

Community Workshop

Balancing Priorities, Maintaining Momentum

Sue Cange

Acting Manager

Oak Ridge Office of Environmental Management

June 24, 2014

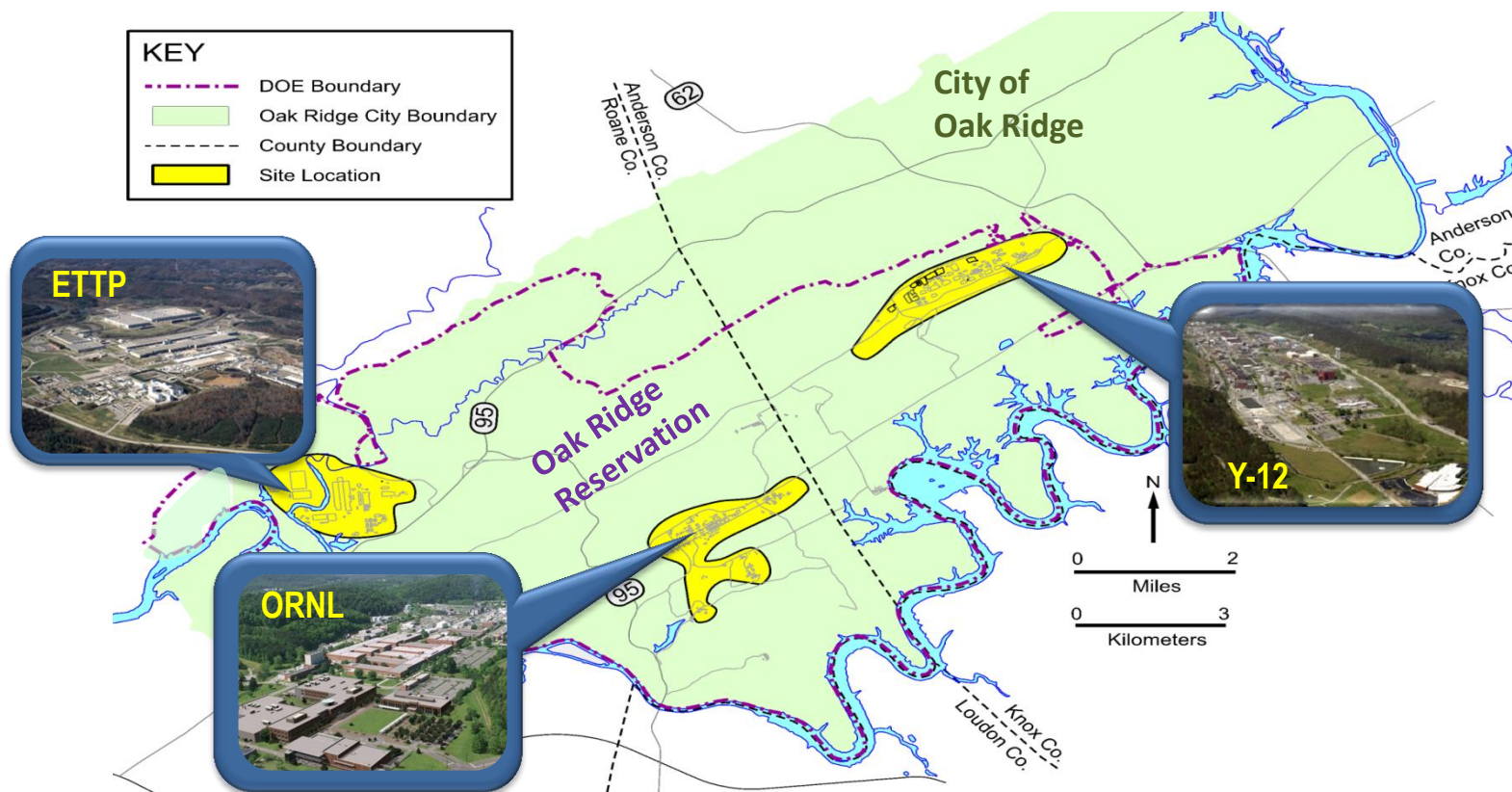
Complete the cleanup of the Oak Ridge Reservation to:

- 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



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



UCOR
URS | CH2M
Oak Ridge LLC

ETTP cleanup and reservation-wide surveillance and maintenance

Contract value: \$2.5B

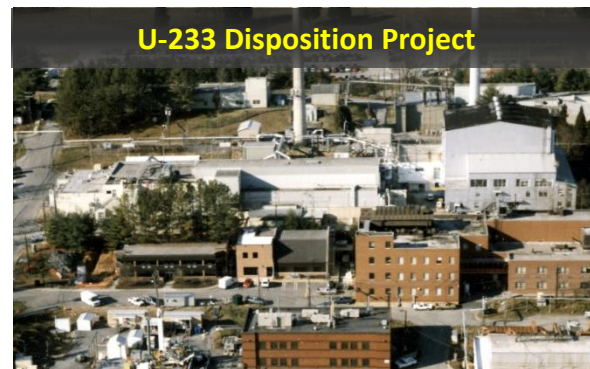
TRU Waste Processing



Facility operations and transuranic debris processing

Contract value: \$292M

U-233 Disposition Project

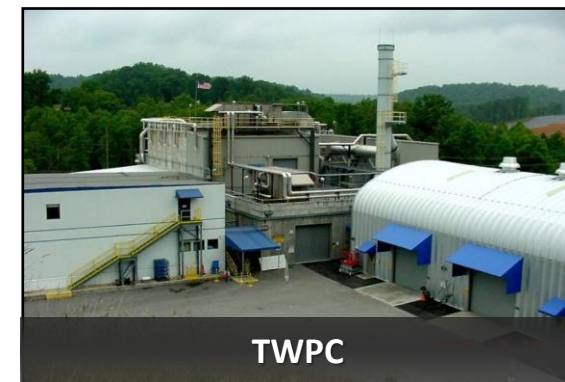
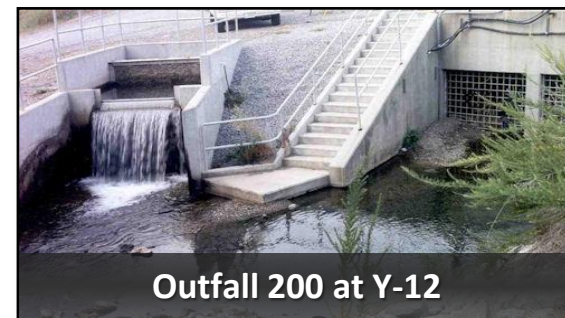
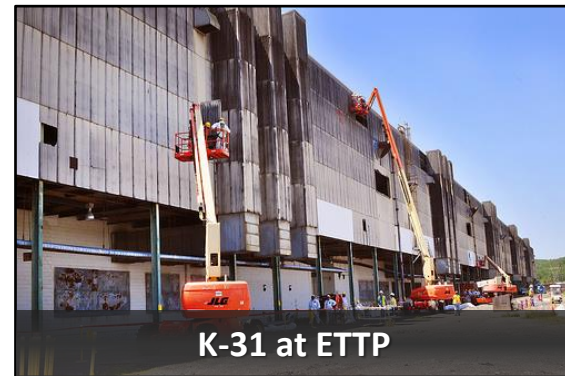


Disposition of U-233 material and management of Building 3019

Contract value: \$406M

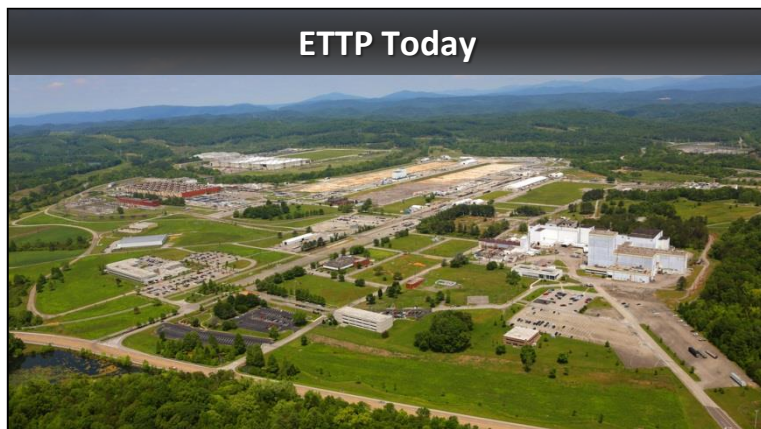
Near-Term Cleanup Goals

- 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)



- 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





- **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

Alan Stokes

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

June 24, 2014

The Federal Budget Process

YEAR ONE

YEAR TWO

Department Budgets
Prepared



U.S. DEPARTMENT OF
ENERGY



OMB
consolidates
and President
Submit Budget



Congress Approves



Federal Budget Process: Department of Energy

Each Site Office

Oak Ridge

Hanford

Savannah
River

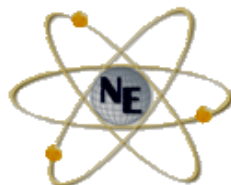
Idaho

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



Submit



Pass-back



Appeal



Office of
Management
and Budget



Consolidates all
department
budgets

President approves the
budget



Submits to
Congress



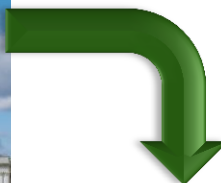
Submits their budget
to OMB

Federal Budget Process: Congressional Approval

Sub-committees



Appropriation
Committee



Conference

- Resolves differences
- Sends back for final floor vote



President signs
budget into law



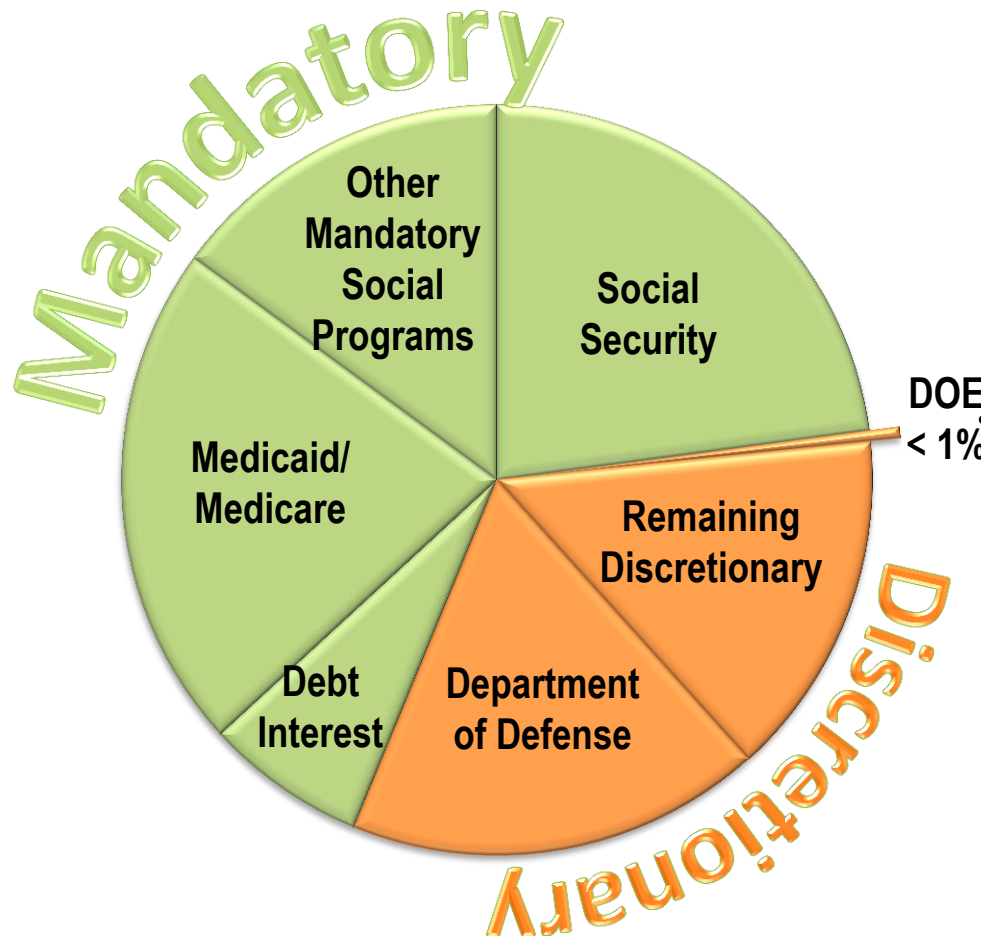
Develop Bills



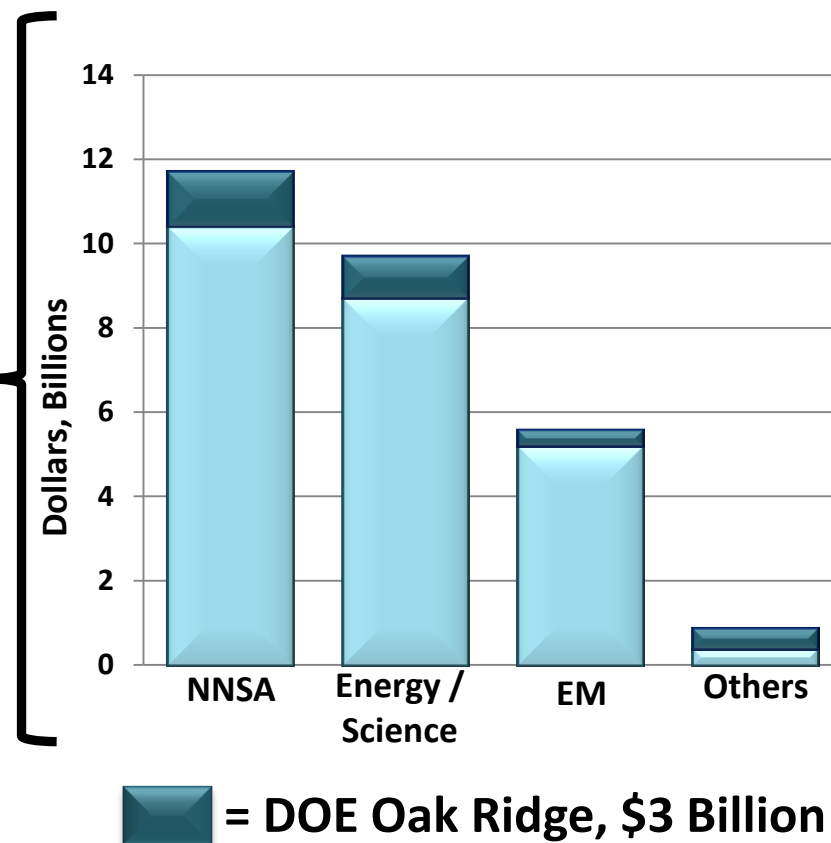
Approves Bills
and sends for
floor vote

Federal Budget

**Federal
(\$ 3.5 Trillion)**

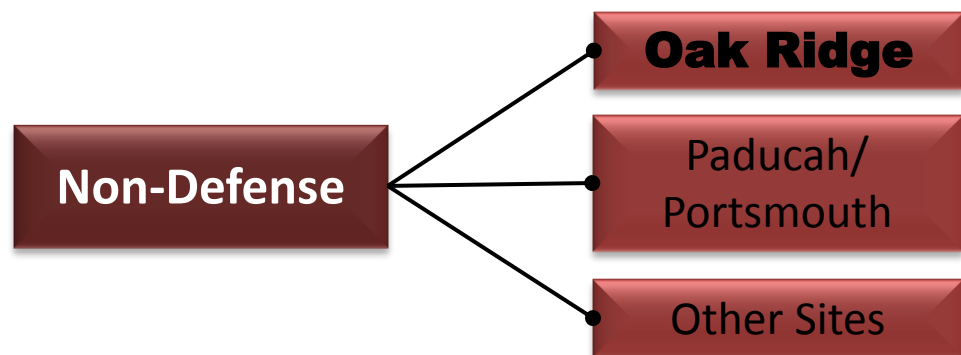
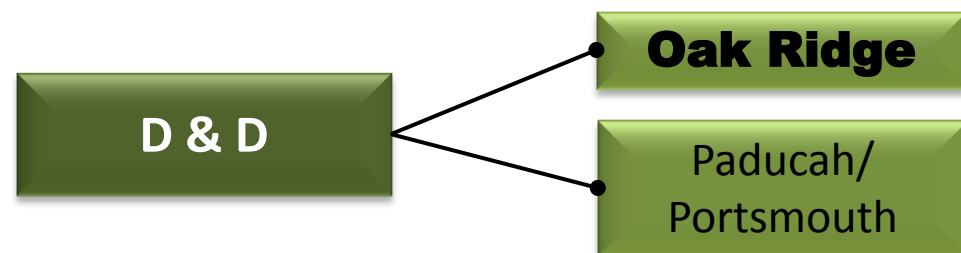
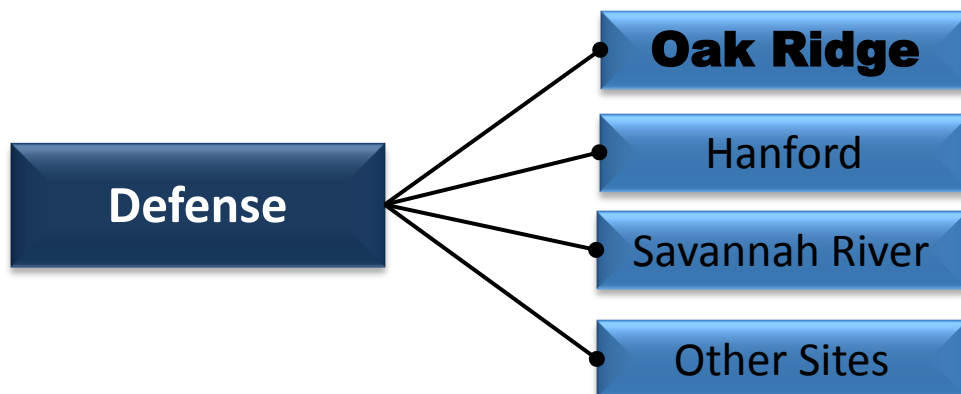


**Department of Energy
(\$28 Billion)**



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
Defense Subtotal		223.3

PBS	Project	\$ M
40	ETTP Cleanup	140.6
102	Post Retirement Life and Medical	19.0
D&D Subtotal		159.6

PBS	Project	\$ M
104	Historic Preservation	2.1
Non-Defense Subtotal		2.1

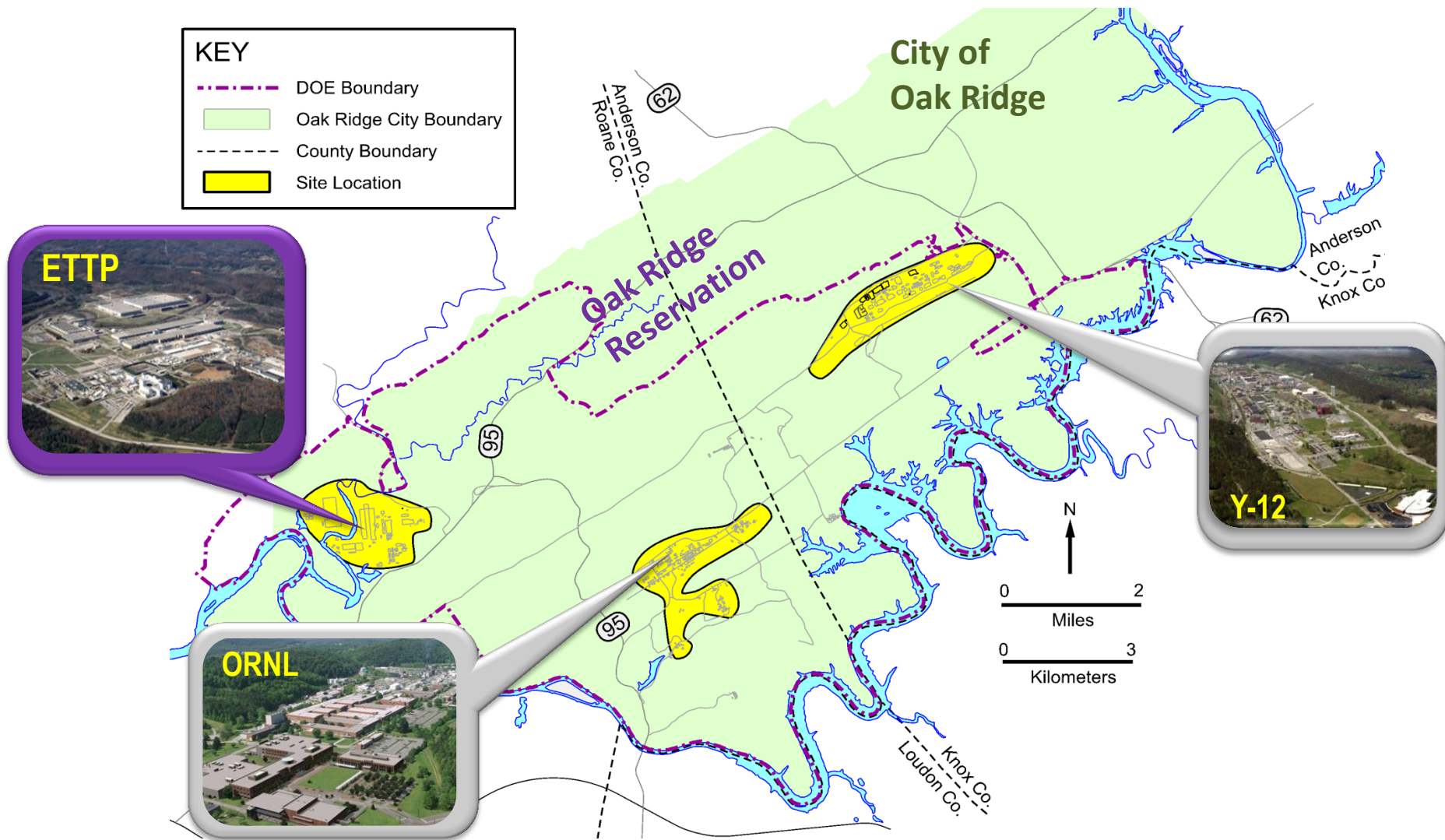
East Tennessee Technology Park Cleanup Plan

Wendy Cain

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

June 24, 2014

East Tennessee Technology Park (ETTP)





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



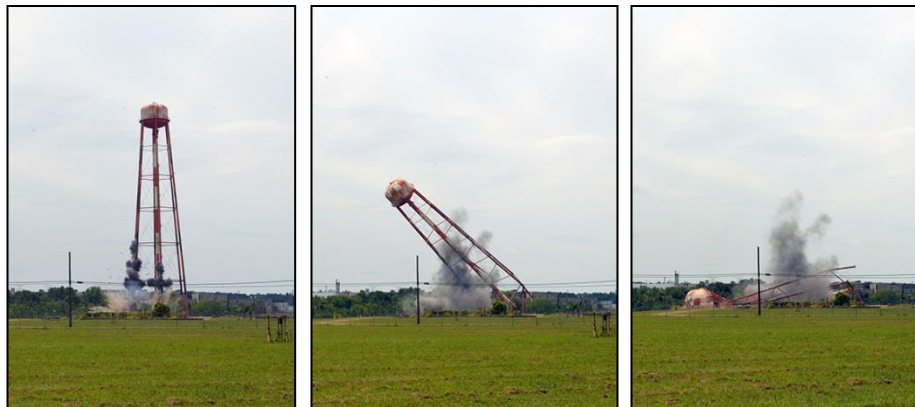
Recent Accomplishments



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



Building K-31 Demolition underway, 17 acre footprint

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**



K-27 Interior

ETTP Portfolio Schedule

Oak Ridge Environmental Management ETTP Portfolio Schedule	Fiscal Years (2014 – 2023)									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Gaseous Diffusion Facilities D&D and RA Scope										
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										
All Other D&D and RA Scope										
Remaining Facility D&D										
Remaining RA and RODs										
Infrastructure and Operations/Maintenance Scope										
Historical Preservation										
ETTP Base Operations										

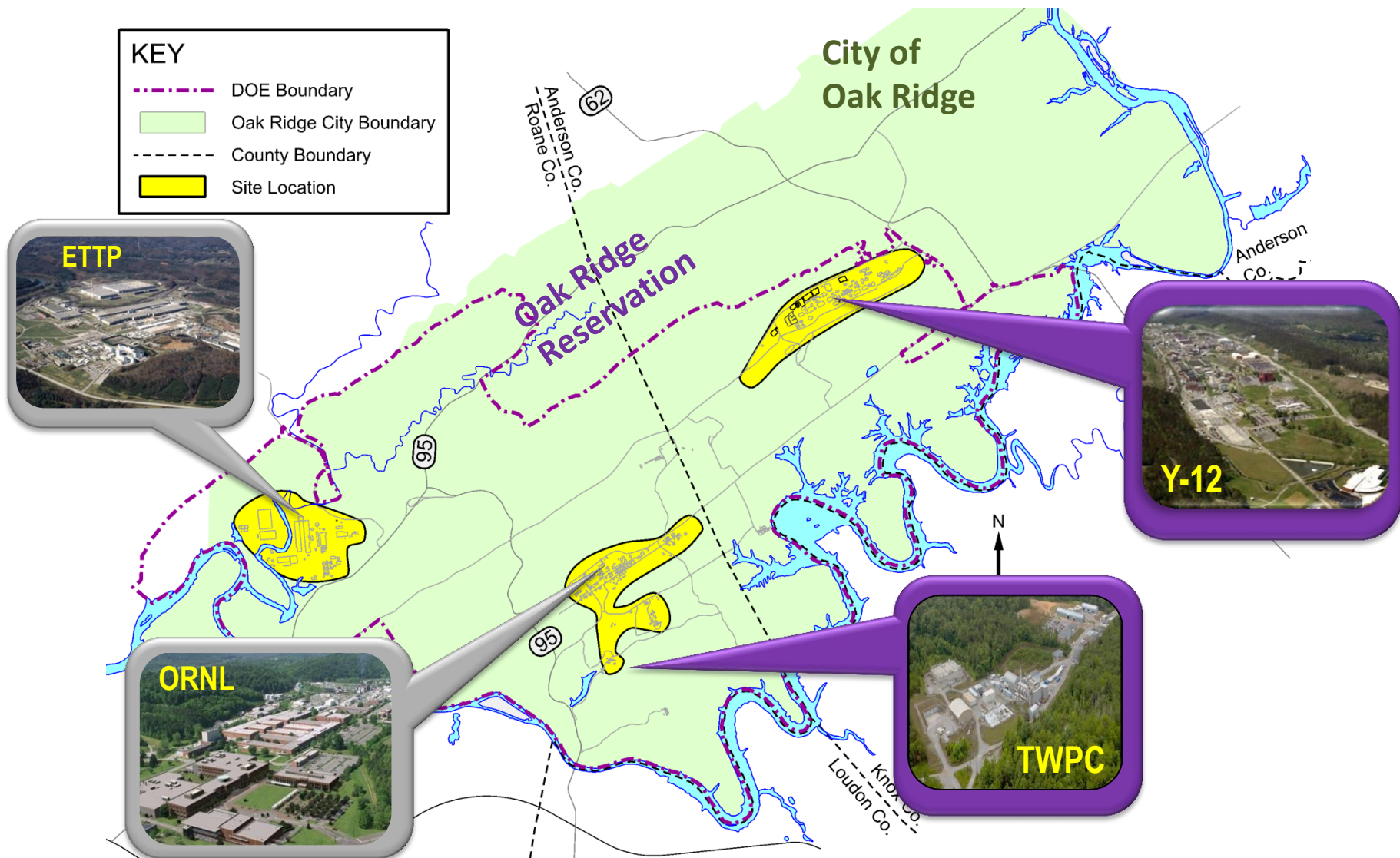
Y-12 National Security Complex Cleanup and Transuranic Waste Processing and Disposition Plans

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



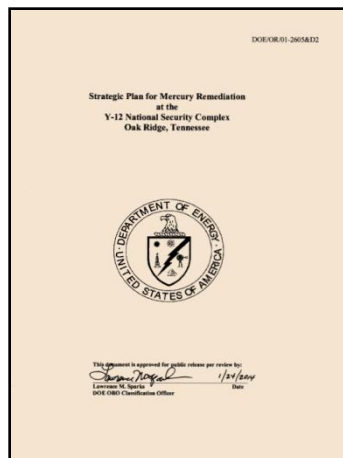
Workers load a mercury-contaminated tank onto an inspection saddle



Mercury recovered from a contaminated tank

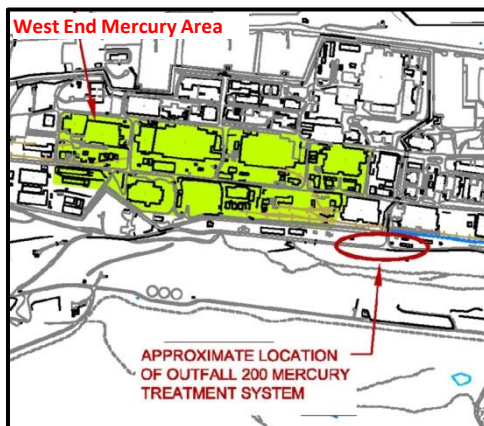


Workers installing a new catch basin at Y-12 to improve drainage and reduce mercury infiltration



Mercury Strategic Planning

Outfall 200 MTF Planning and Conceptual Design



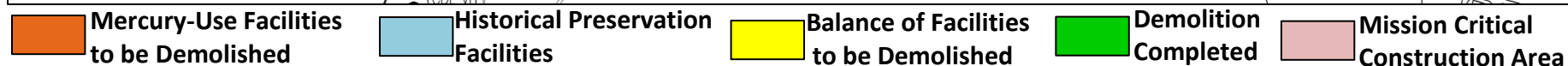
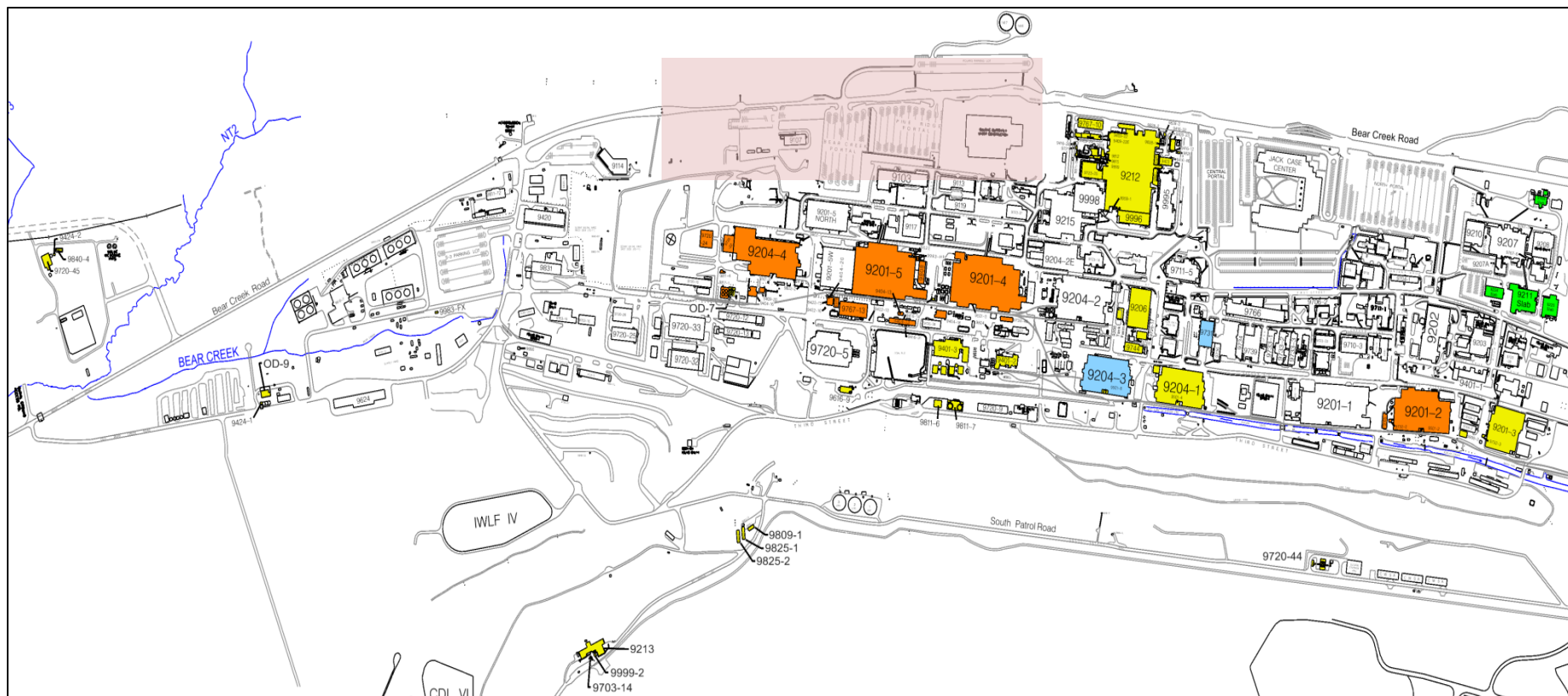
EMWMF receiving waste

Current Cleanup Status

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

*To be kept for historical purposes

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



Y-12 Portfolio Strategy

- **Near term**

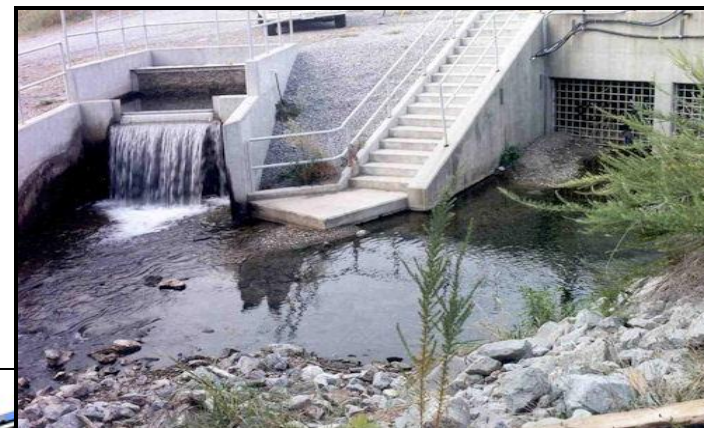
- Design and construct Outfall 200 Mercury Treatment Facility
- Design and begin construction of Environmental Management Disposal Facility
- Continue mercury technology development work

- **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



Outfall 200



Environmental Management Disposal Facility

- **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 Mercury-use Facilities



Beta 4



Alpha 2



Alpha 4



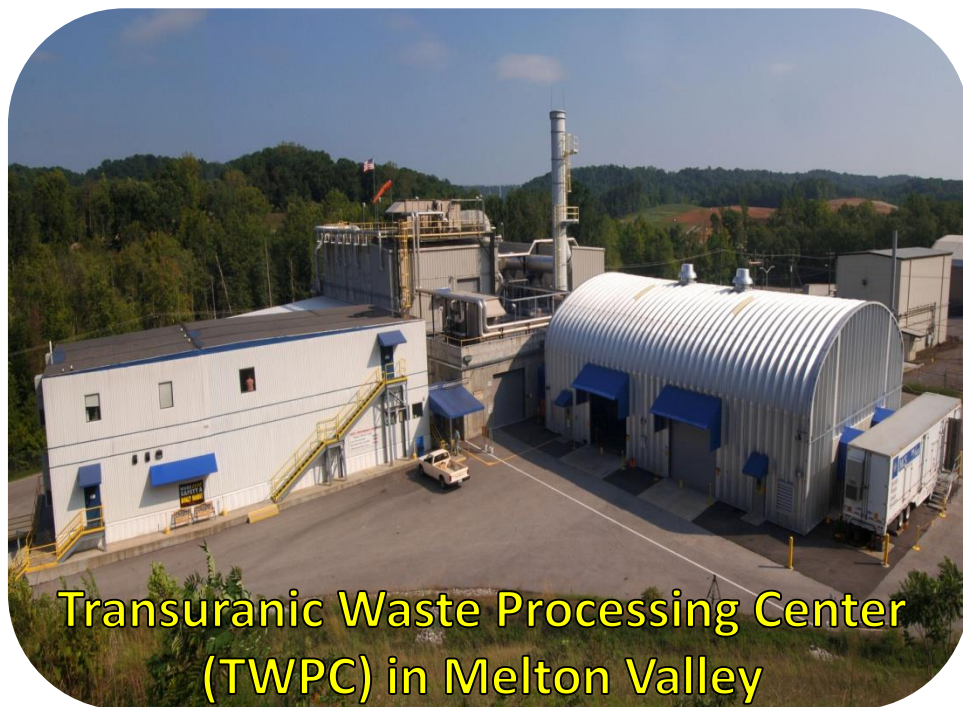
Alpha 5

Total ~ 1.8 million sq ft

37

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

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													

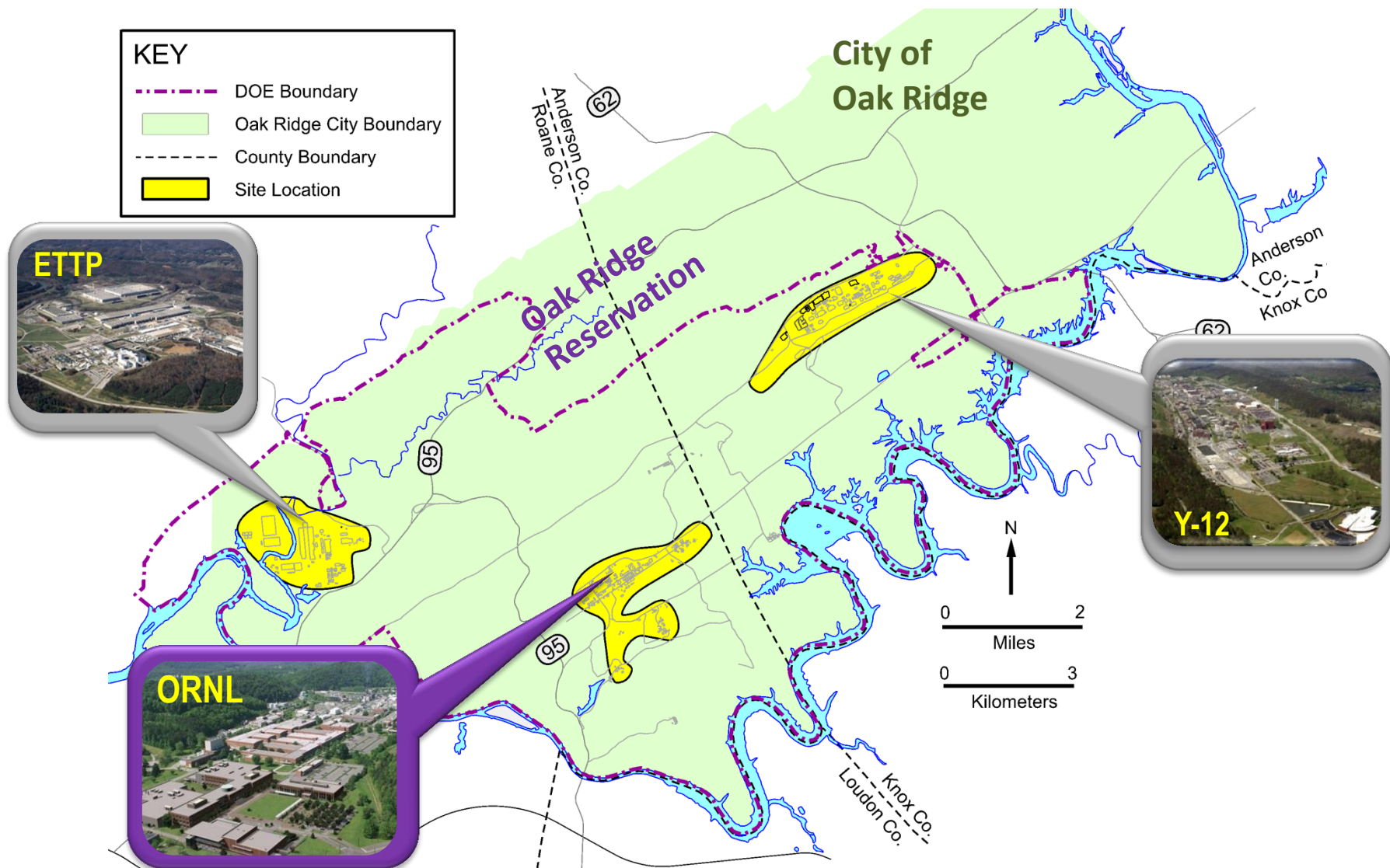


Oak Ridge National Laboratory Cleanup Plan

Bill McMillan

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

June 24, 2014



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 206, Cell Access area refurbished for U-233 Disposition work



Groundwater Strategy Plan completed



4501/4505 new ventilation systems



Bldg 206, Hot Cell 3 after clean-out



Workers close and stabilize underground ducts

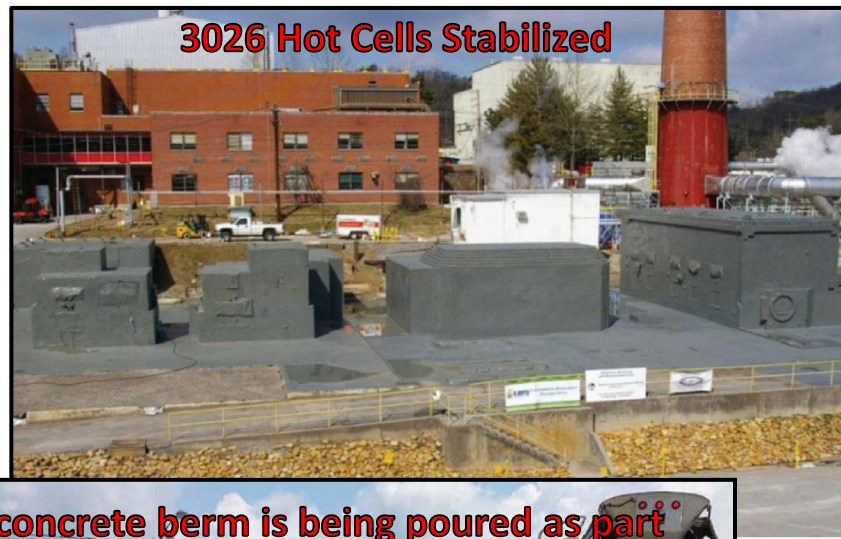


Recent Accomplishments

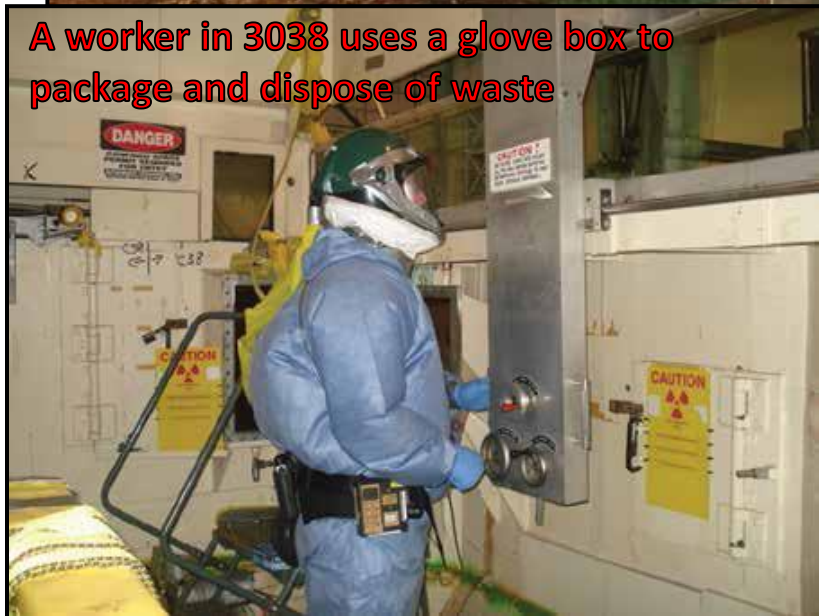
3550 Slab and Soils Removed from Central Campus



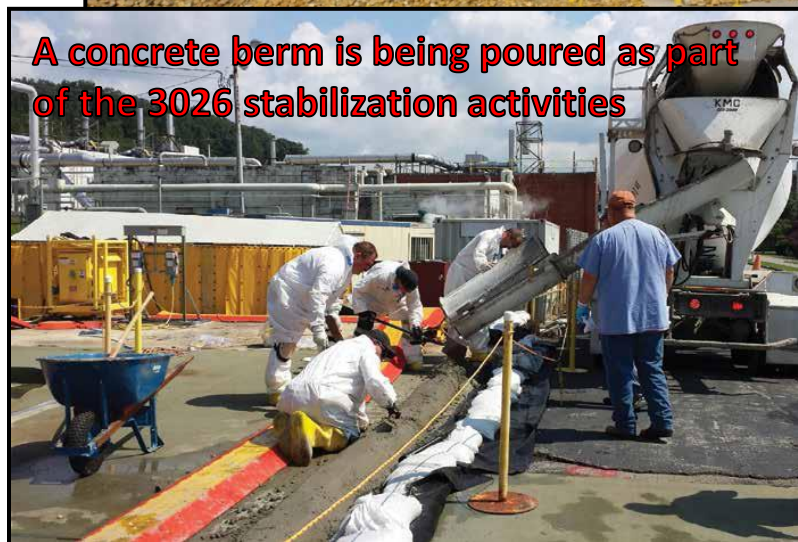
3026 Hot Cells Stabilized



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



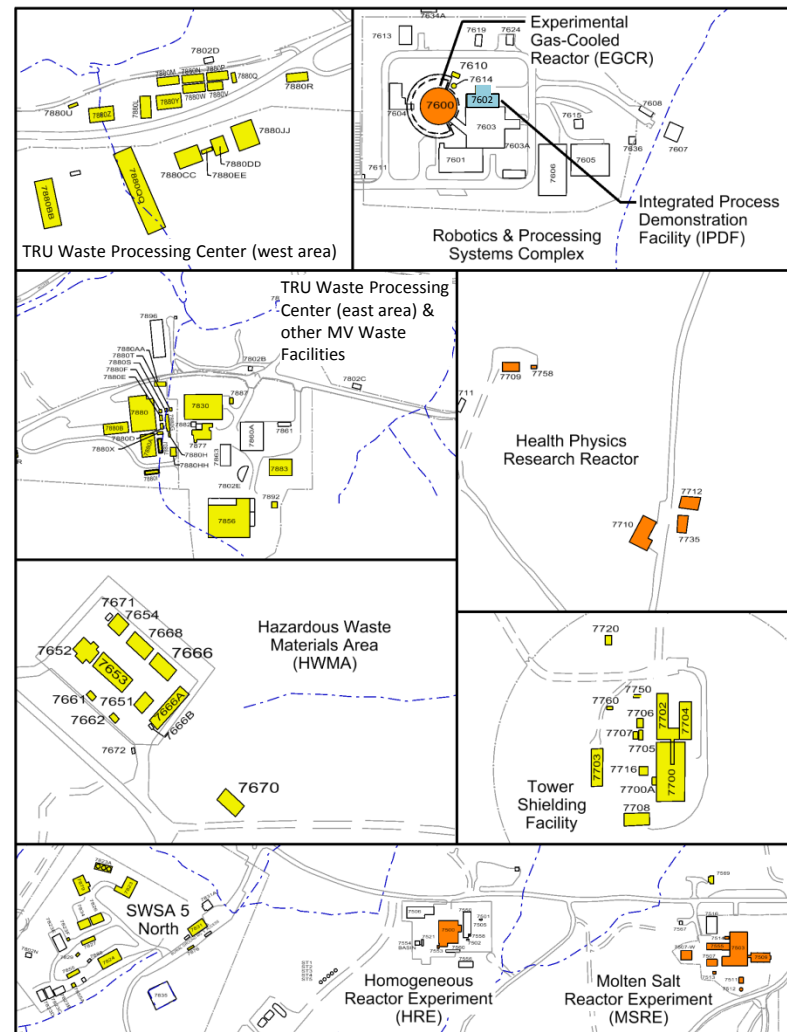
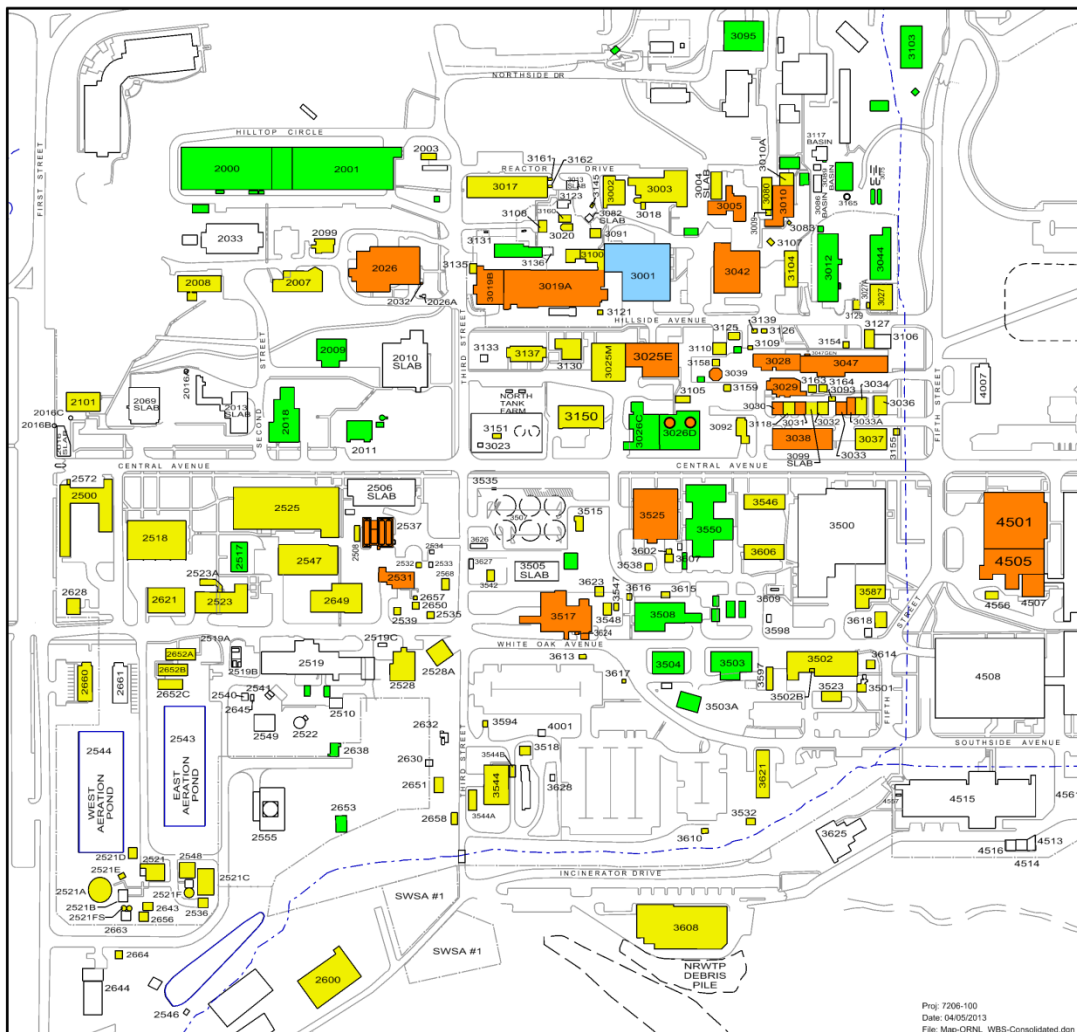
A concrete berm is being poured as part of the 3026 stabilization activities



Current Cleanup Status

Bethel Valley/Central Campus

Melton Valley



To be Demolished Reactor/
Hot Cell/High Risk

To be Demolished
Balance of Facilities

Completed
Demolition

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

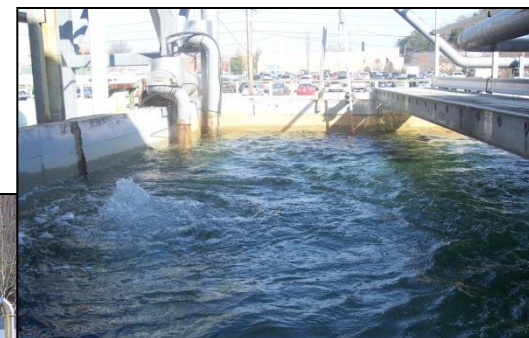
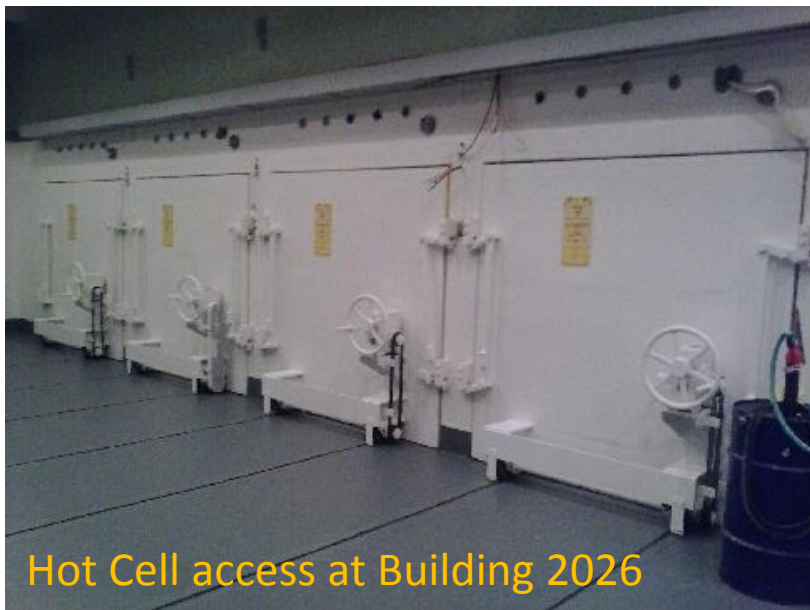
- **Ongoing: Base Operations**

- Waste operations
- Surveillance and maintenance
- Infrastructure
- Environmental monitoring



Planned Accomplishments through FY 2016

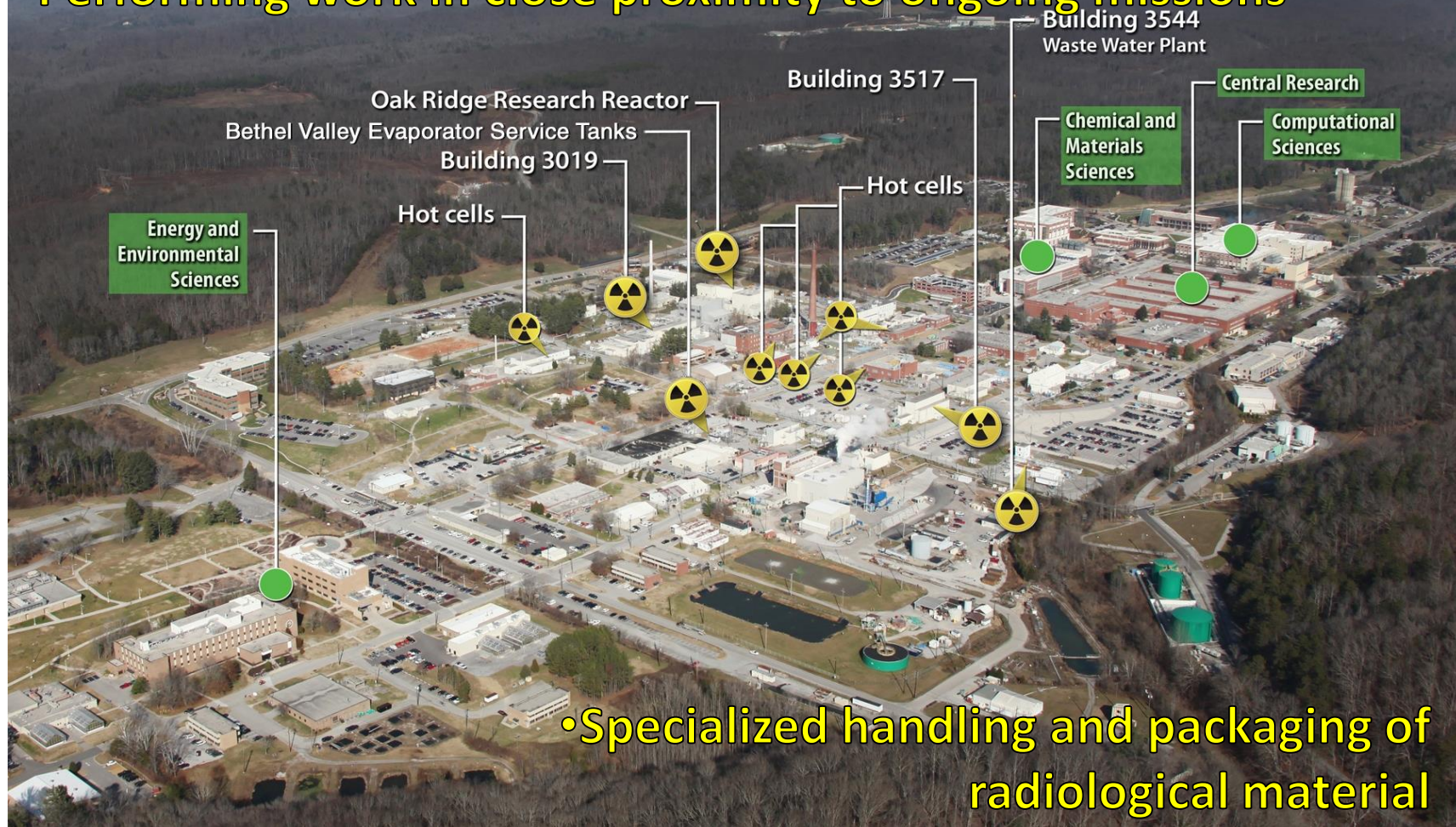
- Continuation of U-233 direct disposition campaign and preparations for U-233 processing campaign
- Continue operation of the Water Treatment Facilities and surveillance and maintenance activities
- Develop a site wide groundwater flow model as part of the Groundwater Strategy and continue field sampling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



ORNL Process Wastewater
Treatment Complex

Execution Challenges

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



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

ORNL Portfolio Schedule

Oak Ridge Environmental Management ORNL Portfolio Schedule	Fiscal Years (2014 – 2046)							
	14 - 17	18 - 22	23 - 27	28 - 32	33 - 37	38 - 42	43 - 46	
Waste Disposition Scope								
U-233 Disposition	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
Bethel Valley D&D and RA Scope								
Central Campus Facilities D&D	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
Other Bethel Valley Facilities D&D	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
All Bethel Valley RA and RODs	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
Melton Valley D&D and RA Scope								
Melton Valley Facilities D&D; MV and other areas RA and RODs	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
Operations/Maintenance Scope								
ORNL Base Operations	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>

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