

**Project Status Update for Paducah DOE Citizens Advisory Board
July 14, 2005**

Project: Surveillance/Maintenance & Conversion, Depleted Uranium Hexafluoride (DUF₆)

Contact Persons:

DOE Site Office: John Sheppard
Uranium Disposition Services:
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. **Conversion** is expected to begin in 2006. 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. DOE is reviewing draft conceptual design reports for the conversion facilities. Construction began in July 2004.

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: (none)

Recent accomplishments/activities:

- Completed 14,220 cylinder inspections in FY 2005 through June (96% of FY total)
- 11,343 radiological surveys completed (82% of FY total)
- 3,227 cylinder skirt cleanings completed (99% of FY total)
- Completed 172 cylinder relocations to improved storage in June; 1,021 in FY2005
- Conversion plant warehouse building foundation and warehouse building contracts awarded
- Cylinder yards transitioned from BJC to UDS on June 27, 2005
- Personnel orientation, signup, training and qualification conducted June 27-29 for 16 employees.
- UDS began S&M operations on June 30.
- Cylinder yards on the south side of the plant have been reconfigured to a Property Protection Area (workers don't require clearance, but UDS controls access)

Activity over next 60 days for surveillance/maintenance:

- Begin warehouse foundation field work
- Remaining cylinder yards being reconfigured for access

Project Status Update for Paducah DOE Citizens Advisory Board
July 14, 2005
Project: Solid Waste Contained Landfill

Contact Persons:

Bechtel Jacobs Company LLC: Steve Davis/Dwight Lamb/Jim Ehlers
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.

Recent accomplishments/activities:

- Disposed of 91 tons of waste in May
- Received permit modification for construction of a leachate treatment facility May 12, 2005
- Signed subcontract for construction of leachate treatment facility
- Initiated fabrication of leachate treatment unit.

Activity over next 60 days:

- Continue disposal of construction debris and other non-hazardous solid waste streams
- Support the Kentucky Research Consortium for Energy and Environment Holocene Displacement Study
- Construct leachate treatment facility, to be completed in August 2005.

Project Status Update for DOE Paducah Citizens Advisory Board
July 14, 2005
Project: Waste Disposition

Contact Persons:

Bechtel Jacobs Company LLC: Pat Gourieux/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 DWM-30039-42

Issues:

- None

Recent accomplishments/activities:

- Made first shipment of UF4 to Duratek on June 27, 2005
- Disposed 1,500 cubic feet of Agreed Order waste in the C-746-U landfill
- Shipped 1,995 cubic feet of Agreed Order waste to Envirocare
- Processing of Agreed Order waste for landfill disposal and shipment to Envirocare continues

Activity over next 60 days:

- Continue shipment of mixed low-level waste to PermaFix facilities and Envirocare
- Continue shipment of UF4 to Duratek and Envirocare
- Continue disposition of solid waste in the C-746-U Landfill
- Continue disposition of ~ 5100 containers of Agreed Order “no-longer contains” waste at Envirocare or the C-476-U Landfill, as appropriate
- Begin disposition of approximately 2000 containers of LLW stored in outside facilities.

**Project Status Update for DOE Paducah Citizens Advisory Board
July 14, 2005**

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:

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.

Key documents (C-410):

- 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:

- None.

Recent accomplishments/activities:

- Continued asbestos removal and confirmatory sampling in Zone 21 has allowed downposting to "clean" status; permitting further work without mandatory respiratory protection
- Completed shipments of LLW waste from C-410 HF Tank Farm to Envirocare
- Installed cool shack to relieve worker heat stress in C-410
- Initiated removal of fluorine cell stands and platforms in Sector 2
- Issued RFP for removal of C-603 Nitrogen Facility as a maintenance action
- Initiated evaluation of response to C-603 RFP from subcontractor
- Received regulator comments on D1 Engineering Evaluation/Cost Analysis (EE/CA) for C-402 Limehouse, C-405 Incinerator and C-746-A West End Smelter.

Activity over next 60 days:

- Continue packaging of loose materials in C-410 Complex
- Complete landfill package and disposition material from C-410-A Hydrogen Holder in landfill
- Submit D2 EE/CA for C402/C-405/C746-A Smelter
- Award contract for C-603 Nitrogen Facility action

Project Status Update for DOE Paducah Citizens Advisory Board
July 14, 2005
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:

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 that are now the DMSAs, 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:

- Because of recent shipment difficulties at Paducah, BJC self-suspended shipments pending a programmatic review. This review included transporting waste to the C-746-U Landfill and off-site disposal facilities. Shipments have now resumed to the Landfill and to off-site facilities except the Nevada Test Site.

Recent accomplishments/activities:

- A total of 2,500 cubic ft. of material was characterized during June, including approximately 480 cubic ft. sampled and awaiting results.
- 4,000 cubic ft. after size reduction packaged for disposal in the month of June.
- 9,600 cubic ft. disposed in June after size reduction.
- Five PG Coolers from DMSA OS-15 have been shipped for disposal; Two additional PG Coolers sized and packaged in June for shipment; Eight PG Coolers and One PG Booster await sizing, packaging, and shipment for disposition

Activity over next 60 days:

- Continue packaging and disposition of DMSA OS-15 material
- Pursue disposition of OS-4 and OS-14 material
- Pursue boundary removal of OS-02, C-331-04, -07, and -20
- Continue characterization of "Priority B" DMSAs under the Agreed Order

**Project Status Update for DOE Paducah Citizens Advisory Board
July 14, 2005**

Project: Groundwater Operable Unit

Contact Persons:

Bechtel Jacobs Company LLC: Bryan Clayton/Craig Jones

Commonwealth of Kentucky: Jon Maybriar/Todd Mullins

U.S. Environmental Protection Agency: David Williams

Citizens Advisory Board:

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 Removal Action for the Volatile Organic Compound Contamination at the C-400 Cleaning Building (DOE/OR/07-2150)

Issues: None

Recent accomplishments:

- Continued development of the Southwest Plume Site Investigation Proposed Plan and adjusted submission of the D1 PRAP to September 7, 2005 from its original date of July 2, 2005
- Received Kentucky comments on D2 C-400 ROD June 15, 2005
- Completed and issued on June 20, 2005 Request for Proposal contracting package for selecting a remedial contractor for the implementation of electrical resistive heating/direct heating in the C-400 area
- D2 C-400 ROD submitted to Kentucky and EPA July 12, 2005.

Activity over next 60 days:

- Continue development of the Remedial Design Work Plan to support development of the C-400 Remedial Action design and construction specifications for submission to the State and EPA following the signing of the ROD
- Submit the C-746-S&T Landfill Site Investigation Report
- Obtain C-400 ROD signature in August, 2005

FFA Milestones:

- Submit the D1 C-400 Remedial Design Work Plan within 30 days after signing of ROD
- Submit the D1 S&T Landfill Site Evaluation Report by September 30, 2005 (date to change with proposal for new milestones)
- Submit the D2 Southwest Plume Site Investigation Report by August 11, 2005.

Project Status Update for DOE Paducah Citizens Advisory Board
July 14, 2005
Project: Surface Water Operable Unit (On-Site)

Contact Persons:

Bechtel Jacobs Company LLC: Dave Guyan/Craig Jones

Commonwealth of Kentucky: Jon Maybriar

U.S. Environmental Protection Agency: David Williams

Citizens Advisory Board:

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)

Issues: None

Recent accomplishments:

- EPA issued unconditional approval of the sampling proposed in the D2 SWOU SAP on January 18, 2005; KDEP conditionally approved on February 3, 2005
- Teleconference held April 28, 2005 with DOE, KDEP and EPA to discuss KDEP issues, which were in Formal Dispute
- Formal Dispute issues resolved in meeting on May 4, 2005
- Submitted revised D2/R2 SAP on May 13, 2005
- Received KDEP SAP approval letter on May 13, 2005
- Began preparation for field sampling activities
- Began field mobilization activities on June 13, 2005
- Sampling began June 20, 2005.

Activity over next 60 days:

- Continue sampling.

FFA Milestones:

- Issue Site Investigation/Risk Assessment Report by April 27, 2006
- Issue Removal Notification by June 23, 2006.

Project Status Update for DOE Paducah Citizens Advisory Board
July 14, 2005
Project: Scrap Metal Removal Project

Contact Persons:

DOE Site Office:

Bechtel Jacobs Company LLC: Wes Bass/Chris Marshall/Craig Jones

Commonwealth of Kentucky: Jon Maybriar

U.S. Environmental Protection Agency: David Williams

Citizens Advisory Board:

Purpose: Environmental Cleanup/Waste Disposition

Description: About 54,000 tons of scrap metal exists at the PGDP. This project involves the removal of 26,700 tons of general scrap metal, 2,000 tons of aluminum ingots, and 15,600 tons of classified material. This project does not include the recycling or disposal of 9,700 tons of nickel.

Key documents:

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

Issues: Several sealand containers packaged for transport of general scrap to NTS leaked moisture prior to shipment. Container inspections identified the presence of circuit boards and other electronic devices that conflict with the NTS waste acceptance criteria. Currently shipments to NTS are suspended and scrap metal waste has not been shipped off site in several months.

Recent accomplishments:

- All turnings (over 3,100 drums, approximately 300 tons) have been processed and packaged for shipment and disposal
- Obtained security approval and made first shipment of turnings to Envirocare on July 11, 2005
- Over 172 tons of D-yard scrap is packaged and ready for shipment.

Activity over next 60 days:

- Complete development of corrective actions and begin implementation to resume scrap metal shipments from C-746-D yard to NTS
- Continue disposition operations by inspecting, sorting, size-reducing and packaging scrap metal
- Continue shipment of machine turnings waste to Envirocare for treatment and disposal
- Initiate shipment of cargo containers of scrap metal to Envirocare via rail for disposal
- Resume shipment of scrap metal to NTS following recertification of waste disposition program.

**Project Status Update for DOE Paducah Citizens Advisory Board
July 14, 2005
Project: Burial Grounds OU**

Contact Persons:

Bechtel Jacobs Company LLC: John Young/Craig Jones
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 subject of this scoping document is the BGOU (Solid Waste Management Units [SWMUs] 2, 3, 4, 5, 6, 7, 30, and 145).

Key documents:

- D1 Burial Grounds OU Scoping Document
- D1 Burial Grounds RI/FS Work Plan

Issues: None

Recent accomplishments:

- D1 Burial Grounds OU Scoping Document was issued November 2004
- State and EPA comments were discussed in a series of meetings and all comment and concerns will be addressed in the Work Plan.
- D1 Work Plan was completed and distributed on June 30, 2005

Activity over next 60 days:

- D1 Work Plan is in review with the regulators and comments are due September 30.