

# Community Workshop

## Balancing Priorities, Maintaining Momentum

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**Sue Cange**  
*Acting Manager*  
Oak Ridge Office of Environmental Management

**June 24, 2014**

## Complete the cleanup of the Oak Ridge Reservation to:

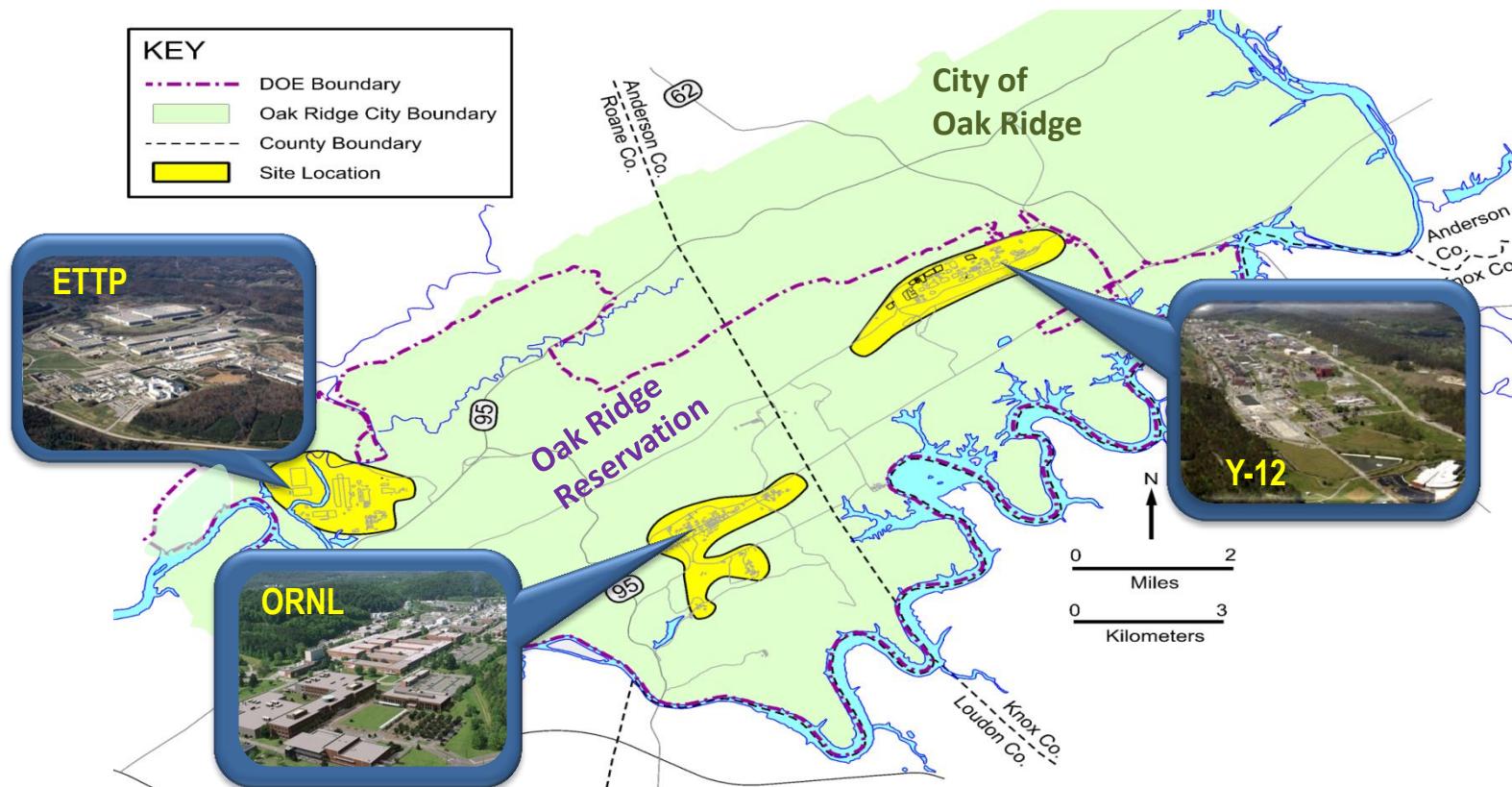
- Protect the region's health and environment
- Make clean land available for future use
- Ensure U.S. Department of Energy's (DOE) ongoing vital missions



# Program Overview

## Work is organized by Cleanup Portfolios:

- East Tennessee Technology Park (ETTP)
- Y-12 National Security Complex (Y-12)/Tru Waste Processing Center (TWPC)
- Oak Ridge National Laboratory (ORNL)



# Primary Cleanup Contractors

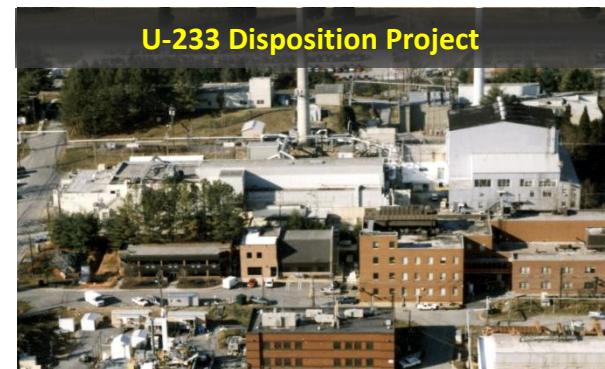
ETTP Cleanup and S&M



TRU Waste Processing



U-233 Disposition Project



ETTP cleanup and reservation-wide surveillance and maintenance

*Contract value: \$2.5B*

Facility operations and transuranic debris processing

*Contract value: \$292M*

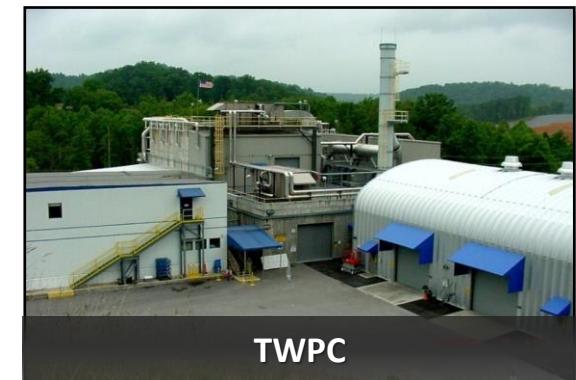
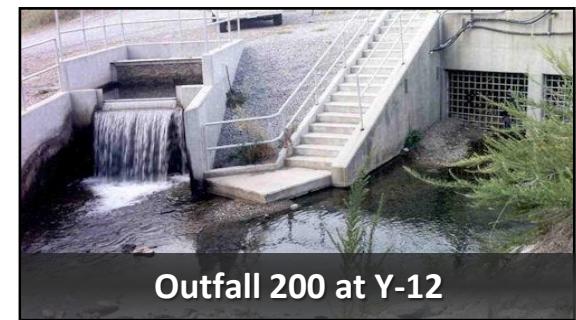


Disposition of U-233 material and management of Building 3019

*Contract value: \$406M*

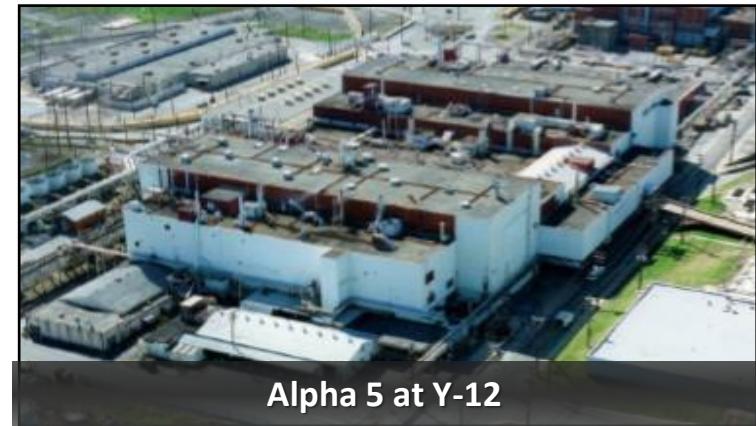
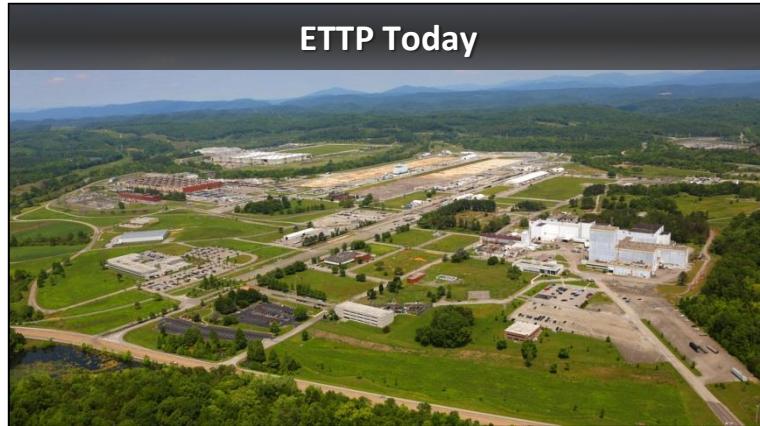
# Near-Term Cleanup Goals

- Complete demolition of K-31 and K-27 at ETTP
- Construct and operate mercury water treatment system at Y-12
- Disposition half the U-233 inventory at ORNL and prepare for processing remaining inventory
- Continue processing transuranic debris
- Prepare for transuranic sludge processing



# Longer-Term Plans

- Complete transuranic debris processing (~ 2018)
- Complete construction of Mercury Treatment Facility (~ 2020)
- Complete Cleanup of ETTP (~2022)
- Begin demolition of mercury buildings at Y-12 (~ 2023)
- Complete U-233 disposition (~ 2024)
- Begin operation of new disposal facility (~ 2024)
- Complete transuranic sludge processing (~ 2026)
- Begin demolition of central campus buildings at ORNL (~ 2027)



# New Opportunities

- Planning for three new capital asset, construction line item projects:
  - Sludge Processing Facility
  - Outfall 200 Mercury Treatment Facility
  - Environmental Management Disposal Facility



# Program Challenges

- Diverse, complex projects
- Competing priorities
- Declining budgets
- Regulator expectations/  
commitments
- Ongoing DOE missions



# Addressing Challenges Together

- **Community engagement makes Oak Ridge unique**
  - Fully supports environmental cleanup mission
  - Engaged in productive dialogue to balance competing priorities



- **It's important that messaging is coordinated and consistent**

## Purpose

- Develop ideas that we can work on together to help maintain momentum in the Oak Ridge environmental cleanup program

## Format

- Briefing on the federal budgeting process
- Briefing on recent Portfolio accomplishments and future plans
- Breakout sessions to discuss and develop ideas
- Report to large group

## Path Forward

- Determine which ideas we will adopt and develop a plan for implementation



# Breakout Sessions



- **Alternative contracting strategies for new projects**
  - Karen Shears and Darrel Kohlhorst
- **Balancing competing priorities with available budget**
  - Alan Stokes and Gerald Boyd
- **Beyond DOE – Reindustrialization/Historic Preservation/etc.**
  - Dave Adler and Cathy Hickey

# The Federal Budget

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**Alan Stokes**

*Planning & Baseline Management Division Director  
DOE Oak Ridge Office of Environmental Management*

**June 24, 2014**

# The Federal Budget Process

YEAR ONE

Department Budgets  
Prepared



YEAR TWO

OMB  
consolidates  
and President  
Submit Budget



Congress Approves



# Federal Budget Process: Department of Energy

Each Site Office

Oak Ridge

Hanford

Savannah  
River

Idaho

Paducah /  
Portsmouth

Others

Develops a budget

DOE Head Quarters  
Office



Consolidates into a  
single Department of  
Energy Budget

Secretary of Energy  
approves the DOE  
budget



Submits to Office of  
Management and  
Budget

# Federal Budget Process: Office of Management and Budget

Each Department



Submits their budget  
to OMB



Office of  
Management  
and Budget



Consolidates all  
department  
budgets

President approves the  
budget



Submits to  
Congress

# Federal Budget Process: Congressional Approval

Sub-committees



Appropriation Committee



President signs budget into law



Conference

- Resolves differences
- Sends back for final floor vote



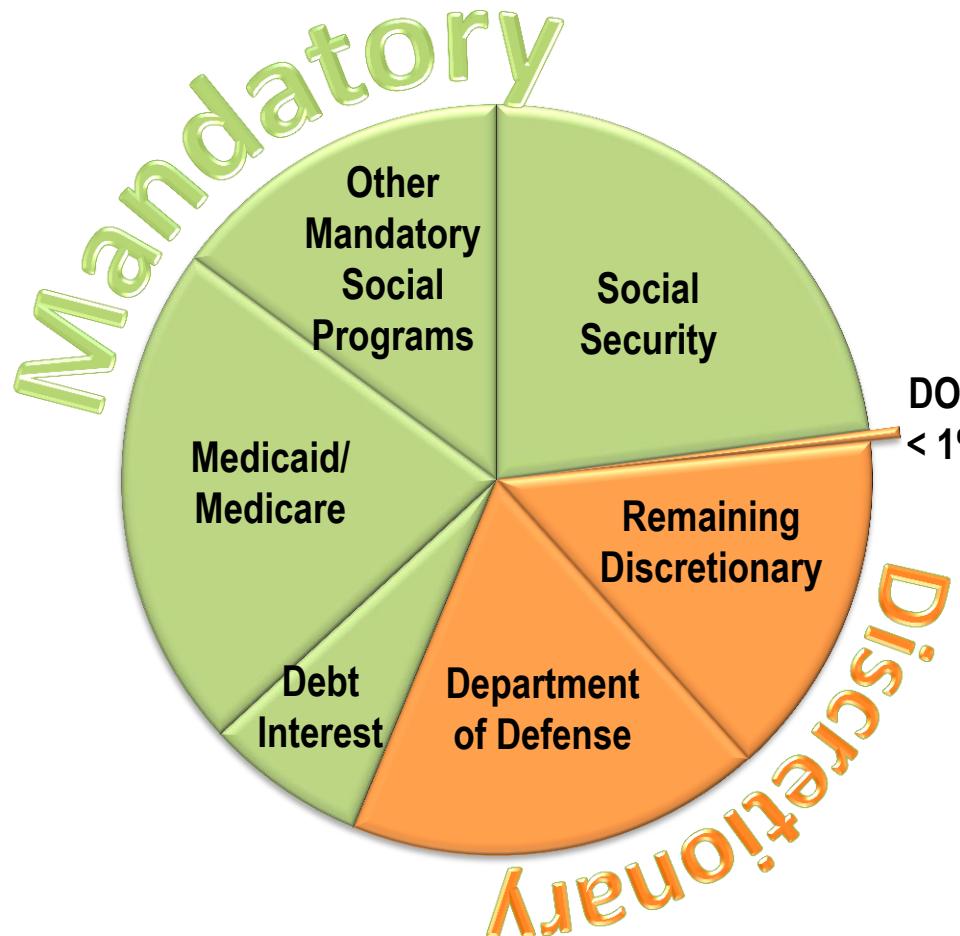
Develop Bills



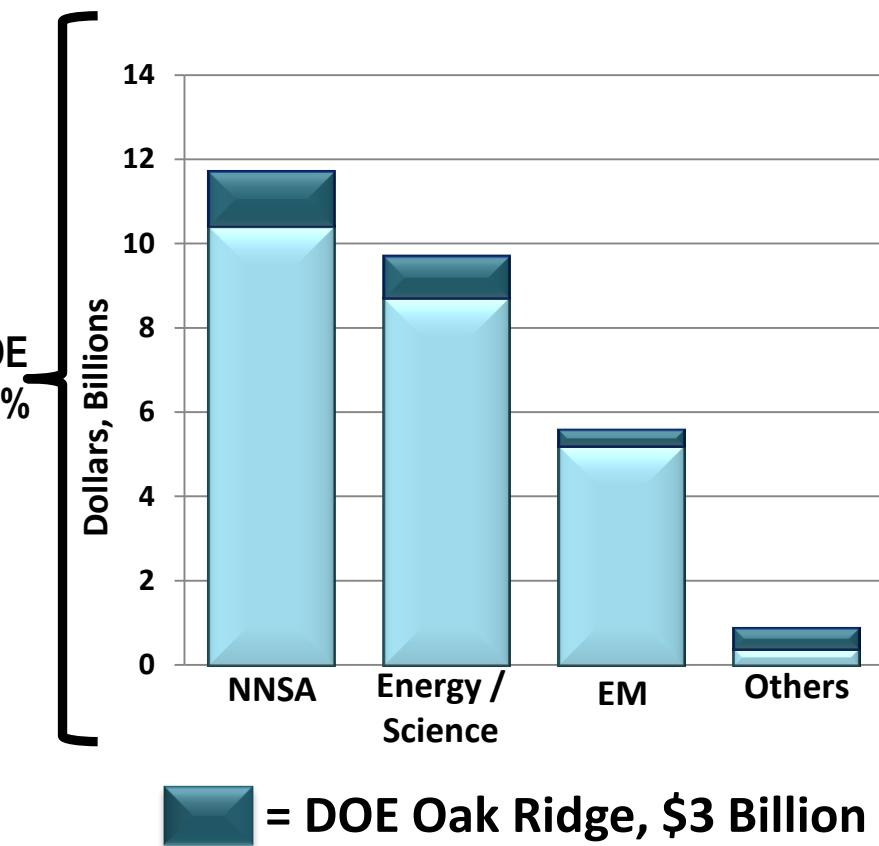
Approves Bills and sends for floor vote

# Federal Budget

**Federal  
(\$ 3.5 Trillion)**



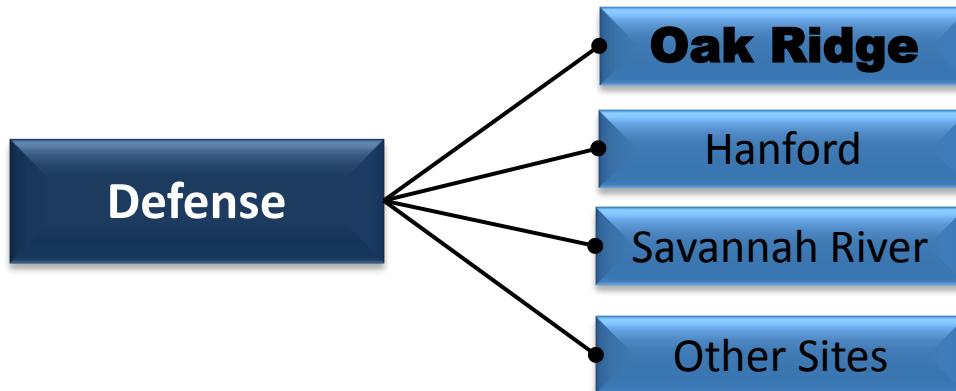
**Department of Energy  
(\$28 Billion)**



# Oak Ridge Environmental Management

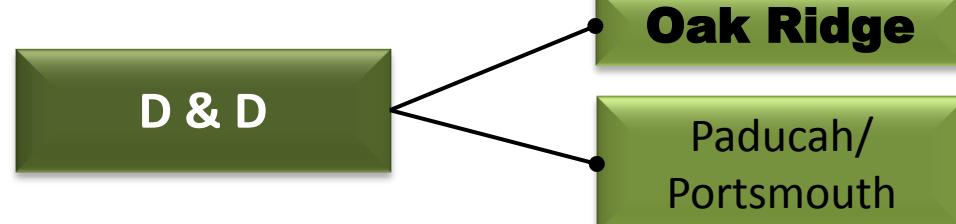
## FY 2015 Budget \$ 385 M

-- Transfers Require Congressional Approval --

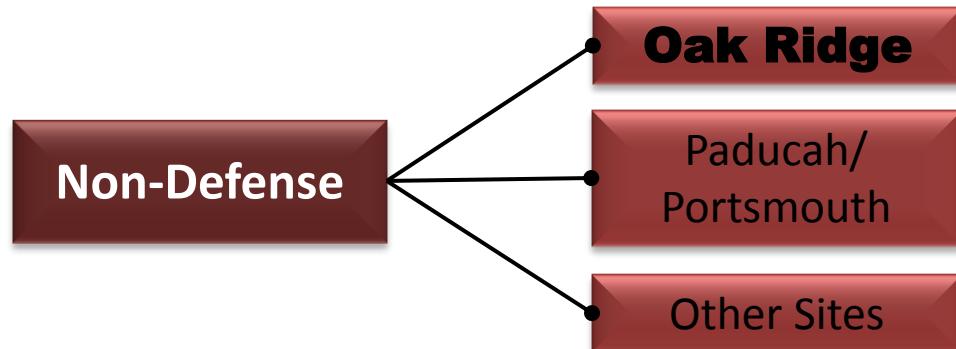


-- Transfers up to \$5 M Allowed --

PBS	Project	\$ M
11D	U-233 Disposition	41.6
13B	TRU Waste Operations	75.3
20	Safeguards & Security	16.4
41	Y-12 Cleanup	44.1
42	ORNL Cleanup	38.4
43	Centrifuge S & M	0.1
100	Community and Regulatory Support	4.4
TD	Tech Development	3.0
<b>Defense Subtotal</b>		<b>223.3</b>



PBS	Project	\$ M
40	ETTP Cleanup	140.6
102	Post Retirement Life and Medical	19.0
<b>D&amp;D Subtotal</b>		<b>159.6</b>



PBS	Project	\$ M
104	Historic Preservation	2.1
<b>Non-Defense Subtotal</b>		<b>2.1</b>

# East Tennessee Technology Park Cleanup Plan

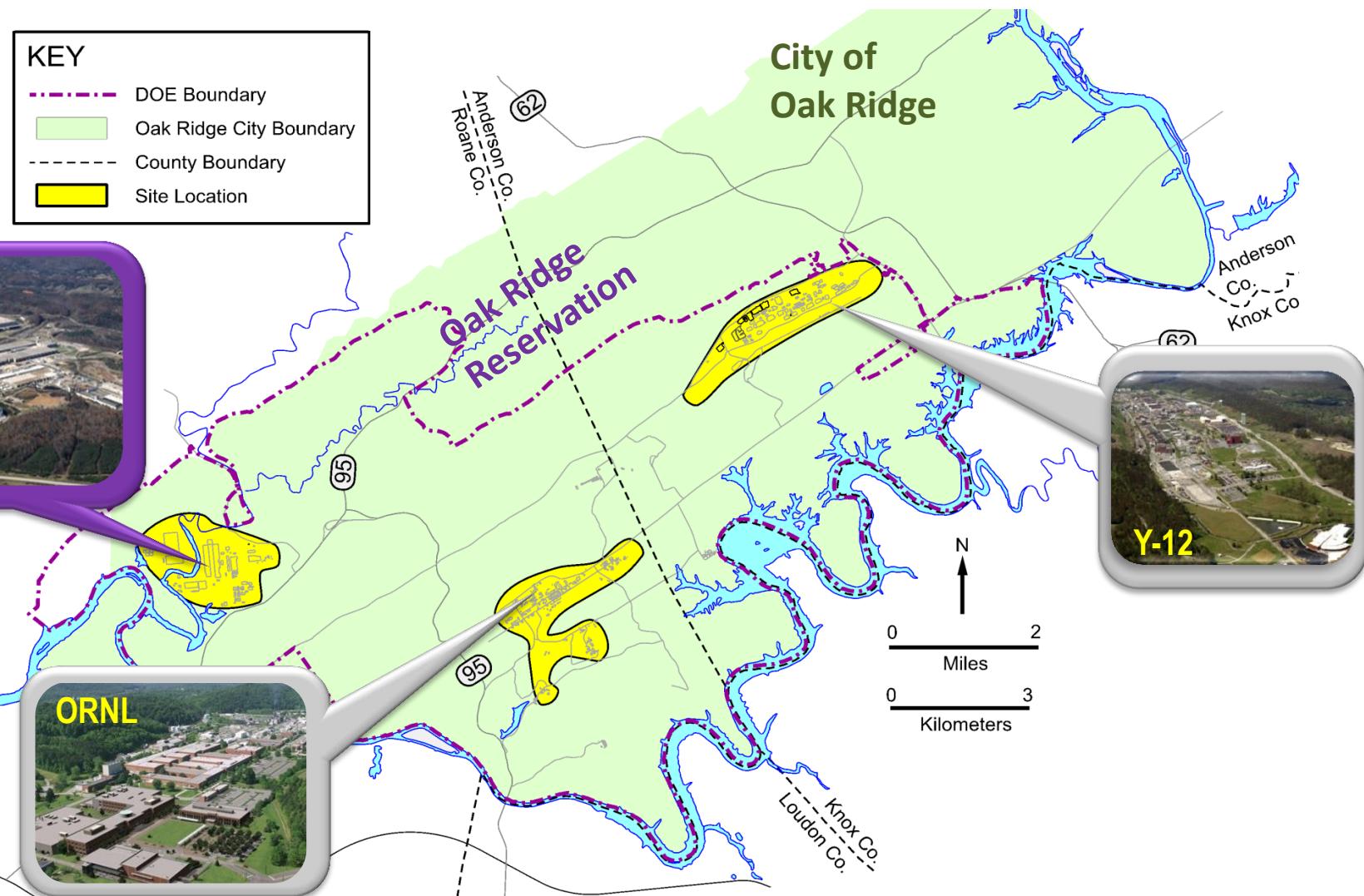
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**Wendy Cain**

*Acting ETTP Portfolio Federal Project Director  
DOE Oak Ridge Office of Environmental Management*

**June 24, 2014**

# East Tennessee Technology Park (ETTP)



# ETTP Site End State



*Achieving reuse as a  
Commercial Industrial  
Park*

- Complete building demolition and waste disposal
- Complete land & groundwater remedial actions
- Make land available for industrial reuse
- Preserve the K-25 Building footprint and construct an Equipment Building, Viewing Tower and History Center



# Recent Accomplishments

## K-25 Building demolition complete

- All 54 building units demolished and disposed



# Recent Accomplishments



K-33/31 tie line removed



K-27 Building  
pre-demolition  
underway



K-1206 F Fire Water Tower demolished



# Current Cleanup Status



## Near term (through FY 2016)

- Complete K-25 project documentation
- Continue K-25 historic preservation
- Continue K-31 demolition
- Prepare K-27 for demolition

## Mid term (through FY 2020)

- Complete K-27 and K-31 demolition
- Complete K-25 historic preservation
- Complete remediation of soils

## Long term (beyond FY 2020)

- Complete all building demolition and remedial actions by FY 2022

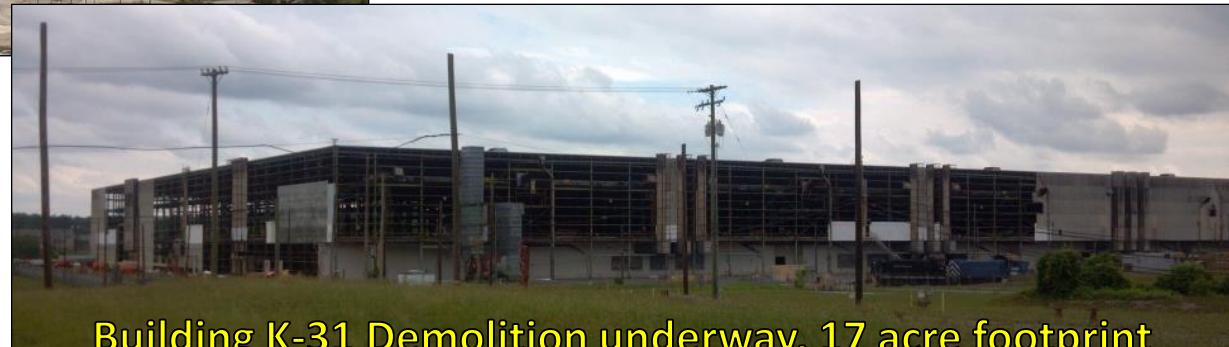
## Ongoing Activities

- Infrastructure, waste operations, S&M, security, environmental monitoring, landlord activities
- Pursue redevelopment opportunities



# Planned Accomplishments through FY 2016

- Complete the majority of demolition activities for Building K-31
- Complete the majority of pre-demolition activities for Building K-27
- Continue activities associated with Historical Preservation
- Complete characterization activities associated with remedial actions for K-25 area



# Execution Challenges

- **Facility contamination**
  - Highly mobile technetium
- **Facility deterioration**
  - Worker safety
  - Increased cost due to need for structural stabilization
- **Challenging budgets**
  - Maintaining momentum and work force
  - High annual costs to maintain and secure infrastructure
- **Balancing cleanup, historical preservation, and reindustrialization with available funding**



Oak Ridge Environmental Management ETTP Portfolio Schedule	Fiscal Years (2014 – 2023)									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Gaseous Diffusion Facilities D&amp;D and RA Scope</b>										
Building K-25 Waste Disposition and Project Closeout	●									
Building K-31 D&D		●	●	●	●					
Building K-27 Pre-Demo & D&D		●	●	●	●					
Gaseous Diffusion Buildings Remedial Actions		●	●	●	●	●	●			
<b>All Other D&amp;D and RA Scope</b>										
Remaining Facility D&D					●	●	●	●	●	
Remaining RA and RODs		●	●	●	●	●	●	●	●	
<b>Infrastructure and Operations/Maintenance Scope</b>										
Historical Preservation		●	●	●	●	●	●	●	●	
ETTP Base Operations		●	●	●	●	●	●	●	●	

# Y-12 National Security Complex Cleanup and Transuranic Waste Processing and Disposition Plans

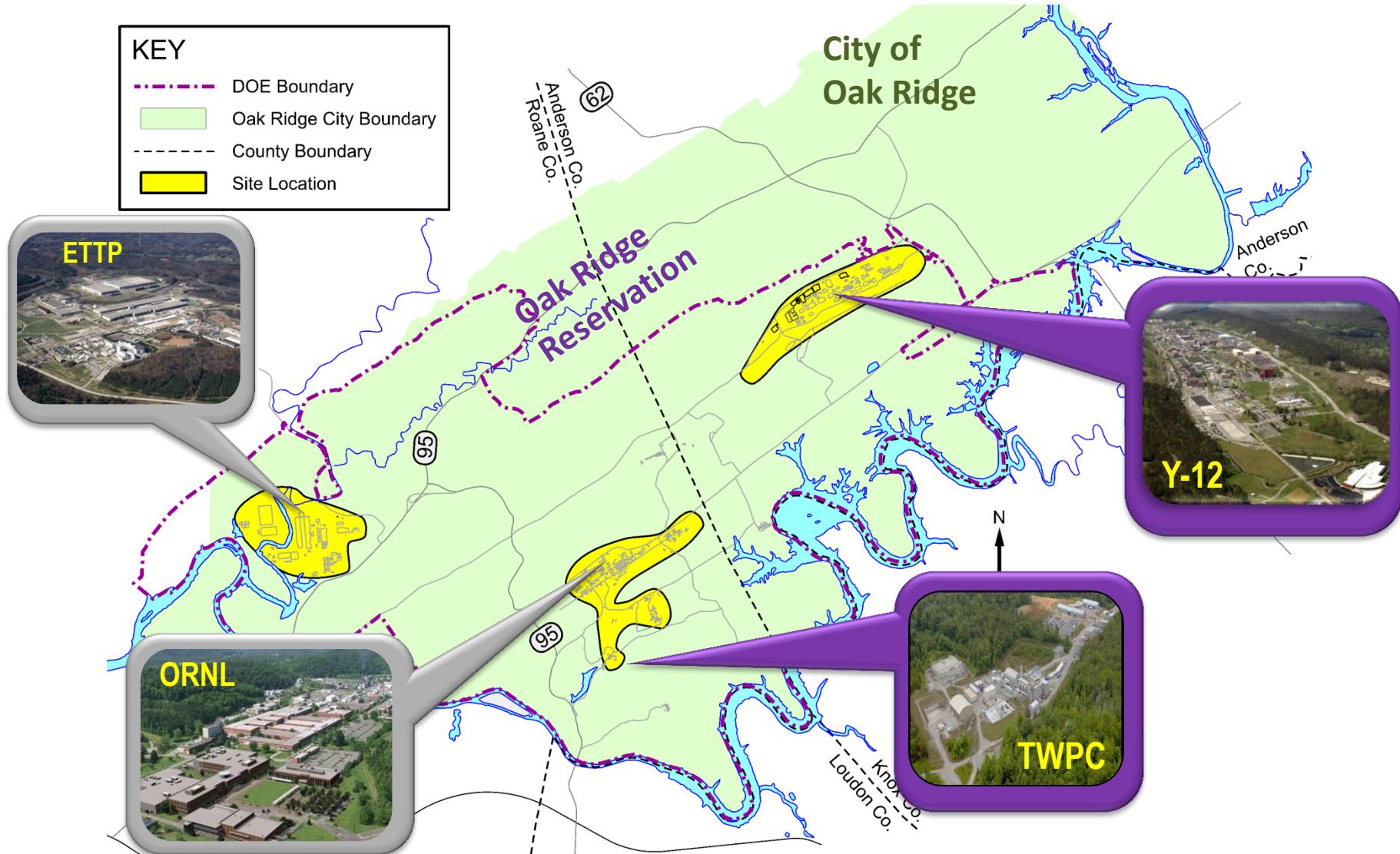
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**Laura Wilkerson**

*Y-12 Portfolio Federal Project Director  
Transuranic Waste Disposition Federal Project Director  
DOE Oak Ridge Office of Environmental Management*

**June 20, 2014**

# Y-12 National Security Complex (Y-12) and the Transuranic Waste Processing Complex

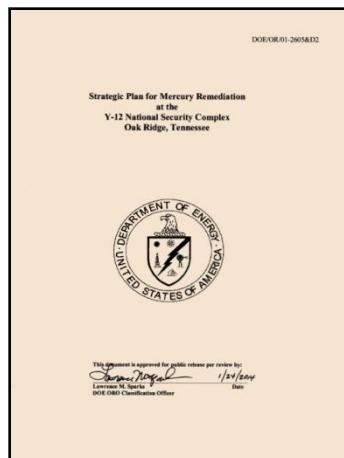


# Y-12 Portfolio End State

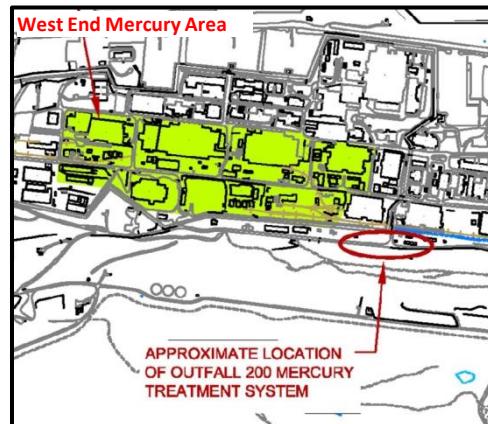
- Removal and disposition of existing legacy waste and material
- Demolition of all excess, contaminated facilities
- Completed remedial actions, including finalized records of decision for groundwater and surface water
- Release of acreage for future re-development in critical areas



# Recent Accomplishments



Mercury Strategic Planning



Outfall 200 MTF Planning and Conceptual Design

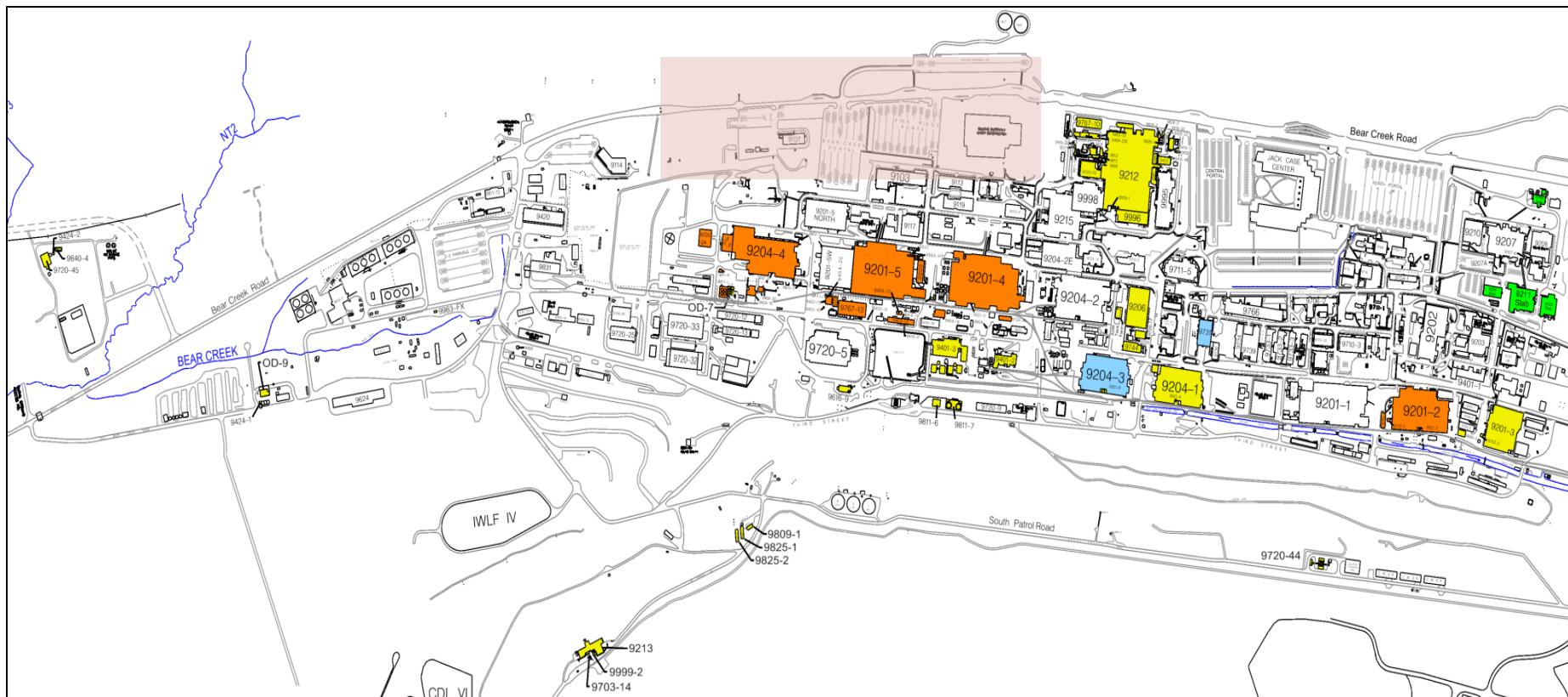


# Current Cleanup Status

Number of Facilities	99
Demolition Area (sq ft)	3,398,980
Deactivation Only (sq ft)*	292,815

Bldg-Associated Soils (e.g., WEMA)	multiple acres
UEFPC Sediment & Lake Reality	~ 1.5 mi/2 acres
Waste Sites (e.g., BCBG, WWSY)	~ 400 acres

\*To be kept for historical purposes



- **Near term**

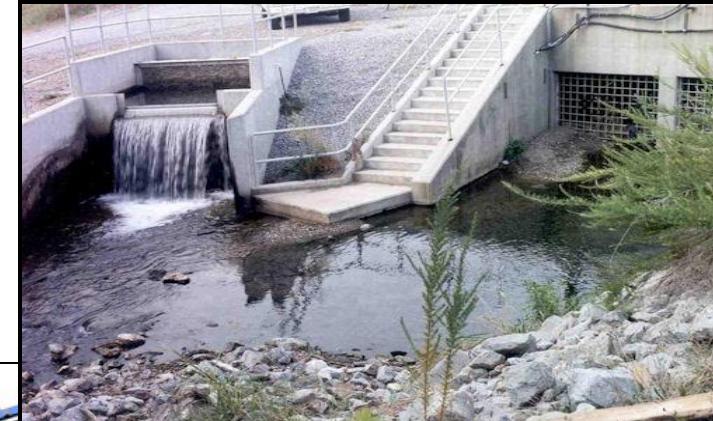
- Design and construct Outfall 200 Mercury Treatment Facility
- Design and begin construction of Environmental Management Disposal Facility
- Continue mercury technology development work

- **Mid term**

- Evaluate actions taken and implement additional actions as needed to address mercury
- Begin D&D of former mercury-use facilities
- Complete construction and begin operation of EMDF

- **Long term**

- Complete all building demolition and media remediation
- Finalize surface and groundwater decisions followed by their implementation



- **Ongoing: Base Operations**

- Waste and disposal operations
- Surveillance and maintenance
- Security and landlord activities post FY22
- Environmental monitoring

# Planned Accomplishments through FY 2016

- Obtain regulatory approval for and complete design of the OF 200 Mercury Treatment Facility
- Continue CERCLA planning for future on-site disposal
- Continue mercury technology development activities
- Continue safe operation of EMWMF and ORR Landfills
- Continue surveillance and maintenance of EM facilities
- Maintain Water Resources Restoration Program and Water Quality Programs



Waste Operations



Alpha 4



Water Quality Monitoring

# Execution Challenges

- More than 20 million pounds of mercury were used in early processing of lithium; over 700,000 pounds suspected to have been released to the environment
- Four large former mercury-use facilities to be demolished; possibly large volumes of soil to be treated
- Mercury flux leaving site needs to be reduced
- Cleanup to occur along side ongoing missions and within high security footprint



# Y-12 Portfolio Schedule

Oak Ridge Environmental Management Y-12 Portfolio Schedule	Fiscal Years (2014 – 2047)						
	14 - 17	18 - 22	23 - 27	28 - 32	33 - 37	38 - 42	43 - 47
<b>Mercury-Related D&amp;D and RA Scope</b>							
Outfall 200 Mercury Treatment Facility Plan/Design/Construct (■) /Operation (□)	■	■	■	■	■	■	■
Mercury-Related Technology Development	▨	▨	▨	▨	▨	▨	▨
Mercury-Use Facility D&D and RA	▨	▨	▨	▨	▨	▨	▨
Other Mercury-Related RA and RODs	▨	▨	▨	▨	▨	▨	▨
<b>All Other Y-12 D&amp;D and RA Scope</b>							
Remaining Facilities D&D	▨	▨	▨	▨	▨	▨	▨
Remaining RA and RODs	▨	▨	▨	▨	▨	▨	▨
<b>Disposal and Operations/Maintenance Scope</b>							
Disposal Facilities (Design, Construction, Operations, Closure)	▨	▨	▨	▨	▨	▨	▨
Y-12 Base Operations	▨	▨	▨	▨	▨	▨	▨

# Transuranic Waste Processing and Disposition

- Processing/repackaging and certifying solid transuranic waste at the TWPC for disposal to meet Site Treatment Plant milestones
- The WIPP shipment suspension is being managed by leveraging use of existing ORNL storage facilities and examining possible use/expansion of RH storage capabilities
- TWPC has processed 95% & shipped 68% of CH\* waste inventory; processed 66% & shipped 21% of RH\* waste inventory through May, 2014
- Future Capital Line Item Construction Project to provide facility for processing tank sludges and supernate (~500,000 gallons) for off-site disposal; planning is ongoing



Transuranic Waste Processing Center (TWPC) in Melton Valley

\*CH = contact-handled; RH=remote handled

# Transuranic Waste Processing and Disposition Schedule

Oak Ridge Environmental Management Transuranic Waste Processing and Disposition	Fiscal Years (2014 to 2026)												
	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26
TRU Waste Processing Operations													
TRU Sludge Planning, Design, Construction, and Operation													



# Oak Ridge National Laboratory Cleanup Plan

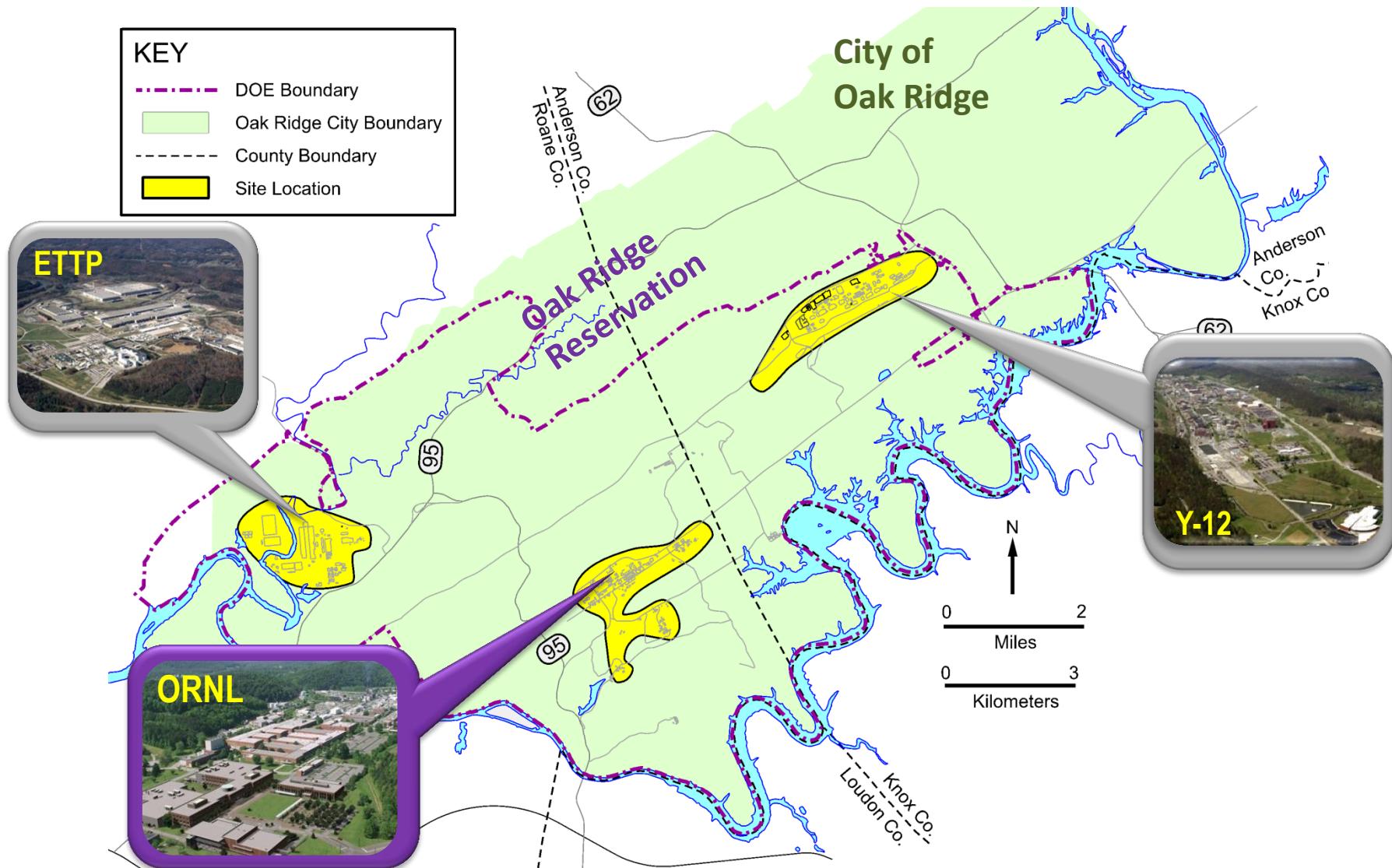
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**Bill McMillan**

*ORNL Portfolio Federal Project Director  
DOE Oak Ridge Office of Environmental Management*

**June 24, 2014**

# Oak Ridge National Laboratory (ORNL)



# ORNL Portfolio End State

- Removal and disposal of existing legacy waste and material
- Demolition of all excess, contaminated facilities
- Completed remedial actions, including finalized records of decision for groundwater and surface water
- Release of acreage for future re-development in critical areas



# Recent Accomplishments

Bldg 2026, Cell Access area refurbished for U-233 Disposition work



Bldg 2026, Hot Cell 3 after clean-out



Workers close  
and stabilize  
underground  
ducts



4501/4505 new ventilation systems



# Recent Accomplishments

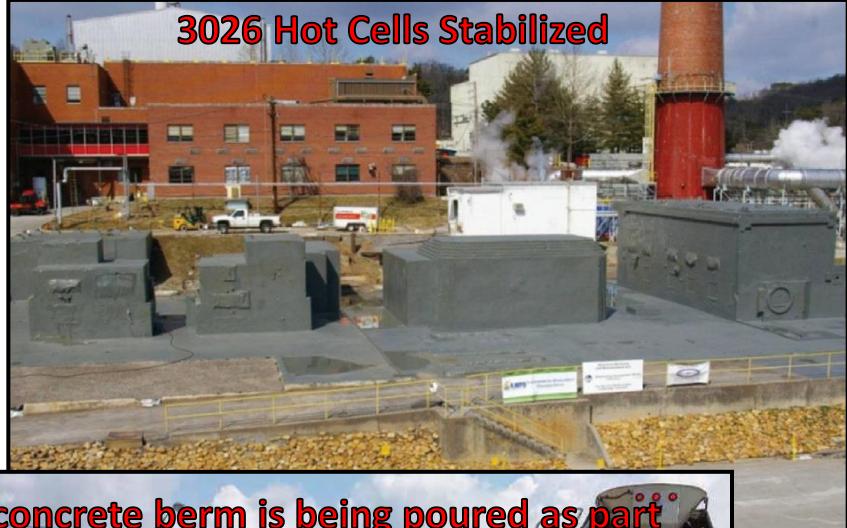
**3550 Slab and Soils Removed from Central Campus**



**A worker in 3038 uses a glove box to package and dispose of waste**



**3026 Hot Cells Stabilized**

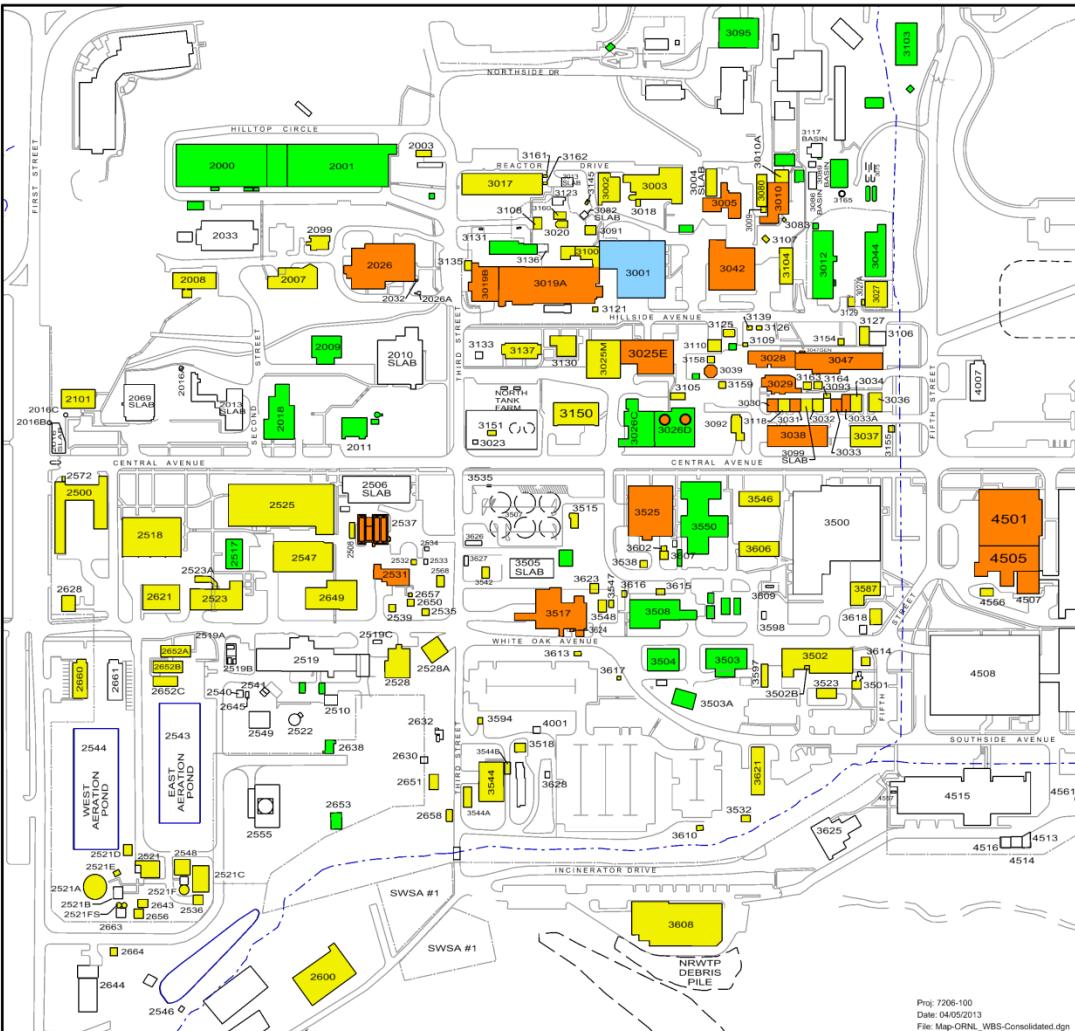


**A concrete berm is being poured as part of the 3026 stabilization activities**



# Current Cleanup Status

## **Bethel Valley/Central Campus**

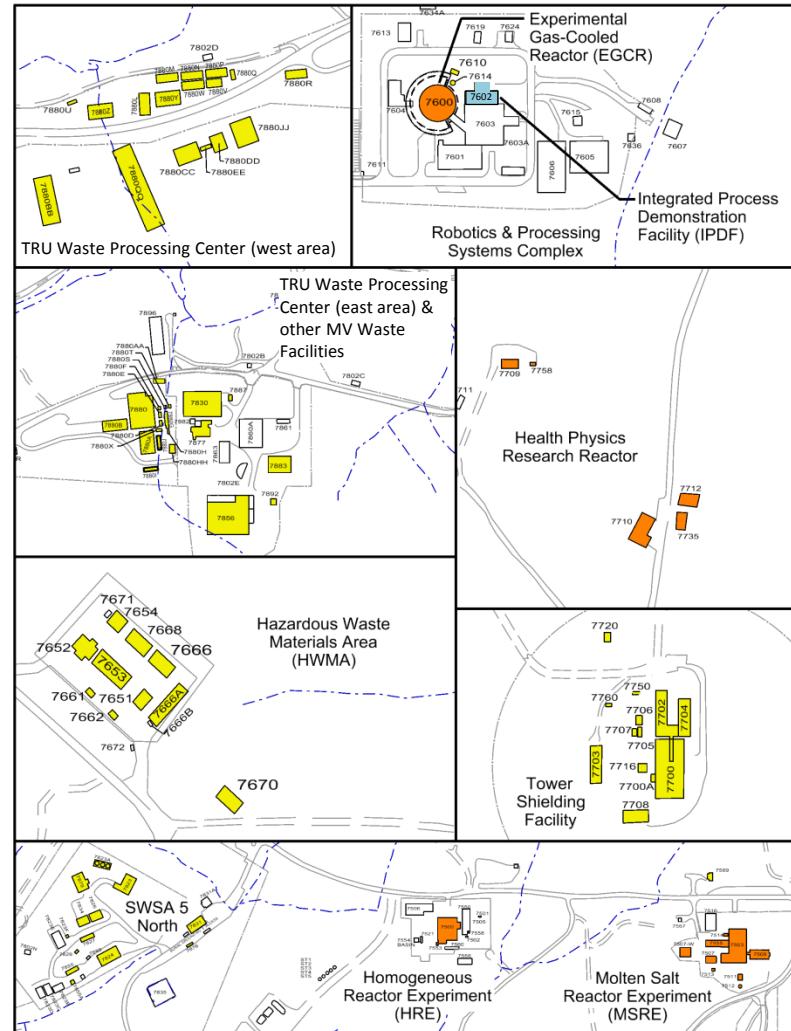


## To be Demolished Reactor/ Hot Cell/High Risk

## To be Demolished Balance of Facilities

## Completed Demolition

# Melton Valley



Historical Preservation (3001)  
Decontaminate Only (7602)

- **Near term**
  - Complete uranium-233 direct disposition campaign
  - Begin downblending operations for remainder of uranium-233 inventory
  - Conduct groundwater investigations
  - Complete remedial actions for Trench 13 in Melton Valley (MV)
- **Mid term**
  - Complete uranium-233 disposition
- **Long term**
  - Complete all building demolition and media remediation by FY 2045
- **Ongoing: Base Operations**
  - Waste operations
  - Surveillance and maintenance
  - Infrastructure
  - Environmental monitoring



# Planned Accomplishments through FY 2016

- Continuation of U-233 direct disposition campaign and preparations for U-233 processing campaign
- Continue operation of the Water Treatment Facilities and surveillance and maintenance activities
- Develop a site wide groundwater flow model as part of the Groundwater Strategy and continue field sampling on-site and off-site as part of the Groundwater Strategy



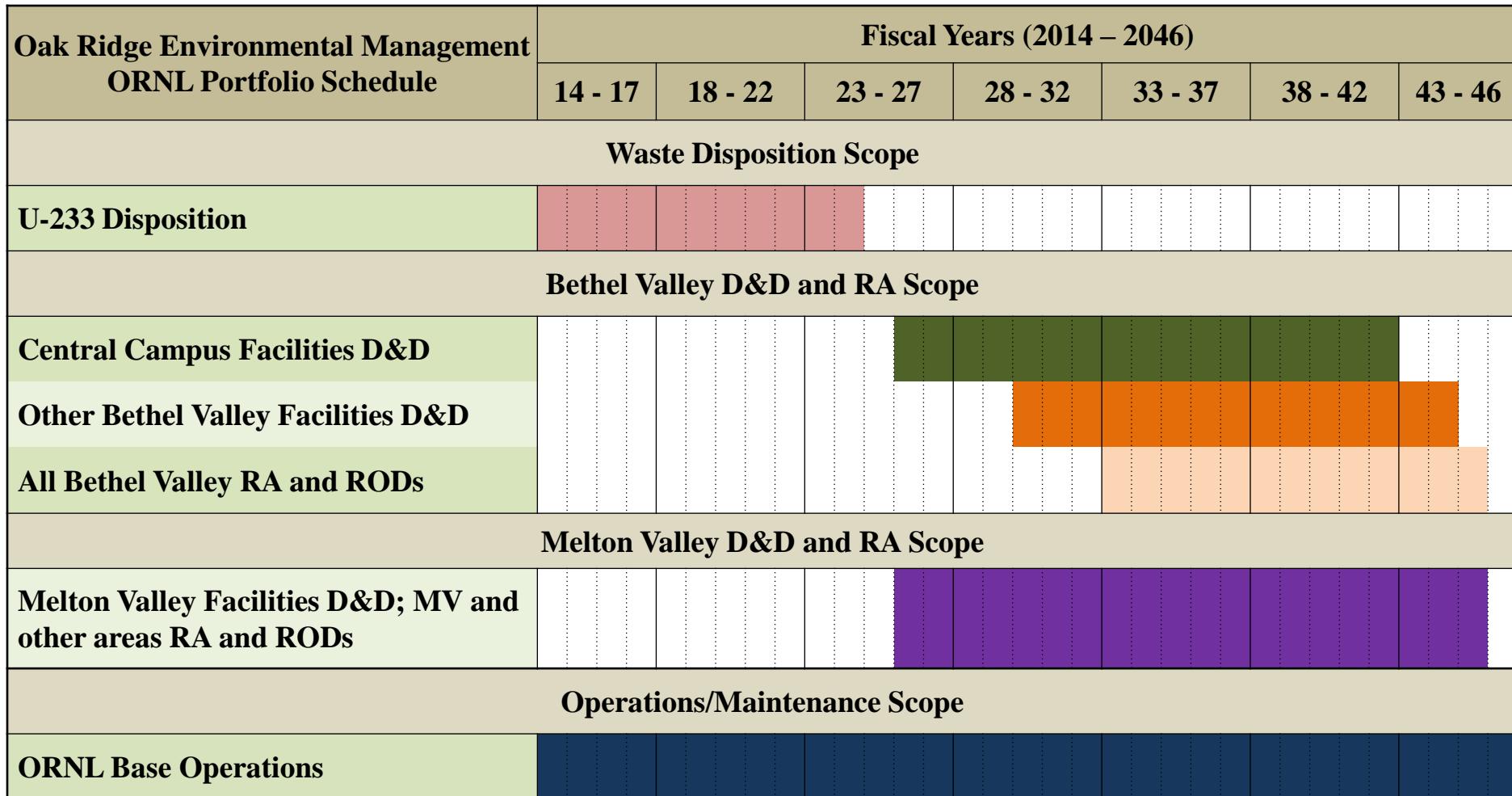
# Execution Challenges

- Deteriorating Facilities
- Performing work in close proximity to ongoing missions



= Facilities/areas to be remediated    = Research Facilities/Government Investments

# ORNL Portfolio Schedule



D&D = Decontamination & Demolition; RA = Remedial Action