

Solving Cleanup Challenges Through Risk Reduction

Progress at the Paducah Project

Update to the
Paducah Citizens Advisory Board

May 15, 2008



EM Environmental Management

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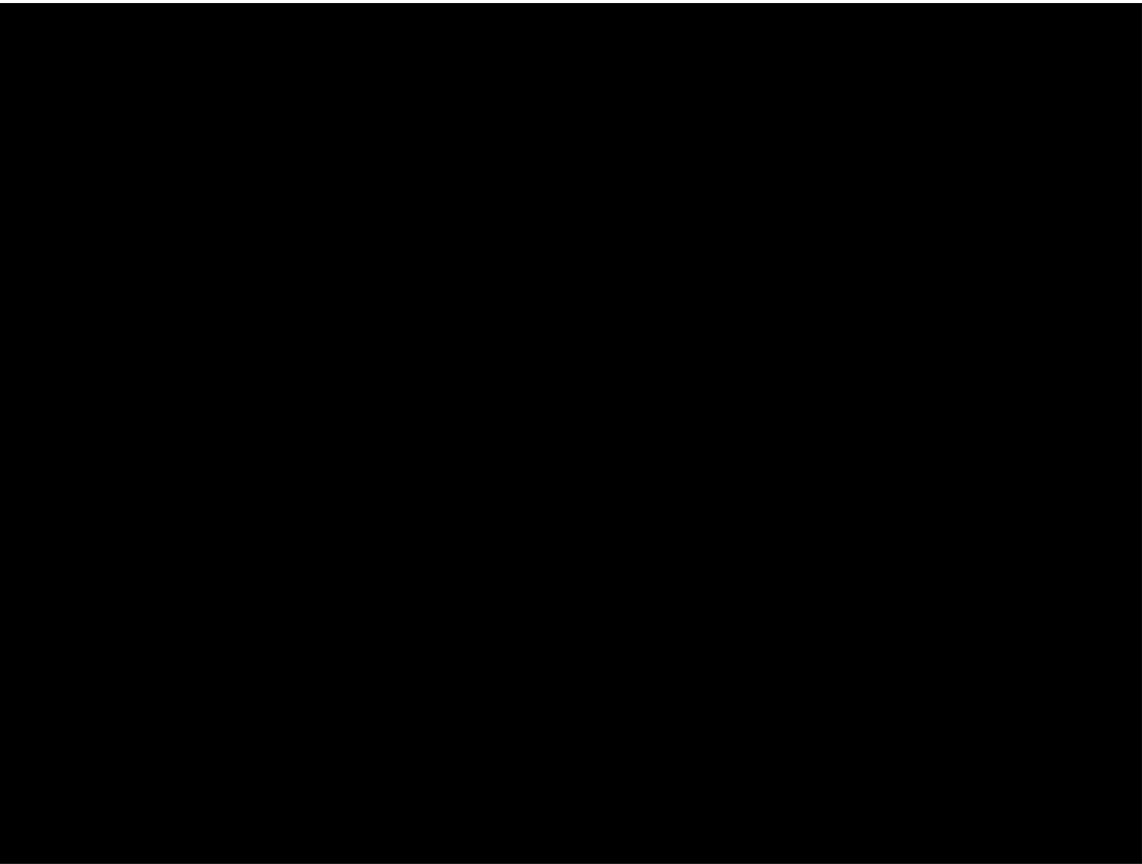
Purpose of Presentation

- Program successes
- Main topics
 - April site walkdown
 - Site Treatment Plan
- Working session updates



D&D - West End Smelter

- Demolition completed April 30
- D1 Removal Action Completion Report due June 3



Above, a video from the demolition.



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D&D - West End Smelter



- ~20,000 ft³ of debris generated
 - More than 70% disposed of in U-Landfill
 - Remainder sent for treatment or disposal to various sites



The C-746-A West End Smelter before and after demolition.



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April Site Walkdown

- In April, KDWM met with former workers to visit areas where they said debris (e.g., soil, rubble) from past plant operations was located
- Determination must be made if the material came from past plant operations or other sources and if it is contaminated
- PRS provided radiological survey support
- DOE and Kentucky doing a further evaluation of those areas



One of the areas where material was used along a now closed road northeast of the plant.



April Site Walkdown



This material was placed along a creek bank near the plant for erosion control.



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April Site Walkdown



This debris as used just north of the plant to shore up a creek bank.



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April Site Walkdown – Continuing Actions

- Complete a sitewide radiological survey
- Complete a radiological flyover
- Complete a topographical survey
- Compile information and develop a work plan to characterize additional areas as needed



This construction debris was used along a creek in the Ballard Wildlife Management Area.



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Legacy Waste Disposition – STP Milestone

- Site Treatment Plan establishes enforceable milestones for the treatment of mixed low-level wastes
 - Newly generated wastes not dispositioned within one year are added to the STP
- Most recent milestone (January 31, 2008) was for disposition of ~390 containers, ~6,000 ft³
- Milestone extended to 4/30/08
 - Less than 10 percent of the milestone waste remained in inventory on January 31, 2008
 - 492 ft³ dispositioned before April 30



Legacy Waste Removal – STP Milestone

- DOE has requested a second extension to 5/31/09 to evaluate ~85 ft³ (11 drums) of material for potential recovery
- This material is “cylinder wash sludge,” which contains a high concentration of uranium
- Kentucky has given tentative approval to the extension request



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Legacy Waste Removal – STP Milestone

- Steps to evaluate reclamation
 - Determine the radionuclide content
 - Issue an Expression of Interest to determine market interest
 - Obtain quotes from vendors
 - Perform a cost benefit analysis, reclamation vs. disposition
- If analysis shows reclamation is a viable alternative, the material will be reclaimed
 - DOE will evaluate if an existing contract in place in Portsmouth can be used for uranium reclamation in Paducah
- If reclamation is not viable, the material will be dispositioned



Groundwater – TCE Degradation

- KRCEE completing second phase of 4-phase project; now initiating third phase
 - Phase I – Historical site data evaluation
 - Phase II – Aerobic biodegradation evaluation
 - Phase III – Stable Carbon Isotope (SCI) investigation
 - Phase IV – Abiotic degradation investigation
- Phase II status
 - Completed
 - Geochemical sampling
 - Enzyme activity probe sampling and analysis
 - Investigation of well biofouling
 - Reports in preparation
 - “Enzyme Activity Probe Analysis & Geochemical Report” (May 15)
 - White Paper and recommendations for future study (May 16)
 - Preliminary Assessment – Microbes that produce enzymes that degrade TCE are active in the RGA
- More detail will be provided in a working session



CERCLA 5-Year Review

- Report evaluates effectiveness of environmental cleanup actions
- Required every 5 years, beginning with the first Record of Decision at a site (Paducah's 1st - Northwest Pump-and-Treat, 1993)
- 2008 report is now being written
- Due to Kentucky and EPA 9/30/08
- Draft list of response actions being evaluated include these:
 - Northwest Pump-and-Treat
 - Northeast Pump-and-Treat
 - C-746-K Landfill
 - North-South Diversion Ditch
 - C-749 Burial Ground
 - C-405 Incinerator
 - C-400 Electrical Resistance Heating
 - C-410 Infrastructure Removal
 - Lasagna™
 - Fire Training Area
 - C-402 Lime House
 - West End Smelter



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