

Ongoing Efforts to Assure Waste Disposal Capacity for the Oak Ridge Reservation

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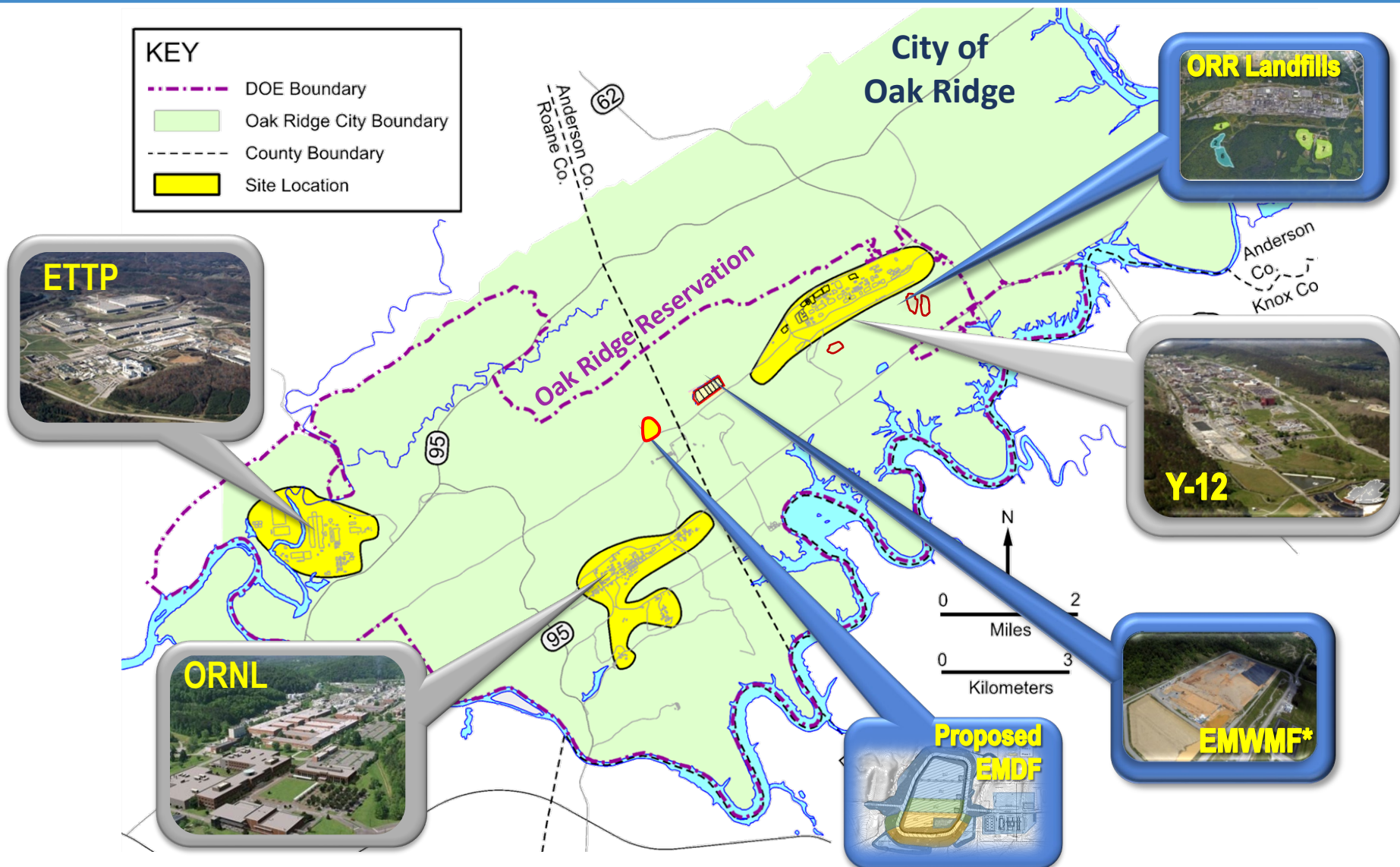
May 12, 2021

Current and planned disposal capacity is sufficient to meet needs



- DOE operates several engineered landfills for safe and compliant disposal of ORR remediation, demolition, and sanitary waste
- Operating landfills are permitted by Tennessee Division of Solid Waste Management
- Environmental Management Waste Management Facility (EMWWMF) and planned Environmental Management Disposal Facility (EMDF) fall under the regulatory requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- Each landfill/waste disposal facility has established waste acceptance criteria to determine whether waste is acceptable for disposal

Oak Ridge includes three distinct sites with different missions

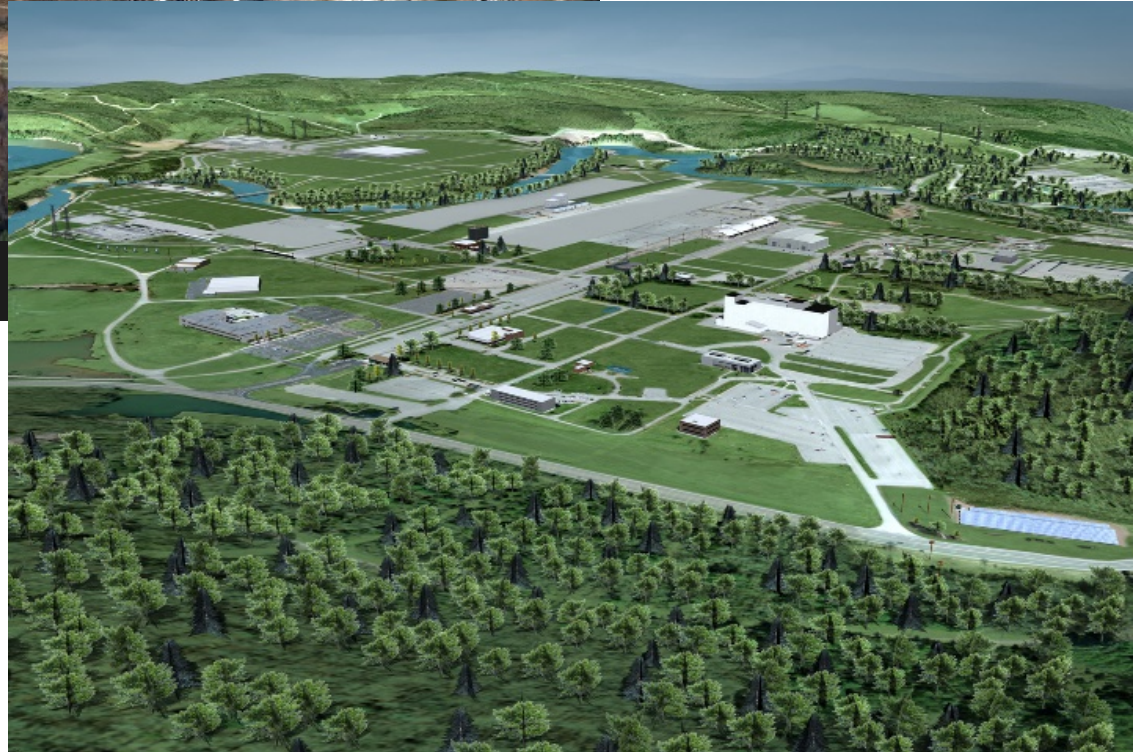


* Environmental Management Waste Management Facility

On-site disposal availability is key to the successful cleanup of ETTP



ETTP Before Cleanup



ETTP After Cleanup

Considerable cleanup scope remains at ORNL and Y-12 requiring additional waste disposal capacity



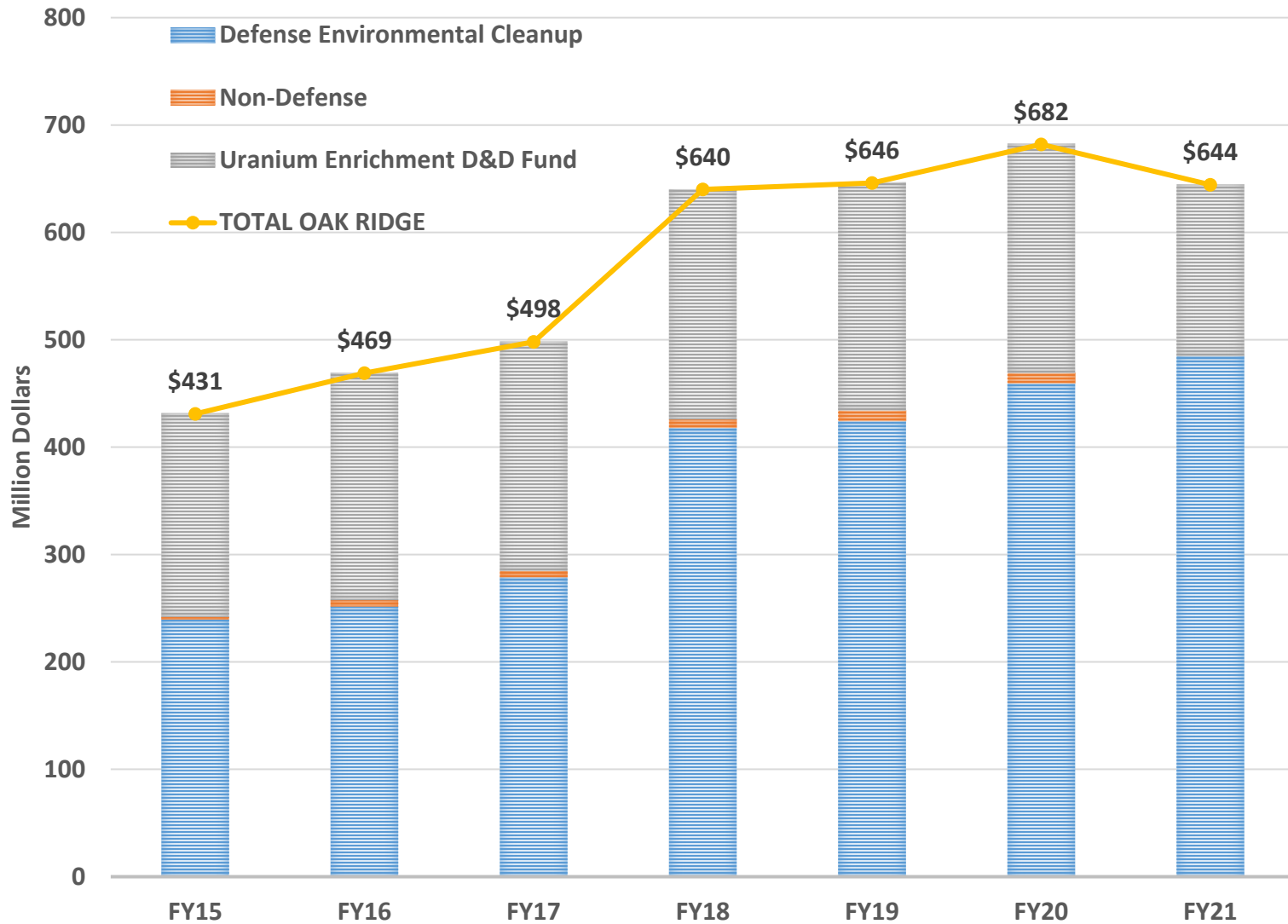
Excess Facilities at Y-12



Excess Facilities at ORNL



- Over 300 buildings to be demolished at Y-12 and ORNL
- Oak Ridge contains 66 of DOE's 254 high-risk facilities
- Wide range of physical, chemical, and nuclear hazards that present risk to critical ongoing research and national security missions

OREM Budget



Landfills/EMWMF are located within DOE- controlled areas

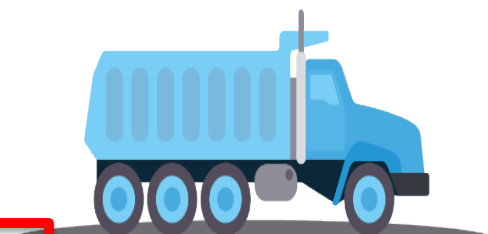


-  Operational Facilities
-  Closed Facilities

Management of various wastes from cleanup operations across DOE Complex requires multiple pathways

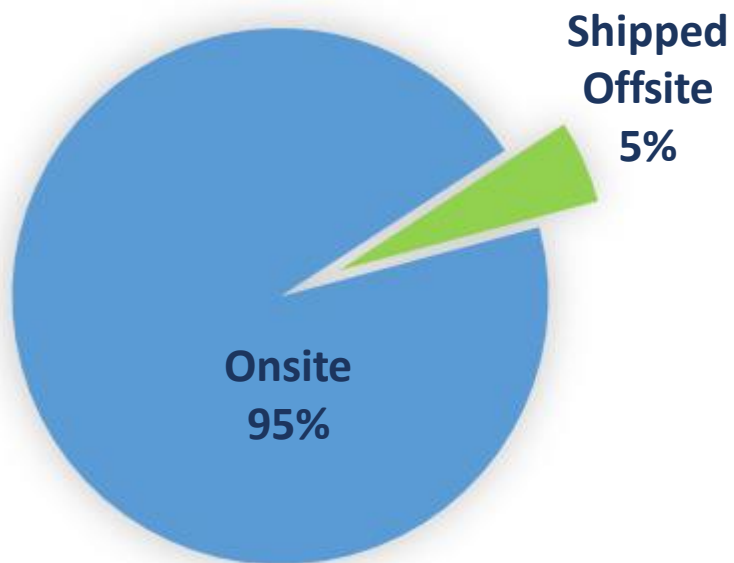
Effective cleanup programs require Onsite and Offsite disposal options

Waste Management Program Hierarchy

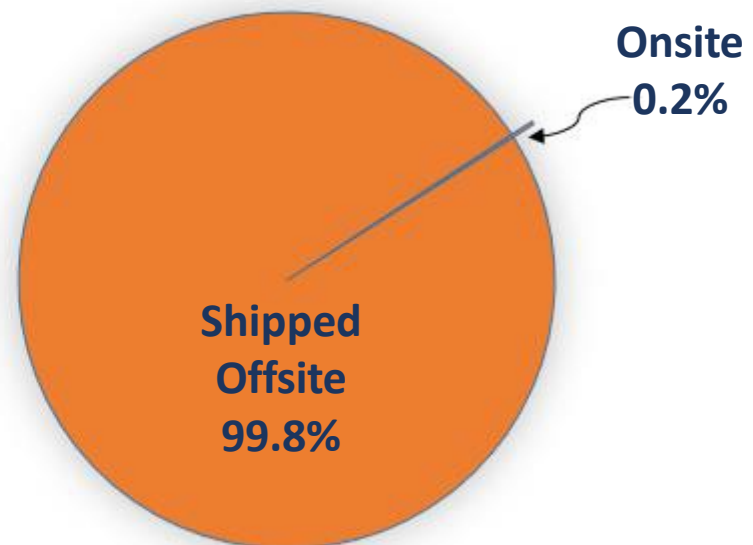


- 1.) Recycle/reuse
- 2.) Disposal at onsite sanitary landfills
- 3.) Disposal at onsite CERCLA facility
- 4.) Disposal at offsite facilities

Offsite disposal is necessary for higher activity waste

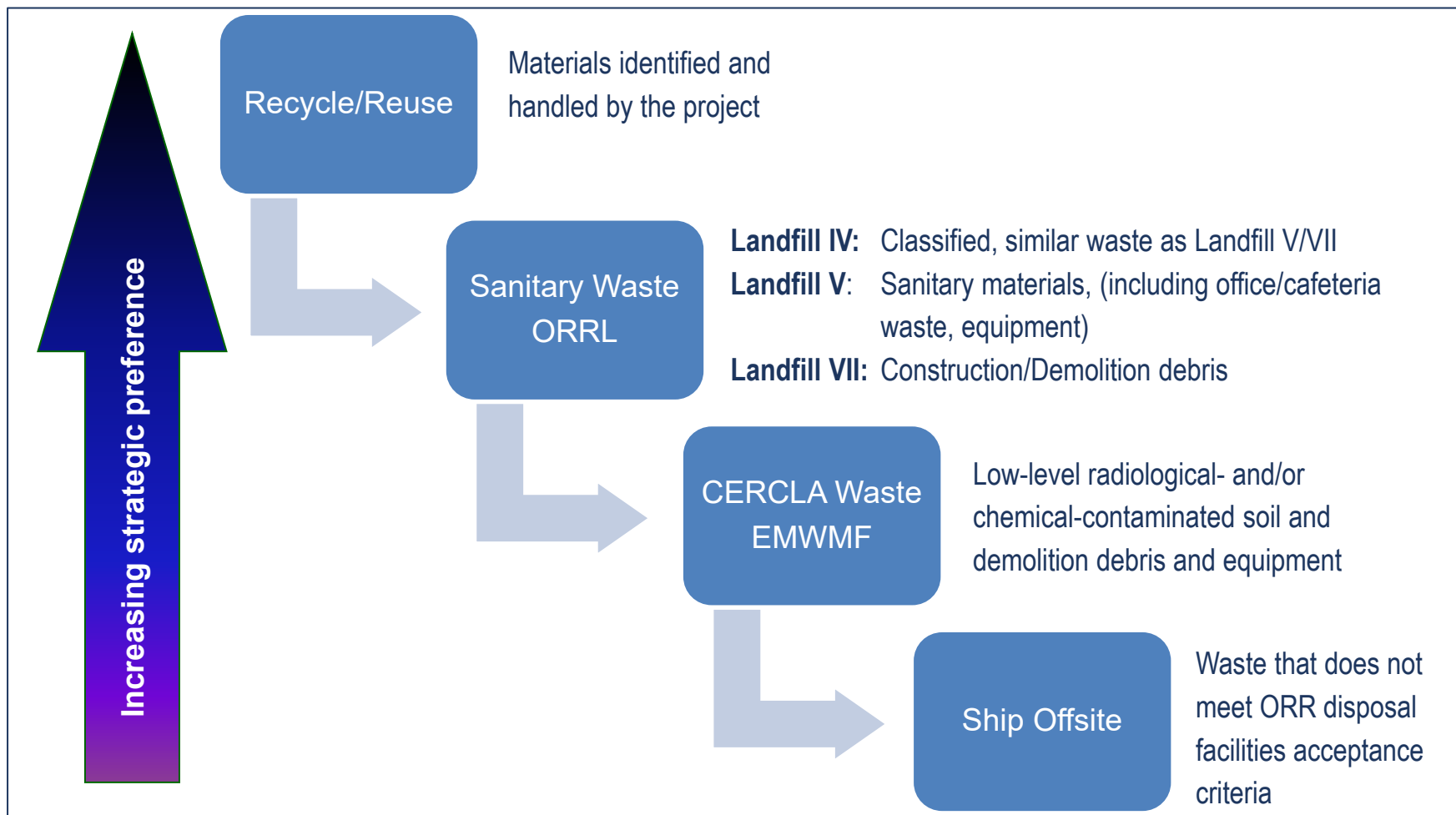


By Volume



By Radiological Activity

Waste disposal decisions follow waste hierarchy



Remaining capacity supports completion of East Tennessee Technology Park cleanup

- 28-acre disposal facility, opened in 2002
- Lined disposal cells receive low-level radiological and chemical waste from CERCLA cleanup of ORR and associated sites
- Approximate total capacity 2.3 million cubic yards
 - Final cap redesign increased capacity to approximately 2.3 million cubic yards
 - Currently about 80% full
 - Projected to be full in late-2020s



Future capacity is needed for Y-12 and ORNL CERCLA cleanup



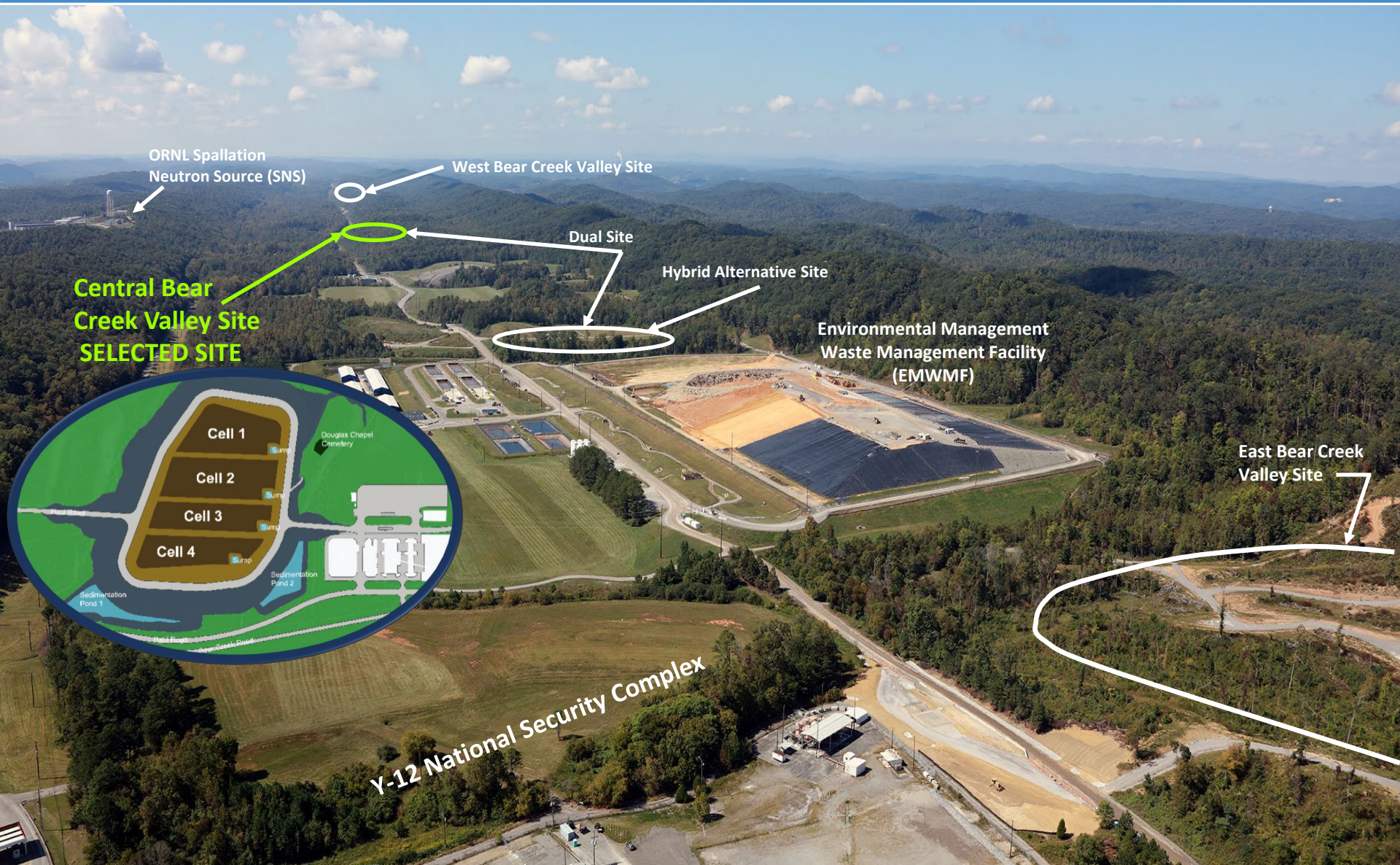
Permitted Oak Ridge Reservation landfills

- Constructed in phases to reach build out of permitted capacity
- Additional area will be constructed to support future cleanup

EMDF (Low-level CERCLA Cleanup Waste)

- Preferred site is located at Central Bear Creek Valley
- Projected disposal capacity is 2.2 M yd³
- D1 Record of Decision to be issued to regulators for review by early July 2021
- Operational overlap of two years with EMWMF is ideal

Central Bear Creek Valley Site is the proposed Environmental Management Disposal Facility location



DOE presented the Proposed Plan to the public in Fall 2018

- Multiple meetings with community leaders began in 2015
- Sessions with public following submittal of the Proposed Plan – September 13, October 2, and October 11, 2018
- Public meeting following the Proposed Plan submittal – November 7, 2018
- Public comment period – September 7, 2018 to January 9, 2019
- State and public main concerns:
 - Groundwater and site characterization
 - Waste acceptance criteria
 - Mercury



Proposed Plan listed the State's main concerns that are in the process of being resolved



TDEC* identified seven issues to be resolved for an approved ROD

- ✓ Site characterization (incorporating a field demonstration)
- ✓ DOE assessments (PA/CA in the Administrative Record)
- ✓ No underdrains beneath waste footprint
- Applicable or Relevant and Appropriate Regulations
- Waste acceptance criteria
- Mercury treatment and disposal
- Radiological discharge limits (recent 12/31/20 ruling by the EPA Administrator has been partially incorporated in D1 ROD)

*Tennessee Department of Environment and Conservation

Moving forward along three major paths

DOE Order 435.1

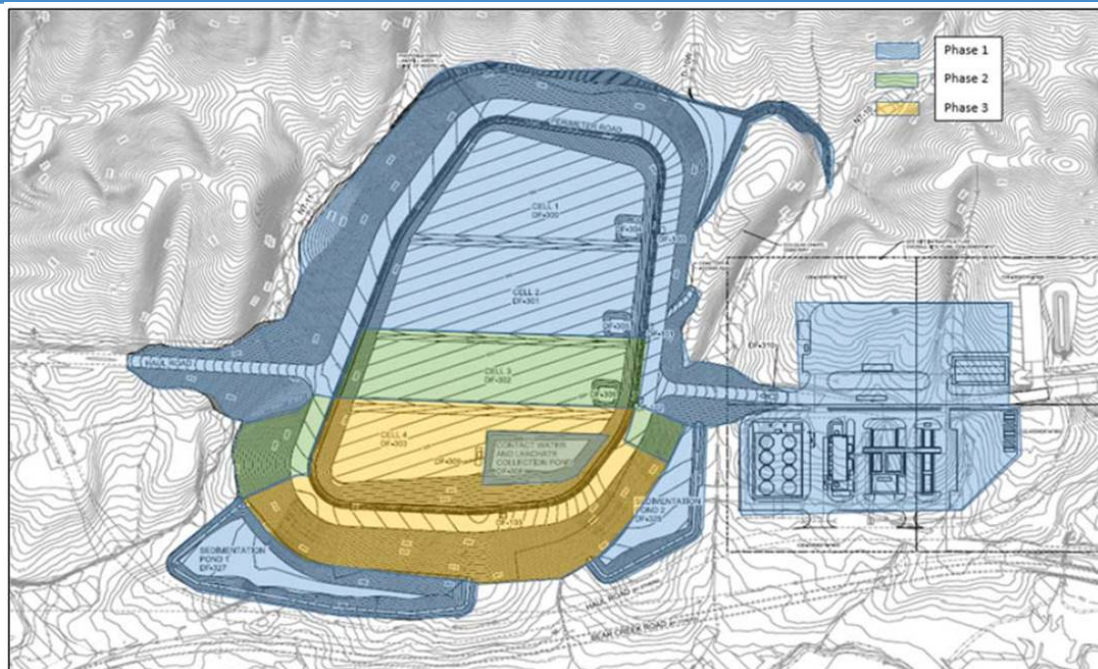
- Received a Preliminary Disposal Authorization Statement (DAS)
- Develop remaining documents for eventual Operational DAS

CERCLA Process

- Submit EMDF D1 ROD before July 2021 milestone for FFA review
- Work with FFA Parties to resolve issues and approve ROD
- Develop CERCLA documents for design and operations

DOE Order 413.3B

- Develop Final Design
- Complete DOE Order 413.3B documentation and approvals to support construction



QUESTIONS?