

# Lessons Learned from ARRA Work at Oak Ridge



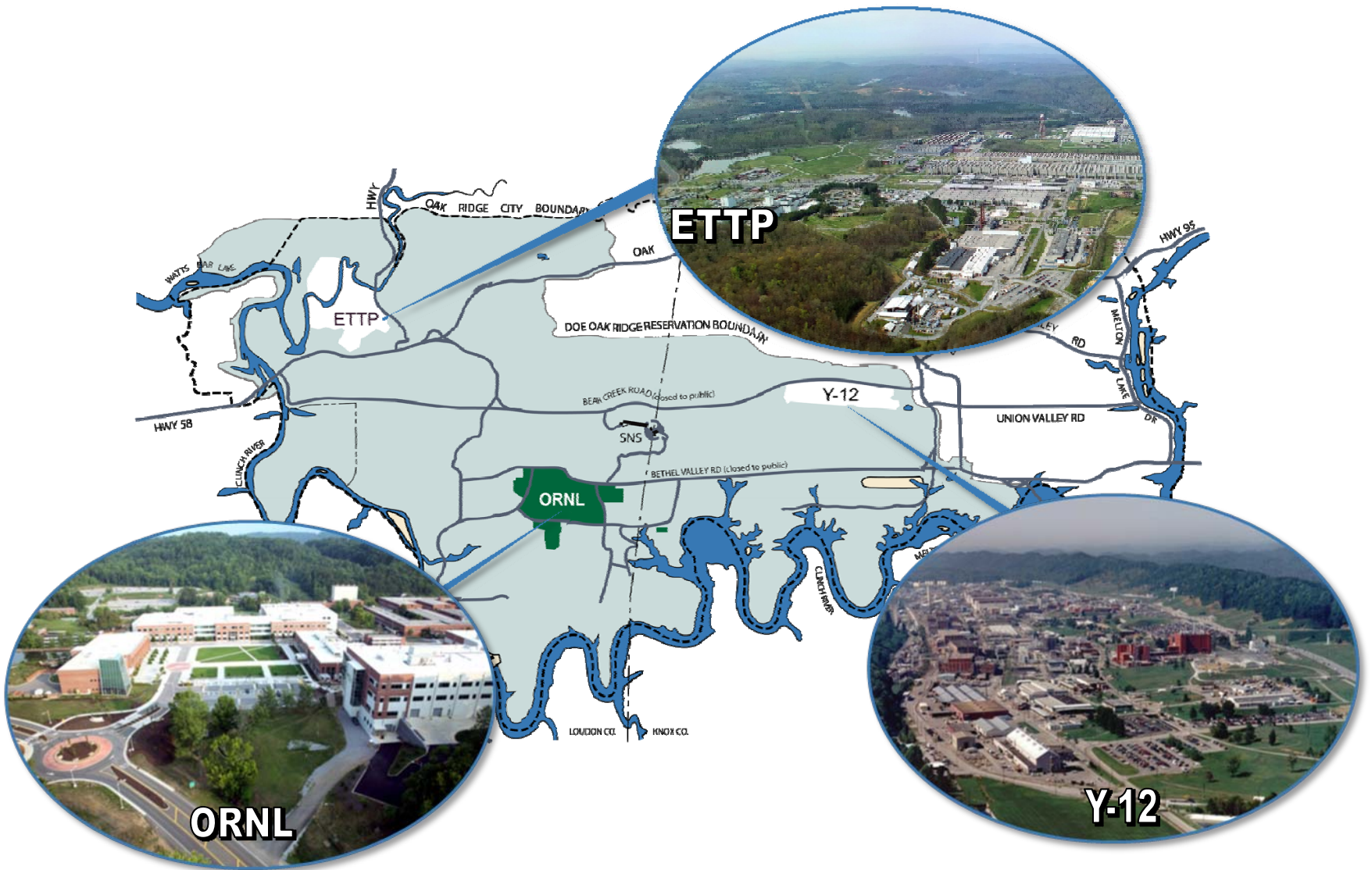
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# Three Different Sites All Supporting DOE's Vital Missions



# Oak Ridge Focus: Solving complex and difficult environmental problems created during World War II and the Cold War

- 140 acres of buried waste
  - 40 million pounds of uranium
  - 6 million curies of radioactivity
- 1,035 contaminated sites/facilities
  - 5 watersheds
  - 6 non-FFA projects
- 8 shutdown reactors
- 400 facilities in deteriorating condition
- Water-rich environment that promotes contaminant transport



# ETTP K-33 ARRA Project D&D

- K-33 is a 1.4 million sq. ft. building located at ETTP site
- Previously housed uranium-enrichment equipment
- LATA-Sharp Remediation Services awarded \$51M contract to demolish
- Over 50% of building demolished

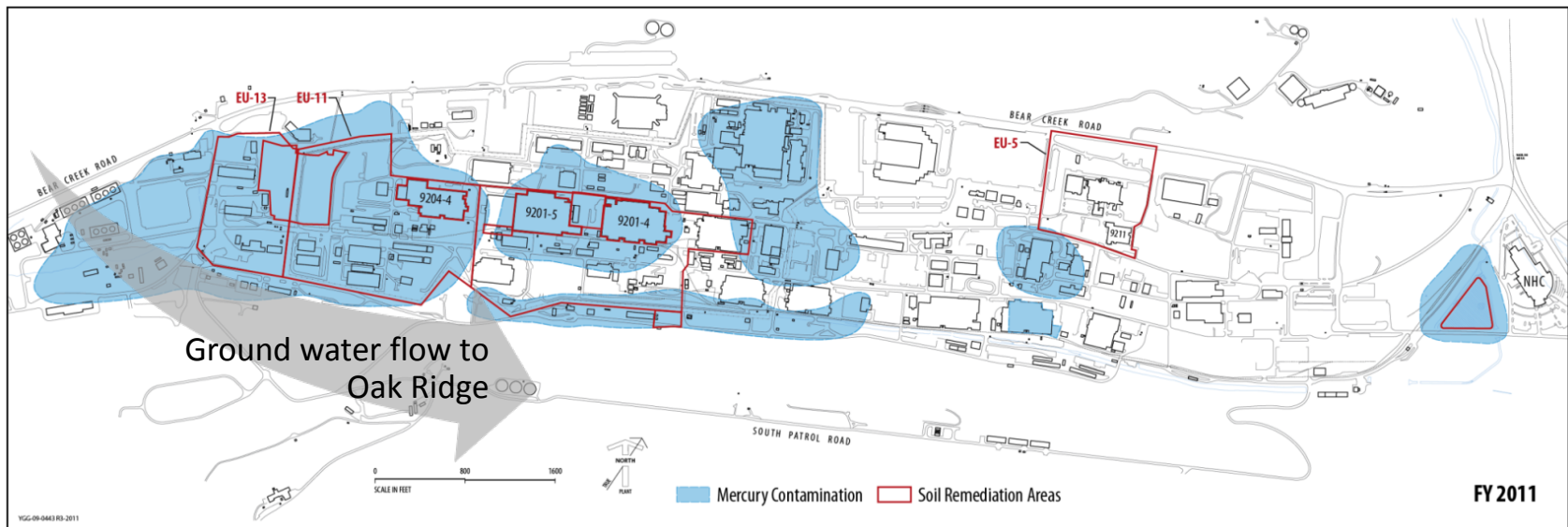


# ETTP K-33 ARRA Project D&D Lessons Learned

- K-33 Site personnel evacuated due to tornado warning issued by the site PSS
- Personnel evacuated to 1007 site building
  - Building located 20 min drive away
  - Badges would not allow entry into building
- Lessons Learned – Identify a closer suitable evacuation facility to eliminate drive time and verify facility has card reader access for all K-33 site personnel.
- Now using K-761 building

# Y-12: Legacy materials pose risk to mission, environment and community

- ARRA projects implement risk elimination strategy to enable long term site vision
  - Projects aim to access mercury and other contamination at their sources from west to east



# Y-12 ARRA Scopes- \$216 Million

## Beta 4 Legacy Material Removal

- Remove legacy material, including items, tooling, and uninstalled equipment
- Affected area: 82,000 ft<sup>2</sup>



## West End Mercury Area

- Assess storm sewer system and plan mitigation of mercury intrusion
- Affected area: estimated 11,500 LF of storm sewer cleaned and 2,650 LF relined



## Building 9206

- D&D filter house



## Building 9735

- Demolish to slab and remove waste
- Affected area: 15,043 ft<sup>2</sup>



## Old Salvage Yard

- Remove ~31,000 yd<sup>3</sup> of scrap metal
- Affected area: 7 acres



## Alpha 5 Legacy Material Removal

- Remove legacy material, including items, tooling, and uninstalled equipment
- Affected area: 613,642 ft<sup>2</sup>



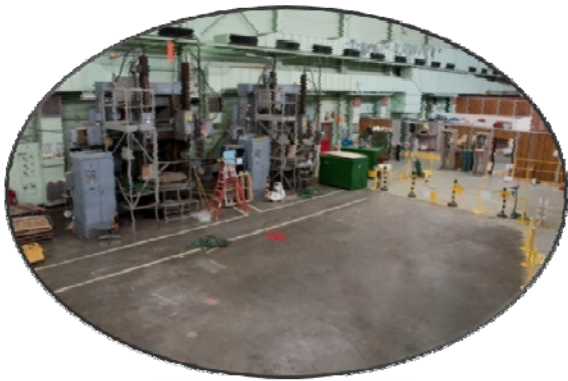
## Biology Complex

- Demolish four buildings to slab and remove waste
- Affected area: 135,812 ft<sup>2</sup> (total)



# Y-12 ARRA Lessons Learned

- Safety and compliance key to success
  - 1.5 million hours worked with no lost work days
- Collaboration among stakeholders ensures desired outcomes
  - Local, state, regional, national dialogue and support
- Fully integrated project teams critical
  - Management, labor, subcontractor representation



*Beta 4  
97% complete*



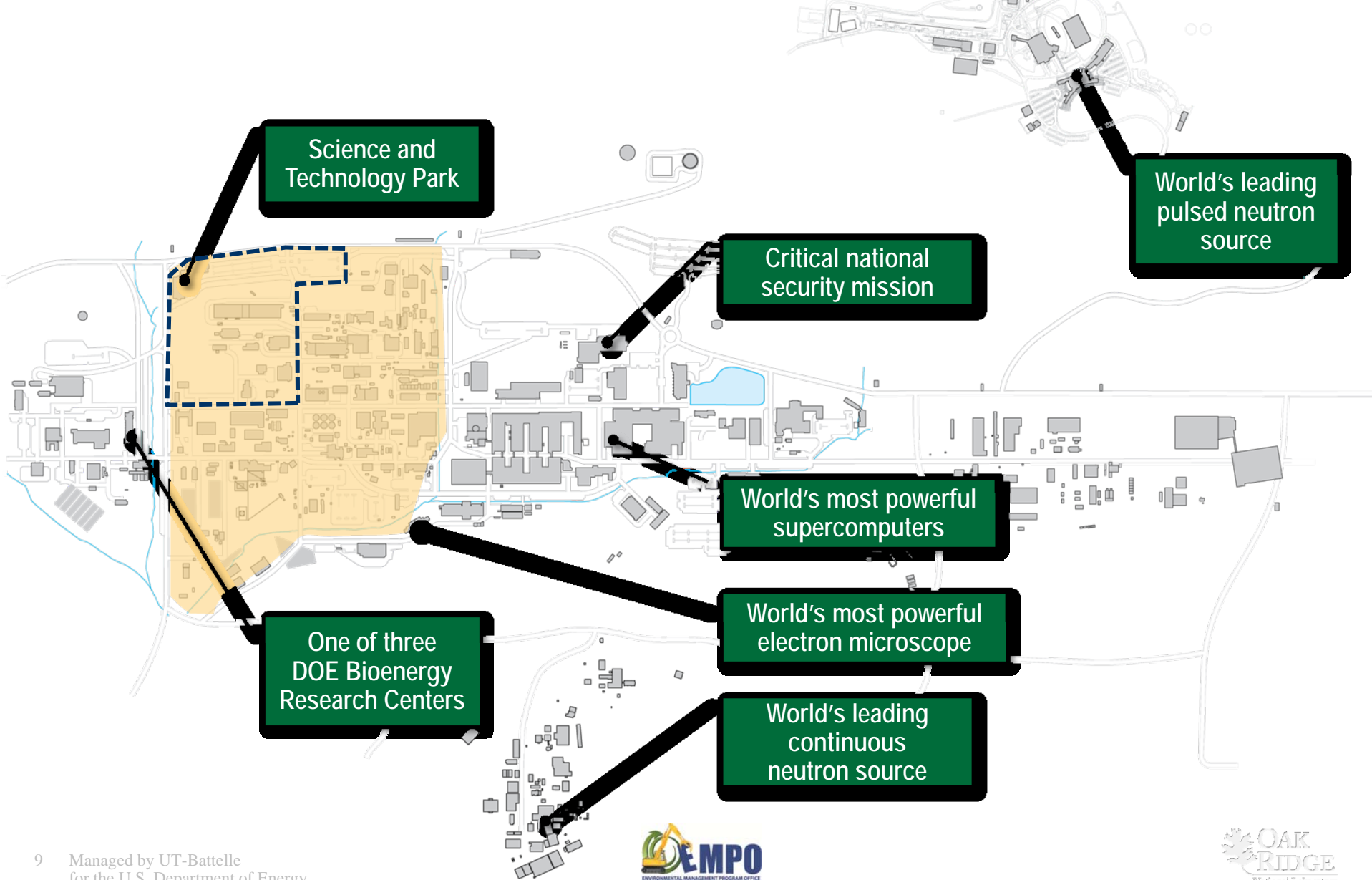
*Old Salvage Yard  
94% complete*



*Biology Complex  
95% complete*



# Key ORNL missions are at risk due to legacy nuclear materials and contamination



# ORNL ARRA Scopes – \$211 Million

Project	Organization
3026C&D Wooden Superstructure D&D	UT-Battelle
2000 Complex D&D and Soils and Slabs RA	UT-Battelle
4500 Gaseous Reconfiguration	UT-Battelle
Isotope Row Legacy Material Removal	UT-Battelle
Beta 3 Characterization and Legacy Material Removal	UT-Battelle
Tank W-1A RA	Bechtel Jacobs
Facility Characterization	ORISE
ORNL Central Campus Facility Demolition and Legacy Material Disposition Project	Safety and Ecology Corporation
ORNL Central Campus Hot Cell Demolition and Legacy Material Disposition Project	Safety and Ecology Corporation
Bethel Valley Burial Grounds	LATA - Sharp Remediation Services
TRU Waste Processing Operations	Wastren Advantage, Inc



# ORNL ARRA Lessons Learned

- Integration Between Multiple Prime Contactors is critical
- Integration between ARRA scopes and ORNL Strategic Plans
- Don't underestimate complexities and schedule requirements of sampling, analysis and waste profile development
  - Early and often communication with the stake holders (regulators, waste disposal site, etc)
- Additional procurement time for ARRA work
- Modification of work schedules/practices to accommodate summer heat

# Summary

Communicate

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