PPPO-02-410-09



# **Department of Energy**

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

# **APR 8 0** 2009

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

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

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

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

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

Please find enclosed U.S. Department of Energy (DOE) Paducah Gaseous Diffusion Plant Federal Facility Agreement Semiannual Progress Report for the First Half of Fiscal Year 2009, Paducah, Kentucky, DOE/LX/07-0245/V1. The enclosed report is required by Sections XXIII and XXXII of the Paducah Site Federal Facility Agreement (FFA) and Part IV of the Resource Conservation and Recovery Act permit. This report describes the actions that DOE has taken during the reporting period of October 1, 2008 through March 31, 2009, to implement FFA requirements.

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

Paducah Site Lead

Portsmouth/Paducah Project Office

Enclosure:

FFA Semiannual Report for the First Half of FY 2009

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cc w/enclosure: DMC/Kevil

e-copy w/enclosure:

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# **CERTIFICATION**

**Document Identification:** 

U.S. Department of Energy Paducah Gaseous Diffusion Plant, Federal Facility Agreement Semiannual Progress Report for the First Half of Fiscal Year 2009, Paducah, Kentucky (DOE/LX/07-0245/V1)

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

Myrna Redfield, Deputy Director

Environmental Restoration and Environmental Monitoring

Paducah Remediation Services, LLC

Date Signed

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

U.S. Department of Energy (DOE)

Reinhard Knerr, Paducah Site Lead

Date Signed

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



This document is approved for public release per review by:

APR 2 1 0 9

Paducah Classification and Control Office Date

Swift and Staley Team

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

Date Issued—April 2009

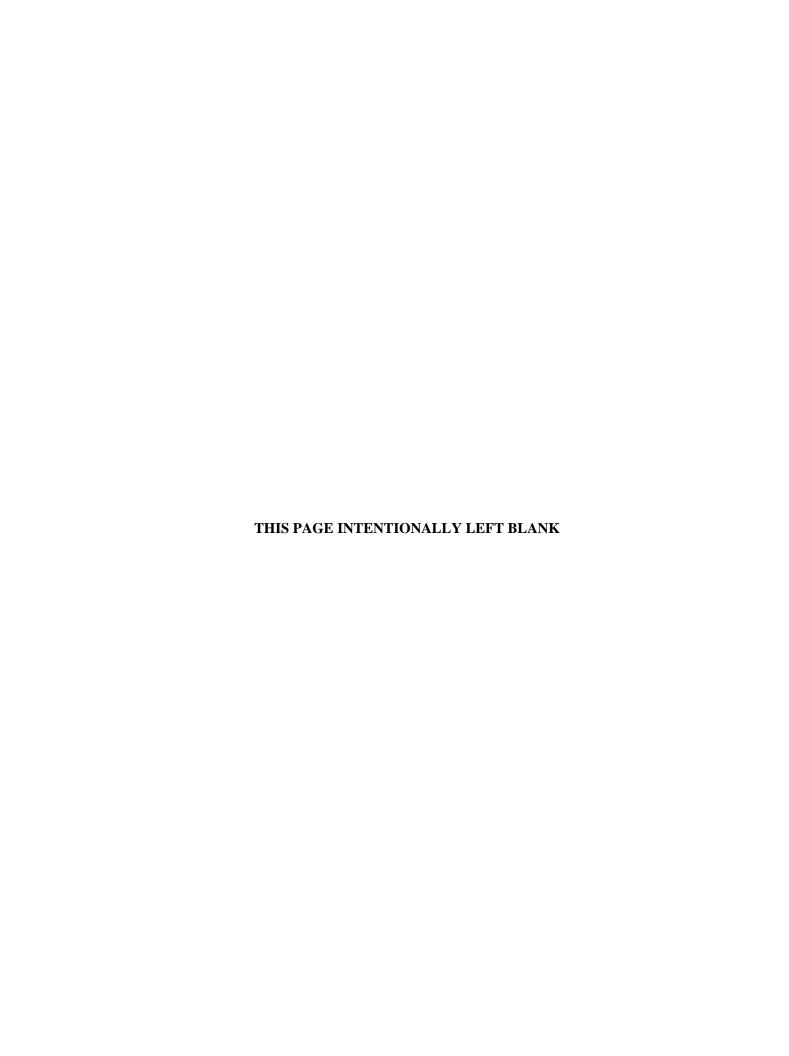
Prepared for the U.S. DEPARTMENT OF ENERGY Office of Environmental Management

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



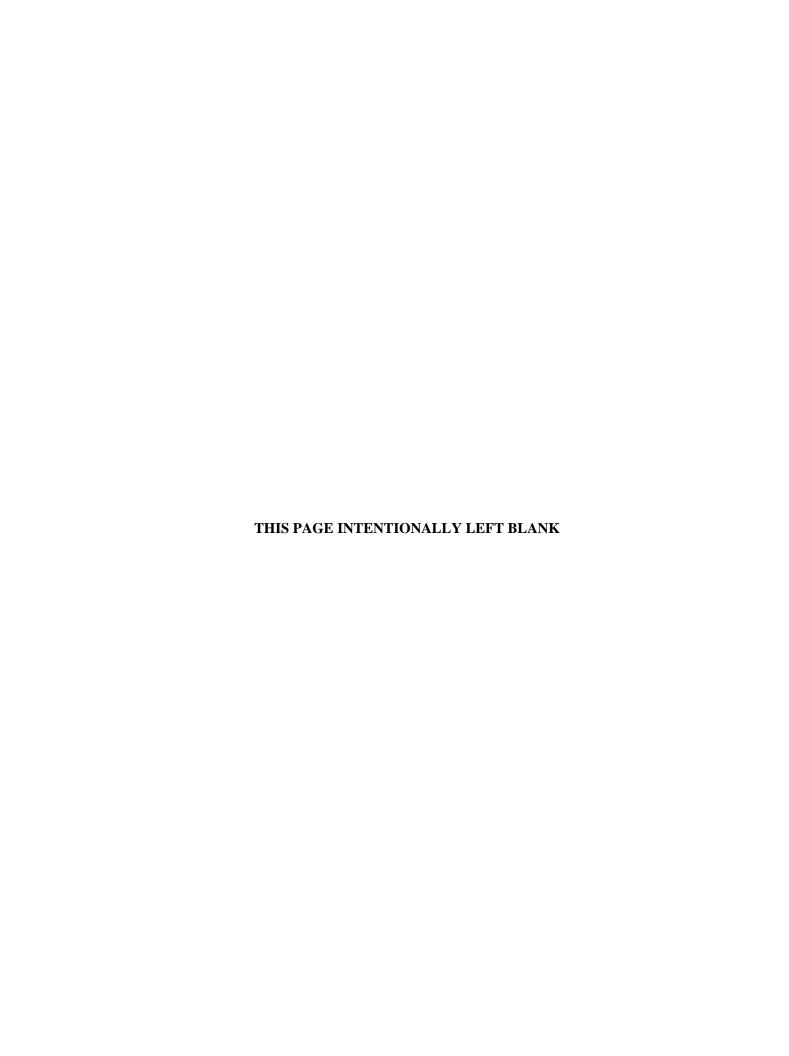
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# **ACRONYMS**

AM Action Memorandum

ARRA American Recovery and Reinvestment Act

BRA Baseline Risk Assessment CAB Citizens Advisory Board

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

CRP Community Relations Plan

D&D decontamination and decommissioning

DOE U.S. Department of Energy

EE/CA Engineering Evaluation/Cost Analysis EPA U.S. Environmental Protection Agency

EQ equalization

ERH electrical resistance heating FFA Federal Facility Agreement

FS Feasibility Study FY fiscal year

GWOU Groundwater Operable Unit IRA Interim Remedial Action

KRCEE Kentucky Research Consortium for Energy and Environment

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

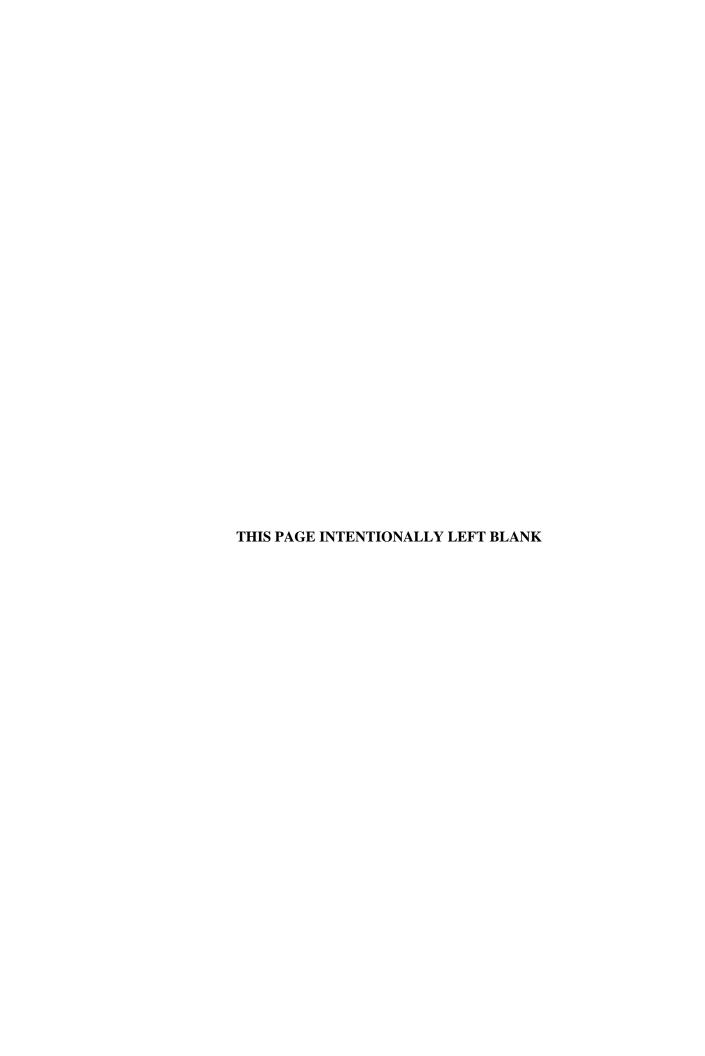
PRS Paducah Remediation Services, LLC

RAWP Remedial Action Work Plan RGA Regional Gravel Aquifer RI remedial investigation ROD Record of Decision

SAP sampling and analysis plan SER site evaluation report SI Site Investigation SMP Site Management Plan SOU Soils Operable Unit

SWMU Solid Waste Management Unit SWOU Surface Water Operable Unit

99Tc technetium-99TCE trichloroetheneWAG waste area group



# INTRODUCTION

# FEDERAL FACILITY AGREEMENT SEMIANNUAL REPORT FIRST HALF FISCAL YEAR 2009

Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

As specified by the Paducah Federal Facility Agreement (FFA), Section XXIII, the U.S. Department of Energy (DOE) has prepared this regulatory progress report that describes the actions that DOE has taken during the previous six months to implement FFA requirements. This report also describes the schedules 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 current Site Management Plan (SMP). Those projects are listed below.

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

| Operable Unit   | Project  |
|---|--|
| Groundwater Operable Unit   | C-400 Interim Remedial Action<br>Southwest Plume Sources<br>Dissolved-Phase Plumes<br>Northeast Plume Interim Remedial Action<br>Northwest Plume Interim Remedial Action |
| Burial Grounds Operable Unit  | Burial Grounds Operable Unit   |
| Surface Water Operable Unit   | Scrap Metal<br>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<br>Unit   |
| Comprehensive Sitewide Operable Unit/Permitted/<br>No Further Action/Miscellaneous/Waste Disposal<br>Alternatives | Waste Area Groups 1 and 7<br>Community Relations Plan<br>Site Management Plan<br>CERCLA Waste Disposal Alternatives  |

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

<sup>&</sup>lt;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 (WAGs) 1 and 7.

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

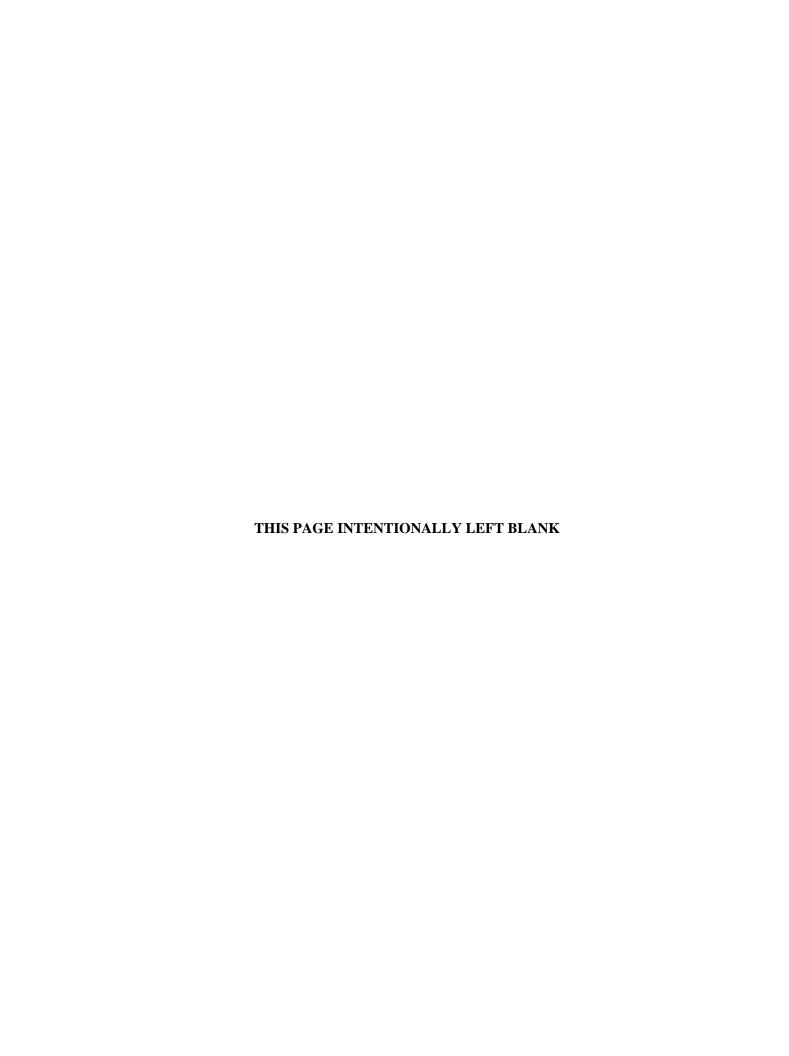
# FEDERAL FACILITY AGREEMENT SEMIANNUAL REPORT FOR THE FIRST HALF OF FISCAL YEAR 2009

Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

## **GROUNDWATER OPERABLE UNIT**

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

Within the GWOU are these projects: C-400 Interim Remedial Action (IRA), Southwest Plume Sources, Dissolved-Phase Plumes, Northeast Plume IRA, and Northwest Plume IRA. Supporting projects in the GWOU include the update and revision of the Risk Methods Document and the Sitewide Numerical Groundwater Model, which are included in the Dissolved-Phase Plumes update.



# FEDERAL FACILITY AGREEMENT SEMIANNUAL REPORT FOR THE FIRST HALF OF FISCAL YEAR 2009

Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

## GROUNDWATER OPERABLE UNIT PROJECT: C-400 IRA

- I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):
  - Received approval of the D2/R1 Remedial Action Work Plan (RAWP) from the Commonwealth of Kentucky (Kentucky) and the U.S. Environmental Protection Agency (EPA).
  - Filed the C-400 Interim Remedial Action (IRA) Property Record Notice and survey plat at the McCracken County courthouse in accordance with the D2/R2 C-400 IRA Land Use Control Implementation Plan (LUCIP).
  - Received approval of the D2/R1 Construction Quality Control Plan for the C-400 IRA from Kentucky and EPA.
  - Removed interfering infrastructure from the southwest corner of the C-400 Area.
  - Initiated fieldwork to install electrical resistance heating (ERH) equipment in the subsurface. Approximately 50% of the Phase I subsurface ERH installations have been completed as of preparation of this report.
  - Began construction of the aboveground liquid and vapor treatment system.
  - Developed the D1 C-400 IRA Operations and Maintenance Plan.
- II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):
  - Issue the D1 and D2 C-400 IRA Operations and Maintenance Plan.
  - Revise the D2/R1 C-400 RAWP to alter the waste management and characterization approach for solid waste from drilling activities.
  - Perform system testing and start up and begin routine operations for Phase I of the C-400 IRA.
  - Complete removal of interfering infrastructure at the C-400 Cleaning Building area in preparation for installation of Phase II of the C-400 IRA systems.

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

Responsibility for the day-to-day operations of the GWOU belongs to Paducah Remediation Services, LLC, (PRS) as the DOE prime remediation contractor at the Paducah Gaseous Diffusion Plant (PGDP). In addition, PRS also provides programmatic and technical support, analytical services, and business management.

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

The requirements are being met for the GWOU C-400 Action subproject; however, project field implementation is behind the original planned schedule, as described in Section VI below. The project is evaluating the impact of schedule delays on the April 2011 milestone date for submittal of the Remedial Action Completion Report.

# V. Primary/Secondary Document Tracking System:

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

• The D2/R2 RAWP for the C-400 IRA has been under review by EPA and Kentucky during this reporting period.

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

- Approval by Kentucky and EPA of the D2/R2 C-400 IRA RAWP is anticipated by May 2009.
- Approval by Kentucky and EPA of the D2 C-400 IRA Operations and Maintenance Plan is anticipated in June 2009.

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

Drilling and installation activities for subsurface ERH equipment is taking longer than initially planned and, as a result, start-up, testing and commencement of routine operations of ERH and aboveground treatment system is projected to be approximately four to five weeks behind schedule. The drilling schedule has been impacted negatively by severe winter weather and by unexpected equipment problems with one of the two drill rigs mobilized to the site. Installation of electrode borings, which requires the drilling of a 12-inch boring to as deep as 95 ft, is taking longer than anticipated.

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

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

#### VIII. Changes in relevant personnel:

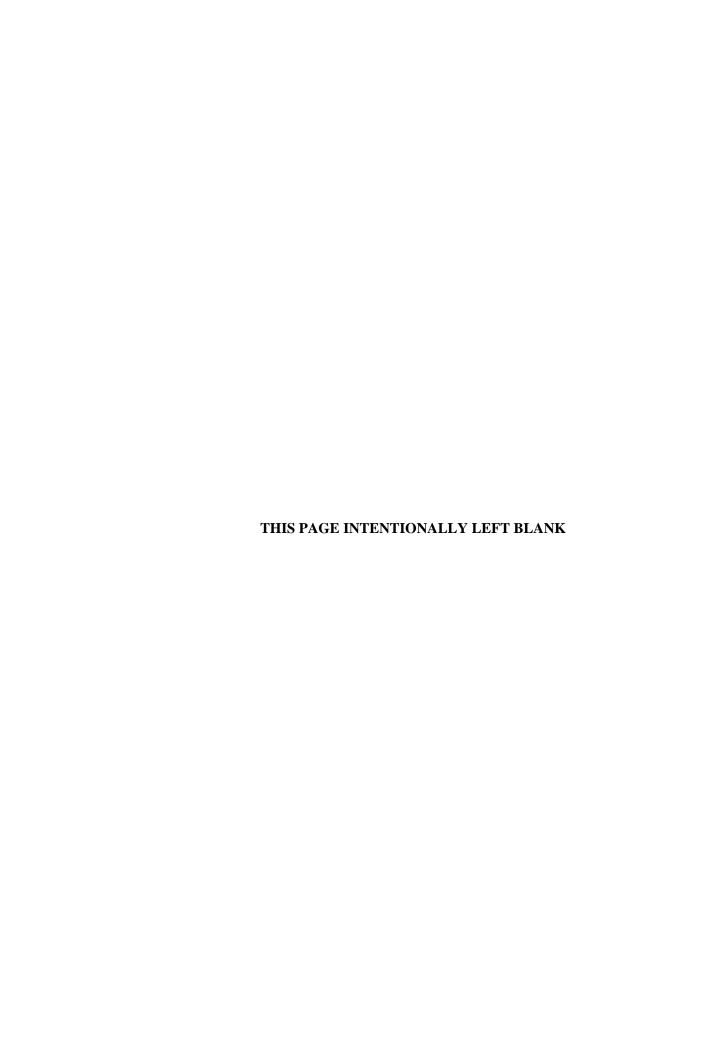
None.

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

IX.

None.



# FEDERAL FACILITY AGREEMENT SEMIANNUAL REPORT FOR THE FIRST HALF OF FISCAL YEAR 2009

Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

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

- I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):
  - DOE continued with the development of the focused feasibility study (FS) for the project. The focused FS is scheduled for D1 submission to Kentucky and EPA in July 2009.
  - DOE issued to the Trichloroethene (TCE) Degradation Team a final draft of the white paper being developed to support the determination of the rate of TCE degradation at the PGDP.
- II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):
  - Continue support of Kentucky Research Consortium for Energy and Environment (KRCEE) facilitated TCE degradation analysis.
  - Continue development of a focused FS for three areas associated with the Southwest Plume: SWMU 1, the Oil Land Farm; a portion of SWMU 102, the plant storm sewers; SWMU 211A, C-720 Northeast, and SWMU 211B, C-720 Southeast.
- III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

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

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:

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

- V. Primary/Secondary Document Tracking System:
  - A) Documents under review and/or preparation for this reporting period:

• The Focused FS for the Southwest Plume Sources has been under development during this review period.

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

- D1 Focused FS Issue for regulatory review July 28, 2009.
- VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

Not applicable.

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.

VIII. Changes in relevant personnel:

None.

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

None.

# FEDERAL FACILITY AGREEMENT SEMIANNUAL REPORT FISCAL YEAR 2009

Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

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

- I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):
  - Completed update of existing PGDP Sitewide Numerical Groundwater Model in support of the
    Dissolved-Phase Plumes, Burial Grounds Operable Unit, and other applicable projects and
    initiated development of the applicable Model Summary Report. Periodic meetings or
    conference calls were held among the FFA parties and the supporting contractors during this
    reporting period. The calibration of the contaminant transport component of the updated model
    was completed during this reporting period. Development of the model update summary report
    was continued during this period.
  - Continued update of the Risk Methods Documents in support of PGDP environmental restoration projects. The Human Health and the Ecological Risk Methods documents were developed up to the draft D1 document level during this reporting period.
  - As a result of negotiations completed on informal dispute associated with the Southwest Plume SI, a remedial investigation (RI) and FS were incorporated into the baseline of the Dissolved-Phase Plumes Project, as part of project baseline schedule. Discussions for selecting baseline remedial actions assumptions for inclusion into the 2009 SMP were completed.
  - Continued discussions with EPA and Kentucky on the Environmental Monitoring Program monitoring well upgrades. Received comments on the project approach from Kentucky.

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

- Complete comment incorporation and development of final TCE Degradation Report concerning aerobic degradation of TCE contaminants in the Regional Gravel Aquifer (RGA) lead by the KRCEE-facilitated multidisciplined TCE Degradation Project Team.
- Initiate scoping of work needed for determining TCE degradation parameters for Southwest and Northeast Plumes based on recommendations developed by the KRCEE-facilitated multidisciplined TCE Degradation Project Team.
- Complete updating of the Risk Methods Documents, including the Human Health and Ecological Risk volumes.
- Complete summary report for update of PGDP Sitewide Numerical Model.
- Begin drilling activities for monitoring well installations.

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

Responsibility for the day-to-day operations of the GWOU belongs to PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management. PRS also is facilitating the update of the Risk Methods Document and the Sitewide Groundwater Numerical Model.

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:
  - Report on the Summary Report for the Update of the PGDP Numerical Groundwater Flow Model.
- 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 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 2009

Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

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

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

During this reporting period the Northeast Plume Containment System (NEPCS) treated 35,259,200 gal of contaminated groundwater and achieved an operational efficiency of 82.4%. The average system treatment rate for the reporting period was 134.5 gal/min and was calculated assuming 100% operational uptime. Operational efficiencies for the reporting period were as follows: October, 81%; November, 89%; December 2008, 100%; January, 86%; February, 34.2%; and March 2009, 100%.

# A) Process Operations

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

## **B)** Process Testing

Operation of the NEPCS began February 28, 1997. As of March 31, 2009, the NEPCS has processed a total of 1,001,360,000 gal of water. The monthly extraction volumes this reporting period 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 July through December 2008.

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 December 2008 are presented in Appendix B, Figure 1. Environmental samples were collected monthly from the treatment system influent and effluent for the period of July through December 2008. High, low, and average influent and effluent TCE concentrations for these months are presented in Table 2. Values reported as less than the reporting limit of 1 ppb are considered to be 1 ppb for averaging and graphing purposes.

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

|                                   |      | TCE (ppb) |         |
|-----------------------------------|------|-----------|---------|
|                                   | High | Low       | Average |
| Influent (EQ Tank)                | 220  | 190       | 203     |
| Effluent (Cooling Tower effluent) | < 1  | < 1       | < 1     |

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

The extraction wells were sampled quarterly during this reporting period. The results of the sampling showed no significant change in TCE levels since the last reporting period. Extraction well EW-331 had an average TCE concentration of 160 ppb, while EW-332 had an average concentration of 230 ppb.

Concentrations of technetiuim-99 (<sup>99</sup>Tc) in water samples collected from the EQ tank did not exceed the data quality objective of 50 pCi/L. The highest reading from the EQ tank was 33.3 pCi/L.

#### **D)** Maintenance Activities

#### **Routine Maintenance Activities**

Daily, monthly, quarterly, and annual routine maintenance activities were conducted in accordance with the *Paducah Plume Operations Maintenance*, *Calibration*, *and Testing Plan*, PRS-ENM-001, January 2008.

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

## **Nonroutine Maintenance Activities**

On October 8 through October 14, 2008, the Northeast Pump and Treat System was removed from service to repair the backflow preventers on the transfer lines to the C-637 Cooling Towers. Both backflow preventers were repaired and passed certification tests prior to returning to operation on October 14, 2008.

On January 27, 2009, a severe ice storm disrupted the power supply to the Northeast Pump and Treat System. Electrical service was restored to the facility on February 19, 2009, and the treatment facility was returned to operation.

# E) Effectiveness Monitoring—Monitoring Well Results

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

MW292 is located approximately 1,200 ft upgradient of the pumping wells to provide an early detection point for <sup>99</sup>Tc migration. During the third and fourth quarters of calendar year 2008, <sup>99</sup>Tc activity at MW292 was 49.5 and 51.9 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, 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 82.4% of the time during this reporting period.

## V. Primary/Secondary Document Tracking System:

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

None.

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

None.

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

No future operational problems or delays are anticipated.

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

None.

# VIII. Changes in relevant personnel:

None.

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

Actual costs for O&M of the Northwest/Northeast Plume facilities are tracked jointly. The total operating cost for the reporting period was \$281,000.

# FEDERAL FACILITY AGREEMENT SEMIANNUAL REPORT FISCAL YEAR 2009

Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

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

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

During this reporting period, the Northwest Plume Groundwater System (NWPGS) treated 38,299,400 gal of contaminated groundwater with an average monthly operational efficiency of 82.7%. The average system treatment rate for the reporting period was 146.1 gal/min and was calculated assuming 100% operational uptime. Operational efficiencies for the reporting period were as follows: October, 100%; November, 100%; December 2008, 87%; January, 86%; February, 32.9%; and March 2009, 75.4%.

## 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 March 30, 2009, the NWPGS has processed a total of 1,359,470,000 gal of water. The monthly extraction volumes for the reporting period 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 July through December 2008.

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

TCE values reported as less than the reporting limit of 1 ppb are considered to be 1 ppb for averaging and graphing purposes. High, low, and average influent and effluent TCE and <sup>99</sup>Tc concentrations from July through December 2008 are presented in Table 3.

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

|          |       | TCE (ppb) |         |      | 99Tc (pCi/L) |         |
|----------|-------|-----------|---------|------|--------------|---------|
|          | High  | Low       | Average | High | Low          | Average |
| Influent | 3,000 | 1200      | 2,322   | 377  | 170          | 316     |
| Effluent | 3     | 1.0       | 1.69    | 42.0 | 0.60         | 18.1    |

The treatment system influent, a composite from four extraction wells, was sampled weekly, and the effluent was sampled daily during this reporting period. As presented in Table 3, the NWPGS continued to effectively remove TCE and <sup>99</sup>Tc. The system operated with an average removal efficiency of 99.92% for TCE and 94.3% for <sup>99</sup>Tc.

The average TCE effluent concentration for this reporting period was 1.69 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 18.1 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 July through December 2008. High, low, and average sample results for this reporting period at the extraction wells are shown in Table 4.

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

|        |       | TCE (ppb) |         |      | 99Tc (pCi/L) |         |
|--------|-------|-----------|---------|------|--------------|---------|
|        | High  | Low       | Average | High | Low          | Average |
| EW-228 | 4.2   | 3.7       | 3.93    | 5.75 | -9.13        | -0.56   |
| EW-229 | 16.0  | 6.4       | 11.2    | 12.3 | -6.03        | 3.14    |
| EW-230 | 6,100 | 3,500     | 4,800   | 801  | 487          | 644     |
| EW-231 | 390   | 47        | 162     | 97.1 | 20.8         | 47.0    |

# 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

March 4, 2009, with recycled carbon. The current stock of recycled carbon and future utilization of recycling technology will provide an adequate supply of carbon throughout 2009.

# E) Maintenance Activities

#### **Routine Maintenance Activities**

Daily, monthly, quarterly, and annual routine maintenance activities were conducted in accordance with the *Paducah Plume Operations Maintenance*, *Calibration*, *and Testing Plan*, PRS-ENM-0001, January 28, 2008. Instances of minor downtime occurred during the reporting period relating to power outages, maintenance, and calibration of the system.

#### **Nonroutine Maintenance Activities**

From November 11 through November 17, 2008, EW 229 was removed from service to have a physical work over of the well. Excess sand deposits were removed from the well.

From December 4 through December 8, 2008, the NWPGS was not operational due to a trip of the starter motor on the air stripper pump after the system was shut down for USEC to conduct electrical repairs on transformers near the facility. The system was reset and restarted.

On January 27, 2009, a severe ice storm disrupted the power supply to the Northwest Pump and Treat Facility. Electrical service was restored to the facility on February 18, 2009, and the treatment system was returned to operation.

On March 10, 2009, an electrical storm caused damage to level indicator circuit boards in backwash tank and air stripper sumps thus causing the NWPGS to halt operations. These boards were replaced and calibrated and the system was returned to operation on March 16, 2009.

# F) Effectiveness Monitoring–Monitoring Well Results

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

# G) Modification of the NWPGS Operations or Configuration

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, 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 82.7% of the time during this reporting period.

# V. Primary/Secondary Document Tracking System:

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

KDEP comments have been received on 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. Comments are being resolved. Proposed changes include reduced sampling frequencies at the Northwest Plume.

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

The O&M Plan revision was completed which incorporated comments received from Kentucky Division of Waste Management.

# 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 October, November, and December 2008 and January, February, and March 2009 were submitted for their respective months to the Kentucky Division of Water.

#### VIII. Changes in relevant personnel:

None.

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

Actual costs for O&M of the Northwest/Northeast Plume facilities are tracked jointly. The total operating cost for the reporting period was \$281,000.

# FEDERAL FACILITY AGREEMENT SEMIANNUAL REPORT FOR THE FIRST HALF OF FISCAL YEAR 2009

Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

## **BURIAL GROUNDS OPERABLE UNIT**

The scope of this project includes an RI, BRA, evaluation of remedial alternatives, remedy selection, and implementation of actions, as necessary, for protection of human health and the environment for the following burial grounds: C-749 [Solid Waste Management Unit (SWMU) 2]; C-404 (SWMU 3); C-747/C-748-B (SWMU 4); C-746-F (SWMU 5); C-747-B (SWMU 6); C-747-A (SWMUs 7 and 30); the residential/inert borrow area (SWMU 145); C-746-P/P1 Scrap Yard (SWMU 13) and any additional disposal areas that might exist beneath the scrap yards; and the C-746-S&T Landfills (SWMUs 9 and 10).

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

- Regulator comments on D1/RI Report were discussed in meetings held December 16 and 18, 2008.
- The D1/R1 RI Report is on schedule to be submitted to the regulators in April 2009.
- The Addendum to the Work Plan for the Burial Grounds Operable Unit RI/FS SWMU 13 Field Sampling Plan was approved in March 2009.
- Results from the geophysics survey of the C-746-P/P1 Scrap Yards (SWMU 13) performed in February 2009 were presented to the regulators in the March 2009 FFA Managers' meeting.

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

- Scoping meetings with the regulators for the FS Report is in process with a D1 milestone date of August 1, 2009.
- Sample borings at SWMU 13 to collect soil and Upper Continental Recharge System groundwater samples.

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

Responsibility for the day-to-day operations of Burial Grounds Operable Unit belongs to PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management.

# 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:

- The D1 RI Report has been under view by EPA and Kentucky during this reporting period.
- The D1/R1 RI Report has been under development for submittal to EPA and Kentucky during this reporting period with a submittal date of April 8, 2009.
- The D1 Feasibility Study has been under development for submittal to EPA and Kentucky during this reporting period with a submittal date of August 1, 2009.

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

- D1 Feasibility Study due August 1, 2009.
- D1 Proposed Plan due March 26, 2010.

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

Due to the complexity and quality of the document, a D1/R1 was submitted. This project is scheduled for a 2019 completion of site cleanup activities.

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

DOE met with regulators in December 2008 to discuss comments on the D1 RI Report. Regulators were briefed on Burial Ground Operable Unit in the January and February FFA Managers' meetings. In addition, routine updates on the subproject were provided to the CAB.

# VIII. Changes in relevant personnel:

None.

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

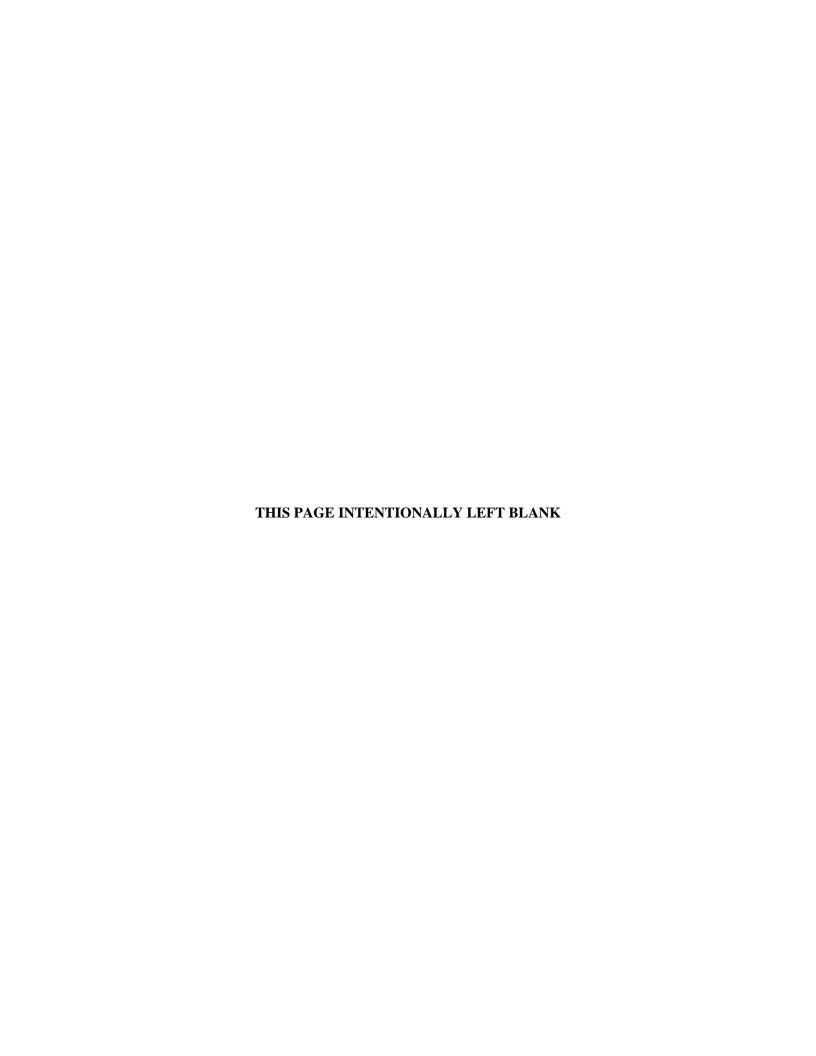
None.

# FEDERAL FACILITY AGREEMENT SEMIANNUAL REPORT FOR THE FIRST HALF OF FISCAL YEAR 2009

Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

## SURFACE WATER OPERABLE UNIT

The Surface Water Operable Unit (SWOU) includes Sections 1 and 2 of the North-South Diversion Ditch (NSDD), Scrap Metal, Surface Water Removal Action (On-Site), and Surface Water Remedial Action (Off-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 Document Management Center, managed by Swift & Staley Team. The estimated annual cost of this O&M is \$94K.



Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

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

This project is no longer considered active, with the exception of the continued O&M activities associated with the C-613 Basin. This activity will no longer be reported in future progress reports.

- I. Work performed during the reporting period (including summaries of findings and any deviations from the work plan):
  - Continued to operate the C-613 Basin.
- II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):
  - None.
- III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

PRS 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:
    - 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:

O&M costs include 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.

Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

### SURFACE WATER OPERABLE UNIT PROJECT: SWOU Remedial Action (On-Site) Investigation

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

The D1 and D2 versions of the *Action Memorandum for Contaminated Sediment Associated with the SWOU (On-Site)* (AM) were issued to EPA and Kentucky on November 12, 2008, and March 2, 2009, respectively. The D2 AM is pending regulatory approval.

The D1 SWOU RAWP was drafted and will be issued to the regulators in the early portion of the next reporting period.

- II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):
  - Issue and obtain approval of the D1 SWOU RAWP.
  - Obtain approval of the D2 AM.
- III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

Responsibility for the day-to-day operations belongs to PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management.

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

Multiple extensions for document reviews and submittals have been requested by EPA, Kentucky, and DOE. Extension requests have impacted due dates for subsequent documents and impacted project milestones.

- V. Primary/Secondary Document Tracking System:
  - A) Documents under review and/or preparation for this reporting period:
    - The D2 SWOU AM has been under review by EPA and Kentucky during this reporting period.
    - The D1 SWOU RAWP has been under development during this reporting period.

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

• D1 SWOU RAWP—Issue for regulatory review 30 days after regulatory approval of the AM.

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

Delays of regulatory approvals have impacted the overall schedule. The implementation of fieldwork has been delayed which has required the modification of the FFA completion milestone from September 30, 2017, to December 13, 2017.

#### 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:

Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

#### **SOILS OPERABLE UNIT**

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

The SOU also includes (1) the Soils Inactive Facilities that include the removal of the interior face of the C-218 Firing Range, the C-410-B Sludge Lagoon, and the C-403 Neutralization Pit; and (2) the soil/rubble areas that include conducting a site evaluation of the identified areas, developing site evaluation reports, and implementing a removal action, if necessary, to address areas of contamination with unacceptable risk.



Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

#### **SOILS OPERABLE UNIT PROJECT: Sitewide Soils**

- I. Work performed during this reporting period (including summaries of findings and any deviations from the work plan):
  - Issued the D1 SOU RI Work Plan.
- II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):
  - Resolve comments and obtain approval of the SOU Remedial Investigation Work Plan.
  - Prepare work control documentation for RI field implementation.
- III. Identity and assigned tasks of DOE contractors for work to be performed for this project:

Responsibility for the day-to-day operations of the SOU remedial action belongs to PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management.

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

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

- V. Primary/Secondary Document Tracking System:
  - A) Documents under review and/or preparation for this reporting period:
    - The D1 SOU RI Work Plan was issued to EPA and Kentucky on March 6, 2009, and the document has been under review during this reporting period.
  - B) Due dates for completion of review/modification tasks:
    - The D1 SOU RI Work Plan has a regulatory review period of 90 days as an FFA primary document.
- VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

| VII.  | . Summary of all contacts with local community, public interest groups, or state government. |  |  |  |  |  |
|-------|--|--|--|--|--|--|
|       | Routine updates on the subproject are provided to the CAB and FFA managers.                  |  |  |  |  |  |
| VIII. | Changes in relevant personnel:   |  |  |  |  |  |

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None.

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

Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

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

- I. Work performed during this reporting period (including summaries of findings and any deviations from the work plan):
  - Submitted the D1 Soils Inactive Facilities AM on October 15, 2008.
  - Submitted the D2 Soils Inactive Facilities AM on March 2, 2009.
- II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):
  - Issue and obtain approval on the D1 Soils Inactive Facilities RAWP.
  - Obtain approval of the D2 Soils Inactive Facilities AM.
- 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 Inactive Facilities belongs to PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management.

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

Multiple extensions for document reviews and submittals have been requested by EPA, Kentucky, and DOE. Extension requests have impacted due dates for subsequent documents and impacted project milestones.

- V. Primary/Secondary Document Tracking System:
  - A) Documents under review and/or preparation for this reporting period:
    - The D1 Soils Inactive Facilities RAWP has been under development during this reporting period.
    - The D2 Soils Inactive Facilities AM has been under review by EPA and Kentucky during this reporting period.
  - B) Due dates for completion of review/modification tasks:
    - D1 Soils Inactive Facilities RAWP will be submitted for regulatory review 30 days after approval of the AM.

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

Delay of regulatory approval of the Engineering Evaluation/Cost Analysis (EE/CA) and AM have impacted completion of the removal action fieldwork and subsequent Removal Action Completion Report.

#### 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:

Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

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

- I. Work performed during this reporting period (including summaries of findings and any deviations from the work plan):
  - Obtained approval on the Site Evaluation Report for Soil Pile I, DOE/LX/07-0108&D2, (SER).
  - Obtained approval on the D2 SAP for Rubble Areas at the PGDP, DOE/LX/07-0060&D2.
  - Completed soil sampling for Addendum 1-B Soil Piles.
  - Completed implementation of the Rubble Piles sampling and analysis plan (SAP) and initiated the maintenance action for five of the rubble piles.
  - Drafted the Site Evaluation Report for Addendum 2 Soil Piles at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-0188&D1, to be issued by April 6, 2009.
- II. Schedules of activities to be performed during the next reporting period (including projected work/crucial phases of construction):
  - Obtain approval of the D1 & D2 SER for Addendum 2 Soil Piles.
  - Issue and obtain approval of the SER for Addendum 1-B Soil Piles.
  - Issue and obtain approval on the SER for Rubble Areas.
  - Complete the maintenance action for five rubble areas.

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

Responsibility for the day-to-day operations of the SOU Soil and Rubble Areas belongs to PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management.

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

Pursuant to the February 16, 2007, "Notification of Soil and Rubble Areas" letter, project implementation dates for soil and rubble areas were based on regulatory approval of the first SAP. The project currently is behind schedule due to multiple review and extension requests.

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

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

• The SER for Addendum 2 Soil Piles has been under development during this reporting period with a submittal date of April 3, 2009.

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

• In accordance with the February 16, 2007, notification letter for soil and rubble areas.

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

Delay of regulatory approval of the SAP and Addenda have impacted completion of the fieldwork and subsequent Site Evaluation Reports.

#### 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:

Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

#### 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 17 inactive DOE facilities, assuming the use of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) removal actions implemented in accordance with the FFA. In instances where facilities do not have a known or potential release, DOE may decommission the facility as a non-CERCLA demolition action.

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

- Completed accessible asbestos abatement in all eight sectors of the C-410 Complex. To date, approximately 43,600 linear ft of asbestos thermal surfacing insulation has been abated. Approximately 5,600 linear ft abated during this reporting period. Additionally, over 6,500 ft<sup>2</sup> of asbestos containing transite or asbestos insulation on tanks or other large equipment has been removed.
- Shipped approximately 26,000 ft<sup>3</sup> of low-level waste asbestos debris and low-level waste polychlorinated biphenyl bulk product debris, and 4,300 ft<sup>3</sup> of mixed low-level waste from the C-410 Complex to Energy*Solutions* for disposal.
- Disposed of 1500 ft<sup>3</sup> of waste from the C-746-A West End Smelter at the Nevada Test Site and 1,100 ft<sup>3</sup> of waste from the C-746-A West End Smelter at Energy *Solutions* in Utah.
- Received approval of D1 Removal Action Completion Report for the C-405 Incinerator and C-746-A West End Smelter.
- Initiated stabilization and removal of small diameter instrument lines in the C-410 Complex. Stabilization and removal of instrument lines has been completed in Zones 33, 34, 35, 36, 38, and 39, and is ongoing in Zone 40. Additionally, the stabilization of larger diameter fluorine, hydrogen, and hydrogen fluoride piping began in Sector 4. The process of removal and stabilization of lines in Zones 59, 60, and 62 is approximately 60% complete.
- Scoped and initiated development of a generic Removal Notification and EE/CA for D&D.

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

- Complete stabilization and removal of fluorine systems in the C-410 Complex.
- Continue stabilization of hydrogen fluoride and hydrogen systems in the C-410 Complex.
- Perform removal of prohibited items in Sectors 2 and 3.
- Complete small diameter instrument line removal in C-410 Complex.
- Complete disposal of asbestos abated from the C-410 Complex.
- Initiate CERCLA documentation for performing a non-time-critical removal action as part of the economic stimulus funding under the American Recovery and Reinvestment Act (ARRA). The following summarizes the specific scope activities associated with each of the three facilities:
  - 1. **C-410/C-420 Feed Plant Complex.** Accelerate and complete the dismantlement and disposal of all major systems and large process equipment contained within the C-410 Complex, and structural demolition of the entire C-410/C-420 Complex to slab (200,000 ft<sup>2</sup>).
  - 2. **C-340 Uranium Metal Plant Complex.** Accelerate and complete the dismantlement and disposal of all major systems and large process equipment contained within the C-340 Complex; and complete structural demolition of the entire C-340 Complex to slab (77,000 ft<sup>2</sup>). Work Scope also will include removal of loose material/waste, but a DOE funding source not associated with the economic stimulus initiative will be used for those activities.
  - 3. **C-746-A East End Smelter (EES).** Accelerate and complete the packaging and disposal of loose material/waste, dismantlement and disposal of all systems and smelter equipment contained within the C-746-A East End Smelter; and complete structural demolition and disposal of the entire smelter facility (21,000 ft<sup>2</sup>) to slab.

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

Responsibility for the day-to-day operations of D&D belongs to PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management.

### 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:

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

As discussed in February 2009, the development of a generic D&D EE/CA and any associated CERCLA documentation has been placed on hold due to the ARRA or economic stimulus projects and will be reevaluated in the future.

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

Routine updates on the subproject were provided to the CAB, FFA managers, and D&D Tri-Party Working Group.

#### VIII. Changes in relevant personnel:

None.

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



Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

#### **COMPREHENSIVE SITEWIDE OPERABLE UNIT**

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



Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

#### <u>PROJECT: WAGs 1 and 7 (C-746-K Landfill, TCE Spill Sites,</u> Underground Storage Tanks, and Kentucky Ordnance Works Sites)

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

Surface water and groundwater monitoring continued around the C-746-K Landfill and in Bayou Creek, as required by the WAGs 1 and 7 ROD. The results of the groundwater monitoring are reported in Appendix C.

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

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

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

Responsibility for the day-to-day operations of WAGs 1 and 7 belongs to PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, 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:

| 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.

Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

#### **PROJECT: Community Relations Plan**

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

None.

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

Appendix A of the CRP will be modified to update the list of key contacts for the PGDP. Several changes have occurred since the CRP was approved (e.g., FFA managers), and these changes need to be reflected in the Appendix.

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

Responsibility for the maintenance of the CRP belongs to PRS, as the DOE prime remediation contractor at the PGDP.

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

Not applicable.

- V. Primary/Secondary Document Tracking System:
  - A) Documents under review and/or preparation for this reporting period:

None.

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

Appendix A of the Community Relations Plan will be revised to update the list of contacts and issued by September 30, 2009.

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

None.

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

### VIII. Changes in relevant personnel:

None.

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

Not applicable.

Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

#### **PROJECT: Site Management Plan**

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

Based upon feedback received from scoping meetings held with the FFA Managers, the fiscal year (FY) 2009 D1 SMP was developed and submitted in November 2008. Comments were received on the FY 2009 D1 SMP on December 19, 2008, and December 29, 2008, from EPA and Kentucky, respectively. DOE requested a 30-day extension to address EPA and Kentucky comments. Comments were addressed and the FY 2009 D2 SMP was issued to EPA and Kentucky on February 12, 2009, for final comment and/or approval. Conditional approval of the FY 2009 D2 SMP was received from EPA on March 9, 2009. Kentucky approved the FY 2009 D2 SMP on March 12, 2009. The D2/R1 FY 2009 SMP was issued on March 27, 2009, to meet the conditions specified by EPA.

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

Initiate discussions for development of the FY 2010 D1 SMP.

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

Responsibility for the maintenance of the SMP belongs to PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management.

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

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

- V. Primary/Secondary Document Tracking System:
  - A) Documents under review and/or preparation for this reporting period:
    - The D2 SMP FY 2009 has been under development during this reporting period.
    - The D2/R1 SMP FY 2009 has been under development during this reporting period.
  - B) Due dates for completion of review/modification tasks:
    - D2 SMP FY 2009 was due February 12, 2009.

- Comments on the D2 SMP FY 2009 were due to DOE within 30 days from the document being issued or March 14, 2009.
- D2/R1 SMP FY 2009 was issued to EPA and Kentucky on March 27, 2009.
- VI. Anticipated problems/delays (provide summary of problems, schedule, reason for delay, and actions taken to prevent or mitigate delay):

None.

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

The CAB was briefed in December 2008.

VIII. Changes in relevant personnel:

None.

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

Not applicable.

Facility: Paducah Gaseous Diffusion Plant Plant EPA I.D. No.: KY8-890-008-982 Reporting Period: 10/1/08-3/31/09

#### **PROJECT: CERCLA Waste Disposal Alternatives Evaluation**

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

DOE issued a comment response summary to Kentucky and EPA on October 14, 2008, to provide responses to comments received on the Scoping Document for CERCLA Waste Disposal Alternatives Evaluation. The purpose of the Scoping Document and scoping meetings that occurred in the last reporting period was to lay the groundwork for the RI/FS process and facilitate development of the RI/FS Work Plan. DOE began development of the CERCLA Waste Evaluation RI/FS Work Plan in this reporting period. The RI/FS Work Plan describes how the RI and FS will be implemented, summarizes data availability and data gaps, identifies how data gaps will be filled, and provides a description of each of the waste disposal alternatives. DOE has incorporated Kentucky and EPA comments from the scoping process into the RI/FS Work Plan as practical. A public information exchange was held November 18 and 20, 2008, to provide general information to the public on environmental projects including the CERCLA Waste Disposal Alternatives Evaluation. A public meeting was conducted on March 24, 2009, to inform the local community on the project and receive suggestions and feedback. Feedback received during the information exchanges will be considered throughout the disposal evaluation process. The RI/FS Work Plan will be submitted to Kentucky and EPA in the next reporting period.

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

A second public involvement meeting will be held to inform the local community on the progress and to solicit input for the waste disposal evaluation. Comments from Kentucky and EPA will be received in the next reporting period on the D1 CERCLA Waste Evaluation RI/FS Work Plan.

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

Responsibility for the waste disposal evaluation belongs to PRS, as the DOE prime remediation contractor at the PGDP. In addition, PRS also provides programmatic and technical support, analytical services, and business management.

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

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

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

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

- The D1 RI/FS Work Plan has been under development during this reporting period.
- Preliminary planning and development of the CERCLA Waste Evaluation RI/FS Report.

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

Comments from Kentucky and EPA are due 90 days after receipt of the D1 RI/FS Work Plan.

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

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

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

CAB briefings occur regularly during monthly meetings and working sessions through the various stages of the project. A presentation to local community leaders (mayor, judge/executive, economic development committee, chamber of commerce, etc.) was held on March 3, 2009. A public meeting with the local community was conducted on March 24, 2009. Additional public meetings are planned to continue informing the community of the progress and receive feedback to incorporate into the disposal evaluation process. Commissioner William Hacker, with the Department of Public Health, was briefed on the project on March 27, 2009, with a follow-up site tour scheduled for April 2009.

#### 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

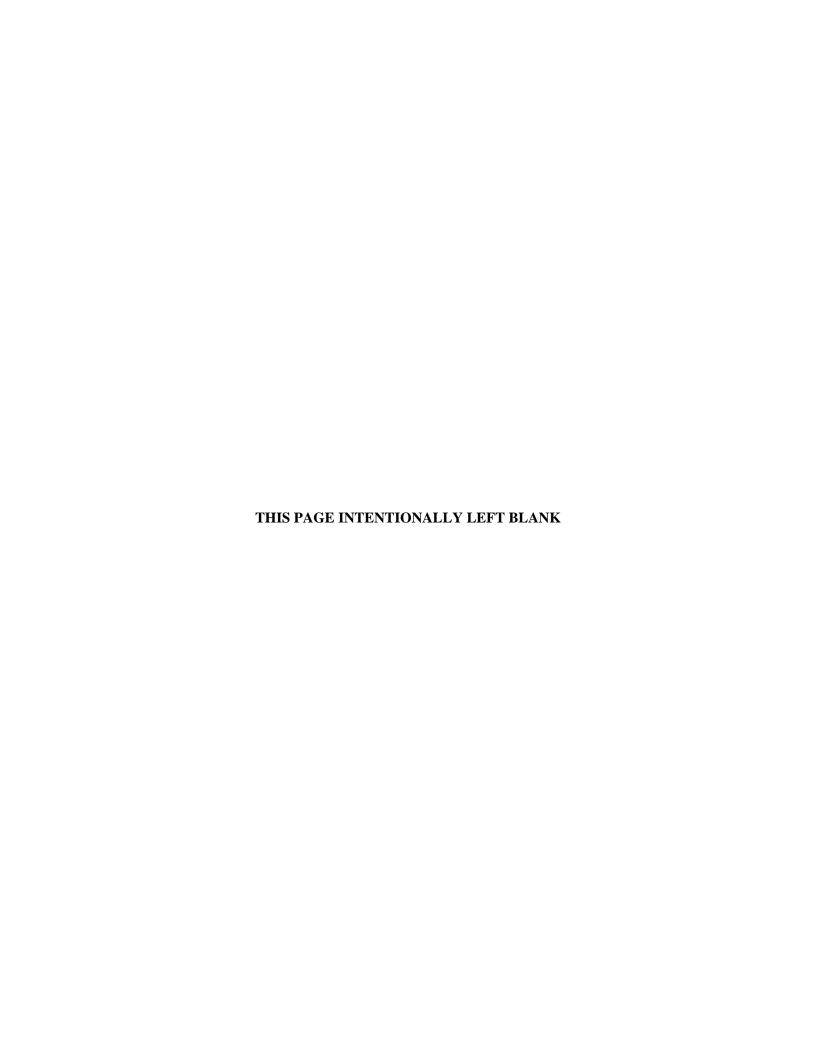


TABLE 1. Northeast Plume Containment System
Water Withdrawal Reporting Form (gallons of water pumped)

| Day               | October 2008 | November 2008 | December 2008 | January 2009 | February 2009 | March 2009 |
|-------------------|--------------|---------------|---------------|--------------|---------------|------------|
| 1                 | 220,300      | 273,500       | 237,400       | 235,800      | 0             | 245,767    |
| 2                 | 231,200      | 273,500       | 235,600       | 240,300      | 0             | 240,500    |
| 3                 | 251,100      | 264,200       | 229,600       | 240,300      | 0             | 255,300    |
| 4                 | 251,100      | 261,500       | 232,450       | 240,300      | 0             | 233,000    |
| 5                 | 251,100      | 267,200       | 232,450       | 239,200      | 0             | 233,000    |
| 6                 | 245,300      | 276,300       | 232,450       | 237,600      | 0             | 233,867    |
| 7                 | 255,900      | 267,400       | 232,450       | 241,200      | 0             | 233,867    |
| 8                 | 0            | 267,400       | 251,100       | 236,600      | 0             | 233,867    |
| 9                 | 0            | 267,400       | 229,400       | 236,433      | 0             | 240,500    |
| 10                | 0            | 259,900       | 239,600       | 236,433      | 0             | 291,600    |
| 11                | 0            | 260,100       | 247,800       | 236,433      | 0             | 182,600    |
| 12                | 0            | 269,800       | 234,700       | 239,000      | 0             | 235,800    |
| 13                | 0            | 266,300       | 234,700       | 228,700      | 0             | 244,767    |
| 14                | 282,400      | 268,600       | 234,700       | 245,700      | 0             | 244,767    |
| 15                | 262,000      | 268,600       | 229,900       | 229,060      | 0             | 244,767    |
| 16                | 263,900      | 268,600       | 229,900       | 240,060      | 0             | 105,200    |
| 17                | 271,800      | 266,700       | 229,900       | 240,060      | 0             | 243,800    |
| 18                | 271,800      | 261,300       | 197,100       | 240,060      | 0             | 246,400    |
| 19                | 271,800      | 212,600       | 233,633       | 240,060      | 63,600        | 234,600    |
| 20                | 260,200      | 151,200       | 233,633       | 231,300      | 241,067       | 177,150    |
| 21                | 270,800      | 0             | 233,633       | 240,600      | 241,067       | 177,150    |
| 22                | 278,200      | 0             | 241,650       | 243,300      | 241,067       | 0          |
| 23                | 279,700      | 0             | 241,650       | 239,267      | 229,800       | 268,300    |
| 24                | 264,333      | 168,600       | 190,480       | 239,267      | 244,000       | 203,100    |
| 25                | 264,333      | 224,800       | 190,480       | 239,267      | 232,300       | 245,400    |
| 26                | 264,333      | 238,020       | 190,480       | 0            | 169,700       | 239,800    |
| 27                | 256,100      | 238,020       | 190,480       | 0            | 245,767       | 240,133    |
| 28                | 256,900      | 238,020       | 190,480       | 0            | 245,767       | 240,133    |
| 29                | 259,500      | 238,020       | 231,700       | 0            | na            | 240,133    |
| 30                | 273,700      | 238,020       | 244,400       | 0            | na            | 243,000    |
| 31                | 273,500      | na            | 235,800       | 0            | na            | 123,900    |
| Monthly Total     | 6,531,300    | 6,755,600     | 7,039,700     | 5,956,300    | 2,154,133     | 6,822,167  |
| *Daily Average    | 261,252      | 250,207       | 227,087       | 238,252      | 215,413       | 227,406    |
| Days water pumped | 25           | 27            | 31            | 25           | 10            | 30         |

<sup>\*</sup>Value based on number of days water was pumped

## TABLE 2. Northwest Plume Groundwater System Water Withdrawal Reporting Form (gallons of water pumped)

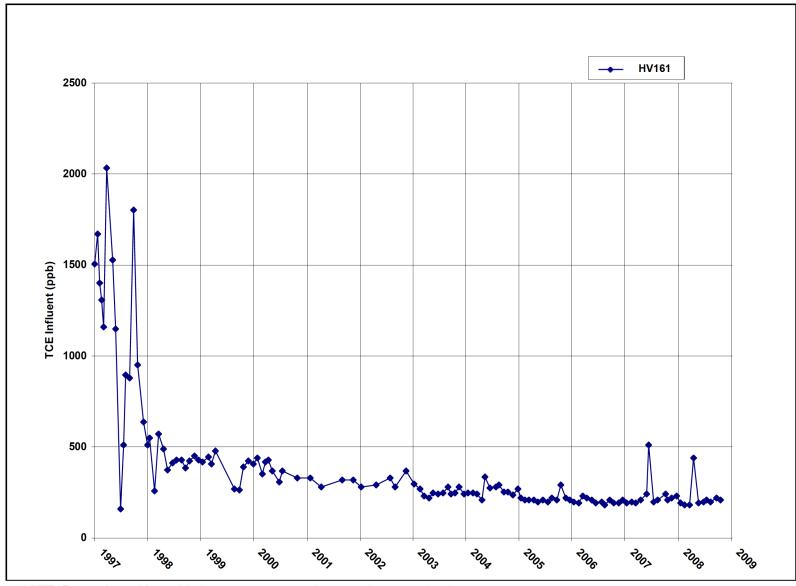
| Day               | October 2008 | November 2008 | December 2008 | January 20009 | February 2009 | March 2009 |
|-------------------|--------------|---------------|---------------|---------------|---------------|------------|
| 1                 | 277,490      | 276,157       | 269,350       | 275,145       | 0             | 203,245    |
| 2                 | 283,670      | 276,157       | 278,200       | 279,957       | 0             | 294,510    |
| 3                 | 259,940      | 265,060       | 233,700       | 279,957       | 0             | 283,260    |
| 4                 | 259,940      | 258,520       | 64,380        | 279,957       | 0             | 0          |
| 5                 | 259,940      | 271,800       | 0             | 277,560       | 0             | 0          |
| 6                 | 253,970      | 277,160       | 0             | 278,290       | 0             | 297,590    |
| 7                 | 224,100      | 267,110       | 0             | 277,390       | 0             | 297,590    |
| 8                 | 223,630      | 267,110       | 241,840       | 281,520       | 0             | 297,590    |
| 9                 | 166,550      | 267,110       | 219,230       | 278,460       | 0             | 286,240    |
| 10                | 220,447      | 245,490       | 261,120       | 278,460       | 0             | 220,610    |
| 11                | 220,447      | 249,810       | 285,880       | 278,460       | 0             | 0          |
| 12                | 220,447      | 261,970       | 264,557       | 269,680       | 0             | 0          |
| 13                | 262,520      | 255,210       | 264,557       | 279,790       | 0             | 0          |
| 14                | 262,440      | 258,433       | 264,557       | 256,220       | 0             | 0          |
| 15                | 260,090      | 258,433       | 208,037       | 300,020       | 0             | 0          |
| 16                | 276,670      | 258,433       | 208,037       | 280,150       | 0             | 220,610    |
| 17                | 262,137      | 257,690       | 208,037       | 280,150       | 0             | 282,420    |
| 18                | 262,137      | 244,800       | 204,870       | 280,150       | 241,370       | 308,090    |
| 19                | 262,137      | 265,280       | 252,893       | 280,150       | 281,970       | 310,310    |
| 20                | 253,610      | 200,430       | 252,893       | 268,110       | 232,993       | 308,597    |
| 21                | 276,460      | 179,310       | 252,893       | 270,710       | 232,993       | 308,597    |
| 22                | 266,160      | 179,310       | 207,355       | 283,390       | 232,993       | 308,597    |
| 23                | 279,080      | 179,310       | 390,435       | 274,347       | 249,500       | 312,490    |
| 24                | 272,643      | 265,590       | 249,170       | 274,347       | 273,120       | 287,790    |
| 25                | 272,643      | 237,190       | 249,170       | 274,347       | 207,290       | 298,400    |
| 26                | 272,643      | 243,840       | 249,170       | 0             | 191,230       | 269,600    |
| 27                | 271,990      | 243,840       | 249,170       | 0             | 0             | 291,327    |
| 28                | 270,350      | 243,840       | 249,170       | 0             | 160,095       | 291,327    |
| 29                | 271,560      | 243,840       | 271,450       | 0             | na            | 291,327    |
| 30                | 176,180      | 243,840       | 292,480       | 0             | na            | 283,740    |
| 31                | 276,157      | na            | 275,145       | 0             | na            | 267,280    |
| Monthly Total     | 7,878,177    | 7,442,073     | 6,917,745     | 6,936,715     | 2,303,555     | 6,821,135  |
| *Daily Average    | 254,135      | 248,069       | 247,062       | 277,469       | 230,356       | 284,214    |
| Days water pumped | 31           | 30            | 28            | 25            | 10            | 24         |

<sup>\*</sup>Value based on number of days water was pumped

### APPENDIX B

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

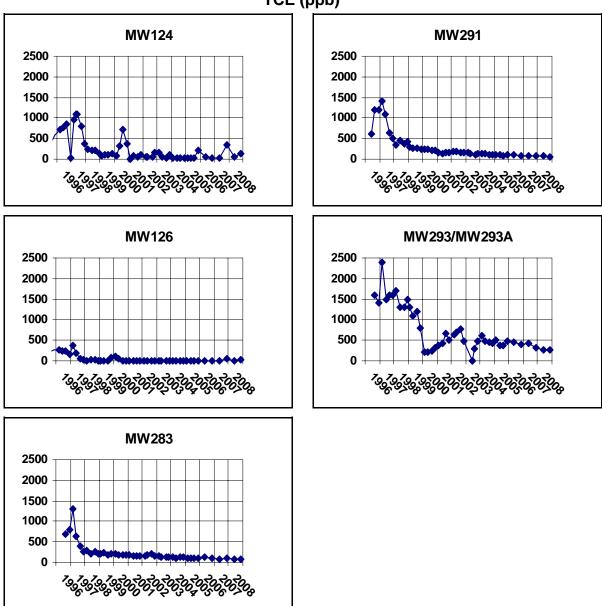




NOTE: Data rejected by validation or assessment have not been graphed.

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

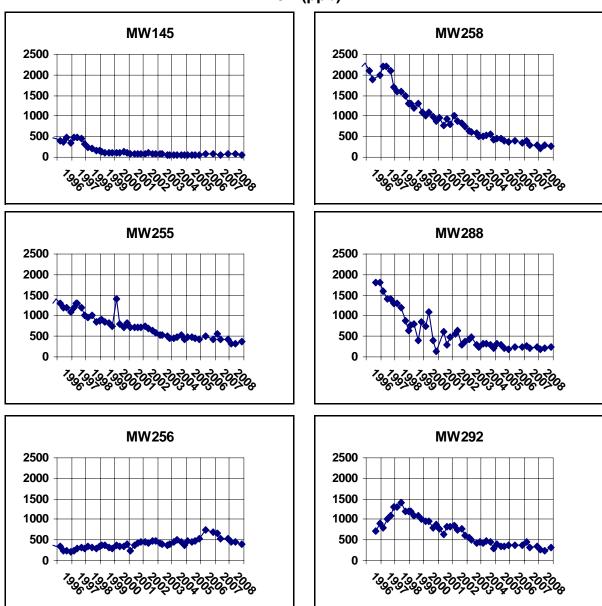
### TCE (ppb)



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

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

### TCE (ppb)



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

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

Tc-99 (pCi/L)

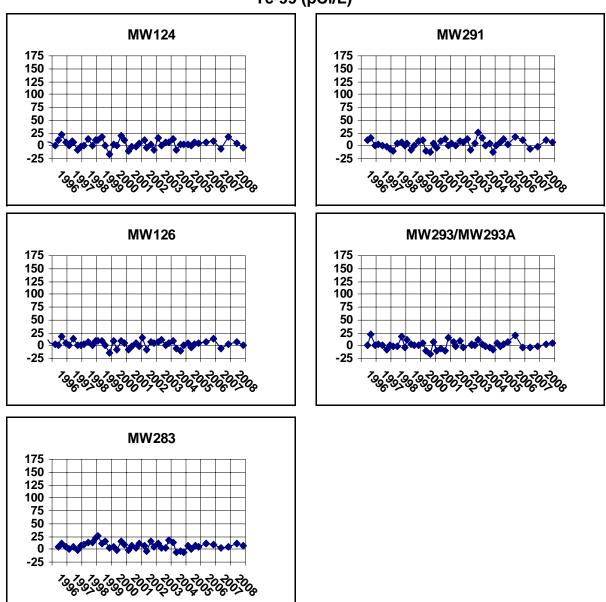
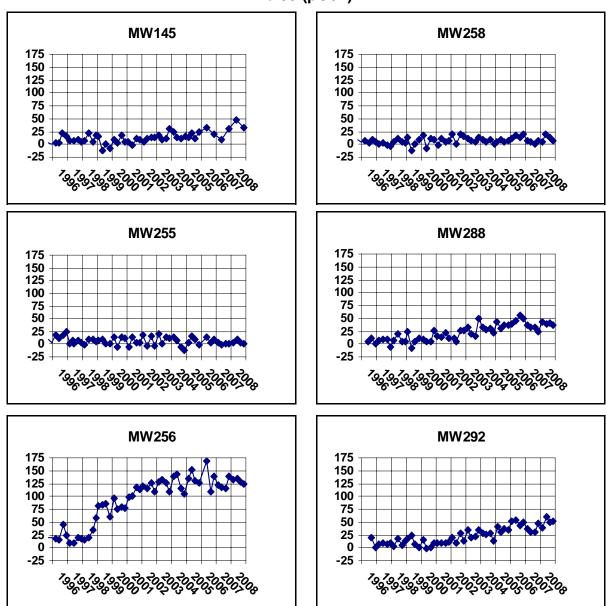


Figure 2c. Northeast Plume—Tc-99 Activities in Downgradient Wells

#### Tc-99 (pCi/L)



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

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

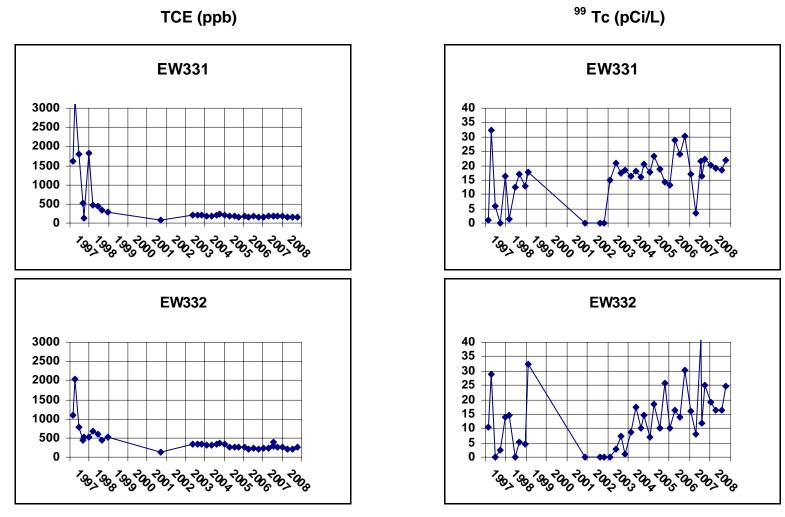
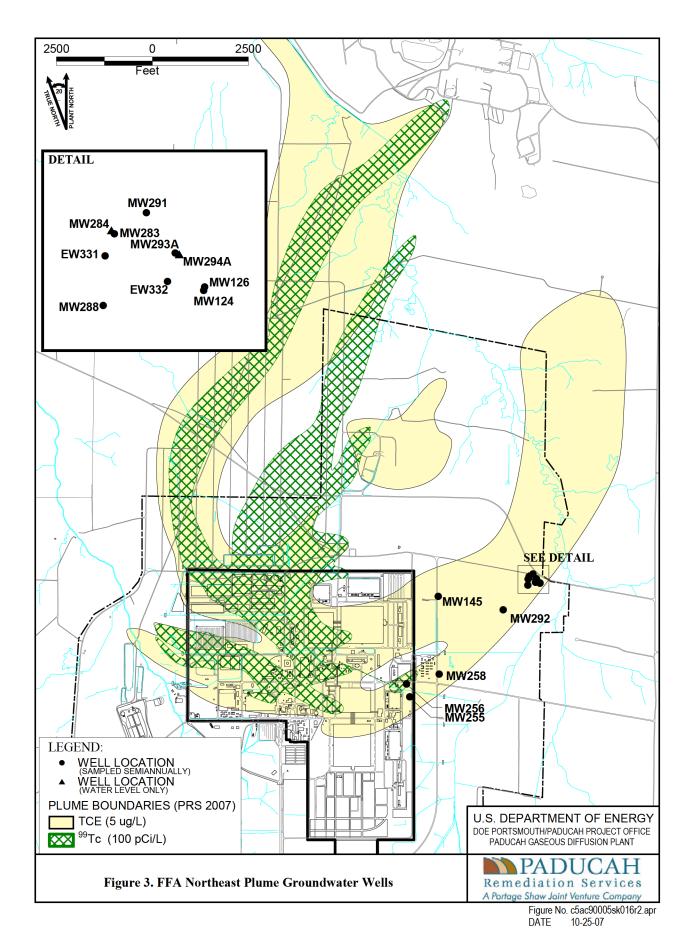


Figure 2e. Northeast Plume—TCE Concentrations and Tc-99 Activities in Extraction Wells



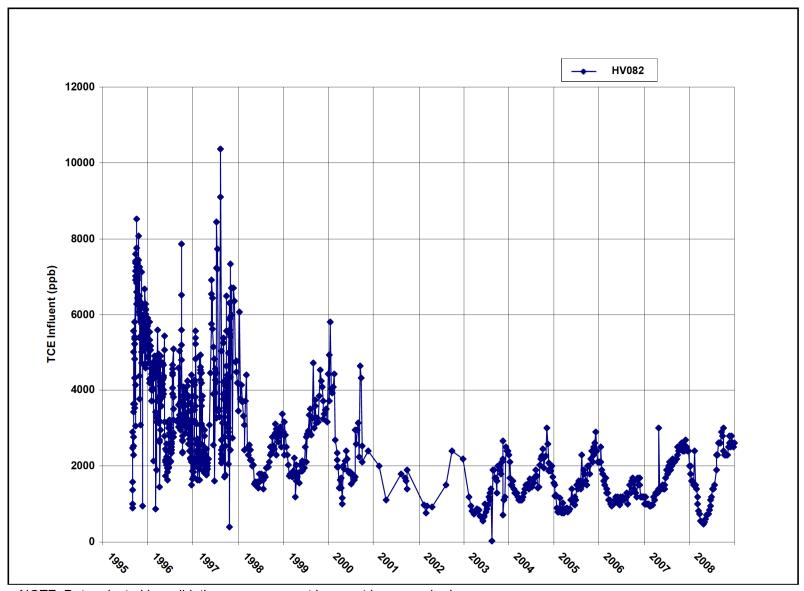
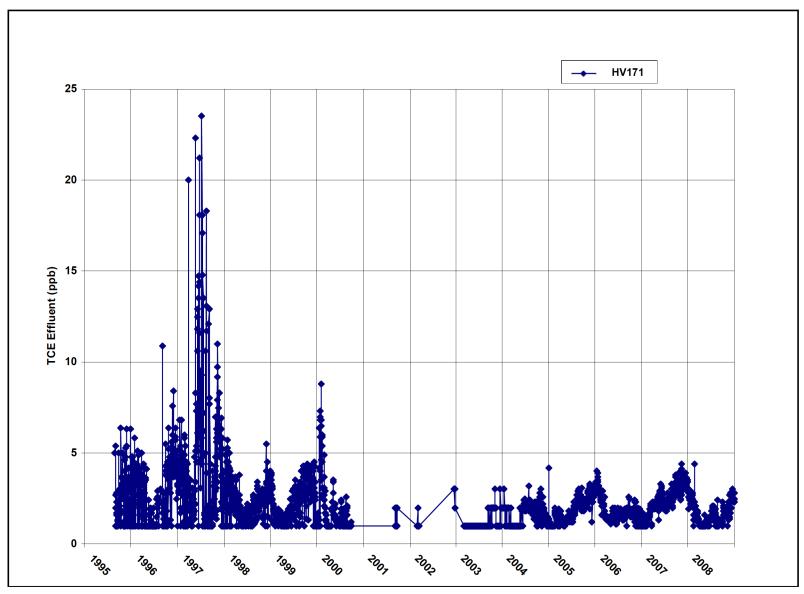


Figure 4a. Northwest Plume Groundwater System Influent TCE Concentrations



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

Figure 4b. Northwest Plume Groundwater System Effluent TCE Concentrations

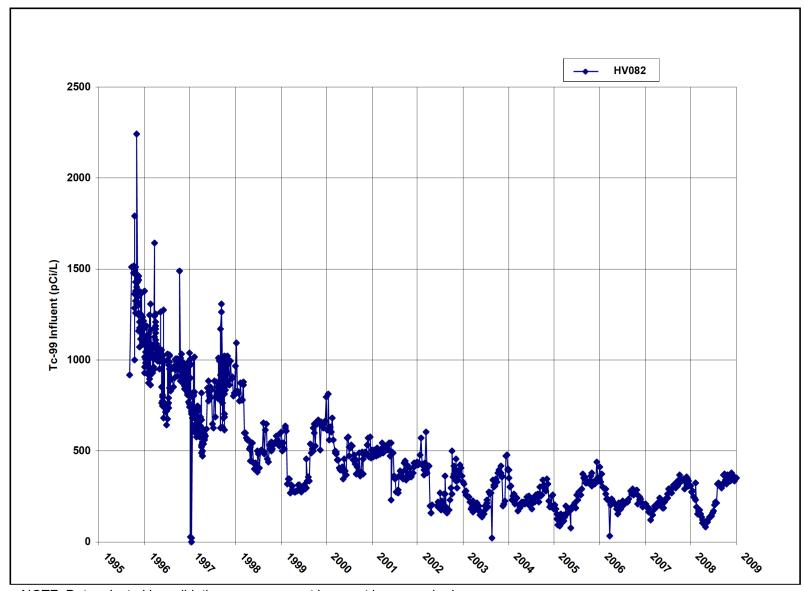


Figure 5a. Northwest Plume Groundwater System Influent Tc-99 Activity

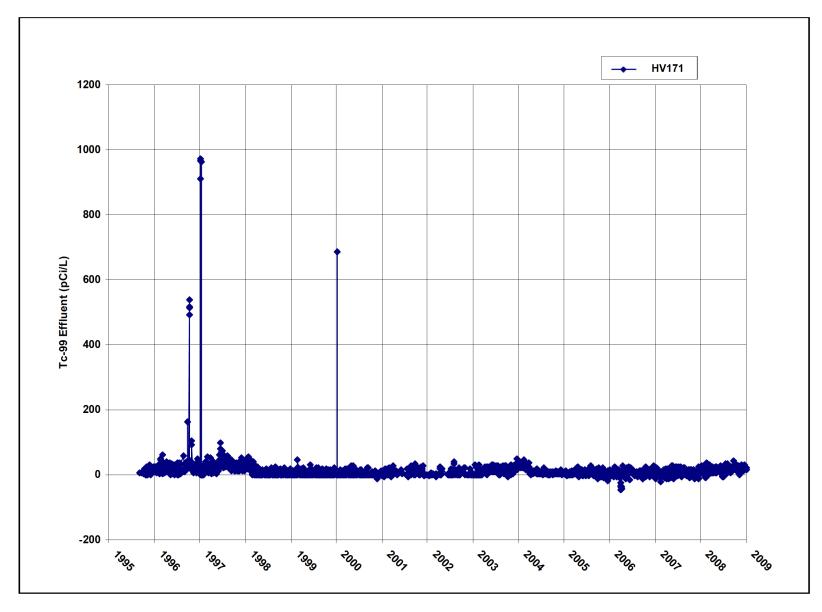


Figure 5b. Northwest Plume Groundwater System Effluent Tc-99 Activity

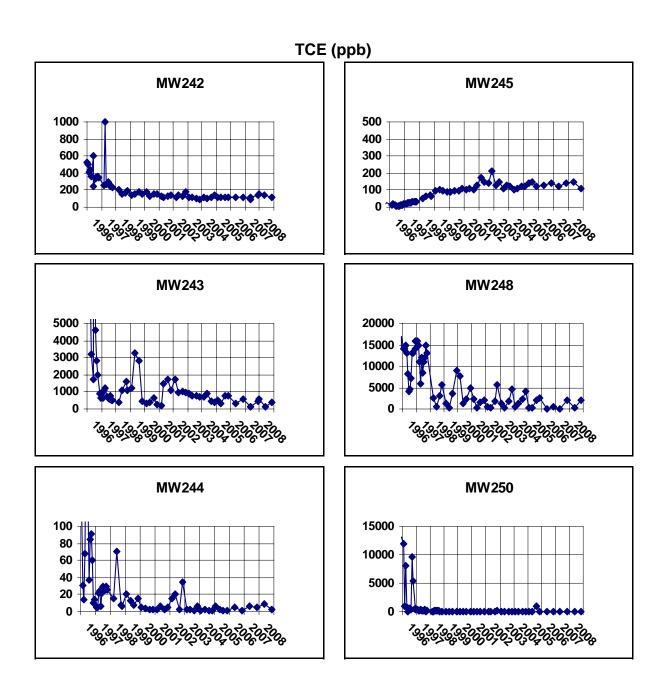


Figure 6a. Northwest Plume—South Well Field TCE Concentrations

Tc-99 (pCi/L)

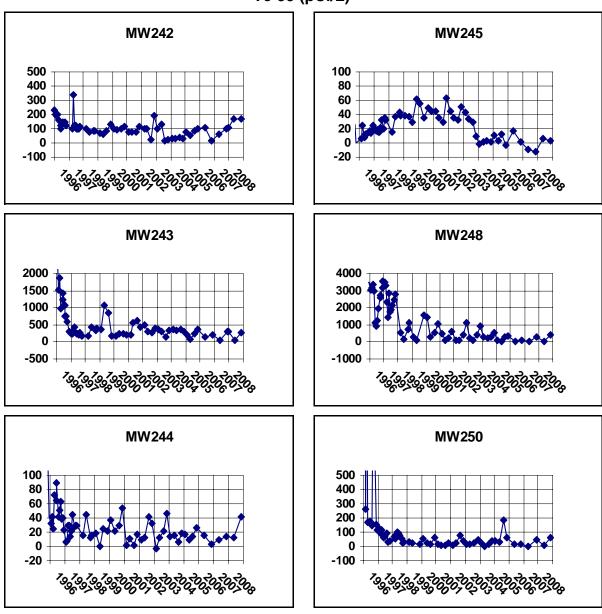


Figure 6b. Northwest Plume—South Well Field Tc-99 Activities



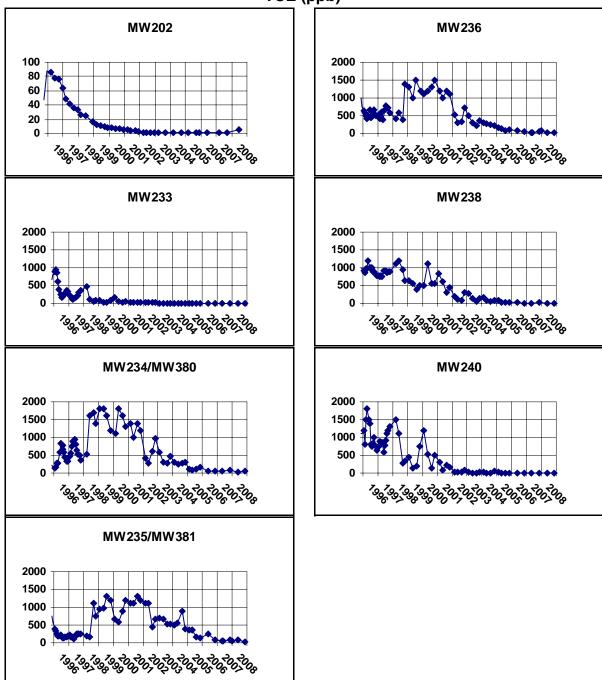
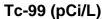


Figure 6c. Northwest Plume—North Well Field TCE Concentrations



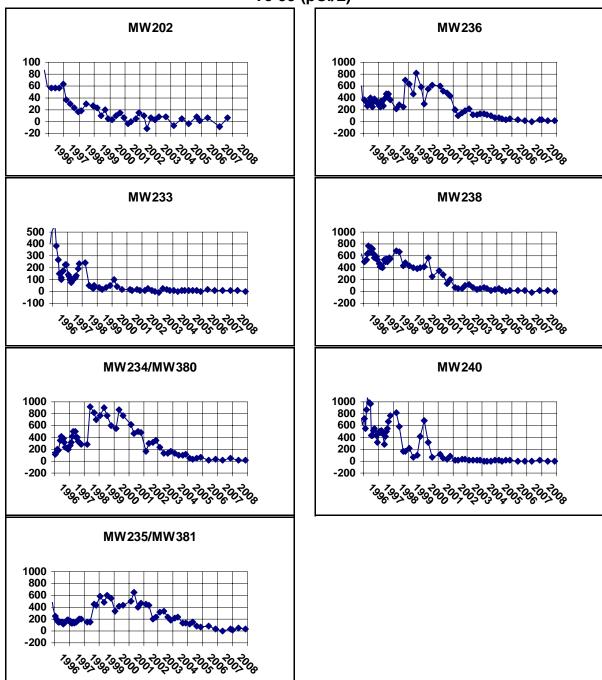


Figure 6d. Northwest Plume—North Well Field Tc-99 Activities

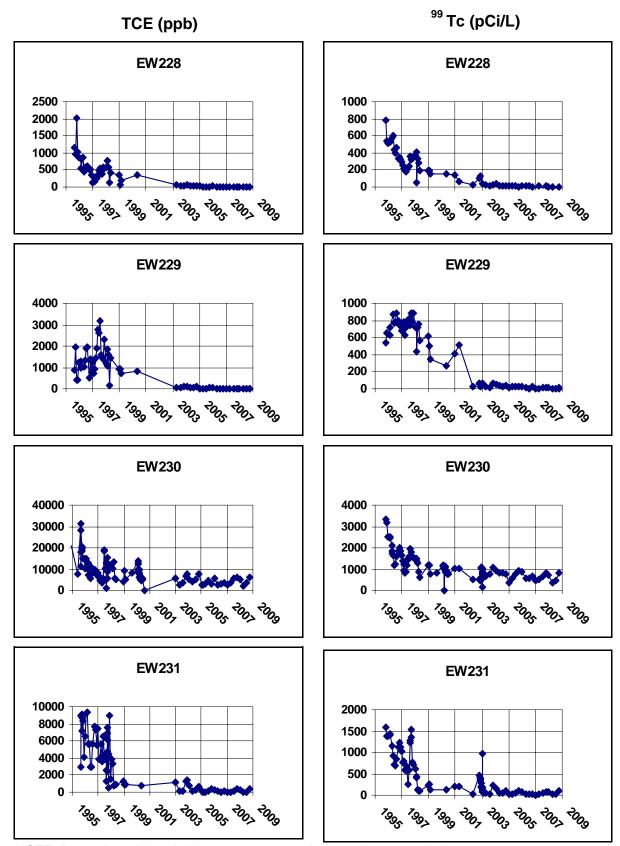
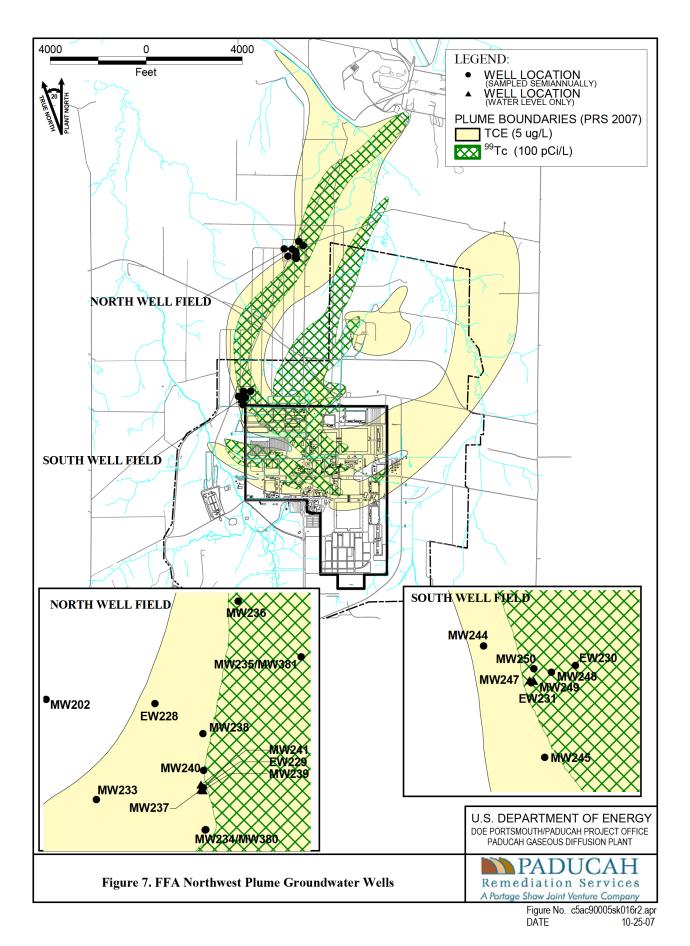


Figure 6e. Northwest Plume—TCE Concentrations and Tc-99 Activities in Extraction Wells





# APPENDIX C C-746-K LANDFILL DATA



MW300DKG1-09 from: MW300 on 10/29/2008 Media: WG SmpMethod: GR
Comments:

| Analysis                    | Results | Counting<br>Error | Units    | Result<br>Qual | Foot<br>Note | Reporting<br>Limit | TPU  | Method          | V/V/A* |
|-----------------------------|---------|-------------------|----------|----------------|--------------|--------------------|------|-----------------|--------|
| ANION                       |         |                   |          |                |              |                    |      |                 |        |
| Chloride                    | 15      |                   | mg/L     |                |              | 2                  |      | SW846-9056      | / X /  |
| Ferrous                     | 92      |                   | mg/L     |                |              | 15                 |      | SM-3500-Fe B 17 | / X /  |
| Nitrate as Nitrogen         | 1       |                   | mg/L     | U              |              | 1                  |      | SW846-9056      | / X /  |
| Sulfate                     | 1220    |                   | mg/L     |                |              | 50                 |      | SW846-9056      | IS/X/  |
| FS                          |         |                   |          |                |              |                    |      |                 |        |
| Barometric Pressure Reading | 30.36   |                   | Inches/H | Нg             |              |                    |      | FS              | / /    |
| Conductivity                | 1840    |                   | umho/cr  | n              |              |                    |      | FS              | / /    |
| Depth to Water              | 6       |                   | ft       |                |              |                    |      | FS              | / /    |
| Dissolved Oxygen            | 3       |                   | mg/L     |                |              |                    |      | FS              | / /    |
| рН                          | 5.24    |                   | Std Unit |                |              |                    |      | FS              | / /    |
| Redox                       | 470     |                   | mV       |                |              |                    |      | FS              | / /    |
| Temperature                 | 66.5    |                   | deg F    |                |              |                    |      | FS              | / /    |
| Turbidity                   | 98.7    |                   | NTU      |                |              |                    |      | FS              | / /    |
| METAL                       |         |                   |          |                |              |                    |      |                 |        |
| Aluminum                    | 0.2     |                   | mg/L     | U              |              | 0.2                |      | SW846-6010B     | / X /  |
| Arsenic                     | 0.00368 |                   | mg/L     |                |              | 0.001              |      | SW846-6020      | / X /  |
| Barium                      | 0.019   |                   | mg/L     |                |              | 0.005              |      | SW846-6020      | / X /  |
| Beryllium                   | 0.001   |                   | mg/L     | U              |              | 0.001              |      | SW846-6020      | / X /  |
| Cadmium                     | 0.001   |                   | mg/L     | U              |              | 0.001              |      | SW846-6020      | / X /  |
| Calcium                     | 289     |                   | mg/L     |                |              | 1                  |      | SW846-6010B     | / X /  |
| Iron                        | 110     |                   | mg/L     |                |              | 0.1                |      | SW846-6010B     | 1/X/   |
| Lead                        | 0.0013  |                   | mg/L     | U              |              | 0.0013             |      | SW846-6020      | / X /  |
| Magnesium                   | 61.3    |                   | mg/L     |                |              | 0.125              |      | SW846-6010B     | / X /  |
| Manganese                   | 16.9    |                   | mg/L     |                |              | 0.5                |      | SW846-6020      | 1/X/   |
| Nickel                      | 0.051   |                   | mg/L     | N              |              | 0.005              |      | SW846-6020      | S/X/   |
| Potassium                   | 21.8    |                   | mg/L     |                |              | 0.2                |      | SW846-6010B     | S/X/   |
| Sodium                      | 19.7    |                   | mg/L     |                |              | 1                  |      | SW846-6010B     | / X /  |
| Uranium                     | 0.001   |                   | mg/L     | UBX            |              | 0.001              |      | SW846-6020      | / X /  |
| METAL-D                     |         |                   |          |                |              |                    |      |                 |        |
| Arsenic, Dissolved          | 0.00386 |                   | mg/L     | X              |              | 0.001              |      | SW846-6020      | / X /  |
| Barium, Dissolved           | 0.0194  |                   | mg/L     |                |              | 0.005              |      | SW846-6020      | / X /  |
| Beryllium, Dissolved        | 0.001   |                   | mg/L     | U              |              | 0.001              |      | SW846-6020      | / X /  |
| Cadmium, Dissolved          | 0.001   |                   | mg/L     | U              |              | 0.001              |      | SW846-6020      | / X /  |
| Lead, Dissolved             | 0.0013  |                   | mg/L     | U              |              | 0.0013             |      | SW846-6020      | / X /  |
| Uranium, Dissolved          | 0.001   |                   | mg/L     | UBX            |              | 0.001              |      | SW846-6020      | / X /  |
| RADS                        |         |                   |          |                |              |                    |      |                 |        |
| Alpha activity              | 5.22    | 1.76              | pCi/L    | UX             | D            | 16.6               | 2.06 | SW846-9310      | / X /  |
| Beta activity               | 34.8    | 3.25              | pCi/L    |                |              | 14                 | 5.21 | SW846-9310      | / X /  |
| Technetium-99               | 6.45    | 11                | pCi/L    | U              |              | 16.4               | 11   | RL-7100         | / X /  |
| VOA                         |         |                   |          |                |              |                    |      |                 |        |
| 1,1,1-Trichloroethane       | 5       |                   | ug/L     | U              |              | 5                  |      | SW846-8260B     | / X /  |
| 1,1,2-Trichloroethane       | 5       |                   | ug/L     | U              |              | 5                  |      | SW846-8260B     | / X /  |
| 1,1-Dichloroethane          | 29      |                   | ug/L     | D              |              | 5                  |      | SW846-8260B     | / X /  |
| 1,1-Dichloroethene          | 46      |                   | ug/L     | D              |              | 5                  |      | SW846-8260B     | 1/X/   |
| 1,2-Dichloroethane          | 25      |                   | ug/L     | U              |              | 25                 |      | SW846-8260B     | / X /  |
| Benzene                     | 25      |                   | ug/L     | U              |              | 25                 |      | SW846-8260B     | / X /  |
| Bromodichloromethane        | 25      |                   | ug/L     | U              |              | 25                 |      | SW846-8260B     | / X /  |
| Carbon tetrachloride        | 25      |                   | ug/L     | U              |              | 25                 |      | SW846-8260B     | / X /  |
| Chloroform                  | 25      |                   | ug/L     | U              |              | 25                 |      | SW846-8260B     | / X /  |

| cis-1,2-Dichloroethene   | 380 | ug/L | D | 5  | SW846-8260B | 1/X/  |
|--------------------------|-----|------|---|----|-------------|-------|
| Ethylbenzene             | 25  | ug/L | U | 25 | SW846-8260B | / X / |
| Tetrachloroethene        | 5   | ug/L | U | 5  | SW846-8260B | / X / |
| Toluene                  | 25  | ug/L | U | 25 | SW846-8260B | / X / |
| Total Xylene             | 75  | ug/L | U | 75 | SW846-8260B | / X / |
| trans-1,2-Dichloroethene | 5   | ug/L | U | 5  | SW846-8260B | / X / |
| Trichloroethene          | 5   | ug/L | U | 5  | SW846-8260B | / X / |
| Vinyl chloride           | 44  | ug/L | D | 10 | SW846-8260B | I/X/  |
| WETCHEM                  |     |      |   |    |             |       |
| Alkalinity               | 88  | mg/L |   | 10 | EPA-310.1   | / X / |

MW300KG1-09 from: MW300 on 10/29/2008 Media: WG SmpMethod: GR
Comments:

| Analysis                    | Results | Counting<br>Error | Units    | Result<br>Qual | Foot<br>Note | Reporting<br>Limit | TPU  | Method          | V/V/A* |
|-----------------------------|---------|-------------------|----------|----------------|--------------|--------------------|------|-----------------|--------|
| ANION                       |         |                   |          |                |              |                    |      |                 |        |
| Chloride                    | 16      |                   | mg/L     |                |              | 2                  |      | SW846-9056      | / X /  |
| Ferrous                     | 57      |                   | mg/L     |                |              | 15                 |      | SM-3500-Fe B 17 | / X /  |
| Nitrate as Nitrogen         | 1       |                   | mg/L     | U              |              | 1                  |      | SW846-9056      | / X /  |
| Sulfate                     | 1170    |                   | mg/L     |                |              | 50                 |      | SW846-9056      | IS/X/  |
| FS                          |         |                   |          |                |              |                    |      |                 |        |
| Barometric Pressure Reading | 30.36   |                   | Inches/H | łg             |              |                    |      | FS              | / /    |
| Conductivity                | 1840    |                   | umho/cn  | n              |              |                    |      | FS              | / /    |
| Depth to Water              | 6       |                   | ft       |                |              |                    |      | FS              | / /    |
| Dissolved Oxygen            | 3       |                   | mg/L     |                |              |                    |      | FS              | / /    |
| рН                          | 5.24    |                   | Std Unit |                |              |                    |      | FS              | / /    |
| Redox                       | 470     |                   | mV       |                |              |                    |      | FS              | / /    |
| Temperature                 | 66.5    |                   | deg F    |                |              |                    |      | FS              | / /    |
| Turbidity                   | 98.7    |                   | NTU      |                |              |                    |      | FS              | / /    |
| METAL                       |         |                   |          |                |              |                    |      |                 |        |
| Aluminum                    | 0.2     |                   | mg/L     | U              |              | 0.2                |      | SW846-6010B     | / X /  |
| Arsenic                     | 0.00236 |                   | mg/L     |                |              | 0.001              |      | SW846-6020      | / X /  |
| Barium                      | 0.0203  |                   | mg/L     |                |              | 0.005              |      | SW846-6020      | / X /  |
| Beryllium                   | 0.001   |                   | mg/L     | U              |              | 0.001              |      | SW846-6020      | / X /  |
| Cadmium                     | 0.001   |                   | mg/L     | U              |              | 0.001              |      | SW846-6020      | / X /  |
| Calcium                     | 288     |                   | mg/L     |                |              | 1                  |      | SW846-6010B     | / X /  |
| Iron                        | 63.9    |                   | mg/L     |                |              | 0.1                |      | SW846-6010B     | 1/X/   |
| Lead                        | 0.0013  |                   | mg/L     | U              |              | 0.0013             |      | SW846-6020      | / X /  |
| Magnesium                   | 61.5    |                   | mg/L     |                |              | 0.125              |      | SW846-6010B     | / X /  |
| Manganese                   | 15      |                   | mg/L     |                |              | 0.5                |      | SW846-6020      | 1/X/   |
| Nickel                      | 0.0449  |                   | mg/L     | Ν              |              | 0.005              |      | SW846-6020      | S/X/   |
| Potassium                   | 22.5    |                   | mg/L     |                |              | 0.2                |      | SW846-6010B     | S/X/   |
| Sodium                      | 19.4    |                   | mg/L     |                |              | 1                  |      | SW846-6010B     | / X /  |
| Uranium                     | 0.001   |                   | mg/L     | UBX            |              | 0.001              |      | SW846-6020      | / X /  |
| METAL-D                     |         |                   |          |                |              |                    |      |                 |        |
| Arsenic, Dissolved          | 0.00191 |                   | mg/L     | Χ              |              | 0.001              |      | SW846-6020      | / X /  |
| Barium, Dissolved           | 0.0207  |                   | mg/L     |                |              | 0.005              |      | SW846-6020      | / X /  |
| Beryllium, Dissolved        | 0.001   |                   | mg/L     | U              |              | 0.001              |      | SW846-6020      | / X /  |
| Cadmium, Dissolved          | 0.001   |                   | mg/L     | U              |              | 0.001              |      | SW846-6020      | / X /  |
| Lead, Dissolved             | 0.0013  |                   | mg/L     | U              |              | 0.0013             |      | SW846-6020      | / X /  |
| Uranium, Dissolved          | 0.001   |                   | mg/L     | UBX            |              | 0.001              |      | SW846-6020      | / X /  |
| RADS                        |         |                   |          |                |              |                    |      |                 |        |
| Alpha activity              | 6.06    | 1.97              | pCi/L    | UX             | D            | 16.2               | 2.32 | SW846-9310      | / X /  |
| Beta activity               | 43.7    | 3.87              | pCi/L    |                |              | 13.8               | 6.41 | SW846-9310      | / X /  |
| Technetium-99               | 11.7    | 11.2              | pCi/L    | U              |              | 16.4               | 11.2 | RL-7100         | / X /  |
| VOA                         |         |                   |          |                |              |                    |      |                 |        |
| 1,1,1-Trichloroethane       | 5       |                   | ug/L     | U              |              | 5                  |      | SW846-8260B     | / X /  |
| 1,1,2-Trichloroethane       | 5       |                   | ug/L     | U              |              | 5                  |      | SW846-8260B     | / X /  |
| 1,1-Dichloroethane          | 32      |                   | ug/L     | D              |              | 5                  |      | SW846-8260B     | / X /  |
| 1,1-Dichloroethene          | 48      |                   | ug/L     | D              |              | 5                  |      | SW846-8260B     | 1/X/   |
| 1,2-Dichloroethane          | 25      |                   | ug/L     | U              |              | 25                 |      | SW846-8260B     | / X /  |
| Benzene                     | 25      |                   | ug/L     | U              |              | 25                 |      | SW846-8260B     | / X /  |
| Bromodichloromethane        | 25      |                   | ug/L     | U              |              | 25                 |      | SW846-8260B     | / X /  |
| Carbon tetrachloride        | 25      |                   | ug/L     | U              |              | 25                 |      | SW846-8260B     | / X /  |
| Carbon legachionne          |         |                   |          |                |              |                    |      |                 |        |

| cis-1,2-Dichloroethene   | 390 | ug/L | D | 5  | SW846-8260B | 1/X/  |
|--------------------------|-----|------|---|----|-------------|-------|
| Ethylbenzene             | 25  | ug/L | U | 25 | SW846-8260B | / X / |
| Tetrachloroethene        | 5   | ug/L | U | 5  | SW846-8260B | / X / |
| Toluene                  | 25  | ug/L | U | 25 | SW846-8260B | / X / |
| Total Xylene             | 75  | ug/L | U | 75 | SW846-8260B | / X / |
| trans-1,2-Dichloroethene | 5   | ug/L | U | 5  | SW846-8260B | / X / |
| Trichloroethene          | 5   | ug/L | U | 5  | SW846-8260B | / X / |
| Vinyl chloride           | 46  | ug/L | D | 10 | SW846-8260B | I/X/  |
| WETCHEM                  |     |      |   |    |             |       |
| Alkalinity               | 53  | mg/L |   | 10 | EPA-310.1   | / X / |

MW301KG1-09 from: MW301 on 10/29/2008 Media: WG SmpMethod: GR Comments:

| Analysis                    | Results | Counting<br>Error | Units    | Result<br>Qual | Foot<br>Note | Reporting<br>Limit | TPU  | Method          | V/V/A* |
|-----------------------------|---------|-------------------|----------|----------------|--------------|--------------------|------|-----------------|--------|
| ANION                       |         |                   |          |                |              |                    |      |                 |        |
| Chloride                    | 70      |                   | mg/L     |                |              | 5                  |      | SW846-9056      | S/X/   |
| Ferrous                     | 230     |                   | mg/L     |                |              | 60                 |      | SM-3500-Fe B 17 | / X /  |
| Nitrate as Nitrogen         | 1       |                   | mg/L     | U              |              | 1                  |      | SW846-9056      | / X /  |
| Sulfate                     | 1970    |                   | mg/L     |                |              | 100                |      | SW846-9056      | I/X/   |
| FS                          |         |                   |          |                |              |                    |      |                 |        |
| Barometric Pressure Reading | 30.27   |                   | Inches/H | <del>l</del> g |              |                    |      | FS              | / /    |
| Conductivity                | 3460    |                   | umho/cr  | n              |              |                    |      | FS              | / /    |
| Depth to Water              | 8.91    |                   | ft       |                |              |                    |      | FS              | / /    |
| Dissolved Oxygen            | 1.03    |                   | mg/L     |                |              |                    |      | FS              | / /    |
| рН                          | 6.1     |                   | Std Unit |                |              |                    |      | FS              | / /    |
| Redox                       | 230     |                   | mV       |                |              |                    |      | FS              | / /    |
| Temperature                 | 64.4    |                   | deg F    |                |              |                    |      | FS              | / /    |
| Turbidity                   | 65.3    |                   | NTU      |                |              |                    |      | FS              | / /    |
| METAL                       |         |                   |          |                |              |                    |      |                 |        |
| Aluminum                    | 0.2     |                   | mg/L     | U              |              | 0.2                |      | SW846-6010B     | / X /  |
| Arsenic                     | 0.00151 |                   | mg/L     |                |              | 0.001              |      | SW846-6020      | / X /  |
| Barium                      | 0.0209  |                   | mg/L     |                |              | 0.005              |      | SW846-6020      | / X /  |
| Beryllium                   | 0.01    |                   | mg/L     | U              |              | 0.01               |      | SW846-6020      | / X /  |
| Cadmium                     | 0.001   |                   | mg/L     | U              |              | 0.001              |      | SW846-6020      | / X /  |
| Calcium                     | 547     |                   | mg/L     |                |              | 5                  |      | SW846-6010B     | / X /  |
| Iron                        | 240     |                   | mg/L     |                |              | 0.1                |      | SW846-6010B     | I/X/   |
| Lead                        | 0.013   |                   | mg/L     | U              |              | 0.013              |      | SW846-6020      | / X /  |
| Magnesium                   | 116     |                   | mg/L     |                |              | 0.125              |      | SW846-6010B     | / X /  |
| Manganese                   | 16.3    |                   | mg/L     |                |              | 0.5                |      | SW846-6020      | I/X/   |
| Nickel                      | 0.015   |                   | mg/L     | Ν              |              | 0.005              |      | SW846-6020      | / X /  |
| Potassium                   | 44.7    |                   | mg/L     |                |              | 0.2                |      | SW846-6010B     | S/X/   |
| Sodium                      | 77.3    |                   | mg/L     |                |              | 1                  |      | SW846-6010B     | / X /  |
| Uranium                     | 0.01    |                   | mg/L     | UBX            | (            | 0.01               |      | SW846-6020      | / X /  |
| METAL-D                     |         |                   |          |                |              |                    |      |                 |        |
| Arsenic, Dissolved          | 0.00104 |                   | mg/L     | X              |              | 0.001              |      | SW846-6020      | / X /  |
| Barium, Dissolved           | 0.05    |                   | mg/L     | U              |              | 0.05               |      | SW846-6020      | / X /  |
| Beryllium, Dissolved        | 0.001   |                   | mg/L     | U              |              | 0.001              |      | SW846-6020      | / X /  |
| Cadmium, Dissolved          | 0.01    |                   | mg/L     | U              |              | 0.01               |      | SW846-6020      | / X /  |
| Lead, Dissolved             | 0.013   |                   | mg/L     | U              |              | 0.013              |      | SW846-6020      | / X /  |
| Uranium, Dissolved          | 0.01    |                   | mg/L     | UBX            | (            | 0.01               |      | SW846-6020      | / X /  |
| RADS                        |         |                   |          |                |              |                    |      |                 |        |
| Alpha activity              | 7.81    | 2.68              | pCi/L    | UX             | D            | 32                 | 3.12 | SW846-9310      | / X /  |
| Beta activity               | 77.1    | 7.03              | pCi/L    |                |              | 27.5               | 11.4 | SW846-9310      | 1/X/   |
| Technetium-99               | 5.16    | 11                | pCi/L    | U              |              | 16.4               | 11   | RL-7100         | / X /  |
| VOA                         |         |                   |          |                |              |                    |      |                 |        |
| 1,1,1-Trichloroethane       | 1       |                   | ug/L     | U              |              | 1                  |      | SW846-8260B     | / X /  |
| 1,1,2-Trichloroethane       | 1       |                   | ug/L     | U              |              | 1                  |      | SW846-8260B     | / X /  |
| 1,1-Dichloroethane          | 3.9     |                   | ug/L     |                |              | 1                  |      | SW846-8260B     | / X /  |
| 1,1-Dichloroethene          | 3.8     |                   | ug/L     |                |              | 1                  |      | SW846-8260B     | S/X/   |
| 1,2-Dichloroethane          | 5       |                   | ug/L     | U              |              | 5                  |      | SW846-8260B     | / X /  |
| Benzene                     | 5       |                   | ug/L     | U              |              | 5                  |      | SW846-8260B     | / X /  |
| Bromodichloromethane        | 5       |                   | ug/L     | U              |              | 5                  |      | SW846-8260B     | / X /  |
| Carbon tetrachloride        | 5       |                   | ug/L     | U              |              | 5                  |      | SW846-8260B     | / X /  |
| Chloroform                  | 5       |                   | ug/L     | Ü              |              | 5                  |      | SW846-8260B     | / X /  |

| Total Xylene                      | 15       | ug/L         | U | 15     | SW846-8260B                | / X /            |
|-----------------------------------|----------|--------------|---|--------|----------------------------|------------------|
| trans-1,2-Dichloroethene          | 1        | ug/L         | U | 1      | SW846-8260B                | / X /            |
| Trichloroethene<br>Vinyl chloride | 1<br>4.4 | ug/L<br>ug/L | U | 1<br>2 | SW846-8260B<br>SW846-8260B | / X /<br>I / X / |
| WETCHEM                           |          |              |   | _      | 2170.00 02002              |                  |
| Alkalinity                        | 450      | mg/L         |   | 10     | EPA-310.1                  | / X /            |

MW302KG1-09 from: MW302 on 10/29/2008 Media: WG SmpMethod: GR
Comments:

| Analysis                    | Results | Counting<br>Error | Units    | Result<br>Qual | Foot<br>Note | Reporting<br>Limit | TPU   | Method          | V/V/A* |
|-----------------------------|---------|-------------------|----------|----------------|--------------|--------------------|-------|-----------------|--------|
| ANION                       |         |                   |          |                |              |                    |       |                 |        |
| Chloride                    | 9.5     |                   | mg/L     |                |              | 2                  |       | SW846-9056      | / X /  |
| Ferrous                     | 0.6     |                   | mg/L     | U              |              | 0.6                |       | SM-3500-Fe B 17 | / X /  |
| Nitrate as Nitrogen         | 1       |                   | mg/L     | U              |              | 1                  |       | SW846-9056      | / X /  |
| Sulfate                     | 150     |                   | mg/L     |                |              | 20                 |       | SW846-9056      | / X /  |
| FS                          |         |                   |          |                |              |                    |       |                 |        |
| Barometric Pressure Reading | 30.36   |                   | Inches/H | <del>l</del> g |              |                    |       | FS              | / /    |
| Conductivity                | 753     |                   | umho/cr  | n              |              |                    |       | FS              | / /    |
| Depth to Water              | 12.34   |                   | ft       |                |              |                    |       | FS              | / /    |
| Dissolved Oxygen            | 2.72    |                   | mg/L     |                |              |                    |       | FS              | / /    |
| рН                          | 6.2     |                   | Std Unit |                |              |                    |       | FS              | / /    |
| Redox                       | 700     |                   | mV       |                |              |                    |       | FS              | / /    |
| Temperature                 | 62.2    |                   | deg F    |                |              |                    |       | FS              | / /    |
| Turbidity                   | 4.4     |                   | NTU      |                |              |                    |       | FS              | / /    |
| METAL                       |         |                   |          |                |              |                    |       |                 |        |
| Aluminum                    | 0.23    |                   | mg/L     |                |              | 0.2                |       | SW846-6010B     | 1/X/   |
| Arsenic                     | 0.00151 |                   | mg/L     |                |              | 0.001              |       | SW846-6020      | / X /  |
| Barium                      | 0.0634  |                   | mg/L     |                |              | 0.005              |       | SW846-6020      | / X /  |
| Beryllium                   | 0.001   |                   | mg/L     | U              |              | 0.001              |       | SW846-6020      | / X /  |
| Cadmium                     | 0.001   |                   | mg/L     | U              |              | 0.001              |       | SW846-6020      | / X /  |
| Calcium                     | 50.9    |                   | mg/L     |                |              | 1                  |       | SW846-6010B     | / X /  |
| Iron                        | 0.281   |                   | mg/L     |                |              | 0.1                |       | SW846-6010B     | / X /  |
| Lead                        | 0.0013  |                   | mg/L     | U              |              | 0.0013             |       | SW846-6020      | / X /  |
| Magnesium                   | 27.5    |                   | mg/L     |                |              | 0.025              |       | SW846-6010B     | / X /  |
| Manganese                   | 0.319   |                   | mg/L     |                |              | 0.005              |       | SW846-6020      | 1/X/   |
| Nickel                      | 0.00624 |                   | mg/L     | Ν              |              | 0.005              |       | SW846-6020      | / X /  |
| Potassium                   | 0.375   |                   | mg/L     |                |              | 0.2                |       | SW846-6010B     | / X /  |
| Sodium                      | 89.4    |                   | mg/L     |                |              | 1                  |       | SW846-6010B     | / X /  |
| Uranium                     | 0.001   |                   | mg/L     | UB             | (            | 0.001              |       | SW846-6020      | / X /  |
| METAL-D                     |         |                   |          |                |              |                    |       |                 |        |
| Arsenic, Dissolved          | 0.001   |                   | mg/L     | UX             |              | 0.001              |       | SW846-6020      | / X /  |
| Barium, Dissolved           | 0.0567  |                   | mg/L     |                |              | 0.005              |       | SW846-6020      | / X /  |
| Beryllium, Dissolved        | 0.001   |                   | mg/L     | U              |              | 0.001              |       | SW846-6020      | / X /  |
| Cadmium, Dissolved          | 0.001   |                   | mg/L     | U              |              | 0.001              |       | SW846-6020      | / X /  |
| Lead, Dissolved             | 0.0013  |                   | mg/L     | U              |              | 0.0013             |       | SW846-6020      | / X /  |
| Uranium, Dissolved          | 0.001   |                   | mg/L     | UΒ>            | (            | 0.001              |       | SW846-6020      | / X /  |
| RADS                        |         |                   |          |                |              |                    |       |                 |        |
| Alpha activity              | 1.16    | 0.445             | pCi/L    | U              | D            | 5.61               | 0.504 | SW846-9310      | / X /  |
| Beta activity               | 0.994   | 0.12              | pCi/L    | U              |              | 6.25               | 0.167 | SW846-9310      | / X /  |
| Technetium-99               | 10.6    | 11.2              | pCi/L    | U              |              | 16.4               | 11.2  | RL-7100         | / X /  |
| VOA                         |         |                   |          |                |              |                    |       |                 |        |
| 1,1,1-Trichloroethane       | 1       |                   | ug/L     | U              |              | 1                  |       | SW846-8260B     | / X /  |
| 1,1,2-Trichloroethane       | 1       |                   | ug/L     | U              |              | 1                  |       | SW846-8260B     | / X /  |
| 1,1-Dichloroethane          | 1       |                   | ug/L     | U              |              | 1                  |       | SW846-8260B     | / X /  |
| 1,1-Dichloroethene          | 1       |                   | ug/L     | U              |              | 1                  |       | SW846-8260B     | / X /  |
| 1,2-Dichloroethane          | 5       |                   | ug/L     | U              |              | 5                  |       | SW846-8260B     | / X /  |
| Benzene                     | 5       |                   | ug/L     | U              |              | 5                  |       | SW846-8260B     | / X /  |
| Bromodichloromethane        | 5       |                   | ug/L     | Ū              |              | 5                  |       | SW846-8260B     | / X /  |
| Carbon tetrachloride        | 5       |                   | ug/L     | U              |              | 5                  |       | SW846-8260B     | / X /  |
| Chloroform                  | 5       |                   | ug/L     | Ü              |              | 5                  |       | SW846-8260B     | / X /  |

| Paducah | <b>OREIS</b> | <b>Report for</b> | KG09-01 |
|---------|--------------|-------------------|---------|
|---------|--------------|-------------------|---------|

| Alkalinity               | 250 | mg/L |   | 10 | EPA-310.1   | / X / |
|--------------------------|-----|------|---|----|-------------|-------|
| WETCHEM                  |     |      |   |    |             |       |
| Vinyl chloride           | 2   | ug/L | U | 2  | SW846-8260B | / X / |
| Trichloroethene          | 1   | ug/L | U | 1  | SW846-8260B | / X / |
| trans-1,2-Dichloroethene | 1   | ug/L | U | 1  | SW846-8260B | / X / |
| Total Xylene             | 15  | ug/L | U | 15 | SW846-8260B | / X / |
| Toluene                  | 5   | ug/L | U | 5  | SW846-8260B | / X / |
| Tetrachloroethene        | 1   | ug/L | U | 1  | SW846-8260B | / X / |
| Ethylbenzene             | 5   | ug/L | U | 5  | SW846-8260B | / X / |
| cis-1,2-Dichloroethene   | 1   | ug/L | U | 1  | SW846-8260B | / X / |

MW344KG1-09 from: MW344 on 10/29/2008 Media: WG SmpMethod: GR Comments:

| Analysis<br>ANION           | Results | Counting<br>Error | Units    | Result Foot<br>Qual Note |        | TPU   | Method          | V/V/A* |
|-----------------------------|---------|-------------------|----------|--------------------------|--------|-------|-----------------|--------|
| Chloride                    | 21      |                   | mg/L     |                          | 2      |       | SW846-9056      | / X /  |
| Ferrous                     | 0.7     |                   | mg/L     |                          | 0.6    |       | SM-3500-Fe B 17 | / X /  |
| Nitrate as Nitrogen         | 1       |                   | mg/L     | U                        | 1      |       | SW846-9056      | / X /  |
| Sulfate                     | 160     |                   | mg/L     | Ü                        | 20     |       | SW846-9056      | / X /  |
| FS                          |         |                   |          |                          |        |       |                 |        |
| Barometric Pressure Reading | 30.3    |                   | Inches/H | q                        |        |       | FS              | / /    |
| Conductivity                | 574     |                   | umho/cm  |                          |        |       | FS              | //     |
| Depth to Water              | 24.85   |                   | ft       |                          |        |       | FS              | / /    |
| Dissolved Oxygen            | 1.26    |                   | mg/L     |                          |        |       | FS              | / /    |
| pΗ                          | 6.25    |                   | Std Unit |                          |        |       | FS              | //     |
| Redox                       | 420     |                   | mV       |                          |        |       | FS              | / /    |
| Temperature                 | 61      |                   | deg F    |                          |        |       | FS              | / /    |
| Turbidity                   | 51.4    |                   | NTU      |                          |        |       | FS              | / /    |
| METAL                       |         |                   |          |                          |        |       |                 |        |
| Aluminum                    | 3.36    |                   | mg/L     |                          | 0.2    |       | SW846-6010B     | 1/X/   |
| Arsenic                     | 0.00447 |                   | mg/L     |                          | 0.001  |       | SW846-6020      | S/X/   |
| Barium                      | 0.0683  |                   | mg/L     |                          | 0.005  |       | SW846-6020      | / X /  |
| Beryllium                   | 0.001   |                   | mg/L     | U                        | 0.001  |       | SW846-6020      | / X /  |
| Cadmium                     | 0.001   |                   | mg/L     | U                        | 0.001  |       | SW846-6020      | / X /  |
| Calcium                     | 59.8    |                   | mg/L     |                          | 1      |       | SW846-6010B     | / X /  |
| Iron                        | 3.64    |                   | mg/L     |                          | 0.1    |       | SW846-6010B     | 1/X/   |
| Lead                        | 0.0013  |                   | mg/L     | U                        | 0.0013 |       | SW846-6020      | / X /  |
| Magnesium                   | 19.2    |                   | mg/L     |                          | 0.025  |       | SW846-6010B     | / X /  |
| Manganese                   | 0.256   |                   | mg/L     |                          | 0.005  |       | SW846-6020      | IS/X/  |
| Nickel                      | 0.00577 |                   | mg/L     | N                        | 0.005  |       | SW846-6020      | / X /  |
| Potassium                   | 1.6     |                   | mg/L     |                          | 0.2    |       | SW846-6010B     | / X /  |
| Sodium                      | 29      |                   | mg/L     |                          | 1      |       | SW846-6010B     | / X /  |
| Uranium                     | 0.001   |                   | mg/L     | UBX                      | 0.001  |       | SW846-6020      | / X /  |
| METAL-D                     |         |                   |          |                          |        |       |                 |        |
| Arsenic, Dissolved          | 0.00322 |                   | mg/L     | Χ                        | 0.001  |       | SW846-6020      | S/X/   |
| Barium, Dissolved           | 0.0515  |                   | mg/L     |                          | 0.005  |       | SW846-6020      | / X /  |
| Beryllium, Dissolved        | 0.001   |                   | mg/L     | U                        | 0.001  |       | SW846-6020      | / X /  |
| Cadmium, Dissolved          | 0.001   |                   | mg/L     | U                        | 0.001  |       | SW846-6020      | / X /  |
| Lead, Dissolved             | 0.0013  |                   | mg/L     | U                        | 0.0013 |       | SW846-6020      | / X /  |
| Uranium, Dissolved          | 0.001   |                   | mg/L     | UBX                      | 0.001  |       | SW846-6020      | / X /  |
| RADS                        |         |                   |          |                          |        |       |                 |        |
| Alpha activity              | 2.88    | 0.922             | pCi/L    | U D                      | 4.55   | 1.09  | SW846-9310      | / X /  |
| Beta activity               | 4.82    | 0.533             | pCi/L    | U                        | 5.95   | 0.776 | SW846-9310      | / X /  |
| Technetium-99               | 0.645   | 10.7              | pCi/L    | U                        | 16.4   | 10.7  | RL-7100         | / X /  |
| VOA                         |         |                   |          |                          |        |       |                 |        |
| 1,1,1-Trichloroethane       | 1       |                   | ug/L     | U                        | 1      |       | SW846-8260B     | / X /  |
| 1,1,2-Trichloroethane       | 1       |                   | ug/L     | U                        | 1      |       | SW846-8260B     | / X /  |
| 1,1-Dichloroethane          | 1       |                   | ug/L     | U                        | 1      |       | SW846-8260B     | / X /  |
| 1,1-Dichloroethene          | 1       |                   | ug/L     | U                        | 1      |       | SW846-8260B     | / X /  |
| 1,2-Dichloroethane          | 5       |                   | ug/L     | U                        | 5      |       | SW846-8260B     | / X /  |
| Benzene                     | 5       |                   | ug/L     | U                        | 5      |       | SW846-8260B     | / X /  |
| Bromodichloromethane        | 5       |                   | ug/L     | U                        | 5      |       | SW846-8260B     | / X /  |
| Carbon tetrachloride        | 5       |                   | ug/L     | U                        | 5      |       | SW846-8260B     | / X /  |
|                             |         |                   |          |                          |        |       |                 |        |

| Alkalinity               | 110 | mg/L |   | 10 | EPA-310.1   | / X / |
|--------------------------|-----|------|---|----|-------------|-------|
| WETCHEM                  |     |      |   |    |             |       |
| Vinyl chloride           | 2   | ug/L | U | 2  | SW846-8260B | / X / |
| Trichloroethene          | 1   | ug/L | U | 1  | SW846-8260B | / X / |
| trans-1,2-Dichloroethene | 1   | ug/L | U | 1  | SW846-8260B | / X / |
| Total Xylene             | 15  | ug/L | U | 15 | SW846-8260B | / X / |
| Toluene                  | 5   | ug/L | U | 5  | SW846-8260B | / X / |
| Tetrachloroethene        | 1   | ug/L | U | 1  | SW846-8260B | / X / |
| Ethylbenzene             | 5   | ug/L | U | 5  | SW846-8260B | / X / |
| cis-1,2-Dichloroethene   | 1   | ug/L | U | 1  | SW846-8260B | / X / |

\*Verification/Validation/Assessment  $^{*}$ Verification/Validation/Assessment  $^{*}$ C-12

FBMW300KG1-09 from: QC on 10/29/2008 Media: WQ SmpMethod:

Comments:

| Analysis                 | Results | Counting<br>Error | Units | Result Fo<br>Qual No |        | TPU    | Method       | V/V/A* |
|--------------------------|---------|-------------------|-------|----------------------|--------|--------|--------------|--------|
| ANION                    |         |                   |       |                      |        |        |              |        |
| Chloride                 | 2       |                   | mg/L  | U                    | 2      |        | SW846-9056   | / X /  |
| Nitrate as Nitrogen      | 1       |                   | mg/L  | U                    | 1      |        | SW846-9056   | / X /  |
| Sulfate                  | 2       |                   | mg/L  | U                    | 2      |        | SW846-9056   | / X /  |
| METAL                    |         |                   |       |                      |        |        |              |        |
| Aluminum                 | 0.2     |                   | mg/L  | U                    | 0.2    |        | SW846-6010B  | / X /  |
| Arsenic                  | 0.001   |                   | mg/L  | U                    | 0.001  |        | SW846-6020   | / X /  |
| Barium                   | 0.005   |                   | mg/L  | U                    | 0.005  |        | SW846-6020   | / X /  |
| Beryllium                | 0.001   |                   | mg/L  | U                    | 0.001  |        | SW846-6020   | / X /  |
| Cadmium                  | 0.001   |                   | mg/L  | U                    | 0.001  |        | SW846-6020   | / X /  |
| Calcium                  | 1       |                   | mg/L  | UB                   | 1      |        | SW846-6010B  | / X /  |
| Iron                     | 0.1     |                   | mg/L  | U                    | 0.1    |        | SW846-6010B  | / X /  |
| Lead                     | 0.0013  |                   | mg/L  | U                    | 0.0013 |        | SW846-6020   | / X /  |
| Magnesium                | 0.025   |                   | mg/L  | UB                   | 0.025  |        | SW846-6010B  | / X /  |
| Manganese                | 0.005   |                   | mg/L  | U                    | 0.005  |        | SW846-6020   | / X /  |
| Nickel                   | 0.005   |                   | mg/L  | UN                   | 0.005  |        | SW846-6020   | / X /  |
| Potassium                | 0.2     |                   | mg/L  | U                    | 0.2    |        | SW846-6010B  | / X /  |
| Sodium                   | 1       |                   | mg/L  | U                    | 1      |        | SW846-6010B  | / X /  |
| Uranium                  | 0.001   |                   | mg/L  | UBX                  | 0.001  |        | SW846-6020   | / X /  |
| RADS                     |         |                   |       |                      |        |        |              |        |
| Alpha activity           | 0.114   | 0.0475            | pCi/L | U                    | 2.37   | 0.0529 | SW846-9310   | / X /  |
| Beta activity            | 0.506   | 0.0615            | pCi/L | U                    | 4.69   | 0.0854 | SW846-9310   | / X /  |
| Technetium-99            | 4.78    | 10.9              | pCi/L | U                    | 16.4   | 11     | RL-7100      | / X /  |
| VOA                      |         |                   |       |                      |        |        |              |        |
| 1,1,1-Trichloroethane    | 1       |                   | ug/L  | U                    | 1      |        | SW846-8260B  | / X /  |
| 1,1,2-Trichloroethane    | 1       |                   | ug/L  | U                    | 1      |        | SW846-8260B  | / X /  |
| 1,1-Dichloroethane       | 1       |                   | ug/L  | U                    | 1      |        | SW846-8260B  | / X /  |
| 1,1-Dichloroethene       | 1       |                   | ug/L  | U                    | 1      |        | SW846-8260B  | / X /  |
| 1,2-Dichloroethane       | 5       |                   | ug/L  | U                    | 5      |        | SW846-8260B  | / X /  |
| Benzene                  | 5       |                   | ug/L  | U                    | 5      |        | SW 846-8260B | / X /  |
| Bromodichloromethane     | 5       |                   | ug/L  | U                    | 5      |        | SW846-8260B  | / X /  |
| Carbon tetrachloride     | 5       |                   | ug/L  | U                    | 5      |        | SW846-8260B  | / X /  |
| Chloroform               | 5       |                   | ug/L  | U                    | 5      |        | SW846-8260B  | / X /  |
| cis-1,2-Dichloroethene   | 1       |                   | ug/L  | U                    | 1      |        | SW846-8260B  | / X /  |
| Ethylbenzene             | 5       |                   | ug/L  | U                    | 5      |        | SW846-8260B  | / X /  |
| Tetrachloroethene        | 1       |                   | ug/L  | U                    | 1      |        | SW846-8260B  | / X /  |
| Toluene                  | 5       |                   | ug/L  | U                    | 5      |        | SW846-8260B  | / X /  |
| Total Xylene             | 15      |                   | ug/L  | U                    | 15     |        | SW846-8260B  | / X /  |
| trans-1,2-Dichloroethene | 1       |                   | ug/L  | U                    | 1      |        | SW846-8260B  | / X /  |
| Trichloroethene          | 1       |                   | ug/L  | U                    | 1      |        | SW846-8260B  | / X /  |
| Vinyl chloride           | 2       |                   | ug/L  | U                    | 2      |        | SW846-8260B  | / X /  |

| RIMW300KG1-09 | from: QC | on 10/29/2008 | Media: WQ | SmpMethod: |
|---------------|----------|---------------|-----------|------------|
| Comments:     |          |               |           |            |

| Analysis                 | Results | Counting<br>Error | Units | Result Fo |        | TPU    | Method      | V/V/A* |
|--------------------------|---------|-------------------|-------|-----------|--------|--------|-------------|--------|
| ANION                    |         |                   |       |           |        |        |             |        |
| Chloride                 | 2       |                   | mg/L  | U         | 2      |        | SW846-9056  | / X /  |
| Nitrate as Nitrogen      | 1       |                   | mg/L  | U         | 1      |        | SW846-9056  | / X /  |
| Sulfate                  | 2       |                   | mg/L  | U         | 2      |        | SW846-9056  | / X /  |
| METAL                    |         |                   |       |           |        |        |             |        |
| Aluminum                 | 0.2     |                   | mg/L  | U         | 0.2    |        | SW846-6010B | / X /  |
| Arsenic                  | 0.001   |                   | mg/L  | U         | 0.001  |        | SW846-6020  | / X /  |
| Barium                   | 0.005   |                   | mg/L  | U         | 0.005  |        | SW846-6020  | / X /  |
| Beryllium                | 0.001   |                   | mg/L  | U         | 0.001  |        | SW846-6020  | / X /  |
| Cadmium                  | 0.001   |                   | mg/L  | U         | 0.001  |        | SW846-6020  | / X /  |
| Calcium                  | 1       |                   | mg/L  | UB        | 1      |        | SW846-6010B | / X /  |
| Iron                     | 0.1     |                   | mg/L  | U         | 0.1    |        | SW846-6010B | / X /  |
| Lead                     | 0.0013  |                   | mg/L  | U         | 0.0013 |        | SW846-6020  | / X /  |
| Magnesium                | 0.025   |                   | mg/L  | UB        | 0.025  |        | SW846-6010B | / X /  |
| Manganese                | 0.005   |                   | mg/L  | U         | 0.005  |        | SW846-6020  | / X /  |
| Nickel                   | 0.005   |                   | mg/L  | UN        | 0.005  |        | SW846-6020  | / X /  |
| Potassium                | 0.2     |                   | mg/L  | U         | 0.2    |        | SW846-6010B | / X /  |
| Sodium                   | 1       |                   | mg/L  | U         | 1      |        | SW846-6010B | / X /  |
| Uranium                  | 0.001   |                   | mg/L  | UBX       | 0.001  |        | SW846-6020  | / X /  |
| RADS                     |         |                   |       |           |        |        |             |        |
| Alpha activity           | 0.107   | 0.0456            | pCi/L | U         | 2.35   | 0.0506 | SW846-9310  | / X /  |
| Beta activity            | -1.39   | 0.18              | pCi/L | U         | 4.62   | 0.242  | SW846-9310  | / X /  |
| Technetium-99            | -2.95   | 10.6              | pCi/L | U         | 16.4   | 10.6   | RL-7100     | / X /  |
| VOA                      |         |                   |       |           |        |        |             |        |
| 1,1,1-Trichloroethane    | 1       |                   | ug/L  | U         | 1      |        | SW846-8260B | / X /  |
| 1,1,2-Trichloroethane    | 1       |                   | ug/L  | U         | 1      |        | SW846-8260B | / X /  |
| 1,1-Dichloroethane       | 1       |                   | ug/L  | U         | 1      |        | SW846-8260B | / X /  |
| 1,1-Dichloroethene       | 1       |                   | ug/L  | U         | 1      |        | SW846-8260B | / X /  |
| 1,2-Dichloroethane       | 5       |                   | ug/L  | U         | 5      |        | SW846-8260B | / X /  |
| Benzene                  | 5       |                   | ug/L  | U         | 5      |        | SW846-8260B | / X /  |
| Bromodichloromethane     | 5       |                   | ug/L  | U         | 5      |        | SW846-8260B | / X /  |
| Carbon tetrachloride     | 5       |                   | ug/L  | U         | 5      |        | SW846-8260B | / X /  |
| Chloroform               | 5       |                   | ug/L  | U         | 5      |        | SW846-8260B | / X /  |
| cis-1,2-Dichloroethene   | 1       |                   | ug/L  | U         | 1      |        | SW846-8260B | / X /  |
| Ethylbenzene             | 5       |                   | ug/L  | U         | 5      |        | SW846-8260B | / X /  |
| Tetrachloroethene        | 1       |                   | ug/L  | U         | 1      |        | SW846-8260B | / X /  |
| Toluene                  | 5       |                   | ug/L  | U         | 5      |        | SW846-8260B | / X /  |
| Total Xylene             | 15      |                   | ug/L  | U         | 15     |        | SW846-8260B | / X /  |
| trans-1,2-Dichloroethene | 1       |                   | ug/L  | U         | 1      |        | SW846-8260B | / X /  |
| Trichloroethene          | 1       |                   | ug/L  | U         | 1      |        | SW846-8260B | / X /  |
| Vinyl chloride           | 2       |                   | ug/L  | U         | 2      |        | SW846-8260B | / X /  |

| TBMW300KG1-09 | from: QC | on 10/29/2008 | Media: WQ | SmpMethod: |  |
|---------------|----------|---------------|-----------|------------|--|
| Comments:     |          |               |           |            |  |

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



#### APPENDIX D

# ADMINISTRATIVE RECORD AND POST-DECISION RECORD INDICES



# D-3

# Paducah Documents Added to the Administrative Record Files- Fourth Quarter CY2008

| Document Status | Date On Document | Document Id           | Title   | Author Affiliation | To Affiliation | Protected<br>Information | Object Name  |
|-----------------|------------------|-----------------------|---|--------------------|----------------|--------------------------|--------------|
| ARFBGOU         | 07/24/08         | PPPO-02-510-08        | REMEDIAL INVESTIGATION REPORT FOR THE BURIAL GROUNDS OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0030&D1)  | DOE-PPPO           | USEPA-IV       | No                       | 1-05209-0035 |
| ARFBGOU         | 09/26/08         | PPPO-02-676-08        | TRANSMITTAL OF ERRATA SHEETS FOR THE REMEDIAL INVESTIGATION REPORT FOR THE BURIAL GROUNDS OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0030&D1)                           | DOE-PPPO           | USEPA-IV       | No                       | 1-05209-0036 |
| ARFCC           | 09/25/08         | PPPO-02-678-08        | [EXTENSION REQUESTED] SCOPING DOCUMENT FOR CERCLA WASTE DISPOSAL ALTERNATIVES EVALUATION REMEDIAL INVESTIGATION/FEASIBILITY STUDY AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0035&D1) | DOE-PPPO           | USEPA-IV       | No                       | I-05311-0012 |
| ARFCC           | 10/07/08         | DOE/LX/07-<br>0035&D1 | [KDEP GRANTS]SCOPING DOCUMENT FOR CERCLA WASTE DISPOSAL ALTERNATIVES EVALUATION REMEDIAL INVESTIGATION/FEASIBILITY STUDY AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-0035&D1)KY8-890-008-982              | KDEP               | DOE-PPPO       | No                       | 1-05311-0010 |
| ARFREF          | 05/27/08         | PPPO-02-471-08        | [DOE GRANTS]NOTIFICATION OF SCHEDULE<br>EXTENSION FOR THE SUBMITTAL OF THE FISCAL<br>YEAR 2008 D2 SITE MANAGEMENT PLAN  | DOE-PPPO           | USEPA-IV       | No                       | I-02001-0628 |
| ARFREF          | 06/27/08         | PPO-02-532-08         | TRANSMITTAL OF THE FISCAL YEAR 2008 D2 SITE MANAGEMENT PLAN, PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY   | DOE-PPPO           | USEPA-IV       | No                       | I-02001-0625 |
| ARFREF          | 07/17/08         | PPPO-02-580-08        | TRANSMITTAL OF THE REVISED APPENDIX 5 OF<br>THE FISCAL YEAR 2008 D2 SITE MANAGEMENT<br>PLAN, PADUCAH GASEOUS DIFFUSION PLANT,<br>PADUCAH, KENTUCKY  | DOE-PPPO           | USEPA-IV       | No                       | I-02001-0626 |
| ARFREF          | 11/25/08         | PPPO-02-142-09        | TRANSMITTAL OF THE D1 SITE MANAGEMENT<br>PLAN FISCAL YEAR 2009, PADUCAH GASEOUS<br>DIFFUSION PLANT, PADUCAH, KENTUCKY   | DOE-PPPO           | USEPA-IV       | No                       | I-02001-0639 |
| ARFSOU          | 05/19/08         | PPPO-02-152-08        | TRANSMITTAL OF THE SAMPLING AND ANALYSIS PLAN FOR RUBBLE PILES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0060&D1)  | DOE-PPPO           | USEPA-IV       | No                       | 1-04909-0064 |
| ARFSOU          | 06/16/08         | PPPO-02-476-08        | TRANSMITTAL OF ADDENDUM 1-B TO THE<br>SAMPLING AND ANALYSIS PLAN FOR SOIL PILES<br>AT THE PADUCAH GASEOUS DIFFUSION PLANT,<br>PADUCAH, KENTUCKY (DOE/LX/07-0015/A2D2)   | DOE-PPPO           | USEPA-IV       | No                       | 1-04909-0065 |

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|-----------------|------------------|------------------------|---|--------------------|----------------|--------------------------|--------------|
| ARFSOU          | 06/16/08         | PPPO-02-472-08         | TRANSMITTAL OF ADDENDUM 2 TO THE SAMPLING AND ANALYSIS PLAN FOR SOIL PILES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07/0015/A2/D2)   | DOE-PPPO           | USEPA-IV       | No                       | I-04909-0066 |
| ARFSOU          | 07/17/08         | PRS/I-0879             | [KDEP APPROVES]SCOPING DOCUMENT FOR THE SOILS OPERABLE UNIT REMEDIAL INVESTIGATION/FEASIBILITY STUDY AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0027&D1)  | KDEP               | DOE-PPPO       | No                       | I-04911-0006 |
| ARFSOU          | 07/18/08         | PPPO-02-509-08         | TRANSMITTAL OF THE SITE EVALUATION REPORT<br>FOR SOIL PILE I AT THE PADUCAH GASEOUS<br>DIFFUSION PLANT, PADUCAH, KENTUCKY<br>(DOE/LX/07-0108&D1)  | DOE-PPPO           | USEPA-IV       | No                       | I-04907-0014 |
| ARFSOU          | 08/12/08         | DOE/LX/07-<br>0060&D1  | COMMENTS PERTAINING TO THE SAMPLING AND ANALYSIS PLAN FOR RUBBLE AREAS AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0060&D1)  | KDEP               | DOE-PPPO       | No                       | I-04909-0056 |
| ARFSOU          | 08/26/08         | DOE/LX/07-<br>0108&D1  | EXTENSION REQUEST OF SITE EVALUATION<br>REPORT FOR SOIL PILE I AT PADUCAH GASEOUS<br>DIFFUSION PLANT, PADUCAH KENTUCKY<br>(DOE/LX/07-0108&D1)   | KDEP               | DOE-PPPO       | No                       | I-04907-0012 |
| ARFSOU          | 08/27/08         | DOE/LX/07-<br>00108&D1 | REVIEW OF THE SITE EVALUATION REPORT FOR SOIL PILE I AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-00108&D1)   | USEPA-IV           | DOE-PPPO       | No                       | I-04907-0013 |
| ARFSOU          | 09/26/08         | PPPO-02-665-08         | TRANSMITTAL OF THE SAMPLING AND ANALYSIS PLAN FOR RUBBLE AREAS AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0060&D2)  | DOE-PPPO           | USEPA-IV       | No                       | I-04909-0055 |
| ARFSOU          | 10/08/08         | DOE/LX/07-<br>0016&D2  | CLARIFICATION OF THE KENTUCKY DEPARTMENT FOR ENVIRONMENTAL PROTECTION APPROVAL LETTER ON THE ENGINEERING EVALUATION/COST ANALYSIS FOR THE SOILS OPERABLE UNIT INACTIVE FACILITIES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0016&D2) | DOE-PPPO           | KDEP           | No                       | I-04912-0023 |
| ARFSWOUOSD      | 05/27/08         | PPPO-02-408-08         | [DOE EXTENSION REQUEST]PROPOSED MILESTONE MODIFICATION FOR THE SURFACE WATER OPERABLE UNIT (ON-SITE) REMOVAL ACTION AND THE SURFACE WATER OPERABLE UNIT (OFF SITE) REMEDIAL ACTION AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY                    | DOE-PPPO           | USEPA-IV       | No                       | I-04813-0052 |

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|-----------------|------------------|-----------------------|---|--------------------|----------------|--------------------------|--------------|
| ARFSWOUOSD      | 07/18/08         | PPPO-02-555-08        | PROPOSED MILESTONE MODIFICATION FOR THE SURFACE WATER OPERABLE UNIT (ON-SITE) REMOVAL ACTION AND THE SURFACE WATER OPERABLE UNIT (OFF SITE) REMEDIAL ACTION AT THE PADUCAH GASEOUS DIFFUSION PLANT,   | DOE-PPPO           | KDEP           | No                       | I-04813-0055 |
| ARFSWOUOSD      | 09/30/08         | PPPO-02-689-08        | [DOE EXTENSION REQUEST]PROPOSED MILESTONE MODIFICATION FOR THE SURFACE WATER OPERABLE UNIT (ON-SITE) REMOVAL ACTION AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY   | DOE-PPPO           | USEPA-IV       | No                       | I-04813-0051 |
| ARFSWOUOSD      | 10/02/08         | PPPO-02-111-09        | TRANSMITTAL OF THE REPLACEMENT PAGES FOR SECTION 5 OF THE ENGINEERING EVALUATION/COST ANALYSIS FOR CONTAMINATED SEDIMENT ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT (ON-SITE) AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0012&D2 | DOE-PPPO           | USEPA-IV       | No                       | I-04812-0135 |
| ARFSWOUOSD      | 10/03/08         | DOE/LX/07-<br>0012&D2 | ENGINEERING EVALUATION/COST ANALYSIS FOR CONTAMINATED SEDIMENT ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY  | USEPA-IV           | DOE-PPPO       | No                       | I-04812-0134 |
| ARFSWOUOSD      | 10/08/08         | KY8-890-008-982       | FFA MILESTONE MODIFICATION FORM FOR THE<br>SURFACE WATER OPERABLE UNIT (ON-SITE)<br>REMOVAL ACTION, PADUCAH GASEOUS<br>DIFFUSION PLANT  | KDEP               | DOE-PPPO       | No                       | I-04810-0050 |
| ARFSWOUOSD      | 11/10/08         | PPPO-02-418-08        | TRANSMITTAL OF THE ACTION MEMORANDUM FOR CONTAMINATED SEDIMENT ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0119&D1)  | DOE-PPPO           | USEPA-IV       | No                       | I-04813-0057 |

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| Document Status | Date On<br>Document | Document Id           | Title   | Author<br>Affiliation | To Affiliation | Protected<br>Information | Object Name  |
|-----------------|---------------------|-----------------------|---|-----------------------|----------------|--------------------------|--------------|
| 24-PD           | 05/09/08            | DOE/LX/07-<br>0018D2  | TRANSMITTAL OF THE REMOVAL ACTION REPORT FOR THE SCRAP METAL REMOVAL ACTION AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0018&D2) INCLUDES 0019 POSTCONSTRUCTION REPORT FOR THE SCRAP METAL REMOVAL AT THE C-746-D YARD AT PGDP         | DOE-PPPO              | KDEP           | OUO                      | I-01718-0007 |
| 55-PD           | 06/20/08            | PPPO-02-432-08        | TRANSMITTAL OF THE D1 REMOVAL ACTION REPORT FOR THE C-405 INCINERATOR AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0106&D1)   | DOE-PPPO              | USEPA-IV       | No                       | I-05116-0074 |
| 55-PD           | 08/13/08            | DOE/LX/07-<br>0122&D1 | [KDEP REQUESTS D2 VERSION] CONDITIONAL CONCURRENCE OF THE REMOVAL ACTION REPORT FOR THE C-746-A WEST END SMELTER INACTIVE FACILITY AT THE PADUCAH ENVIRONMENTAL REMEDIATION PROJECT DOE/LX/07-0122&D1   | KDEP                  | DOE-PPPO       | No                       | I-05116-0072 |
| 55-PD           | 09/29/08            | PPPO-02-671-08        | [D2 VERSION]TRANSMITTAL OF THE REMOVAL ACTION REPORT FOR THE C-405 INCINERATOR AT THE PADUCAH ENVIRONMENTAL REMEDIATION PROJECT, PADUCAH, KENTUCKY (DOE/LX/07-0106&D2)  | DOE-PPPO              | USEPA-IV       | No                       | I-05116-0073 |
| 55-PD           | 10/10/08            | PPPO-02-107-09        | TRANSMITTAL OF THE REMOVAL ACTION REPORT FOR THE C-746-A WEST END SMELTER INACTIVE FACILITY AT THE PADUCAH ENVIRONMENTAL REMEDIATION PROJECT, PADUCAH, KENTUCKY (DOE/LX/07-0122&D2)   | DOE-PPPO              | USEPA-IV       | No                       | I-05116-0077 |
| 6PHASE-PD       | 05/27/08            | PPPO-02-479-08        | EXTENSION REQUEST FOR SUBMITTAL OF THE D2 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 (DOE/LX/07-0004&D1)                   | DOE-PPPO              | USEPA-IV       | No                       | I-04616-0064 |
| 6PHASE-PD       | 06/13/08            | PPPO-02-512-08        | COMMENT RESPONSE SUMMARY AND REVISED PAGE CHANGES FOR THE C-400 REMEDIAL DESIGN REPORT, CERTIFIED FOR CONSTRUCTION DESIGN DRAWINGS AND TECHNICAL SPECIFICATIONS PACKAGE, FOR THE GWOU FOR THE VOLATILE ORGANIC COMPOUND CONTAMINATION AT C-400 CLEANING BLDG    | PPPO                  | USEPA-IV       | No                       | I-04615-0053 |
| 6PHASE-PD       | 06/17/08            | PRS/I-0862            | [KDEP GRANTS] REQUEST FOR SCHEDULE EXTENSION FOR INVOKING DISPUTE FOR THE REMEDIAL DESIGN REPORT, CERTIFIED FOR CONSTRUCTION DESIGN DRAWINGS AND TECHNICAL SPECIFICATION PKG, FOR THE GWOU FOR THE VOLATILE ORGANIC COMPOUND CONTAMINATION AT C-400 CLEANING BL | KDEP                  | DOE-PPPO       | No                       | I-04615-0054 |
| 6PHASE-PD       | 06/19/08            | PPPO-02-527-08        | 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&D2)                       | DOE-PPPO              | USEPA-IV       | No                       | I-04616-0062 |

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|-----------------|---------------------|----------------|---|-----------------------|----------------|--------------------------|--------------|
| 6PHASE-PD       | 08/07/08            | PRS/I-0891     | 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, KENTUCKY (DOE/LX/07-0004&D2) | KDEP                  | DOE-PPPO       | No                       | I-04616-0068 |
| 6PHASE-PD       | 08/22/08            | PPPO-02-641-08 | C-400 INTERIM REMEDIAL ACTION FIELD WORK STATUS   | DOE-PPPO              | USEPA-IV       | No                       | I-04614-0041 |
| 6PHASE-PD       | 09/29/08            | PPPO-02-662-08 | 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&D2/R1)      | DOE-PPPO              | USEPA-IV       | No                       | I-04616-0061 |

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|-----------------|------------------|--------------------------|--|-----------------------|----------------|--------------------------|--------------|
| ARFBGOU         | 10/21/08         | PRS/I-0981               | EXTENSION REQUEST FOR REVIEW OF THE D1 REMEDIAL INVESTIGATION REPORT FOR THE BURIAL GROUNDS OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-0030&D1) PADUCAH, MCCRACKEN COUNTY, KENTUCKY KY8-890-008-982                                       | KDEP                  | DOE-PPPO       | No                       | I-05210-0011 |
| ARFBGOU         | 11/05/08         | DOE/OR/07-<br>2179/A1&D1 | COMMENTS ON THE D1 ADDENDUM TO THE WORK PLAN FOR THE BURIAL GROUNDS OPERABLE UNIT REMEDIAL INVESTIGATION/FEASIBILITY STUDY AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH KENTUCKY-SWMU 13 FIELD SAMPLING PLAN (DOE/OR/07-2179/A1&D1) KY8-890-008-982         | KDEP                  | DOE-PPPO       | No                       | I-05209-0038 |
| ARFBGOU         | 01/06/09         | DOE/OR/07-<br>2179/A1&D2 | RE: EXTENSION REQUEST FOR COMPLETING REVIEW OF THE D2 REMEDIAL INVESTIGATION WORK PLAN ADDENDUM FOR THE BURIAL GROUNDS OPERABLE UNIT (OU-22): FIELD SAMPLING PLAN FOR SOLID WASTE MANAGEMENT UNIT (SWMU) 13 AT THE PADUCAH GASEOUS DIFFUSION PLANT (PGDP)      | USEPA-IV              | DOE-PPPO       | No                       | I-05209-0039 |
| ARFBGOU         | 01/20/09         | PPPO-02-277-09           | [DOE GRANTS] NOTIFICATION OF SCHEDULE EXTENSION FOR SUBMITTAL OF THE D2 REMEDIAL INVESTIGATION REPORT FOR THE BURIAL GROUNDS OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0030&D2)                                       | DOE-PPPO              | USEPA-IV       | No                       | I-05210-0012 |
| ARFBGOU         | 01/21/09         | DOE/OR/07-<br>2179/A1&D2 | [KDEP]CONDITIONAL CONCURRENCE FOR THE D2 ADDENDUM TO THE WORK PLAN FOR THE BURIAL GROUNDS OPERABLE UNIT REMEDIAL INVESTIGATION FEASIBILITY STUDY AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH KENTUCKY - SWMU 13 FIELD SAMPLING PLAN (DOE/OR/07-2179/A1&D2) | KDEP                  | DOE-PPPO       | No                       | I-05209-0040 |
| ARFBGOU         | 01/21/09         | DOE/LX/07-<br>0030&D2    | APPROVAL OF THE NOTIFICATION OF SCHEDULE EXTENSION FOR SUBMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR THE BURIAL GROUNDS OPERABLE UNIT (DOE/LX/07-0030&D2)   | KDEP                  | DOE-PPPO       | No                       | I-05210-0013 |
| ARFBGOU         | 01/22/09         |                          | [EPA] CONDITIONAL APPROVAL OF THE D2 REMEDIAL INVESTIGATION WORK PLAN ADDENDUM FOR THE BURIAL GROUNDS OPERABLE UNIT (OU-22): FIELD SAMPLING PLAN (FSP) FOR SOLID WASTE MANAGEMENT UNIT (SWMU) 13 AT PGDP   | USEPA-IV              | DOE-PPPO       | No                       | I-05209-0041 |
| ARFBGOU         | 02/20/09         | PPPO-02-310-09           | EXTENSION REQUEST FOR SUBMITTAL OF THE D2 REMEDIAL INVESTIGATION REPORT FOR THE BURIAL GROUND OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0030&D2)  | DOE-PPPO              | USEPA-IV       | No                       | I-05210-0014 |
| ARFBGOU         | 02/20/09         | PPPO-02-308-09           | ADDENDUM TO THE WORK PLAN FOR THE BURIAL GROUNDS OPERABLE UNIT REMEDIAL INVESTIGATION FEASIBILITY STUDY AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY-SOLID WASTE MANAGEMENT UNIT 13 FIELD SAMPLING PLAN (DOE/OR/07-2179/A1&D2/R1)                 | DOE-PPPO              | USEPA-IV       | No                       | I-05209-0042 |
| ARFBGOU         | 02/26/09         | DOE/LX/07-<br>0030&D2    | [KDEP GRANTS] COMMONWEALTH OF KENTUCKY'S 30-DAY EXTENSION APPROVAL FOR THE D2 REMEDIAL INVESTIGATION REPORT FOR THE BURIAL GROUNDS OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-0030&D2)  | KDEP                  | DOE-PPPO       | No                       | I-05210-0015 |

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|-----------------|------------------|-----------------------------|---|-----------------------|----------------|--------------------------|--------------|
| ARFBGOU         | 03/05/09         | DOE/OR/07-<br>2179&D2/A1/R1 | RE: COMMONWEALTH OF KENTUCKY'S APPROVAL OF THE D2/A1/R1 ADDENDUM TO THE WORK PLAN FOR THE BURIAL GROUNDS OPERABLE UNIT REMEDIAL INVESTIGATION/FEASIBILITY STUDY AT PGDP SOLID WASTE MANAGEMENT UNIT (SWMU) 13 FIELD SAMPLING PLAN (DOE/OR/07-2179&D2/A1/R1)     | KDEP                  | DOE-PPPO       | No                       | I-05209-0043 |
| ARFBGOU         | 03/24/09         | PPPO-02-384-09              | EXTENSION REQUEST FOR SUBMITTAL OF THE D2 REMEDIAL INVESTIGATION REPORT FOR THE BURIAL GROUNDS OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0030&D2)  | DOE-PPPO              | USEPA-IV       | No                       | I-05210-0016 |
| ARFBGOU         | 03/26/09         | DOE/LX/07-<br>0030&D2       | [KDEP GRANTS]RE: COMMONWEALTH OF KENTUCKY'S 15-DAY EXTENSION APPROVAL FOR THE D2 REMEDIAL INVESTIGATION REPORT FOR THE BURIAL GROUNDS OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-0030&D2) PADUCAH, MCCRACKEN CTY, KENTUCKY KY8-890-008-982 | KDEP                  | DOE-PPPO       | No                       | I-05210-0017 |
| ARFCC           | 10/14/08         | PPPO-02-652-08              | SCOPING DOCUMENT FOR CERCLA WASTE DISPOSAL ALTERNATIVES EVALUATION REMEDIAL INVESTIGATION/FEASIBILITY STUDY AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0035&D1)   | DOE-PPPO              | USEPA-IV       | No                       | I-05311-0017 |
| ARFGW1          | 01/06/09         |                             | MEMORANDUM TO ADMINISTRATIVE RECORD FILES-CLARIFICATION OF INDECES TITLES, GROUNDWATER OPERABLE UNIT, NW PLUME PUMP & TREAT, (ARFGW1)NW PLUME HYDRAULIC CONTAINMENT ROD (ARFGW1,GW1-PD) AND NORTHWEST PLUME PUMP AND TREAT CONTAINMENT                          | PRS                   | SST            | No                       | I-04600-0364 |
| ARFGW3          | 01/06/09         |                             | MEMORANDUM TO ADMINISTRATIVE RECORD FILES-CLARIFICATION OF INDECES TITLES, GROUNDWATER OPERABLE UNIT, NW PLUME PUMP & TREAT, (ARFGW1)NW PLUME HYDRAULIC CONTAINMENT ROD (ARFGW1,GW1-PD) AND NORTHWEST PLUME PUMP AND TREAT CONTAINMENT                          | PRS                   | SST            | No                       | I-04600-0364 |
| ARFREF          | 11/04/08         | PPPO-02-160-09              | FEDERAL FACILITY AGREEMENT PROJECT MANAGERS MEETING CONDUCTED JULY 15-17, 2008  | DOE                   | USEPA-IV       | No                       | I-02001-0641 |
| ARFREF          | 11/14/08         | PPPO-02-184-09              | FISCAL YEAR 2009 D1 SITE MANAGEMENT PLAN EXTENSION REQUEST  | DOE-PPPO              | USEPA-IV       | No                       | I-02001-0643 |
| ARFREF          | 11/19/08         | PPPO-02-705-08              | COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT FIVE-YEAR REVIEW FOR REMEDIAL ACTIONS AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0117&D1)   | DOE-PPPO              | USEPA-IV       | No                       | I-02001-0648 |
| ARFREF          | 12/19/08         | DOE/LX/07-<br>0185&D1       | REVIEW OF THE FY 09 SITE MANAGEMENT PLAN, PADUCAH GASEOUS DIFFUSION PLANT (PGDP) PADUCAH, KENTUCKY DOE/LX/07-0185&D1  | USEPA-IV              | DOE-PPPO       | No                       | I-02001-0644 |
| ARFREF          | 12/23/08         | DOE/LX/07-<br>0185&D1       | 2009 SITE MANAGEMENT PLAN FOR THE PADUCAH GASEOUS<br>DIFFUSION PLANT, PADUCAH KENTUCKY (DOE/LX/07-0185&D1) KY8-890-<br>008-982  | KDEP                  | DOE-PPPO       | No                       | I-02001-0647 |
| ARFREF          | 12/29/08         | DOE/LX/07-<br>0185&D1       | 2009 SITE MANAGEMENT PLAN FOR THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH KENTUCKY (DOE/LX/07-0185&D1)   | KDEP                  | DOE-PPPO       | No                       | I-02001-0646 |
| ARFREF          | 01/08/09         | PPPO-02-254-09              | NOTIFICATION OF SCHEDULE EXTENSION FOR SUBMITTAL OF THE D2<br>SITE MANAGEMENT PLAN FISCAL YEAR 2009   | DOE-PPPO              | USEPA-IV       | No                       | I-02001-0642 |

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|-----------------|------------------|--------------------------------------|--|-----------------------|----------------|--------------------------|--------------|
| ARFREF          | 01/14/09         | PPPO-02-231-09                       | RESPONSE TO U.S. ENVIRONMENTAL PROTECTION AGENCY<br>REGARDING EXTENSION REQUEST FOR THE D1 SITE MANAGEMENT<br>PLAN-FISCAL YEAR 2009  | DOE-PPPO              | USEPA-IV       | No                       | I-02001-0645 |
| ARFREF          | 02/12/09         | PPPO-02-275-09                       | TRANSMITTAL OF THE SITE MANAGEMENT PLAN-FISCAL YEAR 2009, PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY   | DOE-PPPO              | USEPA-IV       | No                       | I-02001-0650 |
| ARFREF          | 03/06/09         | DOE/LX/07-<br>0185&D2                | RE: CONDITIONAL APPROVAL FOR THE FY 2009 SITE MANAGEMENT PLAN FOR THE PADUCAH GASEOUS DIFFUSION PLANT (PGDP) (DOE/LX/07-0185&D2)   | USEPA-IV              | DOE-PPPO       | No                       | I-02001-0649 |
| ARFSOU          | 07/03/08         | PRS/I-0865                           | [KDEP GRANTS] EXTENSION REQUEST FOR SUBMITTAL OF THE D2 ENGINEERING EVALUATION/COST ANALYSIS FOR SOILS OPERABLE UNIT INACTIVE FACILITIES AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-0016&D2)            | KDEP                  | DOE-PPPO       | No                       | I-04912-0024 |
| ARFSOU          | 10/14/08         | PPPO-02-460-08                       | TRANSMITTAL OF THE ACTION MEMORANDUM FOR THE SOILS OPERABLE UNIT INACTIVE FACILITIES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0121&D1)   | DOE-PPPO              | USEPA-IV       | No                       | I-04913-0006 |
| ARFSOU          | 11/04/08         | PRS/I-0991                           | RESPONSE TO ALLEGED DUMPING LOCATIONS AROUND THE PADUCAH GASEOUS DIFFUSION PLANT, MCCRACKEN COUNTY, KENTUCKY, KY8-890-008-982, AGENCY INTEREST NO. 3059  | DOE-PPPO              | USEPA-IV       | No                       | I-04905-0015 |
| ARFSOU          | 11/26/08         | PRS/I-1015,<br>DOE/LX/07-<br>0060&D2 | TRANSMITTAL OF THE REPLACEMENT PAGE FOR SECTION 3 OF THE SAMPLING AND ANALYSIS PLAN FOR RUBBLE AREAS AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0060&D2)                             | DOE-PPPO              | USEPA-IV, KDEP | No                       | I-04909-0075 |
| ARFSOU          | 12/08/08         | DOE/LX/07-<br>0108&D2                | [KDEP APPROVES] APPROVAL OF THE D2 SITE EVALUATION REPORT<br>FOR SOIL PILE 1 AT THE PADUCAH GASEOUS DIFFUSION PLANT,<br>PADUCAH, KENTUCKY (DOE/LX/07-0108&D2)  | KDEP                  | DOE-PPPO       | No                       | I-04907-0018 |
| ARFSOU          | 12/18/08         | PPPO-02-225-09                       | NOTIFICATION OF SCHEDULE EXTENSION FOR THE SUBMITTAL OF THE D2 ACTION MEMORANDUM FOR THE SOILS OPERABLE UNIT INACTIVE FACILITIES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0121&D2) | DOE-PPPO              | USEPA-IV       | No                       | I-04913-0005 |
| ARFSOU          | 01/23/09         | DOE/LX/07-<br>0121&D1                | EXTENSION REQUEST FOR THE ACTION MEMORANDUM FOR THE SOILS OPERABLE UNIT INACTIVE FACILITIES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0121&D1)                                      | USEPA-IV              | DOE-PPPO       | No                       | I-04913-0007 |
| ARFSOU          | 02/20/09         | PPPO-02-314-09                       | EXTENSION REQUEST FOR THE SUBMITTAL OF THE D2 ACTION MEMORANDUM FOR THE SOILS OPERABLE UNIT INACTIVE FACILITIES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0121&D2)                  | DOE-PPPO              | USEPA-IV       | No                       | I-04913-0008 |
| ARFSOU          | 03/17/09         | DOE/LX/07-<br>0121&D2                | CONDITIONAL APPROVAL OF THE D2 ACTION MEMORANDUM FOR THE SOILS OPERABLE UNIT INACTIVE FACILITIES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0121&D2)                                 | USEPA-IV              | DOE-PPPO       | No                       | I-04913-0009 |
| ARFSOU          | 03/27/09         | PPPO-02-381-09                       | PROPOSED MILESTONE MODIFICATION FOR THE REMOVAL ACTION WORK PLAN FOR SOILS OPERABLE UNIT INACTIVE FACILITIES AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY   | DOE-PPPO              | USEPA-IV       | No                       | I-04916-0002 |

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### Paducah Documents Added to the Administrative Record File First Quarter CY2009

| Document Status | Date On<br>Document | Document Id           | Title   | Author<br>Affiliation | To Affiliation | Protected<br>Information | Object Name  |
|-----------------|---------------------|-----------------------|---|-----------------------|----------------|--------------------------|--------------|
| ARFSWOUOSD      | 12/15/08            | DOE/LX/07-<br>0119&D1 | EXTENSION REQUEST FOR THE ACTION MEMORANDUM FOR CONTAMINATED SEDIMENT ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0119&D1)   | USEPA-IV              | DOE-PPPO       | No                       | I-04813-0058 |
| ARFSWOUOSD      | 01/12/09            | DOE/LX/07-<br>0119&D1 | ACTION MEMORANDUM FOR THE CONTAMINATED SEDIMENT ASSOCIATED WITH SURFACE WATER AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0119&D1)   | USEPA-IV              | DOE-PPPO       | No                       | I-04813-0059 |
| ARFSWOUOSD      | 02/20/09            | PPPO-02-313-09        | [DOE APPROVES] EXTENSION REQUEST FOR SUBMITTAL OF THE D2 ACTION MEMORANDUM FOR CONTAMINATED SEDIMENT ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT (ON-SITE) AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0119&D2)    | DOE-PPPO              | USEPA-IV       | No                       | I-04813-0060 |
| ARFSWOUOSD      | 02/24/09            | DOE/LX/07-<br>0119&D1 | RE: APPROVAL OF THE EXTENSION REQUEST FOR THE ACTION MEMORANDUM FOR CONTAMINATED SEDIMENT ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT (ON-SITE) (DOE/LX/07-0119&D1)   | KDEP                  | DOE-PPPO       | No                       | I-04813-0061 |
| ARFSWOUOSD      | 02/26/09            | DOE/LX/07-<br>0119&D2 | RE: PROPOSED EXTENSION REQUEST FOR THE SUBMITTAL OF THE D2 ACTION MEMORANDUM FOR CONTAMINATED SEDIMENT ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT (ON-SITE) AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/007-0119&D2) | USEPA-IV              | DOE-PPPO       | No                       | I-04813-0062 |
| ARFSWOUOSD      | 03/02/09            | DOE/LX/07-<br>0119&D2 | TRANSMITTAL OF THE D2 ACTION MEMORANDUM FOR CONTAMINATED SEDIMENT ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT (ON-SITE) AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LS/07-0119&D2)                                       | DOE-PPPO              | USEPA-IV       | No                       | I-04813-0063 |
| ARFSWOUOSD      | 03/09/09            | DOE/LX/07-<br>0119&D2 | [KDEP] APPROVAL OF THE ACTION MEMORANDUM FOR CONTAMINATED SEDIMENT ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT (ON-SITE)  | KDEP                  | DOE-PPPO       | No                       | I-04813-0064 |
| ARFSWOUOSD      | 03/17/09            | DOE/LX/07-<br>0119&D2 | CONDITIONAL APPROVAL OF THE D2 ACTION MEMORANDUM FOR CONTAMINATED SEDIMENT ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT (ON-SITE) AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY (DOE/LX/07-0119&D2)                              | USEPA-IV              | DOE-PPPO       | No                       | I-04813-0065 |
| ARFSWOUOSD      | 03/27/09            | PPPO-02-379-09        | PROPOSED MILESTONE MODIFICATION FOR THE REMOVAL ACTION WORK PLAN FOR CONTAMINATED SEDIMENT ASSOCIATED WITH THE SURFACE WATER OPERABLE UNIT (ON-SITE) AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY                                  | DOE-PPPO              | USEPA-IV       | No                       | I-04816-0164 |
| ARGW1           | 01/06/09            |                       | MEMORANDUM TO ADMINISTRATIVE RECORD FILES-CLARIFICATION OF INDECES TITLES, GROUNDWATER OPERABLE UNIT, NW PLUME PUMP & TREAT, (ARFGW1)NW PLUME HYDRAULIC CONTAINMENT ROD (ARFGW1,GW1-PD) AND NORTHWEST PLUME PUMP AND TREAT CONTAINMENT          | PRS                   | SST            | No                       | I-04600-0364 |

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# Paducah Documents Added to the Post-Decision File First Quarter CY2009

| Document<br>Status | Date On<br>Document | Document Id    | Title  | Author<br>Affiliation | To Affiliation | Protected<br>Information | Object Name  |
|--------------------|---------------------|----------------|--|-----------------------|----------------|--------------------------|--------------|
| 55-PD              | 10/23/08            | PRS/H-1390     | [KDWM APPROVES] APPROVAL OF THE D2 REMOVAL ACTION REPORT FOR THE C-746-A WEST END SMELTER INACTIVE FACILITY AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/07-0122&D2)   | KDEP                  | DOE-PPPO       | No                       | I-05116-0078 |
| 6PHASE-PD          | 07/16/08            | PRS/I-0955     | [KDEP APPROVES] APPROVAL OF THE REMEDIAL DESIGN REPORT, CERTIFIED FOR CONSTRUCTION DESIGN DRAWINGS AND SPECIFICATIONS PACKAGE, FOR THE GROUNDWATER OPERABLE UNIT FOR THE VOLATILE ORGANIC COMPOUND CONTAMINATION AT THE C-400 CLEANING BLDG AT PGDP  | KDEP                  | DOE-PPPO       | No                       | I-04615-0059 |
| 6PHASE-PD          | 10/17/08            | PPPO-02-679-08 | TRANSMITTAL OF THE CONSTRUCTION QUALITY CONTROL 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/07-0031&D2/R1) | DOE-PPPO              | USEPA-IV       | No                       | I-04615-0056 |
| 6PHASE-PD          | 10/30/08            | PRS/I-0989     | RE: EPA APPROVAL OF THE D2/R1 CONSTRUCTION QUALITY CONTROL PLAN (CQCP) FOR THE INTERIM REMEDIAL ACTION AT THE C-400 CLEANING BUILDING AT THE PADUCAH GASEOUS DIFFUSION PLANT (PGDP)  | USEPA-IV              | DOE-PPPO       | No                       | I-04615-0057 |
| 6PHASE-PD          | 11/17/08            | PPPO-02-148-09 | RESPONSE TO ENVIRONMENTAL PROTECTION AGENCY APPROVAL OF THE REMEDIAL ACTION WORK PLAN FOR THE INTERIM REMEDIAL ACTION AT THE C-400 CLEANING BUILDING AT THE PADUCAH GASEOUS DIFFUSION PLANT (DOE/LX/0004&D2/R1) SEPTEMBER, 2008                      | DOE-PPPO              | USEPA-IV       | No                       | I-04615-0058 |
| 6PHASE-PD          | 12/08/08            | PPPO-02-166-09 | PROPOSED MILESTONE MODIFICATION FOR THE D1 REMEDIAL ACTION COMPLETION REPORT FOR THE C-400 INTERIM REMEDIAL ACTION AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY   | DOE-PPPO              | USEPA-IV       | No                       | I-04618-0003 |
| GW1-PD             | 01/06/09            |                | MEMORANDUM TO ADMINISTRATIVE RECORD FILES-CLARIFICATION OF INDECES TITLES, GROUNDWATER OPERABLE UNIT, NW PLUME PUMP & TREAT, (ARFGW1)NW PLUME HYDRAULIC CONTAINMENT ROD (ARFGW1,GW1-PD) AND NORTHWEST PLUME PUMP AND TREAT CONTAINMENT               | PRS                   | SST            | No                       | I-04600-0364 |

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