

## Department of Energy

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NOV 14 2013

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Kentucky Department for Environmental Protection  
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Division of Waste Management  
Kentucky Department for Environmental Protection  
200 Fair Oaks Lane, 2<sup>nd</sup> Floor  
Frankfort, Kentucky 40601

Dear Mr. Mullins, Ms. Tufts, and Ms. Webb:


**U.S. DEPARTMENT OF ENERGY PADUCAH GASEOUS DIFFUSION PLANT  
FEDERAL FACILITY AGREEMENT SEMIANNUAL PROGRESS REPORT FOR THE  
SECOND HALF OF FISCAL YEAR 2013, PADUCAH, KENTUCKY (DOE/LX/07-  
1290/V2)**

Please find enclosed the *U.S. Department of Energy Paducah Gaseous Diffusion Plant Federal Facility Agreement Semiannual Progress Report for the Second Half of Fiscal Year 2013, Paducah, Kentucky*, DOE/LX/07-1290/V2. Sections XXIII and XXXII.F of the Federal Facility Agreement and Part IV Condition T-163 of the Resource Conservation and Recovery Act Permit require this report.

The U.S. Department of Energy (DOE) would like to note that during an independent assessment of the data presented in Table 2, it was determined that the amount of trichloroethene (TCE) removed from the Northwest Plume Pump-and-Treat system was inaccurately reported in the progress report for the first half of fiscal year 2013. The error in reporting was attributed to a calculation error that duplicated the amount of TCE removed from the system in 1996. This error was unique to the Northwest Plume calculations and impacted only the progress report for the first half of fiscal year 2013. DOE is preparing an errata sheet to correct the page that contains Table 2. DOE will submit the corrected page for this report under a separate cover letter.

If you have any questions or require additional information, please contact me at (270) 441-6820.

Sincerely,



Jennifer Woodard  
Federal Facility Agreement Manager  
Portsmouth/Paducah Project Office

Enclosure:

FFA Semiannual Progress Report for the Second Half of Fiscal Year 2013

e-copy w/enclosure:

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## CERTIFICATION

**Document Identification:** *U.S. Department of Energy Paducah Gaseous Diffusion Plant  
Federal Facility Agreement Semiannual Progress Report for  
the Second Half of Fiscal Year 2013, Paducah, Kentucky  
(DOE/LX/07-1290/V2)*

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 assure 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.

LATA Environmental Services of Kentucky, LLC



Mark A. Duff, Paducah Project Manager

11/13/13

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 assure 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 (DOE)



Rachel H. Blumenfeld, Acting Paducah Site Lead  
Portsmouth/Paducah Project Office

11/14/13

Date Signed

**DOE/LX/07-1290/V2  
Secondary Document**

**U.S. Department of Energy  
Paducah Gaseous Diffusion Plant  
Federal Facility Agreement  
Semiannual Progress Report for the  
Second Half of Fiscal Year 2013  
Paducah, Kentucky**



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**DOE/LX/07-1290/V2  
Secondary Document**

**U.S. Department of Energy  
Paducah Gaseous Diffusion Plant  
Federal Facility Agreement  
Semiannual Progress Report for the  
Second Half of Fiscal Year 2013  
Paducah, Kentucky**

Date Issued—November 2013

Prepared for the  
U.S. DEPARTMENT OF ENERGY  
Office of Environmental Management

Prepared by  
LATA Environmental Services of Kentucky, LLC  
managing the  
Environmental Remediation Activities at the  
Paducah Gaseous Diffusion Plant  
under contract DE-AC30-10CC40020

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## ACRONYMS

ACM	asbestos-containing material
AR	Administrative Record
ATU	alternate treatment unit
BGOU	Burial Grounds Operable Unit
CAB	Citizens Advisory Board
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CRP	Community Relations Plan
D&D	decontamination and decommissioning
DOE	U.S. Department of Energy
EIC	Environmental Information Center
EPA	U.S. Environmental Protection Agency
EQ	equalization
ERH	electrical resistance heating
ESD	explanation of significant differences
EW	extraction well
FFA	Federal Facility Agreement
FS	feasibility study
FY	fiscal year
GDP	gaseous diffusion plant
GWOU	Groundwater Operable Unit
IRA	interim remedial action
LATA Kentucky	LATA Environmental Services of Kentucky, LLC
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
RAWP	removal action work plan
RI	remedial investigation
ROD	record of decision
SMP	Site Management Plan
SOU	Soils Operable Unit
SST	Swift and Staley Inc.
SWMU	solid waste management unit
SWOU	Surface Water Operable Unit
TBD	to be determined
WAG	waste area group

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**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
SECOND HALF OF FISCAL YEAR 2013**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/2013–9/30/2013**

**INTRODUCTION**

The Paducah Gaseous Diffusion Plant (PGDP) was placed on the National Priorities List 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.

Site cleanup activities are being implemented in a sequenced approach consisting of (1) pre-shutdown scope, (2) post-shutdown scope, and (3) Comprehensive Site Operable Unit scope. The pre-shutdown scope is associated with media-specific operable units (OUs) initiated prior to shutdown of the operating gaseous diffusion plant (GDP). The source areas for the pre-GDP shutdown scope have been grouped into these media-specific OUs:

- Groundwater OU (GWOU)
- Burial Grounds OU (BGOU)
- Surface Water OU (SWOU)
- Soils OU (SOU)
- Decontamination and Decommissioning (D&D) 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 schedules<sup>1</sup> of activities to be taken during the upcoming six months. Activities that have taken place after the reporting period closed are not included in this report. Projects and activities reported in this update are grouped by the media-specific OUs listed in Table 1.

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

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<sup>1</sup> Schedules are included for information and planning purposes only; enforceable schedules are established in the Site Management Plan.

**Table 1. Operable Units and Corresponding Report Topics**

<b>Operable Unit</b>	<b>Project/Activities</b>
Groundwater Operable Unit	<ul style="list-style-type: none"> <li>• C-400 Interim Remedial Action (IRA)</li> <li>• Southwest Plume Sources Remedial Action</li> <li>• Dissolved-Phase Plumes Remedial Action</li> <li>• Northeast Plume IRA</li> <li>• Northwest Plume IRA</li> </ul>
Burial Grounds Operable Unit	<ul style="list-style-type: none"> <li>• Burial Grounds Operable Unit</li> <li>• C-749 Uranium Burial Ground Solid Waste Management Unit (SWMU) 2</li> </ul>
Surface Water Operable Unit	<ul style="list-style-type: none"> <li>• Remedial Action</li> </ul>
Soils Operable Unit	<ul style="list-style-type: none"> <li>• Remedial Action</li> </ul>
Decontamination and Decommissioning Operable Unit	<ul style="list-style-type: none"> <li>• C-410/420 Complex</li> <li>• C-340 Metals Reduction Plant Complex</li> </ul>
Comprehensive Site Operable Unit*	<ul style="list-style-type: none"> <li>• No Projects</li> </ul>
Additional Reporting	<ul style="list-style-type: none"> <li>• Waste Area Groups 1 and 7</li> <li>• Community Relations Plan</li> <li>• Site Management Plan (SMP)</li> <li>• CERCLA Waste Disposal Alternatives Evaluation</li> <li>• CERCLA Five-Year Review</li> </ul>

\*The Comprehensive Site Operable Unit work scope, including GDP shutdown, is defined more clearly in the fiscal year (FY) 2013 SMP.

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 of the sections 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 C contains a map depicting the monitoring well (MW) locations; 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 January 1996 through April 2013. This data currently are collected semiannually. Sampling of these MWs is outlined in the Record of Decision (ROD) for Waste Area Groups (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 location; and a summary of the C-400 groundwater MW data trending TCE and technetium-99 (Tc-99) from 2000 through June 2013. Groundwater data from July 2013 through March 2014 will be included in the next semiannual report scheduled for April 2014.
- 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 June 2013.



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**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
SECOND HALF OF FISCAL YEAR 2013**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/2013–9/30/2013**

**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 Phases, 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 most predominant contaminant of concern in the groundwater of all three plumes is TCE. Table 2 provides an overall broad picture of the TCE mass removed by various actions through September 30, 2013.

**Table 2. Cumulative TCE Removed at Paducah**

Source Area	Cumulative TCE Removed (gal)*
Northwest Plume Pump-and-Treat	2,942**
Northeast Plume Pump-and-Treat	280**
C-400 Six-Phase Treatability Study	1,900
C-400 Phase I	535
C-400 Phase IIa and Phase IIb	110
Dissolved-Phase Plume	N/A
Southwest Plume***	0
SWMU 4***	0
Other sources (i.e., SWMU 91, LASAGNA™)	246
<b>Total</b>	<b>6,013</b>

\*Cumulative through September 30, 2013.

\*\*Cumulative through June 2013.

\*\*\*No remedial action selected to-date.

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**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
SECOND HALF OF FISCAL YEAR 2013**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/2013–9/30/2013**

**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):**

**Phase IIa:**

- Completed construction on May 30, 2013, of the remaining equipment necessary for implementing Phase IIa electrical resistance heating (ERH).
- Completed startup and testing on July 18, 2013, for the Phase IIa ERH.
- Initiated Phase IIa ERH operational heating on July 22, 2013. Heating operations will continue into next reporting period.
- Received approval from EPA and Kentucky to implement D2 *Operations and Maintenance Plan for the Phase IIa of the Interim Remedial Action for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1285&D2, on June 21, 2013.

**Phase IIb:**

- Initiated development of a Steam Injection Treatability Study Work Plan on July 25, 2013, for issuance during the next reporting period.
- Continued groundwater monitoring for the C-400 project required by the *Remedial Action Work Plan for the Interim Remedial Action the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-0004&D2/R2. The TCE and Tc-99 groundwater monitoring trends from March 2013 through June 2013 are included as Appendix E of this report.

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

- Continue with Phase IIa ERH operations to completion. Completion is forecasted to occur near the end of the next reporting period.
- Complete development of the D1 Steam Injection Treatability Study Work Plan for issuance.
- Award contract for the support of the development of the Treatability Study Design.
- Complete development of the D1 Steam Injection Treatability Study Design for issuance.

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

Responsibility for the day-to-day operations of the GWOU belongs to LATA Environmental Services of Kentucky, LLC, (LATA Kentucky) as the DOE prime remediation contractor at PGDP. In addition, LATA Kentucky provides programmatic and technical support, analytical services, and business management services. Swift & Staley Inc., (SST) manages the AR and the Environmental Information Center (EIC).

**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 GWOU C-400 phased IRA subproject, 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:**

- *Operations and Maintenance Plan for the Phase IIa of the Interim Remedial Action for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-1285&D2*
- *Treatability Study Work Plan for Steam Injection, Groundwater Operable Unit, at Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-1294&D1*
- *Page Changes for Remedial Action Work Plan for Phase IIa of the Interim Remedial Action for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-1271&D2/R3*

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

Not applicable.

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

Phase IIa ERH batch operations were initiated on July 22, 2013, and full ERH operations were initiated on July 31, 2013. Following the July 31, 2013, ERH initiation, operational difficulties were experienced with the operation of the steam regenerated carbon adsorption skid and with integration of that skid into equipment remaining from Phase I operations. Process engineers with demonstrated experience in troubleshooting and operating vapor and water treatment systems are being used to evaluate and assist with repairs. The ERH electrode system currently is being operated as necessary to minimize the loss of subsurface heat.

Budget uncertainties for FY 2014 could result in project impacts at Paducah. As DOE becomes aware of these impacts, DOE will notify EPA and Kentucky in accordance with Section XXVIII.D of the FFA.

**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 managers, FFA senior managers, local elected officials, and congressional staff.

**VIII. Changes in relevant personnel:**

Jennifer Tufts was appointed as EPA's FFA Manager.

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

Sampling of the C-400 wells has been incorporated into the Environmental Monitoring Program and the O&M cost is not broken out separately. O&M cost of Phase IIa was \$1.2M for this reporting period.

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**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
SECOND HALF OF FISCAL YEAR 2013**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/2013–9/30/2013**

**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):**

- Issued the D2 and D2/R1 *90% Remedial Design Report In Situ Source Treatment Using Deep Soil Mixing for the Southwest Groundwater Plume Volatile Organic Compound Source at the C-747-C Oil Landfarm (Solid Waste Management Unit 1) at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1276, to EPA and Kentucky on June 22, 2013, and September 23, 2013, respectively.
- Kentucky approved on September 26, 2013, the D2/R1 *Remedial Design Report In Situ Source Treatment Using Deep Soil Mixing for the Southwest Groundwater Plume Volatile Organic Compound Source at the C-747-C Oil Landfarm (Solid Waste Management Unit 1) at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1276.
- Completed development and issuance of 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&D1, on July 22, 2013.
- Completed development and issued the D1 *Final Characterization Report for Solid Waste Management Units 211-A and 211-B Volatile Organic Compound Sources for the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1288&D1, on June 26, 2013, for EPA and Kentucky review.
- Received comments on the *Final Characterization Report for Solid Waste Management Units 211-A and 211-B Volatile Organic Compound Sources for the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1288&D1, from EPA and Kentucky on September 13, 2013, and September 25, 2013, respectively. Incorporation of comments into the D2 was initiated for issuance of the D2 during the next reporting period.
- Developed and issued the Final Characterization Notification Letter for SWMUs 211-A and 211-B for EPA and Kentucky approval on July 10, 2013.

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

- Incorporate comments into a D2 version and issue 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.*

- Complete comment incorporation and development of the *Final Characterization Report for Solid Waste Management Units 211-A and 211-B Volatile Organic Compound Sources for the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-1288&D2.* The D2 version will be issued early in the next reporting period.
- Initiate development of procurement activities to support implementation of the approved remedial action at SWMU 1.

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

Responsibility for the day-to-day operations of the GWOU belongs to LATA Kentucky as the DOE prime remediation contractor at PGDP. In addition, LATA Kentucky also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC.

**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 Southwest Plume sources remedial action subproject consistent with the SMP and as agreed to by the FFA parties. Development and submittal of planning documents for the Southwest Plume source areas are being met consistent with the negotiated timelines as agreed to by the FFA parties.

**V. Primary/Secondary Document Tracking System:**

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

- *D2/R1 90% Remedial Design Report In Situ Source Treatment Using Deep Soil Mixing for the Southwest Groundwater Plume Volatile Organic Compound Source at the C-747-C Oil Landfarm (Solid Waste Management Unit 1) at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-1276&D2/R1.*
- *Final Characterization Report for Solid Waste Management Units 211-A and 211-B Volatile Organic Compound Sources for the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-1288&D2.*
- *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.*

**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):**

Budget uncertainties for FY 2014 could result in project impacts at Paducah. As DOE becomes aware of these impacts, DOE will notify EPA and Kentucky in accordance with Section XXVIII.D of the FFA.

**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 managers, FFA senior managers, local elected officials, and congressional staff.

**VIII. Changes in relevant personnel:**

Jennifer Tufts was appointed as EPA's FFA Manager.

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

None.

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**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
SECOND HALF OF FISCAL YEAR 2013**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/2013–9/30/2013**

**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):**

Initiated development of TCE and Tc-99 plume maps for calendar year 2012.

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

Additional work associated with this project has been resequenced based upon agreement with the FFA managers and their respective senior managers. As a result, no additional 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:**

Responsibility for the day-to-day operations of the GWOU belongs to LATA Kentucky as the DOE prime remediation contractor at PGDP. In addition, LATA Kentucky provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC.

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

Project implementation has been resequenced as described in Section II.

**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):**

Budget uncertainties for FY 2014 could result in project impacts at Paducah. As DOE becomes aware of these impacts, DOE will notify EPA and Kentucky in accordance with Section XXVIII.D of the FFA.

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

None.

**VIII. Changes in relevant personnel:**

Jennifer Tufts was appointed as EPA's FFA Manager.

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

None.

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
SECOND HALF OF FISCAL YEAR 2013**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/2013–9/30/2013**

**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):**

Continued the planning and development of project information to optimize the Northeast Plume IRA. As a result of the United States Enrichment Corporation (USEC) discontinuing enrichment operations, the cooling tower used by the Northeast Plume IRA was no longer available after June 28, 2013. A treatment unit consistent in design with the units planned for the optimization efforts was installed in this reporting period to support continuing the Northeast IRA operations. Construction was completed on May 30, 2013. Start-Up and testing of the installed treatment unit was completed on September 4, 2013, when routine operations of the treatment unit were initiated. The following are the other activities associated with the optimization of the Northeast Plume IRA.

- Issued the *D2 Remedial Action Work Plan for the Optimization of the Northeast Plume Interim Remedial Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1280&D2, to EPA and Kentucky on July 11, 2013, for approval.
- Completed revisions and issued the *Operations and Maintenance Plan for the Northeast Plume Containment System Interim Remedial Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/07-1535&D3/R3, on May 3, 2013, for approval by EPA and Kentucky. Developed a D3/R4 document as a result of regulator comments and issued it for approval on August 22, 2013.
- Issued an *Explanation of Significant Differences to the Record of Decision for Interim Remedial Action of the Northeast Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1291, (ESD) as a D1 on June 21, 2013, and as a D2 on August 2, 2013, respectively.

During this reporting period, the Northeast Plume Containment System (NEPCS) treated 24,484,000 gal of contaminated groundwater and achieved an operational efficiency of 54% (operational efficiency was decreased due to USEC shutdown of the cooling tower). The average system treatment rate for the reporting period was 93 gal/min and was calculated assuming 100% operational uptime. Operational online efficiencies for the reporting period were as follows: April 2013, 93%; May 2013, 68%; June 2013, 70%; July 2013, 0%; August 2013, 0%; and September 2013, 90%.

**A) Process Operations:**

The NEPCS consists of two extraction wells (EWs), an underground equalization (EQ) tank, transfer piping, a new alternate treatment unit (ATU) for air stripping and suspended solids removal, and MW network.

**B) Process Testing:**

Operation of the NEPCS began February 28, 1997. As of September 30, 2013, the NEPCS has processed a total of approximately 1,343,719,126 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 January through June 2013.

Influent sample results, compared to the effluent (cooling tower shower) sample results, indicated that TCE was effectively removed below the operational goal of 5 micrograms/liter ( $\mu\text{g/L}$ ). The influent flow is a composite from two EWs. Influent TCE analytical data from 1997 through the end of June 2013 are presented in Appendix B. Environmental samples were collected monthly from the treatment system influent and effluent for the period of January through June 2013. High, low, and average influent and effluent TCE concentrations for these months are presented in Table 3. Values reported as less than the reporting limit of 1  $\mu\text{g/L}$  are considered to be 1  $\mu\text{g/L}$  for averaging and graphing purposes.

**Table 3. TCE Concentrations for Northeast Plume**

	TCE ( $\mu\text{g/L}$ )		
	High	Low	Average
Influent (EQ Tank)	140	100	128
Effluent (Cooling Tower Effluent)*	< 1	< 1	< 1

\*For the purpose of determining efficiency, a reading of < 1 is assumed to be zero.

As presented in Table 3, the NEPCS continued to remove TCE effectively. The system operated with an average removal efficiency of approximately 100% for TCE. All effluent TCE samples showed less than the reporting limit.

The EWs were sampled quarterly during this reporting period. The results of the sampling showed no significant change in TCE levels since the last reporting period. Extraction well EW331 had an average TCE concentration of 105  $\mu\text{g/L}$ , while EW332 had an average concentration of 120  $\mu\text{g/L}$ .

Concentrations of Tc-99 in water samples collected from the EQ tank did not exceed shut down action level of 3,600 pCi/L. The highest Tc-99 concentration from the EQ tank was 21.6 pCi/L.

## **D) Maintenance Activities:**

### **Routine Maintenance Activities:**

Daily, monthly, quarterly, and annual routine maintenance activities were conducted in accordance with the *Paducah Plume Operations Maintenance, Calibration, and Testing Plan*, PAD-SO-0046, January 2013.

Instances of downtime occurred during the reporting period relating to mechanical failures, routine maintenance, and calibration of system components, shutdown of cooling tower, and installation of the new ATU.

### **Nonroutine Maintenance Activities:**

On April 19, 2013, the system was shut down due to high pressure readings. Investigation identified no cause for the high pressure and the system was restarted after being down for approximately 5 hours. The system shut down again later that day due to high pressure readings and would not restart. Several parts were replaced and on April 22, 2013, the system was able to restart after 71 hours of down time. On April 24, 2013, the system again shut down due to high pressure readings. The system could be reset and run; however, it would continue to cut out every day or so. Maintenance and outside vendors worked to fix the system. On April 30, 2013, a pressure switch and associated wiring on EW232 was replaced. Following the replacement of the pressure switch and associated wiring, the system returned to reliable automatic operations on May 1, 2013. No significant operational time was lost because the system could be restarted very quickly after the high pressure alarm and associated call-out was initiated.

On May 22, 2013, the system was shut down to initiate tie-in of the new ATU. On June 4, 2013, the ATU tie-in was complete and the system was restarted and resumed discharging to the C-637 Cooling Tower after 384 hours of down time.

On June 6, 2013, the system was shut down for two hours to allow testing of the ATU.

On June 28, 2013, USEC shut down the C-637 Cooling Tower, preventing discharge of the Northeast Plume treatment system and requiring discontinuation of routine operations. The system remained shut down until September 4, 2013, so that modifications that were made to the IRA could be documented in an ESD.

While the system was shut down for treatment unit construction, the pipe testing of the underground pipeline from the equalization pad to the cooling tower including the ATU lateral was conducted by Leak Detection Technologies. The testing was initiated and completed on June 4, 2013. In addition to pipeline leak testing, the underground equalization tank testing was initiated on June 5, 2013, and completed on June 6, 2013. The tank and associated pipeline testing indicated no leaks. The tank and pipeline continue to maintain their integrity since the time of installation.

## **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 the EWs.

MW292 is located approximately 1,200 ft upgradient of the pumping wells to provide an early detection point for Tc-99 migration. During the third and fourth quarters of calendar year 2012, Tc-99 activity at MW292 was 56 and 28 pCi/L, respectively.

**F) Modification of the NEPCS Operations or Configuration:**

A new ATU was added to the configuration with treated groundwater discharging to a new CERCLA outfall.

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

- Engineering design of the optimized IRA extraction and treatment system will be completed.
- Fieldwork for drilling of new optimized extraction wells will be initiated.
- D2/R1 Removal Action Work Plan (RAWP) will be completed and issued for approval.
- Treatment unit and appurtenant equipment construction will be initiated at off-site and on-site locations.

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

Responsibility for the day-to-day operations of the NEPCS belongs to LATA Kentucky as the DOE prime remediation contractor at PGDP. In addition, LATA Kentucky also provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC.

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

The effluent concentration goal of 5 µg/L for TCE was met during the reporting period. The NEPCS remained operational 54% of the time during this reporting period. This decrease in operational efficiency was due to USEC shutdown of the cooling tower.

**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):**

Budget uncertainties for FY 2014 could result in project impacts at Paducah. As DOE becomes aware of these impacts, DOE will notify EPA and Kentucky in accordance with Section XXVIII.D of the FFA.

**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 managers, FFA senior managers, local elected officials, and congressional staff.

**VIII. Changes in relevant personnel:**

Jennifer Tufts was appointed as EPA's FFA Manager.

**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 \$302,656.

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**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
SECOND HALF OF FISCAL YEAR 2013**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/2013–9/30/2013**

**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 57,967,890 gal of contaminated groundwater with an average monthly operational efficiency of 99%. The average system treatment rate for the reporting period was 211 gal/min and was calculated assuming 100% operational uptime. Operational efficiencies for the reporting period were as follows: April 2013, 100%; May 2013, 100%; June 2013, 100%; July 2013, 100%; August 2013, 97%; September 2013, 100%.

**A) Process Operations:**

The NWPGS previously consisted of two EW fields (north and south with each field having two EWs), for a total of four wells, underground pipeline, treatment facility, and MW network. In August 2010, an optimized system with two new EWs (EW232 and EW233) became operational in the south well field near the north fence line of PGDP. The north well field EWs (EW228 and EW229) were removed from service in August 2010, and the new EWs were placed into operation at that time. EW230 and EW231, also located in the south well field, are kept in standby mode and may be returned to service, if needed.

**B) Process Testing:**

Operation of the NWPGS began on August 28, 1995. As of September 30, 2013, the NWPGS has processed a total of 1,834,635,162 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 January through June 2013.

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 includes 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 Northwest Plume system began operations in

1995. The influent sample results, compared to the NWPGS effluent results, indicated that the NWPGS continues to effectively remove TCE and Tc-99.

TCE values reported as less than the reporting limit of 1 µg/L are considered to be 1 µg/L for averaging and graphing purposes. High, low, and average influent and effluent TCE and Tc-99 concentrations from January through June 2013 are presented in Table 4.

**Table 4. TCE and Tc-99 Concentrations for Northwest Plume**

	TCE (µg/L)			Tc-99 (pCi/L)		
	High	Low	Average	High	Low	Average
Influent	1,800	1,400	1,566	321	267	292
Effluent	2.8	1.6	2.1	50.7	18.9	37.6

The treatment system influent, a composite from two EWs, was sampled monthly. The effluent was sampled weekly. These sampling frequencies were conducted in accordance with the revised O&M Plan for the Northwest Plume Groundwater System IRA D4/R5, which DOE submitted on September 13, 2010, and was approved in correspondence from Kentucky on October 4, 2010, with concurrence from EPA on October 8, 2010. As presented in Table 4, the NWPGS continued to remove TCE and Tc-99 effectively. The system operated with an average removal efficiency of 99.9% for TCE and 87.1% for Tc-99.

The average TCE effluent concentration for this reporting period was 2.1 µg/L, which is less than the treatment goal of 5 µg/L. The average Tc-99 effluent value was 37.6 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. EW228 and EW229 were removed from operation in August 2010. These wells no longer are tied physically into the Northwest Plume Treatment Facility and no longer are sampled. EW230 and EW231 also were removed from operation in August 2010. These wells, however, are sampled only when they are operated (these wells were not operated during this reporting period). EW232 and EW233 were sampled quarterly in accordance with the revised O&M Plan for the Northwest Plume.

**Table 5. TCE and Tc-99 Concentrations for Northwest Plume EWs**

	TCE (µg/L)			Tc-99 (pCi/L)		
	High	Low	Average	High	Low	Average
EW232	1,700	740	1,080	369	171	241
EW233	1,900	990	1,297	384	284	323

**D) Treatment Media:**

**Ion Exchange Resins:**

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

**Activated Carbon Media:**

The NWPGS is equipped with two carbon columns containing granular activated carbon for adsorption of volatile organic compounds from the vapor-phase effluent of the air stripper unit. The carbon in each column is replaced routinely. The carbon in both columns was replaced during the last reporting period on March 26, 2013, with new and recycled carbon. The next carbon exchange is planned for October 4, 2013.

**E) Maintenance Activities:**

**Routine Maintenance Activities:**

Daily, monthly, quarterly, and annual routine maintenance activities were conducted in accordance with the *Paducah Plume Operations Maintenance, Calibration, and Testing Plan*, PAD-SO-0046, January 2013. Instances of minor downtime occurred during the reporting period relating to power outages, maintenance, and calibration of the system. Carbon will be changed out in the treatment system on October 4, 2013.

**Nonroutine Maintenance Activities:**

On August 7, 2013, a power outage occurred to the treatment system and surrounding area. Power was not restored and the system was not operable until the following day. The system was down 13 hours.

**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:**

EW232 and EW233 became operational on August 24, 2010. These EWs replace the previous EWs for recovery of TCE contaminated groundwater from the Northwest Plume. Each of the new wells has a design capacity of 220 gal per minute and is operated full time at approximately 110–115 gpm. EW228 and EW229 have been disconnected from the Northwest Plume Treatment facility. EW230 and EW231 are kept in standby mode and can be operated, as needed.

**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.

Hydraulic and chemical effectiveness monitoring, as described in the D4/R5 O&M Plan for the Northwest Plume Groundwater System IRA, was initiated during the reporting period.

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

Responsibility for the day-to-day operations of the NWPGS belongs to LATA Kentucky as the DOE prime remediation contractor at PGDP. In addition LATA Kentucky provides programmatic and technical support, analytical services, and business management services. SST manages the AR and the EIC.

**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 operational 99% of the time 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):**

Budget uncertainties for FY 2014 could result in project impacts at Paducah. As DOE becomes aware of these impacts, DOE will notify EPA and Kentucky in accordance with Section XXVIII.D of the FFA.

**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 managers, FFA senior managers, local elected officials, and congressional staff.

**VIII. Changes in relevant personnel:**

Jennifer Tufts was appointed as EPA's FFA Manager.

**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 \$302,656.



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**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
SECOND HALF OF FISCAL YEAR 2013**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/2013–9/30/2013**

**BURIAL GROUNDS OPERABLE UNIT**

The scope of the BGOU includes a remedial investigation (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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**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
SECOND HALF OF FISCAL YEAR 2013**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/2013–9/30/2013**

**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):**

- Continued activities to resolve comments received from Kentucky and EPA on the *Feasibility Study for Solid Waste Management Units 2, 3, 7, and 30 of the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1274&D1.
- Prepared and submitted the draft *Proposed Plan for the Burial Grounds Operable Unit Source Areas at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky: Solid Waste Management Units 5 and 6*, DOE/LX/07-1275&D1, to EPA and Kentucky on May 2, 2013, for review and comment. The document was submitted two weeks prior to the regulatory deadline, which was May 16, 2013.
- Received comments from Kentucky and EPA on the draft *Proposed Plan for the Burial Grounds Operable Unit Source Areas at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky: Solid Waste Management Units 5 and 6*, DOE/LX/07-1275&D1, on June 14, 2013, and June 17, 2013, respectively, and initiated resolution of comments.
- Prepared and submitted the draft-final *Proposed Plan for the Burial Grounds Operable Unit Source Areas at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky: Solid Waste Management Units 5 and 6*, DOE/LX/07-1275&D2, to EPA and Kentucky on July 17, 2013, for review and approval. EPA and Kentucky requested a 45-day extension to complete review of the D2 document. On September 30, 2013, Kentucky requested an additional 60-day extension.
- Completed field activity sample analysis, including data verification, data validation, and data assessment associated with Phase II and Phase III of the *Addendum to the Work Plan for the Burial Grounds Operable Unit Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Solid Waste Management Unit 4 Sampling and Analysis Plan*, DOE/OR/07-2179&D2/A2/R2. Initiated monthly water level recordings in the 20 piezometers (monitoring wells) installed during Phase II.
  - Radiological surveys were performed on outbound samples rather than on the extracted sample tube.

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

- Continue resolution of comments on the *Feasibility Study for Solid Waste Management Units 2, 3, 7, and 30 of the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1274&D1.
- Obtain approval, conditional approval, or disapproval from EPA and Kentucky on the draft-final D2 *Proposed Plan for the Burial Grounds Operable Unit Source Areas at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky: Solid Waste Management Units 5 and 6*, DOE/LX/07-1275&D2.
- Develop ROD and Land Use Control Implementation Plan for SWMUs 5 and 6.
- Initiate Phase IV and V field activities associated with the *Addendum to the Work Plan for the Burial Grounds Operable Unit Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Solid Waste Management Unit 4 Sampling and Analysis Plan*, DOE/OR/07-2179&D2/A2/R2. Continue monthly water level recordings in the MWs installed during Phase II.
- Work associated with SWMUs 2, 3, 7, 9, 10, 30, and 145 of the BGOU has been resequenced based upon agreement with the FFA managers and their respective senior managers. With the exception of finalization of the FS for SWMUs 2, 3, 7, and 30, no activities are scheduled for these SWMUs during the upcoming reporting period.

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

Responsibility for the day-to-day operations of BGOU belongs to LATA Kentucky as the DOE prime remediation contractor at PGDP. In addition, LATA Kentucky also provides programmatic and technical support, analytical services, and business management. SST manages the AR and the EIC, and maintains existing burial ground caps.

**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; however, extensions on document review and modification periods have resulted in an overall impact to the project schedule for the BGOU.
- Work associated with SWMUs 2, 3, 7, 9, 10, 30, and 145 of the BGOU has been resequenced based upon agreement with the FFA managers and their respective senior managers; it no longer falls within the five-year window. With the exception of finalization of the FS for SWMUs 2, 3, 7, and 30, no activities are scheduled for these SWMUs during the upcoming reporting period.

**V. Primary/Secondary Document Tracking System:**

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

- *Feasibility Study for Solid Waste Management Units 2, 3, 7, and 30 of the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1274&D1

- *Feasibility Study for Solid Waste Management Units 2, 3, 7, and 30 of the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-1274&D2*
- *Proposed Plan for the Burial Grounds Operable Unit Source Areas at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky: Solid Waste Management Units 5 and 6, DOE/LX/07-1275&D1*
- *Proposed Plan for the Burial Grounds Operable Unit Source Areas at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky: Solid Waste Management Units 5 and 6, DOE/LX/07-1275&D2*
- *Record of Decision for Solid Waste Management Units 5 and 6 of the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-1282&D1*
- *Land Use Control Implementation Plan for Solid Waste Management Units 5 and 6 of the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-1293&D1*

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

- Approval, conditional approval, or disapproval on the D2 *Proposed Plan for the Burial Grounds Operable Unit Source Areas at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky: Solid Waste Management Units 5 and 6, DOE/LX/07-1275&D2*, are due from EPA and Kentucky no later than November 29, 2013.
- The *Record of Decision for Solid Waste Management Units 5 and 6 of the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-1282&D1*, is due to EPA and Kentucky February 25, 2014.
- The D1 Remedial Design Work Plan for Solid Waste Management Units 5 and 6 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, is due to EPA and Kentucky March 27, 2014.
- The *Feasibility Study for Solid Waste Management Units 2, 3, 7, and 30 of the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-1274&D2*, is due to EPA and Kentucky no later than March 31, 2014.

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

Budget uncertainties for FY 2014 could result in project impacts at Paducah. As DOE becomes aware of these impacts, DOE will notify EPA and Kentucky in accordance with Section XXVIII.D of the FFA.

**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 managers, FFA senior managers, local elected officials, and congressional staff. Kentucky Division of Waste Management has observed SWMU 4 field activities and split environmental samples.

**VIII. Changes in relevant personnel:**

Jennifer Tufts was appointed as EPA's FFA Manager.

**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).]

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
SECOND HALF OF FISCAL YEAR 2013**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/2013–9/30/2013**

**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 June 2013, have been included as part of this report. The results of the groundwater monitoring trends from 1996 through June 2013 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:**

Responsibility for the day-to-day operations of C-749 Uranium Burial Ground belongs to LATA Kentucky as the DOE prime remediation contractor at PGDP. In addition, LATA Kentucky provides programmatic and technical support, analytical services, and business management. SST manages the AR and the EIC, 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):**

Budget uncertainties for FY 2014 could result in project impacts at Paducah. As DOE becomes aware of these impacts, DOE will notify EPA and Kentucky in accordance with Section XXVIII.D of the FFA.

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

None.

**VIII. Changes in relevant personnel:**

Jennifer Tufts was appointed as EPA's FFA Manager.

**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 approximately \$1,000.00 per year.

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**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/2013–9/30/2013**

**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. The estimated annual cost of this O&M is \$66,000.

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. No change in the existing linear regression model has occurred since July 2009, and the current maximum discharge limit for turbidity is 53 nephelometric turbidity units (NTU), with a 30-day average not to exceed 29 NTU.

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**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/2013–9/30/2013**

**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):**

- Continued to revise the *Operation and Maintenance Plan for the Surface Water Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2600&D1, in conjunction with the CERCLA Five-Year Review.

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

- Finalize and issue the *Operation and Maintenance Plan for the Surface Water Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2600&D1, once the CERCLA Five-Year Review has been approved. Approval of the CERCLA Five-Year Review is expected in FY 2014.
- Additional work associated with this project has been resequenced based upon agreement with the FFA managers and their respective senior managers. As a result, no additional 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:**

Responsibility for the day-to-day operations of the SWOU Remedial Action belongs to LATA Kentucky as the DOE prime remediation contractor at the PGDP. In addition, LATA Kentucky provides programmatic and technical support, analytical services, and business management. SST manages the AR and the EIC.

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

Additional work associated with this project has been resequenced based upon agreement with the FFA managers and their respective senior managers; it no longer falls within the five-year window. 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:**

- The *Operation and Maintenance Plan for the Surface Water Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2600&D1, has been under development during this reporting period.

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

- The *Operation and Maintenance Plan for the Surface Water Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2600&D1, is scheduled to receive regulatory approval prior to the submittal of the D1 CERCLA Five-Year Review.

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

Additional work associated with this project has been resequenced based upon agreement with the FFA managers and their respective senior managers; it no longer falls within the five-year window.

**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 managers, FFA senior managers, local elected officials, and congressional staff.

**VIII. Changes in relevant personnel:**

Jennifer Tufts was appointed as EPA's FFA Manager.

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

None.

**FEDERAL FACILITY AGREEMENT  
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**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/2013–9/30/2013**

**SOILS OPERABLE UNIT**

The SOU is being implemented in a phased approach (i.e., pre-GDP shutdown and post-GDP shutdown). The SOU consists of 86 SWMUs/areas of concern; three inactive facilities [C-218 Firing Range (SWMU 181), C-403 Neutralization Tank (SWMU 40), C-410-B HF Neutralization Lagoon (SWMU 19)]; and the soil/rubble areas that have been identified to date. Prior to GDP shutdown, the SOU will focus on accessible plant surface soils (ground surface to 10 ft below ground surface and 16 ft below ground surface in the vicinity of pipelines) not associated with PGDP operations. Following PGDP shutdown, slabs and underlying soils associated with facilities that have undergone D&D will be addressed as part of a subsequent action (e.g., post-GDP shutdown for the Soils and Slabs OU). Actions to address a total of 20 of the 86 SWMUs have been deferred to Soils and Slabs OU. Of the remaining 66 SWMUs, 50 will be addressed as part of the Soils OU FS. The remaining 16 SWMUs will be evaluated further under a subsequent Soils OU RI and addressed by a subsequent Soils OU feasibility study.

Due to interferences from ongoing USEC operations, implementation of the response action pursuant to an approved Action Memorandum for SWMU 40 will occur after GDP shutdown (*Action Memorandum for Soils Operable Unit Inactive Facilities*, DOE/LX/07-0121&D2/R1). Implementation of the SWMU 40 response will be reinstated with development, review, and approval of a RAWP.

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**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/2013–9/30/2013**

**SOILS OPERABLE UNIT PROJECT: Remedial Action**

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

- Initiated revisions of SWMU Assessment Reports for SWMU 99, SWMU 225, and SWMU 474, as agreed to by the FFA parties during comment resolution of the D1 *Soils Operable Unit Remedial Investigation Report at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-0358&D1.

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

- Finalize the SWMU Assessment Reports for SWMU 99, SWMU 225, and SWMU 474.
- Additional work associated with this project has been resequenced based upon agreement with the FFA managers and their respective senior managers. As a result, 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:**

Responsibility for the day-to-day operations of the SOU RI belongs to LATA Kentucky as the DOE prime remediation contractor at PGDP. In addition, LATA Kentucky provides programmatic and technical support, analytical services, and business management. SST manages the AR and the EIC.

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

- Additional work associated with this project has been resequenced based upon agreement with the FFA managers and their respective senior managers; it no longer falls within the five-year window.

**V. Primary/Secondary Document Tracking System:**

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

SWMU Assessment Reports for SWMU 99, SWMU 225, and SWMU 474 have been under development 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):**

Additional work associated with this project has been resequenced based upon agreement with the FFA managers and their respective senior managers; it no longer falls within the five-year window.

**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 managers, FFA senior managers, local elected officials, and congressional staff.

**VIII. Changes in relevant personnel:**

Jennifer Tufts was appointed as EPA's FFA Manager.

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

None.

**FEDERAL FACILITY AGREEMENT  
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**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/2013–9/30/2013**

**DECONTAMINATION AND DECOMMISSIONING OPERABLE UNIT**

The D&D OU will employ the CERCLA removal action process to decommission excess buildings (i.e., inactive with no reuse potential) that have a known or potential release of contamination to the environment. Consistent with the 1995 DOE and EPA Memorandum, *Policy on Decommissioning DOE Facilities under CERCLA*, DOE will employ the CERCLA Non-Time-Critical Removal Action framework when appropriate. In instances where facilities do not have a known or potential release, DOE may decommission the facility as a non-CERCLA demolition action using National Environmental Policy Act documentation.

The remaining scope of the D&D OU prior to PGDP shutdown consists of the following inactive DOE facilities:

- C-410/420 Feed Plant Complex
- C-340 Metals Reduction Complex

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**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/2013–9/30/2013**

**D&D OPERABLE UNIT: C-410/420 Complex**

The scope of this project includes D&D of the C-410 Uranium Hexafluoride (UF<sub>6</sub>) Feed Plant, using CERCLA removal actions implemented in accordance with the FFA and consistent with the 1995 EPA and DOE Joint Policy Statement on decommissioning activities.

**I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan) for the C-410/420 Complex:**

- RAWP requires removal of 20 cold traps.
  - Completed placement of the 9 remaining cold traps into storage containers.
  - Transported 20 cold traps from the C-410 Facility to the C-746-Q Facility for future asset recovery and processing with similar material during GDP D&D.
- RAWP requires removal of the fluorine system.
  - Initiated removal of fluorine lines in Zone 39 that became accessible following removal of the mezzanine.
- RAWP requires installation of flowable fill in basements and pits.
  - Initiated preparations for placement of flowable fill (e.g., clean up and drilling of vent holes in floor) of basements in Zones 53 and Zone 54.
  - Initiated procurement of flowable fill.
- RAWP required asbestos-containing materials (ACM) to be removed prior to building demolition.
  - Completed removal of ACM wire in conduit in Zones 2, 3, 23, and 24.
  - Initiated ACM wire in conduit removal in Zones 8 and 11.
  - Initiated removal of transite containing interior panels in Zones 42 and 43.
  - Initiated selected exterior transite panel removal and installation of clear plastic over openings to augment lighting with nature light for internal mezzanine.
  - Accessible thermal surface insulation removal complete in all zones, except Sector 6. Small quantities will require removal when made accessible.

— Removed mezzanine in Zone 39 using heavy equipment and initiated abatement of previously inaccessible asbestos insulation on piping above the mezzanine.

- Completed stabilization of last of 13 abandoned UF<sub>6</sub> sample cylinders. The last cylinder had been determined to contain Freon in addition to UF<sub>6</sub>. The thirteen cylinders have been packaged for disposition.
- Completed rerouting of temporary power distribution and installing stand lights for mezzanine removal in Zone 38/39. Initiated rerouting power to support mezzanine removal in Zones 22, 23, 24, 26, 27, and 28.

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

- Complete asbestos insulated electrical wire removal in Zones 8, 11, 16, and 22.
- Complete mezzanine removal in Zones 22, 23, 24, 26, and 27.
- Complete removal of loose paint, vacuuming, fixative application, and final survey in preparation for demolition.

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

Responsibility for the day-to-day operations of D&D belongs to LATA Kentucky as the DOE prime remediation contractor at PGDP. In addition, LATA Kentucky provides programmatic and technical support, analytical services, and business management. SST manages the AR and the EIC.

**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):**

During the removal of ACM contained in conduit in July 2013, a worker encountered an energized conduit. There were no injuries. Conduit removal was halted while the event was investigated and corrective actions implemented. Following implementation of corrective actions, workers resumed removal of conduit containing ACM in August. With the implementation of the identified corrective actions, demolition is planned to begin for the eastern portion of the C-410 Complex in the first quarter of calendar 2014.

Budget uncertainties for FY 2014 could result in project impacts at Paducah. As DOE becomes aware of these impacts, DOE will notify EPA and Kentucky in accordance with Section XXVIII.D of the FFA.

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

Provided routine updates on the subproject to the Paducah Site CAB, FFA managers, FFA senior managers, local elected officials, congressional staff, and D&D Tri-Party Working Group.

**VIII. Changes in relevant personnel:**

Jennifer Tufts was appointed as EPA's FFA Manager.

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

None.

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**FEDERAL FACILITY AGREEMENT  
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Reporting Period: 4/1/2013–9/30/2013**

**D&D OPERABLE UNIT:  
C-340 Metals Reduction Plant Complex**

The scope of this project includes demolition of the C-340 Uranium Metals Reduction Complex, using CERCLA removal actions implemented in accordance with the FFA and consistent with the 1995 EPA and DOE Joint Policy Statement on decommissioning activities.

**I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan) for the C-340 Complex:**

- Shipped 1,850 tons (51,800 ft<sup>3</sup>) of PCB remediation waste in 28 railcars for disposal at Clive, Utah, on July 18, 2013. Railcars arrived at Clive and debris was placed in disposal cell in August 2013.
- Completed shipment of all waste generated during demolition of C-340 via shipping an additional 2,207 ft<sup>3</sup> of waste generating during C-340 demolition activities to various facilities, including EnergySolutions, Nevada National Security Site, Diversified Scientific Services, Inc., and East Tennessee Materials and Energy Corporation.
- Characterized and treated 8,000 gal of water collected from sumps and pits during demolition and 8,000 gal of water from equipment decontamination. The treated water was discharged in accordance with Kentucky Pollutant Discharge Elimination System requirements.
- Transported and disposed of 113 tons of demolition debris to the on-site C-746-U Landfill during the reporting period, bringing the total for the C-340 Demolition project to 1,713 tons (64,028 ft<sup>3</sup>) disposed of at the C-746-U Landfill.
- Completed radiological surveys, double wash and rinse, and application of fixative on the C-340 Slab on July 25, 2013.
- Completed site restoration and demobilization of personnel and equipment from the site.
- Continued development of the *D1 Removal Action Report for the C-340 Metals Reduction Plant at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1286&D1.

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

- Finalize the *D1 Removal Action Report for the C-340 Metals Reduction Plant at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1286&D1, for submittal to EPA and Kentucky no later than December 31, 2013.



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

Responsibility for the day-to-day operations of D&D belongs to LATA Kentucky as the DOE prime remediation contractor at PGDP. In addition, LATA Kentucky provides programmatic and technical support, analytical services, and business management. SST manages the AR and the EIC.

**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:**

The removal action completion letter is under development.

**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):**

Budget uncertainties for FY 2014 could result in project impacts at Paducah. As DOE becomes aware of these impacts, DOE will notify EPA and Kentucky in accordance with Section XXVIII.D of the FFA.

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

Provided routine updates on the subproject to the Paducah Site CAB, FFA managers, local elected officials, Congressional staff, and D&D Tri-Party Working Group.

Briefed FFA managers on demolition status and provided notification of outfall sampling result for uranium and PCBs at January FFA Managers Meeting.

**VIII. Changes in relevant personnel:**

Jennifer Tufts was appointed as EPA's FFA Manager.

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

None.

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**COMPREHENSIVE SITE OPERABLE UNIT**

There were no reportable activities for the Comprehensive Site Operable Unit during this reporting period.

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**ADDITIONAL REPORTING**

Presented in this section are updates for WAGs 1 and 7 (C-746-K Landfill, TCE Spill Sites, Underground Storage Tanks, and Kentucky Ordnance Works sites), the Community Relations Plan (CRP), the SMP, CERCLA Waste Disposal Alternatives Evaluation, and CERCLA Five-Year Review.

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**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/2013–9/30/2013**

**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 surface water and groundwater 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 January 1995 through April 2013 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):**

Surface water and groundwater 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 PGDP programs, such as the Groundwater Protection Program, 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:**

Responsibility for the day-to-day operations of WAGs 1 and 7 belongs to LATA Kentucky as the DOE prime remediation contractor at PGDP. In addition, LATA Kentucky also provides programmatic and technical support, analytical services, and business management. SST manages the AR and the EIC.

**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:**

Jennifer Tufts was appointed as EPA's FFA Manager.

**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 broken out separately.

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**Facility: Paducah Gaseous Diffusion Plant  
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Reporting Period: 4/1/2013–9/30/2013**

**PROJECT: Community Relations Plan**

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

Issued revision 8 of the *Community Relations Plan under the Federal Facility Agreement at the U.S. Department of Energy Paducah Gaseous Diffusion Plant*, DOE/OR/07-2099&D2/R8, to EPA and Kentucky on July 11, 2013. Kentucky approved revision 8 of the Community Relations Plans (CRP) on August 8, 2013.

**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:**

Responsibility for the maintenance of the CRP belongs to LATA Kentucky as the DOE prime remediation contractor at PGDP. SST manages the AR and the EIC.

The FFA parties agreed to revise and submit the CRP for review and approval on a biannual basis (i.e., status of major projects in Chapter 2, Appendix A—Key Contacts for the PGDP and Appendix B—Public Involvement History). Revision 9 to the CRP is due in July 2015.

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

Not applicable.

**V. Primary/Secondary Document Tracking System:**

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

*Community Relations Plan under the Federal Facility Agreement at the U.S. Department of Energy Paducah Gaseous Diffusion Plant*, DOE/OR/07-2099&D2/R8.

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

- Revision 8 of the CRP is due to EPA and Kentucky no later than July 1, 2013.
- Comments of Revision 8 of the CRP are due to DOE with 90 days of the document's issuance.



**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 managers, local elected officials, and congressional staff.

**VIII. Changes in relevant personnel:**

Jennifer Tufts was appointed as EPA's FFA Manager.

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

Not applicable.

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**Facility: Paducah Gaseous Diffusion Plant  
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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):**

- Issued a modification to the FY 2013 SMP to EPA and Kentucky for approval on July 15, 2013. This modification provided for revision of the D2 FY 2013 SMP and updated the milestones in Appendix 5 to reflect the milestone modifications that had occurred since the D2 SMP was approved by Kentucky and EPA on December 20, 2013, and January 29, 2013, respectively. The D2/R1 FY 2013 SMP was approved by Kentucky and EPA on July 26, 2013, and July 30, 2013, respectively.
- During this reporting period, the D1 FY 2014 SMP was under development. Multiple scoping meetings have been held and DOE has worked closely with EPA and Kentucky on the development of the FY 2014 SMP.

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

Finalize and transmit the FY 2014 D1 SMP to EPA and Kentucky on or before December 2, 2013.

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

Responsibility for the maintenance of the SMP belongs to LATA Kentucky as the DOE prime remediation contractor at PGDP. In addition, LATA Kentucky provides programmatic and technical support, analytical services, and business management. SST manages the AR and the EIC.

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

FFA Section XVIII requires submittal of the SMP by November 15 of each year. As a result of government shutdown, the submittal date for the FY 2014 SMP has been extended to December 2, 2013.

**V. Primary/Secondary Document Tracking System:**

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

- The D1 FY 2014 SMP has been under development during this reporting period.

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

- D1 FY 2014 SMP is due to EPA and Kentucky no later than December 2, 2013.
- Comments on the D1 FY 2014 SMP are due to DOE within 30 days of the document's being issued or January 1, 2014.
- D2 FY 2014 SMP, if required, is due within 15 days of receipt of regulatory comments on the D1 SMP.

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

The scoping of the FY 2014 SMP may be impacted by the return of PGDP to DOE. The FY 2014 SMP will be topic of discussion at the November 21, 2013, Senior Managers meeting.

**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 managers, FFA senior managers, local elected officials, and congressional staff.

**VIII. Changes in relevant personnel:**

Jennifer Tufts was appointed as EPA's FFA Manager.

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

Not applicable.

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
SECOND HALF OF FISCAL YEAR 2013**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/2013–9/30/2013**

**PROJECT: CERCLA Waste Disposal Alternatives Evaluation**

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

- Submitted the D2 *Remedial Investigation/Feasibility Study Report for CERCLA Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-0244&D2, to Kentucky and EPA on July 25, 2013.
- Initiated development of the D1 *Proposed Plan for CERCLA Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1279&D1.

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

- Develop and submit the D1 *Proposed Plan for CERCLA Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1279&D1, to EPA and Kentucky for review by December 19, 2013.
- Conduct a Public Information Workshop upon finalization and approval of the RI/FS Report. DOE is co-sponsoring the workshop with the Paducah CAB and partnering with Kentucky and EPA. The purpose of the workshop is to summarize the content of the RI/FS Report and solicit feedback.

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

Responsibility for the CERCLA waste disposal evaluation belongs to LATA Kentucky as the DOE prime remediation contractor at PGDP. In addition, LATA Kentucky provides programmatic and technical support, analytical services, and business management. SST manages the AR and the EIC.

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

The FFA submittal date for the D2 *Remedial Investigation/Feasibility Study Report for CERCLA Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-0244&D2, was May 27, 2013. DOE requested extensions that moved the submittal date of the D2 *Remedial Investigation/Feasibility Study Report for CERCLA Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-0244&D2, to July 25, 2013. EPA and Kentucky have requested additional extensions for review of the D2 *Remedial Investigation/Feasibility Study Report for CERCLA*

*Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-0244&D2.*

**V. Primary/Secondary Document Tracking System:**

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

- The D2 *Remedial Investigation/Feasibility Study Report for CERCLA Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-0244&D2*, has been under development and review during this reporting period.
- The D1 *Proposed Plan for CERCLA Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-1279&D1*, has been under development during this reporting period.

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

- The D2 *Remedial Investigation/Feasibility Study Report for CERCLA Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-0244&D2*, was due to EPA and Kentucky no later than July 25, 2013.
- D1 *Proposed Plan for CERCLA Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-1279&D1*, is due to EPA and Kentucky no later than December 19, 2013.

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

Budget uncertainties for FY 2014 could result in project impacts at Paducah. As DOE becomes aware of these impacts, DOE will notify EPA and Kentucky in accordance with Section XXVIII.D of the FFA.

**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 managers, FFA senior managers, local elected officials, and congressional staff.

**VIII. Changes in relevant personnel:**

Jennifer Tufts was appointed as EPA's FFA Manager.

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

Not applicable.

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
SECOND HALF OF FISCAL YEAR 2013**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/2013–9/30/2013**

**PROJECT: CERCLA Five-Year Review**

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

- Initiated development of the D1 *Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1289&D1, for submittal to Kentucky and EPA no later than August 29, 2013.
- Submitted the D1 *Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1289&D1, for submittal to Kentucky and EPA no later than August 29, 2013.

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

- Develop and submit the D2 *Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1289&D2, to EPA and Kentucky within 30 days of receipt of comments.

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

Responsibility for the CERCLA Five-Year Review belongs to LATA Kentucky as the DOE prime remediation contractor at PGDP. In addition, LATA Kentucky provides programmatic and technical support, analytical services, and business management. SST manages the AR and the EIC.

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

This Five-Year Review encompasses the 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 last CERCLA Five-Year Review at the Paducah Site was conducted in 2008 for the period January 2003 through December 2007.

**V. Primary/Secondary Document Tracking System:**

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

- The D1 *Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1289&D1, has been under development and EPA and Kentucky review during this reporting period.

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

- The D1 *Five-Year Review for Remedial Actions at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-1289&D1, was due to EPA and Kentucky no later than August 29, 2013.
- Comments on the D1 Five-Year Review are due to DOE within 60 days of the document's issuance or October 28, 2013.

**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 managers, FFA senior managers, local elected officials, and congressional staff.

**VIII. Changes in relevant personnel:**

Jennifer Tufts was appointed as EPA's FFA Manager.

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

Not applicable.

**APPENDIX A**

**NORTHEAST AND NORTHWEST PLUME  
WATER WITHDRAWAL REPORTS**



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

Day	April 2013	May 2013	June 2013	July 2013	August 2013	September 2013
1	271,900	280,200	0	0	0	0
2	241,400	282,825	0	0	0	0
3	262,300	282,825	0	0	0	0
4	260,325	282,825	0	0	0	263,400
5	260,325	282,825	0	0	0	244,340
6	260,325	279,300	259,825	0	0	244,340
7	260,325	293,100	259,825	0	0	244,340
8	273,200	284,500	259,825	0	0	244,340
9	271,300	278,825	259,825	0	0	244,340
10	242,800	278,825	264,200	0	0	261,400
11	265,625	278,825	256,500	0	0	257,100
12	265,625	278,825	220,900	0	0	264,150
13	265,625	279,600	263,850	0	0	264,150
14	265,625	272,400	263,850	0	0	264,150
15	260,800	208,200	263,850	0	0	264,150
16	264,200	261,875	263,850	0	0	267,200
17	260,000	261,875	238,600	0	0	302,300
18	157,450	261,875	276,100	0	0	197,500
19	157,450	261,875	269,000	0	0	258,650
20	0	252,700	268,150	0	0	258,650
21	0	259,200	268,150	0	0	258,650
22	261,500	0	268,150	0	0	258,650
23	255,400	0	268,150	0	0	255,700
24	148,100	0	269,300	0	0	262,200
25	162,025	0	284,000	0	0	259,800
26	162,025	0	247,500	0	0	262,350
27	162,025	0	0	0	0	262,350
28	162,025	0	0	0	0	262,350
29	114,200	0	0	0	0	262,350
30	149,800	0	0	0	0	254,700
31	NA	0	NA	0	0	NA
Monthly Total	6,343,700	5,703,300	5,493,400	0	0	6,943,600
*Daily Average	226,561	271,586	261,590	0	0	257,170
Days water pumped	28	21	21	0	0	27

\*Value based on number of days water was pumped

**Table 2. Northwest Plume Groundwater System  
Water Withdrawal Reporting Form**

Day	April 2013	May 2013	June 2013	July 2013	August 2013	September 2013
1	320,320	317,190	321,108	321,657	321,640	320,702
2	321,910	321,183	321,108	321,657	321,640	320,702
3	313,330	321,183	317,040	321,657	321,640	315,180
4	316,958	321,183	317,270	321,657	321,640	318,140
5	316,958	321,183	319,690	321,657	318,810	322,495
6	316,958	318,230	321,088	321,657	308,400	322,495
7	316,958	315,310	321,088	321,657	0	322,495
8	326,630	319,160	321,088	323,640	290,598	322,495
9	309,020	320,120	321,088	117,640	290,598	319,480
10	318,680	320,120	323,390	516,970	290,598	312,050
11	318,995	320,120	322,640	321,515	290,598	316,050
12	318,995	320,120	320,510	321,515	314,460	324,600
13	318,995	316,400	316,558	321,515	323,380	324,600
14	318,995	314,240	316,558	321,515	316,450	324,600
15	316,490	325,790	316,558	322,240	323,323	324,600
16	319,860	321,543	316,558	321,290	323,323	303,340
17	317,910	321,543	307,590	320,440	323,323	401,600
18	317,753	321,543	313,420	317,795	323,323	229,210
19	317,753	321,543	310,830	317,795	319,160	320,853
20	317,753	317,920	320,303	317,795	319,560	320,853
21	317,753	299,040	320,303	317,795	307,130	320,853
22	316,690	324,760	320,303	322,530	317,875	320,853
23	321,350	319,930	320,303	318,970	317,875	321,800
24	320,120	319,930	319,780	322,860	317,875	321,880
25	319,838	319,930	339,870	322,808	317,875	317,380
26	319,838	319,930	263,500	322,808	289,050	320,553
27	319,838	319,930	321,657	322,808	322,570	320,553
28	319,838	317,640	321,657	322,808	323,470	320,553
29	315,450	322,740	321,657	313,580	320,702	320,553
30	318,380	321,108	321,657	328,330	320,702	320,290
31	NA	321,108	NA	321,100	320,702	NA
Monthly Total	9,550,310	9,901,665	9,536,164	9,949,661	9,438,286	9,591,804
*Daily Average	318,344	319,409	317,872	320,957	314,610	319,727
Days water pumped	30	31	30	31	30	30

\*Value based on number of days water was pumped

**APPENDIX B**

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

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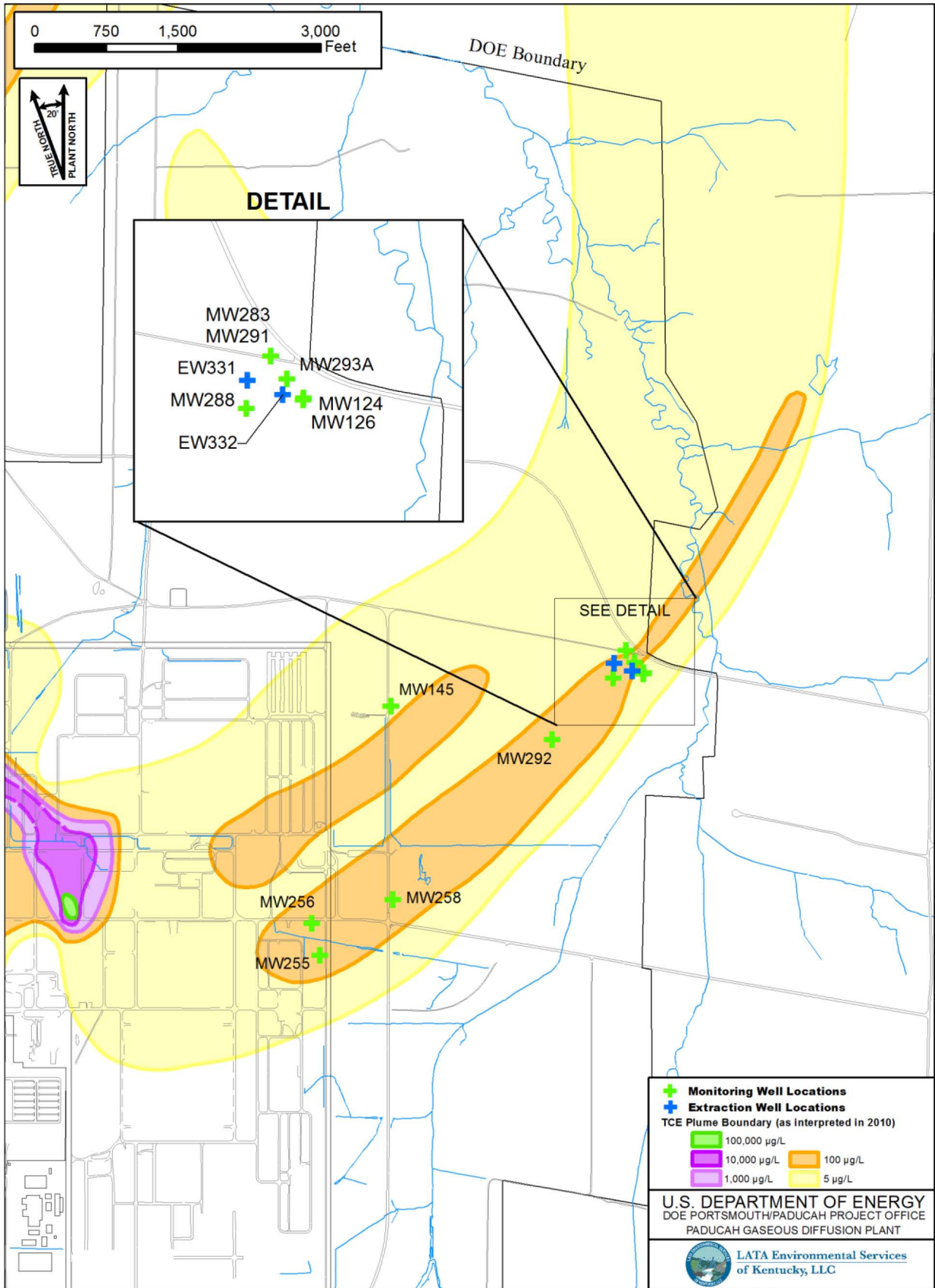


FIGURE No. G:\GIS\ARCVIEWS\PROJECTS\FFA SemiAnnual\20130926\_NEP.mxd  
DATE 9/26/2013

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

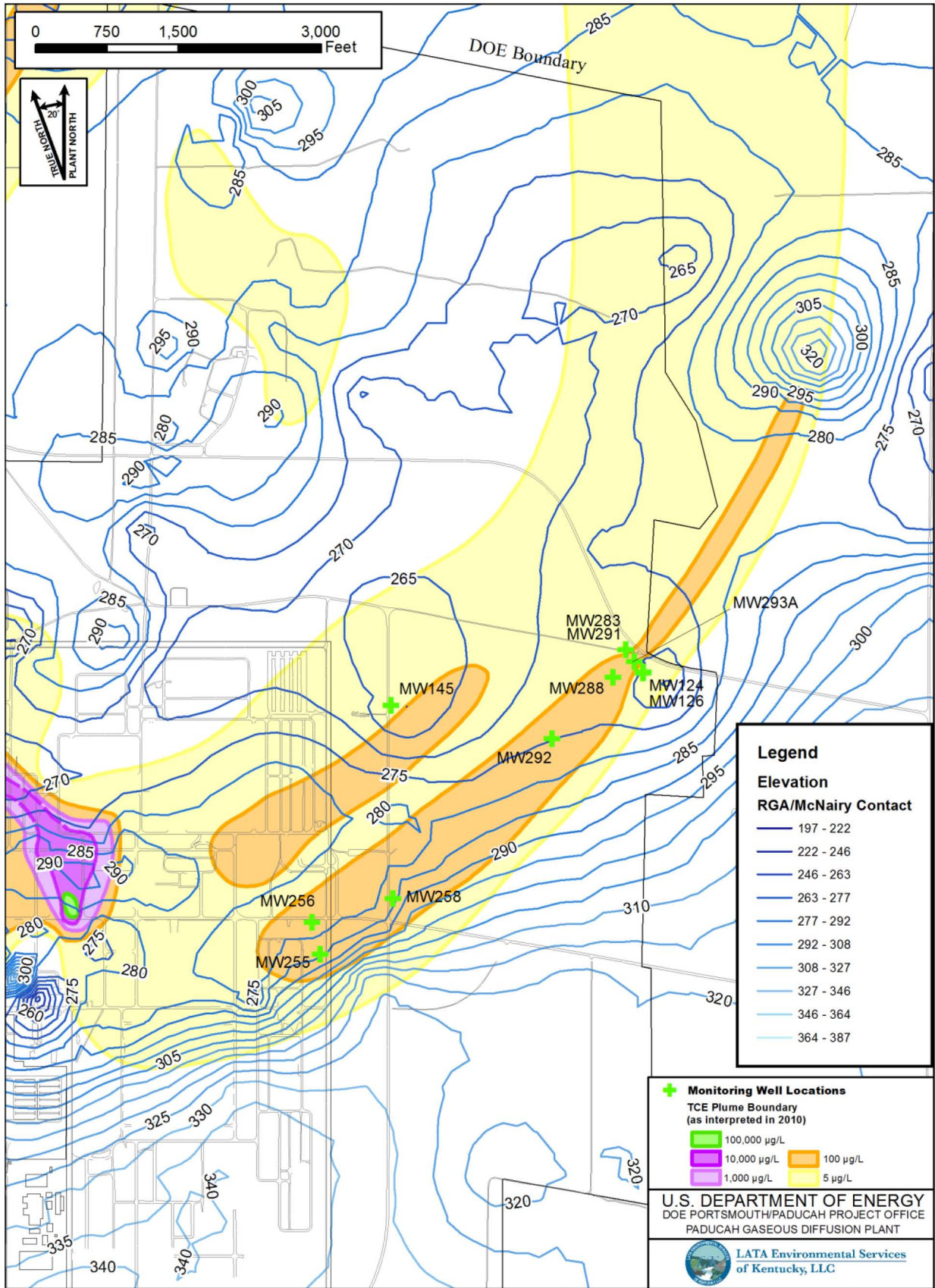
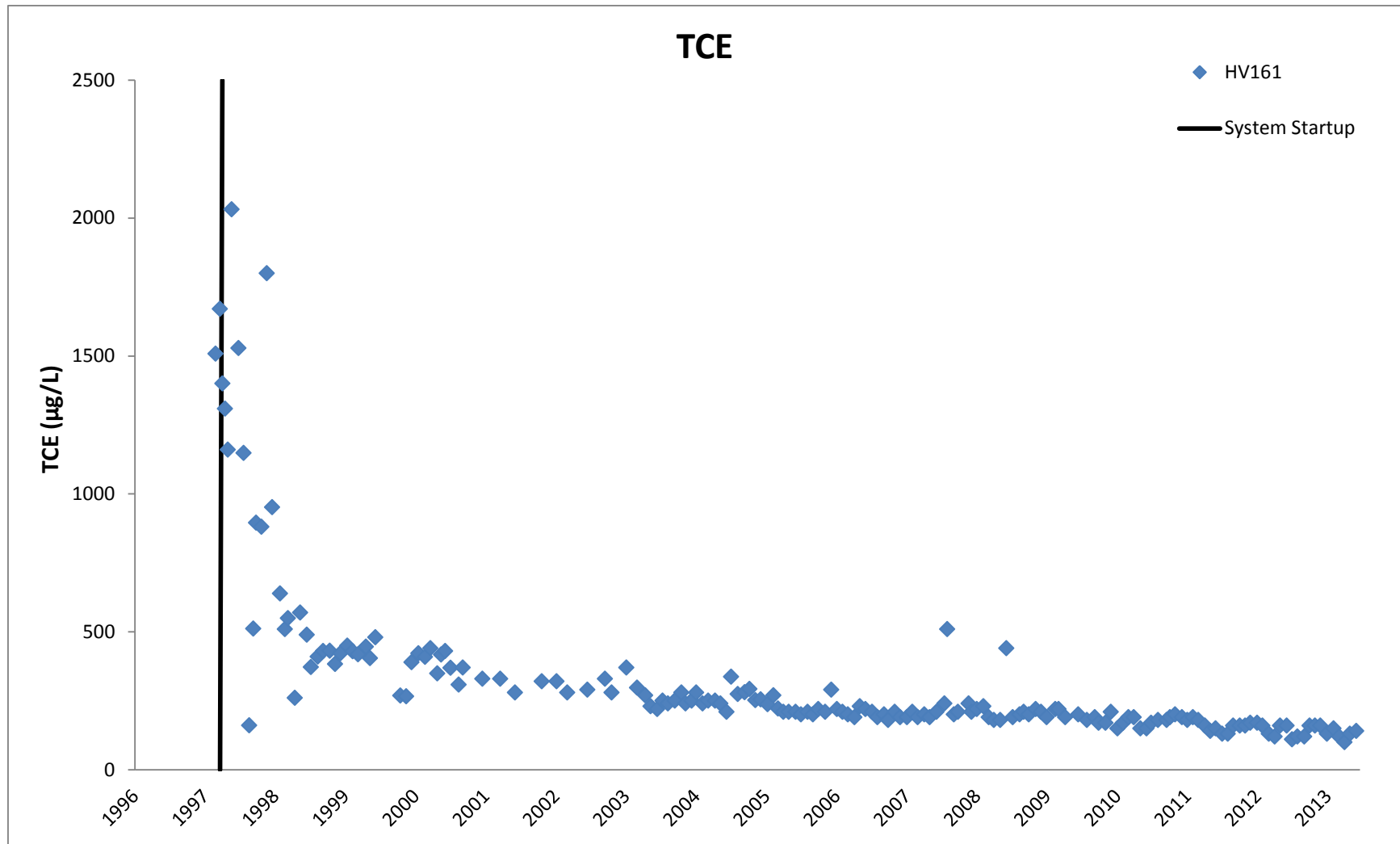


FIGURE No. G:\GIS\ARCVIEWS\PROJECTS\FFA SemiAnnual\20130926\_NEP\_RGA.mxd  
DATE 9/26/2013

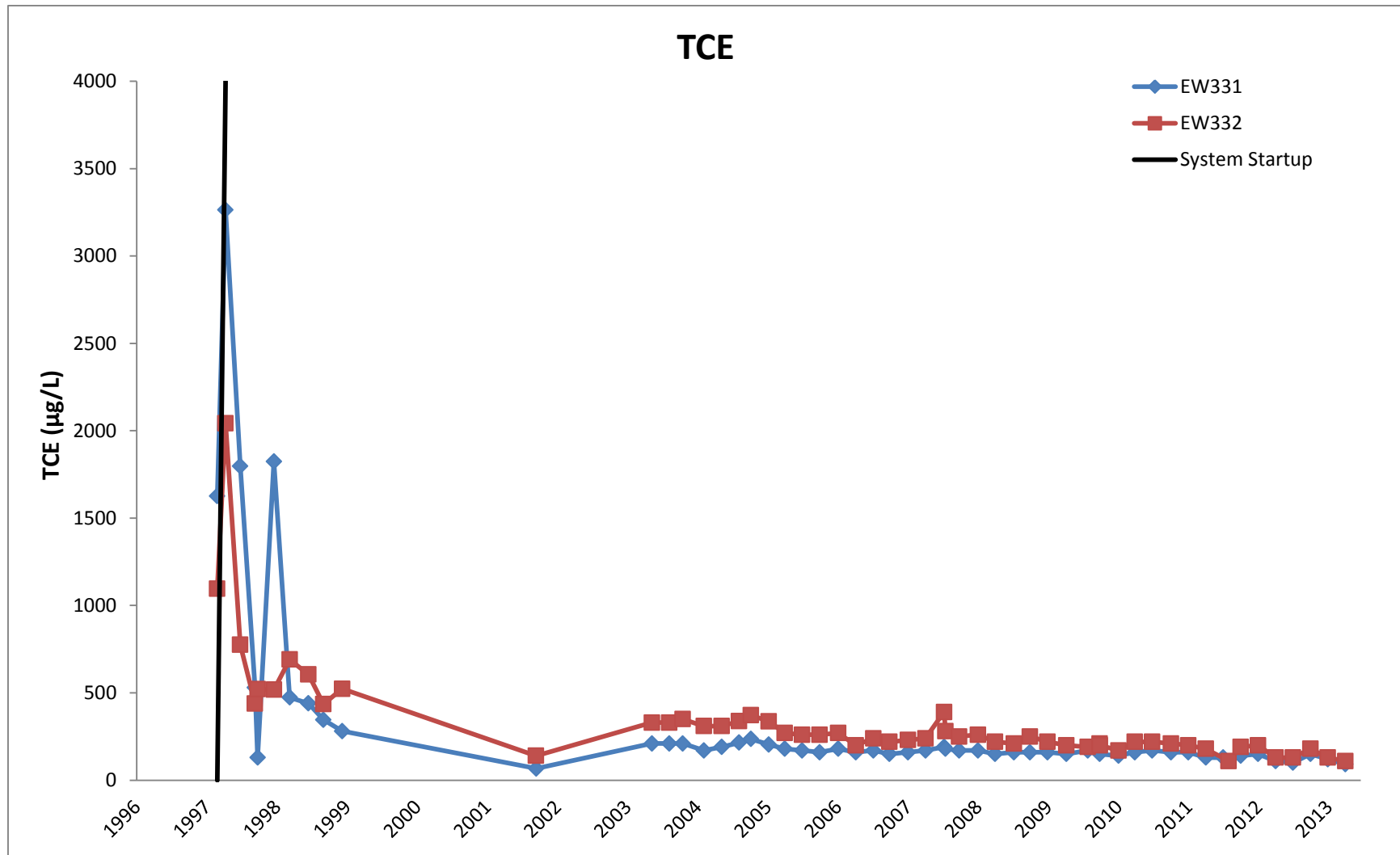
Figure B.2. Northeast Plume with McNairy Topography



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

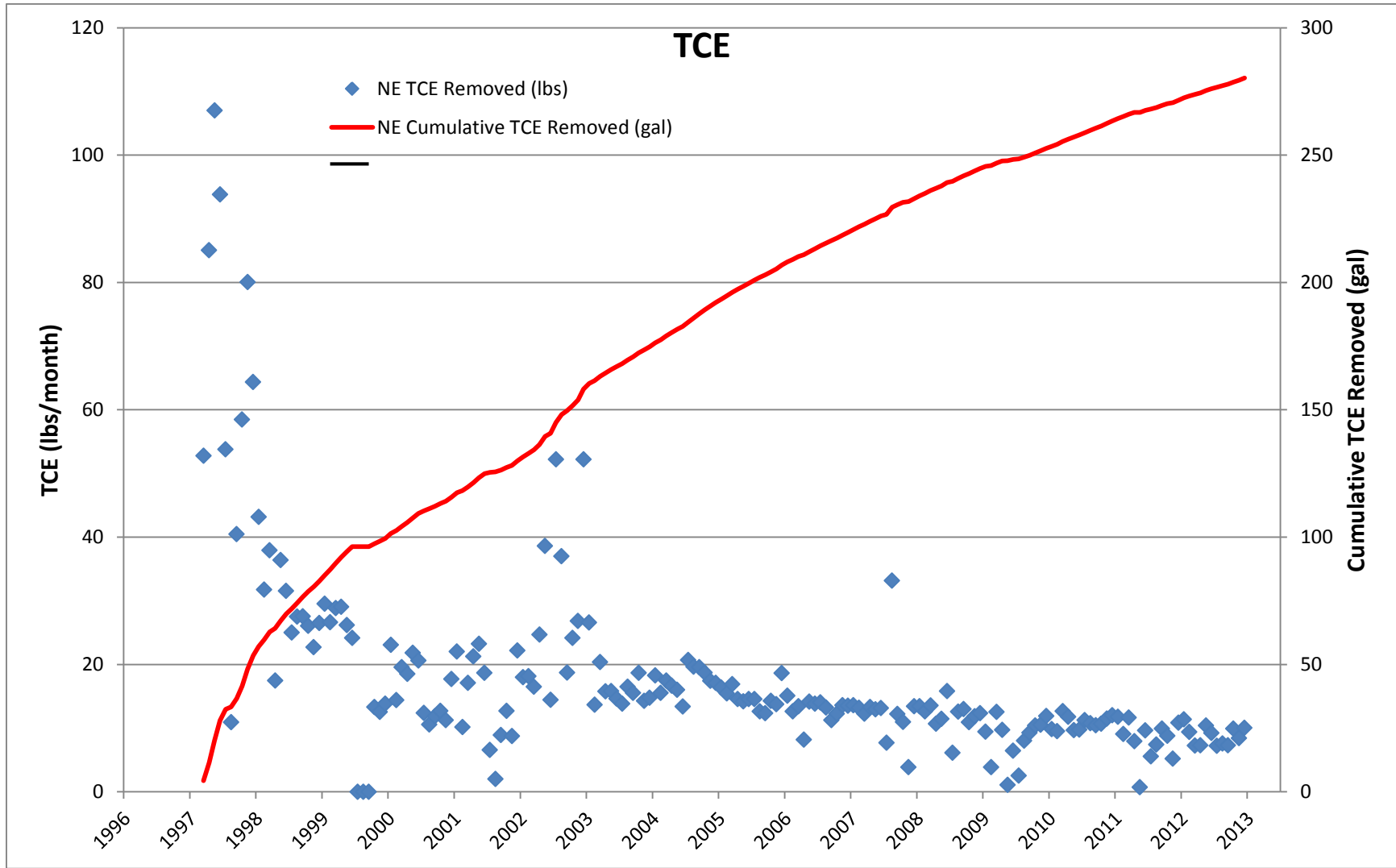
**Figure B.3. Northeast Plume Containment System Influent TCE Concentrations**





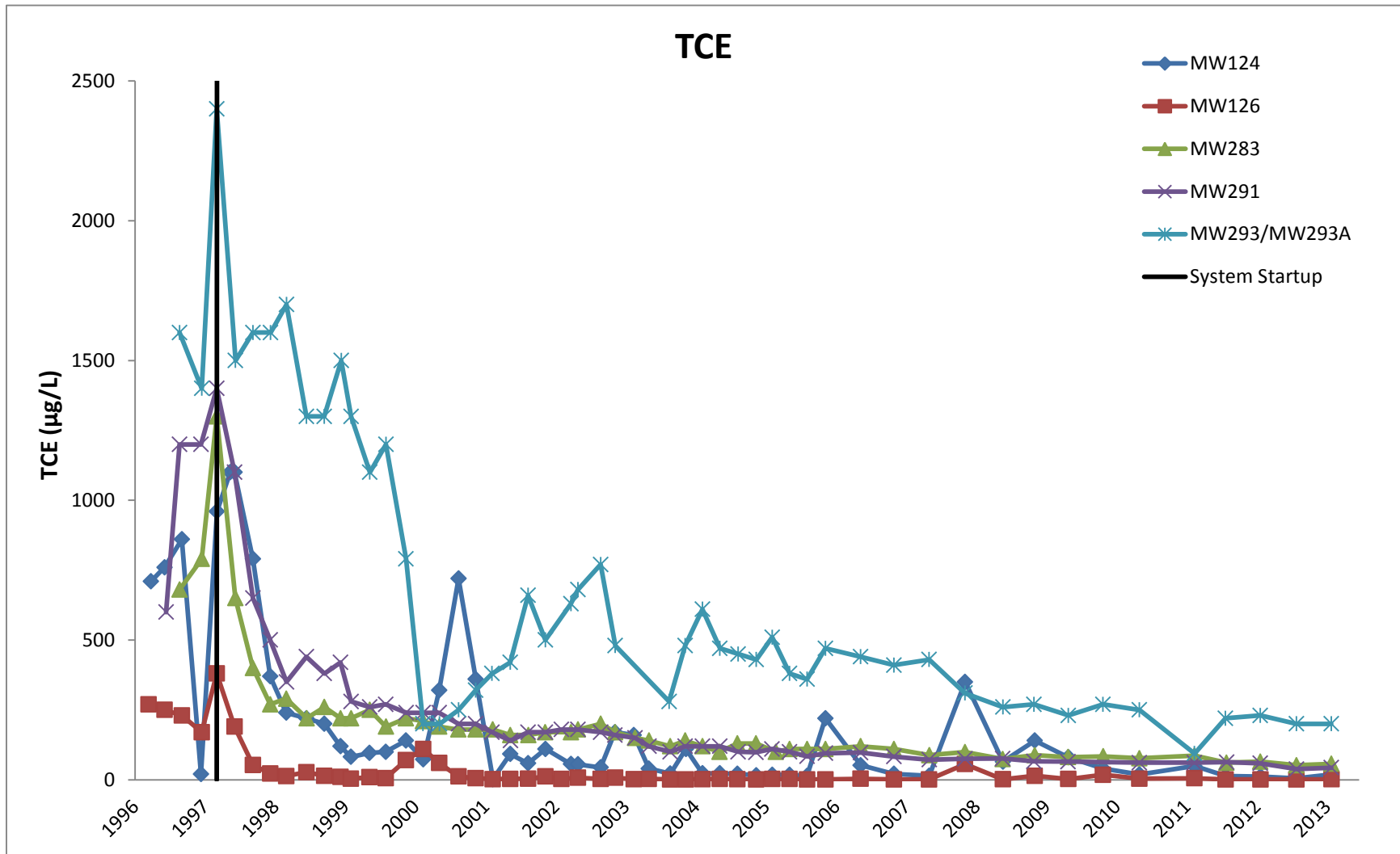
NOTE: Data rejected by validation or assessment have not been graphed.

**Figure B.4. Northeast Plume—TCE Concentrations in Extraction Wells**



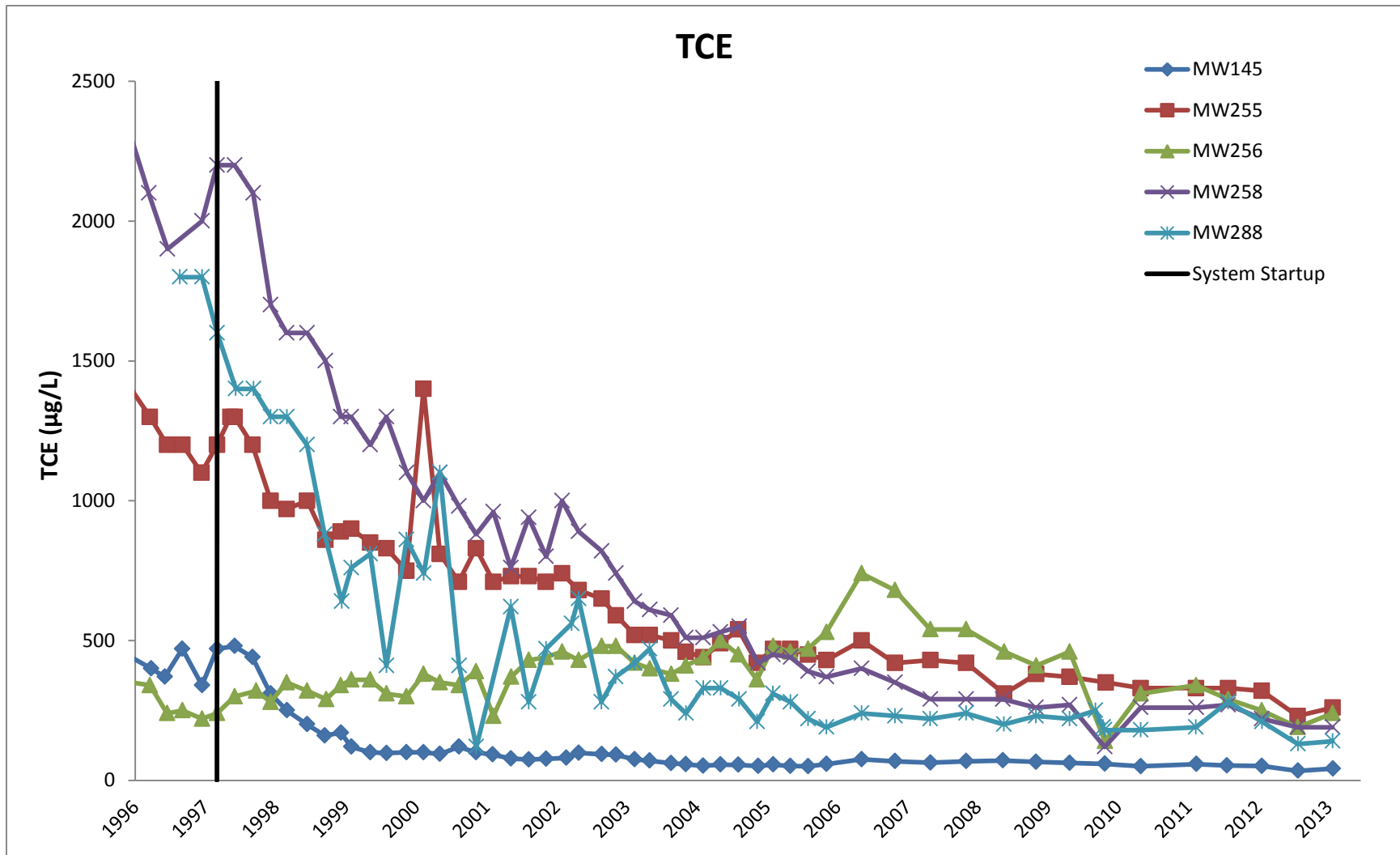
NOTE: Data rejected by validation or assessment are included on the graph.

Figure B.5. Northeast Plume Containment System TCE Removed



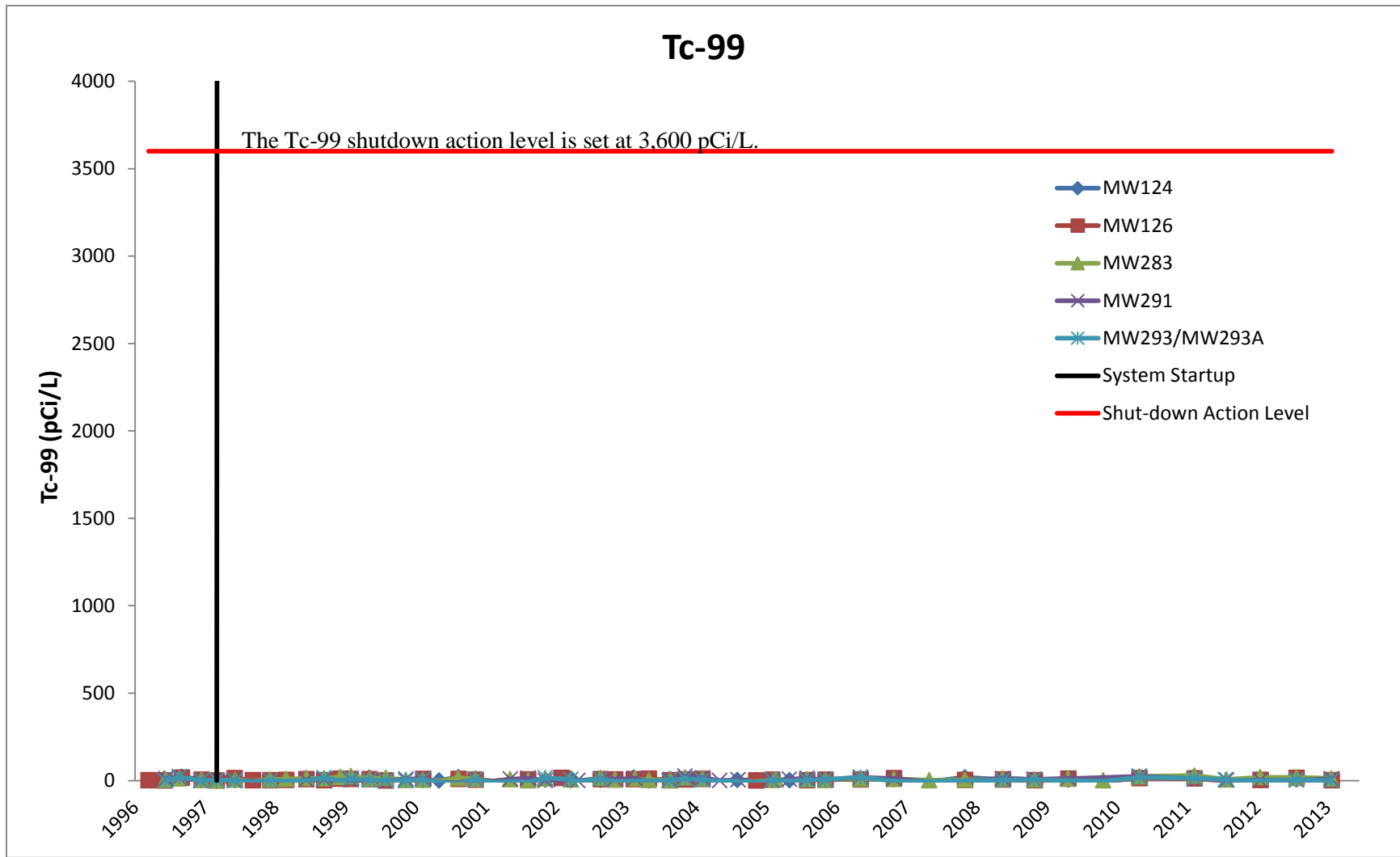
NOTE: Data rejected by validation or assessment have not been graphed.

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



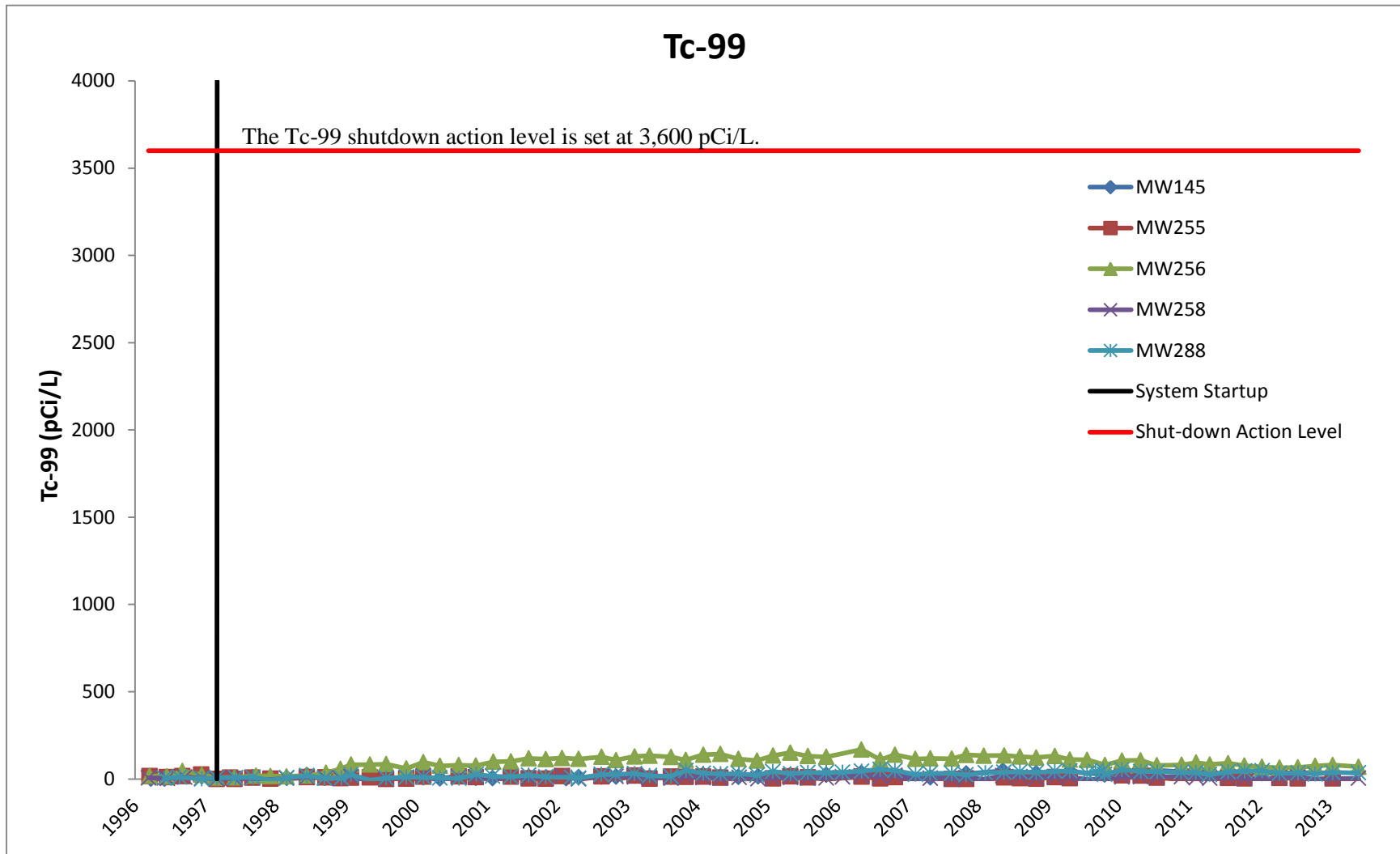
NOTE: Data rejected by validation or assessment have not been graphed.

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



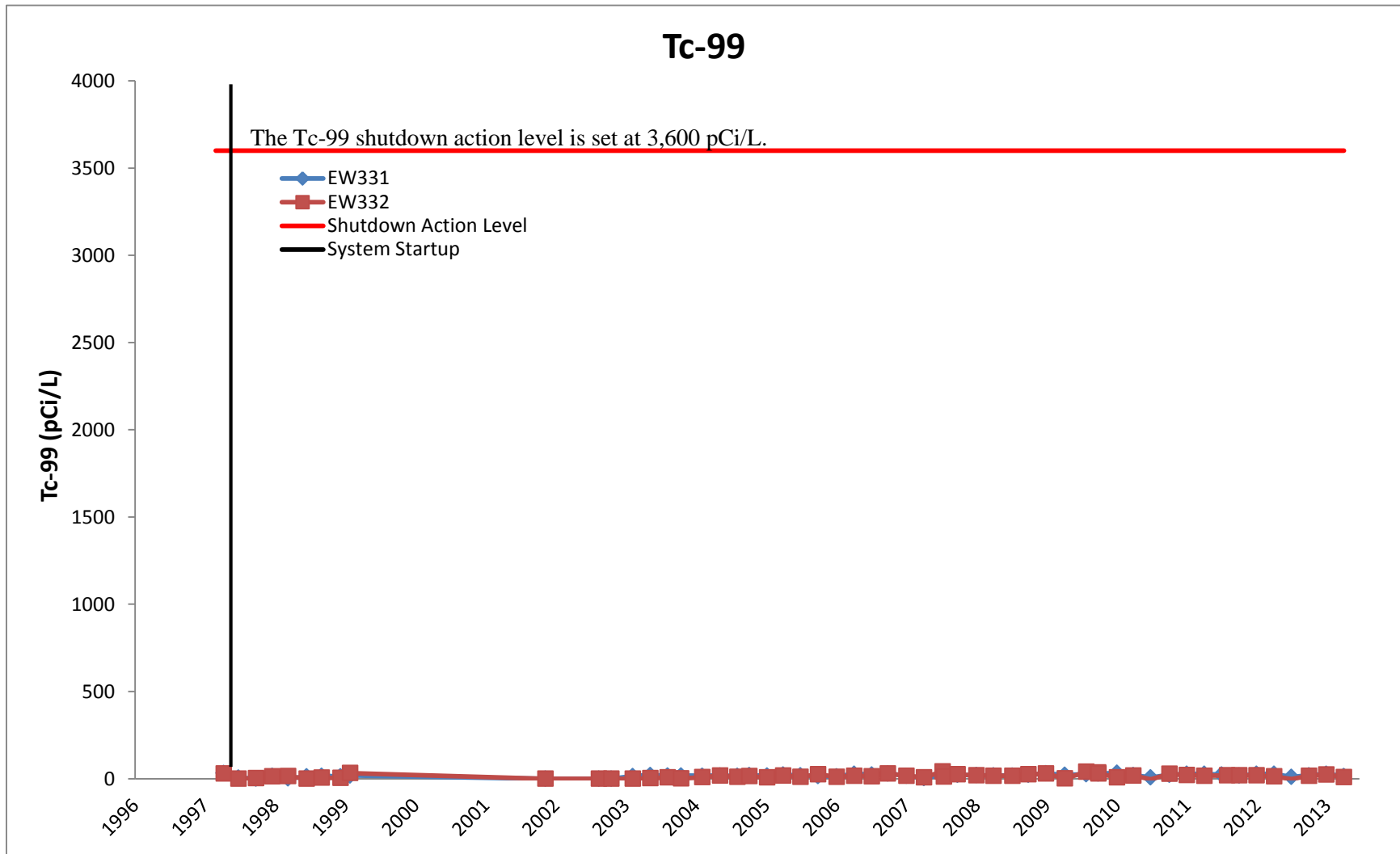
NOTE: Data rejected by validation or assessment have not been graphed.

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



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

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**

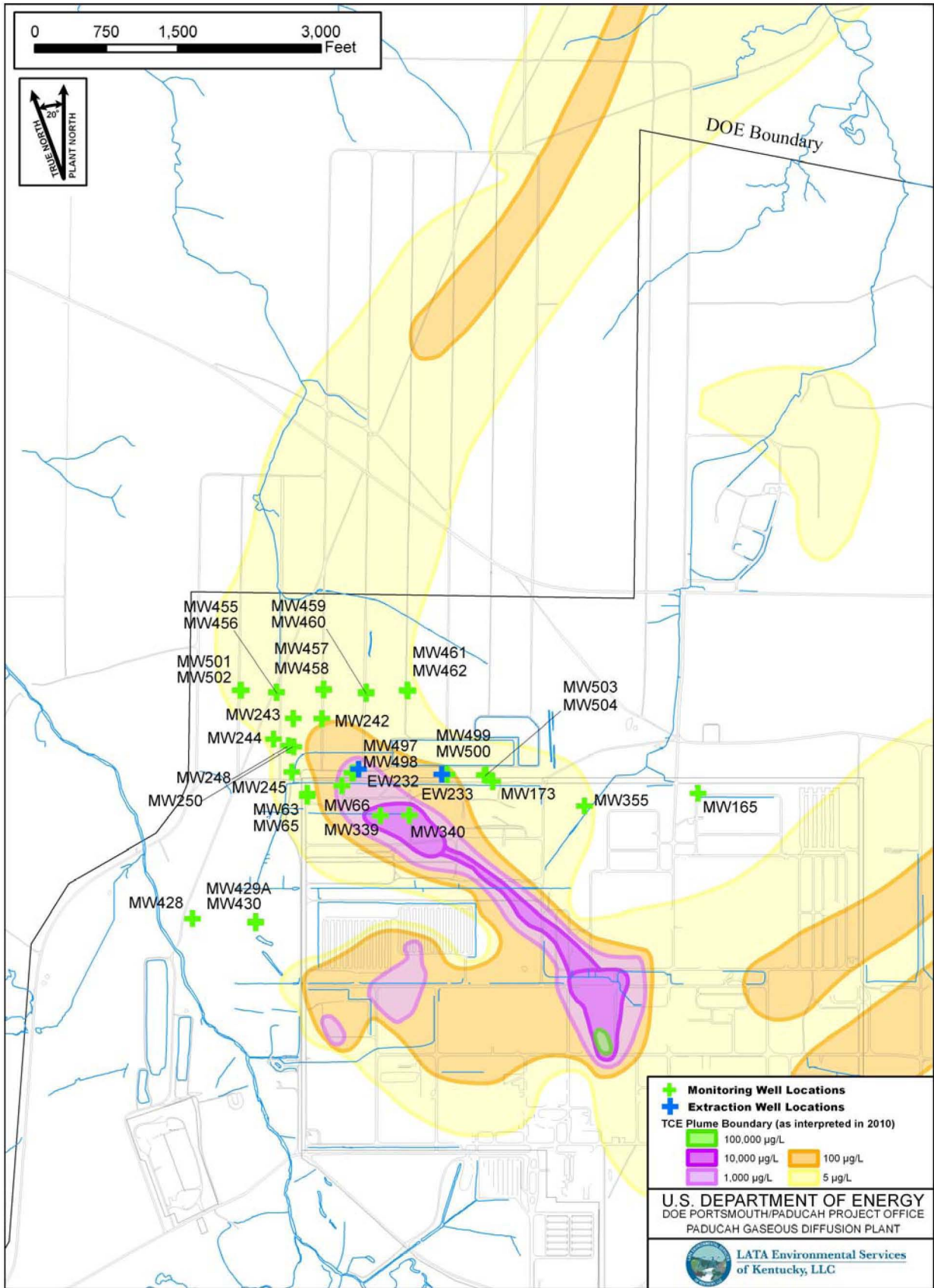


FIGURE No. FFA SemiAnnual20110906\_NWP\_R1.mxd  
DATE 09-15-2011

Figure B.11. Northwest Plume Groundwater Wells



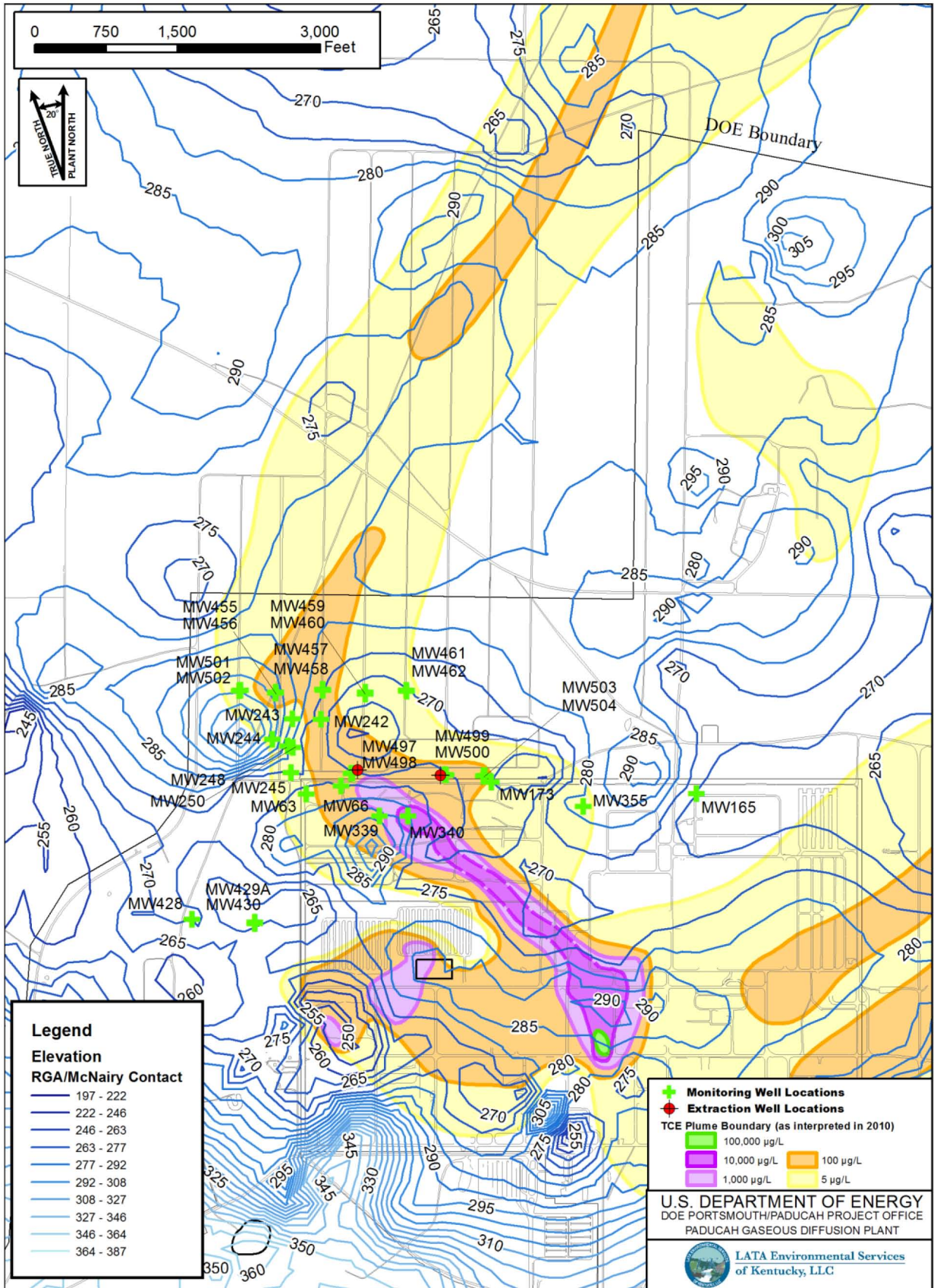
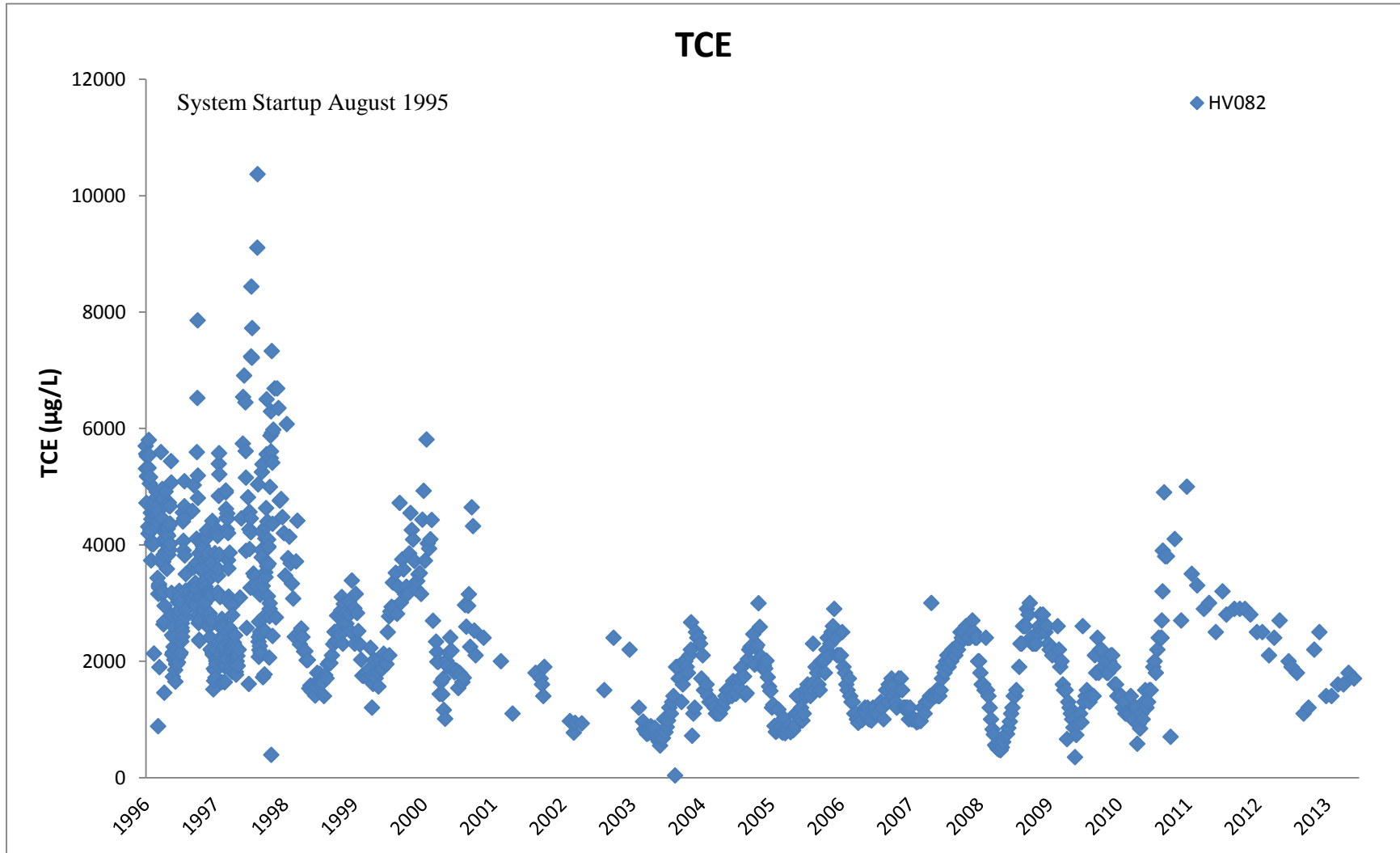


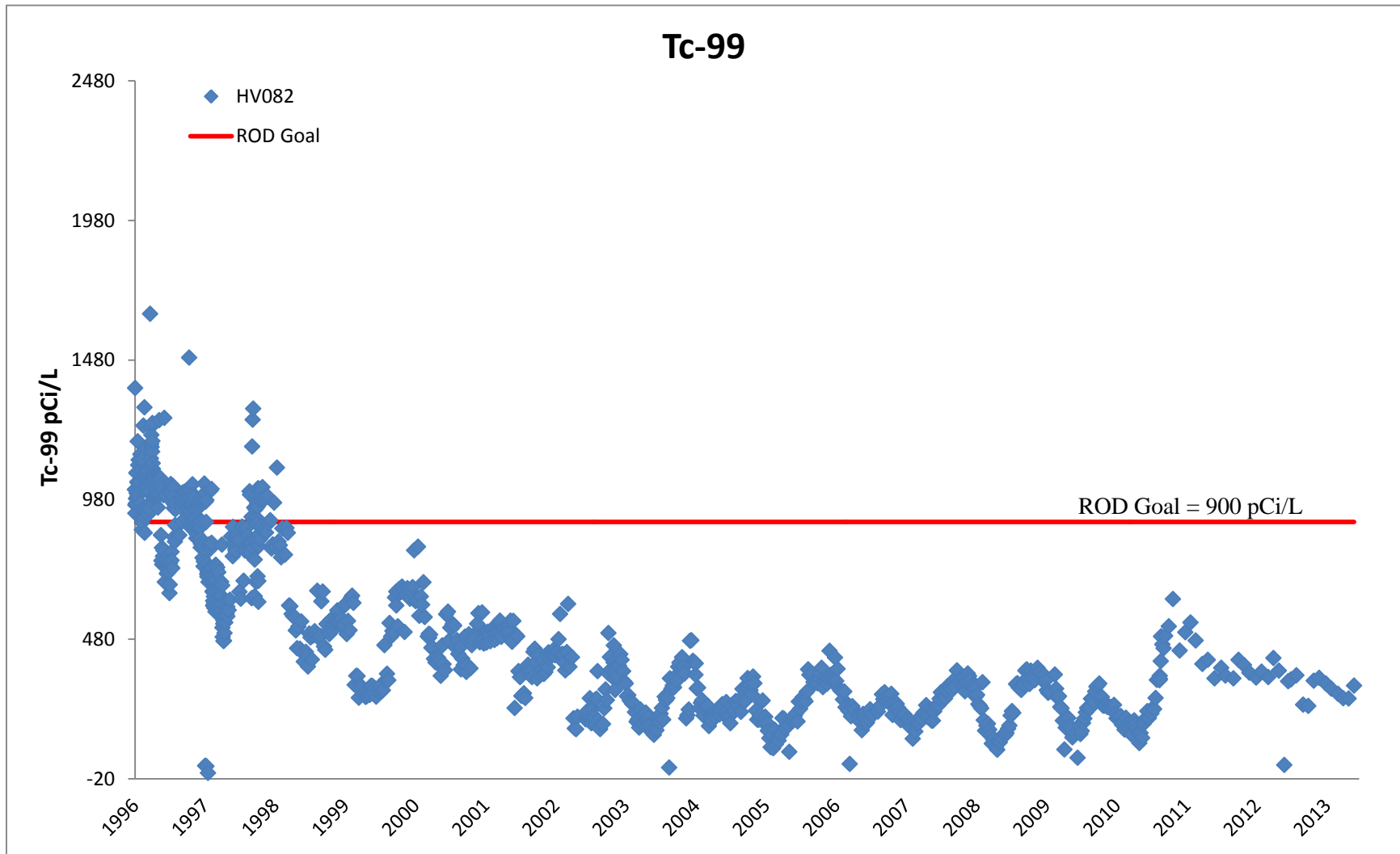
FIGURE No. G:\GIS\ARC\PROJECTS\FFA SemiAnnual\20130926\_NWP\_RGA.mxd  
DATE 9/26/2013

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



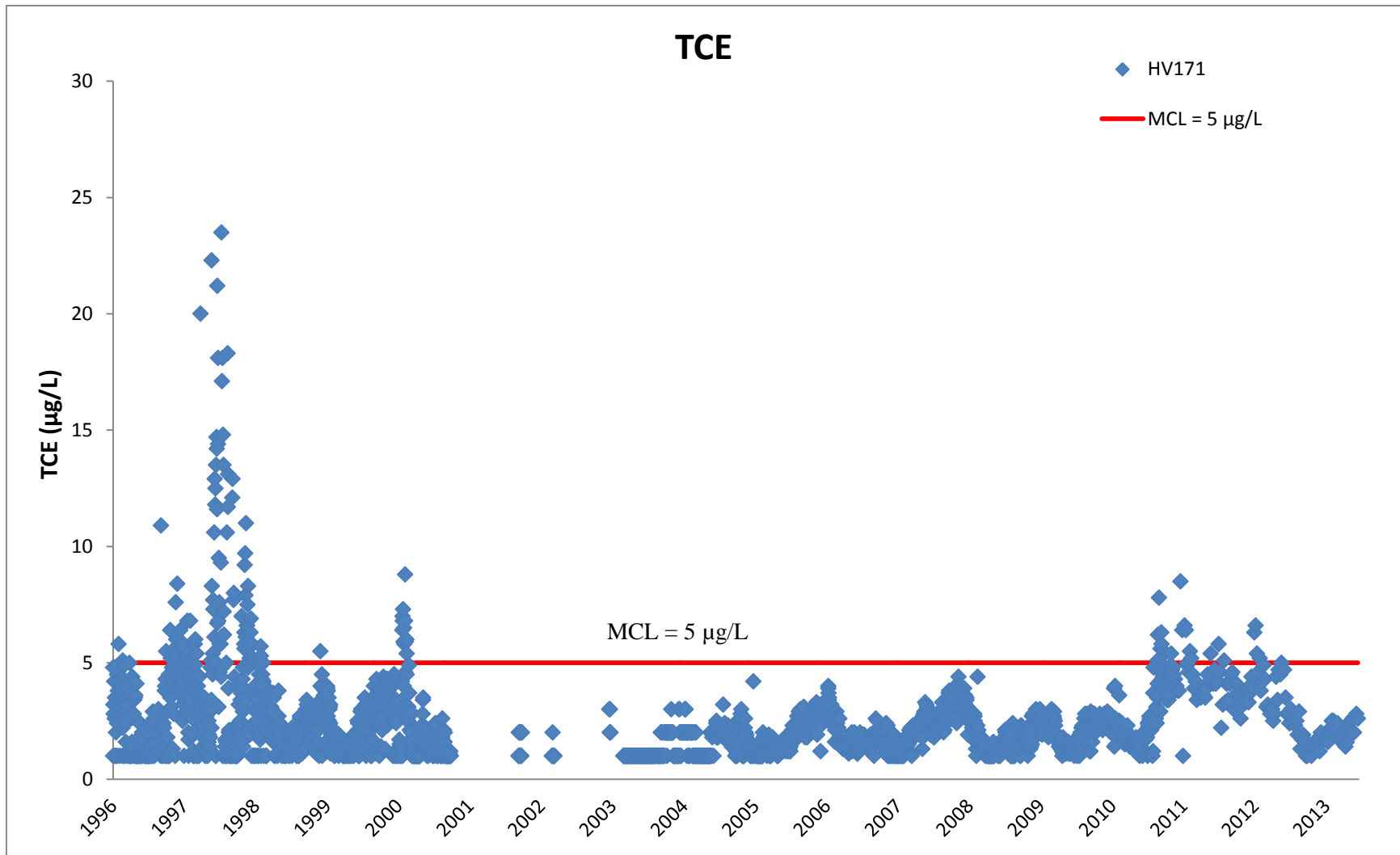
NOTE: Data rejected by validation or assessment have not been graphed.

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



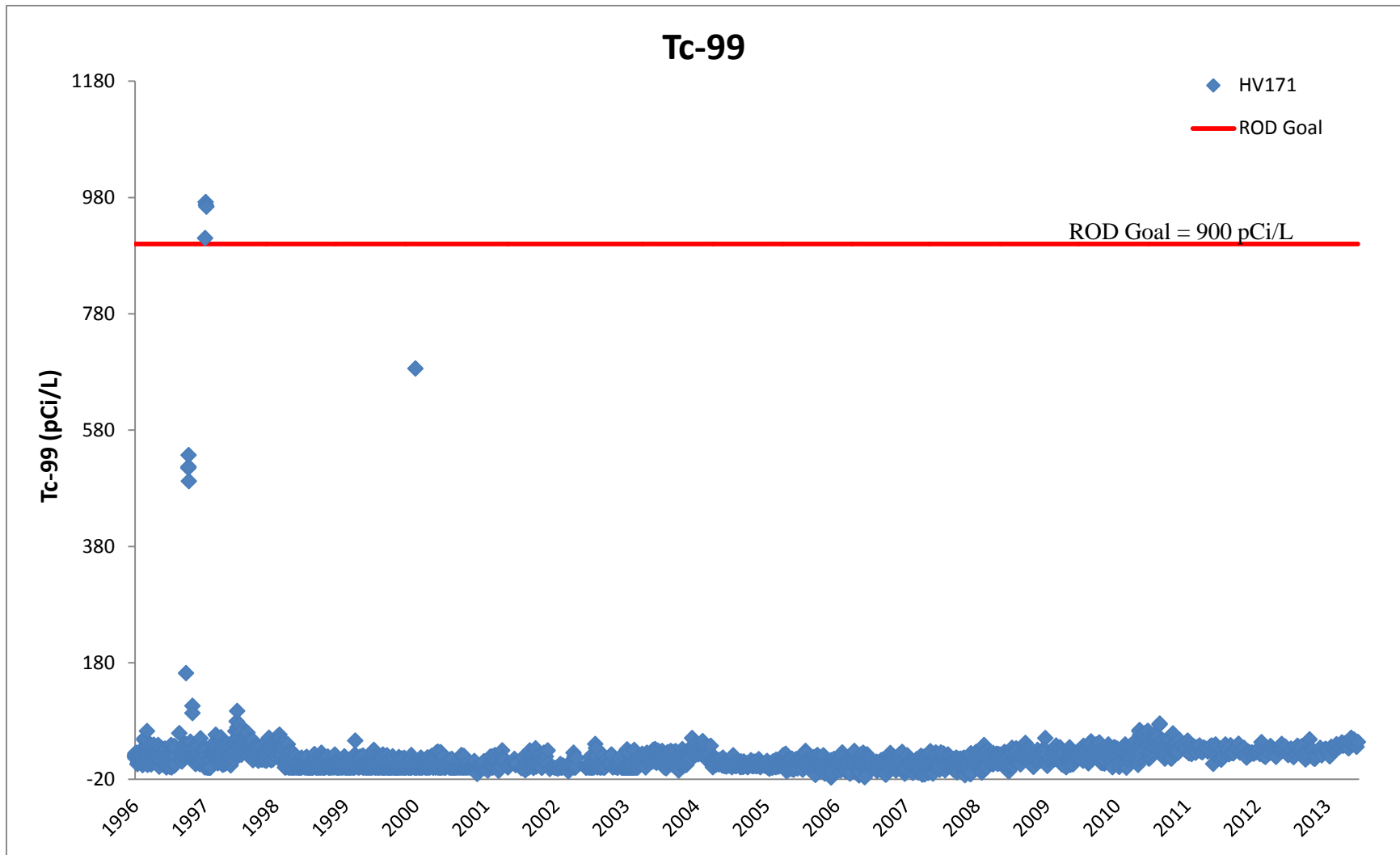
NOTE: Data rejected by validation or assessment have not been graphed.

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



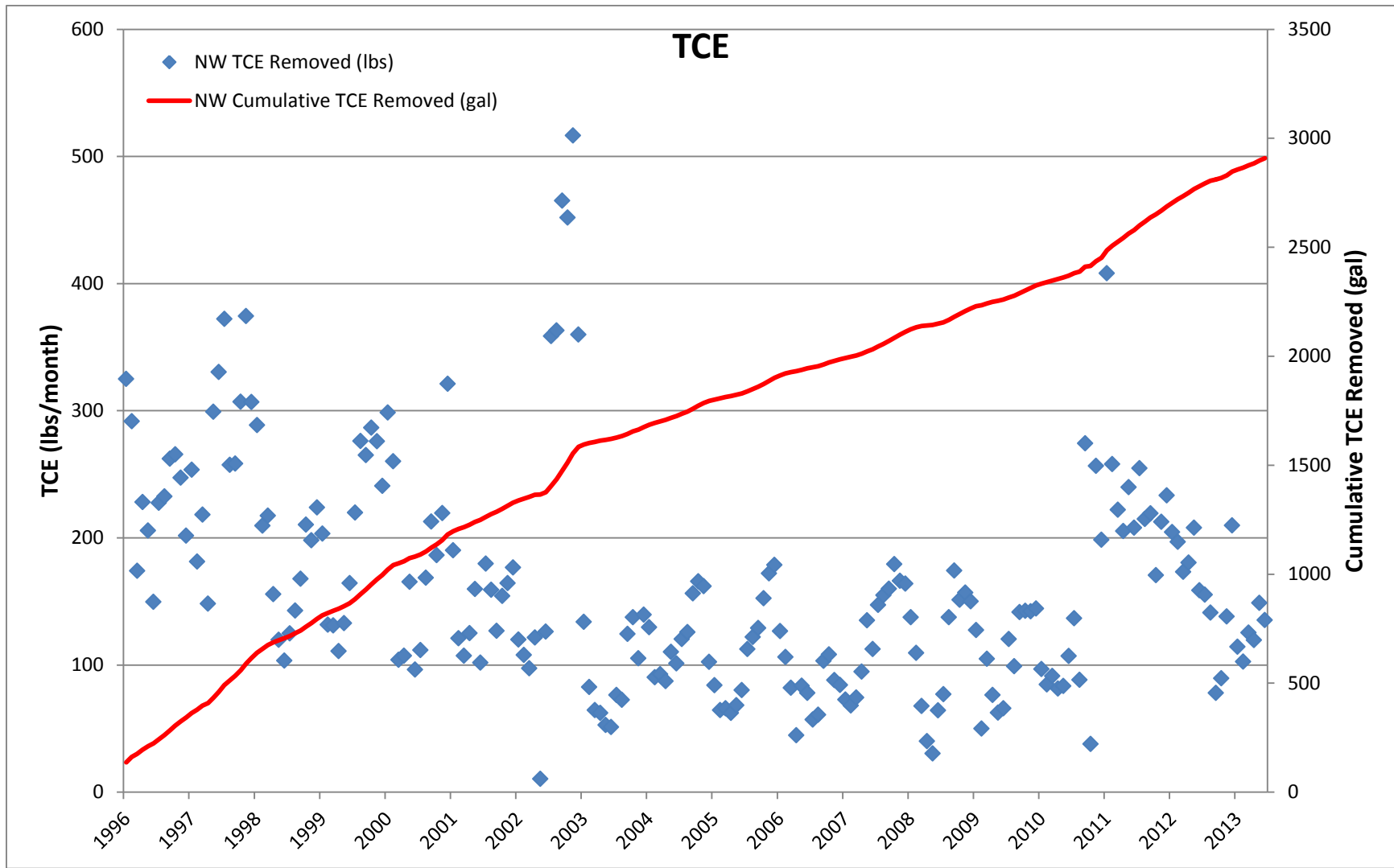
NOTE: Data rejected by validation or assessment have not been graphed.

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



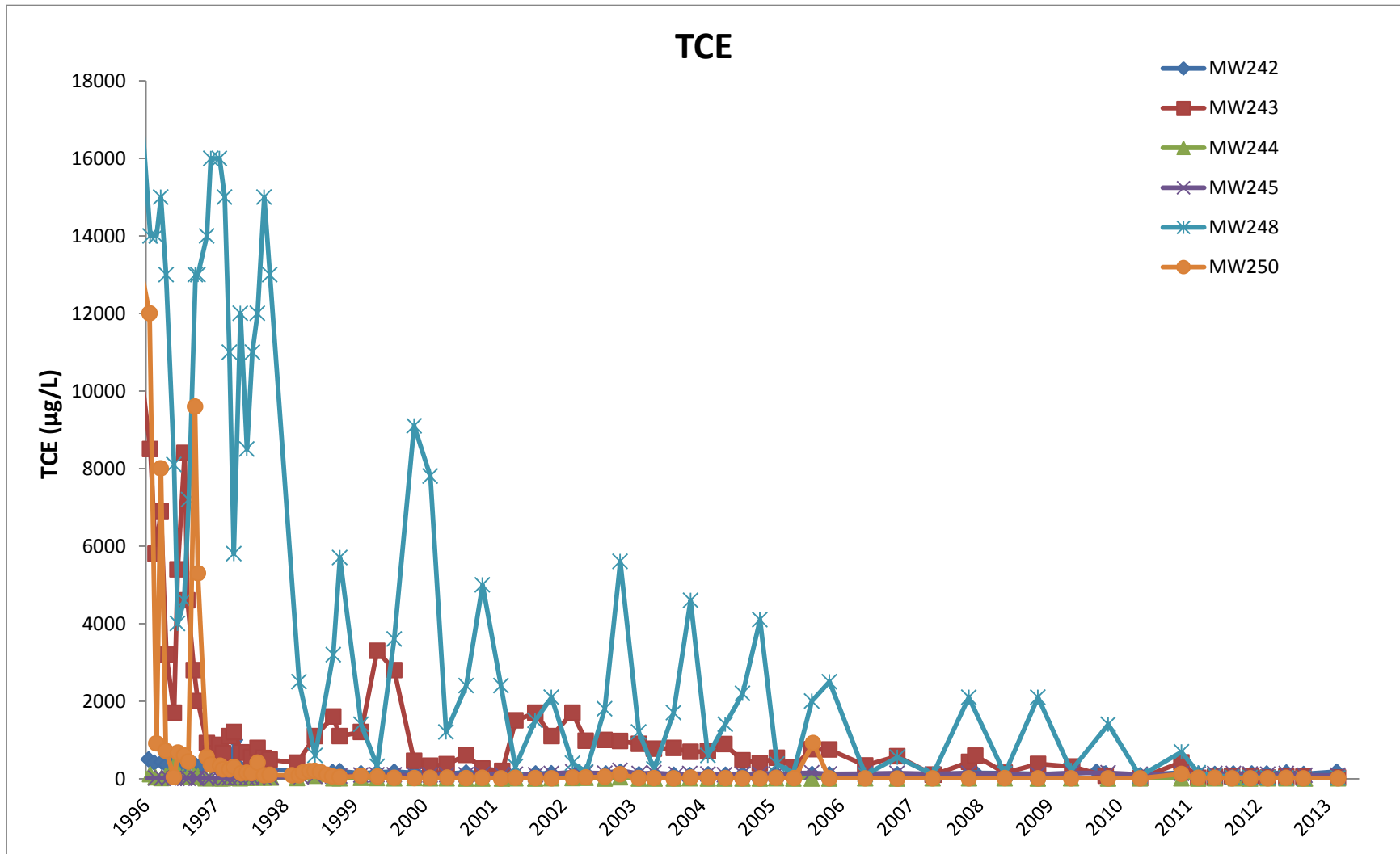
NOTE: Data rejected by validation or assessment have not been graphed.

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



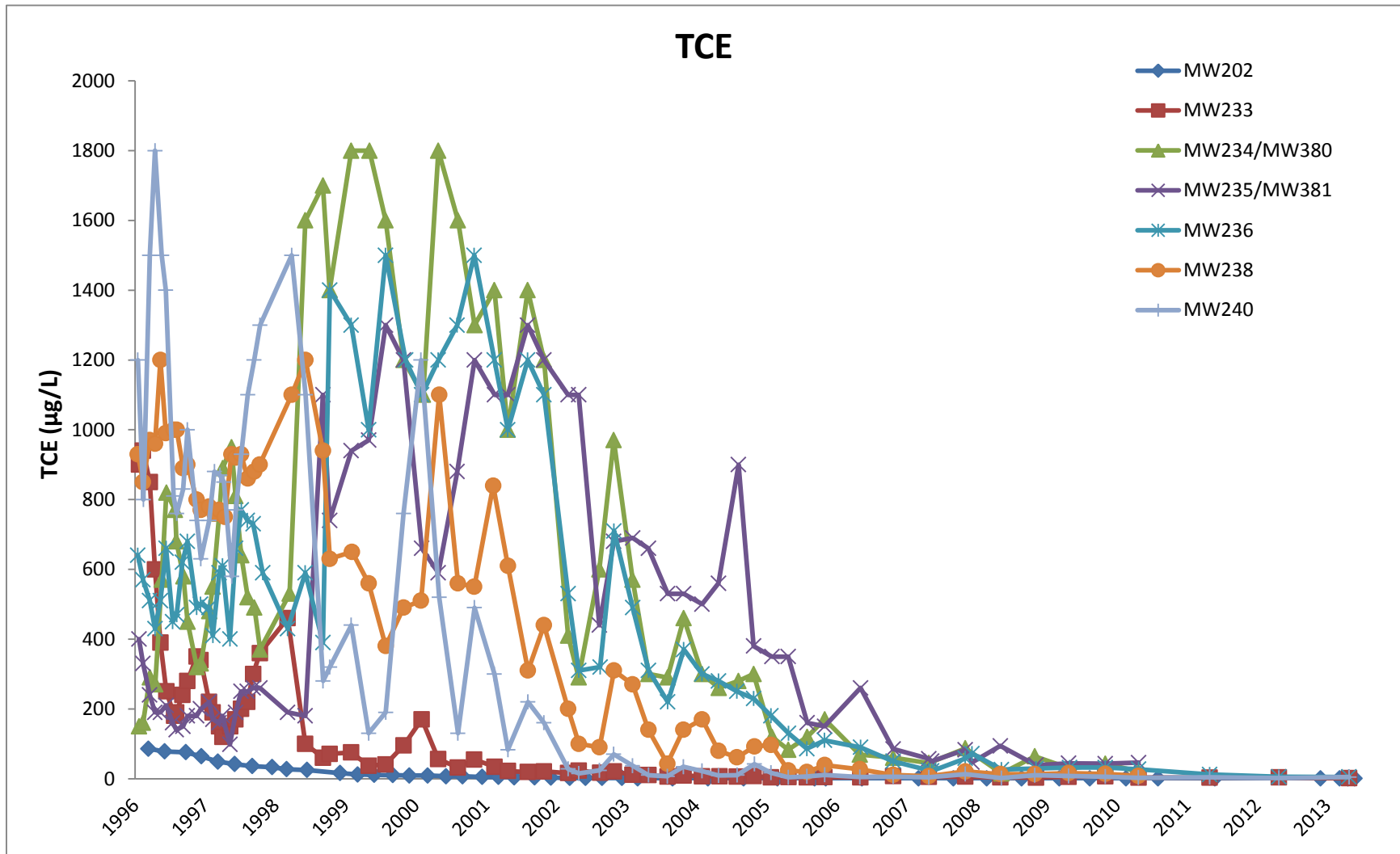
NOTE: Data rejected by validation or assessment are included on the graph.

Figure B.17. Northwest Plume Groundwater System TCE Removed



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

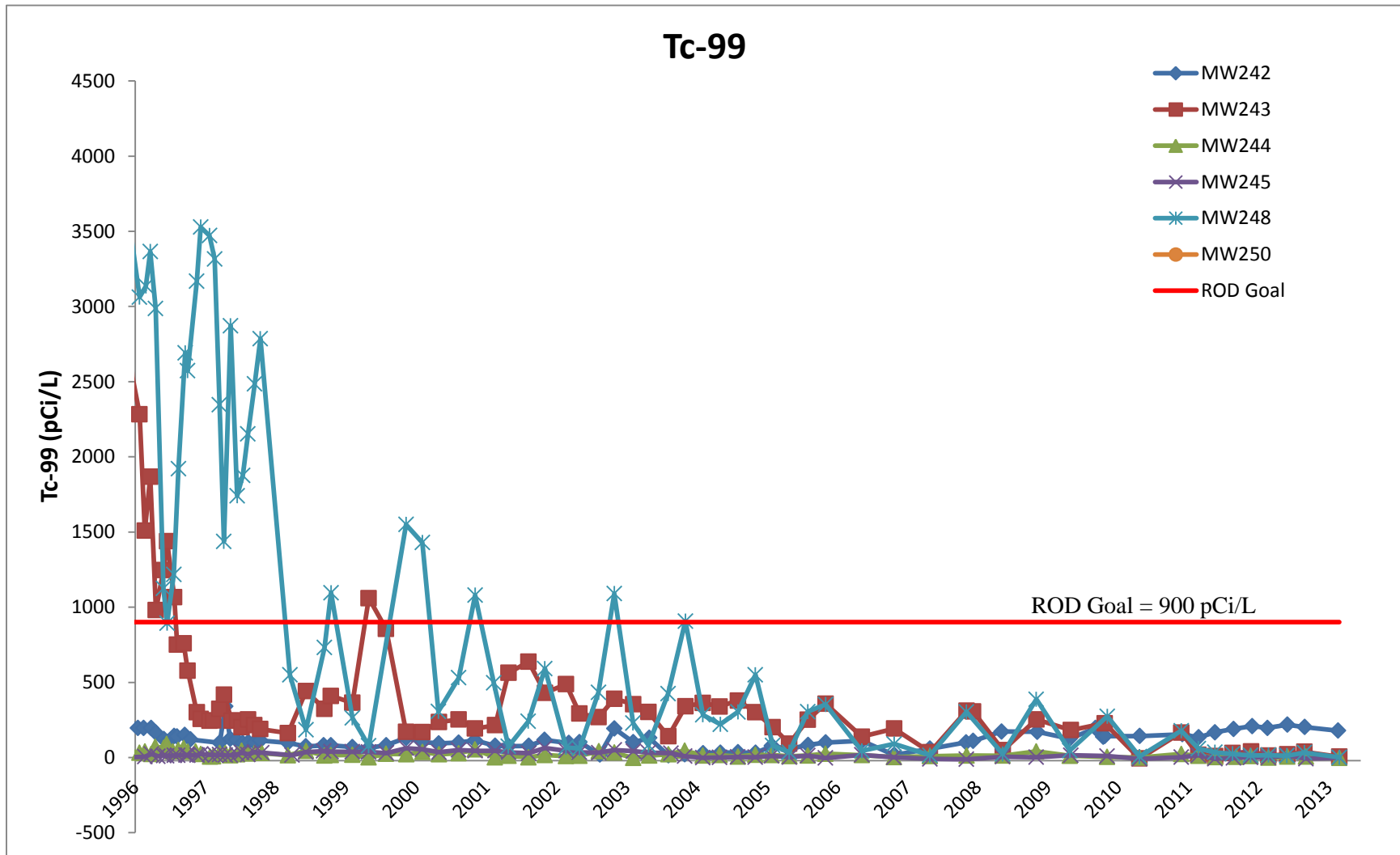
Figure B.18. Northwest Plume—South Well Field TCE Concentrations



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

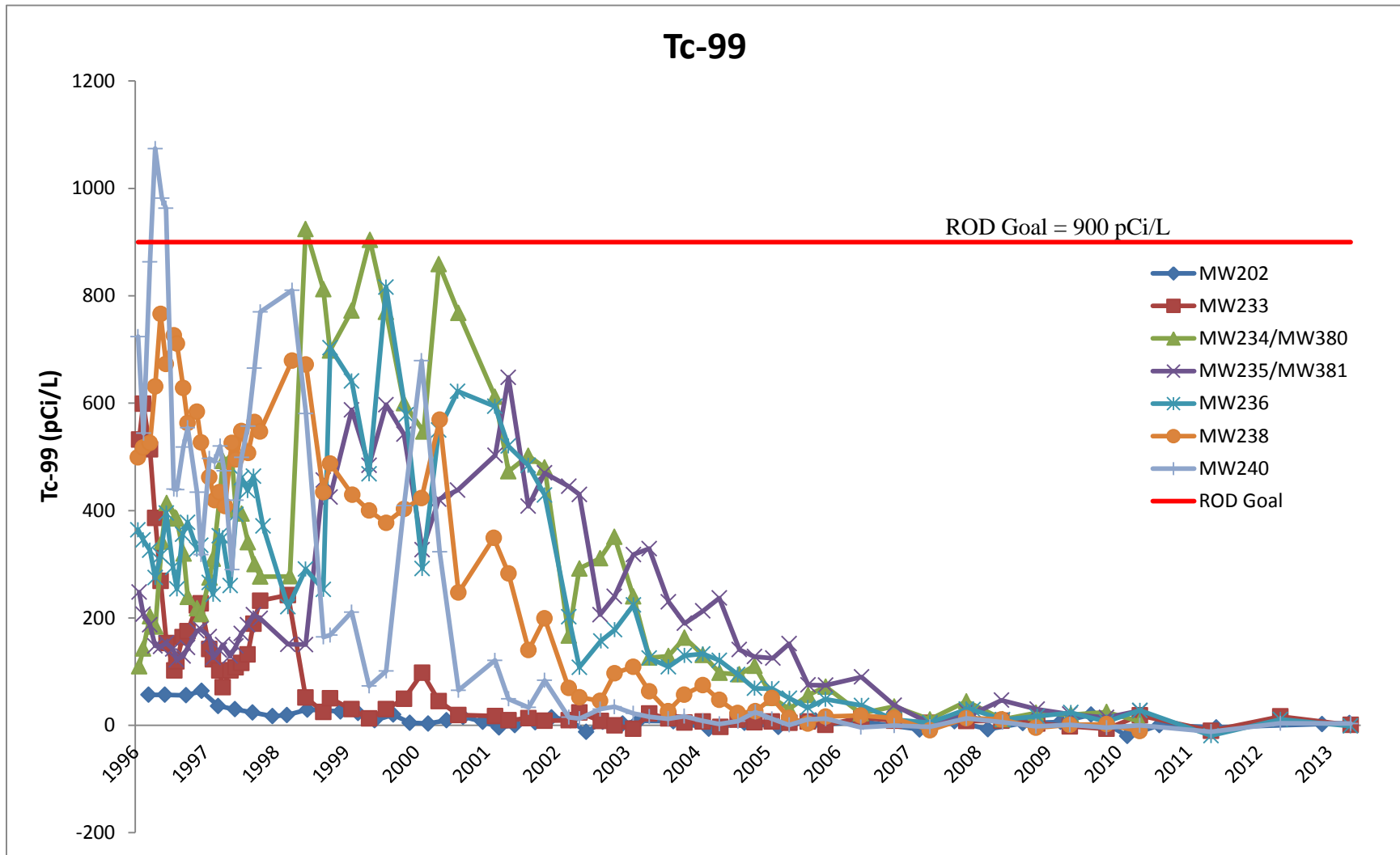
**Figure B.19. Northwest Plume—North Well Field TCE Concentrations**





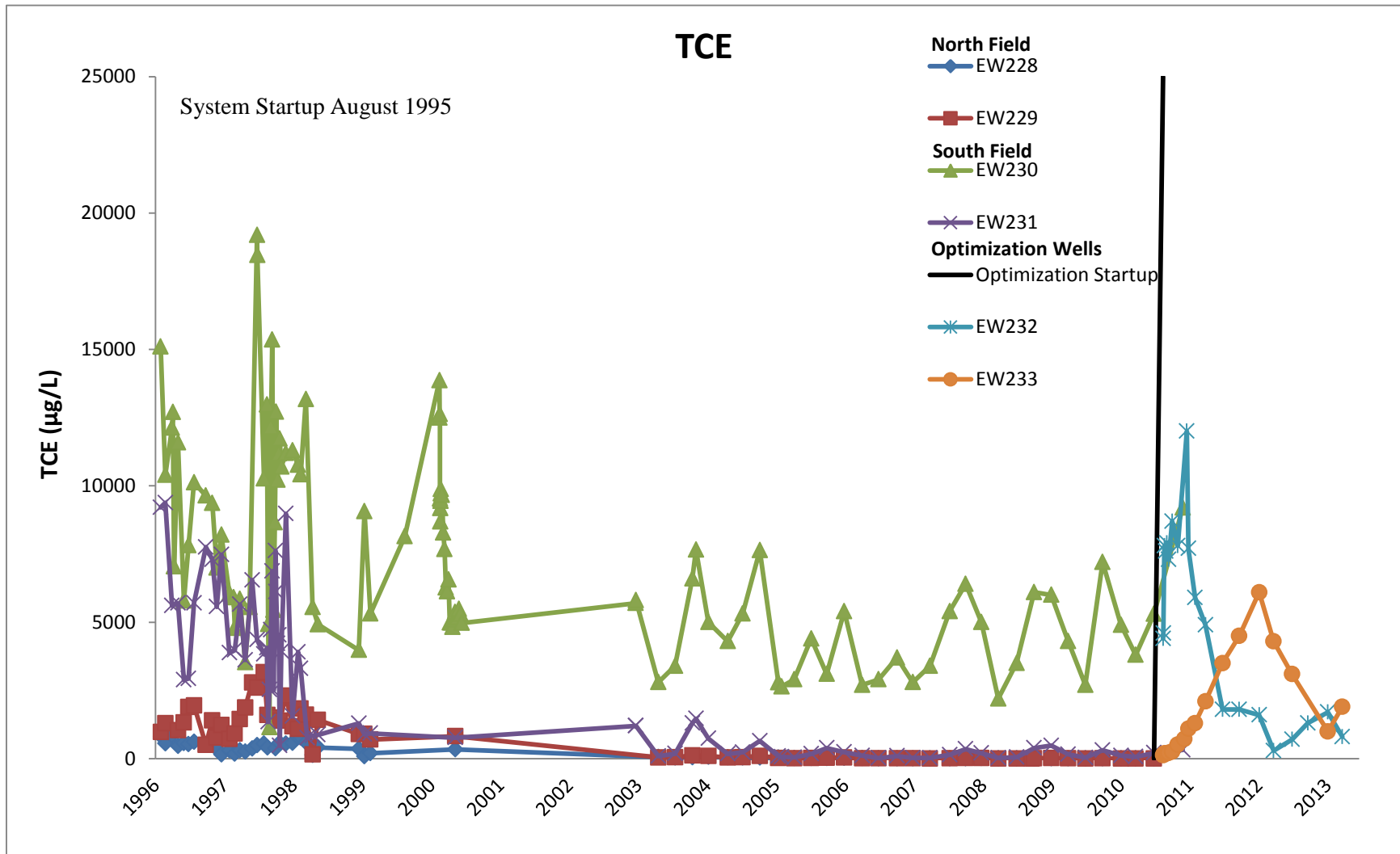
NOTE: Data rejected by validation or assessment have not been graphed.

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



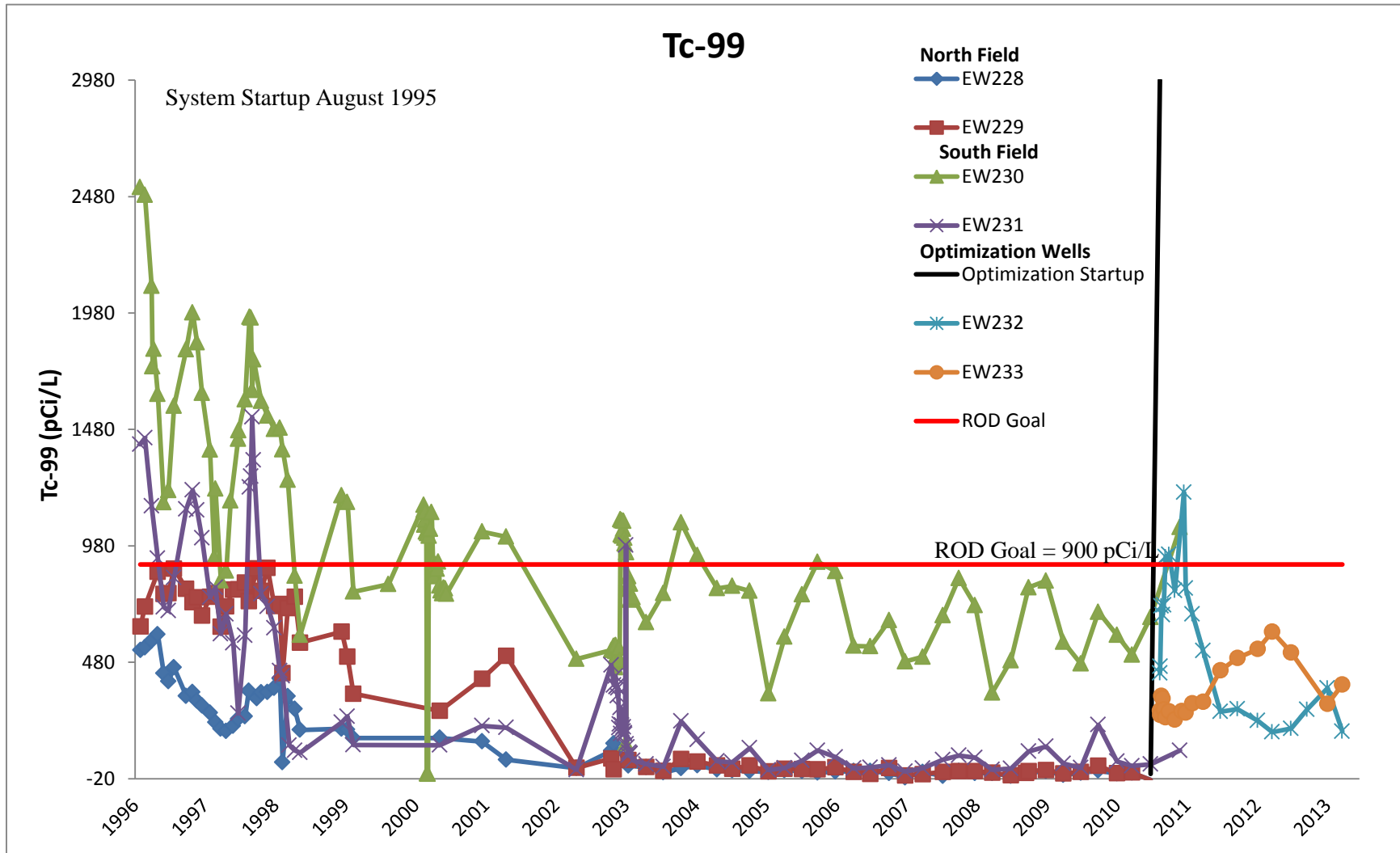
NOTE: Data rejected by validation or assessment have not been graphed.

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**

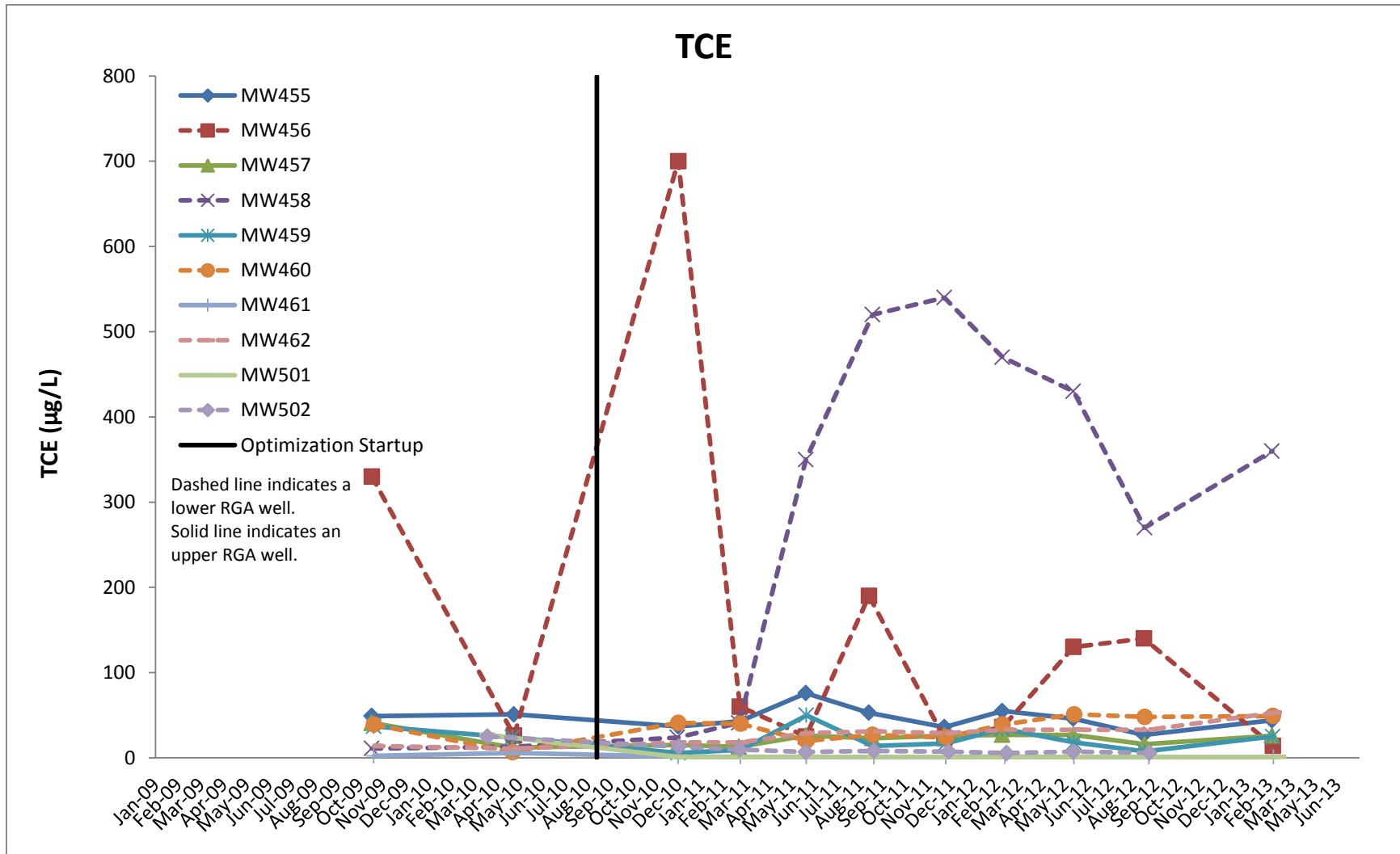


Figure B.24. Northwest Plume—New Well Field TCE Concentrations

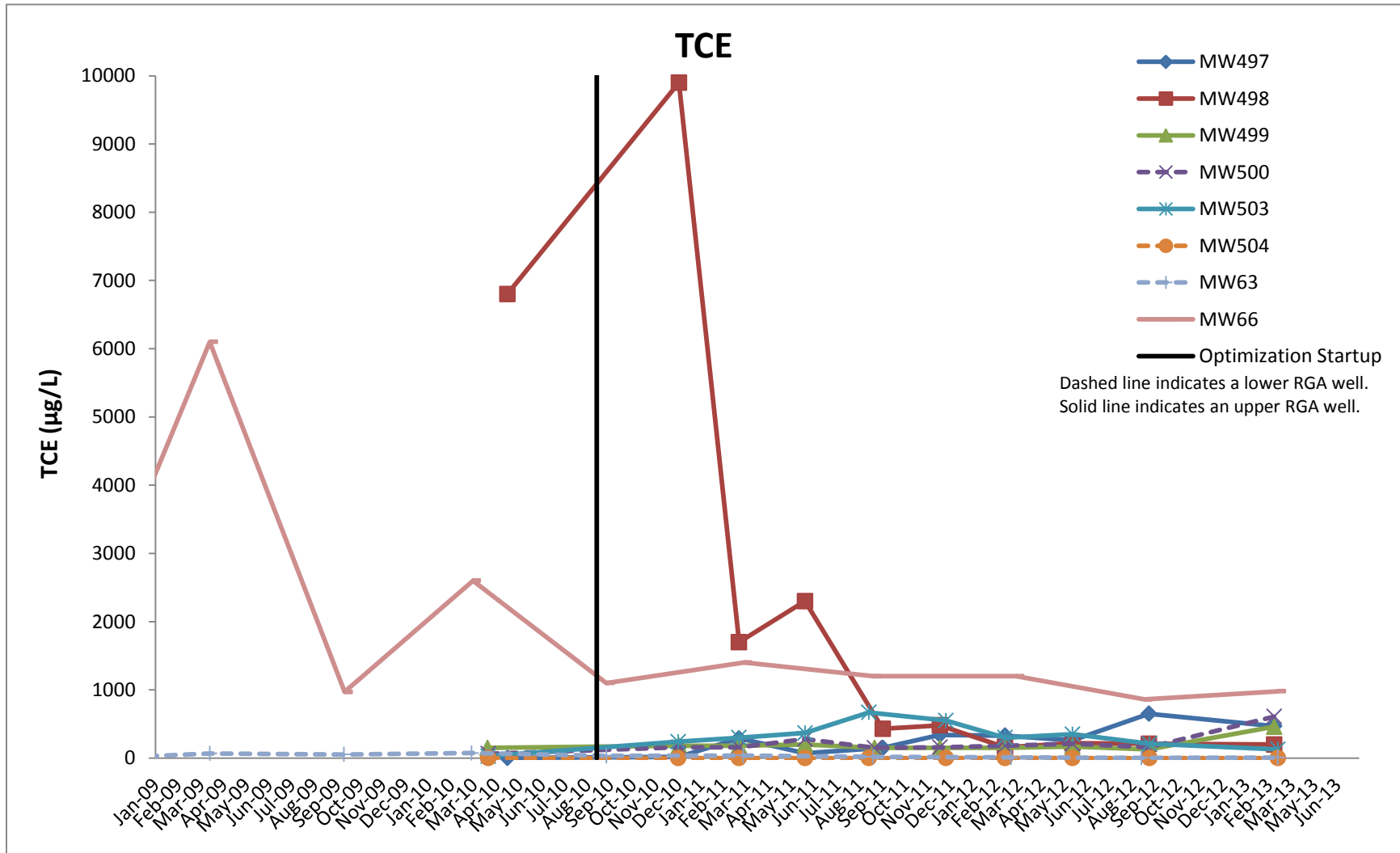


Figure B.25. Northwest Plume—Additional Well Field TCE Concentrations

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**APPENDIX C**

**C-746-K LANDFILL DATA**



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C-746-K Landfill groundwater data for reporting period 11/1/2012–04/30/2013 have been included.

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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- Second Quarter CY2013

Document Status	Date On Document	Document Id	Title	Author Affiliation	To Affiliation	Protected Information	Object Name
ARFBGOU	11/09/06	DOE/OR/07-2179&D2/R1	[KDWM]APPROVAL OF WORK PLAN FOR THE BURIAL GROUNDS OPERABLE UNIT REMEDIAL INVESTIGATION FEASIBILITY STUDY AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/OR/07-2179&D2/R1)	KDWM	DOE-PPPO,PRS	No	ENV 1.A-00351
ARFBGOU	11/13/06	DOE/OR/07-2179&D2/R1	[EPA APPROVAL] BURIAL GROUNDS OPERABLE UNIT REMEDIAL INVESTIGATION FEASIBILITY STUDY WORK PLAN AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/OR/07-2179&D2/R1)	USEPA-4	DOE-PPPO,PRS	No	ENV 1.A-00352
ARFBGOU	02/22/10	PPPO-02-357-10,DOE/LX/07-0030&D2/R1	TRANSMITTAL OF THE D2 REMEDIAL INVESTIGATION REPORT FOR THE BURIAL GROUNDS OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-0030&D2/R1)	DOE-PPPO	USEPA-4,KDWM	No	ENV 1.A-00353
ARFBGOU	03/15/13	KY-13-0434,DOE/LX/07-1274&D1	EPA COMMENTS ON THE D1 FEASIBILITY STUDY FOR SWMUs 2, 3, 7, AND 30 FOR THE BURIAL GROUNDS OPERABLE UNIT AT PGDP (DOE/LX/07-1274&D1)	USEPA-4	DOE-PPPO	No	ENV 1.A-00344
ARFBGOU	04/02/13	KY-13-0454,DOE/LX/07-0130&D2/R2	[EPA APPROVAL] MILESTONE MODIFICATION FOR SOLID WASTE MANAGEMENT UNITS 5 AND 6 OF THE BURIAL GROUNDS OPERABLE UNIT	USEPA-4	DOE-PPPO	No	ENV 1.A-00354
ARFBGOU	05/02/13	PPPO-02-1829693-13,DOE/LX/07-1275&D1	TRANSMITTAL OF THE PROPOSED PLAN FOR THE BURIAL GROUNDS OPERABLE UNIT SOURCE AREAS AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY: SOLID WASTE MANAGEMENT UNITS 5 AND 6, DOE/LX/07-1275&D1	DOE-PPPO	USEPA-4,KDWM	No	ENV 1.A-00380
ARFBGOU	05/20/13	PPPO-02-1931963-13,DOE/LX/07-1274&D2	EXTENSION REQUEST FOR SUBMITTAL OF THE BURIAL GROUNDS OPERABLE UNIT FEASIBILITY STUDY FOR SOLID WASTE MANAGEMENT UNITS 2, 3, 7, AND 30 OF THE BURIAL GROUNDS OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-1274&D2)	DOE-PPPO	USEPA-4,KDWM	No	ENV 1.A-00381
ARFBGOU	05/22/13	KY-13-0476,DOE/LX/07-1274&D2	APPROVAL OF THE EXTENSION REQUEST FOR SUBMITTAL OF THE D2 FEASIBILITY STUDY FOR SWMUs 2, 3, 7 AND 30 OF THE BURIAL GROUNDS OPERABLE UNIT (DOE/LX/07-1274&D2)	KDWM	DOE-PPPO	No	ENV 1.A-00383
ARFBGOU	05/23/13	KY-13-0477,DOE/LX/07-1274&D2	EXTENSION REQUEST FOR SUBMITTAL OF THE BURIAL GROUNDS OPERABLE UNIT FEASIBILITY STUDY FOR SWMUs 2, 3, 7, AND 30 OF THE BURIAL GROUNDS OPERABLE UNIT AT PGDP (DOE/LX/07-1274&D2)	USEPA-4	DOE-PPPO	No	ENV 1.A-00384
ARFBGOU	06/12/13	PPPO-02-1952456-13,DOE/LX/07-1274&D2	EXTENSION REQUEST FOR SUBMITTAL OF THE BURIAL GROUNDS OPERABLE UNIT FEASIBILITY STUDY FOR SOLID WASTE MANAGEMENT UNITS 2, 3, 7, AND 30 OF THE BURIAL GROUNDS OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-1274&D2)	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00393
ARFBGOU	06/14/13	DOE/LX/07-1275&D1,KY-13-0485	COMMENTS PERTAINING TO THE PROPOSED PLAN FOR SWMUs 5 AND 6 OF THE BURIAL GROUNDS OPERABLE UNIT (DOE/LX/07-1275&D1)	KDWM	DOE-PPPO	No	ENV 1.A-00394
ARFBGOU	06/17/13	DOE/LX/07-1275&D1,KY-13-0486	EPA COMMENTS ON THE PROPOSED PLAN FOR THE BURIAL GROUNDS OPERABLE UNIT, SWMUs 5 & 6 AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-1275&D1)	USEPA-4	DOE-PPPO	No	ENV 1.A-00395

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Document Status	Date On Document	Document Id	Title	Author Affiliation	To Affiliation	Protected Information	Object Name
ARFCC	05/15/13	PPPO-02-1927216-13,DOE/LX/07-244&D2	EXTENSION REQUEST FOR REMEDIAL INVESTIGATION FEASIBILITY STUDY REPORT FOR CERCLA WASTE DISPOSAL ALTERNATIVES EVALUATION AT PADUCAH GASEOUS DIFFUSION PLANT, AND MILESTONE MODIFICATION OF SUBSEQUENT WASTE DISPOSAL ALTERNATIVES EVALUATION DOCUMENTS	DOE-PPPO	USEPA-4,KDWM	No	ENV 1.A-00375
ARFCC	05/20/13	KY-13-0473	[KDWM] APPROVAL OF THE FEDERAL FACILITY AGREEMENT MILESTONE MODIFICATION FOR THE REMEDIAL INVESTIGATION FEASIBILITY STUDY REPORT FOR CERCLA WASTE DISPOSAL ALTERNATIVES EVALUATION AND SUBSEQUENT DOCUMENTS (DOE/LX/07-0244&D2)	KDWM	DOE-PPPO	No	ENV 1.A-00376
ARFREF	04/12/12	PPPO-02-1440389-12	PADUCAH FEDERAL FACILITY AGREEMENT MODIFICATION-FISCAL YEAR 2012 SITE MANAGEMENT PLAN, ENFORCEABLE COMMITMENTS, AND LIST OF SOLID WASTE MANAGEMENT UNITS/AREAS OF CONCERNS	DOE-PPPO	USEPA-4,KDWM	No	ENV 1.A-00350
ARFREF	03/17/13		DOE PUBLIC NOTICE 2013 COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA) FIVE-YEAR REVIEW FOR SELECTED CLEANUP ACTIONS AT PGDP	DOE-PPPO		No	ENV 1.A-00359
ARFREF	04/22/13	PPPO-02-1899705-13	PADUCAH FEDERAL FACILITY AGREEMENT FISCAL YEAR 2014 PRESIDENT'S BUDGET	DOE-PPPO	USEPA-4,KDWM	No	ENV 1.A-00360
ARFREF	04/24/13	PPPO-02-1898659-13	EXTENSION OF THE PADUCAH FEDERAL FACILITY AGREEMENT INTEGRATED PRIORITY LIST AND ASSESSMENT OF BUDGET TARGETS ON SITE PRIORITIES	DOE-PPPO	USEPA-4,KDWM	No	ENV 1.A-00361
ARFREF	04/30/13	PPPO-02-1896411-13,DOE/LX/07-1290/V1	U.S. DEPARTMENT OF ENERGY PADUCAH GASEOUS DIFFUSION PLANT FEDERAL FACILITY AGREEMENT SEMIANNUAL PROGRESS REPORT FOR FIRST HALF OF FISCAL YEAR 2013 (DOE/LX/07-1290/V1)	DOE-PPPO	USEPA-4,KDWM	No	ENV 1.A-00362
ARFREF	05/13/13	KY-13-0465	NOTIFICATION OF CHANGE IN DESIGNATION OF ENVIRONMENTAL PROTECTION AGENCY REGION 4 FEDERAL FACILITIES AGREEMENT PROJECT MANAGER	USEPA-4	DOE-PPPO,KDWM	No	ENV 1.A-00371
ARFREF	05/14/13	KY-13-0468,DOE/LX/07-1269&D2/R1	ENVIRONMENTAL PROTECTION AGENCY APPROVAL OF THE PADUCAH GASEOUS DIFFUSION PLANT PROGRAMMATIC QUALITY ASSURANCE PROJECT PLAN (DOE/LX/07-1269&D2/R1)	USEPA-4	DOE-PPPO	No	ENV 1.A-00372
ARFREF	05/16/13	PPPO-02-1930177-13	EXTENSION OF THE PADUCAH FEDERAL FACILITY AGREEMENT INTEGRATED PRIORITY LIST AND ASSESSMENT OF BUDGET TARGETS ON SITE PRIORITIES	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00373
ARFREF	05/20/13	KY-13-0471,DOE/LX/07-1269&D2/R1	PADUCAH GASEOUS DIFFUSION PLANT PROGRAMMATIC QUALITY ASSURANCE PROJECT PLAN (DOE/LX/07-1269&D2/R1)	KDWM	DOE-PPPO	No	ENV 1.A-00374
ARFREF	06/12/13	PPPO-02-1961544-13,DOE/LX/07-1289&D1	EXTENSION REQUEST FOR SUBMITTAL OF THE D1 FIVE-YEAR REVIEW OF REMEDIAL ACTIONS AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-1289&D1	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00399
ARFREF	06/13/13	PPPO-02-1965515-13	FEDERAL FACILITY AGREEMENT BUDGET REPORTING-FISCAL YEAR 2015 BUDGET TARGET FUNDING GUIDANCE NOTIFICATION	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00400

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ARFREF	06/21/13	DOE/LX/07-1289&D1,KY-13-0488	APPROVAL OF THE FEDERAL FACILITY AGREEMENT MILESTONE MODIFICATION REQUEST FOR SUBMITTAL OF FIVE-YEAR REVIEW OF REMEDIAL ACTIONS AT PGDP (DOE/LX/07-1289&D1)	KDWM	DOE-PPPO	No	ENV 1.A-00401
ARFS0U	10/01/12	PPPO-02-1592030-12B,DOE/LX/07-0358&D2	TRANSMITTAL OF THE SOILS OPERABLE UNIT REMEDIAL INVESTIGATION REPORT AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-0358&D2)	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00347
ARFS0U	02/07/13	PPPO-02-1772918-13B,DOE/LX/07-0358&D2/R1	TRANSMITTAL OF THE SOILS OPERABLE UNIT REMEDIAL INVESTIGATION REPORT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0358&D2/R1)	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00358
ARFS0U	05/07/13	KY-13-0462	[KDWM] RE: C-409 BUILDING SUMP REQUEST FOR DETERMINATION	KDWM	DOE-PPPO	No	ENV 1.A-00390
ARFS0U	06/06/13	PPPO-02-1954394-13	EXTENSION FOR SUBMITTAL OF RESPONSE TO KENTUCKY DIVISION OF WASTE MANAGEMENT REGARDING C-409 BUILDING SUMP REQUEST FOR DETERMINATION	DOE-PPPO	KDWM	No	ENV 1.A-00391
ARFS0U	06/07/13	KY-13-0484	[KDWM] APPROVAL OF THE EXTENSION REQUEST FOR SUBMITTAL OF THE C-409 BUILDING SUMP REQUEST FOR DETERMINATION	KDWM	DOE-PPPO	No	ENV 1.A-00392

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55-PD	06/22/07	PPPO-02-305-07,DOE/LX/07-0010&D1	TRANSMITTAL OF THE REMOVAL ACTION REPORT FOR THE C-402 LIME HOUSE AT THE PADUCAH ENVIRONMENTAL REMEDIATION PROJECT, PADUCAH, KENTUCKY (DOE/LX/07-0010&D1)	DOE-PPPO	USEPA-4,KDWM	No	ENV 1.A-00345
6PHASE-PD	04/24/13	PPPO-02-1901932-13,DOE/LX/07-1263&D2	ONGOING DISCUSSIONS FOR PHASE IIB OF C-400 CLEANING BUILDING AND EXTENSION REQUEST FOR SUBMITTAL OF GROUNDWATER OPERABLE UNIT REVISED PROPOSED PLAN FOR VOLATILE ORGANIC COMPOUND CONTAMINATION AT C-400 CLEANING BLDG AT PGDP (DOE/LX/07-1263&D2)	DOE-PPPO	USEPA-4,KDWM	No	ENV 1.A-00366
6PHASE-PD	04/29/13	KY-13-0456,DOE/LX/07-1263&D2	[KDWM] APPROVAL OF EXTENSION REQUEST FOR GROUNDWATER OPERABLE UNIT PHASE IIB REVISED PROPOSED PLAN FOR VOLATILE ORGANIC COMPOUND CONTAMINATION AT C-400 CLEANING BUILDING (DOE/LX/07-1263&D2) AND SUBSEQUENT DOCUMENTS	KDWM	DOE-PPPO	No	ENV 1.A-00367
6PHASE-PD	05/01/13	KY-13-0459,DOE/LX/07-1285&D1	COMMENTS TO THE GROUNDWATER OPERABLE UNIT OPERATIONS AND MAINTENANCE PLAN FOR PHASE IIa OF THE INTERIM REMEDIAL ACTION FOR THE VOLATILE ORGANIC COMPOUND CONTAMINATION AT C-400 CLEANING BUILDING (DOE/LX/07-1285&D1)	KDWM	DOE-PPPO	No	ENV 1.A-00368
6PHASE-PD	05/09/13	KY-13-0463,DOE/LX/07-1285&D1	EPA COMMENTS ON THE OPERATIONS AND MAINTENANCE PLAN FOR PHASE IIa OF THE INTERIM REMEDIAL ACTION FOR THE VOLATILE ORGANIC COMPOUND CONTAMINATION AT C-400 CLEANING BUILDING AT PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-1285&D1)	USEPA-4	DOE-PPPO	No	ENV 1.A-00382
6PHASE-PD	05/23/13	DOE/LX/07-1263&D2,KY-13-0479	EPA'S RESPONSE TO DOE'S LETTER: ONGOING DISCUSSIONS FOR PHASE IIB OF C-400 CLEANING BLDG AND EXTENSION REQUEST FOR SUBMITTAL OF GROUNDWATER OPERABLE UNIT REVISED PROPOSED PLAN FOR VOLATILE ORGANIC COMPOUND CONTAMINATION AT C-400 CLEANING BLDG AT PGDP (DOE/LX/07-1263&D2)	USEPA-4	DOE-PPPO	No	ENV 1.A-00385
6PHASE-PD	06/04/13	PPPO-02-1942711-13,DOE/LX/07-1263&D2	RESPONSE TO U.S. ENVIRONMENTAL PROTECTION AGENCY'S LETTER CONCERNING THE PATH FORWARD STRATEGY FOR PHASE IIB OF C-400 CLEANING BLDG AND EXTENSION REQUEST FOR SUBMITTAL OF GROUNDWATER OPERABLE UNIT REVISED PROPOSED PLAN FOR THE VOLATILE ORGANIC COMPOUND CONTAMINATION AT C-400 CLEANING BLDG AT PGDP (DOE/LX/07-1263&D2)	DOE-PPPO	USEPA-4	No	ENV 1.A-00386
GW3-PD	04/13/06		U.S. DEPARTMENT OF ENERGY OFFICE OF ENVIRONMENTAL MANAGEMENT OFFICE OF ENGINEERING TECHNICAL EXPERTISE PROJECT 610	DOE-EM-1		No	ENV 1.A-00396
GW3-PD	05/24/07		REVIEW REPORT: GROUNDWATER REMEDIAL SYSTEM PERFORMANCE OPTIMIZATION AT PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY	DOE-PPPO, PGDP	DOE-HQ	No	ENV 1.A-00397

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GW3-PD	03/11/13	KY-13-0430	EPA SIGNED MILESTONE MODIFICATION FOR SUBMITTAL OF THE D1 NORTHEAST PLUME REMEDIAL ACTION WORK PLAN FOR THE GROUNDWATER OPERABLE UNIT AT PGDP	USEPA-4	DOE-PPPO	No	ENV 1.A-00340
GW3-PD	03/26/13	PPPO-02-1849640-13	MILESTONE MODIFICATION FOR SUBMITTAL OF THE D1 NORTHEAST PLUME REMEDIAL ACTION WORK PLAN FOR THE GROUNDWATER OPERABLE UNIT AT PGDP	DOE-PPPO	USEPA-4,KDWM	No	ENV 1.A-00341
GW3-PD	03/28/13	PPPO-02-1787390-13,DOE/LX/07-1280&D1	TRANSMITTAL OF THE REMEDIAL ACTION WORK PLAN FOR OPTIMIZATION OF THE NORTHEAST PLUME INTERIM REMEDIAL ACTION AT PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-1280&D1)	DOE-PPPO	USEPA-4,KDWM	No	ENV 1.A-00349
GW3-PD	04/02/13	KY-13-0453,PPPO-02-1849640-13	EPA-SIGNED MILESTONE MODIFICATION FOR SUBMITTAL OF THE D1 NORTHEAST PLUME REMEDIAL ACTION WORK PLAN FOR THE GROUNDWATER OPERABLE UNIT AT PGDP (DATED MARCH 19, 2013)	USEPA-4	DOE-PPPO	No	ENV 1.A-00363
GW3-PD	04/03/13	KY-13-0443,DOE/LX/07-1280&D1	[KDWM] APPROVAL OF THE FEDERAL FACILITY AGREEMENT MILESTONE MODIFICATION REQUEST FOR SUBMITTAL OF THE NORTHEAST PLUME REMEDIAL ACTION WORK PLAN (DOE/LX/07-1280&D1)	KDWM	DOE-PPPO	No	ENV 1.A-00348
GW3-PD	04/25/13	KY-13-0455,DOE/LX/07-1280&D1	[KDWM]EXTENSION NOTIFICATION FOR COMMENT SUBMITTAL FOR THE REMEDIAL ACTION WORK PLAN FOR OPTIMIZATION OF THE NORTHEAST PLUME INTERIM REMEDIAL ACTION (DOE/LX/07-1280&D1)	KDWM	DOE-PPPO	No	ENV 1.A-00364
GW3-PD	04/30/13	KY-13-0458,DOE/LX/07-1280&D1	[EPA]EXTENSION NOTIFICATION FOR COMMENT SUBMITTAL FOR THE REMEDIAL ACTION WORK PLAN FOR OPTIMIZATION OF THE NORTHEAST PLUME INTERIM REMEDIAL ACTION (DOE/LX/07-1280&D1)	USEPA-4	DOE-PPPO	No	ENV 1.A-00365
GW3-PD	05/03/13	PPPO-02-1859303-13,DOE/OR/07-1535&D3/R3	TRANSMITTAL OF THE OPERATION AND MAINTENANCE PLAN FOR THE NORTHEAST PLUME CONTAINMENT SYSTEM INTERIM REMEDIAL ACTION AT THE PADUCAH GASEOUS DIFFUSION PLANT, DOE/OR/07-1535&D3/R3	DOE-PPPO	USEPA-4,KDWM	No	ENV 1.A-00387
GW3-PD	05/29/13	DOE/LX/07-1280&D1,KY-13-0480	SUBMITTAL OF COMMENTS TO THE REMEDIAL ACTION WORK PLAN FOR OPTIMIZATION OF THE NORTHEAST PLUME INTERIM REMEDIAL ACTION (DOE/LX/07-1280&D1)	KDWM	DOE-PPPO	No	ENV 1.A-00388
GW3-PD	06/04/13	DOE/LX/07-1280&D1,KY-13-0481	EPA COMMENTS ON THE REMEDIAL ACTION WORK PLAN FOR OPTIMIZATION OF THE NORTHEAST PLUME INTERIM REMEDIAL ACTION, PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-1280&D1)	USEPA-4	USEPA-4	No	ENV 1.A-00389
GW3-PD	06/19/13	DOE/LX/07-1280&D1,KY-13-0487	REVISION TO JUNE 4, 2013 ENVIRONMENTAL PROTECTION AGENCY (EPA) COMMENT LETTER ON REMEDIAL ACTION WORK PLAN FOR OPTIMIZATION OF NORTHEAST PLUME INTERIM REMEDIAL ACTION, PGDP (DOE/LX/07-1280&D1)	USEPA-4	DOE-PPPO	No	ENV 1.A-00398
SWP-PD	03/20/13	PPPO-02-1836288-13	MILESTONE MODIFICATION FOR THE GROUNDWATER OPERABLE UNIT SOUTHWEST PLUME SOURCES DOCUMENTS	DOE-PPPO	USEPA-4,KDWM	No	ENV 1.A-00342

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SWP-PD	03/25/13	KY-13-0439	APPROVAL OF THE FEDERAL FACILITY AGREEMENT MILESTONE MODIFICATION REQUEST FOR SUBMITTAL OF THE D1 GROUNDWATER OPERABLE UNIT SOUTHWEST PLUME REMEDIAL ACTION WORK PLAN AND SUBSEQUENT DOCUMENTS	KDWM	DOE-PPPO	No	ENV 1.A-00343
SWP-PD	04/02/13	PPPO-02-1836288-13,DOE/LX/07-1276&D1,KY-13-0445	(EPA SIGNED) MILESTONE MODIFICATION FOR THE GROUNDWATER OPERABLE UNIT SOUTHWEST PLUME SOURCES DOCUMENTS (REF: DOE/LX/07-1276&D1)	USEPA-4	DOE-PPPO	No	ENV 1.A-00346
SWP-PD	04/19/13	PPPO-02-1903565-13,DOE/LX/07-1276&D1	SUPPLEMENTAL INFORMATION TO BE PROVIDED IN SUPPORT OF REVIEW OF D1 90% REMEDIAL DESIGN REPORT FOR SOUTHWEST GROUNDWATER PLUME VOLATILE ORGANIC COMPOUND SOURCE AT C-747-C OIL LANDFARM (SWMU 1)	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00355
SWP-PD	04/22/13	KY-13-0452,DOE/LX/07-1276&D1	[EPA]EXTENSION REQUEST FOR THE REVIEW OF THE 90% REMEDIAL DESIGN REPORT IN SITU SOURCE TREATMENT USING DEEP SOIL MIXING FOR THE SOUTHWEST GROUNDWATER PLUME VOLATILE ORGANIC COMPOUND SOURCE AT THE C-747-C LANDFARM (SWMU 1) (DOE/LX/07-1276&D1)	KDWM	DOE-PPPO	No	ENV 1.A-00357
SWP-PD	04/22/13	KY-13-0451,DOE/LX/07-1276&D1	EXTENSION REQUEST FOR THE REVIEW OF THE 90% REMEDIAL DESIGN REPORT IN SITU SOURCE TREATMENT USING DEEP SOIL MIXING FOR THE SOUTHWEST GROUNDWATER PLUME VOLATILE ORGANIC COMPOUND SOURCE AT THE C-747-C LANDFARM (SWMU 1) (DOE/LX/07-1276&D1)	KDWM	DOE-PPPO	No	ENV 1.A-00356
SWP-PD	04/29/13	KY-13-0472	[EPA SIGNED] MILESTONE MODIFICATION FOR GROUNDWATER OPERABLE UNIT SOUTHWEST PLUME SOURCES DOCUMENTS	USEPA-4	DOE-PPPO	No	ENV 1.A-00377
SWP-PD	04/29/13	PPPO-02-1909230-13	MILESTONE MODIFICATION FOR THE GROUNDWATER OPERABLE UNIT SOUTHWEST PLUME SOURCES DOCUMENTS	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00369
SWP-PD	05/02/13	KY-13-0461	APPROVAL OF THE FEDERAL FACILITY AGREEMENT MILESTONE MODIFICATION REQUEST FOR SUBMITTAL OF THE D1 GROUNDWATER OPERABLE UNIT SOUTHWEST PLUME REMEDIAL ACTION WORK PLAN AND SUBSEQUENT DOCUMENTS	KDWM	DOE-PPPO	No	ENV 1.A-00370
SWP-PD	05/22/13	KY-13-0475,DOE/LX/07-1276&D1	REVIEW OF THE 90% REMEDIAL DESIGN REPORT IN SITU SOURCE TREATMENT USING DEEP SOIL MIXING FOR SOUTHWEST GROUNDWATER PLUME VOLATILE ORGANIC COMPOUND SOURCE AT C-747-C OIL LANDFARM (SWMU 1) AT PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-1276&D1)	KDWM	DOE-PPPO	No	ENV 1.A-00379
SWP-PD	05/22/13	KY-13-0474,DOE/LX/07-1276&D1	EPA COMMENTS ON THE 90% REMEDIAL DESIGN REPORT IN SITU SOURCE TREATMENT USING DEEP SOIL MIXING FOR SOUTHWEST GROUNDWATER PLUME VOLATILE ORGANIC COMPOUND SOURCE AT C-747-C OIL LANDFARM (SWMU 1) AT PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-1276&D1)	USEPA-4	DOE-PPPO	No	ENV 1.A-00378

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ARF4-1	12/20/11	PPPO-02-1356362-12C,DOE/OR/07-2179&D2/A2	TRANSMITTAL OF THE SECTION 6 QUALITY ASSURANCE PROJECT PLAN ERRATA TO THE ADDENDUM TO THE WORK PLAN FOR THE BURIAL GROUNDS OPERABLE UNIT REMEDIAL INVESTIGATION/FEASIBILITY STUDY AT PGDP, SWMU 4 SAMPLING AND ANALYSIS PLAN, DOE/OR/07-2179&D2/A2	DOE-PPPO	USEPA-4,KDWM	No	ENV 1.A-00407
ARFBGOU	08/01/12	SRNL-STI-2012-00513 R/1	TECHNICAL EVALUATION OF TEMPORAL GROUNDWATER MONITORING VARIABILITY IN MW66 AND NEARBY WELLS AT PGDP, PREPARED BY SAVANNAH RIVER NATIONAL LABORATORY	SRNL	DOE/HQ	No	ENV 1.A-00435
ARFBGOU	06/26/13	KY-13-0491,DOE/LX/07-1274&D2	APPROVAL OF THE EXTENSION REQUEST FOR SUBMITTAL OF THE D2 FEASIBILITY STUDY FOR SWMUs 2, 3, 7 AND 30 OF THE BURIAL GROUNDS OPERABLE UNIT (DOE/LX/07-1274&D2)	KDWM	DOE-PPPO	No	ENV 1.A-00408
ARFBGOU	06/26/13	KY-13-0492,DOE/LX/07-1274&D2	EXTENSION REQUEST FOR SUBMITTAL OF THE BURIAL GROUNDS OPERABLE UNIT FEASIBILITY STUDY FOR SWMUs 2, 3, 7, AND 30 OF THE BURIAL GROUNDS OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-1274&D2)	USEPA-4	DOE-PPPO	No	ENV 1.A-00409
ARFBGOU	07/17/13	PPPO-02-2005214-13,DOE/LX/07-1275&D2	TRANSMITTAL OF THE PROPOSED PLAN FOR THE BURIAL GROUNDS OPERABLE UNIT SOURCE AREAS AT THE PADUCAH GASEOUS DIFFUSION PLANT, SOLID WASTE MANAGEMENT UNITS 5 AND 6, DOE/LX/07-1275&D2	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00434
ARFBGOU	08/16/13	KY-13-0523,DOE/LX/07-1275&D2	EXTENSION REQUEST FOR COMMENT SUBMITTAL TO THE PROPOSED PLAN FOR THE BURIAL GROUNDS OPERABLE UNIT SOURCE AREAS SWMUs 5 AND 6 (DOE/LX/07-1275&D2)	KDWM	DOE-PPPO	No	ENV 1.A-00442
ARFBGOU	08/28/13	PPPO-02-2053733-13	MILESTONE MODIFICATION FOR THE BURIAL GROUNDS OPERABLE UNIT SWMUs 5 AND 6 FEDERAL FACILITY AGREEMENT DOCUMENTS	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00443
ARFCC	07/10/13	PPPO-02-1984557-13,DOE/LX/0244&D2	EXTENSION REQUEST FOR SUBMITTAL OF THE REMEDIAL INVESTIGATION/FEASIBILITY STUDY REPORT FOR CERCLA WASTE DISPOSAL ALTERNATIVES EVALUATION AT PGDP, DOE/LX/07-0244&D2, AND MILESTONE MODIFICATION OF SUBSEQUENT WASTE DISPOSAL ALTERNATIVES EVALUATION DOCUMENTS	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00410
ARFCC	07/12/13	KY-13-0499,DOE/LX/0244&D2	APPROVAL OF THE FEDERAL FACILITY AGREEMENT MILESTONE MODIFICATION FOR THE REMEDIAL INVESTIGATION/FEASIBILITY STUDY REPORT FOR CERCLA WASTE DISPOSAL ALTERNATIVES EVALUATION AND SUBSEQUENT DOCUMENTS (DOE/LX/07-0244&D2)	KDWM	DOE-PPPO	No	ENV 1.A-00411
ARFCC	07/25/13	PPPO-02-1610776-13,DOE/LX/07-0244&D2	TRANSMITTAL OF THE REMEDIAL INVESTIGATION FEASIBILITY STUDY FOR CERCLA WASTE DISPOSAL ALTERNATIVES EVALUATION AT PGDP, DOE/LX/07-0244&D2	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00436

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## Paducah Documents Added to the Administrative Record Files- Third Quarter CY2013

Document Status	Date On Document	Document Id	Title	Author Affiliation	To Affiliation	Protected Information	Object Name
ARFCC	08/23/13	KY-13-0526,DOE/LX/07-0244&D2	EPA NOTIFICATION FOR EXTENSION FOR NOTIFICATION OF 30-DAY EXTENSION FOR REVIEW OF REMEDIAL INVESTIGATION/FEASIBILITY STUDY REPORT FOR CERCLA WASTE DISPOSAL ALTERNATIVES EVALUATION (DOE/LX/07-0244&D2) PGDP	USEPA-4	DOE-PPPO	No	ENV 1.A-00444
ARFREF	06/11/13	PPPO-02-1813000-13B,DOE/OR/07-2099&D2/R8	TRANSMITTAL OF THE COMMUNITY RELATIONS PLAN UNDER THE FEDERAL FACILITY AGREEMENT AT THE U.S. DEPARTMENT OF ENERGY PADUCAH GASEOUS DIFFUSION PLANT, DOE/OR/07-2099&D2/R8	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00402
ARFREF	06/26/13	KY-13-0493,DOE/LX/07-1289&D1	EPA APPROVAL OF DOE's EXTENSION REQUEST FOR SUBMITTAL OF THE D1 FIVE-YEAR REVIEW OF REMEDIAL ACTIONS AT PGDP, PADUCAH KY, DOE/LX/07-1289&D1	USEPA-4	DOE-PPPO	No	ENV 1.A-00403
ARFREF	06/27/13	PPPO-02-1971454-13,DOE/LX/07-0107&D2/R2/V1	TRANSMITTAL OF THE UPDATED METHODS FOR CONDUCTING RISK ASSESSMENTS AND RISK EVALUATIONS AT THE PADUCAH GASEOUS DIFFUSION PLANT, VOLUME 1, HUMAN HEALTH (DOE/LX/07-0107&D2/R2/V1)	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00440
ARFREF	07/15/13	PPPO-02-1995312-13,DOE/LX/07-1284&D2/R1	MODIFICATION APPROVAL AND TRANSMITTAL OF REPLACEMENT PAGES FOR APPENDIX 5 OF THE SITE MANAGEMENT PLAN, PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, ANNUAL REVISION-FY 2013 (DOE/LX/07-1284&D2/R1)	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00430
ARFREF	07/17/13	PPPO-02-1965571-13	NOTIFICATION OF THE AVAILABILITY OF BUDGET INFORMATION FOR THE DEVELOPMENT OF THE PADUCAH FEDERAL FACILITY AGREEMENT INTEGRATED PRIORITY LIST AND ASSESSMENT OF BUDGET TARGETS ON SITE PRIORITIES	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00412
ARFREF	07/17/13	PPPO-02-1980429-13	FEDERAL FACILITY AGREEMENT BUDGET REPORTING-CHANGE IN DUE DATE FOR SUBMITTAL OF FISCAL YEAR 2015 BUDGET TARGET FUNDING GUIDANCE ASSESSMENT	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00413
ARFREF	07/26/13	KY-13-0506,DOE/LX/07-1284&D2/R1	[KDWM] APPROVAL OF THE MODIFICATION APPROVAL OF THE REPLACEMENT PAGES FOR APPENDIX 5 OF THE 2013 SITE MANAGEMENT PLAN (DOE/LX/07-1284&D2/R1)	KDWM	DOE-PPPO	No	ENV 1.A-00414
ARFREF	07/30/13	KY-13-0510,DOE/LX/07-1284&D2/R1	EPA SIGNED-MODIFICATION APPROVAL FOR THE SITE MANAGEMENT PLAN, PGDP, ANNUAL REVISION-FISCAL YEAR 2013, DOE/LX/07-1284&D2/R1	USEPA-4	DOE-PPPO	No	ENV 1.A-00441
ARFREF	07/31/13	PPPO-02-2010670-13	FEDERAL FACILITY AGREEMENT BUDGET REPORTING PRELIMINARY ASSESSMENT OF FISCAL YEAR 2015 BUDGET TARGET FUNDING GUIDANCE	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00431
ARFREF	08/08/13	KY-13-0515,DOE/LX/07-2099&D2/R8	[KDWM] APPROVAL OF THE COMMUNITY RELATIONS PLAN (DOE/LX/07-2099&D2/R8)	KDWM	DOE-PPPO	No	ENV 1.A-00448
ARFREF	08/22/13	PPPO-02-2023581-13	FISCAL YEAR 2013 FUNDING ALLOCATION EVALUATION	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00449
ARFREF	08/23/13	KY-13-0529	(Incorrectly filed to ARFREF, corrected by filing to ARFBGOU) MODIFICATION TO THE PADUCAH FEDERAL FACILITY AGREEMENT ACCORDING TO THE TERMS OF SECTION XXXIX	USEPA-4	DOE-PPPO	No	ENV 1.A-00450

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## Paducah Documents Added to the Administrative Record Files- Third Quarter CY2013

Document Status	Date On Document	Document Id	Title	Author Affiliation	To Affiliation	Protected Information	Object Name
ARFREF	08/23/13	PPPO-02-2008135-13	PADUCAH FEDERAL FACILITY AGREEMENT INTEGRATED PRIORITY LIST AND ASSESSMENT OF BUDGET TARGETS ON SITE PRIORITIES	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00451
ARFREF	08/29/13	PPPO-02-1969283-13B,DOE/LX/07-1289&D1	TRANSMITTAL OF THE FIVE-YEAR REVIEW FOR REMEDIAL ACTIONS AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KY, DOE/LX/07-1289&D1	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00452
ARFREF	08/29/13		MEMO TO FILE: ADMINISTRATIVE RECORD (AR) COORDINATOR REPLACEMENT AND SIGNATURE AUTHORITY	LATA	SST	No	ENV 1.A-00453

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## Paducah Documents Added to the Post-Decision Files- Third Quarter CY2013

Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Protected Information	Object Name
6PHASE-PD	06/19/13	PPPO-02-1920798-13,DOE/LX/07-1285&D2	TRANSMITTAL OF THE OPERATIONS AND MAINTENANCE PLAN FOR PHASE IIa OF THE INTERIM REMEDIAL ACTION FOR THE VOLATILE ORGANIC CONTAMINATION AT THE C-400 CLEANING BUILDING AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-1285&D2)	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00404
6PHASE-PD	06/21/13	KY-13-0490,DOE/LX/07-1285&D2	EPA APPROVAL OF THE OPERATIONS AND MAINTENANCE PLAN FOR PHASE IIa OF THE INTERIM REMEDIAL ACTION FOR THE VOLATILE ORGANIC COMPOUND CONTAMINATION AT THE C-400 CLEANING BUILDING AT PGDP (DOE/LX/07-1285&D2)	USEPA-4	DOE-PPPO	No	ENV 1.A-00406
6PHASE-PD	06/21/13	KY-13-0489,DOE/LX/07-1285&D2	APPROVAL OF THE GROUNDWATER OPERABLE UNIT OPERATIONS AND MAINTENANCE PLAN FOR PHASE IIa OF THE INTERIM REMEDIAL ACTION FOR THE VOLATILE ORGANIC COMPOUND CONTAMINATION AT THE C-400 CLEANING BUILDING (DOE/LX/07-1285&D2)	KDWM	DOE-PPPO	No	ENV 1.A-00405
6PHASE-PD	07/05/13	PPPO-02-1985037-13,DOE/LX/07-1263&D2	PADUCAH FEDERAL FACILITY AGREEMENT-EXTENSION OF INFORMAL DISPUTE RESOLUTION ON THE GROUNDWATER OPERABLE UNIT REVISED PROPOSED PLAN FOR THE VOLATILE ORGANIC COMPOUND CONTAMINATION AT THE C-400 CLEANING BUILDING AT PGDP (DOE/LX/07-1263&D2)	DOE-PPPO	USEPA-4	No	ENV 1.A-00415
6PHASE-PD	07/15/13	KY-13-500,DOE/LX/07-1263&D2	ONGOING DISCUSSIONS FOR PHASE IIB OF C-400 CLEANING BLDG AND EXTENSION REQUEST FOR SUBMITTAL OF GROUNDWATER OPERABLE UNIT REVISED PROPOSED PLAN FOR VOLATILE ORGANIC COMPOUND CONTAMINATION AT C-400 CLEANING BLDG (DOE/LX/07-1263&D2)	USEPA-4	DOE-PPPO	No	ENV 1.A-00416
6PHASE-PD	07/24/13	PPPO-02-1979495-13,DOE/LX/07-1271&D2/R2	TRANSMITTAL OF PAGE CHANGES FOR REMEDIAL ACTION WORK PLAN FOR PHASE IIA OF THE INTERIM REMEDIAL ACTION FOR THE VOLATILE ORGANIC COMPOUND CONTAMINATION AT THE C-400 CLEANING BUILDING AT PGDP (DOE/LX/07-1271&D2/R2)	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00438
6PHASE-PD	08/05/13	PPPO-02-2032448-13,DOE/LX/07-1263&D2	PADUCAH FEDERAL FACILITY AGREEMENT-EXTENSION OF INFORMAL DISPUTE RESOLUTION ON THE GROUNDWATER OPERABLE UNIT REVISED PROPOSED PLAN FOR THE VOLATILE ORGANIC COMPOUND CONTAMINATION AT THE C-400 CLEANING BUILDING AT PGDP, (DOE/LX/07-1263&D2)	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00439
GW1-PD	05/07/13	KY-13-0462	(Incorrectly filed to ARFSOU. Corrected by filing to GW1-PD.) [KDWM] RE: C-409 BUILDING SUMP REQUEST FOR DETERMINATION	KDWM	DOE-PPPO	No	ENV 1.A-00390
GW1-PD	06/06/13	PPPO-02-1954394-13	(Incorrectly filed to ARFSOU. Corrected by filing to GW1-PD.) EXTENSION FOR SUBMITTAL OF RESPONSE TO KENTUCKY DIVISION OF WASTE MANAGEMENT REGARDING C-409 BUILDING SUMP REQUEST FOR DETERMINATION	DOE-PPPO	KDWM	No	ENV 1.A-00391
GW1-PD	06/07/13	KY-13-0484	(Incorrectly filed to ARFSOU. Corrected by filing to GW1-PD.) [KDWM] APPROVAL OF THE EXTENSION REQUEST FOR SUBMITTAL OF THE C-409 BUILDING SUMP REQUEST FOR DETERMINATION	KDWM	DOE-PPPO	No	ENV 1.A-00392

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Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Protected Information	Object Name
GW1-PD	07/22/13	PPPO-02-1926301-13	RESPONSE TO KENTUCKY DIVISION OF WASTE MANAGEMENT REQUEST FOR C-409 BUILDING SUMP REQUEST FOR DETERMINATION	DOE-PPPO	KDWM	No	ENV 1.A-00428
GW1-PD	07/25/13	KY-13-0505	SUBMITTAL OF THE C-409 BUILDING SUMP DETERMINATION	KDWM	DOE-PPPO	No	ENV 1.A-00429
GW3-PD	06/21/13	PPPO-02-1934964-13,DOE/LX/07-1291&D1	TRANSMITTAL OF EXPLANATION OF SIGNIFICANT DIFFERENCES TO THE RECORD OF DECISION FOR THE INTERIM REMEDIAL ACTION OF THE NORTHEAST PLUME AT PADUCAH GASEOUS DIFFUSION PLANT, (DOE/LX/07-1291&D1)	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00432
GW3-PD	07/02/13	KY-13-0496,DOE/LX/07-1291&D1	EPA COMMENTS OF THE EXPLANATION OF SIGNIFICANT DIFFERENCES TO THE RECORD OF DECISION FOR THE INTERIM REMEDIAL ACTION OF THE NORTHEAST PLUME AT PGDP (DOE/LX/07-1291&D1)	USEPA-4	DOE-PPPO	No	ENV 1.A-00417
GW3-PD	07/03/13	PPPO-02-1978847-13	NOTIFICATION OF INTENT TO TEMPORARILY CEASE OPERATION OF THE NORTHEAST PLUME EXTRACTION SYSTEM AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00418
GW3-PD	07/09/13	KY-13-0498,DOE/LX/07-1291&D1	EXPLANATION OF SIGNIFICANT DIFFERENCES TO THE RECORD OF DECISION FOR THE INTERIM REMEDIAL ACTION OF THE NORTHEAST PLUME (DOE/LX/07-1291&D1)	KDWM	DOE-PPPO	No	ENV 1.A-00419
GW3-PD	07/18/13	PPPO-02-2005688-13,DOE/LX/07-1280&D2	NOTIFICATION OF SCHEDULE EXTENSION FOR SUBMITTAL OF THE REMEDIAL ACTION WORK PLAN FOR OPTIMIZATION OF THE NORTHEAST PLUME INTERIM REMEDIAL ACTION AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-1280&D2)	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00420
GW3-PD	07/24/13	KY-13-0504,DOE/LX/07-1535&D3/R3	KENTUCKY COMMENTS TO THE OPERATION AND MAINTENANCE PLAN FOR THE NORTHEAST PLUME CONTAINMENT SYSTEM INTERIM REMEDIAL ACTION (DOE/LX/07-1535&D3/R3)	KDWM	DOE-PPPO	No	ENV 1.A-00421
GW3-PD	07/26/13	KY-13-0507,DOE/LX/07-1535&D3/R3	EPA COMMENTS ON THE OPERATION AND MAINTENANCE PLAN FOR THE NORTHEAST PLUME CONTAINMENT SYSTEM INTERIM REMEDIAL ACTION AT PGDP (DOE/LX/07-1535&D3/R3)	USEPA-4	DOE-PPPO	No	ENV 1.A-00422
GW3-PD	08/02/13	PPPO-02-2030934-13,DOE/LX/07-1291&D2	EXPLANATION OF SIGNIFICANT DIFFERENCES TO THE RECORD OF DECISION FOR THE INTERIM REMEDIAL ACTION OF THE NORTHEAST PLUME AT THE PADUCAH GASEOUS DIFFUSION PLANT, (DOE/LX/07-1291&D2)	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00433
SWP-PD	06/21/13	PPPO-02-1937029-13,DOE/LX/07-1276&D2	TRANSMITTAL OF THE REMEDIAL DESIGN REPORT IN SITU SOURCE TREATMENT USING DEEP SOIL MIXING FOR THE SOUTHWEST GROUNDWATER PLUME VOLATILE ORGANIC COMPOUND SOURCE AT THE C-747-C OIL LANDFARM (SWMU 1) AT PGDP (DOE/LX/07-1276&D2)	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00423
SWP-PD	06/26/13	PPPO-02-1975934-13,DOE/LX/07-1288&D1	TRANSMITTAL OF THE FINAL CHARACTERIZATION REPORT FOR SWMUs 211-A AND 211-B VOLATILE ORGANIC COMPOUND SOURCES FOR THE SOUTHWEST GROUNDWATER PLUME AT PGDP, DOE/LX/07-1288&D1	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00437

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Document Status	Document Date	Document ID	Title	Author Affiliation	To Affiliation	Protected Information	Object Name
SWP-PD	07/10/13	PPPO-02-1979222-13B	FINAL CHARACTERIZATION NOTIFICATION FOR SOLID WASTE MANAGEMENT UNIT 211-A AND SOLID WASTE MANAGEMENT UNIT 211-B AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00424
SWP-PD	07/22/13	PPPO-02-1789683-13,DOE/LX/07-1287&D1	TRANSMITTAL OF 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 (SWMU 1) AT PGDP, DOE/LX/07-1287&D1	DOE-PPPO	KDWM,USEPA-4	No	ENV 1.A-00425
SWP-PD	07/24/13	KY-13-0503,DOE/LX/07-1276&D2	EXTENSION NOTIFICATION FOR COMMENT SUBMITTAL FOR THE REMEDIAL DESIGN REPORT IN SITU SOURCE TREATMENT USING DEEP SOIL MIXING FOR THE SOUTHWEST GROUNDWATER PLUME VOLATILE ORGANIC COMPOUND SOURCE AT THE C-747-C OIL LANDFARM (SWMU 1), PGDP (DOE/LX/07-1276&D2)	USEPA-4	DOE-PPPO	No	ENV 1.A-00427
SWP-PD	07/24/13	KY-13-0502,DOE/LX/07-1276&D2	NOTIFICATION OF EXTENSION FOR REVIEW OF THE REMEDIAL DESIGN REPORT IN SITU TREATMENT USING DEEP SOIL MIXING FOR THE SOUTHWEST GROUNDWATER PLUME VOLATILE ORGANIC COMPOUND SOURCE AT THE C-747-C OIL LAND FARM (SWMU 1) (DOE/LX/07-1276&D2)	KDWM	DOE-PPPO	No	ENV 1.A-00426
SWP-PD	08/22/13	DOE/LX/07-1287&D1,KY-13-0525	EXTENSION REQUEST FOR COMMENT SUBMITTAL FOR THE D1 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 (SWMU 1) AT PGDP (DOE/LX/07-1287&D1)	USEPA-4	DOE-PPPO	No	ENV 1.A-00445
SWP-PD	08/23/13	DOE/LX/07-1276&D2,KY-13-0528	(EPA) CONDITIONAL CONCURRENCE OF THE 100% REMEDIAL DESIGN REPORT IN SITU SOURCE TREATMENT USING DEEP SOIL MIXING FOR THE SOUTHWEST GROUNDWATER PLUME VOLATILE ORGANIC COMPOUND SOURCE AT THE C-747-C OIL LANDFARM SWMU 1 AT PGDP (DOE/LX/07-1276&D2)	USEPA-4	DOE-PPPO	No	ENV 1.A-00447
SWP-PD	08/23/13	DOE/LX/07-1276&D2,KY-13-0527	(KDWM) CONDITIONAL APPROVAL OF THE 100% REMEDIAL DESIGN REPORT IN SITU SOURCE TREATMENT USING DEEP SOIL MIXING FOR THE SOUTHWEST GROUNDWATER PLUME VOLATILE ORGANIC COMPOUND SOURCE AT THE C-747-C OIL LANDFARM (SWMU 1) (DOE/LX/07-1276&D2)	KDWM	DOE-PPPO	No	ENV 1.A-00446

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**APPENDIX E**

**C-400 PROJECT GROUNDWATER MONITORING WELLS DATA**

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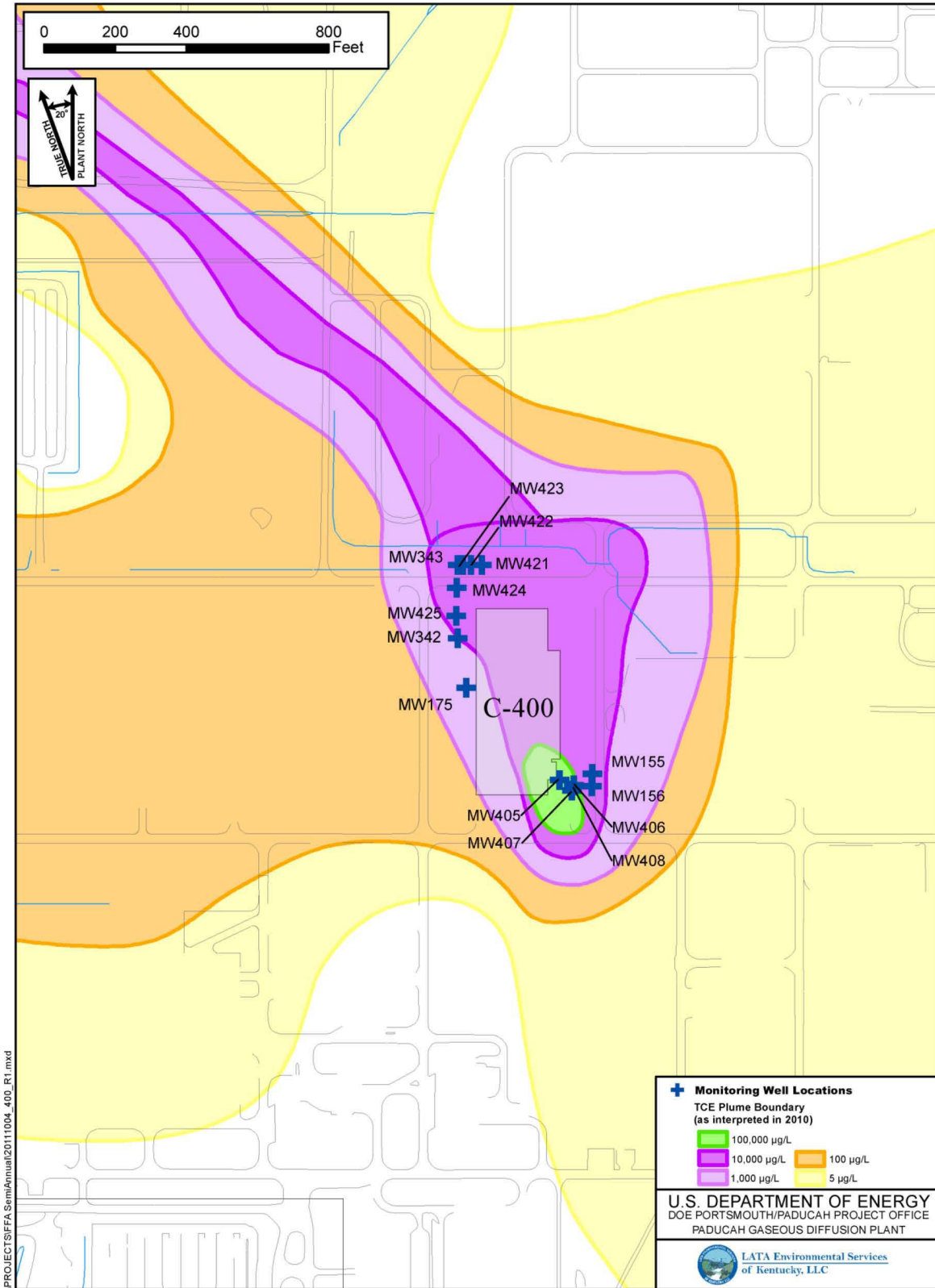


Figure E.1. C-400 Monitoring Wells

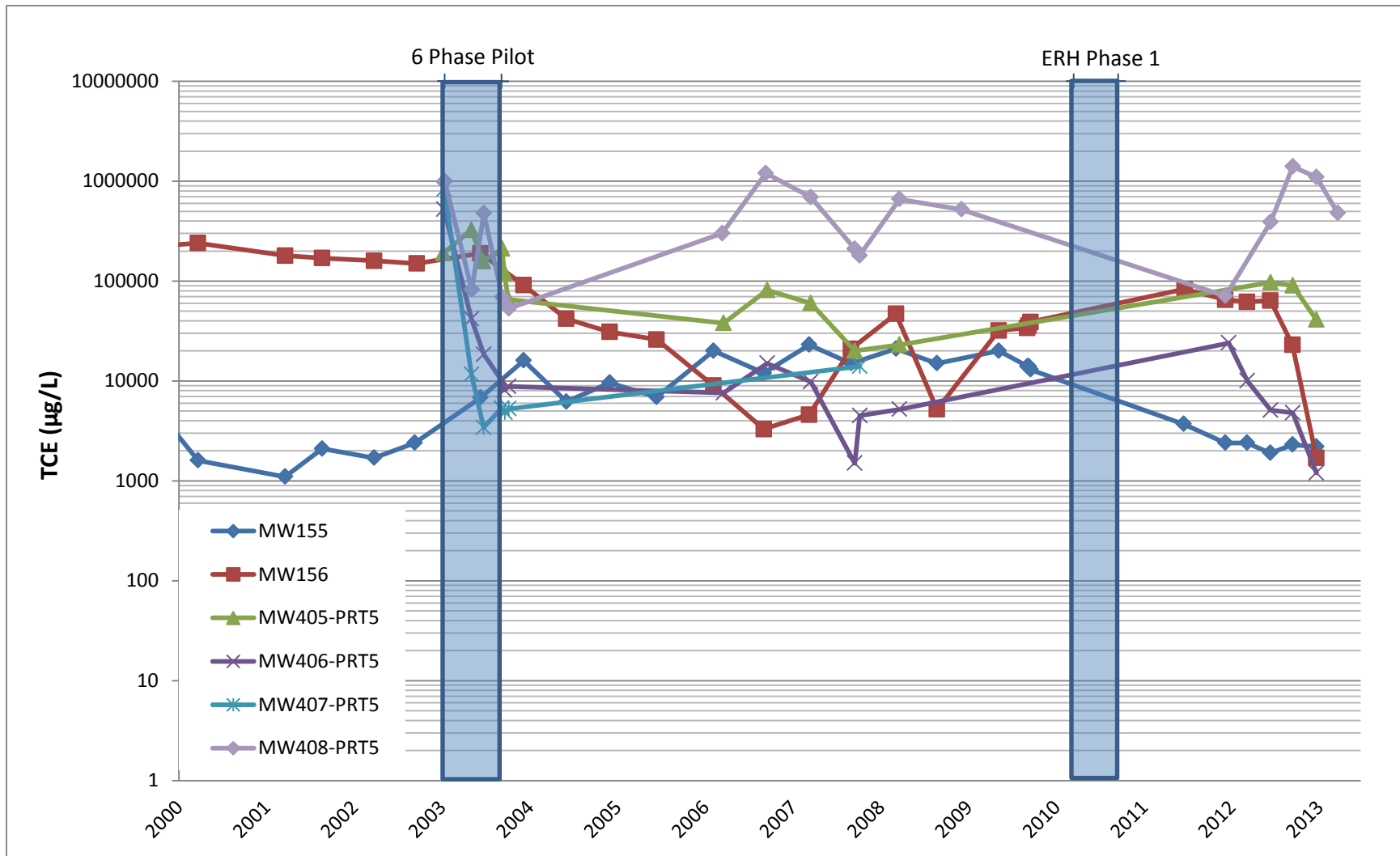


Figure E2. C-400 TCE Trends in MWs in Source Areas

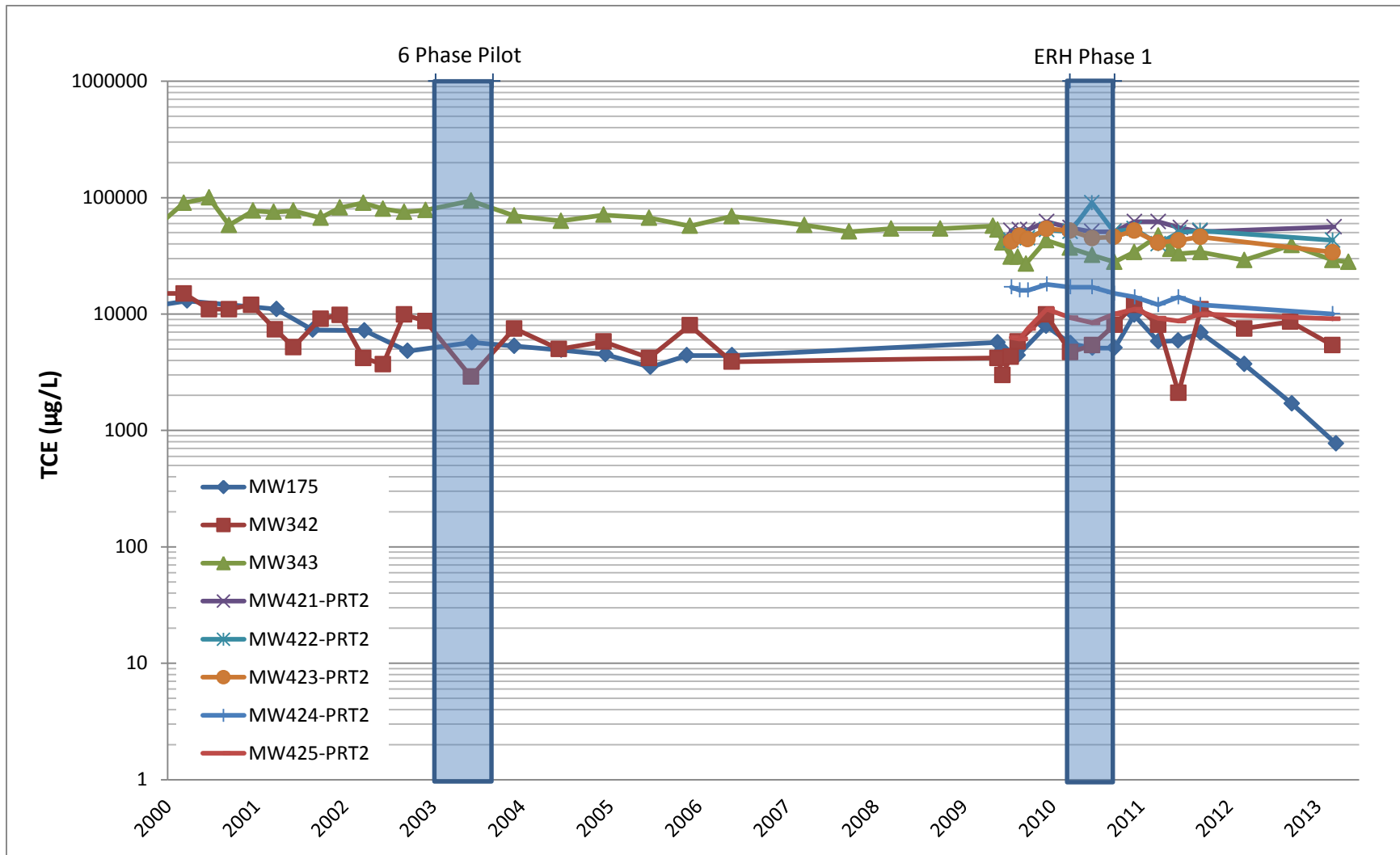


Figure E3. C-400 TCE Trends in MWs Downgradient of Source Areas

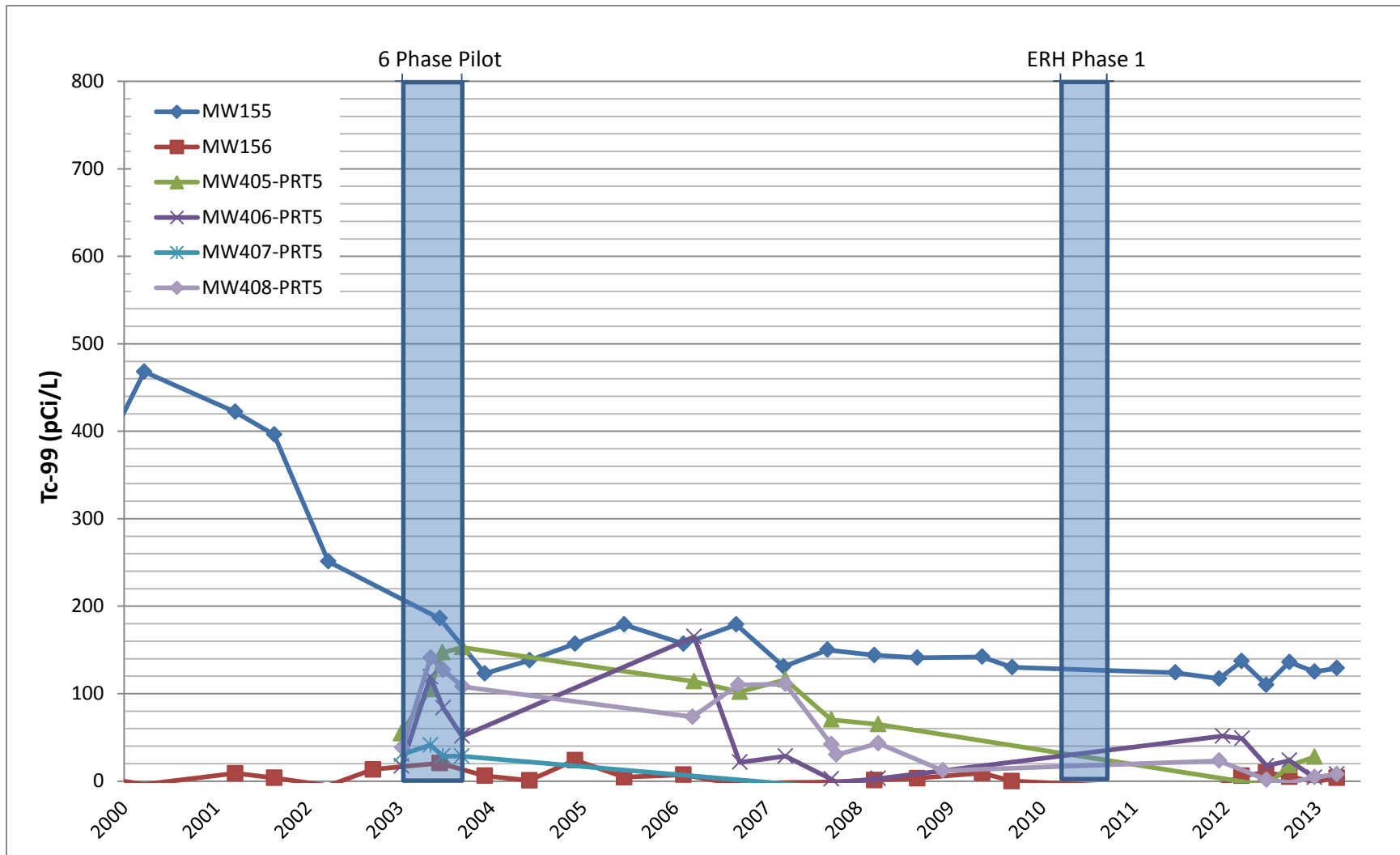


Figure E4. C-400 Tc-99 Trends in MWs in Source Areas

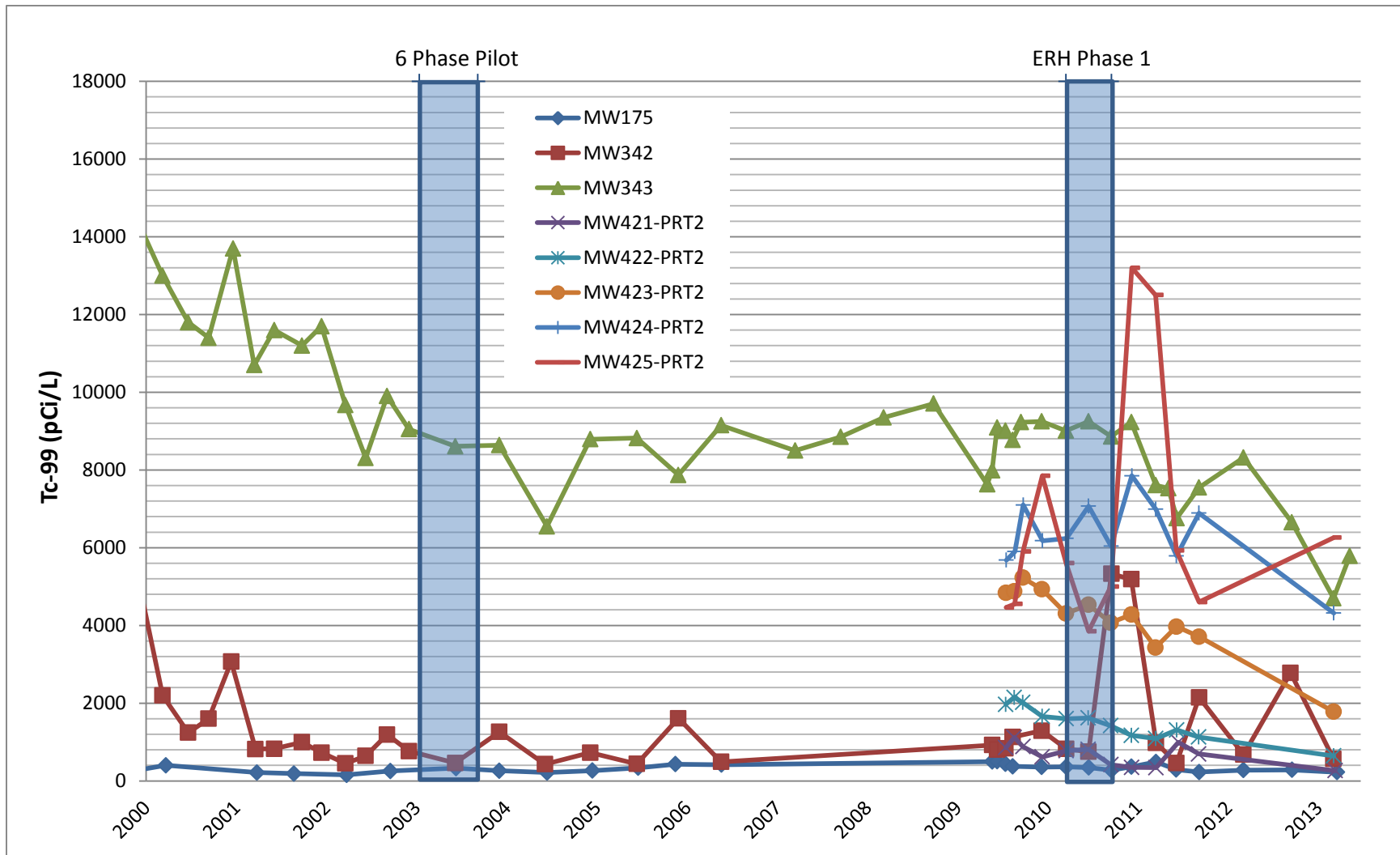


Figure E.5. C-400 Tc-99 Trends in MWs Downgradient of Source Areas



**C-400 Monitoring**  
**Water Quality Records for**  
**MW155**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	
9/10/2009	14000	< 1000			< 1000													C09254002003
9/10/2009	14000	< 200	< 200	< 200	< 200	< 1.12	93.2	130	< .005									C09253025001
9/15/2009	14000	< 500			< 500													C09258030001
9/22/2009	13000	< 500			< 500													C09265022002
6/23/2011	3700	< 100	< 20	< 20	< 20	7.65	130	124	< .005									C11174017005
12/14/2011	2400	< 500			< 100	< 3.61	111	117	< .005									C11348018003
3/13/2012	2400	< 50			< 50	< 2.35	89.7	137	< .005									C12073014001
6/19/2012	1900	< 250			< 50	6.46	121	110	< .005									C12171014003
9/19/2012	2300	< 20			< 20	< 3.19	131	136	< .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

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**NOTE 1: This report does not include data that has been rejected during data assessment and/or data validation.**

**NOTE 2: MW 155 was inaccessible for sampling in June 2013 as a result of Phase IIa operations.**

**C-400 Monitoring**  
**Water Quality Records for**  
**MW156**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	< 2000	< 2000	< 2000	< 2000	< 3.89	4.01	< .0531	< .005									C09252004001
9/8/2009	34000	< 5000			< 5000													C09252006001
9/15/2009	36000	< 5000			< 5000													C09258030002
9/22/2009	39000	< 5000			< 5000													C09265022001
6/27/2011	83000	< 5000	< 1000	< 1000	< 1000	< 3.86	5.6	< -8.94	< .005									C11178014001
12/14/2011	65000	< 5000			< 1000	< 2.55	7.54	< -5.13	< .005									C11348018004
3/13/2012	62000	< 2000			< 2000	6.83	< 4.93	< 6.21	< .005									C12073014002
6/19/2012	64000	< 5000			< 1000	< 6.32	< 6.31	< 9.77	< .005									C12171014004
9/19/2012	23000	< 500			< 500	< 3.24	< 5.54	< 5.12	< .005									C12263022002
12/28/2012	1700	< 500			< 500			< -.798										C12363012003
3/27/2013	32000	< 1000			< 1000			< 3.7										C13086008002

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**C-400 Monitoring**  
**Water Quality Records for**  
**MW175**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	
6/16/2009	4900	< 50			< 50	11.7	447	508	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C09168007001
7/20/2009	4400	< 250			< 50	< 3.65	415	438	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09201015001
8/18/2009	4400	< 50			< 50	9.43	416	375	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C09230023001
12/14/2009	7900	< 250			< 50	< -.722	363	357	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C09348024001
3/24/2010	5600	< 50			< 50	< 1.61	211	360	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C10083023001
6/23/2010	5100	< 250			< 50	12.9	301	315	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C10174017002
6/23/2010	4800	< 250			< 50	< 4.95	292	343	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C10174017001
9/23/2010	5100	< 250			< 50	7.46	226	275	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10266013001
12/13/2010	9800	< 250			< 50	26.6	274	363	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10347023005
3/23/2011	5800	< 100			< 100	24.3	366	488	< .005	< 167	< 176	< 137	< 98	< 118	< 68.6		< 88.2	C11082024002
6/13/2011										< .4	< .4	< .4	< .4	< .4	< .4	< .4	< .4	1106040-01
6/13/2011										< .4	< .4	< .4	< .4	< .4	< .4	< .4	< .4	1106040-02
6/13/2011	5900	< 250			< 50	9.43	190	267	< .005									C11165011003
6/13/2011	5900	< 250			< 50	13.5	201	292	< .005									C11165011004
9/14/2011	6900	< 250			< 50	< -1.01	218	228	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11257087005
3/12/2012	3700	< 50			< 50	< 5.16	156	279	< .005									C12072031011
9/25/2012	1700	< 20			< 20	< 3.25	245	284	< .005									C12269015004
9/25/2012	1700	< 20			< 20	< 3.18	245	282	< .005									C12269015003
3/27/2013	770	< 10			< 10			226										C13086008003

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**C-400 Monitoring**  
**Water Quality Records for**  
**MW342**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	
6/16/2009	3000	< 50			< 50	16.7	616	805	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09168006001
7/20/2009	4300	< 250			< 50	<-.785	510	837	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09201016001
8/18/2009	5800	< 50			< 50	16	985	1130	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C09230024001
12/14/2009	9500	< 250			< 50	<-6.46	978	1290	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C09348024002
12/14/2009	9900	< 250			< 50	< .633	926	1280	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09348024003
3/23/2010	4700	< 50			< 50	10.3	386	827	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C10082025007
6/22/2010	5400	< 250			< 50	11.4	642	750	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C10173039001
9/23/2010	8100	< 250			< 50	<-57.1	3720	4720	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10266013003
9/23/2010	7600	< 250			< 50	<-52	3690	5330	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10266013002
12/13/2010	12000	< 200			< 200	41	4120	5000	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10347023002
12/13/2010	12000	< 200			< 200	56	3960	5190	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10347023003
3/23/2011	8100	< 100			< 100	26.8	835	980	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .32	< .09	C11082024001
6/14/2011										< .4	< .4	< .4	< .4	< .4	< .4	< .4	< .4	1106059-01
6/14/2011	2100	< 500			< 100	28.8	457	456	< .005									C11165038001
9/14/2011	11000	< 250			< 50	<-9.47	1800	2150	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11257087003
9/14/2011	10000	< 250			< 50	<-4.68	1750	1930	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11257087004
3/12/2012	7500	< 100			< 100	< 2.56	420	678	< .005									C12072031010
9/19/2012	8600	< 100			< 100	10.4	2820	2780	< .005									C12263022003
3/12/2013	5400	< 100			< 100			564										C13072002001

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**C-400 Monitoring**  
**Water Quality Records for**  
**MW343**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	
6/16/2009	41000	< 500			< 500	82.1	6710	9090	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09168007002
7/20/2009	31000	< 2500			< 500	< 4.65	6730	9010	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C09201066001
8/18/2009	31000	< 400			< 400	19.7	7420	8770	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C09230023002
9/21/2009	27000	< 1000	< 200	< 1000	< 200	< -119	6980	9230	< .005									C09265006005
12/14/2009	43000	< 2000			< 400	< -176	6970	9250	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09348027001
3/22/2010	37000	< 400	< 250	< 250	< 250	< -90.6	5370	8960	< .005									C10082002001
3/22/2010	37000	< 250			< 250	37.4	6850	< 8920	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C10082005001
3/22/2010	37000	< 250			< 250	92.1	5660	9010	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C10082005002
E-12 6/22/2010	32000	< 2500			< 500	22	6440	9250	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C10173027001
9/22/2010	28000	< 2500			< 500	< -114	6340	8860	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10265020004
12/13/2010	34000	< 2500			< 500	< -77.3	6970	9230	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10347023006
3/22/2011	47000	< 400			< 400	46.5	6570	7610	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .13	< .09	C11081023004
3/22/2011	39000	< 400			< 400	134	5310	7600	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .53	< .09	C11081023003
5/12/2011	36000	< 2500	< 500	< 500	< 500	150	5510	7530	< .005									C11132027003
6/15/2011										< .4	< .4	< .4	< .4	< .4	< .4	< .4	< .4	1106059-02
6/15/2011	33000	< 2000			< 400	< -4.39	7110	6760	< .005									C11166026001
9/13/2011	34000	< 2000			< 400	< -144	6990	7550	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11256012004
3/12/2012	28000	< 400			< 400	< -85.1	4680	8320	< .005									C12072031006
3/12/2012	29000	< 400			< 400	< -56.9	4670	7030	< .005									C12072031007
9/24/2012	39000	< 500			< 500	< -23.7	4970	6650	< .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**  
**MW405**

*Sample Date Range: 6/16/2009 - 9/30/2013*

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	.014									C11174017004

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**C-400 Monitoring**  
**Water Quality Records for**  
**MW405-PRT5**

*Sample Date Range: 6/16/2009 - 9/30/2013*

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	
6/20/2012	97000	< 5000			< 1000	< 4.86	15.7	< -4.94	< .005									C12172011001
9/20/2012	90000	< 1000			< 1000	< .778	14.6	< 17.9	< .005									C12264031001
12/28/2012	41000	< 1000			< 1000			27.7										C12363012004

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**NOTE 1:** This report does not include data that has been rejected during data assessment and/or data validation.  
**NOTE 2:** MW 405-PRT5 was inaccessible for sampling in March and June 2013 as a result of Phase IIa operations.

**C-400 Monitoring**  
**Water Quality Records for**  
**MW406**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	< .005									C11174017003

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**C-400 Monitoring**  
**Water Quality Records for**  
**MW406-PRT5**

*Sample Date Range: 6/16/2009 - 9/30/2013*

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	
12/28/2011	24000	< 500			< 100	7.77	54.5	51.5	< .005									C11362008002
3/15/2012	10000	< 100			< 100	< -2.11	45.3	48.6	< .005									C12075015001
6/20/2012	5100	< 500			< 100	< 1.89	23.6	< 17.5	< .005									C12172011002
9/20/2012	4800	< 100			< 100	< -.0458	31.2	23.5	< .005									C12264031002
12/28/2012	1200	< 10			< 10			< 4.01										C12363012005
3/27/2013	940	< 20			< 20			< 7.56										C13086018001

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**NOTE 1: This report does not include data that has been rejected during data assessment and/or data validation.**

**NOTE 2: MW 406-PRT5 was inaccessible for sampling in June 2013 as a result of Phase IIa operations.**

**C-400 Monitoring**  
**Water Quality Records for**  
**MW407-PRT4**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	
12/28/2011	4900	< 500			< 100	< 3.09	10.7	< 5.26	< .005									C11362008001
3/14/2012	14000	< 100			< 100	< 3.36	5.57	< -5.15	< .005									C12074017002
6/20/2012	13000	< 500			< 100	< 4.76	8.43	< 8.61	< .005									C12172011003
9/20/2012	13000	< 100			< 100	< .291	< 3.11	< -10.2	< .005									C12264031003
12/28/2012	7000	< 50			< 50			< .433										C12363012006
3/27/2013	14000	< 200			< 200			< .435										C13086018002

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**C-400 Monitoring**  
**Water Quality Records for**  
**MW408**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	< .005									C11174017001

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**C-400 Monitoring**  
**Water Quality Records for**  
**MW408-PRT5**

*Sample Date Range: 6/16/2009 - 9/30/2013*

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	< .005									C11348026001
6/20/2012	390000	< 20000			< 4000	< 3.79	12.2	< 1.58	< .005									C12172011004
9/20/2012	1400000	< 4000			< 4000	< -1.52	13.4	< -1.7	< .005									C12264031004
12/28/2012	1100000	< 5000			< 5000			< 4.33										C12363012007
3/27/2013	480000	< 10000			< 10000			< 7.73										C13086018003

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**NOTE 1: This report does not include data that has been rejected during data assessment and/or data validation.**

**NOTE 2: MW 408-PRT5 was inaccessible for sampling in June 2013 as a result of power cables across the top of the monitoring well.**

**C-400 Monitoring**  
**Water Quality Records for**  
**MW421-PRT1**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09202027001
8/25/2009	21000	< 200			< 200	< -377	1300	1670	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C09237029001
9/29/2009	22000	< 200			< 200	33	878	1240	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09273002001
12/16/2009	27000	< 1000			< 200	27.7	906	1160	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C09350025004
3/23/2010	24000	< 200			< 200	15.5	1180	1780	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C10082025004
6/23/2010	58000	< 500			< 500	18.4	1710	2340	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C10172026001
9/21/2010	34000	< 500			< 500	15.1	826	1190	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10264016001
12/14/2010	28000	< 2500			< 500	9.44	789	916	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10348026001
E-20 3/23/2011	28000	< 250			< 250	< 4.35	623	859	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .06	< .09	C11082024003
6/22/2011										< .4	< .4	< .4	< .4	< .4	< .4	< .4	< .4	1106092-01
6/22/2011	29000	< 2000			< 400	< -121	3300	3930	< .005									C11173026001
9/12/2011	32000	< 1000			< 200	9.06	2190	2500	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11255015001
3/19/2013	26000	< 400			< 400			912										C13078013003

**C-400 Monitoring**  
**Water Quality Records for**  
**MW421-PRT2**

*Sample Date Range: 6/16/2009 - 9/30/2013*

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	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C09202027002
8/25/2009	53000	< 500			< 500	6.73	865	1120	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09237029002
9/29/2009	53000	< 500			< 500	27.9	639	882	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09273002002
12/16/2009	62000	< 2500			< 500	4.74	475	618	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09350025005
3/23/2010	55000	< 500			< 500	12.7	417	777	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C10082025005
6/21/2010	51000	< 500			< 500	26.9	514	813	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C10172026002
9/21/2010	51000	< 500			< 500	8.44	255	416	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10264016002
12/14/2010	62000	< 500			< 500	10.4	280	348	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10348026002
E-21 3/23/2011	62000	< 500			< 500	8.6	220	340	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .15	< .09	C11082024004
6/22/2011										< .4	< .4	< .4	< .4	< .4	< .4	< .4	< .4	1106092-02
6/22/2011	55000	< 2500			< 500	< -24.9	853	996	< .005									C11173026002
9/12/2011	51000	< 2000			< 400	14.5	582	694	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11255015002
3/19/2013	56000	< 500			< 500			265										C13078013004

**C-400 Monitoring**  
**Water Quality Records for**  
**MW421-PRT3**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	63000	< 2500			< 500	< 3.73	327	302	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09202027003
8/25/2009	66000	< 500			< 500	< 3.62	398	451	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09237029003
9/29/2009	61000	< 500			< 500	8.99	323	335	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09273002003
12/16/2009	77000	< 2500			< 500	4.67	226	345	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09350025006
3/23/2010	70000	< 500			< 500	12.8	218	376	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C10082025006
6/21/2010	68000	< 500			< 500	< 4.02	278	251	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C10173001001
9/21/2010	64000	< 500			< 500	6.83	215	285	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10264016003
12/14/2010	65000	< 500			< 500	< 5.08	209	278	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10348026003
E-22 3/23/2011	61000	< 500			< 500	19	186	278	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .34	< .09	C11082024005
6/22/2011	72000	< 2500			< 500	15.7	289	399	< .005									C11173026003
6/22/2011										< .4	< .4	< .4	< .4	< .4	< .4	< .4	< .4	1106092-03
9/12/2011	67000	< 2500			< 500	5.7	272	313	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11255015003
3/12/2012	73000	< 500			< 500	5.39	177	283	< .005									C12072031003
9/25/2012	96000	< 1000			< 1000	< 1.59	225	211	< .005									C12270003002
3/19/2013	80000	< 1000			< 1000			216										C13078013005

**C-400 Monitoring**  
**Water Quality Records for**  
**MW422-PRT1**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	10000	< 500			< 100	< -96.7	10400	13600	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09202018001
8/24/2009	13000	< 100			< 100	95	12900	15600	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09237007001
9/28/2009	12000	< 100			< 100	59.7	14200	16900	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09271021004
12/16/2009	16000	< 1000			< 200	< -15.7	10200	13900	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09350025001
3/23/2010	14000	< 100			< 100	< -25.6	8460	13400	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C10082025001
6/21/2010	14000	< 100			< 100	< -60.6	11600	15500	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C10173001002
9/20/2010	15000	< 200			< 200	< -51	8500	12900	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10263039004
12/13/2010	23000	< 1000			< 200	< -3.47	5090	6610	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10347024004
E-23 3/22/2011	20000	< 200			< 200	87.5	4860	6410	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11081023005
6/15/2011										< .4	< .4	< .4	< .4	< .4	< .4	< .4	< .4	1106059-03
6/15/2011	14000	< 1000			< 200	< -13.8	7910	9730	< .005									C11166026002
9/12/2011	16000	< 1000			< 200	< -54.7	10600	12300	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11255022001
3/13/2013	16000	< 250			< 250			6720										C13072022004



**C-400 Monitoring**  
**Water Quality Records for**  
**MW422-PRT2**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	43000	< 2500			< 500	32.8	1570	1970	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09202019001
8/24/2009	47000	< 500			< 500	28.2	1650	2150	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09237008001
9/28/2009	45000	< 500			< 500	18.5	1490	2020	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C09271021005
12/16/2009	53000	< 2500			< 500	16.1	1110	1660	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09350025002
3/23/2010	51000	< 500			< 500	24	823	1600	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C10082025002
6/21/2010	90000	< 400			< 400	17.5	1060	1620	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C10173001003
9/20/2010	51000	< 1000			< 1000	9.61	808	1420	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10263039005
12/13/2010	54000	< 2500			< 500	41.2	789	1170	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10347024005
E-24 3/22/2011	40000	< 500			< 500	27.3	823	1090	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .44	< .09	C11081023006
6/15/2011										< .4	< .4	< .4	< .4	< .4	< .4	< .4	< .4	1106059-04
6/15/2011	50000	< 2500			< 500	35.3	1000	1310	< .005									C11166026003
9/12/2011	52000	< 2000			< 400	10.6	900	1130	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11255022002
3/13/2013	43000	< 500			< 500			643										C13072022005

**C-400 Monitoring**  
**Water Quality Records for**  
**MW422-PRT3**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	45000	< 2500			< 500	< -394	1650	2310	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09202019002
8/24/2009	46000	< 500			< 500	15.4	1380	1960	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09237008002
9/28/2009	45000	< 500			< 500	15.5	1560	1940	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09271021006
12/16/2009	58000	< 2500			< 500	20.7	1230	1630	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09350025003
3/23/2010	53000	< 500			< 500	19.6	866	1490	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C10082025003
6/21/2010	72000	< 1000			< 1000	15.1	883	1520	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C10173001004
9/20/2010	61000	< 1000			< 1000	16.3	777	1320	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10263039006
12/13/2010	54000	< 2500			< 500	22.6	782	1070	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10347024006
E-25 3/22/2011	54000	< 500			< 500	23.3	677	1010	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .36	< .09	C11081023007
6/15/2011	49000	< 2500			< 500	13.5	864	1140	< .005									C11166026004
6/15/2011										< .4	< .4	< .4	< .4	< .4	< .4	< .4	< .4	1106059-05
9/12/2011	53000	< 2000			< 400	7.69	718	910	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11255022003
3/12/2012	69000	< 500			< 500	< 4.11	575	774	< .005									C12072031004
9/25/2012	48000	< 1000			< 1000	< 4.02	524	631	< .005									C12270003001
3/13/2013	35000	< 500			< 500			559										C13072022006

**C-400 Monitoring**  
**Water Quality Records for**  
**MW423-PRT1**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09203009001
8/25/2009	12000	< 200			< 200	81	9720	12100	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C09237022001
9/28/2009	11000	< 100			< 100	87.3	11100	14000	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09271021001
12/15/2009	15000	< 1000			< 200	< -236	11500	14400	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09349015001
3/22/2010	15000	64			< 25	45.5	8550	13800	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C10082005003
6/22/2010	12000	< 500			< 100	< -79.6	10100	13400	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C10173027002
9/20/2010	12000	< 200			< 200	52.9	9500	16000	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10263039001
12/13/2010	18000	< 500			< 100	< -161	8180	10800	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10347024001
E-26 3/21/2011	15000	< 200			< 200	95.2	6870	8960	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11080075002
6/14/2011										< .4	< .4	< .4	< .4	< .4	< .4	< .4	< .4	1106059-06
6/14/2011	15000	< 500			< 100	< -273	9620	9790	< .005									C11165038005
9/13/2011	14000	< 1000			< 200	< -18.7	8820	10500	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11256012001
3/13/2013	18000	< 200			< 200			9070										C13072009001

**C-400 Monitoring**  
**Water Quality Records for**  
**MW423-PRT2**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C09203009002
8/25/2009	47000	< 500			< 500	34.3	3420	4880	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09237022002
9/28/2009	44000	< 500			< 500	35.8	3820	5230	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09271021002
12/15/2009	54000	< 2500			< 500	<-51.8	3650	4930	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09349015002
3/22/2010	52000	< 500			< 500	40.2	2260	4310	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C10082005004
6/22/2010	45000	< 2500			< 500	<-2.09	3050	4530	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C10173027003
9/20/2010	46000	< 500			< 500	14.3	2590	4070	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10263039002
12/13/2010	52000	< 2500			< 500	42.7	2070	4280	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10347024002
E-27 3/21/2011	41000	< 500			< 500	114	1990	3430	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .15	< .09	C11080075003
6/14/2011										< .4	< .4	< .4	< .4	< .4	< .4	< .4	< .4	1106059-07
6/14/2011	43000	< 2500			< 500	<-23.6	2810	3970	< .005									C11165038006
9/13/2011	46000	< 2000			< 400	<-37.2	2730	3710	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11256012002
3/13/2013	34000	< 500			< 500			1780										C13072009002

**C-400 Monitoring**  
**Water Quality Records for**  
**MW423-PRT3**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09203009003
8/25/2009	47000	< 500			< 500	23.4	2850	4440	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09237022003
9/28/2009	14000	< 500			< 500	97.8	10600	13500	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C09271021003
12/15/2009	53000	< 2500			< 500	< -48.6	2970	4030	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C09349015003
3/22/2010	51000	< 500			< 500	43.5	1960	3810	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C10082005005
6/22/2010	49000	< 2500			< 500	5.16	2930	3850	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C10173027004
9/20/2010	50000	< 500			< 500	34.3	2080	3730	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10263039003
12/13/2010	50000	< 2500			< 500	19	2120	3140	< .005	< .17	< .18	< .14	< .1	< .12	< .07	.15	< .09	C10347024003
E-28 3/21/2011	41000	< 500			< 500	89.1	1880	2900	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .12	< .09	C11080075004
6/14/2011	43000	< 2500			< 500	< -17.1	2540	3680	< .005									C11165038007
6/14/2011										< .4	< .4	< .4	< .4	< .4	< .4	< .4	< .4	1106059-08
9/13/2011	47000	< 2000			< 400	< -27.3	2490	2990	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11256012003
3/12/2012	37000	< 500			< 500	< -9.6	1620	2350	< .005									C12072031005
9/24/2012	67000	< 500			< 500	19.2	1550	1820	< .005									C12268086001
3/13/2013	34000	< 500			< 500			1800										C13072009003

**C-400 Monitoring**  
**Water Quality Records for**  
**MW424-PRT1**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09204021001
8/27/2009	7100	< 50			< 50	< 3.09	2680	3330	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C09239018001
9/30/2009	7700	< 100			< 100	125	4580	6150	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C09273021001
12/17/2009	9200	< 100			< 100	< -31.9	7760	10000	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09351022002
3/24/2010	7900	< 100			< 100	86.8	4420	6540	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C10083023002
6/23/2010	7900	< 250			< 50	14	4020	5080	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C10174017003
9/22/2010	7900	< 1000			< 200	< -79.8	7420	10300	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10265020001
12/15/2010	8400	< 100			< 100	< -325	9940	13900	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10349020001
E-29 6/14/2011										< .4	< .4	< .4	< .4	< .4	< .4	< .4	< .4	1106059-09
6/14/2011	7900	< 500			< 100	< -211	7890	8220	< .005									C11165038002
9/13/2011	9000	< 500			< 100	< -150	5730	6730	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11256019001
3/13/2013	7900	< 100			< 100			10300										C13072022001

**C-400 Monitoring**  
**Water Quality Records for**  
**MW424-PRT2**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	17000	< 1000			< 200	<-29.4	4170	5680	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09204022001
8/27/2009	16000	< 200			< 200	<-4.44	6130	5900	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09239019001
9/30/2009	16000	< 200			< 200	91.8	5200	7100	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C09273023001
12/17/2009	18000	< 200			< 200	7.27	4010	6180	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C09351022003
3/24/2010	17000	< 250			< 250	52.8	2940	6240	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C10083023003
6/22/2010	17000	< 1000			< 200	12.7	5150	7070	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C10174017004
9/22/2010	15000	< 1000			< 200	<-41.8	4000	6040	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10265020002
12/15/2010	14000	< 200			< 200	<-161	5510	7850	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10349020002
E-30 3/22/2011	12000	< 100			< 100	170	4620	6990	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .26	< .09	C11081023001
6/14/2011										< .4	< .4	< .4	< .4	< .4	< .4	< .4	< .4	1106059-10
6/14/2011	14000	< 500			< 100	<-51.5	4820	5790	< .005									C11165038003
9/13/2011	12000	< 500			< 100	<-138	5900	6890	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11256019002
3/13/2013	10000	< 100			< 100			4320										C13072022002

**C-400 Monitoring**  
**Water Quality Records for**  
**MW424-PRT3**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09204023001
8/27/2009	23000	< 200			< 200	< 5.21	3400	4970	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09239020001
9/30/2009	23000	< 250			< 250	78.9	3350	4660	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09273024001
12/17/2009	23000	< 200			< 200	12.3	2960	4500	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09351022004
3/24/2010	23000	< 250			< 250	< -39.3	2810	4600	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C10083023004
6/23/2010	21000	< 1000			< 200	10.2	3160	4740	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C10174017005
9/22/2010	21000	< 1000			< 200	< -14.6	2650	4440	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10265020003
12/15/2010	19000	< 200			< 200	< -54.8	2840	4300	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10349020003
E-31 3/22/2011	16000	< 200			< 200	93.3	2580	3430	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .28	< .09	C11081023002
6/14/2011										< .4	< .4	< .4	< .4	< .4	< .4	< .4	< .4	1106059-11
6/14/2011	18000	< 1000			< 200	< -23	2990	3940	< .005									C11165038004
9/13/2011	16000	< 1000			< 200	< -42.4	2720	4190	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11256019003
3/12/2012	12000	< 200			< 200	15.3	2120	3500	< .005									C12072031008
9/25/2012	11000	< 200			< 200	< -2.6	3010	3600	< .005									C12269015005
3/13/2013	10000	< 100			< 100			3070										C13072022003



**C-400 Monitoring**  
**Water Quality Records for**  
**MW425-PRT1**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C09203011001
8/26/2009	8200	< 100			< 100	9.62	4390	3870	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09238024001
9/29/2009	11000	< 100			< 100	107	6500	8580	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09273002004
12/16/2009	13000	< 500			< 100	26.5	6360	9490	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09350025007
3/23/2010	8900	< 100			< 100	51.4	2200	3010	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C10082005006
6/22/2010	8300	< 500			< 100	25	1340	1330	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C10173039002
9/21/2010	12000	< 500			< 100	< -221	10000	12700	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C10264016004
12/15/2010	13000	< 200			< 200	< -819	15000	18300	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10349020004
E-32 3/21/2011	11000	< 100			< 100	81.2	10800	14000	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .17	< .09	C11080075005
6/13/2011										< .4	< .4	< .4	< .4	< .4	< .4	< .4	< .4	1106040-03
6/13/2011	7600	< 500			< 100	75.3	2130	2530	< .005									C11165011005
9/14/2011	12000	< 500			< 100	< -143	7140	9190	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11257087006
3/12/2013	6500	< 100			< 100			5630										C13072002003

**C-400 Monitoring**  
**Water Quality Records for**  
**MW425-PRT2**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	6300	< 250			< 50	< 3.37	2930	4460	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09203011002
8/26/2009	6100	< 50			< 50	< -19.6	3370	4550	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09238024002
9/29/2009	7500	< 50			< 50	121	4600	5900	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09273002005
12/16/2009	11000	< 500			< 100	< -17.7	5550	7850	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C09350025008
3/23/2010	9300	< 50			< 50	49.5	3710	5600	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C10082005007
6/22/2010	8400	< 250			< 50	43.7	2900	3850	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C10173039003
9/21/2010	10000	< 500			< 100	< -37.4	4910	5000	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10264016005
12/15/2010	11000	< 100			< 100	< -456	9930	13200	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10349020005
E-33 3/21/2011	9200	< 100			< 100	28.2	8260	12500	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .36	< .09	C11080075006
6/13/2011										< .4	< .4	< .4	< .4	< .4	< .4	< .4	< .4	1106040-04
6/13/2011	8700	< 500			< 100	< -26.5	4870	5930	< .005									C11165011006
9/14/2011	10000	< 500			< 100	< -98.5	4370	4600	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11257087007
3/12/2013	9100	< 100			< 100			6260										C13072002004

**C-400 Monitoring**  
**Water Quality Records for**  
**MW425-PRT3**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	< .86	3380	4420	< .005	< .16	< .17	< .13	< .1	< .11	< .07	< .05	< .09	C09203011003
8/26/2009	4700	< 50			< 50	< -23.2	3770	4120	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09238024003
9/29/2009	6900	< 50			< 50	96.2	3490	4570	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C09273002006
12/17/2009	8100	< 100			< 100	39.3	3620	5210	< .005	< .16	< .17	< .13	< .09	< .11	< .07	< .05	< .08	C09351022001
3/23/2010	7600	< 50			< 50	57	2590	4290	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C10082005008
6/22/2010	7700	< 250			< 50	33.6	2790	3760	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C10173039004
9/21/2010	8500	< 500			< 100	< -22.6	3270	5070	< .005	< .16	< .17	< .14	< .1	< .12	< .07	< .05	< .09	C10264016006
12/15/2010	9100	< 100			< 100	< -325	7150	8570	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C10349020006
E-34 6/13/2011										< .4	< .4	< .4	< .4	< .4	< .4	< .4	< .4	1106040-05
6/13/2011	7400	< 500			< 100	< -23.1	3310	4310	< .005									C11165011007
9/14/2011	8500	< 500			< 100	< -99.4	4540	4360	< .005	< .17	< .18	< .14	< .1	< .12	< .07	< .05	< .09	C11257087008
3/12/2012	8000	< 100			< 100	< -25.1	3230	5410	< .005									C12072031009
9/19/2012	9900	< 100			< 100	< -28.6	4490	5320	< .005									C12263022004
3/12/2013	11000	< 100			< 100			4600										C13072002005

**C-400 Monitoring**  
**Water Quality Records for**  
**MW505**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	< .005									C12073014003
6/18/2012	18	< 5			< 1	<-1.58	54	51.4	< .005									C12170024001
9/19/2012	22	< 1			< 1	< 1.39	45.1	61.8	< .005									C12263015001
12/5/2012	22	< 5			< 1			56.2										C12340029002
3/19/2013	34	< 1			< 1			49.2										C13078040001
3/19/2013	32	< 1			< 1			53.9										C13078040002
6/11/2013	31	< 1			< 1			55.5										C13162015006

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**C-400 Monitoring**  
**Water Quality Records for**  
**MW506**

*Sample Date Range: 6/16/2009 - 9/30/2013*

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	< .856	50.5	62.6	< .005									C12073014004
6/18/2012	4100	< 250			< 50	< 3.44	66.4	59.7	< .005									C12170024002
9/19/2012	3700	< 50			< 50	< 3.84	50.8	59	< .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

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**C-400 Monitoring**  
**Water Quality Records for**  
**MW507**

**Sample Date Range: 6/16/2009 - 9/30/2013**

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	
3/13/2012	1200	< 10			< 10	< 3.11	38.7	53.4	< .005									C12073014005
6/18/2012	1200	< 100			< 20	< 5.7	51.2	41.2	< .005									C12170024003
9/19/2012	1800	< 10			< 10	< .808	34.4	30.7	< .005									C12263015003
12/5/2012	1900	< 100			< 20			42.9										C12340029005
3/19/2013	770	< 20			< 20			48.3										C13078040004
6/11/2013	1100	< 10			< 10			65.1										C13162015004
6/11/2013	1000	< 10			< 10			72.4										C13162015003

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**APPENDIX F**

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



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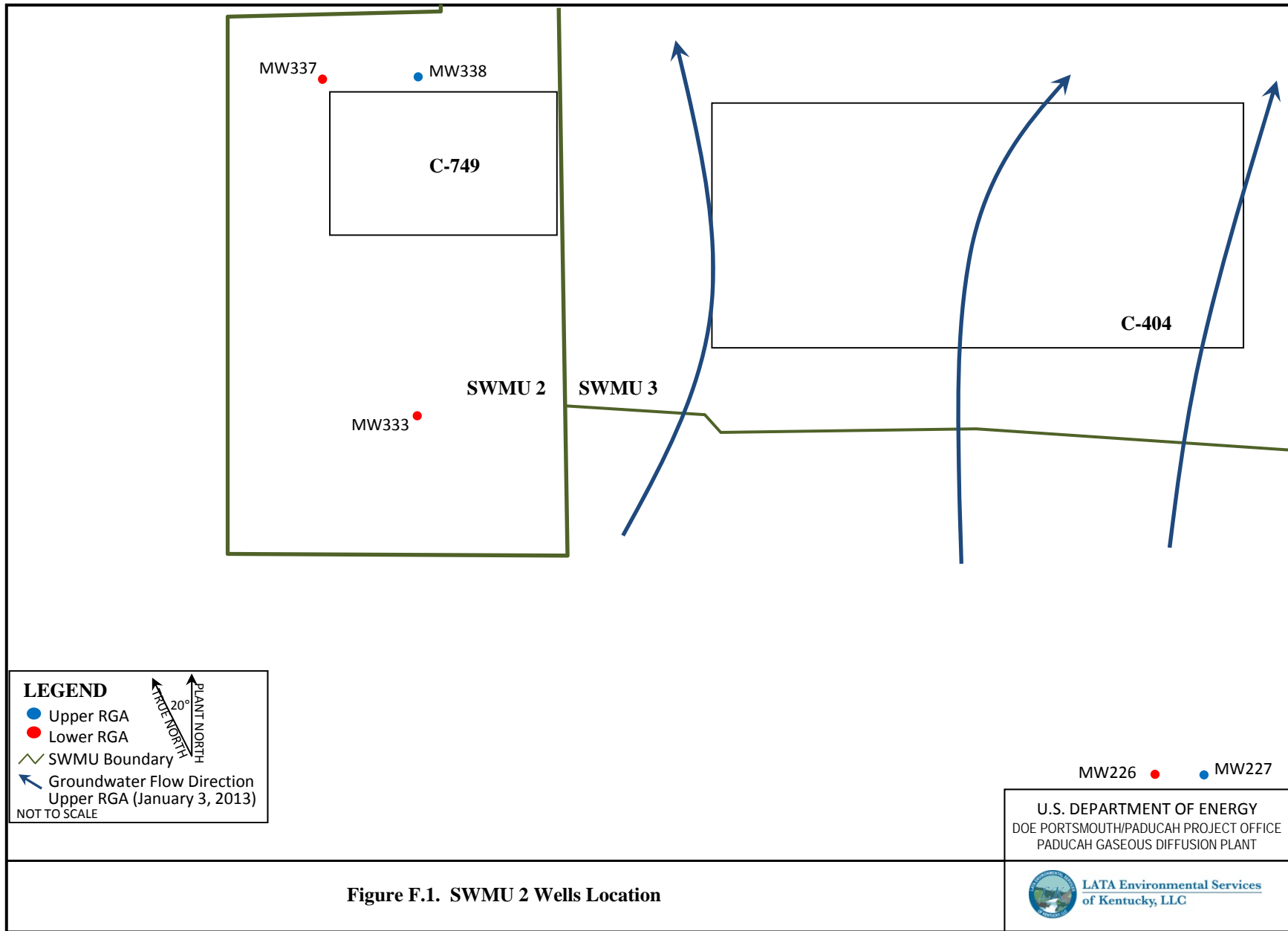



Figure F.1. SWMU 2 Wells Location

MW226 ● MW227 ●

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

 LATA Environmental Services  
of Kentucky, LLC

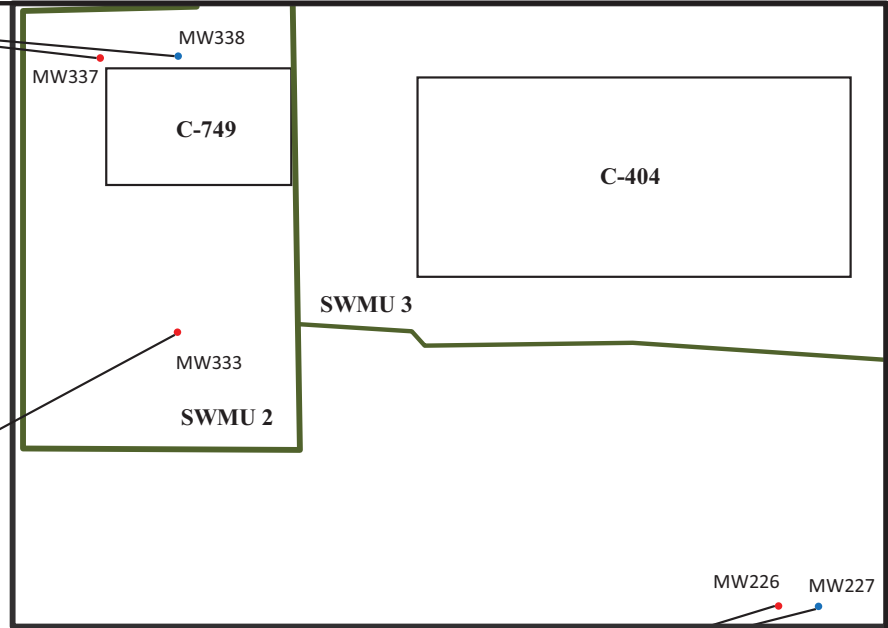
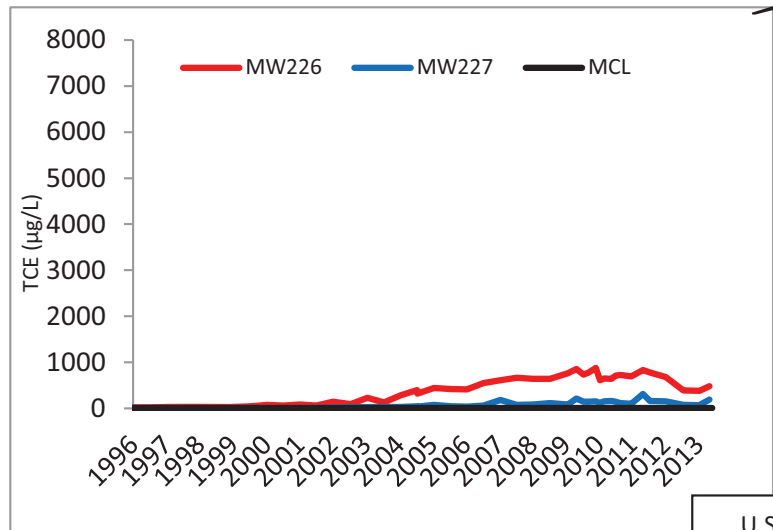
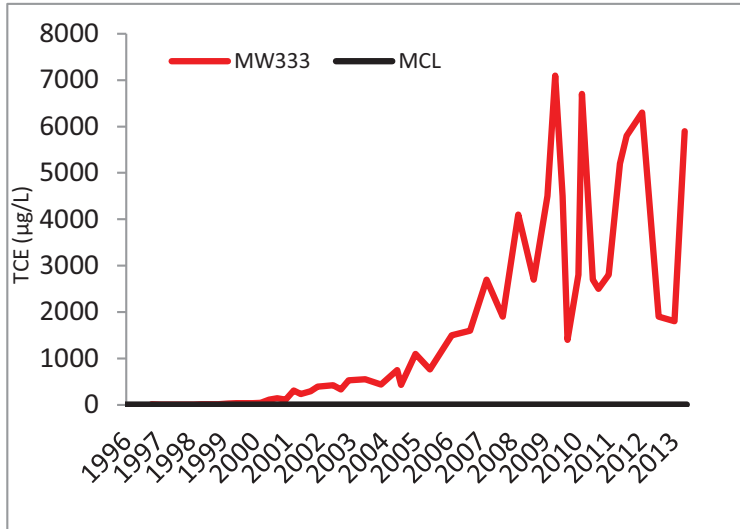
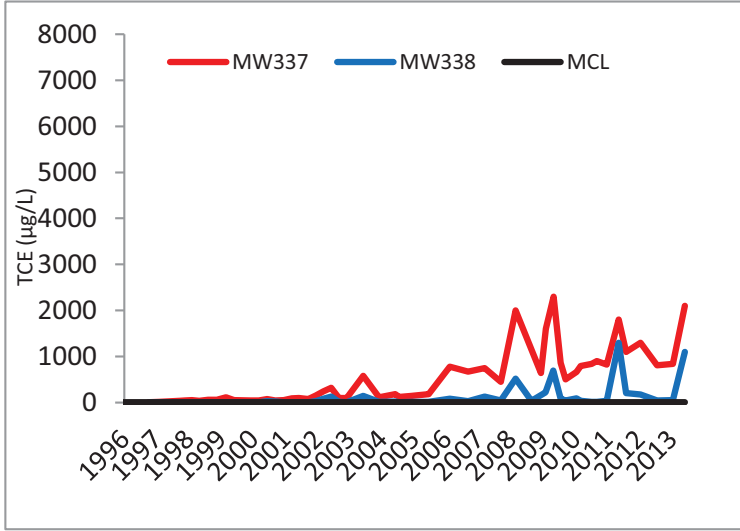
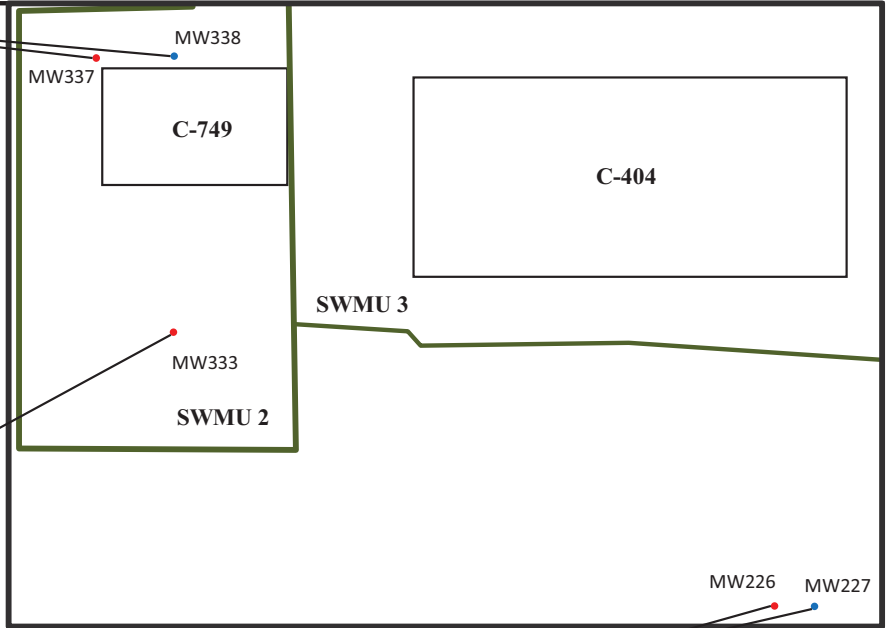
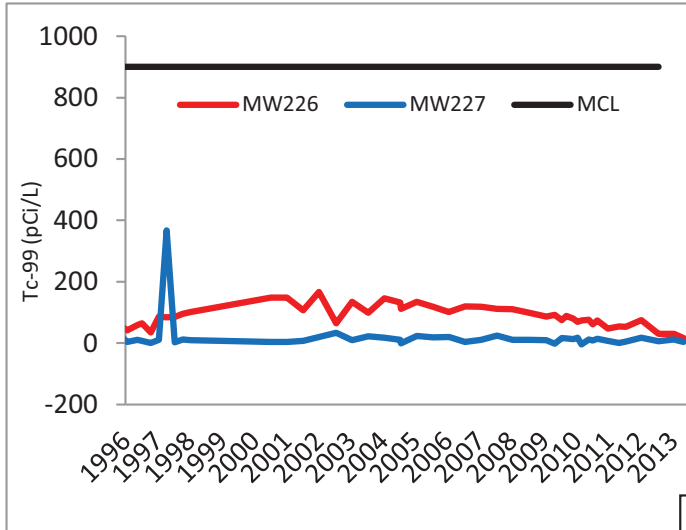
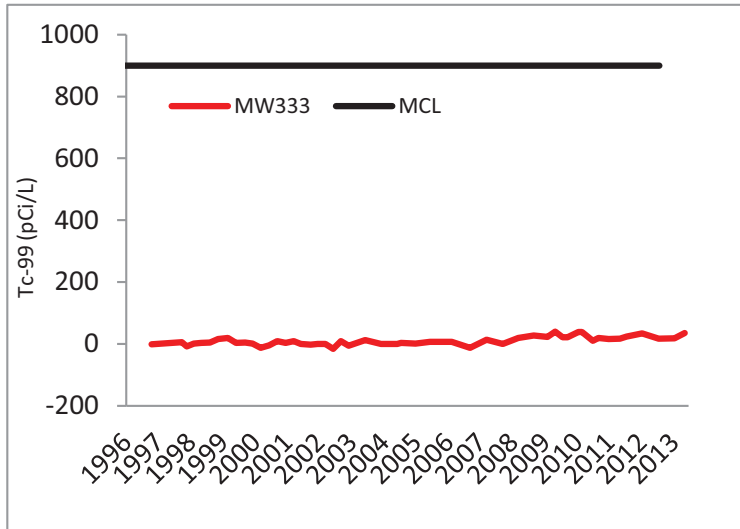
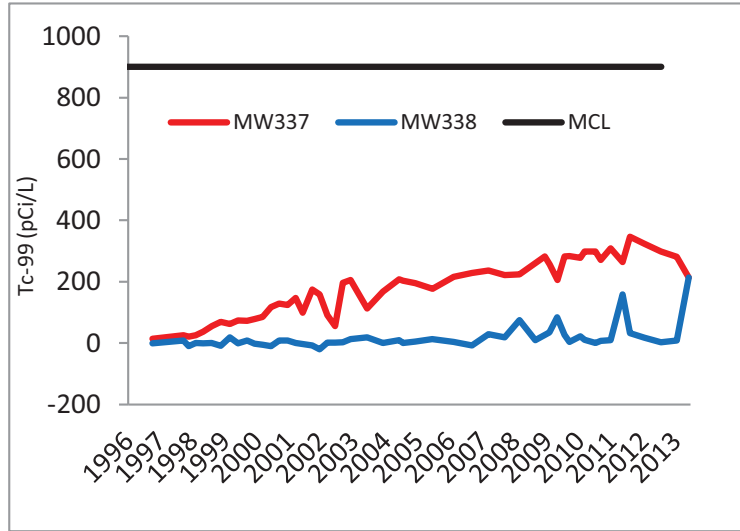


Figure F.2. TCE Trends in SWMU 2 Wells

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





**LEGEND**

- 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.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 - 9/30/2013

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							30				950117-119
1/17/1995	17							26				950117-115
1/23/1995	17							31				950125-081

FIG

**C-749 Uranium Burial Ground (SWMU2) Monitoring**

Water Quality Records for

Sample Date Range: 5/6/1993 - 9/30/2013

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 - 9/30/2013

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	340	12	< 5	< 5	< 5	< .668	57.7	132	< .0902	< .0122	< .348	C042050009
7/22/2004	394											C042050002
7/27/2004	320							112				C042090056
1/24/2005	440							134	< .0357	< .0147	< -.0135	C050240045
7/27/2005	420							118	< .0346	< .00589	< .00252	C052080180
1/24/2006	410							101	< .0973	< -.0183	< .0768	C060240039
7/24/2006	550							119	< 1.07	< .187	< .282	C062050057
1/24/2007	610							118	< 1.03	< -.00311	< .21	C070240038
7/24/2007	660							112	< .0971	< -.0355	< .0361	C072060043

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**C-749 Uranium Burial Ground (SWMU2) Monitoring**

**Water Quality Records for**

**Sample Date Range: 5/6/1993 - 9/30/2013**

**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	< -.0264	< .0644	< .00478	C080160004
7/24/2008	640							98.7	< .0399	< .00678	< -.00253	C082060091
2/5/2009	760							86.5				C09036036004
5/12/2009	850	26	< 5	< 5	< 5	< -.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

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**C-749 Uranium Burial Ground (SWMU2) Monitoring**

Water Quality Records for

Sample Date Range: 5/6/1993 - 9/30/2013

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	3							18				950125-093
1/23/1995	4							10				950125-097

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**C-749 Uranium Burial Ground (SWMU2) Monitoring**

Water Quality Records for

Sample Date Range: 5/6/1993 - 9/30/2013

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								14				950808-067
8/7/1995								17				950808-087
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	.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							11				970121-041
1/16/1997	6							3				970121-042
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 - 9/30/2013

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	< .284	< .00706	< .412	C042050010
7/27/2004	39							< -.469				C042090057
1/24/2005	76							22.8	< .348	< -.0287	< .122	C050240047
7/27/2005	45							18.9	< .0822	< .0131	< .0649	C052080181
1/25/2006	38							20.3	< .0898	< .004	< .0169	C060250133
7/24/2006	61							< 4.11	< 1.36	< .263	< .298	C062050058
1/24/2007	180							< 11	< .219	< .0426	< .0696	C070240039

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**C-749 Uranium Burial Ground (SWMU2) Monitoring**

**Water Quality Records for**

**Sample Date Range: 5/6/1993 - 9/30/2013**

**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	< .124	< -.0338	< .0891	C072060044
1/16/2008	79							< 11	< .21	< .00145	< .0742	C080160068
7/24/2008	110							< 10.9	< .0526	< .00769	< -.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	< .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	< -.521	5.85	< 13.6				C10250033002
1/3/2011	94							< 7.15				C11003029001
5/11/2011	310	6.2	< 1	< 1	< 1	< .974	10.6	< .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

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**C-749 Uranium Burial Ground (SWMU2) Monitoring**

Water Quality Records for

Sample Date Range: 5/6/1993 - 9/30/2013

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								-1.1				96M04623-3761
10/14/1996	10				< .48							96M04623-3717
10/14/1996									9.66		.14	96M04623-3731
1/29/1997	5	< 5	< 5	< 5	< 5							970130-051
9/23/1997	5	< 5	< 5	< 5	< 5	-2	2	6				970923-064
11/19/1997	6	< 5	< 5	< 5	< 5	-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	< .68	< 2.83	19.27				C990620037
6/4/1999	33	< 5	< 5	< 5	< 5	< 1.23	< .07	< 2.81				C991580024
9/15/1999						< -.79		< 4.13				C992580210
12/7/1999	29	< 5	< 5	< 5	< 5	2.48	< 1.48	< .475				C993410100
12/7/1999	33	< 5	< 5	< 5	< 5	< .45	< .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	< .52	< -.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	< .462	< .604	< 3.24				C003540006
3/19/2001	310	< 5	< 5	< 5	< 5	< -.5	< .794	< 8.5				C010780093
6/6/2001	230	< 25	< 25	< 25	< 25	< 1.62	4.76	< -.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	< -.125	< -.337				C013510092
3/13/2002	410	< 25	< 25	< 25	< 25	< 1.13	< .94	< -.654				C020720130
3/13/2002										< -3.95		C020720129

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**C-749 Uranium Burial Ground (SWMU2) Monitoring**

Water Quality Records for

Sample Date Range: 5/6/1993 - 9/30/2013

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	< -.977	< -.125	< 8.51				C022480132
12/2/2002	530	< 25	< 25	< 25	< 25	< 1.7	< .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	< .213	< 2.21	< 0				C033380096
6/7/2004	750	< 50	< 50	< 50	< 50	< -.231	< -.683	< -.384	< 30	< 2.2	< .35	C041590175
7/20/2004	430	< 10	< 10	< 10	< 10	< 1.44	< 1.43	< 2.73	< .198	< .00505	< .363	C042020116
12/30/2004	1100	< 50	< 50	< 50	< 50	< -.0341	< .436	< 1.21				C043650022
6/14/2005	760	< 50	< 50	< 50	< 50	< .455	< 2.91	< 6.24	< .0723	< -.0127	< .0115	C051650114
2/14/2006	1300	< 50	< 50	< 50	< 50	< 2.43	< 3.19	< 5.18				C060450088
2/14/2006	1500	< 50	< 50	< 50	< 50	< -.267	< 3.66	< 6.25				C060450089
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	< .212				C072630092
3/11/2008	4100	< 25	< 25	< 120	< 25	< 1.75	16.9	19				C080710145
9/3/2008	2700	< 25	< 25	< 120	< 25	< .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	< .535	17.7	21.3				C09268017001
1/26/2010	2800							38.1				C10026023004
3/8/2010	6700	< 50	< 50	< 50	< 50	< .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 - 9/30/2013

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

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**C-749 Uranium Burial Ground (SWMU2) Monitoring**

**Water Quality Records for**

**Sample Date Range: 5/6/1993 - 9/30/2013**

**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				< .48							96M04622-3716
10/4/1996									.38		.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	.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	< .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	< .4	48.8	73.5				C991580025
9/15/1999						< .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	< -.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	< -.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	< .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	240	< 25	< 25	< 25	< 25	< 4.6	68	91.3				C020720126
3/13/2002										< -7.31	< 0	C020720125
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 - 9/30/2013

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	< .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	< .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	< .35	C041600042
7/20/2004	120	< 2	2.2	< 2	< 2	3.45	111	203	< .101	< -.00296	< .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	< .059	< -.0123	< .00534	C051720110
2/14/2006	780	< 25	< 25	< 25	< 25	< .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 - 9/30/2013*

**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

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**C-749 Uranium Burial Ground (SWMU2) Monitoring**

**Water Quality Records for**

**Sample Date Range: 5/6/1993 - 9/30/2013**

**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									.56		.67	96M04621-3729
10/4/1996												96M04621-3759
10/4/1996	.7				< .48							96M04621-3715
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	.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	< .2	12	< -6				C981250038
8/6/1998	< 1	< 5	< 5	< 5	< 5	< -1.9	< 3	< .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	< .35	< 1.7	19.04				C990620039
6/3/1999	1	< 5	< 5	< 5	< 5	< .96	19.31	< -.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	< -.418	< .657	< .481				C010780095
6/6/2001	8	< 5	< 5	< 5	< 5	< .866	< 2.9	< -3.53				C011570180
9/24/2001	3	< 5	< 5	< 5	< 5	< -.18	< 2.92	< -7.31		< -4.82		C012680005
12/17/2001	24	< 5	< 5	< 5	< 5	< 1.14	< .738	< -20.6				C013510094
3/13/2002										< 0		C020720127
3/13/2002	78	< 5	< 5	< 5	< 5	< -.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 - 9/30/2013

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	< .0927	< 2.41	< 2.99				C022480134	
12/3/2002	8	< 5	< 5	< 5	< 5	< .447	< 3.19	< 13.4				C023370048	
6/9/2003	140	< 10	< 10	< 10	< 10	< -.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	< .409	< 9.88	< 30	< 2.2	< .35	C041600043	
7/20/2004	4.6	< 1	< 1	< 1	< 1	< .125	< 2.32	< -.111	< .169	< .0261	< .423	C042020118	
12/8/2004	13	< 5	< 5	< 5	< 5	< .742	< 3.48	< 5.2				C043430088	
6/16/2005	11	< 5	< 5	< 5	< 5	< 1.43	< 2.46	< 12.4	< .0101	< -.0133	< -.0335	C051670015	
2/14/2006	82	< 5	< 5	< 5	< 5	< -.143	6.12	< 3.55				C060450091	
9/12/2006	25	< 5	< 5	< 5	< 5	< .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	< -.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							< .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 - 9/30/2013

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

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