



PADUCAH GASEOUS DIFFUSION PLANT CITIZENS ADVISORY BOARD

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Paducah Gaseous Diffusion Plant Citizens Advisory Board Meeting Minutes October 20, 2005

The Citizens Advisory Board (CAB) met at the CAB office in Paducah, Kentucky October 20, 2005, at 6 p.m.

Board members present: John Anderson, Barry Eadens, Chad Kerley, Shirley Lanier, Bobby Lee, Linda Long, Rhonda McCorry, Janet Miller, John Russell and Jim Smart

Board members absent: Allen Burnett

***Ex Officio* members and related regulatory agency employees present:** Jon Maybriar and Leo Williamson, Kentucky Division of Waste Management; and Doug Dawson, Kentucky Department Fish and Wildlife Resources

Deputy Designated Federal Official present: William Murphie

DOE Federal Coordinator present: David Dollins

DOE-related employees present: R.J. Bell, Sammy Bell, Jeannie Brandstetter, Greg Cook, Kim Crenshaw, Bruce Ford, Bruce Gardner, Burt Gawthorp, Bob Giroir, Guy Griswold, Lester Hurst, Steve Kay, Steve Polston, Joe Tarantino, Elizabeth Trawick and Jack Zimmerman

Eleven members of the public attended the meeting.

Agenda

Kay asked for proposed modifications to the agenda. Kerley said the C-746-S&T Site Investigation Report would be moved to the Waste Disposition task force section of the agenda. **The Board adopted the agenda by consensus.**

Minutes

Kay asked for proposed modifications to the draft September minutes. There were none. **The Board approved the minutes as submitted by consensus.**

Deputy Designated Federal Official's Comments

Attachment #1

Comments

Russell asked if all of the outside DOE Material Storage Areas (DMSAs) had been returned to the United States Enrichment Corporation (USEC). Murphie said he believed only the areas referred to on the slide were returned to USEC but he would get clarification.

Russell asked what physical form uranium tetrafluoride (UF₄) held. Giroir said it is a green salt solid powder.

Kerley asked where the waste was disposed from the Nitrogen Facility. Murphie said it has been given to a subcontractor; it has been certified as clean material.

Russell asked if the scrap metal histogram could be added back into the presentation since the shipments have resumed. Murphie said the slide could be added to the presentation. The project had activity during the last couple of months.

Smart asked if the DOE could retain ownership of the UF₄ containers that were sent to Envirocare. Murphie said the title was transferred to Envirocare. Smart asked if a use for the product is identified later, could DOE get the containers back. Murphie said there is no visible value at this time for UF₄, but depleted uranium has become marketable and questions have been raised by Washington, D.C. DOE is researching that question for the depleted uranium hexafluoride (DUF₆) cylinders.

Kerley said the presentation mentioned mixed low-level waste (LLW) sent to the Toxic Substances Control Act (TSCA) Incinerator in Oak Ridge. He said DOE mentioned at one time that the TSCA Incinerator could be shut down. Murphie said the shut-down has been delayed and DOE is looking into options for contracting arrangements and commercial availability to keep it open. Murphie said Portsmouth and Paducah are the single biggest consumers.

Miller asked if ground sampling was conducted on the DMSAs before they were returned to USEC. Murphie said the area is not characterized as clean but all of the ground is dealt with

under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Giroir said the ground is radiologically surveyed and any surface contamination is cleaned up and the soils will be cleaned up through the CERCLA process.

Kerley said an update to the project status of the DUF₆ facility is in the Board packets.

Federal Coordinator Comments

Dollins said a site tour is scheduled for Saturday, October 22. Eadens said there are 24 people attending.

Dollins said the retreat is being held November 4 and 5. He encouraged all Board members to attend.

Public Comments

Donham asked the status on the nickel disposition. Murphie said the nickel is still at the plant. He said Washington has an initiative to look at the nickel and other metal assets on the complex to evaluate a policy decision. There is a lot of interest in the nickel. Donham asked if the nickel had been turned over to the Paducah Area Community Reuse Organization. Murphie said no.

Task Forces/Presentations

Waste Disposition Task Force

Attachment #2

Russell showed a slide that was presented at the task force meeting explaining the objectives, fieldwork, and results of the C-746-S&T Landfills Site Investigation.

Russell said the task force would begin discussing the end condition of the site at their next meeting.

Water Quality Task Force

Attachment #3

Smart said the Water task force discussed possible degradation in the Southwest Plume and the early design features of the C-400 source removal. Murphie said there is still uncertainty with the degradation and discussions with the regulators would continue.

Smart presented an update on the Surface Water Operable Unit sampling results that were discussed at the task force meeting. Lee said there was an exceedence in the storm sewer. Dollins said there was one hit in the storm sewer and the data is still being evaluated. Dollins applauded CDM for their work on this project.

Smart said the task force would begin discussing end state water quality at the next meeting and if anyone would like to share input, he would appreciate it.

Long-Range Strategy/Stewardship

Kerley said the handout from the End State Public Meeting is included in the Board packet.

Kerley said the Board issued a recommendation to DOE on the End State Vision and they had requested a response by October 2004 and still have not received it. Dollins said he is working on the response. He said 50 percent of the recommendation will be answered now and the other 50 percent will be answered later because of the unknowns. He said he hopes to have the response by the next Board meeting.

Community Outreach

Attachment #4

Eadens said as a result from questions raised by Active Citizens for Truth (ACT), the task force formed a set of the following questions:

- What is the Agency for Toxic Substances Disease Registry (ATSDR) doing in Paducah? What have they done? What are their plans for any future health studies?

Eadens found in the ATSDR Public Health Assessment for the Paducah Gaseous Diffusion Plant (PGDP) that no apparent current public health hazard was found. He said the information was incomplete because future unexpected exposures cannot be predicted, and the sample size was too few to accurately determine significance. It was recommended that a spatially and statistically consistent soil sampling program be developed to access accumulation of airborne contaminants in residential areas.

- Is anyone looking at epidemiological data for health in the surrounding neighborhoods (10-mile radius)?

Eadens said the Superfund Basic Research Program, which is part of a University of Kentucky headed by Sandra Bastin received a grant to complete this study.

- What is DOE's responsibility for public health (Superfund site)? Is anyone, DOE or otherwise, as part of Superfund work, examining the health/health effects of plant neighbors within a 10-mile radius?

Eadens said the Citizens Advisory Board (CAB) is specifically addressing plant neighbors. DOE Public Relations sent several web links for information on this topic. Lee requested that these links and Eadens presentation be added to the CAB's Web site.

Eadens highlighted the Environmental Community Garden Project results from prepared by the University of Kentucky. He said 174 samples were taken and studies were blinded by UK using Microbac Laboratories. He said the results indicated repeated calls from the community to laboratory officials with accusations and generally "disruptive behavior." Eadens said the results show that ACT members were displeased with the collective results because the data did not answer the questions they expected to have answered or support the

conclusions they were expecting. There was little statistical difference or little credibility of results because of the small sample sizes. Suggestions were included for a larger better designed project.

Eadens said neither the ATSDR report nor the Community Garden Project appeared to be properly designed or sufficiently powered to answer the question of community health risk. Miller said wide spread contamination is difficult to pinpoint.

Eadens said ATSDR and Sandra Bastin would be invited to talk to the CAB to discuss their ongoing projects.

Eadens said the Community Outreach task force is attempting to get the public involved. He said he presented the Speaker's Bureau to eight Channel 6 news people, and invited city and county officials and organizations to the site tour.

Lee asked if the state has taken any samples of the soils or vegetables in the neighbor areas around the PGDP. Maybriar said the epidemiological branch within the Cabinet for Health Services (CHS) has taken soil and vegetable samples around the plant to check for radiation. He said the state did not split samples with the UK Study. He said if calls are received within a couple of mile radius around the plant for sampling of property, the state will conduct those samples but waste management has not done an epidemiological study. Eadens said the problem with previous studies is that there has not been good randomization of the samples to form conclusions from the data. He said the CAB would like for someone to put a design together that would definitively say if there is contamination that puts neighbors at risk. Maybriar said the Kentucky Department of Waste Management (KDWM) talked with UK and CHS six or seven years ago about an epidemiological study for historical and current workers inside the fence. He said KDWM could not do the study under their grant with DOE, but they were trying to find out if the state or UK could do the study. He said it would take a lot of time and money and the money was not available.

Jurka said during the Environmental Garden Project, collections were made from various individuals in the community requesting water and soil samples and the state did comply with those requests. She said ACT did not "sling any mud" with UK until Sandra Bastin's report was made to them. Jurka said she was very surprised that Bastin is the lead investigator on the health study because her qualifications are with nutrition, not health. She said she and Ruby English, ACT chairperson met with UK and told them that a nutrition study is not possible near the PGDP due to the merit of health problems that the plant neighbors have. Jurka said UK chose Microbac Laboratories for sampling. She said this laboratory does not have the capability to test radionuclides and that was supposed to be part of the Garden Vegetable Study. She said the samples were not tested for the correct chemicals, U₂₃₈ were tested for U₃₀₈, and instead of testing for fluoride, fluorine was tested for instead. She said UK held the test results for a long period of time and the published report consisted of a two page criticism. Jurka said ACT was supposed to receive a bibliography on vegetable collection and instead she received 1200 pages on wheat. She said some of the findings show plutonium in the vegetables and ACT is looking at the source. She said in order for the vegetables to contain a certain amount of plutonium it had to be via air.

She said these were only a few of the problems and ACT did not perform in an unprofessional manner.

Administrative Issues

Budget Review

Kerley said he would postpone the budget discussion until the Annual Planning Retreat or until the next Executive Committee meeting. He said according to last year's budget, the CAB budget has decreased. Yet, according to DOE Headquarters, the budget has stayed flat.

Review of Workplan

Lee said the D2 Southwest Plume Site Investigation document would be postponed as well as the Proposed Remedial Action Plan. Cook agreed.

Lee asked how many CAB members attended the End State Public Meeting. Dollins said three. Lee said half of the CAB members are new members that are not familiar with the End State document. She suggested a presentation at the Retreat for the Board that includes a summary from last years' and this years' meetings. Dollins said the person to make this presentation would not be available at the Retreat. Kay suggested scheduling the presentation at the January meeting. The CAB agreed.

Eadens suggested that the CAB invite DOE to present public information, such as End State, in lieu of their normal agenda when these meetings are necessary. He said the CAB and DOE would benefit with more members of the public in attendance and better feedback from the community. He said public meetings are usually only once a year. Kay suggested adding this suggestion to the retreat agenda.

Smart requested that the realignment of task forces be added to the Retreat agenda. Kay said this issue would be added to the agenda.

Kerley said the Site Management Plan (SMP), which is scheduled for a presentation in November, is not submitted to the regulators until November 15. He asked if the CAB would receive the milestones for the retreat as the CAB has in the past for structuring the workplan. Murphie said the CAB could not have the set of milestones that would be in the SMP but a list of milestones for planning purposes without labeling them the draft SMP could be provided to the CAB before the retreat.

Review of November Agenda

Kerley requested adding the End State presentation to the January agenda and leaving the SMP a placeholder for November.

Action Items

Eadens said when he met with the TV station, they acknowledged that the information on the land buy-out study was over-condensed but he did not expect a retraction.

Dollins said Long requested at a task force meeting that DOE investigate a saturated area on her property and he believes that area is not related to any groundwater contamination from an aquifer.

Subcommittee Report

Executive Committee

Kerley expressed the importance of the retreat. He asked that all members plan to attend. Russell said he had a prior engagement. Kay said he had only received a few of the Self Evaluation forms. He urged members to send their forms to him to prepare the tally for the Retreat. Kerley said the retreat agenda requires approval. Murphie said the CAB goes into tremendous detail on the analysis of the decision making process. He said there are questions that deal with the future of this site and the long term solutions. DOE continues to need and want to get input on the this issue as much or more than the subtleties of the small differential details on the low level technical analysis. Murphie suggested the CAB discuss the long term and future of the plant at the retreat. Russell said the Board is not a technical Board but the problem is DOE has not posed the questions on what DOE needs advise. McCorry said this was a topic at the Chairs Meeting and the CABs need to know what direction of help they can offer to DOE. She recommended DOE put forth thought as to where they want the CAB's help. Kerley said the Board requested guidance in at letter to DOE in November 2002. Dollins said the letter was answered asking the Board to look at their long term vision of the site. Kerley said most of the Board was not here a the time of the letter. Kay asked if Dollins could provide the letter at the retreat. Dollins said yes. Smart said Murphie would not be at the retreat and suggested they continue the conversation while he is present. Russell said he would like to see the final condition of the site on a graphical map and the Waste task force is going to start working on this to see the long range questions and specific decision in a broader complex. He said the task force would be requesting support in mapping from DOE. Murphie said the CAB might focus on how instead of what to get the answers. He said these are complicated issues and may take years to have an answer. He said focusing on how may set processes in place to achieve the end result. Murphie said there are several of ideas in the last couple of years, such as property purchases, economic assessments, and developments. Smart said those are hard questions to answer and it really ends up with the risk assessment. Murphie said there is no right answer and when the answer is picked, it could change tomorrow. Kay said there have been interviews and reports that focus on the Board functioning in a way that DOE has supported and what is appropriate and not appropriate on a complex-wide basis. Cook said he would send the link to these reports to the CAB staff for distribution to all CAB members.

Kerley said the November Executive Committee meeting has been moved to 3 p.m.

Kerley said the CAB has received an invitation to the intergovernmental meeting with DOE on November 8-10 in Washington, and anyone interested in going should let staff know.

Kerley said the letter composed at the chairs meeting to James Rispoli, Assistant Secretary for Environmental Management, requires a vote to authorize the chair's signature on behalf of the CAB. He said four other CAB chairs have signed the letter. McCorry said most of the issues in the letter are not relative to Paducah, but it would show support to the other chairs. She said the letter would allow the CABs to assist in securing public comment regarding the waste disposition strategies. The letter discusses transuranic waste and final disposition of high-level waste streams. The letter was approved for Kerley's signature.

Eadens said the Board has received four applications and three of the applicants are scheduled to attend the site tour. He said the Community Outreach would be having independent interviews with all applicants soon.

The meeting adjourned at 8:45 p.m.

Progress at the PADUCAH PROJECT

Update to the Citizens Advisory Board

October 20, 2005



William Murphie
U.S. Department of Energy
Manager
Portsmouth/Paducah Project Office



DUF₆ Conversion Project

- Conversion Building ground modification 50% complete
- Final design approved September 30
- Project proceeding with Conversion Plant construction

***Critical Decisions 2 & 3
approved by DOE HQ***

Foundation work completed for
Maintenance and Warehouse Building





DMSAs

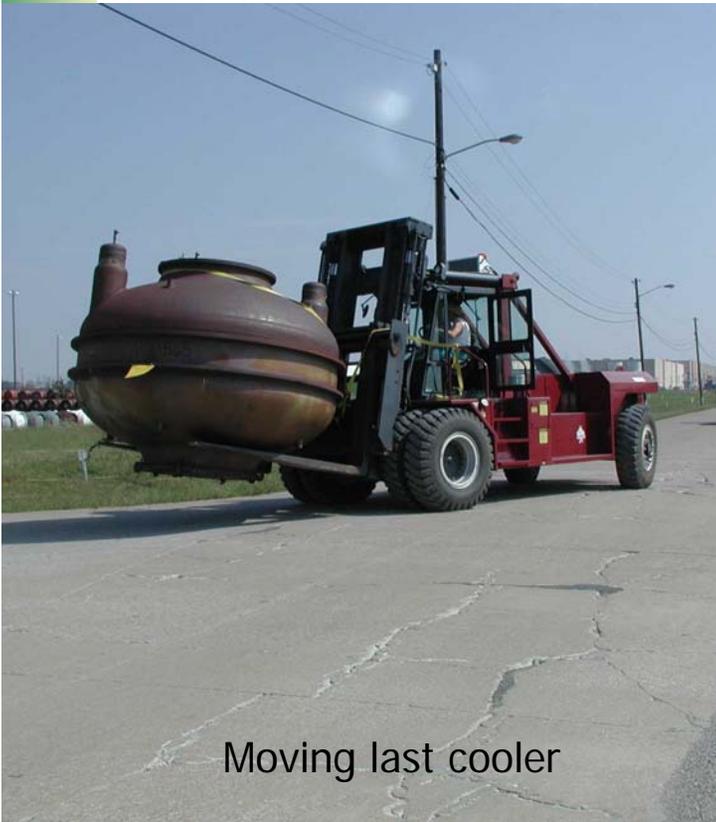
- All coolers removed from DMSA OS-15
- Agreed Order activities in DMSAs 331-04, 331-07 and 331-20 completed; areas returned to USEC





DMSAs

- All coolers removed from DMSA OS-15
- Agreed Order activities in DMSAs 331-04, 331-07 and 331-20 completed; areas returned to USEC



Moving last cooler

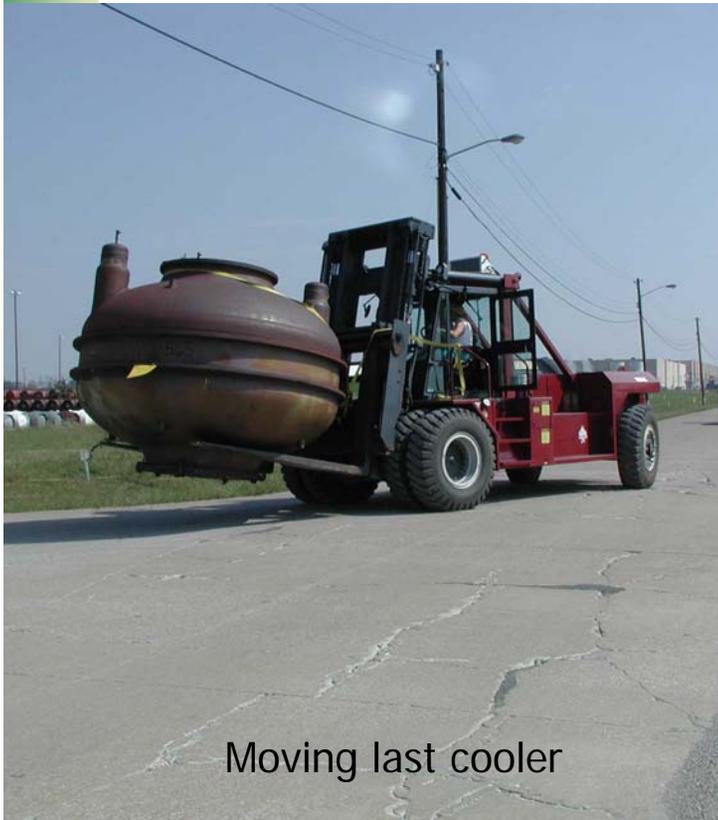


DMSA OS-15 before



DMSAs

- All coolers removed from DMSA OS-15
- Agreed Order activities in DMSAs 331-04, 331-07 and 331-20 completed; areas returned to USEC



Moving last cooler



DMSA OS-15 after



DMSAs

- All coolers removed from DMSA OS-15
- Agreed Order activities in DMSAs 331-04, 331-07 and 331-20 completed; areas returned to USEC

*All Outside DMSAs
now empty*

DMSA OS-15 after





Expedited Cleanup Projects

UF4 Drums

- Completed shipment of 3 million pounds of UF₄ to Duratek/Bear Creek

UF4 gone





Expedited Cleanup Projects

UF4 Drums

- Completed shipment of 3 million pounds of UF₄ to Duratek/Bear Creek

***DMSA 331-28
now empty***



DMSA 331-28 after



Inactive Facilities D&D

Nitrogen Facility

- Demolition has begun
- Completion scheduled for this month



The "cold box" is lowered to the ground



C-410 D&D

- Disposed of the C-410A Hydrogen Holder in the site landfill.
- Continued removal of fluorine cell stands and platforms from Sector 2
- Initiated paint removal from the remaining 13 breached fluorine cells
- Continued electrical demolition in Zone 64, C-411 in preparation for demolition
- Applying fixative to allow removal of equipment without needing to place personnel in respirators



Fixative applied to bright blue area
in Zone 64, C-411

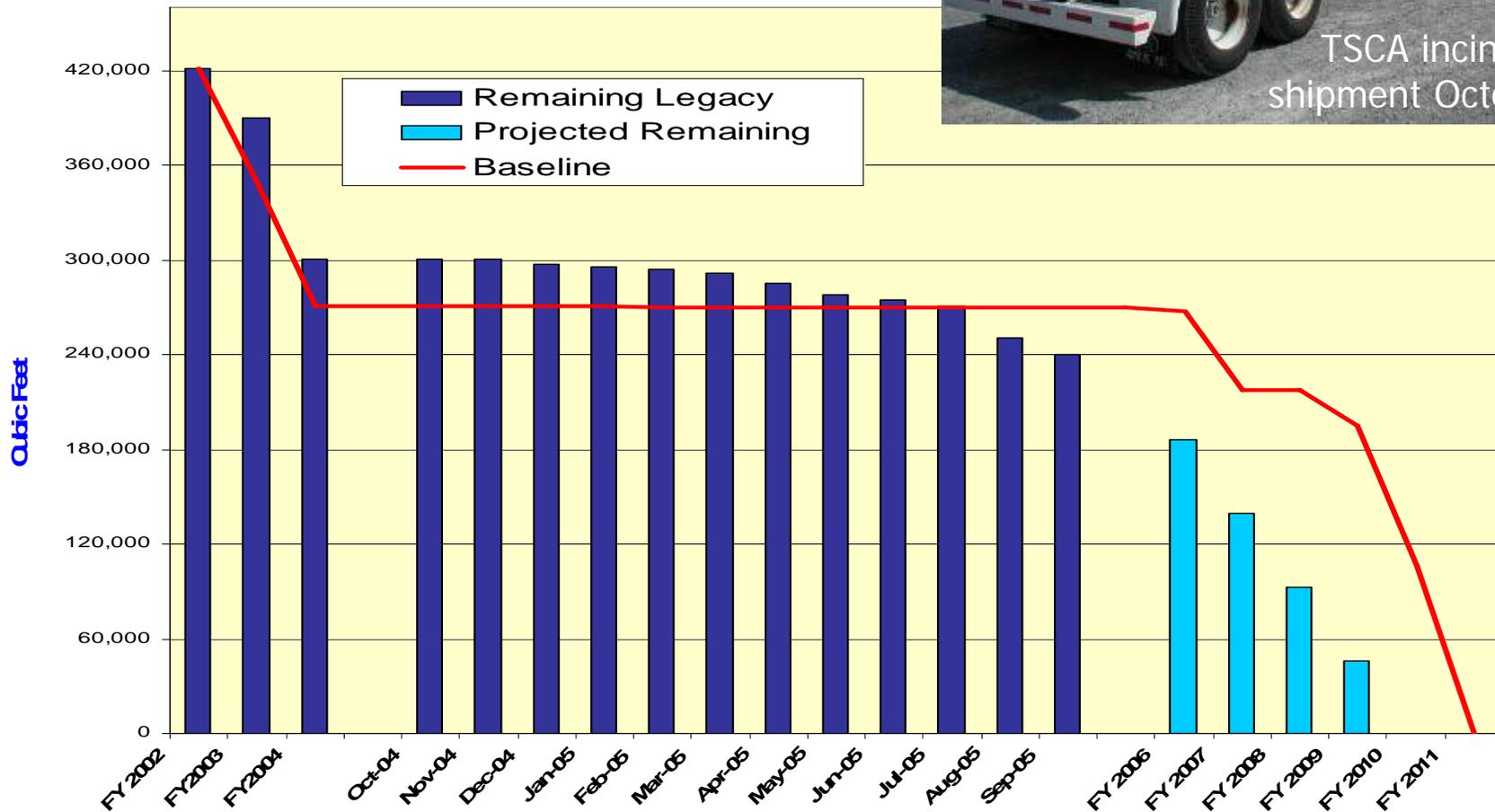


Legacy Waste Disposition

- Shipped ~3,000 gallons of Mixed LLW to TSCA Incinerator



TSCA incinerator shipment October 5





Legacy Waste Disposition

Expedited Outdoor Legacy Waste Disposal

- Outdoor Legacy LLW shipments to Envirocare scheduled for November; repackaging underway

Other projects

- Shipped first load of about ~3,000 containers of sewer sludge
- Complete disposal of Agreed Order waste by December; 4,270 containers have been disposed; ~ 500 containers remain.



Outdoor Legacy Waste
FY 2009 to FY 2006

Waste near C-746-B
July 2005



Legacy Waste Disposition

Expedited Outdoor Legacy Waste Disposal

- Outdoor Legacy LLW shipments to Envirocare scheduled for November; repackaging underway

Other projects

- Shipped first load of about ~3,000 containers of sewer sludge
- Complete disposal of Agreed Order waste by December; 4,270 containers have been disposed; ~ 500 containers remain.



Outdoor Legacy Waste
FY 2009 to FY 2006

Same area
September 2005



Scrap Metal Removal

- Shipped 434 tons of D-Yard scrap to NTS in September; 1,297 tons total shipped since July
- Completed disposal of 222 SeaLand containers to Envirocare September 15
- Preparing to start pallet removal/disposal in A-Yard.



Pallet pile in A-yard



Surface Water Operable Unit



Storm water
sampling

- Sampling of soils and sediments of NSDD Sections 3, 4 and 5, outfalls and internal ditches now complete
- Site Investigation /Baseline Risk Assessment will be submitted to the regulators by August 16, 2006.



C-746-U Landfill

- Field portion of the Kentucky Research Consortium for Energy and Environment Holocene Displacement Study completed October 3.

KRCEE core sampling, core monitoring and core labeling





Other Items of Interest

Groundwater Operable Unit

C-400 Source Removal

- Bechtel Jacobs evaluating subcontractor proposals to design, build, and operate the Electrical Resistance Heating project

Southwest Plume

- D2 Site Investigation Report due to EPA and Kentucky by November 6, 2005

S & T Landfill

- Issued D1 Site Investigation Report on September 30

Expedited D&D -- Lime House, Contaminated Item Incinerator, and West End Smelter

- EE/CA comment period open through October 31
- Fieldwork on Lime House to begin January 2006

Burial Grounds Operable Unit

- EPA and Kentucky comments received on D1 Remedial Investigation/Feasibility Study Work Plan
- D2 RI/FS in development



**Project Status Update for Paducah DOE Citizens Advisory Board
October 13, 2005**

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: 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" UF₆; 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
October 13, 2005
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.

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 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:

- Site preparation subcontract complete – June 2005
- Underground Utilities yard piping subcontract complete – July 2005
- Underground Utilities yard electrical subcontract complete – July 2005
- Cylinder Yard Fence subcontract complete – May 2005
- Construction Trailer Set-up subcontract complete – August 2005
- Construction of the Warehouse foundation has been started – July 2005
- Conversion Building pre-cast wall panels under design.
- Awarded contract and began construction activities for soil stabilization for conversion building – August 2005
- Authorization for remaining construction, approved 9/30/05

Construction activity scheduled over next 60 days:

- Begin warehouse building construction
- Begin construction of the Administration Building
- Award contract and begin Conversion Building foundation

- Award and begin construction of offsite rail spur
- USEC begin connection to PGDP utilities

Procurement activity planned next 60 days:

- Bid miscellaneous foundation package – S-39
- Bid on site railroad – S-34
- Bid pre-engineered buildings – S-31

Project Status Update for Paducah DOE Citizens Advisory Board
October 13, 2005
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 exiting 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:

- Disposed of 50.7 tons of waste in September
- Subcontract for construction of leachate treatment facility (A&K Construction) was issued a suspension of work to minimize costs until KDWM issues permit.
- BJC IFR approved for construction pending landfill permit issuance.
- Approved minor modifications to the leachate treatment unit and directed Calgon to implement changes.
- Delivery of the leachate treatment unit is scheduled for October 31, 2005.
- Field portion of the Kentucky Research Consortium for Energy and Environment Holocene Displacement Study completed October 3, 2005.

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.
- Initiate construction of leachate treatment facility within two weeks of reissuance of Permit.

Project Status Update for DOE Paducah Citizens Advisory Board
October 13, 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:

- Completed UF₄ shipments to Duratek/Bear Creek
- Continued repackaging activities for Sewer Sludge (PCB/low level waste) for October/November shipments to Envirocare
- Continued repackaging activities for low-level waste stored in outside facilities for October/November shipments to Envirocare

Activity over next 60 days:

- Complete shipment of UF₄ from Duratek to Envirocare
- Complete disposition of ~ 4,750 containers of Agreed Order “no-longer contains” waste at Envirocare or the C-476-U Landfill, as appropriate
- Ship four trucks of mixed low-level waste to Perma Fix facilities and Envirocare
- Ship tanker of liquid waste to TSCA Incinerator
- Disposition of approximately 3,000 containers of Sewer sludge and LLW stored in outside facilities

**Project Status Update for DOE Paducah Citizens Advisory Board
October 13, 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: 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 installation of the new boundary control station and placed the facility in service.
- Subcontractor initiated work on the C-603 Nitrogen Generating Facility demolition by removing three tanks.
- Initiated paint removal from the remaining 13 breached fluorine cells.
- Sprayed radiological contamination fixative in building C-411.
- Continued electrical isolation and demolition in Zone 64 (C-411 portion of C-410 Complex).
- Replaced 5-ton crane in Zone 52 of the C-410 Complex.
- Disposed of the C-410A Hydrogen Holder in the site landfill.

Activity over next 60 days:

- Continue packaging of loose materials in C-410 Complex.
- Ship compactable waste material to Envirocare of Utah for disposal.
- Complete demolition activities at C-603 Nitrogen Generating Facility.

Project Status Update for DOE Paducah Citizens Advisory Board
October 13, 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: 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 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:

- 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:

- Approximately 1,100 cubic ft. of material was processed for characterization during September
- Approximately 9,000 cubic ft. after size reduction packaged for disposal in the month of September
- Approximately 8,000 cubic ft. disposed in September after size reduction
- Eleven PG Coolers from DMSA OS-15 have been shipped for disposal; three additional PG Coolers have been sized for packaging and shipment.
- Agreed Order activities in DMSAs C-331-04, -07, and -20 have been completed and the areas returned back to USEC by DOE.

Activity over next 60 days:

- Continue sizing, packaging, and disposition of the remaining DMSA OS-15 material.
- Initiate the sizing, packaging, and disposition of OS-4 and OS-14 rail cars.
- Continue characterization of "Priority B" DMSAs under the Agreed Order.
- Pursue boundary removal for DMSAs OS-02, OS-15, and OS-04.
- Pursue Kentucky approval for approximately 20 DMSA RCRA Closures.

Project Status Update for DOE Paducah Citizens Advisory Board
October 13, 2005
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 (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&D1); Remedial Design Support Investigation Characterization Plan (DOE/OR/07-2211&D1)
- 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 biodegradation factors utilized in groundwater modeling to support risk assessment development.

Recent accomplishments:

- Issued D1 Remedial Design Work Plan to support development of the C-400 Remedial Action August 11, 2005 and regulator comments received on 10/6/05.
- Evaluating contractor 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. Contract award is anticipated in mid-November.
- Issued D1 Remedial Design Support Investigation Characterization Plan for the Interim Remedial Action for the Volatile Organic Compound Contamination at the C-400 Cleaning Building on September 23, 2005 for review.
- Issued D1 Site Investigation Report for the C-746-S&T Landfills for review.

Activity over next 60 days:

- Receive comments on the C-746-S&T Landfill Site Investigation Report and reissue as a D.
- Complete RFP evaluation and award contract for C-400 action.
- Resolve biodegradation factors issue.
- Revise D1 RDWP for C-400 Interim Action by incorporating stakeholder comments into a D2 document for submission and approval by the State of Kentucky and USEPA.

FFA Milestones:

- Submit D2 Southwest Plume Site Investigation Report and Remedial Action Plan, both due by November 6, 2005. (Milestone being modified pending resolution of the biodegradation factor use in groundwater models.)

Project Status Update for DOE Paducah Citizens Advisory Board
October 13, 2005
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:

- Completed all soil samples (planned and contingency) from ditches on September 28, 2005
- Third (Final) month of Step 1 storm sewer sampling was completed September 29, 2005
- Completed 1st week of 3 weekly Step 2 storm sewer sampling events on October 7, 2005

Activity over next 60 days:

- Continue upgradient storm sewer sampling (Step 2) at one of the four storm sewer discharges that exceeded the indicator chemicals (samples collected every other week)
- Plan for Direct Push Technology (DPT) soil sampling along storm sewer after all Step 2 analytical data has been reviewed.

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
October 13, 2005
Project: Scrap Metal Removal Project

Contact Persons:

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: 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:

- 434 tons of scrap metal were shipped by truck in September from C-746-D yard to NTS. Since recertification of the waste shipping program by NTS in July 2005, BJC has shipped 1,297 tons of scrap to NTS.
- Shipped 703 tons of scrap to Envirocare during September by rail. This completed the disposal of 222 sealand-type containers staged at PGDP since last summer.

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 Envirocare.
- Initiate pallet removal and disposal in C-747-A Scrap Yard.

**Project Status Update for DOE Paducah Citizens Advisory Board
October 13, 2005
Project: Burial Grounds OU**

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 D1 RI/FS Work Plan was completed and distributed to the Commonwealth of Kentucky and the EPA on June 30, 2005.

Activity over next 60 days:

- Comments from Kentucky and EPA on the BGOU D1 RI/FS Work Plan are due October 14, 2005.
- Resolution of regulator comments on the Work Plan and issuance of a D2 Work Plan for approval
- The Request for Proposal to implement Work Plan is being developed.