



November 19, 2015

Chair

Renie Barger

Vice-Chair

Mike Kemp

Board Members

Cindy Butterbaugh

Victoria Caldwell

Judy Clayton

Basil Drossos

Eddie Edmonds

Tom Grassham

Bill Murphy

Kevin L. Murphy

Ben Peterson

Cindy Ragland

Richard Rushing

Ken Wheeler

Carol Young

Jennifer Woodard

DOE DDFO

Buz Smith

DOE Federal Coordinator

Board Liaisons

April Webb

Division of Waste

Management

Julie Corkran

Environmental Protection

Agency

Mike Hardin

Fish and Wildlife Resources

Stephanie Brock

Radiation Health Branch

Support Services

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Agenda for the November Board Meeting

6:00

Call to order, introductions

Review of agenda

DDFO Comments

-- 20 minutes

Federal Coordinator Comments

-- 5 minutes

Liaison Comments

-- 5 minutes

Administrative Issues

-- 5 minutes

Public Comments

-- 15 minutes

Final Comments

-- 10 minutes

Adjourn



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
**ENVIRONMENTAL
MANAGEMENT**

U.S. Dept. of Energy Paducah Site Citizens Advisory Board

November 19, 2015

Key Regulatory Cleanup Dates

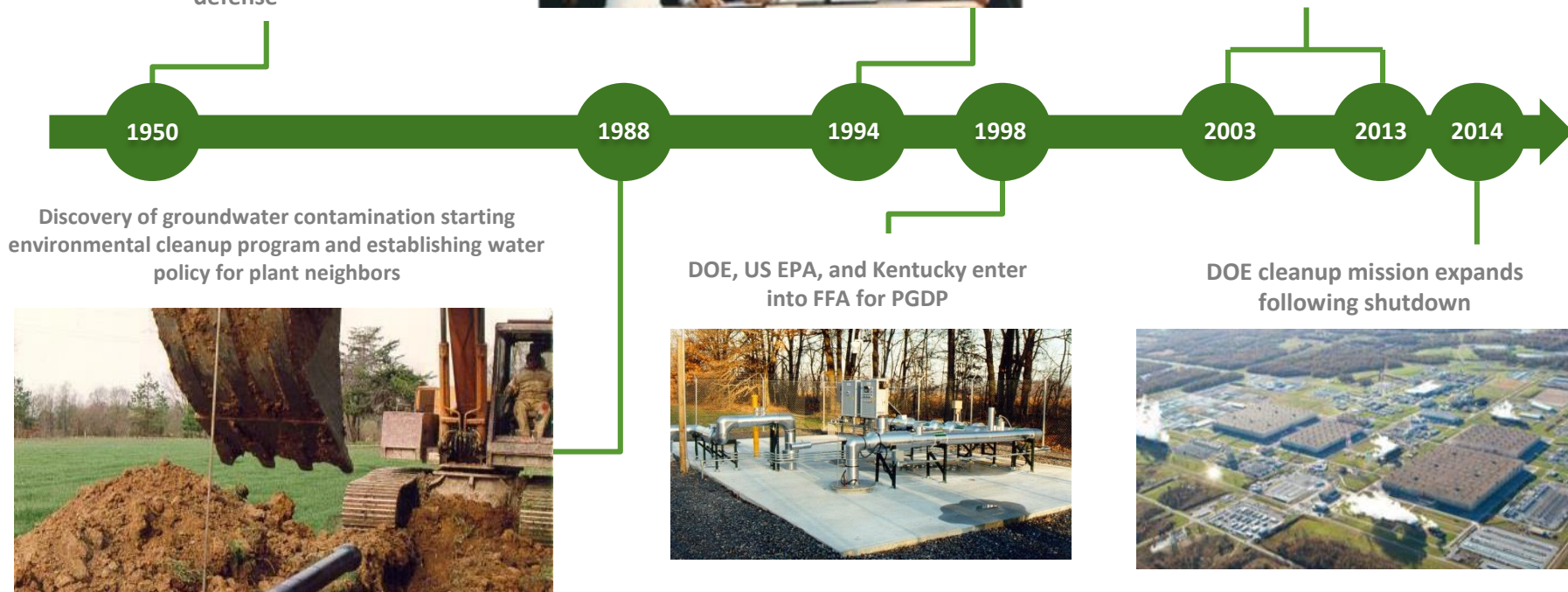


Paducah selected for second of three enrichment plants for defense

PGDP placed on National Priorities List in 1994



The FFA parties renegotiated milestones for the Site Management Plan to define a completion strategy



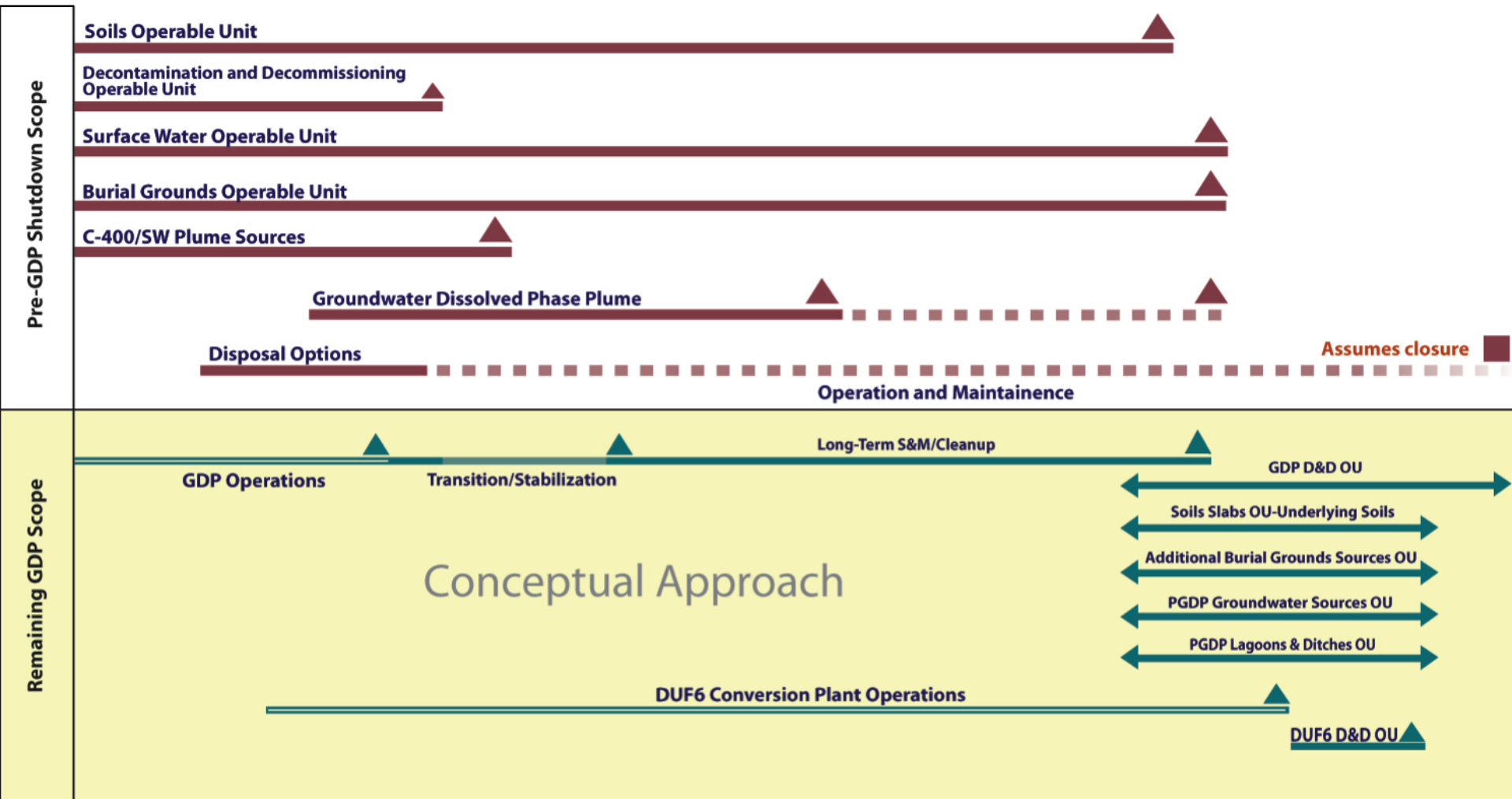
Paducah



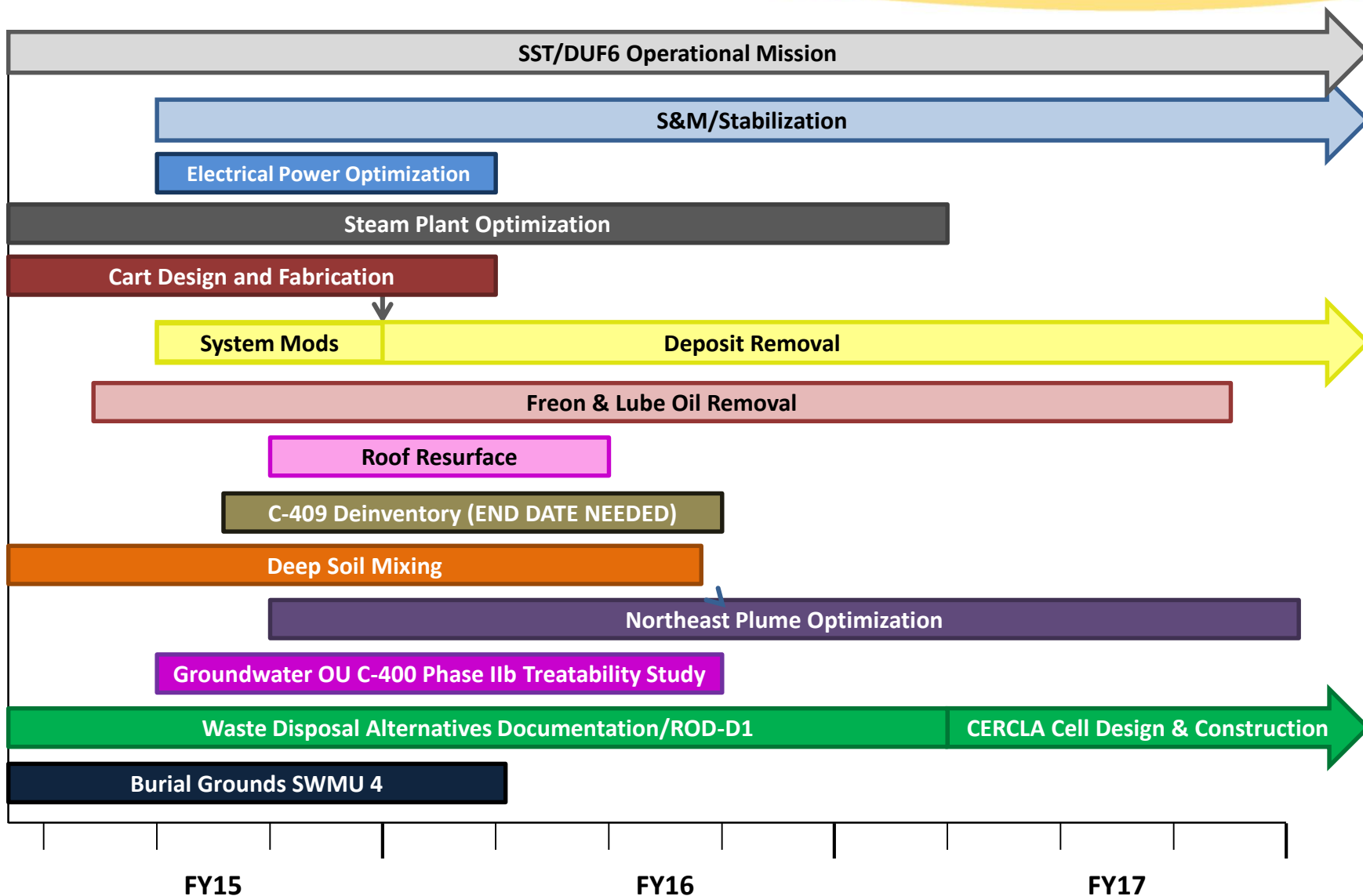
DOE End Goals for Cleanup

- Demolition of facilities
- Burial Grounds Remediation
- Soils Remediation
- Groundwater Remediation
- Surface Water Remediation
- Conversion and disposition of DUF_6 cylinders
- Reduce footprint by land transfer
- Delisting from National Priorities List
- Transfer remaining responsibilities to DOE Legacy Management

PGDP Site Scope



Near Term Projects



Near Term Deactivation Strategy

GOAL: Demolition Ready

GDP Nuclear Facilities Inherently Safe

- Achieve 'Criticality Incredible'
- GDP Nuclear Facilities from CAT II to Radiological
- Fissile Deposit Removal Complete
- Fissile Loose Equipment Disposed
- Unnecessary Safety & Other Systems Deactivated
- Excess Fire Loading Removed
- Vacate facilities, isolate utilities and further reduce utility usage

Reduction of Radiological Material

- Uranium Deposit Removal
- Tc99 Removal
- Disposition of Removed Fissile Equipment
- Hazard Material Removal

Stabilization & Deactivation

- Freon/Lube Oil Removal
- Power Distribution Reconfiguration
- Boiler replacements
- Facilities Winterized
- Automated Access Controls
- Utilities Optimized
- Utility Isolation
- Lessons learned from OR, PORTS and DOE-wide

Base & Safe Operation Activities Optimized

TIME

- Annual Cleanup Operations Functions
 - Swift Staley, Inc. Infrastructure Activities
 - DUF6 Cylinder Conversion Operations
 - Surveillance and Maintenance/Stabilization Activities
- Complete 14kV Electrical Redistribution – Electrical Power Optimization
- Package boiler installation – Steam Plant Optimization
- Deposit Removal
 - Cell Treatment Facility Modifications
 - Cell Treatment Operational Readiness Review
 - PCTC carts on site
- Complete transformer PCB oil draining
- Lube oil draining
- Complete process building resurfacing (roof)
- Complete C-409 – Fissile removal?
- EM Projects
 - ❖ Deep Soil Mixing (GWOU – South West Plume SWMU 1)
 - ❖ North East Plume Optimization - GWOU
 - ❖ C-400 Phase 2b Treatability Study - GWOU
- FFA Regulatory documents: WDA Proposed Plan, BGOU (what docs?), Soils Remedial Investigation Report
- Demolition of 12 Inactive Facilities

Current D&D Scope

Fac. #	Facility Name
C-212	Office Building
C-212A	Main Guard Post (Gate 15)
C-215	Portals 18&19
C-216	Post 47
C-229	Post 229
C-408	50 Ton Truck Scale
C-601-D	Fuel Oil Storage Tank
C-616-G	Tanks
C-746-A	North Warehouse Center Section
C-746-B	South Warehouse
C-746-M	Waste Askarel Storage Facility
C-801	Ohio Drive Bus Shelter

C-746-B Warehouse began demolition in early November and is currently completing demolition and waste disposal activities with an estimated 1,600 yds³ of waste



Fluor Federal Services

- Project management (including Paducah GDP release planning/facility transfer)
- Facility modification
- Infrastructure optimization
- Decontamination/demolition
- Absorbed Environmental Services scope in July 2015
- 3-year contract, from July 2014 to July 2017
- Contract value ~\$370 M (Cost + Award Fee)
- ~1,100 employees



Swift & Staley, Inc.

- Infrastructure (facility and road operations, maintenance)
- Security (classification)
- Records management
- Property & fleet management
- Information technology
- 3-year contract extension from December 2016 to December 2019
- Contract value ~\$177 M (Cost + Award Fee)
- ~250 employees



Babcock & Wilcox Conversion Services, LLC

- DUF₆ plant construction
- DUF₆ plant operation
- Cylinder management
- 5-year contract, from January 2011 to January 2016
- Contract value, ~\$428 M for PPPO, ~\$214 M for Paducah
- Conversion plant employs ~230

Long Term Planning

- Creating reference sheets for each facility at the site over the next year to have reference information
- Will be meeting with regulatory agencies to discuss the current work scope under the 2032 completions commitments and work scope outside that commitment
- Will meet with the CAB to relay discussions with the regulatory agencies and ensure the same level of information is provided
- Will develop site wide planning documentation

Groundwater Operable Unit (GWOU)

Description

- Remediation of TCE and Tc-99 contamination in off-site and on-site plumes

Completed

- C-400 Phase I and IIa source remediation
- Deep Soil Mixing

Current – to be completed

- C-400 Treatability Study results
- Pump-and-treat
- Southwest Plume Well Sampling
- NE Plume Optimization transect well installation

Future

- Additional Sources (e.g., C-400 Bldg)
- Dissolve Phase Plume



Soils Operable Unit

Description

- The Soils OU addresses the remediation of 66 areas totaling ~110 acres sitewide

Complete

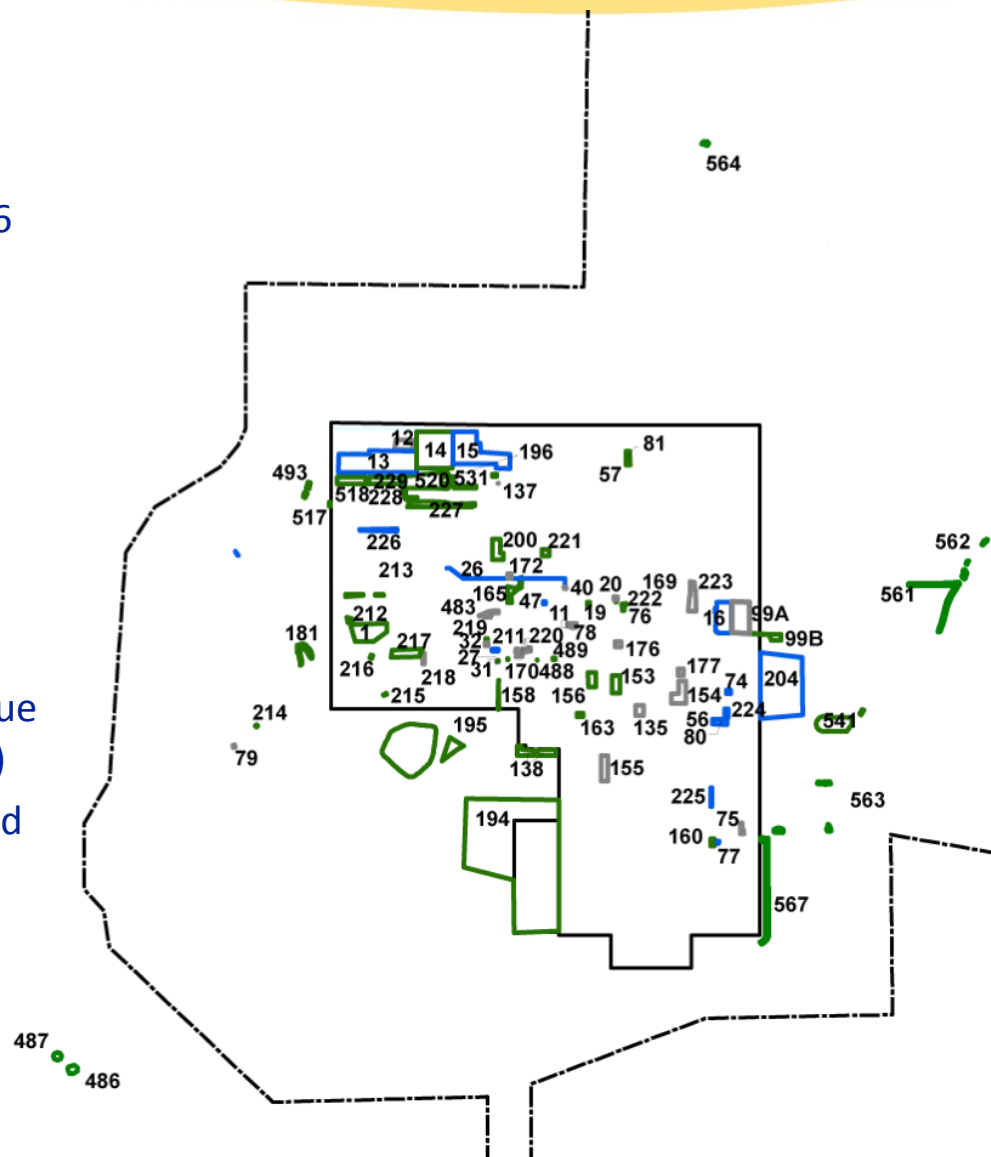
- Soils site-wide radiological evaluation
- Second soils remedial investigation

Current – to be completed

- RI Addendum for SWMU 229
- D2 Soils OU Remedial Investigation report (due January 2016 based upon EPA/KY comments)
- RI Addendum for Oil Landfarm (field work and report scheduled in FY16)

Future

- CERCLA decision process restarts in 2025



Burial Grounds Operable Unit (BGOU)

Description

- More than 100 acres of old waste burial grounds containing household/commercial, radioactive, hazardous, and flammable waste.

Complete

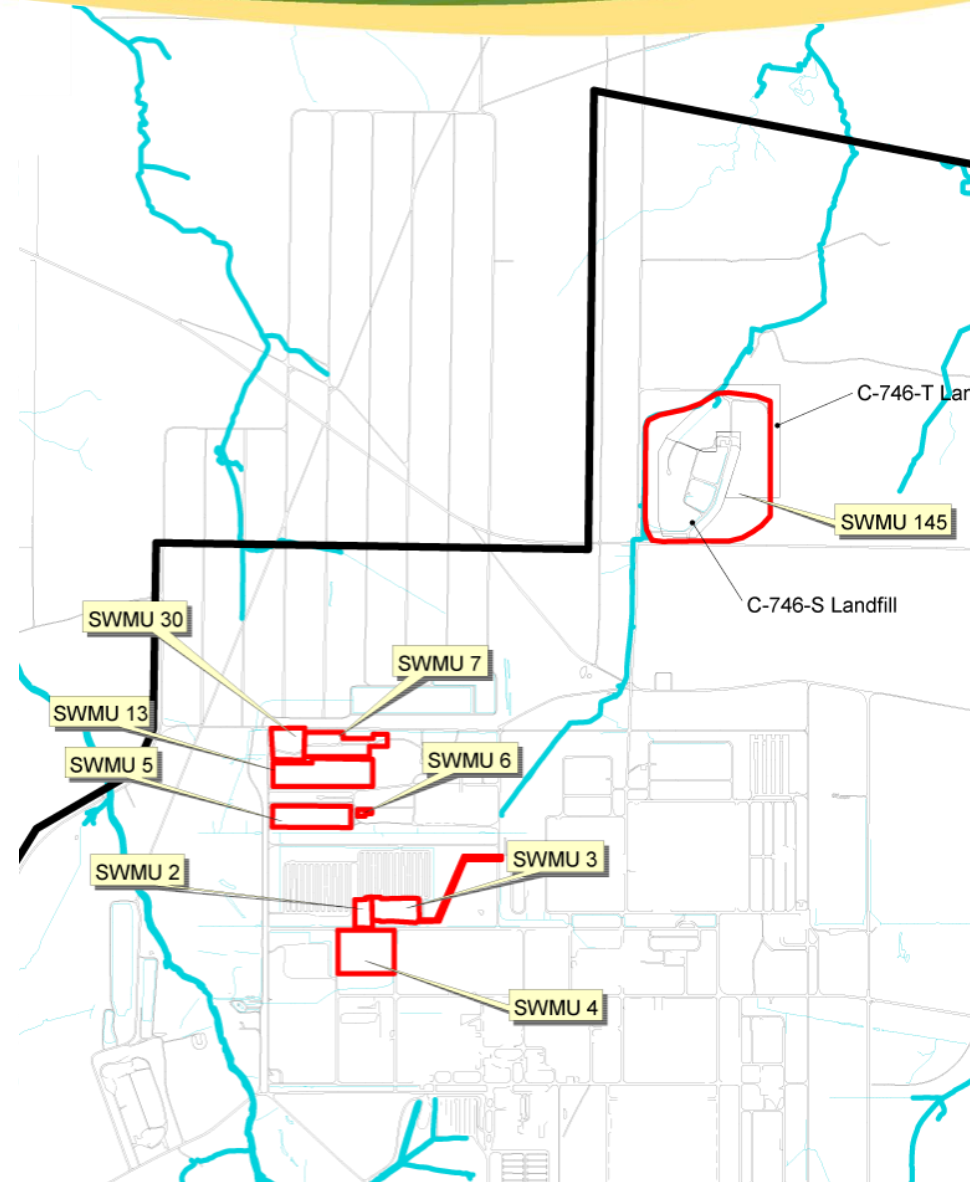
- SWMU 4: Phases I – IV

Current – to be completed

- Phase V of SWMU 4 (to be completed in early 2016)
- SWMU 4: CERCLA documentation
- SWMUs 2, 3, 7 & 30: finalize feasibility study

Future

- SWMUs 5 & 6: finalize proposed plan and record of decision



Surface Water Operable Unit (SWOU)

Description

- Remove contaminated soils and sediments from creeks, ditches both on and off the plant site

Complete – to be completed

- Scrap metal removal
- North-South Diversion Ditch
- “Hot spot” removal

Future

- CERCLA decision process restarts with field work to begin in 2027
- If beneficial, potentially address earlier actions outside the fence



- Since 2004, 32 facilities have been demolished totaling more than 320,000 ft². The last, and largest, being the C-410/C-420 Feed Plant which was completed in May 2015.
- More than 160 major facilities remain at the site. These buildings must be maintained and decontaminated prior to demolition activities.
- The four main process buildings will have to undergo deposit removal of uranium held-up in the process cascade system.



C-632-B Acid Storage Tank

C-632-B Acid Storage Tank

C-410-A Hydrogen Holder

C-603-A Nitrogen Manifold Building

C-603-B Nitrogen Storage Tank

C-603-C Nitrogen Receiver (North)

C-603-D Nitrogen Receiver (South)

C-603-E Nitrogen Storage Tank (East)

C-603-F Nitrogen Storage Tank (Center)

C-342-A Ammonia Dissociator Addition

C-342-B Ammonia Dissociator Tank Shelter

C-611-M North Concrete Sanitary Water Storage Tank

C-611-N South Concrete Sanitary Water Storage Tank

C-410-B Sludge Lagoon

C-218 Firing Range

C-603-G Nitrogen Storage Tank (West)

C-603-G Nitrogen Storage Tank (West)

C-603-H Nitrogen Generator-Control House

C-603-I Nitrogen Generator-Tower Area

C-402 Lime House

C-612-A Pump and Treat Decon Pad (Clamshell)

C-405 Contaminated Items Incinerator

C-746-A North Warehouse (West End Smelter area only)

C-342 Ammonia Dissociator1

C-746-A North Warehouse (East End Smelter area only)

C-752-D Clamshell

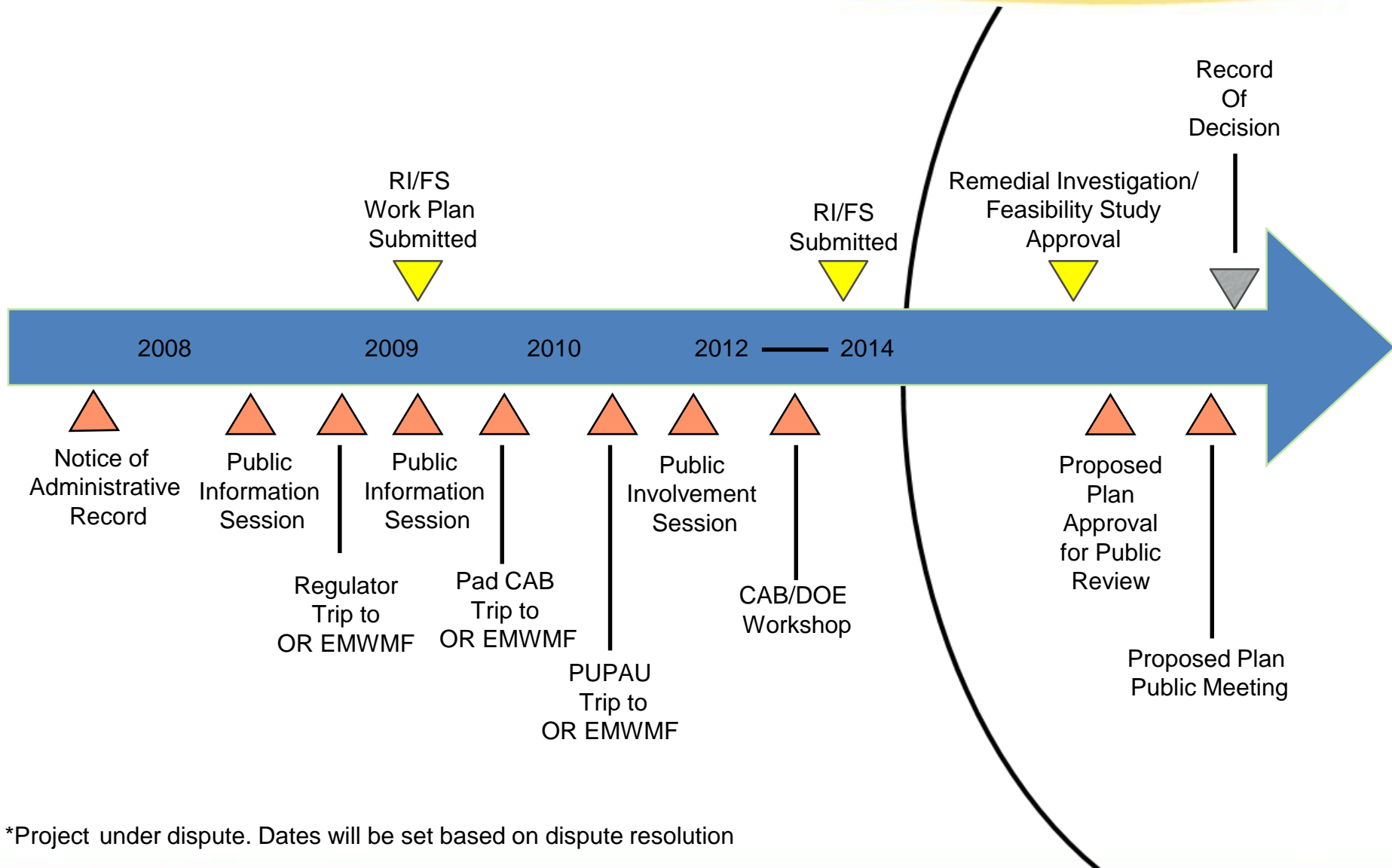
C-720-N Scale House

C-615 Trailer #1 - #5

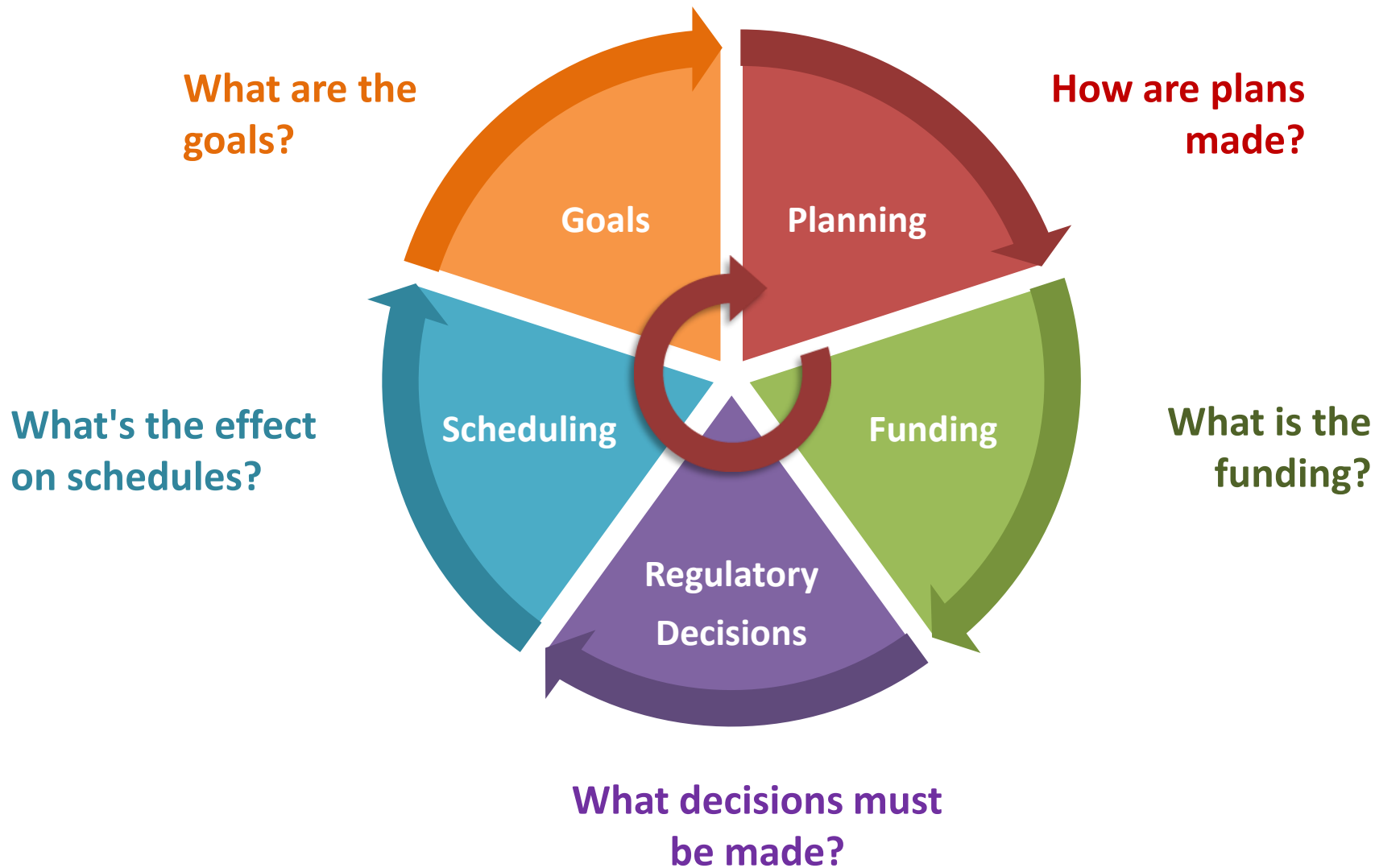
C-340 Metals Complex

C-410 Feed Plant

Facilities and Integration Subcommittee Waste Disposal Alternative Schedule



What Impacts the Plan?



BWXT – Babcock & Wilcox Excellence in Technologies
CAB – Citizens Advisory Board
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
D&D – Decontamination and Decommissioning
DOE – Department of Energy
DUF6 – Depleted Uranium Hexafluoride
EMWMF - Environmental Management Waste Management Facility
EPA - Environmental Protection Agency
ERH – Electrical Resistance Heating
FFA - Federal Facility Agreement
FPDP – Fluor Paducah Deactivation Project
FY – Fiscal Year
HF - Hydrofluoride
KOW – Kentucky Ordinance Works
OR - Oak Ridge
PGDP – Paducah Gaseous Diffusion Plant
PORTS - Portsmouth
PPPO – Portsmouth/Paducah Project Office
PUPAU - Paducah Uranium Plant Asset Utilization
RI - Remedial Investigation
RI/FS - Remedial Investigation/Feasibility Study
S&M - Surveillance & Maintenance
SWMU – Solid Waste Management Unit
TCE – Trichloroethene
TVA – Tennessee Valley Authority
UF6 – Uranium Hexafluoride
VOC - Volatile Organic Compounds



PADUCAH GASEOUS DIFFUSION PLANT CITIZENS ADVISORY BOARD

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Paducah Gaseous Diffusion Plant Citizens Advisory Board Meeting Minutes November 19, 2015

The Citizens Advisory Board (CAB) met at the Environmental Information Center (EIC) in Paducah, Kentucky on Thursday, November 19th at 6:00 p.m.

Board members present: Ben Peterson, Ken Wheeler, Mike Kemp, Renie Barger, Judy Clayton, Cindy Butterbaugh, Tom Grassham, Dick Rushing, Cindy Ragland, Victoria Caldwell and Carol Young.

Board Members absent: Basil Drossos, Bill Murphy, Kevin Murphy, and Eddie Edmonds.

Board Liaisons and related regulatory agency employees: Gaye Brewer (KDWM)

DOE Deputy Designated Federal Official: Jennifer Woodard, DOE

U.S. Department of Energy (DOE) related employees: Bill Murphie, Buz Smith, Tracey Duncan, DOE; Con Murphy, Cory Hicks, Mark Duff, Steve Christmas, Fluor Paducah (Fluor); Eddie Spraggs, Pro2Serve (P2S); Yvette Cantrell, Restoration Services, Inc.(RSI); Eric Roberts, Jim Ethridge, EHI Consultants (EHI).

Public: Tony Graham, Ralph Young, and Nancy Duff.

Introductions:

Barger opened the meeting at 6:00 pm, and asked for introductions and then reviewed the Agenda. She then recognized **Bill Murphie**, PPPO Manager, with a presentation of a certificate of thanks for his help and service to the CAB on the event of his retirement from DOE.

DDFO Comments:

Barger then turned the meeting over to **Woodard** for an overview presentation on upcoming activity at the site. This was needed to plan projects and direction for the different Subcommittees that were to meet immediately following the Board meeting.

Kemp asked how DOE determined that areas were not contaminated after the removal of the fuel oil located in tanks. Was it based on pre-observations, or what is observed while the tank is being removed? **Woodard** indicated that it was determined by pre-observations.

Clayton asked if buildings C-310 and C-315 were considered part of the deposit removal work the process buildings. **Woodard** explained what these buildings were and indicated that they were included in the work.

Federal Coordinator Comments: None

Liaison Comments:

Brewer said that Brian Begley had been appointed Federal Facilities Act Manager for the State, and will started in that role on November 1, 2015.

Administrative Issues: None

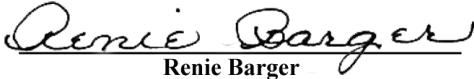
Public Comments: None

Final Comments:

Wheeler pointed out that there was an article in the Wall Street Journal recently summarizing the status of the DOE budget. **Roberts** said that it would be sent to the members the following day. **Wheeler** also recommended seeing the documentary film about former nuclear workers that was shown at the River's Edge Film Festival.

The meeting adjourned at 6:48pm.

Approved by **Renie Barger, Chair**



Renie Barger