

U.S. DEPARTMENT OF ENERGY



PORTS D&D Project Update Piketon High School January 24, 2017



AGENDA

- **Portsmouth Site Background and DOE Missions**
 - Joel Bradburne, Site Lead, U.S. Department of Energy
- **Decontamination and Decommissioning Project**
 - Dennis Carr, Site Program Director, Fluor-BWXT Portsmouth
- **Informational Kiosks**
 - DOE personnel
 - Fluor-BWXT personnel
 - Ohio EPA
 - Ohio Department of Health
 - Ohio Historic Preservation Office
 - Site Specific Advisory Board





Portsmouth Site Background and DOE Missions

Joel Bradburne, Site Lead, U.S. Department of Energy

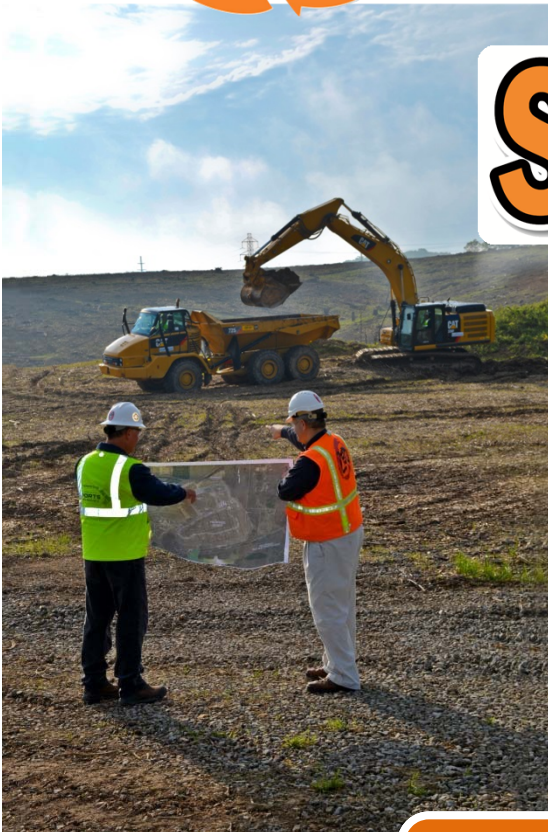


**We know where we are, we know
where we are going, and we know
how to get there.**

Integrated Safety Management System



P O R T S
SAFETY WORKS



Safety is Central in All We Do



Portsmouth Site Background and DOE's Mission

Joel Bradburne, Site Lead, U.S. Department of Energy

- Portsmouth Site – The Original Mission
- DOE's Cleanup Mission
- Regulatory Oversight at PORTS
- The Community's Input
- Project Baseline
- Property Transfer and the Draft Environmental Assessment





Portsmouth Site – The Original Mission

- Built from 1952-1956 by the U.S. Atomic Energy Commission
 - Now the U.S. Department of Energy
- Enriched Uranium by Gaseous Diffusion process from 1954-2001





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COLD WAR

1954-1989

Nuclear Defense





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COLD WAR

1954-1989

Nuclear Defense

POST COLD WAR

1989-2001

Commercial
Nuclear Power





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COLD WAR

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Commercial
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CLEANUP

2001-Current

- Environmental Cleanup
- Decontamination & Decommissioning
- Reuse





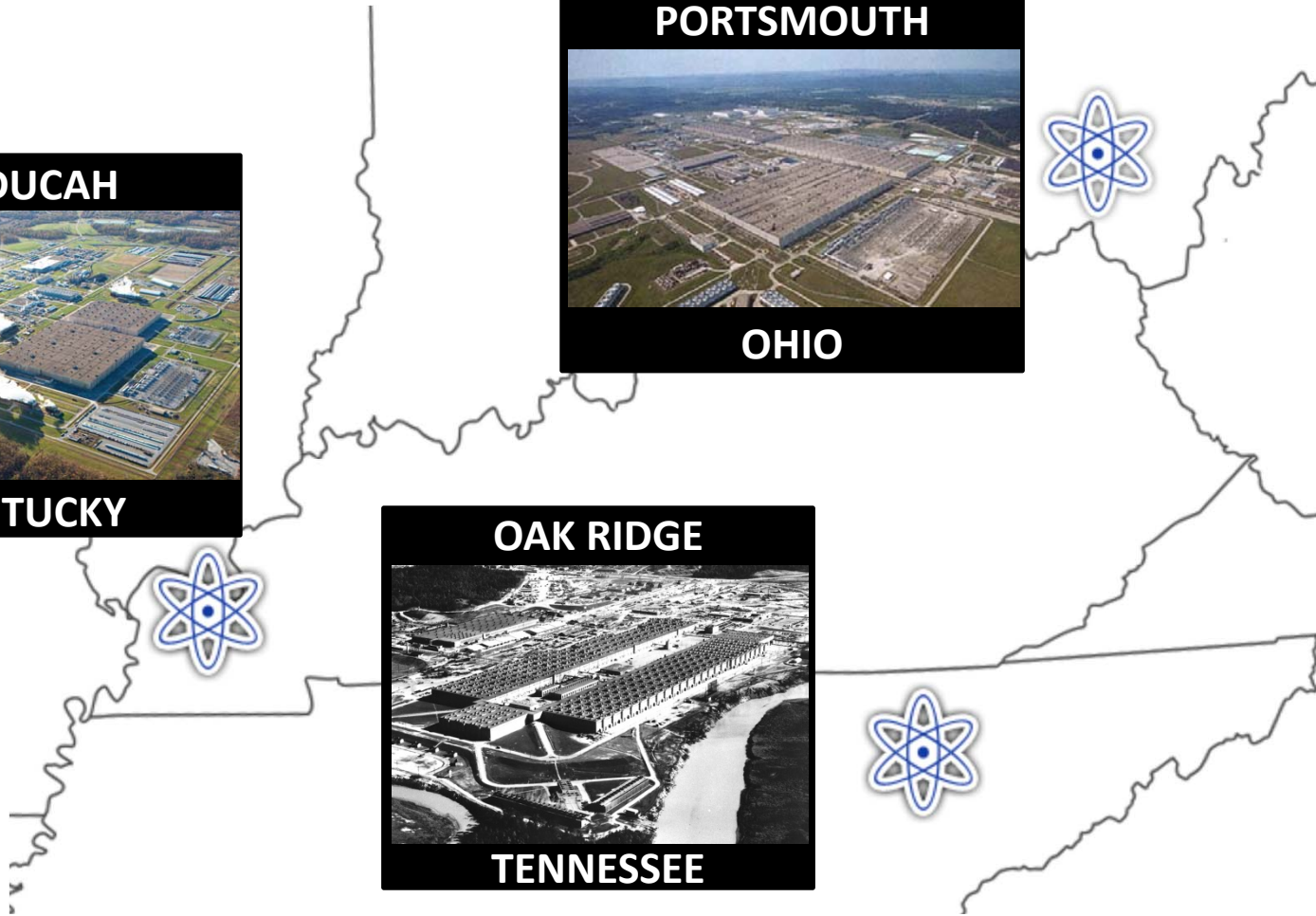
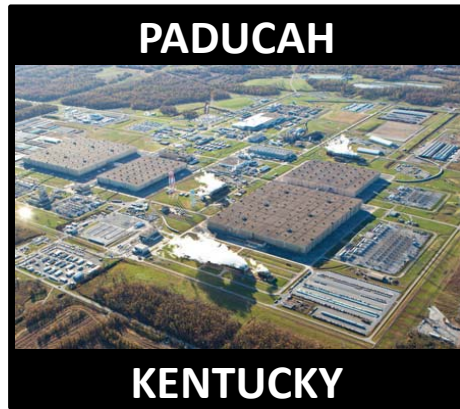
DOE Cleaning up Sites Across the Country

- DOE's office of Environmental Management (EM) is in charge of the safe cleanup of nuclear weapons and energy research sites around the country, eliminating potential environmental threats, reducing the DOE footprint and life-cycle costs.





Decommissioning DOE's Gaseous Diffusion Plants





DOE's Cleanup Progress at Portsmouth

- **Groundwater Cleanup**
 - 681 million gallons treated / 35,000 pounds of Trichloroethylene (TCE) removed
- **Landfills and Lagoons Closed**
 - Five landfills containing construction debris, low-level contaminated scrap metal, hazardous materials, sanitary wastes
 - A number of sludge lagoons, impoundments and oil biodegradation plots
- **Waste Removed**
 - More than 2.8 million cubic feet of waste removed and disposed off-site
- **Demolition and Removal of Facilities**
 - 40 buildings and facilities have been removed





Regulatory Oversight



**State Historic
Preservation Office**





Listening to the Community

- County Commissioners (Pike, Scioto, Ross & Jackson)
- U.S. Senator Sherrod Brown
- U.S. Senator Rob Portman
- U.S. Congressional representatives
- Local Mayors & Township Trustees
- United Steel Workers
- Local Trade Unions
- Southern Ohio Diversification Initiative (SODI)
- Ohio Valley Regional Development Commission (OVRDC)
- Joint Economic Diversification Initiative of Southern Ohio (JEDISO)
- Economic Development Alliance of Southern Ohio (EDASO)





Listening to the Community– SSAB

- The Site Specific Advisory Board is made up of community members who have an interest in the safe cleanup and future use of the site.
 - Four subcommittees include: Budget, D&D, Future Use, and Historical Legacy and Community Outreach.
 - The SSAB makes recommendations to the Department on a regular basis on a wide range of topics pertaining to the project.





Listening to the Community– *PORTSFuture*

- *PORTSFuture* was a grant-funded study by the Ohio University Voinovich School of Leadership and Public Affairs.
- 15-month public participation process in Pike, Scioto, Ross and Jackson counties to identify the community's future-use preferences for the Portsmouth site post-cleanup.
- Public voting occurred online and in-person at public events. 1,141 people voted on nine future-use scenarios.
 - Scenarios with the most votes:
 - Nuclear power plant
 - Green energy production
 - Industrial park
 - National research and development





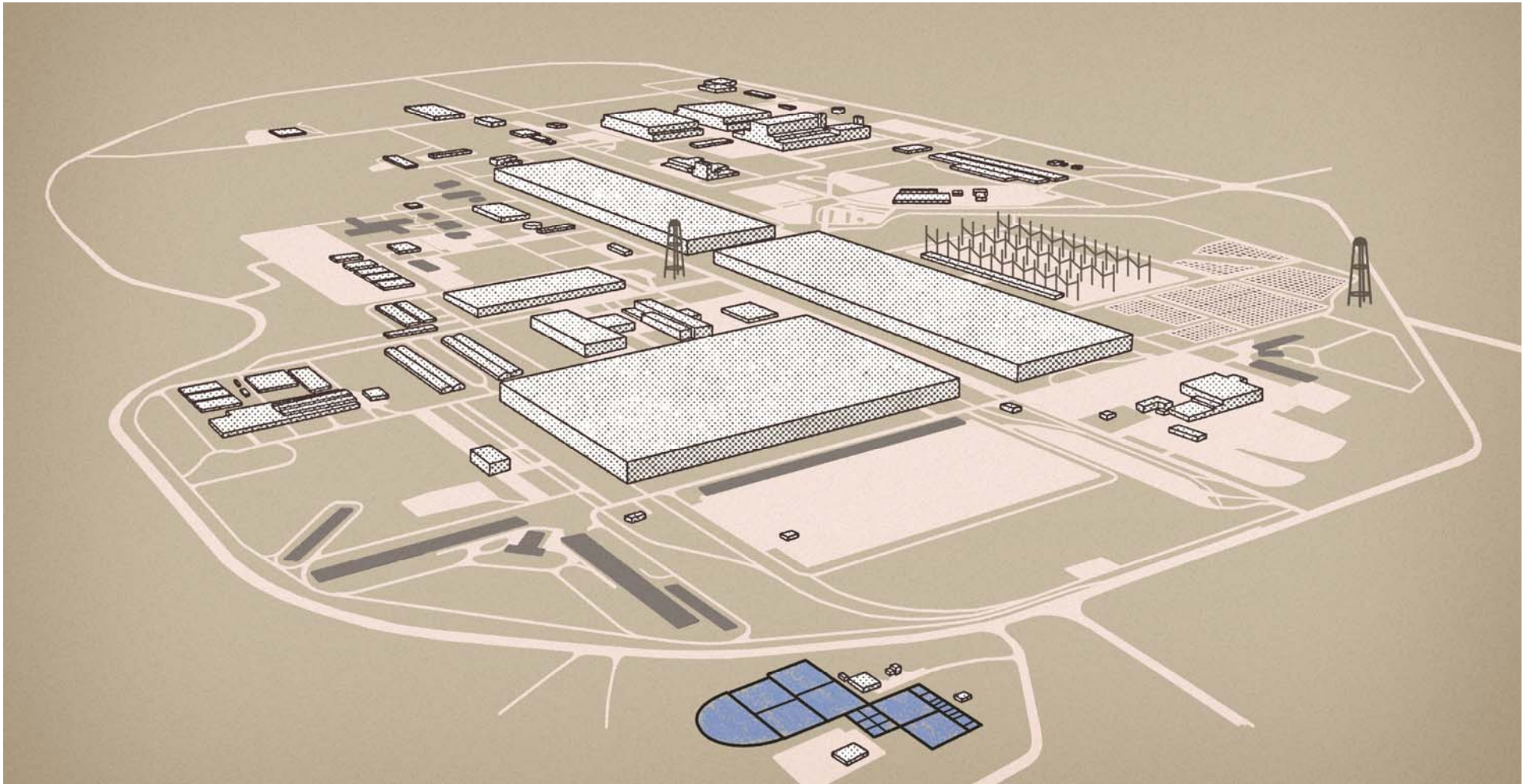
Using The Community's Input– RODs



- In the summer of 2015, two important Records of Decision (RODs) were agreed upon by the DOE and Ohio Environmental Protection Agency (Ohio EPA) to proceed with a comprehensive plan to (1) demolish the old process buildings and support structures at PORTS and, (2) disposition the waste that would be generated.
- These decisions were influenced by an extensive community outreach effort that gave members of the public an opportunity to comment on the proposed plans.
- In total, 983 comments were received and evaluated individually as part of the two decision processes.



Portsmouth – The End Goal





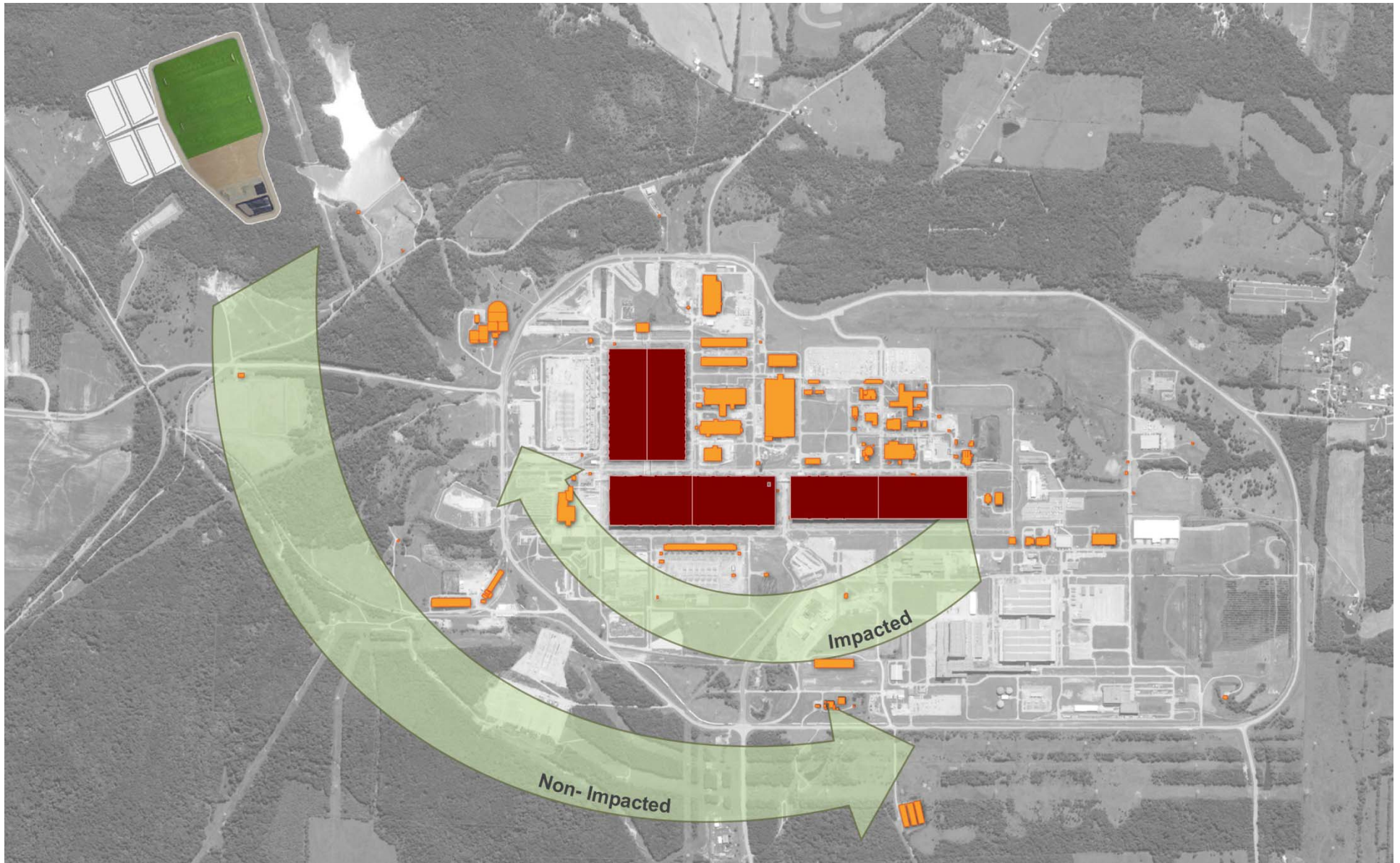
Portsmouth – The End Goal

DOE's mission at Portsmouth is to accomplish Environmental Remediation, Waste Management, Depleted Uranium Hexafluoride (DUF6) Conversion, and Decontamination and Decommissioning. DOE's goal is to accelerate cleanup, eliminating potential environmental threats, reducing the DOE footprint, and reducing life-cycle cost.





D&D Approach





Future Use – First Property Transfer

- Through a collaboration with the Southern Ohio Diversification Initiative (SODI), DOE has identified an 80-acre parcel for transfer
- Environmental baseline survey developed, reviewed by Ohio EPA
- Requires DOE-HQ and Congressional approval
- Property could be component to future reindustrialization





Draft Environmental Assessment

- Analyzes the potential environmental consequences associated with potential land transfers.
- DOE is inviting comments on the Draft EA for a period of 45 days ending on February 18, 2017.
- The Draft EA is available for review:
 - <http://energy.gov/nepa/nepa-documents/environmental-assessments-EA>
 - The Portsmouth Environmental Information Center, 1862 Shyville Road, Room 207, Piketon.
 - Informational kiosk here tonight
- The public has been notified through local newspapers, post cards and letters.





Decontamination and Decommissioning Project Update

Dennis Carr, Program Director, Fluor-BWXT Portsmouth





D&D Project Update

Dennis Carr, Program Director, Fluor-BWXT Portsmouth

- Fluor-BWXT's Role at PORTS
- D&D Progress
 - Process Building Deactivation
 - Building Demolition Update
- Waste Removal
- OSWDF Construction
- Environmental Remediation
- Programmatic Topic: Uranium Barter and the Budget





Fluor-BWXT's Role at PORTS

- Decontamination & Decommissioning
- Environmental Remediation
- Laboratory Services
- Waste Disposition
- OSWDF Construction
- Uranium Management and Processing
- Site Infrastructure/Maintenance





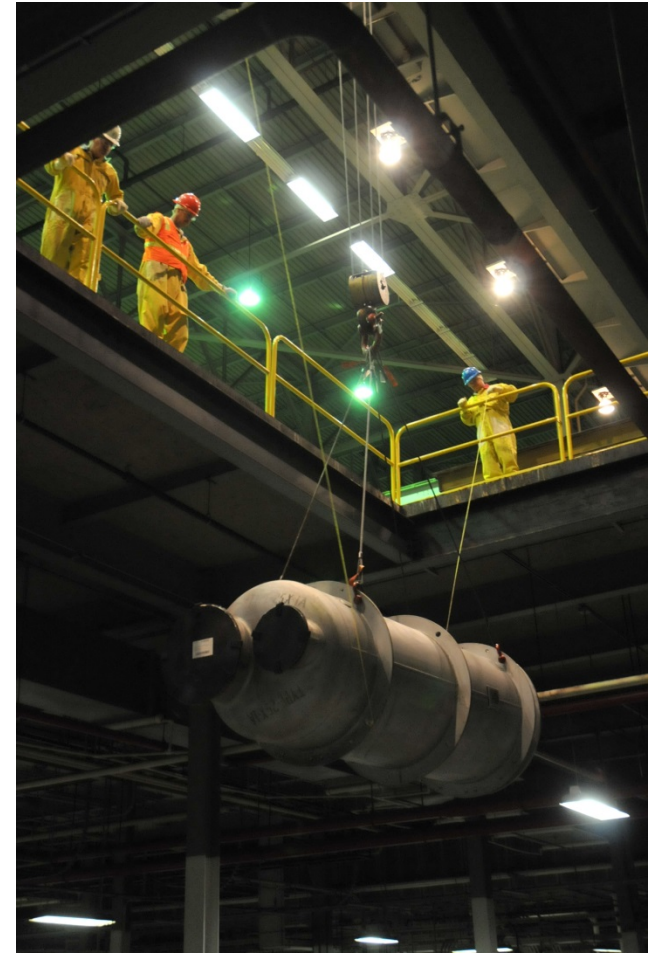
D&D Progress – X-326 Deactivation





D&D Progress – X-326 Deactivation

- Deactivation Goal – ‘Cold & Dark’
 - Downgrading facility from a Cat 2 Nuclear Facility
 - Downgrading security
 - Utility isolation and relocation
- In the past three years, more than 7,000 process components have been removed.
- Complex, labor-intensive process involving every department within the PORTS D&D Project.
- Timeline – ‘Cold & Dark’ in 2017 and ready for demolition.





D&D Progress – X-333 Deactivation





D&D Progress – X-333 Deactivation



Preparations for Cold and Dark Begin

- Bypass panels removed to allow technicians to test for deposits
- Dry pipe fire suppression system installed
- Transformers being shipped off-site for recycle
- Large process gas equipment will be downsized
- Nickel will be removed for potential recycling





D&D Progress – X-114A Demolition





D&D Progress – X-114A Demolition

- Old outdoor firing range demolished as part of OSWDF site prep.
- 7.7 acre area used for training by site Protective Forces.
- 142,540 lbs. of scrap metal sent to SODI to be recycled.





Waste Removal

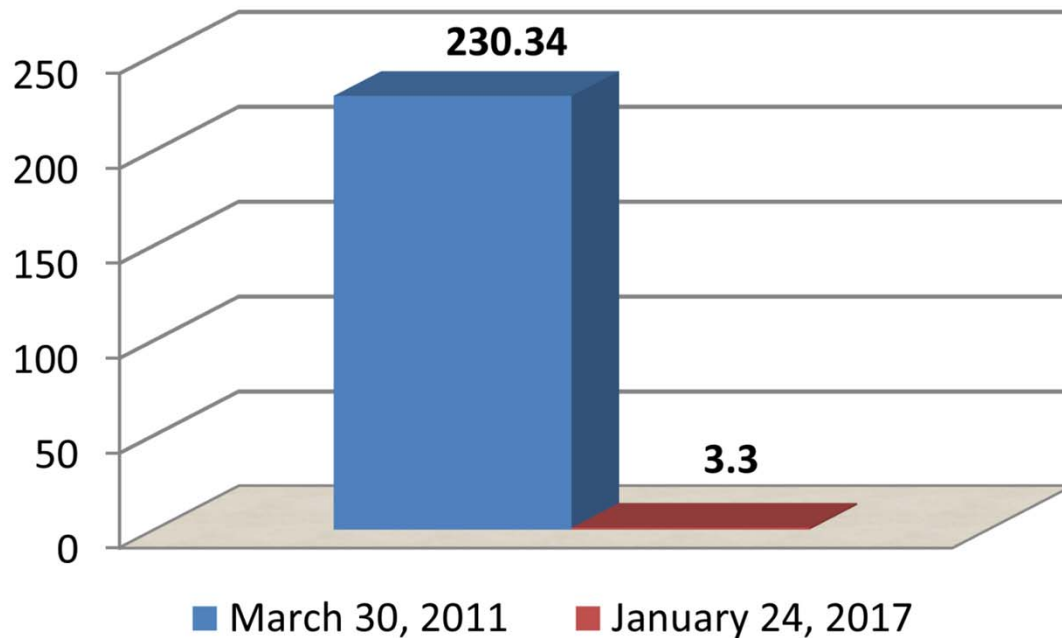




Waste Removal

98.8% RCRA Waste Reduction

Total Permitted Storage Volume
(in cubic meters)



- RCRA Waste is hazardous and could be environmentally harmful if not handled and disposed properly.
- RCRA stands for Resource Conservation and Recovery Act



OSWDF Construction





OSWDF Construction

Completed Work

- Land Clearing – 294 Acres
- X-114A Firing Range D&D
- 7-acre sediment pond constructed
- Raw water line installed





OSWDF Construction

Completed Work (Cont.)

- Perimeter fence installed
- Construction trailers installed

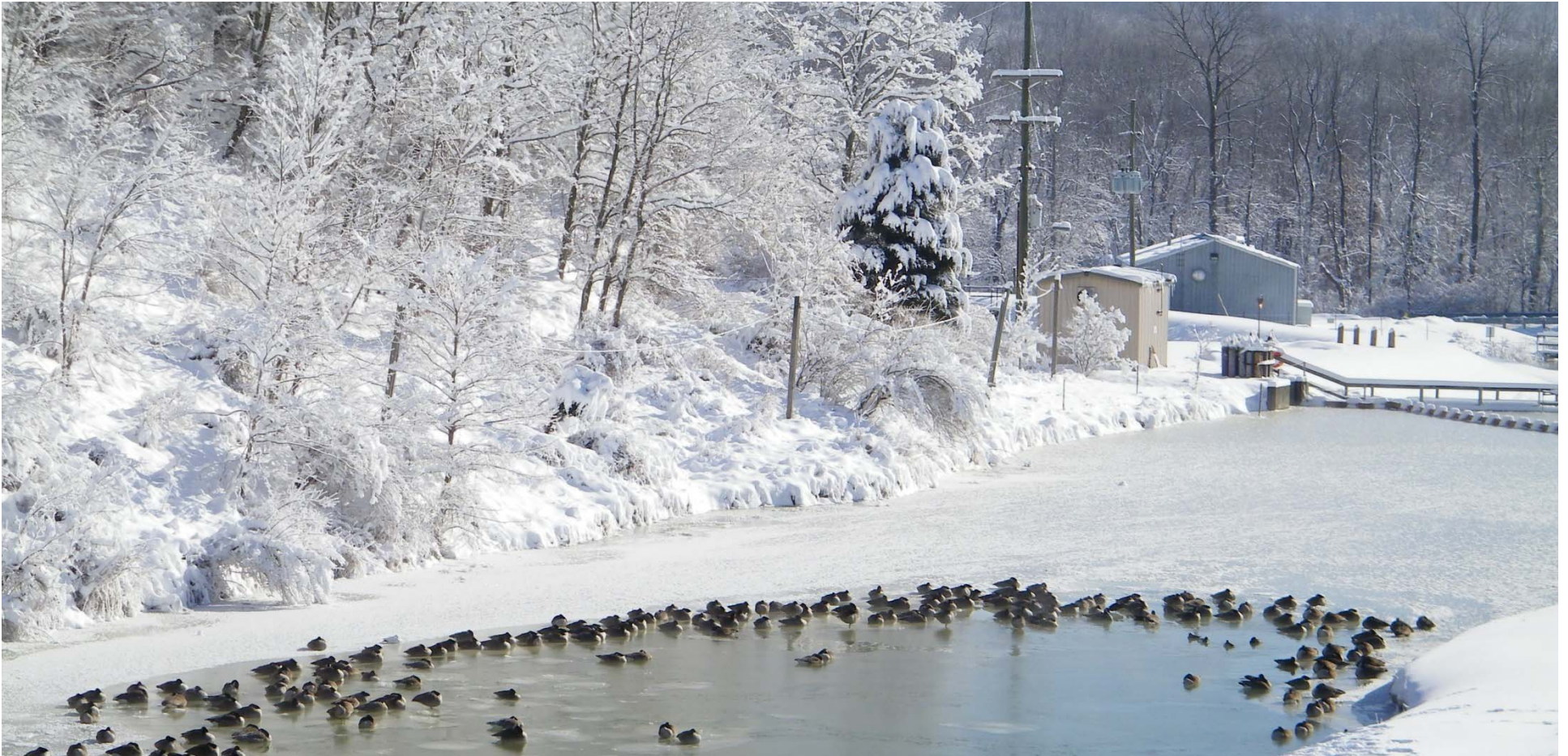
Upcoming Work

- Sanitary/potable water to trailers
- North Access Road widening
- Water filling station #1
- Sediment Pond #3





Environmental Remediation





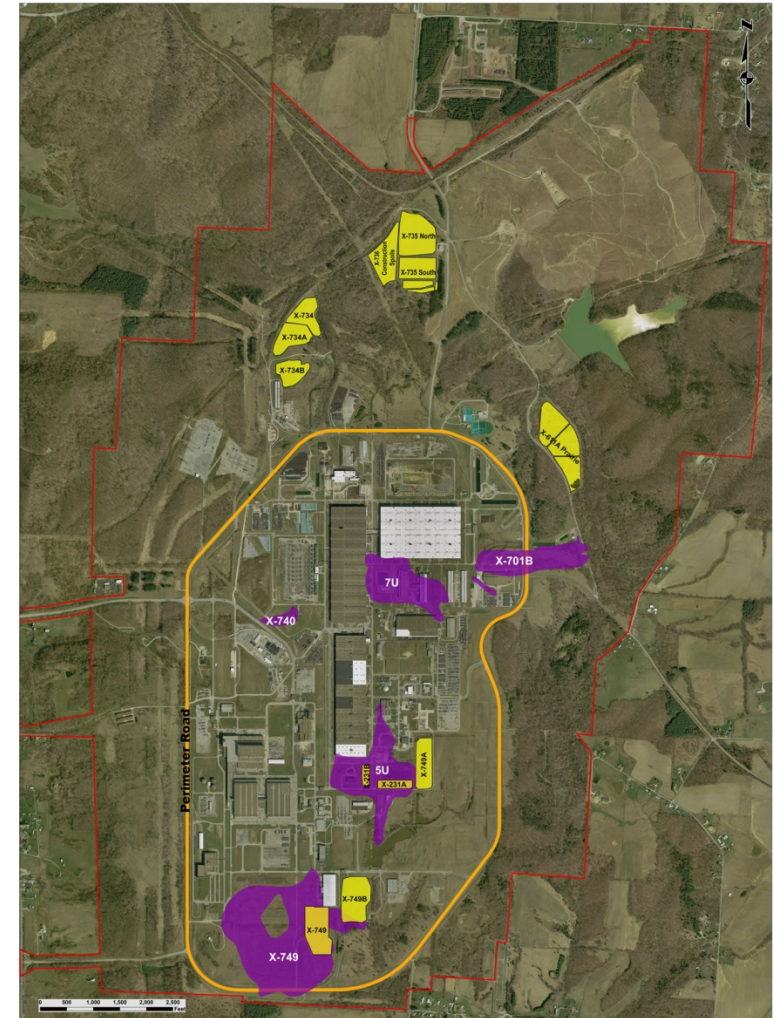
Environmental Remediation

Cleaning Contaminated Groundwater

- Five areas (plumes) where the groundwater is contaminated with TCE, an industrial solvent
- Water is cleaned at four Pump and Treat facilities
- Plumes are contained onsite

| Groundwater Treated | TCE Removed |
|---------------------|-------------|
| 32,500,000 gallons | 249 pounds |

During FBP contract period beginning Mar 29, 2011



Environmental Monitoring

- Continuous environmental sampling on and off-site to ensure no negative impacts
 - Air Monitoring
 - Surface Water and Sediment Sampling
 - Water Discharge Monitoring



Uranium Barter





Uranium Barter

- Unique program sells DOE's stockpile of Uranium Hexafluoride (UF6) on the open market for use in nuclear power plants.
- All proceeds are used to fund the Portsmouth D&D project.
- Since the program began in 2011, it has generated more than \$1 billion for the project.



| Positive Aspects | Negative Aspects |
|--|--|
| <ul style="list-style-type: none">• Good use of DOE assets• Minimizes impact to the tax payer• Dispositions DOE's inventory of UF6 which benefits site cleanup | <ul style="list-style-type: none">• Market volatility causes budget issues at PORTS• Finite inventory |



Thank You For Attending
Please Visit our Project Experts Located at the Kiosks

