Project Status Update for DOE Paducah Citizens Advisory Board
February 9, 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 Permission to construct Leachate Treatment Facility was withdrawn pending reissuance of the Permit.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.
- As of January 11, 2006 there has been no indication from KDWM of when the permit modification for the C746-U landfill will be approved.

Recent accomplishments/activities:

- Subcontractor for construction of leachate treatment facility (A&K Construction) was issued a suspension of work to minimize costs until KDWM issues permit
- Field portion of the Kentucky Research Consortium for Energy and Environment Holocene Displacement Study completed October 3, 2005
- Ordered prefabricated steel building for C-746-U 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. Kentucky Research Consortium for Energy and Environment Holocene Displacement Study project final report due at the end of January or first week of February.
- Initiate construction of leachate treatment facility within two weeks of reissuance of Permit

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

- Completed shipping TSCA Sewer Sludge to EnergySolutions
- Began shipping Low-Level Sewer Sludge to EnergySolutions
- Continued repackaging activities for waste stored in outside facilities for shipments to EnergySolutions and disposal at C-746-U Landfill, as appropriate
- Shipped Agreed Order TSCA mixed low-level waste to EnergySolutions
- Sent letter to Kentucky documenting completion of characterization of STP Table 8 waste

Activity over next 60 days:

- Complete shipment of UF_4 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
- Ship mixed low-level waste to Perma Fix facilities and EnergySolutions for treatment/disposal
- Complete disposition of approximately 3,000 containers of Sewer sludge and LLW stored in outside facilities
- Ship tanker of liquid waste to TSCA Incinerator

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

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 removal of fluorine cell stands and platforms in Sector 2
- Completed blasting fourth fluorine cell
- Removed cold box (tower) and nitrogen tank from C-603 Nitrogen Generating Facility
- Completed D&D of Sector 1
- Shipped three intermodals of debris for disposal

Activity over next 60 days:

- Continue packaging of loose materials in C-410 Complex
- Ship asbestos waste to EnergySolutions of Utah for disposal
- Ship C-411 (Sector 1) demolition debris to EnergySolutions of Utah for disposal
- Initiate characterization sampling of C-402 Lime House
- Initiate fixative application to exterior stacks
- Package demolition debris for shipment to EnergySolutions of Utah
- Continue paint removal from breached fluorine cells

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

- Submitted Final Inventory/Characterization Reports to DOE for DMSAs C-331-21, C-333-39, C-337-26, and C-337-28
- In January, 1,103 ft^3 characterized (645,000 ft^3 over project life), 9,590 ft^3 packaged for disposal, 6,052 ft^3 disposed (289,000 ft^3 over project life)
- Stored material continues to be characterized, packaged, and disposed

Activity over next 60 days:

- Continue disposition of the remaining DMSA OS-15 material
- Continue the sizing, packaging, and disposition of OS-4 and OS-14 rail cars
- Continue characterization of “Priority B” DMSAs under the Agreed Order
- Pursue Kentucky approval for approximately 20 DMSA RCRA Closures

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

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 (^{99}Tc). 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&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.

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 BJC Oak Ridge Procurement
- Revised D1 Site Investigation Report for the C-746-S&T Landfills to incorporate regulator comments received. The D2 document is to be issued on 2/10/06

Activity over next 60 days:
- Award Subcontract for the implementation of the C-400 Interim Remedial Action
- Receive approval of D2 Remedial Design Work Plan for the Interim Remedial Action of C-400
- Issue D2 C-746-S&T Landfill Site Investigation Report
- Issue D1 Land Use Control Implementation Plan for the C-400 Remedial Action
- Issue D2 Site Investigation for the Southwest Groundwater Plume

FFA Milestones:
- Submit D2 Southwest Plume Site Investigation Report by 2/4/06 and D1 Remedial Action Plan by 3/6/06. (Milestone being modified pending resolution of the degradation factor use in groundwater models.)

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

- Prepare technical memorandum to not implement Step 3 storm sewer sampling. (First two steps obtained required data.)
- Continue data validation

Activity over next 60 days:

- Submit technical memorandum to Regulatory agencies
- Prepare draft Site Investigation/Baseline Risk Assessment Report

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
February 9, 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
- Loaded 543 tons of scrap in Northwest Scrap Metal yards during January 2006

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
February 9, 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 30 day extension on the review period

Activity over next 60 days:

- Receive regulator approval of the RI/FS Work Plan by February 23, 2006

Project Status Update for Paducah DOE Citizens Advisory Board
November 10, 2005
Project: Depleted Uranium Hexafluoride (DUF_6) 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 DUF_6 cylinder inventory pending disposition.

Description: The Atomic Energy Act, as amended, gives DOE responsibility for the DUF_6 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 DUF_6. There are also 182 cylinders of low-enriched UF_6, about 1,500 cylinders of "normal" UF_6 (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 DUF_6. 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 UF_6 Cylinders at Paducah (PA-2400)
- Agreed Order DWM-31434-030
- Final Environmental Impact Statement for the Construction and Operation of the DUF_6 Conversion Facility at the Paducah Site (DOE/EIS-0359)
- Record of Decision for Construction and Operation of the DUF_6 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:

- Cylinder yards transitioned from BJC to UDS on June 27, 2005
- UDS began S&M operations on June 30, 2005
- An agreement with the Bonneville Power Administration (BPA) has been approved to transfer 672 cylinders of DUF6 to BPA to supply power reactor fuel; 157 cylinders have been transferred since June 30, 2005
- 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" UF_6; 71 cylinders were transferred in September

Activity over next 60 days for surveillance/maintenance:

- Continue transferring cylinders to USEC as per the two previously mentioned agreements

Project Status Update for Paducah DOE Citizens Advisory Board
February 13, 2006
Project: Depleted Uranium Hexafluoride (DUF_6) 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 DUF_6 Conversion Facility.

Description: The Atomic Energy Act, as amended, gives DOE responsibility for the DUF_6 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 DUF_6. DOE selected Uranium Disposition Services LLC to design, build, and operate facilities in Paducah and Portsmouth to convert DUF_6 to a more stable form for disposal or recycling.

The project site occupies approximately 11 acres immediately adjacent to DOE's DUF_6 cylinder storage yards. The completed capital costs for the facility at Paducah are estimated to be ≈ $91,000,000. The major facilities on the DUF_6 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.

Ground breaking 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 DUF_6 Conversion Facility at the Paducah Site (DOE/EIS-0359)
- Record of Decision for Construction and Operation of the DUF_6 Conversion Facility
- Paducah Conversion Facility Preliminary Documented Safety Analysis, DUF6-C-G-PSA-001, Rev. F

Issues: Critical Decision 3, authorization for remaining construction – received September 30, 2005

Recent accomplishments/activities:

- Four Conversion Building pre-cast columns cast.
- Ground Modifications for Conversion Building - Sub-contractor demobilized. Final Report submitted.
- Conversion Building foundation - 4,400 cy of concrete placed. Foundation concrete and placing embedments complete.
- Warehouse Building – siding and roofing being installed.
- Offsite rail spur Bayou Creek Bridge cofferdam piling complete, bridge steel fabricated.
- Place gravel around Conversion Building – 100% complete.
- Administration Building – underground utilities installed, select backfill placed, reinforcing steel on site, foundation forms being placed.

Construction activity scheduled over next 60 days:

- Continue construction of offsite rail spur with rail clearing and bridge foundation work.
- Remove forms from Conversion Building foundation, install grounding and connect utilities.
- Award subcontract and begin constructing balance of plant foundations S-39

- Fabricate and begin erecting Conversion Building panels and columns
- USEC to begin connecting PGDP utilities
- Begin constructing Power Feed to Facility
- Receive selected equipment.

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 Power Feed to Facility – S-44
- Award Pre-Engineered Buildings Package - S-31
- Process and Award Conversion Building Roof – S-23
- Bid Structural Steel Installation – S-33
- Bid Architectural Finishes – S-32
- Bid Fire Protection Systems – S-41
- Bid Major Equipment RFPs