

The Oak Ridge Partnership: Oak Ridge Challenges and Future Vision

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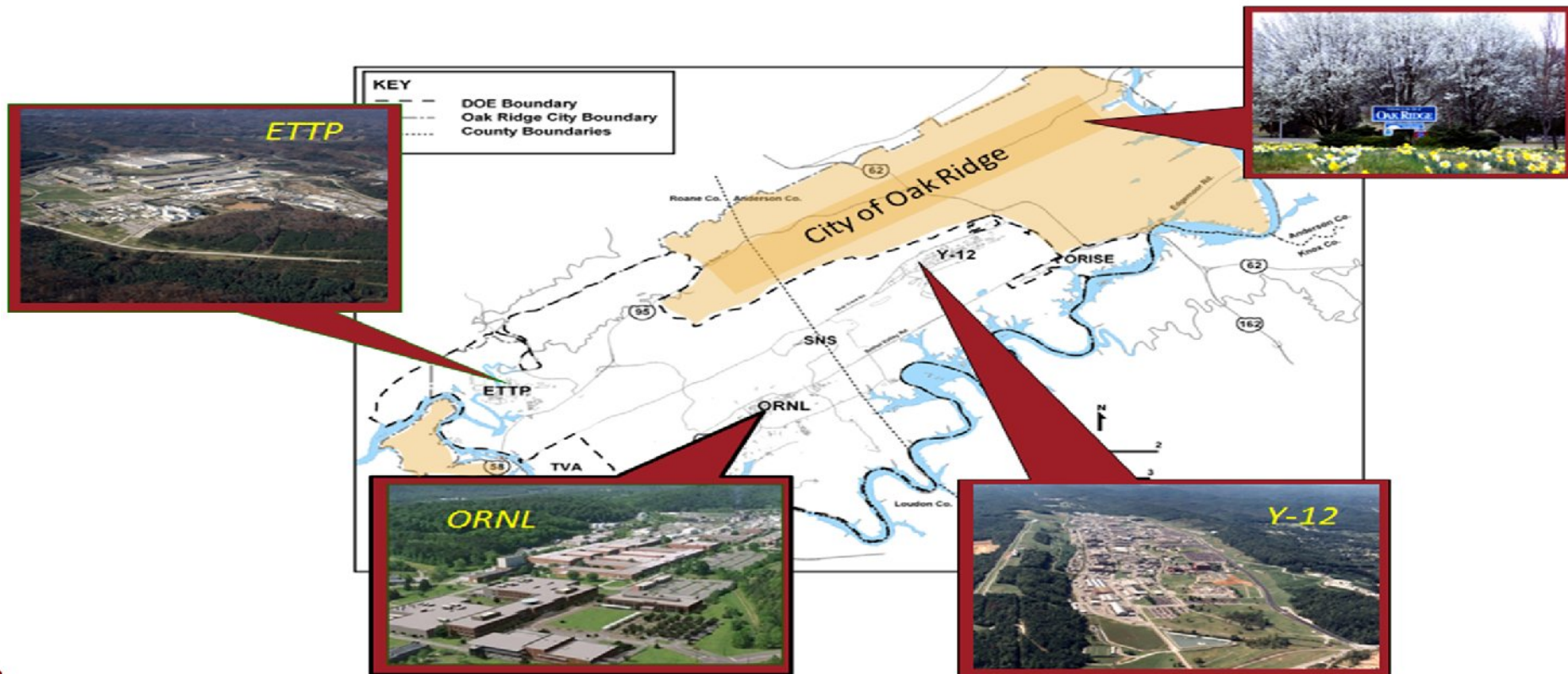
Oak Ridge has a Unique Challenge for Cleanup

Oak Ridge is not an expansive, isolated, or arid site

- High levels of rainfall coupled with shallow groundwater carry contaminants to local streams and rivers

Oak Ridge is a continuing missions site

- Science, Energy and NNSA are investing in on-going missions that are vital for our Nation



Oak Ridge Cleanup Work is Urgent and Essential

• Our Mission

- Complete the cleanup of the Oak Ridge Reservation to:
 - Protect the region's health and environment
 - Make clean land available for future use
 - Ensure DOE's vital missions of Science, Energy, and National Security

• Our Projects

- Use Base and Recovery Act Funding (from 2009 – Present)
- Include over 40 projects across the Oak Ridge Reservation at ETTP, ORNL and Y-12
- Are co-located with ongoing DOE missions -- EM sites at ORNL and Y-12 put some of DOE's largest and most valuable assets at risk



EM-OR has Made Significant Progress



2006: Building K-29 at ETPP demolished



2006: All 7,000 UF₆ cylinders removed from ETPP



2007: Expansion of onsite disposal facility complete



2008: Building K-25 West Wing demo begins



2009: TSCA Incinerator closed



2010: Building K-25 West Wing demolished



2009: Initiated cleanup of Y-12 under Recovery Act



2009: Initiated cleanup of ORNL under Recovery Act



2011: New cleanup contract awarded



2011: Completed cleanup of Old Salvage Yard at Y-12



2011: Building K-33 at ETPP demolished



2011: Began Building K-25 East Wing demolition



2011: Began U-233 Direct Disposition campaign

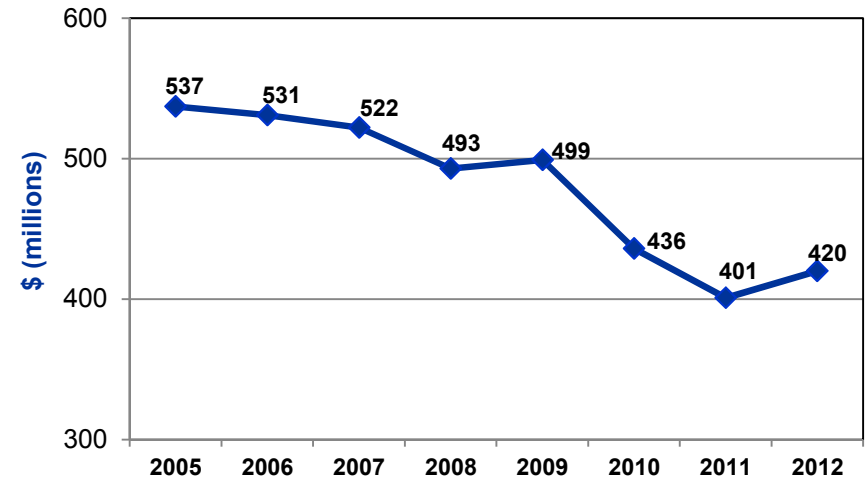


MOVING TO THE FUTURE BY CLEANING UP THE PAST

EM-OR has Significant Challenges

- Declining budgets
- Little relief on regulatory commitments
- Diverse, complex projects
- Numerous contractors
- Multiple stakeholders
- Ongoing DOE missions and billions in investment

Historical Funding Profiles



MOVING TO THE FUTURE BY CLEANING UP THE PAST

EM-OR is Positioning for the Future

- **Balancing competing risks**
 - Environmental: Y-12
 - Nuclear/radiological: ORNL
 - Lifecycle cost: ETTP
- **Optimizing progress and efficiencies**
 - Maintaining our outstanding safety record
 - Utilizing our efficient and experienced workforce
- **Looking for innovative ways to perform work**
 - Challenge our approaches
 - Improve use of technology
- **Identifying near-term goals while continuing our longer-term strategic focus**



EM-OR has Five Near-term Goals

- Complete demolition of Buildings K-25 and K-27 at ETPP
- Continue to identify ways to address mercury releases at the Y-12 site with a combination of actions including reducing mercury flux, characterizing potential sources and preparing facilities for D&D
- Remove half of the U-233 inventory at the Oak Ridge National Laboratory (ORNL) and make final decisions on remaining nuclear materials
- Continue processing Transuranic waste (debris) and prepare for sludge processing
- Reduce risk posed by nuclear materials from ORNL Central Campus by removing excess materials, addressing sources of groundwater contamination and demolishing facilities



Key Program Considerations

- **Y-12 National Security Complex**
 - **Environmental Risk**
 - Nearly 20 million pounds of mercury was used at Y-12 and of that approximately 2 million pounds are unaccounted for. Of this, roughly 700,000 lbs is believed to have been released into the environment
- **Oak Ridge National Laboratory**
 - **Nuclear Radiological Risk**
 - Over 26 million curries are currently stored in ORNL's Central Campus along side billions of dollars of Science investment
- **East Tennessee Technology Park**
 - **Lifecycle Cost Risk**
 - Roughly ½ of the EM-OR budget is spent on minimum safe/essential services, and most of that is spent at ETTP
 - As ETTP facilities continue to degrade, the cost for D&D continues to increase
 - Cost to D&D the K-25 Building has tripled, mostly due to deteriorating conditions of the building



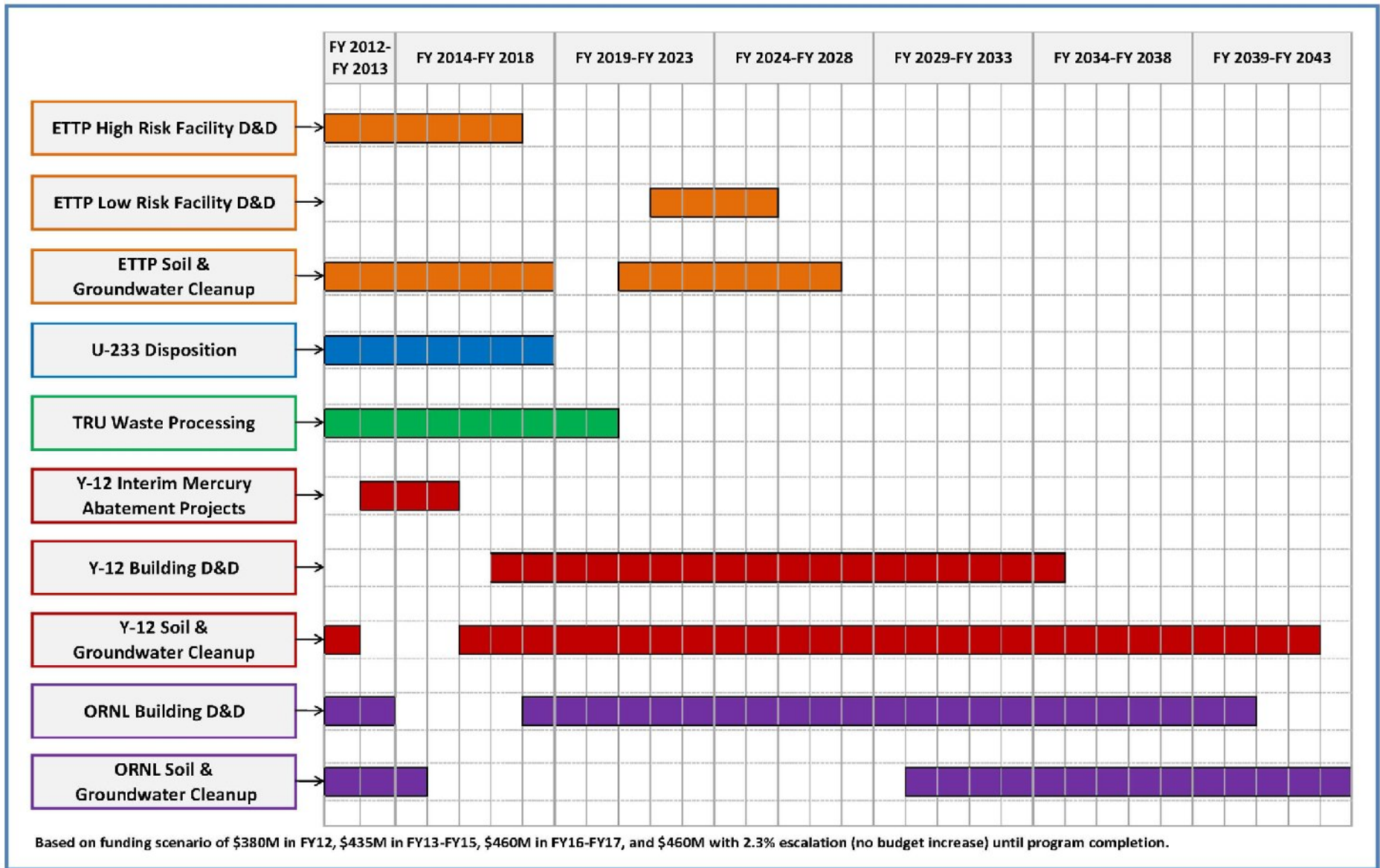
Key Program Considerations

- Balancing these competing risks is further complicated because Oak Ridge has **nine** funding controls, which limits flexibility in shifting or realigning priorities
- Our regulatory commitments which consist of enforceable milestones from the Federal Facility Agreement and Site Treatment Plan are critical drivers that can set and/or realign program priorities

Strategy is to identify near term focus/priorities while continuing to plan for the future



Proposed Sequencing of Work



ETTP's Cleanup and Vision for the Future



- Approximately 2,200 acres
- 500 facilities totaling 5 million square feet
- Radiological contaminants (primarily uranium) and wide range of chemical constituents



- DOE Legacy Cleanup Complete
- History Commemorated
- Private Sector Brownfield Industrial Park



Y-12's Cleanup and Vision for the Future

BEFORE



- Approximately 111 acres
- 112 excess buildings totaling 3.8 million square feet
- 2 million pounds of Mercury lost dating back to Cold War and earlier times

AFTER



- DOE Legacy cleanup complete
- High Security footprint reduced
- Modernized Y-12 incorporating new facilities

ORNL's Cleanup and Vision for the Future

BEFORE



- Approximately 4,400 acres
- 327 excess buildings totaling 1.5 million square feet
- Radiological contaminants (Transuranics, Strontium, & Cesium) totaling over 26 million curries

AFTER



- DOE Legacy cleanup complete
- Modernized Central Campus contributing to Science mission

“Oak Ridge Day”

Unique Challenges and Creative Solutions



- **Environmental Challenges and Solutions**

- Highlights the three types of risks on the Oak Ridge Reservation and the strategy EM-OR is using to address them

- **Partnering to Move Oak Ridge Forward**

- Identifies the partnerships that have been developed and fostered to address the cleanup mission and enduring Science and NNSA missions on the Oak Ridge Reservation

- **Innovation to Enabling the Future**

- Focuses on specific EM challenges and their innovative solutions to achieve efficiencies and further EM's mission in Oak Ridge