U.S. DEPARTMENT OF ENERGY | OFFICE OF ENVIRONMENTAL MANAGEMENT

Cleanup of the Oak Ridge Reservation

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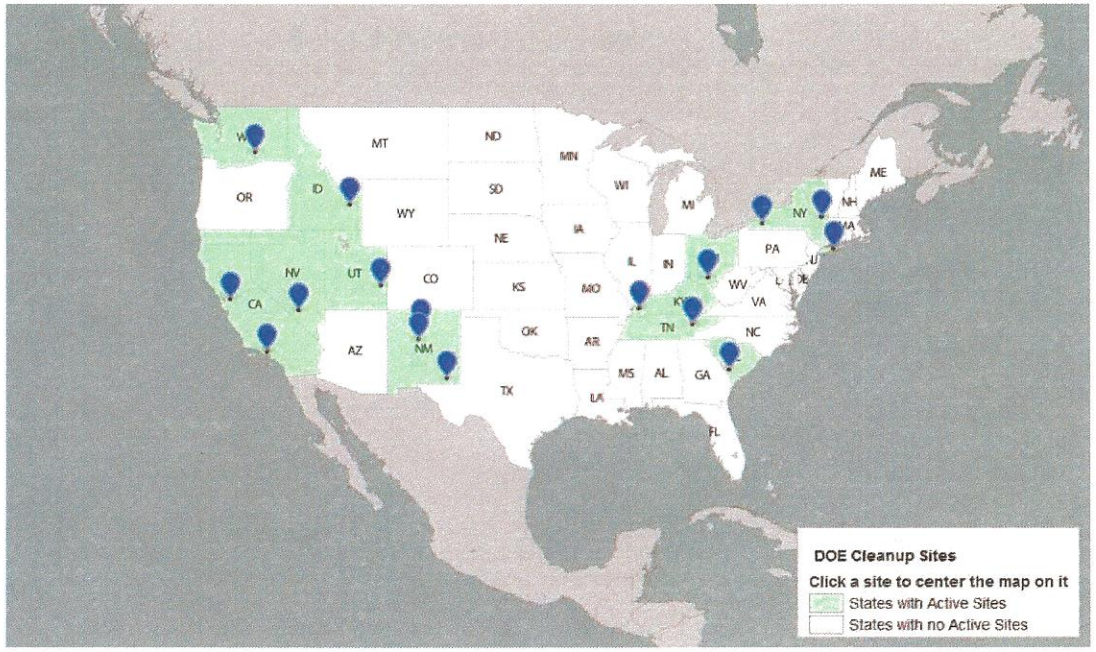
Manager

May 5, 2016
Roane County Environmental Review Board

EM is removing legacies at sites across our country

- As the largest cleanup program in the world, EM is responsible for addressing nuclear sites used to support the Manhattan Project and Cold War efforts

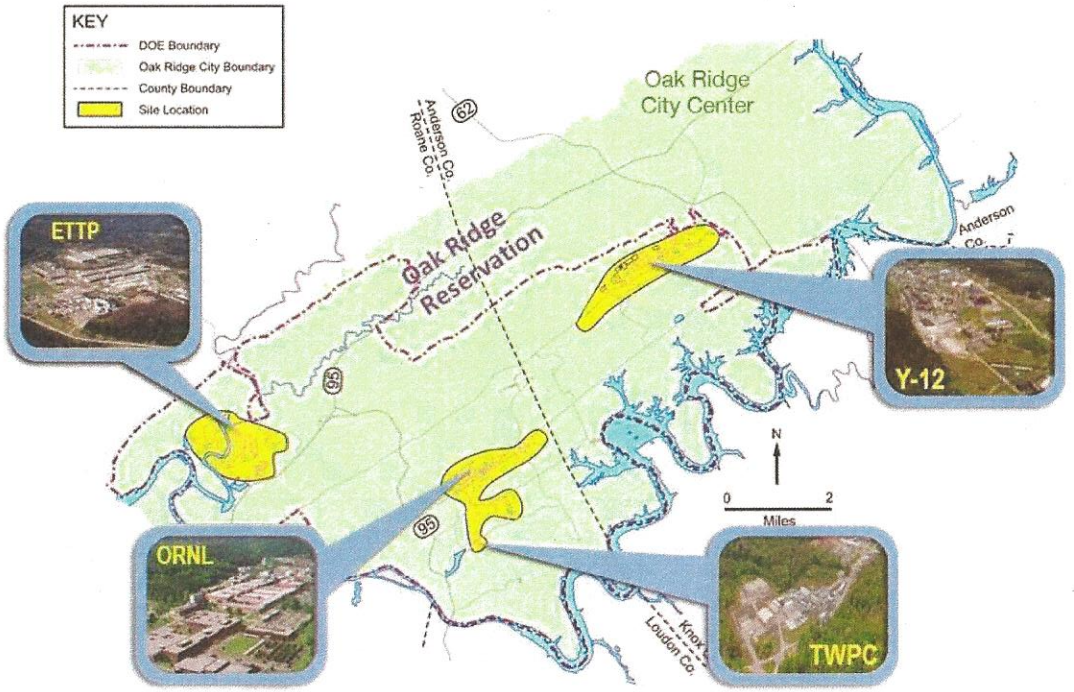
- The Oak Ridge Reservation is one of 16 sites in 11 states remaining to be remediated in the DOE complex



OREM's missions is critical and important

Our mission is to complete cleanup of the Oak Ridge Reservation to:

- Protect the region's health and environment
- Make clean land available for future use
- Ensure DOE's ongoing vital missions

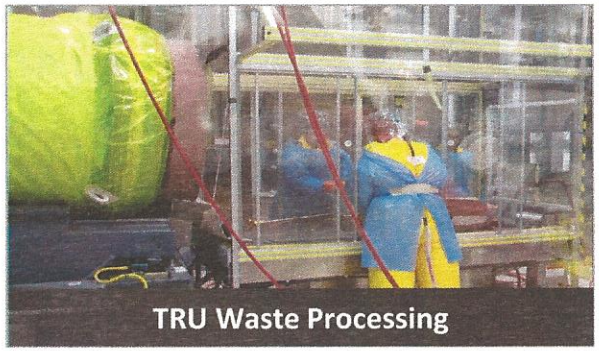


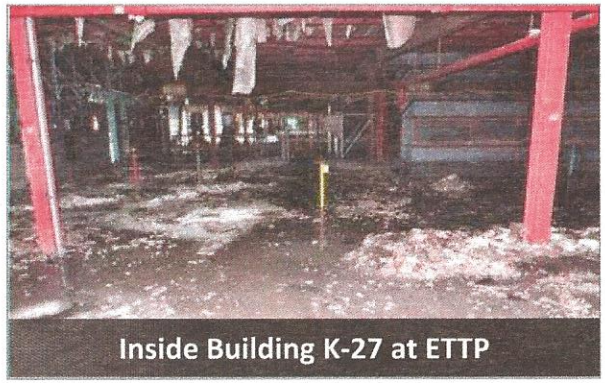
Our vision is that the Oak Ridge Reservation is Remediated, Modernized, and Reindustrialized

OREM faces a variety of cleanup challenges

- **Y-12 National Security Complex (Y-12)**
  - *Environmental Risk* – Nearly 20 million pounds of mercury used and ~ 700,000 pounds released into environment
- **Oak Ridge National Laboratory (ORNL)**
  - *Nuclear/Radiological Risk* – Over 26 million curies stored at ORNL
- **East Tennessee Technology Park (ETTP)**
  - *Lifecycle Cost Risk* – Nearly $60M spent on base operations, and as facilities degrade the cost for cleanup continues to increase

Mercury from Y-12 Storm Sewers


TRU Waste Processing


Inside Building K-27 at ETTP

OREM has established near-term visions

Vision 2016

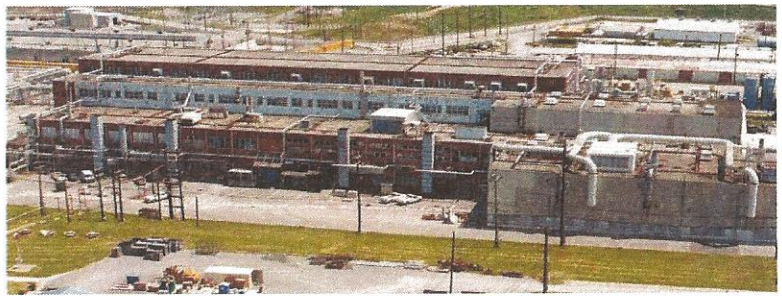
Completion of GDP building demolition at ETTP

Vision 2020

Remaining portion of ETTP cleaned up and reindustrialized

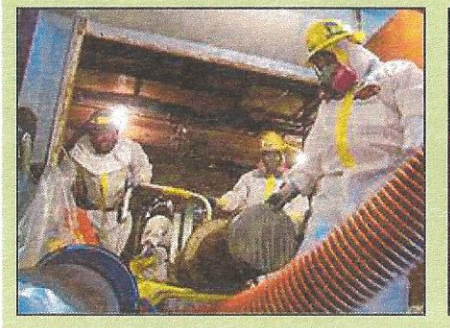
Vision 2024

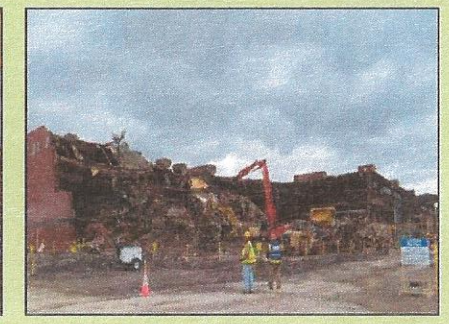
Expand cleanup work to Y-12 to address mercury contamination



Delivering on Vision 2016

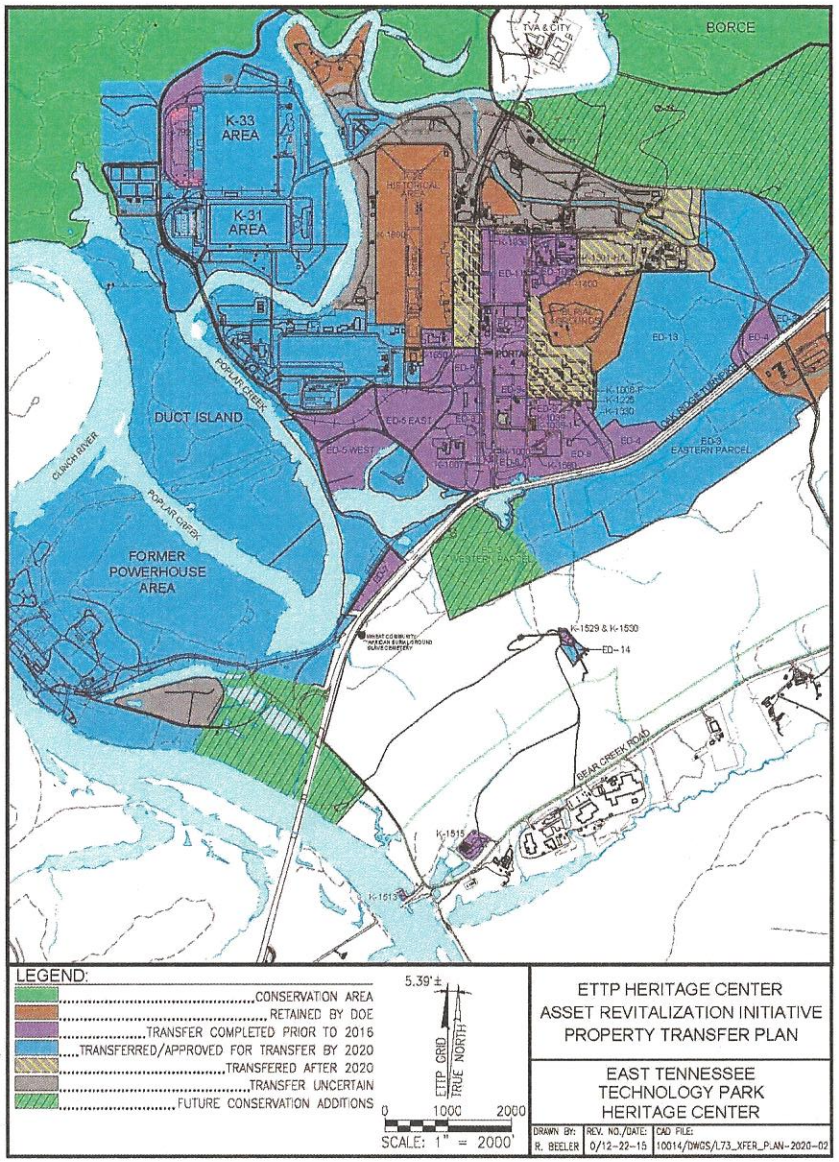
All gaseous diffusion facilities at ETTP demolished by end of 2016





What remains to meet Vision 2020

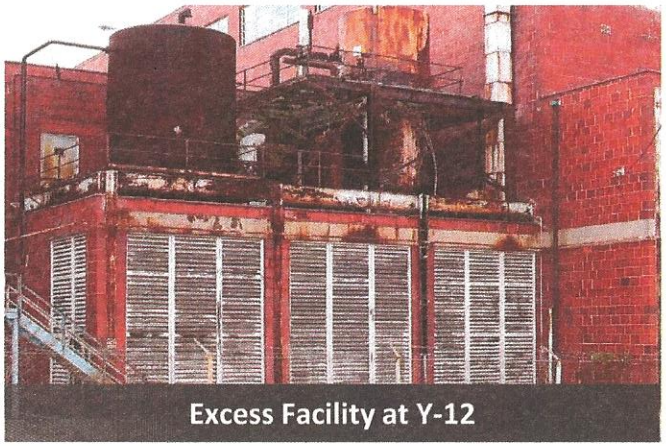
ETTP will be a private-sector industrial park



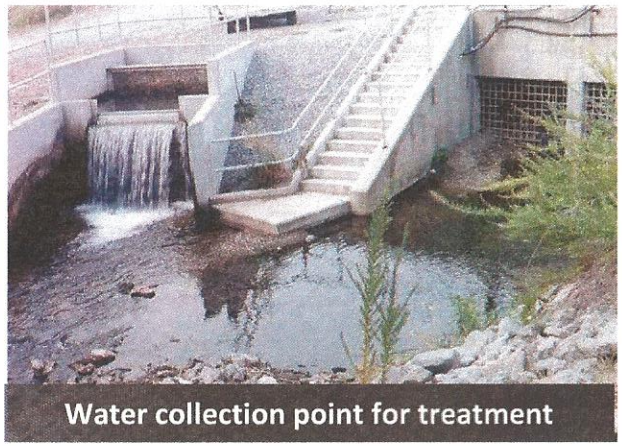
- Reindustrialization of ETTP is underway
  - Over 700 acres of land transferred
  - 14 buildings transferred
  - 20 private companies operating
  - Site infrastructure, roads and services transferred to City of Oak Ridge
- Historic preservation of the former gaseous diffusion plant is also underway in accordance with the National Historic Preservation Act

What are we doing to prepare for Vision 2024?

- Preparing facilities for future demolition under the Excess Facilities initiative
  - Characterizing facilities; preparing Critical Decision documents, where appropriate; abating hazards/reducing risks
- Design/construction of Mercury Treatment Facility
  - Needed to reduce concentration of mercury leaving the site today and will be an important control measure in the future
- Planning for waste disposition
  - Current disposal facility is ~ 70% full and is expected to be nearly full when cleanup of ETTP is complete



Excess Facility at Y-12



Water collection point for treatment

Offloading waste at disposal cell

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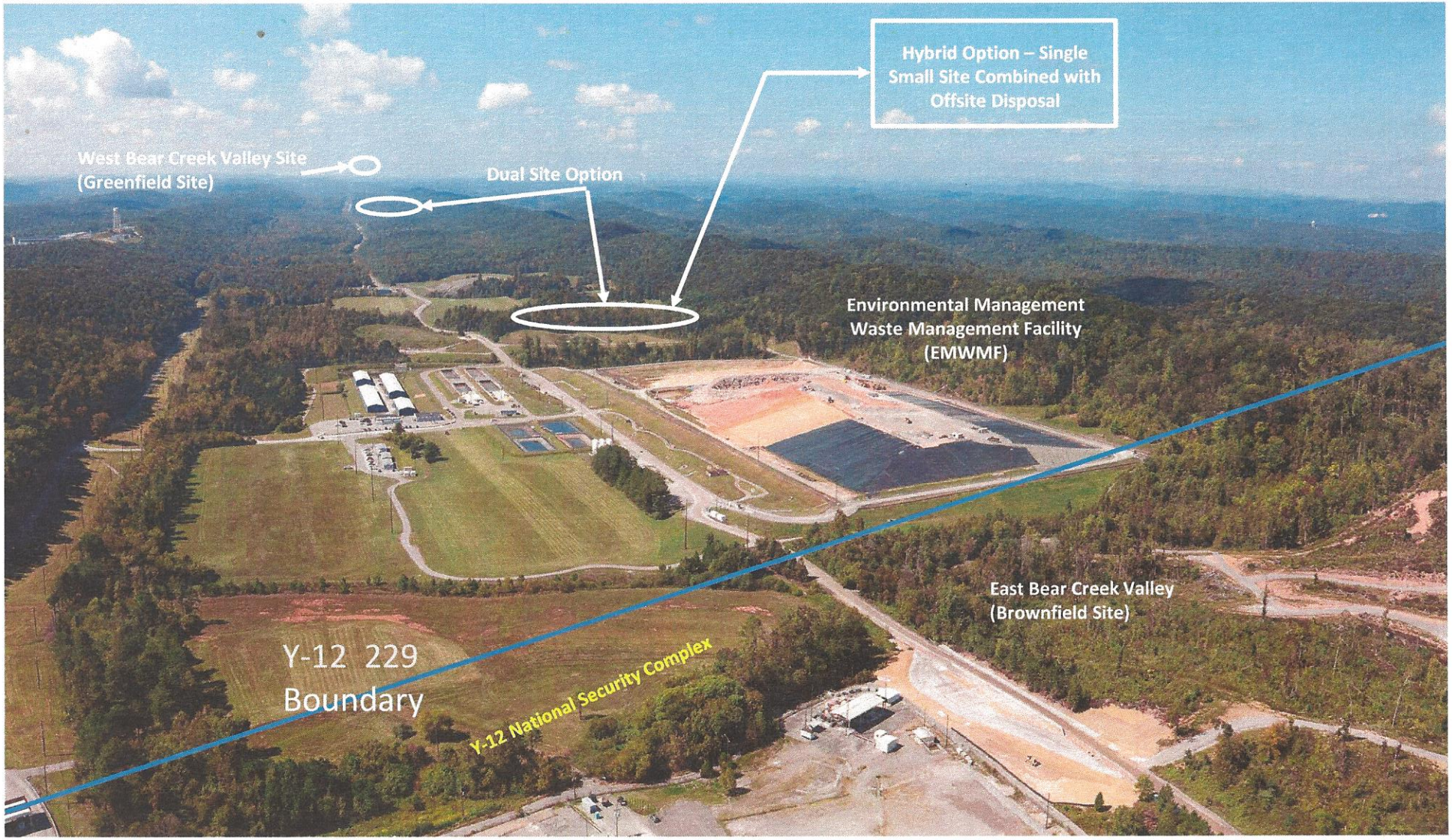
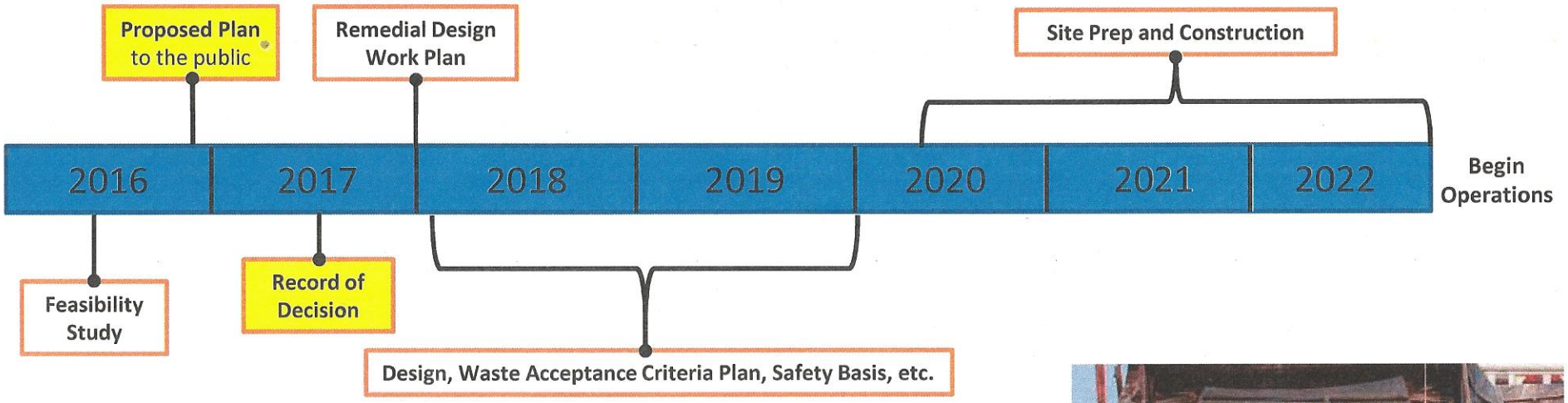
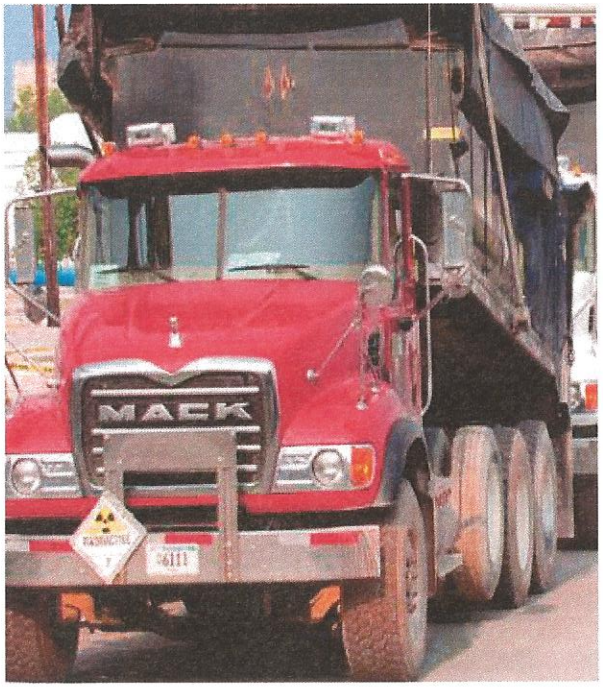
Additional disposal capacity is needed to achieve Vision 2024



Community input prior to a decision is important



- Submitted 4th draft of alternatives evaluation to regulators on March 17; regulators have 60 days to review/approve or parties enter into informal dispute
- Issuance of Proposed Plan for public comment is targeted for fall 2016
- Goal is to make ourselves available to inform and respond to questions now – prior to release of Proposed Plan



Groundwater strategy is being implemented

- DOE, TDEC, and EPA have prepared a strategy that focuses on addressing groundwater contamination on and around the Oak Ridge Reservation (ORR)
- First project was to evaluate the potential for offsite migration of contamination west of the Clinch River
  - Conducted three rounds of sampling at more than 40 locations in Anderson/Roane Counties
  - Results indicated no exceedances of Federal Drinking Water Standards
  - Final report will be issued in 2017

Groundwater sample collections

- Next, onsite studies of Melton Valley and Bethel Valley groundwater migration pathways will be performed to reduce uncertainties associated with former waste disposal areas

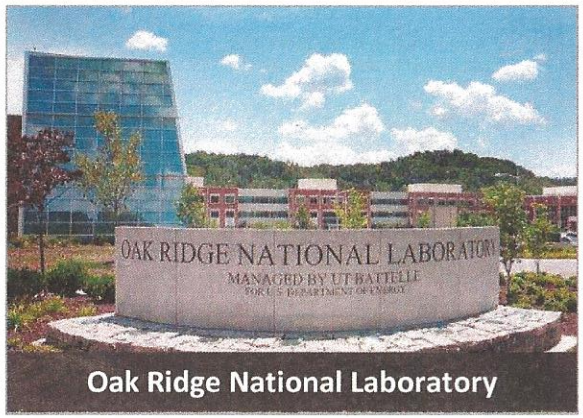
Oak Ridge is a leader for stewardship implementation

- DOE's stewardship program is in place to ensure completed cleanup actions remain effective and protective
  - Includes upkeep of earthen caps on closed burial grounds, site postings, environmental monitoring, maintenance of land use restrictions, etc.
  - More than 45 sites with engineering/institutional controls requiring more than 200 inspections annually
- OREM uses a web-based tool to implement, track, maintain, and verify controls and other stewardship information
- Implementation of stewardship activities is coordinated with environmental regulators and the public via annual formal reviews

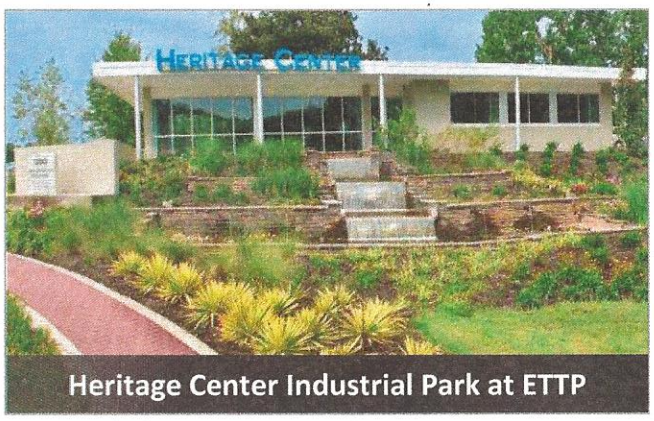
EM is critical to environmental health and economic growth

- Create land free of legacy materials at Y-12 and ORNL that will support continued modernization, keeping these sites at the forefront of their respective fields
- Continue to reindustrialize ETTP to accelerate cleanup and diversify the local economy
- Commemorate the historical significance of Oak Ridge in our national history

New Hope Center at Y-12



Oak Ridge National Laboratory



Heritage Center Industrial Park at ETTP