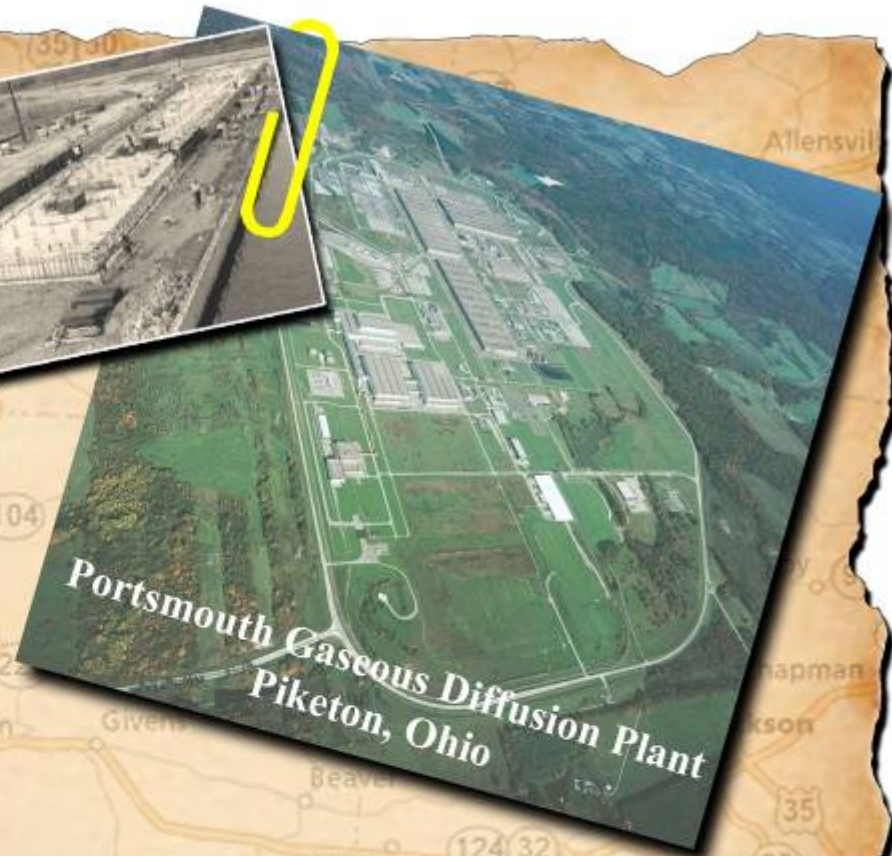


**Portsmouth
Public Meeting
August 14, 2008**

**Environmental
Cleanup Update**

*Stepping Back in Time
and Looking to the Future*



Agenda

- Welcome/Introductions – William Murphie, Manager, U.S. Department of Energy’s Portsmouth/Paducah Project Office
- The Environmental Management (EM) Site Specific Advisory Board (SSAB) for the Portsmouth Plant – William Murphie, U.S. Department of Energy
 - Purpose
 - Selection Process
 - Introduction of New Members
- ‘A Step Back In Time’ – David Kozlowski, U.S. Department of Energy, Acting Site Lead
 - History of the Piketon Plant
 - Origins of the Cleanup Program
 - Cleanup Actions Completed Over the Last 20 Years



Agenda *(continued)*

- 'Here and Now' – U.S. Department of Energy Contractors (LATA/Parallax, United States Enrichment Corporation, Uranium Disposition Services, Theta Pro2Serve Management Company)
 - Ongoing Cleanup Efforts
- 'Looking to the Future' – William Murphie, U.S. Department of Energy
 - Planning Update for the Decontamination and Decommissioning (D&D) Project
 - Public Involvement
- Questions and Answers / Informal Meet and Greet EM SSAB members



Environmental Management (EM) Site Specific Advisory Board (SSAB) for the Portsmouth Site

*The Selection Process
and Introduction of the New Members*



EM SSAB for Portsmouth

- Purpose: Provide advice and recommendations to EM Assistant Secretary concerning
 - Cleanup standards and environmental restoration
 - Waste management and disposition
 - Stabilization and disposition of non-stockpile nuclear materials
 - Excess facilities
 - Future land use and long term stewardship
 - Risk assessment and management
 - Cleanup science and technology activities



EM SSAB for Portsmouth

- Recommendation Process
 - DOE received over 50 applications for the EM SSAB for Portsmouth
 - Under Federal Advisory Committee Act requirements, the applicants were reviewed for fair, balanced representation with focus on diversification
 - Selection panel consisted of Dr. David Todt, Provost, Shawnee State University; Judy Dixon, Executive Director, Pike County Outreach Council; and David Kozlowski, Department of Energy



EM SSAB for Portsmouth

- Evaluation Criteria
 - Nominees were evaluated under the following membership criteria:
 - Pertinent interests (i.e. community, county/city/tribal government, academia, minority, labor, civic, environmental, women's or business organizations)
 - Minority groups and gender
 - Education, geographic location, and occupation
 - Membership nominations were reviewed by DOE's Office of EM, Office of General Counsel, and Office of the Secretary



EM SSAB for Portsmouth

- 20 members selected for initial two-year terms
 - 9 represent Pike County
 - Thomas Allen, Shirley Bandy, Dr. Edwin G. Charle, Val Francis (co-chairperson), Sharon Manson, Stephen Martin, Daniel Minter, Larry Parker, Billy Spencer
 - 1 represents Jackson County
 - Lee Blackburn
 - 2 represent Ross County
 - Cristy Renner and Richard Snyder (co-chairperson)
 - 5 represent Scioto County
 - Dr. Andrew Feight, Bobby Graff, Franklin Halstead, Thomas Martin, Michael Payton
 - 3 represent other areas in region
 - Dr. Nicholas Dinos (Athens County), Terri Ann Smith (Athens County), and Lornita (Lorry) Swain (Greenup County, Kentucky)



EM SSAB for Portsmouth

- Meetings and Co-Chairs
 - All full board meetings open to the public, advertised in Federal Register and local newspapers
 - Meetings tentatively scheduled to be held first Thursday of each month
 - Waverly businessman Val Francis and Ross County plant retiree Richard Snyder chosen by the EM SSAB members to serve as co-chairs through the end of 2008
 - First official EM SSAB for Portsmouth meeting scheduled for 6:00 p.m., Thursday, September 4, 2008, OSU South Centers Auditorium, Piketon, Ohio



EM SSAB for Portsmouth

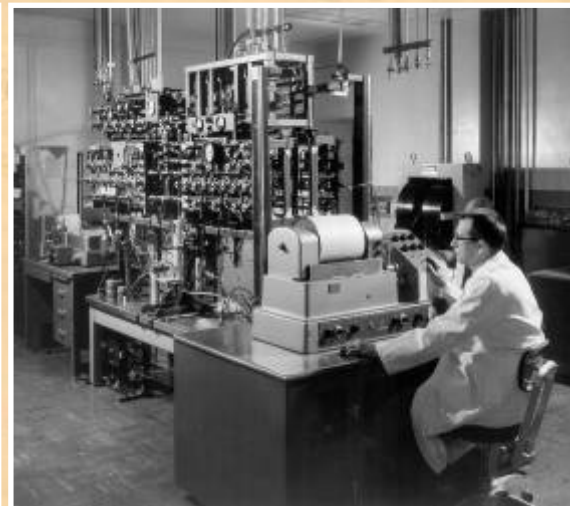
- DOE is pleased to welcome the EM SSAB members for the Portsmouth site and looks forward to working with the board as a new journey begins to evaluate the EM challenges and opportunities for the future of the plant site.

Join us in welcoming the new members, who will help serve as the eyes, ears and voices of the public.



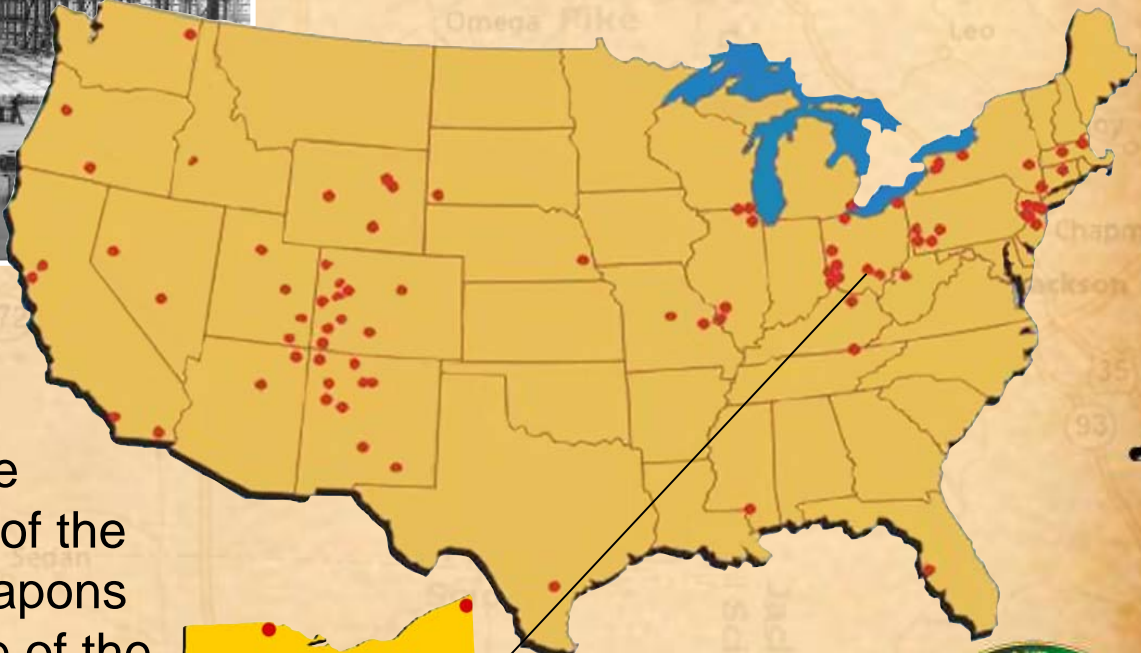
'A Step Back In Time'

*Understanding How Past Operations
at the Portsmouth Gaseous Diffusion Plant
Affect the Work of Today*



In The Beginning...

Early 1950s



The Portsmouth Gaseous Diffusion Plant was built in the early 1950s as part of the nation's nuclear weapons complex for defense of the country. Now, it is part of the world's largest cleanup program.



'A Step Back In Time'

The plant was built in 1952-1956 as one of three plants (others in Oak Ridge, TN and Paducah, KY) to enrich uranium by the gaseous diffusion technology. The process separates lighter Uranium-235 isotopes (enriched stream) from the heavier Uranium-238 (depleted stream). Highly enriched Uranium-235 was made for the nuclear weapons program and nuclear submarine reactors. Low-enriched

Uranium-235 between 2-5% is used for commercial nuclear power reactors. This plant stopped producing weapons grade material in 1964, highly enriched uranium for submarines in 1991, and all low enriched uranium in 2001 leaving the Paducah plant as the only currently operating uranium enrichment plant in the country.



Early
1950s



'A Step Back In Time'

The Portsmouth plant was operational for nearly 50 years. As a major industrial site, many hazardous chemicals were used during this time...



1954
thru
2001



... resulting in soil and groundwater contamination



'A Step Back In Time'



- Cleanup Program begins at the Portsmouth plant
 - The Department of Energy established the Office of Environmental Management in 1989 to address the Cold War environmental legacy across the country
 - Enforcement actions were taken against DOE at Portsmouth due to notices of violation stemming from Resource Conservation and Recovery Act (RCRA) inspections in the 1980s
 - Consent decree with State of Ohio (Ohio EPA as state's lead agency), 1989
 - Administrative Consent Order with U.S. EPA, 1989



'A Step Back In Time'

1990
thru
2008

- Working with Ohio EPA, DOE has taken extensive cleanup actions at the site
 - 10 Decision Documents issued by regulatory agencies
 - All major cleanup actions implemented except units agreed by DOE and Ohio EPA to be deferred until plant Decontamination and Decommissioning (D&D)



'A Step Back In Time'

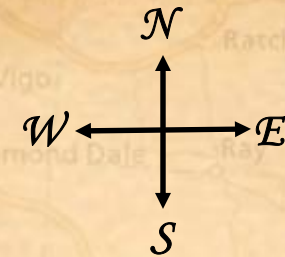
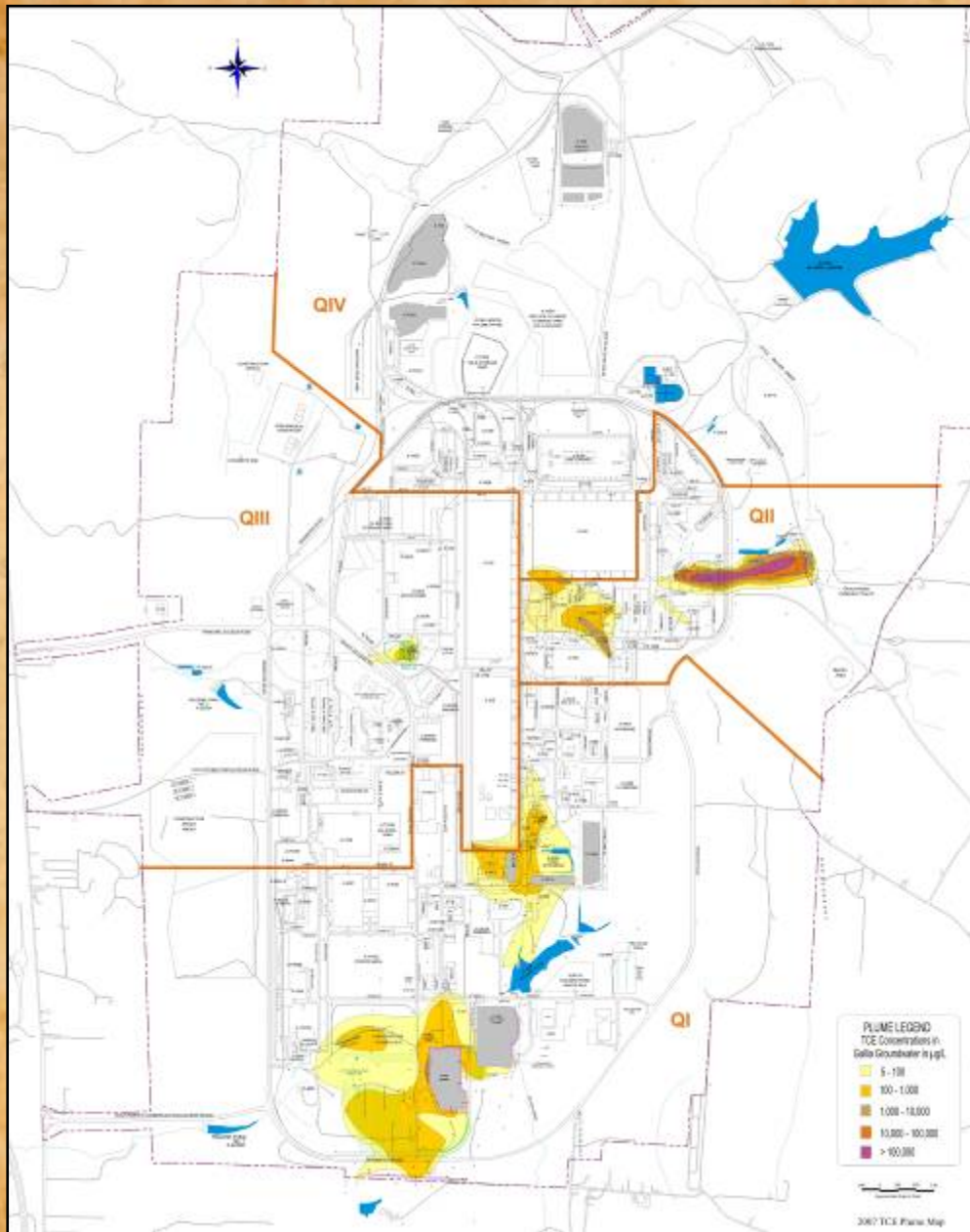
Mid
1990s

- Completed Site Investigation Studies
 - Nearly 1,000 groundwater monitoring wells installed in and around the 3,777-acre plant site
 - Tens of thousands of soil samples taken at various depths
 - 5 groundwater contamination areas, or plumes, identified from sampling results
 - Treatments in place at each plume; additional cleanup actions still being taken



Treatment is injected into the soil at the X-701B plume located on the plant's east side.





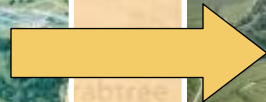
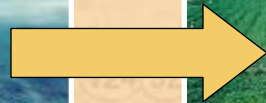
Groundwater
plume locations at
the Portsmouth
Gaseous Diffusion
Plant



'A Step Back In Time'

- Remediated lagoons and surface impoundments

1992
thru
1997



Cleanup itself generates large volumes of wastes – drums/containers of soils, sludge, personal protective equipment, rags, oils, etc.



'A Step Back In Time'

1992
thru
2000

- Closed and capped all 5 on-site landfills



X-749 Low-Level Waste Landfill

1992



X-749A Classified Waste Landfill

1994



X-735 Sanitary Landfill

1998



X-734 Construction Spoils Landfill

2000



X-749B (Peter Kiewit) Landfill



'A Step Back In Time'

- More than 8,400 tons of radioactively contaminated scrap metal removed

2000
thru
2005



Scrap metal was shipped to disposal sites in Utah and Nevada.



'A Step Back In Time'

- Planted 3,000 hybrid poplar trees as part of approved remedy for groundwater cleanup on southern end of plant

2000
thru
2003



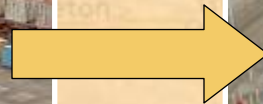
Actions continue to be taken at this location through installation of extraction wells to pull contaminated groundwater back onto the DOE property for treatment.



'A Step Back In Time'

- Shipped deteriorating containers of legacy waste off-site for disposal

2003
thru
2004



Majority of this waste was shipped to Energy Solutions disposal facility in Utah.



'A Step Back In Time'

- Cleaned out more than 1,300 old centrifuge casings and equipment from centrifuge facilities

2005
thru
2006



Project completed 7 months ahead of schedule and \$8.3M less than original estimate.



'A Step Back In Time'

- Emptied waste storage facility of 49,000 legacy waste containers

1993
thru
2007



Wastes were shipped to disposal / treatment facilities in Utah and Tennessee and various recycling vendors.



'A Step Back In Time'

2006
thru
2008

- Demolished and removed 16 inactive, surplus facilities



X-230J-8 Environmental Storage Building



X-230J-1 Environmental Monitoring Station



X-342C HF Neutralization Pit



X-344E Gas Ventilation Stack



X-720A Maintenance and Stores Gas Manifold Shed



X-106B Old Fire Training Building



X-344F HF Safety Building



X-740 Waste Oil Storage Facility



X-701D Water Deionization Building



'A Step Back In Time'

2006
thru
2008

- Demolished and removed 16 inactive, surplus facilities



X-230J-8 Environmental Storage Building



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X-106B Old Fire Training Building



X-344F HF Safety Building



X-740 Waste Oil Storage Facility



X-701D Water Deionization Building



'A Step Back In Time'

2006
thru
2008

- Demolished and removed 16 inactive, surplus facilities (*continued*)



X-616 Liquid Effluent Control Facility



X-105 Electronic Maintenance Building



X-770 Mechanical Test Facility



X-744 T / U Lithium Storage Warehouses



X-344C HF Storage Building



X-615 Old Sewage Treatment Plant



'A Step Back In Time'

2006
thru
2008

- Demolished and removed 16 inactive, surplus facilities (*continued*)



X-616 Liquid Effluent Control Facility



X-105 Electronic Maintenance Building



X-770 Mechanical Test Facility



X-744 T / U Lithium Storage Warehouses



X-344C HF Storage Building

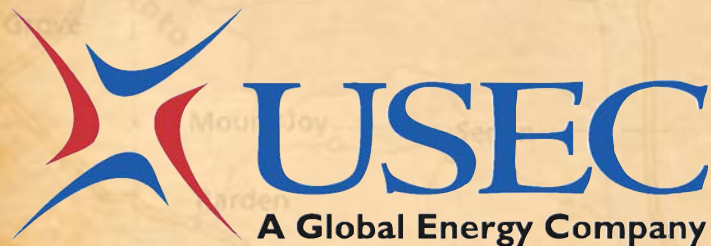


X-615 Old Sewage Treatment Plant



'Here and Now'

*Understanding the Significant Progress
Being Made at the Plantsite Today*



2008...

- Current cleanup activities by LATA/Parallax Portsmouth (LPP), the United States Enrichment Corporation (USEC), Uranium Disposition Services (UDS), and Theta Pro2Serve Management Company (TPMC)
 - LPP : Paul Kreitz, Project Manager
 - USEC : Wray Jordan, General Manager
 - UDS : John McCoy, Plant Manager
 - TPMC : Rodger Carter, Division Manager





Environmental Remediation

Paul Kreitz, Project Manager





Environmental Remediation

Paul Kreitz, Project Manager

- Measures of Progress
 - Waste removal was completed on schedule in December 2007... For the first time in 15 years, waste is removed from the site as it is generated
 - In June 2008, completed the shipment of 1,900 containers of special process waste for treatment and disposal
 - Continue to make significant progress conducting oxidant treatment at 2 on-site groundwater plumes





Environmental Remediation

Paul Kreitz, Project Manager



- Measures of Progress
 - In July 2008, completed all processing and waste removal of more than 1,200 small cylinders. Project was completed 3 months ahead of schedule and approximately \$500,000 under budget.





Environmental Remediation

Paul Kreitz, Project Manager



- **Measures of Progress**

- United Steel Workers completed removal of X-744 T/U Lithium Storage Warehouses in May 2008
- Use of local companies for recycling non-contaminated metals and debris resulted in a cost savings of approximately \$300,000



Environmental Remediation

Paul Kreitz, Project Manager



- Measures of Progress
 - More than 320 old converter shells processed by LATA/Parallax; less than 60 remaining
 - On schedule for completion by September 2008





Environmental Remediation

Paul Kreitz, Project Manager



- **Upcoming Work**

- Disposition of X-746, a former shipping and receiving facility, with public comment
- Removal of the X-770 concrete slab upon approval by the Ohio Environmental Protection Agency
- Processing, transport and disposal of more than 2,200 excess, large cylinders containing low enriched uranium





Environmental Remediation

Paul Kreitz, Project Manager

- Upcoming Work (*continued*)
 - Disposition of selected materials in the Uranium Management Center
 - Disposition of 361 small cylinders (Phase II)
 - Continual monitoring of groundwater at southern boundary of plant site





Government Services

Wray Jordan, General Manager





Tech-99 Cleanup

Wray Jordan, General Manager

USEC is completing a project for DOE to clean cylinders of out-of-specification uranium contaminated with technetium (Tc-99) for reuse by the nuclear industry.

- Since the project began in 2002, 14,883 out of 15,067 metric tons of uranium (MTU) have been cleaned:
- 1,884 MTU DOE uranium cleaned to date in FY 08. Cleanup of remaining current inventory of 184 MTU to be completed by end of FY 08 (Sept. 30).
- Discussions ongoing for additional material to be processed.



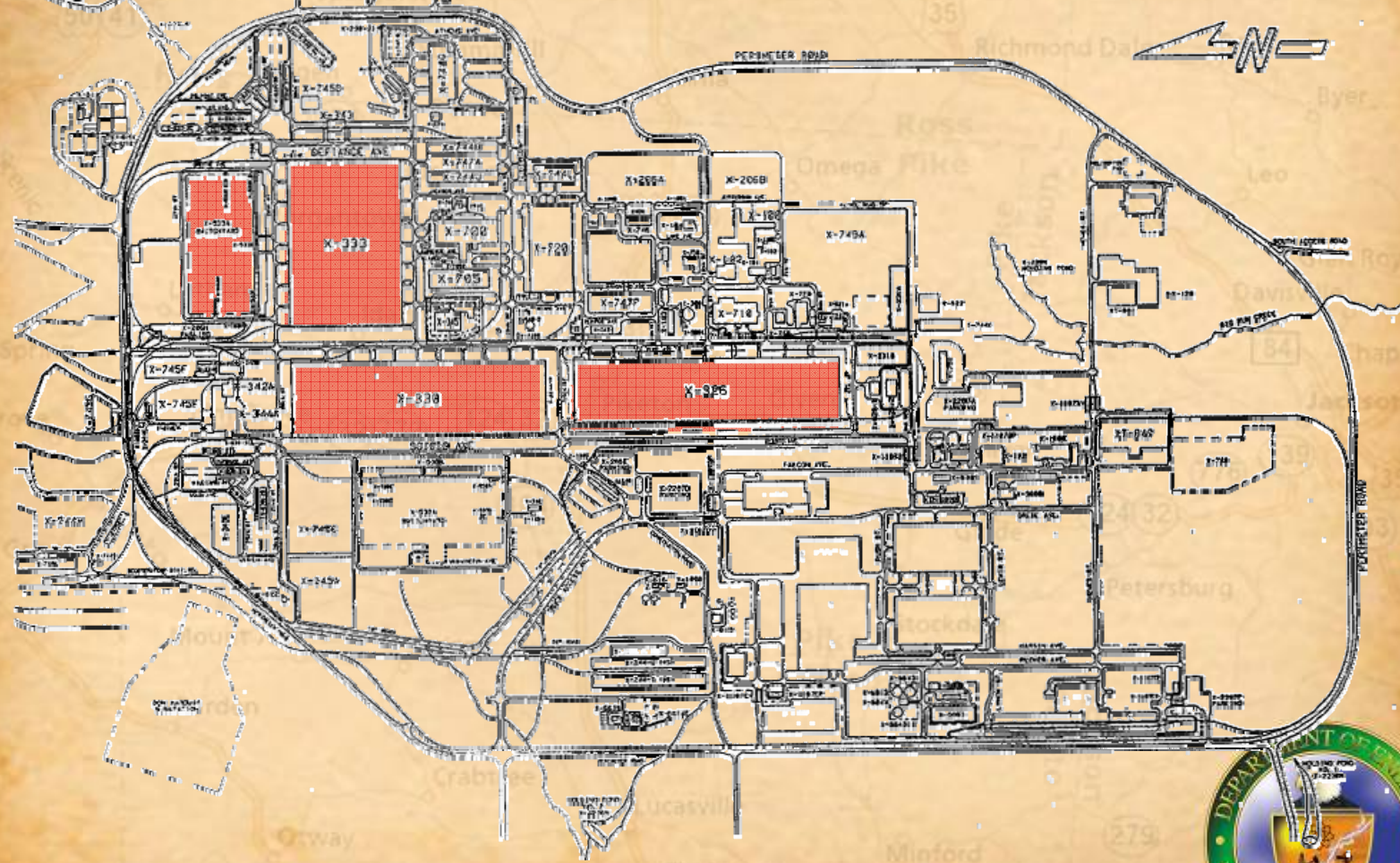
Straddle Buggies are used to move cylinders within the plant





Cold Shutdown

Wray Jordan, General Manager





Cold Shutdown

Wray Jordan, General Manager



Heated housing for three of 86 dry pipe fire suppression systems in the X-333

X-333 Cold Shutdown Activities

Removal of Lube Oils and Pyranol Transformer Oils

Thus far in FY 08, 19,230 gallons of lube oil and 12,400 gallons of pyranol oils have been removed.

Deposit Removal

Final Greater-than-Safe-Mass uranium deposit was removed in 2007. All other deposits considered uncomplicated handling.

Safety Systems

Dry pipe fire suppression system installation completed in 2008.





Cold Shutdown

Wray Jordan, General Manager



Installation of Electrical Conduit to provide power to dry pipe fire suppression system in X-330.

X-330 Cold Shutdown Activities

NDA Analysis

Performing diagnostic Non-Destructive Analysis on uranium deposits. Expected completion in August 2008.

Deposit Removal

Deposit removal underway. Four deposits are currently under treatment. A total of eight are awaiting analysis and/or treatment.

Fire Suppression System

Dry pipe fire suppression system installation underway (87 systems). Expected completion in September 2008.





Cold Shutdown

Wray Jordan, General Manager

X-326 Cold Shutdown Activities

NDA Analysis

Performing diagnostic Non-Destructive Analysis on uranium deposits.

Cell Modification

Installing modifications and performing tasks in preparation for deposit removal. Additional activities under consideration with DOE.





Cold Shutdown

Wray Jordan, General Manager



Concrete pad poured for new substation to provide power for plant fire water systems

X-533 Cold Shutdown Activities

Deactivation

The X-533 Switchyard is being deactivated and will no longer be utilized for power to plant systems.

Current Activities

- Installation of new switch gear, high voltage cable, & utility poles
- New substation for fire water pumps installation underway





DUF₆ Conversion Plant

John McCoy, Plant Manager





DUF₆ Conversion Plant

John McCoy, Plant Manager

- Construction is complete as of May 20, 2008
 - All systems and facilities are turned over to testing or operations
 - The construction staff is now less than 60 from a high of 240
 - Remaining construction staff is completing documentation, inspections, and making minor repairs/installations based on operations and testing support needs



UDS

Uranium
Disposition
Services, LLC

DUF₆ Conversion Plant

John McCoy, Plant Manager





DUF₆ Conversion Plant

John McCoy, Plant Manager

- Operations and Testing Activities
 - System testing will continue into early 2009
 - Operations staff (including testing group and subcontractors) is now approaching 100 and will grow to over 160 over the next 2 years
 - Operational readiness reviews will start after testing is completed, followed by full scale conversion operations





Theta Pro2Serve Management Company, LLC

Infrastructure Services

Rodger Carter, Division Manager





Theta Pro2Serve Management Company, LLC

Infrastructure Services

Rodger Carter, Division Manager

- Scope of Work
 - Human Resources Management
 - Surveillance and Maintenance of Facilities
 - Janitorial Services
 - Roadway / Parking Lot / Grounds Maintenance
 - Computing and Telecommunication
 - Fleet Management
 - Real and Personal Property Management
 - Records Management and Document Control
 - Site Security
 - Waste Management and Pollution Prevention
 - Other activities





Theta Pro2Serve Management Company, LLC

Infrastructure Services

Rodger Carter, Division Manager



- Personnel Statistics

- 43 hourly workers – represented by United Steel Workers (USW) Union Local 5-689
- 51 salaried workers
- Approximately 40 subcontractors
- TPMC employees reside in eight Ohio counties (Pike, Scioto, Ross, Jackson, Vinton, Hocking, Highland, Brown) and two Kentucky counties (Greenup and Lewis)





Theta Pro2Serve Management Company, LLC

Infrastructure Services

Rodger Carter, Division Manager



- Fog Road
 - Watch signs
 - Slow down
 - Obey weight limit



'Looking to the Future'

Understanding What is Necessary for the Effective Cleanup of the Plantsite



'Looking to the Future'

- 5-Year Planning Budget:

Dollars in Thousands

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Portsmouth	242,561	284,963	253,970	261,766	267,787

- Site Priorities for FY 2009:

- Complete shutdown and demobilization after successful completion of Technetium-99 project
- Continue operational readiness reviews and testing for Depleted Uranium Hexafluoride (DUF₆) Conversion Facility in support of future operations
- Complete Cold Shutdown activities in the former gaseous diffusion operations facilities and transition towards D&D activities
- Complete X-701B oxidation injection system field treatment activities, and complete Quadrant II remedial actions, which are the last remedial actions at Portsmouth until D&D project
- Complete disposition of converter shell project



‘Looking to the Future’

10M sq ft – largest in complex today



D&D of the Gaseous Diffusion Plant will signify the beginning of the second major cleanup effort at the site.



Near-Term

Out - Years

2007

2008

2009

2010

2011-2015

2016-2020

2021-2045

Environmental Remediation & Cold Shutdown

Legacy Uranium Mtl's Disposition

Legacy Waste Disposition

Remediation

Cold Shutdown and S&M

D&D and Remediation of the Gaseous Diffusion Plant

D&D of Support Buildings

~2040

D&D of Process Buildings

Remediation

Waste Disposition

Project close-out and transition to long-term management

~2045

Depleted Uranium Hexafluoride Conversion Plant

'Looking to the Future'

Preparing for D&D of the Gaseous Diffusion Plant



‘Looking to the Future’

- Planning for D&D of the Gaseous Diffusion Plant
 - Initial contract awarded: Environmental Technical Services support to DOE awarded to Restoration Services, Inc. on June 25, 2008
 - A Draft Request For Proposals for the Management and Integration (M&I) contract for initial D&D work to be issued
 - Contract to provide for a 5-year base with a possible 5-year option
 - Further information available on the Environmental Management Consolidated Business Center (EMCBC) Portsmouth Procurement website:

http://www.emcbc.doe.gov/PPPO_Main_Site/



‘Looking to the Future’

- The Challenges Ahead...
 - Determining future end use and final vision for the site
 - Environmental evaluation of D&D restoration and waste alternatives
 - Assess potential for recycling and reutilization of equipment, metals, concrete debris
 - Maintaining skilled / trained workforce
- Input from the EM Site Specific Advisory Board, public, and regulators will be essential elements in the decision process



Information Resources

- **Department of Energy's Environmental Information Center**
Location: OSU Endeavor Center, Room 220, Piketon, Ohio
Telephone: (740) 289-8898
E-mail address: eic@falcon1.net
- **Information websites**
U.S. Department of Energy : www.energy.gov
United States Enrichment Corporation : www.usec.com
LATA/Parallax Portsmouth : www.lpports.com
Theta Pro2Serve Management Company : www.tpmcllc.com
Uranium Disposition Services LLC : www.uds-llc.com
Environmental Management Consolidated Business Center (EMCBC) Portsmouth Procurement website: www.emcbc.doe.gov/PPPO_Main_Site/

