



## Department of Energy

Portsmouth/Paducah Project Office  
1017 Majestic Drive, Suite 200  
Lexington, Kentucky 40513  
(859) 219-4000

OCT 30 2009

Mr. W. Turpin Ballard  
U.S. Environmental Protection Agency, Region 4  
Federal Facilities Branch  
61 Forsyth Street  
Atlanta, Georgia 30303

PPPO-02-132-10

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

Mr. Edward Winner, FFA Manager  
Kentucky Department for Environmental Protection  
Division of Waste Management  
200 Fair Oaks Lane, 2<sup>nd</sup> Floor  
Frankfort, Kentucky 40601

Dear Mr. Ballard, Ms. Webb, and Mr. Winner:

**U.S. DEPARTMENT OF ENERGY PADUCAH GASEOUS DIFFUSION PLANT  
FEDERAL FACILITY AGREEMENT SEMIANNUAL PROGRESS REPORT FOR THE  
SECOND HALF OF FISCAL YEAR 2009, PADUCAH, KENTUCKY**

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 2009, Paducah, Kentucky*, DOE/LX/07-0245/V2. The enclosed report is required by Sections XXIII and XXXII.F of the Federal Facility Agreement and Part IV of the Resource Conservation and Recovery Act Permit. The report covers the time period from April 1, 2009 through September 30, 2009.

If you have any questions or require additional information, please contact David Dollins at (270) 441-6819.

Sincerely,

A handwritten signature in black ink, appearing to read "Reinhard Knerr", is written over the word "Sincerely,".

Reinhard Knerr  
Paducah Site Lead  
Portsmouth/Paducah Project Office

Enclosure:

FFA Semi-annual Progress Report-2<sup>nd</sup> Half of FY 2009

cc w/enclosure:

AR File

DMC/Kevil

EIC/PAD

e-copy w/enclosure:

april.webb@ky.gov, KDEP/Frankfort

ballard.turpin@epa.gov, EPA/Atlanta

brandy.mitchell@prs-llc.net, PRS/Kevil

dave.dollins@lex.doe.gov, PPPO/PAD

dennis.ferrigno@prs-llc.net, PRS/Kevil

edward.winner@ky.gov, KDEP/Frankfort

jana.white@prs-llc.net, PRS/Kevil

janet.miller@lex.doe.gov, PRC/PAD

john.lea@prs-llc.net, PRS/Kevil

christa.turner@ky.gov, KDEP/Frankfort

mike.spry@prs-llc.net, PRS/Kevil

myrna.redfield@prs-llc.net, PRS/Kevil

rachel.blumenfeld@lex.doe.gov, PPPO/LEX

reinhard.knerr@lex.doe.gov, PPPO/PAD

stan.knaus@prs-llc.net, PRS/Kevil

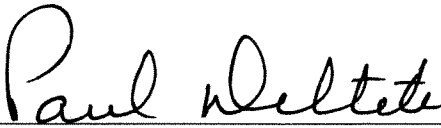
tufts.jennifer@epa.gov, EPA/Atlanta

## 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 2009, Paducah, Kentucky  
(DOE/LX/07-0245/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.


Paducah Remediation Services LLC

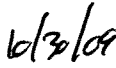
  
\_\_\_\_\_  
Paul Deltete, Deputy Site Manager  
jm

  
\_\_\_\_\_  
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)

  
\_\_\_\_\_  
Reinhard Knerr, Paducah Site Lead

  
\_\_\_\_\_  
Date Signed

**U.S. Department of Energy  
Paducah Gaseous Diffusion Plant  
Federal Facility Agreement  
Semiannual Progress Report for the  
Second Half of Fiscal Year 2009  
Paducah, Kentucky**



**CLEARED FOR PUBLIC RELEASE**



**U.S. Department Of Energy  
Paducah Gaseous Diffusion Plant  
Federal Facility Agreement  
Semiannual Progress Report for the  
Second Half of Fiscal Year 2009  
Paducah, Kentucky**

Date Issued—October 2009

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

Prepared by  
PADUCAH REMEDIATION SERVICES, LLC  
managing the  
Environmental Management Activities at the  
Paducah Gaseous Diffusion Plant  
under contract DE-AC30-06EW05001

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## ACRONYMS

AM	Action Memorandum
AOC	area of concern
ARRA	American Recovery and Reinvestment Act
BGOU	Burial Grounds Operable Unit
BRA	baseline risk assessment
CAB	Citizens Advisory Board
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CRP	Community Relations Plan
CX	categorical exclusion
D&D	decontamination and decommissioning
DOE	U.S. Department of Energy
EE/CA	Engineering Evaluation/Cost Analysis
EPA	U.S. Environmental Protection Agency
EQ	equalization
ERH	electrical resistance heating
FFA	Federal Facility Agreement
FS	Feasibility Study
FY	fiscal year
GWOU	Groundwater Operable Unit
IRA	Interim Remedial Action
KRCEE	Kentucky Research Consortium for Energy and Environment
NEPA	National Environmental Policy Act
NEPCS	Northeast Plume Containment System
NWPGS	Northwest Plume Groundwater System
O&M	operation and maintenance
PCB	polychlorinated biphenyl
PGDP	Paducah Gaseous Diffusion Plant
ppb	parts per billion
PRS	Paducah Remediation Services, LLC
RAWP	Remedial Action Work Plan
RGA	Regional Gravel Aquifer
RI	remedial investigation
ROD	Record of Decision
SAP	Sampling and Analysis Plan
SER	Site Evaluation Report
SMP	Site Management Plan
SOU	Soils Operable Unit
SWMU	solid waste management unit
SWOU	Surface Water Operable Unit
<sup>99</sup> Tc	technetium-99
TCE	trichloroethene
WAG	waste area group

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# INTRODUCTION

## FEDERAL FACILITY AGREEMENT SEMIANNUAL REPORT FISCAL YEAR 2009

**Facility: Paducah Gaseous Diffusion Plant**  
**Plant EPA I.D. No.: KY8-890-008-982**  
**Reporting Period: 4/1/09–9/30/09**

As specified by the Paducah Federal Facility Agreement (FFA), Section XXIII, the U.S. Department of Energy (DOE) has prepared this regulatory progress report that describes the actions that DOE has taken during the previous six months to implement FFA requirements. This report also describes the schedules<sup>1</sup> for the upcoming six months. Activities that have taken place after the reporting period closed are not included in this report.

Projects and activities reported within this update are grouped similarly to the organization presented in the current Site Management Plan (SMP). Those projects are listed below in Table 1.

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

Operable Unit	Project/Activities
Groundwater Operable Unit	C-400 Interim Remedial Action Southwest Plume Sources Dissolved-Phase Plumes Northeast Plume Interim Remedial Action Northwest Plume Interim Remedial Action
Burial Grounds Operable Unit	Burial Grounds Operable Unit
Surface Water Operable Unit	Removal Action Remedial Action
Soils Operable Unit	Remedial Action Soils Inactive Facilities Soil and Rubble Areas
Decontamination and Decommissioning Operable Unit	C-410/420 Complex C-746-A East End Smelter and C-340 Metals Reduction Plant Complex
Comprehensive Sitewide Operable Unit <sup>2</sup>	No Projects
Additional Reporting	Waste Area Groups 1 and 7 Community Relations Plan Site Management Plan CERCLA Waste Disposal Alternatives Evaluation

Within this report, Appendix A contains Water Withdrawal Reports and Appendix B contains Figures 1 through 7, as referenced in the Northeast and Northwest Plume updates.

C-746-K Landfill groundwater monitoring data, normally included as Appendix C of this report was not available in time for inclusion with this report. This data will be included in the next semiannual report.

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

<sup>2</sup> The Comprehensive Sitewide Operable Unit work scope, including gaseous diffusion plant shutdown, is defined more clearly in the fiscal year 2010 SMP.

Sampling of these monitoring wells is outlined in the Record of Decision (ROD) for Waste Area Groups (WAGs) 1 and 7.

As required by the Paducah FFA (Section XXXII.F), updates to the administrative record index since the last progress report are included as Appendix D.

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
FISCAL YEAR 2009**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/09–9/30/09**

**GROUNDWATER OPERABLE UNIT**

The scope of the Groundwater Operable Unit (GWOU) includes investigation, a baseline risk assessment (BRA), evaluation of removal/remedial alternatives, and selection and implementation of actions necessary to achieve protection of human health and the environment from exposure to groundwater contamination that could result in unacceptable risk.

Within the GWOU are these projects: C-400 Interim Remedial Action (IRA), Southwest Plume Sources, Dissolved-Phase Plumes, Northeast Plume IRA, and Northwest Plume IRA. Supporting projects in the GWOU include the update and revision of the *Methods for Conducting Risk Assessments and Risk Evaluations at the Paducah Gaseous Diffusion Plant*, Paducah, Kentucky, Volume 1, Human Health, DOE/OR/07-1506/V1 & D2, and the Sitewide Numerical Groundwater Model, which are included in the Dissolved-Phase Plumes update.



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**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
FISCAL YEAR 2009**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/09–9/30/09**

**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):**

- Completed Phase I subsurface electrical resistance heating (ERH) installations.
- Completed Phase I baseline groundwater sampling activities at extraction wells in the east and southwest treatment areas.
- Continued with construction of the aboveground liquid and vapor treatment system.
- Received U.S. Environmental Protection Agency (EPA) and Kentucky approval of the D2 C-400 Operations and Maintenance Plan.
- Completed the installation and initial sampling of five new monitoring wells clusters near the northwest corner of the C-400 Cleaning Building.
- Revised the D2/R1 C-400 Remedial Action Work Plan (RAWP) to alter the waste management and characterization approach for solid waste from drilling activities.

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

- Receive approval of the D2/R2 C-400 RAWP from EPA and Kentucky.
- Develop and issue operating procedures for C-400 IRA operations.
- Perform system testing and start up and begin routine operations for Phase I of the C-400 IRA.
- Complete removal of interfering infrastructure at the C-400 Cleaning Building area in preparation for installation of Phase II of the C-400 IRA systems.
- Initiate drilling and installation of Phase II ERH components.

**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 Paducah Remediation Services, LLC, (PRS) as the DOE prime remediation contractor at the Paducah Gaseous Diffusion Plant (PGDP). In addition, PRS also provides programmatic and technical support, analytical services, and business management services. Swift and Staley Mechanical Contractors, Inc., manages the administrative record and the Environmental Information Center.

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

The requirements are being met for the GWOU C-400 action subproject; however, project field implementation is significantly behind the original planned schedule, as described in Section VI below.

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

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

- D2/R2 RAWP for the C-400 IRA under review by EPA and Kentucky.

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

- Approval by Kentucky and EPA of the D2/R2 C-400 IRA RAWP is anticipated by December 2009.

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

Drilling and installation activities for subsurface ERH equipment, as well for construction of the above ground treatment system, are taking longer than initially planned and, as a result, start-up, testing, and commencement of operations of the ERH and aboveground treatment system are projected to be approximately five months behind the current baseline schedule. The drilling schedule was impacted negatively by severe winter weather and by unexpected equipment problems with one of the two drill rigs mobilized to the site. Installation of electrode borings, which required the drilling of 12-inch borings to as deep as 95 ft, took longer than anticipated.

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

Routine updates on the subproject were provided to the Paducah Site Citizens Advisory Board (CAB), FFA managers, local elected officials, and congressional staff.

**VIII. Changes in relevant personnel:**

None.

**IX. Actual cost for operation and maintenance (O&M), if appropriate:**

None.

**FEDERAL FACILITY AGREEMENT  
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Reporting Period: 4/1/09–9/30/09**

**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):**

- DOE completed and submitted the Focused Feasibility Study (FS) for the Southwest Plume Sources project. The D1 focused FS was submitted to Kentucky and EPA on July 2, 2009.
- Initiated preparation of the D0 Proposed Plan for the Southwest Plume Sources project.

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

- Respond to comments from EPA and Kentucky on the D1 Focused FS for the Southwest Plume Sources.
- Prepare and issue a D2 Focused FS for the Southwest Plume Sources to EPA and Kentucky.
- Prepare and submit a D1 Proposed Plan for the Southwest Plume Sources to EPA and Kentucky.

**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 PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management services. Swift and Staley Mechanical Contractors, Inc., manages the administrative record and the Environmental Information Center.

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

All FFA parties are in agreement with the existing project schedule. Southwest Plume Sources milestones have been realigned consistent with the informal dispute resolution dated March 24, 2008, and SMP negotiations.

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

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

- D1 Focused FS for the Southwest Plume Sources is under review by EPA and Kentucky.
- Proposed Plan for the Southwest Plume Sources is in preparation.

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

- EPA and Kentucky comments on the Southwest Plume Sources D2 Focused FS are due October 1, 2009.

**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:**

Routine updates on the subproject were provided to the Paducah Site CAB, FFA managers, local elected officials, and congressional staff.

**VIII. Changes in relevant personnel:**

None.

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

None.

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
FISCAL YEAR 2009**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/09–9/30/09**

**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):**

- Issued the D1 Human Health and the Ecological Risk Methods documents to EPA and Kentucky.
- Prepared and issued the Draft Sitewide Groundwater Flow and Transport Groundwater Modeling Report for Modeling Group review.
- Revised the Draft Sitewide Groundwater Flow and Transport Groundwater Modeling Report and initiated internal review.
- Initiated preparation of the Dissolved-Phase Plumes Remedial Investigation (RI) Work Plan Scoping Document.

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

- Conduct sitewide dissolved oxygen profiling and collection of samples for enzyme analysis in support of KRCEE TCE degradation analysis.
- Prepare and issue a Monitored Natural Attenuation Report based on KRCEE's TCE degradation analysis.
- Issue the draft Sitewide Groundwater Flow and Transport Groundwater Modeling Report.
- Begin preparation of the Dissolved-Phase Plumes Scoping Document.
- Continue comment incorporation and development of final TCE Degradation Report concerning aerobic degradation of TCE contaminants in the Regional Gravel Aquifer (RGA) lead by the KRCEE-facilitated multidisciplined TCE Degradation Project Team.
- Continue scoping of work needed for determining TCE degradation parameters for Southwest and Northeast Plumes based on recommendations developed by the KRCEE-facilitated multidisciplined TCE Degradation Project Team.

**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 PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical

support, analytical services, and business management services. Swift Staley and Mechanical Contractors, Inc., manages the administrative record and the Environmental Information Center.

KRCEE has been assigned the task of facilitating the TCE degradation analysis with support from the TCE Technical Degradation Working Group, which is comprised of representatives from DOE, EPA, Kentucky, PRS, and Performance Results Corporation.

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

The Dissolved-Phase Plume project is proceeding with planned scope by utilizing an interagency TCE Technical Degradation Working Group.

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

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

- Dissolved-Phase Plumes Scoping Document is in preparation.
- Report on the update of the PGDP Numerical Groundwater Flow and Transport Model revision is in preparation.

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

- Submit Dissolved-Phase Plumes Scoping Document to EPA and Kentucky by March 30, 2010.

**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:**

Routine updates on the subproject were provided to the Paducah Site CAB, FFA managers, local elected officials, and congressional staff.

**VIII Changes in relevant personnel:**

None.

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

None.

**FEDERAL FACILITY AGREEMENT  
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FISCAL YEAR 2009**

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Reporting Period: 4/1/09–9/30/09**

**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):**

During this reporting period the Northeast Plume Containment System (NEPCS) treated 23,729,000 gal of contaminated groundwater and achieved an operational efficiency of 63.6%. The average system treatment rate for the reporting period was 90.1 gal/min and was calculated assuming 100% operational uptime. Operational efficiencies for the reporting period were as follows: April, 100%; May, 14.5%; June, 61.9%; July, 24.4%; August, 83.1%; and September 2009, 100%.

**A) Process Operations**

The NEPCS consists of two extraction wells, an underground equalization (EQ) tank, transfer piping, a cooling tower for air stripping, and monitoring well network.

**B) Process Testing**

Operation of the NEPCS began February 28, 1997. As of September 30, 2009, the NEPCS has processed a total of 1,025,092,907 gal of water. The monthly withdrawal volumes this reporting period are presented in Appendix A, Table 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 2009.

Influent sample results, compared to the effluent (cooling tower shower) sample results, indicated that TCE was effectively removed below the operational goal of 5 parts per billion (ppb). The influent flow is a composite from two extraction wells. Influent TCE analytical data from 1997 through the end of June 2009 are presented in Appendix B, Figure 1. Environmental samples were collected monthly from the treatment system influent and effluent for the period of January through June 2009. High, low, and average influent and effluent TCE concentrations for these months are presented in Table 2. Values reported as less than the reporting limit of 1 ppb are considered to be 1 ppb for averaging and graphing purposes.



**Table 2. TCE Concentrations for Northeast Plume**

	TCE (ppb)		
	High	Low	Average
Influent (EQ Tank)	220	180	198
Effluent (Cooling Tower effluent)	< 1	< 1	< 1

As presented in Table 2, the NEPCS continued to remove TCE effectively. The system operated with an average removal efficiency of 100% for TCE. All effluent TCE samples showed less than the reporting limit.

The extraction wells 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 EW-331 had an average TCE concentration of 153 ppb, while EW-332 had an average concentration of 210 ppb.

Concentrations of technetium-99 (<sup>99</sup>Tc) in water samples collected from the EQ tank did not exceed the data quality objective of 50 pCi/L. The highest reading from the EQ tank was 30.8 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*, PRS-ENM-001, January 2008.

Instances of downtime occurred during the reporting period relating to power outages, routine maintenance, and calibration of system components.

##### **Nonroutine Maintenance Activities**

From May 5, 2009, through June 11, 2009, the Northeast Pump-and-Treat System was out of service due to an accidental break in the electrical connections of the emergency stop from the Northeast Plume control panel to the C-637 Cooling Towers. The break in the connections occurred when a track hoe hit an electrical pull box of the Northeast Plume system. Repairs were completed on June 11, 2009, and the system was restarted.

From July 8, 2009, through August 5, 2009, the Northeast Pump-and-Treat System was out of service due to operating failure of the influent and effluent flow meters at the Northeast Plume treatment pad. The system was restarted on August 5, 2009, when the control logic was configured to allow safe operation of the Northeast treatment system. The influent and effluent flow meters were replaced on August 27, 2009.

On September 23, 2009, the pressure switch on EW-331 was replaced due to faulty high pressure readings received at the Northeast control panel.

**E) Effectiveness Monitoring—Monitoring Well Results**

Figures 2a, 2b, 2c, 2d, and 2e presented in Appendix B, show TCE concentrations and <sup>99</sup>Tc activities in monitoring wells downgradient and upgradient and the extraction wells. Figure 3, included in Appendix B, shows locations of the monitoring wells and extraction wells.

MW292 is located approximately 1,200 ft upgradient of the pumping wells to provide an early detection point for <sup>99</sup>Tc migration. During the first and second quarters of calendar year 2009, <sup>99</sup>Tc activity at MW292 was 55.0 and 35.9 pCi/L, respectively.

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

No modifications were made to the NEPCS operation or configuration during the reporting period.

**II. Schedule 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 operations, as specified within 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.
- Develop criteria for putting the Northeast Plume extraction system on standby in accordance with the goals of the ROD and the recommendations of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Five-Year Review.

**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 PRS, as the DOE prime remediation contractor at PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management services. Swift and Staley Mechanical Contractors, Inc., manages the administrative record and the Environmental Information Center.

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

The effluent concentration goal of 5 ppb for TCE was met during the reporting period. The NEPCS remained operational 63.6% of the time during this reporting period.

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

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

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):**

No future operational problems or delays are anticipated.

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

None.

**VIII. Changes in relevant personnel:**

None.

**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 \$332,486.

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
FISCAL YEAR 2009**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/09–9/30/09**

**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 51,994,080 gal of contaminated groundwater with an average monthly operational efficiency of 99.3%. The average system treatment rate for the reporting period was 197.3 gal/min and was calculated assuming 100% operational uptime. Operational efficiencies for the reporting period were as follows: April, 100%; May, 100%; June, 95.7%; July, 100%; August, 100%; and September 2009, 100%.

**A) Process Operations**

The NWPGS consists of two extraction well fields (each field has two extraction wells) for a total of four wells, underground pipeline, treatment facility, and monitoring well network.

**B) Process Testing**

Operation of the NWPGS began on August 28, 1995. As of September 30, 2009, the NWPGS has processed a total of 1,411,467,417 gal of water. The monthly withdrawal volumes for the reporting period are presented in Appendix A, Table 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 2009.

The influent sample results, compared to the NWPGS effluent results, indicated that the NWPGS continues to effectively remove TCE and <sup>99</sup>Tc. Influent and effluent TCE and <sup>99</sup>Tc analytical data are presented in Appendix B on Figures 4a, 4b, 5a, and 5b, respectively.

TCE values reported as less than the reporting limit of 1 ppb are considered to be 1 ppb for averaging and graphing purposes. High, low, and average influent and effluent TCE and <sup>99</sup>Tc concentrations from January through June 2009 are presented in Table 3.

**Table 3. TCE and <sup>99</sup>Tc Concentrations for Northwest Plume**

	TCE (ppb)			<sup>99</sup> Tc (pCi/L)		
	High	Low	Average	High	Low	Average
Influent	2,600	350	1,437	353	51	200
Effluent	3	1.0	1.77	50.4	0.39	17.9

The treatment system influent, a composite from four extraction wells, was sampled weekly, and the effluent was sampled daily during this reporting period. As presented in Table 3, the NWPGS continued to effectively remove TCE and <sup>99</sup>Tc. The system operated with an average removal efficiency of 99.87% for TCE and 91.0% for <sup>99</sup>Tc.

The average TCE effluent concentration for this reporting period was 1.77 ppb, which is less than the treatment goal of 5 ppb and the existing Kentucky Pollutant Discharge Elimination System Outfall 001 TCE permit limit of 80.7 ppb. The average <sup>99</sup>Tc effluent value was 17.9 pCi/L, which is less than the operational goal of 900 pCi/L, during the reporting period.

NWPGS extraction wells were sampled quarterly during the period January through June 2009. High, low, and average sample results for this reporting period at the extraction wells are shown in Table 4.

**Table 4. TCE and <sup>99</sup>Tc Concentrations for Northwest Plume Extraction Wells**

	TCE (ppb)			<sup>99</sup> Tc (pCi/L)		
	High	Low	Average	High	Low	Average
EW-228	7.4	5.4	6.4	12.1	-4.9	3.6
EW-229	22	9.5	17.8	16.7	2.2	8.0
EW-230	6,000	4,200	4,833	830	564	654
EW-231	480	160	320	118	44.7	81.35

#### **D) Treatment Media**

##### **Ion Exchange Resins**

The NWPGS is equipped with four ion exchange columns used for the removal of <sup>99</sup>Tc. 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 the 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 on September 9, 2009, with recycled carbon. The current inventory of recycled carbon has been depleted and the purchase of additional virgin carbon will be required.

## **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*, PRS-ENM-0001, January 28, 2008. Instances of minor downtime occurred during the reporting period relating to power outages, maintenance, and calibration of the system.

### **Nonroutine Maintenance Activities**

From June 3, 2009, to June 4, 2009, the NWPGS was out of service due to a faulty circuit board on the level indicator on the backwash feed tank. The circuit board was replaced on June 4, 2009, and the system was restarted.

## **F) Effectiveness Monitoring—Monitoring Well Results**

Figures 6a, 6b, 6c, 6d, and 6e presented in Appendix B, show TCE and <sup>99</sup>Tc concentrations in monitoring wells at the south and north fields of the Northwest Plume and the extraction wells, respectively. These graphs show all data since monitoring began in 1995 and indicate the position of the monitoring wells relative to the extraction. Figure 7, included in Appendix B, shows locations of the monitoring wells and extraction wells.

## **G) Modification of the NWPGS Operations or Configuration**

Initiated optimization modeling for the Northwest Plume south well field in accordance with recommendations in the CERCLA Five-Year Review.

## **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 operations, 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.

Additional activities associated with the optimization of the Northwest Plume south well field include these:

- Complete optimization modeling for the Northwest Plume south well field in accordance with the recommendations in the CERCLA Five-Year Review.
- Initiate and complete a system assessment report in support of the optimization of the Northwest Plume south well field.
- Conduct design concurrence meeting with EPA and Kentucky in January 2010 for optimization of the Northwest Plume south well field.
- Initiate and complete development of design documents and specifications for Northwest Plume south well field system expansion and optimization.

- Procure construction services, mobilize, and initiate construction for Northwest Plume south well field system expansion and optimization.

**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 PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management services. Swift and Staley Mechanical Contractors, Inc., manages the administrative record and the Environmental Information Center.

**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 ppb for TCE and 900 pCi/L for <sup>99</sup>Tc during the reporting period. The NWPGS has remained operational 99.3% 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):**

No future operational problems or delays are anticipated.

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

The Water Withdrawal Reports for April, May, June, July, August, and September 2009 were submitted for their respective months to the Kentucky Division of Water.

**VIII. Changes in relevant personnel:**

None.

**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 \$332,486.

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**BURIAL GROUNDS OPERABLE UNIT**

The scope of this project includes an RI, BRA, 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 [Solid Waste Management Unit (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); the residential/inert borrow area (SWMU 145); and the C-746-S&T Landfills (SWMUs 9 and 10). A site investigation for the C-746-P/P1 Scrap Yard (SWMU 13) will be conducted under the Burial Grounds Operable Unit (BGOU) Project.

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

- The D1/R1 RI Report was submitted to the regulators on April 8, 2009.
- Regulator comments on D1/RI Report were received in June and July 2009 and discussed in a meeting held July 15, 2009.
- The D2 RI Report is on schedule to be submitted to the regulators in October 2009.
- Scoping meetings for the FS were held on April 15, May 6, June 8 to June 10, and June 15 to June 16, 2009.
- Results from the geophysics survey of the C-746-P/P1 Scrap Yards (SWMU 13) performed in February 2009 were presented to the regulators in the March 2009 FFA Managers meeting. Tentative sample locations have been discussed but have not been agreed upon.

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

- Develop and submit the D2 RI Report.
- Develop and submit the D1 FS and D2 FS.
- Sample borings at SWMU 13 to collect soil and Upper Continental Recharge System groundwater samples once sample locations are agreed upon.
- Develop CERCLA documents for potential accelerated Removal Action at SWMU 4.

**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 PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management. Swift and Staley Mechanical Contractors,



Inc., manages the administrative record and the Environmental Information Center, and maintains burial ground caps.

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

On July 20, 2009, DOE requested a 150-day extension for the submittal of the BGOU D1 FS and Proposed Plan to allow the FFA parties time to scope the FS and develop and review the documents in sequence. The extension did not impact the submittal date for the ROD; therefore, the extension did not impact the overall project schedule. The extension was approved by both EPA and Kentucky.

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

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

- D1/R1 RI Report was reviewed by EPA and Kentucky during this reporting period.
- D2 RI Report is in preparation.
- D1 FS is in preparation.

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

- D2 RI due to EPA and Kentucky October 7, 2009.
- D1 FS due to EPA and Kentucky December 29, 2009.
- D1 Proposed Plan due to EPA and Kentucky August 23, 2010.

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

Given the complexity of the action and that risk-based cleanup levels have not yet been agreed upon as yet, a delay of ROD approval is anticipated. DOE is working with EPA and Kentucky to accelerate excavation of SWMU 4, which is a critical path in completing the project by 2019 as a removal action. DOE would like to accelerate project team interactions to determine the appropriate cleanup levels and remedies.

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

DOE met with regulators in July 2009 to discuss comments on the D1/R1 RI Report. DOE met with regulators several times during scoping meetings for the FS. Routine updates on the subproject were provided to the CAB, FFA managers, local elected officials, and congressional staff.

**VIII. Changes in relevant personnel:**

Jennifer Woodard was assigned as DOE PM for the BGOU project.

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

None.

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**SURFACE WATER OPERABLE UNIT**

The Surface Water Operable Unit (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, respectively. Inspection reports are filed in the Document Management Center, managed by Swift and Staley Mechanical Contractors, Inc. The estimated annual cost of this O&M is \$84,000.

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**SURFACE WATER OPERABLE UNIT PROJECT: Removal Action**

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

The D2/R1 version of the *Action Memorandum for Contaminated Sediment Associated with the SWOU (On-Site)* (AM) was approved on April 23, 2009, and April 27, 2009, by EPA and Kentucky, respectively.

The D1 and D2 versions of the SWOU Removal Action Work Plan (RAWP) were issued to the regulators on May 22, 2009, and August 21, 2009, respectively. EPA and Kentucky provided conditional approval of the D2 version on September 21, 2009, and September 23, 2009, respectively.

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

- Obtain approval of the D2 SWOU RAWP.
- Initiate and complete excavation and construction activities as required by the SWOU RAWP.

**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 Surface Water OU Removal Action belongs to PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management. Swift and Staley Mechanical Contractors, Inc., manages the administrative record and the Environmental Information Center.

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

Previous multiple extensions for document reviews and submittals have been requested by EPA, Kentucky, and DOE outside this reporting period. Extension requests have impacted due dates for documents and impacted project milestones. Although this project experienced only a 30-day delay during this reporting period due to the addition of a D2/R1 revision of the RAWP, the project is approximately nine months behind schedule due to previously mentioned extension delays prior to this reporting period.

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

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

- D2/R1 SWOU AM was reviewed and approved by EPA and Kentucky.
- Kentucky approved the D2 SWOU RAWP on September 23, 2009.
- D2 SWOU RAWP was prepared and reviewed, and EPA provided conditional approval.

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

EPA provided comments along with its conditional approval on September 21, 2009, a D2/R2 SWOU RAWP will be submitted in the next reporting period by October 23, 2009.

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

Delays of regulatory approvals have impacted schedule for the SWOU removal action. The implementation of fieldwork has been delayed by nine months. As a result of the removal action delays, the FFA completion milestone of September 30, 2017, has been modified for the completion of the SWOU remedial action to December 13, 2017.

Once the SWOU RAWP is approved by both EPA and Kentucky, the FFA requires field implementation to be initiated within 15 calendar days of the last approval date.

As a result of Kentucky approval and EPA conditional approval of the RAWP, mobilization activities, including tree removal and staging area preparation have begun for the SWOU removal action.

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

Routine updates on the subproject were provided to the Paducah Site CAB, FFA managers, local elected officials, and congressional staff.

**VIII. Changes in relevant personnel:**

None.

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

None.

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**SURFACE WATER OPERABLE UNIT PROJECT: Remedial Action**

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

Initiated scoping on September 8, 2009, and scheduled first conference call with regulators to be held on October 6, 2009.

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

Scope the SWOU RI with the regulators and provide a scoping package to the regulators by the March 29, 2010 SMP date.

**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 Surface Water OU Remedial Action belongs to PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management. Swift and Staley Mechanical Contractors, Inc. manages the administrative record and the Environmental Information Center.

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

Project is on schedule based upon revised Surface Water Remedial Action completion date to December 13, 2017. (See Surface Water Operable Unit Removal Action Section VI.)

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

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

SWOU RI Scoping Document is in preparation.

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

SWOU RI Scoping package is due to EPA and Kentucky March 29, 2010.

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

Currently, no delays are anticipated based upon revised Surface Water Remedial Action completion date to December 13, 2017. (See Surface Water Operable Unit Removal Action Section VI.)



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

Routine updates on the subproject were provided to the Paducah Site CAB, FFA managers, local elected officials, and congressional staff.

**VIII. Changes in relevant personnel:**

None.

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

None.

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**SOILS OPERABLE UNIT**

This project includes a removal action coordinated with an RI, BRA, evaluation of cleanup alternatives, remedy selection, and implementation of necessary response actions. The scope of the Soils Operable Unit (SOU) is intended to address primarily those units where contamination is believed to be confined to shallow soil horizons, units currently not being addressed by the accelerated actions, and units that require additional characterization.

The SOU also includes (1) the Soils Inactive Facilities that include the removal of the interior face of the C-218 Firing Range, the C-410-B Sludge Lagoon, and (2) the soil/rubble areas that include conducting a site evaluation of the identified areas, developing site evaluation reports, and implementing a removal action, if necessary, to address areas of contamination with unacceptable risk. In addition, the SOU includes an RI of 82 areas of concern (AOCs)/SWMUs to determine nature and extent of contamination to help determine if an action may be warranted. The majority of the AOCs/SWMUs are located inside the limited area and will be sampled between 0 ft and 16 ft for polychlorinated biphenyls (PCBs), metals, radionuclides, and semivolatile organic compounds. A PCB evaluation of known sources, in addition to a limited area radiological survey, also will be performed.

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**SOILS OPERABLE UNIT PROJECT: Remedial Action**

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

- Addressed regulator comments on the D1 SOU RI Work Plan and held comment resolution meetings on July 15, 2009, July 23, 2009, and August 25, 2009. Issued the D2 SOU RI Work Plan on September 11, 2009.
- Developed and issued a draft Sitewide Evaluation Work Plan to EPA and Kentucky on October 6, 2009, requesting concurrence of the scope of work.

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

- Obtain approval of the D2 SOU RI Work Plan.
- Prepare for and complete the RI fieldwork including collection of nearly 500 fixed-base laboratory samples and over 1,000 field samples using a direct push technology rig or similar equipment.

**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 remedial investigation belongs to PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management. Swift Staley Mechanical Contractors, Inc., manages the administrative record and the Environmental Information Center.

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

Pursuant to the SMP, the D1 SOU RI Work Plan was submitted on March 6, 2009, ahead of the regulatory milestone of March 12, 2009. The D2 SOU RI Work Plan was issued on September 11, 2009.

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

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

The D2 SOU RI Work Plan has been under review by EPA and Kentucky.

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

The D2 SOU RI Work Plan was issued September 11, 2009, and approval was requested by October 11, 2009.

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

A 30-day delay in receipt of regulator comments on D2 SOU RI Work Plan is anticipated, followed by revision of the document (if necessary) and approval.

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

Routine updates on the subproject were provided to the Paducah Site CAB, FFA managers, local elected officials and congressional staff.

**VIII. Changes in relevant personnel:**

None.

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

None.

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**SOILS OPERABLE UNIT PROJECT: Soils Inactive Facilities**

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

- Kentucky and EPA approved the D2 Soils Inactive Facilities AM on April 30, 2009.
- Submitted the D1 and D2 Soils Inactive Facilities RAWP for two of the three facilities on June 10, 2009, and August 7, 2009, respectively.
- Kentucky approved the D2 Soils Inactive Facilities RAWP (two of three facilities) on September 2, 2009. EPA conditionally approved on September 8, 2009.

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

- Issue and obtain approval of the D2/R1 Soils Inactive Facilities RAWP.
- Initiate, implement, and complete fieldwork as required in the Soils Inactive Facilities RAWP, including removal of the C-218 Firing Range and the C-410-B Neutralization Pit.
- Issue the documentation to Kentucky and EPA modifying the AM for delaying the C-403 Neutralization Tank until post PGDP shutdown due to critical operational water line within 10 ft of the C-403 facility.

**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 Soils Inactive Facilities belongs to PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management. Swift and Staley Mechanical Contractors, Inc., manages the administrative record and the Environmental Information Center.

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

Multiple extensions for document reviews and submittals have been requested by EPA, Kentucky, and DOE. Extension requests have impacted due dates for documents and impacted project milestones. Although this project experienced only a 30-day delay during this reporting period due to the addition of a D2/R1 revision of the RAWP, the project is approximately 14 months behind schedule due to the previously mentioned extension delays prior to this reporting period.

The C-403 facility removal action (one of three inactive facilities) will be delayed until post PGDP shutdown due to an active 30-inch water line critical to United States Enrichment Corporation's operations activities being within 10 ft of the facility. A memo to the administrative record file is being developed documenting this delay.

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

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

- D2 Soils Inactive Facilities AM was reviewed and approved by EPA and Kentucky.
- D1 Soils Inactive Facilities RAWP has been in preparation, review, and comments provided.
- D2 Soils Inactive Facilities RAWP was prepared.
- Kentucky approved the D2 Soils Inactive Facilities RAWP September 2, 2009, and EPA conditionally approved the document on September 8, 2009.
- D2/R1 Soils Inactive Facilities RAWP was in preparation.

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

D2/R1 Soils Inactive Facilities RAWP will be submitted for regulatory approval in the next reporting period, no later than October 8, 2009.

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

As a result of Kentucky approval and EPA conditional approval of the RAWP, mobilization activities, including tree removal, have begun for the C-218 Firing Range.

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

Routine updates on the subproject were provided to the Paducah Site CAB, FFA managers, local elected officials, and congressional staff.

**VIII. Changes in relevant personnel:**

None.

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

None.

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**SOILS OPERABLE UNIT PROJECT: Soil and Rubble Areas**

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

- Completed implementation of the Rubble Piles Sampling and Analysis Plan (SAP) and initiated the maintenance action for five of the rubble piles.
- Issued the D1 and D2 *Site Evaluation Report for Addendum 2 Soil Piles at the Paducah Gaseous Diffusion Plant*, on July 28, 2009, and September 24, 2009, respectively.
- Issued the D1 Site Evaluation Report (SER) for Rubble Areas on September 11, 2009.

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

- Obtain approval of the D2 SER for Addendum 2 Soil Piles.
- Obtain approval of the D2 SER for Addendum 1-B Soil Piles.
- Obtain approval on the SER for Rubble Areas.

**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 soil and rubble areas belongs to PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management. Swift and Staley Mechanical Contractors, Inc., manages the administrative record and the Environmental Information Center.

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

Pursuant to the February 16, 2007, "Notification of Soil and Rubble Areas" letter, project implementation dates for soil and rubble areas were based on regulatory approval of the first SAP. The project currently is behind schedule due to previous multiple review and extension requests outside of the current reporting period; however, no delays on the SERs pending regulatory approvals occurred during the current reporting period.



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

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

- D2 SER for Addendum 2 Soil Piles was under review by EPA and Kentucky.
- D2 SER for Addendum 1B Soil Piles was under review by EPA and Kentucky.
- D1 SER for Rubble Areas was under review by EPA and Kentucky.

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

The D2 Addendum 2 SER was issued June 18, 2009; however, neither Kentucky nor EPA has provided approval during this reporting period.

As the result of Kentucky (October 7, 2009) and EPA (October 22, 2009) comments on the D1 Rubble Area SER, the D2 revision will be issued November 12, 2009.

As a result of Kentucky (October 20, 2009) and EPA (October 22, 2009) comments on the D2 Addendum 1B SER, a D2/R1 revision will be issued by November 20, 2009, for approval.

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

Delay of regulatory approval of the SAP and addenda have impacted completion of the fieldwork and subsequent SERs. Additional delays in obtaining approvals of the SERs may be incurred as a result of uranium previously being analyzed/extracted by methods different from those expected by Kentucky. In addition, the site evaluation for the soil piles does not present and imminent risk; therefore, consolidating soil piles removal with the future SOU Removal Action will result in a cost savings and insignificant schedule delay.

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

Routine updates on the subproject were provided to the Paducah Site CAB, FFA managers, local elected officials, and congressional staff.

**VIII. Changes in relevant personnel:**

None.

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

None.

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
FISCAL YEAR 2009**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/09–9/30/09**

**DECONTAMINATION AND DECOMMISSIONING OPERABLE UNIT**

The Decontamination and Decommissioning (D&D) Operable Unit will employ the CERCLA removal action process to administer the D&D of 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 (NEPA) documentation.

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

- C-410/420 Complex Infrastructure Removal
- C-340 Complex Demolition
- C-746-A East End Smelter

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**FEDERAL FACILITY AGREEMENT  
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**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/09–9/30/09**

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

The scope of this project includes decontamination and decommissioning (D&D) of the C-410 Uranium Hexafluoride Feed Plant, assuming the use of 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:**

- Paducah Site selected to receive funding under the American Recovery and Reinvestment Act (ARRA) to accelerate the ongoing removal action at the C-410/420 Complex, and to initiate the D&D of the C-340 Uranium Metals Reduction Complex and the C-746-A East End Smelter.
- Coordinated with the EPA and Kentucky to develop and gain approval of a regulatory strategy for accelerating the D&D activities under ARRA. Under this strategy, the ongoing C-410 removal action will be modified through development of an AM Addendum to include building demolition.
- Submitted a D1 AM Addendum for the C-410/420 Complex to EPA and Kentucky. The AM Addendum recommends expanding the scope of the existing C-410/420 removal action to include building demolition.
- Conducted a real time comment resolution meeting and document revision meeting with the regulatory agencies for the C-410/420 AM Addendum.
- Completed removal of fluorine, hydrogen fluoride, and hydrogen systems in Sector 4 of the C-410/420 Complex.
- Continued the stabilization and removal of small diameter instrument lines within the C-410/420 Complex. Stabilization and removal of instrument lines has been completed in Zones 41, 42, 47, 58, 59, and 60.

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

- Submit the D1 Removal Action Work Plan to EPA and Kentucky for the C-410/420 Complex receive Kentucky and EPA comments, and submit D2 for approval.
- Complete stabilization and removal of fluorine systems in the C-410/420 Complex.

- Continue stabilization of hydrogen fluoride and hydrogen systems in the C-410/420 Complex.
- Perform removal of prohibited items throughout C-410/420 Complex.
- Complete small diameter instrument line removal in C-410/420 Complex.
- Initiate removal of the heating, ventilation, and air-conditioning system, uranium hexafluoride; vacuum; glycol; alcohol; and ammonia systems in the C-410/420 Complex.

**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 PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management. Swift and Staley Mechanical Contractors, Inc., manages the administrative record and the Environmental Information Center.

**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. Use of ARRA funding will allow acceleration of DOE baseline schedules and SMP projected completion dates.

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

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

**Under review or review completed by regulatory agencies**

- D1 AM Addendum for the C-410/420 Complex is under review by EPA and Kentucky.

**Under development by DOE**

- RAWP for the C-410/420 Complex Demolition is being prepared.

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

Verbal comments were received on the D1 AM Addendum during a real time review and comment resolution meeting.

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

The requirements and time schedules are being met. Use of ARRA funding will allow acceleration of DOE Baseline schedules and Site Management Plan projected completion dates.

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

Routine updates on the subproject were provided to the Paducah Site CAB, FFA managers, local elected officials, congressional staff, and D&D Tri-Party Working Group. Media press releases were developed and issued for the ARRA-related work.

**VIII. Changes in relevant personnel:**

None.

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

None.

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**FEDERAL FACILITY AGREEMENT  
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**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/09–9/30/09**

**D&D OPERABLE UNIT: C-746-A East End Smelter and  
C-340 Metals Reduction Plant Complex**

The scope of this project includes demolition of the C-746-A East End Smelter and C-340 Uranium Metals Reduction Complex, assuming the use of 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 and C-746-A East End Smelter:**

- Paducah selected to receive funding under the ARRA to accelerate the ongoing removal action at the C-410 Complex, and to initiate the D&D of the C-340 Uranium Metals Reduction Complex and the C-746-A East End Smelter.
- Coordinated with the EPA and Kentucky to develop and gain approval of a regulatory strategy for accelerating the D&D activities under ARRA. Under this strategy, the ongoing C-410 removal action will be modified through development of an AM Addendum to include building demolition. The C-340 and C-746-A East End Smelter infrastructure removal will be performed as a non-CERCLA action, with the building demolition performed as a non-time-critical removal action.
- Submitted the D1 Removal Notification to EPA and Kentucky for implementation of the non-time-critical removal action for the demolition of the C-340 Complex and the C-746-A East End Smelter; received regulatory agency comments, and submitted the D2 Removal Notification for approval. Received Kentucky and EPA approval of the D2 Removal Notification.
- Submitted the D1 Engineering Evaluation/Cost Analysis (EE/CA) to EPA and Kentucky to evaluate the demolition for the C-340 Complex and the C-746-A East End Smelter.

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

- Receive regulatory agency comments on the D1 EE/CA for the C-340 Complex and the C-746-A East End Smelter, and submit the D2, if needed, for approval.
- Submit the D1 AM for the C-340 Complex and the C-746-A East End Smelter receive regulatory, agency comments, and submit the D2, if needed, for approval.
- Submit the D1 RAWPs for the C-340 Complex and the C-746-A East End Smelter, receive regulatory agency comments, and submit D2, if needed, for approval.



**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 PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management. Swift and Staley Mechanical Contractors, Inc., manages the administrative record and the Environmental Information Center.

**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. Use of ARRA funding will allow acceleration of DOE baseline schedules and SMP projected completion dates.

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

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

**Under review or review completed by regulatory agencies**

- D2 Removal Notification for the removal action at the C-340 Complex and the C-746-A East End Smelter was reviewed and approved by EPA and Kentucky.
- D1 EE/CA at the C-340 Complex and the C-746-A East End Smelter is under review by EPA and Kentucky.

**Under development by DOE**

- AM for the C-340 Complex and C-746-A East End Smelter.
- RAWP for the C-340 Complex D&D.
- RAWP for the C-746-A East End Smelter.

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

Comments are due for D1 EE/CA for the C-340 Complex and the C-746-A East End Smelter by November 8, 2009. EPA and Kentucky have requested 30-day extensions, until November 7, 2009, for the completion of comments.

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

The requirements and time schedules are being met. Use of ARRA funding will allow acceleration of DOE Baseline schedules and Site Management Plan projected completion dates.

A thirty day extension has been requested for the completion of the review of the D1 EE/CA for the C-340 Complex and the East End Smelter. Evaluation of the project schedules indicate this extension will not negatively impact field activities or the overall milestone for the D7D of C-340 and the East End Smelter. DOE and their contractors will continue to coordinate closely with the EPA and Kentucky to achieve the schedules for the ARRA Projects.

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

Routine updates on the subproject were provided to the Paducah Site CAB, FFA managers, local elected officials, Congressional staff, and D&D Tri-Party Working Group. Media press releases were developed and issued for the ARRA-related work.

**VIII. Changes in relevant personnel:**

None.

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

None.

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**FEDERAL FACILITY AGREEMENT  
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**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/09–9/30/09**

**COMPREHENSIVE SITEWIDE OPERABLE UNIT**

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

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Reporting Period: 4/1/09–9/30/09**

**ADDITIONAL REPORTING**

Presented in this operable unit 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, and CERCLA Waste Disposal Alternatives Evaluation.

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**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/09–9/30/09**

**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):**

Surface water and groundwater monitoring continued around the C-746-K Landfill and in Bayou Creek, as required by the WAGs 1 and 7 ROD. The results of the groundwater monitoring for this reporting period are not yet available. The results will be included in the next report.

**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 PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management. Swift and Staley Mechanical Contractors, Inc., manages the administrative record and the Environmental Information Center.

**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:**

None.

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

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

**FEDERAL FACILITY AGREEMENT  
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**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/09–9/30/09**

**PROJECT: Community Relations Plan**

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

Appendix A of the Community Relations Plan (CRP) has been modified to update the list of key contacts for the PGDP. Several changes to key contacts have occurred since the CRP was approved (e.g., FFA managers), and these changes are reflected in the modified appendix. In addition, the CRP has been revised to note the name change of the Kentucky Environmental and Public Protection Cabinet to Kentucky Energy and Environment Cabinet, update census information, and to provide a summary of public involvement for 2007 and 2008 (Appendix B).

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

- Revision 6 of the CRP will be provided to EPA and Kentucky for review and comment by November 2009.
- Obtain approval of Revision 6 of the CRP.

**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 PRS, as the DOE prime remediation contractor at the PGDP. Swift and Staley Mechanical Contractors, Inc., manages the administrative record and the Environmental Information Center.

**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:**

Revision 6 of the CRP has been under development during this reporting period.

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

Revision 6 of the CRP will be submitted to EPA and Kentucky for review and comment by November 2009. EPA and Kentucky have 90 days to review and provide comments and/or approve the document.

**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:**

Routine updates on the subproject were provided to the Paducah Site CAB, FFA managers, local elected officials, and congressional staff.

**VIII. Changes in relevant personnel:**

None.

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

Not applicable.

**FEDERAL FACILITY AGREEMENT  
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**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/09–9/30/09**

**PROJECT: Site Management Plan**

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

During this review period, the fiscal year (FY) 2010 SMP was under development. The FFA managers held scoping meetings on August 18–20, 2009 and September 16–17, 2009, to scope details associated with FY 2010 SMP.

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

Complete development of the FY 2010 D1 SMP and transmit to EPA and Kentucky no later than November 15, 2009, for review and approval.

**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 PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management. Swift and Staley Mechanical Contractors, Inc., manages the administrative record and the Environmental Information Center.

**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.

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

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

The D1 FY 2010 SMP has been under development during this reporting period.

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

- D1 FY 2010 SMP is due to EPA and Kentucky no later than November 15, 2009.
- Comments on the D1 FY 2010 SMP are due to DOE within 30 days from the document being issued or December 15, 2009.
- D2 FY 2010 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):**

During the scoping of the FY 2010 SMP, EPA requested DOE establish an enforceable outyear completion milestone for the Dissolved-Phase Plume (DPP) project. The request is being evaluated and discussions among the FFA managers are ongoing. Delays in reaching consensus on the path forward will delay approval of the SMP as DOE will need to submit a request for the new outyear enforceable milestone to DOE Headquarters for approval.

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

Routine updates on the subproject were provided to the Paducah Site CAB, FFA managers, local elected officials, and congressional staff.

**VIII. Changes in relevant personnel:**

None.

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

Not applicable.

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
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**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/09–9/30/09**

**PROJECT: CERCLA Waste Disposal Alternatives Evaluation**

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

- DOE transmitted for Kentucky and EPA review and comment a document originally prepared in 2004 that provided the results of a seismic investigation on-site at the PGDP and an off-site study at a location in Illinois. The results contained in that report provide valuable information that will be used to address seismic considerations when evaluating the on-site alternative in the RI/FS Report. DOE also submitted the D1 CERCLA Waste Disposal Alternatives Evaluation RI/FS Work Plan to Kentucky and EPA on May 15, 2009. The RI/FS Work Plan describes how the RI/FS will be implemented, summarizes the data availability and data gaps, and provides a description of the waste disposal alternatives that are planned to be evaluated.
- A meeting to discuss seismic issues with Kentucky and EPA was held June 25, 2009, in Oak Ridge, TN. The meeting resulted in agreements on several seismic issues that were identified in the RI/FS Work Plan. These agreements will be included in the RI/FS Report. Comments on the D1 RI/FS Work Plan were received from Kentucky on August 14, 2009, and September 1, 2009, and comments from EPA were received on August 15, 2009.
- DOE conducted siting discussions with Kentucky and EPA on August 5, 2009, and August 11, 2009, to discuss the proposed approach and screening criteria. A proposed site screening methodology was included in the RI/FS Work Plan and is associated with the on-site disposal alternative. Feedback from Kentucky and EPA was received and incorporated into the site screening process.
- DOE is preparing responses to Kentucky and EPA comments on the RI/FS Work Plan and will revise and issue a D2 RI/FS WP as per agreements reached during a comment resolution meeting with Kentucky and EPA.
- Progress also has been made preparing a draft RI/FS Report. The RI/FS Report is being prepared as described in the RI/FS Work Plan and through discussions with Kentucky and EPA on specific topics (seismic, siting criteria) that are related primarily with the on-site waste disposal alternative.

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

A third public involvement meeting will be held to inform the local community on the progress and to solicit input for the waste disposal evaluation. The final D2 CERCLA Waste Evaluation RI/FS Work Plan will be issued to EPA and Kentucky for review and approval. The D1 RI/FS Report will be submitted to Kentucky and EPA for review in the next reporting period.

**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 PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management. Swift and Staley Mechanical Contractors, Inc., manages the administrative record and the Environmental Information Center.

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

Following submittal of the RI/FS Work Plan, the standard FFA review and comment periods for primary documents are expected to apply.

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

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

- D1 RI/FS Work Plan was reviewed and comments provided by EPA and Kentucky.
- D0 CERCLA Waste Evaluation RI/FS Report was in preparation.

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

Comments from Kentucky and EPA are due 90 days after receipt of the D1 RI/FS Work Plan. Per the FFA, DOE is allowed 60 days to respond to comments and issue a D2 RI/FS Work Plan.

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

There are no FFA dates that are being impacted, but the project is behind the baseline schedule.

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

CAB briefings occur regularly during monthly meetings and working sessions through the various stages of the project. As part of the RI/FS activities, DOE conducted a Seismic Investigation Workshop with Kentucky and EPA on June 25, 2009. Additionally, project buildings have been provided to local elected officials and congressional staff.

**VIII. Changes in relevant personnel:**

None.

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

Not applicable.

## **APPENDIX A**

### **NORTHEAST AND NORTHWEST PLUME WATER WITHDRAWAL REPORTS**



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**TABLE A.1. NORTHEAST PLUME CONTAINMENT SYSTEM  
WATER WITHDRAWAL REPORTING FORM (gallons of water pumped)**

Day	April 2009	May 2009	June 2009	July 2009	August 2009	September 2009
1	243,000	176,767	0	244,920	0	267,800
2	243,100	176,767	0	244,920	0	170,700
3	243,000	176,767	0	244,920	0	326,300
4	243,000	141,600	0	244,920	0	71,375
5	243,000	0	0	244,920	0	71,375
6	252,000	0	0	254,500	170,100	71,375
7	241,600	0	0	117,800	228,067	71,375
8	235,300	0	0	40,100	228,067	245,300
9	49,400	0	0	0	228,067	282,400
10	49,400	0	0	0	280,000	276,500
11	49,400	0	0	0	244,600	185,500
12	49,400	0	245,767	0	242,100	185,500
13	239,000	0	245,767	0	244,000	185,500
14	241,600	0	245,767	0	253,867	280,700
15	239,100	0	237,300	0	253,867	254,500
16	251,400	0	130,400	0	253,867	252,000
17	242,667	0	235,400	0	251,300	268,900
18	242,667	0	0	0	246,700	49,233
19	242,667	0	240,433	0	243,700	49,233
20	243,000	0	240,433	0	299,800	49,233
21	225,700	0	240,433	0	236,800	241,600
22	257,200	0	253,400	0	236,800	111,000
23	244,700	0	236,100	0	236,800	138,400
24	164,900	0	239,500	0	247,100	252,800
25	164,900	0	267,500	0	244,500	245,600
26	164,900	0	236,433	0	41,600	245,600
27	102,600	0	236,433	0	106,500	245,600
28	230,200	0	236,433	0	21,800	251,400
29	243,800	0	240,100	0	21,800	245,500
30	247,800	0	102,200	0	21,800	244,500
31	na	0	na	0	259,500	na
Monthly Total	6,130,400	671,900	4,109,800	1,637,000	5,343,100	5,836,800
*Daily Average	204,347	167,975	228,322	204,625	205,504	194,560
Days water pumped	30	4	18	8	26	30

\*Value based on number of days water was pumped

**TABLE A.2. NORTHWEST PLUME GROUNDWATER SYSTEM  
WATER WITHDRAWAL REPORTING FORM**

Day	April 2009	May 2009	June 2009	July 2009	August 2009	September 2009
1	265,270	285,840	297,890	311,738	310,810	303,980
2	287,090	285,840	296,990	311,738	310,810	307,050
3	283,117	285,840	0	311,738	263,380	365,080
4	283,117	272,650	227,700	311,738	263,380	278,963
5	283,117	296,030	313,943	311,738	272,200	278,963
6	281,500	293,300	313,943	296,020	356,080	278,963
7	274,050	304,630	313,943	299,310	301,623	278,963
8	274,870	232,627	192,620	299,740	301,623	286,520
9	54,373	232,627	309,660	306,150	301,623	213,320
10	54,373	232,627	312,430	306,757	310,600	315,350
11	54,373	298,350	320,600	306,757	313,650	307,713
12	54,373	297,650	313,683	306,757	304,010	307,713
13	262,610	305,090	313,683	321,110	305,800	307,713
14	263,800	308,250	313,683	275,700	104,293	304,060
15	274,640	302,293	312,280	245,880	104,293	297,250
16	291,230	302,293	305,840	312,100	104,293	276,200
17	270,973	302,293	310,860	309,330	307,910	314,180
18	270,973	301,830	324,970	309,330	306,540	307,153
19	270,973	294,640	306,960	309,330	305,150	307,153
20	304,400	214,360	306,960	304,780	334,420	307,153
21	282,100	311,670	306,960	302,900	308,983	289,960
22	308,310	296,195	301,800	315,570	308,983	297,380
23	300,470	296,195	281,050	302,420	308,983	301,460
24	301,370	296,195	303,920	198,673	304,880	325,280
25	301,370	296,195	337,400	198,673	308,190	285,120
26	301,370	311,000	302,583	198,673	298,450	285,120
27	289,980	314,860	302,583	260,150	323,730	285,120
28	294,940	312,680	302,583	296,210	261,537	366,560
29	279,570	314,607	303,740	294,840	261,537	248,310
30	228,200	314,607	277,130	266,710	261,537	313,170
31	na	314,607	na	310,810	307,330	na
Monthly Total	7,546,900	9,027,870	8,728,390	9,013,370	8,736,630	8,940,920
*Daily Average	251,563	291,222	300,979	290,754	281,827	298,031
Days water pumped	30	31	29	31	31	30

\*Value based on number of days water was pumped

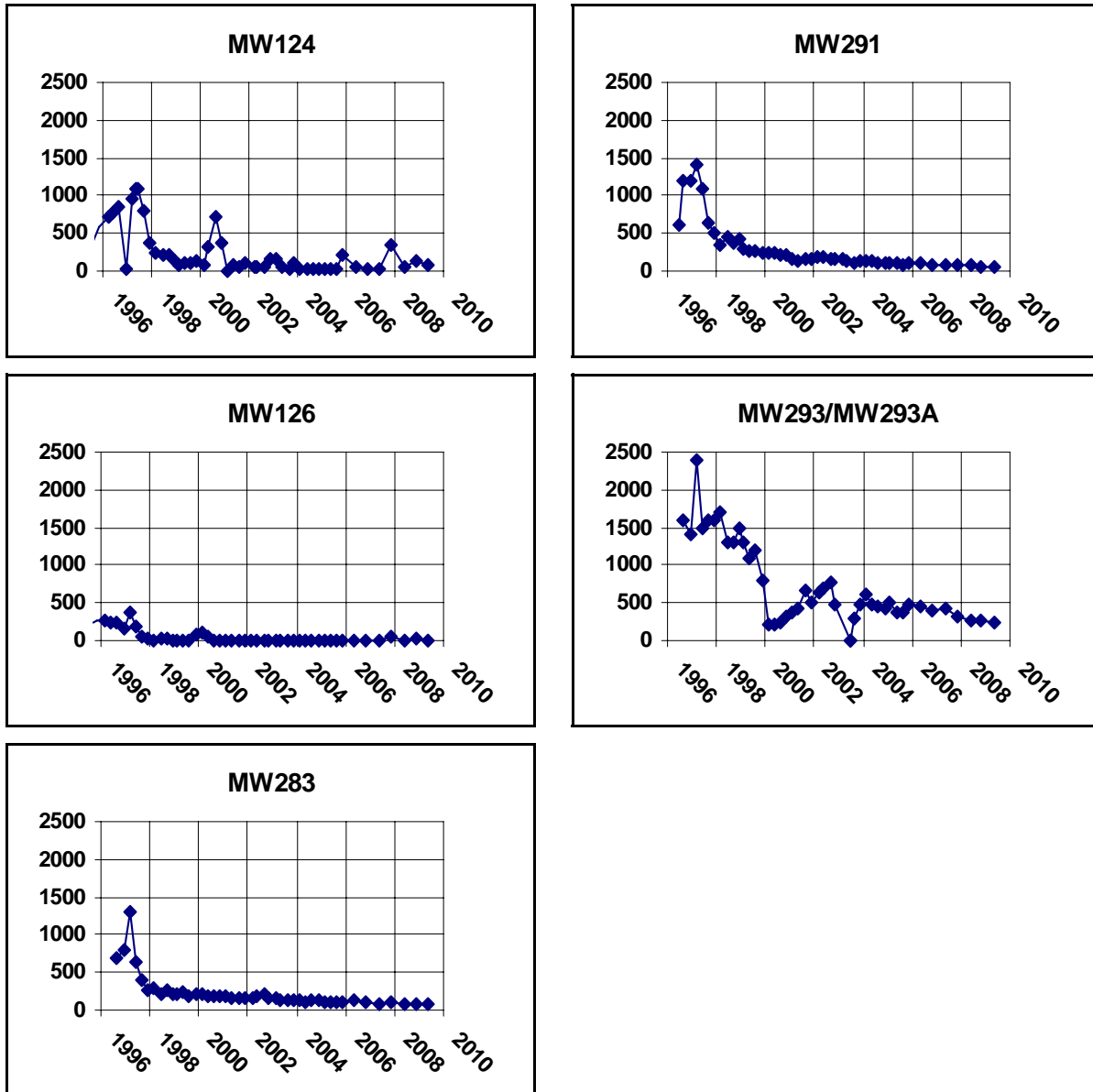
## **APPENDIX B**

### **NORTHEAST PLUME AND NORTHWEST PLUME GRAPHS AND MAPS FIGURES 1 THROUGH 7**

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**Figure B.1. Northeast Plume Containment System Influent TCE Concentration**

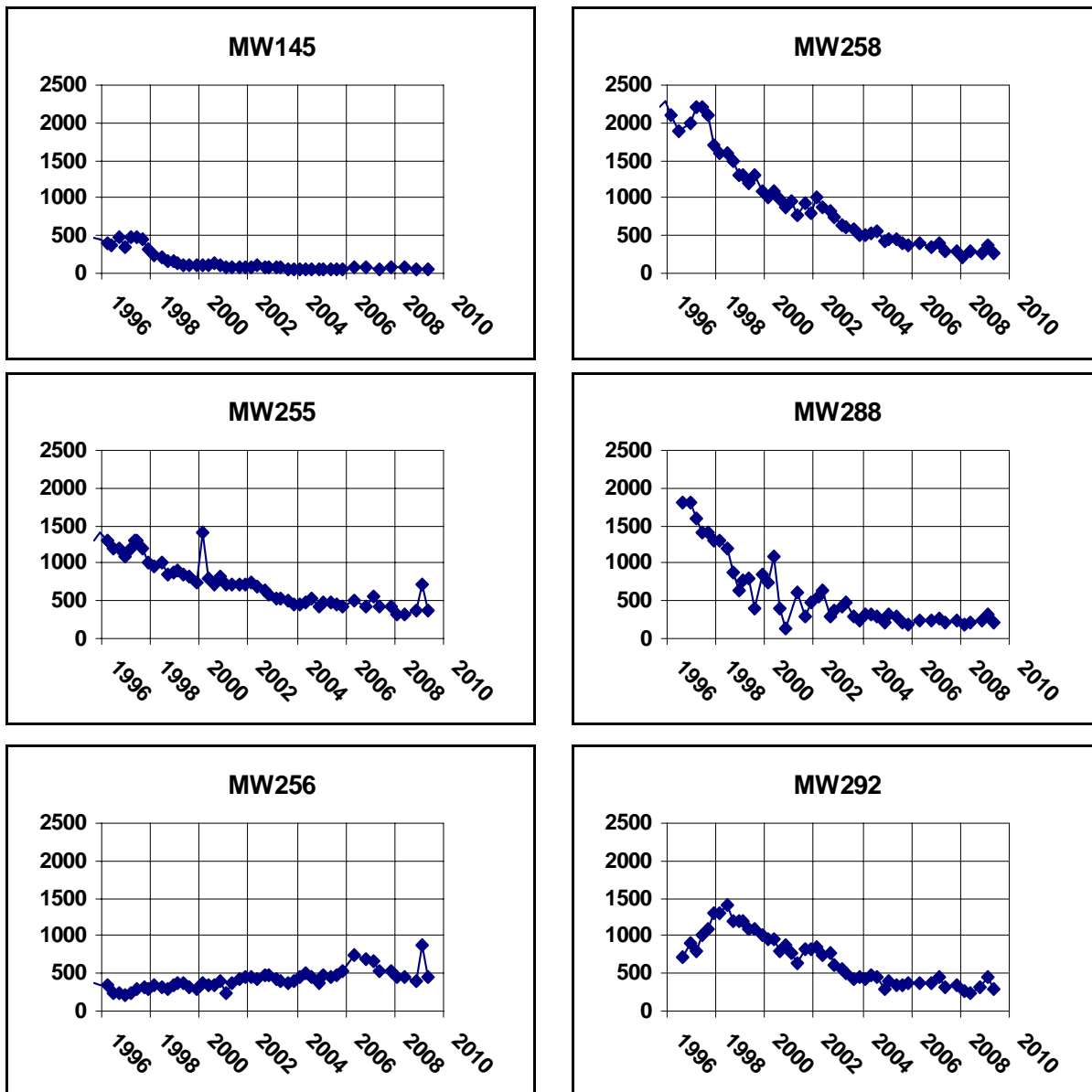
TCE (ppb)



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

Figure B.2a. Northeast Plume—TCE Concentrations in Downgradient Wells

## TCE (ppb)

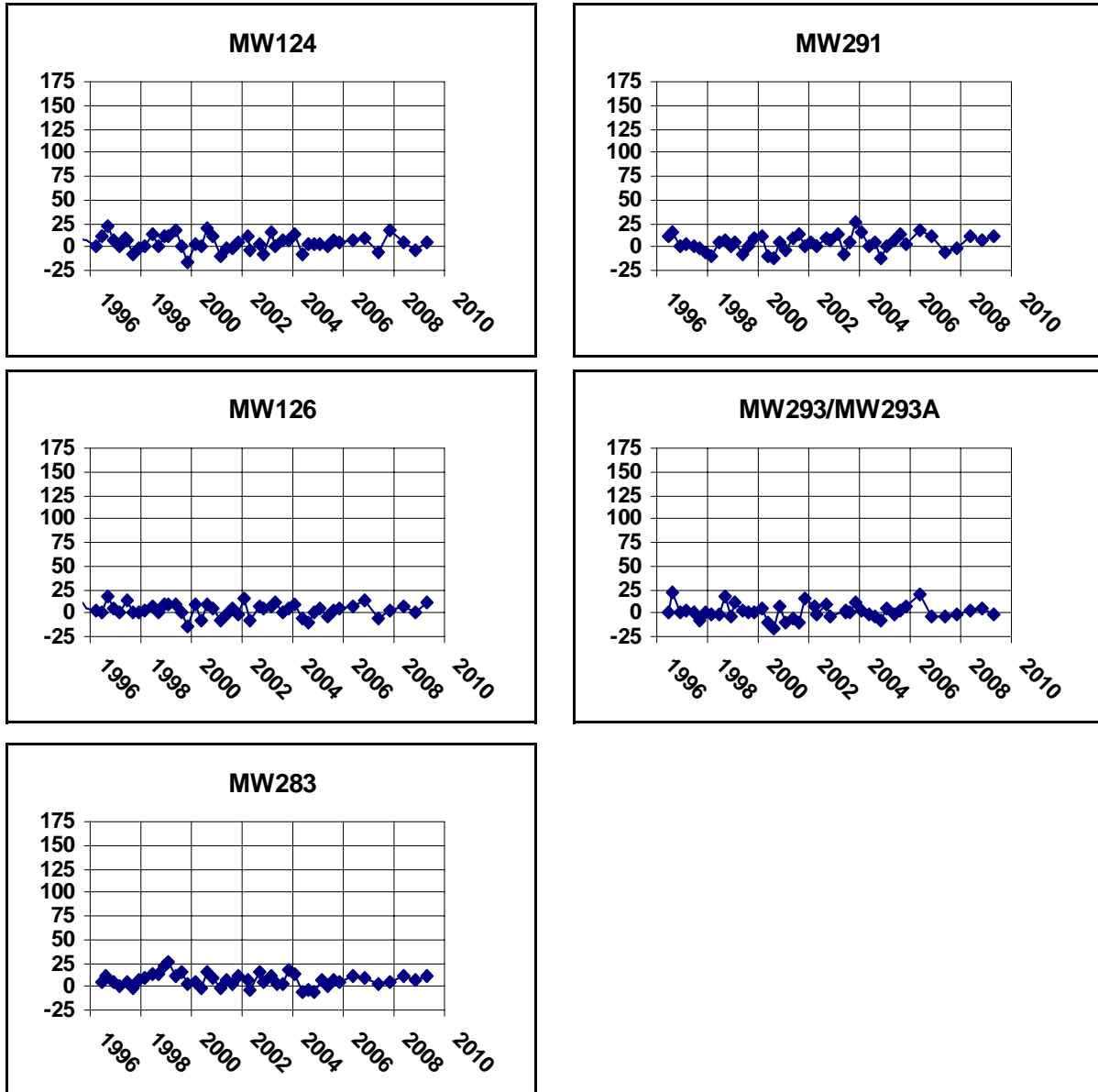


NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.2b. Northeast Plume—TCE Concentrations in Upgradient Wells



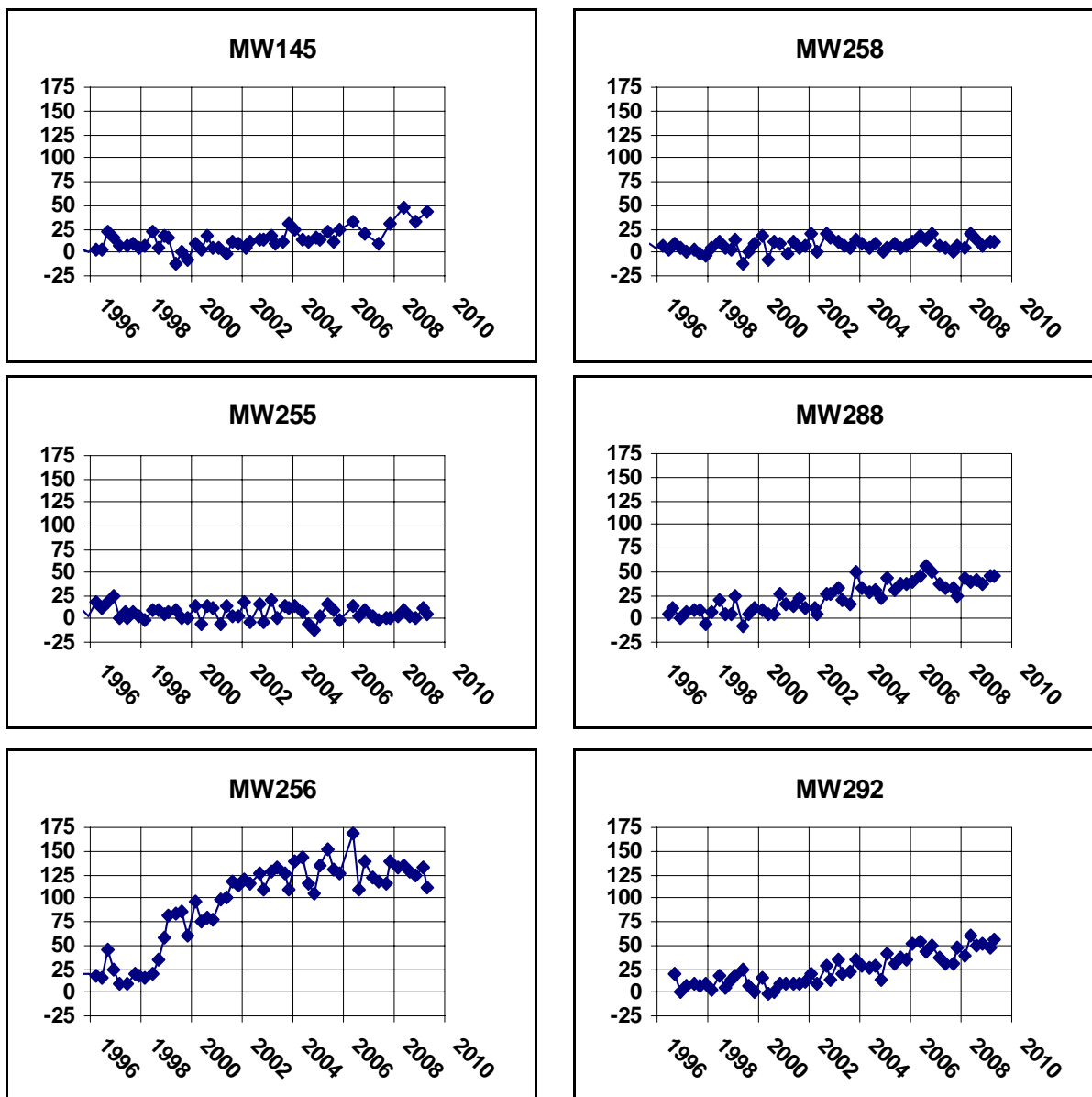
## Tc-99 (pCi/L)



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

Figure B.2c. Northeast Plume—Tc-99 Activities in Downgradient Wells

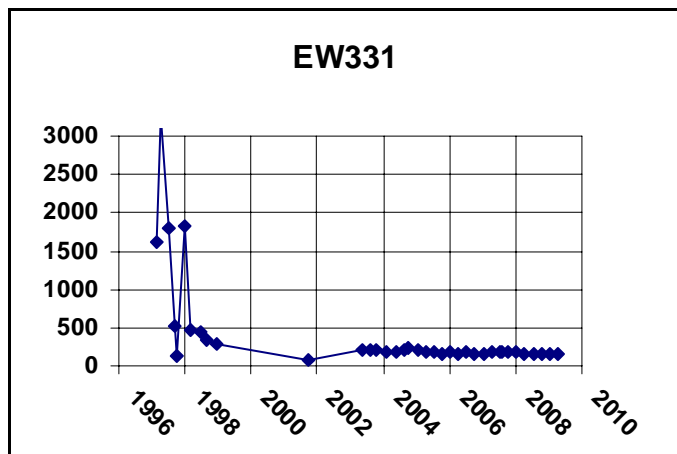
# Tc-99 (pCi/L)



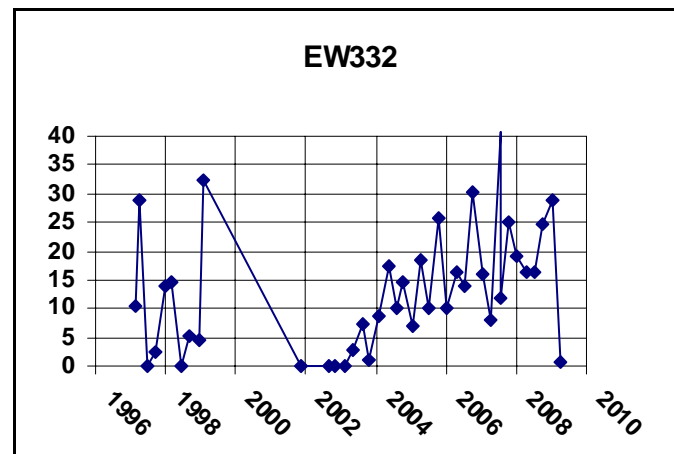
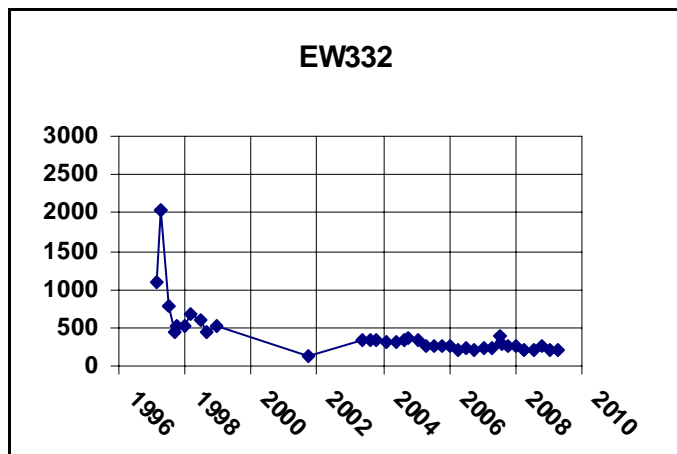
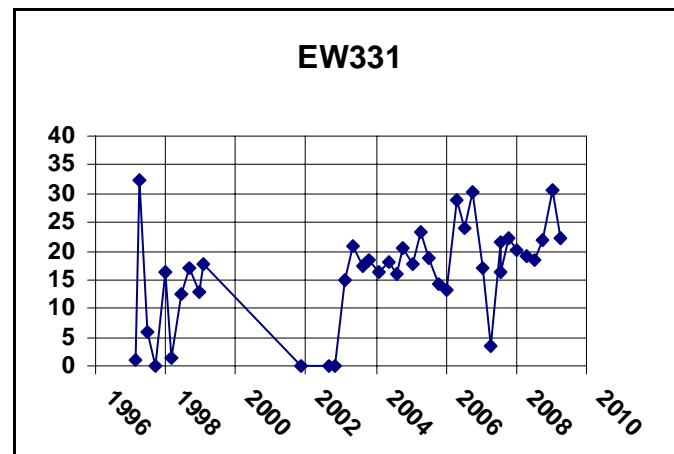
NOTE: Data rejected by validation or assessment have not been graphed.

Figure B.2d. Northeast Plume—Tc-99 Activities in Upgradient Wells

TCE (ppb)



Tc-99 (pCi/L)



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

Figure B.2e. Northeast Plume—TCE Concentrations and Tc-99 Activities in Extraction Wells

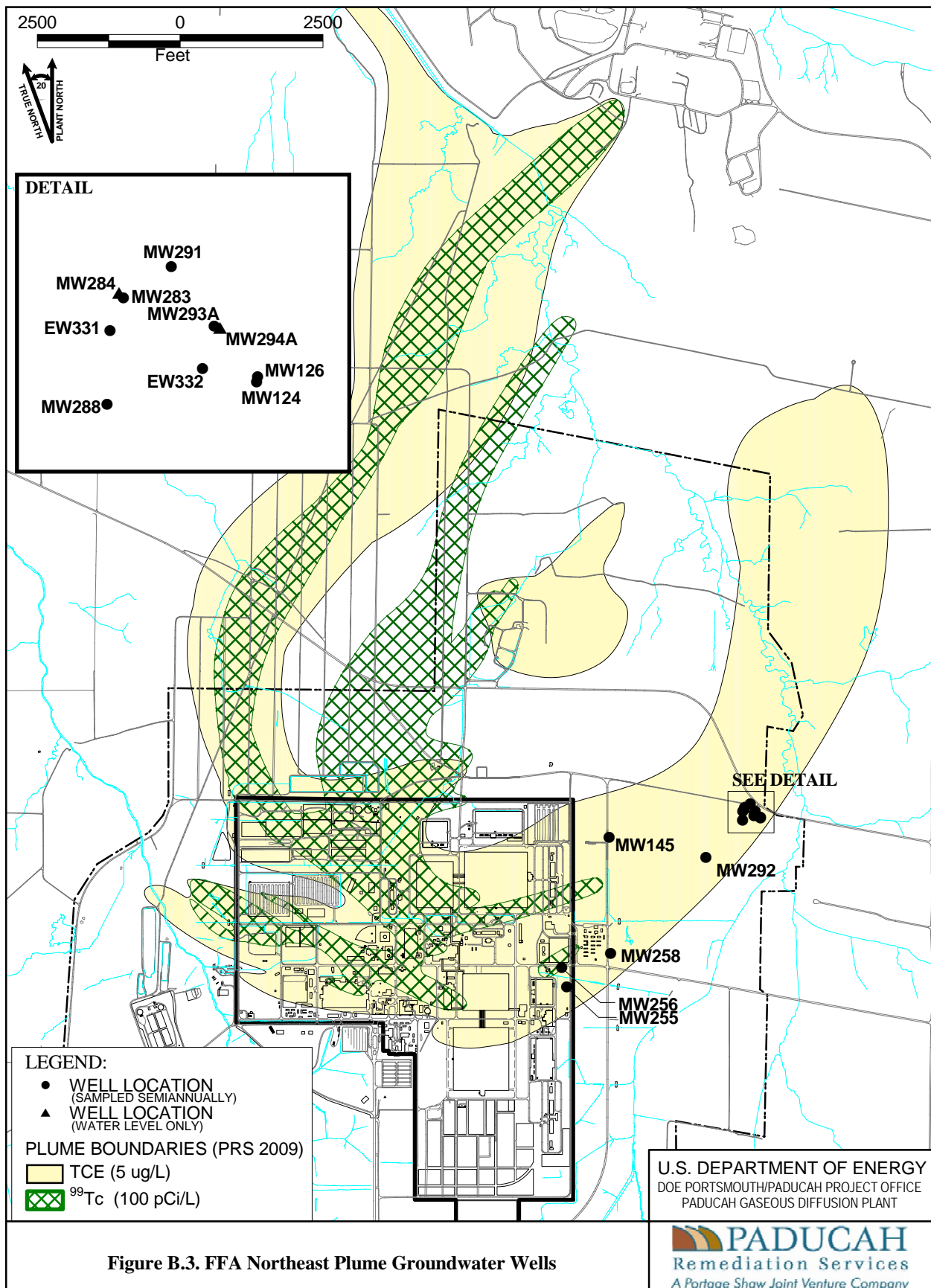
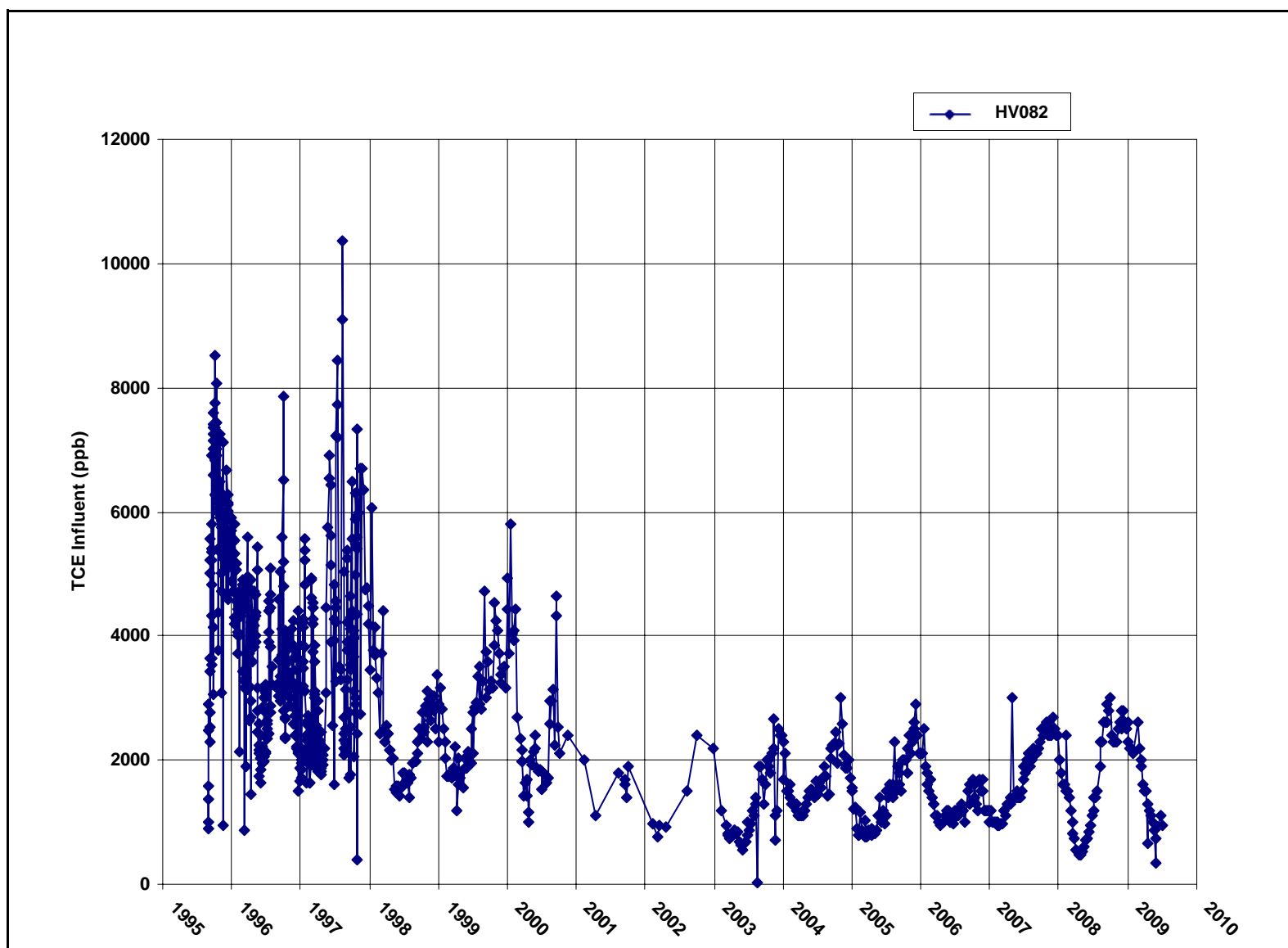


Figure B.3. FFA Northeast Plume Groundwater Wells

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

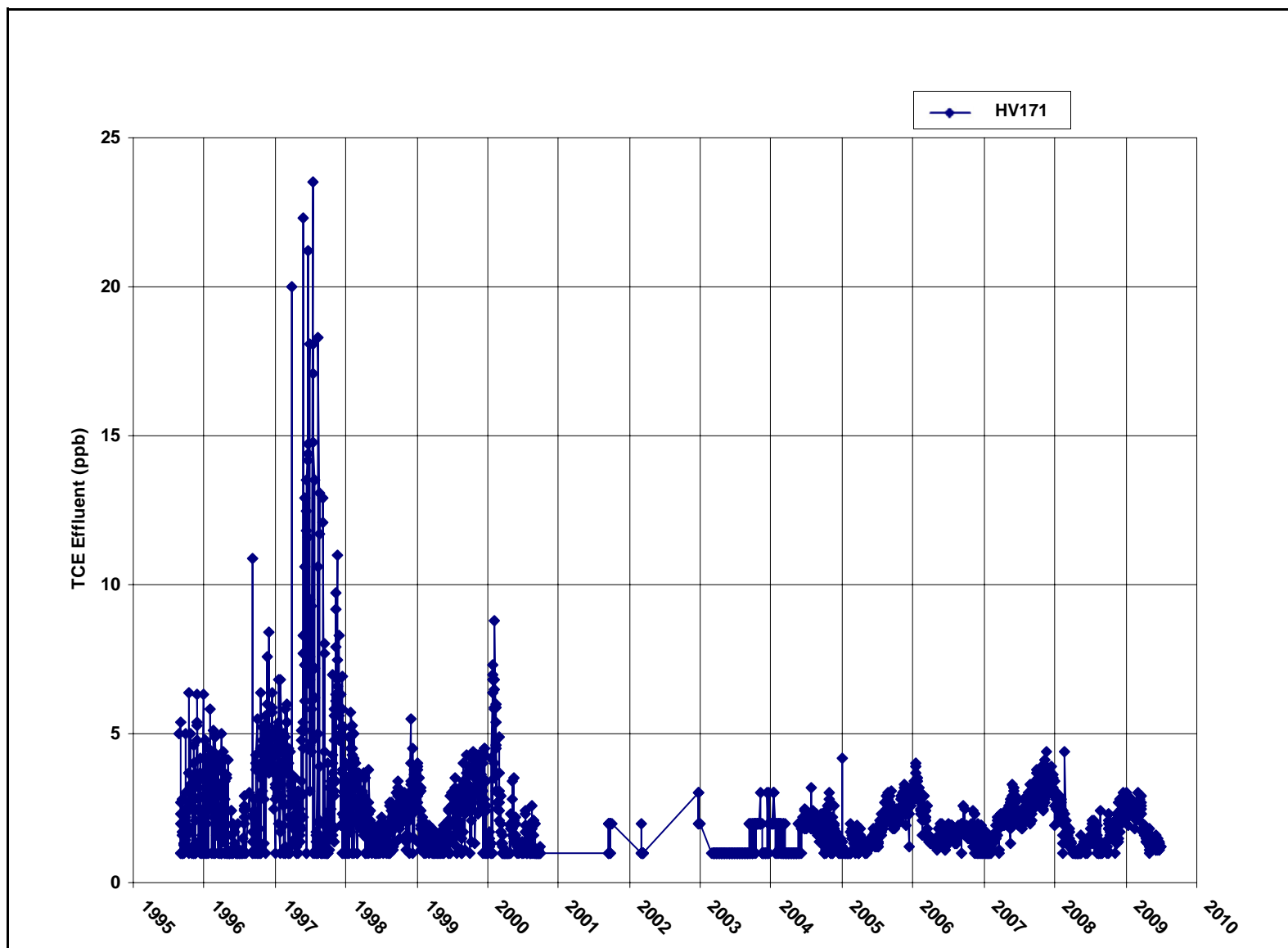
**PADUCAH**  
Remediation Services  
A Portage Shaw Joint Venture Company

Figure No. c5ac90005sk016r3.apr  
DATE 08-31-09



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

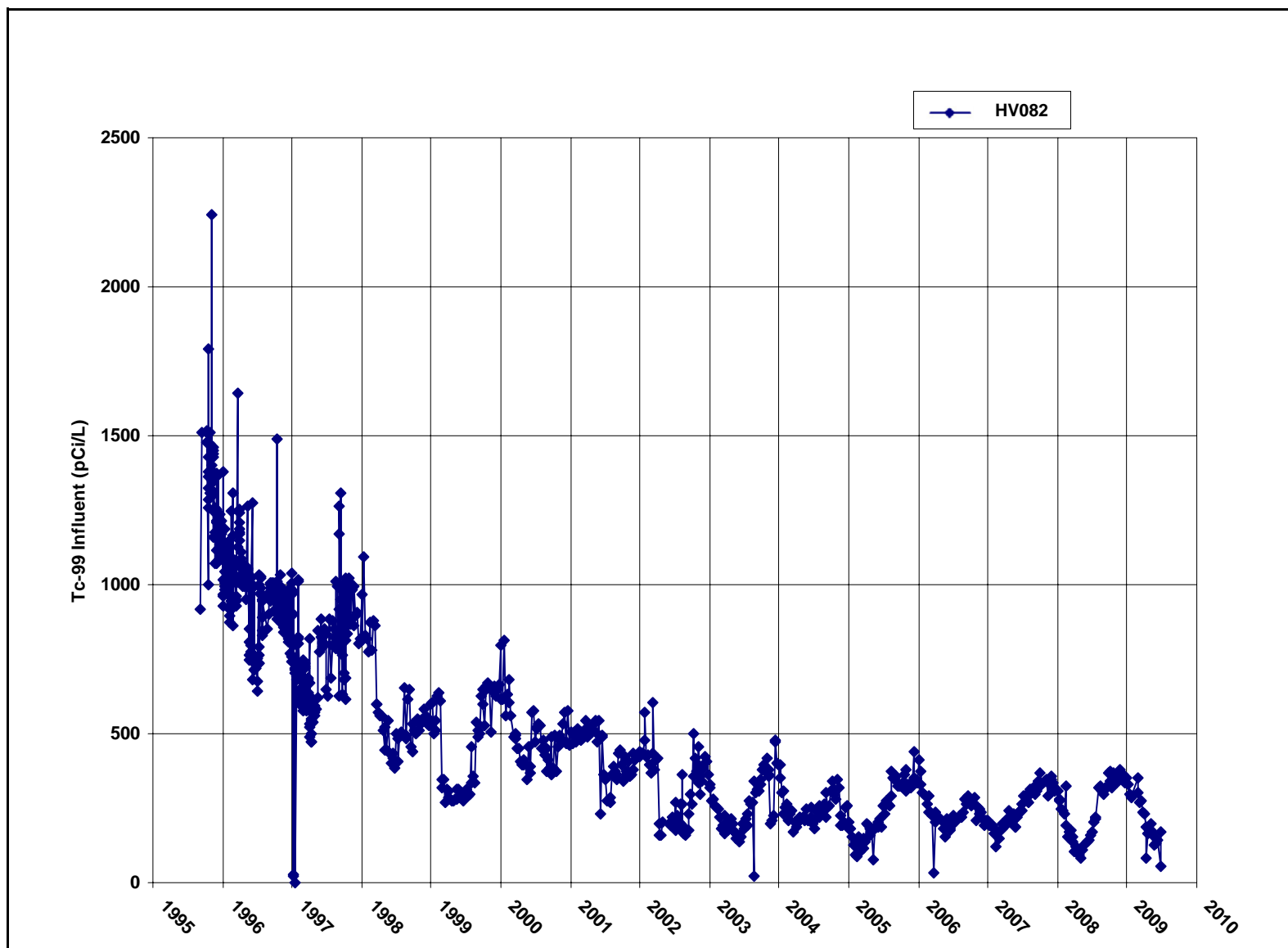
**Figure B.4a. Northwest Plume Groundwater System Influent TCE Concentrations**



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

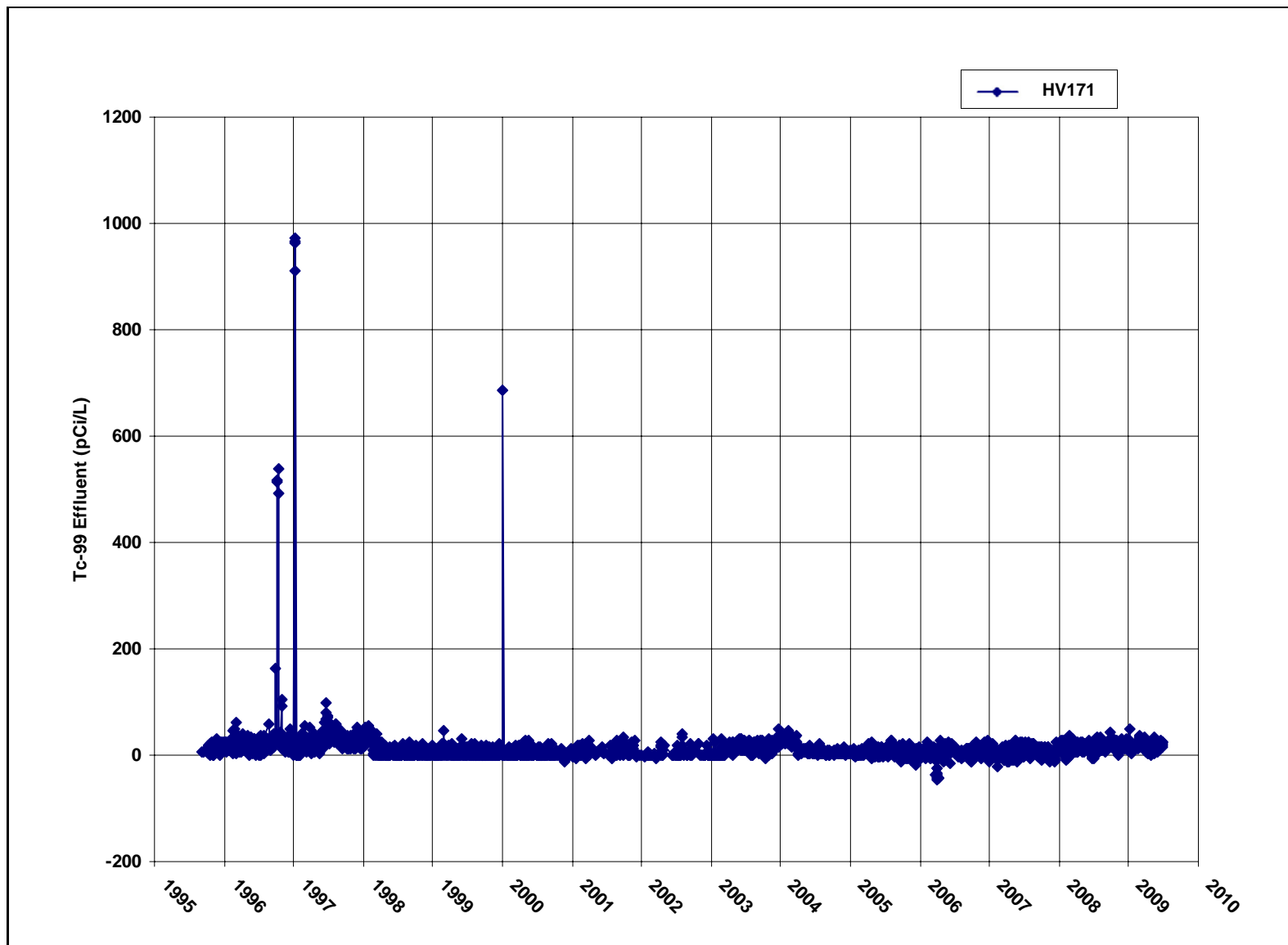
Sample result of 280 ug/L collected 9/6/1995 not plotted.

**Figure B.4b. Northwest Plume Groundwater System Effluent TCE Concentrations**



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

Figure B.5a. Northwest Plume Groundwater System Influent Tc-99 Activity

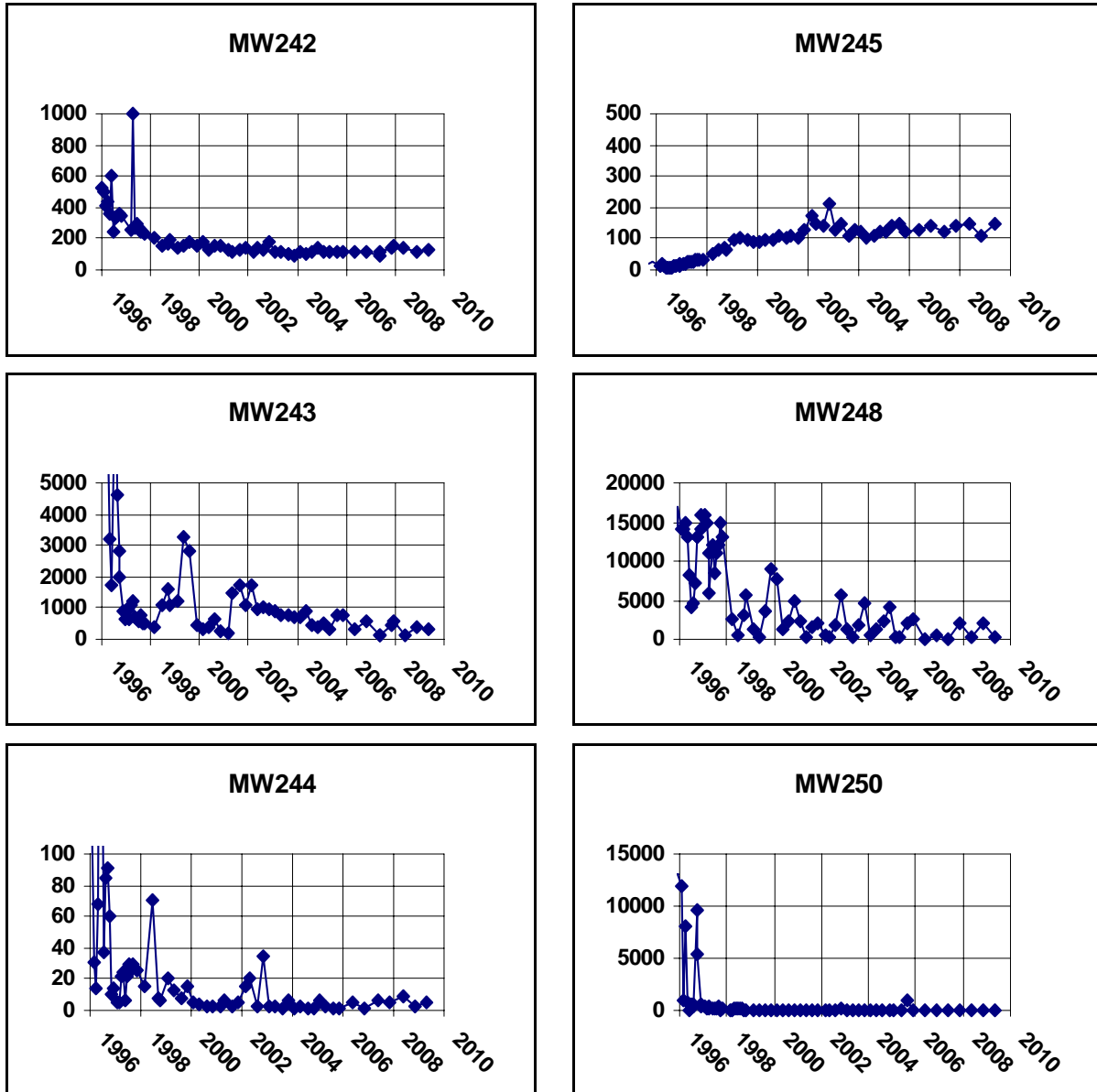


NOTE: Data rejected by validation or assessment have not been graphed.

**Figure B.5b. Northwest Plume Groundwater System Effluent Tc-99 Activity**



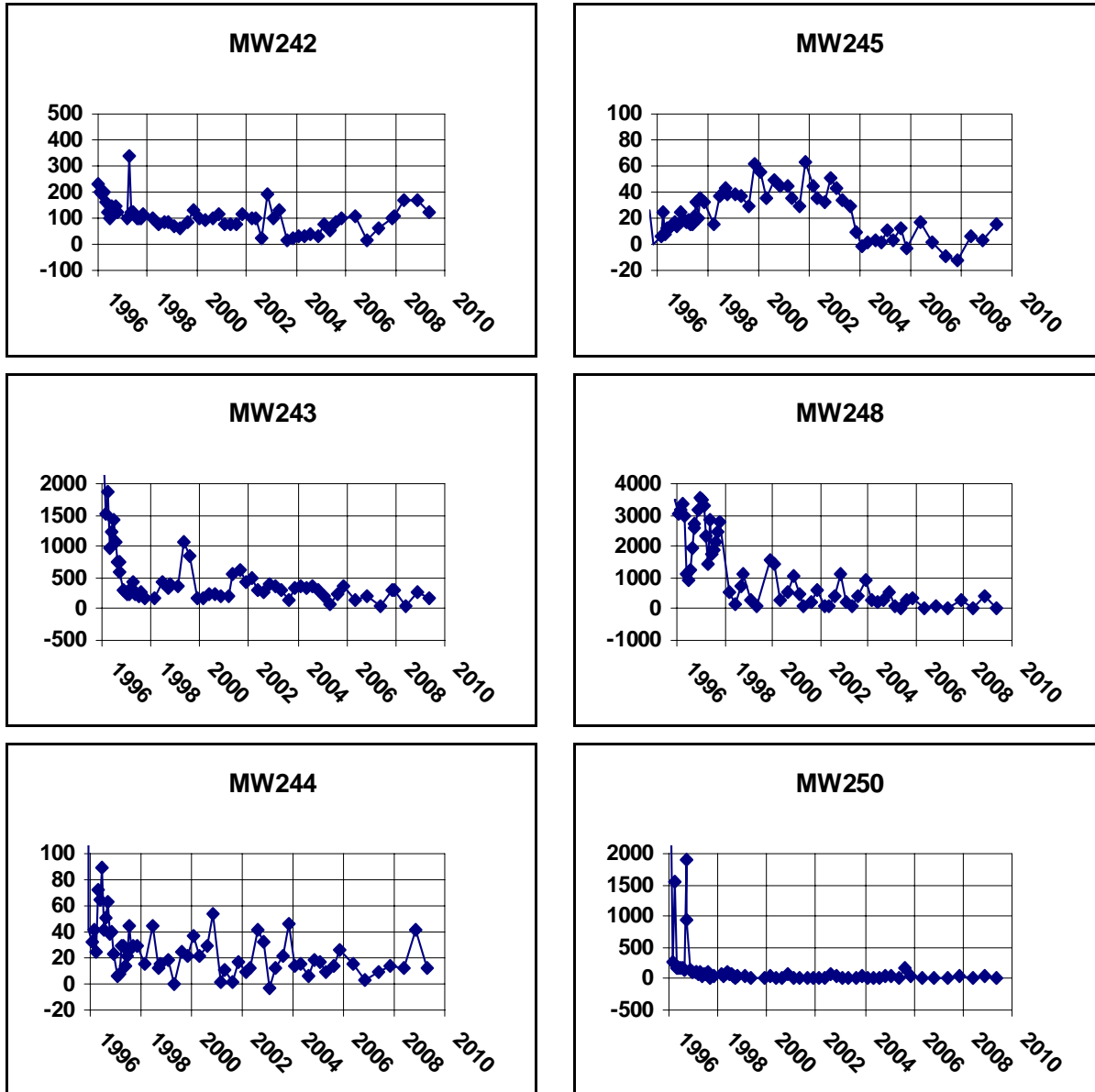
# TCE (ppb)



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

Figure B.6a. Northwest Plume—South Well Field TCE Concentrations

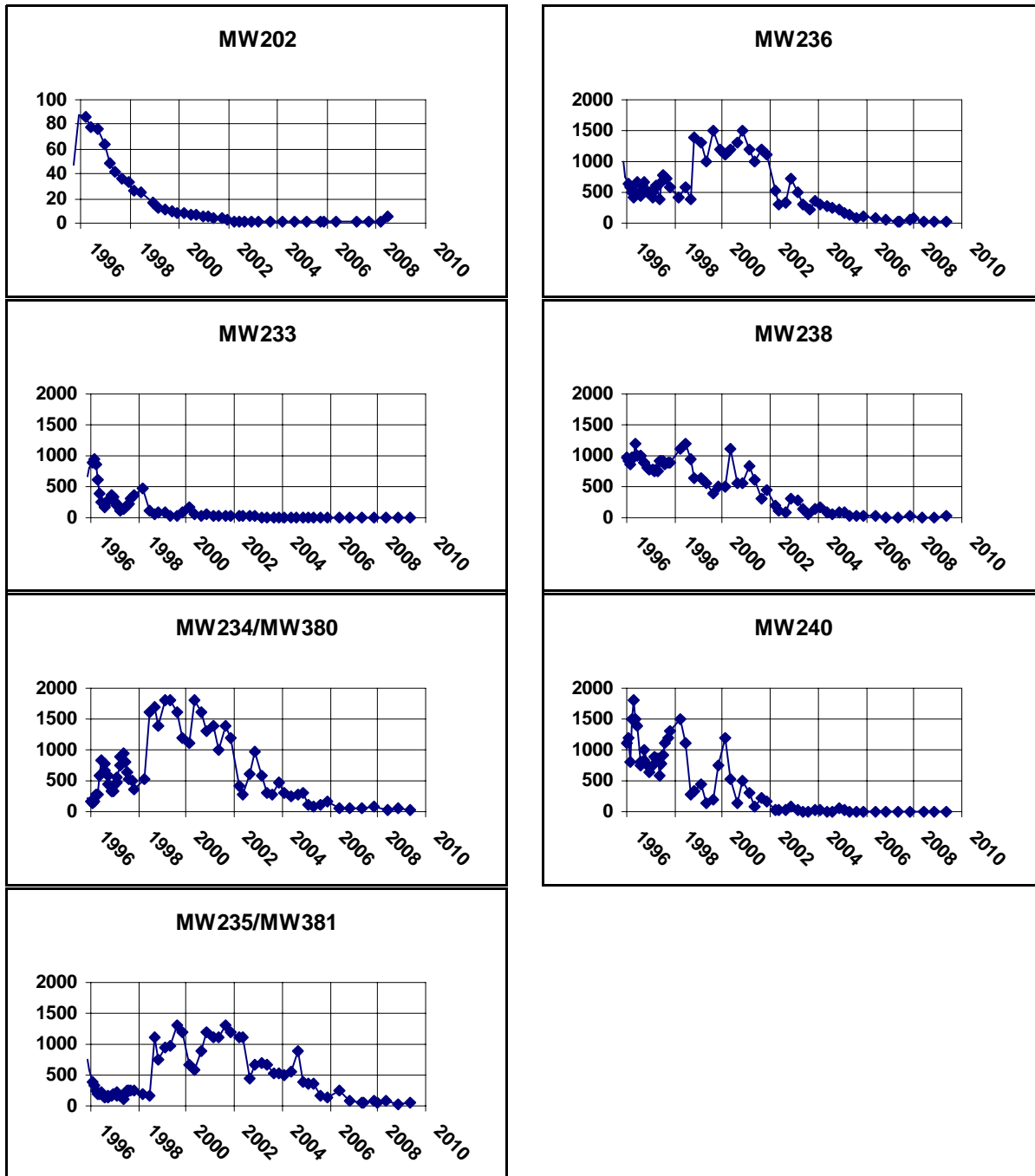
# Tc-99 (pCi/L)



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

Figure B.6b. Northwest Plume—South Well Field Tc-99 Activities

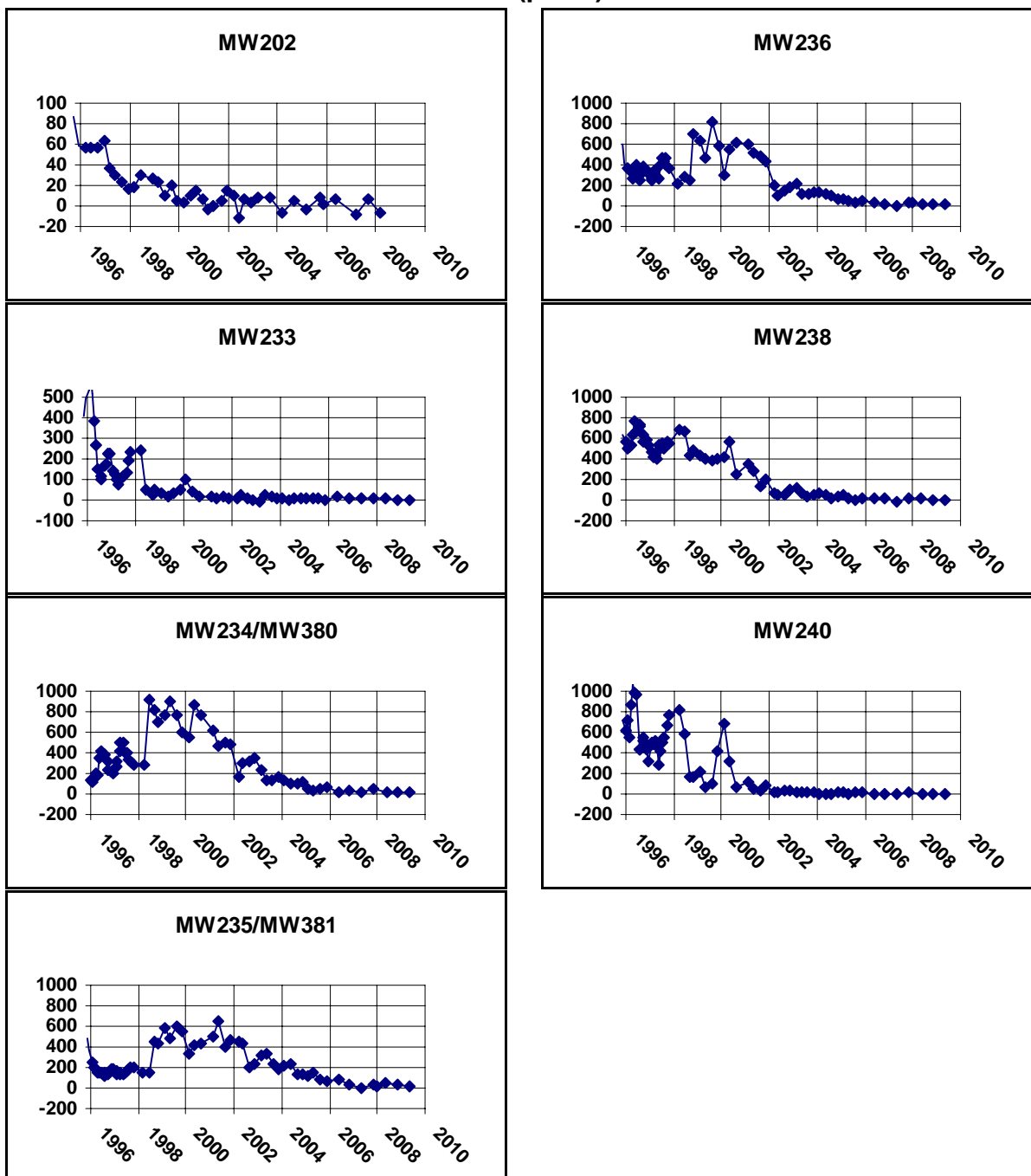
# TCE (ppb)



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

Figure B.6c. Northwest Plume—North Well Field TCE Concentrations

# Tc-99 (pCi/L)



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

Figure B.6d. Northwest Plume—North Well Field Tc-99 Activities

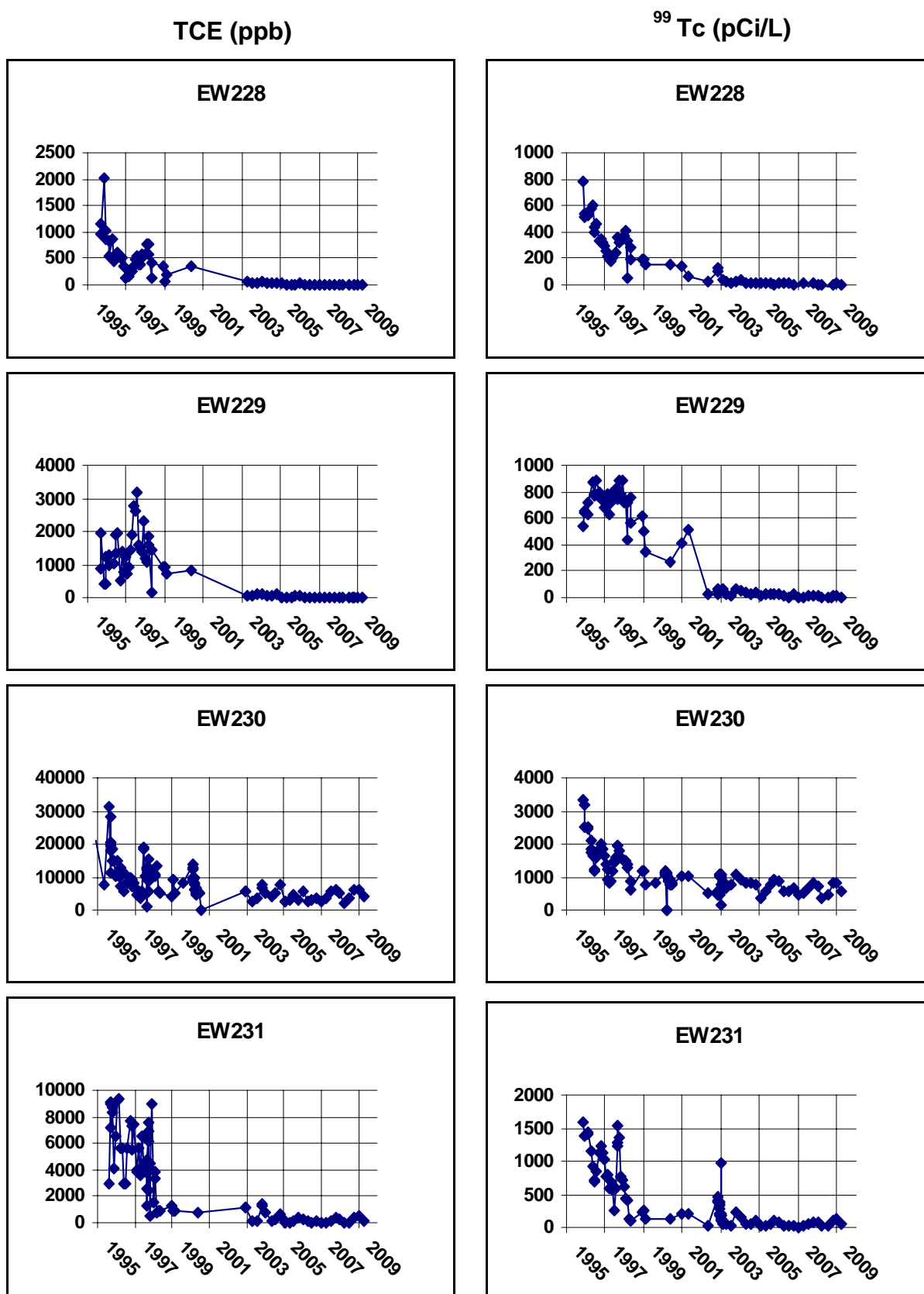


Figure B.6e. Northwest Plume—TCE Concentrations and Tc-99 Activities in Extraction Wells

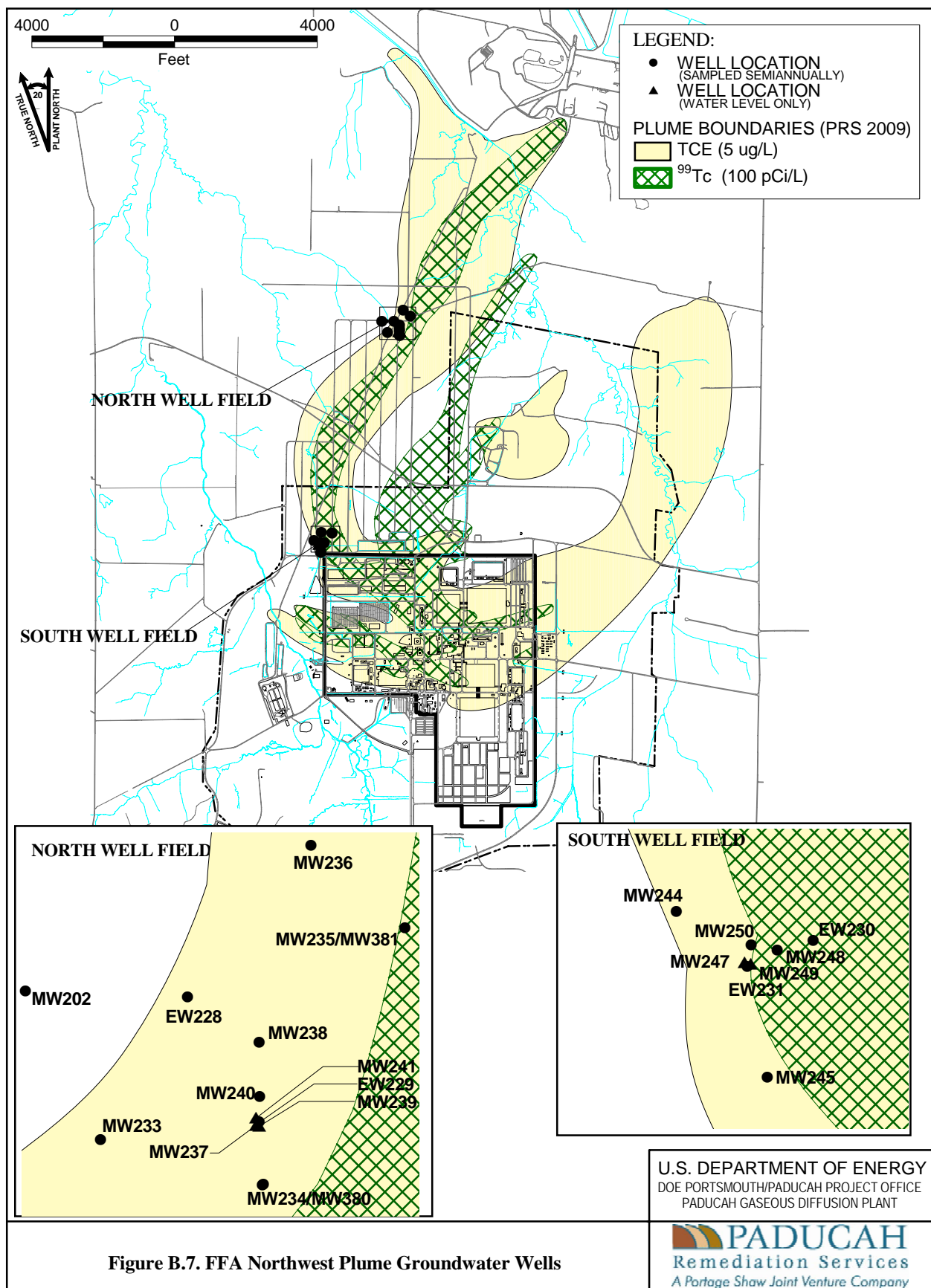


Figure No. c5ac90005sk016r3.apr  
DATE 08-31-09

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## **APPENDIX C**

### **C-746-K LANDFILL DATA**



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C-746-K Landfill groundwater data are not available at the time of preparation of this report. The data will be included in the next report.

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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 CY2009

Document Status	Date On Document	Document Id	Title	Author Affiliation	To Affiliation	Protected Information	Object Name
ARFBGOU	11/23/08	PRS/I-1011	RE: COMMONWEALTH OF KENTUCKY'S COMMENTS FOR THE D1 REMEDIAL INVESTIGATION REPORT FOR THE BURIAL GROUNDS OPERABLE UNIT AT PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-0030&D1) PADUCAH, MCCRACKEN COUNTY, KENTUCKY KY8-890-008-982	KDEP	DOE-PPPO	No	I-05210-0018
ARFBGOU	04/08/09	PPPO-02-395-09	TRANSMITTAL OF THE D1/R1 REMEDIAL INVESTIGATION REPORT FOR THE BURIAL GROUNDS OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0030&D1/R1)	DOE-PPPO	USEPA-IV	No	I-05210-0019
ARFCC	05/15/09	DOE/LX/07-0099&D1	TRANSMITTAL OF THE D1 WORK PLAN FOR CERCLA WASTE DISPOSAL ALTERNATIVE EVALUATION REMEDIAL INVESTIGATION/FEASIBILITY STUDY AT PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0099&D1)	DOE-PPPO	USEPA-IV	No	I-05309-0002
ARFREF	07/31/08	PRS/I-0885	RE: APPROVAL OF THE FY08 SITE MANAGEMENT PLAN FOR THE PADUCAH GASEOUS DIFFUSION PLANT (PGDP) DOE/LX/07-0105&D2	USEPA-IV	DOE-PPPO	No	I-02001-0652
ARFREF	01/26/09	PRS/I-1055	RE: EPA COMMENTS ON THE FIVE-YEAR REVIEW FOR REMEDIAL ACTIONS AT THE PADUCAH GASEOUS DIFFUSION PLANT (PGDP), KENTUCKY (DOE/LX/07-0117&D1)	USEPA-IV	DOE-PPPO	No	I-02001-0651
ARFREF	04/06/09	DOE/LX/07-0185&D2/R1	RE: [KDEP] APPROVAL OF THE 2009 SITE MANAGEMENT PLAN ANNUAL REVISION (DOE/LX/07-0185&D2/R1)	KDEP	DOE-PPPO	No	I-02001-0653
ARFREF	04/20/09	PPPO-02-410-09	U.S. DEPARTMENT OF ENERGY PADUCAH GASEOUS DIFFUSION PLANT FEDERAL FACILITY AGREEMENT SEMI ANNUAL PROGRESS REPORT FOR THE FIRST HALF OF FISCAL YEAR 2009, PADUCAH, KENTUCKY	DOE-PPPO	USEPA-IV	No	I-02001-0654
ARFREF	05/01/09	CMP-L-003	FEEDBACK SUMMARY FROM THE PUBLIC INFORMATION EXCHANGE HELD IN MARCH 2009	PRS	DOE-PPPO	No	A-00010-1243
ARFSOU	11/20/08	PRS/I-1007	RE: EXTENSION REQUEST FOR THE ACTION MEMORANDUM FOR THE SOILS OPERABLE UNIT INACTIVE FACILITIES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0121&D1)	USEPA-IV	DOE-PPPO	No	I-04913-0010
ARFSOU	11/24/08	PRS/I-1009	RE: [KDEP APPROVES] ACTION MEMORANDUM FOR THE SOILS OPERABLE UNIT INACTIVE FACILITIES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0121&D1) PADUCAH, MCCRACKEN COUNTY, KENTUCKY KY8-890-008-982	KDEP	DOE-PPPO	No	I-04913-0011
ARFSOU	04/17/09	PPPO-02-422-09	SCHEDULE EXTENSION REQUEST FOR SUBMITTAL OF THE D2/R1 ACTION MEMORANDUM FOR THE SOILS OPERABLE UNIT INACTIVE FACILITIES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0121&D2/R1)	DOE-PPPO	USEPA-IV	No	I-04913-0012

## Paducah Documents Added to the Administrative Record Files Second Quarter CY2009

Document Status	Date On Document	Document Id	Title	Author Affiliation	To Affiliation	Protected Information	Object Name
ARFSOU	04/27/09	DOE/LX/07-0121&D2/R1	[EPA GRANTS] RE: PROPOSED EXTENSION REQUEST FOR THE SUBMITTAL OF THE D2/R1 ACTION MEMORANDUM FOR SOILS OPERABLE UNIT INACTIVE FACILITIES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0121&D2/R1)	USEPA-IV	DOE-PPPO	No	I-04913-0013
ARFSOU	04/30/09	PPPO-02-432-09	TRANSMITTAL OF THE ACTION MEMORANDUM FOR THE SOILS OPERABLE UNIT INACTIVE FACILITIES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0121&D2/R1)	DOE-PPPO	USEPA-IV	No	I-04913-0014
ARFSOU	05/07/09	DOE/LX/07-0188&D1	[EPA APPROVES] COMMENTS ON THE SITE EVALUATION REPORT FOR ADDENDUM 2 SOIL PILES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0188&D1)	USEPA-IV	DOE-PPPO	No	I-04907-0019
ARFSOU	05/08/09	DOE/LX/07-0188&D1	EXTENSION REQUEST FOR REVIEW OF THE SITE EVALUATION REPORT FOR ADDENDUM 2 SOIL PILES AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-0188&D1)	KDEP	DOE-PPPO	No	I-04907-0021
ARFSOU	05/11/09	DOE/LX/07-0121&D2/R1	[EPA APPROVES] APPROVAL OF THE ACTION MEMORANDUM FOR THE SOILS OPERABLE UNIT INACTIVE FACILITIES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0121&D2/R1)	USEPA-IV	DOE-PPPO	No	I-04913-0015
ARFSOU	05/14/09	DOE/LX/07-0188&D1	RETRANSMITTAL OF THE SITE EVALUATION REPORT FOR ADDENDUM 2 SOIL PILES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0188&D1)	DOE-PPPO	USEPA-IV	No	I-04907-0020
ARFSWOUOSD	04/16/09	PPPO-02-421-09	TRANSMITTAL OF THE ACTION MEMORANDUM FOR CONTAMINATED SEDIMENT ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT (ON-SITE) AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0119&D2/R1)	DOE-PPPO	USEPA-IV	No	I-04813-0068
ARFSWOUOSD	04/23/09	DOE/LX/07-0119&D2/R1	[EPA] APPROVAL OF THE ACTION MEMORANDUM FOR CONTAMINATED SEDIMENT ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT (ON-SITE) AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY	USEPA-IV	DOE-PPPO	No	I-04813-0066
ARFSWOUOSD	04/27/09	DOE/LX/07-0119&D2/R1	[KDEP] APPROVAL OF THE ACTION MEMORANDUM FOR CONTAMINATED SEDIMENT ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT (ON-SITE) DOE/LX/07-0119&D2/R1	KDEP	DOE-PPPO	No	I-04813-0067
ARFSWOUOSD	05/22/09	DOE/LX/07-0221&D1	TRANSMITTAL OF THE REMOVAL ACTION WORK PLAN FOR CONTAMINATED SEDIMENT ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT (ON-SITE) AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0221&D1)	DOE-PPPO	USEPA-IV	No	I-04816-0165

## Paducah Documents Added to the Post-Decision Files Second Quarter CY2009

Document Status	Date On Document	Document Id	Title	Author Affiliation	To Affiliation	Protected Information	Object Name
6PHASE-PD	12/17/08	PRS/I-1028	APPROVAL OF THE PROPOSED MILESTONE MODIFICATION FOR THE D1 REMEDIAL ACTION COMPLETION REPORT FOR THE C-400 INTERIM REMEDIAL ACTION AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH KENTUCKY	KDEP	DOE-PPPO	No	I-04618-0004
6PHASE-PD	04/17/09	PPPO-02-358-09	TRANSMITTAL OF THE OPERATION AND MAINTENANCE PLAN FOR 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/07-0187&D1)	DOE-PPPO	USEPA-IV	No	I-04616-0070



## Paducah Documents Added to the Administrative Record Files Third Quarter CY2009

Document Status	Date On Document	Document Id	Title	Author Affiliation	To Affiliation	Protected Information	Object Name
ARFBGOU	07/08/09	DOE/LX/07-0030&D1/R1	COMMONWEALTH OF KENTUCKY'S COMMENTS FOR THE D1/R1 REMEDIAL INVESTIGATION REPORT FOR THE BURIAL GROUNDS OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-0030&D1/R1)PADUCAH, MCCracken COUNTY, KENTUCKY KY8-890-008-982	KDEP	DOE-PPPO	No	I-05210-0020
ARFBGOU	07/20/09	PPPO-02-538-09	MILESTONE MODIFICATION REQUEST FOR SUBMITTAL OF THE D1 FEASIBILITY STUDY FOR THE BURIAL GROUNDS OPERABLE UNIT AND THE D-1 PROPOSED PLAN FOR THE BURIAL GROUNDS	DOE-PPPO	USEPA-IV	No	I-05211-0003
ARFBGOU	08/23/09		RE: EXTENSION APPROVAL FOR SUBMITTAL OF THE D-1 FEASIBILITY STUDY REPORT AND THE D-1 PROPOSED PLAN FOR THE BURIAL GROUNDS OPERABLE UNIT (OU 22) AT THE PADUCAH GASEOUS DIFFUSION PLANT (PGDP)	USEPA-IV	DOE-PPPO	No	I-05211-0005
ARFBGOU	08/25/09		RE: COMMONWEALTH OF KENTUCKY'S APPROVAL OF DOE'S EXTENSION REQUEST TO SUBMIT THE FEASIBILITY STUDY AND PROPOSED PLAN FOR THE BURIAL GROUNDS OPERABLE UNIT	KDEP	DOE-PPPO	No	I-05211-0006
ARFCC	08/14/09	DOE/LX/07-0099&D1	WORK PLAN FOR CERCLA WASTE DISPOSAL ALTERNATIVE EVALUATION REMEDIAL INVESTIGATION/FEASIBILITY STUDY AT PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0099&D1)	KDEP	DOE-PPPO	No	I-05309-0004
ARFCC	08/15/09	DOE/LX/07-0099&D1	RE: EPA COMMENTS ON THE WORK PLAN FOR CERCLA WASTE DISPOSAL ALTERNATIVE EVALUATION RI/FS AT THE PADUCAH GASEOUS DIFFUSION PLANT (PGDP) (DOE/LX/07-0099&D1)	USEPA-IV	DOE-PPPO	No	I-05309-0006
ARFCC	08/27/09	DOE/LX/07-0099&D1	RE: ADDITIONAL COMMENTS ON WORK PLAN FOR CERCLA WASTE DISPOSAL ALTERNATIVE EVALUATION REMEDIAL INVESTIGATION/FEASIBILITY STUDY AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0099&D1)	KDEP	DOE-PPPO	No	I-05309-0007
ARFREF	07/02/09	PPPO-02-542-09	FEDERAL FACILITY AGREEMENT PROJECT MANAGERS MEETING CONDUCTED MAY 21, 2009	DOE-PPPO	USEPA-IV	No	I-02001-0656
ARFREF	09/04/09	PPPO-02-654-09	FEDERAL FACILITY AGREEMENT PROJECT MANAGERS MEETING CONDUCTED JULY 16, 2009	DOE-PPPO	USEPA-IV	No	I-02001-0660
ARFSOU	06/10/09	PPPO-02-503-09	TRANSMITTAL OF THE REMOVAL ACTION WORK PLAN FOR SOILS OPERABLE UNIT INACTIVE FACILITIES SWMU 19 AND SWMU 181 AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0220&D1)	DOE-PPPO	USEPA-IV	No	I-04916-0003
ARFSOU	06/15/09	DOE/LX/07-0120-&D1	RE: WORK PLAN FOR THE SOILS OPERABLE UNIT REMEDIAL INVESTIGATION/FEASIBILITY STUDY AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH KENTUCKY (DOE/LX/07-0120&D1), 3/6/09 AND THE SUPPLEMENTAL INFORMATION, 5/14/09	USEPA-IV	DOE-PPPO	No	I-04909-0076
ARFSOU	06/15/09	PPPO-02-507-09	MILESTONE MODIFICATION REQUEST FOR SUBMITTAL OF THE D1 SITE EVALUATION REPORT FOR ADDENDUM 1-B SOIL PILES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0225&D1)	DOE-PPPO	USEPA-IV	No	I-04907-0029

## Paducah Documents Added to the Administrative Record Files Third Quarter CY2009

Document Status	Date On Document	Document Id	Title	Author Affiliation	To Affiliation	Protected Information	Object Name
ARFSOU	07/06/09	DOE/LX/07-0225&D1	RE: APPROVAL OF THE PROPOSED MILESTONE MODIFICATION FOR THE SUBMITTAL OF THE D1 SITE EVALUATION REPORT FOR ADDENDUM 1-B SOIL PILES AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-0225&D1)	KDEP	DOE-PPPO	No	I-04907-0030
ARFSOU	07/28/09	PPPO-02-541-09	TRANSMITTAL OF THE SITE EVALUATION REPORT FOR ADDENDUM 1-B SOIL PILES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0225&D1)	DOE-PPPO	USEPA-IV	No	I-04907-0031
ARFSOU	08/13/09	PPPO-02-619-09	NOTIFICATION OF SCHEDULE EXTENSION FOR SUBMITTAL OF THE D2 WORK PLAN FOR THE SOILS OPERABLE UNIT REMEDIAL INVESTIGATION/FEASIBILITY STUDY AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0120&D2)	DOE-PPPO	USEPA-IV	No	I-04909-0078
ARFSOU	08/27/09	DOE/LX/07-0225&D1	RE: REVIEW OF THE SITE EVALUATION REPORT FOR ADDENDUM 1-B SOIL PILES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH KENTUCKY (DOE/LX/0225&D1)	USEPA-IV	DOE-PPPO	No	I-04907-0026
ARFSOU	08/28/09	DOE/LX/07-0225&D1	RE: SITE EVALUATION REPORT FOR ADDENDUM 1-B SOIL PILES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0225&D1)	KDEP	DOE-PPPO	No	I-04907-0025
ARFSOU	09/02/09	DOE/LX/07-0220&D2	[KDEP] APPROVAL OF THE REMOVAL ACTION WORK PLAN FOR SOILS OPERABLE UNIT INACTIVE FACILITIES SWMU 19 AND SWMU 181 (DOE/LX/07-0220&D2)	KDEP	DOE-PPPO	No	I-04916-0006
ARFSOU	09/08/09	DOE/LX/07-0220&D2	RE: CONDITIONAL APPROVAL OF THE D2 REMOVAL ACTION WORK PLAN FOR SOILS OPERABLE UNIT INACTIVE FACILITIES SWMU 19 AND SWMU 181 AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0220&D2)	USEPA-IV	DOE-PPPO	No	I-04916-0005
ARFSOU	09/10/09	PPPO-02-608-09	TRANSMITTAL OF THE WORK PLAN FOR THE SOILS OPERABLE UNIT REMEDIAL INVESTIGATION/FEASIBILITY STUDY AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-120&D2)	DOE-PPPO	USEPA-IV	No	I-04909-0081
ARFSWOUOSD	06/22/09	DOE/LX/07-0221&D1	EXTENSION REQUEST FOR THE REMOVAL ACTION WORK PLAN FOR CONTAMINATED SEDIMENT ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT (ON-SITE) AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH KENTUCKY (DOE/LX/07-0221 & D1)	USEPA-IV	DOE-PPPO	No	I-04816-0166
ARFSWOUOSD	06/22/09	DOE/LX/07-0221&D1	RE: EXTENSION REQUEST FOR SUBMITTAL OF COMMENTS TO THE REMOVAL ACTION WORK PLAN FOR CONTAMINATED SEDIMENT ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT (ON-SITE) (DOE/LX/07-0221&D1) PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, MCCracken CTY, KENTUCKY	KDEP	DOE-PPPO	No	I-04816-0167
ARFSWOUOSD	07/07/09	DOE/LX/07-0221&D1	RE: REMOVAL ACTION WORK PLAN FOR CONTAMINATED SEDIMENT ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT (ON-SITE) AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-0221&D1	USEPA-IV	DOE-PPPO	No	I-04816-0169

## Paducah Documents Added to the Administrative Record Files Third Quarter CY2009

Document Status	Date On Document	Document Id	Title	Author Affiliation	To Affiliation	Protected Information	Object Name
ARFSWOUOSD	07/24/09	DOE/LX/07-0221&D1	RE: COMMONWEALTH OF KENTUCKY'S COMMENTS TO THE REMOVAL ACTION WORK PLAN FOR CONTAMINATED SEDIMENT ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT (ON-SITE) (DOE/LX/07-0221&D1) PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH MCCRACKEN CTY, KENTUCKY	KDEP	DOE-PPPO	No	I-04816-0168
ARFSWOUOSD	08/21/09	PPPO-02-629-09	TRANSMITTAL OF THE REMOVAL ACTION WORK PLAN FOR CONTAMINATED SEDIMENT ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT (ON-SITE) AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0221&D2)	DOE-PPPO	USEPA-IV	No	I-04816-0170
ARFSWP	07/02/09	DOE/LX/07-0186&D1	TRANSMITTAL OF THE FOCUSED FEASIBILITY STUDY FOR THE SOUTHWEST GROUNDWATER PLUME VOLATILE ORGANIC COMPOUND SOURCES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0186&D1)	DOE-PPPO	USEPA-IV	No	I-04611-0298

## Paducah Documents Added to the Post-Decision Third Quarter CY2009

Document Status	Date On Document	Document Id	Title	Author Affiliation	To Affiliation	Protected Information	Object Name
GW3-PD	07/02/09	PPPO-02-518-09	NOTIFICATION OF POWER OUTAGE AT THE NORTHEAST PLUME GROUNDWATER TREATMENT SYSTEM AT THE PADUCAH GASEOUS DIFFUSION PLANT	DOE-PPPO	USEPA-IV, KDEP	No	I-00225-0017

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