

**Project Status Update for DOE Paducah Citizens Advisory Board
April 13, 2006**

Project: Solid Waste Contained Landfill

Contact Persons:

Bechtel Jacobs Company LLC: Jim Ehlers/Steve Davis

Commonwealth of Kentucky: Todd Hendricks

U.S. Environmental Protection Agency: David Williams

Citizens Advisory Board: John Russell

Purpose: Waste Disposition

Description: The operating landfill and support facilities are located on 60-acres of DOE property near Ogden Landing Road, operating under a permit from the Kentucky Division of Waste Management (KDWM). Landfill disposal operations began in 1997. DOE uses the landfill for disposal of solid waste generated from its operations at the Paducah site. Examples of wastes accepted include non-hazardous soil and debris from environmental cleanup and other DOE projects, protective clothing worn by workers, paper, packaging, and landfill office wastes. No waste classified as hazardous or radioactive is accepted.

Key documents:

- Environmental Assessment for the Construction, Operation and Closure of the Solid Waste Landfill at the Paducah Gaseous Diffusion Plant (DOE/EA-1046)
- Environmental Assessment on the Implementation of the Authorized Limits Process for Waste Acceptance at the C-746-U Landfill (DOE/EA-1414)
- Waste Acceptance Criteria for the Department of Energy Treatment, Storage, and Disposal Units at the Paducah Gaseous Diffusion Plant (BJC/PAD-111R4)
- C-746-U Landfill Solid Waste Disposal Facility Permit Number 073-00045

Issues:

- The Kentucky Division of Waste Management (KDWM) issued a letter of withdrawal on July 6, 2005 for the S, T and U permit modification due to an administrative error. The public comment period had not expired and the permit was issued prematurely. Currently the landfill facility is operating on the existing permit, which expires in 2006. Permit was reissued for public comment on July 11, 2005. Permission to construct Leachate Treatment Facility was withdrawn pending reissuance of the Permit. The comment period closed August 10, 2005. KDWM is addressing comments received.

Recent accomplishments/activities:

- A&K Construction began mobilization on March 20, 2006 to start construction of the C-746-U Leachate Treatment Facility
- Ground broken on March 23
- Underground electrical construction completed on April 6
- Foundation concrete pour completed April 12
- Building construction to begin week of April 17

Activity over next 60 days:

- Complete the construction on the C-746-U Leachate Treatment Facility
- Continue disposal of construction debris and other non-hazardous solid waste streams
- Support the Kentucky Research Consortium for Energy and Environment Holocene Displacement Study
- Initiate construction of leachate treatment facility within two weeks of reissuance of Permit

Project Status Update for DOE Paducah Citizens Advisory Board

April 13, 2006

Project: Waste Disposition

Contact Persons:

Bechtel Jacobs Company LLC: Greg Shaia

Commonwealth of Kentucky: Jon Maybriar

U.S. Environmental Protection Agency: David Williams

Citizens Advisory Board: John Russell

Purpose: Waste Disposition

Description: DOE is responsible for disposal and/or recycling of legacy wastes (wastes generated at the PGDP prior to establishment of USEC on July 1, 1993); wastes generated from ongoing DOE projects; and a limited amount of waste generated by USEC. After characterization to assure selection of the appropriate disposition method, non-hazardous and non-radioactive wastes are disposed of in the DOE Solid Waste Contained Landfill. *(Please see landfill update sheet.)* Hazardous and radioactive wastes are treated if necessary and shipped off-site to approved DOE or commercial disposal facilities. Wastewater (collected from sumps in diked areas in DOE waste storage facilities at PGDP) is treated and discharged in accordance with the Kentucky Pollutant Discharge Elimination System permit.

Key documents:

- Paducah Waste Acceptance Criteria (BJC/PAD-11, Revision 4)
- Final Environmental Assessment for Proposed Disposition of Waste from the Paducah Site (DOE/EA-1339 and Addendum DOE/EA-1339-A) (FONSI)
- Agreed Order DWM-31434-042
- Site Treatment Plan (STP) DWM-30039-42

Issues:

- None

Recent accomplishments/activities:

- Continued repackaging and disposition activities to Energy Solutions and C-746-U Landfill for waste stored in outside facilities
- Shipped tanker of liquid waste to TSCA Incinerator
- Shipped mixed low-level waste to Perma-Fix facilities for treatment
- Shipped clean scrap wire for recovery

Activity over next 60 days:

- Complete shipment of UF₄ from Duratek to EnergySolutions
- Complete disposition of 5,055 containers of Agreed Order "no-longer contains" waste at EnergySolutions or the C-746-U Landfill, as appropriate
- Complete disposition of approximately 3,000 containers of LLW stored in outside facilities
- Ship tanker of liquid waste and several trucks of solid incinerable waste to TSCA Incinerator
- Repackage mixed low-level waste for shipment to treatment/disposal at Energy Solutions and Perma-Fix facilities

**Project Status Update for DOE Paducah Citizens Advisory Board
April 13, 2006**

Project: Decontamination & Decommissioning (D&D)

Contact Persons:

Bechtel Jacobs Company LLC: Brad Montgomery

Commonwealth of Kentucky: Jon Maybriar

U.S. Environmental Protection Agency: David Williams

Citizens Advisory Board: John Russell

Purpose: Environmental Cleanup/Waste Disposition

Description: The D&D project has completed development of Comprehensive Environmental Response, Compensation, and Liability Act regulatory documentation and has initiated actual D&D of the C-410/420 Feed Plant Complex. The current scope of D&D includes infrastructure removal on the C-410/C-420 complex, as well as ongoing surveillance and maintenance of the C-410/C-420 complex and the C-340 Metals Plant complex. Scope also included development of Safety Basis Documentation for the removal of equipment, piping, and stored material from the C-410 Complex. Operations at both complexes ended in 1977.

The Engineering Evaluation and Cost Analysis and the Action Memorandum for three inactive Facilities, the C402 Limehouse, the C-405 Contaminated Items Incinerator, and the C-746-A West End Smelter, have been completed and approved. The Removal Action Work Plan for the C-402 Limehouse has been approved by the regulatory agencies, and the C-405 and C-746-A West End Smelter RAWP is under development.

Key documents (C-410 and Inactive Facilities):

- Engineering Evaluation/Cost Analysis (EE/CA)
- Action Memorandum
- Removal Action Work Plan (RAWP)
- Cultural Resources Assessment of C-410 Complex
- Agreed Order DWM-31434-042

Issues:

A UF6 release occurred inside C-410 Building on March 1, 2006, when a mechanic snagged an instrument line while routing an air line through the building, resulting in the line breaking. The line contained residual material that was not completely removed when the facility was shut down. Monitoring outside the building indicated no detectable HF outside the building. Evaluation of work controls or other methods to insure additional releases can be prevented are ongoing.

Recent accomplishments/activities:

- Initiated D&D activities in the C-402 Limehouse within 15 days of RAWP approval, as required by FFA
- Completed electrical isolation, air gapping of electrical equipment, and demolition of electrical equipment in C-402
- Completed PCB paint removal from 13 breached fluorine cells; ten have been shipped to ToxCo for reuse
- Continued crane rehabilitation in C-410 Complex. One of five cranes is ready for load testing; two more are nearing readiness to load test.
- Busswork removal from Sector 2 is approximately 40% complete
- Continued packaging loose debris and waste from Sector 1; shipped two intermodal containers, two SeaLand containers, and six ST-90 containers of debris for disposal
- Continued application of fixative on stacks and painted metal outside building
- USEC Completed rerouting of power from C-402 Facility

Activity over next 60 days:

- Review approach with management for resuming activities in the C-410 Complex
- Ship last three breached fluorine cells to ToxCo for reuse
- Continue packaging of loose materials in C-410 Complex
- Ship C-411 (Sector 1) demolition debris to EnergySolutions of Utah for disposal
- Continue demolition activities in C-402 Lime House
- Continue fixative application to exterior stacks
- Package demolition debris for shipment to EnergySolutions of Utah
- Submit RAWP for C-405 Incinerator and C-746-A West End Smelter to regulatory agencies for review and approval
- Perform sampling for waste characterization of C-405 Incinerator and C-746-A West End Smelter

Project Status Update for DOE Paducah Citizens Advisory Board
April 13, 2006
Project: DOE Material Storage Areas (DMSAs)

Contact Persons:

Bechtel Jacobs Company LLC: Rick Keeling
Commonwealth of Kentucky: Jon Maybriar/Mike Guffey
U.S. Environmental Protection Agency: David Williams
Citizens Advisory Board: John Russell

Purpose: Environmental Cleanup/Waste Disposition

Description: The 160 DMSAs are non-leased areas inside buildings, as well as outdoor areas. DOE accepted the return of the areas, and the material and equipment they contained from USEC on December 31, 1996, to facilitate NRC certification of the gaseous diffusion plants. At that time, most of the contents needed detailed inventory, characterization, and disposition. Since that time, DOE and contractors have been documenting contents, resolving environmental concerns such as draining and disposing of oils from old equipment, and segregating and disposing of wastes.

Key documents:

- PGDP Department of Energy Material Storage Area Characterization/Remediation Plan (BJC/PAD-186/R4), April 2001
- Agreed Order DWM-31434-042
- Documented Safety Analysis (DSA)

Issues:

- Increased rigor in characterizing painted items for PCB content has impacted characterization, packaging, and disposal activities. Effort is under way to resolve different requirements and allowances between Kentucky and EPA regulations for solid waste disposal of painted items.

Recent accomplishments/activities:

- 4,448 ft³ of material characterized (including sampling) during March
- 6,689 ft³ of material packaged for disposal during March
- 7,059 ft³ of material disposed during March
- An additional 8,707 ft³ of metal pallets removed from DMSAs for re-use by other projects

Activity over next 60 days:

- Complete disposition of the remaining DMSA OS-15 material
- Complete the sizing, packaging, and disposition of OS-4 and OS-14 rail cars
- Continue characterization of "Priority B" DMSAs under the Agreed Order
- Initiate final closure certification for approximately 20 DMSA RCRA Closures

Project Status Update for DOE Paducah Citizens Advisory Board
April 13, 2006
Project: Groundwater Operable Unit

Contact Persons:

Bechtel Jacobs Company LLC: Bryan Clayton/Lance Fleming

Commonwealth of Kentucky: Jon Maybriar/Todd Mullins

U.S. Environmental Protection Agency: David Williams

Citizens Advisory Board: Jim Smart

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Purpose: Environmental Cleanup

Description: This project addresses environmental remediation of groundwater contamination on a site-wide basis at the Paducah Gaseous Diffusion Plant. The main contaminants of concern are trichloroethylene (TCE) and technetium-99 (⁹⁹Tc). Remedial actions will be designed and implemented after completion and signing of Records of Decision (RODs).

Key documents:

- Feasibility Study of the Groundwater Operable Unit at PGDP (DOE/OR/07-1857)
- Agreed Order DWM-31434-042
- Six-Phase Treatability Report (DOE/OR/07-2113)
- Proposed Remedial Action Plan for the Volatile Organic Compound Contamination at the C-400 Cleaning Building (DOE/OR/07-2114)
- Southwest Plume Site Investigation Workplan (DOE/OR/07-2094)
- S&T Landfill Site Investigation Workplan (DOE/OR/07-2098)
- Record of Decision for Interim Remedial Action for the Groundwater Operable Unit for the Volatile Organic Compound Contamination at the C-400 Cleaning Building (DOE/OR/07-2150&D2/R2)
- Remedial Design Work Plan (DOE/OR/07-2214&D2)
- Remedial Design Support Investigation Characterization Plan (DOE/OR/07-2211&D2)
- Site Investigation Report for the Southwest Groundwater Plume (DOE/OR/07-2180&D1)
- Site Investigation Report for the C-746-S&T Landfills (DOE/OR/07-2212&D2)
- Land Use Control Implementation Plan: Interim Remedial Action for the Groundwater Operable Unit for the Volatile Organic Contamination at the C-400 Cleaning Building...DOE/OR/07-2151&D1

Issues: Discussions with the State of Kentucky and EPA are continuing concerning the use of degradation factors utilized in groundwater modeling to support risk assessment development. The D2 SW Site Investigation Report is being updated utilizing revised degradation values in the groundwater modeling.

Recent accomplishments:

- Evaluated proposals from contractors responding to the Request for Proposal for a remediation contractor to design, build and operate the Electrical Resistance Heating at the C-400 Building and provided recommendation for award to the DOE Oak Ridge Procurement. DOE provided direction on April 2, 2006, that the interim action will be performed as part of the new environmental restoration contract.
- Developed Errata Sheet for the D2 Remedial Design Work Plan and submitted to Kentucky and USEPA for acceptance on 3/6/05
- D2 Site Investigation Report for the C-746-S&T Landfills was approved by the regulators. All additional environmental restoration activities will be evaluated and implemented as part of the Burial Grounds Operable Unit.
- Issued the D1 Land Use Control Implementation Plan for the C-400 Interim Remedial Action. Extension received on April 2 from the USEPA requesting an additional 30 days to review the LUCIP.
- Continued Supporting a Department of Energy Headquarters Remedy Review Team in evaluating the status of remediation at PGDP for Burial Grounds and Groundwater

Activity over next 60 days:

- Initiate design and design investigation activities for the implementation of the C-400 Interim Remedial Action
- Receive approval of the Errata Sheet for the D2 Remedial Design Work Plan for the Interim Remedial Action of C-400
- Receive approval of the Land Use Control Implementation Plan for the C-400 Interim Remedial Action
- Issue D2 Site Investigation for the Southwest Groundwater Plume

FFA Milestones:

- Submit D2 Southwest Plume Site Investigation Report by 5/17/06 and D1 Proposed Remedial Action Plan by 7/16/06 (Milestone being modified pending resolution of the degradation factor use in groundwater models)

Project Status Update for DOE Paducah Citizens Advisory Board
April 13, 2006
Project: Surface Water Operable Unit (On-Site)

Contact Persons:

Bechtel Jacobs Company LLC: Dave Guyan/Lance Fleming
Commonwealth of Kentucky: Jon Maybriar/Brian Baker
U.S. Environmental Protection Agency: David Williams
Citizens Advisory Board: Jim Smart

Purpose: Environmental Cleanup

Description: The Surface Water Operable Unit (On-Site) Project includes a site investigation to identify hot spots in ditches and outfalls, including Sections 3, 4, and 5 of the North-South Diversion Ditch. The site investigation scope also includes an evaluation of whether additional sediment control measures are needed, as well as actions for potential legacy releases associated with the storm sewer system. The results of the site investigation will be documented in a Site Investigation/Baseline Risk Assessment Report and non-time-critical removal action documentation, as appropriate.

Key documents:

- Sampling and Analysis Plan for Site Investigation and Risk Assessment of the Surface Water Operable Unit (On-Site), DOE/OR/07-2137&D2/R2.

Issues: None

Recent accomplishments:

- Prepared Draft Site Investigation/Risk Assessment report for BJC review

Activity over next 60 days:

- Prepare Site Investigation/Baseline Risk Assessment Report for DOE review

FFA Milestones:

- Issue Site Investigation/Risk Assessment Report by August 16, 2006
- Issue Removal Notification by October 12, 2006

Project Status Update for DOE Paducah Citizens Advisory Board
April 13, 2006
Project: Scrap Metal Removal Project

Contact Persons:

Bechtel Jacobs Company LLC: Frank Overby/Chris Marshall/Craig Jones
Commonwealth of Kentucky: Jon Maybriar
U.S. Environmental Protection Agency: David Williams
Citizens Advisory Board: Jim Smart/John Russell

Purpose: Environmental Cleanup/Waste Disposition

Description: About 36,000 tons of scrap metal exists at the PGDP, excluding nickel ingots. This project involves the removal of 26,700 tons of general scrap metal, 2,000 tons of aluminum ingots, and approximately 7,000 tons of classified scrap. The project does not include the recycling or disposal of 9,700 tons of nickel. Note the classified scrap total has been revised downward based on field experience.

Key documents:

- Engineering Evaluation and Cost Analysis
- Action Memorandum
- Removal Action Work Plans
- Agreed Order DWM-31434-042
- Documented Safety Analysis (DSA)

Issues: None

Recent accomplishments:

- 251 tons of scrap metal were shipped by truck in January 2006 from C-746-D yard to NTS. Since recertification of the waste shipping program by NTS in July 2005, BJC has shipped 2,979 tons of scrap to NTS
- In April 2006, 1,305 tons of scrap metal were shipped via rail to *EnergySolutions, LLC*
- Since January 1, 2006, 3,358 tons of scrap metal have been shipped via rail to *EnergySolutions, LLC*
- Approval has been granted to begin utilizing High Sided Gondolas for rail shipments to *EnergySolutions, LLC*

Activity over next 60 days:

- Continue disposition operations by inspecting, sorting, size-reducing and packaging scrap metal
- Continue shipment of scrap metal to NTS and *EnergySolutions*

**Project Status Update for DOE Paducah Citizens Advisory Board
April 13, 2006**

Project: Burial Grounds Operable Unit

Contact Persons:

Bechtel Jacobs Company LLC: John Young/Lance Fleming
Commonwealth of Kentucky: Jon Maybriar
U.S. Environmental Protection Agency: David Williams
Citizens Advisory Board: John Russell

Purpose: Environmental Cleanup/Waste Disposition

Description: A Remedial Investigation/Feasibility Study (RI/FS) Scoping Document and the RI/FS Work Plan for the investigation of the Burial Ground Operable Unit (BGOU) at PGDP have been developed. The documents utilize a compilation of sampling information collected on and around the PGDP over the course of the last ten years. The BGOU includes Solid Waste Management Units (SWMUs) 2, 3, 4, 5, 6, 7, 30, and 145.

Key documents:

- Scoping Document for the Burial Grounds Operable Unit Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky
- Work Plan for the Burial Grounds Operable Unit Remedial Investigation/Feasibility Study at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/OR/07-2179

Issues: None

Recent accomplishments:

- BGOU D2 RI/FS Work Plan was completed and distributed to the Commonwealth of Kentucky and the EPA on December 19, 2005
- The regulators have requested a second 30 day extension on the review period

Activity over next 60 days:

- Receive regulator approval of the RI/FS Work Plan by April 21, 2006

**Project Status Update for DOE Paducah Citizens Advisory Board
April 11, 2006**

Project: Depleted Uranium Hexafluoride (DUF₆) Project Surveillance & Maintenance

Contact Persons:

DOE Site Office: John Sheppard
Uranium Disposition Services: Dick Veazey
Commonwealth of Kentucky:
U.S. Environmental Protection Agency:
Citizens Advisory Board:

Purpose: Maintain safe storage of DOE DUF₆ cylinder inventory pending disposition.

Description: The Atomic Energy Act, as amended, gives DOE responsibility for the DUF₆ inventory, which is a by-product from enriching uranium for nuclear fuel. At Paducah, approximately 36,200 cylinders contain approximately 436,400 metric tons of DUF₆. There are also 182 cylinders of low-enriched UF₆, about 1,500 cylinders of "normal" UF₆ (which has not gone through the enrichment process), and 275 empty cylinders. The DOE inventory at Paducah includes the material generated from 1952 until the establishment of USEC in July 1993, and material transferred from USEC to DOE since that time.

Surveillance and maintenance involves safely storing DUF₆. Most of the 60-acre DOE cylinder yard complex now consists of concrete yards, which provide for improved storage and inspection. In recent years, DOE cleaned and painted 3,368 cylinders which had surface corrosion. DOE continually monitors and inspects its cylinder inventory to assure safe storage.

Key Documents for surveillance/maintenance:

- Handling and Inspection of DOE 48-Inch Diameter UF₆ Cylinders at Paducah (PA-2400)
- Agreed Order DWM-31434-030
- Final Environmental Impact Statement for the Construction and Operation of the DUF₆ Conversion Facility at the Paducah Site (DOE/EIS-0359)
- Record of Decision for Construction and Operation of the DUF₆ Conversion Facility
- Documented Safety Analysis for the DOE Cylinder Yards, BJC/PAD-459
- Technical Safety Requirements for the DOE Cylinder Yards, BJC/PAD-461

Issues: OIG Review of 30A Cylinders

Recent accomplishments/activities:

- An agreement with the Bonneville Power Administration (BPA) has been approved to transfer 672 cylinders of DUF₆ to BPA to supply power reactor fuel; a total of 460 cylinders have been transferred through March 2006
- Cylinder yards on the south side of the plant have been reconfigured to a Property Protection Area (PPA). Work in the PPA does not require security clearance; UDS controls access according to a DOE approved security plan
- An agreement with USEC has been approved to "clean up" 743 cylinders of off-spec "normal" UF₆; a total of 401 cylinders have been transferred through March 2006
- Extensive review of 30A cylinder records in response to the OIG Management Alert and a sampling plan was developed. Sampling was completed on February 6, 2006. No phosgene was detected.
- Supported DOE in preparation for January 19 Congressional field hearing

Activity over next 60 days for surveillance/maintenance:

- Continue transferring cylinders to USEC as per the two previously mentioned agreements
- Issue a Characterization Report on the resolution of the phosgene issue in 30A cylinders.

**Project Status Update for DOE Paducah Citizens Advisory Board
February 9, 2006**

Project: Depleted Uranium Hexafluoride (DUF₆) Conversion Facility

Contact Persons:

DOE Site Office: John Sheppard
Uranium Disposition Services: Guy Griswold
Commonwealth of Kentucky:
U.S. Environmental Protection Agency:
Citizens Advisory Board:

Purpose: Design, build, and operate the DOE DUF₆ Conversion Facility.

Description: The Atomic Energy Act, as amended, gives DOE responsibility for the DUF₆ inventory, which is a by-product from enriching uranium for nuclear fuel. At Paducah, approximately 36,200 cylinders contain approximately 436,400 metric tons of DUF₆. DOE selected Uranium Disposition Services LLC to design, build, and operate facilities in Paducah and Portsmouth to convert DUF₆ to a more stable form for disposal or recycling.

The project site occupies approximately 11 acres immediately adjacent to DOE's DUF₆ cylinder storage yards. The completed capital costs for the facility at Paducah are estimated to be ≈ \$91,000,000. The major facilities on the DUF₆ project include the Conversion Building, Administration Building, Warehouse and Maintenance Building, KOH Regeneration Building, and the HF Neutralization Building. The project work also includes a railroad connection, rail sidings, load out facilities, roads, storage areas for full and empty cylinders, and all utilities.

Groundbreaking occurred in July 2004 and construction has continued since that time. At the conclusion of construction, all systems will be tested and the plant will undergo an Operational Readiness Review. The facility is expected to commence conversion operations in 2007.

Key Documents for the Conversion Project:

- Final Environmental Impact Statement for the Construction and Operation of the DUF₆ Conversion Facility at the Paducah Site (DOE/EIS-0359)
- Record of Decision for Construction and Operation of the DUF₆ Conversion Facility
- Paducah Conversion Facility Preliminary Documented Safety Analysis, DUF6-C-G-PSA-001, Rev. F

Issues: None

Recent accomplishments/activities:

- Conversion Building – The foundation has been completed
- Warehouse Building – Placement of siding and roofing has been completed and work continues on the interior of the facility
- Administration Building – The foundation has been completed
- Construction prep for offsite rail spur continued
- Place gravel around Conversion Building – 95% complete

Construction activity scheduled over next 60 days:

- Begin erection of the Administration Building structural steel
- Begin construction of offsite rail spur
- Begin construction of balance of plant foundations S-39
- Begin erection of Conversion Building panels and columns by March 15, 2006
- Continue construction of Bayou Creek railroad bridge
- USEC to begin connection to PGDP utilities

- Begin construction of Power Feed to Facility

Procurement activity planned next 60 days:

- Award HVAC package - S-42
- Award Piping/Mechanical Equipment package - S-40
- Award Electrical Distribution and Instrumentation - S-43
- Award process pre-engineered buildings - S-31
- Bid Conversion Building Roof – S-23
- Bid Structural Steel Installation – S-33
- Continue Bid Major Equipment RFPs