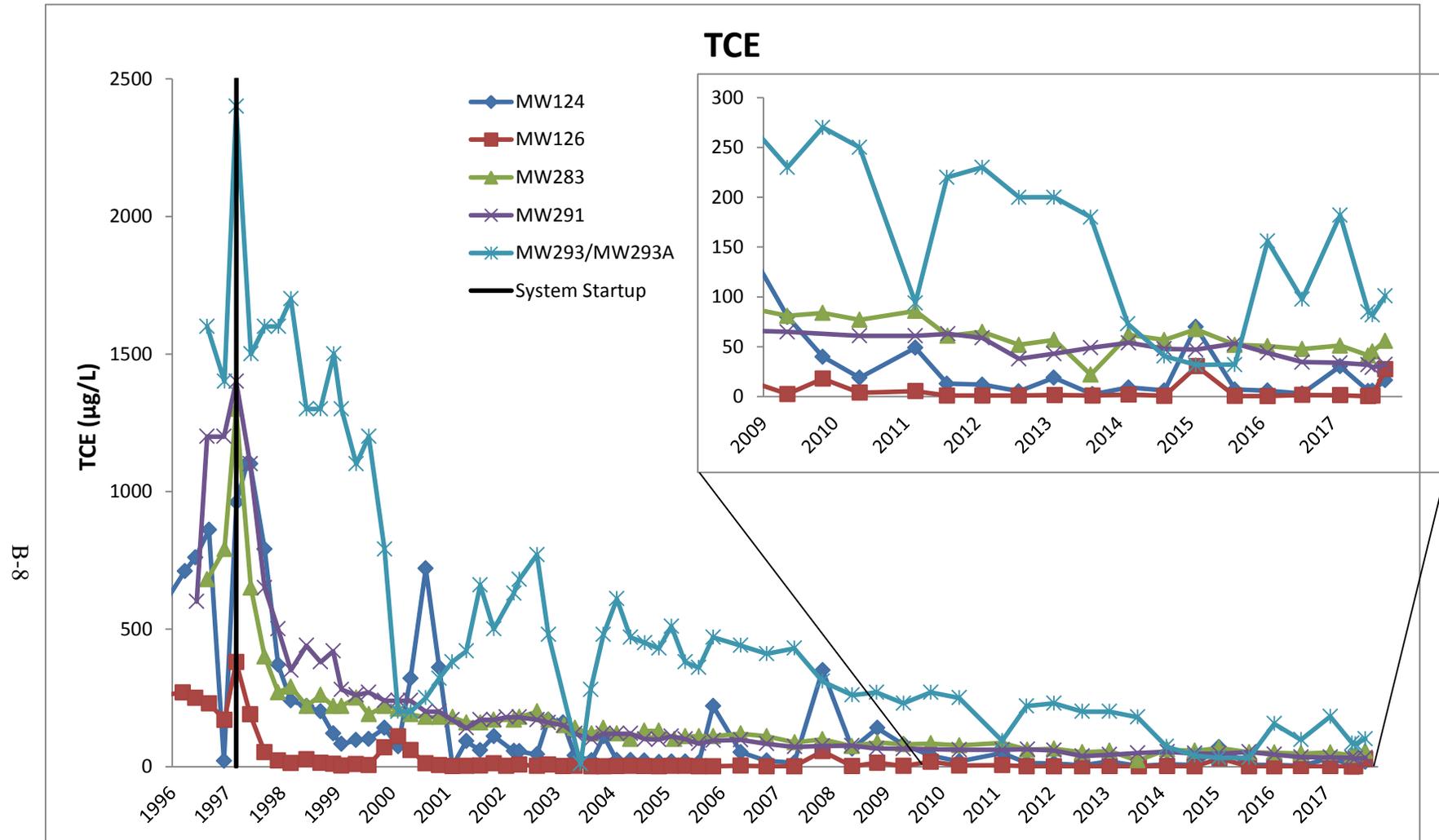
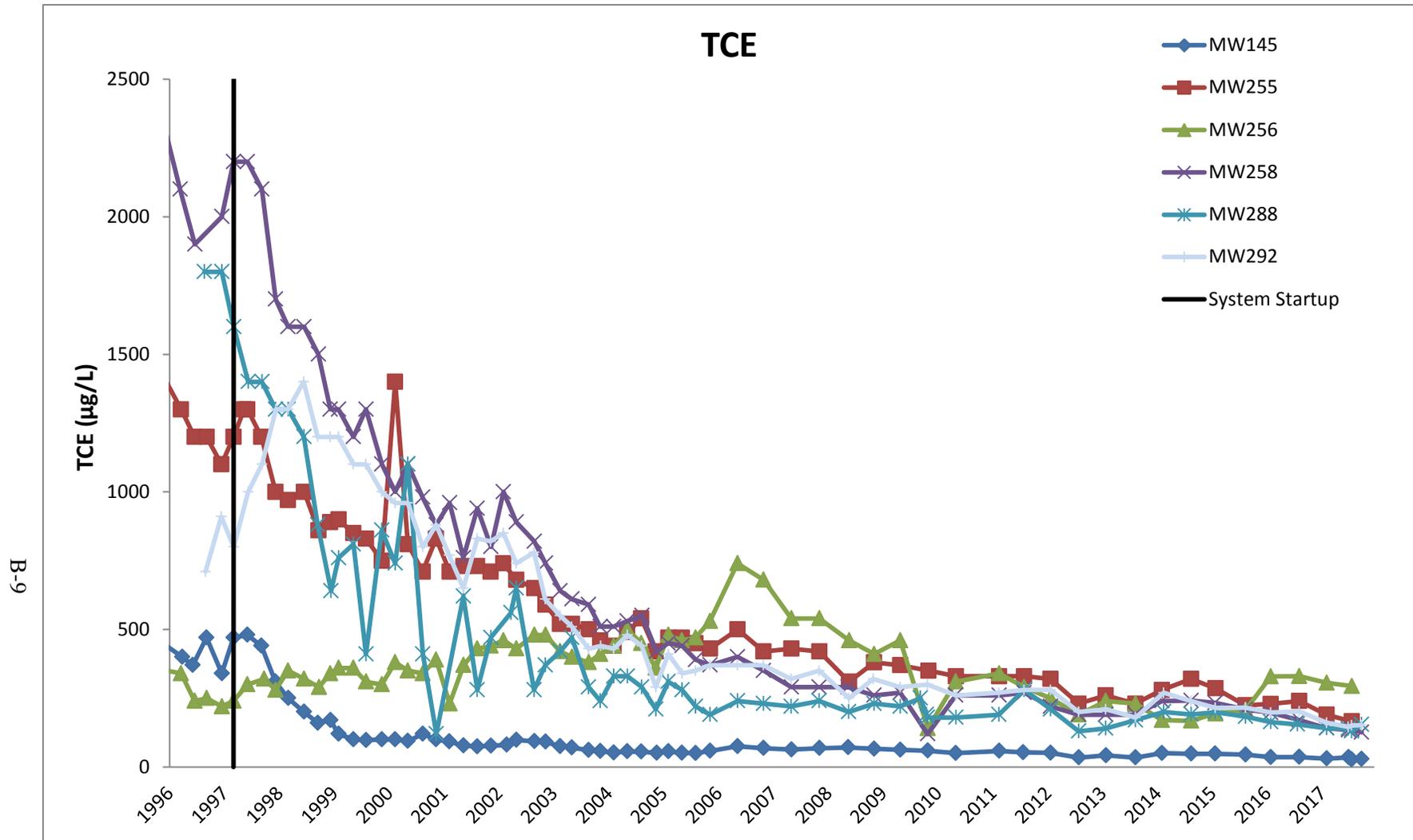
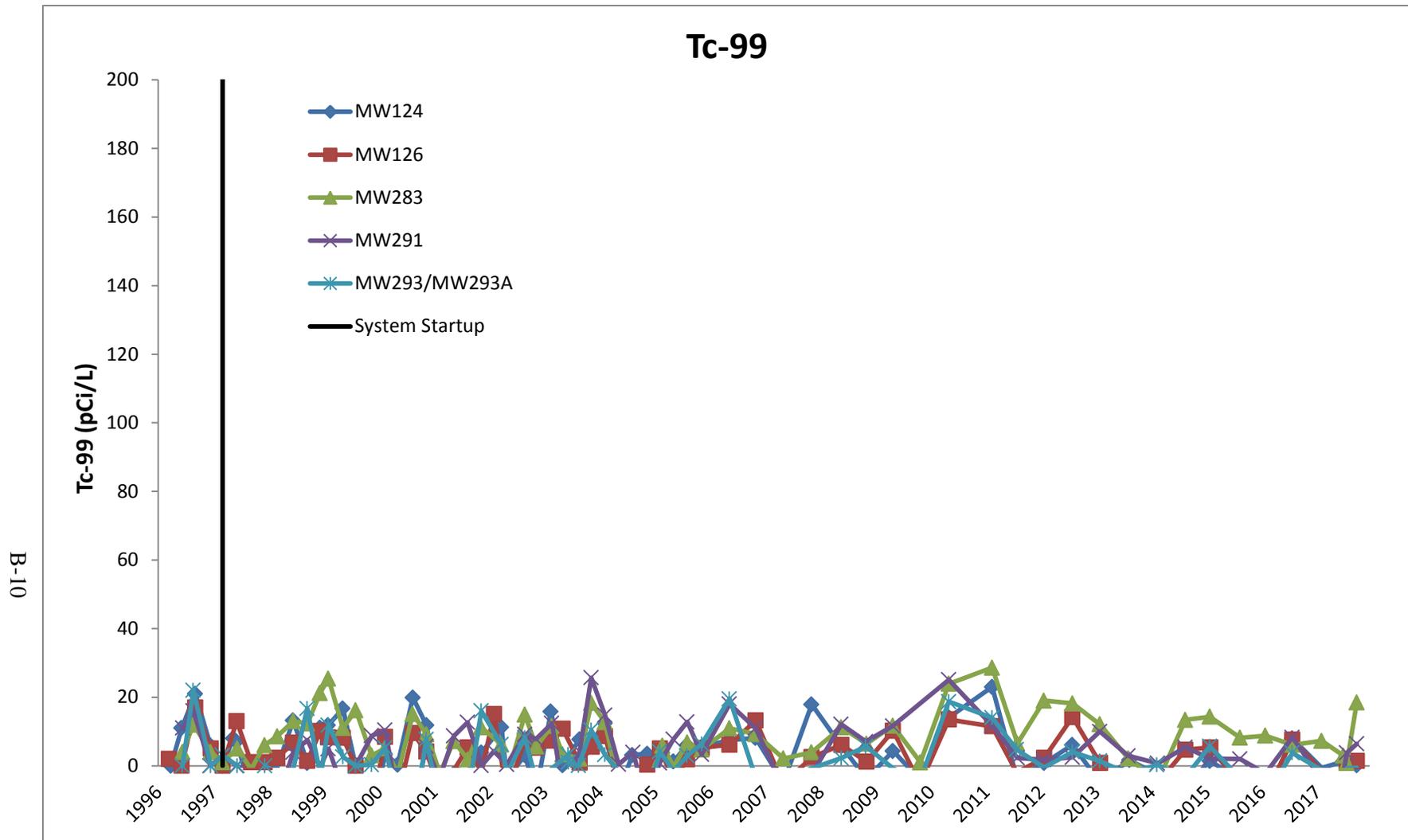


Figure B.6. Northeast Plume—TCE Concentrations in Downgradient Wells



NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.7. Northeast Plume—TCE Concentrations in Upgradient Wells



NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.8. Northeast Plume—Tc-99 Activities in Downgradient Wells

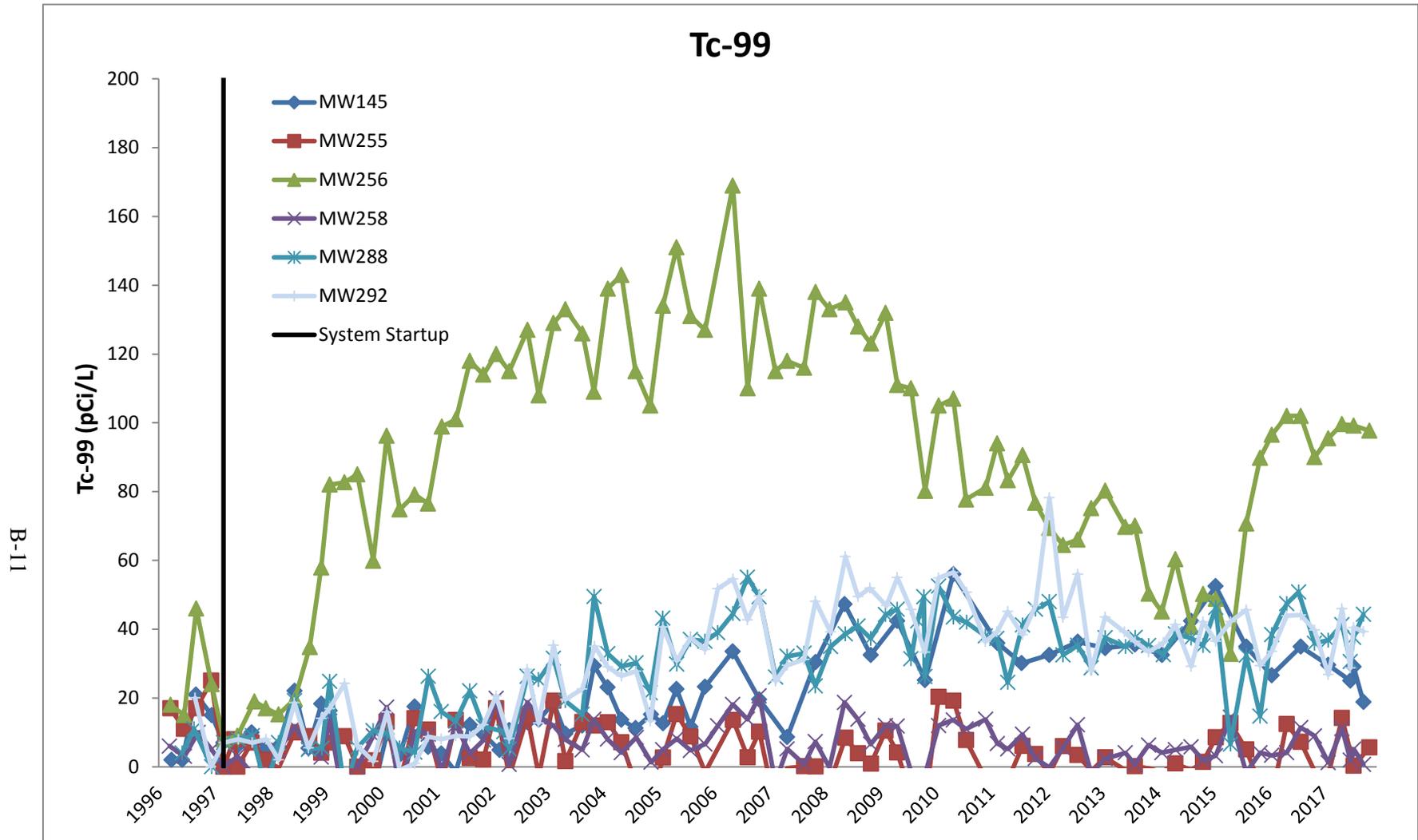
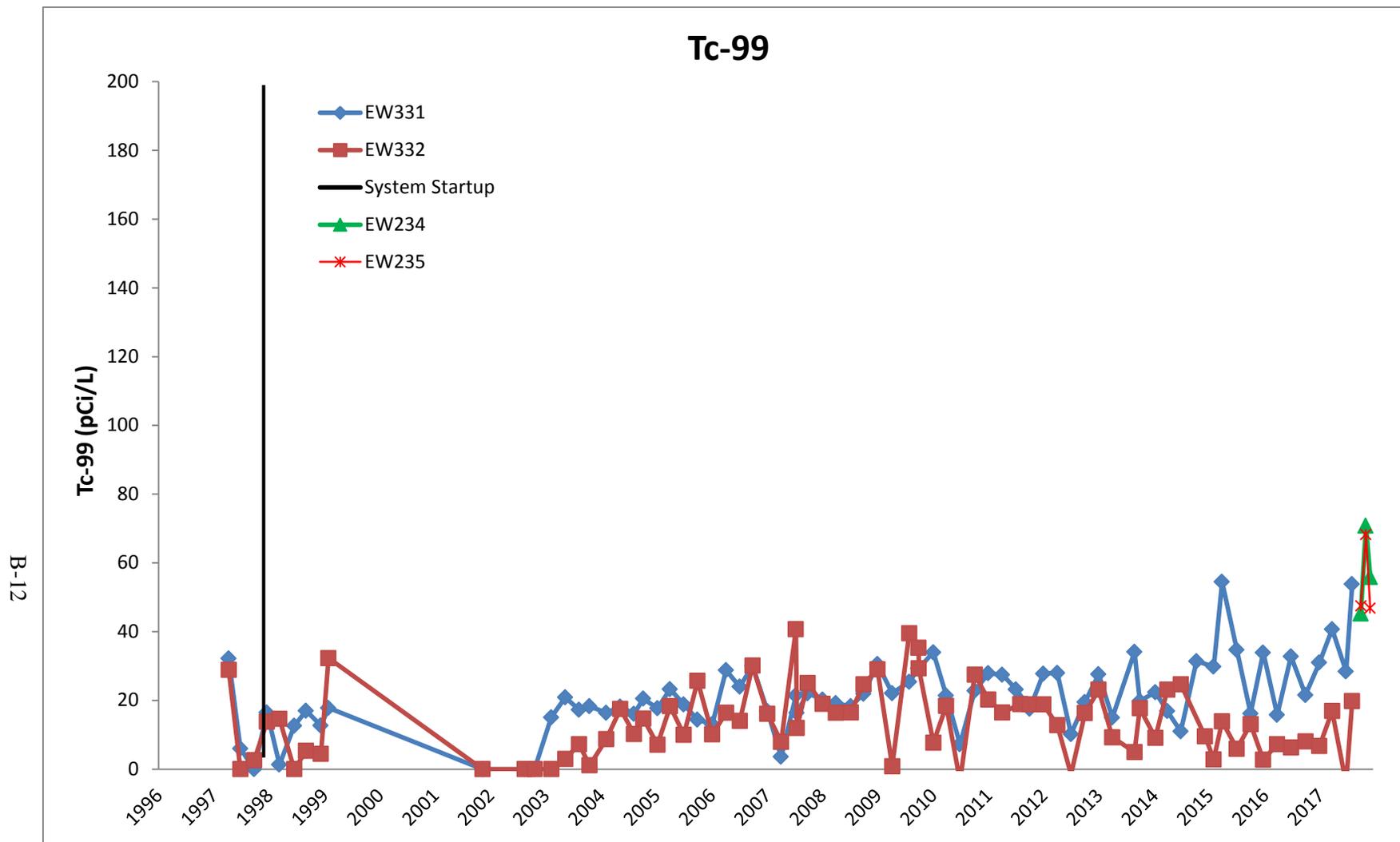


Figure B.9. Northeast Plume—Tc-99 Activities in Upgradient Wells



NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.10. Northeast Plume—Tc-99 Activities in Extraction Wells

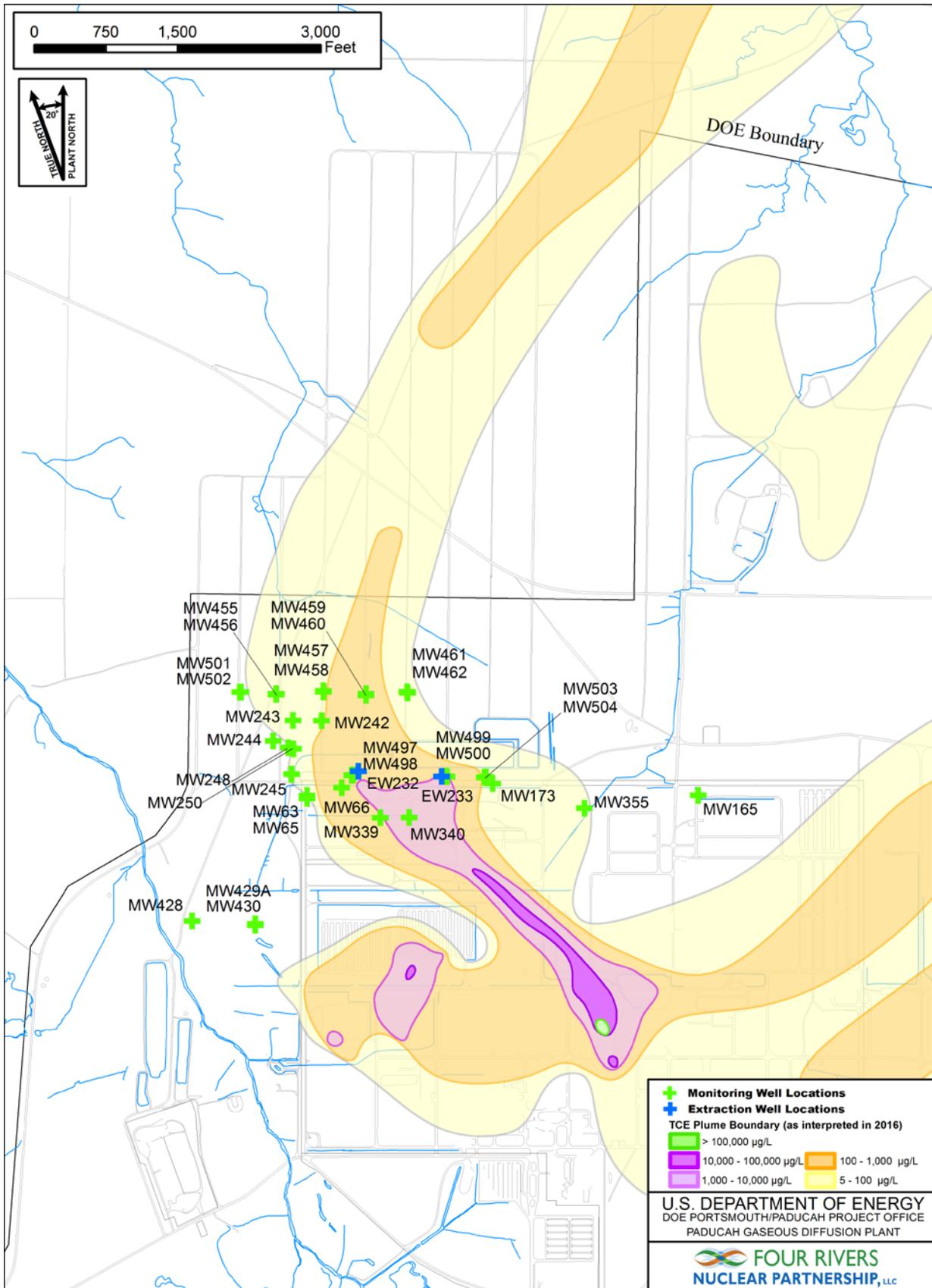


FIGURE No. S:\Env Services\Environmental Stewardship\ERP - Risk\GIS\IFFA_SA_20180308_NWP.mxc
DATE 3/8/2018

Figure B.11. Northwest Plume Groundwater Wells

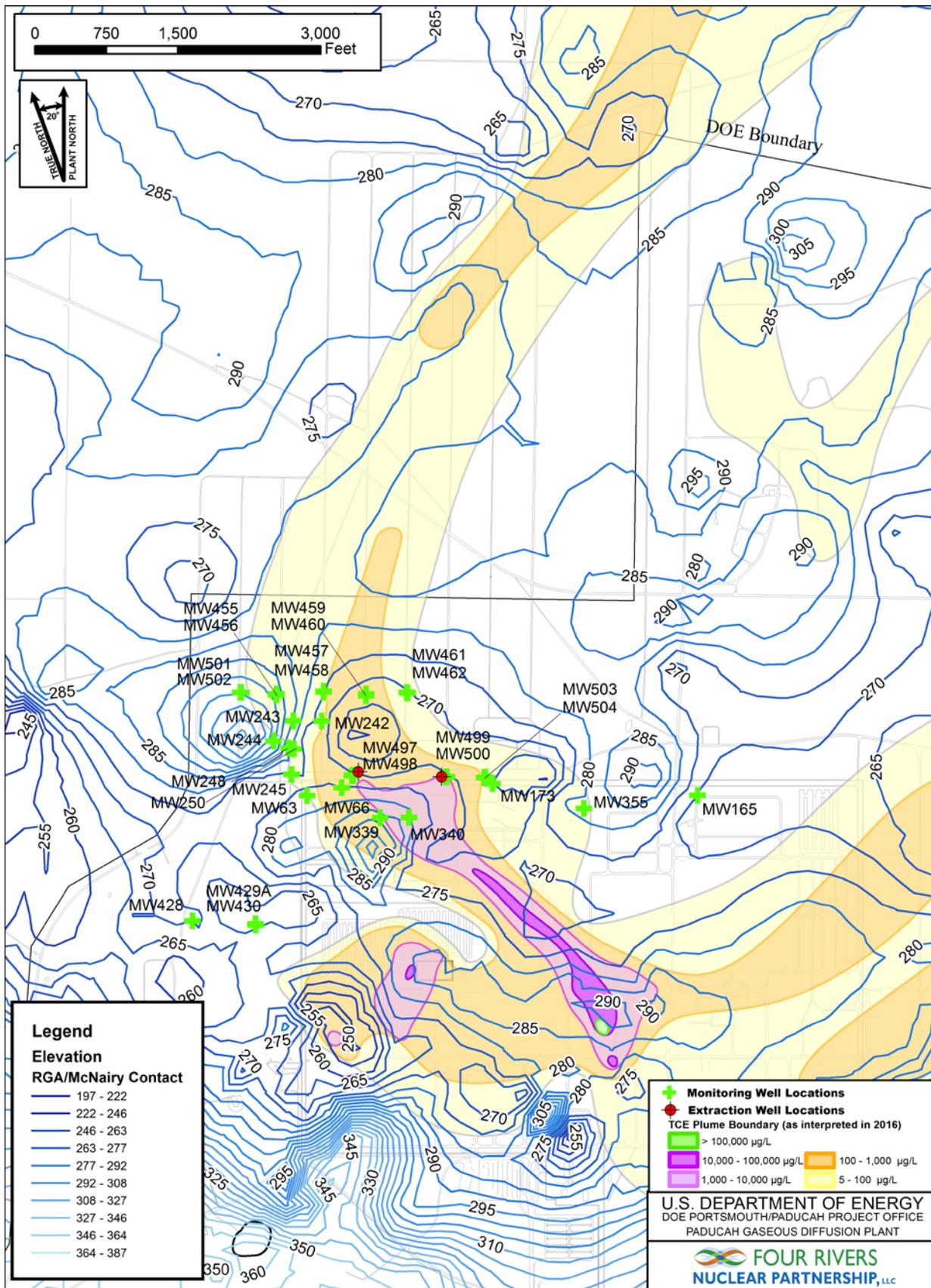
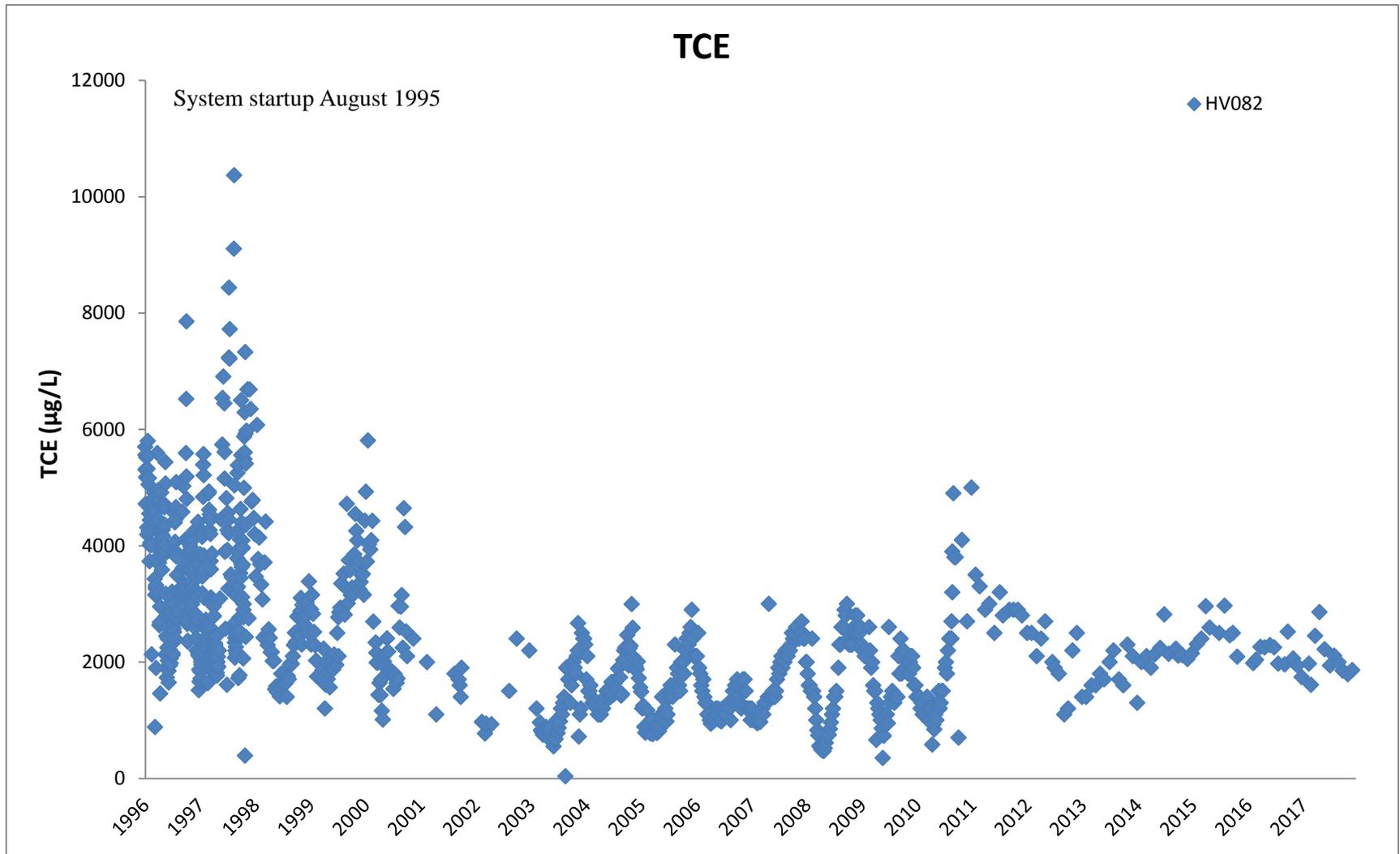


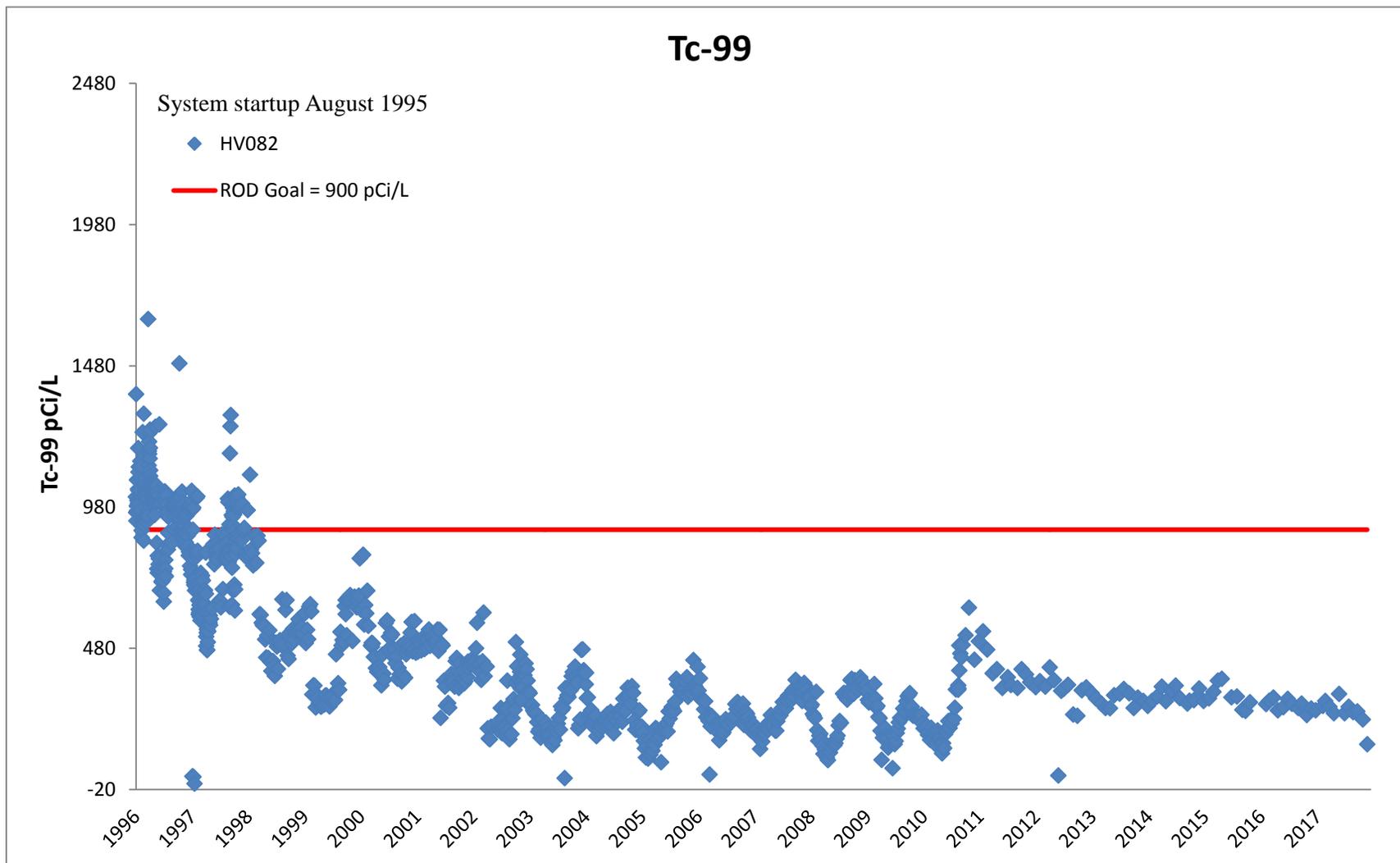
FIGURE No. S:\Env Services\Environmental Stewardship\ERP - Risk\GIS\FFA_SA_20180308_NWP_RGA.mxd
DATE 3/8/2018

Figure B.12. Northwest Plume with Top of McNairy Topography



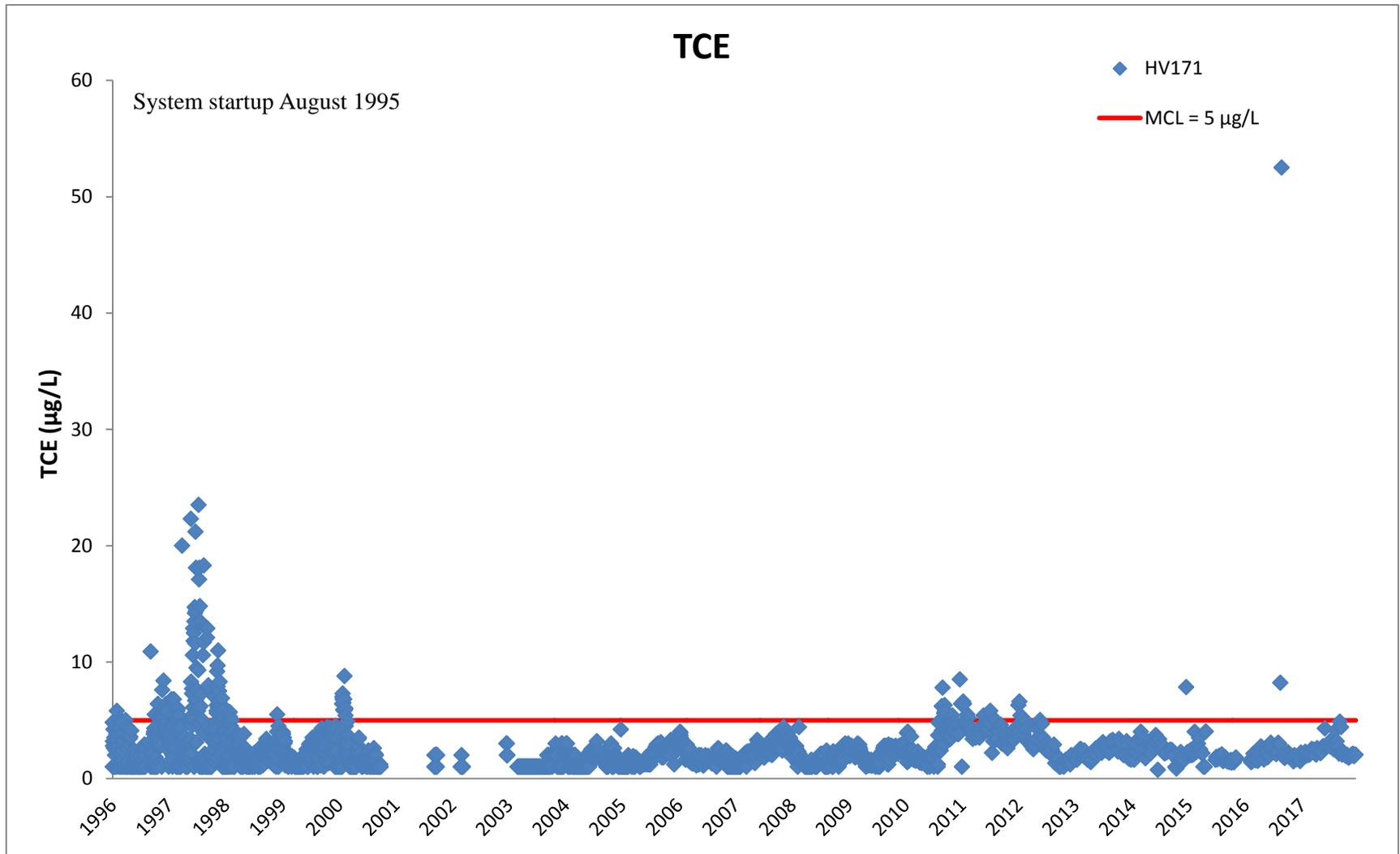
NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.13. Northwest Plume Groundwater System Influent TCE Concentrations



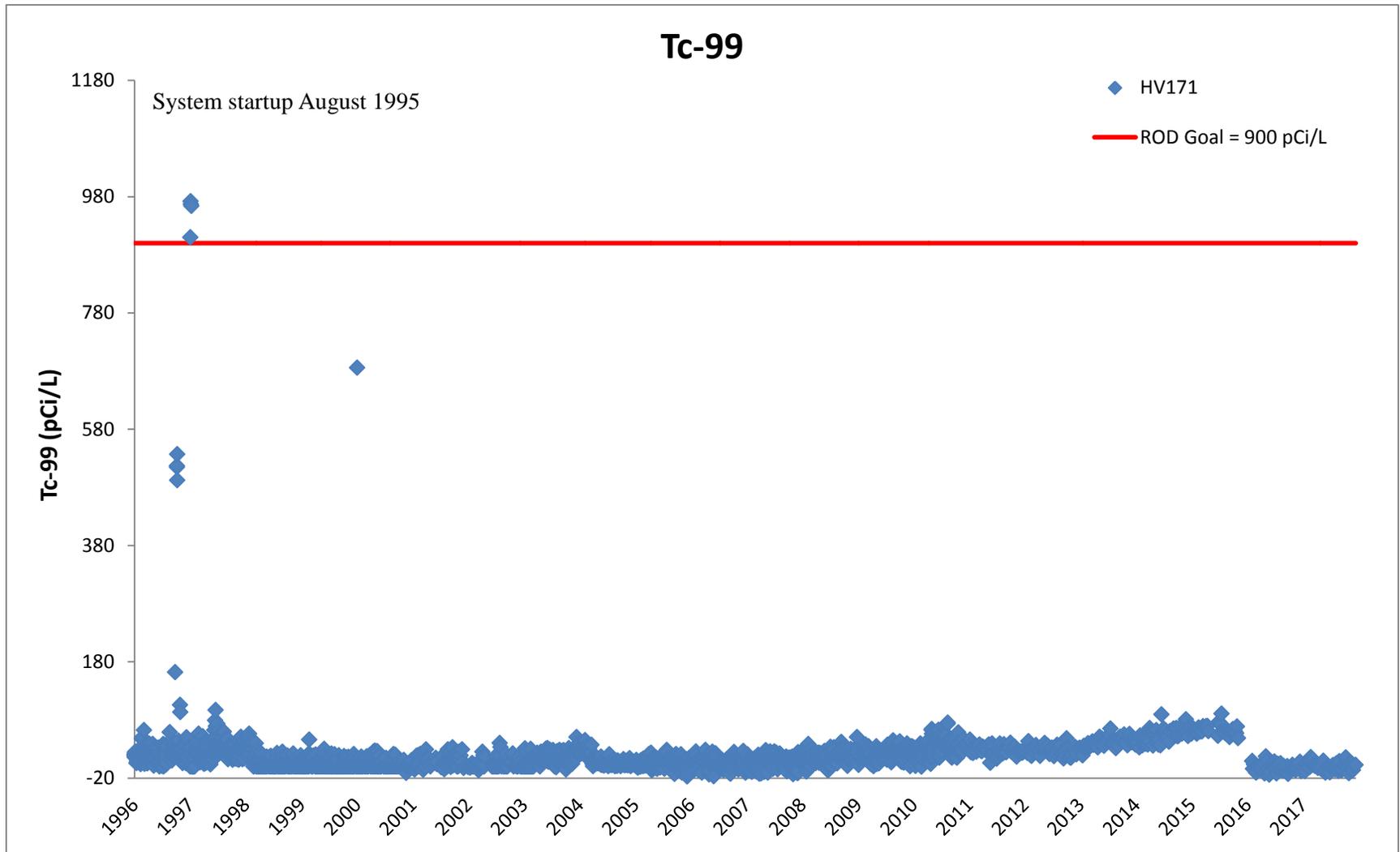
NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.14. Northwest Plume Groundwater System Influent Tc-99 Activities



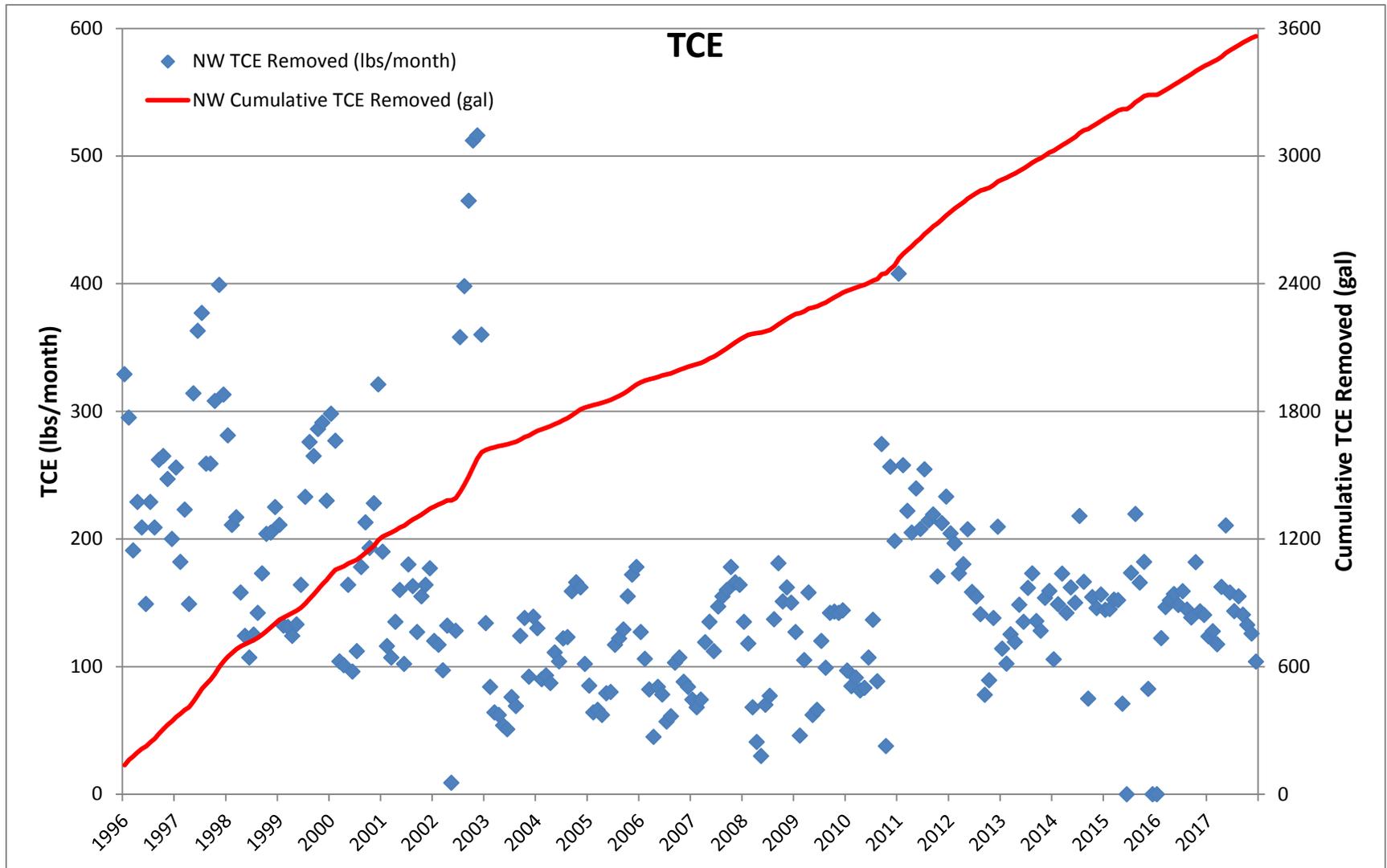
NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.15. Northwest Plume Groundwater System Effluent TCE Concentrations



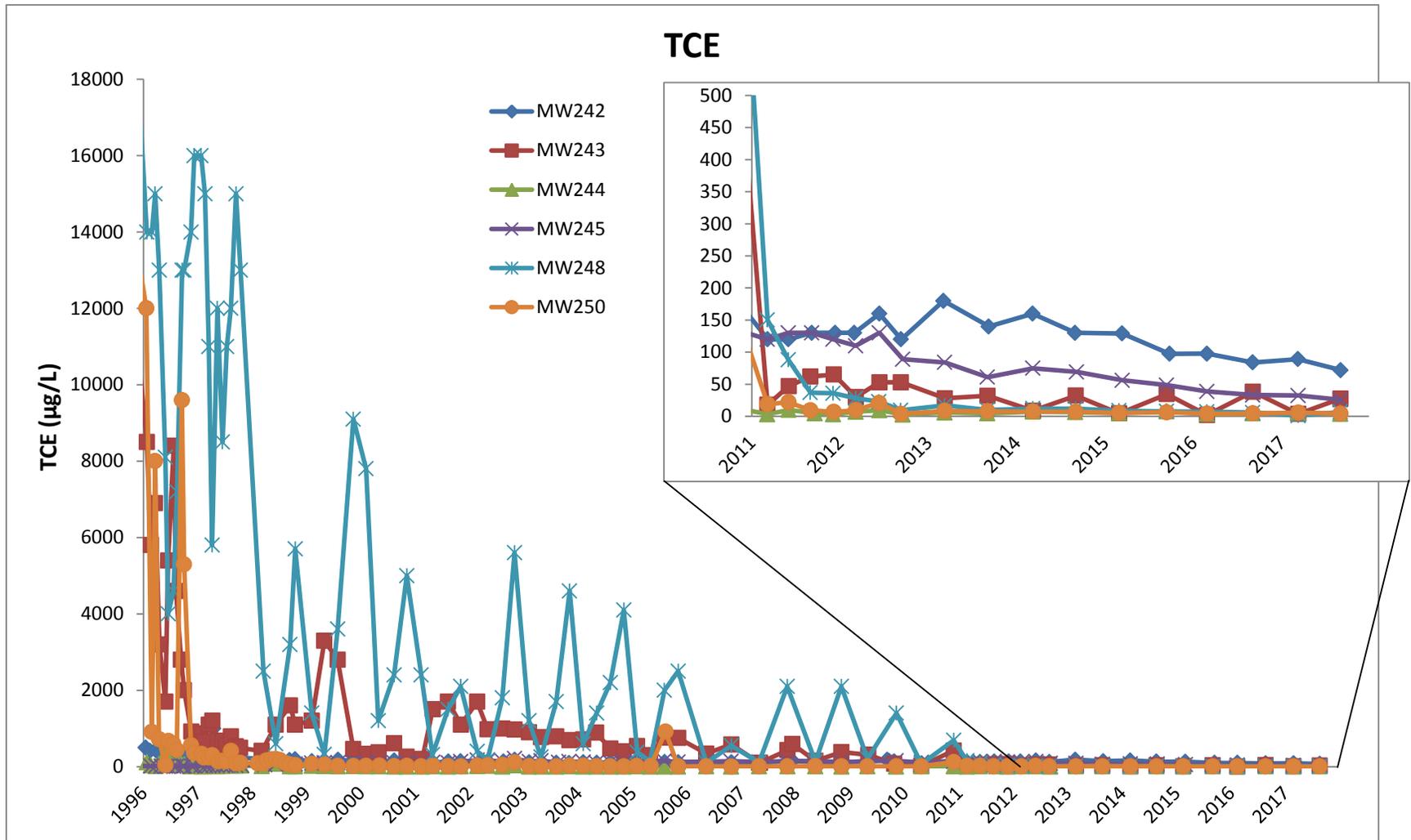
NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.16. Northwest Plume Groundwater System Effluent Tc-99 Activities



NOTE: Data rejected by validation or assessment are not included on the graph.

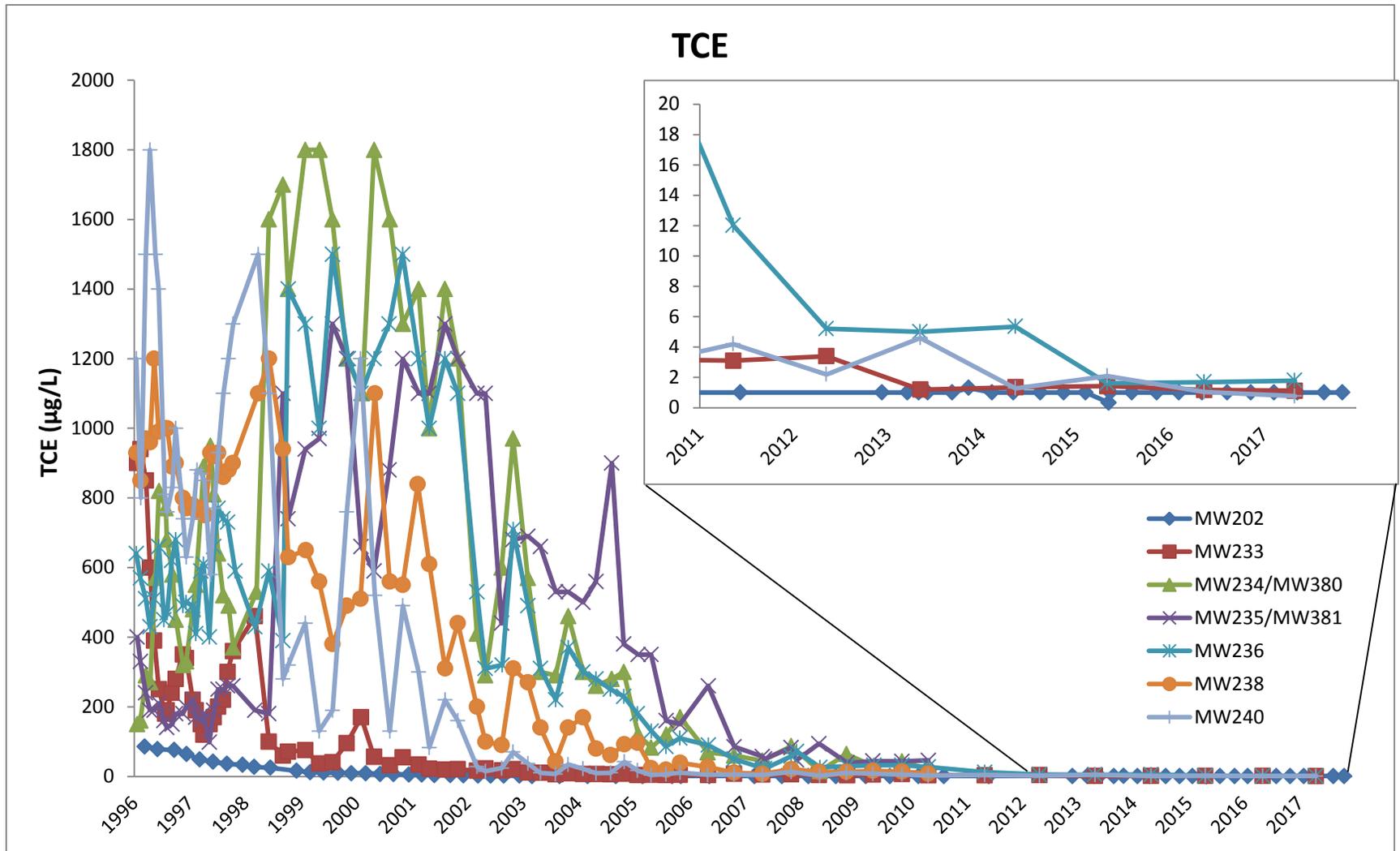
Figure B.17. Northwest Plume Groundwater System TCE Removed



NOTE: Data rejected by validation or assessment have not been graphed.

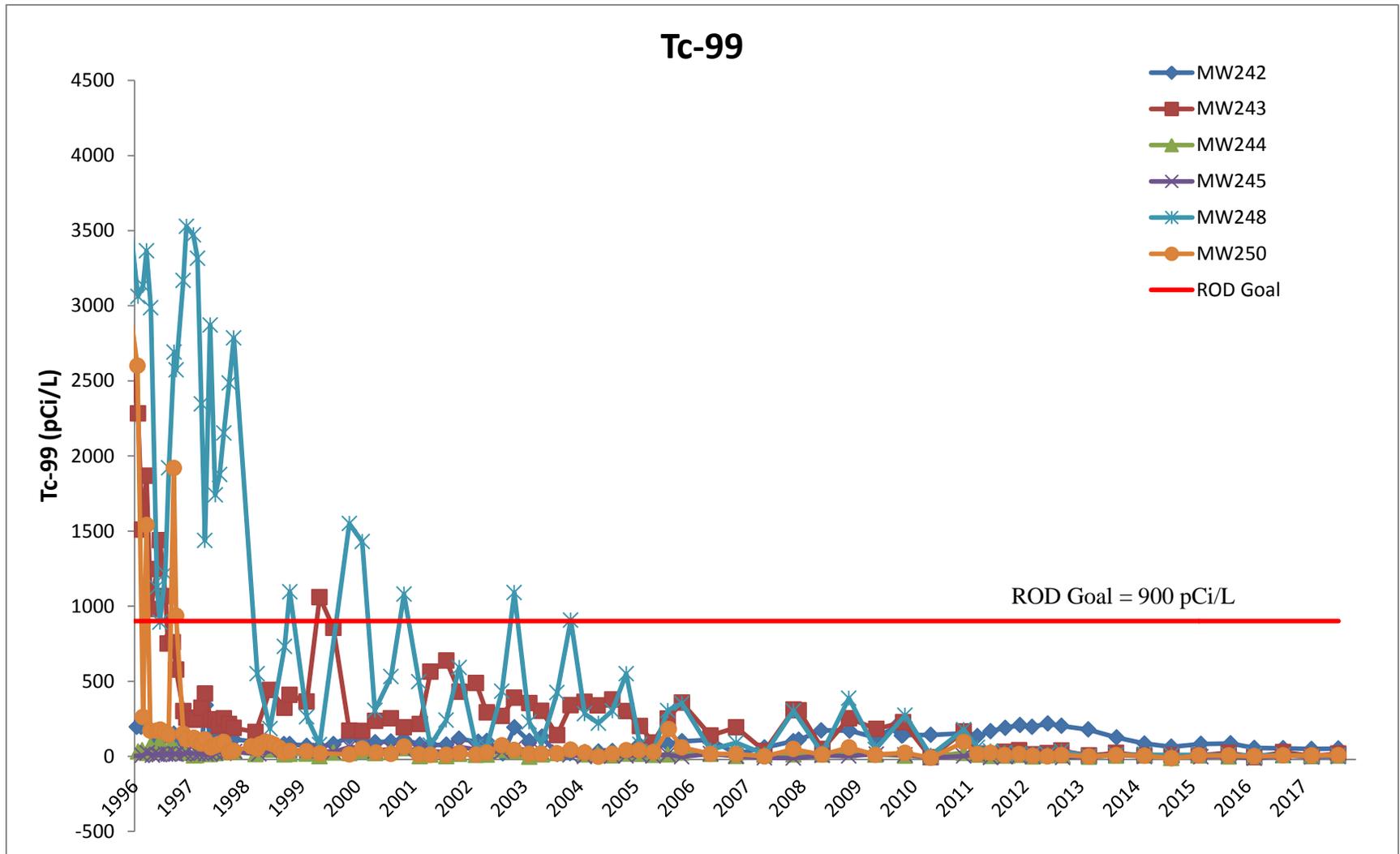
Figure B.18. Northwest Plume—South Well Field TCE Concentrations

B-21



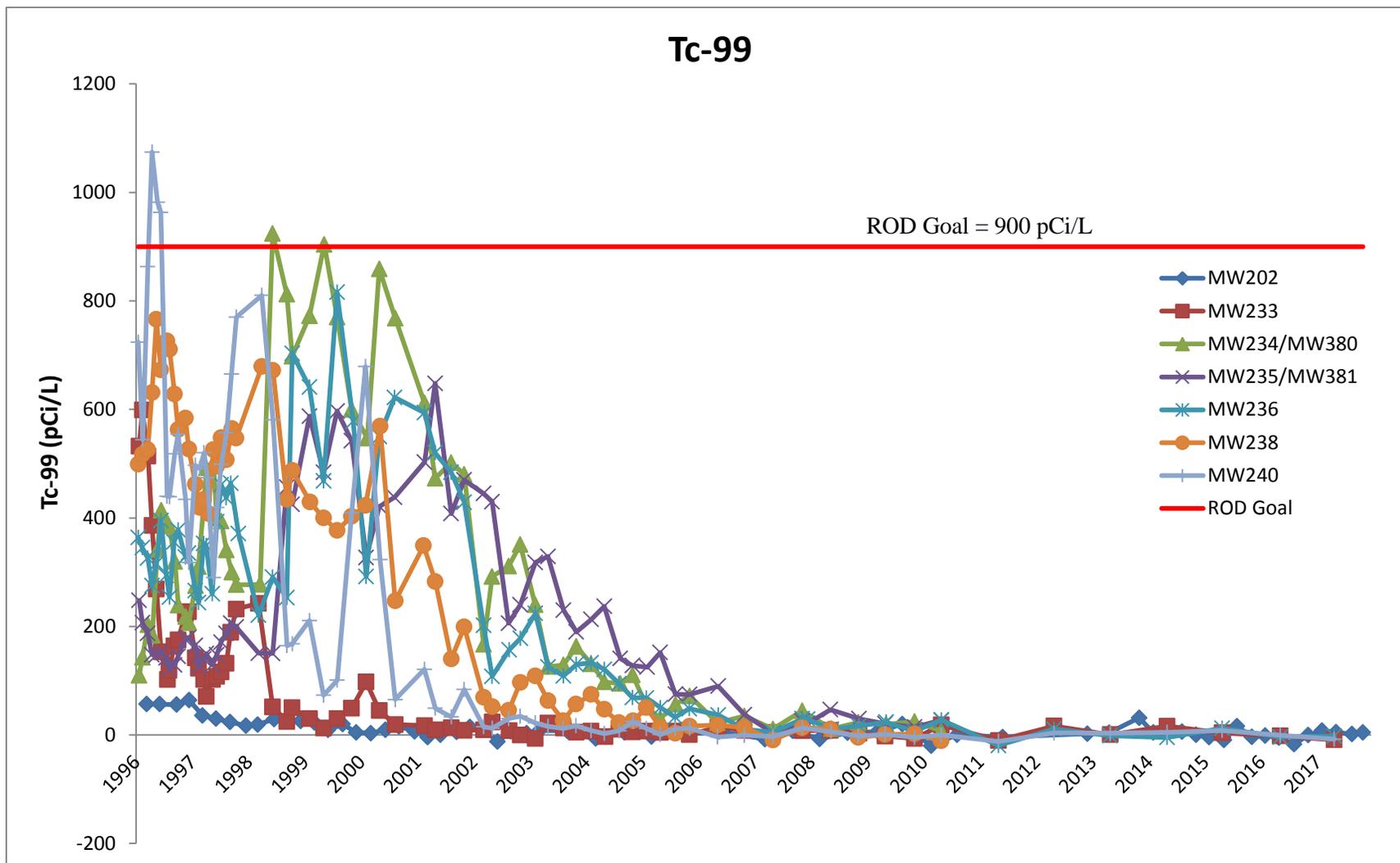
NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.19. Northwest Plume—North Well Field TCE Concentrations



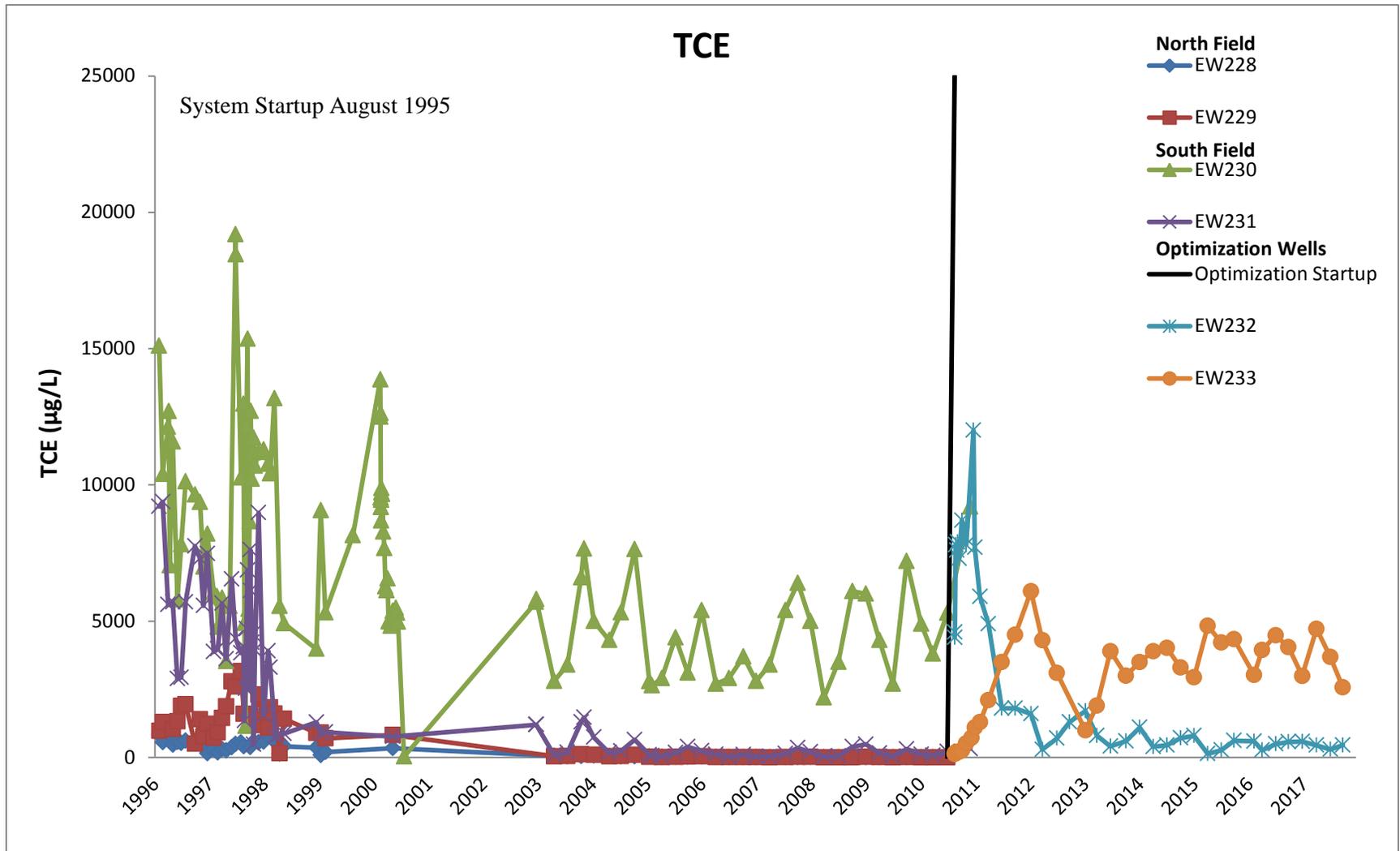
NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.20. Northwest Plume—South Well Field Tc-99 Activities



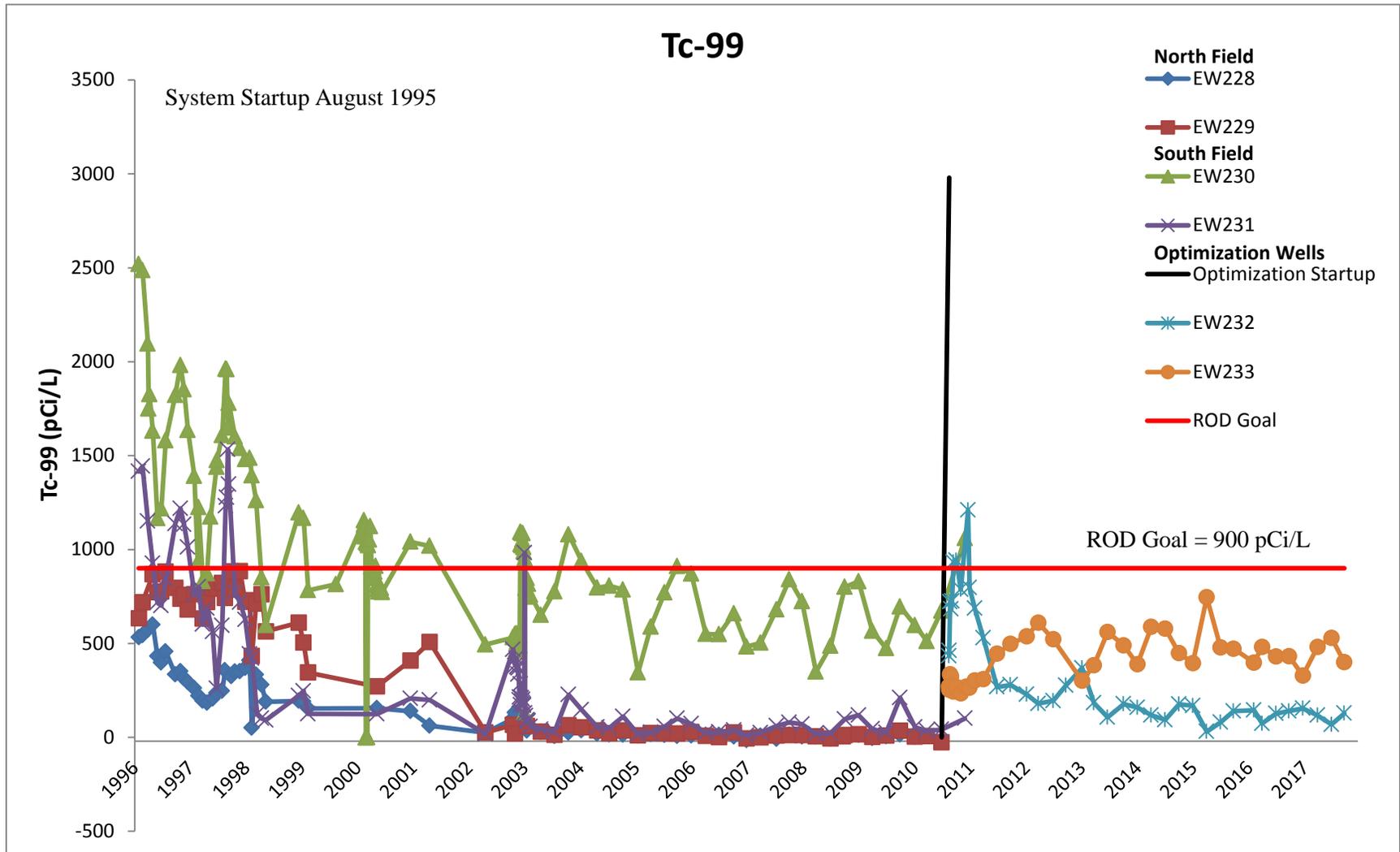
NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.21. Northwest Plume—North Well Field Tc-99 Activities



NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.22. Northwest Plume—TCE Concentrations in Extraction Wells



NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.23. Northwest Plume—Tc-99 Activities in Extraction Wells

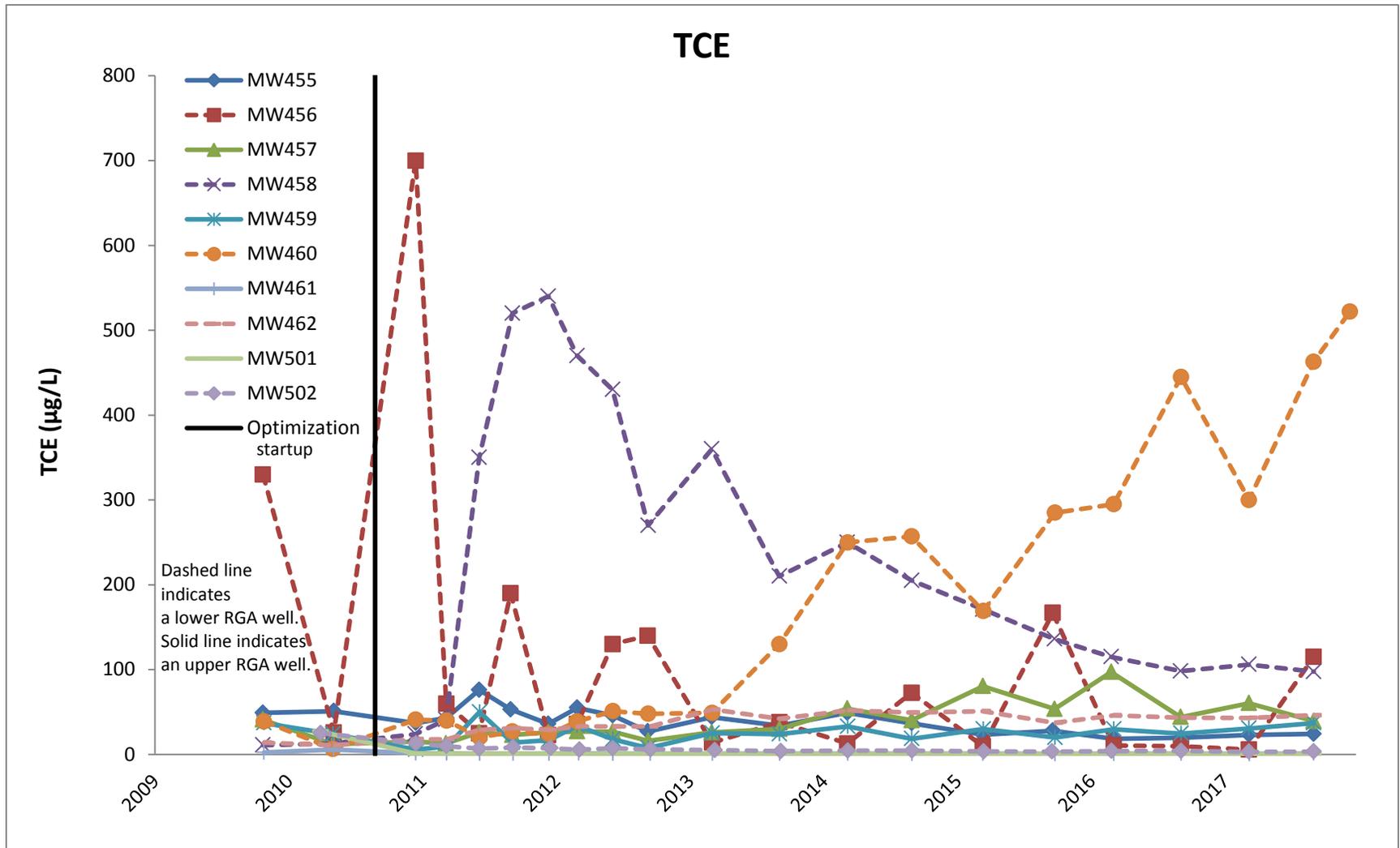
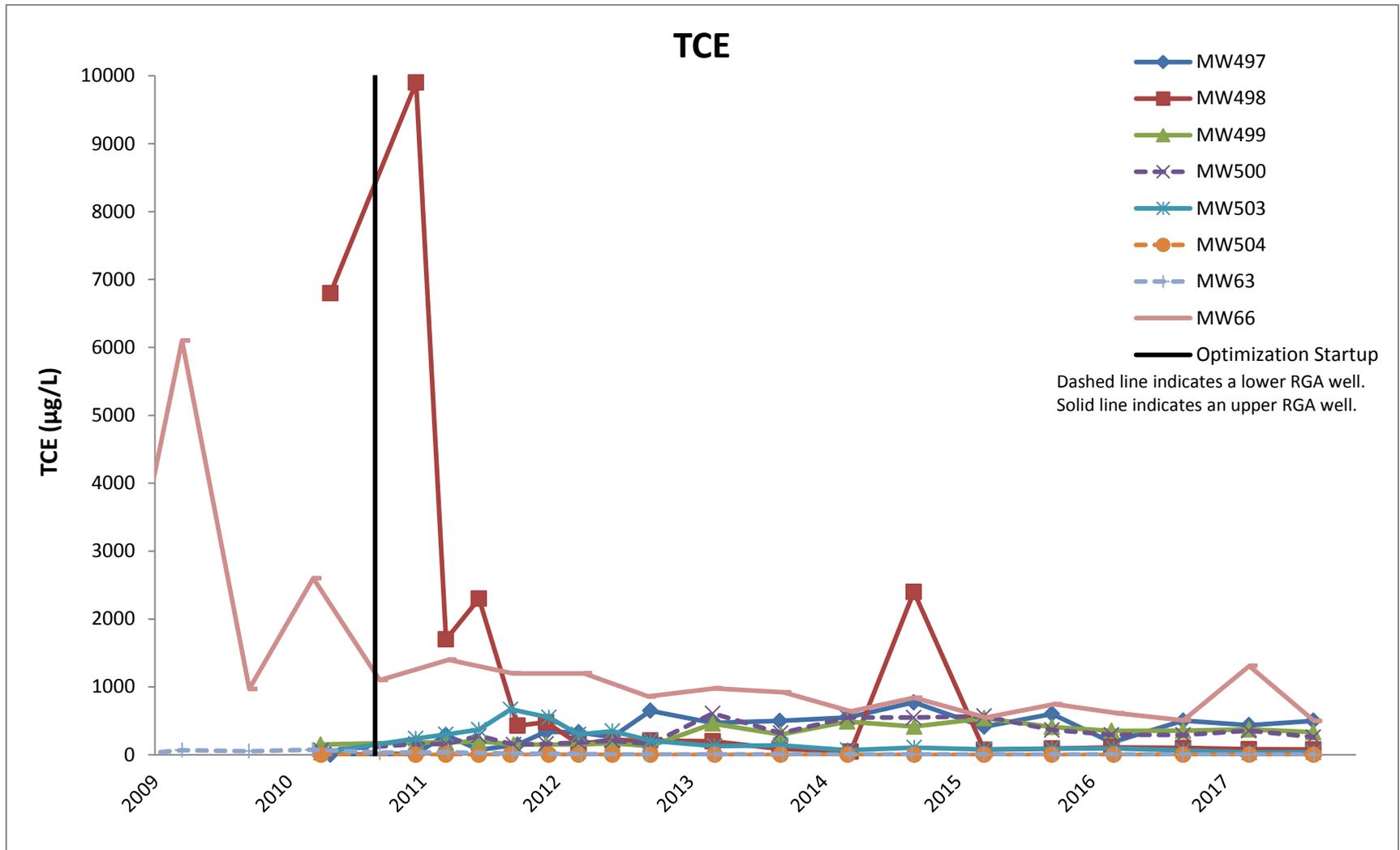


Figure B.24. Northwest Plume—New Well Field TCE Concentrations



NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.25. Northwest Plume—Additional Well Field TCE Concentrations

Northeast Plume CERCLA Outfall Monitoring

Water Quality Records for

Sample Date Range: 9/3/2013 - 12/27/2017

C001

Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Chronic Toxicity Analysis Results			Lab Sample ID*
	TCE µg/L	1,1-DCE µg/L	Tc-99 pCi/L	Ceriodaphnia dubia	TUc	Pimephales Promelas TUc	
9/3/2013	6.3	< 1					C13246018001
9/10/2013	10	< 5					C13253015001
9/10/2013	9.4	< 5					C13253015002
9/13/2013				< 1		< 1	QTXC0019-13
9/16/2013	9	< 5					C13259014001
9/23/2013	8.3	< 5					C13266024001
10/3/2013	9.4	< 1					C13276032002
10/3/2013			16.2				C13276015001
10/7/2013	6.6	< 1					C13280028001
10/14/2013	3.8	< 1					C13287017001
10/21/2013	< 1	< 1					C13294018001
10/25/2013				< 1		< 1	QTXC00110-13
10/28/2013	2.9	< 5					C13301021001
11/4/2013			20.2				C13308024001
11/4/2013	3	< 5					C13308025001
11/11/2013	3.3	< 5					C13315031001
11/11/2013	3.4	< 5					C13315031002
11/20/2013	3	< 5					C13324011001
11/25/2013	< 1	< 1					C13329036001
12/2/2013	< 1	< 1					C13336090001

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* Project Sample ID is used if Lab Sample ID is not available.

NOTE: This report does not include data that has been rejected during data assessment and/or data validation.

Northeast Plume CERCLA Outfall Monitoring

Water Quality Records for

Sample Date Range: 9/3/2013 - 12/27/2017

C001

Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Chronic Toxicity Analysis Results			Lab Sample ID*
	TCE µg/L	1,1-DCE µg/L	Tc-99 pCi/L	Ceriodaphnia dubia	TUc	Pimephales Promelas TUc	
1/21/2014			21.2				C14021027001
1/21/2014			19.1				C14021027002
1/21/2014	3.7	< 1					C14021029001
1/27/2014	3.5	< 1					C14027014001
1/31/2014				< 1		< 1	QTXC0011-14
2/5/2014	< 1	< 1					C14036044001
2/10/2014	4.7	< 1					C14041021001
2/17/2014	5.4	< 1					C14048023001
2/17/2014	5.7	< 1					C14048023002
2/24/2014	4.8	< 1					C14055021001
3/4/2014	4.6	< 1					C14063020001
3/10/2014	5.2	< 1					C14069033001
3/17/2014	4.8	< 1					C14076022001
3/24/2014	2.5	< 1					C14083021001
4/1/2014	2.68	< 1					345636002
4/10/2014			< 10.5				346575006
4/10/2014	3.05	< 1					346575008
4/14/2014	3.42	< 1					346699001
4/23/2014	3.48	< 1					347434001
4/28/2014	3.63	< 1					347629001

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Northeast Plume CERCLA Outfall Monitoring

Water Quality Records for

Sample Date Range: 9/3/2013 - 12/27/2017

C001

Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Chronic Toxicity Analysis Results			Lab Sample ID*
	TCE µg/L	1,1-DCE µg/L	Tc-99 pCi/L	Ceriodaphnia dubia	TUc	Pimephales Promelas TUc	
5/7/2014	4.29	< 1					348446001
5/7/2014	4.17	< 1					348446002
5/12/2014	5.02	< 1					348596001
5/19/2014	5.4	< 1					349038001
5/27/2014	11.1	< 1					349629001
6/2/2014	15	< 1					349858001
6/10/2014	4.1	< 1					350426001
6/16/2014	4.5	< 1					350780001
6/23/2014	5.79	< 1					351207001
6/29/2014				< 1		< 1	QTXC001-0614
6/30/2014	6.56	< 1					351615001
7/8/2014	5.68	< 1					352237001
7/14/2014	4.73	< 1					352624001
7/21/2014	3.73	< 1					353177001
7/21/2014			< 12.7				353177002
7/25/2014				< 1		< 1	QTXC001-0714
7/29/2014	4.95	< 1					353694001
8/5/2014	7.05	< 1					354137001
8/11/2014	4.35	< 1					354637001
8/18/2014	4.57	< 1					355052001

B-30

* Project Sample ID is used if Lab Sample ID is not available.

NOTE: This report does not include data that has been rejected during data assessment and/or data validation.

Northeast Plume CERCLA Outfall Monitoring

Water Quality Records for

Sample Date Range: 9/3/2013 - 12/27/2017

C001

Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Chronic Toxicity Analysis Results			Lab Sample ID*
	TCE µg/L	1,1-DCE µg/L	Tc-99 pCi/L	Ceriodaphnia dubia	TUc	Pimephales Promelas TUc	
8/25/2014	6.14	< 1					355488001
9/2/2014	5.39	< 1					355872001
9/8/2014	4.55	< 1					356338001
9/15/2014	4.6	< 1					356868001
9/23/2014	3.92	< 1					357338002
9/29/2014	4.44	< 1					357703001
10/7/2014	6.35	< 1					358590002
10/13/2014	0.52	< 1					358950002
10/13/2014			31.3				358950004
10/20/2014	0.51	< 1					359488004
10/27/2014	2.07	< 1					360011002
10/31/2014				< 1		< 1	QTXC001-1014
11/4/2014	< 1	< 1					360615002
11/11/2014	0.33	< 1					361080002
11/17/2014	< 1	< 1					361458002
11/17/2014	< 1	< 1					361458003
11/24/2014	< 1	< 1					361948003
12/1/2014	0.35	< 1					362225002
12/9/2014	< 1	< 1					362804003
12/15/2014	5.35	< 1					363245004

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* Project Sample ID is used if Lab Sample ID is not available.

NOTE: This report does not include data that has been rejected during data assessment and/or data validation.

Northeast Plume CERCLA Outfall Monitoring

Water Quality Records for

Sample Date Range: 9/3/2013 - 12/27/2017

C001

Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Chronic Toxicity Analysis Results			Lab Sample ID*
	TCE µg/L	1,1-DCE µg/L	Tc-99 pCi/L	Ceriodaphnia dubia	TUc	Pimephales Promelas TUc	
12/22/2014	5.34	< 1					363660002
12/29/2014	3.26	< 1					363851002
1/29/2015	7.68	< 1					366169002
2/2/2015	5.58	< 1					366311002
2/4/2015			22.5				366545001
2/4/2015			23.4				366545002
2/6/2015				< 1		< 1	QTXC001-0215
B-32 2/10/2015	3.96	< 1					366969005
2/18/2015	3.81	< 1					367365003
2/18/2015	3.45	< 1					367365002
2/23/2015	3	< 1					367607002
3/2/2015	3.36	< 1					367959002
3/11/2015	4.63	< 1					368692003
3/16/2015	1.19	< 1					368893002
3/16/2015	1.13	< 1					368893003
3/23/2015	4.16	< 1					369408002
3/30/2015	4.45	< 1					369759002
4/7/2015	5.84	< 1					370571006
4/13/2015	5.78	< 1					370982003
4/20/2015	4.83	< 1					371423003

* Project Sample ID is used if Lab Sample ID is not available.

NOTE: This report does not include data that has been rejected during data assessment and/or data validation.

Northeast Plume CERCLA Outfall Monitoring

Water Quality Records for

Sample Date Range: 9/3/2013 - 12/27/2017

C001

Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Chronic Toxicity Analysis Results			Lab Sample ID*
	TCE µg/L	1,1-DCE µg/L	Tc-99 pCi/L	Ceriodaphnia dubia	TUc	Pimephales Promelas TUc	
4/20/2015			18.2				371423001
4/24/2015				< 1		< 1	QTXC001-0415
4/28/2015	4.26	< 1					371963002
5/5/2015	5.31	< 1					372605002
5/5/2015	4.94	< 1					372605003
5/11/2015	4.8	< 1					372848003
5/18/2015	4.1	< 1					373300002
5/26/2015	5.68	< 1					373775002
6/2/2015	5.36	< 1					374232002
6/8/2015	6.39	< 1					374647003
6/15/2015	7.27	< 1					375139002
6/22/2015	6.12	< 1					375551002
6/29/2015	6.74	< 1					375908003
7/6/2015	6.47	< 1					376221002
7/13/2015			38				377120004
7/13/2015	7.59	< 1					377120006
7/17/2015				< 1		< 1	QTXC001-0715
7/20/2015	7.72	< 1					377564002
7/30/2015	7.86	< 1					378414002
8/3/2015	7.15	< 1					378504001

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* Project Sample ID is used if Lab Sample ID is not available.

NOTE: This report does not include data that has been rejected during data assessment and/or data validation.

Northeast Plume CERCLA Outfall Monitoring

Water Quality Records for

Sample Date Range: 9/3/2013 - 12/27/2017

C001

Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Chronic Toxicity Analysis Results			Lab Sample ID*
	TCE µg/L	1,1-DCE µg/L	Tc-99 pCi/L	Ceriodaphnia dubia	TUc	Pimephales Promelas TUc	
8/11/2015	7.6	< 1					379137003
8/17/2015	6.16	< 1					379518002
8/24/2015	5.1	< 1					379891004
8/31/2015	7.58	< 1					380316002
9/8/2015	8.55	< 1					380778002
9/15/2015	6.68	< 1					381232003
9/21/2015	5.86	< 1					381607002
9/28/2015	6.48	< 1					381967002
10/6/2015	6.11	< 1					382713002
10/13/2015	5.06	< 1					383173005
10/19/2015			< 13.3				383605001
10/19/2015	3.12	< 1					383605003
10/23/2015				< 1		< 1	QTXC001-1015
10/26/2015	3.34	< 1					384073001
11/3/2015	3.72	< 1					384687002
11/9/2015	3.29	< 1					385132003
11/16/2015	3.33	< 1					385708002
11/16/2015	3.23	< 1					385708003
11/23/2015	3.14	< 1					386250003
11/30/2015	3.52	< 1					386486002

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* Project Sample ID is used if Lab Sample ID is not available.

NOTE: This report does not include data that has been rejected during data assessment and/or data validation.

Northeast Plume CERCLA Outfall Monitoring

Water Quality Records for

Sample Date Range: 9/3/2013 - 12/27/2017

C001

Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Chronic Toxicity Analysis Results			Lab Sample ID*
	TCE µg/L	1,1-DCE µg/L	Tc-99 pCi/L	Ceriodaphnia dubia	TUc	Pimephales Promelas TUc	
12/7/2015	3.62	< 1					386947002
12/14/2015	6.21	< 1					387486003
12/21/2015	3.44	< 1					387961002
12/28/2015	4.04	< 1					388160002
1/4/2016			< 18.3				388627004
1/4/2016			< 16.3				388627005
1/4/2016	3.09	< 1					388627007
1/11/2016	5.15	< 1					389075002
1/19/2016	2.9	< 1					389669002
1/25/2016	3.36	< 1					390034002
1/29/2016				< 1		< 1	QTXC001-0116
2/1/2016	3.33	< 1					390453002
2/8/2016	3.3	< 1					390933003
2/17/2016	3.24	< 1					391578002
2/17/2016	3.24	< 1					391578003
2/22/2016	3.04	< 1					391842002
2/29/2016	3.41	< 1					392231002
3/8/2016	4.14	< 1					392896004
3/14/2016	3.72	< 1					393230001
3/21/2016	2.82	< 1					393611002

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* Project Sample ID is used if Lab Sample ID is not available.

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Northeast Plume CERCLA Outfall Monitoring

Water Quality Records for

Sample Date Range: 9/3/2013 - 12/27/2017

C001

Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Chronic Toxicity Analysis Results			Lab Sample ID*
	TCE µg/L	1,1-DCE µg/L	Tc-99 pCi/L	Ceriodaphnia dubia	TUc	Pimephales Promelas TUc	
3/28/2016	5.09	< 1					393963002
4/5/2016	2.66	< 1					394654001
4/5/2016	2.66	< 1					394654002
4/5/2016			< 16.5				394654006
4/11/2016	3.69	< 1					395009002
4/18/2016	3.84	< 1					395559002
4/22/2016				< 1		< 1	QTXC001-0416
4/26/2016	6.13	< 1					396121001
5/3/2016	2.55	< 1					396568003
5/9/2016	3.2	< 1					397075002
5/16/2016	2.42	< 1					397535002
5/23/2016	2.95	< 1					397984002
6/7/2016	3.2	< 1					398913002
6/13/2016	3.58	< 1					399291002
6/20/2016	3.68	< 1					399780002
6/27/2016	3.44	< 1					400228002
7/6/2016			20.1				401038004
7/6/2016			< 15				401038005
7/6/2016	3.33	< 1					401038007
7/11/2016	2.95	< 1					401330002

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Northeast Plume CERCLA Outfall Monitoring

Water Quality Records for

Sample Date Range: 9/3/2013 - 12/27/2017

C001

Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Chronic Toxicity Analysis Results			Lab Sample ID*
	TCE µg/L	1,1-DCE µg/L	Tc-99 pCi/L	Ceriodaphnia dubia	TUc	Pimephales Promelas TUc	
7/18/2016	3.77	< 1					401899002
7/25/2016	3.18	< 1					402378002
7/29/2016				< 1		< 1	QTXC001-0716
8/1/2016	3.5	< 1					402874004
8/8/2016	3.15	< 1					403433002
8/15/2016	3.63	< 1					403928002
8/22/2016	1.83	< 1					404376002
8/29/2016	3.46	< 1					404871002
9/6/2016	< 3.13	< 1					405309003
9/13/2016	< 3.11	1					405843002
9/19/2016	3.46	< 1					406268002
9/26/2016	< 1	< 1					406761002
10/3/2016	< 1	< 1					407409002
10/10/2016			22				407689005
10/10/2016	< 1	< 1					407689007
10/14/2016				< 1		< 1	QTXC001-1016
10/17/2016	< 3.79	< 1					408434002
10/24/2016	< 3.01	< 1					409012002
10/31/2016	< 3.68	< 1					409492002
11/8/2016	3.41	< 1					410178004

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* Project Sample ID is used if Lab Sample ID is not available.

NOTE: This report does not include data that has been rejected during data assessment and/or data validation.

Northeast Plume CERCLA Outfall Monitoring

Water Quality Records for

Sample Date Range: 9/3/2013 - 12/27/2017

C001

Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Chronic Toxicity Analysis Results			Lab Sample ID*
	TCE μg/L	1,1-DCE μg/L	Tc-99 pCi/L	Ceriodaphnia dubia	TUc	Pimephales Promelas TUc	
11/8/2016	3.25	< 1					410178005
11/14/2016	3.09	< 1					410597002
11/21/2016	2.79	< 1					411177002
11/28/2016	3.39	< 1					411421002
12/6/2016	2.61	< 1					412013002
12/12/2016	2.41	< 1					412498003
12/19/2016	1.62	< 1					413001002
12/27/2016	2.28	< 1					413365001
1/4/2017	1.71	< 1					413711002
1/9/2017			32.6				413954005
1/9/2017	4.16	< 1					413954007
1/17/2017	2.78	< 1					414480002
1/23/2017	2.66	< 1					414875002
1/30/2017	2.22	< 1					415330002
2/6/2017	3.06	< 1					415797003
2/13/2017	2.32	< 1					416621002
2/21/2017	2.92	< 1					417084002
2/21/2017	2.92	< 1					417084003
2/27/2017	2.58	< 1					417486002
3/6/2017	2.81	< 1					417894004

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* Project Sample ID is used if Lab Sample ID is not available.

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Northeast Plume CERCLA Outfall Monitoring

Water Quality Records for

Sample Date Range: 9/3/2013 - 12/27/2017

C001

Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Chronic Toxicity Analysis Results			Lab Sample ID*
	TCE µg/L	1,1-DCE µg/L	Tc-99 pCi/L	Ceriodaphnia dubia	TUc	Pimephales Promelas TUc	
3/10/2017				< 1		< 1	QTXC001-0317
3/13/2017	2	< 1					418494002
3/20/2017	2.79	< 1					418903002
3/27/2017	2.92	< 1					419376002
4/4/2017	2.73	< 1					419842005
4/4/2017	< 1	< 1					419842006
4/10/2017	2.78	< 1					420352002
4/17/2017	3.12	< 1					420901002
4/24/2017	2.66	< 1					421403002
5/1/2017	2.62	< 1					422065003
5/8/2017			< 19.9				422691001
5/8/2017	3.04	< 1					422691003
5/12/2017				< 1			QTXC0015-17
5/15/2017	2.62	< 1					423225002
5/22/2017	1.92	< 1					423789002
5/30/2017	2.3	< 1					424351002
6/5/2017	2.9	< 1					424743004
6/19/2017	2.79	< 1					425832002
6/26/2017	2.24	< 1					426426001
7/5/2017			28.4				427251006

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* Project Sample ID is used if Lab Sample ID is not available.

NOTE: This report does not include data that has been rejected during data assessment and/or data validation.

Northeast Plume CERCLA Outfall Monitoring

Water Quality Records for

Sample Date Range: 9/3/2013 - 12/27/2017

C001

Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Chronic Toxicity Analysis Results			Lab Sample ID*
	TCE μg/L	1,1-DCE μg/L	Tc-99 pCi/L	Ceriodaphnia dubia	TUc	Pimephales Promelas TUc	
7/5/2017	2.59	< 1					427251001
7/5/2017			26.8				427251005
7/11/2017	3	< 1					427613002
7/17/2017	2.94	< 1					428085001
7/24/2017	3.14	< 1					428713002
8/14/2017	1.97	< 1					430615001
8/21/2017	3.42	< 1					431181002
B-40 8/25/2017				< 1		< 1	QTXC0018-17
8/28/2017	3.06	< 1					431681002
10/11/2017			45.5				434895003
10/11/2017	0.67	< 1					434895007
10/11/2017			59.4				439669001
10/16/2017	0.42	< 1					435322003
10/25/2017	< 1	< 1					436374003
10/30/2017	0.44	< 1					436651003
11/6/2017	0.63	< 1					437150004
11/10/2017				< 1		< 1	QTXC00111-17
11/13/2017	< 1	< 1					437793005
11/30/2017	0.55	< 1					439009002
12/5/2017	< 1	< 1					439319001

* Project Sample ID is used if Lab Sample ID is not available.

NOTE: This report does not include data that has been rejected during data assessment and/or data validation.

Northeast Plume CERCLA Outfall Monitoring

Water Quality Records for

Sample Date Range: 9/3/2013 - 12/27/2017

C001

Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Chronic Toxicity Analysis Results			Lab Sample ID*
	TCE µg/L	1,1-DCE µg/L	Tc-99 pCi/L	Ceriodaphnia dubia	TUc	Pimephales Promelas TUc	
12/5/2017	< 1	< 1					439319004
12/11/2017	< 1	< 1					439844005
12/18/2017	< 1	< 1					440275003
12/27/2017	< 1	< 1					440755003

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* Project Sample ID is used if Lab Sample ID is not available.

NOTE: This report does not include data that has been rejected during data assessment and/or data validation.

Northeast Plume Optimization Transect Monitoring Wells

Water Quality Records for

MW524

***Sample Date Range:
10/4/2016 - 10/11/2017***

Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	Tc-99 pCi/L	
10/4/2016	4.13	< 1	< -2.15	407700003
10/4/2016	5.52	< 1	< -1.43	407700002
1/10/2017	3.74	< 1	< -3.88	414020001
4/3/2017	3.58	< 1	14.5	419846001
7/13/2017	2.36	< 1	< 9.65	427964020
10/11/2017	4.53	< 1	< 1.65	435057010

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Northeast Plume Optimization Transect Monitoring Wells

Water Quality Records for

MW525

***Sample Date Range:
10/4/2016 - 10/11/2017***

Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	Tc-99 pCi/L	
10/4/2016	403	0.77	27.2	407700004
1/10/2017	607	< 5	82.6	414020002
1/10/2017	599	< 5	88.4	414020003
4/3/2017	606	< 10	102	419846002
7/11/2017	510	< 10	64.4	427966001
10/11/2017	635	< 10	46.9	435057012
10/11/2017	302	< 10	52.5	435057011

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Northeast Plume Optimization Transect Monitoring Wells

Water Quality Records for

MW526

***Sample Date Range:
10/4/2016 - 10/11/2017***

Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	Tc-99 pCi/L	
10/4/2016	145	1.73	139	407700005
1/10/2017	214	1.72	134	414020004
4/3/2017	173	1.2	164	419846003
4/3/2017	168	1.24	175	419846004
7/11/2017	123	< 2	156	427966002
10/11/2017	131	1.04	90.2	435057013

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Northeast Plume Optimization Transect Monitoring Wells

Water Quality Records for

MW527

***Sample Date Range:
10/4/2016 - 10/11/2017***

Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	Tc-99 pCi/L	
10/4/2016	5.01	< 1	14.4	407700006
1/10/2017	8.67	< 1	32	414020005
4/3/2017	6.82	< 1	26.3	419846005
7/11/2017	4.92	< 1	24.6	427966003
7/11/2017	4.91	< 1	20.1	427966004
10/11/2017	5	< 1	< 15.7	435057014

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Northeast Plume Optimization Transect Monitoring Wells

Water Quality Records for

MW528

***Sample Date Range:
10/4/2016 - 10/11/2017***

Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	Tc-99 pCi/L	
10/4/2016	32.2	< 1	< -2.63	407700007
1/10/2017	24.4	< 1	< 0.895	414020006
4/3/2017	26.7	< 1	< 9.06	419846006
7/11/2017	21.1	< 1	< 3.27	427966005
10/11/2017	20	< 1	< 3.96	435057015

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Northeast Plume Optimization Transect Monitoring Wells

Water Quality Records for

MW529

*Sample Date Range:
10/4/2016 - 10/11/2017*

Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	Tc-99 pCi/L	
10/4/2016	63.3	1.4	105	407700008
1/10/2017	95.8	2.14	165	414020007
4/3/2017	90.9	3.55	146	419846007
7/11/2017	98.9	2.07	139	427966006
10/11/2017	94.2	4.56	104	435057016

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Northeast Plume Optimization Transect Monitoring Wells

Water Quality Records for

MW530

***Sample Date Range:
10/4/2016 - 10/11/2017***

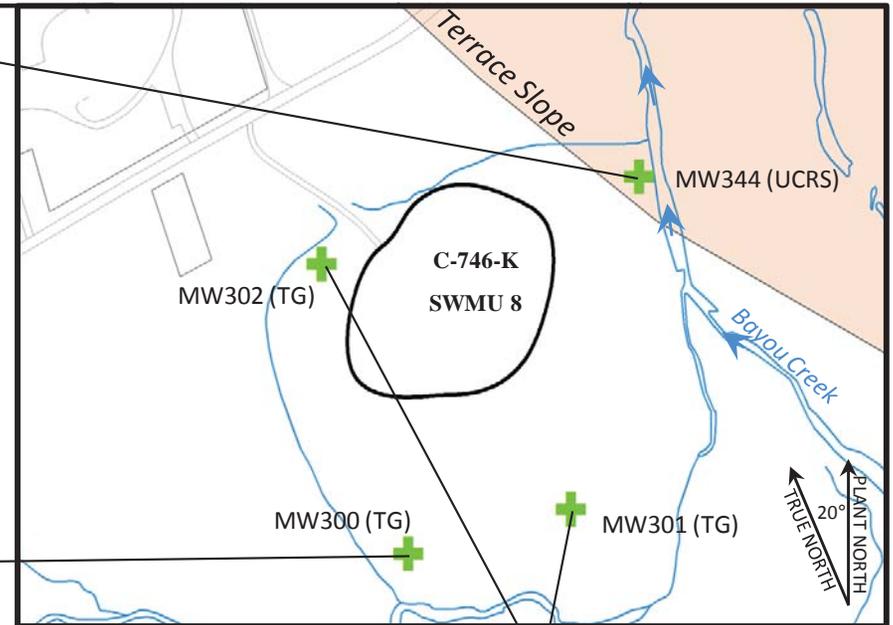
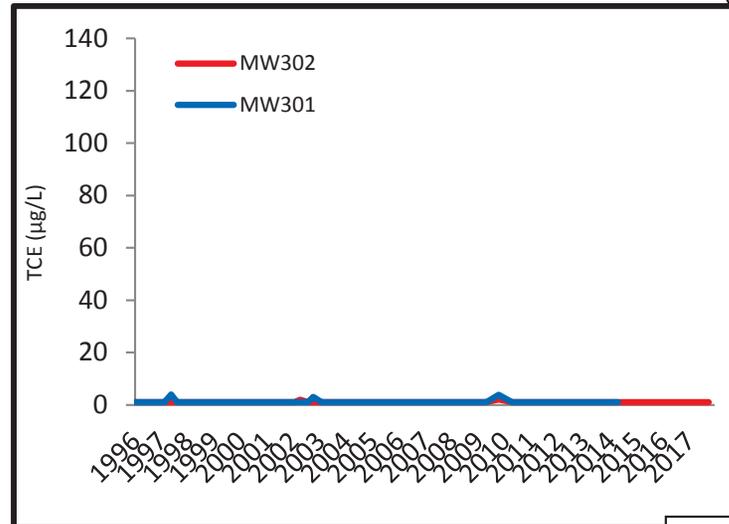
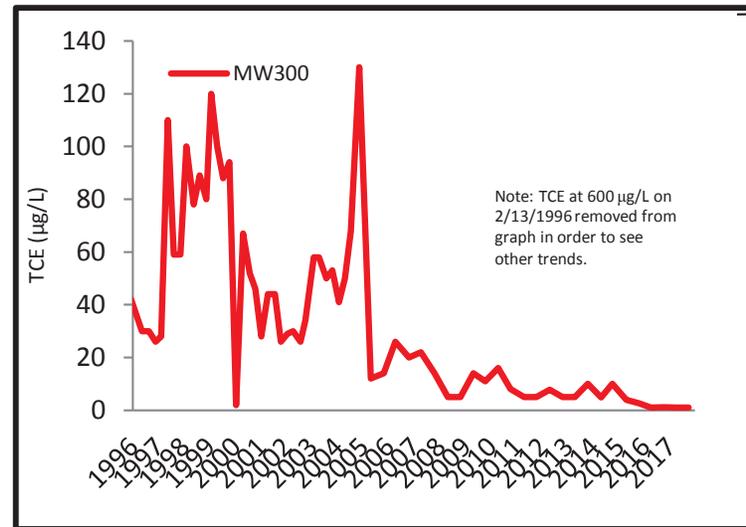
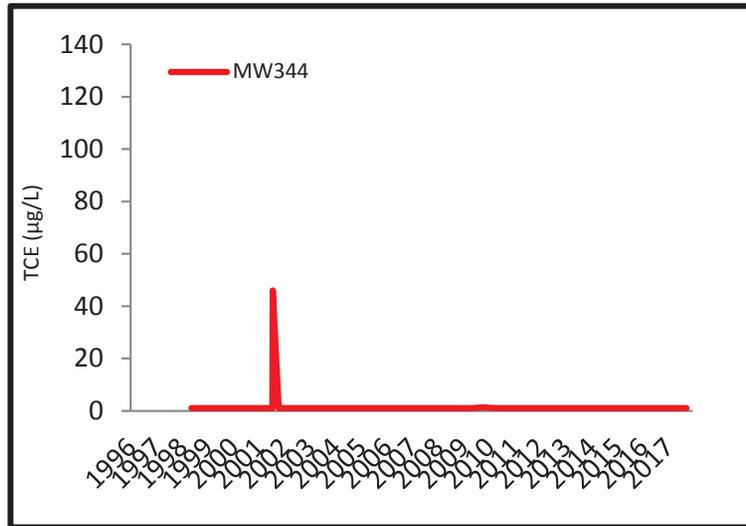
Sample Date	Organic Laboratory Analysis Results		Radiological Laboratory Analysis Results	Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	Tc-99 pCi/L	
10/4/2016	49.3	< 1	110	407700001
1/10/2017	63.2	< 1	204	414020008
4/3/2017	53	< 1	236	419846008
7/11/2017	58.3	< 1	209	427966007
10/11/2017	52.1	< 1	156	435057017

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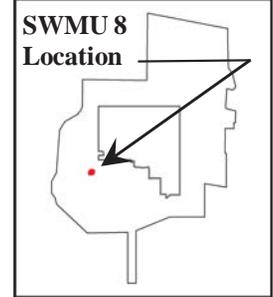
APPENDIX C

C-746-K LANDFILL DATA

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LEGEND
 + Monitoring Well
 TG = Terrace Gravels
 UCRS = Upper Continental Recharge System
 ~ Landfill Boundary
 NOT TO SCALE



U.S. DEPARTMENT OF ENERGY
 DOE PORTSMOUTH/PADUCAH PROJECT OFFICE
 PADUCAH GASEOUS DIFFUSION PLANT



Figure C.1. TCE Trends in SWMU 8 Wells

C-746-K Landfill Monitoring

Water Quality Records for

Sample Date Range: 5/31/1994 - 10/6/2017

MW300

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Sample Date	Organic Laboratory Analysis Results					Inorganic Laboratory Analysis Results			Radiological Laboratory Analysis Results			Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Al mg/L	Fe mg/L	Mn mg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	
5/31/1994	27	18	23	< 5		87.7	1230	< 50.7	25.8	< 31.3	7.68	3220303
3/21/1995	52	72	61	< 50	< 50		973	49	33.8	27	1	950322-056
7/12/1995	38	< 50	< 50	< 50	< 50		761	52.4	47	143	3	950713-153
9/12/1995	38	< 50	< 50	< 50	< 50	52.8	679	57.5	24	33	12	950913-029
12/7/1995	42	56	47	< 5	< 5		767	44.6	59.9	-6	0	951211-006
2/13/1996	600	54	< 50	< 50	< 50	64.5	985	60			4	960214-062
5/9/1996	30	< 50	< 50	< 50	< 50	44.9	792	44.9	0.4	16	2	960513-011
8/19/1996	30	< 50	< 50	< 50	< 50	37.2	568	44.4	22.9	31.5	0	960819-088
11/18/1996	26	< 50	< 50	< 50	< 50	35.8	570	37.5	7.4	48	0	961118-095
2/10/1997	28	49	30	< 25	< 25	21.3	412	20.6	5	45	0	970211-009
5/13/1997	110	120	61	< 50	< 50	31.3	518	27.6	5.2	11	0	970514-042
8/7/1997	59	< 50	68	< 50	< 50	27	497	31.2	12	13	0	970807-104
11/10/1997	59	110	66	< 25	< 25	31.8	521	32.3	-7.7	6	4	971110-114
2/4/1998	100	240	140	< 50	< 50	36.2	674	33.8	< -0.4	< 2	< -2	C980370056
5/19/1998	78	460	< 250	< 250	< 250	30.8	534	30.5	< 6.3	< 54	< 4.8	C981400029
8/11/1998	89	230	120	< 5	< 5	27.3	532	31	< 37.7	< 11	< 9.2	C982240047
11/16/1998	80	< 250	< 250	< 250	< 250	25.2	406	28.1	32.52	< 37.03	< -4.1	C983200080
1/25/1999	120	250	< 250	< 250	< 250	27	490	27.4	< 1.11	< 4.76	< -8.4	C990250154
4/19/1999	100	240	110	< 100	< 100	26.7	559	25.7	< 28.48	< 55.05	< -4.95	C991090060
7/15/1999	88	210	< 100	< 100	< 100	24.8	506	28.3	< 2.73	< -19.36	< 3.06	C991960146
10/14/1999	94	210	< 200	< 200	< 200	23.2	500	27.2	< 18.8	< 40.17	< -1.57	C992870104
1/13/2000	2	< 5	< 5	< 5	< 5	19.2	303	20.8	< -2.5	< 24.46	< 8.53	C000130120
1/13/2000	2	< 5	< 5	< 5	< 5	15.9	301	19	< -4.85	< -7.6	< 8.59	C000130123
4/27/2000	67	130	80	< 50	< 50	18.2	310	21.4	< 10.97	66.12	< -1.63	C001190009
7/27/2000	52	< 100	< 100	< 100	< 100	15.2	318	23.7	< 15.87	< 55.01	< 11.9	C002090106
10/16/2000	46	100	60	< 5	< 5	14.8	278	23	< 8.41	< 36.69	< 2.75	C002910044
1/10/2001	28	64	39	< 5	< 5	10.3	217	18	< -9.46	< 4.09	< 2.2	C010100097
4/16/2001	44	100	64	< 50	< 50	15	340	24.1	< -7.63	< 25.6	< 27.4	C011060085
7/24/2001	44	93	59	< 50	< 50	16.4	331	28.6	< 27	< 8.41	< 7.99	C012060008
10/15/2001	26	< 50	< 50	< 50	< 50	10.6	220	18.8	< 32.5	33.9	< -2.48	C012880074
1/22/2002	29	< 100	< 100	< 100	< 100	10	286	20.9	< 43.8	< 19.4	< 3.36	C020220046
4/10/2002	30	57	< 50	< 50	< 50	13	381	26.6	< -15.1	< 50.8	< 2.75	C021010048
7/24/2002	26	< 100	< 100	< 100	< 100	12.6	363	24.8	< 23.2	< 43.3	21.5	C022060003

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Water Quality Records for

Sample Date Range: 5/31/1994 - 10/6/2017

MW300

Sample Date	Organic Laboratory Analysis Results					Inorganic Laboratory Analysis Results			Radiological Laboratory Analysis Results			Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Al mg/L	Fe mg/L	Mn mg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	
7/24/2002	26	< 100	< 100	< 100	< 100	12.9	339	26.8	< 47.4	62.2	< 8.97	C022060004
10/3/2002	34	66	< 50	< 50	< 50	0.0101	0.33	36.9	< 26.9	< 24.9	17.5	C022760027
1/30/2003	58	160	100	< 50	< 50	10.8	395	23.5	< 3.65	< 3.52	< 1.19	C030310020
4/15/2003	58	180	< 100	< 100	< 100	6.86	437	22.9	< 2.47	< 20.3	< 4.19	C031050068
7/30/2003	50	< 100	< 100	< 100	< 100	14.3	382	25.4	< 51.5	53.5	< 4.26	C032110045
7/30/2003	42	< 100	< 100	< 100	< 100	21.9	409	27	< 9.4	< 48.7	< 1.31	C032110044
10/21/2003	53	92	63	< 50	< 50	0.55	497	24.9	< 39.1	< 38	< -4.59	C032950017
1/26/2004	41	120	< 100	< 100	< 100	0.471	414	1.91	< 50.1	< 1.36	< 6.71	C040260079
4/21/2004	50	140	< 100	< 100	< 100	0.591	327	17.2	< -5.55	< 8.26	< -1.58	C041130033
7/15/2004	68	160	< 100	< 100	< 100	0.69	424	24.2	< 21.8	< -11.1	< -7.47	C041970166
7/15/2004	55	140	< 100	< 100	< 100	0.882	396	22.9	< 15	< 17.4	< -6.91	C041970167
11/9/2004	130	110	< 100	< 100	< 100	0.99	369	22.9	< 12	< 29.7	< -2.6	C043150018
4/27/2005	12	51	< 50	< 50	< 50	0.289	126	11.8	< 19.1	39.8	< -2.41	C051170049
10/25/2005	14	65	< 50	< 50	< 50	0.344	178	15.2	< 2.14	29.6	< 6.49	C052990006
10/25/2005	13	55	< 50	< 50	< 50	0.259	199	16.1	< 18.1	38.4	< 8.37	C052990007
4/11/2006	26	120	77	< 50	< 50	< 0.2	161	16.5	< 0.896	< 28.2	< -2.86	C061020009
10/23/2006	< 20	< 100	< 100	< 100	< 100	0.334	124	16.2	< -0.251	< 16.2	< 8.62	C062960050
4/12/2007	< 22	< 120	< 60	< 50	< 50	< 0.2	203	18.1	< -3.16	< 33.1	< -1.66	C071030007
10/25/2007	14	120	77	< 5	< 5	< 0.2	162	19.7	< -0.658	< 25.1	< 1.82	C072980183
10/25/2007	13	120	75	< 5	< 5	< 0.2	166	20.2	< 4.54	27.8	< 1.13	C072980184
4/28/2008	< 5	42	34	< 25	< 5	< 0.2	117	16.8	< -0.155	64.4	< 0.8	C081200001
10/29/2008	< 5	46	29	< 25	< 5	< 0.2	110	16.9	< 5.22	34.8	< 6.45	C08304013002
10/29/2008	< 5	48	32	< 25	< 5	< 0.2	63.9	15	< 6.06	43.7	< 11.7	C08304013001
4/30/2009	14	93	52	< 5	< 5	< 0.2	104	27.4	< -0.39	37	< 5.55	C09120015001
10/19/2009	11	39	24	< 2	< 2	< 0.2	36.9	11.2	< -1.13	28.4	< -8.36	C09292035001
10/19/2009	9	41	24	< 2	< 2	< 0.2	65	9.73	< -2.41	27.1	< -8.19	C09292035002
4/20/2010	16	130	58	< 25	< 5	< 0.2	121	19.2	< -4.11	33.6	< -1.74	C10110009002
10/13/2010	8	130	72	< 25	< 5	< 0.4	241	27.2	< 21.9	48.4	< -7.38	C10286021002
10/13/2010	8	140	78	< 25	< 5	< 0.4	165	25.5	< 2.34	62.3	< -3.09	C10286021003
4/26/2011	< 5	68	44	< 25	< 5	0.625	129	14.1	< 0.246	34.3	< -0.327	C11116009001
10/19/2011	< 5	71	44	< 5	< 5	0.358	78.8	15.8	< 13.2	53.9	< -4.3	C11292015002
10/19/2011	< 5	68	42	< 5	< 5	0.558	155	18.4	< 2.93	65.7	< 0.89	C11292015001
4/24/2012	7.8	100	59	< 5	< 5	< 2	218	18.2	< 3.57	80.6	< 3.84	C12115011001

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Water Quality Records for

Sample Date Range: 5/31/1994 - 10/6/2017

MW300

Sample Date	Organic Laboratory Analysis Results					Inorganic Laboratory Analysis Results			Radiological Laboratory Analysis Results			Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Al mg/L	Fe mg/L	Mn mg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	
10/29/2012	< 5	93	56	< 5	< 5	0.271	222	25.5	< 1.27	49.6	< -4.68	C12303019003
10/29/2012	< 5	100	69	< 5	< 5	1.65	217	25.3	< 12.6	57.8	< -2.74	C12303019002
4/23/2013	< 5	93	73	< 5	< 5	< 0.2	292	23.6	< 4.25	< 42	< -2.67	C13113007001
10/21/2013	< 10	76	53	< 10	2.2	< 0.2	201	21.4	< 3.28	61.9	< 0.287	C13294037002
10/21/2013	< 10	76	52	< 10	< 2	< 0.2	208	20.7	< -6.52	< 36.5	< 11.5	C13294037003
4/29/2014	4.9	82.4	56.8	< 10	< 10	0.0253	276	19.3	< 10.4	37.4	< 0.00258	347676009
10/7/2014	< 10	64.3	55.2	< 10	< 10	< 0.05	236	18.9	< 5	23.5	< -2.04	358703001
10/7/2014	< 10	66.7	54	< 10	< 10	0.0224	253	19.5	< 2.03	29.1	< -4.11	358703003
4/28/2015	3.9	< 1	< 1	< 1	< 1	< 0.05	26.9	3.38	< 1.86	21.2	< 3.96	371985001
10/27/2015	2.56	46.6	35.9	< 1	0.51	< 0.5	192	16.8	< 6.99	30.2	< 4.16	384156001
4/13/2016	0.94	22.1	16.7	< 1	< 1	0.0364	99.1	10.8	< -4.3	31.5	< -4.87	395245003
4/13/2016	0.97	22	17.2	< 1	< 1	0.0608	92.1	10.5	< -4.61	27.8	< -5.55	395245005
10/11/2016	1.17	19.6	14.5	< 1	< 1	0.0314	79.6	8.18	< 3.41	25.3	< -5	407853001
4/6/2017	1.06	24.6	19.5	< 2	< 2	0.0241	129	14.6	< 0.27	20.6	< 0.563	420096001
10/6/2017	< 1	< 1	< 1	< 1	< 1	0.127	77.5	12.5	< -0.084	23.7	< 1.57	434592001

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Water Quality Records for

Sample Date Range: 5/31/1994 - 10/6/2017

MW301

Sample Date	Organic Laboratory Analysis Results					Inorganic Laboratory Analysis Results			Radiological Laboratory Analysis Results			Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Al mg/L	Fe mg/L	Mn mg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	
6/1/1994	< 5	< 5	3	< 5		0.823	470	28.3	< 10.4	< 19.4	5.07	3220101
3/21/1995	< 1	< 5	< 5	< 5	< 5		236	22	-5.9	34	3	950322-052
7/12/1995	< 1	< 5	< 5	< 5	< 5		249	22.1	14	102	9	950713-157
9/12/1995	< 1	< 5	< 5	< 5	< 5	< 0.625	171	17.8	-2.6	17	3	950913-025
12/7/1995	1	< 5	< 5	< 5	< 5		99	12.3	30.3	49	6	951211-014
2/13/1996	< 1	< 5	< 5	< 5	< 5	0.766	166	18.9	6.3	82	0	960214-066
5/9/1996	< 1	< 5	< 5	< 5	< 5	0.975	224	18	0.3	22	3	960513-010
8/19/1996	< 1	< 5	< 5	< 5	< 5	1.58	284	21.3	5.5	42.4	7	960819-087
11/18/1996	< 1	< 5	< 5	< 5	< 5	1.32	175	19.5	-1.4	47	0	961118-096
11/18/1996	< 1	< 5	< 5	< 5	< 5	< 0.75	< 0.3	< 0.05	6	15	0	961118-097
2/10/1997	< 1	< 5	< 5	< 5	< 5	1.13	225	19.8	12.6	47	0	970211-015
5/13/1997	4	< 5	< 5	< 5	< 5	< 0.75	248	22	-11	45	0	970514-043
8/7/1997	< 1	< 5	< 5	< 5	< 5	< 1	203	17.2	19.2	160	0	970807-105
11/10/1997	< 1	< 5	< 5	< 5	< 5	< 1	72.4	10	4.3	18	3	971110-115
2/4/1998	< 1	< 5	< 5	< 5	< 5	2.44	160	15.8	< -11.3	106	< 4	C980370057
5/19/1998	< 1	< 5	< 5	< 5	< 5	< 1	169	17.4	< -2.3	< 25	< 8.2	C981400028
8/11/1998	< 1	< 5	< 5	< 5	< 5	2.13	170	16.3	< -2.3	< 35	< 4.3	C982240046
11/16/1998	< 1	< 5	< 5	< 5	< 5	< 1	102	12.8	< 11.32	55.82	< -15.9	C983200081
1/25/1999	< 1	< 5	< 5	< 5	< 5	< 1	138	14.9	< 3.83	< 52.42	< -5.8	C990250155
4/19/1999	< 1	< 5	< 5	< 5	< 5	< 0.2	203	18.2	< -6.97	< 49.78	< -10.6	C991090061
7/15/1999	< 1	< 5	< 5	< 5	< 5	< 0.2	210	17.5	< -12.3	< 32.1	< -6.69	C991960147
10/14/1999	< 1	< 5	< 5	< 5	< 5	< 0.2	73.1	10.3	< 1.83	41.56	< 0.419	C992870105
10/14/1999	< 1	< 5	< 5	< 5	< 5	< 0.2	73.7	10.6	17.2	50.79	< 2.57	C992870106
1/13/2000	< 1	< 5	< 5	< 5	< 5	< 0.2	77.8	9.32	< 6.93	52.05	< 6.54	C000130122
4/27/2000	< 1	< 5	< 5	< 5	< 5	< 0.2	152	15.6	< 4.87	< -6.93	< -12.6	C001190010
7/27/2000	< 1	< 5	< 5	< 5	< 5	< 0.2	135	14.9	< 2.09	< 4.03	< -2.23	C002090105
10/16/2000	< 1	< 5	< 5	< 5	< 5	< 0.2	70.6	10.6	< -16.56	63.66	< -2.02	C002910045
1/10/2001	< 1	< 5	< 5	< 5	< 5	< 0.2	95.6	12.2	< 6.56	27.9	< -1.62	C010100098
4/16/2001	< 1	< 5	< 5	< 5	< 5	1.86	139	13.8	< 16.1	32.7	< 10.7	C011060087
4/16/2001	< 1	< 5	< 5	< 5	< 5	0.231	128	13.8	< 11.1	30.1	< 5.23	C011060088
7/24/2001	< 1	< 5	< 5	< 5	< 5	< 0.2	106	13.1	< -0.871	54.4	< 7.08	C012060010
10/15/2001	< 1	< 5	< 5	< 5	< 5	< 0.2	107	12.8	< 21.9	37.9	< 5.53	C012880075
1/25/2002	< 1	< 5	< 5	< 5	< 5	< 0.2	154	15.4	< -2.44	51.6	< 6.3	C020250056

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Water Quality Records for

Sample Date Range: 5/31/1994 - 10/6/2017

MW301

Sample Date	Organic Laboratory Analysis Results					Inorganic Laboratory Analysis Results			Radiological Laboratory Analysis Results			Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Al mg/L	Fe mg/L	Mn mg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	
1/25/2002	< 1	< 5	< 5	< 5	< 5	< 0.2	146	14.5	< 3.69	< 28.3	< 2.51	C020250055
4/10/2002	< 1	< 5	< 5	< 5	< 5	0.317	172	16.2	< 19	< 5.09	< 0.617	C021010049
7/24/2002	< 1	< 5	< 5	< 5	< 5	< 0.2	186	15.4	< 36.1	< 23.5	17.8	C022060005
10/3/2002	3	< 5	< 5	< 5	< 5	< 0.002	< 0.2	14.5	< 5.72	46.8	< 15	C022760029
1/30/2003	< 1	< 5	< 5	< 5	< 5	0.287	166	15.5	< -1.71	< 6.29	< -0.324	C030310017
1/30/2003	< 1	< 5	< 5	< 5	< 5	4.62	203	16.1	< 0.197	< 3.65	< 3.3	C030310018
4/14/2003	< 1	< 5	< 5	< 5	< 5	1.03	232	17.2	< 0.227	< 37.1	< -0.162	C031040077
7/30/2003	< 1	< 5	< 5	< 5	< 5	0.71	218	15.4	< 32.9	50.2	< 2.84	C032110046
10/21/2003	< 1	< 5	< 5	< 5	< 5	< 0.2	257	17.4	< 9.47	< 31.4	< 0	C032950018
1/26/2004	< 1	< 5	< 5	< 5	< 5	0.577	266	19.3	< 17.7	73	< 11.7	C040260081
1/26/2004	< 1	< 5	< 5	< 5	< 5	0.39	267	19.6	< 14.9	53.3	< 10.8	C040260080
4/21/2004	< 1	< 5	< 5	< 5	< 5	< 0.2	238	18	< 9.42	< 42.4	< -3	C041130034
7/15/2004	< 1	5	5	< 5	< 5	< 0.2	277	19.8	< 17.3	< 40.3	< -12.4	C041970168
10/19/2004	< 1	< 5	< 5	< 5	< 5	< 0.2	152	13.7	< -32.8	< 33.7	< -1.56	C042940033
4/27/2005	< 1	< 5	< 5	< 5	< 5	< 0.2	232	20.1	< -0.987	129	< -6.58	C051170050
10/25/2005	< 1	5.1	5.6	< 5	< 5	< 0.2	289	19.9	< -12.7	51.3	< 4.49	C052990008
4/11/2006	< 1	< 5	5.4	< 5	< 5	< 0.2	279	19.6	< 3.04	62	< 8.86	C061020011
4/11/2006	< 1	< 5	5.2	< 5	< 5	< 0.2	287	20.9	< 8.03	50.9	< -2.97	C061020010
10/23/2006	< 1	5.9	5.8	< 5	< 5	0.76	295	20.5	< 13.7	< 31.7	< 15.3	C062960051
4/12/2007	< 1	< 5	< 5	< 5	< 5	2.42	265	15.8	< 7.86	60.8	< 4.66	C071030005
10/25/2007	< 1	3.6	3.1	< 1	< 1	1.06	117	8.42	< 1.59	39.3	< -9.49	C072980109
4/28/2008	< 1	< 1	2.9	< 5	< 1		192	15.3	< 25.6	45.9	< -3.1	C081190047
4/28/2008	< 1	< 1	2.8	< 5	< 1		185	14.7	< 20.4	79.9	< -4.91	C081190048
10/29/2008	< 1	3.8	3.9	< 5	< 1	< 0.2	240	16.3	< 7.81	77.1	< 5.16	C08304013003
4/30/2009	< 1	3.8	3.9	< 1	< 1	< 0.2	228	15.9	< 7.32	71	< 7.74	C09120015002
4/30/2009	< 1	4.5	4.4	< 1	< 1	< 0.2	160	14.5	< 17.8	85	< 12.3	C09120015003
10/19/2009	3.8	5.5	4.8	< 1	< 1	< 0.2	208	14	< 0.393	58.6	< -1.75	C09292035003
4/20/2010	< 1	< 5	3	< 5	< 1	< 0.2	198	13.8	< 11.5	50.7	< -8.41	C10110009004
4/20/2010	< 1	< 5	2.9	< 5	< 1	< 0.2	196	13.7	< -7.51	45.2	< -8.84	C10110009005
10/13/2010	< 1	< 5	1.9	< 5	< 1	< 0.4	133	11	< -0.711	56.4	< -4.72	C10286021005
4/26/2011	< 1	< 5	< 1	< 5	< 1	0.247	176	14.5	< 8.21	68	< -13.4	C11116009002
10/19/2011	< 1	< 5	1.7	< 1	< 1	0.298	183	11.8	< 8.7	86.5	< 4.3	C11292015003
4/24/2012	< 1	2.1	< 1	< 1	< 1	< 2	119	9.63	< 5.31	< 35.7	< 2.86	C12115011002

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Water Quality Records for

Sample Date Range: 5/31/1994 - 10/6/2017

MW301

Sample Date	Organic Laboratory Analysis Results					Inorganic Laboratory Analysis Results			Radiological Laboratory Analysis Results			Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Al mg/L	Fe mg/L	Mn mg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	
10/29/2012	< 1	< 1	< 1	< 1	< 1	6.98	163	8.35	< 15.1	58.9	< 1.99	C12303019004
4/23/2013	< 1	1.2	1.4	< 1	< 1	0.216	120	9.8	< 10.1	< 46.9	< 0.0556	C13113007002
10/21/2013	< 1	2.4	2.2	< 1	< 1	10.9	200	10.7	< 6.61	< 54.4	< 8.32	C13294037004
4/29/2014	< 1	1.73	1.95	< 1	< 1	0.0277	121	8.95	6.95	52.9	< 2.71	347676005

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C-746-K Landfill Monitoring

Water Quality Records for

Sample Date Range: 5/31/1994 - 10/6/2017

MW302

Sample Date	Organic Laboratory Analysis Results					Inorganic Laboratory Analysis Results			Radiological Laboratory Analysis Results			Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Al mg/L	Fe mg/L	Mn mg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	
6/1/1994	< 5	< 5	< 5	< 5	< 5	< 0.415	0.238	0.189	< 3.09	< 3.11	< 0.94	3220301
3/21/1995	< 1	< 5	< 5	< 5	< 5		2.6	0.26	2.2	5	8	950322-048
7/12/1995	< 1	< 5	< 5	< 5	< 5		0.702	0.175	4	13	6	950713-149
9/11/1995	< 1	< 5	< 5	< 5	< 5	1.3	1.06	0.139	7.2	2	13	950912-007
12/7/1995	< 1	< 5	< 5	< 5	< 5		2.39	0.087	6.2	3	2	951211-018
2/13/1996	< 1	< 5	< 5	< 5	< 5	2.14	1.68	0.08	-6	-2	1	960214-054
2/13/1996	< 1	< 5	< 5	< 5	< 5	2.61	2.14	0.099	-5.4	-4	0	960214-058
5/9/1996	< 1	< 5	< 5	< 5	< 5	< 0.75	< 0.3	0.041	0.9	17	6	960513-009
8/20/1996	< 1	< 5	< 5	< 5	< 5	< 0.75	< 0.3	< 0.05	12.3	5	11	960821-020
8/20/1996	< 1	< 5	< 5	< 5	< 5	< 0.75	< 0.3	0.058	4.4	6	6	960821-022
2/10/1997	< 1	< 5	< 5	< 5	< 5	< 0.75	0.31	0.157	-0.2	1	0	970211-011
2/10/1997	< 1	< 5	< 5	< 5	< 5	< 0.75	1.64	0.19	2.9	3	0	970211-010
5/13/1997	< 1	< 5	< 5	< 5	< 5	< 0.75	< 0.3	0.099	5.9	3	10	970514-044
8/7/1997	< 1	< 5	< 5	< 5	< 5	< 1	< 0.25	< 0.1	2.8	1	0	970807-144
8/7/1997	< 1	< 5	< 5	< 5	< 5	< 1	< 0.25	0.12	1.6	1	2	970807-145
11/10/1997	< 1	< 5	< 5	< 5	< 5	1.02	1.09	0.11	9.8	14	0	971110-118
2/5/1998	< 1	< 5	< 5	< 5	< 5	< 1	< 0.5	< 0.1	< 1.2	< 4	< -2	C980370103
2/5/1998	< 1	< 5	< 5	< 5	< 5	< 1	< 0.5	0.114	< 1.8	< 0	< 5	C980370102
5/20/1998	< 1	< 5	< 5	< 5	< 5	< 1	< 0.25	0.164	< 2.3	37	< 2.1	C981400088
5/20/1998	< 1	< 5	< 5	< 5	< 5	< 1	< 0.25	0.167	< -0.9	8	< 2.8	C981400087
8/11/1998	< 1	< 5	< 5	< 5	< 5	< 1	< 0.2	0.173	< 7.6	11	< -7.6	C982240043
8/11/1998	< 1	< 5	< 5	< 5	< 5	< 1	< 0.2	0.143	< 1	< 4	< -1	C982240044
11/16/1998	< 1	< 5	< 5	< 5	< 5	< 1	< 0.2	0.1	< 3.6	8.03	< -7.2	C983200082
1/25/1999	< 1	< 5	< 5	< 5	< 5	< 1	< 0.2	0.11	< 0.86	< 0.3	< -19.8	C990250156
4/19/1999	< 1	< 5	< 5	< 5	< 5	0.22	< 0.2	0.122	< 1.67	< 4.72	< -18.5	C991090062
7/15/1999	< 1	< 5	< 5	< 5	< 5	< 0.2	< 0.2	0.157	< 0.82	< -20.12	< 5.04	C991960148
10/14/1999	< 1	< 5	< 5	< 5	< 5	< 0.2	< 0.2	0.069	< 4.18	< 3.33	< -1.15	C992870107
1/13/2000	< 1	< 5	< 5	< 5	< 5	< 0.2	0.381	0.05	< 0.05	< 5.09	< 1.59	C000130119
4/27/2000	< 1	< 5	< 5	< 5	< 5	< 0.2	< 0.2	0.118	< 1.91	< 4.14	< -16.4	C001190012
4/27/2000	< 1	< 5	< 5	< 5	< 5	< 0.2	< 0.2	0.11	< 4.56	< 2.89	< -21.3	C001190011
7/27/2000	< 1	< 5	< 5	< 5	< 5	0.203	0.315	0.185	< 6.72	< 4.08	< -2.03	C002090104
10/16/2000	< 1	< 5	< 5	< 5	< 5	< 0.2	< 0.2	0.08	< 2.79	22.54	< 5.95	C002910046
1/10/2001	< 1	< 5	< 5	< 5	< 5	< 0.2	< 0.2	0.101	< -4.7	< 3.52	< 2.65	C010100095

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Water Quality Records for

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Sample Date	Organic Laboratory Analysis Results					Inorganic Laboratory Analysis Results			Radiological Laboratory Analysis Results			Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Al mg/L	Fe mg/L	Mn mg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	
1/10/2001	< 1	< 5	< 5	< 5	< 5	< 0.2	< 0.2	0.112	< 0.329	< 5.56	< 8.77	C010100096
4/16/2001	< 1	< 5	< 5	< 5	< 5	< 0.2	< 0.2	0.068	< -4.37	< 1	< 12.2	C011060086
7/24/2001	< 1	< 5	< 5	< 5	< 5	< 0.2	< 0.2	0.053	< 1.09	< 1.72	< 12.4	C012060011
10/15/2001	< 1	< 5	< 5	< 5	< 5	< 0.2	< 0.2	0.207	< 2.32	< 0.344	< 4.48	C012880076
1/22/2002	< 1	< 5	< 5	< 5	< 5	< 0.2	< 0.2	0.047	< 5.75	< 1.7	< 11.5	C020220047
4/10/2002	< 1	< 5	< 5	< 5	< 5	< 0.2	< 0.2	0.054	< 5.56	< -1.95	< 4.88	C021010050
4/10/2002	2	< 5	< 5	< 5	< 5	< 0.2	< 0.2	0.062	< 2.37	< -2.75	< -3.64	C021010051
7/24/2002	< 1	< 5	< 5	< 5	< 5	< 0.2	< 0.2	0.056	9.53	< 2.21	< 14.7	C022060006
10/3/2002	< 1	< 5	< 5	< 5	< 5	< 0.002	< 0.002	0.0688	< 9.5	< 2.76	< 10.1	C022760028
1/30/2003	< 1	< 5	< 5	< 5	< 5	0.639	0.762	0.144	< -0.209	< 1.74	< 2.05	C030310021
4/15/2003	< 1	< 5	< 5	< 5	< 5	< 0.2	< 0.2	0.0607	< 2.62	< 1.04	< 4.54	C031050066
4/15/2003	< 1	< 5	< 5	< 5	< 5	< 0.2	< 0.2	0.0609	< -4.39	43.1	16.2	C031050067
7/30/2003	< 1	< 5	< 5	< 5	< 5	< 0.2	0.523	1.3	< 6.9	< 4.11	< -9.55	C032110047
10/21/2003	< 1	< 5	< 5	< 5	< 5	< 0.2	5.77	1.88	< 4.13	< 2.82	< -6.62	C032950016
1/26/2004	< 1	< 5	< 5	< 5	< 5	< 0.2	2.64	1.98	< -3.37	9.48	< 6.25	C040260078
4/21/2004	< 1	< 5	< 5	< 5	< 5	< 0.2	0.611	1.63	< 6.89	< -1.62	< -0.819	C041130035
4/21/2004	< 1	< 5	< 5	< 5	< 5	< 0.2	0.302	1.71	< -1.61	< -0.897	< 5.4	C041130036
7/15/2004	< 1	< 5	< 5	< 5	< 5	< 0.2	1.18	1.63	< 5.85	< -0.825	< -12.4	C041970169
10/19/2004	< 1	< 5	< 5	< 5	< 5	< 0.2	0.244	1.06	< -4.94	< 3.65	< 4.4	C042940032
4/27/2005	< 1	< 5	< 5	< 5	< 5	< 0.2	0.154	0.708	< 0.394	< 0.723	< 15.5	C051170051
4/27/2005	< 1	< 5	< 5	< 5	< 5	< 0.2	< 0.1	0.675	< 1.48	< 3.76	< 15.3	C051170052
10/25/2005	< 1	< 5	< 5	< 5	< 5	< 0.2	< 0.1	1.35	< -1.17	< 0.46	< 9.83	C052990009
4/11/2006	< 1	< 5	< 5	< 5	< 5	0.418	1.02	0.572	< -1.64	< 3.54	< 0.914	C061020008
10/26/2006	< 1	< 5	< 5	< 5	< 5	< 0.2	0.128	0.986	< -3.44	< 2.09	< 8.97	C062990103
10/26/2006	< 1	< 5	< 5	< 5	< 5	0.347	0.479	0.99	< -0.702	< 3.23	< 8.62	C062990102
4/12/2007	< 1	< 5	< 5	< 5	< 5	< 0.2	0.131	0.345	< 4.96	< 3.59	< 13.1	C071030006
10/25/2007	< 1	< 1	< 1	< 1	< 1	< 0.2	0.317	0.622	< 3.48	< 4.7	< -3.38	C072980110
4/28/2008	< 1	< 1	< 1	< 5	< 1	< 0.1	0.263	0.263	< 3.99	< -0.184	< -5.34	C081190049
10/29/2008	< 1	< 1	< 1	< 5	< 1	0.23	0.281	0.319	< 1.16	< 0.994	< 10.6	C08304013004
4/30/2009	< 1	< 1	< 1	< 1	< 1	< 0.2	< 0.1	0.215	< 1.78	< 1.17	< 1.39	C09120016001
10/19/2009	2.1	< 1	< 1	< 1	< 1	0.493	0.425	0.433	< 0.942	< 1.51	< -6.33	C09292035004
4/20/2010	< 1	< 5	< 1	< 5	< 1	0.933	1.5	1.01	< 1.13	< 1.46	< -0.868	C10110009001
10/13/2010	< 1	< 5	< 1	< 5	< 1	< 0.4	0.21	0.245	< 4.95	< 2.61	< 2.66	C10286021004

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Water Quality Records for

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Sample Date	Organic Laboratory Analysis Results					Inorganic Laboratory Analysis Results			Radiological Laboratory Analysis Results			Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Al mg/L	Fe mg/L	Mn mg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	
4/26/2011	< 1	< 5	< 1	< 5	< 1	< 0.2	0.112	0.095	< 0.402	< 3.67	< -0.163	C11116009003
10/19/2011	< 1	< 5	< 1	< 1	< 1	< 0.2	0.235	0.208	< 1.9	6.89	< 2.99	C11292015004
4/24/2012	< 1	< 1	< 1	< 1	< 1	< 0.4	0.333	0.163	< 0.867	< 0.188	< 3.89	C12115011003
10/29/2012	< 1	< 1	< 1	< 1	< 1	< 0.2	< 0.1	0.0704	< 0.308	< -0.308	< -6.18	C12303019001
4/23/2013	< 1	< 1	< 1	< 1	< 1	< 0.2	< 0.1	0.0804	< 3.53	< 1.37	< -2.15	C13113007003
10/21/2013	< 1	< 1	< 1	< 1	< 1	< 0.2	< 0.1	0.19	< 2.39	< 2.41	< 1.2	C13294037001
4/29/2014	< 1	< 1	< 1	< 1	< 1	0.0339	0.112	0.156	< -0.306	< 2.95	< 2.13	347676007
10/7/2014	< 1	< 1	< 1	< 1	< 1	0.0573	0.163	0.414	< -1.1	< 1.86	< 12.8	358703005
4/28/2015	< 1	< 1	< 1	< 1	< 1	0.0504	0.106	0.674	< 7.44	< 3.78	< -0.946	371985003
10/27/2015	< 1	< 1	< 1	< 1	< 1	0.0272	0.157	0.454	< -3.02	< -1.71	< -2.76	384156005
10/27/2015	< 1	< 1	< 1	< 1	< 1	0.0205	0.13	0.402	< -2.37	< -2.28	< 3.12	384156003
4/13/2016	< 1	< 1	< 1	< 1	< 1	0.0496	0.275	0.326	< 3.35	8.77	< -11	395245001
10/11/2016	< 1	< 1	< 1	< 1	< 1	0.0458	0.109	0.297	< -1.69	< -6.03	< -4.58	407853003
10/11/2016	< 1	< 1	< 1	< 1	< 1	0.102	0.222	0.31	< -3.58	< 4.11	< -7.9	407853005
4/6/2017	< 1	< 1	< 1	< 1	< 1	0.106	0.274	0.0465	< -2.09	< 5.58	< 3.16	420096003
10/6/2017	< 1	< 1	< 1	< 1	< 1	0.0659	0.296	0.332	< -0.704	< 8.85	< 0.00131	434592003
10/6/2017	< 1	< 1	< 1	< 1	< 1	0.0885	0.333	0.41	< 2.18	< 5.43	< 2.4	434592005

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Water Quality Records for

Sample Date Range: 5/31/1994 - 10/6/2017

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Sample Date	Organic Laboratory Analysis Results					Inorganic Laboratory Analysis Results			Radiological Laboratory Analysis Results			Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Al mg/L	Fe mg/L	Mn mg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	
5/20/1998	< 1	< 5	< 5	< 5	< 5	5.43	11.2	0.663	< 4	24	<-2.8	C981400089
8/11/1998	< 1	< 5	< 5	< 5	< 5	7.65	13.1	0.946	< 3.2	11	<-1.3	C982240042
11/16/1998	< 1	< 5	< 5	< 5	< 5	2.43	9.51	0.65	< 2.27	9.59	<-3.1	C983200079
11/16/1998	< 1	< 5	< 5	< 5	< 5	2.65	12.2	0.83	< 5.66	8.45	< 6.8	C983200078
1/25/1999	< 1	< 5	< 5	< 5	< 5	8.54	13	0.79	< 0.1	14.19	< 8.4	C990250157
4/19/1999	< 1	< 5	< 5	< 5	< 5	9.26	16.1	0.827	< 4.05	8.24	<-9.06	C991090063
7/15/1999	< 1	< 5	< 5	< 5	< 5	3.21	13.6	0.756	< 3.29	< 3.03	< 7.03	C991960149
10/14/1999	< 1	< 5	< 5	< 5	< 5	8.76	13.1	0.871	5.38	< 5.75	< 7.28	C992870108
1/13/2000	< 1	< 5	< 5	< 5	< 5	1.35	9.06	0.565	< 0.74	12.89	< 6.94	C000130121
4/27/2000	< 1	< 5	< 5	< 5	< 5	3.68	10.8	0.523	< 2.81	19.31	<-2.65	C001190013
7/27/2000	< 1	< 5	< 5	< 5	< 5	1.92	8.16	0.531	7.68	12.31	< 10.4	C002090102
7/27/2000	< 1	< 5	< 5	< 5	< 5	1.27	6.22	0.404	< 4.3	14.19	<-6.62	C002090103
10/16/2000	< 1	< 5	< 5	< 5	< 5	1.92	6.81	0.525	< 1.79	15.94	< 0.674	C002910047
10/16/2000	< 1	< 5	< 5	< 5	< 5	1.5	5.4	0.37	<-0.9	21.88	< 1.57	C002910048
1/10/2001	< 1	< 5	< 5	< 5	< 5	4.4	6.02	0.396	< 0.529	< 1.5	< 4.46	C010100099
4/16/2001	< 1	< 5	< 5	< 5	< 5	2.3	7.02	0.411	< 1.98	6.24	<-7.79	C011060089
7/19/2001	< 1	< 5	< 5	< 5	< 5	1.83	5.1	0.355	<-2.34	< 1.95	< 7.79	C012010060
7/24/2001	46	100	59	< 50	< 50	15.8	315	27.7	< 32.1	< 25.1	< 12.4	C012060009
10/15/2001	< 1	< 5	< 5	< 5	< 5	0.797	3.79	0.329	< 0.901	9.99	<-8.48	C012880067
10/15/2001	< 1	< 5	< 5	< 5	< 5	0.655	3.55	0.399	< 4.6	< 2.4	<-2	C012880066
1/22/2002	< 1	< 5	< 5	< 5	< 5	1.37	5.33	0.366	< 5.38	6.15	< 6.69	C020220045
4/10/2002	< 1	< 5	< 5	< 5	< 5	1.63	7.58	0.378	<-0.899	< 2.73	< 4.04	C021010052
7/24/2002	< 1	< 5	< 5	< 5	< 5	2.07	5.44	0.49	10.2	< 6.95	< 4.82	C022060007
10/3/2002	< 1	< 5	< 5	< 5	< 5	0.00423	0.00456	0.323	< 5.83	< 5.09	18.5	C022760030
10/3/2002	< 1	< 5	< 5	< 5	< 5	0.00323	0.00478	0.366	< 2.54	< 2.37	< 13.8	C022760031
1/30/2003	< 1	< 5	< 5	< 5	< 5	1.68	4.16	0.378	<-2.18	< 0.631	< 2	C030310019
4/14/2003	< 1	< 5	< 5	< 5	< 5	3.92	3.28	0.268	< 0.0183	< 8.74	20.4	C031040078
7/30/2003	< 1	< 5	< 5	< 5	< 5	21.9	35.4	6.18	< 12.1	< 6.22	< 12.3	C032110048
10/21/2003	< 1	< 5	< 5	< 5	< 5	3.63	34.8	3.99	< 3.45	< 3.49	<-1.39	C032950015
10/21/2003	< 1	< 5	< 5	< 5	< 5	4.19	32.6	0.388	< 5.8	< 4.3	< 3.31	C032950014
1/26/2004	< 1	< 5	< 5	< 5	< 5	4.22	18.2	2.32	10.1	7.74	< 5.32	C040260082
4/21/2004	< 1	< 5	< 5	< 5	< 5	2.91	13.3	1.23	< 2.26	< 1.95	<-4.04	C041130037
7/15/2004	< 1	< 5	< 5	< 5	< 5	< 0.2	12.9	1.61	< 0.82	< 2.89	<-8.52	C041970170

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	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Al mg/L	Fe mg/L	Mn mg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	
10/19/2004	< 1	< 5	< 5	< 5	< 5	2.51	13.2	1.56	< -0.79	9.99	< -3.88	C042940034
10/19/2004	< 1	< 5	< 5	< 5	< 5	2.99	11.8	1.63	< -2.19	< 0.172	< 4.34	C042940035
4/27/2005	< 1	< 5	< 5	< 5	< 5	3.67	7.9	0.692	< 0.794	5.87	< 10.7	C051170053
10/25/2005	< 1	< 5	< 5	< 5	< 5	1.49	5.25	0.714	< 2.1	< 5.13	< 8.07	C052990010
4/11/2006	< 1	< 5	< 5	< 5	< 5	2.55	6.79	0.419	< 2.13	< 5.53	< 0.686	C061020012
10/26/2006	< 1	< 5	< 5	< 5	< 5	4.32	5.55	0.472	< 2.45	< 5.05	< 13.9	C062990104
4/12/2007	< 1	< 5	< 5	< 5	< 5	13.5	7.9	0.279	< 6.28	< 4.88	< -3.22	C071030003
4/12/2007	< 1	< 5	< 5	< 5	< 5	7.87	6.28	0.286	8.77	< 7.36	< 7.1	C071030004
10/25/2007	< 1	< 1	< 1	< 1	< 1	5.46	4.1	0.217	< 2.24	< 2.43	< 1.88	C072980185
4/28/2008	< 1	< 1	< 1	< 5	< 1		0.947	0.183	< 1.35	< 4.02	< 2.67	C081200002
10/29/2008	< 1	< 1	< 1	< 5	< 1	3.36	3.64	0.256	< 2.88	< 4.82	< 0.645	C08304013005
4/30/2009	< 1	< 1	< 1	< 1	< 1	4	3.56	0.19	< 2.62	5.57	< 10.1	C09120016002
10/19/2009	1.3	< 1	< 1	< 1	< 1	3.55	3.04	0.299	< 1.6	< 4.25	< -0.283	C09292035005
4/20/2010	< 1	< 5	< 1	< 5	< 1	11.5	22	0.262	9.17	8.43	< 10	C10110009003
10/13/2010	< 1	< 5	< 1	< 5	< 1	9.93	13.8	0.233	8.01	9.96	< -7.65	C10286021001
4/26/2011	< 1	< 5	< 1	< 5	< 1	4.7	8.17	0.154	< -0.331	< 5.11	< -7.02	C11116009004
4/26/2011	< 1	< 5	< 1	< 5	< 1	4.48	7.89	0.155	< 0.101	5.63	< -3.92	C11116009005
10/19/2011	< 1	< 5	< 1	< 1	< 1	2.86	7.14	0.188	< 2.34	9.7	< 2.78	C11292015005
4/24/2012	< 1	< 1	< 1	< 1	< 1	4.39	7.54	0.167	< 3.64	< 3.59	< -0.511	C12115011004
4/24/2012	< 1	< 1	< 1	< 1	< 1	3.92	6.46	0.118	< 6.28	< 5.53	< 7.1	C12115011005
10/29/2012	< 1	< 1	< 1	< 1	< 1	2.12	3.89	0.143	< 0.405	< 3.49	< -8.39	C12303019005
4/23/2013	< 1	< 1	< 1	< 1	< 1	2.65	4.66	0.116	< 4.97	< 3.39	< -3.25	C13113014001
4/23/2013	< 1	< 1	< 1	< 1	< 1	2.77	3.82	0.107	< 1.89	< 3.93	< -1.43	C13113014002
10/21/2013	< 1	< 1	< 1	< 1	< 1	8.79	6.63	0.185	< 4.86	4.56	< 4.93	C13294037005
4/29/2014	< 1	< 1	< 1	< 1	< 1	3.92	9.31	0.138	9.05	7.89	< 1.14	347676001
4/29/2014	< 1	< 1	< 1	< 1	< 1	4.42	10.1	0.139	6.34	9.4	< -2.93	347676003
10/7/2014	< 1	< 1	< 1	< 1	< 1	3.61	8.09	0.253	< 0.965	< 11	< 3.57	358703007
4/28/2015	0.87	12.6	7.7	< 1	< 1	1.37	3.05	0.116	< 0.878	< 5.5	< -0.00901	371985005
4/28/2015	< 1	< 1	< 1	< 1	< 1	0.906	1.78	0.0971	< -1.64	< 5.21	< -3.42	371985007
10/27/2015	< 1	< 1	< 1	< 1	< 1	1.71	4.22	0.138	< 2.02	< 3.58	< -0.265	384156007
4/13/2016	< 1	< 1	< 1	< 1	< 1	2.07	4.76	0.153	< 10	26	< -15.1	395245007
10/11/2016	< 1	< 1	< 1	< 1	< 1	1.46	3.17	0.125	< -3.18	< 0.375	< 0.299	407853007
4/6/2017	< 1	< 1	< 1	< 1	< 1	3.31	6.42	0.129	< -7.42	< 2.91	< 5.27	420096005

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C-746-K Landfill Monitoring

Water Quality Records for

Sample Date Range: 5/31/1994 - 10/6/2017

MW344

Sample Date	Organic Laboratory Analysis Results					Inorganic Laboratory Analysis Results			Radiological Laboratory Analysis Results			Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Al mg/L	Fe mg/L	Mn mg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	
4/6/2017	< 1	< 1	< 1	< 1	< 1	3.94	8.11	0.139	< -4.29	10.7	< 6.53	420096007
10/6/2017	< 1	< 1	< 1	< 1	< 1	11	21.9	0.249	< 8.2	16.1	< 1.81	434592007

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APPENDIX D

**ADMINISTRATIVE RECORD AND
POST-DECISION RECORD INDICES**

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Paducah Documents Added to the Administrative Record Files- Fourth Quarter CY2017

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Notes	Name
ARF4-1	11/01/17	FR-18-0010	EPA SUPPLEMENTAL COMMENTS: FEASIBILITY STUDY FOR THE BURIAL GROUNDS OPERABLE UNIT SOLID WASTE MANAGEMENT UNIT 4, AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-2408&D1)	USEPA-4	DOE-PPPO	No	ENV 1.A-01449
ARF4-1	10/02/17	FFS-18-0601	EXTENSION: SUPPLEMENTAL EPA COMMENTS FOR THE FEASIBILITY STUDY FOR THE BURIAL GROUNDS OPERABLE UNIT SOLID WASTE MANAGEMENT UNIT 4, AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-2408&D1) EPA ID KY8890008982, MCCRACKEN COUNTY, KY	USEPA-4	DOE-PPPO	No	ENV 1.A-01448
ARFCC	11/21/17	PPPO-02-4559683-18	MINOR MODIFICATION TO EXTEND THE TIME PERIOD FOR CONSULTATION OF THE DISPUTE RESOLUTION COMMITTEE RELATED TO THE REMEDIAL INVESTIGATION/FEASIBILITY STUDY REPORT FOR CERCLA WASTE DISPOSAL ALTERNATIVES EVALUATION AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KY, DOE/LX/07-0244&D2	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01470
ARFCC	09/14/17	FFS-17-0593	MINOR MOD FOR THE REMEDIAL INVESTIGATION/FEASIBILITY STUDY REPORT FOR CERCLA WASTE DISPOSAL ALTERNATIVES EVALUATION AT PGDP, PADUCAH, KY DOE/LX/07-0244&D2	DOE-PPPO, KDWM, USEPA-4	ADMIN RECORD	No	ENV 1.A-01443
ARFREF	11/15/17	PPPO-02-4534345-18A, DOE/LX/07-2418&D1	TRANSMITTAL OF THE D1 SITE MANAGEMENT PLAN, PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, ANNUAL REVISION FISCAL YEAR 2018 (DOE/LX/07-2418&D1)	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01469
ARFREF	11/14/17	FR-18-0018	EPA APPROVAL: (APPENDIX C: WATER POLICY ADDITIONAL ACTIONS) ADDENDUM TO THE FIVE YEAR REVIEW FOR REMEDIAL ACTIONS AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, (DOE/LX/07-1289&D2/R1/A2/R2), TRANSMITTAL DATED OCTOBER 4, 2017 (PPPO-02-4446800-18A)	USEPA-4	DOE-PPPO	No	ENV 1.A-01468
ARFREF	11/08/17	PPPO-02-4446153-18	FEDERAL FACILITY AGREEMENT BUDGET REPORTING-FISCAL YEAR 2019 BUDGET TARGET FUNDING GUIDANCE NOTIFICATION AND INTEGRATED PRIORITY LIST	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01465
ARFREF	11/08/17	FR-18-0017	KENTUCKY CONCURRENCE TO THE ADDENDUM TO THE FIVE-YEAR REVIEW FOR THE REMEDIAL ACTIONS AT THE PADUCAH GASEOUS DIFFUSION PLANT - APPENDIX C WATER POLICY ADDITIONAL ACTIONS (DOE/LX/07-1289&D2/R1/A2/R2)	KDWM	DOE-PPPO	No	ENV 1.A-01464
ARFREF	10/02/17	PPPO-02-4446019-17	FEDERAL FACILITY AGREEMENT BUDGET NOTIFICATION-CONTINUING RESOLUTION	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01462
ARFREF	10/26/17	PPPO-02-4490783-18, DOE/LX/07-2416/V2	U.S. DEPARTMENT OF ENERGY PADUCAH GASEOUS DIFFUSION PLANT FEDERAL FACILITY AGREEMENT SEMIANNUAL PROGRESS REPORT FOR THE SECOND HALF OF FISCAL YEAR 2017, PADUCAH, KENTUCKY (DOE/LX/07-2416/V2)	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01463
ARFREF	10/18/17	PPPO-02-4222141-18	PADUCAH FEDERAL FACILITY AGREEMENT FISCAL YEAR 2017 FUNDING ALLOCATION EVALUATION	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01461
ARFREF	10/17/17	FFS-18-0607	E-MAIL REQUEST FOR MW91 ABANDONMENT APPROVAL (KDEP APPROVAL)	FRNP	FRNP	No	ENV 1.A-01460
ARFREF	09/21/17	PPPO-02-4449794-17	MINOR MODIFICATION TO EXTEND THE TIME PERIOD FOR CONSULTATION OF THE DISPUTE RESOLUTION COMMITTEE RELATED TO THE REMEDIAL INVESTIGATION/FEASIBILITY STUDY REPORT FOR CERCLA WASTE DISPOSAL ALTERNATIVES EVALUATION AT PGDP, PADUCAH, KY, DOE/LX/07-0244&D2	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01458

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Paducah Documents Added to the Administrative Record Files- Fourth Quarter CY2017

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Notes	Name
ARFREF	09/14/17	PPPO-02-4436108-17	SIGNED MEMORANDUM OF AGREEMENT FOR RESOLUTION OF FORMAL DISPUTE FOR THE APPENDIX C-WATER POLICY ACTIONS, ADDENDUM TO THE FIVE-YEAR REVIEW FOR REMEDIAL ACTIONS AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-1289&D2/R1/A2/R1)	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01457
ARFREF	08/28/17	PPPO-02-4397665-17	MINOR MODIFICATION TO EXTEND THE TIME PERIOD FOR CONSULTATION OF THE DISPUTE RESOLUTION COMMITTEE CONCERNING RECEIPT OF CONDITIONAL CONCURRENCE RELATED TO THE ADDENDUM TO THE FIVE-YEAR REVIEW FOR REMEDIAL ACTIONS AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-1289&D2/R1/A2/R1	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01456
ARFREF	10/04/17	PPPO-02-4446800-18A, DOE/LX/07-1289&D2/R1/A2/R2	TRANSMITTAL OF THE ADDENDUM TO THE FIVE-YEAR REVIEW FOR REMEDIAL ACTIONS (DOE/LX/07-1289&D2/R1/A2/R2)	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01459
ARFSOU	10/26/17	FR-18-0004	EPA APPROVAL: ADDENDUM TO THE SOILS OPERABLE UNIT REMEDIAL INVESTIGATION REPORT FOR SOLID WASTE MANAGEMENT UNIT 1 AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-0358&D2/R1/A2/R2, TRANSMITTAL DATED OCTOBER 20, 2017 (PPPO-02-4430042-18)	USEPA-4	DOE-PPPO	No	ENV 1.A-01455
ARFSOU	10/23/17	FR-18-0002	KENTUCKY CONCURRENCE ON THE ADDENDUM TO THE SOILS OU REMEDIAL INVESTIGATION REPORT FOR SWMU 1 AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-0358&D2/R1/A2/R2)	KDWM	DOE-PPPO	No	ENV 1.A-01454
ARFSOU	10/16/17	FFS-18-0608	EPA CONDITIONAL APPROVAL: ADDENDUM TO THE SOILS OPERABLE UNIT REMEDIAL INVESTIGATION REPORT FOR SOLID WASTE MANAGEMENT UNIT 1 AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-0358&D2/R1/A2/R1 (AUGUST 15, 2017) U.S. EPA ID KY8890008982	USEPA-4	DOE-PPPO	No	ENV 1.A-01452
ARFSOU	10/20/17	PPPO-02-4430042-18, DOE/LX/07-0358&D2/R1/A2/R2	TRANSMITTAL OF THE REVISED ADDENDUM TO THE SOILS OPERABLE UNIT REMEDIAL INVESTIGATION REPORT FOR SOLID WASTE MANAGEMENT UNIT 1 AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-0358&D2/R1/A2/R2	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01453

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Paducah Documents Added to the Administrative Record Files- First Quarter CY2018

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Notes	Name
ARF4-1	1/29/2018	PPPO-02-4645212-18B, DOE/LX/07-2408&D2	TRANSMITTAL OF THE FEASIBILITY STUDY FOR SWMU 4 OF THE BURIAL GROUNDS OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KY, DOE/LX/07-2408&D2	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01488
ARFCC	12/17/2017	FR-18-0039	DOE PUBLIC NOTICE FOR THE 2018 CERCLA FIVE-YEAR REVIEW FOR SELECTED CLEANUP ACTION AT PGDP	DOE-PPPO	PUBLIC NOTICE	No	ENV 1.A-01482
ARFCC	2/27/2018	PPPO-02-4715192-18	SIGNED MEMORANDUM OF AGREEMENT FOR RESOLUTION OF THE FORMAL DISPUTE FOR THE REMEDIAL INVESTIGATION/FEASIBILITY STUDY REPORT FOR CERCLA WASTE DISPOSAL ALTERNATIVES EVALUATION AT PGDP, PADUCAH, KY, DOE/LX/07-0244&D2	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01492
ARFREF	1/16/2018	PPPO-02-4602574-18, DOE/LX/07-2418&D1/R1	TRANSMITTAL OF THE D1/R1 SITE MANAGEMENT PLAN, PGDP, PADUCAH, KENTUCKY, ANNUAL REVISION-FY 2018 (DOE/LX/07-2418&D1/R1)	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01483
ARFREF	1/18/2018	PPPO-02-4621758-18	FEDERAL FACILITY AGREEMENT BUDGET NOTIFICATION-CONTINUING RESOLUTION	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01484
ARFREF	1/23/2018	PPPO-02-4602574-18A, DOE/LX/07-2418&D1/R1	TRANSMITTAL ERATA PAGES AND COMPLETE DOCUMENT FOR THE D1/R1 SITE MANAGEMENT PLAN, PGDP, PADUCAH, KENTUCKY, ANNUAL REVISION-FY 2018 (DOE/LX/07-2418&D1/R1)	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01485
ARFREF	1/26/2018	PPPO-02-4652903-18	MINOR MODIFICATION TO EXTEND THE TIME PERIOD FOR CONSULTATION OF THE DISPUTE RESOLUTION COMMITTEE RELATED TO THE REMEDIAL INVESTIGATION/FEASIBILITY STUDY REPORT FOR CERCLA WASTE DISPOSAL ALTERNATIVES EVALUATION AT THE PGDP, PADUCAH, KY, DOE/LX/07-0244&D2	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01486
ARFREF	2/8/2018	PPPO-02-4679229-18	MINOR MODIFICATION TO EXTEND THE TIME PERIOD FOR CONSULTATION OF THE DISPUTE RESOLUTION COMMITTEE RELATED TO THE REMEDIAL INVESTIGATION/FEASIBILITY STUDY REPORT FOR CERCLA WASTE DISPOSAL ALTERNATIVES EVALUATION AT THE PGDP, PADUCAH, KY, DOE/LX/07-0244&D2	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01487
ARFREF	2/15/2018	PPPO-02-4693774-18	PADUCAH FEDERAL FACILITY AGREEMENT DRAFT INTEGRATED PRIORITY LIST AND ASSESSMENT OF BUDGET TARGET ON SITE PRIORITIES, FISCAL YEAR 2020	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01493
ARFREF	2/16/2018	PPPO-02-4675937-18	PADUCAH FEDERAL FACILITY AGREEMENT FISCAL YEAR 2019 PRESIDENT'S BUDGET	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01494
ARFREF	2/16/2018	PPPO-02-4666629-18	FEDERAL FACILITY AGREEMENT BUDGET NOTIFICATION-CONTINUING RESOLUTION	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01495
ARFREF	2/16/2018	PPPO-02-4675937-18	PADUCAH FEDERAL FACILITY AGREEMENT FISCAL YEAR 2019 PRESIDENT'S BUDGET	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01494
ARFREF	2/16/2018	PPPO-02-4666629-18	FEDERAL FACILITY AGREEMENT BUDGET NOTIFICATION-CONTINUING RESOLUTION	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01495
ARFREF	2/20/2018	PPPO-02-4601368-18	RESPONSE TO KENTUCKY DIVISION OF WASTE MANAGEMENT REGARDING THE FISCAL YEAR 2019 PADUCAH INTEGRATED PRIORITIES LIST	DOE-PPPO	KDWM	No	ENV 1.A-01496
ARFREF	2/20/2018	PPPO-02-4601368-18	RESPONSE TO KENTUCKY DIVISION OF WASTE MANAGEMENT REGARDING THE FISCAL YEAR 2019 PADUCAH INTEGRATED PRIORITIES LIST	DOE-PPPO	KDWM	No	ENV 1.A-01496
ARFREF	2/22/2018	FR-18-0050	NOTIFICATION FOR EPA COMMENTS ON: SITE MANAGEMENT PLAN, PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KY, ANNUAL REVISION-FISCAL YEAR 2018 (DOE/LX/07-2418&R1 ERRATA), PRIMARY DOCUMENT, TRANSMITTAL OF THE ERRATA PAGES AND COMPLETE DOCUMENT DATED JANUARY 23, 2018 (PPPO-02-4602574-18A)	USEPA-4	DOE-PPPO	No	ENV 1.A-01497
ARFREF	2/22/2018	FR-18-0050	NOTIFICATION FOR EPA COMMENTS ON: SITE MANAGEMENT PLAN, PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KY, ANNUAL REVISION-FISCAL YEAR 2018 (DOE/LX/07-2418&R1 ERRATA), PRIMARY DOCUMENT, TRANSMITTAL OF THE ERRATA PAGES AND COMPLETE DOCUMENT DATED JANUARY 23, 2018 (PPPO-02-4602574-18A)	USEPA-4	DOE-PPPO	No	ENV 1.A-01497
ARFSS	4/19/2001	20010419 ARFSS	NOTIFICATION OF NEWLY IDENTIFIED SOLID WASTE MANAGEMENT UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01476
ARFSS	4/19/2001	20010419 ARFSS	NOTIFICATION OF NEWLY IDENTIFIED SOLID WASTE MANAGEMENT UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01476

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Paducah Documents Added to the Post-Decision Files- Fourth Quarter CY2017

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Notes	Name
6PHASE-PD	11/06/17	11062017 6PHASE-PD	C-400 AND NSDD LUCIP IMPLEMENTATION CERTIFICATION CHECKLIST FOR FY 2018 SITE MANAGEMENT PLAN (DOE/LX/07-2418&D1)	FRNP	ADMIN RECORD	No	ENV 1A-01466
6PHASE-PD	10/06/17	PPPO-02-4482392-18	SIGNED MEMORANDUM OF AGREEMENT FOR RESOLUTION OF FORMAL DISPUTE REGARDING THE NON-CONCURRENCE BY EPA AND KDEP ON THE DOE MILESTONE MOD REQUEST FOR SUBMITTAL OF THE REVISED PROPOSED PLAN FOR THE VOLATILE ORGANIC COMPOUND CONTAMINATION AT THE C-400 CLEANING BUILDING (DOE/LX/07-2407&D1)	DOE-PPPO	KDWM, USEPA-4	No	ENV 1A-01447
6PHASE-PD	09/21/17	PPPO-02-4449482-17	MINOR MOD TO EXTEND THE TIME PERIOD FOR CONSULTATION OF THE DISPUTE RESOLUTION COMMITTEE REGARDING THE NONCONCURRENCE OF THE MILESTONE MOD REQUEST FOR SUBMITTAL OF THE REVISED PROPOSED PLAN FOR VOLATILE ORGANIC COMPOUND CONTAMINATION AT C-400 CLEANING BLDG AT PGDP, PADUCAH, KY, DOE/LX/07-2407&D1	DOE-PPPO	KDWM, USEPA-4	No	ENV 1A-01446
6PHASE-PD	08/08/17	20170808 C-400	C-400 LUCIP INSPECTION DATED 8-8-17	FRNP	ADMIN RECORD	No	ENV 1A-01444
6PHASE-PD	09/14/17	FFS-17-0594	MINOR MOD FOR THE REVISED PROPOSED PLAN FOR VOLATILE ORGANIC COMPOUND CONTAMINATION AT THE C-400 CLEANING BUILDING AT PGDP, PADUCAH, KY DOE/LX/07-2407&D1	DOE-PPPO, KDWM, USEPA-4	ADMIN RECORD	No	ENV 1A-01445
GW3-PD	09/15/17	FFS-17-0591	EPA CONCURRENCE: OPERATION AND MAINTENANCE PLAN FOR THE NORTHEAST PLUME CONTAINMENT SYSTEM INTERIM REMEDIAL ACTION AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-1535&D3/R6, TRANSMITTAL DATED SEPTEMBER 7, 2017 (PPPO-02-4341706-17)	USEPA-4	DOE-PPPO	No	ENV 1A-01451
GW3-PD	09/15/17	FFS-17-0592	KDEP APPROVAL OF THE OPERATION AND MAINTENANCE PLAN FOR THE NORTHEAST PLUME CONTAINMENT SYSTEM INTERIM REMEDIAL ACTION (DOE/LX/07-1535&D3/R6)	KDWM	DOE-PPPO	No	ENV 1A-01450
NSDD-PD	11/06/17	11062017 NSDD-PD	C-400 AND NSDD LUCIP IMPLEMENTATION CERTIFICATION CHECKLIST FOR FY 2018 SITE MANAGEMENT PLAN (DOE/LX/07-2418&D1)	FRNP	ADMIN RECORD	No	ENV 1A-01467
NSDD-PD	08/25/17	20170802 C-400	C-400 WEEKLY, QUARTERLY, ANNUAL NSDD INSPECTIONS FOR AUGUST	FRNP	ADMIN RECORD	No	ENV 1A-01442

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Paducah Documents Added to the Post-Decision Files- First Quarter CY2018

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Notes	Name
6PHASE-PD	03/30/88		RCRA FACILITY INVESTIGATION C-400 TRICHLOROETHYLENE SPILL SITE PADUCAH GASEOUS DIFFUSION PLANT	THE EDGE GROUP	MMES	No	ENV 1.A-01498
6PHASE-PD	06/08/95	KY/ERWM-38	C-400 PROCESS AND STRUCTURE REVIEW	LMES	LMES	No	ENV 1.A-01499
6PHASE-PD	08/23/11	PPPO-02-1222665-11B-1	TRANSMITTAL OF THE TECHNICAL PERFORMANCE EVALUATION FOR THE C-400 IRA AT PGDP DOE LX 07-1260 D1, APPENDIX C, CD DATA	DOE-PPPO	ADMIN RECORD	No	ENV 1.A-01481
6PHASE-PD	01/10/18	PPPO-02-4594721-18A,DOE/LX/07-2420&D1	TRANSMITTAL OF THE REMOVAL NOTIFICATION FOR DEMOLITION OF THE C-400 CLEANING BUILDING AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-2420&D1)	DOE-PPPO	KDWM, USEPA-4	No	ENV 1.A-01489
6PHASE-PD	02/09/18	FR-18-0044	EPA COMMENTS: REMOVAL NOTIFICATION FOR DEMOLITION OF THE C-400 CLEANING BUILDING AT PGDP, (DOE/LX/07-2420&D1), PRIMARY DOCUMENT, TRANSMITTAL DATED JANUARY 10, 2018 (PPPO-02-4594721-18A)	USEPA-4	DOE-PPPO	No	ENV 1.A-01490
6PHASE-PD	02/09/18	FR-18-0045	KENTUCKY CONCURRENCE WITH THE REMOVAL NOTIFICATION FOR DEMOLITION OF THE C-400 CLEANING BUILDING (DOE/LX/07-2420&D1)	KDWM	DOE-PPPO	No	ENV 1.A-01491
GW3-PD	01/15/18	PPPO-02-4501110-18B,DOE/LX/07-2419&D1	TRANSMITTAL OF THE POSTCONSTRUCTION REPORT FOR THE NORTHEAST PLUME OPTIMIZATION AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-2419&D1)	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-01478
NSDD-PD	11/01/17	20171101 NSDD-PD	C-400-L NORTH SOUTH DIVERSION DITCH MONTHLY ELECTRICIANS INSPECTION FOR NOVEMBER 2017	FRNP	ADMIN RECORD	No	ENV 1.A-01479
NSDD-PD	11/02/17	20171102 NSDD-PD	400-L NORTH SOUTH DIVERSION DITCH WEEKLY INSPECTIONS FOR NOVEMBER 2017	FRNP	ADMIN RECORD	No	ENV 1.A-01480
NSDD-PD	12/06/17	20171206 NSDD-PD	WINTERIZATION CHECKLIST-NORTH-SOUTH DIVERSION DITCH (WEEKLY)--DECEMBER 2017	FRNP	ADMIN RECORD	No	ENV 1.A-01500
NSDD-PD	12/07/17	20171207 NSDD-PD	WINTERIZATION CHECKLIST-NORTH-SOUTH DIVERSION DITCH (WEEKLY AND QUARTERLY)-DECEMBER 2017	FRNP	ADMIN RECORD	No	ENV 1.A-01501
SWP-PD	06/01/07	DOEOR07-2180D2R1	SITE INVESTIGATION REPORT FOR THE SOUTHWEST GROUNDWATER PLUME AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY DOE/OR/07-2180&D2/R1	PRS	ADMIN RECORD	No	ENV 1.A-01477

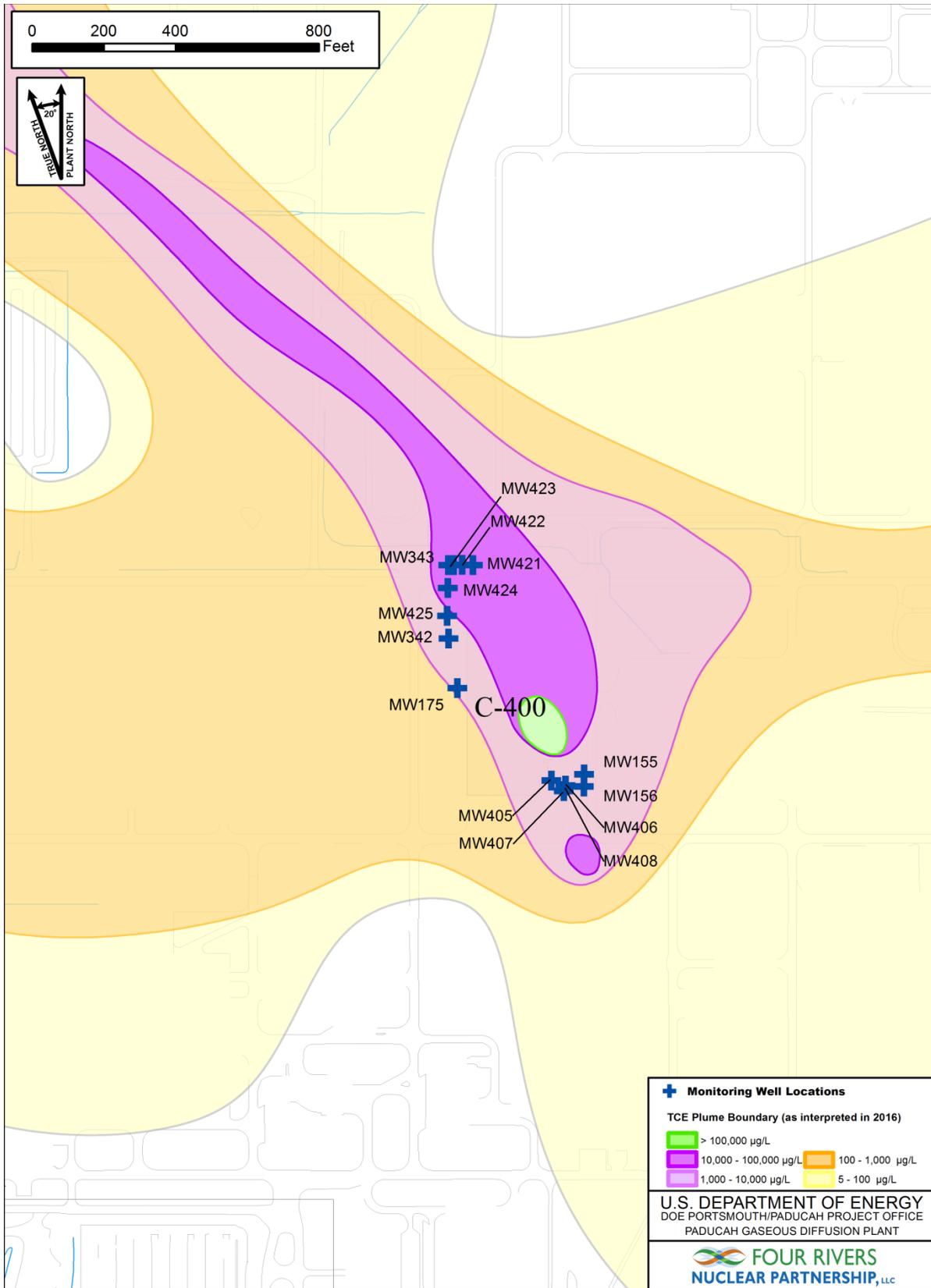
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APPENDIX E

C-400 PROJECT GROUNDWATER MONITORING WELLS DATA

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3/8/2018

Figure E.1. C-400 Monitoring Wells

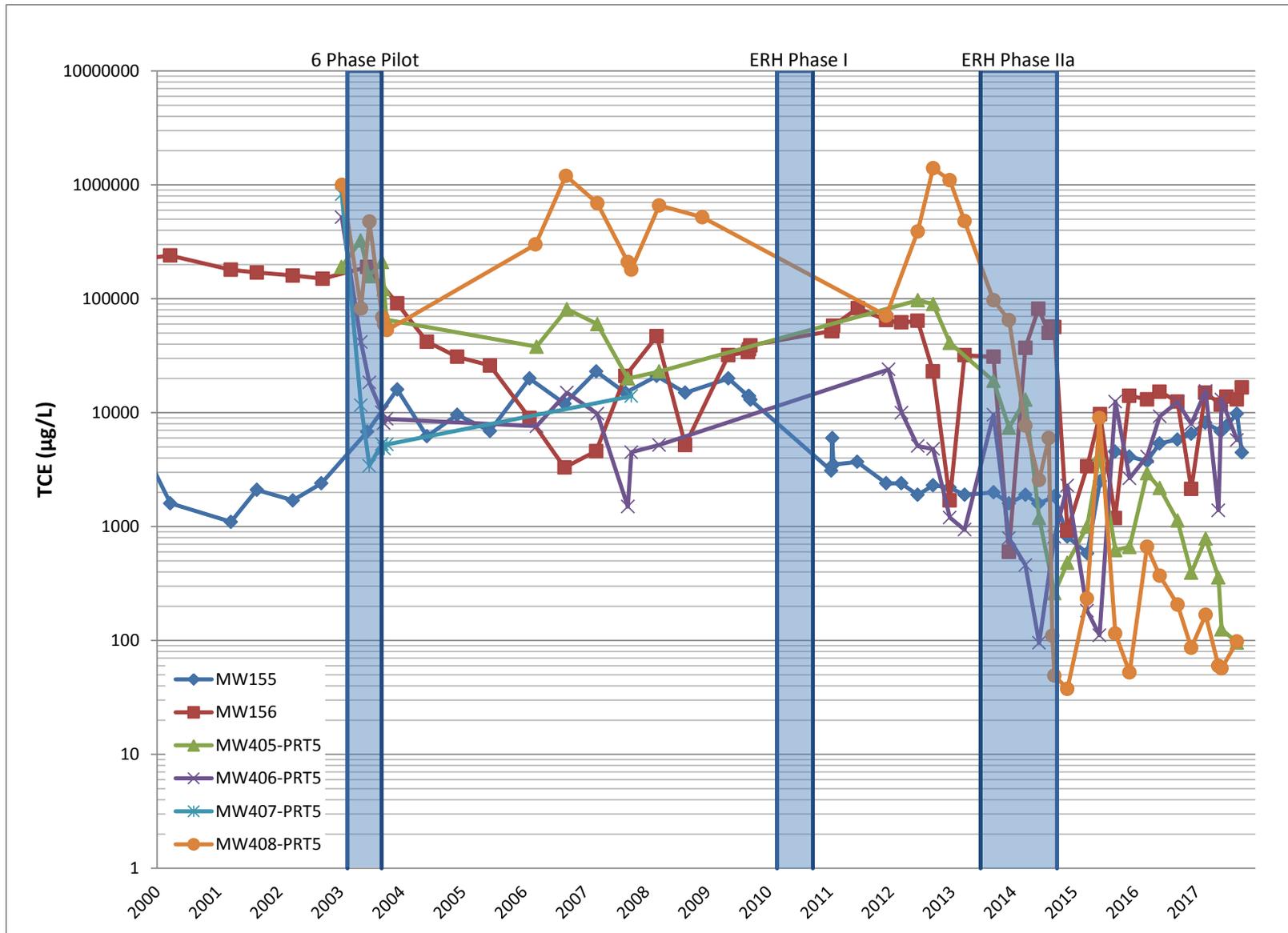


Figure E.2. C-400 TCE Trends in MWs in Source Areas

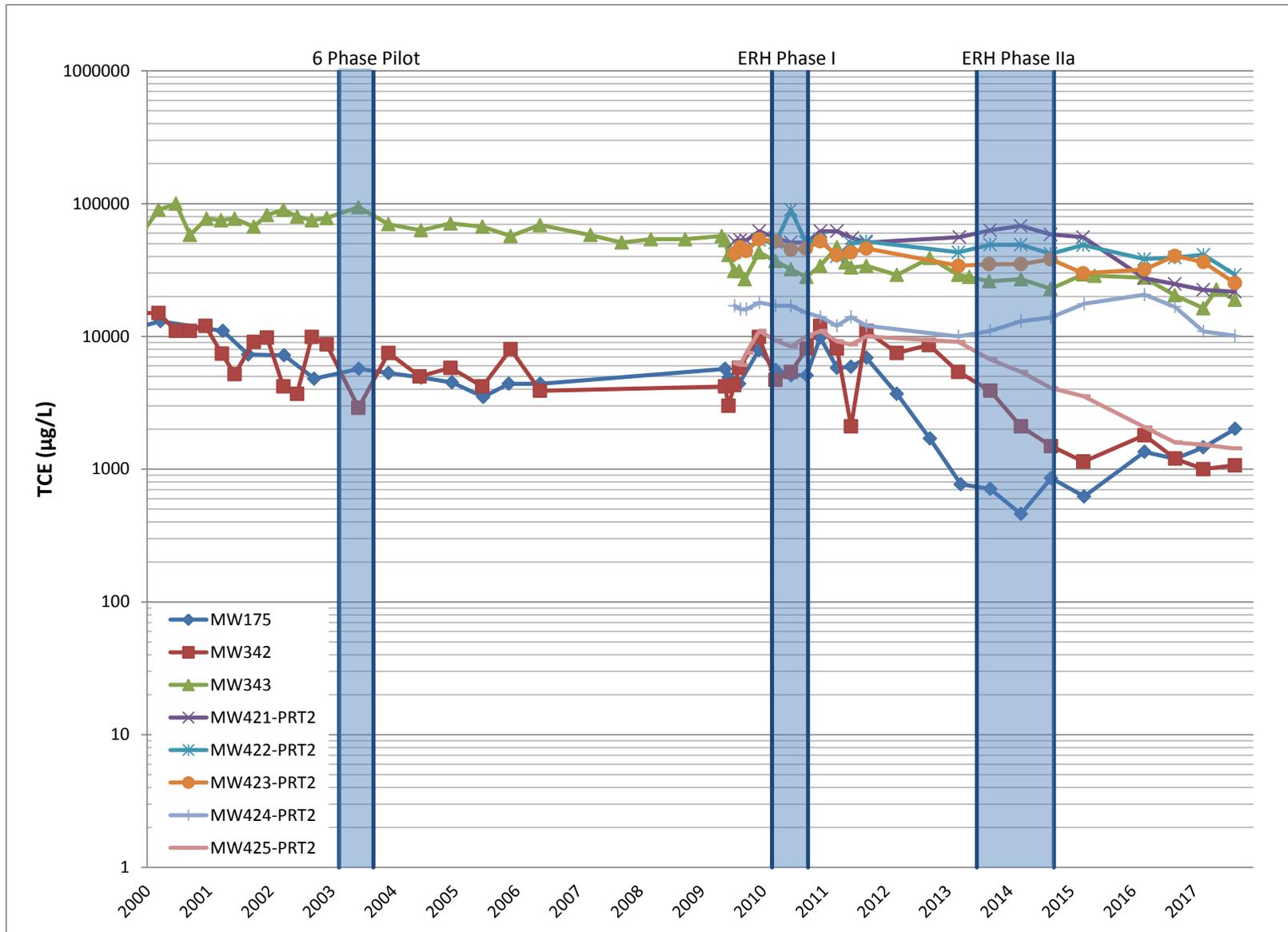


Figure E.3. C-400 TCE Trends in MWs Downgradient of Source Areas

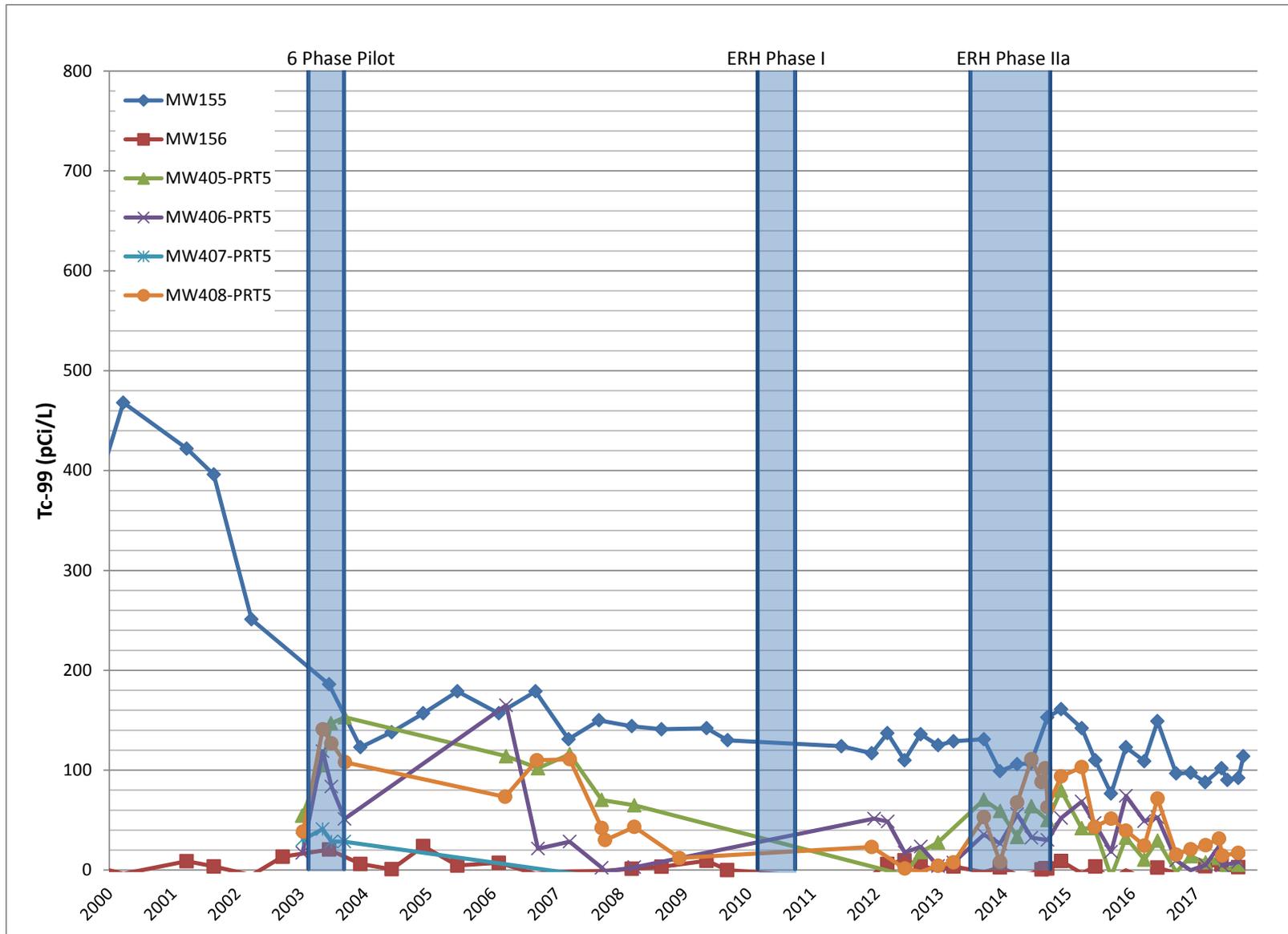


Figure E.4. C-400 Tc-99 Trends in MWs in Source Areas

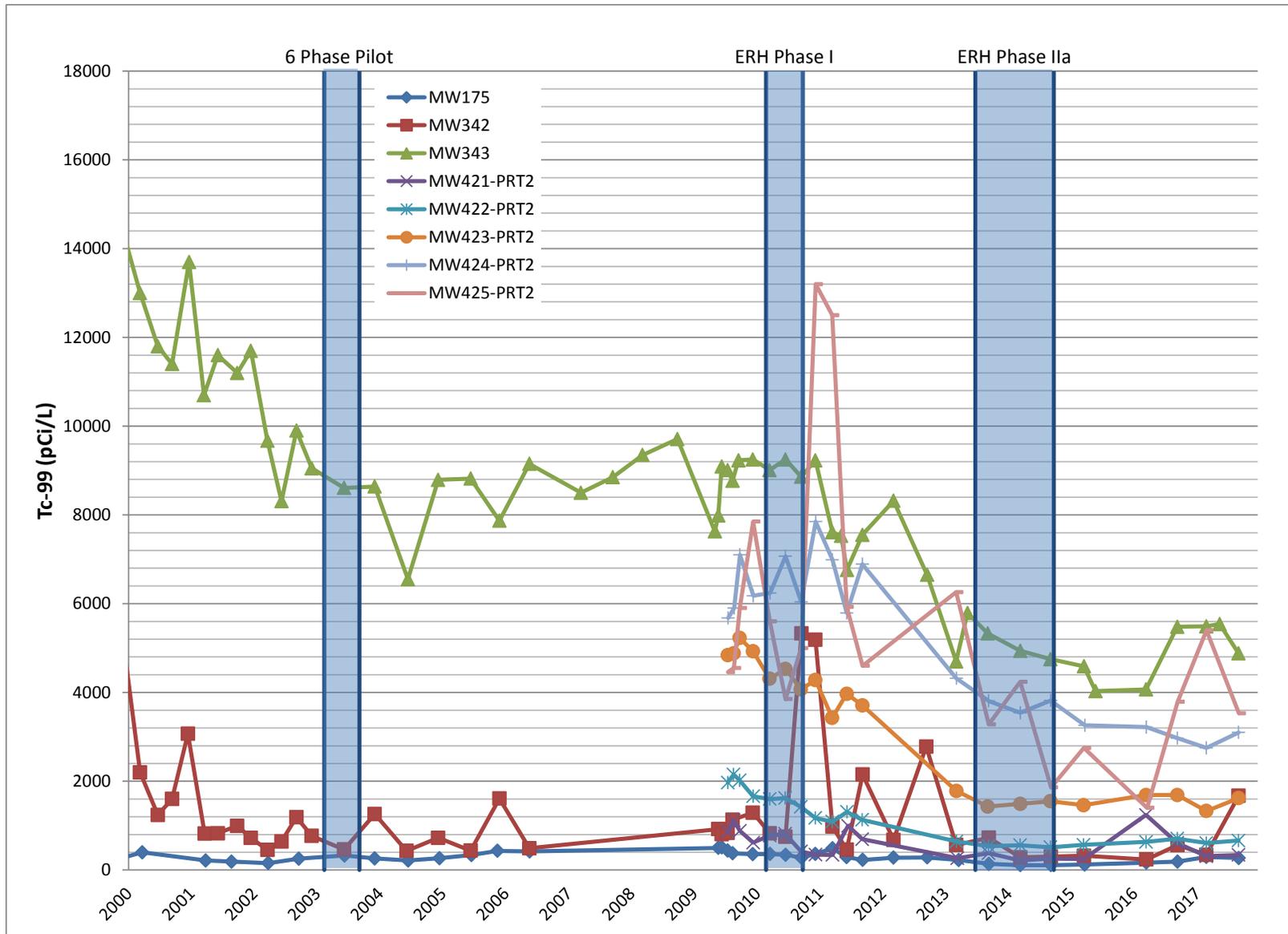


Figure E.5. C-400 Tc-99 Trends in MWs Downgradient of Source Areas

C-400 Monitoring
Water Quality Records for
MW155

Sample Date Range: 6/16/2009 - 12/18/2017

E-8

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal Uranium mg/L	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L		PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	PCB 1268 µg/L	
9/10/2009	14000	< 1000			< 1000													C09254002003
9/10/2009	14000	< 200	< 200	< 200	< 200	< 1.12	93.2	130	< 0.005									C09253025001
9/15/2009	14000	< 500			< 500													C09258030001
9/22/2009	13000	< 500			< 500													C09265022002
1/19/2011	3100	< 25			< 25					< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11019028004
1/25/2011	6000	< 250			< 50													C11026001005
1/25/2011	3800	< 250			< 50													C11026001006
1/31/2011	3500	< 250			< 50													C11031038005
6/23/2011	3700	< 100	< 20	< 20	< 20	7.65	130	124	< 0.005									C11174017005
12/14/2011	2400	< 500			< 100	< 3.61	111	117	< 0.005									C11348018003
3/13/2012	2400	< 50			< 50	< 2.35	89.7	137	< 0.005									C12073014001
6/19/2012	1900	< 250			< 50	6.46	121	110	< 0.005									C12171014003
9/19/2012	2300	< 20			< 20	< 3.19	131	136	< 0.005									C12263022001
12/28/2012	2200	< 20			< 20			125										C12363012001
12/28/2012	2200	< 20			< 20			120										C12363012002
3/27/2013	1900	< 20			< 20			129										C13086008001
9/16/2013	2000	< 100			< 20			131										C13259034001
12/17/2013	1600	< 20			< 20			98.6										C13351094006
12/17/2013	1600	< 20			< 20			99.1										C13351094007
3/26/2014	1900	< 20			< 20			106										C14085027001
6/12/2014	1590	< 25			< 25			107										350627004
9/15/2014	1850	0.44			0.31			153										356931002

C-400 Monitoring
Water Quality Records for
MW155

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results							Lab Sample ID	
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L		Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L		PCB 1260 µg/L
12/2/2014	817	< 1			< 1			160										362435001
12/2/2014	810	< 1			< 1			161										362435002
3/31/2015	583	< 10			< 10			142										369938002
6/16/2015	2500	< 50			< 50			110										375398002
9/14/2015	4560	< 100			< 100			76.5										381234002
12/8/2015	4110	< 50			< 50			120										387183002
12/8/2015	4080	< 50			< 50			123										387183003
3/23/2016	3760	< 50			< 50			109										393849001
6/6/2016	5370	< 100			< 100			149										398881002
9/21/2016	5800	< 100			< 100			96.7										406611002
12/13/2016	6520	< 100			< 100			88										412748003
12/13/2016	6320	< 100			< 100			97.5										412748002
3/7/2017	8160	< 100			< 100			87.9										418299002
6/8/2017	6840	< 100			< 100			102										425123001
7/11/2017	7650	< 100			< 100			90.1										427964006
9/12/2017	9830	< 200			< 200			92.2										432724002
10/11/2017	4470	< 100			< 100			114										435057002
10/11/2017	4130	< 50			< 50			113										435057003
12/18/2017	5720	< 100			< 100			107										440362003
12/18/2017	5260	< 100			< 100			87.5										440362002

E-9

C-400 Monitoring
Water Quality Records for
MW156

Sample Date Range: 6/16/2009 - 12/18/2017

E-10

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	PCB 1268 µg/L	
9/8/2009	34000	< 5000			< 5000													C09252006001
9/8/2009	34000	< 2000	< 2000	< 2000	< 2000	< 3.89	4.01	< 0.0531	< 0.005									C09252004001
9/15/2009	36000	< 5000			< 5000													C09258030002
9/22/2009	39000	< 5000			< 5000													C09265022001
1/20/2011	52000	< 1000			< 1000					< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11020026003
1/25/2011	52000	< 2500			< 500													C11026003001
1/31/2011	58000	< 2500			< 500													C11031038006
6/27/2011	83000	< 5000	< 1000	< 1000	< 1000	< 3.86	5.6	< -8.94	< 0.005									C11178014001
12/14/2011	65000	< 5000			< 1000	< 2.55	7.54	< -5.13	< 0.005									C11348018004
3/13/2012	62000	< 2000			< 2000	6.83	< 4.93	< 6.21	< 0.005									C12073014002
6/19/2012	64000	< 5000			< 1000	< 6.32	< 6.31	< 9.77	< 0.005									C12171014004
9/19/2012	23000	< 500			< 500	< 3.24	< 5.54	< 5.12	< 0.005									C12263022002
12/28/2012	1700	< 500			< 500			< -0.798										C12363012003
3/27/2013	32000	< 1000			< 1000			< 3.7										C13086008002
9/16/2013	31000	< 2500			< 500			< -2.19										C13259034002
12/17/2013	600	< 500			< 500			< 2.71										C13351094008
3/26/2014	37000	< 500			< 500			< -4.56										C14085027002
6/12/2014	81800	< 1000			< 1000			< -3.61										350627005
8/13/2014	50000	< 20			< 20			< 0.723										160-7947-6
9/3/2014	57000	< 40			< 40			< 1.81										160-8215-12
9/15/2014	56500	15.2			3.67			< 1.62										356931003
12/2/2014	925	< 500			8.79			< 9.1										362435003

C-400 Monitoring
Water Quality Records for
MW156

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal Uranium mg/L	Polychlorinated biphenyl Analysis Results							Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L		PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	
3/31/2015	3390	< 500			< 500			< -3.32									369938003
6/16/2015	9720	< 500			< 500			< 3.72									375398003
6/16/2015	8270	< 500			< 500			< 1.43									375398004
9/14/2015	1190	< 50			< 50			< -9.6									381234003
12/8/2015	14100	< 500			< 500			< -0.175									387183001
3/23/2016	13100	170			< 50			< -8.5									393849002
6/6/2016	14600	< 500			< 500			< 1.33									398881001
6/6/2016	15300	< 500			< 500			< 2.38									398881003
9/21/2016	12500	< 500			< 500			< -2.91									406611003
12/13/2016	2140	< 100			< 100			< -7.97									412748001
3/7/2017	15000	< 500			< 500			< 3.88									418299003
6/8/2017	10300	< 500			< 500			< 5.59									425123003
6/8/2017	11800	< 500			< 500			< -5.94									425123002
7/11/2017	13800	< 500						< -8.3									427964007
7/11/2017	13700	< 500						< -2.35									427964008
9/12/2017	13100	< 500			< 500			< 2.86									432724003
10/11/2017	16700	116						< -6.64									435057004
12/18/2017	8910	71.2			9.11			< 6.73									440362001

E-11

C-400 Monitoring
Water Quality Records for
MW175

Sample Date Range: 6/16/2009 - 12/18/2017

E-12

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L		Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	
6/16/2009	4900	< 50			< 50	11.7	447	508	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09168007001
7/20/2009	4400	< 250			< 50	< 3.65	415	438	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09201015001
8/18/2009	4400	< 50			< 50	9.43	416	375	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09230023001
12/14/2009	7900	< 250			< 50	< -0.722	363	357	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C09348024001
3/24/2010	5600	< 50			< 50	< 1.61	211	360	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C10083023001
6/23/2010	4800	< 250			< 50	< 4.95	292	343	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10174017001
6/23/2010	5100	< 250			< 50	12.9	301	315	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C10174017002
9/23/2010	5100	< 250			< 50	7.46	226	275	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10266013001
12/13/2010	9800	< 250			< 50	26.6	274	363	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10347023005
3/23/2011	5800	< 100			< 100	24.3	366	488	< 0.005	< 167	< 176	< 137	< 98	< 118	< 68.6	6730	< 88.2	C11082024002
6/13/2011	5900	< 250			< 50	9.43	190	267	< 0.005									C11165011003
6/13/2011	5900	< 250			< 50	13.5	201	292	< 0.005									C11165011004
6/13/2011										< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	1106040-02
6/13/2011										< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	1106040-01
9/14/2011	6900	< 250			< 50	< -1.01	218	228	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11257087005
3/12/2012	3700	< 50			< 50	< 5.16	156	279	< 0.005									C12072031011
9/25/2012	1700	< 20			< 20	< 3.18	245	282	< 0.005									C12269015003
9/25/2012	1700	< 20			< 20	< 3.25	245	284	< 0.005									C12269015004
3/27/2013	770	< 10			< 10			226										C13086008003
9/18/2013	710	< 100			< 20			139										C13261023005
3/20/2014	460	< 5			< 5			110										C14079018001
3/20/2014	460	< 5			< 5			102										C14079018002

C-400 Monitoring
Water Quality Records for
MW175

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal Uranium mg/L	Polychlorinated biphenyl Analysis Results							Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L		PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	
9/15/2014	855	< 10			< 10			111									356931004
3/30/2015	575	< 10			5.2			98.2									369938004
3/30/2015	623	< 10			6.1			124									369938005
3/23/2016	1350	< 20			< 20			160									393849003
3/23/2016	1330	< 20			< 20			167									393849004
9/21/2016	1200	< 20			< 20			189									406611004
3/7/2017	1460	< 20			< 20			285									418299004
3/7/2017	1420	< 20			< 20			293									418299005
9/12/2017	2010	< 50			< 50			272									432724001

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C-400 Monitoring
Water Quality Records for
MW342

Sample Date Range: 6/16/2009 - 12/18/2017

E-14

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L		Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	
6/16/2009	3000	< 50			< 50	16.7	616	805	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09168006001
7/20/2009	4300	< 250			< 50	< -0.785	510	837	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09201016001
8/18/2009	5800	< 50			< 50	16	985	1130	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09230024001
12/14/2009	9500	< 250			< 50	< -6.46	978	1290	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C09348024002
12/14/2009	9900	< 250			< 50	< 0.633	926	1280	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09348024003
3/23/2010	4700	< 50			< 50	10.3	386	827	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C10082025007
6/22/2010	5400	< 250			< 50	11.4	642	750	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C10173039001
9/23/2010	7600	< 250			< 50	< -52	3690	5330	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10266013002
9/23/2010	8100	< 250			< 50	< -57.1	3720	4720	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10266013003
12/13/2010	12000	< 200			< 200	41	4120	5000	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10347023002
12/13/2010	12000	< 200			< 200	56	3960	5190	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10347023003
3/23/2011	8100	< 100			< 100	26.8	835	980	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.32	< 0.09	C11082024001
6/14/2011	2100	< 500			< 100	28.8	457	456	< 0.005									C11165038001
6/14/2011										< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	1106059-01
9/14/2011	10000	< 250			< 50	< -4.68	1750	1930	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11257087004
9/14/2011	11000	< 250			< 50	< -9.47	1800	2150	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11257087003
3/12/2012	7500	< 100			< 100	< 2.56	420	678	< 0.005									C12072031010
9/19/2012	8600	< 100			< 100	10.4	2820	2780	< 0.005									C12263022003
3/12/2013	5400	< 100			< 100			564										C13072002001
9/18/2013	3900	< 500			< 100			728										C13261023004
3/20/2014	2100	< 20			< 20			287										C14079016010
9/15/2014	1490	5.8			0.6			303										356931001

C-400 Monitoring
Water Quality Records for
MW342

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	PCB 1268 µg/L	
3/26/2015	1140	5.96			0.66			322										369707001
3/23/2016	1800	< 25			< 25			237										393849005
9/21/2016	1200	< 25			< 25			562										406611001
3/7/2017	1000	< 20			< 20			341										418299006
9/11/2017	1070	< 20			< 20			1670										432728002

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C-400 Monitoring
Water Quality Records for
MW343

Sample Date Range: 6/16/2009 - 12/18/2017

E-16

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L		Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	
6/16/2009	41000	< 500			< 500	82.1	6710	9090	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09168007002
7/20/2009	31000	< 2500			< 500	< 4.65	6730	9010	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C09201066001
8/18/2009	31000	< 400			< 400	19.7	7420	8770	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09230023002
9/21/2009	27000	< 1000	< 200	< 1000	< 200	< -119	6980	9230	< 0.005									C09265006005
12/14/2009	43000	< 2000			< 400	< -176	6970	9250	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09348027001
3/22/2010	37000	< 250			< 250	92.1	5660	9010	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10082005002
3/22/2010	37000	< 400	< 250	< 250	< 250	< -90.6	5370	8960	< 0.005									C10082002001
3/22/2010	37000	< 250			< 250	37.4	6850	< 8920	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C10082005001
6/22/2010	32000	< 2500			< 500	22	6440	9250	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C10173027001
9/22/2010	28000	< 2500			< 500	< -114	6340	8860	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10265020004
12/13/2010	34000	< 2500			< 500	< -77.3	6970	9230	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10347023006
3/22/2011	39000	< 400			< 400	134	5310	7600	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.53	< 0.09	C11081023003
3/22/2011	47000	< 400			< 400	46.5	6570	7610	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.13	< 0.09	C11081023004
5/12/2011	36000	< 2500	< 500	< 500	< 500	150	5510	7530	< 0.005									C11132027003
6/15/2011										< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	1106059-02
6/15/2011	33000	< 2000			< 400	< -4.39	7110	6760	< 0.005									C11166026001
9/13/2011	34000	< 2000			< 400	< -144	6990	7550	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11256012004
3/12/2012	29000	< 400			< 400	< -56.9	4670	7030	< 0.005									C12072031007
3/12/2012	28000	< 400			< 400	< -85.1	4680	8320	< 0.005									C12072031006
9/24/2012	39000	< 500			< 500	< -23.7	4970	6650	< 0.005									C12268086002
3/12/2013	29000	< 400			< 400			4700										C13072002002
5/17/2013	28000	< 1000	< 200	< 200	< 200			5790										C13137019001

C-400 Monitoring
Water Quality Records for
MW343

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal Uranium mg/L	Polychlorinated biphenyl Analysis Results							Lab Sample ID
	TCE μg/L	1,1-DCE μg/L	1,1-DCA μg/L	1,2-DCA μg/L	trans-1,2-DCE μg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L		PCB 1016 μg/L	PCB 1221 μg/L	PCB 1232 μg/L	PCB 1242 μg/L	PCB 1248 μg/L	PCB 1254 μg/L	PCB 1260 μg/L	
9/12/2013	25000	< 1000			< 200			5330									C13255009004
9/12/2013	26000	< 1000			< 200			5150									C13255009005
3/20/2014	27000	< 200			< 200			4940									C14079016011
9/12/2014	22000	< 50			< 50			4750									356931005
9/12/2014	22800	< 50			< 50			4710									356931006
3/26/2015	29300	9.73			2.09			4590									369707002
6/1/2015	28600	< 500	< 500	< 500	< 500			4030									374452006
3/21/2016	27700	0.84			10.5			4070									393717001
9/19/2016	20400	< 250			< 250			5480									406359010
3/7/2017	16300	< 250			< 250			5490									418299007
5/24/2017	22500	< 500	< 500	< 500	< 500			5540									424148014
9/11/2017	18900	< 200			< 200			4880									432728003

E-17

C-400 Monitoring
Water Quality Records for
MW405

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results							Lab Sample ID	
	TCE μg/L	1,1-DCE μg/L	1,1-DCA μg/L	1,2-DCA μg/L	trans-1,2-DCE μg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 μg/L	PCB 1221 μg/L	PCB 1232 μg/L	PCB 1242 μg/L	PCB 1248 μg/L	PCB 1254 μg/L	PCB 1260 μg/L		PCB 1268 μg/L
6/23/2011	52000	< 2500	< 500	< 500	< 500	8.66	22.7	< 16.1	0.014									C11174017004

E-18

C-400 Monitoring
Water Quality Records for
MW405-PRT5

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L		Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	
6/20/2012	97000	< 5000			< 1000	< 4.86	15.7	< -4.94	< 0.005									C12172011001
9/20/2012	90000	< 1000			< 1000	< 0.778	14.6	< 17.9	< 0.005									C12264031001
12/28/2012	41000	< 1000			< 1000			27.7										C12363012004
9/16/2013	19000	< 1000			< 200			70.4										C13259034003
12/18/2013	7400	< 100			< 100			59.1										C13353003001
3/26/2014	13000	< 100			< 100			33.1										C14085027003
6/16/2014	1190	< 20			< 20			63.8										350866002
9/16/2014	261	2.45			< 5			50										356931007
12/2/2014	481	< 10			< 10			79.8										362435004
3/30/2015	1000	< 20			< 20			41.8										369938006
6/12/2015	4010	< 50			< 50			41.9										375132002
6/12/2015	4270	< 100	< 100	< 100	< 100			34.4										375135001
9/15/2015	622	< 10			< 10			< -6.41										381234004
12/9/2015	663	< 10			< 10			32.5										387183004
3/23/2016	2930	< 10			< 10			< 10.5										393849006
6/7/2016	2180	< 50			< 50			29.5										398881004
9/22/2016	1130	< 20			< 20			< -1.98										406611005
12/13/2016	393	< 5			< 5			< 13.9										412748004
3/9/2017	784	< 10			< 10			< 7.61										418299008
5/24/2017	358	< 10	< 10	< 10	< 10			< 12.1										424148017
6/12/2017	125	< 10			< 10			< -1.71										425662001
9/12/2017	96	< 2			< 2			< 5.3										432724004

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C-400 Monitoring
Water Quality Records for
MW405-PRT5

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE μg/L	1,1-DCE μg/L	1,1-DCA μg/L	1,2-DCA μg/L	trans-1,2-DCE μg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 μg/L	PCB 1221 μg/L	PCB 1232 μg/L	PCB 1242 μg/L	PCB 1248 μg/L	PCB 1254 μg/L	PCB 1260 μg/L	PCB 1268 μg/L	
12/18/2017	396	< 5			< 5			< -0.144										440362004

E-20

C-400 Monitoring
Water Quality Records for
MW406

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results							Lab Sample ID	
	TCE μg/L	1,1-DCE μg/L	1,1-DCA μg/L	1,2-DCA μg/L	trans-1,2-DCE μg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 μg/L	PCB 1221 μg/L	PCB 1232 μg/L	PCB 1242 μg/L	PCB 1248 μg/L	PCB 1254 μg/L	PCB 1260 μg/L		PCB 1268 μg/L
6/23/2011	6500	< 500	< 100	< 100	< 100	11.4	45.5	47.7	< 0.005									C11174017003

E-21

C-400 Monitoring
Water Quality Records for
MW406-PRT5

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal Uranium mg/L	Polychlorinated biphenyl Analysis Results							Lab Sample ID	
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L		PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L		PCB 1268 µg/L
12/28/2011	24000	< 500			< 100	7.77	54.5	51.5	< 0.005									C11362008002
3/15/2012	10000	< 100			< 100	< -2.11	45.3	48.6	< 0.005									C12075015001
6/20/2012	5100	< 500			< 100	< 1.89	23.6	< 17.5	< 0.005									C12172011002
9/20/2012	4800	< 100			< 100	< -0.0458	31.2	23.5	< 0.005									C12264031002
12/28/2012	1200	< 10			< 10			< 4.01										C12363012005
3/27/2013	940	< 20			< 20			< 7.56										C13086018001
9/16/2013	9600	< 100			< 20			35.5										C13259034004
12/18/2013	790	< 10			< 10			26.5										C13353003002
3/26/2014	460	< 5			< 5			55.9										C14085027004
6/16/2014	95.4	< 2			< 2			32.5										350866003
9/16/2014	812	< 10			< 10			30.1										356931008
12/2/2014	2290	1.1			0.87			52										362435005
3/30/2015	183	< 4			< 4			68.6										369938007
6/12/2015	111	< 2	< 2	< 2	< 2			43.2										375135002
6/12/2015	100	< 2			< 2			47.1										375132003
9/15/2015	12500	< 250			< 250			< 18.3										381234005
12/9/2015	2660	< 50			< 50			74.3										387183005
3/23/2016	4120	< 50			< 50			49										393849007
6/7/2016	9270	< 100			< 100			52.7										398881005
9/22/2016	12400	< 250			< 250			< 9.62										406611006
12/13/2016	7960	< 100			< 100			< -0.059										412748005
3/9/2017	15500	< 250			< 250			< 5.12										418299009

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C-400 Monitoring
Water Quality Records for
MW406-PRT5

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	PCB 1268 µg/L	
5/24/2017	1390	< 25	< 25	< 25	< 25			23.6										424148018
6/12/2017	13000	< 250			< 250			< 4.63										425662002
9/12/2017	5760	< 100			< 100			< 8.05										432724005
12/18/2017	4810	< 100			< 100			< -2.88										440362005

E-23

C-400 Monitoring
Water Quality Records for
MW407-PRT4

Sample Date Range: 6/16/2009 - 12/18/2017

E-24

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal Uranium mg/L	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L		PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	PCB 1268 µg/L	
12/28/2011	4900	< 500			< 100	< 3.09	10.7	< 5.26	< 0.005									C11362008001
3/14/2012	14000	< 100			< 100	< 3.36	5.57	< -5.15	< 0.005									C12074017002
6/20/2012	13000	< 500			< 100	< 4.76	8.43	< 8.61	< 0.005									C12172011003
9/20/2012	13000	< 100			< 100	< 0.291	< 3.11	< -10.2	< 0.005									C12264031003
12/28/2012	7000	< 50			< 50			< 0.433										C12363012006
3/27/2013	14000	< 200			< 200			< 0.435										C13086018002
9/16/2013	24000	< 500			< 100			< 13.4										C13259034005
12/18/2013	7000	< 100			< 100			< 3.81										C13353003003
3/26/2014	2300	< 20			< 20			67.6										C14085027005
6/16/2014	32100	< 500			< 500			58.3										350866004
9/16/2014	23800	< 500			< 500			< 11.5										356931009
12/2/2014	13900	< 1			0.8			< 2.74										362435006
3/30/2015	10300	< 200			< 200			45.8										369938008
6/12/2015	18200	< 250			< 250			< 11.6										375132001
6/12/2015	18600	< 250	< 250	< 250	< 250			< 11.3										375135003
9/15/2015	671	< 10			< 10			55.1										381234006
12/9/2015	544	< 10			< 10			81										387183006
3/23/2016	3300	< 10			< 10			57.6										393849008
6/7/2016	9180	< 100			< 100			115										398881006
9/22/2016	9990	< 100			< 100			50.6										406611007
12/13/2016	2100	< 50			< 50			65.2										412748006
3/9/2017	2810	< 50			< 50			54.3										418299010

C-400 Monitoring
Water Quality Records for
MW407-PRT4

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	PCB 1268 µg/L	
5/24/2017	3710	< 100	< 100	< 100	< 100			53.1										424148019
6/12/2017	2960	< 40			< 40			49.4										425662003
9/12/2017	2160	< 50			< 50			59.4										432724006
12/18/2017	468	< 10			< 10			37.5										440362006

E-25

C-400 Monitoring
Water Quality Records for
MW408

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE μg/L	1,1-DCE μg/L	1,1-DCA μg/L	1,2-DCA μg/L	trans-1,2-DCE μg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 μg/L	PCB 1221 μg/L	PCB 1232 μg/L	PCB 1242 μg/L	PCB 1248 μg/L	PCB 1254 μg/L	PCB 1260 μg/L	PCB 1268 μg/L	
6/23/2011	95000	< 5000	< 1000	< 1000	< 1000	< 2.51	13.3	< 14.5	< 0.005									C11174017001

E-26

C-400 Monitoring
Water Quality Records for
MW408-PRT5

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	PCB 1268 µg/L	
12/14/2011	71000	< 5000			< 1000	< 1.93	32.9	23.2	< 0.005									C11348026001
6/20/2012	390000	< 20000			< 4000	< 3.79	12.2	< 1.58	< 0.005									C12172011004
9/20/2012	1400000	< 4000			< 4000	< -1.52	13.4	< -1.7	< 0.005									C12264031004
12/28/2012	1100000	< 5000			< 5000			< 4.33										C12363012007
3/27/2013	480000	< 10000			< 10000			< 7.73										C13086018003
9/16/2013	97000	< 2500			< 500			52.9										C13259034006
12/18/2013	65000	< 1000			< 1000			< 8.07										C13353003004
3/26/2014	7700	< 50			< 50			67.7										C14085027006
6/16/2014	2560	< 40			< 40			111										350866001
8/13/2014	6000	< 2			< 2			88.2										160-7947-7
9/3/2014	110	< 0.08			< 0.08			102										160-8215-10
9/16/2014	49.1	< 1			< 1			63										356931010
12/2/2014	37.6	< 1			< 1			93.7										362435007
3/30/2015	234	< 4			< 4			103										369938009
6/12/2015	8990	< 200	< 200	< 200	< 200			36										375135004
6/12/2015	3490	< 50			< 50			43.1										375132004
9/15/2015	115	< 2			< 2			51.5										381234001
12/9/2015	52.4	< 1			< 1			39.5										387183007
3/23/2016	665	0.94			0.84			24.5										393849009
6/7/2016	371	< 5			< 5			71.6										398881007
9/22/2016	207	< 5			< 5			< 15.4										406611008
12/13/2016	86.2	< 1			< 1			20.9										412748007

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C-400 Monitoring
Water Quality Records for
MW408-PRT5

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results							Lab Sample ID	
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L		PCB 1268 µg/L
3/9/2017	168	< 2			< 2			24.8										418299011
5/24/2017	59.8	< 1	< 1	< 1	< 1			31.5										424148020
6/12/2017	56.9	< 1			< 1			< 14.5										425662004
9/12/2017	97.9	< 2			< 2			17.1										432724007
12/18/2017	< 1	< 1			< 1			< 4.89										440362007

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C-400 Monitoring
Water Quality Records for
MW421-PRT1

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	PCB 1268 µg/L	
7/21/2009	20000	< 1000			< 200	38	1780	1650	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09202027001
8/25/2009	21000	< 200			< 200	< -0.377	1300	1670	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C09237029001
9/29/2009	22000	< 200			< 200	33	878	1240	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09273002001
12/16/2009	27000	< 1000			< 200	27.7	906	1160	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C09350025004
3/23/2010	24000	< 200			< 200	15.5	1180	1780	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C10082025004
6/23/2010	58000	< 500			< 500	18.4	1710	2340	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C10172026001
9/21/2010	34000	< 500			< 500	15.1	826	1190	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10264016001
12/14/2010	28000	< 2500			< 500	9.44	789	916	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10348026001
3/23/2011	28000	< 250			< 250	< 4.35	623	859	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.06	< 0.09	C11082024003
6/22/2011										< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	1106092-01
6/22/2011	29000	< 2000			< 400	< -121	3300	3930	< 0.005									C11173026001
9/12/2011	32000	< 1000			< 200	9.06	2190	2500	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11255015001
3/19/2013	26000	< 400			< 400			912										C13078013003
9/17/2013	34000	< 2000			< 400			1750										C13260018001
3/19/2014	31000	< 400			< 400			761										C14078013004
9/10/2014	26000	< 500			< 500			944										356723001
3/24/2015	19300	< 500			< 500			892										369707003
3/21/2016	9860	21.5			0.54			4160										393717002
9/19/2016	10300	< 200			< 200			1750										406359001
3/7/2017	9260	< 200			< 200			898										418299001
9/11/2017	9440	< 100			< 100			1500										432728004

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C-400 Monitoring
Water Quality Records for
MW421-PRT2

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	PCB 1268 µg/L	
7/21/2009	52000	< 2500			< 500	15.2	830	856	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09202027002
8/25/2009	53000	< 500			< 500	6.73	865	1120	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09237029002
9/29/2009	53000	< 500			< 500	27.9	639	882	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09273002002
12/16/2009	62000	< 2500			< 500	4.74	475	618	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09350025005
3/23/2010	55000	< 500			< 500	12.7	417	777	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C10082025005
6/21/2010	51000	< 500			< 500	26.9	514	813	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C10172026002
9/21/2010	51000	< 500			< 500	8.44	255	416	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10264016002
12/14/2010	62000	< 500			< 500	10.4	280	348	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10348026002
3/23/2011	62000	< 500			< 500	8.6	220	340	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.15	< 0.09	C11082024004
6/22/2011										< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	1106092-02
6/22/2011	55000	< 2500			< 500	<-24.9	853	996	< 0.005									C11173026002
9/12/2011	51000	< 2000			< 400	14.5	582	694	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11255015002
3/19/2013	56000	< 500			< 500			265										C13078013004
9/17/2013	63000	< 2000			< 400			377										C13260018002
3/19/2014	68000	< 400			< 400			216										C14078013005
9/12/2014	58600	< 50			< 50			255										356931011
3/24/2015	55900	< 1000			< 1000			249										369707004
3/21/2016	27400	8.01			1.39			1240										393717003
9/19/2016	24800	< 500			< 500			609										406359002
3/7/2017	22400	< 500			< 500			311										418299012
9/11/2017	21700	< 500			< 500			339										432728001

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C-400 Monitoring
Water Quality Records for
MW421-PRT3

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L		Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	
7/21/2009	63000	< 2500			< 500	< 3.73	327	302	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09202027003
8/25/2009	66000	< 500			< 500	< 3.62	398	451	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09237029003
9/29/2009	61000	< 500			< 500	8.99	323	335	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09273002003
12/16/2009	77000	< 2500			< 500	4.67	226	345	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09350025006
3/23/2010	70000	< 500			< 500	12.8	218	376	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C10082025006
6/21/2010	68000	< 500			< 500	< 4.02	278	251	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C10173001001
9/21/2010	64000	< 500			< 500	6.83	215	285	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10264016003
12/14/2010	65000	< 500			< 500	< 5.08	209	278	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10348026003
3/23/2011	61000	< 500			< 500	19	186	278	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.34	< 0.09	C11082024005
6/22/2011	72000	< 2500			< 500	15.7	289	399	< 0.005									C11173026003
6/22/2011										< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	1106092-03
9/12/2011	67000	< 2500			< 500	5.7	272	313	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11255015003
3/12/2012	73000	< 500			< 500	5.39	177	283	< 0.005									C12072031003
9/25/2012	96000	< 1000			< 1000	< 1.59	225	211	< 0.005									C12270003002
3/19/2013	80000	< 1000			< 1000			216										C13078013005
9/17/2013	63000	< 2500			< 500			191										C13260018003
3/19/2014	67000	< 500			< 500			202										C14078013006
9/12/2014	62800	< 50			< 50			181										356931012
3/24/2015	45500	4.96			1.92			200										369707005
3/21/2016	49300	4.07			1.22			318										393717004
9/19/2016	49500	< 500			< 500			261										406359003
3/7/2017	49600	< 1000			< 1000			155										418299013

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C-400 Monitoring
Water Quality Records for
MW421-PRT3

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE μg/L	1,1-DCE μg/L	1,1-DCA μg/L	1,2-DCA μg/L	trans-1,2-DCE μg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 μg/L	PCB 1221 μg/L	PCB 1232 μg/L	PCB 1242 μg/L	PCB 1248 μg/L	PCB 1254 μg/L	PCB 1260 μg/L	PCB 1268 μg/L	
9/11/2017	42100	< 1000			< 1000			194										432728005

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C-400 Monitoring
Water Quality Records for
MW422-PRT1

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L		Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	
7/21/2009	10000	< 500			< 100	< -96.7	10400	13600	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09202018001
8/24/2009	13000	< 100			< 100	95	12900	15600	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09237007001
9/28/2009	12000	< 100			< 100	59.7	14200	16900	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09271021004
12/16/2009	16000	< 1000			< 200	< -15.7	10200	13900	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09350025001
3/23/2010	14000	< 100			< 100	< -25.6	8460	13400	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C10082025001
6/21/2010	14000	< 100			< 100	< -60.6	11600	15500	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10173001002
9/20/2010	15000	< 200			< 200	< -51	8500	12900	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10263039004
12/13/2010	23000	< 1000			< 200	< -3.47	5090	6610	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10347024004
3/22/2011	20000	< 200			< 200	87.5	4860	6410	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11081023005
6/15/2011										< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	1106059-03
6/15/2011	14000	< 1000			< 200	< -13.8	7910	9730	< 0.005									C11166026002
9/12/2011	16000	< 1000			< 200	< -54.7	10600	12300	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11255022001
3/13/2013	16000	< 250			< 250			6720										C13072022004
9/17/2013	17000	< 500			< 100			14200										C13260018004
3/19/2014	15000	< 100			< 100			5800										C14078013007
9/12/2014	10800	32.8			< 25			10400										356931013
3/24/2015	9330	< 100			< 100			7120										369707006
3/21/2016	4720	43.2			0.4			10800										393717005
9/19/2016	4490	34			< 100			14900										406359004
3/8/2017	7020	< 100			< 100			7680										418299014
9/11/2017	4230	< 100			< 100			15000										432728006

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C-400 Monitoring
Water Quality Records for
MW422-PRT2

Sample Date Range: 6/16/2009 - 12/18/2017

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Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal Uranium mg/L	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L		PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	PCB 1268 µg/L	
7/21/2009	43000	< 2500			< 500	32.8	1570	1970	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09202019001
8/24/2009	47000	< 500			< 500	28.2	1650	2150	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09237008001
9/28/2009	45000	< 500			< 500	18.5	1490	2020	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C09271021005
12/16/2009	53000	< 2500			< 500	16.1	1110	1660	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09350025002
3/23/2010	51000	< 500			< 500	24	823	1600	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C10082025002
6/21/2010	90000	< 400			< 400	17.5	1060	1620	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C10173001003
9/20/2010	51000	< 1000			< 1000	9.61	808	1420	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10263039005
12/13/2010	54000	< 2500			< 500	41.2	789	1170	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10347024005
3/22/2011	40000	< 500			< 500	27.3	823	1090	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.44	< 0.09	C11081023006
6/15/2011										< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	1106059-04
6/15/2011	50000	< 2500			< 500	35.3	1000	1310	< 0.005									C11166026003
9/12/2011	52000	< 2000			< 400	10.6	900	1130	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11255022002
3/13/2013	43000	< 500			< 500			643										C13072022005
9/17/2013	49000	< 2000			< 400			535										C13260018005
3/19/2014	49000	< 400			< 400			559										C14078013008
9/12/2014	41800	< 50			< 50			514										356931014
3/24/2015	48700	< 100			< 100			567										369707007
3/21/2016	38200	3.2			1.2			634										393717006
9/19/2016	39200	< 500			< 500			707										406359005
3/8/2017	41200	< 500			< 500			608										418299015
9/11/2017	29100	< 500			< 500			663										432728007

C-400 Monitoring
Water Quality Records for
MW422-PRT3

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L		Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	
7/21/2009	45000	< 2500			< 500	< -0.394	1650	2310	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09202019002
8/24/2009	46000	< 500			< 500	15.4	1380	1960	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09237008002
9/28/2009	45000	< 500			< 500	15.5	1560	1940	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09271021006
12/16/2009	58000	< 2500			< 500	20.7	1230	1630	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09350025003
3/23/2010	53000	< 500			< 500	19.6	866	1490	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C10082025003
6/21/2010	72000	< 1000			< 1000	15.1	883	1520	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C10173001004
9/20/2010	61000	< 1000			< 1000	16.3	777	1320	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10263039006
12/13/2010	54000	< 2500			< 500	22.6	782	1070	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10347024006
3/22/2011	54000	< 500			< 500	23.3	677	1010	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.36	< 0.09	C11081023007
6/15/2011										< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	1106059-05
6/15/2011	49000	< 2500			< 500	13.5	864	1140	< 0.005									C11166026004
9/12/2011	53000	< 2000			< 400	7.69	718	910	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11255022003
3/12/2012	69000	< 500			< 500	< 4.11	575	774	< 0.005									C12072031004
9/25/2012	48000	< 1000			< 1000	< 4.02	524	631	< 0.005									C12270003001
3/13/2013	35000	< 500			< 500			559										C13072022006
9/17/2013	47000	< 2000			< 400			535										C13260018006
3/19/2014	49000	< 400			< 400			543										C14078013009
9/12/2014	46700	< 50			< 50			496										356931015
3/24/2015	44600	< 100			< 100			550										369707008
3/21/2016	37800	3.13			1.09			635										393717007
9/19/2016	44300	< 500			< 500			678										406359006
3/8/2017	39700	< 500			< 500			622										418299016

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C-400 Monitoring
Water Quality Records for
MW422-PRT3

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE μg/L	1,1-DCE μg/L	1,1-DCA μg/L	1,2-DCA μg/L	trans-1,2-DCE μg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 μg/L	PCB 1221 μg/L	PCB 1232 μg/L	PCB 1242 μg/L	PCB 1248 μg/L	PCB 1254 μg/L	PCB 1260 μg/L	PCB 1268 μg/L	
9/11/2017	25200	< 500			< 500			623										432728008

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C-400 Monitoring
Water Quality Records for
MW423-PRT1

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	PCB 1268 µg/L	
7/22/2009	13000	< 500			< 100	< -60	8610	10400	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09203009001
8/25/2009	12000	< 200			< 200	81	9720	12100	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09237022001
9/28/2009	11000	< 100			< 100	87.3	11100	14000	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09271021001
12/15/2009	15000	< 1000			< 200	< -236	11500	14400	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09349015001
3/22/2010	15000	64			< 25	45.5	8550	13800	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10082005003
6/22/2010	12000	< 500			< 100	< -79.6	10100	13400	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C10173027002
9/20/2010	12000	< 200			< 200	52.9	9500	16000	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10263039001
12/13/2010	18000	< 500			< 100	< -161	8180	10800	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10347024001
3/21/2011	15000	< 200			< 200	95.2	6870	8960	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11080075002
6/14/2011										< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	1106059-06
6/14/2011	15000	< 500			< 100	< -273	9620	9790	< 0.005									C11165038005
9/13/2011	14000	< 1000			< 200	< -18.7	8820	10500	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11256012001
3/13/2013	18000	< 200			< 200			9070										C13072009001
9/12/2013	13000	< 1000			< 200			14900										C13255083001
3/20/2014	13000	< 100			< 100			8350										C14079016004
9/12/2014	8980	32.8			< 25			9080										356931016
3/24/2015	8970	35.5			< 50			8220										369707009
3/21/2016	3350	35.7			0.4			8560										393717008
9/19/2016	4890	41.5			< 50			12600										406359007
3/8/2017	4520	< 100			< 100			8980										418299017
9/11/2017	3370	22.5			< 50			13000										432728009

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C-400 Monitoring
Water Quality Records for
MW423-PRT2

Sample Date Range: 6/16/2009 - 12/18/2017

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Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L		Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	
7/22/2009	42000	< 2500			< 500	< -8.97	3760	4840	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09203009002
8/25/2009	47000	< 500			< 500	34.3	3420	4880	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09237022002
9/28/2009	44000	< 500			< 500	35.8	3820	5230	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09271021002
12/15/2009	54000	< 2500			< 500	< -51.8	3650	4930	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09349015002
3/22/2010	52000	< 500			< 500	40.2	2260	4310	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C10082005004
6/22/2010	45000	< 2500			< 500	< -2.09	3050	4530	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C10173027003
9/20/2010	46000	< 500			< 500	14.3	2590	4070	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10263039002
12/13/2010	52000	< 2500			< 500	42.7	2070	4280	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10347024002
3/21/2011	41000	< 500			< 500	114	1990	3430	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.15	< 0.09	C11080075003
6/14/2011										< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	1106059-07
6/14/2011	43000	< 2500			< 500	< -23.6	2810	3970	< 0.005									C11165038006
9/13/2011	46000	< 2000			< 400	< -37.2	2730	3710	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11256012002
3/13/2013	34000	< 500			< 500			1780										C13072009002
9/12/2013	35000	< 2000			< 400			1430										C13255083002
3/20/2014	35000	< 400			< 400			1490										C14079016005
9/12/2014	38100	< 500			< 500			1550										356937007
3/24/2015	29900	< 1000			< 1000			1460										369707010
3/21/2016	31900	2.39			1.49			1690										393717009
9/19/2016	40400	< 500			< 500			1690										406359008
3/8/2017	36300	< 500			< 500			1330										418299018
9/11/2017	25200	< 500			< 500			1620										432728010

C-400 Monitoring
Water Quality Records for
MW423-PRT3

Sample Date Range: 6/16/2009 - 12/18/2017

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Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L		Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	
7/22/2009	42000	< 2500			< 500	< -4.38	2660	4350	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09203009003
8/25/2009	47000	< 500			< 500	23.4	2850	4440	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09237022003
9/28/2009	14000	< 500			< 500	97.8	10600	13500	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C09271021003
12/15/2009	53000	< 2500			< 500	< -48.6	2970	4030	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C09349015003
3/22/2010	51000	< 500			< 500	43.5	1960	3810	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C10082005005
6/22/2010	49000	< 2500			< 500	5.16	2930	3850	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C10173027004
9/20/2010	50000	< 500			< 500	34.3	2080	3730	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10263039003
12/13/2010	50000	< 2500			< 500	19	2120	3140	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	0.15	< 0.09	C10347024003
3/21/2011	41000	< 500			< 500	89.1	1880	2900	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.12	< 0.09	C11080075004
6/14/2011										< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	1106059-08
6/14/2011	43000	< 2500			< 500	< -17.1	2540	3680	< 0.005									C11165038007
9/13/2011	47000	< 2000			< 400	< -27.3	2490	2990	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11256012003
3/12/2012	37000	< 500			< 500	< -9.6	1620	2350	< 0.005									C12072031005
9/24/2012	67000	< 500			< 500	19.2	1550	1820	< 0.005									C12268086001
3/13/2013	34000	< 500			< 500			1800										C13072009003
9/12/2013	35000	< 2000			< 400			1730										C13255083003
3/20/2014	36000	< 400			< 400			1480										C14079016006
9/13/2014	38300	< 50			< 50			1500										356931017
3/24/2015	34900	< 1000			< 1000			1470										369707011
3/21/2016	32800	2.35			0.98			1820										393717010
9/19/2016	37800	< 500			< 500			1600										406359009
3/8/2017	31800	< 500			< 500			1230										418299019

C-400 Monitoring
Water Quality Records for
MW423-PRT3

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE μg/L	1,1-DCE μg/L	1,1-DCA μg/L	1,2-DCA μg/L	trans-1,2-DCE μg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 μg/L	PCB 1221 μg/L	PCB 1232 μg/L	PCB 1242 μg/L	PCB 1248 μg/L	PCB 1254 μg/L	PCB 1260 μg/L	PCB 1268 μg/L	
9/11/2017	26800	< 500			< 500			1670										432728011

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C-400 Monitoring
Water Quality Records for
MW424-PRT1

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	PCB 1268 µg/L	
7/23/2009	7200	< 500			< 100	< -7	2300	1790	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09204021001
8/27/2009	7100	< 50			< 50	< 3.09	2680	3330	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C09239018001
9/30/2009	7700	< 100			< 100	125	4580	6150	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C09273021001
12/17/2009	9200	< 100			< 100	< -31.9	7760	10000	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09351022002
3/24/2010	7900	< 100			< 100	86.8	4420	6540	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C10083023002
6/23/2010	7900	< 250			< 50	14	4020	5080	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C10174017003
9/22/2010	7900	< 1000			< 200	< -79.8	7420	10300	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10265020001
12/15/2010	8400	< 100			< 100	< -325	9940	13900	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10349020001
6/14/2011										< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	1106059-09
6/14/2011	7900	< 500			< 100	< -211	7890	8220	< 0.005									C11165038002
9/13/2011	9000	< 500			< 100	< -150	5730	6730	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11256019001
3/13/2013	7900	< 100			< 100			10300										C13072022001
9/17/2013	5900	< 250			< 50			5540										C13260018007
3/20/2014	3900	< 50			< 50			6530										C14079016007
9/13/2014	2630	18.8			< 25			3070										356931018
3/26/2015	2520	18.5			< 50			5140										369707012
3/23/2016	1410	22.2			< 20			2400										393849010
9/20/2016	1650	23			< 20			6870										406359011
3/8/2017	1380	< 20			< 20			8620										418299020
9/11/2017	1180	11			< 20			6110										432728012

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C-400 Monitoring
Water Quality Records for
MW424-PRT2

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	PCB 1268 µg/L	
7/23/2009	17000	< 1000			< 200	< -29.4	4170	5680	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09204022001
8/27/2009	16000	< 200			< 200	< -4.44	6130	5900	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09239019001
9/30/2009	16000	< 200			< 200	91.8	5200	7100	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C09273023001
12/17/2009	18000	< 200			< 200	7.27	4010	6180	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C09351022003
3/24/2010	17000	< 250			< 250	52.8	2940	6240	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C10083023003
6/22/2010	17000	< 1000			< 200	12.7	5150	7070	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10174017004
9/22/2010	15000	< 1000			< 200	< -41.8	4000	6040	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10265020002
12/15/2010	14000	< 200			< 200	< -161	5510	7850	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10349020002
3/22/2011	12000	< 100			< 100	170	4620	6990	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.26	< 0.09	C11081023001
6/14/2011										< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	1106059-10
6/14/2011	14000	< 500			< 100	< -51.5	4820	5790	< 0.005									C11165038003
9/13/2011	12000	< 500			< 100	< -138	5900	6890	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11256019002
3/13/2013	10000	< 100			< 100			4320										C13072022002
9/17/2013	11000	< 500			< 100			3810										C13260018008
3/20/2014	13000	< 100			< 100			3540										C14079016008
9/13/2014	13900	< 250			< 250			3820										356931019
3/31/2015	17600	< 250			< 250			3260										369938010
3/23/2016	20600	< 250			< 250			3220										393849011
9/20/2016	16700	< 250			< 250			2970										406359012
3/8/2017	10900	< 250			< 250			2750										418307001
9/11/2017	10100	< 250			< 250			3100										432728013

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C-400 Monitoring
Water Quality Records for
MW424-PRT3

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L		Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	
7/23/2009	22000	< 1000			< 200	< -7.72	1900	2770	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09204023001
8/27/2009	23000	< 200			< 200	< 5.21	3400	4970	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09239020001
9/30/2009	23000	< 250			< 250	78.9	3350	4660	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09273024001
12/17/2009	23000	< 200			< 200	12.3	2960	4500	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09351022004
3/24/2010	23000	< 250			< 250	< -39.3	2810	4600	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C10083023004
6/23/2010	21000	< 1000			< 200	10.2	3160	4740	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10174017005
9/22/2010	21000	< 1000			< 200	< -14.6	2650	4440	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10265020003
12/15/2010	19000	< 200			< 200	< -54.8	2840	4300	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10349020003
3/22/2011	16000	< 200			< 200	93.3	2580	3430	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.28	< 0.09	C11081023002
6/14/2011										< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	1106059-11
6/14/2011	18000	< 1000			< 200	< -23	2990	3940	< 0.005									C11165038004
9/13/2011	16000	< 1000			< 200	< -42.4	2720	4190	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11256019003
3/12/2012	12000	< 200			< 200	15.3	2120	3500	< 0.005									C12072031008
9/25/2012	11000	< 200			< 200	< -2.6	3010	3600	< 0.005									C12269015005
3/13/2013	10000	< 100			< 100			3070										C13072022003
9/17/2013	9300	< 500			< 100			2870										C13260018009
3/20/2014	10000	< 100			< 100			2500										C14079016009
9/13/2014	11100	< 250			< 250			2600										356931020
3/31/2015	14000	< 250			< 250			2570										369938011
3/23/2016	16800	< 250			< 250			2680										393849012
9/20/2016	16600	< 250			< 250			2580										406359013
3/8/2017	13500	< 250			< 250			2190										418307002

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C-400 Monitoring
Water Quality Records for
MW424-PRT3

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE μg/L	1,1-DCE μg/L	1,1-DCA μg/L	1,2-DCA μg/L	trans-1,2-DCE μg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 μg/L	PCB 1221 μg/L	PCB 1232 μg/L	PCB 1242 μg/L	PCB 1248 μg/L	PCB 1254 μg/L	PCB 1260 μg/L	PCB 1268 μg/L	
9/11/2017	13300	< 250			< 250			2330										432728014

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C-400 Monitoring
Water Quality Records for
MW425-PRT1

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	PCB 1268 µg/L	
7/22/2009	5100	< 250			< 50	< 2.26	755	789	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09203011001
8/26/2009	8200	< 100			< 100	9.62	4390	3870	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09238024001
9/29/2009	11000	< 100			< 100	107	6500	8580	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09273002004
12/16/2009	13000	< 500			< 100	26.5	6360	9490	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09350025007
3/23/2010	8900	< 100			< 100	51.4	2200	3010	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10082005006
6/22/2010	8300	< 500			< 100	25	1340	1330	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10173039002
9/21/2010	12000	< 500			< 100	< -221	10000	12700	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10264016004
12/15/2010	13000	< 200			< 200	< -819	15000	18300	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10349020004
3/21/2011	11000	< 100			< 100	81.2	10800	14000	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.17	< 0.09	C11080075005
6/13/2011										< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	1106040-03
6/13/2011	7600	< 500			< 100	75.3	2130	2530	< 0.005									C11165011005
9/14/2011	12000	< 500			< 100	< -143	7140	9190	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11257087006
3/12/2013	6500	< 100			< 100			5630										C13072002003
9/18/2013	4600	< 500			< 100			5220										C13261023001
3/20/2014	3000	< 50			< 50			2810										C14079016001
9/15/2014	2260	< 50			< 50			2220										356937001
3/26/2015	1820	12.8			< 25			2220										369707013
3/28/2016	1080	14.2			< 20			1040										393954001
9/21/2016	1320	9.4			< 20			6810										406611009
3/8/2017	1160	11.6			< 20			4280										418307003
9/11/2017	1140	< 20			< 20			6150										432728015

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C-400 Monitoring
Water Quality Records for
MW425-PRT2

Sample Date Range: 6/16/2009 - 12/18/2017

E-46

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal Uranium mg/L	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L		PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	PCB 1268 µg/L	
7/22/2009	6300	< 250			< 50	< 3.37	2930	4460	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09203011002
8/26/2009	6100	< 50			< 50	< -19.6	3370	4550	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09238024002
9/29/2009	7500	< 50			< 50	121	4600	5900	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09273002005
12/16/2009	11000	< 500			< 100	< -17.7	5550	7850	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C09350025008
3/23/2010	9300	< 50			< 50	49.5	3710	5600	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C10082005007
6/22/2010	8400	< 250			< 50	43.7	2900	3850	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10173039003
9/21/2010	10000	< 500			< 100	< -37.4	4910	5000	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10264016005
12/15/2010	11000	< 100			< 100	< -456	9930	13200	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10349020005
3/21/2011	9200	< 100			< 100	28.2	8260	12500	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.36	< 0.09	C11080075006
6/13/2011										< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	1106040-04
6/13/2011	8700	< 500			< 100	< -26.5	4870	5930	< 0.005									C11165011006
9/14/2011	10000	< 500			< 100	< -98.5	4370	4600	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11257087007
3/12/2013	9100	< 100			< 100			6260										C13072002004
9/18/2013	6700	< 500			< 100			3280										C13261023002
3/20/2014	5400	< 50			< 50			4240										C14079016002
9/15/2014	4080	< 50			< 50			1860										356937002
3/26/2015	3540	< 50			< 50			2750										369707014
3/28/2016	2060	< 25			< 25			1400										393954002
9/21/2016	1590	< 25			< 25			3790										406611010
3/8/2017	1530	< 25			< 25			5400										418307004
9/12/2017	1430	< 25			< 25			3530										432724008

C-400 Monitoring
Water Quality Records for
MW425-PRT3

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L		Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	
7/22/2009	6200	< 250			< 50	< 0.86	3380	4420	< 0.005	< 0.16	< 0.17	< 0.13	< 0.1	< 0.11	< 0.07	< 0.05	< 0.09	C09203011003
8/26/2009	4700	< 50			< 50	< -23.2	3770	4120	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09238024003
9/29/2009	6900	< 50			< 50	96.2	3490	4570	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C09273002006
12/17/2009	8100	< 100			< 100	39.3	3620	5210	< 0.005	< 0.16	< 0.17	< 0.13	< 0.09	< 0.11	< 0.07	< 0.05	< 0.08	C09351022001
3/23/2010	7600	< 50			< 50	57	2590	4290	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10082005008
6/22/2010	7700	< 250			< 50	33.6	2790	3760	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10173039004
9/21/2010	8500	< 500			< 100	< -22.6	3270	5070	< 0.005	< 0.16	< 0.17	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10264016006
12/15/2010	9100	< 100			< 100	< -325	7150	8570	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C10349020006
6/13/2011										< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	1106040-05
6/13/2011	7400	< 500			< 100	< -23.1	3310	4310	< 0.005									C11165011007
9/14/2011	8500	< 500			< 100	< -99.4	4540	4360	< 0.005	< 0.17	< 0.18	< 0.14	< 0.1	< 0.12	< 0.07	< 0.05	< 0.09	C11257087008
3/12/2012	8000	< 100			< 100	< -25.1	3230	5410	< 0.005									C12072031009
9/19/2012	9900	< 100			< 100	< -28.6	4490	5320	< 0.005									C12263022004
3/12/2013	11000	< 100			< 100			4600										C13072002005
9/18/2013	9600	< 500			< 100			2530										C13261023003
3/20/2014	9500	< 100			< 100			3230										C14079016003
9/15/2014	8610	< 100			< 100			1950										356937003
3/26/2015	7170	< 100			< 100			2340										369707015
3/28/2016	4430	< 50			< 50			1200										393954003
9/21/2016	3320	< 50			< 50			1890										406611011
3/8/2017	2850	< 50			< 50			3480										418307005
9/12/2017	2630	< 50			< 50			2430										432724009

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C-400 Monitoring
Water Quality Records for
MW505

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results							Lab Sample ID	
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L		PCB 1268 µg/L
3/13/2012	160	< 5			< 5	< -2.14	48.8	51.6	< 0.005									C12073014003
6/18/2012	18	< 5			< 1	< -1.58	54	51.4	< 0.005									C12170024001
9/19/2012	22	< 1			< 1	< 1.39	45.1	61.8	< 0.005									C12263015001
12/5/2012	22	< 5			< 1			56.2										C12340029002
3/19/2013	32	< 1			< 1			53.9										C13078040002
3/19/2013	34	< 1			< 1			49.2										C13078040001
6/11/2013	31	< 1			< 1			55.5										C13162015006
9/12/2013	26	< 5			< 1			74.3										C13255009001
12/17/2013	28	< 1			< 1			56.2										C13351094003
3/19/2014	23	< 1			< 1			69										C14078013001
6/11/2014	26.2	< 1			< 1			52.8										350627002
9/13/2014	150	< 1			< 1			63.4										356937004
12/2/2014	22.8	< 1			< 1			71.4										362435008
3/30/2015	16.3	< 1			< 1			61.1										369938012
6/16/2015	16.8	< 1			< 1			53.1										375398001
9/14/2015	18.9	< 1			< 1			40.7										381234007
9/14/2015	19	< 1			< 1			36.5										381234008
12/8/2015	49.2	< 1			< 1			56.4										387183008
3/23/2016	22.6	< 1			< 1			62.2										393849013
6/6/2016	32.6	< 1			< 1			86.4										398881008
9/20/2016	56.1	< 1			< 1			70										406359014
9/20/2016	19.7	< 1			< 1			63.1										406359015

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C-400 Monitoring
Water Quality Records for
MW505

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results							Lab Sample ID	
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L		PCB 1268 µg/L
12/13/2016	10.5	< 1			< 1			47.1										412748008
3/9/2017	13.9	< 1			< 1			51.1										418307006
6/20/2017	109	< 2			< 2			50.1										425938001
9/12/2017	15	< 1			< 1			56.2										432724011
9/12/2017	9.44	< 1			< 1			59.9										432724010
12/18/2017	36.2	< 1			< 1			57										440362008

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C-400 Monitoring
Water Quality Records for
MW506

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results							Lab Sample ID	
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L		PCB 1268 µg/L
3/13/2012	4300	< 50			< 50	< 0.856	50.5	62.6	< 0.005									C12073014004
6/18/2012	4100	< 250			< 50	< 3.44	66.4	59.7	< 0.005									C12170024002
9/19/2012	3700	< 50			< 50	< 3.84	50.8	59	< 0.005									C12263015002
12/5/2012	4200	< 250			< 50			42.8										C12340029004
3/19/2013	2100	< 50			< 50			49.7										C13078040003
6/11/2013	2400	< 50			< 50			64										C13162015005
9/12/2013	2100	< 100			< 20			63.1										C13255009002
12/17/2013	2000	< 20			< 20			60.9										C13351094004
3/19/2014	1200	< 20			< 20			65.4										C14078013002
6/11/2014	954	< 20			< 20			56.8										350627003
9/13/2014	641	< 10			< 10			59.6										356937005
12/2/2014	1080	< 1			0.47			72.7										362435009
3/30/2015	906	< 10			< 10			66.8										369938001
6/16/2015	2690	< 50			< 50			73.4										375398005
9/14/2015	7110	< 100			< 100			46.3										381234009
12/8/2015	9040	< 100			< 100			72.7										387183009
3/23/2016	17600	< 100			< 100			54.8										393849014
6/6/2016	24400	< 250			< 250			108										398881009
9/20/2016	19700	< 500			< 500			69.1										406359016
12/13/2016	22200	< 500			< 500			59.2										412748009
3/9/2017	15000	< 500			< 500			75.2										418307007
6/20/2017	17800	< 250			< 250			52.5										425938002

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C-400 Monitoring
Water Quality Records for
MW506

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE μg/L	1,1-DCE μg/L	1,1-DCA μg/L	1,2-DCA μg/L	trans-1,2-DCE μg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 μg/L	PCB 1221 μg/L	PCB 1232 μg/L	PCB 1242 μg/L	PCB 1248 μg/L	PCB 1254 μg/L	PCB 1260 μg/L	PCB 1268 μg/L	
9/12/2017	17400	< 250			< 250			72.4										432724012
12/18/2017	19600	< 250			< 250			89.3										440362009

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C-400 Monitoring
Water Quality Records for
MW507

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results							Lab Sample ID	
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L		PCB 1268 µg/L
3/13/2012	1200	< 10			< 10	< 3.11	38.7	53.4	< 0.005									C12073014005
6/18/2012	1200	< 100			< 20	< 5.7	51.2	41.2	< 0.005									C12170024003
9/19/2012	1800	< 10			< 10	< 0.808	34.4	30.7	< 0.005									C12263015003
12/5/2012	1900	< 100			< 20			42.9										C12340029005
3/19/2013	770	< 20			< 20			48.3										C13078040004
6/11/2013	1000	< 10			< 10			72.4										C13162015003
6/11/2013	1100	< 10			< 10			65.1										C13162015004
9/12/2013	530	< 50			< 10			86.6										C13255009003
12/17/2013	870	< 10			< 10			64.6										C13351094005
3/19/2014	190	< 1			< 1			82.7										C14078013003
6/12/2014	245	< 5			< 5			77.6										350627001
6/12/2014	260	< 5			< 5			80.4										350627006
9/13/2014	582	< 10			< 10			57.3										356937006
12/2/2014	510	< 1			< 1			71.7										362435010
3/30/2015	265	< 5			< 5			74.1										369938013
6/16/2015	913	< 20			< 20			52.1										375398006
9/14/2015	2700	< 50			< 50			53.2										381234010
12/8/2015	6030	< 100			< 100			61.6										387183010
3/23/2016	6960	< 100			< 100			67.9										393849015
6/6/2016	9720	< 200			< 200			105										398881010
9/20/2016	11100	< 200			< 200			77.5										406359017
12/13/2016	10900	< 200			< 200			65.4										412748010

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C-400 Monitoring
Water Quality Records for
MW507

Sample Date Range: 6/16/2009 - 12/18/2017

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results			Metal	Polychlorinated biphenyl Analysis Results								Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	Uranium mg/L	PCB 1016 µg/L	PCB 1221 µg/L	PCB 1232 µg/L	PCB 1242 µg/L	PCB 1248 µg/L	PCB 1254 µg/L	PCB 1260 µg/L	PCB 1268 µg/L	
3/9/2017	6990	< 200			< 200			59.6										418307008
6/20/2017	4240	< 100			< 100			55.6										425938003
9/12/2017	7590	< 200			< 200			55.3										432724013
12/18/2017	5300	< 100			< 100			75.7										440362010

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APPENDIX F

**C-749 URANIUM BURIAL GROUND (SWMU 2)
GROUNDWATER MONITORING WELL DATA**

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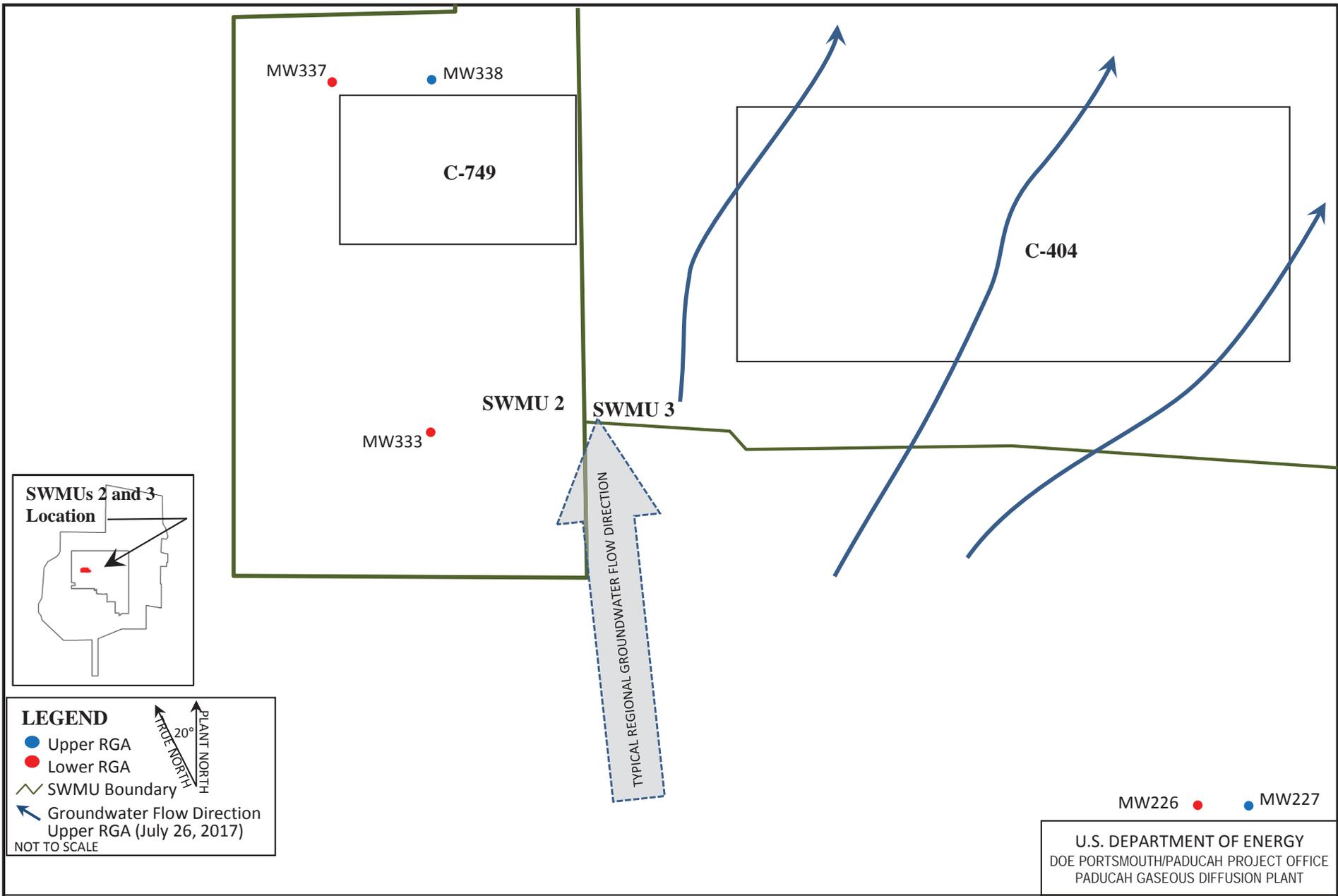
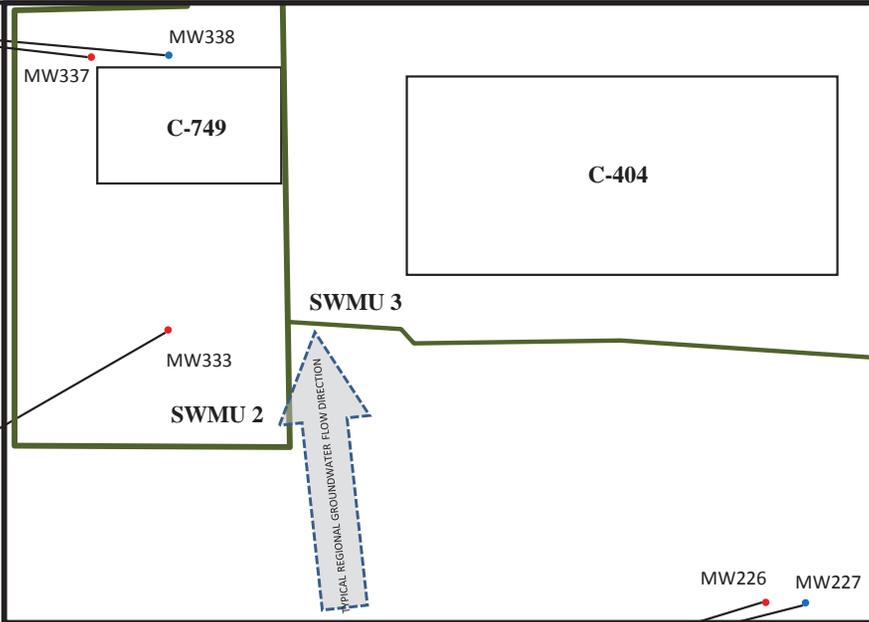
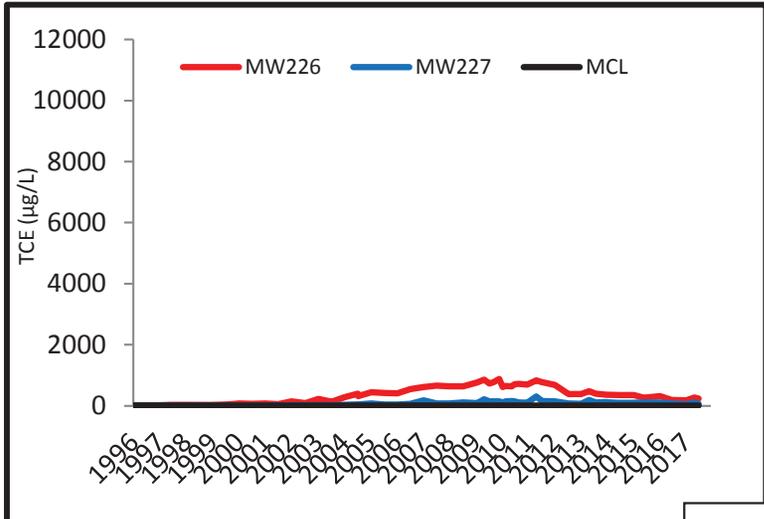
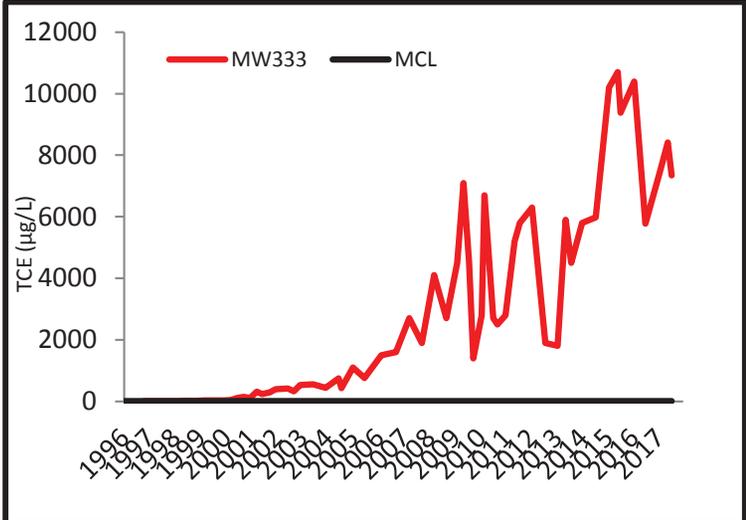
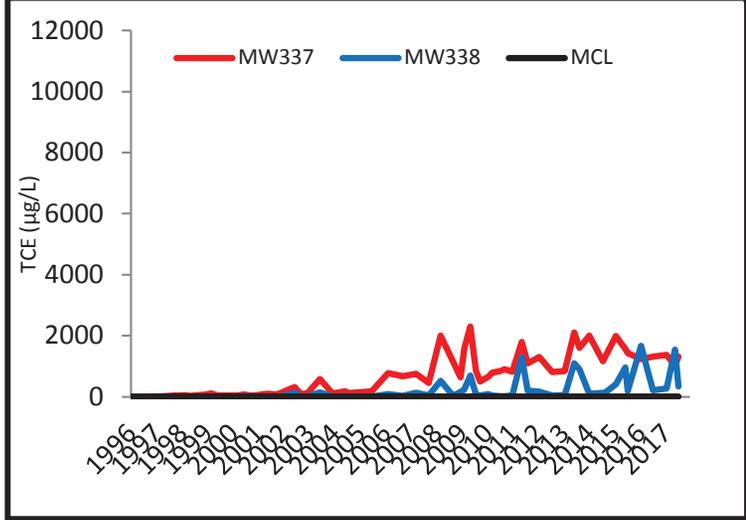


Figure F.1. SWMU 2 Wells Location

MW226 ● MW227

U.S. DEPARTMENT OF ENERGY
DOE PORTSMOUTH/PADUCAH PROJECT OFFICE
PADUCAH GASEOUS DIFFUSION PLANT



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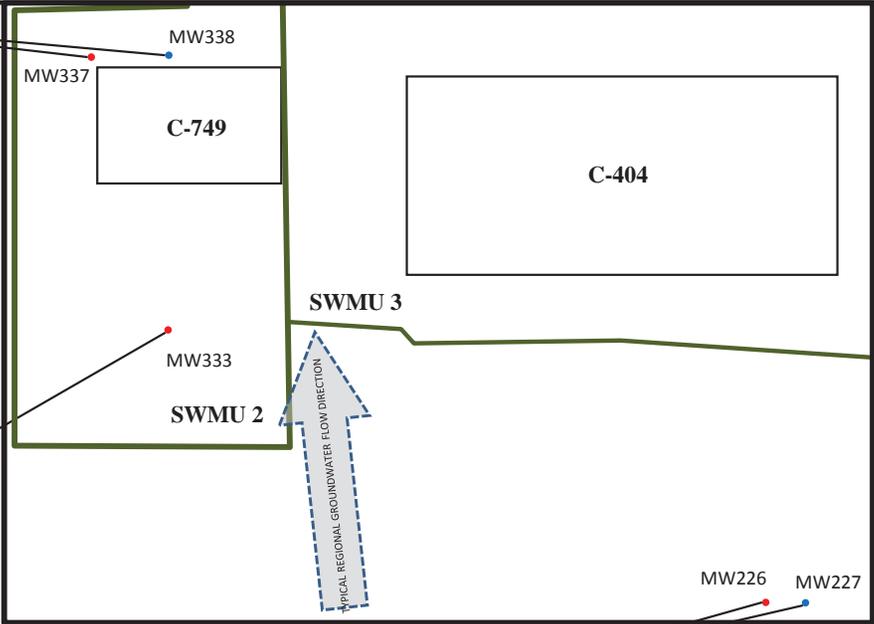
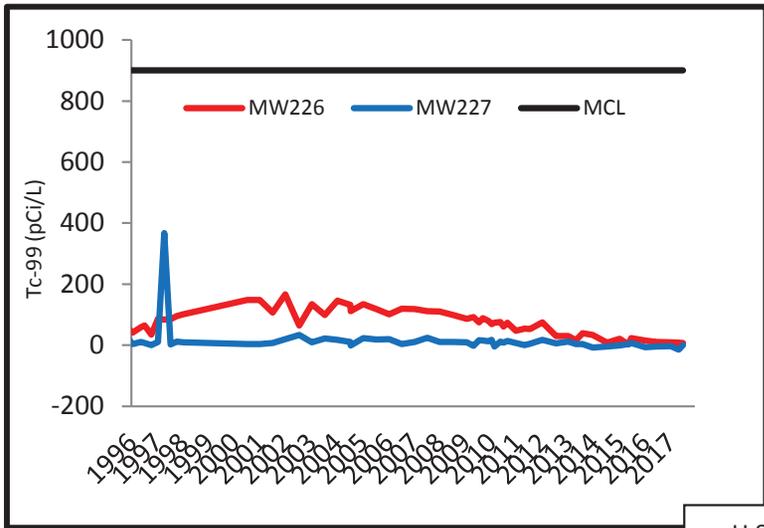
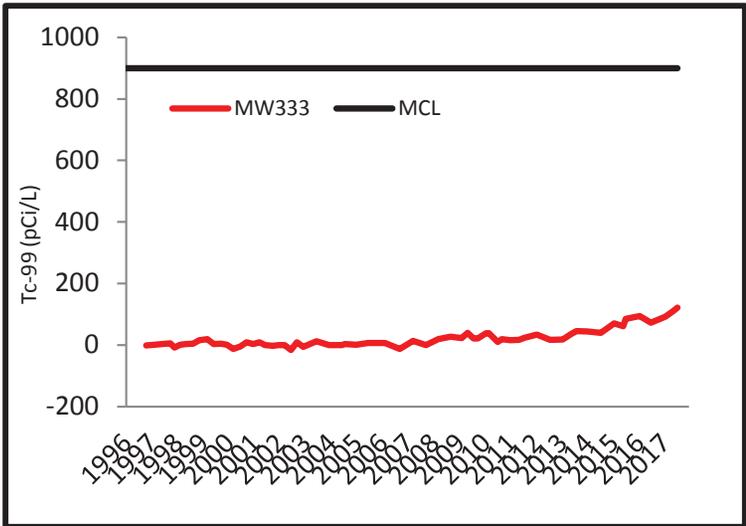
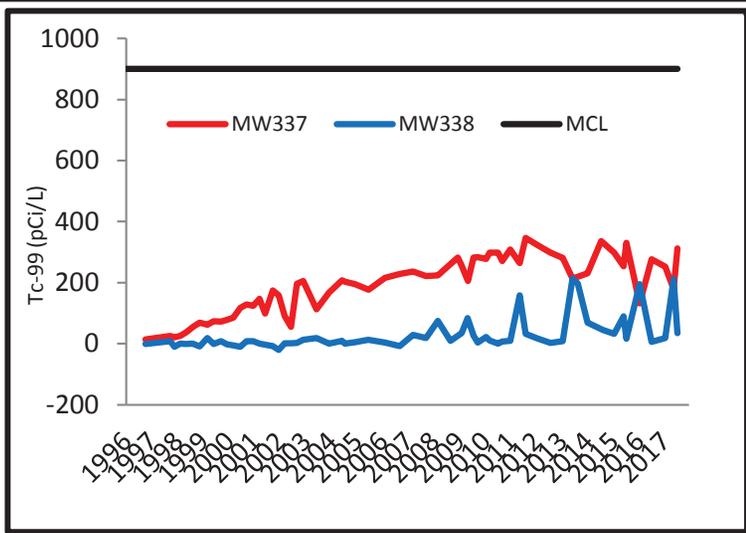
- Upper RGA
- Lower RGA
- ∧ SWMU Boundary
- NOT TO SCALE
- ∩ Upper RGA Results
- ∩ Lower RGA Results

TRUE NORTH
20°
PLANT NORTH

U.S. DEPARTMENT OF ENERGY
DOE PORTSMOUTH/PADUCAH PROJECT OFFICE
PADUCAH GASEOUS DIFFUSION PLANT

Figure F.2. TCE Trends in SWMU 2 Wells





LEGEND

- Upper RGA
- Lower RGA
- ∧ SWMU Boundary
- NOT TO SCALE
- ∧ Upper RGA Results
- ∧ Lower RGA Results

TRUE NORTH
PLANT NORTH
20°

U.S. DEPARTMENT OF ENERGY
DOE PORTSMOUTH/PADUCAH PROJECT OFFICE
PADUCAH GASEOUS DIFFUSION PLANT



Figure F.3. Tc-99 Trends in SWMU 2 Wells

C-749 Uranium Burial Ground (SWMU2) Monitoring

Water Quality Records for

Sample Date Range: 5/6/1993 - 7/17/2017

MW226

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results						Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	
5/6/1993	8							11				930507-105
5/6/1993	2							6				930507-101
5/13/1993	7							12				930513-235
6/2/1993	8							10				930602-113
6/16/1993	8							8				930617-116
6/16/1993	2											930617-118
7/14/1993	9							16				930715-049
7/20/1993	10							8				930721-106
8/9/1993	11							15				930810-018
8/16/1993	11							18				930819-067
9/30/1993	11							18				930930-169
10/26/1993	12							35				931027-061
11/8/1993	11							32				931109-073
11/16/1993	11							22				931117-105
1/11/1994	11							25				940111-177
1/25/1994	12							13				940126-013
2/8/1994	10							32				940209-005
2/15/1994	12							14				940216-023
7/18/1994	12							18				940719-065
7/26/1994	14							35				940726-198
8/11/1994	15							32				940812-033
8/18/1994	15							15				940818-135
1/17/1995	17							26				950117-115
1/17/1995	17							30				950117-119
1/23/1995	17							31				950125-081

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C-749 Uranium Burial Ground (SWMU2) Monitoring

Water Quality Records for

Sample Date Range: 5/6/1993 - 7/17/2017

MW226

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results						Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	
2/6/1995	16							28				950207-055
2/13/1995	16							36				950215-031
4/19/1995								39				950419-194
4/24/1995								44				950425-170
5/3/1995								15				950503-140
5/8/1995								43				950509-033
5/8/1995								49				950509-041
7/19/1995	16							32				950720-047
7/25/1995	11							32				950726-034
8/7/1995								41				950808-083
8/14/1995								43				950815-023
8/14/1995								30				950815-031
10/23/1995								34				951024-036
10/30/1995								40				951031-056
10/30/1995								36				951031-060
11/8/1995								54				951110-059
11/15/1995								55				951116-020
1/22/1996	20							42				960122-119
5/17/1996								59				960521-007
7/10/1996	20							65				960710-204
10/14/1996								35				961015-019
1/16/1997	24							86				970121-043
4/14/1997								84				970414-100
7/14/1997	26							84				970714-133
7/14/1997	27							85				970714-134

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C-749 Uranium Burial Ground (SWMU2) Monitoring

Water Quality Records for

Sample Date Range: 5/6/1993 - 7/17/2017

MW226

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results						Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	
10/14/1997								95				971014-047
1/12/1998	30							101				C980140119
7/13/1998	25											C981960004
7/13/1998	25											C981960005
1/11/1999	26											C990110084
7/20/1999	40											C992020007
7/20/1999	42											C992020008
1/11/2000	71											C000110092
7/12/2000	61							148				C001940098
1/9/2001	81							148				C010100017
7/11/2001	55							107				C011930007
1/8/2002	140							166				C020080098
7/22/2002	89							64.7				C022030173
1/21/2003	230							134				C030210115
7/23/2003	130							98.9				C032040144
1/21/2004	280							146				C040210090
7/22/2004	394											C042050002
7/22/2004	340	12	< 5	< 5	< 5	< 0.668	57.7	132	< 0.0902	< 0.0122	< 0.348	C042050009
7/27/2004	320							112				C042090056
1/24/2005	440							134	< 0.0357	< 0.0147	< -0.0135	C050240045
7/27/2005	420							118	< 0.0346	< 0.00589	< 0.00252	C052080180
1/24/2006	410							101	< 0.0973	< -0.0183	< 0.0768	C060240039
7/24/2006	550							119	< 1.07	< 0.187	< 0.282	C062050057
1/24/2007	610							118	< 1.03	< -0.00311	< 0.21	C070240038
7/24/2007	660							112	< 0.0971	< -0.0355	< 0.0361	C072060043

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C-749 Uranium Burial Ground (SWMU2) Monitoring

Water Quality Records for

Sample Date Range: 5/6/1993 - 7/17/2017

MW226

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results						Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	
1/15/2008	640							110	< -0.0264	< 0.0644	< 0.00478	C080160004
7/24/2008	640							98.7	< 0.0399	< 0.00678	< -0.00253	C082060091
2/5/2009	760							86.5				C09036036004
5/12/2009	850	26	< 5	< 5	< 5	< -0.403	49.2	92.3				C09132009001
7/28/2009	730							74.6				C09209020001
9/21/2009	780	< 25	< 5	< 25	< 5	< 2.56	46.3	88.1				C09265006002
12/10/2009	880							79.1				C09344026005
1/26/2010	610							69.3				C10026023001
3/9/2010	650	22	< 10	< 10	< 10	4.2	49.4	74				C10068052005
6/1/2010	640							75.7				C10152026001
7/14/2010	710							60.7				C10195040002
9/7/2010	720	22	< 10	< 10	< 10	< 4.04	38.8	73.8				C10250033001
1/3/2011	690							47.6				C11003029002
5/11/2011	830	28	< 5	< 5	< 5	4.3	41	54.5				C11131023001
7/28/2011	780							53.2				C11209031001
1/20/2012	680							74.7				C12020022001
7/31/2012	390							30.5				C12213022002
1/23/2013	380							30.3				C13023019002
5/14/2013	480	< 25	< 5	< 5	< 5			< 16.5				C13134021006
8/12/2013	400							39.3				C13224030001
1/8/2014	360							33				C14008024003
7/28/2014	350							< 7.97				353626001
1/26/2015	351							20.5				365824001
6/1/2015	267	5.4	< 1	0.32	< 1			< 2.55				374452002
7/11/2015	270							23.2				377100001

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C-749 Uranium Burial Ground (SWMU2) Monitoring

Water Quality Records for

Sample Date Range: 5/6/1993 - 7/17/2017

MW226

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results						Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	
1/25/2016	311							< 14.9				390095001
7/5/2016	194							< 10.7				401035001
1/23/2017	177							< 9.01				414959002
5/19/2017	271	5.5	< 5	< 5	< 5			< 8				423910002
7/17/2017	235							< 7.1				428290002

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C-749 Uranium Burial Ground (SWMU2) Monitoring

Water Quality Records for

Sample Date Range: 5/6/1993 - 7/17/2017

MW227

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results						Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	
5/13/1993	2							17				930513-239
6/2/1993	2							0				930602-124
6/16/1993	2							0				930617-138
7/13/1993	2							12				930713-156
7/19/1993	2							10				930721-102
8/9/1993	2							5				930810-014
8/16/1993	2							13				930820-001
9/30/1993	2							13				930930-173
10/26/1993	2							7				931027-053
11/8/1993	2							0				931109-077
11/16/1993	2							9				931117-134
1/11/1994	3							18				940111-181
1/25/1994	3							11				940126-017
2/8/1994	3							0				940209-001
2/15/1994	3							5				940216-019
4/29/1994	4											940429-116
7/18/1994	2							0				940719-061
7/26/1994	3							6				940726-202
8/10/1994	4							14				940811-063
8/10/1994	4							10				940811-075
8/10/1994	3	< 5	< 5	< 5	< 5							S408081-01V
8/18/1994	4							3				940818-131
1/17/1995	4							9				950118-204
1/23/1995	4							10				950125-097
1/23/1995	3							18				950125-093

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C-749 Uranium Burial Ground (SWMU2) Monitoring

Water Quality Records for

Sample Date Range: 5/6/1993 - 7/17/2017

MW227

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results						Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	
2/6/1995	3							9				950207-059
2/13/1995	4							17				950215-027
4/19/1995								16				950419-202
4/24/1995								20				950425-162
4/24/1995								23				950425-178
5/3/1995								5				950503-136
5/8/1995								14				950509-049
7/19/1995	5							6				950720-043
7/25/1995	4							23				950726-038
8/7/1995								17				950808-087
8/7/1995								14				950808-067
8/14/1995								12				950815-027
10/23/1995								0				951024-040
10/23/1995								0				951024-032
10/30/1995								6				951031-064
11/8/1995								7				951110-063
11/15/1995								22				951116-024
1/22/1996	4							3	2.9	0.18	6.69	960122-115
1/22/1996	4							4				960122-123
5/17/1996								10				960521-008
7/9/1996	5							7				960709-085
10/14/1996								0				961015-018
1/16/1997	6							3				970121-042
1/16/1997	6							11				970121-041
4/14/1997								367				970414-099

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C-749 Uranium Burial Ground (SWMU2) Monitoring

Water Quality Records for

Sample Date Range: 5/6/1993 - 7/17/2017

MW227

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results						Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	
7/14/1997	6							2				970714-135
10/14/1997								< 12				971014-048
1/12/1998	4							< 9				C980140120
1/12/1998	4							< 8				C980140122
7/13/1998	6											C981960003
1/11/1999	6											C990110085
1/11/1999	6											C990110086
7/20/1999	8											C992020009
1/11/2000	3											C000110093
7/12/2000	6							< 3.92				C001940099
1/9/2001	3							< 3.82				C010100018
7/11/2001	7							< 7.5				C011930006
1/8/2002	23							20.2				C020080097
7/22/2002	23							33.4				C022030172
1/21/2003	24							< 9.75				C030210114
7/23/2003	26							22.5				C032040145
1/21/2004	31							< 17				C040210091
7/22/2004	40											C042050003
7/22/2004	33	< 1	< 1	< 1	< 1	5.9	10.1	< 10.4	< 0.284	< 0.00706	< 0.412	C042050010
7/27/2004	39							< -0.469				C042090057
1/24/2005	76							22.8	< 0.348	< -0.0287	< 0.122	C050240047
7/27/2005	45							18.9	< 0.0822	< 0.0131	< 0.0649	C052080181
1/25/2006	38							20.3	< 0.0898	< 0.004	< 0.0169	C060250133
7/24/2006	61							< 4.11	< 1.36	< 0.263	< 0.298	C062050058
1/24/2007	180							< 11	< 0.219	< 0.0426	< 0.0696	C070240039

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C-749 Uranium Burial Ground (SWMU2) Monitoring

Water Quality Records for

Sample Date Range: 5/6/1993 - 7/17/2017

MW227

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results						Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	
7/24/2007	73							24	< 0.124	< -0.0338	< 0.0891	C072060044
1/16/2008	79							< 11	< 0.21	< 0.00145	< 0.0742	C080160068
7/24/2008	110							< 10.9	< 0.0526	< 0.00769	< -0.00691	C082060092
2/5/2009	82							< 9.22				C09036036005
5/12/2009	210	4.2	< 1	< 1	< 1	< 1.54	7.61	< -2.16				C09132009002
7/28/2009	140							16.5				C09209020002
9/21/2009	140	< 5	< 1	< 5	< 1	< 0.447	7.47	< 14.8				C09265006003
12/10/2009	150							< 12.6				C09344026006
1/26/2010	110							< 17.1				C10026023002
3/9/2010	150	3.5	< 1	< 1	< 1	< 2.74	7.52	< -4.34				C10068052006
6/1/2010	160							< 11.8				C10152026002
7/14/2010	140							< 8.12				C10195040003
9/7/2010	110	2.5	< 1	< 1	< 1	< -0.521	5.85	< 13.6				C10250033002
1/3/2011	94							< 7.15				C11003029001
5/11/2011	310	6.2	< 1	< 1	< 1	< 0.974	10.6	< 0.676				C11131023002
7/28/2011	160							< 4.69				C11209031002
1/20/2012	150							17.9				C12020022003
7/31/2012	74							< 5.99				C12213022003
1/22/2013	63							< 11.8				C13022086002
5/14/2013	190	< 5	< 1	< 1	< 1			< 3.61				C13134021005
8/12/2013	110							< 4.08				C13224030002
1/8/2014	120							< -7.61				C14008024004
7/28/2014	104							< -4.4				353626002
1/26/2015	97.8							< -1.45				365824002
6/2/2015	110	1.68	< 2	< 2	< 2			< 3.74				374344008

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C-749 Uranium Burial Ground (SWMU2) Monitoring

Water Quality Records for

Sample Date Range: 5/6/1993 - 7/17/2017

MW227

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results						Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	
7/11/2015	94.3							< 7.22				377100002
1/25/2016	110							< -6.66				390095002
7/5/2016	75.5							< -4.03				401035002
1/23/2017	55							< -2.64				414959001
5/19/2017	112	1.31	< 1	< 1	< 1			< -14.1				423910003
7/17/2017	66.7							< 0.795				428290003

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C-749 Uranium Burial Ground (SWMU2) Monitoring

Water Quality Records for

Sample Date Range: 5/6/1993 - 7/17/2017

MW333

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results						Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	
10/14/1996	10				< 0.48							96M04623-3717
10/14/1996									9.66		0.14	96M04623-3731
10/14/1996								-1.1				96M04623-3761
1/29/1997	5	< 5	< 5	< 5	< 5							970130-051
9/23/1997	5	< 5	< 5	< 5	< 5	-0.2	2	6				970923-064
11/19/1997	6	< 5	< 5	< 5	< 5	-0.7	2	-8				971119-080
2/9/1998	8	< 5	< 5	< 5	< 5	< 2.3	< 1	< 1				C980420046
5/4/1998	14	< 5	< 5	< 5	< 5	< 5.1	15	< 3				C981250036
8/10/1998	16	< 5	< 5	< 5	< 5	< 4.3	6	< 3.9				C982220109
11/12/1998	16	< 5	< 5	< 5	< 5	< -1.37	5.36	< 16				C983160089
3/3/1999	30	< 5	< 5	< 5	< 5	< 0.68	< 2.83	19.27				C990620037
6/4/1999	33	< 5	< 5	< 5	< 5	< 1.23	< 0.07	< 2.81				C991580024
9/15/1999						< -0.79		< 4.13				C992580210
12/7/1999	29	< 5	< 5	< 5	< 5	2.48	< 1.48	< 0.475				C993410100
12/7/1999	33	< 5	< 5	< 5	< 5	< 0.45	< 0.49	< -6.17				C993410101
3/8/2000	46	< 5	< 5	< 5	< 5	< 1.58	< 4.62	< -12.8		< 0		C000680108
6/14/2000	110	< 5	< 5	< 5	< 5	< 0.52	< -0.97	< -4.54				C001670002
9/12/2000	140	< 5	< 5	< 5	< 5	< 2.67	< 3.97	< 9.38				C002560135
12/18/2000	110	< 10	< 10	< 10	< 10	< 0.462	< 0.604	< 3.24				C003540006
3/19/2001	310	< 5	< 5	< 5	< 5	< -0.5	< 0.794	< 8.5				C010780093
6/6/2001	230	< 25	< 25	< 25	< 25	< 1.62	4.76	< -0.303				C011570178
9/25/2001	290	< 25	< 25	< 25	< 25	< 2.25	< 1.41	< -2.35		< -9.94		C012680234
12/17/2001	390	< 25	< 25	< 25	< 25	< 1.86	< -0.125	< -0.337				C013510092
3/13/2002										< -3.95		C020720129
3/13/2002	410	< 25	< 25	< 25	< 25	< 1.13	< 0.94	< -0.654				C020720130

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C-749 Uranium Burial Ground (SWMU2) Monitoring

Water Quality Records for

Sample Date Range: 5/6/1993 - 7/17/2017

MW333

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results						Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	
6/10/2002	420	< 50	< 50	< 50	< 50	< 1.57	< -2.59	< -15.7				C021610047
9/5/2002	330	< 50	< 50	< 50	< 50	< -0.977	< -0.125	< 8.51				C022480132
12/2/2002	530	< 25	< 25	< 25	< 25	< 1.7	< 0.462	< -6.2				C023370013
6/10/2003	550	< 25	< 25	< 25	< 25	< 1.08	< 1.1	< 12.4				C031620013
12/4/2003	440	< 25	< 25	< 25	< 25	< 0.213	< 2.21	< 0				C033380096
6/7/2004	750	< 50	< 50	< 50	< 50	< -0.231	< -0.683	< -0.384	< 30	< 2.2	< 0.35	C041590175
7/20/2004	430	< 10	< 10	< 10	< 10	< 1.44	< 1.43	< 2.73	< 0.198	< 0.00505	< 0.363	C042020116
12/30/2004	1100	< 50	< 50	< 50	< 50	< -0.0341	< 0.436	< 1.21				C043650022
6/14/2005	760	< 50	< 50	< 50	< 50	< 0.455	< 2.91	< 6.24	< 0.0723	< -0.0127	< 0.0115	C051650114
2/14/2006	1500	< 50	< 50	< 50	< 50	< -0.267	< 3.66	< 6.25				C060450089
2/14/2006	1300	< 50	< 50	< 50	< 50	< 2.43	< 3.19	< 5.18				C060450088
9/12/2006	1600	< 120	< 120	< 120	< 120	< 1.58	4.31	< -12.7				C062550163
3/19/2007	2700	< 100	< 100	> 100	> 100	4.34	8.66	< 13.8				C070780102
9/19/2007	1900	< 20	< 20	< 100	< 20	< 2.81	6.15	< 0.212				C072630092
3/11/2008	4100	< 25	< 25	< 120	< 25	< 1.75	16.9	19				C080710145
9/3/2008	2700	< 25	< 25	< 120	< 25	< 0.456	6.72	27.3				C082470086
2/9/2009	4500							22.7				C09040013001
5/7/2009	7100	< 250	< 50	< 250	< 50	< 2.35	22	39.9				C09127062003
7/28/2009	4500							21.1				C09209012001
9/25/2009	1400	< 50	< 50	< 50	< 50	< 0.535	17.7	21.3				C09268017001
1/26/2010	2800							38.1				C10026023004
3/8/2010	6700	< 50	< 50	< 50	< 50	< 0.795	24.7	38.6				C10067037002
7/9/2010	2700							< 10.3				C10190027002
9/8/2010	2500	< 50	< 50	< 50	< 50	< 1.48	10.6	18.7				C10251037004
1/4/2011	2800							< 15.6				C11005004006

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C-749 Uranium Burial Ground (SWMU2) Monitoring

Water Quality Records for

Sample Date Range: 5/6/1993 - 7/17/2017

MW333

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results						Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	
5/11/2011	5200	< 100	< 20	< 20	< 20	< 2.14	13.1	< 16.3				C11131034002
7/28/2011	5800							23.4				C11209031004
1/20/2012	6300							33.7				C12020022002
7/26/2012	1900							< 17.2				C12208015003
1/22/2013	1800							18				C13022086003
5/15/2013	5900	< 250	< 50	< 50	< 50			34.7				C13135012003
8/6/2013	4500							45				C13219005002
1/8/2014	5800							44.4				C14008024002
7/23/2014	5980							40.1				353402002
1/26/2015	10200							70				365824003
6/3/2015	10700	< 200	< 200	< 200	< 200			61				374344009
7/11/2015	9380							85.7				377100003
1/25/2016	10400							93.9				390095003
7/5/2016	5780							72.8				401035003
1/23/2017	7400							91.9				414959003
5/24/2017	8420	< 200	< 200	< 200	< 200			111				424148010
7/17/2017	7350							122				428290001

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C-749 Uranium Burial Ground (SWMU2) Monitoring

Water Quality Records for

Sample Date Range: 5/6/1993 - 7/17/2017

MW337

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results						Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	
10/4/1996	8.3				< 0.48							96M04622-3716
10/4/1996									0.38		0.27	96M04622-3730
10/4/1996								14				96M04622-3760
1/29/1997	10	< 5	< 5	< 5	< 5							970130-050
9/22/1997	38	< 5	< 5	< 5	< 5	3.8	21	26				970923-040
11/19/1997	41	< 5	< 5	< 5	< 5	0.9	22	21				971119-081
2/9/1998	48	< 5	< 5	< 5	< 5	< 1.3	18	26				C980420047
5/4/1998	34	< 5	< 5	< 5	< 5	< 4.4	37	36.8				C981250037
8/10/1998	58	< 5	< 5	< 5	< 5	< 0.6	35	55.1				C982220110
11/17/1998	61	< 5	< 5	< 5	< 5	3.06	37.83	69.2				C983210021
3/3/1999	110	< 25	< 25	< 25	< 25	< 1.91	< 2.49	62.71				C990620038
6/4/1999	47	< 5	< 5	< 5	< 5	< 0.4	48.8	73.5				C991580025
9/15/1999						< 0.8	48.9	72.4				C992580183
12/7/1999	44	< 5	< 5	< 5	< 5	4.34	69.36	77.7				C993410097
3/7/2000	44	< 5	< 5	< 5	< 5	< -0.43	79.03	84.8		< -9.63		C000680019
6/14/2000	75	< 5	< 5	< 5	< 5	< 1.02	97.07	117				C001670003
9/12/2000	44	< 5	< 5	< 5	< 5	< 3.09	112.58	129				C002560134
12/18/2000	50	< 5	< 5	< 5	< 5	< -0.451	75.1	124				C003540007
3/19/2001	90	< 5	< 5	< 5	< 5	< 1.05	81.1	147				C010780094
6/6/2001	97	< 5	< 5	< 5	< 5	< 0.921	97.6	98.5				C011570179
9/24/2001	75	< 5	< 5	< 5	< 5	< -2.29	97.2	175		< -8.42		C012680004
12/17/2001	150	< 10	< 10	< 10	< 10	4.96	103	158				C013510093
3/13/2002										< -7.31	< 0	C020720125
3/13/2002	240	< 25	< 25	< 25	< 25	< 4.6	68	91.3				C020720126
6/10/2002	320	< 25	< 25	< 25	< 25	< -1.91	43.3	55.1				C021610048

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C-749 Uranium Burial Ground (SWMU2) Monitoring

Water Quality Records for

Sample Date Range: 5/6/1993 - 7/17/2017

MW337

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results						Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	
9/5/2002	96	< 25	< 25	< 25	< 25	< 0.989	115	196				C022480133
12/2/2002	100	< 5	< 5	< 5	< 5	< 1.72	127	205				C023370011
6/9/2003	580	< 25	< 25	< 25	< 25	< 0.265	63.1	113				C031600083
12/4/2003	110	< 25	< 25	< 25	< 25	10.8	159	168				C033380097
6/8/2004	180	< 25	< 25	< 25	< 25	< -1.26	111	208	< 30	< 2.2	< 0.35	C041600042
7/20/2004	120	< 2	2.2	< 2	< 2	3.45	111	203	< 0.101	< -0.00296	< 0.275	C042020117
12/8/2004	140	< 10	< 10	< 10	< 10	< -2.1	129	195				C043430086
6/21/2005	180	< 10	< 10	< 10	< 10	4.73	113	177	< 0.059	< -0.0123	< 0.00534	C051720110
2/14/2006	780	< 25	< 25	< 25	< 25	< 0.0576	21.5	216				C060450090
9/12/2006	670	< 50	< 50	< 50	< 50	3.19	157	229				C062550177
3/19/2007	750	< 5	14	< 5	< 5	< 2.38	163	237				C070790063
9/19/2007	450	< 5	< 5	< 25	< 5	4.99	123	222				C072630052
3/6/2008	2000	< 10	< 10	< 50	< 10	4.24	173	224				C080670001
12/18/2008	640	< 10	< 10	< 10	< 10	< 1.52	97.5	282				C08353022001
2/10/2009	1600							256				C09041031001
5/11/2009	2300	< 25	< 25	< 25	< 25	< 1.82	177	205				C09131017003
7/28/2009	860							282				C09209006001
9/25/2009	500	< 10	< 10	< 10	< 10	4.01	196	284				C09268025002
1/27/2010	660							278				C10027031002
3/16/2010	790	< 50	< 10	< 50	< 10	5.77	191	298				C10075019002
7/14/2010	840							298				C10195017001
9/13/2010	900	< 10	< 10	< 10	< 10	< 1.14	155	271				C10256034001
1/3/2011	820							309				C11003029004
5/19/2011	1800	< 50	< 10	< 10	< 10	6.63	172	264				C11139019001
8/10/2011	880							347				C11222050002

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C-749 Uranium Burial Ground (SWMU2) Monitoring

Water Quality Records for

Sample Date Range: 5/6/1993 - 7/17/2017

MW337

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results						Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	
8/10/2011	1100							333				C11222050003
1/23/2012	1300							324				C12023024006
7/30/2012	800							298				C12212050001
7/30/2012	810							294				C12212050002
1/24/2013	840							281				C13024007001
6/11/2013	2100	< 20	< 20	< 20	< 20			213				C13162014003
8/26/2013	1600							219				C13238022001
1/13/2014	2000							231				C14013030001
7/24/2014	1160							336				353464001
1/27/2015	1990							298				365920001
6/11/2015	1570	0.8	< 1	< 1	3.37			254				374981003
7/20/2015	1430							330				377570001
1/27/2016	1230							132				390195001
7/12/2016	1310							277				401419001
1/24/2017	1370							253				414959004
5/25/2017	1020	< 20	< 20	< 20	< 20			179				424148011
7/17/2017	1320							312				428290004

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C-749 Uranium Burial Ground (SWMU2) Monitoring

Water Quality Records for

Sample Date Range: 5/6/1993 - 7/17/2017

MW338

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results						Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	
10/4/1996								-0.82				96M04621-3759
10/4/1996	0.7				< 0.48							96M04621-3715
10/4/1996									0.56		0.67	96M04621-3729
1/29/1997	< 1	< 5	< 5	< 5	< 5							970130-049
9/22/1997	< 1	< 5	< 5	< 5	< 5	-1.1	3	8				970923-041
11/19/1997	< 1	< 5	< 5	< 5	< 5	0.8	2	-10				971119-082
2/9/1998	< 1	< 5	< 5	< 5	< 5	< 4.2	< 5	< 0				C980420048
5/4/1998	2	< 5	< 5	< 5	< 5	< 0.2	12	< -0.6				C981250038
8/6/1998	< 1	< 5	< 5	< 5	< 5	< -1.9	< 3	< 0.2				C982180120
11/17/1998	< 1	< 5	< 5	< 5	< 5	< 1.15	< 2.58	< -9.2				C983210022
3/3/1999	5	< 5	< 5	< 5	< 5	< 0.35	< 1.7	19.04				C990620039
6/3/1999	1	< 5	< 5	< 5	< 5	< 0.96	19.31	< -0.869				C991540178
9/15/1999						< 1.1		< 8.63				C992580184
12/7/1999	< 1	< 5	< 5	< 5	< 5	< 1.51	< 2.91	< -2.48				C993410096
3/7/2000	< 1	< 5	< 5	< 5	< 5	< 0	5.93	< -4.97		< -11.6		C000680018
6/14/2000	24	< 5	< 5	< 5	< 5	< 1.83	< -2.5	< -9.54				C001670001
9/12/2000	21	< 5	< 5	< 5	< 5	< 2.6	8.27	< 7.94				C002560133
12/18/2000	< 1	< 5	< 5	< 5	< 5	< 3.14	5.38	< 7.73				C003540008
3/19/2001	5	< 5	< 5	< 5	< 5	< -0.418	< 0.657	< 0.481				C010780095
6/6/2001	8	< 5	< 5	< 5	< 5	< 0.866	< 2.9	< -3.53				C011570180
9/24/2001	3	< 5	< 5	< 5	< 5	< -0.18	< 2.92	< -7.31		< -4.82		C012680005
12/17/2001	24	< 5	< 5	< 5	< 5	< 1.14	< 0.738	< -20.6				C013510094
3/13/2002										< 0		C020720127
3/13/2002	78	< 5	< 5	< 5	< 5	< -0.652	< 4	< 1.2				C020720128
6/10/2002	130	< 10	< 10	< 10	< 10	< 1.08	< 5.59	< 1.54				C021610049

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C-749 Uranium Burial Ground (SWMU2) Monitoring

Water Quality Records for

Sample Date Range: 5/6/1993 - 7/17/2017

MW338

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results						Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	
9/5/2002	11	< 5	< 5	< 5	< 5	< 0.0927	< 2.41	< 2.99				C022480134
12/3/2002	8	< 5	< 5	< 5	< 5	< 0.447	< 3.19	< 13.4				C023370048
6/9/2003	140	< 10	< 10	< 10	< 10	< -0.525	8.03	18.8				C031600084
12/4/2003	9	< 5	< 5	< 5	< 5	< 1.42	6.17	< 0				C033380098
6/8/2004	22	< 5	< 5	< 5	< 5	< -1.41	< 0.409	< 9.88	< 30	< 2.2	< 0.35	C041600043
7/20/2004	4.6	< 1	< 1	< 1	< 1	< 0.125	< 2.32	< -0.111	< 0.169	< 0.0261	< 0.423	C042020118
12/8/2004	13	< 5	< 5	< 5	< 5	< 0.742	< 3.48	< 5.2				C043430088
6/16/2005	11	< 5	< 5	< 5	< 5	< 1.43	< 2.46	< 12.4	< 0.0101	< -0.0133	< -0.0335	C051670015
2/14/2006	82	< 5	< 5	< 5	< 5	< -0.143	6.12	< 3.55				C060450091
9/12/2006	25	< 5	< 5	< 5	< 5	< 0.511	7.01	< -7.99				C062550178
3/19/2007	130	< 5	< 5	< 5	< 5	< 1.6	18.3	29.4				C070790064
9/19/2007	44	< 1	< 1	< 5	< 1	< 1.36	7.27	18.2				C072630053
9/19/2007	44	< 1	< 1	< 5	< 1	< 2.72	9.39	< 12.3				C072630054
3/6/2008	520	< 1	< 1	< 5	< 1	< 2.16	60.8	74.6				C080670002
9/2/2008	33	< 1	< 1	< 5	< 1	< 2.39	7.6	< 9.04				C082460126
2/9/2009	220							35.1				C09040021003
5/7/2009	690	< 25	< 5	< 25	< 5	< -0.167	64.6	83.5				C09127062004
7/28/2009	80							26.3				C09209006002
9/25/2009	40	< 1	< 1	< 1	< 1	< 3.07	< 3.87	< 3.76				C09268017003
1/27/2010	89							22.4				C10027031001
3/16/2010	36	< 10	< 2	< 10	< 2	< 1.76	8.45	< 10.3				C10075019003
7/14/2010	14							< -3.51				C10195017002
7/14/2010	14							< 0.779				C10195017003
9/13/2010	14	< 1	< 1	< 1	< 1	< 1.25	< 3.53	< 7.51				C10256034002
1/3/2011	39							< 9.16				C11003029005

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C-749 Uranium Burial Ground (SWMU2) Monitoring

Water Quality Records for

Sample Date Range: 5/6/1993 - 7/17/2017

MW338

Sample Date	Organic Laboratory Analysis Results					Radiological Laboratory Analysis Results						Lab Sample ID
	TCE µg/L	1,1-DCE µg/L	1,1-DCA µg/L	1,2-DCA µg/L	trans-1,2-DCE µg/L	Alpha Activity pCi/L	Beta Activity pCi/L	Tc-99 pCi/L	U-234 pCi/L	U-235 pCi/L	U-238 pCi/L	
5/19/2011	1300	< 5	< 1	< 1	< 1	< 1.41	94.2	158				C11139019002
8/10/2011	200							32.7				C11222050004
1/23/2012	170							18				C12023024007
7/30/2012	44							< 2.01				C12212050003
1/24/2013	54							< 8.03				C13024007002
6/11/2013	1100	< 20	< 20	< 20	< 20			214				C13162014004
8/26/2013	900							197				C13238022002
1/13/2014	100							69.4				C14013030002
8/20/2014								44.4				355247001
8/25/2014	133											355531001
1/27/2015	404							32.6				365920002
6/11/2015	963	0.71	< 1	< 1	0.74			89.3				374981004
7/20/2015	193							< 16.7				377570002
1/27/2016	1670							195				390195002
7/12/2016	211							< 6.49				401419002
1/24/2017	267							19				414959005
5/25/2017	1540	< 40	< 40	< 40	< 40			211				424148012
7/17/2017	335							35.1				428290005

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