



# U.S. DEPARTMENT OF **ENERGY**

Paducah Gaseous Diffusion Plant (PGDP)  
Deactivation and Remediation (D&R)  
Draft Request For Proposal (DRFP)  
Pre-Solicitation Conference  
DE-SOL-0008746

**Jennifer Woodard**  
**Paducah Site Lead**

May 17, 2016



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# Welcome and Overview

Purpose of the Pre-Proposal Conference and Site Tour:

- Visualize physical descriptions included in the Performance Work Statement (PWS) via the site tour.
- Identify and resolve concerns regarding the DRAFT RFP to include requirement definition, proposal instructions and evaluation criteria.



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# Paducah Gaseous Diffusion Plant Overview

3,423 acre reservation (3,556 acres with easements)  
615 acre fenced limited area  
822 acre support area outside limited area  
1986 acre West Kentucky Wildlife Management Area  
Approximately 3.5 miles south of the Ohio River and 10 miles west of Paducah



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# Site History

- In 1950, the Atomic Energy Commission selected the former Kentucky Ordnance Works site for the second of three planned uranium enrichment plants.
- Construction began in 1951. The first product was shipped in 1952.
- Construction 1951 - 1954
- Mission until mid 1960s was national defense
- Enrichment for commercial nuclear power since 1963
- Enrichment ended in 2013
- In its nearly 60 years of operation, the plant has pumped more than \$5 billion into the regional economy.



\*Photo of a floodwall mural by Robert Dafford marking the plant's 50<sup>th</sup> anniversary.



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# Paducah Site DOE Missions

DOE and its predecessor agencies operated the plant until 1993. From 1993 until 2014 United States Enrichment Corporation (USEC) operated the PGDP. In October 2014, USEC completed transfer of the plant back to DOE.

Current DOE roles include:

- Owner/landlord
- Environmental cleanup
- Waste disposition
- Deactivation, decontamination, decommissioning, and demolition of surplus facilities
- Storage and conversion of depleted uranium hexafluoride (DUF<sub>6</sub>)



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# Priorities

The scope of this Contract focuses on the continued deactivation of the PGDP facilities and preparing the facilities for future demolition, while maintaining compliant waste management and environmental remediation operations.

- **Safe Operations**
- **Environmental Remediation and Waste Management**
- **Facility Hazard Reduction**
- **Cost Savings Measures**
- **Community Relations**



# Bridget Purdy

## EMCBC Office of Contracting



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# AGENDA

**Overview of the Acquisition Process and Draft Request for Proposal (RFP) - *Bridget Purdy, EMCBC Office of Contracting***

**Contractor Human Resources Management - *Peggy Doherty, EMCBC Office of Contracting***

**Technical Briefings:**

**Gaseous Diffusion Process - Reinhard Knerr, Federal Project Director**

**Safeguards and Security - *Mark Allen, Security Specialist***

**Surveillance and Maintenance of Facilities - *April Ladd, General Engineer***

**General Engineer Environmental Monitoring and Reporting - *Tracey Duncan, General Engineer***



# SCHEDULE MAY 17-19, 2016

Tuesday, May 17, 2016

8:00 AM – 12:30 PM	Pre-Solicitation Conference
1:30 PM – 5:30 PM	Site Tour (Outside Limited Area)

Wednesday, May 18, 2016

7:30 AM – 1:00 PM	Site Tour (Inside Limited Area)
2:00 PM – 6:30 PM	One-on-One Sessions

Thursday, May 19, 2016

7:30 AM – 12:00 PM	Bidder's Choice Tour
1:00 PM – 5:30 PM	One-on-One Sessions



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# Logistics/Ground Rules

- No audio or video recording is permitted.
- DOE will answer questions during the pre-solicitation conference today, time permitting. Questions should be submitted via the notecards that have been provided.
- For the site tour, questions should be submitted on notecards and DOE will post the responses on the procurement website.
- Comments may also be submitted to the procurement email address at for DOE consideration in drafting the Final RFP: [PaducahDR@emcbc.doe.gov](mailto:PaducahDR@emcbc.doe.gov).



# Logistics/Ground Rules

- Nothing stated or presented during this conference should be construed as a revision to the Draft RFP unless issued in an amendment or incorporated into the final RFP.
- Today's briefing slides and the attendee list will be posted on the website.
- Participants will stay within their tour group during the site visit.
- No questions will be asked of Contractors working at any of the visited areas.



# Logistics/Ground Rules

## One-on-One Sessions:

- Meetings will not be more than 35 minutes long.
- Opportunity for interested parties to present their thoughts and suggestions on the procurement.
- There will be no negative ramifications for any firm choosing not to participate in a one-on-one session meetings or cancelling their current scheduled time.
- DOE is not requesting and will not accept any company marketing material.



# Current Contract

- Contract Number: DE-DT0007774
- Contractor: Flour Federal Services, Inc.
- Current Value: \$465 million
- Contract Type: Hybrid Fixed Price and Cost Reimbursable CLINs with Award Fee
- Period of Performance: 07/22/2014 to 07/21/2017
- Current Contract can be found here:  
<https://www.emcbc.doe.gov/About/PrimeContracts>



# Draft RFP to Final RFP

- There may be updates posted to the DRFP. However, DO NOT rely on the previously posted Draft RFP (DRFP) in preparation and submission of offers.
- Imperative to read and comply with the Final Request For Proposal (RFP) (and any accompanying amendments, if issued).
- The Final RFP (and any amendments) will be posted to the following:
  - Procurement website <https://www.emcbc.doe.gov/SEB/PaducahDandR>
  - FedConnect website at [www.fedconnect.net](http://www.fedconnect.net), and
  - The Federal Business Opportunities (FBO) website at [www.fbo.gov](http://www.fbo.gov).



# Acquisition Process

- DRFP was released to industry on April 28, 2016.
- Industry is encouraged to comment on the DRFP by May 26, 2016.
- Interested parties should submit comments in writing for DOE consideration to email address:  
[PaducahDR@emcbc.doe.gov](mailto:PaducahDR@emcbc.doe.gov).
- DOE will carefully consider all comments received in response to the DRFP in preparing the Final RFP.
- DOE is not required to officially respond to any verbal or written questions or comments pertaining to the DRFP.
- For the Final RFP, DOE will post questions and answers to the procurement website.



# Draft RFP

- Full and open competition that includes meaningful work to be performed by small business concerns under NAICS Code 562910, Remediation Services, Size Standard of 750 Employees.
- Proposed Minimum Offer Acceptance Period: 365 calendar days after proposals receipt date.
- Industry will have 60 calendar days from the date the Final RFP is released to prepare and submit their proposal to DOE



# Small Business

- L. 11 (k) Small business subcontracting plan (required for all Offerors unless Offeror is a small business under NAICS code and size standard for this solicitation)

“ 1. A completed and acceptable Small Business Subcontracting Plan is required to be submitted in accordance with the Section I, FAR Clause 52.219-9, Small Business Subcontracting Plan, Alternate II, and proposal instructions herein by all large business Offerors. This plan will become part of the contract as Section J, Attachment J-1 entitled, Small Business Subcontracting Plan.

2. To be considered acceptable, the Offeror’s plan shall address, in adequate detail, each of the eleven elements identified in FAR 52.219-9(d). Failure by a large business Offeror to submit and/or negotiate a subcontracting plan that addresses each of the eleven elements identified in FAR 52.219-9(d) in adequate detail may make the Offeror ineligible for award of a contract.”



# Small Business

<b>Category</b>	<b>Goal</b>
Small Businesses (SB)	50.00%
Small Disadvantaged Business Concerns (SDB)	10.00%
Women Owned Small Business Concerns (WOSB)	10.00%
HUBZone Small Business Concerns (HBZ)	3.0%
Service-Disabled Veteran-Owned Small Business Concerns (SDVOSB)	3.0%



# Draft RFP Overview

- Sections A – J of the Final RFP will become the resultant contract.
- Section K will be incorporated by reference into the contract.
- Section L contains important information on proposal preparation. Section M sets forth the proposed evaluation criteria and method for award.



# DRAFT RFP OVERVIEW

## Section B:

Contract Line Item Numbers (CLIN)s include a non- fee bearing Cost reimbursable CLIN, Cost-Plus Award-Fee (CPAF) CLINs, CPAF Technical Options and an Indefinite Delivery Indefinite Quantity (IDIQ) CLIN.

CLIN	CLIN Title	CLIN Type
0001	Paducah Contractor Transition	CR
0101, 0201, 0301	Base Operations and Remediation	CPAF
0102, 0202, 0302	Polychlorinated Biphenyls (PCBs)	CPAF
0103, 0203, 0303	Safe Guards and Security (PA-0020)	CPAF
0104,0204,0304	Worker Pensions & Retirement Health Benefits (fee applies to administration only)	CPAF
0105	OSWDF Cell 1 and Infrastructure	CPAF
0106, 0206,0306	Stabilization and Deactivation	CPAF



# Draft RFP Overview

Technical Options and IDIQ CLIN			
CLIN	CLIN Title	CLIN Type	Estimated Period of Performance
107	C-360 and Loose Convertors Deposit & Equipment Removal and Utility Isolation	CPAF	10/1/18 to 09/30/20
207	C-310 Deposit & Equipment Removal and Utility Isolation	CPAF	10/1/22 to 03/22/25
307	C-310 and C-335 Deposit & Equipment Removal and Utility Isolation	CPAF	03/23/25 to 03/22/27
108	Loose Convertors Tc-99 Thermal Treatment	CPAF	10/1/19 to 09/30/21
208	C-333 Tc-99 Thermal Treatment	CPAF	10/1/22 to 09/30/24
308	C-335 Tc-99 Thermal Treatment	CPAF	10/1/25 to 03/22/27
401	EM.PA.0040.A009.04.DR.01 & any other PWS Section, as necessary	IDIQ	03/23/17- 03/22/27



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# Draft RFP Overview

- The Total Contract Value equals the sum of the base period total amount, the option periods total amount, the technical options total amount, and the IDIQ CLIN ceiling value.
- The IDIQ maximum ordering value of \$112,000,000 is for the full period of performance, including the option periods, if exercised.
- The performance period for the IDIQ CLIN will be extended if the option periods are exercised.



# Draft RFP Overview

## Section F:

- F.3 DOE-F-2003 Period of Performance

Periods of Performance (POP)		
Period	Start	End
Base POP (60 months)*	03/23/17	03/22/22
Option 1 POP (36 months)	03/23/22	03/22/25
Option 2 POP (24 months)	03/23/25	03/22/27

\*Base POP includes 120 day Transition Period.



# Draft RFP Overview

## Section H:

### H.62 Self-Performed Work

- Within one year of contract award, unless otherwise approved in advance by the Contracting Officer, the percentage of work which may be self-performed by the large business(es) of the Contracting Team Arrangement (as described in FAR 9.601(1), Contracting Team Arrangements), shall be limited collectively to not more than 70 percent (%) of the Total Estimated Contract Cost. If a small business is a member of the Contracting Team Arrangement, the small business portion is not part of the 70%. Unless otherwise approved in advance by the Contracting Officer, work to subcontractors outside of the Contracting Team Arrangement shall be performed through competitive procurements after contract award, with an emphasis on fixed-price subcontracts. The Contractor's subcontracted work shall be in compliance with the Contractor's approved Small Business Subcontracting Plan.



# Proposal Prep

## Section L:

- Ensure proposals contains all necessary information, required documentation and is complete in all aspects.

Proposal Volume – Title	Copies Required
Volume I – Offer and Other Documents	1 signed original and 1 copy
Volume II – Technical and Management Proposal Factor 1: Technical Approach Factor 2: Key Personnel Factor 3: Experience Factor 4: Past Performance	1 signed original and 3 copies
Volume III – Cost/Price Proposal	1 signed original and 5 copies



# Proposal Prep

- Solicitation and proposal alignment between PWS, WBS, and cost proposal to allow for efficient establishment of an initial contractor baseline after award.
- The Offeror shall not propose its own WBS structure (including adding to or aggregating PWS elements) for this solicitation
- Verify all areas of the RFP marked To Be Proposed (TBP) are complete.



# Proposal Prep

- L.17 Funding Profile- Offerors shall assume a planned funding profile per the Government Fiscal Year (GFY) as follows:

	FY 17 <sup>2</sup>	FY 18	FY 19	FY20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27 <sup>2</sup>	TOTAL
BASE + POP (INCLUDING TRANSITION) <sup>1</sup>	39	161	162	159	155	146	151	148	145	137	68	1,471
TECHNICAL OPTION CLINS <sup>1</sup>	0	5	10	12	7	0	16	17	23	56	42	188

<sup>1</sup> The dollar amounts are represented in (\$M).

<sup>2</sup> Funding is consistent with the POPs for FY17 & FY27.



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# Proposal Prep

- **L.26 DEAR 952.204-73 FACILITY CLEARANCE (MAR 2011)**
- A Facility Clearance is required prior to the award
- Contractors are encouraged to submit this information through the use of the online tool at <https://foci.anl.gov>.
- When completed the Contractor must print and sign one copy of the SF 328 and submit it to the Contracting Officer.



# Proposal Evaluation Factors

## Section M:

- The Government intends to award without discussions, but reserves the right to hold discussions if the Contracting Officer deems them to be necessary
- Technical Evaluation Factors
  - Factor 1: Technical Approach
  - Factor 2: Key Personnel and Organization
  - Factor 3: Experience
  - Factor 4: Past Performance



# Proposal Evaluation Factors

- Factor 1, Technical Approach, and Factor 2, Key Personnel and Organization, are considered equal in importance, and are each significantly more important than Factor 3, Experience and Factor 4, Past Performance. Past Performance and Experience are considered equal in importance.
- M. 8 DOE-M-2012 Basis for Award:  
Best Value Tradeoff Processes: the evaluation factors for the Technical and Management Proposal, when combined, are significantly more important than the evaluated price.



# Schedule (Tentative)

- Final RFP Released July 2016
- Proposal Due September, 2016
- Proposal Evaluation Period September 2016 – November 2016
- Award NLT March 2017



# Peggy Doherty

## Contractor Human Resources Management



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# Increase Emphasis and Oversight

- **Due to issues with past transitions, DOE is increasing its oversight over the Contractor Human Resource Management (CHRM) Programs.**
- **New language/requirements in Sections C, L, and M**
  - **C.02 – Implementation**
  - **L.13(e) (1) through (8) – Technical Approach**
  - **M.2(h) – Evaluation Factor – Technical Approach**



# RFP Overview- Section H

**Contractor HR Management (CHRM) clauses in the Draft RFP:**

**H.2 DOE-H-2002 No Third Party Beneficiaries**

**H.3 Definitions**

**H.4 Workforce Transition and Employee Hiring Preferences,  
Including Through Period of Performance**

**H.5 DOE-H-2001 Employee Compensation: Pay and Benefits**

**H.6 Special Provisions Applicable to Workforce Transition and  
Employee Compensation: Pay and Benefits**

**H.7 Workforce Transition and Benefits Transition: Plans and  
Timeframes**

**H.8 DOE-H-2004 Post Contract Responsibilities for Pension,  
Other Benefits Plans**



# RFP Overview- Section H

**Contractor HR Management (CHRM) clauses in the Draft RFP:**

**H.9 DOE-H-2028 Labor Relations**

**H.10 Workforce Restructuring**

**H.11 Labor Standards**

**H.12 DOE-H-2003 Worker's Compensation Insurance**

**H.13 DOE-H-2049 Insurance Requirements**

**H.14 DOE-H-2057 Department of Labor Wage Determinations**

**H.15 DOE-H-2073 Risk Management and Insurance Programs**



# CHRM H Clauses

## H.4 Workforce Transition and Employee Hiring Preferences

**Right of first refusal under FAR 52.222-17 applies to current Fluor Federal Services (FFS)& LATA-Sharp Remediation Services (LSRS) Service Employees:**

- For positions for which the service employees are qualified
- Unless he/she declines bona fide job offer

### **Hiring Priorities In Descending Order for Vacancies in Non-Managerial Positions**

1. FFS & LSRS: Right of First Refusal for comparable positions
2. FFS & LSRS: Preference in Hiring for those who meet qualifications
3. FFS & LSRS: Preference in Hiring for those who may not be qualified but agree to be and can be qualified through training by commencement of active employment under contract
4. Former FFS, LSRS, SSI, BWCS, or USEC employees entitled to recall rights consistent with applicable site seniority list and CBAs at Paducah Gaseous Diffusion Plant (PGDP): Preference in Hiring



# CHRM H Clauses

## H.4 Workforce Transition and Employee Hiring Preferences

5. Former FFS & LSRS GF employees eligible for Displaced Employee Hiring Preference : Preference in Hiring
6. Former employees FFS, LSRS, SSI, BWCS, USEC or any other DOE contractor at the PGDP Site eligible for Displaced Employee Hiring Preference: Preference in Hiring
7. Former employees of any other DOE contractor or subcontractor at a DOE defense nuclear facility eligible for Displaced Employee Hiring Preference: Preference in Hiring
8. Former employees of the PGDP by FFS, LSRS, SSI , BWCS or USEC who were involuntarily separated (other than for cause), who are qualified for a particular position or agree to become qualified by commencement of active employment under the Contract: Preference in Hiring
9. Other former PGDP employees who are not precluded from seeking employment, who are qualified or agree to become qualified under the contract: Preference in hiring



# CHRM H Clauses

## H.5 DOE-H-2001 Employee Compensation: Pay and Benefits

- **Incumbent Employees – FFS & LSRS**

- Pay: Equivalent base pay for at least the 1<sup>st</sup> year of the contract, consistent with Service Contract Labor Standards statute.
- Benefits: comparable to FFS and LSRS; Grandfathered employees will remain in ETTP Multi-Employer Pension Plan (MEPP) & ETTP Multiple Employer Welfare Arrangement (MEWA) plans.

- **Non-Incumbent Employees**

- Market based total pay and benefits including medical and retirement plans competitive with your industry

- **Key Personnel**

- **Top Contractor Official:** Base salary requires annual DOE approval; reimbursable total compensation is subject to OFPP Cap
- **Other Key Personnel:** Base salary approval required at time of hire or replacement, and for all salary actions if not included in CIP; total compensation must be below that of Top Contractor Official.



# CHRM H Clauses

## H.6 Special Provisions on Workforce Transition and Employee Compensation: Pay and Benefits

- **Benefit plans: Incumbent Employees**
  - Defined Benefit (DB) and Defined Contribution (DC): Cannot lose right to participate as a result of the contract transition
  - Service Credit for Leave: Length of service carries over for accruing leave
  - Service Credit for Fringe Benefits Other than Leave: Service credit applies as consistent with applicable law, terms of benefit plans, and collective bargaining agreements.
- **Benefit plans: Non-Incumbent Employees**
  - Provides a market-based retirement and medical benefits package that is competitive with the industry in which you recruit and complies with applicable law and contract requirements.



# CHRM H Clauses

## H.6 Special Provisions on Workforce Transition and Employee Compensation: Pay and Benefits

- **Pension and other benefits**
  - FFS and LSRS are Participating Employers of the MEPP and the MEWA for Grandfathered Employees.
  - UCOR is the Lead Sponsor/Plan Administrator, responsible for paying benefits, being the record keepers and filing IRS, DOL and other reports.
  - Paducah D&R contractor is responsible to see that required payments and reporting are made timely.



# CHRM H Clauses

## H.7 Workforce Transition and Benefits Transition

- Workforce Transition Plan
- Benefits Transition Plan

**Critical activities!**

**Make certain you chart the time requirements, understand what is needed to be submitted, plan, and have appropriate resources available.**



# CHRM H Clauses

## H.9 Labor Relations

### Collective Bargaining Agreements:

- **FFS & International Union, Security, Police, and Fire Professionals of America (SPFPA) – January 21, 2016 to July 26, 2017 (28)**
- **FFS & United Steel Workers (USW) Local 550 – TBD (283)**
- **LSRS & United Steel Workers (USW) Local 550 – TBD (68 )**

**Initially consult with, and recognize the unions, bargain in good faith to a collective bargaining agreement. Give due consideration to applicable terms and conditions of existing CBAs**



- 10 Minute Break
- Questions



# Reinhard Knerr

## Federal Project Director



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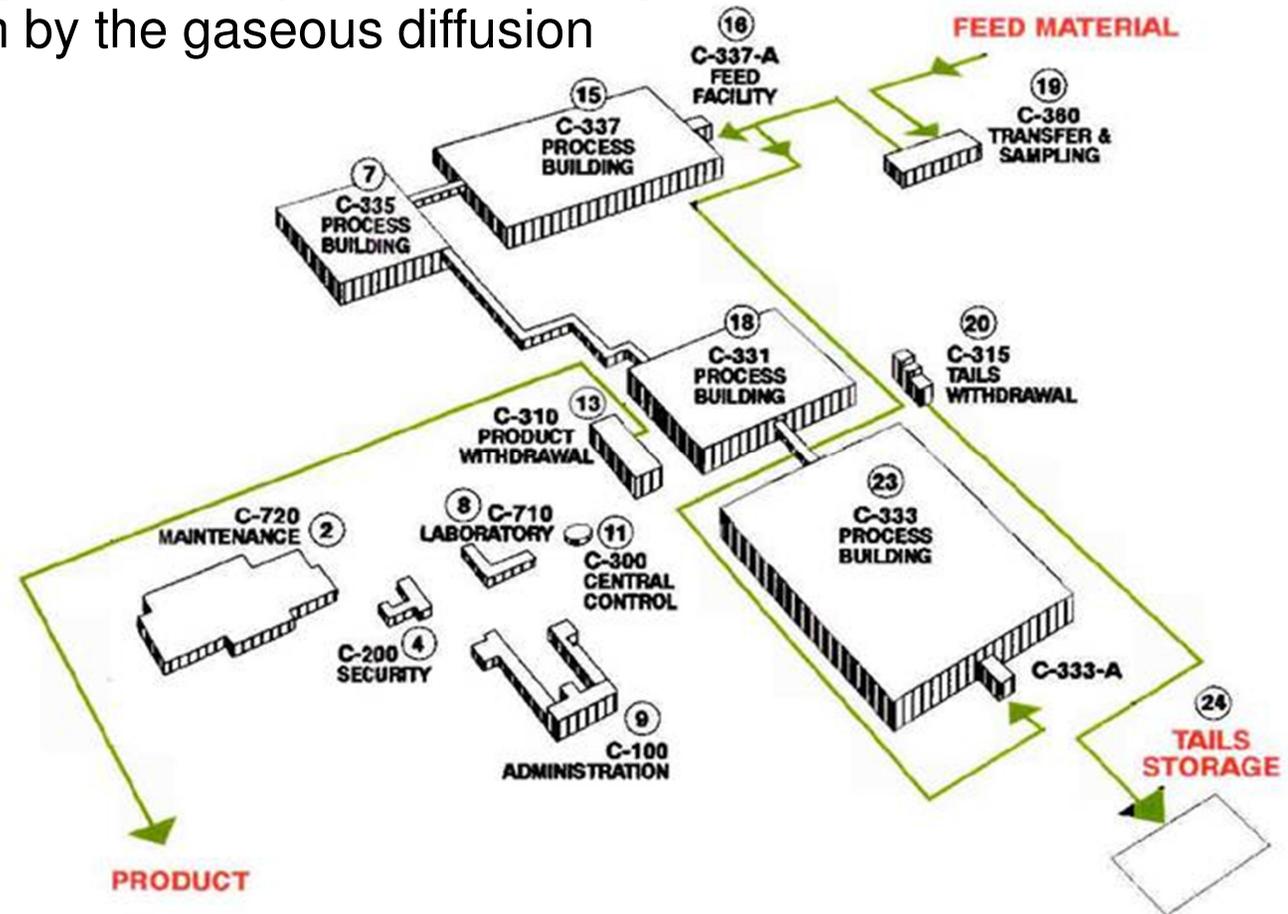
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# Gaseous Diffusion Process

The enrichment process at PGDP occurred primarily in four large cascade process buildings that enrich uranium by the gaseous diffusion process.



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# Contract Purpose and Scope

**The Contract focuses on the continuing Environmental Remediation Projects and Deactivation of the Paducah GDP facilities, while preparing the facilities for future demolition.**

The PWS objectives are:

- Elimination of unnecessary requirements by optimizing and streamlining programs and processes
- Achieve continuous cost and process improvements
- Identify and eliminate systems, processes that are no longer necessary
- Strive to pursue the most cost effective approach for Operations and S&M safely and securely
- Continued removal of hazardous materials (such as uranium and technetium) and actively pursue activities to safely down grade facilities' Hazard Category
- Operate support facilities at the capacity necessary to safely support site needs
- Maintain safe and secure operation of the plant to protect the public, the worker and the environment
- Reduce the overall DOE Paducah GDP landlord costs



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# Performance Work Scope Briefing Agenda

- Transition
- Project Management Support
- Stabilization and Deactivation
- Safeguards and Security
- Surveillance & Maintenance
- Utility Operations
- Waste Operations, Landfill Operations, and PCB Operations
- Environmental Monitoring and Reporting
- Environmental Remediation
- On-Site Waste Disposal Facility
- Analytical Laboratory Operations



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# Transition

**Transition may commence immediately upon issuance of Notice to Proceed (NTP) and shall not exceed 120 days. Be prepared to fully mobilize when the NTP is issued.**

- Declaration of Acceptance of Operational Responsibility
- Implementation
  - Executive Summary Placed on Website 48 hours after NTP
  - Complete Mobilization of Transition Management Team 7 days after NTP
  - Submit Contract Transition Plan 15 days after NTP
  - Submit Initial CPB within 7 days after NTP
  - Modify all existing regulatory permits to reflect new Contractor as stipulated by regulation, statute, law, or permit requirements prior to conclusion of Transition
  - Weekly Transition Status Reports



# Transition

Comprehensive environmental compliance that certifies the results of the review.

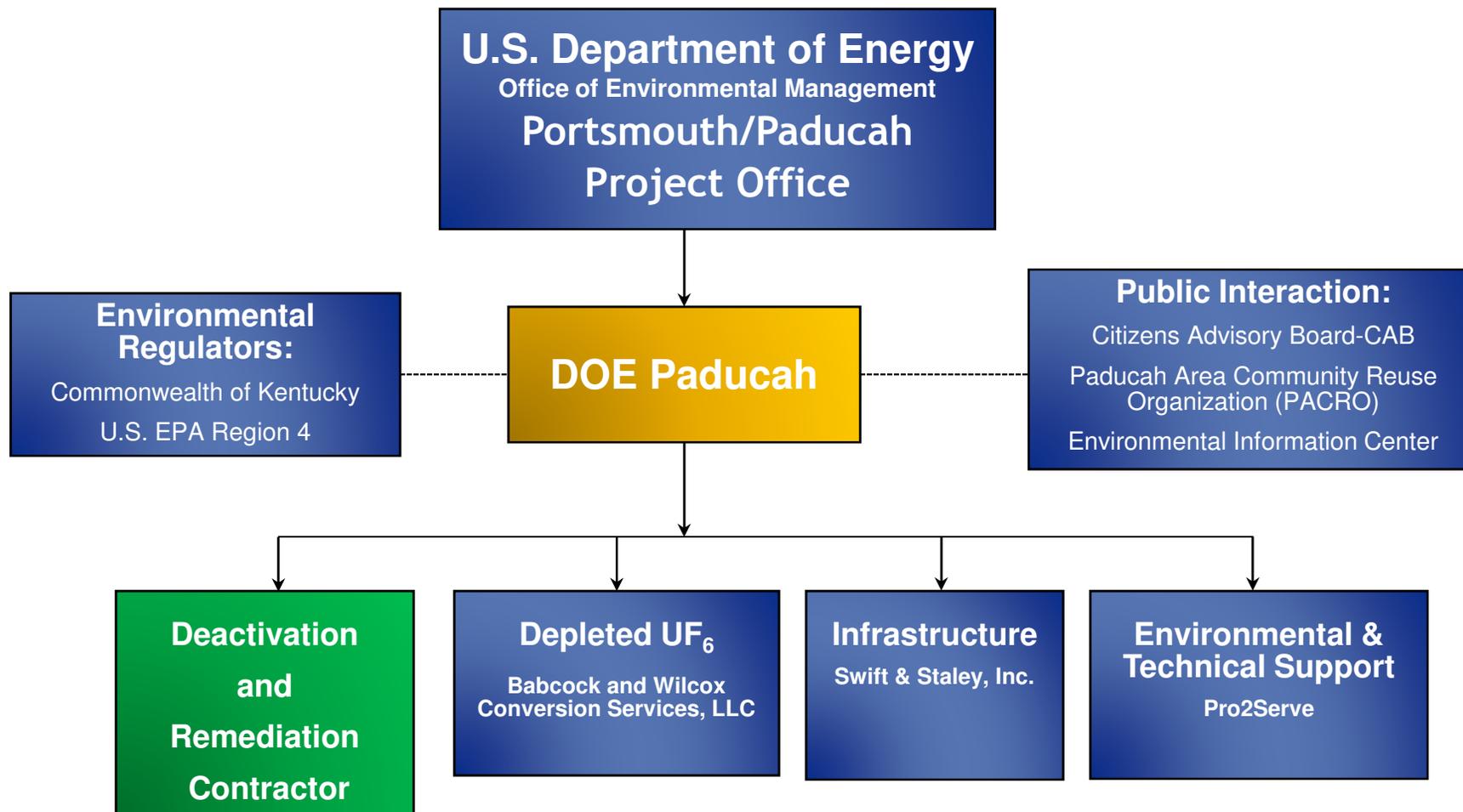
- List of site conditions that pose a potential compliance risk for DOE and/or the Contractor;
- Declarative statement, by the Contractor, of acceptance of all site environmental conditions, with noted exceptions; and
- Evidence that all existing site environmental permits have been modified to identify the Contractor as an operator.

## Statement of Material Differences.

- Contract section(s) that are impacted
- Specifically identify the sections of the Contractor's proposal (Technical and Cost Volumes) that conflict with the site conditions
- Any/all reference material on which the Contractor is relying.



# Current Paducah Site Contracts



# Services Provided by Deactivation and Remediation Contractor to Other Site Contractors

- Nuclear Materials Control and Accountability (NMC&A)
- Shared Site Process
- Lock & Tag Program
- Emergency Management, Fire & Rescue
- Emergency Operations
- Water Systems
- Wastewater Systems
- Electrical Transmission, Distribution, & Energy Management
- Natural Gas
- Protective Force Program
- Environmental Permits



# Services Provided by Infrastructure Contractor To Deactivation and Remediation Contractor

- Pest Control Services
- Janitorial Services
- Roads & Grounds
- Fleet Management
- Maintain/Administer the Site Wide Real and Personal Property Management System
- Records Management and Document Control
- Intra-Site Mail Services
- Environmental Information Center Operations
- Network Administration
- Maintain Radio & Landline Telephone Systems
- Provide General Site Training
- Coordination of Utilities in Remote Areas Outside Limited Area
- Calibration of Radiological Instrumentation
- Safeguards & Security Program
- Railroad Services



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# Services Provided by DUF6 and ETS Contractors To Deactivation and Remediation Contractor

DUF <sub>6</sub>	DEACTIVATION AND REMEDIATION
<p><b>Cylinder Management.</b> Manage the DOE DUF<sub>6</sub> cylinder inventory, including cylinder inspections, on-site transportation of cylinders, and maintenance of the existing DUF<sub>6</sub> cylinder yards. Take receipt of newly generated DUF<sub>6</sub> cylinders.</p>	<p>Identifies cylinder yard storage needs or necessary on-site transportation of cylinders and requests cylinder movements formally through DOE at least 3 months in advance of need date.</p>
ETS	DEACTIVATION AND REMEDIATION
<p><b>Project Management.</b> Maintain the site-wide, integrated life-cycle baseline</p>	<p>Provide a Life-cycle Plan to be integrated with the site-wide life-cycle baseline and provide input and routine updates to the life-cycle baseline.</p>



# Project Management Support

- Project Planning & Integration Support
- Project Management
- Environment, Safety, Security, Health, and Quality
- Real and Personal Property Management
- Automated Supply Pilot Project
- Asset Recovery and Recycling
- Energy Efficiency
- Records Management
- Continuity Program
- DOECAP
- Worker Pensions and Retirement Health Benefits
- Nuclear Materials Control & Accountability
- Communications and Information Technology



# Stabilization and Deactivation

## EM.PA.0040.A008.48.DR

In general “stabilization” refers to the early stages of the deactivation process when nuclear and hazardous materials are removed from the facility, shutting down of facility systems, de-energizing equipment in preparation for long-term S&M, completely isolating (i.e. “air gapping”) the facility from site utilities, removal of all fire loading, and preparing the facility for long-term surveillance awaiting demolition.

Critical stabilization activities in this Contract include the removal of uranium deposits using *in-situ chemical treatment* (ICT); mechanical removal of equipment and piping containing fissile material; technetium-99 ( $^{99}\text{Tc}$ ) thermal treatment; removal of lube oils, Freon, or other hazardous materials; and utility isolation in process buildings.



# Stabilization and Deactivation

## EM.PA.0040.A008.48.DR

Stabilization and Deactivation Scope includes the following work:

- Deposit/Hold-Up Removal - EM.PA.0040.A008.DR.01.01
- <sup>99</sup>Tc Thermal Treatment - EM.PA.0040.A008.DR.01.02
- Bypass Piping and Trapping Equipment - EM.PA.0040.A008.DR.01.03
- Equipment Removal - EM.PA.0040.A008.DR.01.04
- Utility/Instrument Line Isolation - EM.PA.0040.A008.DR.01.05



# Stabilization and Deactivation – Deposit/Hold-Up Removal

## EM.PA.0040.A008.48.DR.01.01

Due to enormous surface area of the uranium process systems within the Paducah cascade, a significant amount of uranium has been chemically and physically absorbed to the inner walls of the piping and cell components (commonly referred to as hold-up)

Uranium deposits are also caused by wet air in leakage

- Upon entering the cascade, moisture in the air reacts with  $UF_6$  to form various uranium oxy-fluoride solids that are deposited near the leak
- The uranium deposits can range from a few pounds caused by seal failures to several hundred pounds from expansion joints



# Stabilization and Deactivation – Deposit/Hold-Up Removal

## EM.PA.0040.A008.48.DR.01.01 (Cont.)

Deposit/Hold-Up Removal requirements (for listed facilities) include:

- Completing deposit/holdup removal such that uranium processing facilities are in a “crit-incredible” condition
- Performing deposit/hold-up removal from the process equipment (including all piping/lines located inside of the boundaries of the cell block valves)
- Performing deposit/hold-up removal from convertors, compressors, equipment that was cut out of operating cells (these convertors are stored in various locations within the process buildings and in outside storage areas)
- Completing all additional design, testing, or operational activities required to ensure effective operations of the PCTC and Test Buggy system to maximize in-situ chemical treatment of deposits
- Completing design, procurement, installation, and testing for required PGDP facility modifications necessary to support the deposit/hold-up removal using the PCTC Systems
- Completing design, procurement, installation, and testing for PGDP facility modifications necessary for regeneration and change-out of NaF trapping material associated with the use of the PCTC System
- Transfer of any large cylinders generated as part of deposit/hold-up removal to the DUF<sub>6</sub> Contractor



# Stabilization and Deactivation – $^{99}\text{Tc}$ Thermal Treatment

## EM.PA.0040.A008.48.DR.01.02

Portions of the GDP cascade have been contaminated with  $^{99}\text{Tc}$  that accompanied spent reactor fuel that was reprocessed in the past at the PGDP. This cascade equipment must be treated to remove the  $^{99}\text{Tc}$  to levels that will allow the disposal of the equipment in the a future onsite waste disposal facility (OSWDF).

The contractor shall develop, select, and implement an approach to thermally treat the converters to reduce  $^{99}\text{Tc}$  levels to below the waste acceptance criteria of the OSWDF.



# Stabilization and Deactivation – $^{99}\text{Tc}$ Thermal Treatment

## EM.PA.0040.A008.48.DR.01.02 (Cont.)

The contractor shall address the following requirements during the development, evaluation and implementation of the thermal treatment technique:

- Minimize the potential for redepositing of  $^{99}\text{Tc}$  in/on equipment/components during the process
- Acquire necessary equipment (skid mounted or mobile systems to replace removed utilities), as necessary, to implement the thermal treatment technique and to capture the liberated  $^{99}\text{Tc}$
- Contractor may select to use the PCTCs used for Deposit/Hold-up removal activities as an approach to capturing the liberated  $^{99}\text{Tc}$
- Upon completion of  $^{99}\text{Tc}$  thermal treatment activities, remove any remaining instrument lines, piping, or equipment necessary to achieve criticality that was left in place to support  $^{99}\text{Tc}$  thermal treatment



# Stabilization and Deactivation – Bypass Piping and Trapping Equipment

## EM.PA.0040.A008.48.DR.01.03

Where the use of the PCTC systems may not be warranted, the Contractor shall :

- complete deposit/holdup removal and additional hazard reduction/stabilization activities in piping outside the cell block valves (including the cell block valves) and all tie-lines connected to the facility
- complete deposit/holdup removal in all additional UF<sub>6</sub> piping/lines that have not been addressed by WBS EM.PA.0040.A008.48.DR.01.01
- complete deposit/hold-up removal in all chemical traps
- complete deposit/hold-up removal in treatment/support equipment that operated in an UF<sub>6</sub> environment (cold boxes, surge drums, valves, pumps, etc.).

The Contractor shall submit all documentation necessary to support criticality incredibility, including authorization basis changes to downgrade the uranium processing facilities to radiological facilities and gain DOE approval.



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# Stabilization and Deactivation – Equipment Removal

## EM.PA.0040.A008.48.DR.01.04

Where the use of the Portable Cell Treatment Cart systems may not be warranted, the Contractor shall:

- disposition any loose or spare equipment/materials containing fissile (e.g., deposit/hold-up) materials
- disposition any remaining equipment that contains fissile material precluding the building from achieving crit-incredible status
- dispose of any fissile equipment and not return the item after the fissile material has been removed, unless agreed to by DOE
- transfer of any large cylinders generated as part of deposit/hold-up removal to the DUF<sub>6</sub> Contractor



## Stabilization and Deactivation – Utility/Instrument Line Isolation

EM.PA.0040.A008.48.DR.01.05

### The Contractor shall:

- isolate and air gap all of the utilities supporting/feeding the facilities listed in the performance work scope
- remove all temporary power/utilities service and remaining fire loading (including any resulting from the treatment processes) in the listed facilities
- deactivate or configure the listed facilities in a manner that eliminates the need for freeze protection
- submit all supporting documentation and authorization basis changes for deactivation of the fire suppression systems in these listed facilities



# Mark Allen

## Security Specialist



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# Safeguards and Security

## EM.PA.0020.A001.03.DR

While the Infrastructure Support Services Contractor is the Officially Designated Security Authority (ODSA) at the Paducah site and has the primary role for administering the Safeguards and Security program, to include establishing the appropriate site security posture for all DOE operations consistent with the scope of the Infrastructure Support Services Contract, the Deactivation and Remediation Contractor also plays a significant role in support of site security.



# Safeguards and Security – Security Program

## EM.PA.0020.A001.03.DR.01

- The Contractor is responsible for executing their contract scope in accordance with the approved Site Security Plan (SSP) developed by the OSDA.
- In support of SSP development and implementation, the Contractor shall:
  - Consult with the Infrastructure Support Services Contractor in preparation of the plan
  - Ensure that the Project Security Plans meet both near term and long term operational needs prior to signature
  - Notify the OSDA of all Incidents of Security Concern (IOSC) at the site or related to the implementation of the Contract
  - Provide derivative classifiers, as necessary, to support implementation of the Contract.
- The Contractor shall ensure operations are fully consistent with all approved security plans applicable to the Contractor programs including, but not limited to facility security, personnel security, physical security (including visitor control and automated access control site requirements), cyber security, Operations Security (OPSEC), and information security.



# Safeguards and Security – Protective Force Services

## EM.PA.0020.A001.03.DR.02

The Contractor shall implement, maintain and provide a Protective Force program and services for the protection of classified matter, special nuclear material (category IV, attractiveness level E), chemicals, and site personnel and property in accordance with DOE requirements consistent with the contract and the approved Site Security Plan.

- Protective Force services shall include:
  - Staffing and maintenance of a trained DOE armed Protective Force
  - Providing all necessary equipment for use by the Protective Force (e.g. weapons, body armor, and masks)
  - Maintenance of site facilities, including training facilities, to implement and maintain compliance with Site Security Plan
  - Development of (in consultation with the ODSA) the Protective Force/Nuclear Material Control & Accountability sections of the SSP and provide them to the ODSA
  - Developing and executing an annual force-on-force exercise
  - Staffing to address the active shooter scenario for all facilities and areas on the PGDP reservation
  - Providing routine access to the Department, Infrastructure Support Services contractor, DUF6 contractors and others having official business into the security areas of the plant in support of their operational needs.



# April Ladd

## General Engineer



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# Surveillance and Maintenance of Facilities

## EM.PA.0040.A008.41.DR.01

- Perform routine surveillance and maintenance (S&M) of all DOE-owned facilities assigned to the Contractor through the end of the contract
- Develop, document, and maintain an S&M Program Plan as appropriate for all facilities within the Contractor's responsibility
- Tailor S&M during the facility life-cycle in accordance with DOE O 430.1B, Real Property Asset Management, and 10 CFR 851, Worker Safety and Health Program
- Provide preventive and corrective maintenance using a graded approach on buildings, trailers and other structures assigned to the Contractor



# Surveillance and Maintenance of Facilities

## EM.PA.0040.A008.41.DR.01 (Cont.)

A graded approach is defined as the process of ensuring that actions used to comply with a requirement are commensurate with:

- 1) the relative importance of safety and safeguards and security,
- 2) the magnitude of any hazard(s) involved,
- 3) the life cycle stage of the facility,
- 4) the programmatic mission of the facility,
- 5) the particular characteristics of the facility,
- 6) the relative importance of the radiological and non-radiological hazards, and
- 7) any other relevant factor.



# Surveillance and Maintenance of Facilities

## EM.PA.0040.A008.41.DR.01 (Cont.)

- Conduct preventive, predictive, and corrective maintenance actions only necessary to support near-term Contractor or site tenants/contractors operations
- Ensure that an electronic S&M tracking/work processing software package is used to integrate historical S&M data with S&M work requests for subsequent scheduling
- Ensure that no systems, equipment, or items related to safety (including defense in depth) are degraded for more than 30 days without written DOE consent
- Ensure that long-lead or critical spares are in on-site inventory where practical
- Ensure mitigating actions are put in place within 24 hours of identifying a degraded system, equipment, or item related to safety



# Surveillance and Maintenance of Facilities

## EM.PA.0040.A008.41.DR.01 (Cont.)

- Minimize and reduce the occupation of facilities to the maximum extent practicable with the goal of reducing utility and S&M costs and maximizing personnel productivity
- Maintain the operability of critical equipment such as the criticality accident alarm systems and public warning systems, monitor radiological conditions, and check and maintain safety-related items
- Perform minimally required facility inspections including equipment and/or structure
- Remove and disposition permanently unoccupied temporary facilities (e.g. trailers) or small structures to preclude degradation that would result in increased cost to DOE
- Provide to DOE an Annual Site Facility Occupational Status Report that documents which facilities are routinely occupied and the plans associated with unoccupied facilities



# Surveillance and Maintenance of Facilities

## EM.PA.0040.A008.41.DR.01 (Cont.)

- Maximize the recycling of excess materials and equipment to reduce project costs in accordance with DOE O 436.1, including leading efforts to gain approval for recycling scrap metals



- Support DOE's reindustrialization and asset utilization activities at the site



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# Facility Roofs

## EM.PA.0040.A008.41.DR.02

- Ensure that all Category 2 nuclear facility roofs do not leak.
- Immediate actions must be taken to mitigate leaks that develop in Category 2 nuclear facility roofs and permanent repairs must be made within 60 days of discovery.
- Ensure that roof leaks in non-Category 2 nuclear facilities do not impact operational activities (defined as taking an action that adjusts the operation from pre-leak condition/configuration, including modifying operator PPE).
- Leaks in non-Category 2 nuclear facilities must be permanently repaired within 90 days of discovery.
- Assess the structural integrity of the roofs 30 days after transition and annually thereafter.
- Provide DOE a report of the structural integrity of the roofs within 30 days of completing the assessment, including the costs and schedule for repair of the roofs.
- Repair deficiencies in a compliant, timely manner and prevent water leakage.
- Recently resurfaced roofs on C-310, C-310-A, C-331, C-333, C-335, C-337, and C-720 shall be maintained such that the roof warranty is not invalidated.



# Utility Operations

EM.PA.0040.A008.42.DR.01

- Operate and maintain utilities to the extent necessary and ensure utility services are provided to site tenants.
- Work with the other site tenants/contractors to ensure that decisions to provide these services are based on overall cost effectiveness.
- Install and track meters for the usage of power, natural gas, water, and other fuels when repairs are made to the utility service for a building/group of buildings.
- Maintain a list of meters added and deleted and provide the list to DOE within 12 months after transition and annually thereafter.



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# Steam, Chilled Water, Compressed Air, and Waste Heat Systems

EM.PA.0040.A008.42.DR.02

- Operate and maintain the existing five (5) package boilers units (22,500 pounds/hour each) to meet the site demands of up to 100,000 pounds/hour.
- Package boilers should be removed as site-wide demand is reduced.
- Ensure that the facilities currently using steam for heating have a replacement heat supply installed if the facility is going to continue to be occupied/operated.
- Develop and submit to DOE the plan and schedule for replacing the heat source to facilities that are going to remain operational within 12 months after transition.
- Operate and maintain recirculating heat and chilled water systems until shutdown of the facilities that require these systems.
- Ensure that facilities using chilled water or the recirculating heat system have replacement heating/cooling installed if they are going to continue to be occupied/operated.
- Operate and maintain dry compressed air distribution system until the Contractor can modify the system to shutdown and discontinue use of the plant-wide dry air distribution system.



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# Water Systems

## EM.PA.0040.A008.42.DR.03

- Ensure the operation and maintenance of the permitted C-611 Water Treatment Facilities and provide potable and non-potable (process) water to the site's contractors/tenants
- Continue to operate the existing on-site water treatment facilities and distribution network until a commercial/community water supplier connects and begins to provide water to the site
- Complete all actions, including design, procurement, and construction necessary to place the in-coming water lines from the local water district into service, while minimizing the operation and maintenance of the existing on-site water treatment facilities and systems
- Develop and submit to DOE a plan and detailed schedule that identifies the facilities/systems to be shut down and those required to continue to operate after connection to the local water district
- Ensure sufficient water capacity remains on-site in support of fire suppression systems and firefighting response actions



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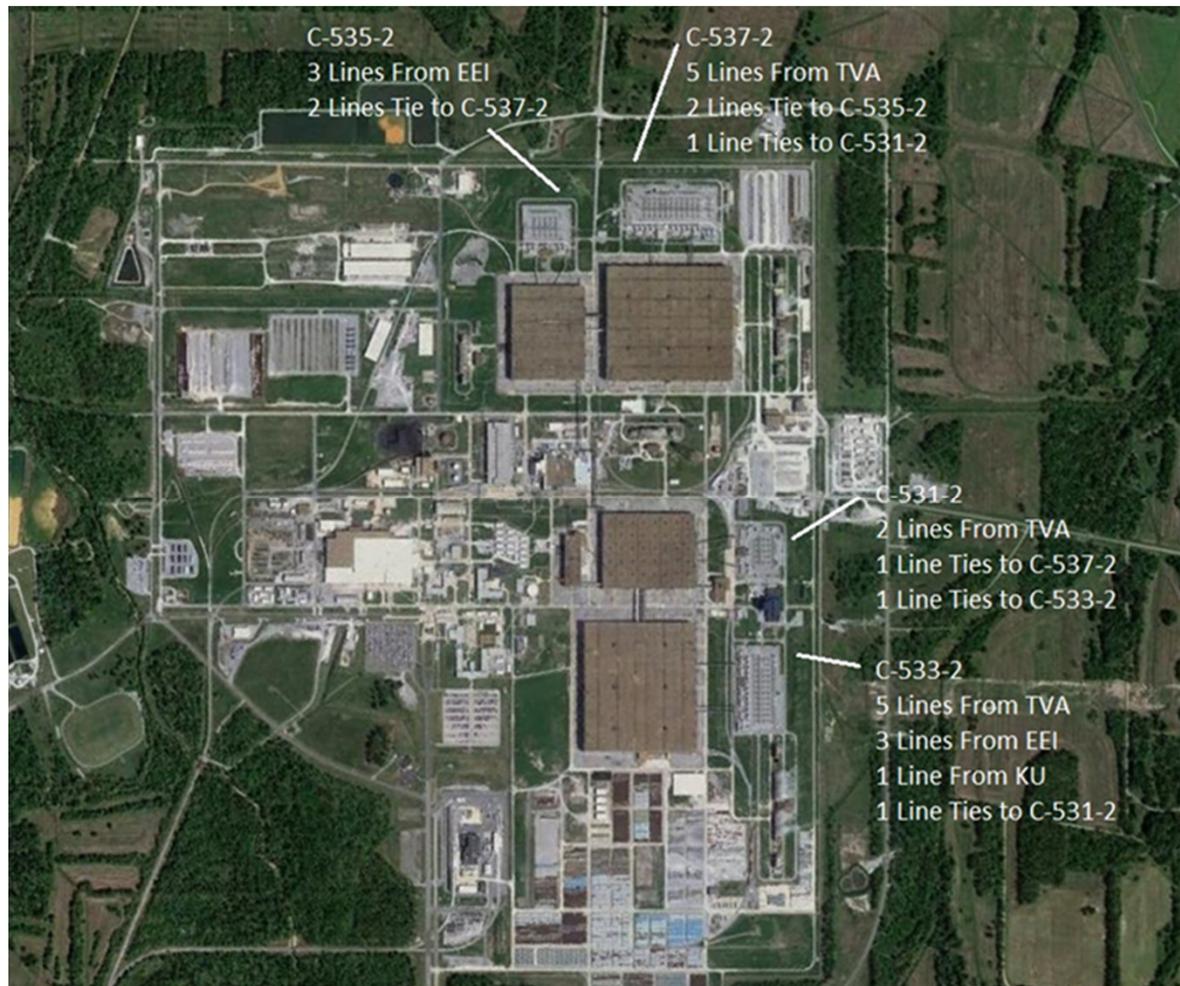
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# Electric Power Distribution

## EM.PA.0040.A008.42.DR.04

- Of the eighteen transmission lines entering the PGDP, twelve are owned by the Tennessee Valley Authority (TVA) and six are owned by EEI.
- Kentucky Utilities owns one line that comes to the plant and goes out but does not provide feed to the plant.
- In addition the four PGDP switchyards are connected by five 161kV tie lines owned by DOE.



# Electric Power Distribution

## EM.PA.0040.A008.42.DR.04 (Cont.)



- C-531, C-533, C-535, and C-537 switchyards contain the 161 kilovolt (kV) electrical system components necessary for operation of the PGDP.
- The plant was built with the capacity to provide up to 3000 megawatts of electricity.
- The plant typically operated at between 900 megawatts and 2000 megawatts of electrical power, depending on the plant's production targets and availability of reasonably priced power. Currently, the plant is using approximately 15-35 megawatts.
- Electrical power comes into the plant at 161,000 volts through the overhead transmission lines from TVA's Shawnee Steam Plant and Electric Energy, Inc. (EEI) at Joppa, Illinois.
- The power system was designed to flow through more than 80 circuit breakers to large transformers (35) located throughout the plant.
- In 2015 a project was completed to reconfigure all 14kV power to be fed from the C-531 switchyard



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# Electric Power Distribution

## EM.PA.0040.A008.42.DR.04 (Cont.)

- Complete all actions necessary to construct the 14KV distribution lines/system by-passing the C-531 Switchyard and tie those lines into the a new switchyard (to be built by others), place the new switchyard into service, and ensure as-built drawings are provided.
- Shut-down the C-531 Switchyard upon completing tie-ins to the new switchyard.
- Maintain and operate the 14kV Power Distribution systems at the site.
- Maintain the high side of the site's four switchyards in accordance with the requirements established by the regional reliability coordinator (TVA), until TVA, EEI, or KU have migrated the 161KV lines away from the switchyards.
- Shutdown and isolate the high side of the switchyards and eliminate all power (including any ancillary or station power) and other utility services to the switchyards and associated ancillary facilities as utilities migrate 161kV lines away from switchyards.
- Project the power needs for all site operations (including infrastructure and DUF<sub>6</sub> needs) for a five-year period and update that projection quarterly.



# Sewage Treatment Systems

## EM.PA.0040.A008.42.DR.05

The C-615 Sewage Disposal Plant consists of chemical, mechanical, and biological treatment prior to discharge. The plant provides secondary treatment. It consists of a comminutor, primary and secondary settling basins, trickling filter, sludge digester and settling beds, chlorinator, and contact chamber. The sewage collection system services all the occupied plant buildings with the exception of some remote facilities.

The Contractor shall:

- Provide sewage handling and treatment services to the site's contractors/tenants
- Continue isolation of low use or damaged sewer lines and transition to the use of contractor-supplied self-contained restroom facilities
- Prepare an alternatives analysis to replace, modify, repair, optimize or supplement the existing sewage treatment system, the existing sewage lines, and the existing sewage collection and treatment systems and facilities
- Perform a smoke test to verify the integrity of the sewage lines and determine where blocks or leaks exist and incorporate the results into the alternative analysis.



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# Waste Operations

EM.PA.0040.A002.04.DR.01

- Operate and maintain a Waste Management Program compliant with regulatory and DOE requirements
- Submit and maintain a Waste Management Plan
- Perform waste treatment, packaging, transportation, and disposal of waste as necessary
- Assist DOE in evaluating disposal site alternatives (e.g., cost/benefit analyses, NEPA documentation)
- Ensure operations of storage areas or facilities comply with applicable permits, orders, and regulatory requirements
- Maximize use of recycling excess materials and equipment to reduce project costs



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# Landfill Operations

## EM.PA.0040.A002.05.DR.01

- The C-746-U landfill is currently operational and the C-746-S and T landfills are closed.
- Perform all activities to 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
- Accept waste (including waste from other site contractors or TVA) that meets the requirements of the permit
- Operate and maintain the leachate collection and treatment systems
- 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
- Be designated as the waste generator and responsible for making waste determinations at the site
- Enter into a RCRA co-generator agreement with DOE consistent with the existing agreement at the Paducah Site



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# Polychlorinated Biphenyls (PCBs) Operations

## EM.PA.0011.A001.01.DR.02

- Perform S&M of the PCB collection and containment trough system including disposition of the collected PCB lube oils to the extent necessary
- 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
- If required for regulatory compliance, collect quarterly air quality data throughout the cascade buildings, and submit quarterly and annual reports
- Collect and prepare the data needed to conduct the technical/scientific analysis; prepare draft permit or other regulatory document changes; and take any other necessary actions to support successfully obtaining a discontinuance or a reduction in the levels of PCB sampling and reporting to the U.S. EPA
- Evaluate the requirements of the TSCA FFCA as the Contractor implements actions to deactivate and isolate the enrichment facilities and determine how to comply with or modify the agreement in order to minimize cost to DOE



# Tracey Duncan

## General Engineer



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# Environmental Monitoring and Reporting

## EM.PA.0040.A001.01.DR.01

Perform programmatic Environmental Management System functions:

- Perform ongoing environmental monitoring of on-site and off-site air, soils, and water, and reporting the results to DOE and regulators
- Maintain, repair, or replace the equipment used in support of environmental monitoring
- Continuously optimize the environmental monitoring program (EMP)
- DOE and/or regulatory approval necessary prior to making changes to the EMP



# Environmental Monitoring and Reporting

## EM.PA.0040.A001.01.DR.01

Perform all environmental monitoring and reporting tasks such as:

- Monitor and maintain the structural integrity of the groundwater monitoring wells (currently estimated at 336) as identified in Appendix B of the EMP CP2-ES-0006/R0
- Sampling and maintaining outfalls
- Sampling Seeps
- Performing in-stream surface water locations
- Collecting sediment from monitoring locations
- Sampling aquatic and other biota, as needed
- Performing ambient air monitoring
- Performing landfill surface water and leachate monitoring
- Managing environmental thermoluminescent dosimeter (TLD) monitoring at an estimated 40 locations
- Conduct monthly inspections of C-746-K and C-404 burial ground caps, and provide corrective maintenance as required. This includes cap maintenance and management of the leachate collection sump at C-404.



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# Environmental Monitoring and Reporting

## EM.PA.0040.A001.01.DR.01



- 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 10) to allow DOE to access and sample off-site monitoring and residential wells
- Maintain the license agreement with Kentucky Fish and Wildlife for management of the approximately 1,986 acres of DOE property
- Operate and maintain the Oak Ridge Environmental Information System (OREIS), Geographical Information System (GIS), Paducah Project Environmental Measurement System (Paducah PEMS), and Paducah Data Warehouse that is not OUO that is accessible by the public - includes maintaining the site groundwater modeling program(s) and support of routine groundwater modeling meetings with EPA and KDEP
- Perform site-wide environmental regulatory management for all site-wide permits, permit applications, and reports; site-wide NEPA documents; site-wide environmental reports, etc.
- Administer the site program, and provide required environmental information to support regulatory compliance, and responsible for compliance in areas under its cognizance, including NEPA



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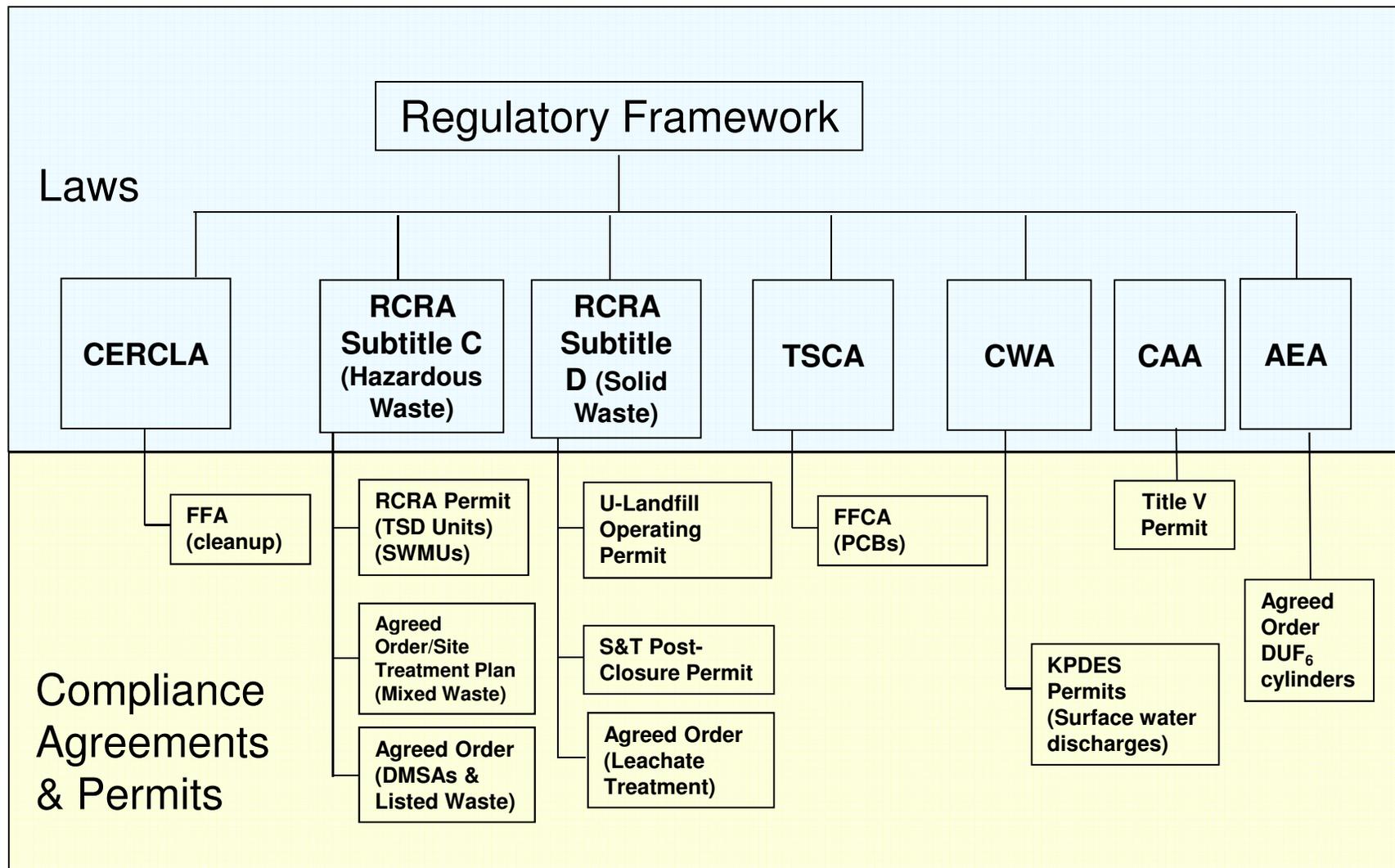
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# Environmental Monitoring and Reporting

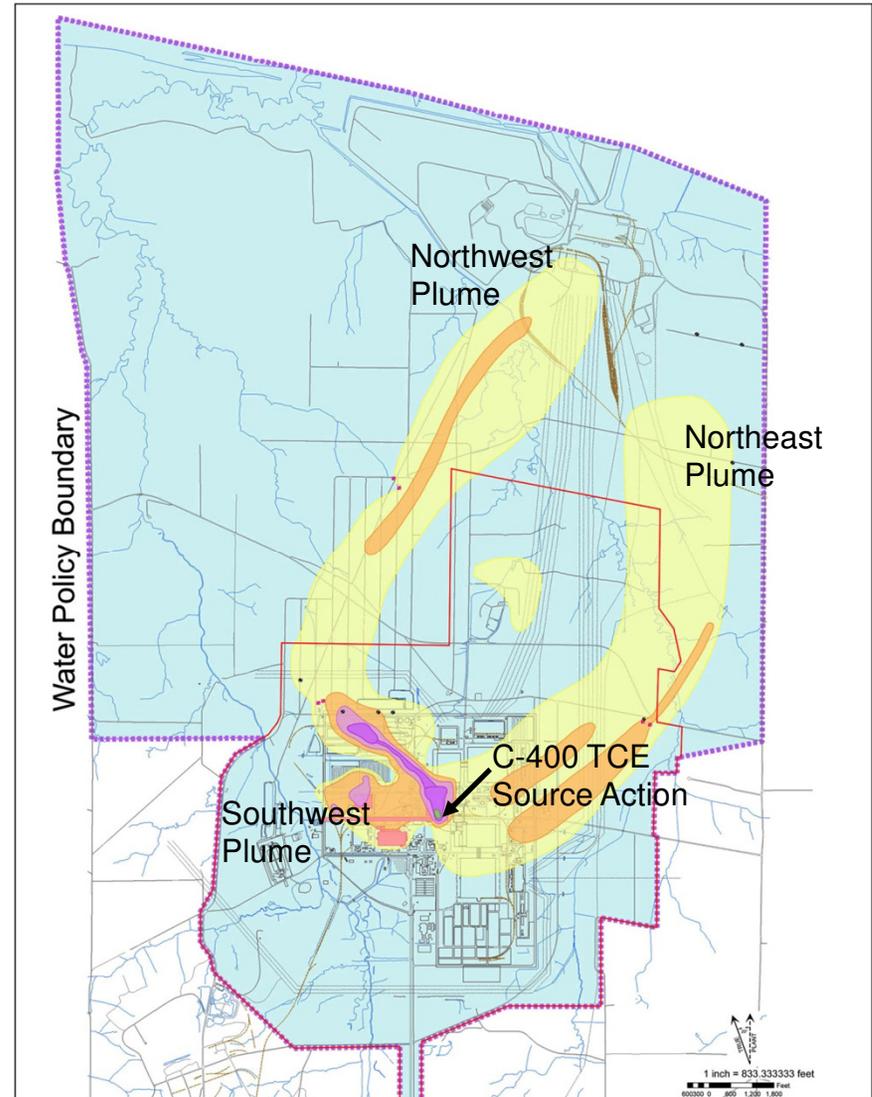
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# C-400 Phase IIb

## EM.PA.0040.A005.03.DR.01

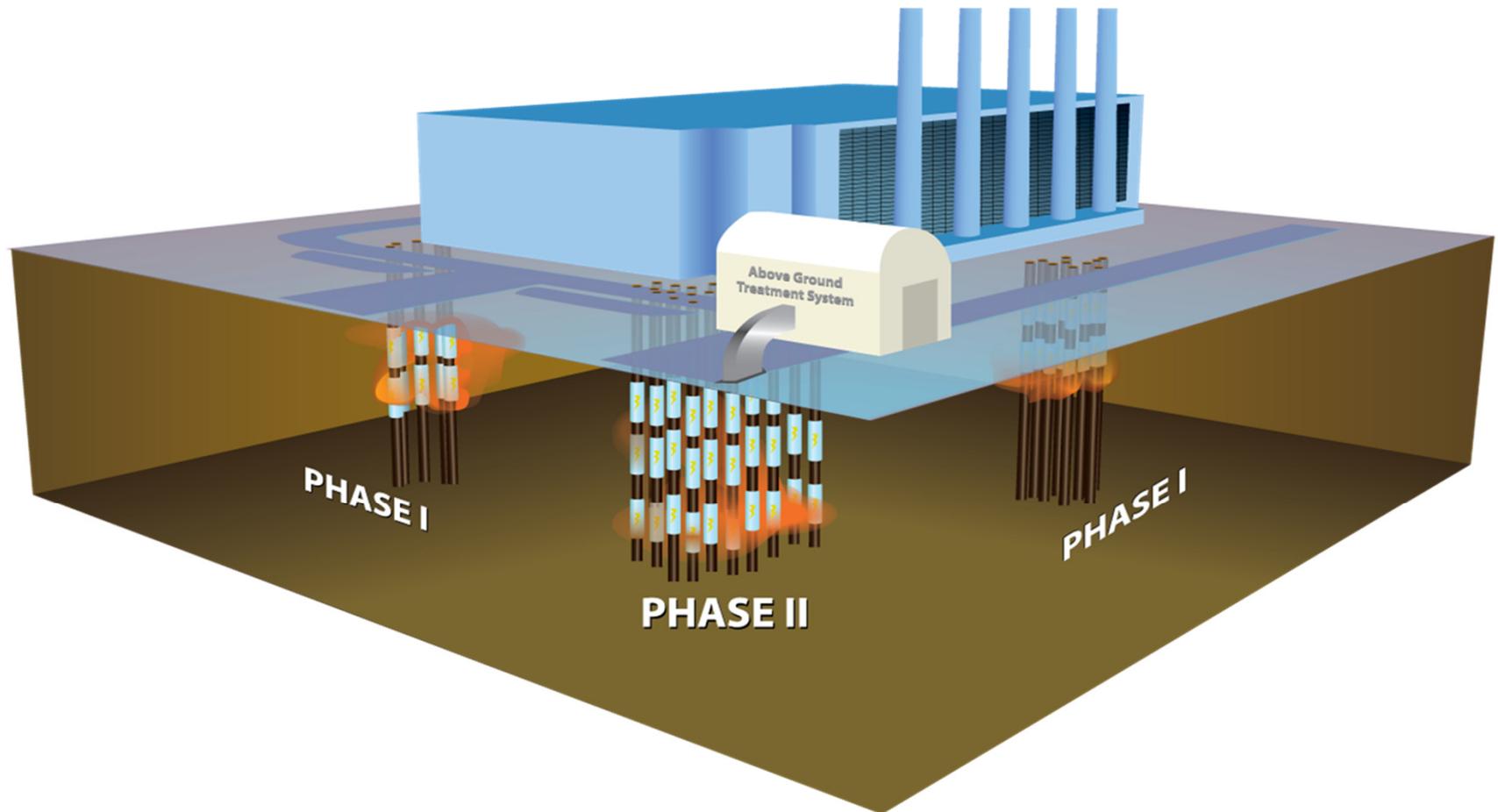
- Complete the ongoing remediation of the C-400 (Phase IIb) sources, including design, construction, testing and operation of the treatment system, shutdown and removal of the treatment system, development and submittal of all regulatory documents and reports, demobilization, site restoration and compliant waste disposal
- Complete all applicable CERCLA documentation for Phase IIb, including the 30%, 60%, 90%, CFC design packages, the RAWP, a post construction report, and a RACR.



# C-400 Phase IIb

## EM.PA.0040.A005.03.DR.01 (Cont.)

The RACR shall include the results of all phases of the C-400 source remediation activities (Phase I, Phase IIa, and Phase IIb).



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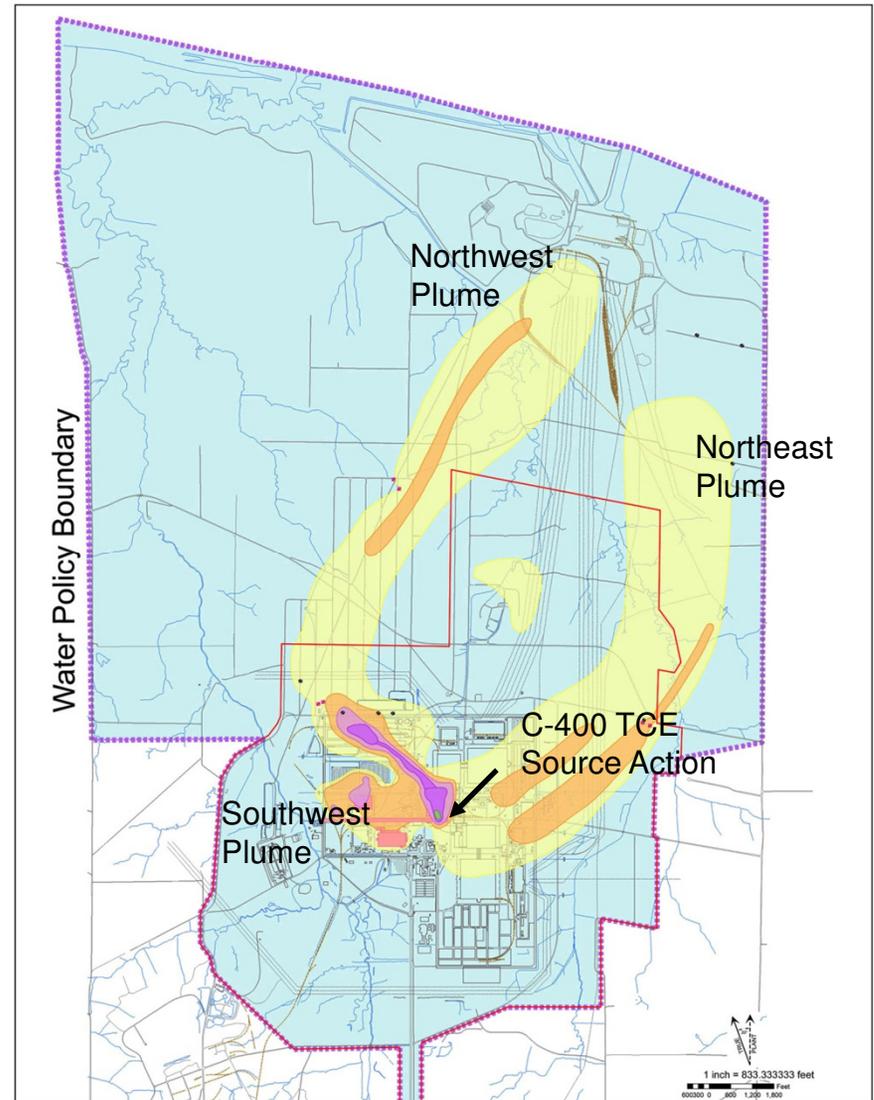
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# C-400 Building Subsurface Groundwater Source Remediation

## EM.PA.0040.A005.10.DR.01

- Complete an investigation, including any and all sampling, to determine the nature and extent of any TCE contamination that might extend beneath the C-400 Cleaning Building, beyond the currently known TCE source areas around C-400
- Develop and submit to DOE and the regulatory agencies all applicable CERCLA documentation, including any sampling and analysis plans necessary to complete the investigation



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# C-400 Building Subsurface Groundwater Source Remediation

## EM.PA.0040.A005.10.DR.01 (Cont.)



Develop and submit to DOE and the regulatory agencies all applicable CERCLA documentation (e.g., revised or new Proposed Plans, Records of Decision, Explanations of Significant Differences, Design Packages, Remedial Design Work Plans, Remedial Action Work Plans) necessary to complete remediation of any TCE contamination that extends beneath the C-400 Cleaning Building



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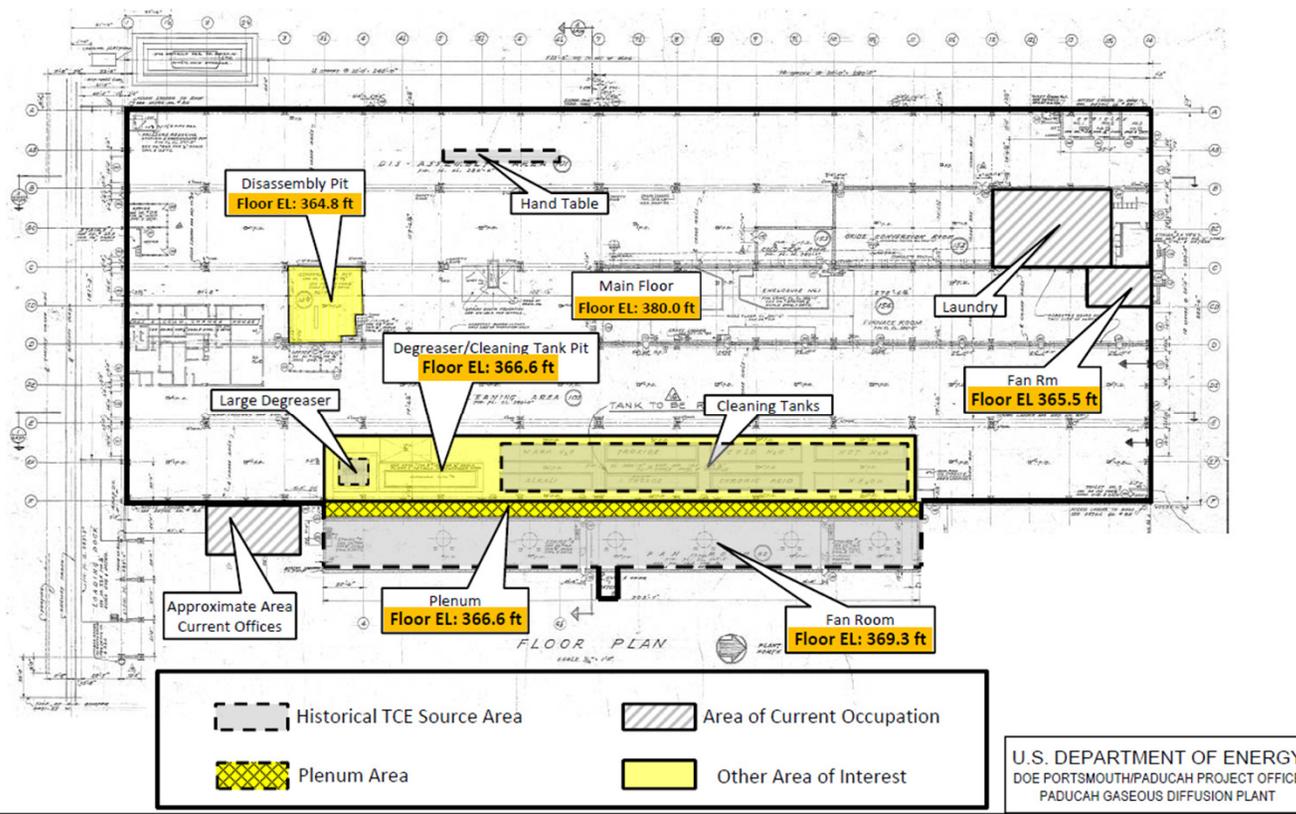
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# C-400 Building Subsurface Groundwater Source Remediation

## EM.PA.0040.A005.10.DR.01 (Cont.)

- Complete the remediation of TCE contamination that extends beneath the C-400 Cleaning Building (beyond the currently known TCE source areas around C-400) while the C-400 Building is still in place, in accordance with the approved CERCLA documents



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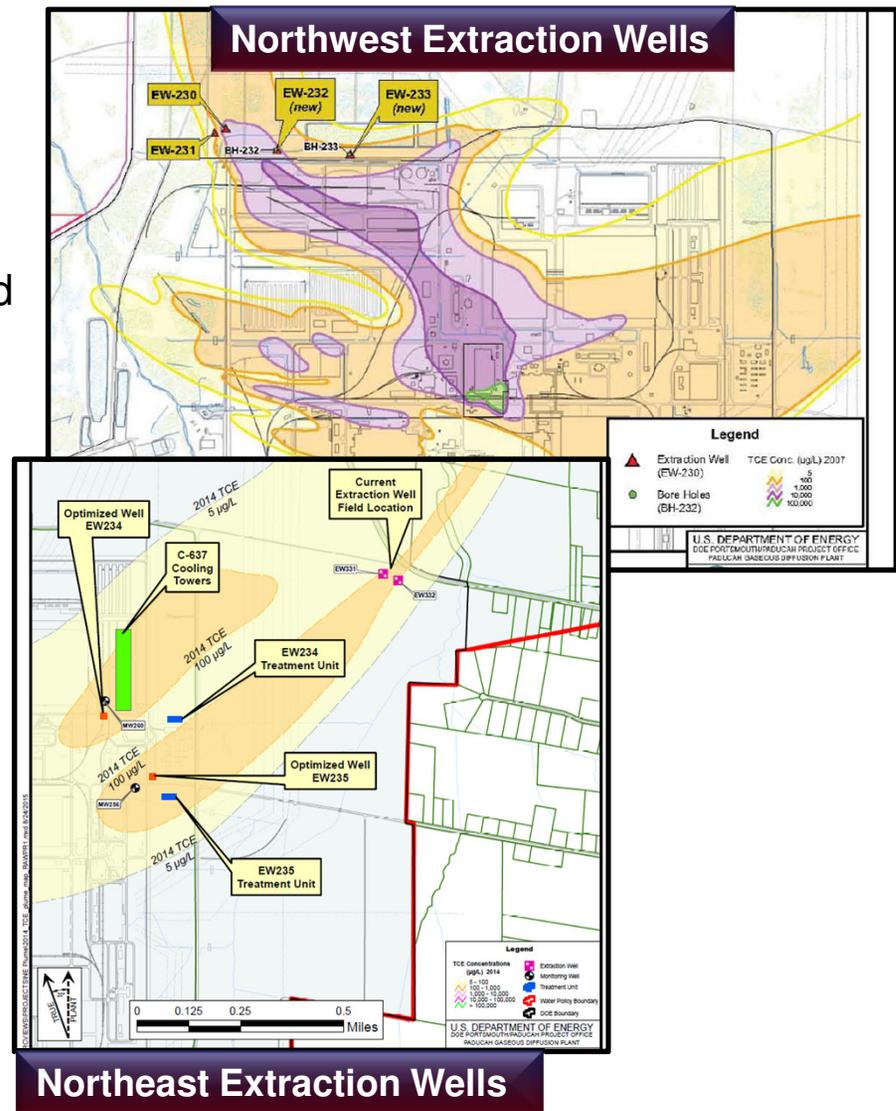
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# Pump and Treat Operations

## EM.PA.0040.A001.02.DR.01

- Operate and maintain the two installed groundwater pump-and-treat facilities
- Sample and monitor the three groundwater plumes, and conduct analyses to determine the effectiveness of and the need for continued operation of the pump-and-treat systems
- Continue and complete pump-and-treat optimization activities (e.g., Northeast Plume Optimization) consistent with regulatory agencies negotiated agreements and strategies, as specified in the 2015 Dispute Resolution on the Northeast Plume Pump and Treat System Optimization
- Prepare an updated TCE and  $^{99}\text{Tc}$  plume map with current data every two years



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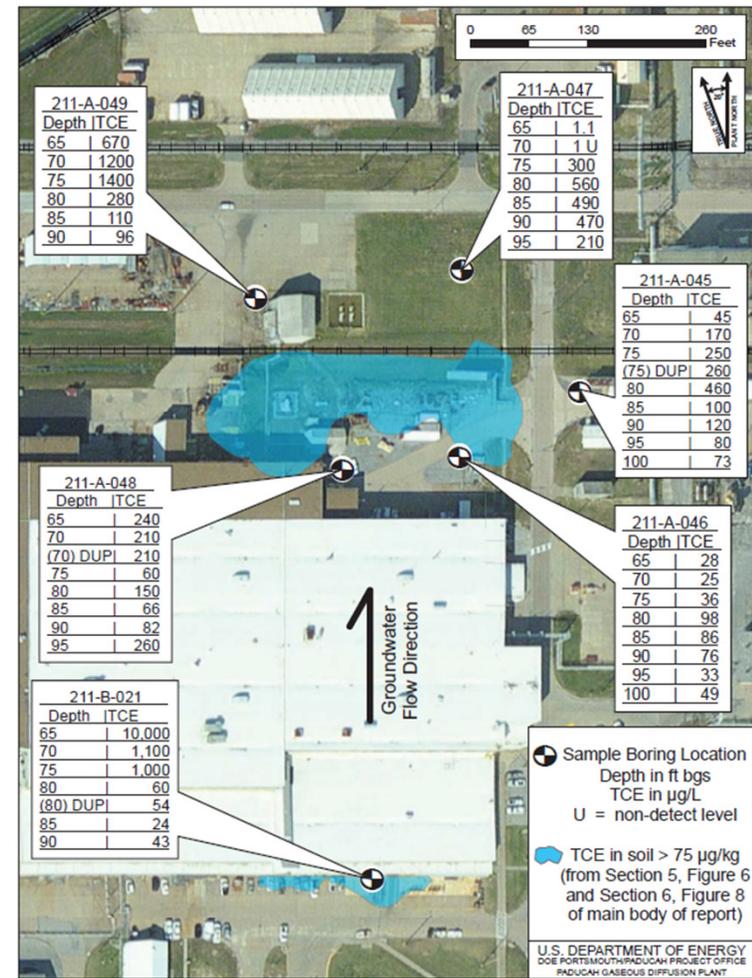
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# Southwest Plume – SWMUs 211 A&B Remediation

## EM.PA.0040.A005.02.DR.02

- Complete the installation of the Bio-Remediation delivery system and monitoring system, including monitoring wells at SWMUs 211a needed to implement long-term monitoring of the source areas for the Bio-Remediation remedy as specified in the applicable CERCLA documents
- Assume design and Remedial Action Work Plan are completed
- Complete the Remedial Action Completion Report (RACR) for SWMUs 211a and implement long-term monitoring
- Support future planning and regulatory activities for a path forward for SWMU 211B



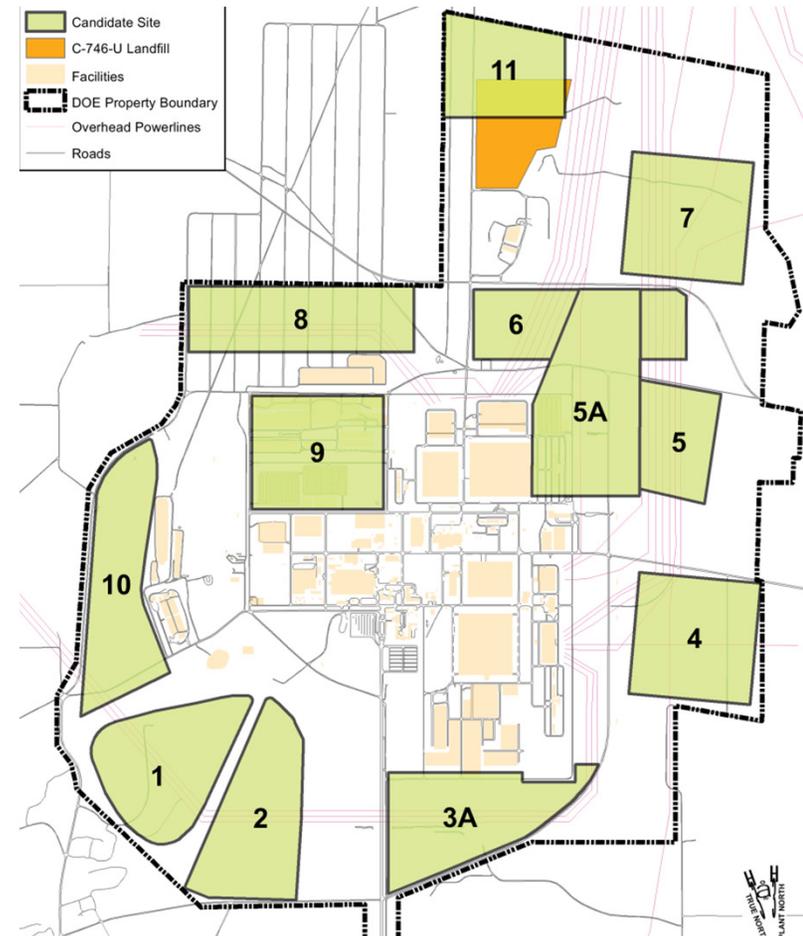
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# OSWDF Cell 1 and Infrastructure

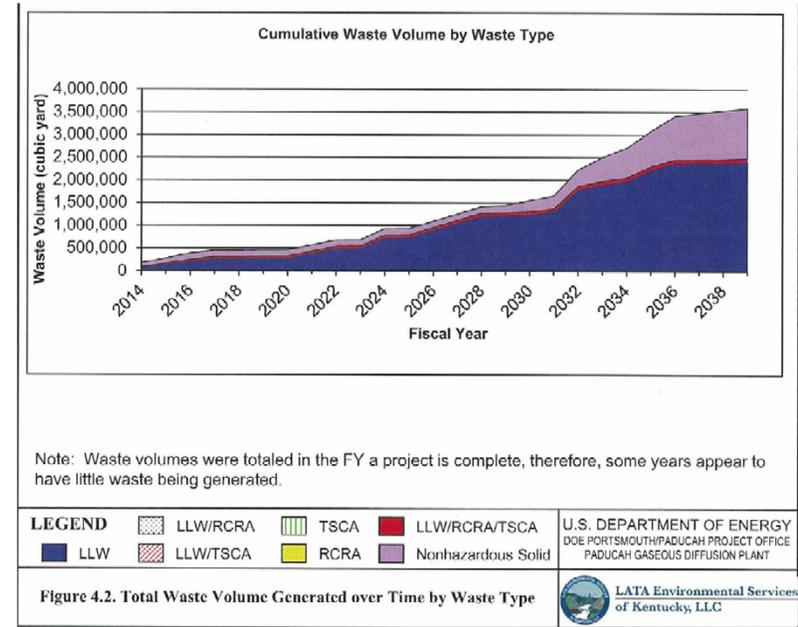
## EM.PA.0040.C002.03.DR.01

- Assume responsibility for any and all On-Site Waste Disposal Facility (OSWDF) approvals, design, and construction, if selected as the preferred alternative for waste disposition through a ROD
- Complete all CERCLA documentations, LFRG presentations and documents, the necessary designs (consistent with the planned lifecycle waste projections) for OSWDF Cell 1 and necessary infrastructure during the POP, consistent with the Project Data Sheet and CD-0/1 documentation
- Prepare and submit the OSWDF Critical Decision Documents (CD-2/3 and CD-3A) to DOE for review and approval



# OSWDF Cell 1 and Infrastructure EM.PA.0040.C002.03.DR.01 (Cont.)

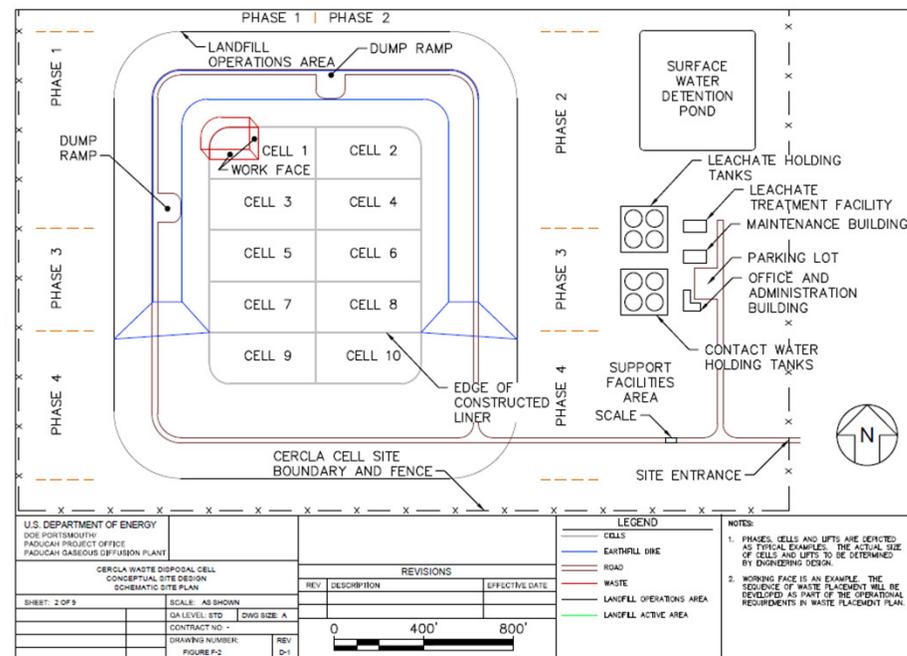
- Prepare, submit, and obtain regulatory approval of the OSWDF Remedial Design Work Plan/Remedial Design Support Investigation
- Complete the Remedial Design Support Investigation, including any necessary fieldwork to complete the investigation, including any data analysis, modeling, and other reporting necessary to support completion of the OSWDF design
- Prepare and submit the OSWDF Safety Basis Documentation for DOE approval
- Prepare and obtain regulatory approval of the Waste Acceptance Criteria for the OSWDF



# OSWDF Cell 1 and Infrastructure

## EM.PA.0040.C002.03.DR.01 (Cont.)

- Prepare, submit, and obtain regulatory approval of the OSWDF 30%, 60%, and 90% Remedial Design Reports, and the CFC Remedial Design Report, Remedial Action Work Plan, O&M Plan, Post Construction Report, and all other CERCLA documents and supporting documents necessary to complete construction and begin operations of the OSWDF
- Prepare, submit, and obtain regulatory approval of the OSWDF Remedial Action Work Plan



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# Analytical Laboratory Operations

## EM.PA.0040.A008.43.DR.01

The C-709 Plant Laboratory Annex and the C-710 Technical Services Building house laboratories with an array of modern analyzers and test equipment, offices, a conference room, and a vault for records retention and storage.

Laboratory services currently include:

- Analysis of safety samples ( $\text{UF}_6$ ,  $\text{ClF}_3$ ,  $\text{F}_2$ , etc.)
- Mixing of gas standards ( $\text{ClF}_3$ ,  $\text{F}_2$ , etc.)
- Equipment cleaning and corrosive gas passivation
- Video probing
- Assay and isotopic smear analyses
- Moisture sampling/analysis
- Production of working reference material for non-destructive analysis
- Radiochemical screening and metals analysis for shipping support
- Support for commercial grade dedication and failure analyses
  - Scanning electron microscope
  - Tensile strength testing
- Fecal coliform analysis



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# Analytical Laboratory Operations

## EM.PA.0040.A008.43.DR.01 (Cont.)

- The continued operation of on-site analytical facilities to provide analytical laboratory services will be at the discretion of the Contractor.
- In the event the Contractor chooses to continue performing analytical services on-site:
  - The services shall also be available to other DOE on-site contractors.
  - The cost for services are segregated appropriately.
  - The other site tenants/contractors are to pay the fully burdened costs for performance of the analytical analysis/services.
  - The Contractor shall arrange for and coordinate the disposition of laboratory equipment, chemicals, samples, waste resulting from its services, and any other materials associated with laboratory services
  - The Contractor shall participate in Performance Evaluation Studies (PES), etc.
- Regardless of whether the Contractor utilizes the laboratory, all samples and other materials within shall be dispositioned appropriately



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# What's Next?

- Final questions?
- After lunch
  - Site Tour - Meet at 1:30 at the Paducah GDP site, C-100 Parking Lot Security Check Point
- Wednesday
  - Site Tour - Meet at 7:30 at the Paducah GDP site, C-100 Parking Lot Security Check Point
  - One-on-Ones – check assigned schedule
- Thursday
  - Bidder's Choice Tour - Meet at 7:30 at the Paducah GDP site, C-100 Parking Lot Security Check Point
  - One-on-Ones – check assigned schedule



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