# SECTION C – PADUCAH ENVIRONMENTAL REMEDIATION PERFORMANCE WORK STATEMENT – REVISION 0

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## Acronyms

| | |
|---|---|
| ACO | Administrative Consent Order |
| AEA | Atomic Energy Act |
| BGOU | Burial Grounds Operable Unit |
| CAAS | Criticality Accident Alarm System |
| CAB | Citizens Advisory Board |
| CD | Critical Decision |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| CO | Contracting Officer |
| CSA | Cognizant Security Authority |
| CSCS | Contract Security Classification Specification |
| CSOU | Comprehensive Site-Wide Operable Unit |
| D1 | First Draft to Regulators (See Federal Facility Agreement) |
| D2 | Second Draft Responding to Regulatory Comments (See Federal Facility Agreement) |
| D&D | Decontamination and Decommissioning |
| D&DOU | Decontamination and Decommissioning Operable Unit |
| DMSAs | Department of Energy Material Storage Areas |
| DNAPL | Dense Non-Aqueous Phase Liquid |
| DOE | United States Department of Energy |
| DOECAP | Department of Energy Consolidated Audit Program |
| $DUF_6$ | Depleted Uranium Hexafluoride |
| EALs | Emergency Action Levels |
| EE/CA | Engineering Evaluation/Cost Analysis |
| EPA | United States Environmental Protection Agency |
| ERAP | Emergency Readiness Assurance Plan |
| ERH | Electrical Resistance Heating |
| ES&H | Environment, Safety and Health |
| FCC | Federal Communications Commission |
| FFA | Federal Facility Agreement |
| FIMS | Facilities Information Management System |
| FOIA | Freedom of Information Act |
| FS | Feasibility Study |
| FY | Fiscal Year |
| GDP | Gaseous Diffusion Plant |
| GIS | Geographical Information System |
| GWOU | Groundwater Operable Unit |
| HW | Hazardous Waste |
| ISMS | Integrated Safety Management System |
| KRCEE | Kentucky Research Consortium for Energy and Environment |
| LAN | Local Area Network |
| LEED | Leadership in Energy and Environmental Design |

| | |
|---|---|
| LLW | Low-Level Waste |
| LTS | Long-Term Stewardship |
| LUCIP | Land Use Control Implementation Plan |
| µg/kg | Micrograms Per Kilogram |
| µg/l | Micrograms Per Liter |
| MLLW | Mixed Low-Level Waste |
| MTRU | Mixed Transuranic Waste |
| MOA | Memorandum of Agreement |
| NCS | Nuclear Criticality Safety |
| NEPA | National Environmental Policy Act |
| NMC&A | Nuclear Materials Control and Accountability |
| NOV | Notice of Violation |
| NRC | Nuclear Regulatory Commission |
| NSDD | North/South Diversion Ditch |
| OECM | Office of Engineering and Construction Management |
| OPSEC | Operations Security |
| OREIS | Oak Ridge Environmental Information System |
| OSF | other structures and facilities |
| OSHA | Occupational Safety and Health Administration |
| OU | Operable Unit |
| OUO | Official Use Only |
| O&M | Operations and Maintenance |
| PBS | Performance Baseline Summary |
| PC | Personal Computer |
| PCBs | Polychlorinated Biphenyls |
| PEMS | Project Environmental Management System |
| PGDP | Paducah Gaseous Diffusion Plant |
| PIDS | Property Information Database System |
| PNAD | Personal Nuclear Accident Dosimeter |
| PPE | Personal Protective Equipment |
| PPL | Personal Property Letter |
| PPPO | Portsmouth/Paducah Project Office |
| PRA | Probabilistic Risk Analysis |
| PRAP | Proposed Remedial Action Plan |
| PWS | Performance Work Statement |
| QAP | Quality Assurance Plan |
| RACR | Removal Action Completion Report or Remedial Action Completion Report |
| RAR | Removal Action Report or Remedial Action Report |
| RAWP | Removal Action Work Plan or Remedial Action Work Plan |
| RCRA | Resource Conservation and Recovery Act |
| RDR | Remedial Design Report |
| RDSI | Remedial Design Support Investigation |
| RDWP | Remedial Design Work Plan |
| RI | Remedial Investigation |
| RI/FS | Remedial Investigation/Feasibility Study |
| ROD | Record of Decision |

| | |
|---|---|
| S&M | Surveillance and Maintenance |
| SER | Site Evaluation Report |
| SI/RA | Site Investigation/Remedial Action |
| SMP | Site Management Plan |
| SOU | Soils Operable Unit |
| SSCs | Systems, Structures and Components |
| STP | Site Treatment Plan |
| SWMU | Solid Waste Management Unit |
| SWOU | Surface Water Operable Unit |
| $^{99}Tc$ | Technetium-99 |
| TCE | Trichloroethene |
| TEAM | Transformation Energy Action Management |
| TLD | Thermoluminescent Dosimeter |
| TRU | Transuranic |
| TSCA | Toxic Substances Control Act |
| TSDF | Treatment, Storage, and Disposal Facility |
| UCNI | Unclassified Controlled Nuclear Information |
| UDS | Uranium Disposition Services, LLC |
| UE | Uranium Enrichment |
| $UF_4$ | Uranium Tetrafluoride |
| $UF_6$ | Uranium Hexafluoride |
| USEC | United States Enrichment Corporation |
| UST | Underground Storage Tank |
| VOC | Volatile Organic Compounds |
| WAN | Wide Area Network |
| WP | Work Plan |

Note: Other definitions include:

| | |
|---|---|
| $DUF_6$ Contractor | Department of Energy contractor responsible for management and operation of the $DUF_6$ conversion facility at the Paducah site |
| Infrastructure Contractor | Department of Energy contractor responsible for Paducah site infrastructure services. |

# SECTION C – PADUCAH ENVIRONMENTAL REMEDIATION PERFORMANCE WORK STATEMENT (PWS)

## Paducah Environmental Remediation Project

## Introduction

The Paducah Gaseous Diffusion Plant (PGDP or Paducah Site) is located on a Federal reservation in Western Kentucky, approximately 10 miles west of Paducah, Kentucky, and 3.5 miles south of the Ohio River. The plant is sited on 3,556 acres divided as follows:

- 748-acres within a fenced security area;
- Approximately 822 acres of uninhabited buffer zone surrounding the plant area; and
- 1,986 acres licensed to the Kentucky Department of Fish and Wildlife as part of the West Kentucky Wildlife Management Area.

Bordering the Paducah Site to the northeast, between the plant and the Ohio River, is the Tennessee Valley Authority Reservation where the Shawnee Steam Plant is located.

The PGDP is a Government owned uranium enrichment plant that was constructed in the early 1950's and operated by the Department of Energy (DOE) and its predecessor agencies for the purpose of manufacturing enriched uranium for the fabrication of fuel assemblies to support commercial and military nuclear reactors and to support weapons development activities. The PGDP is still in use and is currently leased and operated by the United States Enrichment Corporation (USEC).

The uranium enrichment program utilizing the gaseous diffusion process resulted in various wastes and contaminants, including those regulated under the Resource Conservation and Recovery Act (RCRA), the Toxic Substances Control Act (TSCA), and the Atomic Energy Act (AEA) such as construction debris; sanitary waste; Hazardous Waste (HW); radioactive Low-Level Waste (LLW); Mixed Low-Level Waste (MLLW); Transuranic Waste (TRU); and Mixed TRU (MTRU) Waste. Many of these wastes were stockpiled or disposed on-site, which resulted in the site being placed on the National Priorities List in 1994. The most significant contaminants are Trichloroethene (TCE) and Polychlorinated Biphenyls (PCBs). Approximately 575 Solid Waste Management Units (SWMUs) have been identified and details may be found in the Paducah Federal Facility Agreement Site Management Plan and the RCRA Permit. (See also reference PPPO-02-297-07, Notification of Soil and Rubble Areas at the Paducah Gaseous Diffusion Plant, February 16, 2007.)

The approach to site cleanup is outlined in the Paducah Federal Facility Agreement (FFA), where the cleanup is divided into Operable Units (OUs). These OUs are the Comprehensive Site-Wide OU (CSOU), the Decontamination and Decommissioning OU (D&DOU), the Groundwater OU (GWOU), the Surface Water OU (SWOU), the Soils OU (SOU), and the Burial Grounds OU (BGOU).

**Contract Purpose and Scope**

The primary objectives of this contract are to remediate and disposition specific areas on the site (land sites, groundwater, and surface water), perform facility D&D, and operate the site waste storage facilities to include waste disposition. This contract reflects the application of performance-based contracting approaches and techniques that emphasize results/outcomes and minimize "how to" performance descriptions. The Remediation Contractor, herein referred to as the Contractor, has the responsibility for total performance under this contract, including determining the specific methods for accomplishing the work. However, the Contractor is required to comply with all applicable Federal, State, and local laws and regulations, Executive Orders, DOE Orders (and other types of Directives), Regulatory Permits, Agreements and Orders and Milestones with the regulators (both State and Federal) (See Section J, Attachments J1 and J2). The Contractor shall provide all deliverables to DOE in accordance with Section J, Attachment J4 "Paducah List of Deliverables." These deliverables shall not be separately priced. Failure by the Contractor to perform scope adequately, meet regulatory milestones or provide documents of sufficient quality on the first draft may result in negative Contractor performance rating and further action by the Contracting Officer (CO) as allowed for by Section B and other provisions of this contract.

The following sections describe the scope of work. This includes Groundwater Environmental Actions (C.1.1), Material Disposition (C.1.2), Facilities Disposition (C.1.3), Soils Operable Unit (C.1.4) , Surface Water Remediation (C.1.5), Waste Disposition Options Project (C.1.6), Polychlorinated Biphenyl Activities (C.1.7), Environmental Monitoring and Reporting (C.1.8), Burial Ground Operable Unit (C.1.9), and Project Support (C.1.10). The Contractor is responsible for implementation of the overall OU strategy in accordance with the Site Management Plan (SMP) and the Paducah FFA. Regulatory milestone dates reflect agreement among DOE and the regulators [i.e., the Kentucky Environmental and Public Protection Cabinet (Kentucky) and the United States Environmental Protection Agency Region 4 (EPA)]. While the Contractor has the flexibility to implement a project structure and to sequence the work to optimize the project schedule to achieve safe, cost-effective work/cleanup of the site, the Contractor shall meet all regulatory milestone dates. The Contractor is expected to seek ways to reduce cost through negotiated agreements with the regulators and innovative approaches to site clean-up and waste minimization. No negotiation or agreement shall be made without DOE notification and consent. There may be additional Paducah remediation work identified during performance of this contract which may be considered to be within the scope of this contract as determined by the Contracting Officer.

**General End State Requirements**

The Contractor shall perform all activities, including all PWS requirements, to:

a) 1) Complete all CERCLA documents to support a Dissolved Phase Plumes remedy including the submittal of a Record of Decision (ROD) for the site's three Dissolved Phase Plumes. Includes all applicable field work and analytical work necessary to support CERCLA documents. 2) Investigate potential sources of groundwater contamination and identify mitigation strategies consistent with CERCLA decisions, building upon existing documentation and data collected. 3) Remediate the Southwest Plume sources in accordance with the ROD. (Section C.1.1)

b) Disposition all waste before contract completion, including all TRU/MTRU waste and waste generated prior to 90 days before contract completion. (Section C.1.2)

c) Properly service all facilities. All facilities identified for D&D within this contract shall be demolished or decommissioned; the remaining identified facilities shall undergo surveillance and maintenance. (Section C.1.3)

d) Remediate all identified soil areas. Initiate the Remedial Action Completion Reports. All decision and design documents shall be completed and approved. (Section C.1.4)

e) Complete the Removal Action and obtain approval of a Removal Action Completion Report for effluent ditches and storm sewers (on-site). Submit a ROD for the effluent ditches and site creeks (off-site). (Section C.1.5)

f) Complete and implement a ROD for the Waste Disposition Options project determining whether waste resulting from remediation and D&D activities will be disposed on-site, off-site, or some combination thereof. (Section C.1.6)

g) Complete and implement a ROD for the Burial Grounds Operable Unit project to support remediation activities and closeout of all required documentation. (Section C.1.9)

**Contractor Performance and Key Requirements**

The Contractor shall furnish all personnel, facilities, equipment, material, services and supplies (except as set forth in this contract to be furnished by the Government), and otherwise do all things necessary to accomplish work in a safe, integrated, effective and efficient manner. The Contractor shall operate and perform S&M activities for the facilities, buildings, trailers, and other structures and facilities (OSF) as assigned in the Facilities Information Management System (FIMS) and Section J, Attachment J8. The Contractor shall be responsible for planning, integrating, managing and executing the programs, projects, operations and other activities as described in this PWS. The Contractor shall develop, implement and maintain a comprehensive, resource-loaded baseline as required in Section H and DOE Order 413.3A. The Contractor shall update and maintain the existing Probabilistic Risk Analysis (PRA) baseline. The Contractor

shall be prepared for and support any External Independent Review by the DOE Office of Engineering and Construction Management (OECM) of the lifecycle baseline and all supporting documents.

The Contractor shall provide general operations oversight and project management functions to enable the safe operation of the site. In addition, the Contractor is responsible for the operations, environment, safety, health and quality assurance within its own organization and its subcontractors. The Contractor shall provide site health and safety oversight for remediation activities and for other activities in support of the DOE mission on DOE-owned property (e.g., Kentucky Research Consortium for Energy and Environment (KRCEE) activities). Other DOE contractors will provide health and safety oversight for their activities.

The Contractor shall ensure that its technical approach and execution of work is compliant with the applicable statutory and regulatory requirements and shall annually certify to DOE its compliance with environmental requirements. The Contractor shall be responsible for all work necessary to obtain regulatory acceptance including legal/regulatory reviews and comment resolution. The Contractor shall recognize and work within the constraints imposed by the contracts and other regulatory agreements between DOE and other site contractors, Kentucky, and the EPA. Regulatory documents include, but are not limited to, all applicable laws, regulations, permits, plans, orders, and agreements. For performance of work under this contract, the Contractor shall integrate all activities with ongoing USEC operations and other DOE contractors in areas of joint interface, such as in coordination of utility lock outs or establishment of work exclusion areas, and shall support DOE with respect to the Lease Agreement between DOE and USEC. The Contractor shall comply with, and provide DOE with services necessary for its compliance with, all applicable federal, state, and local requirements and agreements respecting the protection and preservation of cultural, historic, or archeological resources.

The Contractor shall comply with all site permits, all State and Federal requirements, and all compliance documents contained in Section J, Attachment J1 (List A). The FFA milestones may be modified only by agreement among DOE and the regulators. The Contractor shall comply with all regulatory documents whether they are included in the contract, including any amendments to those listed. Additionally, the Paducah Site Risk Methods Document is used to perform baseline risk assessments and screening.

The Contractor shall use commercial modeling techniques, such as 4D Geographical Information System (GIS) that incorporates a time factor along with the three spatial dimensions and decision consequence modeling, to assess contamination in performing general investigatory activities and developing, analyzing, and selecting alternatives for activities such as the surface water remediation, groundwater environmental actions, and BGOU under this contract. For all projects the Contractor shall maximize use of recycling excess materials and equipment to reduce project costs. The Contractor shall support DOE's reindustrialization and asset utilization activities at the site.

The applicable contract milestones, dates and reference documents for the PWS are provided within each section and/or Section J, Attachments J1, J2 and J4. The Contractor shall comply with all contract milestone dates and all regulatory milestone dates. Regulatory milestone dates can be found in documents such as FFA SMP, Agreed Orders, Uranium Enrichment (UE) TCSA, and FFCA (see Section J, Attachments J1, J2, and J4). Deliverables without specific dates identified shall be established by the Contractor during baseline development and throughout the contract term as appropriate for approval by DOE. The Contractor shall comply with all milestone dates, once approved. Changes to regulatory milestones do not alleviate Contractor responsibility to meet contractual or baseline milestone dates without specific approval by DOE.

**Reference Documents***

*Table is not comprehensive of all regulatory documents.

| General Project Reference Documents | |
|---|---|
| **Document Number** | **Title** |
| DOE/OR/07-1707 | PGDP Federal Facility Agreement |
| DOE/OR/07-2099&D2R5 | Community Relations Plan, April 2007 |
| DOE/OR/07-1595&D2 | Data and Documents Management and Quality Assurance Plan for Paducah Environmental Management and Enrichment Facilities, September 1998 |
| DOE/OR/07-1506/V1&D2 | Methods for Conducting Risk Assessments and Risk Evaluations at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Volume 1. Human Health and Volume 2. Ecological, December 2001 |
| DOE/LX/07-0009&D2 | Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision-FY 2007, October 2007 |
| DOE/LX/07-0105&D2 | Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision-FY 2008, June 2008 |
| No document number (Previously issued as POEF-090-95-050 GDP Lease) | Lease Agreement Between The U.S. Department of Energy And The United States Enrichment Corporation, July 1, 1993 |

### C.1.1 Groundwater Environmental Actions

TCE was discovered in residential wells north of the Paducah Site in 1988. DOE, the EPA and Kentucky entered into an Administrative Consent Order (ACO) under Sections 104 and 106 of CERCLA that requires: 1) monitoring residential wells potentially affected by contamination; 2) providing alternative drinking water to residents with contaminated wells as specified by the DOE Action Memorandum for the Water Policy

at the Paducah Gaseous Diffusion Plant (DOE/OR/06-1201&D2); and 3) investigation of the nature and extent of off-site contamination.

The ACO site investigation delineated two off-site groundwater contamination plumes, referred to as the Northwest and Northeast Plumes, and identified several potential on and off-site source areas requiring additional investigation and action. An additional on-site plume has been found to the southwest. In addition, a series of Remedial Investigation/Feasibility Studies (RI/FS) were conducted under the FFA, including the evaluation of all potential major contaminant sources impacting groundwater and surface water. The project continues to evaluate on-going potential sources of contamination. In accordance with these investigations, DOE implemented interim actions that focused on reducing potential risks associated with off-site contamination.

The three primary areas associated with the groundwater remediation initial response project are: C-400 Source Remediation (C.1.1.1); Southwest Plume Sources Remediation (C.1.1.2); and Dissolved Phase Plumes Remediation (C.1.1.3).

### C.1.1.1 C-400 Source Remediation

This work scope shall be considered complete following the operation, dismantlement, plugging and abandonment of the selected removal system, submittal of a Remedial Action Completion Report (RACR) that is of sufficient quality such that DOE and regulators can approve it without further modification or correction, and implementation of post-remedial Operations and Maintenance (O&M) monitoring. Additional fieldwork may be necessary to measure system performance and demonstrate compliance with the ROD, and preparation, completion, and submittal of subsequent regulatory documents, prior to system shut down.

#### General Information

The C-400 Cleaning Building has been found to be a major source of TCE in the Northwest and Northeast Plumes. TCE and other related Volatile Organic Compounds (VOC) have been found in the vadose zone from the surface down to the water table. Concentrations of TCE up to 11,055,000 µg/kg in the soil have been found to date. Concentrations of TCE in groundwater in the C-400 area are as high as 1,400,000 ppb. Significant quantities of TCE have been released to the environment.

An interim Record of Decision selecting Electrical Resistance Heating (ERH) was signed in August 2005. Additionally, a Remedial Design Support Investigation (RDSI) was completed in August 2006 further defining the location of TCE Dense Non-Aqueous Phase Liquid (DNAPL) source material near C-400. Design and construction of the ERH system is expected to be completed in early calendar year 2009. Operation of the ERH system is expected to begin in calendar year 2009. Additional remedial actions may be necessary to complete removal of TCE sources. This may include utilization of other technologies and the development and submittal of additional CERCLA documents.

**Work to be Performed**

The Contractor shall perform all activities to:

a) Complete operations and maintain, dismantle, and remove, the selected source term removal system in accordance with the Record of Decision and all subsequent remedial action design documents. This may include additional field work, analysis, and related documentation to demonstrate compliance with the ROD prior to system shut down. If necessary, prepare, complete, and submit CERCLA documents and implement subsequent Remedial Actions to complete source removal.
b) Restore the construction area to pre-construction conditions including removal of all aboveground equipment/systems in the Six-Phase treatment area. The Six-Phase treatment area boundaries are documented within DOE/LX/07-0005&D2.
c) Complete disposal of all generated wastes, contaminants and materials excavated or generated during this project and all site restoration and demobilization activities.
d) Monitor and report on the remedy in compliance with CERCLA.
e) Prepare, complete, and submit a Remedial Action Completion Report that is sufficient in quality such that DOE and regulators can approve it without further modification or correction. Actively assist in obtaining regulatory approval.
f) Implement post-remedial O&M monitoring of the C-400 TCE source to determine the effectiveness of the three Dissolved Phase Plumes remediation and the C-400 source remediation.

**Milestones/Schedule/Reference Documents***

*Milestone tables are not comprehensive of all regulatory documents.

| Table C.1.1.1(a) C-400 Source Remediation Milestones/Schedule | |
|---|---|
| **Milestone** | **Date** |
| D1 Remedial Action Completion Report | 7/30/10 |
| Post-remedial O&M Monitoring | As established in the Contractor's baseline and approved by DOE. Dates must be within the period of performance of this contract |
| The first draft (D1) of a report or work plan that is transmitted to EPA and Kentucky for review and comment under Section XX (Review/Comment on Draft/Primary Documents) of the Paducah FFA is referred to as a D1 document. | |

| Table C.1.1.1(b) C-400 Source Remediation Reference Documents | |
|---|---|
| **Document Number** | **Title** |
| DOE/OR/06-1201&D2 | Action Memorandum for the Water Policy at the Paducah Gaseous Diffusion Plant Paducah, Kentucky, June 1994 |
| DOE/OR/06-1143&D4 | Record of Decision for Interim Remedial Action of the Northwest Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, July 1993 |

| | |
|---|---|
| DOE/OR/07-1727&D2 | Remedial Investigation Report for Waste Area Grouping 6 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, May 1999 |
| DOE/OR/07-1857&D2 | Feasibility Study for the Groundwater Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, August 2001 |
| DOE/OR/07-2113&D2 | Final Report Six-Phase Heating Treatability Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, March 2004 |
| DOE/OR/07-2150&D2/R2 | Record of Decision for Interim Remedial Action for the Groundwater Operable Unit for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, July 2005 |
| DOE/OR/07-2211&D2 | Remedial Design Support Investigation Characterization Plan for Interim Remedial Action for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, December 2005 |
| DOE/OR/07-2214&D2 | Remedial Design 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, December 2005 |
| DOE/LX/07-0004&D2/R1 | Remedial Action Work Plan for the Interim Remedial Action Design Report, Certified for Construction, Drawings and Technical for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant Paducah, Kentucky, September 2008 |
| DOE/LX/07-0031&D2/R1 | 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, October 2008 |
| DOE/LX/07-0005&D2/R1 | Remedial Design Report, Certified for Construction Drawings and Specifications Package, for the Groundwater Operable Unit for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant Paducah, Kentucky, July 2008 |
| PPPO-02-392-08, dated March 24, 2008 | Resolution of the Environmental Protection Agency Letter of Non-concurrence for the Site Investigation Report for the Southwest Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, (DOE/OR/07-2180&D2) and Notice of Informal Dispute, dated November 30, 2007 |

| | |
|---|---|
| DOE/OR/07-2151&D2 | Land Use Control Implementation Plan: Interim Remedial Action for the Groundwater Operable Unit for the Volatile Organic Compound Contamination at the C-400 Cleaning Building at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, September 2006 |

### C.1.1.2 Southwest Plume Sources Remediation

This work scope shall be considered complete following the operation, dismantlement, site restoration of the selected remedial system, submittal of a Remedial Action Completion Report that is of sufficient quality such that DOE and the regulators without further modification or correction can approve it, and implementation of post-remedial monitoring. Additional fieldwork may be necessary to measure system performance and demonstrate compliance with the ROD, and subsequent preparation, completion, and submittal of regulatory documents, prior to system shut down.

**General Information**

C-720 Area, Oil Landfarm (SWMU 1), groundwater releases located near the C-747/C-748-B burial grounds (SWMU 4), and the storm sewer system (SWMU 102) leading from the C-400 building to Outfall Ditch 008 (SWMU 63) have been identified as potential contributors to the Southwest Plume. The C-747/C-748-B burial grounds will be addressed within the burial ground operable unit.

**Work to be Performed**

The Contractor shall perform all activities to:

a) Complete the ongoing Southwest Plume Sources Remediation, including investigation of other potential sources of groundwater contamination, preparation of all CERCLA documents for remedy identification and implementation, implementation of the remedy (including installation and operation of any selected treatment systems) to cleanup the TCE and other related VOC source(s) of the Southwest Plume. Includes all applicable field work and analytical work necessary to support CERCLA documents. Prepare all CERCLA documents, including a ROD and subsequent CERCLA documents that are sufficient in quality such that DOE and regulators can approve them without further modification or correction. Actively assist in obtaining regulatory approval.
b) Design, construct, operate, maintain, dismantle, and remove, the selected source term removal system in accordance with the ROD and all future remedial action design documents. This may include additional field work, analysis, and related documentation to demonstrate compliance with the ROD prior to system shut down.
c) Restore the construction area to pre-construction conditions.

d) Complete disposal of all generated wastes, contaminants and materials excavated or generated during this project and all site restoration and demobilization activities.
e) Monitor and report on the remedy in compliance with CERCLA.
f) Prepare, complete, and submit a Remedial Action Completion Report of sufficient quality such that DOE and regulators can approve it without further modification or correction. Actively assist in obtaining regulatory approval.

**Milestones/Schedule/Reference Documents***
*Milestone tables are not comprehensive of all regulatory documents.

| Table C.1.1.2(a) Southwest Plume Sources Remediation Milestones/Schedule | |
|---|---|
| **Milestone** | **Date** |
| Submittal of D1 ROD | As specified in the latest approved version of the FFA SMP |
| Submittal of D1 Remedial Design Work Plan (RDWP) | As established in the Contractor's baseline and approved by DOE. Dates must be within the period of performance of this contract and as specified in the latest approved version of the FFA SMP |
| Submittal of D1 Land Use Control Implementation Plan (LUCIP) | As established in the Contractor's baseline and approved by DOE. Dates must be within the period of performance of this contract and as specified in the latest approved version of the FFA SMP |
| Submittal of D1 (90%) Remedial Design Report (RDR) | As established in the Contractor's baseline and approved by DOE. Dates must be within the period of performance of this contract and as specified in the latest approved version of the FFA SMP |
| Submittal of D1 Remedial Action Work Plan (RAWP) | As established in the Contractor's baseline and approved by DOE. Dates must be within the period of performance of this contract and as specified in the latest approved version of the FFA SMP |
| Submittal of D1 Remedial Action Completion Report | 9/30/14 |

| Table C.1.1.2(b) Southwest Plume Sources Remediation Reference Documents | |
|---|---|
| **Document Number** | **Title** |
| KY/ER-4 | Results of the Site Investigation Phase I, at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, CH2M HILL, Southeast, Inc., Oak Ridge, TN, March 1991 |

| Table C.1.1.2(b) Southwest Plume Sources Remediation Reference Documents | |
|---|---|
| **Document Number** | **Title** |
| KY/SUB/13B-97777CP-03/1991/1 | Results of the Site Investigation, Phase II, at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, April 1992 |
| DOE/OR/07-1737&D0 | Final Remedial Action Report for Waste Area Grouping (WAG) 23 and Solid Waste Management Unit 1 of WAG 27 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, June 1998 |
| DOE/OR/07-1777&D2 | Remedial Investigation Report for Waste Area Grouping 27 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, June 1999 |
| DOE/OR-07-1727&D2 | Remedial Investigation Report for Waste Area Grouping 6 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, May 1999 |
| DOE/OR/07-2180&D2/R1 | Redlined Site Investigation Report for the Southwest Groundwater Plume at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, June 2007 |

### C.1.1.3 Dissolved Phase Plumes Remediation

This work scope shall be considered complete following submittal of a Biodegradation Studies Evaluation Report and all CERCLA documents through the ROD, and, if required by the CERCLA documents, continued operation of the pump-and-treat facilities. The Dissolved Phase Plumes remediation scope includes, but is not limited to, evaluating through the CERCLA process 1) actions necessary to prevent migration of groundwater contamination and 2) actions necessary to remediate groundwater contamination.

**General Information**

The Southwest, Northwest and Northeast Plumes all have TCE and $^{99}$Tc contaminants. Interim remedial actions were developed to mitigate and control the spread of highest concentration portion of the Northwest and Northeast plumes. To implement these two interim remedial actions, two pump-and-treat facilities have been installed. The Northwest Interim Record of Decision was signed in 1993, and the Northeast Interim Record of Decision was signed in 1995.

A preliminary study has been completed on the viability of utilizing natural attenuation as a final remedy. The preliminary study showed that aerobic degradation is occurring in the Regional Gravel Aquifer.

**Work to be Performed**

The Contractor shall perform all activities to:

a) Operate and maintain the two installed groundwater pump-and-treat facilities in accordance with the approved operations and maintenance plans to control the highest concentration portion of the Northeast and Northwest Groundwater Plumes until regulatory approval is attained to cease operations, including preparation, completion and submittal of any applicable regulatory documents.
b) Sample and monitor the three plumes, and conduct analyses to determine the effectiveness of and the need for continued operation of the pump-and-treat system.
c) Prepare, complete, and submit a Biodegradation Studies Evaluation Report that includes recommendations for cost savings that is of sufficient quality such that DOE and regulators can approve it without further modification or correction. Actively assist in obtaining regulator approval.
d) Prepare, complete, and submit all CERCLA documents (e.g., RI/FS Work Plan, RI Report, Feasibility Study, Proposed Remedial Action Plan (PRAP)), including a Record of Decision that incorporates the results of biodegradation studies, that are sufficient in quality such that DOE and regulators can approve the documents without further modification or correction, and actively assist in obtaining regulatory approval. Submittals shall be consistent with the latest approved version of the FFA SMP. Includes all applicable field work and analytical work necessary to support CERCLA documents.

Upon approval by DOE (including regulatory approval), the Contractor shall:

e) Shut down the pump-and-treat systems, dismantle and remove both pump-and-treat facilities. Complete disposal of all generated wastes, contaminants, and materials excavated or generated during this project and all site restoration and demobilization activities.
f) Sample the USEC cooling towers that are used with the pump-and-treat facility for contaminants.
g) Prepare required documentation.
h) Recommend cooling tower cleanup actions.

**Milestones/Schedule/Reference Documents***

*Milestone tables are not comprehensive of all regulatory documents.

| Table C.1.1.3(a) Dissolved Phase Plumes Remediation Milestones/Schedule | |
|---|---|
| | |
| **Milestone** | **Date** |
| Submit Biodegradation Studies Evaluation Report | 9/30/12 |
| Approval of FS that evaluates Natural Attenuation as one of the alternatives | 9/30/13 |
| D1 ROD for the Dissolved Phase Plumes | 9/30/14 |

| Table C.1.1.3(b) Dissolved Phase Plumes Remediation Documents | |
|---|---|
| **Document Number** | **Title** |
| DOE/OR/06-1143&D4 | Record of Decision for Interim Remedial Action of the Northwest Plume, July 1993 |
| DOE/OR/06-1356&D2 | Record of Decision for Interim Remedial Action of the Northeast Plume, June 1995 |
| DOE/OR/07-1253&D4 | Operation and Maintenance Plan for the Northwest Plume Groundwater System Interim Remedial Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, January 1998 |
| DOE/OR/07-1535&D3 | Operation and Maintenance Plan for the Northeast Plume Containment System Interim Remedial Action at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, January 1998 |

### C.1.2 Material Disposition

The primary area associated with Materials Disposition is waste disposition and waste facility operations and maintenance. This work scope shall be considered complete upon successful execution of the work to be performed that is identified below and disposition of waste identified in Tables C.1.2(a) and C.1.2(b) below. Waste is considered disposed of when it has been shipped to, and accepted for final disposition at, a properly licensed and permitted disposal site. The Contractor shall avoid generating waste with no pathway for disposal. The contractor shall assist DOE in evaluating disposal site alternatives (e.g., cost/benefit analyses, NEPA documentation). Department of Energy Material Storage Areas (DMSAs) are to be periodically inspected to ensure no material is inadvertently stored in them and access to the DMSAs by non-contractor personnel is to be controlled.

**General Information**

A large quantity of waste and other nuclear materials has been generated and stored at the Paducah Site over its lifetime. This waste includes, but is not limited to, waste such as TSCA, MLLW, LLW, TRU, and MTRU generated by the previous contractors. The Contractor shall take all reasonable actions to minimize waste generation and to preclude the generation of TRU and MTRU wastes. The Contractor shall obtain DOE approval prior to generation of TRU or MTRU waste. The Contractor must also address newly generated waste such as runoff from waste facilities, LLW, TSCA, MLLW, and other waste received from USEC.

Building C-746-Q is a Hazard Category 2 Nuclear Facility in accordance with 10 CFR 830 for potential criticality concerns, and the other waste management facilities are radiological or standard industrial facilities.

There is approximately 9,700 tons of volumetrically contaminated classified nickel stored on the C-746-H4 pad. A small sub-population (~50 tons) also contains asbestos that could not be abated.

The Paducah Site has one 60-acre RCRA Subtitle D landfill (approximately 22 acres are permitted for disposal) that is currently operational and is designated as the C-746-U landfill. The landfill waste acceptance criteria prohibits the disposal of classified, hazardous, or LLW. However, waste with residual radioactive material within authorized limits may be disposed in the C-746-U landfill. The location of the landfill is outside the security fence. Five of 23 cells within the C-746-U landfill are currently active. The landfill has a capacity to accept an estimated 1.96 million cubic yards of waste, and currently contains an estimated 300,000 cubic yards.

**Work to be Performed**

The Contractor shall perform all activities to:

a) Store, characterize, process, package, and ship all of the waste identified in Tables C.1.2(a) and C.1.2(b) below.
b) Store, characterize, process, package, and ship TRU/MTRU waste. The waste shall be disposed as MLLW/LLW by 9/30/11 if processed and packaged waste is less than 100 nCi/gram transuranics, otherwise if it remains as TRU/MTRU it shall be disposed at the Waste Isolation Pilot Plant by the end of the contract period of performance. TRU/MTRU waste disposition and shipping schedules shall be coordinated with the Carlsbad Field Office and the Advanced Mixed Waste Treatment Facility in Idaho.
c) Develop strategies, including options for the sale of 9,700 tons of classified nickel and other recyclable metals and materials stored at Paducah. Tasks may include, but are not limited to:
    1. Assist DOE in completing the evaluation of disposition options under NEPA;
    2. Once authorized, implement the approved option for sale of classified nickel and other recyclable metals and materials; and
    3. If sale is selected, assist DOE in completing the sale and disposition of the classified nickel and other recyclable metals and materials. As allowed by applicable law, any proceeds generated from the sale of the classified nickel and other recyclable metals and materials will be utilized as directed by DOE to off-set and/or accelerate remediation of the Paducah Site.
d) Comply with all container certificate requirements and other policy requirements for off-site shipments.
e) Disposition all of the waste identified by the dates set forth in Table C.1.2(c) (milestone/schedule) below and in accordance with the latest Site Treatment Plan as applicable.
f) Store, characterize, process, package, and ship all of the newly generated waste (generated prior to 90 days before this contract completion) and other nuclear materials to an approved storage, treatment, or disposal site. This includes final

characterization, packaging, labeling, and final disposition of all acceptable waste (e.g. not sanitary waste) from the Infrastructure Contractor.

g) Operate and maintain the waste storage facilities identified in Exhibit C.1.2.
h) Operate and maintain the three landfills (C-746-U, C-746-S, and C-746-T) in accordance with Kentucky regulations, DOE requirements (e.g., authorized limits), closure and post-closure requirements, and the operating permit, to include but not limited to, the following:
    1. Accept waste (including waste from the Infrastructure Contractor) that meets the requirements of the permit.
    2. Operate and maintain the leachate collection systems at C-746-U and C-746-S. Collect, characterize, transport, treat as necessary, and discharge an estimated 405,000 gallons of leachate from the C-746-U (365,000 gallons) and C-746-S (40,000 gallons) landfills annually at an approved wastewater treatment facility. (NOTE: When phases 4 and 5 are attached to the leachate collection system in calendar year 2009, an average rainfall year will produce approximately an additional 120,000 gallons of leachate.) C-746-U leachate is collected via underground pipes and pumped into leachate storage tanks. Leachate from C-746-S is collected in a sump and transferred into tanker trucks where it can be transferred to the leachate storage tanks. Leachate is treated either in the C-746-U leachate treatment system or transferred to USEC via tanker trucks for treatment at C-615 when the C-746-U treatment system is unavailable or leachate treatment demands exceeds the C-746-U treatment system capacity such as during maintenance or discharges into outfall 19 from the sediment basin when the treatment system is not allowed to simultaneously discharge into the outfall.
    3. Be named as the operator on the permit for the C-746-U, C-746-S and C-746-T landfills, the RCRA permit, and the KPDES permit. If this work is subcontracted out, the Contractor will remain named as the operator. Additionally, the Contractor shall be designated as the waste generator and responsible for making waste determinations at the site. The Contractor shall enter into a RCRA co-generator agreement with DOE consistent with the existing agreement at the Paducah Site.
    4. Operate the C-746-U on-site leachate treatment facility.
i) Submit annual revisions to Part A of the RCRA permit to include identification of additional areas identified as storing hazardous waste.
j) Submit annual revisions of the SWMU Assessment Reports for areas where hazardous waste has been discovered.
k) Submit annual revisions of the Site Treatment Plan in accordance with the September 10, 1997, Agreed Order.
l) Disposition, process and/or package waste and nuclear materials to meet receiver site acceptance criteria. The Contractor shall sign all manifests/shipping documents and RCRA land disposal restriction notifications.
m) The Contractor shall continue any waste determination efforts regarding De-Listing Waste and as described within the 2003 Agreed Order Site-Wide Contained-In determinations.

n) Perform regulatory activities as identified in the 2003 Agreed Order associated with no further action determinations for SWMUs for DMSAs.
o) Provide support for the turnover of DMSAs to USEC.
p) Complete DMSA Closure Plan activities.
q) Comply with the agreement with the Tennessee Valley Authority Shawnee Fossil Plant for DOE to accept certain $^{99}$Tc contaminated waste associated with the PDGP $^{99}$Tc groundwater plume.
r) Maintain approximately 19 DMSAs still in existence in five facilities at the PGDP. These DMSAs consist almost exclusively of in-place equipment awaiting final D&D and have little to no available floor space.

The following table provides estimated quantities of waste to be dispositioned:

Table C.1.2(a) Waste Disposition and Waste Facility Operations Waste Estimates

| Waste Type | TSCA* Mixed | LLW* | MTRU* | TRU* |
|---|---|---|---|---|
| Quantity | 350 ft3 | 7,100 ft3 | 200 ft3 | 16 ft3 |

NOTE: The quantities identified in this PWS are based upon current approximations; actual quantities may vary.
*Generated by the previous contractor.

The following table provides estimated quantities of newly generated waste to be dispositioned:

Table C.1.2(b) Waste Disposition and Waste Facility Operations Newly Generated Waste Estimates

| Waste Type | Runoff from Waste facilities | LLW | TSCA | MLLW | Other* |
|---|---|---|---|---|---|
| Quantity | 28,500 ft3 per year | 26,000 ft3 per year | 300 ft3 per year | 325 ft3 per year | 350 ft3 per year |

NOTE: The quantities identified in this PWS are based upon current approximations; actual quantities may vary.
* Received from USEC, and may contain asbestos, PCB, chromium, TCE, arsenic, TRU, etc. An estimated 1% of the total USEC waste generated will be characterized as TRU. The Contractor shall be required to dispose of these wastes in accordance with applicable laws and regulations.

**Milestones/Schedule/Reference Documents***
*Milestone tables are not comprehensive of all regulatory documents.

| **Table C.1.2(c) Waste Disposition and Waste Facility Operations Milestones/Schedule** | |
|---|---|
| **Milestone** | **Date** |
| Complete sale of Paducah nickel | 9/30/14 |
| Disposition all waste in accordance with the Site Treatment Plan except as noted below for TRU and MTRU waste | As required by the Site Treatment Plan And as established in the Contractor's baseline and approved by DOE |

| | |
|---|---|
| Disposition all TRU and MTRU Waste | 9/30/11 |
| Site Treatment Plan/Federal Facility Compliance Act Waste Minimization Progress Report | Annually by March 31 |
| Submit revisions to the Part A of the RCRA Hazardous Waste Permit | By 1/15 of each year of this contract |
| Submit revisions to the Part B of the RCRA Hazardous Waste Permit | As required |
| Submit revisions of the DMSA SWMU Assessment Reports to Kentucky | Annually until 1/1/10 |
| Submit revisions of the SWMU Assessment Reports to Kentucky | Annually |
| Complete disposition of all newly generated waste generated up to 90 days prior to this contract completion | Within 1 year of generation and no later than the contract completion date |

**Table C.1.2(d) Waste Disposition and Waste Facility Operations Reference Documents**

| Document Number | Title |
|---|---|
| Commonwealth of Kentucky Permit Number 073-00045, 073-00014, 073-00015 | C-746-U, C-746-S, and C-746-T Landfills Solid Waste Permits |
| Permit Number KY8-890-008-982 | Kentucky Division of Waste Management Hazardous Waste Management Facilities Permit |
| Commonwealth of Kentucky File Numbers DWM-31434-042, DAQ-31740-030 and DOW-26141-042 | Agreed Order between DOE and Commonwealth of Kentucky, filed 10/03/03 |
| UE-TSCA-FFCA | Uranium Enrichment Toxic Substances Control Act Federal Facilities Compliance Agreement , February 1992 |
| Commonwealth of Kentucky File Numbers DOW-28187-045, 28193-039, 28194-039, 28195-039 and 28196-039 | Agreed Order between Commonwealth of Kentucky and DOE for KPDES Permit Number KY00004049, December 2007 |
| Commonwealth of Kentucky File Number DWM-30039-042 | Site Treatment Plan Agreed Order, dated 9/10/97 |
| PRS-WSD-0278 | The Site Treatment Plan Annual Update for the United States Department of Energy Paducah Gaseous Diffusion Plant, Paducah, Kentucky, March 2008 |
| USEC Letter dated May 6, 1998 | DOE Legacy Waste Agreement between DOE and USEC |
| DOE/OR/07-2041&D1 | Risk and Performance Evaluation of the C-746-U Landfill |

| | |
|---|---|
| No document number. Issued by U.S. DOE, Oak Ridge Operations Office, Oak Ridge, TN | Authorized Limit Request for Solid Waste at Landfill C-746-U at the Paducah Gaseous Diffusion Plant, November 2002, revised January 2003 |
| PRS-WSD-0011 | Waste Acceptance Criteria for the Treatment, Storage, and Disposal Facilities at the U.S. Department of Energy Paducah Site, April 2008 |
| No document number (Previously issued as POEF-090-95-050 GDP Lease) | Lease Agreement Between The U.S. Department of Energy And The United States Enrichment Corporation, July 1, 1993 |
| Letter from Tennessee Valley Authority dated March 13, 2006 and signed by DOE May 9, 2006 | The Tennessee Valley Authority Shawnee Fossil Plant – Paducah Gaseous Diffusion Plant Letter of Agreement |
| No document number | RCRA Co-generator Agreement dated April 2007 |

### C.1.3 Facilities Disposition

The three groups of facilities to be dispositioned are: the C-410/420 Complex (C.1.3.1); Inactive Facilities (C.1.3.2); and the C-340 Complex (C.1.3.3); work also includes facility Surveillance and Maintenance (C.1.3.4), and Preparation for Transition to GDP D&D (C.1.3.5).

The Contractor shall perform rodent and pest control at facilities assigned to their responsibility in Section J, Attachment J8. Although the Contractor shall perform Surveillance and Maintenance (S&M) of facilities assigned to their responsibility, the Infrastructure Contractor will collect sanitary waste. The Contractor (remediation) shall accumulate sanitary waste that is generated within D&D facilities at a central location for collection. To accomplish this, the Contractor shall provide and locate a container at each D&D facility that can accommodate a weekly waste collection schedule.

#### C.1.3.1 D&D of the C-410/420 Complex

This work scope shall be considered complete following deactivation, decontamination, demolition and disposition of all material associated with the D&D of the C-410/420 Complex; site restoration; and submittal of a final Removal Action Completion Report.

**General Information**

The C-410/420 Complex consists of a grouping of single-story and multi-story steel and transite facilities with approximately 194,000 square feet of floor space that were constructed in the 1950's. The C-410/420 Complex houses process equipment and various support systems. It was used for converting uranium oxide to uranium hexafluoride through a series of reactions involving gaseous hydrogen, hydrogen fluoride, and $F_2$, along with the production of fluorine to support the gaseous diffusion of

uranium-235. The Complex was shutdown in 1977 and utilized for storage. The Complex is contaminated with uranium oxides, uranium hexafluoride, heavy metals, asbestos, PCBs, refrigerants, hydrogen fluoride, transuranics, and other contaminants.

Uranium contamination (greater than one percent by weight of uranium-235) and traces of transuranics (from reactor returns) and beryllium were discovered in the Complex. The C-410/420 Complex is currently classified as a Hazard Category 2 Nuclear Facility in accordance with 10 CFR 830 for internal inventory and external criticality concerns.

There are no known Nuclear Criticality Safety (NCS) items within the C-410/420 Complex; however, NCS concerns could emerge as D&D progresses. Full personal protective equipment, including respirators is currently required for entry into the facility. A portion of the C-410/420 Complex requires Criticality Accident Alarm System (CAAS) coverage as a result of a nearby USEC fissile material operation. CAAS coverage is provided by a portable CAAS.

**Work to be Performed**

The Contractor shall perform all activities necessary to remove, decontaminate, decommission, demolish and disposition all infrastructure components that contain asbestos or other hazardous materials and perform structural demolition of remaining structures down to the slab for Sectors I through VIII within the C-410/420 Complex. Currently only equipment/facility infrastructure removal is approved in the Removal Action Work Plan for C-410 DOE/OR/07-2012&D2 and the Action Memorandum DOE/OR/07-2002&D1 Rev 1. After demolition, the Contractor shall then restore the site and submit a final Removal Action Completion Report to the regulators and assist in obtaining regulatory approval.

The Contractor shall perform all activities to:

a) Prepare, complete, and submit all required CERCLA documentation (some actions may be done as DOE maintenance actions) for demolition of the facilities identified in Table C.1.3.1(a.), and assist in obtaining regulator approval. Includes all applicable field work and analytical work necessary to support CERCLA documents.
b) Plan and conduct the response action in accordance with the CERCLA process for all structures listed in Table C.1.3.1(a). If selected within the Action Memorandum, then demolish all facilities to slab, if applicable, or at grade components. If selected within the Action Memorandum, sub-grade areas, including but not limited to basements, depressions, sumps, etc., shall be backfilled with an approved material suitable to prevent surface water accumulation and groundwater infiltration. Removal may include, but not be limited to, the facility equipment, personal property/fixtures, utility service components (including components leading up to the inactive facilities not maintained/utilized by USEC), tanks, sumps, asbestos, LLW, and PCB contaminated items. The C-410/420 Complex facilities are identified in Table C.1.3.1(a).

c) Perform all S&M activities associated with the C-410/420 Complex. This will include, but not be limited to, routine inspections, rodent and pest control, and facility repairs necessary to maintain the integrity of the facility.
d) Complete disposal of all wastes excavated or generated during this project, all site restoration, and demobilization activities. Complete and submit a final Removal Action Completion Report that is of sufficient quality such that the DOE and the regulators can approve it without further modification or correction. Actively assist in obtaining regulatory approval.

**Table C.1.3.1(a) C-410/C-420 Complex Facilities**

| Building Number | Title | Approximate Floor Area ($ft^2$) | Description | Comments |
|---|---|---|---|---|
| C-410 | Original Feed Plant & East and West Expansion | 123,000 | Structural steel frame with walls of reinforced concrete, corrugated transite (asbestos), steel sash, tar and slag roofing | Converted $UO_3$ to $UO_2$ then to $UF_4$ |
| C-410-A | Second East Expansion of Feed Plant | 6,000 | Structural steel frame with concrete block walls, corrugated transite (asbestos), steel sash, tar and slag roofing | Converted $UO_3$ to $UO_2$ then to $UF_4$ |
| C-410-C | HF Neutralization Building | 1,088 | Steel-framed with corrugated transite (asbestos) siding | Contains a slurry tank for mixing lime or soda ash |
| C-410-F | HF Storage (North) | 1,222 | Prefabricated metal structure built over an open concrete pit | Contain two HF storage tanks |
| C-410-G | HF Storage (Center) | 1,222 | Prefabricated metal structure built over an open concrete pit | Contain two HF storage tanks |
| C-410-H | HF Storage (South) | 1,222 | Prefabricated metal structure built over an open concrete pit | Contain two HF storage tanks |
| C-410-I | Ash Receiver Site | 2,000 | Structural steel and corrugated transite (asbestos) sides | Used to store ash from the UF4 fluorination process |
| C-410-J | HF Storage (East) | 2,024 | Prefabricated metal structure built over an open concrete pit | Contain three HF storage tanks |
| C-411 | Cell Maintenance Building | 6,262 | Steel framed with concrete blocked exterior walls | Performed maintenance work on F2 generating cells |

| Building Number | Title | Approximate Floor Area ($ft^2$) | Description | Comments |
|---|---|---|---|---|
| C-420 | Green Salt Plant | 51,778 | Four-story, structural steel and corrugated transite (asbestos) siding | Converted UO3 to UF4. A PCB spill occurred in 1967 |

The following table provides estimated quantities of material to be dispositioned:

**Table C.1.3.1(b) C-410/C-420 Complex Facilities Waste Estimates**

| Waste Type | TSCA | Sanitary | MLLW | LLW* |
|---|---|---|---|---|
| Quantity | 71,000 ft3 | 867,000 ft3 | 1500 ft3 | 1,051,000 ft3 |

NOTE: The quantities identified in this PWS are based upon current approximations; actual quantities may vary.
* Asbestos, heavy metals, and TRU waste may likely be generated, estimated to be 1% of the total waste generated. The Contractor shall be required to dispose of these wastes in accordance with applicable laws and regulations.

### Milestones/Schedule/Reference Documents*

*Milestone tables are not comprehensive of all regulatory documents.

| Table C.1.3.1(c) D&D of C-410/420 Complex Milestones | |
|---|---|
| **Milestone** | **Schedule** |
| Complete decontamination and decommissioning of all identified facilities | 9/30/10 |
| Submittal of D1 Removal Action Completion Report | 3/31/11 |

| Table C.1.3.1(d) D&D of C-410/420 Complex Reference Documents | |
|---|---|
| **Document Number** | **Title** |
| DOE/OR/07-2002&D1/R1 | Action Memorandum for the C-410 Infrastructure Removal at the Paducah Paducah Gaseous Diffusion Plant, Paducah, Kentucky, May 2002 |
| DOE/OR/07-1952&D2/R1 | Engineering Evaluation/Cost Analysis for the C-410 Complex Infrastructure at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, December, 2001 |
| DOE/OR/07-2012&D2 | Removal Action Work Plan for the C-410 Complex Infrastructure D&D Project at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, October, 2002 |
| No document number (Previously issued as POEF-090-95-050 GDP Lease) | Lease Agreement Between The U.S. Department of Energy And The United States Enrichment Corporation, July 1, 1993 |

### C.1.3.2 D&D of Inactive Facilities

This work scope shall be considered complete following deactivation, decontamination, demolition and disposition of all material associated with the D&D of C-746-A, C-746-B, C-728, C-615-T01 through T05, C-217, C-219, C-415, C-746-M, and C-720-N,all site restoration, demobilization activities, and submittal of a final Removal Action Completion Report. Additional facilities may be transferred into the inactive facilities work scope.

**General Information**

The facilities have been maintained to a minimal level to ensure integrity of the structure safety envelope. The facilities exist in various states of repair; asbestos, uranium, heavy metals, and PCBs are the hazards of most concern. Facilities have historically been used to store excess items and equipment that must be dispositioned as part of D&D activities. Some facilities may have classified material in them.

**Work to be Performed**

The Contractor shall perform all activities to:

a) Prepare, complete, and submit all required CERCLA documentation (some actions may be done as DOE maintenance actions) for demolition of the facilities and assist in obtaining regulatory approval. Includes all applicable field work and analytical work necessary to support CERCLA documents.
b) Plan and conduct the response action in accordance with the CERCLA process for all structures listed in Table C.1.3.2(a). If selected within the Action Memorandum, then demolish all facilities to slab, if applicable, or at grade components. If selected within the Action Memorandum, sub-grade areas, including but not limited to basements, depressions, sumps, etc., shall be backfilled with an approved material suitable to prevent surface water accumulation and groundwater infiltration. Removal may include, but not be limited to, the facility equipment, personal property/fixtures, utility service components (including components leading up to the inactive facilities not maintained/utilized by USEC), tanks, sumps, asbestos, LLW, and PCB contaminated items.
c) Perform all S&M activities associated with the facilities identified in Table C.1.3.2(a) until their final demolition. This will include, but not be limited to, routine inspections, rodent and pest control, and facility repairs necessary to maintain the integrity of the facility.
d) Complete disposal of all wastes excavated or generated, all site restoration, demobilization activities, submit a final Removal Action Completion Report that is of sufficient quality such that the DOE and regulator can approve it without further modification or correction, and complete RCRA closure of the RCRA storage facilities. Actively assist in obtaining regulatory approval.

**Table C.1.3.2(a) Inactive Facilities**

DOE reserves the right to update this table as facilities are de-leased from USEC.

| Building Number | Title | Approximate Floor Area ($ft^2$) | Description | Comments |
|---|---|---|---|---|
| C-746-A | North Warehouse | 63,100 | Prefabricated metal building | Provided hazardous/flammable storage |
| C-746-B | South Warehouse | 71,100 | Prefabricated metal building | Provided hazardous/flammable storage |
| C-728 | Motor Cleaning Facility | 1,597 | Steel Light Frame | Used for maintenance shops and general motor cleaning |
| C-615-T01 | Storage Trailer | 800 | Steel braced frame building | Used for general storage |
| C-615-T02 | Storage Trailer | 800 | Steel braced frame building | Used for general storage |
| C-615-T03 | Storage Trailer | 800 | Steel braced frame building | Used for general storage |
| C-615-T04 | Storage Trailer | 800 | Steel braced frame building | Used for general storage |
| C-615-T05 | Storage Trailer | 800 | Steel braced frame building | Used for general storage |
| C-217 | Post 43 | 108 | Steel light frame building | Guard house |
| C-219 | Post 38 | 100 | Steel light frame building | Guard house |
| C-415 | Feed Plant Storage | 3,672 | Steel light frame building | Used for tool cribs/dispensing/control |
| C-746-M | Waste Askarel Storage Facility | 560 | Prefabricated metal building | Used for general storage |
| C-720-N | Scale House | 192 | Steel light frame building | Abandoned |

The following table provides estimated quantities of material to be dispositioned:

Table C.1.3.2(b) Inactive Facilities Waste Estimates

| Waste Type | TSCA | Sanitary | MLLW | LLW |
|---|---|---|---|---|
| Quantity | Included in MLLW | 35,000 ft3 | 7,000 ft3 | 748,000 ft3 |

NOTE: The quantities identified in this PWS are based upon current approximations; actual quantities may vary.

**Milestones/Schedule/Reference Documents***

*Milestone tables are not comprehensive of all regulatory documents.

| Table C.1.3.2(c) Inactive Facilities Milestones | |
|---|---|
| **Milestone** | **Schedule** |
| Complete decontamination and decommissioning of all identified inactive facilities | As established in the Contractor's baseline and approved by DOE. |
| Submittal of D1 Removal Action Reports | As established in the Contractor's baseline and approved by DOE. |

| Table C.1.3.2(d) Inactive Facilities Reference Documents | |
|---|---|
| **Document Number** | **Title** |
| No document number (Previously issued as POEF-090-95-050 GDP Lease) | Lease Agreement Between The U.S. Department of Energy And The United States Enrichment Corporation, July 1, 1993 |

### C.1.3.3 D&D of the C-340 Complex

This work scope shall be considered complete following deactivation, decontamination, demolition and disposition of all material associated with the D&D of the C-340 Complex, all site restoration, demobilization activities, and submittal of a final Removal Action Completion Report.

**General Information**

The C-340 Complex was previously used to convert $UF_6$, to $UF_4$, uranium oxides, and uranium metal. It has been shutdown and placed in the DOE D&D program. The complex has been undergoing routine S&M activities awaiting D&D. The C-340 Complex is classified as a radiological facility. The C-340-A, -B, and -C buildings are all physically connected, residing under a single roof. The facilities are metal frame structures, with transite exterior walls and built-up roofs. The C-340-A and –B facilities are single level or single level with operating platforms. The C-340-C includes four different floors. The C-340-D is a prefabricated metal building that was used for the receipt and storage of drums of magnesium for use in C-340 operations. The C-340-D building is connected to the C-340-A, -B, and –C facilities by a sloped conveyer system that was used to transport magnesium from the ground floor warehouse to the third floor

of C-340. The conveyer is enclosed in a protective housing. The C-340-E Emergency Power Building is a prefabricated metal building. This facility houses the emergency propane generator that provided backup electrical power for the criticality alarms when the C-340 complex was in operation.

**Work to be Performed**

The Contractor shall perform all activities to:

a) Prepare, complete, and submit all required CERCLA documentation for demolition of the facilities. Actively assist in obtaining regulatory approval. Includes all applicable field work and analytical work necessary to support CERCLA documents.
b) Plan and conduct the response action in accordance with the CERCLA process for all structures listed in Table C.1.3.3(a). If selected within the Action Memorandum, then demolish all facilities to slab, if applicable, or at grade components. If selected within the Action Memorandum, sub-grade areas, including but not limited to basements, depressions, sumps, etc., shall be backfilled with an approved material suitable to prevent surface water accumulation and groundwater infiltration. Removal may include, but not be limited to, the facility equipment, personal property/fixtures, utility service components (including components leading up to the inactive facilities not maintained/utilized by USEC), tanks, sumps, asbestos, LLW, and PCB contaminated items.
c) Perform all S&M activities associated with the facilities until their final demolition. This will include, but not be limited to, routine inspections, rodent and pest control, and facility repairs necessary to maintain the integrity of the facility.
d) Complete disposal of all wastes excavated or generated during this project, all site restoration, and demobilization activities. Submit a Removal Action Completion Report that is of sufficient quality such that DOE and regulators can approve it without further modification or correction. Actively assist in obtaining regulatory approval.

**Table C.1.3.3(a) C-340 Complex Facilities**

| Building Number | Title | Approximate Floor Area ($ft^2$) | Description | Comments |
|---|---|---|---|---|
| C-340-A | Powder Building | 25,200 | Metal frame structures, with transite exterior walls and built | Used as a nuclear chemical process facility |
| C-340-B | Metals Building | 21,360 | Metal frame structures, with transite exterior walls and built | Used as a nuclear chemical process facility |

| Building Number | Title | Approximate Floor Area ($ft^2$) | Description | Comments |
|---|---|---|---|---|
| C-340-C | Slag Building | 4,200 | Metal frame structures, with transite exterior walls and built | Used as a nuclear chemical process facility |
| C-340-D | Magnesium Storage Building | 3,888 | Prefabricated metal building that includes the sloped conveyor system | Used for nuclear contaminated storage |
| C-340-E | Emergency Power for Critical Alarms | 100 | Prefabricated metal building | Housed propane generator for emergency power backup |

The following table provides estimated quantities of material to be dispositioned:

**Table C.1.3.3(b) C-340 Complex Facilities Waste Estimates**

| Waste Type | TSCA | Sanitary | MLLW | LLW |
|---|---|---|---|---|
| Quantity | Included in MLLW | 9,500 ft3 | 2,500 ft3 | 300,000 ft3 |

NOTE: The quantities identified in this PWS are based upon current approximations; actual quantities may vary.

**Milestones/Schedule/Reference Documents***

*Milestone tables are not comprehensive of all regulatory documents.

| Table C.1.3.3(c) D&D of the C-340 Complex Milestones/Schedule | |
|---|---|
| **Milestone** | **Date** |
| Complete decontamination and decommissioning of all identified facilities | 9/30/13 |
| Submittal of D1 Removal Action Completion Report | 3/31/14 |

| Table C.1.3.3(d) D&D of the C-340 Complex Reference Documents | |
|---|---|
| **Document Number** | **Title** |
| DOE/LX/07-0009&D2 | Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision-FY 2007, October 2007 |
| DOE/LX/07-0105&D2 | Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision, FY 2008, June 2008 |

| Table C.1.3.3(d) D&D of the C-340 Complex Reference Documents | |
|---|---|
| **Document Number** | **Title** |
| No document number (Previously issued as POEF-090-95-050 GDP Lease) | Lease Agreement Between The U.S. Department of Energy And The United States Enrichment Corporation, July 1, 1993 |

### C.1.3.4 Surveillance and Maintenance of DOE Facilities

The Contractor shall perform routine surveillance and maintenance of all DOE-owned facilities assigned to Contractor responsibility in FIMS and Section J, Attachment J8.

**Work to be Performed**

The Contractor shall perform all activities to:

a) Perform all S&M activities associated with these facilities through the end of the contract. This will include tasks as required; for example, routine inspections, corrective maintenance, facility repairs necessary to maintain the integrity of the facility, combustible removal, rodent and pest control, gross vacuuming, maintenance vacuuming, cleanup of spills/leaks, control of loose contamination and airborne particles, and isolation of utilities.
b) Establish and maintain a central trash collection container for weekly sanitary waste trash collection by the Infrastructure Contractor.
c) Maintain temporary bathrooms, i.e., port-a-johns, procured under this contract.
d) Develop and implement a plan to reduce cost while maintaining performance of S&M in DOE-owned facilities assigned to Contractor responsibility in FIMS.

**Milestones/Schedule/Reference Documents***

*Milestone tables are not comprehensive of all regulatory documents.

| Table C.1.3.4(a) Surveillance and Maintenance of DOE Facilities Milestones/Schedule | |
|---|---|
| **Milestone** | **Date** |
| Submittal of Cost Savings Plan | Six (6) months after contract award and annually thereafter. |

| Table C.1.3.4(b) Surveillance and Maintenance Reference Documents | |
|---|---|
| **Document Number** | **Title** |
| DOE/OR/07-1904&D1 | Operation and Maintenance Plan for the Surface Water Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, September 2000 |
| UE-TSCA-FFCA | Uranium Enrichment Toxic Substances Control Act Federal Facilities Compliance Agreement, February 1992 |

### C.1.3.5 Preparation for Transition to GDP D&D

The latest published USEC estimate for gaseous diffusion operations at Paducah is through 2013. DOE expects USEC to provide a two-year notice prior to the turnover of the GDP to DOE; however, individual leased facilities may be turned over during the lease without the two-year notice. This work scope includes support to DOE for the Critical Decision planning, de-leasing, and transfer of facilities from USEC control and Nuclear Regulatory Commission (NRC) and Occupational Safety and Health Administration (OSHA) regulation to DOE administrative control and regulation. The Contractor shall also implement the plans and procedures for the transition of GDP facilities from USEC that DOE approves for turn over to the Contractor.

**Work to be Performed**

The Contractor shall perform all activities to:

a) Provide support to DOE and its contractors in developing project Critical Decision packages and regulatory strategy for D&D of GDP, including final soil, groundwater and surface water remedial actions leading to the CSOU.

The Contractor shall perform all activities to (Option Items):

b) The Infrastructure Contractor has the primary responsibility of coordinating the transition of de-leased facilities with DOE. The Contractor shall support de-leasing of facilities upon receiving approval from DOE, including authorization basis, programmatic, and operational documents and procedures (Option Item 002). These actions may also include helping DOE determine/verify whether lease turnover requirements have been met, including, but not limited to, USEC deactivation of facilities being returned, walk down of facilities being returned, submission of appropriate records, and data.
c) Conduct S&M of de-leased facilities that are turned over to the Contractor (Option Item 003).

**Milestones/Schedule/Reference Documents***

*Milestone tables are not comprehensive of all regulatory documents.

| Table C.1.3.5(a) Preparation for Transition to GDP D&D Milestones/Schedule | |
|---|---|
| **Milestone** | **Date** |
| In conjunction with the Infrastructure Contractor, successfully complete the transition of the DOE leased facilities back to operational control and regulatory oversight. | As defined in the modification exercising the option item |

| Table C.1.3.5(b) Preparation for Transition Reference Documents | |
|---|---|
| **Document Number** | **Title** |

| Table C.1.3.5(b) Preparation for Transition Reference Documents | |
|---|---|
| **Document Number** | **Title** |
| No document number (Previously issued as POEF-090-95-050 GDP Lease) | Lease Agreement between The U.S. Department of Energy And The United States Enrichment Corporation, July 1, 1993 |

### C.1.4 Soils Operable Unit

The three Soils Operable Unit areas are Sitewide Remedial Action (and Removal Action if necessary) (C.1.4.1), Soils Inactive Facilities (C.1.4.2); and Soil Piles/Rubble Areas (C.1.4.3).

#### C.1.4.1 Sitewide Remedial Action (and Removal Action, if necessary)

This work scope shall be considered complete following development and regulatory approval of the RI Report, FS Report, PRAP, ROD, and Remedial Design and the Remedial Action shall be completed by September 2014. Potential removal action will require submittal and regulatory approval of a Removal Action Completion Report by March 2013.

**General Information**

This work scope addresses 79 SWMUs; however as a result of ongoing investigations, additional areas (e.g., SWMUs) may need to be addressed. The work scope includes characterization for all chemicals of potential concern up to a sixteen foot depth, excavation of potentially 18,000 $yd^3$ of PCB contaminated soil posing direct contact risk, and excavation of potentially 75,000 $yd^3$ of soil during remedial actions. This work scope consists of three parts:

a) An RI for 79 SWMUs (perform the RI work and prepare, complete, and submit an RI Report);
b) A potential removal action for hot spots identified during the RI of the 79 SWMUs. This potential removal action would only be implemented to address higher levels of contamination that warranted accelerated cleanup and is consistent with regulator expectations.
c) A PCB evaluation and a limited area radiological survey.

**Work to be Performed**

The Contractor shall perform all activities to:

a) Execute and complete the remedial investigation;
b) Prepare, complete, and submit all CERCLA documents including RI Report, FS Report, PRAP, ROD, and Remedial Design Report that are of sufficient quality such that DOE and regulators can approve them without further modification or correction. Actively assist in obtaining regulatory approval of documents. Includes all applicable field work and analytical work necessary to support CERCLA documents;

c) Complete remedial actions by September 2014 and initiate Remedial Action Reports;
d) Prepare, complete, and submit if necessary, all CERCLA documents including Engineering Evaluation/Cost Analysis (EE/CA), Action Memorandum, Removal Action Work Plan, removal action field work, and Removal Action Completion Report that are of sufficient quality such that DOE and regulators can approve them without further modification or correction;
e) Actively assist in obtaining regulatory approval of documents;
f) Complete disposal of all wastes excavated or generated during this project and all site restoration and demobilization activities. All wastes excavated or generated up to 90 days prior to the end of the contract must be disposed of prior to the end of the contract period of performance.

**Milestones/Schedule/Reference Documents***
*Milestone tables are not comprehensive of all regulatory documents.

| Table C.1.4.1(a) Sitewide Remedial Action (and Removal Action, if necessary) Milestones/Schedule | |
|---|---|
| **Milestone** | **Date** |
| Submit ROD | 2/29/12 |
| Complete D1 Remedial Design Report | 7/31/13 |
| Complete remedial actions | 9/30/14 |

| Table C.1.4.1(b) Sitewide Remedial Action (and Removal Action, if necessary) Reference Documents | |
|---|---|
| **Document Number** | **Title** |
| DOE/LX/07-0027&D1 | Scoping Document for the Soils Operable Unit Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, December 2007 |
| DOE/OR/07-1958&D1/R1 | Engineering Evaluation/Cost Analysis for Site-Wide Sediment Controls at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, February 2002 |
| DOE/LX/07-0001&D2/R1 | Surface Water Operable Unit (On-site) Site Investigation and Baseline Risk Assessment Report at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, February 2008 |

### C.1.4.2 Soils Inactive Facilities

This work scope consists of the C-218 Firing Range (SWMU 181), C-403 Neutralization Tank (SWMU 40), and C-410-B HF Neutralization Lagoon (SWMU 19) and shall be considered complete following disposal of all wastes excavated or generated, all site restoration, demobilization activities, and submittal of the Removal Action Completion

Reports that are of sufficient quality such that DOE and regulators can approve the documents without further modification or correction.

**General Information**

C-218 is an outdoor firing range that was in operation from 1985 to 1992. The facility is located immediately west of the PGDP on DOE property and consists of a U-shaped soil berm approximately 16 ft high. C-218 is contaminated with lead. C-403 is located at the northeast corner of the C-400 building. The tank is approximately 25 $ft^2$ by 26 ft deep, in-ground, and open-topped. It is constructed of concrete and lined with two layers of acid brick. The tank was used for the storage and treatment of acidic, uranium-bearing waste solutions generated during cleaning operations in C-400 until 1957. TCE is the primary contaminant. C-410-B is located north of the C-410 Feed Plant. It is a rectangular, below grade impoundment with a volume of approximately 1938 $ft^3$. It has an earth-clay floor and has sloped sides reinforced with wire and grout. It received effluent from the C-410-C Neutralization Building. Radionuclides are the primary contaminant of concern. The Removal Action for the three facilities, including field activities, will be completed by September 30, 2009.

**Work to be Performed**

The Contractor shall perform all activities to:

a) Prepare, complete, and submit all required CERCLA documentation, including submittal of final Removal Action Completion Reports that are of sufficient quality such that DOE and regulators can approve them without further modification or correction. Includes all applicable field work and analytical work necessary to support CERCLA documents;
b) Actively assist in obtaining regulatory approval of documents;
c) Implement the selected CERCLA response and complete disposal of all wastes excavated or generated during this project and all site restoration and demobilization activities.

**Milestones/Schedule/Reference Documents***

*Milestone tables are not comprehensive of all regulatory documents.

| Table C.1.4.2(a) Soils Inactive Facilities Milestones/Schedule | |
|---|---|
| | |
| **Milestone** | **Date** |
| Submit Removal Action Completion Report(s) | 3/31/10 |

| Table C.1.4.2(b) Soils Inactive Facilities Reference Documents | |
|---|---|
| **Document Number** | **Title** |

| Table C.1.4.2(b) Soils Inactive Facilities Reference Documents | |
|---|---|
| **Document Number** | **Title** |
| DOE/LX/07-0014&D1 | Removal Notification for the Soils Operable Unit Inactive Facilities at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, February 2007 |
| DOE/LX/07-0016&D2 | Engineering Evaluation/Cost Analysis for the Soils Operable Unit Inactive Facilities at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, July 2008 |

### C.1.4.3 Soil Piles/Rubble Areas

This work scope shall be considered complete following completion of field work and waste disposal, as appropriate; submittal and approval of all CERCLA documents including, but not limited to, Action Memorandum, EE/CA, Removal Action Work Plan, and Removal Action Completion Report; and the archive of all accumulated sampling data in Paducah Oak Ridge Environmental Information System (OREIS). OREIS is a database containing sampling information from the site.

**General Information**

This work scope includes planning for development and regulatory approval of CERCLA documents for completion of removal actions. These removal actions, if selected within the Action Memorandum are expected to include excavation of approximately 10,000 $yd^3$ of soil from soil pile areas near Bayou Creek, Little Bayou Creek, the North-South Diversion Ditch, and an un-named tributary; removal and excavation of approximately 250 $yd^3$ of rubble; and appropriate disposition of excavated soil and rubble. Based on the data in the Site Evaluation Reports (SERs) combining this potential removal action with the sitewide soils remedial/removal action (Section C.1.4.1) may be warranted. DOE and regulator approval will be required.

**Work to be Performed**

The Contractor shall perform all activities to:

a) Prepare, complete, and submit all CERCLA documents including Action Memorandum, Removal Action Work Plan, and Removal Action Completion Report that are of sufficient quality such that DOE and regulators can approve them without further modification or correction. Includes all applicable field work and analytical work necessary to support CERCLA documents. Actively assist in obtaining regulatory approval of documents;
b) If selected by the decision document, excavate approximately 10,000 $yd^3$ of soil adjacent to Bayou Creek, Little Bayou Creek, the North-South Diversion Ditch, and an un-named tributary soil pile area;
c) If selected by the decision document, excavate approximately 250 $yd^3$ of rubble;

d) Complete disposal of all wastes excavated or generated during this project and all site restoration and demobilization activities. Restore excavated areas to natural grade and native vegetation.

**Milestones/Schedule/Reference Documents***
*Milestone tables are not comprehensive of all regulatory documents.

| Table C.1.4.3(a) Soil Piles/Rubble Areas Milestones/Schedule | |
|---|---|
| **Milestone** | **Date** |
| Submittal of D1 Removal Action Work Plan | 11/30/09 |
| Submittal of D1 Removal Action Completion Report | 2/28/11 |

| Table C.1.4.3(b) Soil Piles/Rubble Areas Reference Documents | |
|---|---|
| **Document Number** | **Title** |
| PPPO-02-297-07 | Notification of Soil and Rubble Areas at the Paducah Gaseous Diffusion Plant, February 16, 2007 |
| DOE/LX/07-0015&D2/R1 | Sampling And Analysis Plan For Soil Piles at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, August 2007 |
| DOE/LX/07-0015/A1&D2/R1 | Addendum 1-A to the Sampling and Analysis Plan for Soil Piles at the Paducah Gaseous Diffusion Plant Paducah, Kentucky, August 2007 |
| DOE/LX/07-0015/B | Addendum 1-B to the Sampling and Analysis Plan for Soil Piles at the Paducah Gaseous Diffusion Plant Paducah, Kentucky, December 2007 |
| DOE/LX/07-0015/A2 | Addendum 2 to the Sampling and Analysis Plan for Soil Piles at the Paducah Gaseous Diffusion Plant Paducah, Kentucky, December 2007 |
| DOE/LX/07-0060&D2 | Sampling and Analysis Plan for Rubble Areas at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, September 2008 |
| DOE/LX/07-0108&D1 | Site Evaluation Report for Soil Pile 1 at Paducah Gaseous Diffusion Plant, Paducah, Kentucky, May 2008 |

### C.1.5 Surface Water Operable Unit

#### C.1.5.1 Removal Action for Selected Effluent Ditches and Storm Sewers (On-Site)

This work scope shall be considered complete following completion and regulatory approval of the Removal Action Completion Report for selected effluent ditches and storm sewers within the industrial area of the plant up to the KPDES outfalls (i.e., 001, 008, 010, 011, 015) and for the North/South Diversion Ditch (NSDD), Section 3, 4 and 5.

**General Information**

The specified effluent ditches, storm sewers, and Sections 3, 4 and 5 of the NSDD have soil/sediment contamination (e.g., americium, plutonium, thorium, cesium, uranium, neptunium), metals (e.g., mercury, chromium, beryllium, arsenic, lead, manganese, nickel, vanadium, etc.), potential RCRA listed waste, and PCBs. The majority of these effluent ditches and storm sewers are located within the limited area of the plant; however, the KPDES outfalls and Sections 3, 4 and 5 of the NSDD are located outside the limited area of the site. Many of the effluent ditches and storm sewers are currently in use. However, the flow through Sections 3, 4 and 5 of the NSDD has been limited by the installation of piping from the C-400-L, C-616 and Outfall 001 Lift Stations to a new discharge area at the C-616-C inlet control structure. The Site Investigation/Baseline Risk Assessment Report has been approved by the regulators and the EE/CA has been submitted for review. The removal action is expected to focus on hot spot removal within the ditches/storm sewers.

**Work to be Performed**

The Contractor shall perform all activities to:

a) Complete remaining field work. Prepare, complete, and submit a final Removal Action Completion Report that is sufficient in quality such that DOE and regulators can approve it without further modification or correction;
b) Actively assist in obtaining regulatory approval of documents;
c) Implement the selected CERCLA response and complete disposal of all wastes excavated or generated, all site restoration, and demobilization activities.

**Milestones/Schedule/Reference Documents***

*Milestone tables are not comprehensive of all regulatory documents.

| Table C.1.5.1(a) Removal Action for Selected Effluent Ditches and Storm Sewers (On-Site) - Milestones/Schedule | |
|---|---|
| **Milestone** | **Date** |
| Submit D1 Removal Action Completion Report to regulators | 2/28/10 |

| Table C.1.5.1(b) Removal Action for Selected Effluent Ditches and Storm Sewers (On-Site) - Reference Documents | |
|---|---|
| **Document Number** | **Title** |

| | |
|---|---|
| DOE/LX/07-0001&D2/R1 | Surface Water Operable Unit (On-site) Site Investigation and Baseline Risk Assessment Report at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, February 2008. |
| DOE/LX/07-0011&D1 | Removal Notification for the Surface Water Operable Unit (On-Site) at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, January 2007 |
| DOE/LX/07-0012&D2 | Engineering Evaluation/Cost Analysis for Surface Water Operable Unit (On-Site) at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, September 2008 |
| PPPO-02-111-09, dated October 2, 2008 | Replacement Pages for Engineering Evaluation/Cost Analysis for Surface Water Operable Unit (On-Site) at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, (DOE/LX/07-0012&D2), September 2008 |
| DOE/OR/07-1506/V1&D2 | Methods for Conducting Risk Assessments and Risk Evaluations at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Volume 1 Human Health, and Volume 2 Ecological, December 2001 |

### C.1.5.2 Remedial Action for All Effluent Ditches and Site Creeks (Off-Site)

This work scope shall be considered complete following development and regulatory approval of the RI/FS WP, RI Report, FS Report, PRAP, and submittal of the ROD by September 2014.

**General Information**

Discharges from the uranium enrichment process buildings have historically been sent to internal plant ditches, which then drain into the Little Bayou Creek and Bayou Creek. This has resulted in radionuclides (primarily Cesium) and PCBs being introduced into the sediments and surface water at various locations throughout the Paducah Site.

**Work to be Performed**

The Contractor shall perform all activities to:

a) Prepare, complete, and submit all CERCLA documents including the RI/FS WP; complete collection of all sample data as required in the RI work plan, the RI Report, the FS Report, and PRAP that are of sufficient quality such that DOE and regulators can approve them without further modification or correction. Includes all applicable field work and analytical work necessary to support CERCLA documents. Actively assist in obtaining regulatory approval of documents;

b) Develop a D1 ROD by September 2014 for submittal to the regulators;
c) Perform a risk assessment to include a baseline ecological risk assessment focusing on off-site contamination and migration of contaminants from the PGDP in support of the CSOU. The assessment will be included in the RI Report.

**Milestones/Schedule/Reference Documents***
*Milestone tables are not comprehensive of all regulatory documents.

| Table C.1.5.2(a) Remedial Action for All Effluent Ditches and Site Creeks (Off-Site) - Milestones/Schedule | |
|---|---|
| | |
| **Milestone** | **Date** |
| Submit D1 ROD to regulators | 9/30/14 |

| Table C.1.5.2(b) Remedial Action for All Effluent Ditches and Site Creeks (Off-Site) - Reference Documents | |
|---|---|
| **Document Number** | **Title** |
| DOE/LX/07-0105&D2 | Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision-FY 2008, June 2008 |
| DOE/LX/07-0009&D2 | Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision-FY 2007, October 2007 |
| DOE/OR/07-1506/V1&D2 | Methods for Conducting Risk Assessments and Risk Evaluations at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Volume 1 Human Health, and Volume 2 Ecological, December 2001 |

### C.1.6 Waste Disposition Options Project

This work scope shall be considered complete following submittal, approval, and implementation of a Record of Decision and all associated project CERCLA documentation. The Record of Decision for the Waste Disposition Options Project will be implemented in sufficient time to support disposal of waste from the Burial Grounds Operable Unit (BGOU) project.

**General Information**

The DOE estimates a future need for disposal of approximately 3.7 million cubic yards of radioactively contaminated, non-radioactively contaminated, and hazardous material (soil and building debris), including sanitary waste (Table C.1.6(c)) through the end of D&D of the PGDP in 2040. The majority of this waste will be disposed of outside of the period of performance of this contract as it is currently associated with D&D of the GDP. An estimate of the waste that will be disposed of during this contract is provided in Table C.1.6(b). Approximately 2,000 $yd^3$ of these volumes are classified waste.

Currently, the majority of remediation-generated waste is being disposed at the onsite C-746-U landfill, EnergySolutions of Utah, and the Nevada Test Site.

**Work to be Performed**

The Contractor shall perform all activities to:

a) Prepare, complete, and submit RI/FS, Proposed Plan, ROD and all subsequent CERCLA documents consistent with the results of the RI/FS that evaluated the waste disposal options for material generated from remediation, deactivation, decommissioning and decontamination activities at the PGDP. Includes all applicable fieldwork and analytical work necessary to support CERCLA documents. Documents are to be of sufficient quality such that DOE and regulators can approve them without further modification or correction. Actively assist in obtaining regulatory approval for any submittal.
b) Implement the ROD to support all waste disposal activities associated with the BGOU and other projects as required.
c) If the ROD selects the on-site disposal cell alternative, minimize the footprint for the portion of the disposal cell associated with the classified waste.

The following table provides estimated quantities of material to be dispositioned over the project life-cycle consistent with Table C.1.6(c):

**Table C.1.6(a) Life-cycle CERCLA Waste Estimates**

| Waste Type | TSCA | Sanitary | MLLW | RCRA | LLW |
|---|---|---|---|---|---|
| Quantity | 13,000 yd3 | 1,079,000 yd3 | 63,300 yd3 | 16,700 yd3 | 2,547,000 yd3 |

Note: The quantities identified in this PWS are based upon current approximations; actual quantities may vary.

The following table provides estimated quantities of material to be dispositioned during the contract performance period:

**Table C.1.6(b) CERCLA Waste Estimates**

| Waste Type | TSCA | Sanitary | MLLW | LLW |
|---|---|---|---|---|
| Quantity | 2,500 yd3 | 125,000 yd3 | 9,000 yd3 | 170,000 yd3 |

**Table C.1.6(c) Estimated Disposal Volumes by Waste Form for Waste Disposition Options Project through 2040**

| Waste form | LLW ($yd^3$) | LLW/RCRA ($yd^3$) | LLW/RCRA/TSCA ($yd^3$) | LLW/ TSCA ($yd^3$) | RCRA ($yd^3$) | TSCA ($yd^3$) | Sanitary ($yd^3$) | Total ($yd^3$) |
|---|---|---|---|---|---|---|---|---|
| Asbestos | 3,742 | 21 | 24,773 | 0 | 0 | 4,031 | 980 | 33,547 |
| Concrete | 377,393 | 746 | 0 | 0 | 0 | 0 | 393,349 | 771,488 |
| General Construction Debris | 425,867 | 2,863 | 0 | 19 | 0 | 2,871 | 235,380 | 667,000 |
| Other Dry Solids | 45,951 | 95 | 5,325 | 167 | 542 | 780 | 4,172 | 57,032 |
| Scrap Metal | 407,746 | 172 | 0 | 0 | 0 | 3,676 | 68,827 | 480,421 |
| Soil | 1,286,267 | 29,154 | 12 | 0 | 16,121 | 1,685 | 376,273 | 1,709,512 |
| **Total** | **2,546,966** | **33,051** | **30,110** | **186** | **16,663** | **13,043** | **1,078,981** | **3,719,000** |

LLW = low-level waste
RCRA = Resource Conservation and Recovery Act of 1976
TSCA = Toxic Substances Control Act of 1976, Public Law 94-469, October 11, 1976, 15 USC Section 2622

Source: DOE/LX/07-0035&D1, Scoping Document for CERCLA Waste Disposal Alternatives Evaluation Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, April 2008

**Milestones/Schedule/Reference Documents***
*Milestone tables are not comprehensive of all regulatory documents.

| Table C.1.6(d) Waste Disposition Options Project Milestones/Schedule | |
|---|---|
| | |
| **Milestone** | **Date** |
| Submittal of D1 RI/FS | 11/30/09 |
| Submittal of D1 Proposed Plan | 4/30/10 |
| Submittal of D1 Record of Decision | 1/4/11 |
| If required, post-ROD CERCLA documentation, including final design documents, Quality Control Plans, etc. | As established in the Contractor's baseline and approved by DOE. |
| If required, commence continual physical on-site remediation action, i.e. field work | Within 15 months of ROD approval |

| Table C.1.6(e) Waste Disposition Options Project Reference Documents | |
|---|---|
| **Document Number** | **Title** |
| DOE/OR/07-1893&D1 | Initial Assessment of Consideration of On-Site Disposal of CERCLA Waste as a Potential Disposal Option |
| DOE/OR/07-1916&D1 | Seismic Issues for Consideration in Site Selection and Design of a Potential On-Site CERCLA Waste Disposal Facility |
| DOE/OR/07-1939&D1 | Identification and Screening of Candidate Sites for a Potential CERCLA Waste Disposal Facility |
| DOE/OR/07-2038&D1 | Seismic Investigation Report for Siting of a Potential On-Site CERCLA Waste Disposal Facility |
| DOE/LX/07-0035&D1 | Scoping Document for CERCLA Waste Disposal Alternatives Evaluation Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, February 2008 |

### C.1.7 Polychlorinated Biphenyl Activities

The cleanup of PCB spills and leaks, maintenance of PCB collection trough systems in the Gaseous Diffusion Plant cascade buildings, and the disposal of PCB waste are ongoing activities.

**General Information**

PCBs were used extensively in the uranium enrichment process. The lube oil system that USEC currently operates leaks oil that migrates into the USEC ventilation systems and comes into contact with PCB impregnated gaskets. These systems occasionally leak due to age, vibration, and thermal cycling. Troughs and a collection system have been installed under the areas that have a high potential to leak. There are over 16,000 PCB collection troughs (ranging from 4½ to 6 feet in length) installed inside the cascade buildings (C-331, C-333, C-335, and C-337). The cascade buildings cover approximately 6,400,000 square feet of floor space. PCB lube oils are continuously collected and dispositioned; maintenance of the trough system is ongoing. PCB lube oils that leak or spill are collected, cleaned-up, sampled, and properly disposed.

**Work to be Performed**

The Contractor shall perform all activities to:

a) Perform surveillance and maintenance of the PCB collection and containment trough system through the end of the contract including disposition of the collected PCB lube oils.
b) Clean up, sample, and decontaminate PCB spills and leaks, sample and analyze spill sites (estimated to be 40 small spills per year), and properly disposition the PCBs and PCB contaminated material (e.g., absorbent pads and pigs) through the end of the contract.
c) Collect quarterly air quality data throughout the cascade buildings, and submit quarterly and annual reports through the end of the contract.

**Milestones/Schedule/Reference Documents***

*Milestone tables are not comprehensive of all regulatory documents.

| Table C.1.7(a) Polychlorinated Biphenyl Activities Milestones/Schedule | |
|---|---|
| **Milestone** | **Date** |
| As defined by Uranium Enrichment Toxic Substances Control Act Federal Facilities Compliance Agreement (UE TSCA FFCA) | As defined by the UE TSCA FFCA |
| UE TSCA FFCA Annual Compliance Agreement Report | Due 7/1 (for previous calendar year) |
| Troughing of all motor exhaust duct gasket flanges | To be documented as required by UE TSCA FFCA - 1992 |
| Quarterly Air Sampling Report | To be documented as required by UE TSCA FFCA - 1992 |
| Quarterly PCB Spills and PCB Spill Clean-up Report | To be documented as required by UE TSCA FFCA - 1992 |
| Annual inspection of readily accessible C-340 PCB-contaminated hydraulic system components | To be documented as required by UE TSCA FFCA - 1992 |
| PCB Waste Off Site Disposal Activities | To be documented as required by UE TSCA FFCA - 1992. |

| Table C.1.7(b) Polychlorinated Biphenyl Reference Documents | |
|---|---|
| **Document Number** | **Title** |
| UE-TSCA-FFCA | Uranium Enrichment Toxic Substances Control Act Federal Facilities Compliance Agreement, February 1992 |
| No document number | Paducah DOE TSCA/FFCA Concurrence Agreements (1992-1998) |
| PRS-WSD-0278 | The Site Treatment Plan Annual Update for the United States Department of Energy Paducah Gaseous Diffusion Plant, Paducah, Kentucky, March 2008 |
| Commonwealth of Kentucky File Number DWM-30039-042 | Site Treatment Plan Agreed Order, 9/10/97 |
| Letter dated May 6, 1998 | DOE Legacy Waste Agreement between DOE and USEC |

### C.1.8 Environmental Monitoring and Reporting

This is an ongoing activity requiring the Contractor to perform environmental monitoring of on-site and off-site air, soils, and water, and to report results to DOE and regulators.

**General Information**

In order to protect the health and safety of the on-site workforce, the public, and the environment, monitoring of on-site and off-site air, soils, and water is continuously performed.

An environmental monitoring program has been established. Agreements with the regulators have been made on the scope of the program. It is DOE's goal to continuously optimize the monitoring requirements through agreements with the regulators; however, the Contractor must obtain DOE and/or regulator approval as appropriate prior to reducing any monitoring activities.

**Work to be Performed**

The Contractor shall perform all activities to:

a) Monitor and maintain the structural integrity of the groundwater monitoring wells (currently estimated at 285). Well maintenance includes, but is not limited to, replacing broken concrete pads surrounding the wells; repairing, replacing, extending the outer protective steel casing; repairing, replacing, installing vehicle guard posts around the wells; repairing and replacing casing covers, lock hasps, and hinges on outer protective casings; drilling weep holes in the outer protective casing; and painting the outside of the outer protective casings, including well rehabilitation or replacement, and abandonment as required.

b) Monitor outfalls (including Outfall 17), seeps, in-stream surface water locations, and sediment monitoring locations.
c) Conduct thermoluminescent dosimeter (TLD) monitoring at an estimated 40 locations; aquatic and other biological monitoring; and landfill surface water and leachate monitoring.
d) Conduct monthly inspections of C-746-K and C-404 burial ground caps, and provide corrective maintenance as required.
e) Perform daily inspections of C-400-L and C-616-L lift stations.
f) Execute the Water Policy (interim control measure) to include management of license agreements (an estimated 101) with local residents and businesses to supply municipal water and license agreements (an estimated 2) to allow DOE to access and sample off-site monitoring and residential wells.
g) Maintain 2 license agreements with Kentucky Fish and Wildlife for management of the approximately 1,986 acres of DOE property not in the industrialized portion or buffer area of the plant.
h) Operate and maintain the Paducah Data Warehouse. Provide an Official Use Only (OUO) version for access by regulators and Citizens Advisory Board members and a separate version that is not OUO that is accessible by the public.
i) Perform all environmental monitoring tasks necessary to support all site activities, including but not limited to sample collection, and analysis as necessary to prepare and submit reports identified in Section J, Attachment J4, including input from others on-site.
j) Monitor all SWMUs in accordance with the RCRA permit.
k) Maintain, input, create reports, and complete all other activities necessary to manage environmental data generated by the Contractor's activities and data provided by other site Contractors. Ensure the data is current, complete, and compliant with contract requirements. This includes management of databases (e.g., Oak Ridge Environmental Information System (OREIS), Geographical Information System (GIS), Paducah Project Environmental Measurement System (Paducah PEMS)) transitioned to the Remediation Contractor or included as part of any regulatory agreement(s).
l) Provide SWMU notifications for work in all SWMUs at PGDP in compliance with all legal requirements.
m) Complete the C-746-U Groundwater Assessment Plan field investigation report and any required remedial actions in performance of the C-746-U Landfill Assessment.
n) The Contractor shall prepare and submit the D1 Five Year Review by 9/30/13 and in accordance with the Federal Facility Agreement.

**Milestones/Schedule/Reference Documents***

*Milestone tables are not comprehensive of all regulatory documents.

| Table C.1.8(a) Environmental Monitoring and Reporting Milestones/Schedule | |
|---|---|
| **Milestone** | **Date** |
| D1 Five Year Review | As identified in C.1.8 |

| | |
|---|---|
| Submittal of Reports | As identified in Section J, Attachment J4 |
| Complete C-746-U Groundwater Assessment per the Groundwater Assessment Plan | As established in the Contractor's baseline and approved by DOE. |
| Complete any required remedial actions resulting from the Groundwater Assessment Plan investigation | As established in the Contractor's baseline and approved by DOE. |

| Table C.1.8(b) Environmental Monitoring and Reporting Reference Documents | |
|---|---|
| **Document Number** | **Title** |
| PRS-ENM-0034 Volume I | Paducah Site Annual Site Environmental Report for Calendar Year 2006, September 2008 |
| PRS-ENM-0034 Volume II | Environmental Monitoring Results, Annual Site Environmental Report, Calendar Year 2006, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, September 2008 |
| Commonwealth of Kentucky Permit Number KY0004049 | Kentucky Pollutant Discharge Elimination System Permit Number KY0004049 for the Paducah Gaseous Diffusion Plant/U.S. Department of Energy Outfalls Under, McCracken County, Kentucky |
| Commonwealth of Kentucky Permit Numbers 073-00045, 073-00014, 073-00015 | C-746-U, C-746-S and C-746-T Landfills Solid Waste Permits |
| REEMCBCDOE-03-06-0710, REORDOER-3-93-0700 | License Agreements between DOE and the Kentucky Department of Fish & Wildlife Resources for Paducah Gaseous Diffusion Plant Deer Bow Hunts and Paducah Gaseous Diffusion Plant Wildlife Development |
| Permit Number KY8-890-008-982 | Kentucky Division of Waste Management Hazardous Waste Management Facilities Permit |
| REEMCBCDOE-7-08-0xxx (PPPO-02-232-08 Enclosure) | License (Single Purpose: Groundwater Monitoring Wells, Sampling, Furnishing Municipal Water to Grantor) |
| REEMCBCDOE-7-08-0xxx | License (Single Purpose: Groundwater Monitoring Wells, Miscellaneous Sampling) |
| Dated March 13, 2006; signed by DOE May 9, 2006 | Tennessee Valley Authority – Shawnee Fossil Plant – Paducah Gaseous Diffusion Plant Letter of Agreement |

| Table C.1.8(b) Environmental Monitoring and Reporting Reference Documents | |
|---|---|
| **Document Number** | **Title** |
| PRS-ENM-0024 | Environmental Monitoring Plan, Fiscal Year 2008, Paducah Gaseous Diffusion Plant, Paducah, Kentucky |
| PRS-PROJ-0003 | Bayou Creek And Little Bayou Creek Revised Watershed Monitoring Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky; Kentucky Pollutant Discharge Elimination System Permit Number KY0004049, November 2006 |
| PRS/PROJ/0025 | Monitoring Well Maintenance Implementation Plan For The Paducah Gaseous Diffusion Plant, Paducah, Kentucky, February 2008 |
| Dated December 2007 | KPDES Agreed Order |
| Permit Number KY8-890-008-982 | Kentucky Division of Waste Hazardous Waste Management Facilities Permit |
| PRS-PROJ-0006 | Groundwater Assessment Plan for the C-746-U Landfill at the Paducah Gaseous Diffusion Plant Paducah, Kentucky, Permit Number 073-00045, Agency Interest No. 3059 |
| DOE/LX/07-0117&D1 | CERCLA Five-Year Review, November 2008 |
| PRS-ENM-0031/R2 | C-404 Landfill Source Demonstration Paducah Gaseous Diffusion Plant, Paducah, Kentucky, August 2007 |
| DOE/OR/06-1201&D2 | Action Memorandum for the Water Policy at the Paducah Gaseous Diffusion Plant Paducah, Kentucky, June 1994 |
| PRS/ENM/0037 | Spill Prevention, Control, and Countermeasure Plan for the DOE Paducah Site, McCracken County, Kentucky, February 2008 |
| PRS/PROG/0015/R1 | Pollution Prevention/Waste Minimization Program Plan for the U.S. Department of Energy Paducah Remediation Project, February 2008 |
| BJC/PAD-691/R1 | Cultural Resource Management Plan for the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, March 2006 |

### C.1.9 Burial Grounds Operable Unit (BGOU)

This work scope shall be considered complete following submittal and approval of all regulatory documents (e.g., Proposed Plan, ROD, Remedial Design Report, Land Use

Control Implementation Plan) allowing implementation of the remedial action, field mobilization, and completion of at least 15% of the remedial action fieldwork.

**General Information**

There are on-site burial grounds that are being investigated in the Burial Grounds Operable Unit. Known contaminants include, but are not limited to, heavy metals, TCE, radioactive materials, and PCBs. The burial grounds may be contributing sources of TCE contamination to the Southwest and Northwest Dissolved Phase Plumes. These burial grounds contain various waste forms that include, but are not limited to radiologically contaminated (uranium, $^{99}$Tc, etc.) dry active waste, debris, drummed sludges, metals, classified components, and excess equipment. The burial grounds at SWMUs 2, 4, 5, 6, 7, 13, 30, and 145 all have a soil cover (not a cap). The SWMUs cover an area of approximately 32,000 ft2, 286,700 ft2, 197,400 ft2, 13,500 ft2, 240,900 ft2, 294,000 ft 2, 128,000 ft2, and 44 acres, respectively. SWMU 3 (C-404 RCRA landfill) has a Subtitle C RCRA cap, though it has no subsurface liner, and is approximately 1.2 acres. The Remedial Investigation Report has been submitted to Kentucky and the EPA and approval is anticipated in early FY09; it is anticipated that the Feasibility Study will be approved by September 30, 2009.

Though the final remedy will not be determined until the ROD is finalized, the baseline assumption is that SWMU 2, SWMU 3, and SWMU 4 will be excavated. Some wastes may meet the waste acceptance criteria for the C-746-U landfill. Other wastes will be disposed off-site, unless there is an on-site CERCLA cell (see Section C.1.6) that is able to accept those wastes. The baseline also assumes that the remaining SWMUs will have soil covers and their wastes will remain in place. In addition, the baseline assumes that at least three burial grounds (SWMU 4, SWMU 7, and SWMU 30) will also require soil treatment such as ERH, Chem-Ox, and/or C-Sparge.

**Work to be Performed**

The Contractor shall perform all activities to:

a) Prepare all CERCLA documents supporting the remediation of the burial grounds including a Proposed Plan, Record of Decision, and all subsequent CERCLA documents needed to implement the selected remedial action, and actively assist in obtaining regulatory approval. Includes all applicable field work and analytical work necessary to support CERCLA documents. These documents must be consistent with the Site Management Plan and of sufficient quality such that DOE and regulators can approve them without further modification or correction. Actively assist in obtaining regulatory approval of document submittals.
b) Implement the selected remedial action as specified within the Burial Grounds Record of Decision and subsequent CERCLA documents (e.g., Remedial Design Work Plan, Remedial Design Report, Remedial Action Work Plan, Land Use Control Implementation Plan, and Operations and Maintenance Plan).
c) Dispose of all wastes excavated or generated up to 90 days prior to the completion of the contract period.

**Milestones/Schedule/Reference Documents***
*Milestone tables are not comprehensive of all regulatory documents.

| Table C.1.9(a) Burial Grounds Operable Unit Milestones/Schedules | |
|---|---|
| **Burial Grounds Operable Unit** | **Date** |
| D1 Proposed Plan | As established in the Contractor's baseline and approved by DOE. Dates must be within the period of performance of the contract and as specified in the latest approved version of FFA SMP. |
| D1 Record of Decision | As established in the Contractor's baseline and approved by DOE. Dates must be within the period of performance of the contract and as specified in the latest approved version of the FFA SMP. |
| Commence Continual Physical On-Site Remediation Action | Within 15 months of ROD approval |
| Complete at least 15% of physical on-site remediation action work (as established in the Contractor's baseline and approved by DOE) | 9/30/14 |

| Table C.1.9(b) Burial Grounds Operable Unit Reference Documents | |
|---|---|
| **Document Number** | **Title** |
| DOE/OR/07-2178&D1 | Scoping Document for the Burial Grounds Operable Unit Remedial Investigation/Feasibility Study at Paducah Gaseous Diffusion Plant Paducah, Kentucky, November 2004 |
| DOE/OR/07-2179&D2/R1 | Work Plan for the Burial Grounds Operable Unit Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, October 2006 |
| DOE/LX/07-0030&D1 | Remedial Investigation Report for the Burial Grounds Operable Unit at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, May 2008 |

### C.1.10 Project Support

The Contractor shall provide all project support necessary for performance of this contract. This is an ongoing activity.

### C.1.10.1 Project Management System

The Contractor shall perform all activities to:

a) Develop and maintain a project management system in accordance with clause H.1, Project Control Systems and Reporting Requirements, for both the scope of work under this contract and the anticipated site environmental restoration lifecycle.
b) Ensure that Long-Term Stewardship (LTS) issues are considered in the cleanup decision-making processes. Even though the LTS activities are not included in the scope of this contract, some of the activities needed to ensure the site's successful transition to future LTS are integrated into the work scope defined in this contract.
c) Assist DOE in coordination and communication regarding LTS planning and transition with all involved parties including local stakeholders and regulators.
d) Maintain the Paducah Site Life Cycle Baseline for all Performance Baseline Summary (PBS) activities associated with the site to include all other DOE site contractors.

### C.1.10.2 Integrated Safety Management System

The Contractor shall develop and maintain a single, site-wide Integrated Safety Management System (ISMS) to accomplish all work under this contract as required by Department of Energy Acquisition Regulation Clause 970.5223-1, "Integration of Environment, Safety and Health into Work Planning and Execution." The Contractor shall prepare, complete, and submit within 60 calendar days after contract award an ISMS for DOE approval and Phase I/II verification. The ISMS must also comply with Environmental Management System requirements set forth in DOE O 450.1A.

The initial ISMS program must be approved by DOE prior to the start of operations. The ISMS program shall be subject to an annual verification review by a DOE chartered ISMS verification team.

### C.1.10.3 Environment, Safety and Health Program

The Contractor shall perform all activities to:

a) Conduct all activities required for compliance with applicable laws, regulations, permits, agreements and Orders, and DOE Directives including those listed in Section J, Attachments J1 and J2. The Contractor's Environment, Safety and Health (ES&H) program shall be operated as an integral, but visible, part of how the Contractor conducts business. This includes, but is not limited to: prioritizing work planning and execution; establishing clear ES&H priorities; allocating resources to address programmatic and operational considerations; collecting and analyzing samples; and correcting non-compliances and addressing all hazards for all facilities, operations, and work. The Contractor shall ensure that cost reduction efforts and efficiency efforts are fully compatible with ES&H performance.

b) Take all actions necessary to preclude serious injuries and/or fatalities; keep worker exposures and environmental releases as low as reasonably achievable and below established limits; minimize the generation of waste; maintain or increase protection to the environment; and maintain or increase public and worker safety and health.
c) Maintain the documented safety analysis and safety basis documents, as applicable, for all non-leased DOE facilities, including, but not limited to, C-410/420 and C-746-Q. The Contractor shall, as required, develop, update and maintain all safety analysis and safety documents in accordance with the requirements of 10 CFR 830, Subpart B.
d) Develop and/or update existing regulatory required implementation plans and processes (e.g., 10 CFR 835, Radiation Protection Plan; Unreviewed Safety Question Process; and 10 CFR 851, Worker Safety and Health Plan). Plans shall be submitted to DOE for approval within 30 calendar days after contract award and updated annually for changes.
e) Establish and maintain a formal quality assurance program which satisfies the quality assurance requirements contained in the Paducah List of Applicable Laws and Regulations (List A) and applicable DOE Directives (List B) (see Section J, Attachments J1 and J2) and the American Society of Mechanical Engineers (ASME) NQA-1, Quality Assurance Requirements for Nuclear Facility Applications, NQA-1-2004 (and Addenda through 2007). A Quality Assurance Plan (QAP) shall be submitted to DOE for approval within 30 calendar days after contract award and updated annually for changes. The Contractor's QAP shall be implemented for all work performed by the Contractor (e.g., mission, safety, and health).
f) Submit within 60 calendar days after contract award for DOE review and approval a Beryllium Protection Program consistent with 10 CFR 850. A study has been completed characterizing the levels of Beryllium within the site (BJC/PAD-581) and shall be considered by the Contractor in development and implementation of a Beryllium Protection Program and in the performance of this contract.
g) Develop all remaining elements of the contractor's fire protection program to meet DOE O 420.1B.
h) Ensure adequate access to health programs/ambulatory care, and beryllium and radiation worker health surveillance programs. These services are required to assess, monitor, record data, and provide medical support for current site workers who are or may be exposed to radiological and hazardous materials. The Infrastructure Contractor shall provide radiation dosimetry (TLDs/Personal Nuclear Accident Dosimeters (PNADs)) and bioassays as required by 10 CFR 835 for the Contractor.
i) Provide project-specific training for both the Contractor's and the DOE employees as required by DOE, the Department of Transportation, and safety and health requirements. The Infrastructure Contractor shall provide the following training: Consolidated Annual Training, Radiation Worker I and II, General Employee Training, Annual Security Refresher, Workplace Violence Prevention, Diversity Awareness, Employee Conduct Training, Business

Ethics/Standards of Conduct, and Fire Extinguisher Training, DOE Orders/Work Smart Standards and ISMS. The training for Work Smart Standards and ISMS shall be general introductory courses, not specific to any Contractor's program. The Contractor shall track the training status and notify employees of pending expiration of training.

j) Ensure personnel are properly and adequately trained.

k) Provide safety and health Personal Protective Equipment (PPE) for both the Contractor's and the DOE employees. The Infrastructure Contractor shall provide calibration and maintenance of all monitoring and surveying equipment as required by 10 CFR 835. The Contractor shall perform radiological surveys as needed for their work.

l) Although the Infrastructure Contractor provides for integrating DOE contractor emergency management support, the Contractor shall within 60 calendar days after contract award provide support to DOE and participate in the site's Emergency Management program (including procedure or plan development). The Contractor shall coordinate with the Infrastructure Contractor and provide adequate staff to support the Emergency Operation Center efforts for its operations, and ensure adequate support is available to respond to an emergency. The Emergency Operation Center for the site is provided by USEC with specific support from DOE for DOE activities. The Contractor shall develop and update the Emergency Planning Hazard Surveys/Assessments at least every three years or whenever a major change occurs. Develop and update as needed, site/facility-specific Emergency Action Levels (EALs) for the spectrum of potential Operational Emergencies identified by the Emergency Planning Hazard Assessment to include protective actions for implementation in the USEC Site Emergency Program. Provide the Infrastructure Contractor timely Emergency Readiness Assurance Plan (ERAP) information to be included in the DOE Paducah Site Integrated ERAP for DOE submittal per DOE Order 151.1C.

m) Implement an Underground Storage Tank (UST) program consistent with all State Regulations. A list of USTs is provided in Exhibit C.1.10.3.

n) Perform an environmental compliance due diligence review within 30 days after the end of the transition period to ensure noncompliances are known and managed and provide a certification to the Contracting Officer.

o) Provide investigations and support for ES&H issues/effects resulting from the historical "work for others program". The Contractor may encounter materials and historical information that references a "work for others" program; these materials may include classified information. The potential implications will be discussed after award of this contract consistent with security requirements.

p) Provide input and support, to include, but not be limited to: actions, documents, responses, and information for DOE's preparation of various reports to Congress, DOE-HQ, the public, and other requesting organizations.

q) Provide non-emergency spill contamination, clean-up, and other post-emergency response activities. Spills could include, but not be limited to, diesel fuel, oils containing PCBs, and radioactive contamination.

r) Provide certified analytical laboratory services to analyze samples it takes in support of this contract.

s) Provide programmatic and oversight support to other DOE contractors, as requested by DOE. Examples may include Kentucky Research Consortium for Energy and Environment (KRCEE) demonstration projects on DOE property.
t) Identify and ensure the operability of systems, structures and components (SSCs) used to support fire suppression systems and mitigation systems in facilities operated by DOE (this includes fire suppression systems, smoke/heat detection systems, and alarm notification systems).
u) Identify interface points (for facilities as assigned in FIMS) with SSCs operated by USEC and other utility providers.
v) Ensure that operation and maintenance of the fire suppression and mitigation systems in facilities operated by DOE is performed in a manner that minimizes impact on the safety and efficiency of DOE and USEC operations.

### C.1.10.4 Administration

The Contractor shall provide administrative services including, but not limited to, management, public affairs, financial, legal, procurement, program management, taxes (Contractor should pursue any available exemptions), public information, support to DOE, Paducah Site Citizens Advisory Board (CAB) support, and human resource management commensurate to support the Contractor's scope of work. The Contractor shall perform all activities to:

a) Support DOE in responding to Congressional, regulatory and other requests for documents and information; examples of such include: Freedom of Information Act requests; Privacy Act requests; and litigation document requests served upon DOE and its current and former prime Contractors.
b) Support shall include, but not be limited to, preparation for briefings, public presentations, and search, review, and reproduction of documents. The Contractor shall ensure all external briefing materials and public presentations are of the highest professional quality to market the current and planned project achievements.
c) Provide administrative services pertaining to public affairs. These shall include, but not be limited to, development of a project/site external communication strategy to market the current and planned project achievements to DOE's stakeholders, including local and state government and congressional representatives.
d) Ensure that all environmental regulatory documents have received adequate legal review for sufficiency, accuracy and strategic impacts before being submitted to DOE and then to the regulatory agencies.
e) Support DOE efforts with regard to site reindustrialization/reutilization activities and with regard to Natural Resource Damage Assessments.
f) Provide joint legal support to DOE in connection with legal or regulatory proceedings at DOE's request.
g) Support transition from the existing Contractor, and transition to a new Contractor at the end of this contract. Complete transition of "blue sheet" procedures (procedures carried over from existing Contractor) to Contractor procedures within 60 days of transition.

h) Provide central locations and receptacles for the collection and delivery of site mail by the Infrastructure Contractor.

### C.1.10.5 Transportation

The Contractor shall be responsible for its own services including, but not limited to, transportation, traffic management, shipping/receiving, scale calibrations, maintenance of one trackmobile, vehicle and equipment maintenance and management, except as specifically referenced as being furnished by the DOE or by others on behalf of DOE in Section H clause entitled "Government Furnished Services and Items." Additionally, the Contractor shall maintain equipment and appropriate certifications to ensure an effective transportation program.

### C.1.10.6 Records Management

The Contractor shall perform all activities to:

a) Provide a records management program for records attained for or generated under the performance of this contract. This includes, but is not limited to: maintaining, storing, protecting, and dispositioning active and inactive records; retrieving records from on-site storage facilities; and supporting ongoing discovery efforts for litigation or Freedom of Information Act (FOIA) requests. Records management shall be in compliance with regulatory requirements, such as RCRA on-site records storage requirements.

b) Provide hard and electronic copies of documents to the Infrastructure Contractor (for inclusion in the site's centralized records repository) that are scanned, properly rotated, are clearly and legibly marked, and meet the following Documentum system requirements:

- Black and White - Scan to 300 dpi
- Grayscale - Scan to 400 dpi
- Color - Scan to 150 dpi
- Convert to PDF ASCII file (Optical Character Recognition)
- Page sizes:
  - 8 1/2 x 11
  - 11 x 14
  - 11 x 17

Documents that have been converted to an electronic format using the Optical Character Recognition process shall be reviewed to ensure the Optical Character Recognition process properly converted the document.

c) Place all necessary documents in the Paducah Environmental Information Center, which is maintained by the Infrastructure Contractor on behalf of DOE.

### C.1.10.7 Safeguards and Security

The Infrastructure Contractor is the Contractor Cognizant Security Authority (CSA) at the Paducah site and as such has the primary security function for DOE operations at the site consistent with the scope of their contract. In this regard the CSA is the primary contact with USEC regarding GFS&I security services provided by USEC. The CSA maintains the Site Security Plan for all DOE operations at the Paducah site and will prepare physical security plans and vulnerability assessments in support of all DOE programs (e.g., physical security, site visits, etc). Physical security plans supporting work by the Contractor will be prepared by the CSA in consultation with the Contractor who will also be a signatory to the documents. If specific subject matter experts are not resident within the CSA, the Contractor with the appropriate subject matter expert on staff will draft the specific plan and coordinate activities with the CSA. The CSA provides a site consolidated report on security infractions to DOE. The CSA provides personnel security and badging service for DOE Contractors at the site. The CSA is responsible for DOE information security at the site including both classified and unclassified sensitive information. The CSA maintains a Classification Officer and supporting staff for all DOE classification activities at the site. Site derivative classifiers are appointed by the CSA Classification Officer.

The Contractor shall perform all activities to:

a) Comply with site requirements to ensure appropriate levels of protection against: unauthorized access; theft, diversion, loss of custody of special nuclear material; espionage; loss or theft of classified matter or Government property; and other hostile acts that may cause unacceptable adverse impacts on national security or the health and safety of DOE and Contractor employees, the public, or the environment. USEC currently provides the on-site protective force.
b) Coordinate all requests for USEC security services through the CSA.
c) Ensure operations are fully consistent with all approved security plans applicable to the Contractor programs including, but not limited to facility security, physical security, cyber security, Operations Security (OPSEC), and information security.
d) Promptly prepare and submit requests for DOE authorization for personnel access to classified matter consistent with the provisions of the Contract Security Classification Specification (CSCS) approved for work under this contract. The Infrastructure Contractor provides the processing of the security clearance applications, and coordinates with federal security reviewers.
e) Provide an information security program commensurate with the types of information available on-site, such as but not limited to, proprietary, privacy act, official use only, classified and Unclassified Controlled Nuclear Information (UCNI). The Contractor will coordinate all information security programs with the CSA who will adjudicate classification issues.
f) Provide reports of security infractions to the CSA to be included in a single, consolidated site report to DOE.

g) Provide a Nuclear Materials Control and Accountability (NMC&A) plan 30 days prior to the Initial Security Survey and implement a NMC&A program to manage all nuclear materials associated with contract requirements.
h) Ensure an adequate number of Contractor personnel are designated as derivative classifiers and/or UCNI reviewers in support of the Contractor's project needs.
i) Comply with security plans. The Contractor has the responsibility to recognize situations in which they will need to request or develop security plans and work with the Infrastructure Contractor/USEC as appropriate to get those plans in place.

### C.1.10.8 Property Management

Administration of the real and personal property program is the responsibility of the Infrastructure Contractor including managing an automated database of all personal property actions related to acquisition, use and disposition. The Infrastructure Contractor is also responsible for the property inventories, disposition operations, and provides input to FIMS and the Property Information Database System (PIDS). The Contractor shall provide FIMS data to the Infrastructure Contractor and shall support the annual FIMS data verification.

The Contractor shall manage all assigned Government-owned accountable and non-accountable personal property in accordance with the requirements listed below and 41CFR101 and 41CFR109:

i. Control classified equipment and material in accordance with DOE M 470.4-4 Chg 1, "Information Security."

ii. Control high risk property in accordance with DOE Personal Property Letter (PPL) 970-3, Rev.1, dated February 3, 1998.

iii. Destruction or "rendering useless" of any component, equipment, and material, which are both surplus to the DOE and identified in the Nuclear Suppliers Group Trigger List or are nuclear weapon component or weapon-like components, is the responsibility of the Contractor.

This includes establishing a system to track assignment and status of high risk property specifically assigned to the Contractor. Prior to providing property to the Infrastructure Contractor for disposition, the Contractor shall characterize the property and maintain characterization records. The Contractor shall provide the characterization records at the time of property transfer to the Infrastructure Contractor.

### C.1.10.9 Energy Efficiency

The Contractor shall assist DOE through direct participation and other support in achieving DOE's energy efficiency goals and objectives in electricity, water, and thermal

consumption, conservation, and savings, including goals and objectives contained in Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management. The Contractor shall maintain and update, as appropriate, its documents to include detailed plans and milestones for achieving site-specific energy efficiency goals and objectives. With respect to this paragraph, the plan shall consider all potential sources of funds, in the following order: 1) the maximum use of private sector, third party financing applied on a life-cycle cost effective basis, particularly from Energy Savings Performance Contracts and Utility Energy Services Contracts awarded by DOE; and 2) only after third-party financing options are evaluated, in the event that energy efficiency and water conservation improvements cannot be effectively incorporated into a private sector financing arrangement that is in the best interest of the Government, then DOE funding and funding from overhead accounts can be utilized. Implement the Transformation Energy Action Management (TEAM) Goals and Initiatives. Report the progress on achieving these goals and initiatives upon request. At a minimum, the following initiatives shall be pursued:

a) All new construction shall include plans for solar or other clean, secure on-site generation. All lighting systems and products shall utilize compact fluorescent /solid state/fluorescent lights where practical. All purchases of office equipment shall be ENERGY STAR or DOE Federal Energy Management Program top 25th percentile. All new construction and major renovations to achieve not less than Leadership in Energy and Environmental Design (LEED) Gold certification.

b) Decrease water consumption where practical, in all applicable buildings, trailers, and other structures and facilities.

c) Develop Green purchasing program and incorporate Executive Order 13423 into new subcontracts.

### C.1.10.10 Computer/Radio/Telephones

A Local Area Network (LAN) and a Wide Area Network (WAN) configured to allow multiple users will be provided for the Contractor's use at Paducah via a T-1 line. The T-1 line is only furnished for facilities on-site at PGDP and at the off-site Kevil facilities. The Contractor will have to furnish the T-1 line to any other off-site facilities. The Infrastructure Contractor will perform maintenance and repair of all installed T-1 lines. The system will be configured to allow separation of multiple users and provide basic operating software sufficient to allow input into DOE data systems. Computer support will be provided by the Infrastructure Contractor and will include network administration, customer service support, help desk support, servers for the Paducah Data Warehouse, computer repairs, and cyber security and basic security such as SPAM, adware, and spyware protection. Customer service support includes unpacking, installation, testing and removal of Personal Computers (PCs) and related components and software installation, removal, or upgrades as necessary; ensuring operability between PCs and peripheral devices, the LAN and WAN; and providing personal interface in assessing user needs through personal visits and telephone.

The Contractor shall install any additional ports necessary to support its own activities if a sufficient number of ports are not available in the work location. If additional facilities are brought on to house personnel (e.g. trailers) that are not sufficiently equipped, the Contractor is responsible to run lines, wire trailers, install ports and to perform any necessary preliminary work for connection to the site LAN or WAN. Any requests for additional computing resources either hardware or software must be submitted to DOE for approval including justification and detailed explanation of costs.

The Contractor is responsible to provide only peripheral activities related to the telephone system for its own personnel (i.e. individual phone unit replacements, and working with USEC for moving office phone numbers). If additional facilities are brought on to house personnel (e.g. trailers) that are not sufficiently equipped, the Contractor is responsible to run lines, wire the facilities, install phone systems and to perform any necessary preliminary work for connection to the site phone system.

USEC holds the license for the Federal Communications Commission (FCC) digital narrow band radio frequencies being used. USEC provides the narrow band radio frequency, the tower, transmission and radio repair services. At Paducah most of the radios are Enhanced Access Communication Systems (LPE-200) portable 800 MHz compliant with the narrow band frequency. Approximately 245 narrow band frequency radios are available for use by the Contractor. Additional radios may be available upon request. Cell phones and other communication devices will not be provided and are the responsibility of the Contractor. Subcontractors are responsible for providing their own radios meeting the narrow band frequencies and subject to USEC guidelines and oversight.

### C.1.10.11 DOE Consolidated Audit Program (DOECAP)

The DOECAP is a consolidated audit program with DOE complex-wide participation that conducts annual audits of analytical environmental laboratories and commercial treatment, storage, and disposal facilities (TSDFs) that have contracts or agreements to provide services to DOE. DOECAP audits are performed on behalf of, and with the participation of, sites throughout the DOE complex. The six DOECAP laboratory audit areas include Quality Assurance Management Systems and General Laboratory Practices, Data Quality for Organic Analyses, Data Quality for Inorganic and Wet Chemistry Analyses, Data Quality for Radiochemistry Analyses, Laboratory Information Management Systems and Electronic Data Management, and Hazardous and Radioactive Materials Management. The seven DOECAP TSDF audit areas include Quality Assurance Management Systems, Sampling and Analytical Data Quality, Waste Operations, Environmental Compliance/Permitting, Radiological Control, Industrial and Chemical Safety, and Transportation Management.

The Contractor shall perform all activities to:

a) Provide qualified candidates to participate on at least one DOECAP audit team.

b) Perform pre-audit activities, including but not limited to, requesting and reviewing pre-audit information from the audited facilities and participating in conference calls.
c) Perform audit activities, including lead auditor activities during laboratory audits.
d) Perform post-audit activities, including but not limited to, completing and issuing audit reports and notifying the audited facility of acceptance of the proposed CAP.
e) Perform work in accordance with DOECAP procedure AD-1, DOECAP Policies and Practices.

**Exhibit C.1.2 Waste Storage Facilities**

| Exhibit C.1.2 Waste Storage Facilities | | | | | | | |
|---|---|---|---|---|---|---|---|
| Building Number | Building Title | Square Feet | Bldg. Description | Waste Type | | | |
| | | | | RCRA | RCRA/ TSCA | TSCA | LLW |
| C-301 | LLW Waste Storage | 2,802 | Concrete pad with roof | | | | X |
| C-331 | Cascade Building | | Leased to USEC for the uranium enrichment process. DOE waste is stored within these buildings. | | | X | |
| C-333 | Cascade Building | | Leased to USEC for the uranium enrichment process. DOE waste is stored within these buildings. | | | X | X |
| C-335 | Cascade Building | | Leased to USEC for the uranium enrichment process. DOE waste is stored within these buildings. | | | X | |
| C-337 | Cascade Building | | Leased to USEC for the uranium enrichment process. DOE waste is stored within these buildings. | | | X | |
| C-733 | Waste Oil and Chemical Storage Facility | 4,224 | Covered structure enclosed by a wall on one side and fencing on the other sides. This building is RCRA permitted and holds the flammable/ignitable hazardous material. Several large tanks are here for batching/transfer operations. | X | X | | X |
| C-746-H3 | Storage Area | 56,150 | Concrete slab for 90-day storage of RCRA material. Two clean shell structures are located on the pad for storing LLW and solid waste. | X | | | X |
| C-746-M | Waste Uranium Chip Storage | 432 | Prefabricated metal building. No uranium chips are currently stored here | | | | X |
| C-746-Q | Hazardous and Low-Level Waste Storage Facility | 33,165 | Prefabricated metal building that stores RCRA and LLW. Material that requires nuclear criticality storage is located here. Some USEC waste is stored in the building. | X | X | X | X |
| C-746-V | Waste Staging Area | 10,000 | Outside gravel pad. LLW and solid waste is temporarily stored here. | | | | X |
| C-752 | Waste Holding Pad | 8,800 | Concrete slab for outside holding of waste material. | | | | |
| C-752-A | Waste Storage Facility | 43,600 | Prefabricated metal building used for operations and storage of waste. This building is permitted for RCRA storage and treatment. The southeast corner of the building has a structure for waste treatment that can be isolated from the rest of the building and hooked to air containment systems. Treatment for wastewater occurs here by activated carbon or a low capacity ultraviolet light | X | X | X | X |

| Exhibit C.1.2 Waste Storage Facilities | | | | | | | |
|---|---|---|---|---|---|---|---|
| Building Number | Building Title | Square Feet | Bldg. Description | Waste Type | | | |
| | | | | RCRA | RCRA/ TSCA | TSCA | LLW |
| | | | system. The building is also used for sorting and packaging waste. | | | | |
| C-753-A | TSCA Storage Facility | 31,600 | Prefabricated metal building used for storage of TSCA waste. Sorting and packing operations also occur here. | | | X | X |

**"X" indicates the type of waste that can be stored in the facility**

## Exhibit C.1.10.3 PGDP Underground Tank Summary

| STATE ID # | PGDP ID # | DATE INST. | CAPACITY (gal) | CONTENTS | MATL. OF CONSTR. | SERVICE | EVIDENCE OF LEAKS? | REGULATORY STATUS | CLOSURE SUMMARY |
|---|---|---|---|---|---|---|---|---|---|
| 0009 | C-751-W | 1992 | 10,000 | Diesel Fuel | Fiberglass-reinforced plastic | Gas station | No | In use. | Leased to and operated by USEC. |
| 0010 | C-751-E | 1992 | 10,000 | Gasoline | Fiberglass-reinforced plastic | Gas station | No | In use. | Leased to and operated by USED |