



June 20, 2013

**Chair**  
Ralph Young

**Vice-Chair**  
Ben Peterson

**Board Members**

Glenda Adkisson  
Renie Barger  
Judy Clayton  
Robert Coleman  
Eddie Edmonds  
David M. Franklin  
Tom Grassham  
Kyle Henderson  
Jonathan Hines  
Mike Kemp  
Maggie Morgan  
Kevin L. Murphy  
Dianne O'Brien  
Richard Rushing  
Jim Tidwell  
Roger Truitt  
Ken Wheeler

**Board Liaisons**

Rachel Blumenfeld  
*DOE DDFO*

Buz Smith  
*DOE Federal Coordinator*

Todd Mullins  
*Division of Waste  
Management*

Turpin Ballard  
*Environmental Protection  
Agency*

Mike Hardin  
*Fish and Wildlife Resources*

Stephanie Brock  
*Radiation Health Branch*

**Support Services**

EHI Consultants, Inc.  
111 Memorial Drive  
Paducah, KY 42001  
Phone 270.554.3004  
Fax 270.554.3248  
[www.pgdpkab.org](http://www.pgdpkab.org)  
[info@pgdpkab.org](mailto:info@pgdpkab.org)

## Agenda for the June Board Meeting

### 6:00

Call to order, introductions  
Review of agenda

### DDFO's Comments

- DDFO Presentation

-- 15 minutes

### Federal Coordinator Comments

-- 5 minutes

### Liaison Comments

-- 10 minutes

### Presentations

- Steve Penrod, USEC

-- 20 minutes

### Administrative Issues

- Recommendation 13-XX – Recycling
- Recommendation 13-XX – Prompt Initiation of PGDP Operating Facility Decontamination and Decommissioning after Transition of Leased Buildings to DOE

-- 40 minutes

### Subcommittee Chair Comments

-- 10 minutes

### Public Comments

-- 15 minutes

### Final Comments

- Additional materials

-- 5 minutes

### Adjourn



# PADUCAH GASEOUS DIFFUSION PLANT CITIZENS ADVISORY BOARD

115 Memorial Drive • Paducah, Kentucky 42001 • (270) 554-3004 • [info@pgdpcab.org](mailto:info@pgdpcab.org) • [www.pgdpcab.org](http://www.pgdpcab.org)

## Paducah Gaseous Diffusion Plant Citizens Advisory Board Meeting Minutes June 20, 2013

*The Citizens Advisory Board (CAB) met at the Environmental Information Center (EIC) in Paducah, Kentucky on Thursday, June 20th at 6:00 p.m.*

**Board members present:** Judy Clayton, Ken Wheeler, Robert Coleman, Dianne O'Brien, Roger Truitt, Mike Kemp, Ben Peterson, Renie Barger, David Franklin, Kevin Murphy, Jim Tidwell, and Tom Grassham.

**Board Members absent:** Kyle Henderson, Eddie Edmonds, Jonathan Hines, Ralph Young, Glenda Adkisson, and Richard Rushing.

**Board Liaisons and related regulatory agency employees:** Tim Kreher, KY Fish and Wildlife; Todd Mullins, Kentucky Department of Waste Management (KDWM); Stephanie Brock, Radiation Health Branch.

**DOE Deputy Designated Federal Official:** Buz Smith, DOE

**U.S. Department of Energy (DOE) related employees:** Rob Seifert, Bill Murphie, Catherine Alexander, Russell McAllister, DOE; Joe Walker, Mark Duff, LATA Environmental Services of Kentucky (LATA); Gaye Brewer, KDWM; Yvette Cantrell, Leslie Cusik, Restoration Services, Inc. (RSI); Steve Penrod, Georgann Lookofsky, Jim Key, United States Enrichment Corporation (USEC); Eric Roberts, Jim Ethridge, EHI Consultants (EHI).

**Public:** Cheryl Duff, Ronnie Stone

### Introductions:

**Peterson** opened the meeting at 6:00 pm, and asked for introductions. He then introduced **Seifert** for the DDFO presentation.

<p><b>Wheeler:</b> Can you explain the evaluation process after the initial 9 months? [C-400 IRA]</p>
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<p><b>Duff:</b> It will take 9 months to get the formation up to design temperature and then we will be able to see how effective the project will be.</p>
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**Seifert** turned the meeting over to **Murphie** to speak to the Board about the DOE budget and shutdown of PGDP.

<p><b>Wheeler:</b> Bill, can you give us any indication of the timeline for the contractor for D&amp;D of the plant to be selected and in place?</p>
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<p><b>Murphie:</b> It is hard to say because it is timed from when the final RFP (Request for Proposal) is issued? It is not unusual for it to take a year from</p>
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	when that is issued.
<b>Truitt:</b> When do you think the RFP will be released?	<b>Murphie:</b> The draft is already out, and excuse me for being vague but shortly.
<b>Wheeler:</b> From the community perspective, would it be wrong to think that we would have that document by the first quarter of next year?	<b>Murphie:</b> We will be doing everything we can to meet the schedule to meet the schedule that has been tentatively set with USEC.

**Murphie** turned the meeting over to **Penrod** for a presentation about the status of the shutdown at the Paducah Gaseous Diffusion Plant (USEC).

<b>Wheeler:</b> Do you have a plan B in the event that the budget is not passed and the possibility of going to a continuing resolution (CR) is considered?	<b>Penrod:</b> We plan to be ready to turn over the facility during the first quarter of next year.
<b>Truitt:</b> What happens if you are ready to turn it over and DOE is not ready to accept it?	<b>Murphie:</b> If we find ourselves in a position of being out of money for five or six months, we will have some challenges to reallocate funds that we do have and reprioritize what we need to do first with that money.

**Federal Coordinator Comments:** **Smith** reported that **Barger, Kemp** and **Wheeler** had been able to go on an orienting tour of the site. He also welcomed and introduced **Alexander**, who was visiting from DOE headquarters in Washington, DC.

**Liaison Comments:** **Mullins** indicated that he would be willing to discuss any concerns that the CAB had about the shutdown of PGDP that also concerned the state. **Kreher** said that his department was watching with interest the developments that concerned the part of the site that was leased by the Department of Fish and Wildlife. **Brock** indicated that once the shutdown occurred that the Radiation Control Branch would continue to do monitoring of the site that they have been doing.

**Administrative Issues:**

**Peterson** introduced *Recommendation 13-03: Recycling*, and turned the meeting over to **Clayton** for an explanation of the recommendation.

**Recommendation 13-03: Recycling – Rev. 3 - FINAL**

Drafted April 2, 2013

**Background**

The Paducah Citizens Advisory Board (CAB) wishes to thank the U. S. Department of Energy (DOE) for taking action toward lifting the moratorium on unrestricted use of non-contaminated metals and equipment from radiological areas. This action, which would preserve metals that would otherwise be treated as waste, demonstrates DOE’s commitment to achieving waste reduction and cost efficient waste management.

The EM Site Specific Advisory Board (SSAB) and the Paducah Citizens Advisory Board have long advocated recycling and reuse of excess metals and materials by the DOE as an environmentally responsible method for the DOE to deal with waste, as well as preserve national assets. We believe it is in the national interest to preserve America’s finite resources through recycling and reuse.

There are vast amounts of contaminated, high quality nickel and other metals that should be reclaimed when the Paducah Gaseous Diffusion Plant (PGDP) enrichment facility moves to decontamination and decommissioning (D&D). The PGDP cascade is made up of several components such as compressors and converters, along with miles of associated piping. These components are constructed of monel, copper, nickel-plated steel, aluminum, and other valuable materials. If these components are treated as waste, they will consume volumes of space in a disposal cell. In cases where the technology is not currently available for decontamination, the materials should be stored onsite.

Alternately, an option for disposition of volumetrically contaminated assets could be restricted reuse of the reclaimed assets by DOE-authorized nuclear facilities, the commercial nuclear industry, or Nuclear Regulatory Commission (NRC) licensees authorized to possess the material. Nickel currently stored at Paducah and Oak Ridge, along with the volumes which will be generated during the D&D of the PGDP could be used in this manner and still be compliant with the moratorium of January 12, 2000, which prohibits free-release of contaminated scrap metals.

The Paducah CAB feels that DOE made the right decision in researching and publishing the *Programmatic Environmental Assessment for the Recycle of Scrap Metals Originating from Radiological Areas (DRAFT)*. Responsible stewardship of government resources by recycling, reclamation, and reuse will help preserve the precious natural resources of this nation for future generations and our national security. The CAB looks forward to seeing the results of the year long trial of the carbonyl process recently authorized at Portsmouth.

### **Recommendation**

**The CAB recommends that a comprehensive and structured recycling program be established at Paducah. This action offers the following benefits:**

- **Potential for recovery of many hundreds of tons of valuable materials and components that are of value to the nation's economy.**
- **Generation of significant revenue to both DOE and the local economy in a manner already being utilized at other sites across the country.**
- **Reduction in volumes of waste that must otherwise be buried at an on-site landfill, or transported to a remote landfill.**

**The CAB further recommends that materials for which adequate certification for approved cleanup procedures has not yet been developed be stored on-site pending development of approved techniques.**

Recommendation was approved by consensus

**Peterson** then presented *Recommendation 13-04: Prompt Initiation of PGDP Operating Facility Decontamination and Decommissioning after Transition of Leased Buildings to DOE*

## **Recommendation 13-04: Prompt Initiation of PGDP Operating Facility Decontamination and Decommissioning after Transition of Leased Buildings to DOE – Rev. 7 - FINAL**

Drafted - June 4, 2013

### **Background**

The United States Enrichment Corporation (USEC) ended enrichment operations on May 31, 2013. The Department of Energy (DOE) has commenced planning for return of the facilities once USEC has completed commercial activities and lease obligations. As site landlord, DOE

is responsible for environmental restoration and decontamination and decommissioning (D&D) of the site.

At the Oak Ridge Gaseous Diffusion Plant (ORGD), more than 10 years passed after shutdown before serious decontamination and decommissioning work began. During that time, much plant knowledge that would have been useful at the beginning of D&D was lost. The DOE could avoid this mistake at Paducah by beginning D&D promptly after the plant is returned from USEC. The Paducah Gaseous Diffusion Plant (PGDP) is operated and maintained by trained and experienced workers who possess security clearances. These workers perform operations and maintenance tasks that are similar to process equipment preparation and removal tasks in D&D. The workers are also trained in environmental safety and health (ES&H) issues that are important to the D&D effort. Workers that are available as a result of declining USEC needs following notification, with a minimum of D&D-specific training, could move directly to D&D work. (1.)

Long-term surveillance and maintenance (S&M) is not acceptable to our community. It is imperative that DOE adequately fund the PGDP post operation shutdown and move into the D&D phase of restoration of the site. DOE Environmental Management (EM) has submitted a FY2014 budget request for \$321M for the PGDP. Sustaining or increasing that number through transition and into full D&D of the facility is critical to maintaining cleanup momentum and avoiding what could be potentially a very long delay period between transition/deactivation and actual D&D of the plant. Delay in D&D will increase eventual life-cycle costs and human risks involved with the process. The negative effects of delayed D&D are well chronicled at the ORGD site. Structures were weakened by decay and posed greater hazards during demolition. Contaminants were dispersed and were more difficult to clean up. Plant knowledge was lost. Time is not our friend.

(1.)BJC/OR-573, *Planning Study for Return of a Gaseous Diffusion Plant from the United States Enrichment Corporation to the United States Department of Energy Oak Ridge Tennessee*, Page 37.

The Paducah Citizens Advisory Board (CAB) has studied the *Uranium Enrichment Decontamination and Decommissioning Report, Report to Congress, December 2010*, and understands the following:

- DOE plans to D&D the PGDP when operations are concluded and the site is transitioned to DOE.
- Projected cost to D&D the PGDP site is \$9 billion, with a range of \$6.3 billion to \$13.5 billion.
- According to *the Uranium Enrichment Decontamination and Decommissioning Report, Report to Congress, December 2010*, Pages 9, 30, and 40, “D&D work at Paducah is scheduled to begin in 2017 and continue through 2040”, prior to completion of Portsmouth D&D in 2044.
- Assumptions for the PGDP timeline include an on-site Comprehensive Environmental Response Compensation and Liability Act (CERCLA) cell, presence of a skilled workforce, and recycling.

- Paducah is planned for a shorter D&D time period than Portsmouth due to the following:
  - With regard to radiation hazards, Paducah has cleaner buildings than Portsmouth
  - The community desires to redevelop the site as soon as possible.
- Lessons learned from ongoing D&D of the ORGDP and Portsmouth GDP will enhance full scale D&D operations at Paducah.

The CAB feels that DOE should re-commit to helping the community create the next economic chapter for the PGDP site. Re-commitment includes adequate funding for full scale D&D of the PGDP. Should an ongoing mission of the operating facility not be found, the CAB is concerned that a delay of the D&D of the enrichment facilities would hinder future use development.

- A cost-effective site-wide cleanup with a goal of obtaining an end-state site condition acceptable to stakeholders must commence upon transition of the PGDP to the DOE.
- *Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY2013*, Page 3, the CAB suggests that the DOE give D&D priority following immediate threats and reword the line to address sources as shown below:
  - Mitigate immediate threats, both on- and off-site.
  - Perform D&D of the GDP and address sources contributing to off-site contamination
  - Address post-GDP Operable Units(OU).
  - Reduce further migration of off-site contamination.
  - Address remaining sources contributing to on-site contamination.
  - Perform D&D of the Depleted Uranium Hexafluoride (DUF6) Plant once it ceases operations.
  - Evaluate the final Comprehensive Site Operable Unit(CSOU) .
- A successful and timely remediation of the site supports adaptive reuse. Key assumptions are that in addition to on-site disposal, recycling, and asset revitalization, a trained and skilled workforce will be immediately available.

*Portions of this background were borrowed from DOE document, BJC/OR-573; Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2013; and the Uranium Enrichment Decontamination and Decommissioning Report, Report to Congress, December 2010.*

### **Recommendation**

**The PGDP CAB recommends that DOE adequately fund the PGDP post operation shutdown and initiate immediate D&D of the enrichment operating facility upon return of the PGDP to DOE.**

**The CAB, along with other stakeholders, recommends that DOE continue to support the goal of adaptive reuse including the development and successful completion of a strategy that supports revitalization. Furthermore, where possible, the CAB recommends that the DOE increase its efforts to support this initiative. The CAB is aware that the EM program is not tasked with site reindustrialization, however, complete transparency and constant communication is a necessity for the community to succeed in transitioning property and assets from DOE to the community for the purpose of adaptive reuse.**

<b>Grassham:</b> How do you define immediate D&D?	<b>Peterson:</b> Upon the return of the plant back to DOE.
<b>Grassham:</b> Wouldn't it be better to say within a certain time period.	<b>Peterson:</b> I don't know that we can say that, because we don't know what their time period is. It is a moving target.

Recommendation was approved by consensus.

**Subcommittee Chair Comments:** **Roberts** reported that the Executive Committee would be meeting with members from the Paducah Area Chamber of Commerce, Paducah Economic Development, the Paducah Mayor and McCracken County Judge Executive on July 1, 2013, to explain the CAB's role and how it is related to issues of the shutdown of PGDP.

**Peterson** and **Clayton** presented **Alexander** with a copy of the recently published history book of the Paducah site.

**Public Comments:** none

**Final Comments:** **Peterson** presented two draft recommendations as a point of information saying that the Board would be looking at them in the coming months. They were:

- **DRAFT - Recommendation 13-XX: Seek Change to Budget Strategy to Include Post Operations of the PGDP**
- **DRAFT - Recommendation 13-XX: Communications Strategy**

**Peterson** adjourned the meeting at 8:10 pm.

# Paducah Citizens Advisory Board

## Project Update

June 20, 2013



**CITIZENS**  
**ADVISORY BOARD**



*EM Environmental Management*

safety ❖ performance ❖ cleanup ❖ closure

# Presentation Agenda

- Inactive facilities removal
- Groundwater cleanup
- Burial grounds cleanup
- Recently submitted documents
- PGDP transition

# Inactive Facilities Removal: C-410 Feed Plant



The last of 20 cold traps is loaded into a container for storage at an on-site warehouse

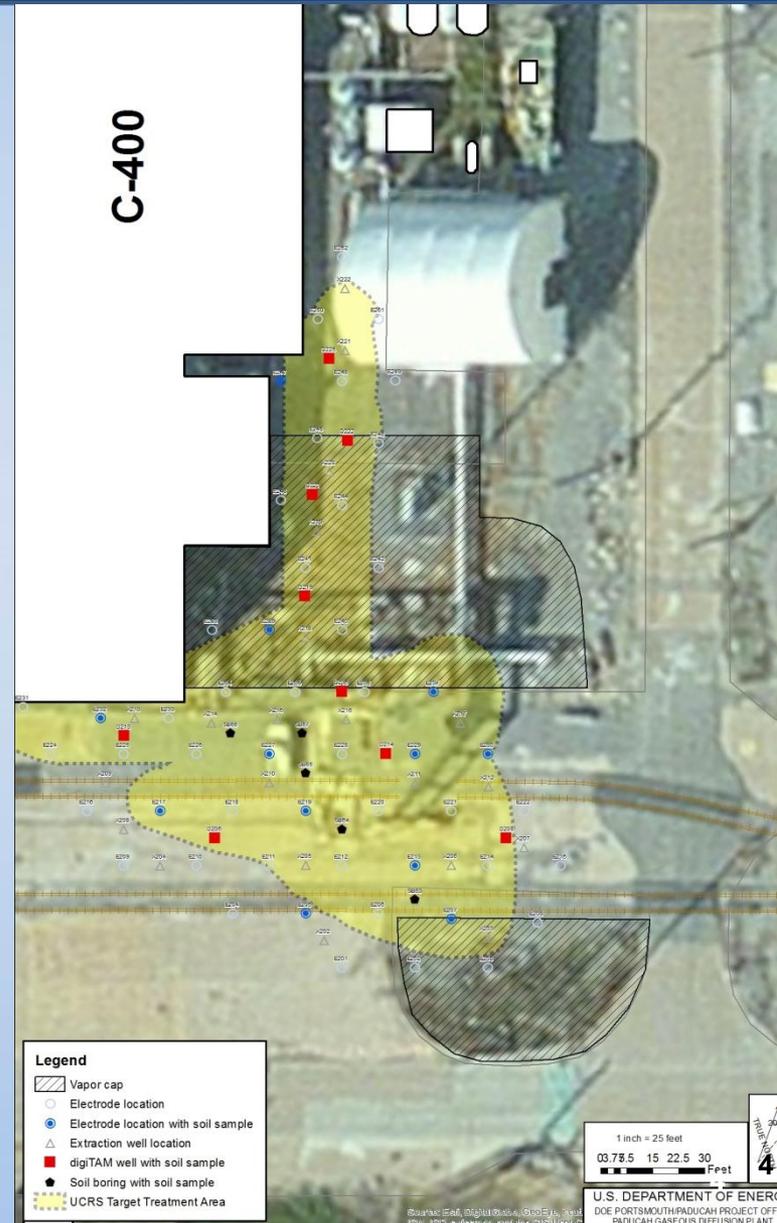
- C-410 is the last inactive facility to be removed as part of the D&D program.
- Removal, packaging, and movement of 20 cold traps from C-410 to the C-746-Q on-site storage building was completed May 29.
- Removal of accessible asbestos-containing material and fluorine piping was completed June 7 for 57 of 65 work zones in the building.
- Additional demo-ready activities:
  - Demolition of mezzanines and other infrastructure to remove previously inaccessible process piping/equipment
  - Application of fixative
- C-410 demolition targeted for FY 14.

# Groundwater Cleanup: C-400 Source Removal Phase IIa

- C-400 is the leading source of groundwater contamination at the Paducah site.
- Electrical resistance heating (ERH) will remove TCE from as deep as 65 feet below ground southeast of C-400 so that it can be pumped to the surface and treated.
- Aboveground treatment system (air stripping, carbon adsorption) installation completed May 30; testing continues.
- System expected to be fully operational by June 25 and operate 6 to 9 months.



A crane lifts the carbon treatment system onto the ground.



# Groundwater Cleanup: NE Plume Alternate Treatment Unit



Workers use machinery, right, to connect sections of water line linking the pump-and-treat facility with the new treatment unit.

- A USEC-leased cooling tower in NE part of the plant had been used to strip TCE extracted via NE Pump-and-Treat Facility off Ogden Landing Road.
- Alternate treatment unit (ATU) construction was completed May 30 to replace cooling tower to strip TCE from NE plume.
- ATU has treatment throughput capacity of 200 gals/minute and is designed to reduce TCE concentrations from 1,000 parts per billion (ppb) to less than 5 ppb.

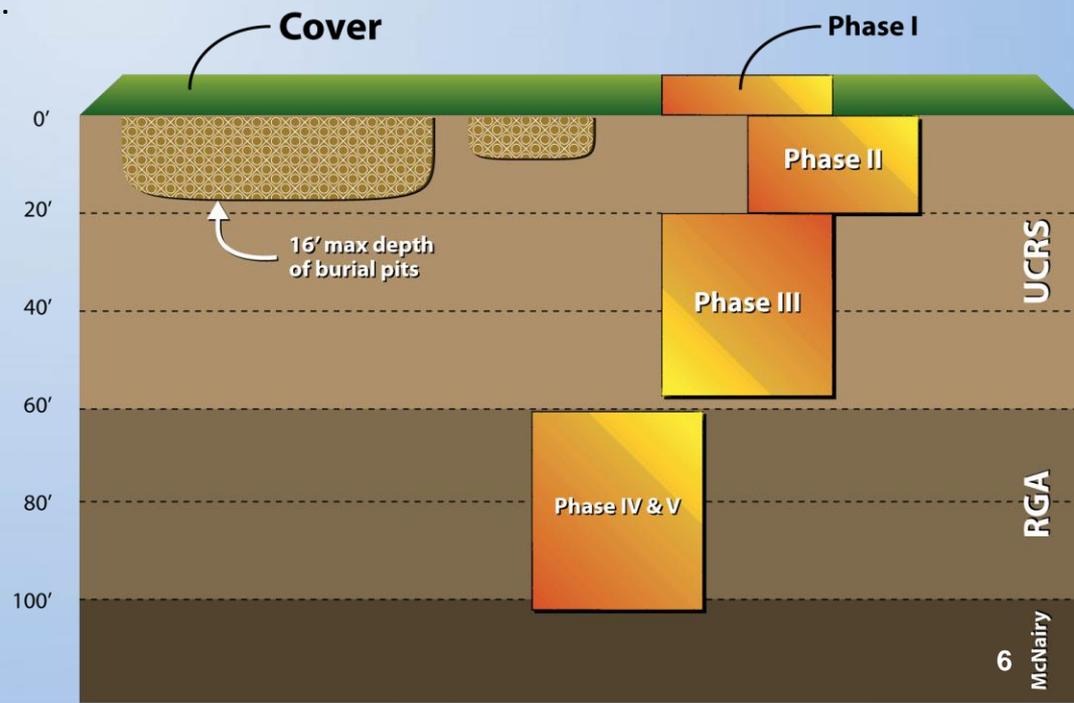


# Burial Grounds: SWMU 4 Field Sampling

- Solid Waste Management Unit (SWMU) 4 Legacy Burial Ground undergoing 5-phased, focused sampling over 2 years to optimize remedial design.
- Sampling within a 6-acre boundary focuses on TCE and other volatile organic compounds (VOCs).
- Analytical results from Phase I and II sampling had fewer, smaller detections of VOCs – particularly TCE – than anticipated
  - Phase 1 (surface soils) completed November 2012: 7 of 65 passive gas samplers detected VOCs; 1 detected TCE
  - Phase 2 (to 20' deep) completed in April: 7 of 22 soil borings detected VOCs; 1 detected TCE
- Phase 3 (11 borings 20-55' deep) completed in May. Data analysis continues through August; results not yet available.
- Phase 4 (to 105' deep) sampling to occur in FY 14.

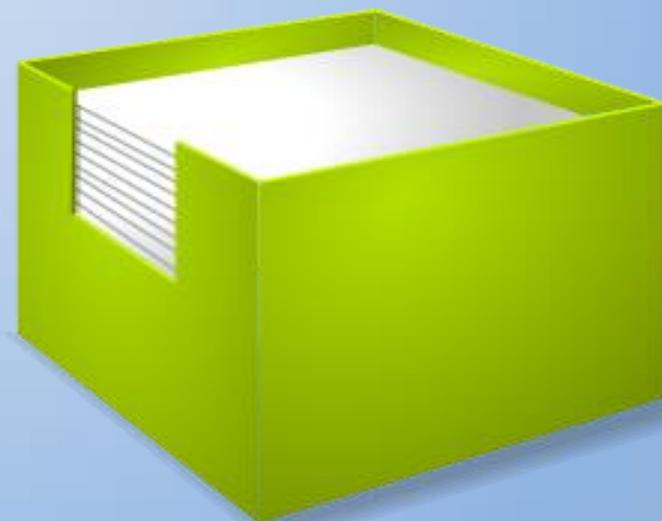


Soil boring in SWMU 4, located in the western part of the PGDP fenced area.



# Documents Recently Submitted to Regulators

Document	Submittal Date	Regulatory Review Period
Community Relations Plan (D2/R8)	June 11, 2013	90 Days
Groundwater OU – Northeast Plume Operation and Maintenance Plan (D2/R3)	May 3, 2013	90 Days
Burial Grounds OU - SWMUs 5 and 6 – Proposed Plan (D1)	May 2, 2013	45 Days
FFA Semiannual Progress Report for the First Half of Fiscal Year 2013	April 30, 2013	90 Days (Note: EPA and Kentucky consider this document for informational purposes and normally do not provide comments on this document)



# PGDP Transition Update

- The Paducah FY14 Funding Request included an additional \$140M for GDP De-Lease Planning, Facility Modifications, and S&M/Deactivation costs in preparation for the return of the facility before the end of FY14.
- DOE is planning to award a new contract for PGDP deactivation. The Deactivation Contractor will perform all activities necessary to optimize utilities, perform S&M, and deactivate and prepare PGPD for D&D.
- DOE continues to look for other opportunities for productive use of the PGDP Facilities and Property.
- DOE is working with USEC to assure the safe and compliant transition of facilities back to DOE.

# PGDP Transition Update

Comments from the Secretary of Energy before the House Subcommittee on Energy and Power.

- *...a good model going forward with Paducah is to go into clean up: that prepares the way for decommissioning, but on a parallel track, we look for new business opportunities at the site, the people at the site and the resources at the site.*

Regarding the EOI

- We have received several proposals and we are in the process of evaluating them