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PPPO-02-134-08

Mr. R. Bruce Scott, Director  
Division of Waste Management  
Kentucky Department for Environmental Protection  
14 Reilly Road  
Frankfort Office Park  
Frankfort, Kentucky 40601

Mr. David G. Williams  
United States Environmental Protection Agency  
Region IV  
DOE Remedial Section  
Federal Facilities Branch  
Waste Management Division  
61 Forsyth Street  
Atlanta, Georgia 30303

Dear Mr. Scott and Mr. Williams:

**U.S. DEPARTMENT OF ENERGY PADUCAH GASEOUS DIFFUSION PLANT  
FEDERAL FACILITY AGREEMENT SEMIANNUAL PROGRESS REPORT  
FOR THE SECOND HALF OF FISCAL YEAR 2007, PADUCAH, KENTUCKY**

Enclosed is the *U.S. Department of Energy Paducah Gaseous Diffusion Plant Federal Facility Agreement Semiannual Progress Report for the Second Half of Fiscal Year 2007, Paducah, Kentucky* (DOE/LX/07-0020/V2). The enclosed report is required by Sections XXIII and XXXII of the Federal Facility Agreement and Part IV of the Resource Conservation and Recovery Act Permit.

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

Sincerely,

Reinhard Knerr  
Paducah Site Lead  
Portsmouth/Paducah Project Office

Enclosures:

- 1. FFA Semiannual Progress Report
- 2. Certification Page

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cc w/enclosures:

DCC/Kevil

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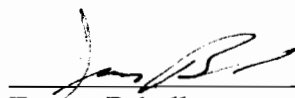
M. Redfield, PRS/Kevil

## CERTIFICATION

**Document Identification:**      **Federal Facility Agreement Semiannual Progress Report  
First Half Fiscal Year 2007 (DOE/LX/07-0020/V1)  
Paducah Gaseous Diffusion Plant,  
Paducah, Kentucky**

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  
Co-Operator



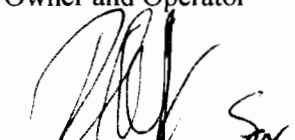
Tracey Brindley,  
ER/EM Manager

10/29/07

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)  
Owner and Operator



William E. Murphy, Manager

10/29/07

Date Signed

**DOE/LX/07-0020/V2  
Secondary Document**

**U.S. Department Of Energy  
Paducah Gaseous Diffusion Plant  
Federal Facility Agreement  
Semiannual Progress Report For The  
Second Half of Fiscal Year 2007  
Paducah, Kentucky**

Date Issued—October 2007

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

BGOU	Burial Grounds Operable Unit
CAB	Citizens Advisory Board
D&D	decontamination and decommissioning
DOE	U.S. Department of Energy
DQO	data quality objectives
EE/CA	engineering evaluation/cost analysis
EPA	U.S. Environmental Protection Agency
EQ	Equalization
FFA	Federal Facility Agreement
FY	fiscal year
GWOU	Groundwater Operable Unit
IRA	interim remedial action
KRCEE	Kentucky Research Consortium for Energy and the Environment
LUCIP	Land Use Control Implementation Plan
NEPCS	Northeast Plume Containment System
NSDD	North-South Diversion Ditch
NWPGS	Northwest Plume Groundwater System
O&M	operation and maintenance
PGDP	Paducah Gaseous Diffusion Plant
ppb	parts per billion
PRAP	Proposed Remedial Action Plan
PRS	Paducah Remediation Services, LLC
RAWP	Remedial Action Work Plan
RDR	Remedial Design Report
RI	remedial investigation
RI/FS	remedial investigation/feasibility study
ROD	Record of Decision
SAP	sampling and analysis plan
SI	Site Investigation
SI/BRA	Site Investigation/Baseline Risk Assessment
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 SECOND HALF FISCAL YEAR 2007

**Facility: Paducah Gaseous Diffusion Plant**  
**Plant EPA I.D. No.: KY8-890-008-982**  
**Reporting Period: 4/1/07–9/30/07**

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 the 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 reported within this update are grouped similarly to the organization presented in the *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/07-2280&D2 (SMP). Those projects are listed below.

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

Operable Unit	Project
Groundwater Operable Unit	C-400 Southwest Plume and Its 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	Scrap Metal Surface Water (On-Site)
Soils Operable Unit	Sitewide Soils Inactive Facilities Soil and Rubble Areas <sup>2</sup>
Decontamination and Decommissioning Operable Unit	Decontamination and Decommissioning Operable Unit
Comprehensive Sitewide Operable Unit/Permitted/ No Further Action/Miscellaneous	Waste Area Groups 1 and 7 Community Relations Plan Site Management Plan

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.

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

<sup>2</sup> Soil and rubble areas are not included within the Site Management Plan, but are reported under the Soils Operable Unit for clarity.

Appendix C reports the C-746-K Landfill groundwater monitoring data. Sampling of these monitoring wells is outlined in the Record of Decision (ROD) for Waste Area Groups (WAG)s 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 FOR THE  
SECOND HALF OF FISCAL YEAR 2007**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/07-9/30/07**

**GROUNDWATER OPERABLE UNIT**

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

Within the GWOU are these projects: C-400, 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 Risk Methods Document and the Sitewide Numerical Groundwater Model, which are included in the Dissolved-Phase Plumes Update.

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**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT FOR THE  
SECOND HALF OF FISCAL YEAR 2007**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/07-9/30/07**

**GROUNDWATER OPERABLE UNIT PROJECT: C-400**

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

- Developed and submitted 90% Remedial Design Report (D1 RDR) to the Commonwealth of Kentucky (Kentucky) and U.S. Environmental Protection Agency (EPA).
- Developed and submitted D1 Remedial Action Work Plan (RAWP) to Kentucky and EPA.
- Responded to EPA comments on the D2/R1 Land Use Control Implementation Plan (LUCIP).

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

- Resolve and incorporate Kentucky and EPA comments from the D1 RAWP and the D1 RDR (90% design) and issue the D2 versions of these documents.
- Resolve EPA comments on the D2/R1 LUCIP and issue the D2/R2 LUCIP as an appendix to the D2 RDR.
- Complete installation of overhead/underground electrical feeder to supply future electrical needs of the C-400 Interim Remedial Action (IRA).
- Remove interfering infrastructure at the C-400 Cleaning Building area in preparation for installation of the IRA systems.

**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, fixed-base analytical services, and business management.

**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 for the Groundwater C-400 Action Subproject.



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

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

- D2 RAWP for the C-400 IRA,
- D2 RDR for the C-400 IRA, and
- D2/R2 LUCIP for the C-400 IRA.

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

- Approval by Kentucky and EPA of the D2 C-400 IRA RAWP is expected by March 2008,
- Approval by Kentucky and EPA of the D2 C-400 IRA RDR is expected by March 2008, and
- Approval by Kentucky and EPA of the D2/R2 C-400 IRA LUCIP as an appendix to the RDR is expected by March 2008.

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

Review of the D1 RDR and D1 RAWP by Kentucky and EPA were delayed until the DOE Headquarters sponsored Independent Technical Review of the design was completed. The final Independent Technical Review Report was released to Kentucky and EPA on August 24, 2007. Kentucky comments on the D1 RDR were received on September 7, 2007, and D1 RAWP were received on September 26, 2007. EPA comments are expected by October 30, 2007. The RDR and RAWP will be revised, with final approval of these documents as indicated above.

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

Routine updates on the subproject were provided to the Citizens Advisory Board (CAB) and FFA Managers.

**VIII. Changes in relevant personnel:**

None.

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

None.

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT FOR THE  
SECOND HALF OF FISCAL YEAR 2007**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/07–9/30/07**

**GROUNDWATER OPERABLE UNIT PROJECT: Southwest Plume Sources**

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

- Issued D2/R1 Southwest Plume Site Investigation (SI) Report and Comment Response Summary for D2 comments in June 2007 for approval by EPA and Kentucky. EPA continued their review of the D2/R1 through the end of the reporting period.
- The project continued to operate under an FFA Informal Dispute with EPA. Kentucky issued minor comments on the D2/R1 on September 5, 2007, and indicated they were terminating their informal dispute issue.
- Proposed Remedial Action Plan (PRAP) for the Solid Waste Management Unit (SWMU) Oil Landfarm (SWMU 1) and C-720 Building area sources to the Southwest Plume was revised and issued for internal review cycles through the end of the reporting period. An FFA milestone modification, which was submitted in October 2006, is pending the closure of the FFA informal dispute. The FFA milestone modification included the D1 PRAP being submitted 30 days after Kentucky and EPA approval of the SI Report.
- On June 26, 2007, DOE issued a letter of intent to the Kentucky and EPA to support and fund the scope of work entitled, "TCE Fate and Transport Project Enzyme Activity Probe Scoping Document."

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

- Revise/amend the D2/R1 SI Report, incorporating comments received from Kentucky and EPA and resubmit for approval.
- Continue Kentucky Research Consortium for Energy and the Environment (KRCEE) facilitated Data Quality Objectives (DQO) process for the trichloroethene (TCE) degradation analysis as part of the Dissolved-Phase Plume project.
- Complete development of the D1 PRAP for the Southwest Plume sources and submit for stakeholder review and comment.
- Initiate development of the Record of Decision (ROD) for the Southwest Plume sources.

**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, fixed-base analytical services, and business management.

The KRCEE has been assigned the task of facilitating the TCE degradation evaluation with support from the TCE Technical Degradation Working Group that includes technical experts 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:**

Although the Southwest Plume SI currently is in informal dispute, all FFA parties are in agreement with the existing project extensions. Also, all future Southwest Plume milestones have been revised to be realigned once the informal dispute process has been completed.

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

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

- D2/R1 SI Report for the Southwest Groundwater Plume at the PGDP, and
- D1 PRAP for the Southwest Groundwater Plume Sources at the PGDP.

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

- Submission and approval of the D2/R1 Southwest Plume Groundwater Sources SI Report is pending the resolution of the informal dispute associated with the D2 SI Report.
- FFA milestone proposal submitted by DOE on October 13, 2006, modifies remaining milestones to be dependent on resolution of FFA informal dispute. Modification form approved by Kentucky on November 6, 2006; approval is pending by EPA.
- Submittal of the D1 Southwest Groundwater Plume PRAP is expected 30 days after the approval of the Southwest SI Report.

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

Invoking informal dispute concerning the D2 Southwest SI Report has impacted the progress of the Southwest Plume subproject. Modifications to the development schedules have been coordinated through DOE correspondence. An FFA milestone modification form was submitted on October 13, 2006, to realign milestones to be consistent with original FFA durations prior to informal dispute being invoked. Kentucky approved modification on November 6, 2006. Approval by EPA is pending. Additional schedule mitigation is being performed through the facilitation of the TCE degradation DQO process to accelerate the resolution of the degradation issue to reduce impacts to ongoing GWOU and Burial Grounds Operable Unit (BGOU) projects.

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

Routine updates for the subproject were provided to the CAB and FFA Managers. Dispute resolution meetings were attended by DOE, Kentucky, and EPA.

**VIII. Changes in relevant personnel:**

None.

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

None.

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**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
FISCAL YEAR 2007**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/07–9/30/07**

**GROUNDWATER OPERABLE UNIT PROJECT: Dissolved-Phase Plumes**

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

- Sampled 12 monitoring wells for enzyme probe analysis to assist in determining if TCE degradation is occurring in the Regional Gravel Aquifer at the Northwest Plume. Sample results are pending at the Idaho National Laboratory. Analytical results for a geochemical sampling also was performed in support of the TCE Degradation Working Group.
- Began scoping and procurement for the Phase II sampling for stable carbon isotope analysis on Regional Gravel Aquifer groundwater was initiated.
- On June 26, 2007, DOE issued a letter of intent to Kentucky and EPA to support and fund the scope of work entitled, "TCE Fate and Transport Project Enzyme Activity Probe Scoping Document."
- Continued update of existing PGDP Sitewide Numerical Groundwater Model in support of the Dissolved-Phase Plumes and the BGOU.
- Initiated update of the 2001 Risk Methods Document in support of all PGDP environmental restoration projects.

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

- Complete scoping and procurement for stable carbon isotope analysis and perform sampling.
- Continue KRCEE-facilitated DQO process for the TCE degradation analysis as part of the Dissolved-Phase Plume project.
- Initiate scope of work for abiotic TCE degradation potential and complete analysis.
- Complete drafting of the Risk Methods Document update to 2007 requirements.
- Complete development of PGDP Sitewide Numerical flow model and substantially complete the transport component of the flow model.

**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, fixed-base analytical services, and business management. PRS also is managing the upgrade of the Risk Methods Document and the Sitewide Groundwater Numerical Model.

The KRCEE has been assigned the task of facilitating the TCE degradation evaluation 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:**

- Initiated scope of work to support the abiotic sampling necessary to complete the TCE degradation effort by the working group.

**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):**

Phase II sampling for stable carbon isotope analysis is being delayed due to the lack of an approved laboratory that can perform the specialized analysis and has the required nuclear license to handle the Northwest Plume technetium-(<sup>99</sup>Tc-) contaminated groundwater.

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

Routine updates on the subproject are provided to the CAB and FFA Managers.

**VIII. Changes in relevant personnel:**

None.

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

None.

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
FISCAL YEAR 2007**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/07–9/30/07**

**GROUNDWATER OPERABLE UNIT PROJECT: Northeast Plume IRA**

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

The Northeast Plume Containment System (NEPCS) achieved an operational efficiency of 87.8% during the reporting period of April through September 2007. During this reporting period, the NEPCS treated 42,661,500 gallons of contaminated groundwater. The average system treatment rate for the reporting period was 161.9 gal/min and was calculated assuming 100% operational uptime. Operational efficiencies for 2007 were as follows: April, 96%; May, 100%; June, 95%; July, 43%; August, 100%; and September, 96%.

**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, 2007, the NEPCS has processed a total of 889,600,000 gallons of water. The monthly extraction volumes for April, May, June, July, August, and September 2007 are presented in Appendix A, Table 1, of this report. This table includes a summary of the extracted 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 2007.

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 the beginning of calendar year 2000 through the end of June 2007 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 2007. High, low, and average influent and effluent TCE concentrations for these months are presented in the following table. 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)	210	190	198
Effluent (Cooling Tower effluent)	< 1	< 1	< 1

As presented Table 2, the NEPCS continued to effectively remove TCE. 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 163 ppb, while EW-332 had an average concentration of 235 ppb.

<sup>99</sup>Tc concentrations in water samples collected from the EQ tank did not exceed the DQO of 50 pCi/L. The highest reading from the EQ tank was 21.8 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 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, Revision 3, July 2005.

In accordance with the above-mentioned plan, a precision tank tightness test on the NEPCS EQ tank to verify its integrity was conducted on September 26, 2007. The test was successful in verifying the integrity of the tank. This test is conducted every five years of operation and last was conducted in 2002.

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

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

From June 29 through July 18, 2007, the Northeast Pump-and-Treat System was removed from service due to a faulty circuit board to the EQ tank influent flow meter from the extraction wells. A new calibrated circuit board was procured and installed on July 18, 2007, and the system was returned to operation.

**E) Effectiveness Monitoring - Monitoring Well Results**

Figures 2a, 2b, 2c, 2d, and 2e included 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 2007, <sup>99</sup>Tc activity at MW292 was 24.9 and 36.9 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.

**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, fixed-base analytical services, and business management.

**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 87.9 % of the time during this reporting period.

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

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

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, is being revised to reflect how PRS now operates the NEPCS.

**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 period between April and September 2007 was \$289K.

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT  
FISCAL YEAR 2007**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/07-9/30/07**

**GROUNDWATER OPERABLE UNIT PROJECT: Northwest Plume IRA**

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

During this reporting period, the Northwest Plume Groundwater System (NWPGS) treated 53,801,041 gallons of contaminated groundwater with an average monthly operational efficiency of 99.3%. The average system treatment rate for the reporting period was 204.4 gal/min and was calculated assuming 100% operational uptime. Operational efficiencies for 2007 were as follows: April, 96%; May, 100%; June, 100%; July, 100%; August, 100%; and September, 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, 2007, the NWPGS has processed a total of 1,225,961,000 gallons of water. The monthly extraction volumes for April, May, June, July, August, and September 2007 are presented in Appendix A, Table 2, of this report. This table includes a summary of the extracted 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 2007.

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 from January 2000 through June 2007 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 2007 are presented in the following table.

**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	3000	930	1280	243	123	195
Effluent	3.3	1.0	1.88	27.8	-20.7	5.8

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 the previous table, the NWPGS continued to effectively remove TCE and <sup>99</sup>Tc. The system operated with an average removal efficiency of 99.85% for TCE and 97.0% for <sup>99</sup>Tc.

The average TCE effluent concentration for this reporting period was 1.88 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 5.8 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 2007. High, low, and average sample results for this reporting period at the extraction wells are shown below.

**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	4.7	3.1	3.9	7.99	-15.1	-3.55
EW-229	11	8.6	9.6	-6	-16.4	-7.7
EW-230	3400	2800	3133	503	483	495
EW-231	27	26	26.5	24.8	10.5	17.7

#### 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

June 13, 2007, with recycled carbon. The current stock of recycled carbon and future utilization of recycling technology will provide an adequate supply of carbon throughout 2008.

#### **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 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, Revision 3, July 2005 (Maintenance and Calibration Plan).

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

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

There were no nonroutine maintenance activities conducted at the NWPGS during the reporting period.

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

Figures 6a, 6b, 6c, 6d, and 6e included 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**

There were no modifications of the NWPGS operations or configuration during the reporting period.

## **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.

## **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, fixed-base analytical services, and business management.

**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:**

*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*, is being revised to reflect that PRS now operates the NWPGS.

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

The O&M Plan revision is due December 9, 2007.

**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 2007 were submitted in 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 period between April and September 2007 was \$289K.

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Reporting Period: 4/1/07-9/30/07**

**BURIAL GROUND OPERABLE UNIT**

The scope of this project includes a Remedial Investigation (RI), baseline risk assessment, evaluation of remedial alternatives, remedy selection, and implementation of actions, as necessary, for protection of human health and the environment for the following burial grounds: C-749 (SWMU 2); C-404 (SWMU 3); C-747 (SWMU 4); C-746-F (SWMU 5); C-747-B (SWMU 6); C-747-A (SWMUs 7 and 30, which includes the area beneath SWMU 12); the Area P Construction/Demolition Debris Disposal and Spoils Area (SWMU 145); and additional disposal areas that might exist beneath the scrap yards.

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

RI field work began in January 2007 and sample borings were completed May 5, 2007. A plan, for installation of a new monitoring well at C-404 was submitted to the regulators July 20, 2007, and currently awaits approval.

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

- The RI Report is in process with a D1 milestone date of July 25, 2008.
- Planning for further investigation of metal detected in C-746-P/P1 scrap yards (SWMU 13).
- Installation of a new well at the C-404 Landfill.

**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, fixed-base analytical services, and business management.

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

The requirements and time schedules are being met.



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

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

RI Report.

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

D1 RI Report due July 25, 2008

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

This project is critical path for a 2019 completion of site cleanup activities. Additional delays to the project may jeopardize the ability to finish cleanup activities.

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

Routine meetings with the CAB were held. A scoping meeting for the RI Report was held with Kentucky and EPA in July 2007. Regulators were briefed, as needed, on progress or issues.

**VIII. Changes in relevant personnel:**

None.

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

None.

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**SURFACE WATER OPERABLE UNIT**

The scope of this project includes investigation, baseline risk assessment, evaluation of removal/remedial alternatives, remedy selection, and implementation of cleanup actions for hot spots associated with the following areas: internal plant ditches; outfall ditches; and Sections 3, 4, and 5 of the North-South Diversion Ditch (NSDD). The scope also includes evaluation of whether additional sediment control measures are needed, as well as actions for potential legacy releases associated with the storm sewer system and Bayou and Little Bayou Creeks.

Within the Surface Water Operable Unit (SWOU) are the Scrap Metal and Surface Water (On-Site) projects. Additionally, O&M is performed on NSDD Sections 1 and 2 and Institutional Controls for Surface Water, 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 PGDP Environmental Management and Enrichment Facilities Document Management Center. The estimated annual cost of this O&M is \$94K.

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**SURFACE WATER OPERABLE UNIT PROJECT: Scrap Metal Removal**

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

- Prepared and submitted a minor modification of the Scrap Metal Action Memorandum to KDEP and EPA on May 24, 2007. This addresses leaving the nickel ingots in place rather than moving them under a temporary shelter. Kentucky approved the minor modification on June 21, 2007. EPA requested more information concerning the minor modification on August 27, 2007.
- Segregated, characterized, packaged, and shipped 45.21 net tons of scrap metal from the C-746-H4 pad to the on site C-746-U Landfill by June 21, 2007. All field work now is complete.
- Prepared and submitted the D0 Removal Action Report for Scrap Metal to DOE for review and comment on August 3, 2007.

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

- Prepare and submit the D1 Removal Action Report for Scrap Metal to DOE for transmittal to regulatory agencies for review by December 30, 2007.
- Prepare and submit more information on the nickel ingots to support the EPA request concerning a minor modification to the Scrap Metal Action Memorandum.

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

PRS is responsible for preparation of the Removal Action Report and minor modification to the Scrap Metal Action Memorandum. In addition, PRS also provides programmatic and technical support and business management.

**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:**

D1 Removal Action Completion Report (Secondary Document) for Scrap Metal.

**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:**

Routine updates on the subproject were provided to the CAB and FFA Managers.

**VIII. Changes in relevant personnel:**

None.

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

O&M should represent only craft labor to inspect, in-line monitor, and discharge the C-613 Basin, as well as any discrete maintenance repairs that may be required such as potential repairs of the high-density polyethylene basin liner or a pump. Cost is estimated at approximately \$20K.

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**SURFACE WATER OPERABLE UNIT PROJECT: SWOU On-Site Investigation**

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

The D2 and D2/R1 versions of the SWOU Site Investigation/Baseline Risk Assessment (SI/BRA) Report have been completed. Approval of the D2/R1 SWOU SI/BRA Report was received from Kentucky on August 24, 2007. EPA has requested a 60-day extension, requesting additional time for review of the D2/R1 SWOU SI/BRA Report, and DOE is currently awaiting EPA comments and/or approval of the D2/R1 SWOU SI/BRA report. As a result of the EPA 60-day extension request, a 120-day milestone extension request will be submitted to EPA/KY for the D1 Action Memorandum and the D1 Removal Action Work Plan.

The D1 SWOU EE/CA has been drafted and is currently undergoing DOE review. Submittal of the D1 SWOU EE/CA to EPA and Kentucky will be placed on hold until final approval of the SWOU SI/BRA Report is received from EPA.

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

The D2/R2 SWOU SI/BRA Report will be submitted (if required) to the EPA for final approval.

The D1 SWOU EE/CA will be submitted to the regulators for review.

The D1 SWOU Action Memorandum will be prepared for submittal to the regulators by the modified FFA milestone date, June 12, 2008.

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

Refer to Section VIII for the identity and assigned tasks to be performed for this project.

**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, as agreed by DOE, Kentucky, and EPA.

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

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

D2/R1 SWOU SI/BRA Report

D2/R2 SWOU SI/BRA Report

D1 SWOU EE/CA

D1 SWOU Action Memorandum

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

D2/R1 SWOU SI/BRA Report – Receipt of comments from EPA, October 20, 2007

D2/R2 SWOU SI/BRA Report – EPA approval, December 21, 2007

D1 SWOU EE/CA – Issue for regulatory review, December 28, 2007

D1 SWOU Action Memorandum – Issue for regulatory review, June 12, 2008

**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 CAB and FFA Managers.

**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 hot spot removal action coordinated with an RI, baseline risk assessment, 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 not currently being addressed by the accelerated actions, and units that require additional characterization. The scope of the SOU RI will include a multimedia evaluation (e.g., groundwater, surface water) to ensure that all exposure pathways for the subject units are assessed adequately to support cleanup decisions.



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**SOILS OPERABLE UNIT PROJECT: Sitewide Soils**

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

Preparation began for the Soils Remedial Investigation/Feasibility Study (RI/FS) Scoping Document.

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

- Submit D1 RI/FS Scoping Document to Kentucky and EPA for review for the SOU SWMUs listed in the SMP.
- Scoping meeting with regulators to be held after receipt of the RI/FS scoping document.
- Prepare RI/FS Work Plan.

**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 Sitewide Soils belongs to PRS as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, fixed-base analytical services, and business management.

**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:**

Routine updates on the subproject were provided to the CAB and FFA Managers.

**VIII. Changes in relevant personnel:**

None.

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

None.

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

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

The Soils Inactive Facilities Engineering Evaluation/Cost Analysis (EE/CA) of the C-218 Outdoor Firing Range (SWMU 181), C-403 Neutralization Tank (SWMU 40), and C-410-B Hydrogen Fluoride Neutralization Lagoon (SWMU 19) was prepared.

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

Submit the D1 EE/CA for the soils inactive facilities, C-218 Outdoor Firing Range (SWMU 181), C-403 Neutralization Tank (SWMU 40), and C-410-B Hydrogen Fluoride Neutralization Lagoon (SWMU 19) for approval to Kentucky and EPA and for public comment. Prepare the Action Memorandum for the soils inactive facilities.

**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 belongs to PRS as the DOE prime remediation contractor at the PGDP. In addition PRS also provides programmatic and technical support, fixed-base analytical services, and business management.

**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:**

- Preparation of D1 EE/CA

**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:**

Routine updates on the subproject were provided to the CAB and FFA Managers.

**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<sup>3</sup>**

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

- The D2 Sampling and Analysis Plan (SAP) and Addendum 1-A for Soil Piles was prepared and submitted to Kentucky and EPA for review.
- Field sampling, in accordance with Soil Piles SAP Addendum 1-A, was completed July 17, 2007. Preparation for SAP Addendum 1-A data validation and verification began.
- Preparation of Soil Piles SAP Addendum 2 completed. Preparation of Soil Piles SAP Addendum 1-B and the Rubble Piles SAP began.

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

- Issue D2/R1 SAP and Addendum 1-A for Soil Piles to Kentucky and EPA for approval.
- Prepare and submit the D1 Addendum 1-B and Addendum 2 for Soil Piles to Kentucky and EPA for approval.
- Prepare and submit the D1 Rubble Piles SAP to Kentucky and EPA for approval.
- Prepare and submit the D1 Soil Piles Site Evaluation Report.
- Prepare mobilization and complete field work for SAP Addendum 2, Addendum 1-B, and the Rubble Piles SAP.

**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 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, fixed-base analytical services, and business management.

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

Soil and Rubble Areas currently are not included in the SMP schedule; however, the schedule that was agreed to pursuant to the February 16, 2007, Notification of Soil and Rubble Areas letter is being maintained.

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<sup>3</sup> Soil and Rubble Areas are not included within the SMP, but are reported under the SOU for clarity.

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

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

D2 SAP and Addendum 1-A for Soil Piles.

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

Kentucky and EPA's approval of the following documents:

- D2/R1 Soil Piles SAP and Addendum 1-A
- D2 Soil Piles Addendum 2—D1 submitted 15 days after regulatory approval of Addendum 1-A
- D2 Rubble Piles SAP—D1 submitted 45 days after regulatory approval of Addendum 1-A
- D2 Soil Piles Addendum 1-B—D1 submitted 7 days within receipt of final validated data from Addendum 1-A for entry into Oak Ridge Environmental Information System

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

The due date for submittal of the D1 Soil Piles Addendum 2 is based on a 15-day window after approval by Kentucky and EPA on the D2/R1 Soil Piles SAP and Addendum 1-A. The due date for submitting the D1 Rubble Piles SAP is based on a 45-day window after approval by Kentucky and EPA on the D2 Soil Piles SAP and Addendum 1-A. Delay by Kentucky and EPA affects submittal dates of the D1 Soil Piles Addendum 2 and D1 Rubble Piles SAP.

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

Routine updates on the subproject were provided to the CAB and FFA Managers. DOE has updated the local media on background information and the planned activities for the soil piles identified in November 2006.

**VIII. Changes in relevant personnel:**

None.

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

None.

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Reporting Period: 4/1/07–9/30/07**

**DECONTAMINATION AND DECOMMISSIONING OPERABLE UNIT**

The scope of this project includes decontamination and decommissioning (D&D) of the C-410 and C-340 facilities as well as the other 15 inactive DOE facilities, assuming the use of the Comprehensive Environmental Response, Compensation and Liability Act removal actions implemented in accordance with the FFA.

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

- Continued asbestos abatement as a part of D&D activities in C-410 Complex in multiple areas using glovebag techniques and enclosures.
- Have abated approximately 23,000 linear ft of asbestos thermal surfacing insulation to date, with approximately 15,000 linear ft abated during this reporting period.
- Shipped approximately 22,000 ft<sup>3</sup> of low-level waste asbestos debris and low-level waste Bulk Product Debris from the C-410 Complex to *EnergySolutions* for disposal.
- Reduced C-410 operations during July to perform annual, biannual, and triannual update training of craft and support personnel in a “block.” This will reduce impacts of loss of personnel for training during remainder of year and result in overall gains in efficiencies.
- Submitted C-402 Limehouse Removal Action Completion Report for EPA and Kentucky review and approval. Received approval from Kentucky on the Removal Action Completion Report.
- Completed asbestos abatement and equipment removal at the C-405 Contaminated Items Incinerator.
- Completed transite removal, structural steel removal, and stack demolition at the C-405 Contaminated Items Incinerator.
- Applied epoxy fixative to slab at C-405 Incinerator, and demobilized equipment from site.
- Dispositioned 2,756 ft<sup>3</sup> of debris from the C-405 Contaminated Items Incinerator Demolition at the C-746-U Landfill, and planning for disposition of material that does not meet the landfill acceptance criteria at *EnergySolutions*. Mixed low level waste was transferred to onsite permitted storage awaiting disposition.
- Completed loose material removal at the C-746-A West End Smelter, generating eight roll-off bins of material targeted for disposition at the C-746-U Landfill.



- Applied fixative to C-746-A West End Smelter to control potential beryllium contamination and began equipment removal.
- Removed six large (up to 2 tons each) furnace doors from smelters to allow access for collecting samples to determine if interiors of furnaces contain asbestos.

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

- Continue asbestos abatement in C-410 Complex, Sectors 2 and 3, and move into Sector 4.
- Continue collection, sorting, and packaging of stored material inside C-410 Complex for disposition.
- Complete C-746-A West End Smelter Demolition field work.
- Submit C-405 Contaminated Items Incinerator Removal Action Completion Report; begin development of C-746-A West End Smelter Removal Action Completion Report.

**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, fixed-base analytical services, and business management.

**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:**

C-405 Removal Action Completion Report under preparation

C-402 Limehouse Removal Action Completion Report under review by EPA

**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):**

Extreme heat in August and continued high temperatures in September, combined with the required personal protective equipment for the C-410 Complex, has resulted in implementing work/rest regimens in C-410 to combat heat stress. The work/rest regimens have impacted productivity during this time frame. Cool shacks (rooms where workers can cool off), additional physiological monitoring and development of alternatives to allow for reduced levels of personal protective equipment while still providing adequate worker protections have been evaluated and deployed where possible to mitigate impacts.

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

Routine updates on the subproject were provided to the CAB and FFA Managers.

**VIII. Changes in relevant personnel:**

None.

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

None.

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**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT FOR THE  
SECOND HALF OF FISCAL YEAR 2007**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/07-9/30/07**

**COMPREHENSIVE SITEWIDE OPERABLE UNIT/PERMITTED/  
NO FURTHER ACTION/MISCELLANEOUS**

Presented in this section are updates for WAGs 1 and 7 (C-746-K Landfill, TCE Spill Sites, Underground Storage Tanks, and Kentucky Ordnance Works Sites, the Community Relations Plan, and the Site Management Plan (SMP)).

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**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT FOR THE  
SECOND HALF OF FISCAL YEAR 2007**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/07-9/30/07**

**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 (include 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.

**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 the 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, fixed-base analytical services, and business management.

**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  
SEMIANNUAL REPORT FOR THE  
SECOND HALF OF FISCAL YEAR 2007**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/07-9/30/07**

**PROJECT: Community Relations Plan**

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

The FFA managers reached resolution of the FFA Informal Dispute that was ongoing on this document. Kentucky approved the document on May 10, 2007, and EPA approved it on June 18, 2007.

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

No activities are planned. The Community Relations Plan has been approved by the FFA parties.

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

Responsibility for the maintenance of the Community Relations Plan belongs to PRS as the DOE prime remediation contractor at the PGDP. No activities are anticipated for this period.

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

The Community Relations Plan FFA informal dispute has been resolved, and the document now is approved.

**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:**

A summary of the Community Relations Plan was presented to the CAB during the April 2007 meeting.

**VIII. Changes in relevant personnel:**

None.

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

Not applicable.

**FEDERAL FACILITY AGREEMENT  
SEMIANNUAL REPORT FOR THE  
SECOND HALF OF FISCAL YEAR 2007**

**Facility: Paducah Gaseous Diffusion Plant  
Plant EPA I.D. No.: KY8-890-008-982  
Reporting Period: 4/1/07-9/30/07**

**PROJECT: Site Management Plan**

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

Received comments from EPA on the FY 2007 D1 SMP on September 14, 2007. Kentucky had provided comments on February 21, 2007. Initiated process to address comments and issue a FY 2007 D2 SMP.

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

Address comments received from Kentucky and EPA, then issue D2 version.

**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, fixed-base analytical services, and business management.

**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 fiscal year. The D1 FY 2007 SMP was issued November 15, 2006. Regulator comments are due within 30 days of issuance. Various extension requests were requested by EPA and Kentucky. Kentucky provided comments on February 21, 2007. EPA's comments were received on September 14, 2007. The D2 SMP is due within 15 days of receipt of both Kentucky and EPA comments. A 30-day extension request was issued by DOE on September 28, 2007, to allow for additional time to address comments received from the regulators.

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

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

FY 2007 D2 SMP and FY 2008 D1 SMP.

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

FY 2007 D2 SMP is due by October 29, 2007; FY 2008 D1 SMP is due on November 15, 2007.

**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:**

The CAB was briefed on the status of the FY 2007 SMP in April 2007.

**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 2007	May 2007	June 2007	July 2007	August 2007	September 2007
1	0	239,100	264,533	0	261,900	266,700
2	283,900	278,300	264,533	0	275,100	266,700
3	275,000	270,300	264,533	0	270,667	266,700
4	281,700	268,733	264,600	0	270,667	270,300
5	277,950	268,733	270,100	0	270,667	248,200
6	277,950	268,733	251,700	0	277,300	264,600
7	277,950	265,900	267,700	0	269,700	262,967
8	277,950	262,000	266,700	0	265,200	262,967
9	288,200	275,300	266,700	0	280,400	262,967
10	273,300	289,000	266,700	0	175,867	279,900
11	270,100	272,067	275,500	0	175,867	267,700
12	270,800	272,067	259,900	0	175,867	257,000
13	277,167	272,067	251,200	0	275,800	322,100
14	277,167	266,400	288,100	0	265,500	249,433
15	277,167	187,800	264,167	0	274,100	249,433
16	290,800	272,700	264,167	0	269,500	249,433
17	287,400	274,200	264,167	0	272,833	264,400
18	272,100	250,467	265,100	239,600	272,833	262,200
19	277,700	250,467	260,800	274,900	272,833	271,200
20	270,467	250,467	268,700	279,167	269,500	262,700
21	270,467	259,800	268,200	279,167	267,100	266,367
22	270,467	257,800	266,200	279,167	259,100	266,367
23	264,500	260,100	266,200	277,900	266,100	266,367
24	275,600	268,300	266,200	265,500	206,767	5,800
25	261,500	268,525	264,400	280,200	206,767	0
26	276,800	268,525	250,500	283,900	206,767	246,100
27	262,300	268,525	253,100	276,833	249,900	293,900
28	262,300	268,525	281,000	276,833	265,300	221,233
29	262,300	256,100	68,800	276,833	271,800	221,233
30	279,600	261,200	0	272,500	261,400	221,233
31	na	274,000	na	282,000	266,700	na
Monthly Total	7,970,600	8,166,200	7,494,200	3,844,500	7,869,800	7,316,200
*Daily Average	265,687	263,426	249,807	124,016	253,865	243,873
Days water pumped	30	31	30	31	31	30

\*Value based on number of days water was pumped

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

Day	April 2007	May 2007	June 2007	July 2007	August 2007	September 2007
1	0	280,630	302,457	295,793	289,190	296,298
2	309,270	311,790	302,457	292,900	268,260	296,298
3	297,330	303,950	302,457	300,203	254,760	296,298
4	304,620	297,883	310,740	300,203	254,760	294,410
5	301,153	297,883	302,120	300,203	254,760	288,610
6	301,153	297,883	292,230	297,160	305,310	295,510
7	301,153	299,660	310,750	297,160	292,590	293,773
8	301,153	300,710	307,853	297,160	294,640	293,773
9	308,070	296,490	307,853	288,290	306,880	293,773
10	300,360	314,110	307,853	295,710	295,400	311,220
11	299,070	272,387	312,620	293,440	295,400	278,810
12	300,890	262,127	277,050	311,640	295,400	290,750
13	303,013	262,127	216,860	295,757	301,100	317,260
14	303,013	299,690	320,540	295,757	286,260	269,043
15	303,013	272,370	305,307	295,757	305,740	269,043
16	300,450	307,380	305,307	288,380	277,380	269,043
17	297,360	309,120	305,307	293,300	264,990	265,500
18	299,610	307,590	306,800	305,450	264,990	288,140
19	302,960	307,590	298,200	293,110	264,990	297,400
20	300,117	307,590	303,330	295,353	304,530	291,160
21	300,117	313,030	298,660	295,353	291,000	290,867
22	300,117	306,190	298,517	295,353	302,690	290,867
23	294,480	302,340	298,517	240,360	296,750	290,867
24	309,030	308,170	298,517	297,100	299,353	295,560
25	296,660	310,448	296,920	284,650	299,353	287,540
26	304,160	310,448	297,680	288,350	299,353	294,260
27	298,340	310,448	293,960	297,237	289,970	308,510
28	298,340	310,448	306,720	297,237	297,560	284,233
29	298,340	297,720	295,793	297,237	300,340	284,233
30	306,610	306,720	295,793	299,360	297,750	284,233
31	na	321,820	na	295,190	296,298	na
Monthly Total	8,739,950	9,306,740	8,979,167	9,120,153	8,947,748	8,707,283
*Daily Average	291,332	300,217	299,306	294,198	288,637	290,243
Days water pumped	30	31	30	31	31	30

\*Value based on number of days water was pumped

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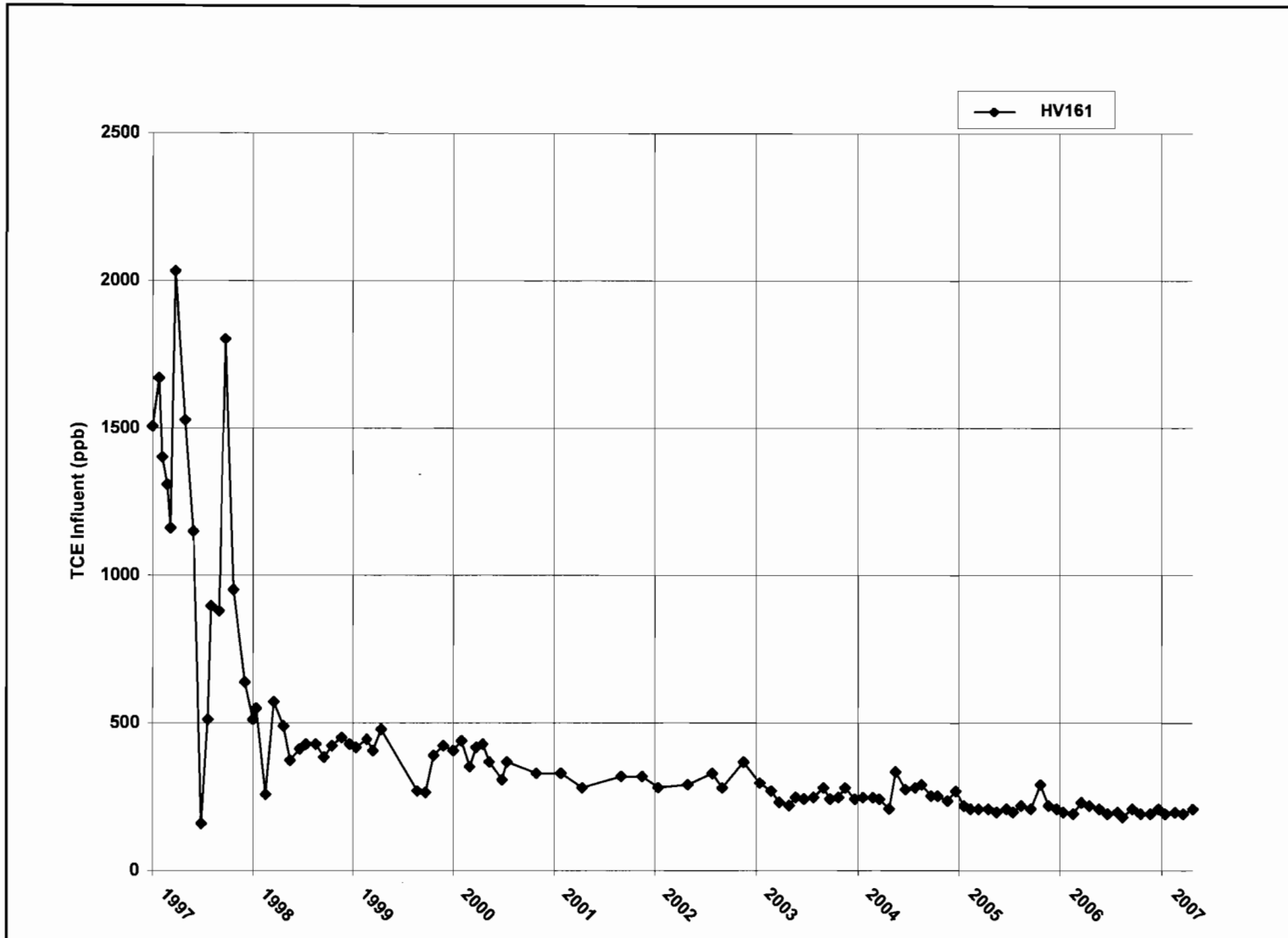
**APPENDIX B**  
**FIGURES 1 THROUGH 7**



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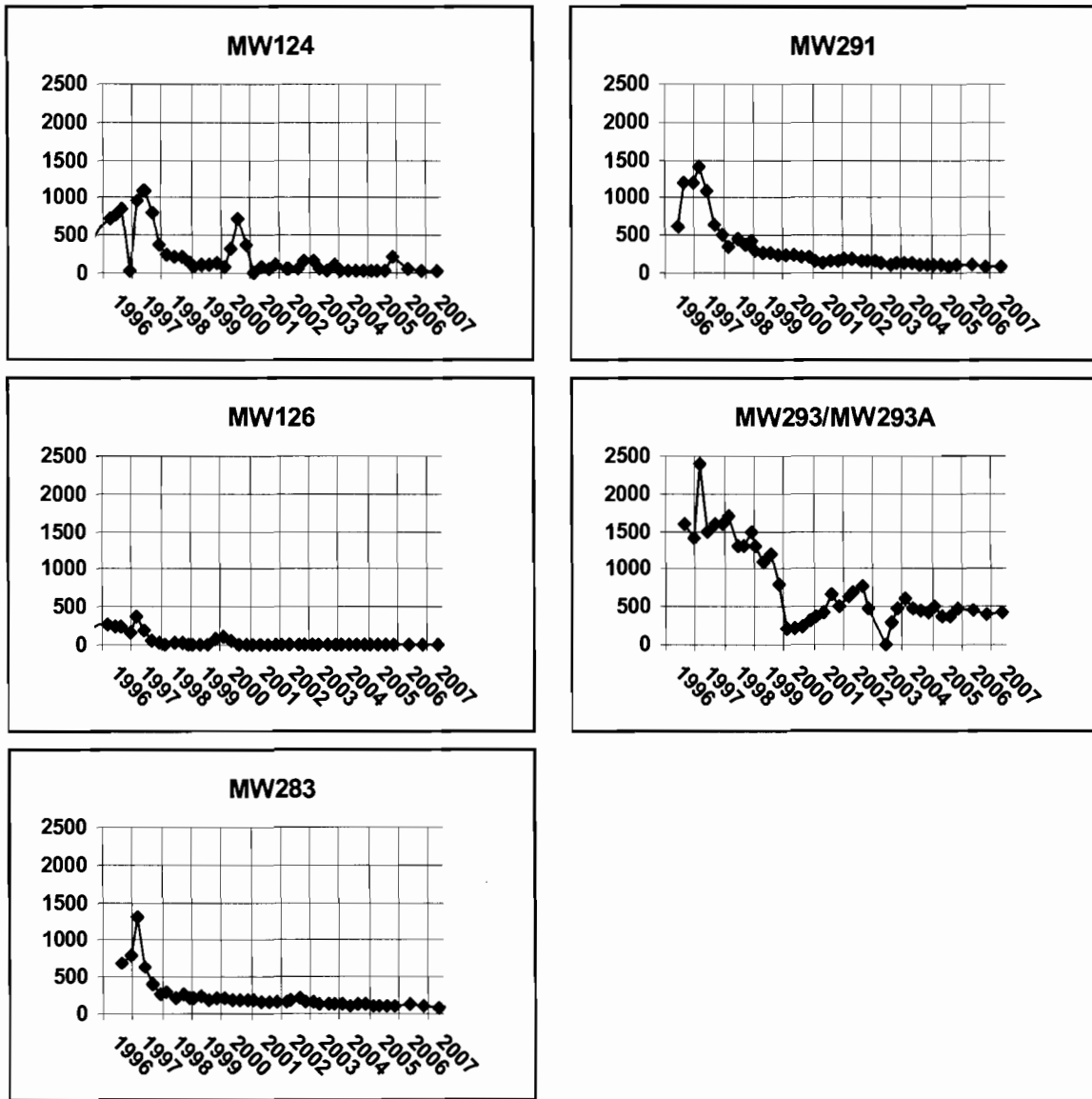
B-3



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

Figure 1. Northeast Plume Containment System Influent TCE Concentration

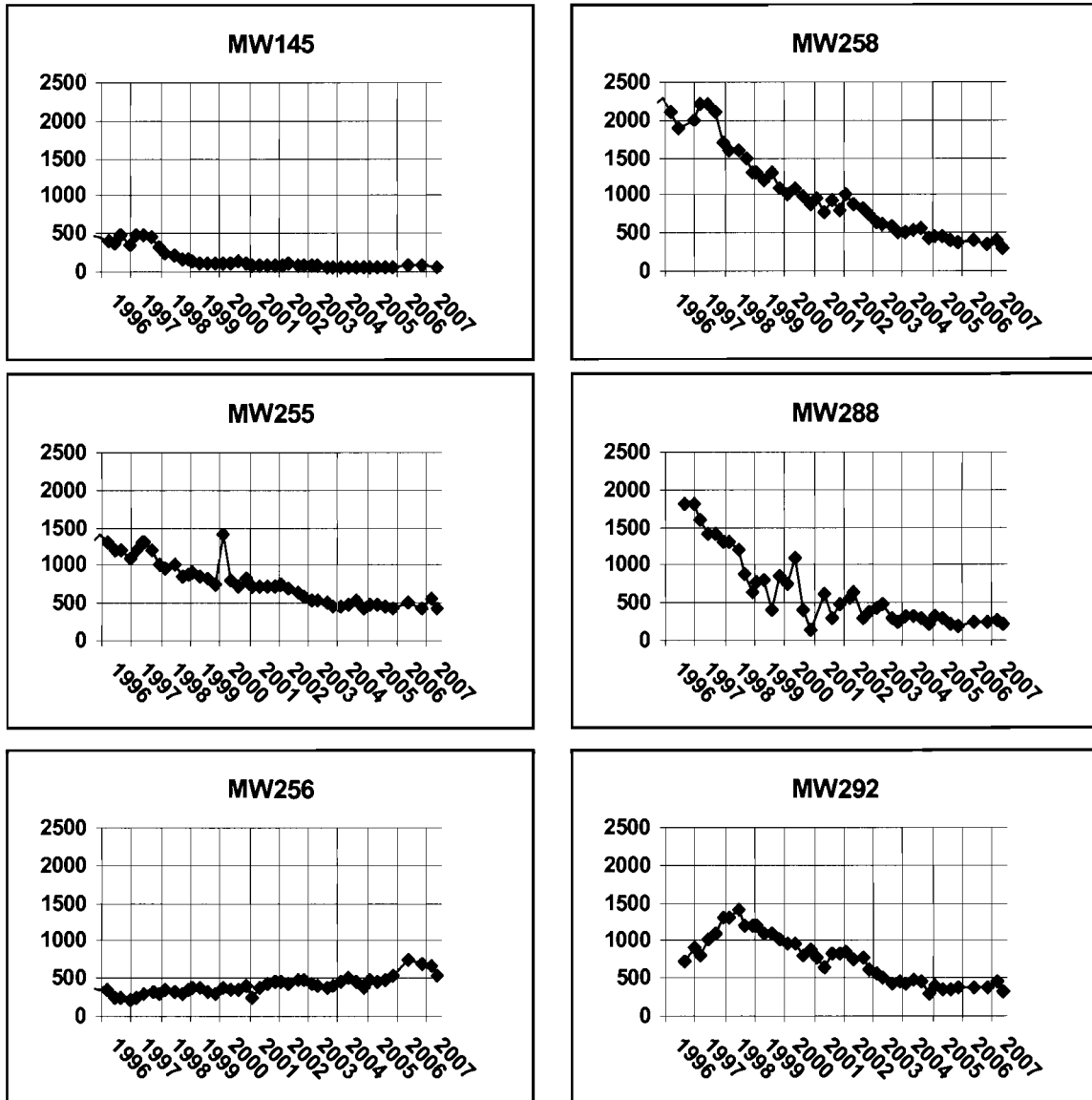
TCE (ppb)



NOTE: Data rejected by validation or assessment have not been graphed.  
May 2007 data still pending validation.

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

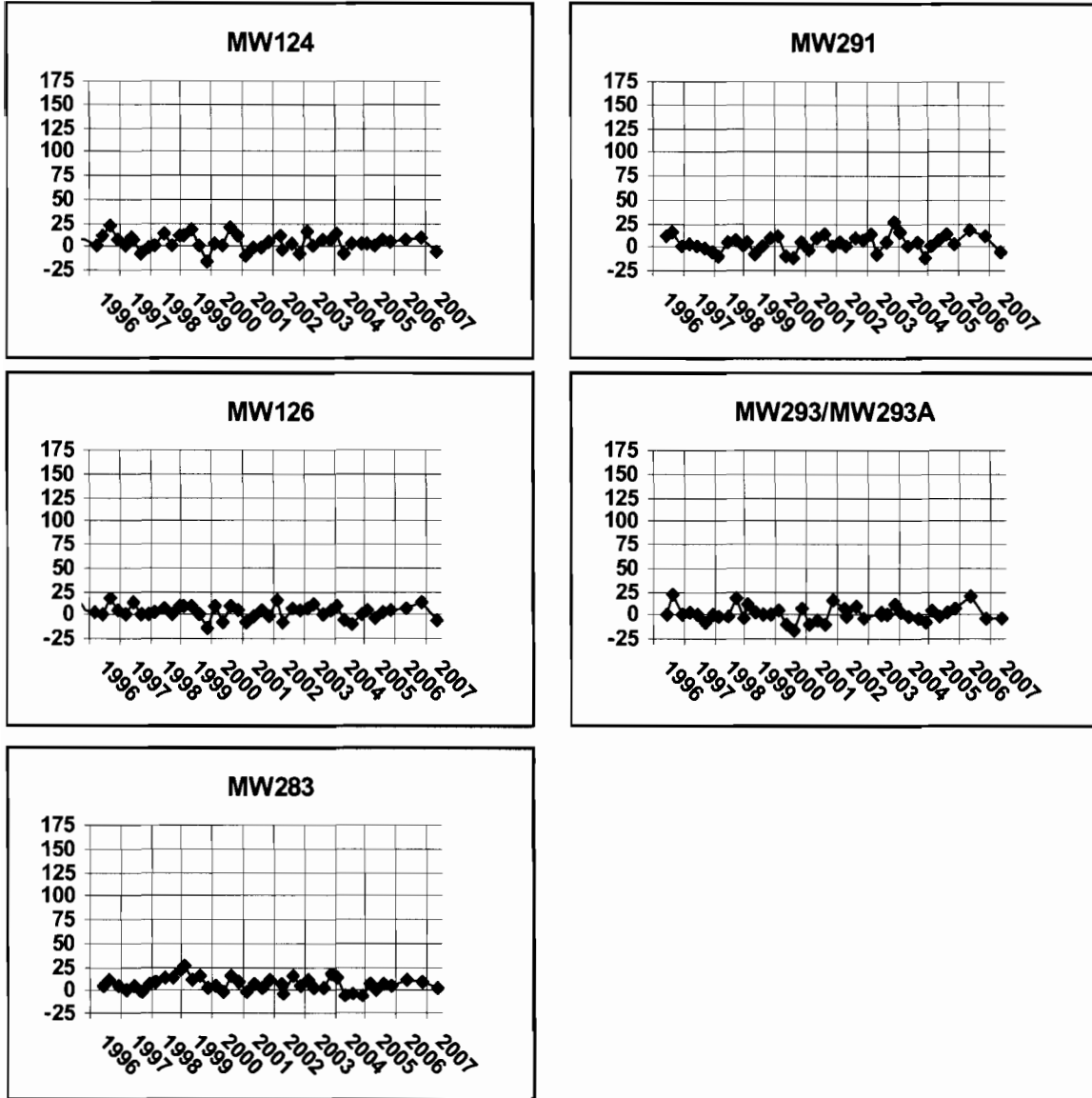
TCE (ppb)



NOTE: Data rejected by validation or assessment have not been graphed.  
May 2007 data still pending validation.

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

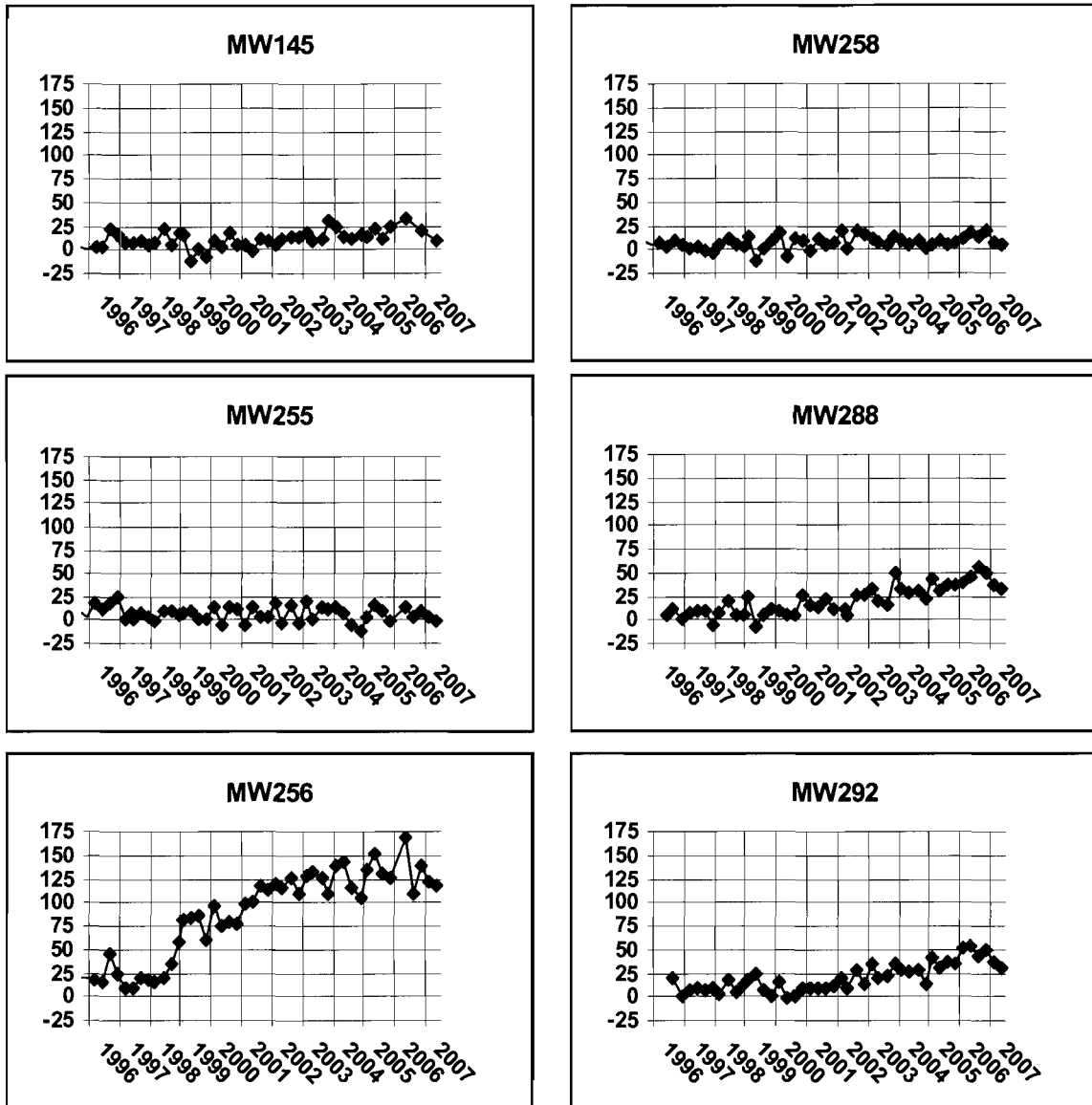
Tc-99 (pCi/L)



NOTE: Data rejected by validation or assessment have not been graphed.  
May 2007 data still pending validation.

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

Tc-99 (pCi/L)



NOTE: Data rejected by validation or assessment have not been graphed.  
 May 2007 data still pending validation.

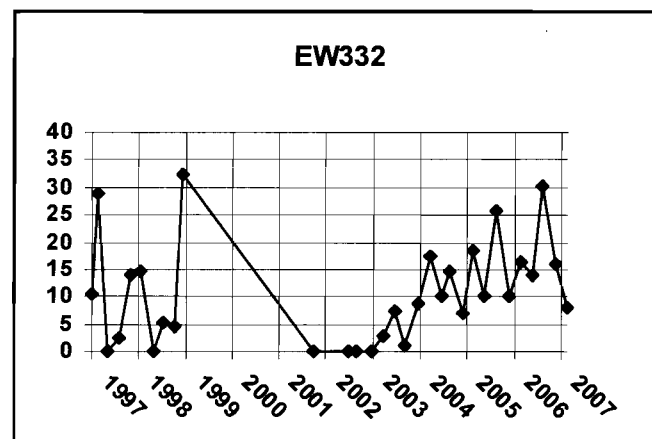
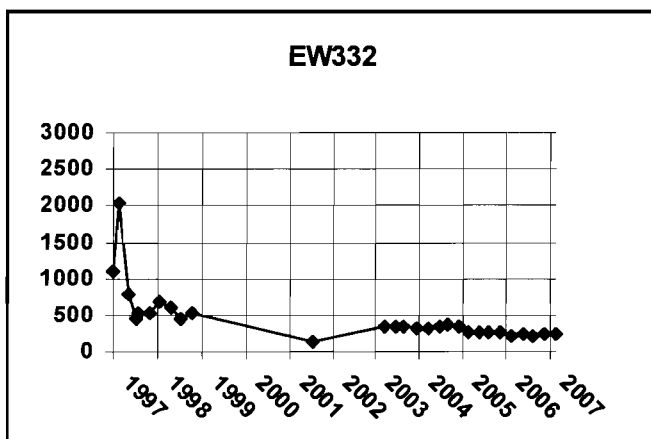
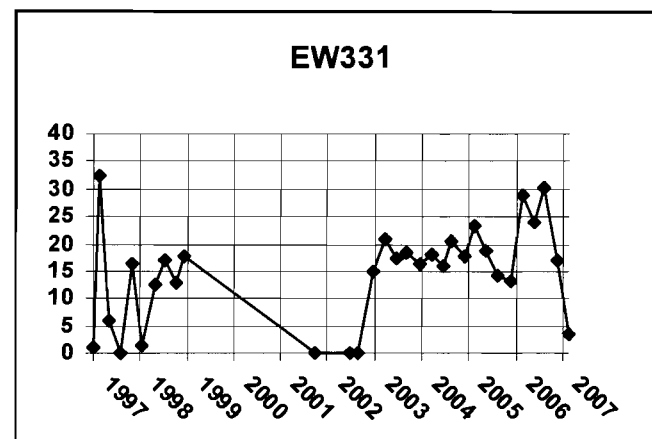
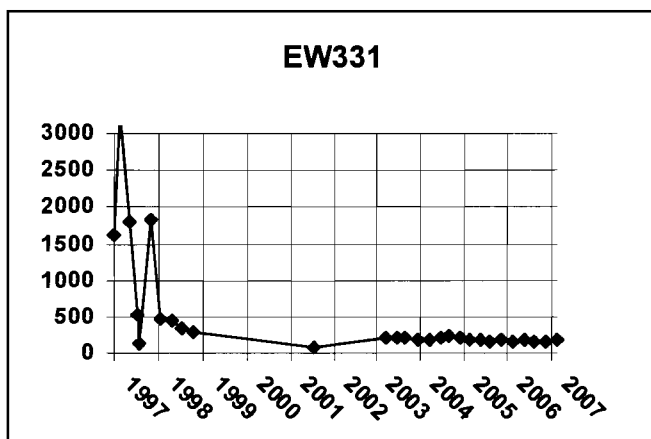
Figure 2d. Northeast Plume—Tc-99 Activities in Upgradient Wells

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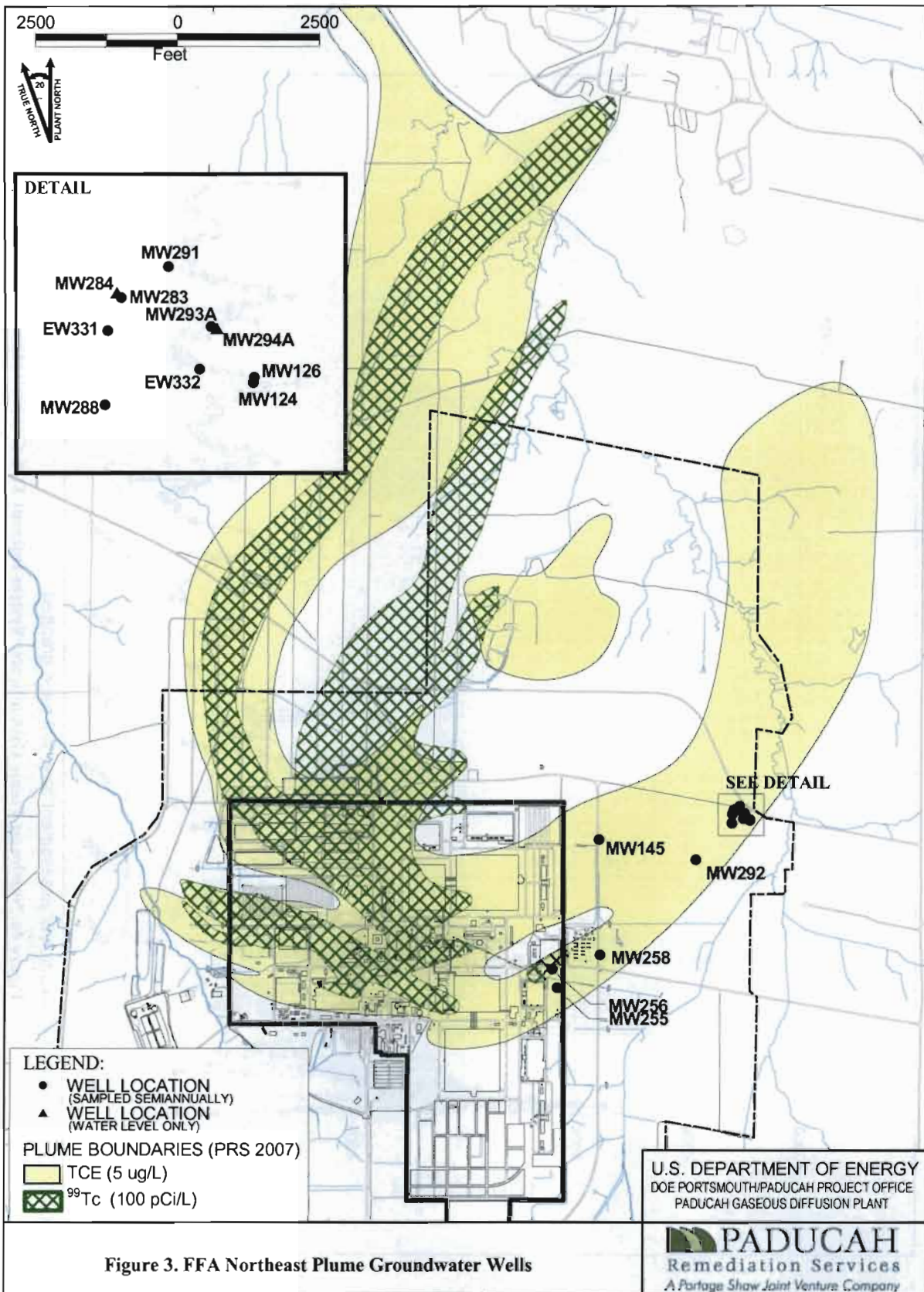
### TCE (ppb)

### Tc-99 (pCi/L)



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

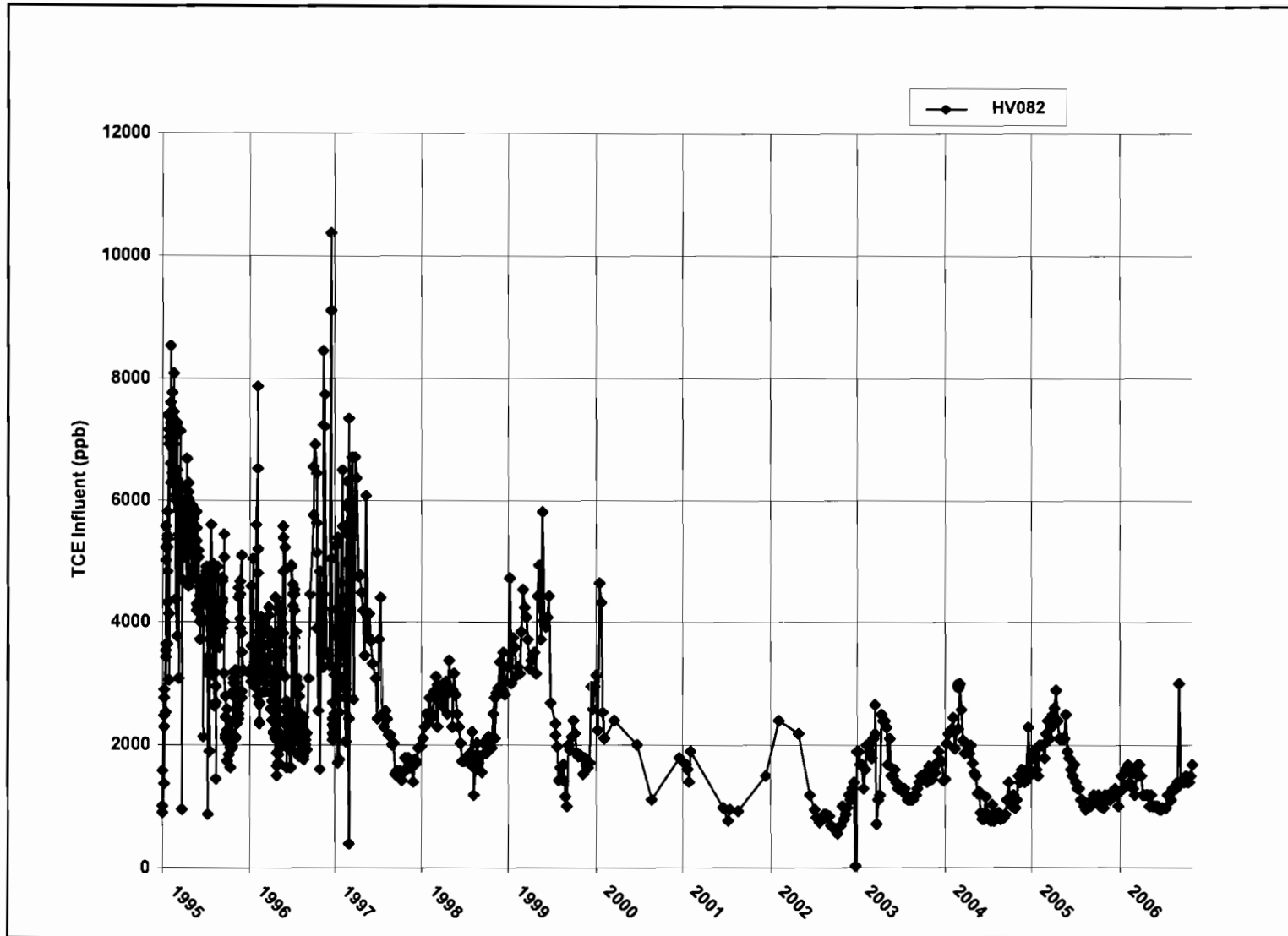
Figure 2e. Northeast Plume—TCE Concentrations and Tc-99 Activities in Extraction Wells





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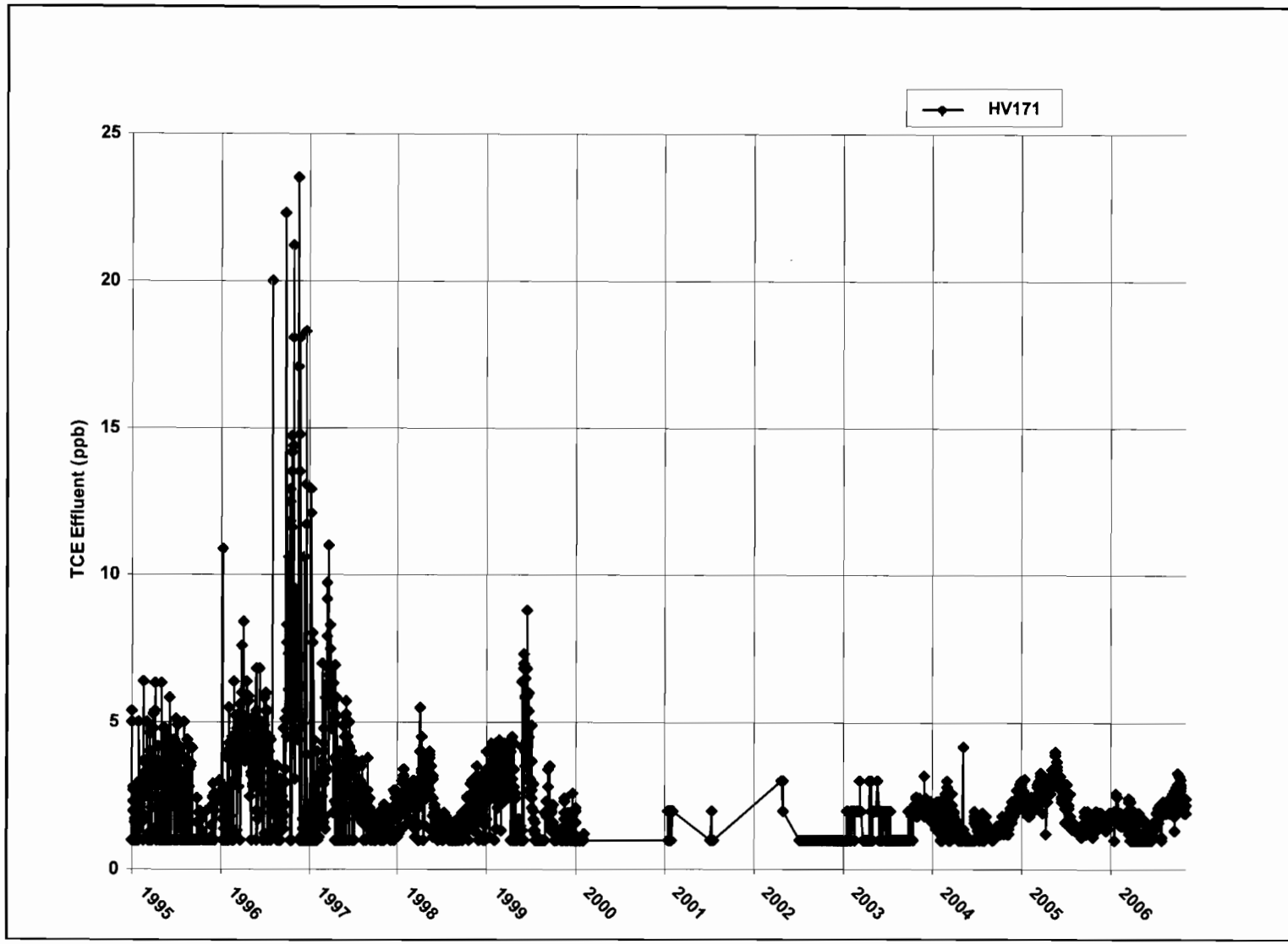


NOTE: Data rejected by validation or assessment have not been graphed.

Figure 4a. Northwest Plume Groundwater System Influent TCE Concentrations

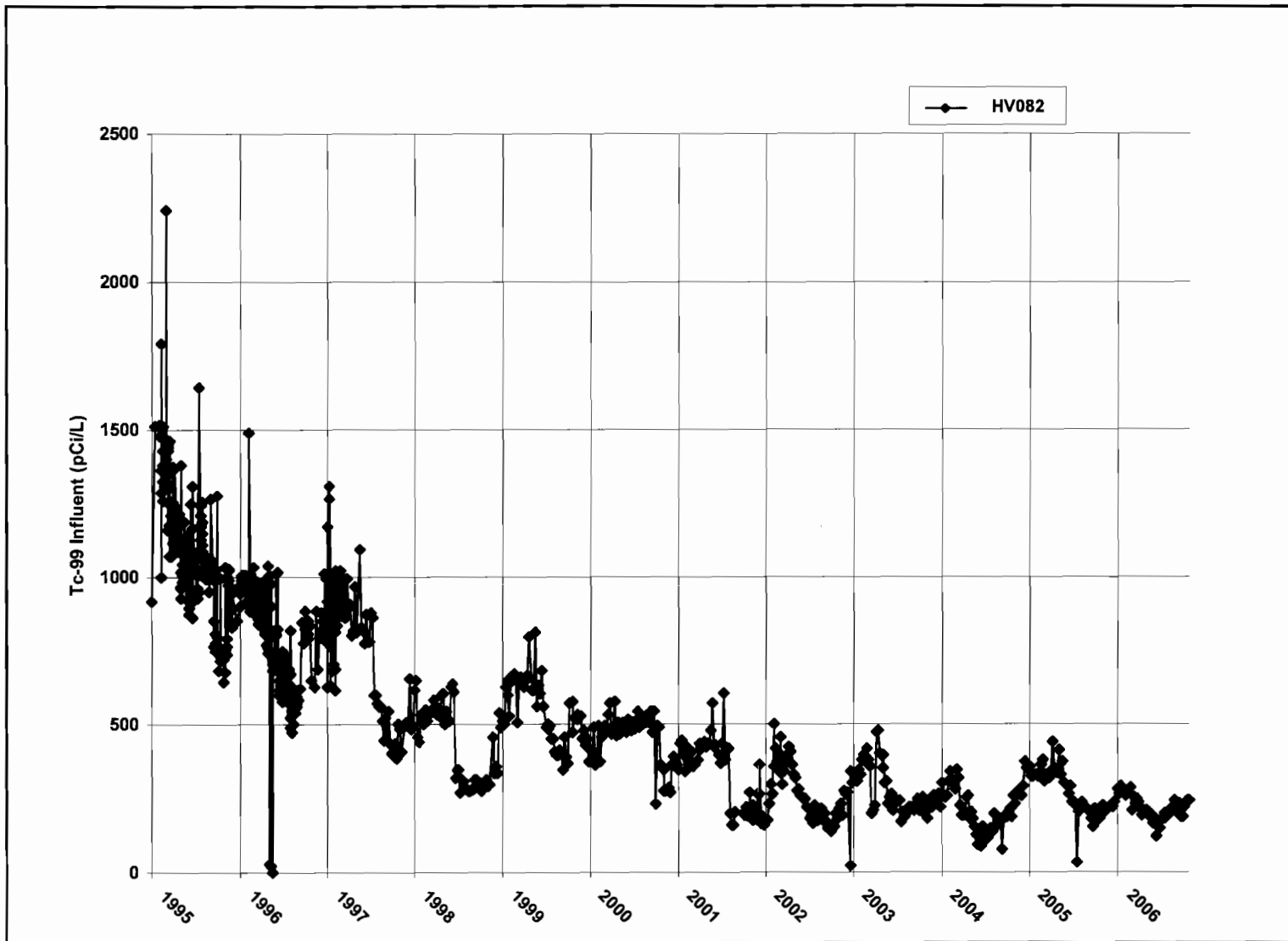
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NOTE: Data rejected by validation or assessment have not been graphed.  
Sample result of 280 ug/L collected 9/6/1995 not plotted.

Figure 4b. Northwest Plume Groundwater System Effluent TCE Concentrations



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

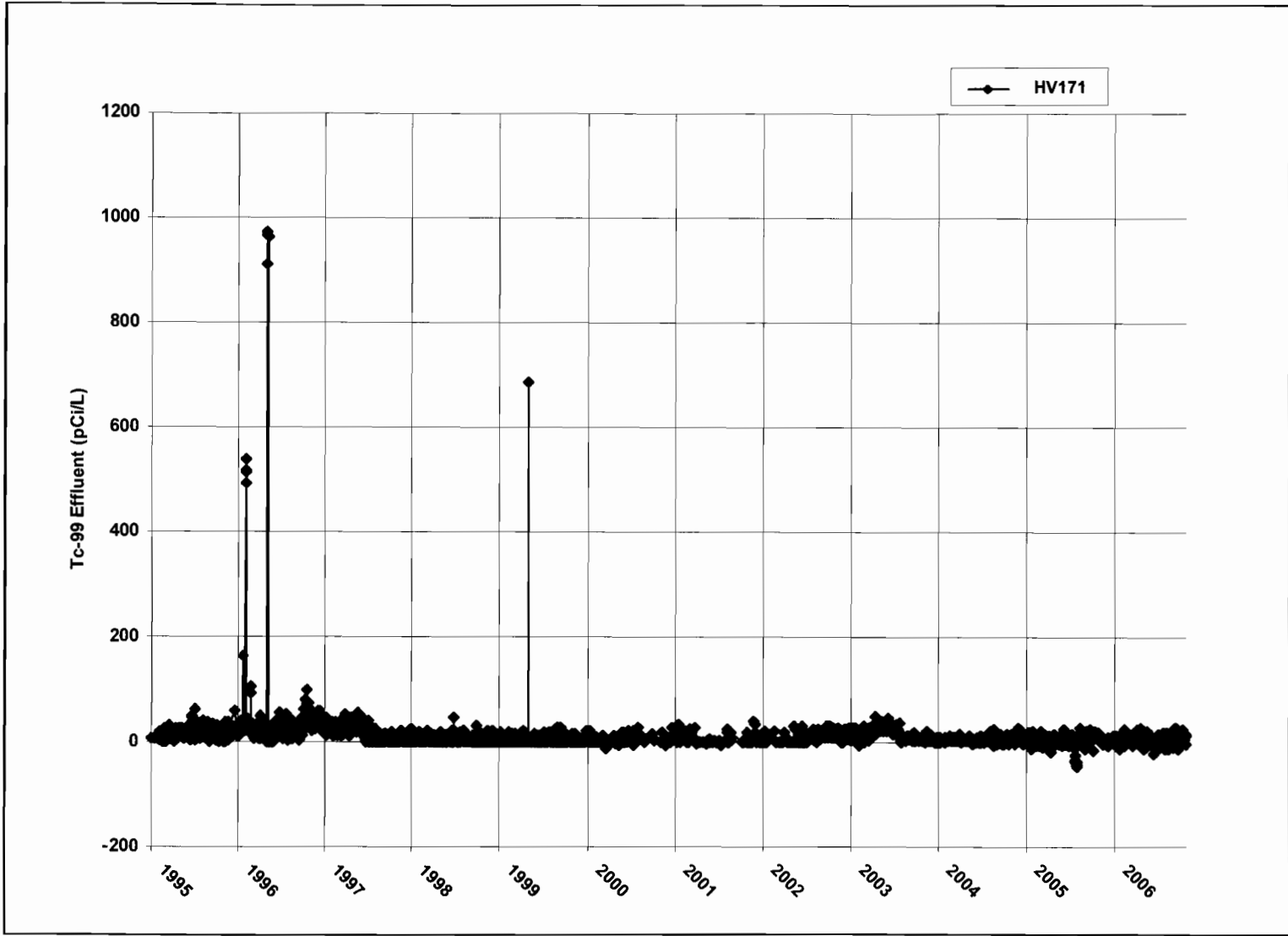
Figure 5a. Northwest Plume Groundwater System Influent Tc-99 Activity

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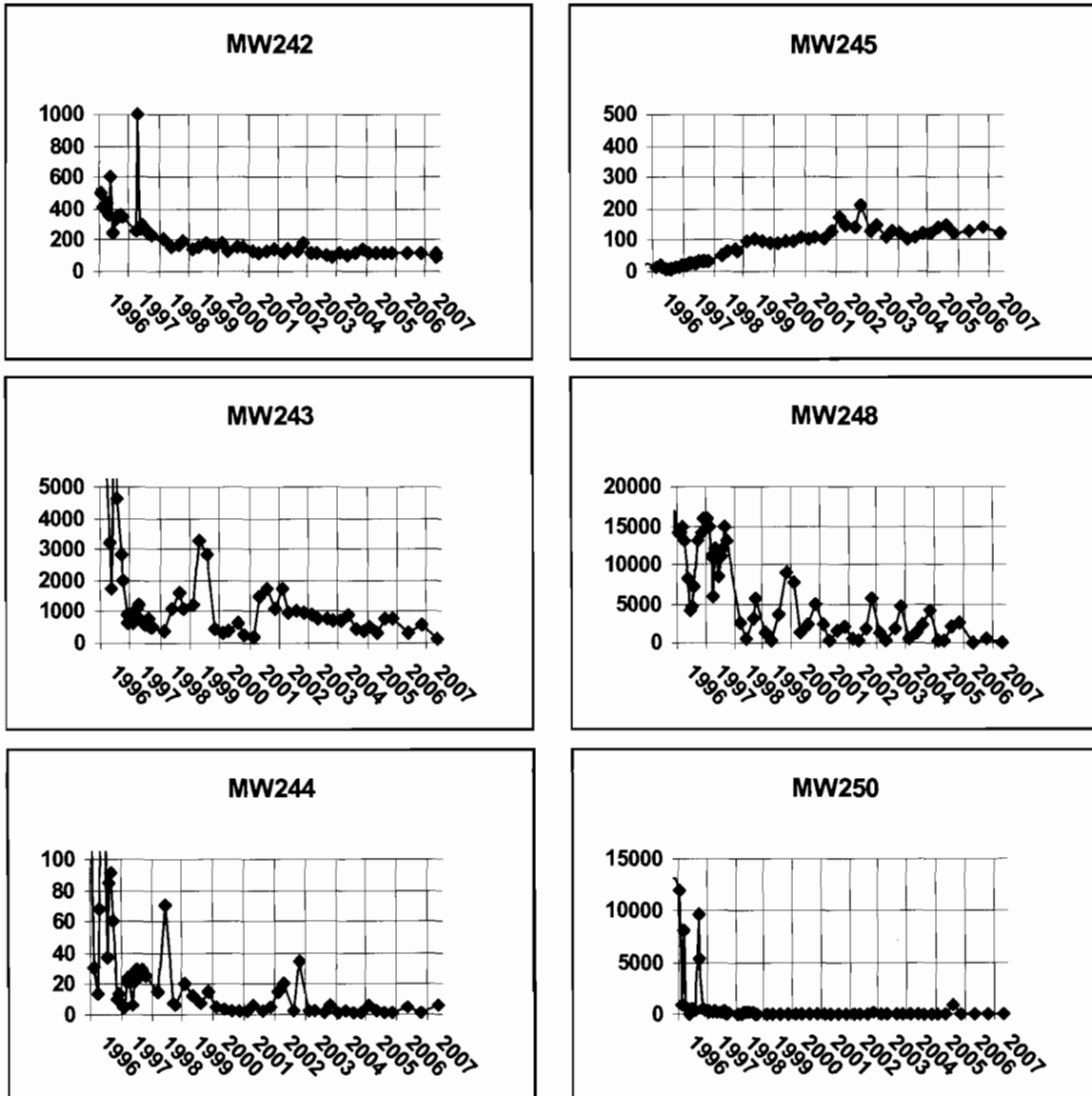
B-13



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

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

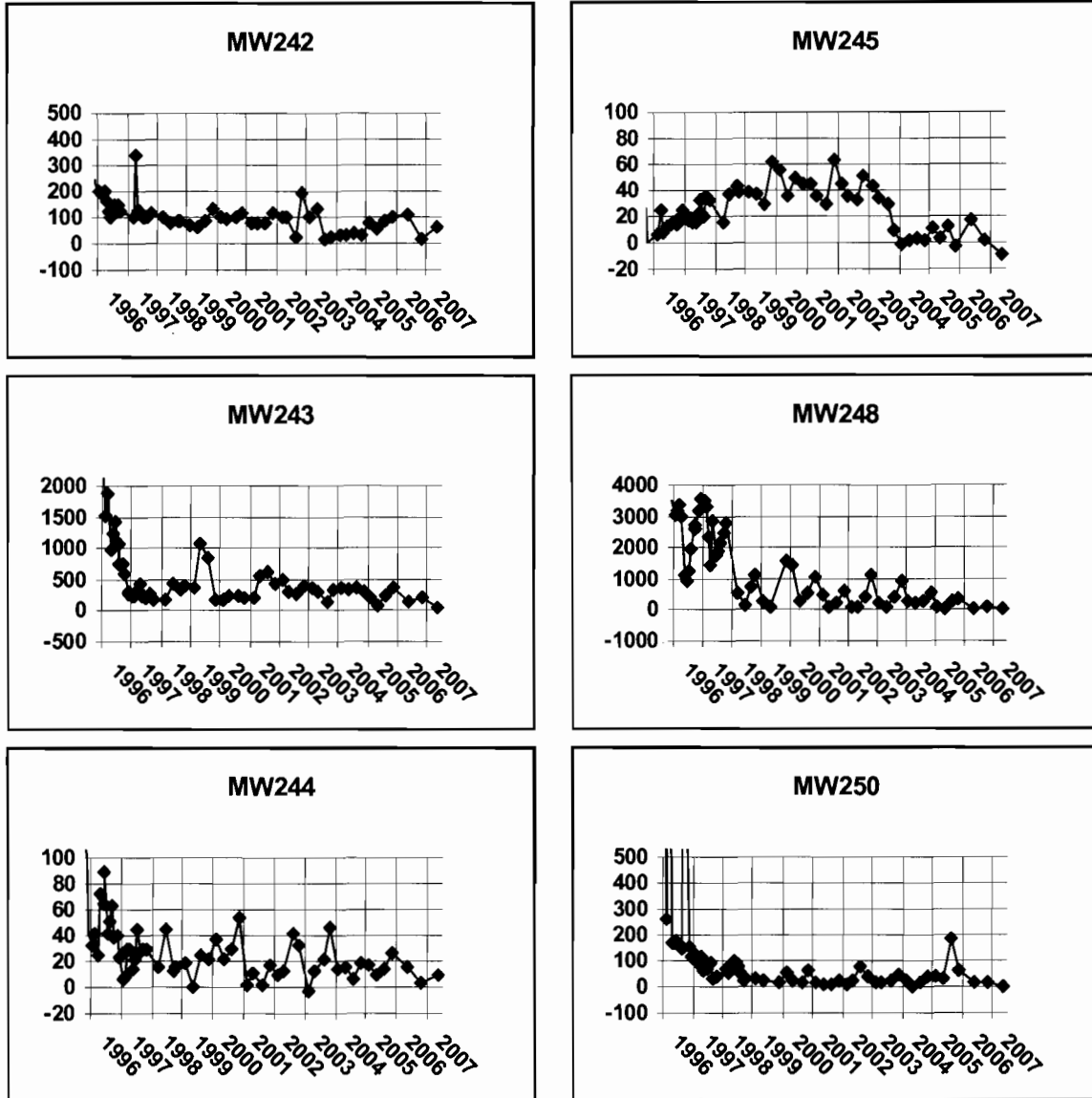
TCE (ppb)



NOTE: Data rejected by validation or assessment have not been graphed.  
May 2007 data still pending validation.

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

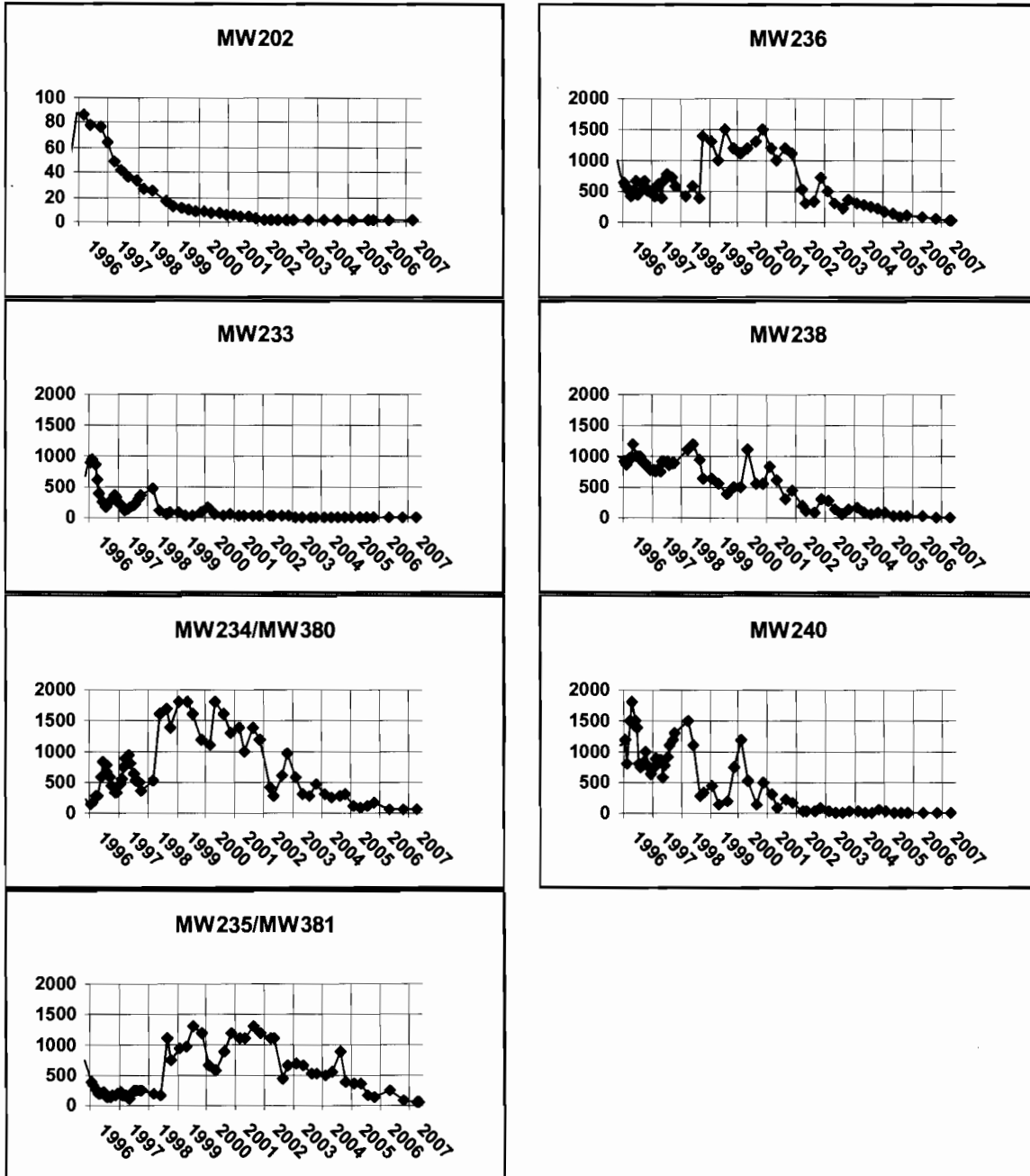
Tc-99 (pCi/L)



NOTE: Data rejected by validation or assessment have not been graphed.  
May 2007 data still pending validation.

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

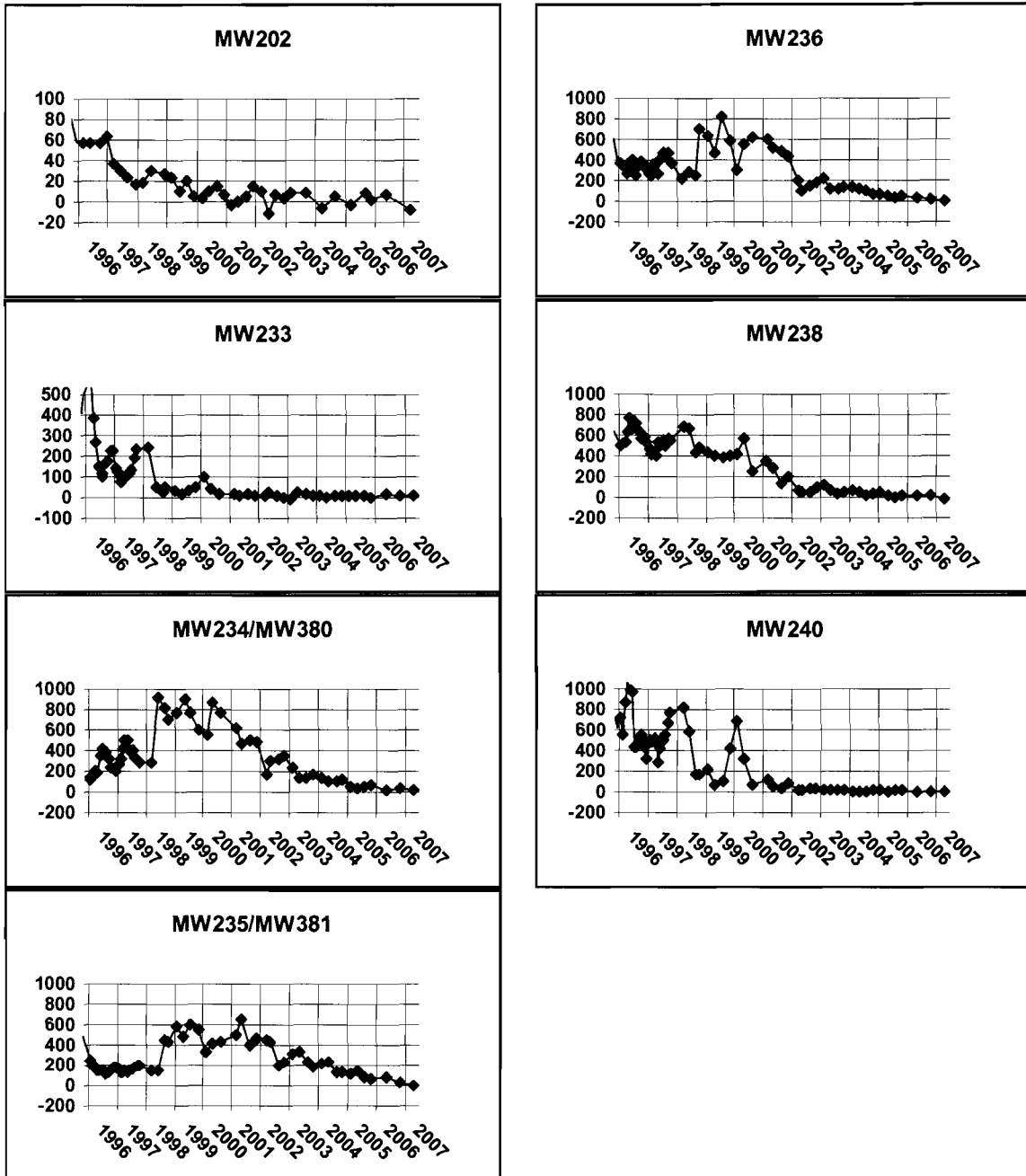
TCE (ppb)



NOTE: Data rejected by validation or assessment have not been graphed.  
 May 2007 data still pending validation.

Figure 6c. Northwest Plume—North Well Field TCE Concentrations  
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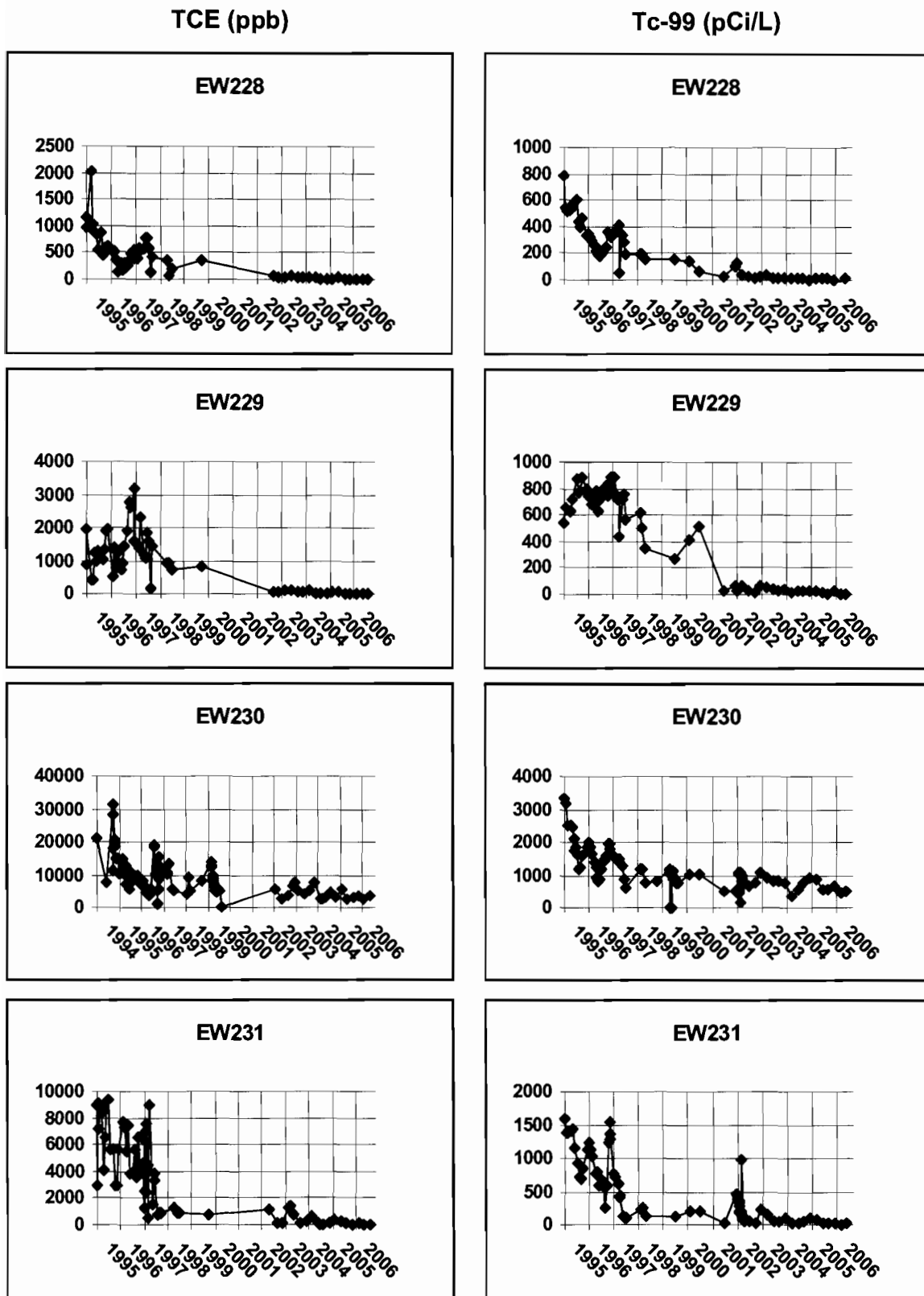
Tc-99 (pCi/L)



NOTE: Data rejected by validation or assessment have not been graphed.  
 May 2007 data still pending validation.

Figure 6d. Northwest Plume—North Well Field Tc-99 Activities  
 B-17





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

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

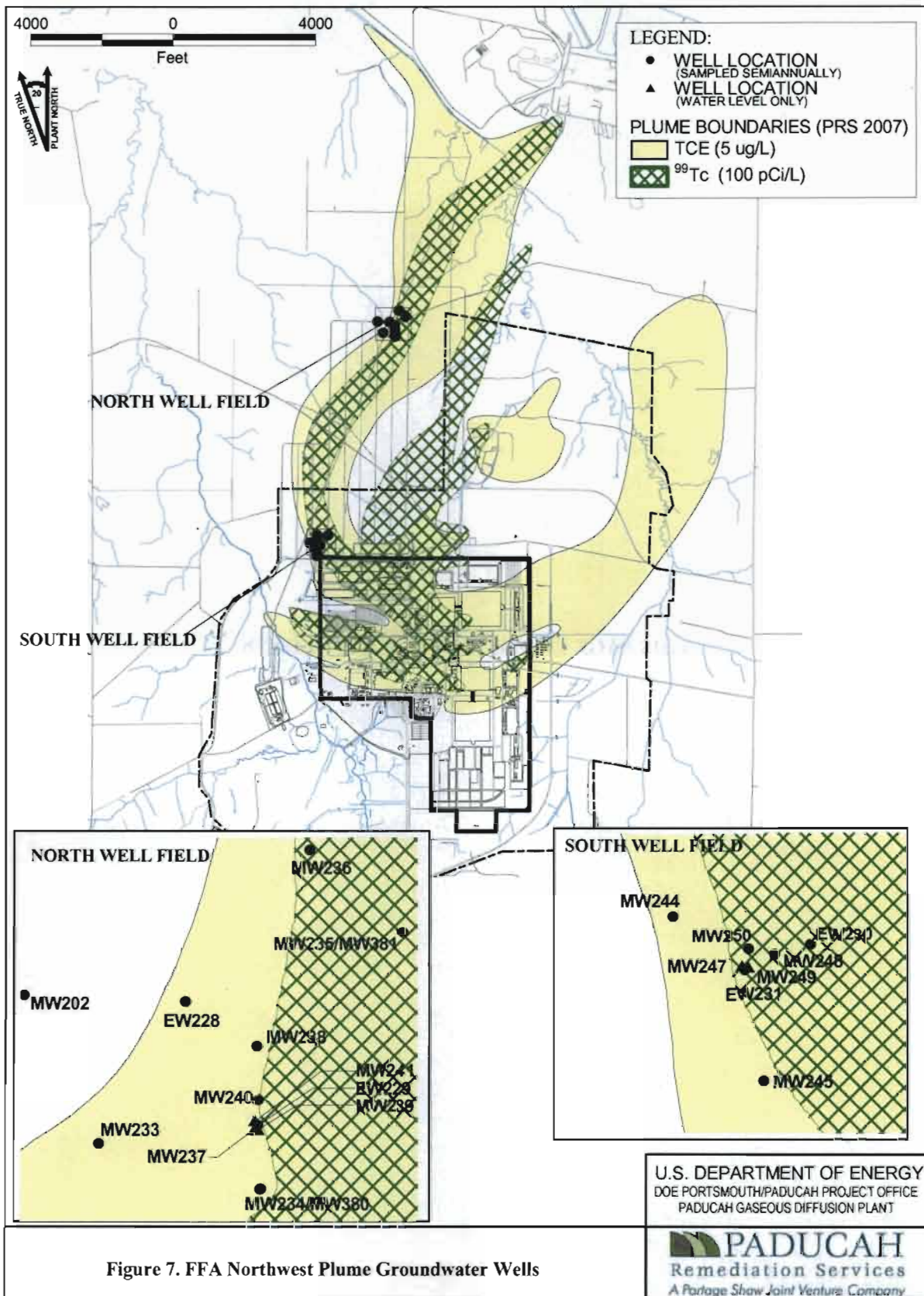


Figure 7. FFA Northwest Plume Groundwater Wells

Figure No. c5ac90005sk016r2.apr  
DATE 10-25-07

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**APPENDIX C**  
**C-746-K LANDFILL DATA**

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## Paducah OREIS Report for KG07-02

**MW300KG2-07**

from: MW300

on 4/12/2007

Media: WG

SmpMethod: GR

Comments:

Analysis	Results	Counting Error	Units	Result Qual	Foot Note	Reporting Limit	TPU	Method	VV/A*
<b>ANION</b>									
Chloride	14		mg/L			2		SW846-9056	/ = /
Nitrate as Nitrogen	1		mg/L	U		1		SW846-9056	/ = /
Sulfate	1800		mg/L			100		SW846-9056	1 / = /
<b>FS</b>									
Barometric Pressure Reading	29.97		Inches/Hg					FS	/ /
Conductivity	2760		umho/cm					FS	/ /
Depth to Water	5.59		ft					FS	/ /
Dissolved Oxygen	0.96		mg/L					FS	/ /
pH	5.41		Std Unit					FS	/ /
Redox	89		mV					FS	/ /
Temperature	58.1		deg F					FS	/ /
Turbidity	111		NTU					FS	/ /
<b>METAL</b>									
Aluminum	0.2		mg/L	U		0.2		SW846-6010B	/ = /
Arsenic	0.00394		mg/L	X		0.001		SW846-6020	/ = /
Barium	0.0142		mg/L			0.005		SW846-6020	/ = /
Beryllium	0.001		mg/L	U		0.001		SW846-6020	/ = /
Cadmium	0.0006		mg/L	U		0.0006		SW846-6020	/ = /
Calcium	398		mg/L			1		SW846-6010B	/ = /
Iron	203		mg/L			0.05		SW846-6010B	1 / = /
Lead	0.0013		mg/L	U		0.0013		SW846-6020	/ = /
Magnesium	101		mg/L			0.025		SW846-6010B	/ = /
Manganese	18.1		mg/L			0.5		SW846-6020	1 / = /
Nickel	0.0689		mg/L	BX		0.005		SW846-6020	/ = /
Potassium	19.7		mg/L	B		0.2		SW846-6010B	/ = /
Sodium	23.7		mg/L			0.5		SW846-6010B	/ = /
Uranium	0.001		mg/L	BU		0.001		SW846-6020	/ = /
<b>METAL-D</b>									
Arsenic, Dissolved	0.00258		mg/L			0.001		SW846-6020	/ = /
Barium, Dissolved	0.014		mg/L			0.005		SW846-6020	/ = /
Beryllium, Dissolved	0.001		mg/L	U		0.001		SW846-6020	/ = /
Cadmium, Dissolved	0.0006		mg/L	U		0.0006		SW846-6020	/ = /
Lead, Dissolved	0.0013		mg/L	U		0.0013		SW846-6020	/ = /
Uranium, Dissolved	0.001		mg/L	BU		0.001		SW846-6020	/ = /
<b>RADS</b>									
Alpha activity	-3.16	3.64	pCi/L		MUX E	40.1	3.78	SW846-9310	/ U /
Beta activity	33.1	7.86	pCi/L		U	38.1	8.77	SW846-9310	/ U /
Technetium-99	-1.66	12.8	pCi/L		U	18.8	12.8	RL-7100	/ U /
<b>VOA</b>									
1,1,1-Trichloroethane	50		ug/L	U		50		SW846-8260	/ U /
1,1,2-Trichloroethane	50		ug/L	U		50		SW846-8260	/ U /
1,1-Dichloroethane	60		ug/L	D		50		SW846-8260	/ U /
1,1-Dichloroethene	120		ug/L	D		50		SW846-8260	1 / U /
1,2-Dichloroethane	50		ug/L	U		50		SW846-8260	/ U /
Benzene	50		ug/L	U		50		SW846-8260	/ U /
Bromodichloromethane	50		ug/L	U		50		SW846-8260	/ U /
Carbon tetrachloride	50		ug/L	U		50		SW846-8260	/ U /
Chloroform	50		ug/L	U		50		SW846-8260	/ U /
cis-1,2-Dichloroethene	790		ug/L	D		50		SW846-8260	1 / U /

**Paducah OREIS Report for KG07-02**

Ethylbenzene	50	ug/L	U	50	SW846-8260	/U/
Tetrachloroethene	50	ug/L	U	50	SW846-8260	/U/
Toluene	50	ug/L	U	50	SW846-8260	/U/
Total Xylene	150	ug/L	U	150	SW846-8260	/U/
trans-1,2-Dichloroethene	50	ug/L	U	50	SW846-8260	/U/
Trichloroethene	22	ug/L	D	10	SW846-8260	I/U/
Vinyl chloride	120	ug/L	D	20	SW846-8260	I/U/

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## Paducah OREIS Report for KG07-02

**MW301KG2-07**

from: MW301

on 4/12/2007

Media: W/G

SmpMethod: GR

Comments:

Analysis	Results	Counting Error	Units	Result Qual	Foot Note	Reporting Limit	TPU	Method	VV/A*
<b>ANION</b>									
Chloride	37		mg/L			2		SW846-9056	/=/
Nitrate as Nitrogen	1		mg/L	U		1		SW846-9056	/=/
Sulfate	1700		mg/L			100		SW846-9056	1/=/
<b>FS</b>									
Barometric Pressure Reading	29.97		Inches/Hg					FS	/ /
Conductivity	3280		umho/cm					FS	/ /
Depth to Water	8.63		ft					FS	/ /
Dissolved Oxygen	1.98		mg/L					FS	/ /
pH	6.1		Std Unit					FS	/ /
Redox	-12		mV					FS	/ /
Temperature	57.1		deg F					FS	/ /
Turbidity	344		NTU					FS	/ /
<b>METAL</b>									
Aluminum	2.42		mg/L			0.2		SW846-6010B	1/=/
Arsenic	0.00158		mg/L	X		0.001		SW846-6020	/=/
Barium	0.0292		mg/L			0.005		SW846-6020	/=/
Beryllium	0.001		mg/L	U		0.001		SW846-6020	/=/
Cadmium	0.0006		mg/L	U		0.0006		SW846-6020	/=/
Calcium	486		mg/L			1		SW846-6010B	/=/
Iron	265		mg/L			0.05		SW846-6010B	1/=/
Lead	0.00196		mg/L			0.0013		SW846-6020	S/=/
Magnesium	94.6		mg/L			0.025		SW846-6010B	/=/
Manganese	15.8		mg/L			0.5		SW846-6020	1/=/
Nickel	0.028		mg/L	BX		0.005		SW846-6020	/=/
Potassium	33.9		mg/L	B		0.2		SW846-6010B	/=/
Sodium	49.1		mg/L			0.5		SW846-6010B	/=/
Uranium	0.00234		mg/L	B		0.001		SW846-6020	/=/
<b>METAL-D</b>									
Arsenic, Dissolved	0.001		mg/L	U		0.001		SW846-6020	/=/
Barium, Dissolved	0.0181		mg/L			0.005		SW846-6020	S/=/
Beryllium, Dissolved	0.001		mg/L	U		0.001		SW846-6020	/=/
Cadmium, Dissolved	0.0006		mg/L	U		0.0006		SW846-6020	/=/
Lead, Dissolved	0.0013		mg/L	U		0.0013		SW846-6020	/=/
Uranium, Dissolved	0.00149		mg/L	B		0.001		SW846-6020	/=/
<b>RADS</b>									
Alpha activity	7.86	6.41	pCi/L		MUX E	41.9	6.87	SW846-9310	/ U /
Beta activity	60.8	12.8	pCi/L			39.3	14.7	SW846-9310	1/=/
Technetium-99	4.66	13.2	pCi/L	U		18.8	13.2	RL-7100	/ U /
<b>VOA</b>									
1,1,1-Trichloroethane	5		ug/L	U		5		SW846-8260	/ U /
1,1,2-Trichloroethane	5		ug/L	U		5		SW846-8260	/ U /
1,1-Dichloroethane	5		ug/L	U		5		SW846-8260	/ U /
1,1-Dichloroethene	5		ug/L	U		5		SW846-8260	/ U /
1,2-Dichloroethane	5		ug/L	U		5		SW846-8260	/ U /
Benzene	5		ug/L	U		5		SW846-8260	/ U /
Bromodichloromethane	5		ug/L	U		5		SW846-8260	/ U /
Carbon tetrachloride	5		ug/L	U		5		SW846-8260	/ U /
Chloroform	5		ug/L	U		5		SW846-8260	/ U /
cis-1,2-Dichloroethene	49		ug/L			5		SW846-8260	/ U /



**Paducah OREIS Report for KG07-02**

Ethylbenzene	5	ug/L	U	5	SW846-8260	/U/
Tetrachloroethene	5	ug/L	U	5	SW846-8260	/U/
Toluene	5	ug/L	U	5	SW846-8260	/U/
Total Xylene	15	ug/L	U	15	SW846-8260	/U/
trans-1,2-Dichloroethene	5	ug/L	U	5	SW846-8260	/U/
Trichloroethene	1	ug/L	U	1	SW846-8260	/U/
Vinyl chloride	3.2	ug/L		2	SW846-8260	I/U/

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## Paducah OREIS Report for KG07-02

**MW302KG2-07**

from: MW302

on 4/12/2007

Media: WG

SmpMethod: GR

Comments:

Analysis	Results	Counting Error	Units	Result Qual	Foot Note	Reporting Limit	TPU	Method	VV/A*
<b>ANION</b>									
Chloride	11		mg/L			2		SW846-9056	/=/
Nitrate as Nitrogen	1		mg/L	U		1		SW846-9056	/=/
Sulfate	130		mg/L			20		SW846-9056	/=/
<b>FS</b>									
Barometric Pressure Reading	29.97		Inches/Hg					FS	/ /
Conductivity	782		umho/cm					FS	/ /
Depth to Water	7.96		ft					FS	/ /
Dissolved Oxygen	1.92		mg/L					FS	/ /
pH	6.23		Std Unit					FS	/ /
Redox	113		mV					FS	/ /
Temperature	57.1		deg F					FS	/ /
Turbidity	8.3		NTU					FS	/ /
<b>METAL</b>									
Aluminum	0.2		mg/L	U		0.2		SW846-6010B	/=/
Arsenic	0.001		mg/L	UX		0.001		SW846-6020	/=/
Barium	0.0566		mg/L			0.005		SW846-6020	/=/
Beryllium	0.001		mg/L	U		0.001		SW846-6020	/=/
Cadmium	0.0006		mg/L	U		0.0006		SW846-6020	/=/
Calcium	44.8		mg/L			1		SW846-6010B	/=/
Iron	0.131		mg/L	B		0.05		SW846-6010B	/=/
Lead	0.0013		mg/L	U		0.0013		SW846-6020	/=/
Magnesium	25.7		mg/L			0.025		SW846-6010B	/=/
Manganese	0.345		mg/L			0.005		SW846-6020	/ /
Nickel	0.00543		mg/L	BX		0.005		SW846-6020	/=/
Potassium	0.365		mg/L	B		0.2		SW846-6010B	/U /
Sodium	85.1		mg/L			0.5		SW846-6010B	/=/
Uranium	0.001		mg/L	BU		0.001		SW846-6020	/=/
<b>METAL-D</b>									
Arsenic, Dissolved	0.001		mg/L	U		0.001		SW846-6020	/=/
Barium, Dissolved	0.056		mg/L			0.005		SW846-6020	S / = /
Beryllium, Dissolved	0.001		mg/L	U		0.001		SW846-6020	/=/
Cadmium, Dissolved	0.0006		mg/L	U		0.0006		SW846-6020	/=/
Lead, Dissolved	0.0013		mg/L	U		0.0013		SW846-6020	/=/
Uranium, Dissolved	0.001		mg/L	BU		0.001		SW846-6020	/=/
<b>RADS</b>									
Alpha activity	4.96	3.31	pCi/L		MUX E	8.49	3.66	SW846-9310	/U /
Beta activity	3.59	0.944	pCi/L		U	8.84	1.03	SW846-9310	/U /
Technetium-99	13.1	13.5	pCi/L		U	18.8	13.5	RL-7100	/U /
<b>VOA</b>									
1,1,1-Trichloroethane	5		ug/L	U		5		SW846-8260	/U /
1,1,2-Trichloroethane	5		ug/L	U		5		SW846-8260	/U /
1,1-Dichloroethane	5		ug/L	U		5		SW846-8260	/U /
1,1-Dichloroethene	5		ug/L	U		5		SW846-8260	/U /
1,2-Dichloroethane	5		ug/L	U		5		SW846-8260	/U /
Benzene	5		ug/L	U		5		SW846-8260	/U /
Bromodichloromethane	5		ug/L	U		5		SW846-8260	/U /
Carbon tetrachloride	5		ug/L	U		5		SW846-8260	/U /
Chloroform	5		ug/L	U		5		SW846-8260	/U /
cis-1,2-Dichloroethene	5		ug/L	U		5		SW846-8260	/U /

**Paducah OREIS Report for KG07-02**

Ethylbenzene	5	ug/L	U	5	SW846-8260	/U/
Tetrachloroethene	5	ug/L	U	5	SW846-8260	/U/
Toluene	5	ug/L	U	5	SW846-8260	/U/
Total Xylene	15	ug/L	U	15	SW846-8260	/U/
trans-1,2-Dichloroethene	5	ug/L	U	5	SW846-8260	/U/
Trichloroethene	1	ug/L	U	1	SW846-8260	/U/
Vinyl chloride	2	ug/L	U	2	SW846-8260	/U/

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## Paducah OREIS Report for KG07-02

**MW344DKG2-07**

from: MW344

on 4/12/2007

Media: WG

SmpMethod: GR

Comments:

Analysis	Results	Counting Error	Units	Result Qual	Foot Note	Reporting Limit	TPU	Method	VV/A*
<b>ANION</b>									
Chloride	22		mg/L			2		SW846-9056	/ = /
Nitrate as Nitrogen	1		mg/L	U		1		SW846-9056	/ = /
Sulfate	160		mg/L			50		SW846-9056	S / = /
<b>FS</b>									
Barometric Pressure Reading	29.97		Inches/Hg					FS	/ /
Conductivity	646		umho/cm					FS	/ /
Depth to Water	16.82		ft					FS	/ /
Dissolved Oxygen	0.8		mg/L					FS	/ /
pH	6.09		Std Unit					FS	/ /
Redox	-60		mV					FS	/ /
Temperature	56.6		deg F					FS	/ /
Turbidity	59.3		NTU					FS	/ /
<b>METAL</b>									
Aluminum	7.87		mg/L			0.2		SW846-6010B	/ = /
Arsenic	0.01		mg/L	UX		0.01		SW846-6020	/ = /
Barium	0.0792		mg/L			0.005		SW846-6020	/ = /
Beryllium	0.001		mg/L	U		0.001		SW846-6020	/ = /
Cadmium	0.0006		mg/L	U		0.0006		SW846-6020	/ = /
Calcium	58.9		mg/L			1		SW846-6010B	/ = /
Iron	6.28		mg/L			0.05		SW846-6010B	/ = /
Lead	0.00184		mg/L			0.0013		SW846-6020	S / = /
Magnesium	20.9		mg/L			0.025		SW846-6010B	/ = /
Manganese	0.286		mg/L			0.05		SW846-6020	/ = /
Nickel	0.05		mg/L	BUX		0.05		SW846-6020	/ = /
Potassium	2.23		mg/L	B		0.2		SW846-6010B	/ = /
Sodium	29.8		mg/L			0.5		SW846-6010B	/ = /
Uranium	0.001		mg/L	BU		0.001		SW846-6020	/ = /
<b>METAL-D</b>									
Arsenic, Dissolved	0.00391		mg/L			0.001		SW846-6020	/ = /
Barium, Dissolved	0.0531		mg/L			0.005		SW846-6020	/ = /
Beryllium, Dissolved	0.001		mg/L	U		0.001		SW846-6020	/ = /
Cadmium, Dissolved	0.0006		mg/L	U		0.0006		SW846-6020	/ = /
Lead, Dissolved	0.0013		mg/L	U		0.0013		SW846-6020	/ = /
Uranium, Dissolved	0.001		mg/L	BU		0.001		SW846-6020	/ = /
<b>RADS</b>									
Alpha activity	8.77	4.53	pCi/L	MX	E	7.43	5.3	SW846-9310	/ J /
Beta activity	7.36	1.75	pCi/L	U		8.47	1.95	SW846-9310	/ U /
Technetium-99	7.1	13.3	pCi/L	U		18.8	13.3	RL-7100	/ U /
<b>VOA</b>									
1,1,1-Trichloroethane	5		ug/L	U		5		SW846-8260	/ U /
1,1,2-Trichloroethane	5		ug/L	U		5		SW846-8260	/ U /
1,1-Dichloroethane	5		ug/L	U		5		SW846-8260	/ U /
1,1-Dichloroethene	5		ug/L	U		5		SW846-8260	/ U /
1,2-Dichloroethane	5		ug/L	U		5		SW846-8260	/ U /
Benzene	5		ug/L	U		5		SW846-8260	/ U /
Bromodichloromethane	5		ug/L	U		5		SW846-8260	/ U /
Carbon tetrachloride	5		ug/L	U		5		SW846-8260	/ U /
Chloroform	5		ug/L	U		5		SW846-8260	/ U /
cis-1,2-Dichloroethene	5		ug/L	U		5		SW846-8260	/ U /

**Paducah OREIS Report for KG07-02**

Ethylbenzene	5	ug/L	U	5	SW846-8260	/U/
Tetrachloroethene	5	ug/L	U	5	SW846-8260	/U/
Toluene	5	ug/L	U	5	SW846-8260	/U/
Total Xylene	15	ug/L	U	15	SW846-8260	/U/
trans-1,2-Dichloroethene	5	ug/L	U	5	SW846-8260	/U/
Trichloroethene	1	ug/L	U	1	SW846-8260	/U/
Vinyl chloride	2	ug/L	U	2	SW846-8260	/U/

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## Paducah OREIS Report for KG07-02

**MW344KG2-07**

from: MW344

on 4/12/2007

Media: WG

SmpMethod: GR

Comments:

Analysis	Results	Counting Error	Units	Result Qual	Foot Note	Reporting Limit	TPU	Method	V/V/A*
<b>ANION</b>									
Chloride	22		mg/L			2		SW846-9056	/=/
Nitrate as Nitrogen	1		mg/L	U		1		SW846-9056	/=/
Sulfate	160		mg/L			40		SW846-9056	S/=/
<b>FS</b>									
Barometric Pressure Reading	29.97		Inches/Hg					FS	/ /
Conductivity	646		umho/cm					FS	/ /
Depth to Water	16.82		ft					FS	/ /
Dissolved Oxygen	0.8		mg/L					FS	/ /
pH	6.09		Std Unit					FS	/ /
Redox	-60		mV					FS	/ /
Temperature	56.6		deg F					FS	/ /
Turbidity	59.3		NTU					FS	/ /
<b>METAL</b>									
Aluminum	13.5		mg/L			0.2		SW846-6010B	/=/
Arsenic	0.01		mg/L	UX		0.01		SW846-6020	/=/
Barium	0.0896		mg/L			0.005		SW846-6020	/=/
Beryllium	0.001		mg/L	U		0.001		SW846-6020	/=/
Cadmium	0.0006		mg/L	U		0.0006		SW846-6020	/=/
Calcium	62.2		mg/L			1		SW846-6010B	/=/
Iron	7.9		mg/L			0.05		SW846-6010B	/=/
Lead	0.0024		mg/L			0.0013		SW846-6020	S/=/
Magnesium	22		mg/L			0.025		SW846-6010B	/=/
Manganese	0.279		mg/L			0.05		SW846-6020	/=/
Nickel	0.05		mg/L	BUX		0.05		SW846-6020	/=/
Potassium	3.01		mg/L			0.2		SW846-6010B	/=/
Sodium	31.5		mg/L			0.5		SW846-6010B	/=/
Uranium	0.001		mg/L	BU		0.001		SW846-6020	/=/
<b>METAL-D</b>									
Arsenic, Dissolved	0.00397		mg/L			0.001		SW846-6020	/=/
Barium, Dissolved	0.0516		mg/L			0.005		SW846-6020	/=/
Beryllium, Dissolved	0.001		mg/L	U		0.001		SW846-6020	/=/
Cadmium, Dissolved	0.0006		mg/L	U		0.0006		SW846-6020	/=/
Lead, Dissolved	0.0013		mg/L	U		0.0013		SW846-6020	/=/
Uranium, Dissolved	0.001		mg/L	BU		0.001		SW846-6020	/=/
<b>RADS</b>									
Alpha activity	6.28	3.62	pCi/L		MUX E	7.08	4.13	SW846-9310	/U/
Beta activity	4.88	1.23	pCi/L		U	8.36	1.36	SW846-9310	/U/
Technetium-99	-3.22	13.1	pCi/L		U	18.8	13.1	RL-7100	/U/
<b>VOA</b>									
1,1,1-Trichloroethane	5		ug/L	U		5		SW846-8260	/U/
1,1,2-Trichloroethane	5		ug/L	U		5		SW846-8260	/U/
1,1-Dichloroethane	5		ug/L	U		5		SW846-8260	/U/
1,1-Dichloroethene	5		ug/L	U		5		SW846-8260	/U/
1,2-Dichloroethane	5		ug/L	U		5		SW846-8260	/U/
Benzene	5		ug/L	U		5		SW846-8260	/U/
Bromodichloromethane	5		ug/L	U		5		SW846-8260	/U/
Carbon tetrachloride	5		ug/L	U		5		SW846-8260	/U/
Chloroform	5		ug/L	U		5		SW846-8260	/U/
cis-1,2-Dichloroethene	5		ug/L	U		5		SW846-8260	/U/

**Paducah OREIS Report for KG07-02**

Ethylbenzene	5	ug/L	U	5	SW846-8260	/U/
Tetrachloroethene	5	ug/L	U	5	SW846-8260	/U/
Toluene	5	ug/L	U	5	SW846-8260	/U/
Total Xylene	15	ug/L	U	15	SW846-8260	/U/
trans-1,2-Dichloroethene	5	ug/L	U	5	SW846-8260	/U/
Trichloroethene	1	ug/L	U	1	SW846-8260	/U/
Vinyl chloride	2	ug/L	U	2	SW846-8260	/U/

<b>FBMW344KG2-07</b>	from: QC	on 4/12/2007	Media: WQ	SmpMethod:
Comments:				

Analysis	Results	Counting Error	Units	Result Qual	Foot Note	Reporting Limit	TPU	Method	V/V/A*
<b>ANION</b>									
Chloride	2		mg/L	U		2		SW846-9056	/=/
Nitrate as Nitrogen	1		mg/L	U		1		SW846-9056	/=/
Sulfate	2		mg/L	U		2		SW846-9056	/=/
<b>METAL</b>									
Aluminum	0.2		mg/L	U		0.2		SW846-6010B	/=/
Arsenic	0.001		mg/L	UX		0.001		SW846-6020	/=/
Barium	0.005		mg/L	U		0.005		SW846-6020	/=/
Beryllium	0.001		mg/L	U		0.001		SW846-6020	/=/
Cadmium	0.0006		mg/L	U		0.0006		SW846-6020	/=/
Calcium	1		mg/L	U		1		SW846-6010B	/=/
Iron	0.05		mg/L	BU		0.05		SW846-6010B	/=/
Lead	0.0013		mg/L	U		0.0013		SW846-6020	/=/
Magnesium	0.025		mg/L	U		0.025		SW846-6010B	/=/
Manganese	0.005		mg/L	U		0.005		SW846-6020	/=/
Nickel	0.005		mg/L	BUX		0.005		SW846-6020	/=/
Potassium	0.2		mg/L	BU		0.2		SW846-6010B	/=/
Sodium	0.5		mg/L	U		0.5		SW846-6010B	/=/
Uranium	0.001		mg/L	BU		0.001		SW846-6020	/=/
<b>RADS</b>									
Alpha activity	2.02	1.42	pCi/L	MUX		3.87	1.56	SW846-9310	/U/
Beta activity	-1.02	0.316	pCi/L	U		6.29	0.338	SW846-9310	/U/
Technetium-99	0.666	12.6	pCi/L	U		18.8	12.6	RL-7100	/U/
<b>VOA</b>									
1,1,1-Trichloroethane	5		ug/L	U		5		SW846-8260	/U/
1,1,2-Trichloroethane	5		ug/L	U		5		SW846-8260	/U/
1,1-Dichloroethane	5		ug/L	U		5		SW846-8260	/U/
1,1-Dichloroethene	5		ug/L	U		5		SW846-8260	/U/
1,2-Dichloroethane	5		ug/L	U		5		SW846-8260	/U/
Benzene	5		ug/L	U		5		SW846-8260	/U/
Bromodichloromethane	5		ug/L	U		5		SW846-8260	/U/
Carbon tetrachloride	5		ug/L	U		5		SW846-8260	/U/
Chloroform	5		ug/L	U		5		SW846-8260	/U/
cis-1,2-Dichloroethene	5		ug/L	U		5		SW846-8260	/U/
Ethylbenzene	5		ug/L	U		5		SW846-8260	/U/
Tetrachloroethene	5		ug/L	U		5		SW846-8260	/U/
Toluene	5		ug/L	U		5		SW846-8260	/U/
Total Xylene	15		ug/L	U		15		SW846-8260	/U/
trans-1,2-Dichloroethene	5		ug/L	U		5		SW846-8260	/U/
Trichloroethene	1		ug/L	U		1		SW846-8260	/U/
Vinyl chloride	2		ug/L	U		2		SW846-8260	/U/

## Paducah OREIS Report for KG07-02

**RIMW344KG2-07**

from: QC

on 4/12/2007

Media: WQ

SmpMethod:

Comments:

Analysis	Results	Counting Error	Units	Result Qual	Foot Note	Reporting Limit	TPU	Method	VV/A*
<b>ANION</b>									
Chloride	2		mg/L	U		2		SW846-9056	/ = /
Nitrate as Nitrogen	1		mg/L	U		1		SW846-9056	/ = /
Sulfate	2		mg/L	U		2		SW846-9056	/ = /
<b>METAL</b>									
Aluminum	0.2		mg/L	U		0.2		SW846-6010B	/ = /
Arsenic	0.001		mg/L	UX		0.001		SW846-6020	/ = /
Barium	0.005		mg/L	U		0.005		SW846-6020	/ = /
Beryllium	0.001		mg/L	U		0.001		SW846-6020	/ = /
Cadmium	0.0006		mg/L	U		0.0006		SW846-6020	/ = /
Calcium	1		mg/L	U		1		SW846-6010B	/ = /
Iron	0.05		mg/L	BU		0.05		SW846-6010B	/ = /
Lead	0.0013		mg/L	U		0.0013		SW846-6020	/ = /
Magnesium	0.025		mg/L	U		0.025		SW846-6010B	/ = /
Manganese	0.005		mg/L	U		0.005		SW846-6020	/ = /
Nickel	0.005		mg/L	BUX		0.005		SW846-6020	/ = /
Potassium	0.2		mg/L	BU		0.2		SW846-6010B	/ = /
Sodium	0.5		mg/L	U		0.5		SW846-6010B	/ = /
Uranium	0.001		mg/L	BU		0.001		SW846-6020	/ = /
<b>RADS</b>									
Alpha activity	0.788	0.705	pCi/L	MUX		3.87	0.747	SW846-9310	/ U /
Beta activity	-0.808	0.246	pCi/L	U		6.35	0.264	SW846-9310	/ U /
Technetium-99	5.21	13.2	pCi/L	U		18.8	13.2	RL-7100	/ U /
<b>VOA</b>									
1,1,1-Trichloroethane	5		ug/L	U		5		SW846-8260	/ U /
1,1,2-Trichloroethane	5		ug/L	U		5		SW846-8260	/ U /
1,1-Dichloroethane	5		ug/L	U		5		SW846-8260	/ U /
1,1-Dichloroethene	5		ug/L	U		5		SW846-8260	/ U /
1,2-Dichloroethane	5		ug/L	U		5		SW846-8260	/ U /
Benzene	5		ug/L	U		5		SW846-8260	/ U /
Bromodichloromethane	5		ug/L	U		5		SW846-8260	/ U /
Carbon tetrachloride	5		ug/L	U		5		SW846-8260	/ U /
Chloroform	5		ug/L	U		5		SW846-8260	/ U /
cis-1,2-Dichloroethene	5		ug/L	U		5		SW846-8260	/ U /
Ethylbenzene	5		ug/L	U		5		SW846-8260	/ U /
Tetrachloroethene	5		ug/L	U		5		SW846-8260	/ U /
Toluene	5		ug/L	U		5		SW846-8260	/ U /
Total Xylene	15		ug/L	U		15		SW846-8260	/ U /
trans-1,2-Dichloroethene	5		ug/L	U		5		SW846-8260	/ U /
Trichloroethene	1		ug/L	U		1		SW846-8260	/ U /
Vinyl chloride	2		ug/L	U		2		SW846-8260	/ U /



## Paducah OREIS Report for KG07-02

<b>TBMW344KG2-07</b>	from: QC	on 4/12/2007	Media: WQ	SmpMethod:
Comments:				

Analysis	Results	Counting Error	Units	Result Qual	Foot Note	Reporting Limit	TPU	Method	V/V/A*
<b>VOA</b>									
1,1,1-Trichloroethane	5		ug/L	U		5		SW846-8260	/ U /
1,1,2-Trichloroethane	5		ug/L	U		5		SW846-8260	/ U /
1,1-Dichloroethane	5		ug/L	U		5		SW846-8260	/ U /
1,1-Dichloroethene	5		ug/L	U		5		SW846-8260	/ U /
1,2-Dichloroethane	5		ug/L	U		5		SW846-8260	/ U /
Benzene	5		ug/L	U		5		SW846-8260	/ U /
Bromodichloromethane	5		ug/L	U		5		SW846-8260	/ U /
Carbon tetrachloride	5		ug/L	U		5		SW846-8260	/ U /
Chloroform	5		ug/L	U		5		SW846-8260	/ U /
cis-1,2-Dichloroethene	5		ug/L	U		5		SW846-8260	/ U /
Ethylbenzene	5		ug/L	U		5		SW846-8260	/ U /
Tetrachloroethene	5		ug/L	U		5		SW846-8260	/ U /
Toluene	5		ug/L	U		5		SW846-8260	/ U /
Total Xylene	15		ug/L	U		15		SW846-8260	/ U /
trans-1,2-Dichloroethene	5		ug/L	U		5		SW846-8260	/ U /
Trichloroethene	1		ug/L	U		1		SW846-8260	/ U /
Vinyl chloride	2		ug/L	U		2		SW846-8260	/ U /

**APPENDIX D**  
**ADMINISTRATIVE RECORD INDEX**

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ADMINISTRATIVE RECORD  
4/1/07 through 9/30/07

Accession Num	Title	Date On Document	To Affiliation	Author Affiliation	Status Code
I-01713-0036	[DOE REQUESTS CONCURRENCE] MINOR MODIFICATION OF THE ACTION MEMORANDUM FOR THE SCRAP METAL DISPOSITION AT THE PADUCAH GASEOUS DIFFUSION PLANT	05/24/07	KDEP, USEPA-IV	DOE-PPPO	24-PD
I-01716-0193	[REVISION OF TECHNICAL JUSTIFICATION FOR LEAVING ALUMINUM INGOTS IN STORAGE] RECYCLING OF ALUMINUM INGOTS	07/13/07	DOE-PPPO	PRS	24-PD
I-01713-0037	[EPA REQUEST REGARDING] DOE REQUEST FOR MINOR MODIFICATION OF THE ACTION MEMORANDUM FOR THE SCRAP METAL DISPOSITION AT THE PGDP AND TECHNICAL JUSTIFICATION FOR LEAVING NICKEL INGOTS AT THE C-746-H4 STORAGE PAD WITHOUT A PROTECTIVE STRUCTURE	08/27/07	DOE-PPPO, PRS	USEPA-IV	24-PD
I-05116-0061	[KDEP] APPROVAL REMOVAL ACTION REPORT FOR THE C-402 LIME HOUSE AT THE PADUCAH ENVIRONMENTAL REMEDIATION PROJECT (DOE/LX/07-0010&D1), PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY	09/12/07	DOE-PPPO, PRS	KDEP	55-PD
I-04616-0033	PROPOSED MILESTONE EXTENSION FOR THE GROUNDWATER OPERABLE UNIT C-400 INTERIM REMEDIAL ACTION AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY	04/06/07	KDEP, USEPA-IV	DOE-PPPO	6PHASE-PD
I-04615-0017	TRANSMITTAL OF THE REMEDIAL DESIGN REPORT, 90% DESIGN DRAWINGS AND TECHNICAL SPECIFICATIONS PACKAGE, FOR THE GWOU INTERIM REMEDIAL ACTION FOR THE VOCC AT THE C-400 CLEANING BLDG. AT THE PGDP, PADUCAH, KENTUCKY (DOE/LX/07-0005&D1)	04/09/07	KDEP, USEPA-IR	DOE-PPPO	6PHASE-PD
I-04615-0021	MEMORANDUM - U.S. DEPARTMENT OF ENERGY HEADQUARTERS REVIEW OF THE 90% REMEDIAL DESIGN REPORT FOR THE INTERIM REMEDIAL ACTION OF THE C-400 BUILDING COMPLEX GROUNDWATER CONTAMINATION	04/12/07	DOE-PPPO	DOE-PPPO	6PHASE-PD
I-04615-0023	[KDEP GRANTS] PROPOSED MILESTONE EXTENSIONS FOR THE GROUNDWATER OPERABLE UNIT, C-400 INTERIM REMEDIAL ACTION PADUCAH GASEOUS DIFFUSION PLANT	04/20/07	DOE-PPPO	KDEP	6PHASE-PD
I-04615-0020	CONTRACT NUMBER DE-AC30-06EW05001: HALT ANALYSIS OF STEAM VERSUS ELECTRICAL RESISTANCE HEATING OF C-400 BUILDING AREA	04/24/07	PRS	DOE-PPPO	6PHASE-PD
I-04615-0019	PROPOSED MILESTONE MODIFICATION FOR THE GROUNDWATER OPERABLE UNIT C-400 INTERIM REMEDIAL ACTION AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY	04/26/07	KDEP, USEPA-IV	DOE-PPPO	6PHASE-PD
I-04616-0034	[MODIFICATION GRANTED] PROPOSED MILESTONE EXTENSIONS FOR THE GROUNDWATER OPERABLE UNIT C-400 INTERIM REMEDIAL ACTION	05/02/07	DOE-PPPO, PRS	KDEP	6PHASE-PD
I-04615-0016	[EPA EXTENDS] REVIEW OF THE REMEDIAL DESIGN REPORT, 90% DESIGN DRAWINGS AND TECHNICAL SPECIFICATIONS PACKAGE FOR THE GWOU INTERIM REMEDIAL ACTION FOR THE VOCC AT THE C-400 CLEANING BLDG. AT THE PGDP, PADUCAH, KY. (DOE/LX/07-0005&D1)	05/07/07	DOE-PPPO, PRS	USEPA-IV	6PHASE-PD
I-04616-0035	TRANSMITTAL OF THE REMEDIAL ACTION WORK 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/07-0004&D1)	05/09/07	KDEP, USEPA-IV	DOE-PPPO	6PHASE-PD

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ADMINISTRATIVE RECORD  
4/1/07 through 9/30/07

Accession Num	Title	Date On Document	To Affiliation	Author Affiliation	Status Code
I-04615-0015	[KDEP] REQUEST TO EXTEND REVIEW PERIOD FOR REMEDIAL DESIGN REPORT, 90% DESIGN DRAWINGS AND TECHNICAL SPECIFICATION PACKAGE FOR THE GWOU FOR THE VOLATILE ORGANIC COMPOUND CONTAMINATION AT THE C-400 CLEANING BLDG. AT THE PGDP (DOE/LX/07-0005&D1)	05/11/07	DOE-PPPO, PRS	KDEP	6PHASE-PD
I-04616-0037	[KDEP'S APPROVAL] LAND USE CONTROL IMPLEMENTATION PLAN [LUCIP]: INTERIM REMEDIAL ACTION FOR THE GWOU FOR THE VOLATILE ORGANIC COMPOUND CONTAMINATION AT THE C-400 CLEANING BLDG. AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KY. (DOE/LX/07-2151&D2/R1)	05/14/07	DOE-PPPO, PRS	KDEP	6PHASE-PD
I-04613-0097	[DOE-PPPO] REQUEST FOR MODIFICATION OF THE INTERIM REMEDIAL ACTION C-400 RECORD OF DECISION [ROD] PERTAINING TO THE LAND USE CONTROLS IMPLEMENTATION PLAN [LUCIP]	05/16/07	KDEP, USEPA-IV	DOE-PPPO	6PHASE-PD
I-04616-0039	[EPA COMMENTS] LUCIP, APPENDIX H COMMENTS UNDER THE REVIEW OF THE REMEDIAL DESIGN REPORT, 90% DESIGN DRAWINGS AND TECHNICAL SPECIFICATIONS PACKAGE FOR THE GWOU INTERIM REMEDIAL ACTION FOR THE VOCC AT THE C-400 CLEANING BLDG. AT THE PGDP(DOE/OR/07-0005&D1)	06/07/07	DOE-PPPO, PRS	USEPA-IV	6PHASE-PD
I-04616-0040	[KDEP GRANTS] REQUEST TO EXTEND REVIEW PERIOD FOR THE REMEDIAL DESIGN REPORT, 90% DESIGN DRAWINGS AND TECHNICAL SPECIFICATION PKG. FOR THE GWOU FOR THE VOCC AT THE C-400 CLEANING BLDG. AND REMEDIAL ACTION WORK PLAN FOR THE IRA FOR THE VOCC AT (SAME) PGDP	06/11/07	DOE-PPPO, PRS	KDEP	6PHASE-PD
I-04616-0041	[KDEP] REQUEST TO EXTEND REVIEW PERIOD FOR REMEDIAL DESIGN REPORT, 90% DESIGN DRAWINGS AND TECHNICAL SPECIFICATION PACKAGE FOR THE GWOU FOR THE VOCC AT THE C-400 CLEANING BLDG. AT THE PGDP AND RAWP FOR THE IRA FOR THE VOCC AT THE C-400	07/10/07	DOE-PPPO, PRS	KDEP	6PHASE-PD
I-04615-0022	REQ TO EXTEND REVIEW PERIOD FOR REMEDIAL DESIGN REP, 90% DESIGN DRAWINGS AND TECH SPECIFICATION PKG. FOR THE GWOU FOR THE VOCC AT THE C-400 CLEANING BLDG (DOE/LX/07-0005&D1) AND RAWP FOR THE IRA FOR THE VOC AT THE C-400 CLEAN. BLDG (DOE/LX/07-0004-&D1)	08/09/07	DOE-PPPO, PRS	KDEP	6PHASE-PD
I-04616-0042	[KDEP COMMENTS] REMEDIAL DESIGN REPORT, 90% DESIGN DRAWINGS AND TECHNICAL SPECIFICATIONS PACKAGE FOR THE GWOU FOR THE VOCC AT THE C-400 CLEANING BUILDING AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0005&D1)	09/07/07	DOE-PPPO, PRS	KDEP	6PHASE-PD
I-04616-0043	[KDEP] REQUEST TO EXTEND REVIEW PERIOD FOR REMEDIAL ACTION WORK PLAN FOR THE INTERIM REMEDIAL ACTION FOR THE VOLATILE ORGANIC CONTAMINATION AT THE C-400 CLEANING BUILDING AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KY (DOE/LX/07-0004&D1)	09/12/07	DOE-PPPO, PRS	KDEP	6PHASE-PD
I-05209-0031	REVISED SOLID WASTE MANAGEMENT UNIT ASSESSMENT REPORT FOR SOLID WASTE MANAGEMENT UNIT 4	07/19/07	KDEP, USEPA-IV	DOE-PPPO	ARFBGOU
I-04909-0006	KENTUCKY RADIATION HEALTH BRANCH (KRHB) COMMENTS ON THE SAMPLING AND ANALYSIS PLAN FOR THE SOIL PILES AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-0015&D1) AND ADDENDUM 1-A (DOE/LX/07-0015/A1)	04/02/07	DOE-PPPO, PRS	KDEP	ARFSOU
I-04909-0009	[KDEP APPROVAL TO] INITIATE SOIL PILES FIELD WORK AT PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY	04/13/07	PRS	KDEP	ARFSOU

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ADMINISTRATIVE RECORD  
4/1/07 through 9/30/07

Accession Num	Title	Date On Document	To Affiliation	Author Affiliation	Status Code
I-04909-0007	TRANSMITTAL OF THE SAMPLING AND ANALYSIS PLAN FOR SOIL PILES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0015&D2) AND ADDENDUM 1-A	04/25/07	KDEP, USEPA-IV	DOE-PPPO	ARFSOU
I-04909-0014	[KDEP] COMMENTS ON THE SAMPLING AND ANALYSIS PLAN FOR SOIL PILES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0015&D2)	06/05/07	DOE-PPPO, PRS	KDEP	ARFSOU
I-04909-0010	[PADUCAH GASEOUS DIFFUSION PLANT] SOIL PILES SAMPLING AND ANALYSIS PLAN/ADDENDUM 1-A (DOE/LX/07-0015&D1) COMMENT RESPONSE SUMMARIES FROM EPA, KDEP, AND KY RADIATION HEALTH BRANCH REVIEW	06/08/07	SST, PRS	PRS	ARFSOU
I-04909-0012	[EPA COMMENTS] SAMPLING AND ANALYSIS PLAN FOR THE SOIL PILES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0015&D2) SECONDARY DOCUMENT	06/14/07	DOE-PPPO, PRS	USEPA-IV	ARFSOU
I-04909-0013	[KDEP FORWARDS KRHB COMMENTS] COMMENTS ON THE SAMPLING AND ANALYSIS PLAN FOR SOIL PILES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0015&D2)	06/14/07	DOE-PPPO, PRS	KDEP, KRHB	ARFSOU
I-04810-0024	TRANSMITTAL OF THE SURFACE WATER OPERABLE UNIT (ON-SITE) SITE INVESTIGATION AND BASELINE RISK ASSESSMENT REPORT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0001&D2) [AND COMMENT RESPONSE SUMMARY OF D1]	04/13/07	KDEP, USEPA-IV	DOE-PPPO	ARFSWOUOSD
I-04810-0026	[KDEP] EXTENSION REQUEST ON THE SURFACE WATER OPERABLE UNIT (ON-SITE) SITE INVESTIGATION AND BASELINE RISK ASSESSMENT REPORT (0001&D2)	05/15/07	DOE-PPPO, PRS	KDEP	ARFSWOUOSD
I-04810-0030	[EPA REQUESTS EXTENSION] REVIEW OF THE SURFACE WATER OPERABLE UNIT (ON-SITE) SITE INVESTIGATION AND BASELINE RISK ASSESSMENT REPORT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0001&D2)	05/29/07	DOE-PPPO, PRS	USEPA-IV	ARFSWOUOSD
I-04810-0028	[EPA] COMMENTS ON THE SURFACE WATER OPERABLE UNIT (ON-SITE) SITE INVESTIGATION AND BASELINE RISK ASSESSMENT REPORT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0001&D2)	06/18/07	DOE-PPPO, PRS	USEPA-IV	ARFSWOUOSD
I-04810-0029	[KDEP AND KRHB] COMMENTS ON THE SURFACE WATER OPERABLE UNIT (ON-SITE) SITE INVESTIGATION AND BASELINE RISK ASSESSMENT REPORT (DOE/LX/07-0001&D2)	06/18/07	DOE-PPPO, PRS	KDEP	ARFSWOUOSD
I-04810-0032	[CERTIFIED ERRATA] TRANSMITTAL OF THE SURFACE WATER OPERABLE UNIT (ON-SITE) SITE INVESTIGATION AND BASELINE RISK ASSESSMENT REPORT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0001&D2/R1)	07/20/07	KDEP, USEPA-IV	DOE-PPPO	ARFSWOUOSD
I-04802-0110	PROPOSED MILESTONE EXTENSION FOR THE SURFACE WATER OPERABLE UNIT (ON-SITE) REMOVAL ACTION AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY	08/01/07	KDEP, USEPA-IV	DOE-PPPO	ARFSWOUOSD
I-04810-0033	TRANSMITTAL OF RADIOLOGICAL MAPS ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT (ON-SITE) SITE INVESTIGATION AND BASELINE RISK ASSESSMENT REPORT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KY (DOE/LX/07-0001&D2/R1)	08/02/07	KDEP, USEPA-IV	DOE-PPPO	ARFSWOUOSD

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**ADMINISTRATIVE RECORD**  
4/1/07 through 9/30/07

<b>Accession Num</b>	<b>Title</b>	<b>Date On Document</b>	<b>To Affiliation</b>	<b>Author Affiliation</b>	<b>Status Code</b>
I-04810-0036	[KDEP] APPROVAL OF THE SURFACE WATER OPERABLE UNIT (ON-SITE) SITE INVESTIGATION AND BASELINE RISK ASSESSMENT REPORT (0001&D2/R1), PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY	08/24/07	DOE-PPPO, PRS	KDEP	ARFSWOUOSD
I-04810-0035	FFA MILESTONE MODIFICATION FORM FOR THE SURFACE WATER OPERABLE UNIT, PADUCAH GASEOUS DIFFUSION PLANT (PGDP)	08/28/07	DOE-PPPO, PRS	KDEP	ARFSWOUOSD
I-04810-0034	[EPA REQUESTS EXTENSION] REVIEW OF THE SURFACE WATER OPERABLE UNIT (ON-SITE) SITE INVESTIGATION AND BASELINE RISK ASSESSMENT REPORT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0001&D2/R1)	08/29/07	DOE-PPPO, PRS	USEPA-IV	ARFSWOUOSD
I-04810-0038	[EPA REQUESTS EXTENSION] REVIEW OF THE SURFACE WATER OPERABLE UNIT (ON-SITE) SITE INVESTIGATION AND BASELINE RISK ASSESSMENT REPORT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0001&D2/R1)	09/11/07	DOE-PPPO, PRS	USEPA-IV	ARFSWOUOSD
I-04810-0037	[EPA REQUESTS EXTENSION] REVIEW OF THE SURFACE WATER OPERABLE UNIT (ON-SITE) SITE INVESTIGATION AND BASELINE RISK ASSESSMENT REPORT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0001&D2/R1)	09/19/07	DOE-PPPO, PRS	USEPA-IV	ARFSWOUOSD
I-04610-0079	[EXTENSION GRANTED] DOE REQUEST TO EXTEND THE INFORMAL DISPUTE RESOLUTION PERIOD FOR THE SITE INVESTIGATION REPORT FOR THE SOUTHWEST PLUME AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/OR/07-2180&D2)	04/05/07	DOE-PPPO, PRS	KDEP	ARFSWP
I-04610-0076	EXTENSION REQUEST FOR THE INFORMAL DISPUTE RESOLUTION PERIOD FOR THE SITE INVESTIGATION REPORT FOR THE SOUTHWEST GROUNDWATER PLUME AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, KY8-890-008-982	04/06/07	KDEP, USEPA-IV	DOE-PPPO	ARFSWP
I-04610-0077	EXTENSION REQUEST FOR THE INFORMAL DISPUTE RESOLUTION PERIOD FOR THE SITE INVESTIGATION REPORT FOR THE SOUTHWEST GROUNDWATER PLUME AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY KY8-890-008-982	05/04/07	KDEP, USEPA-IV	DOE-PPPO	ARFSWP
I-04610-0082	[KDEP GRANTS REQUEST DATED 04/06/07] EXTENSION REQUEST FOR THE INFORMAL DISPUTE RESOLUTION PERIOD FOR THE SITE INVESTIGATION REPORT FOR THE SOUTHWEST PLUME AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/OR/07-2180&D2)	05/14/07	DOE-PPPO, PRS	KDEP	ARFSWP
I-04610-0083	[KDEP GRANTS REQUEST DATED 05/04/2007] EXTENSION REQUEST FOR THE INFORMAL DISPUTE RESOLUTION PERIOD FOR THE SITE INVESTIGATION REPORT FOR THE SOUTHWEST GROUNDWATER PLUME AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/OR/07-2180&D2)	05/14/07	DOE-PPPO, PRS	KDEP	ARFSWP
I-04610-0085	EXTENSION REQUEST FOR THE INFORMAL DISPUTE RESOLUTION PERIOD FOR THE SITE INVESTIGATION REPORT FOR THE SOUTHWEST GROUNDWATER PLUME AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, KY8-890-008-982	06/05/07	KDEP, USEPA-IV	DOE-PPPO	ARFSWP

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**ADMINISTRATIVE RECORD**  
4/1/07 through 9/30/07

<b>Accession Num</b>	<b>Title</b>	<b>Date On Document</b>	<b>To Affiliation</b>	<b>Author Affiliation</b>	<b>Status Code</b>
I-04610-0088	[KDEP CONDITIONALLY GRANTS] EXTENSION REQUEST FOR THE INFORMAL DISPUTE RESOLUTION PERIOD FOR THE SITE INVESTIGATION REPORT FOR THE SOUTHWEST GROUNDWATER PLUME AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/OR/07-2180&D2)	06/14/07	DOE-PPPO, PRS	KDEP	ARFSWP
I-04610-0086	SITE INVESTIGATION REPORT FOR THE SOUTHWEST GROUNDWATER PLUME AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/OR/07-2180&D2/R1)	06/29/07	KDEP, USEPA-IV	DOE-PPPO	ARFSWP
I-04610-0091	[KDEP] LETTER OF CONDITIONAL CONCURRENCE FOR THE SITE INVESTIGATION REPORT FOR THE SOUTHWEST PLUME (DOE/OR/07-2180&D2/R1)	09/05/07	DOE-PPPO, PRS	KDEP	ARFSWP
I-05112-0057	INCORRECT APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENT CITATION FOR THE C-410 DECONTAMINATION AND DECOMMISSIONING PROJECT ENGINEERING EVALUATION/COST ANALYSIS FOR THE C-410 COMPLEX INFRASTRUCTURE AT THE PGDP, PADUCAH, KY (DOE/OR/07-1952&D2/R1)	09/17/07	KDEP, USEPA-IV	DOE-PPPO	C-410-PD
I-00127-0052	REVISED OPERATION AND MAINTENANCE (O&M) PLAN FOR THE NORTHWEST PLUME GROUNDWATER SYSTEM INTERIM REMEDIAL ACTION AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/OR/07-1253&D4/R5)	08/09/07	KDEP, USEPA-IV	DOE-PPPO	GW1-PD

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