



U.S. DEPARTMENT OF
ENERGY



Paducah Cleanup Progress



DDFO Presentation

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Paducah Citizens Advisory Board
February 3, 2011

Presentation Agenda

- ARRA Projects: C-340/C-410
- C-400 Source Reduction
- Site Management Plan
- Surface Water Sampling
- DUF₆ Conversion Plant
- Federal Facility Agreement
- Public Information Exchanges

C-340 Complex Update



Draining potential PCB oil from Freon motors

Complex (~65,000 ft²) operated 1953-62, 1968-73 to convert DUF₆ to U metal or UF₄ – second of the two large inactive facilities planned for D&D. Demolition accelerated under ARRA

- Focused efforts on 7-story C-340-A Powder Building Nov-Jan
- Electrical D&D/RCRA Component removal 75% complete; completion scheduled in March
- Instrument line removal 98% complete; completion scheduled in February
- Anticipate completing ARRA milestone to have complex demo-ready by spring 2011
- Post-ARRA efforts will transition to demo of the complex and slab prep

Dipping a UF₆ holding tank into sodium carbonate solution to neutralize the UF₆



C-340 Slag Building Work

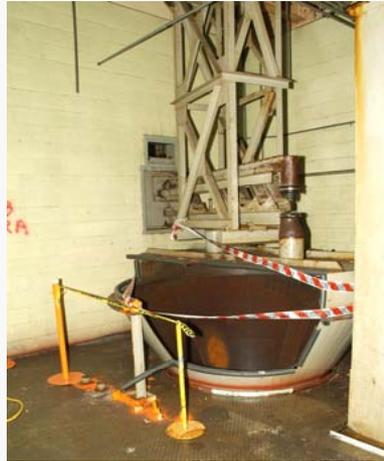
Significant ARRA Milestone Achieved

Completed Building Deactivation

- Prepared C-340-C Magnesium Fluoride Slag Building in January to be demolition-ready
 - ✓ Removed magnesium fluoride system
 - ✓ Stabilized waste by blending material with sand
 - ✓ Blending expedited work by avoiding having to move waste from container to container
 - ✓ Removed asbestos and conduit



Mag Fluoride feed hopper before cleanup



Hopper after cleanup



Laying protective plastic



Removing vacuum pipe near Slag Building



C-410 'Cattle Shed' Demo-Nov 2010



EM Environmental Management
safety ♦ performance ♦ cleanup ♦ closure

C-410 Remaining Work



C-411

C-410
Sector 4

Complex (~200,000 ft²) operated 1957-1977 to make UF₆ and fluorine. First of two large inactive facilities to undergo D&D. Demolition accelerated under ARRA

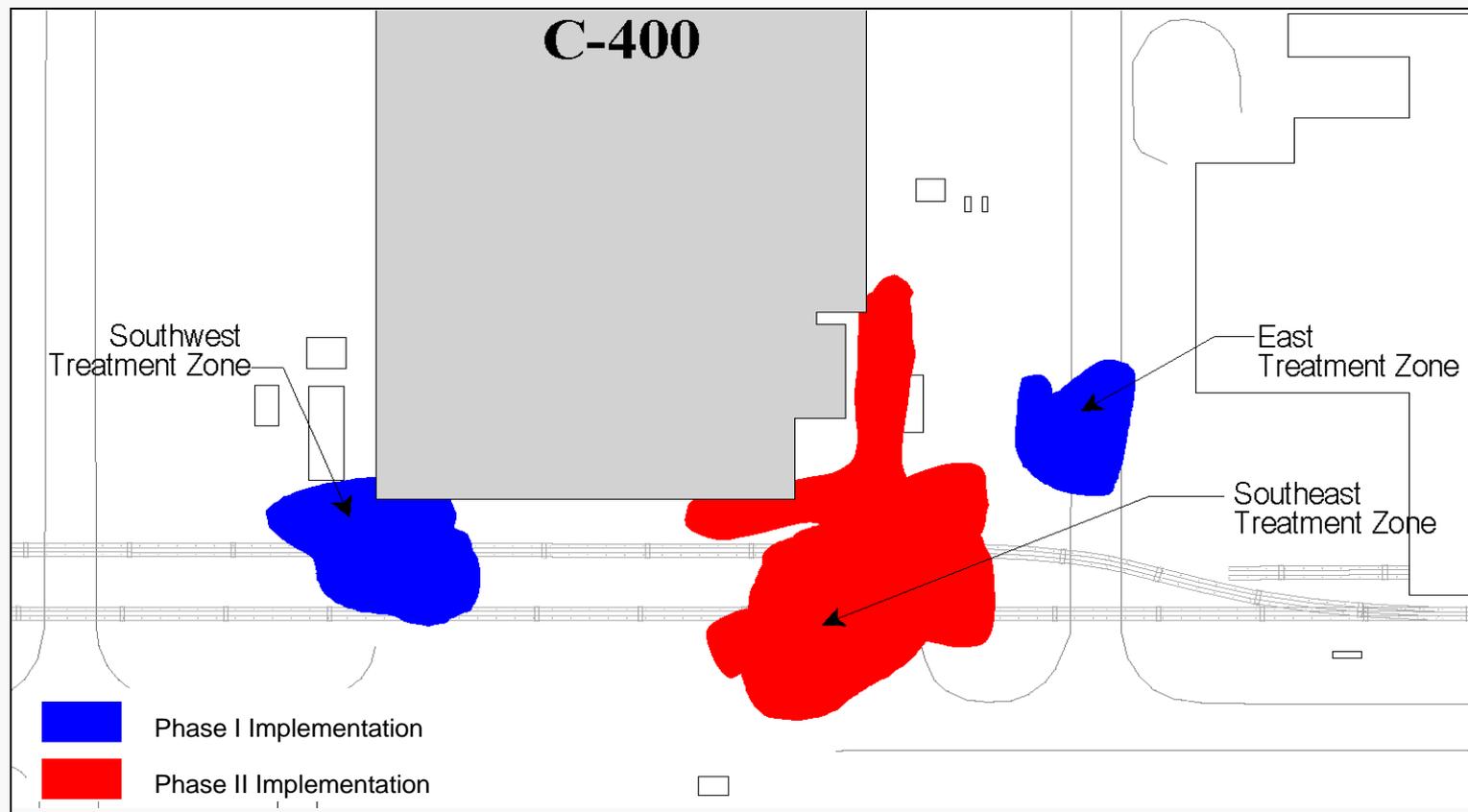
C-340

- Preparing to demo C-411 and C-410-A (sector 4), which accounts for ~30,000 ft² of the total 200,000 ft²; April 2011 demo completion target
- Preparing to demo the inactive C-410/C-310 tie line that was used to transfer HF₆ to the enrichment process; March 2011 demo completion target



EM Environmental Management
safety ♦ performance ♦ cleanup ♦ closure

C-400 Source Reduction

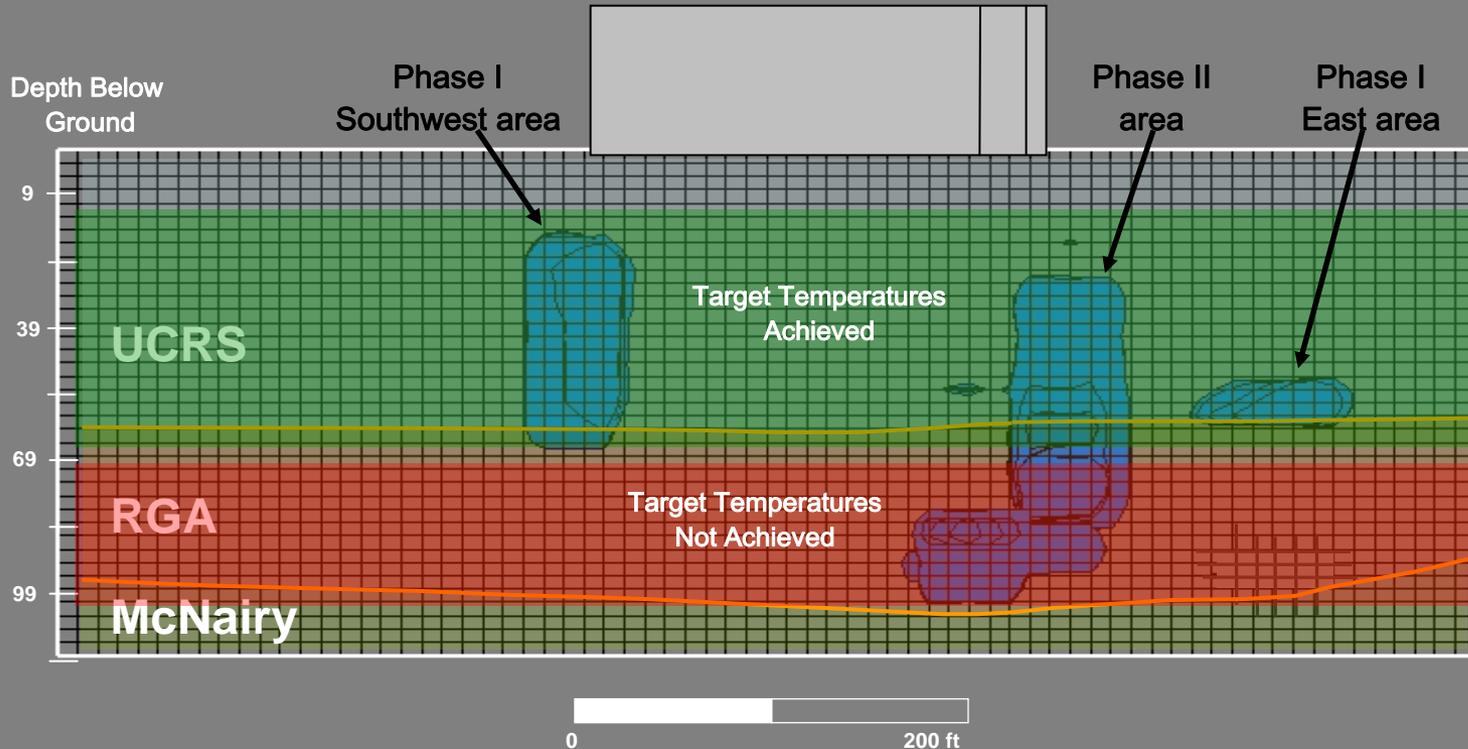


- **Completed Phase I Operations 12/07/2010**
- Recovered ~560 gals of TCE from Phase I source areas
- Equipment removal and site restoration activities ongoing
- Evaluating Phase II path forward

C-400 TCE Source Reduction

Conceptual Site Model

CROSS-SECTION VIEW (looking north)



Potential "DNAPL" Zone based only on MIP data

C-400 Project Status

- Regulators reviewing Phase II Field Sampling Plan (main focus to increase our confidence in the conceptual model regarding DNAPL volume and location)
- Preparing remedial decision strategies and identifying data gaps
- Proposed schedule and strategies for Phase II to be presented to the FFA parties

Site Management Plan

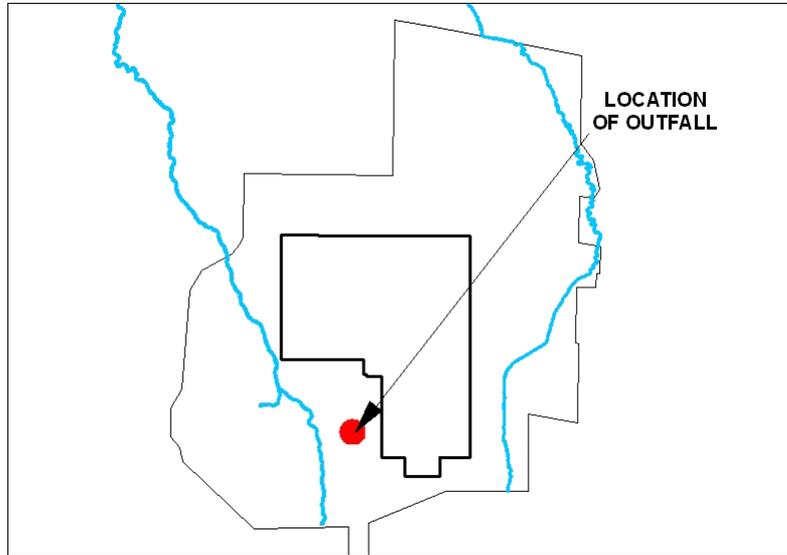
Fact sheet in CAB folder



Paducah, KY

Surface Water Sampling

Zinc Exceedance – Outfall 17



K017 Sampling Location

- Zinc value at Outfall 17 exceeded permit value of 216 mg/l during sampling in August and December 2010
- UDS fall sampling indicated cylinder yard paint was most probable main contributor
- Other potential sources:
 - Hot, dry conditions
 - Run-off after grass moving
 - Cooling tower blow-down water
- Notice of Violation received in late November
- UDS is evaluating corrective actions

DUF₆ Conversion Plant

Undergoing Commissioning program - includes:

- Phased introduction of Hydrogen Process Gas started on Nov. 15 2010
- Phased heat up of 1st DUF₆ Cylinder on Nov. 29, 2010
- Expect to introduce process gas into conversion units by late March
- All four production lines will be tested by running DUF₆ through them during 2011

Future Operations:

- Operations Contract Award to Babcock and Wilcox on 12/8/2010
- Transition to full responsibility by March 2011

Federal Facility Agreement

Ongoing dispute-burial grounds

- Received non-concurrence on Feasibility Study from EPA on 1/14/11
- EPA issue: FS does not present treatment technology alternatives for comparison to thermal treatment
- Parties agreed to conceptual path forward

Public Information Exchanges



Describing a waste cell liner system



Explaining potential on-site cell locations

- Jan. 18 at Heath Middle School; Jan. 19 at WKCTC Emerging Technology Center
- 80 registrants:
 - ✓ 65 neighbors, concerned citizens, community leaders, elected officials, regulators, college students, news media
 - ✓ 15 DOE/LATTA staff, family
- Meetings promoted through press releases, newspaper ads, CAB discussion, employee word of mouth; front-page Sun coverage
- Focus: Public input into CERCLA process for long-term waste disposal at Paducah



DOE Portsmouth/Paducah Project Office