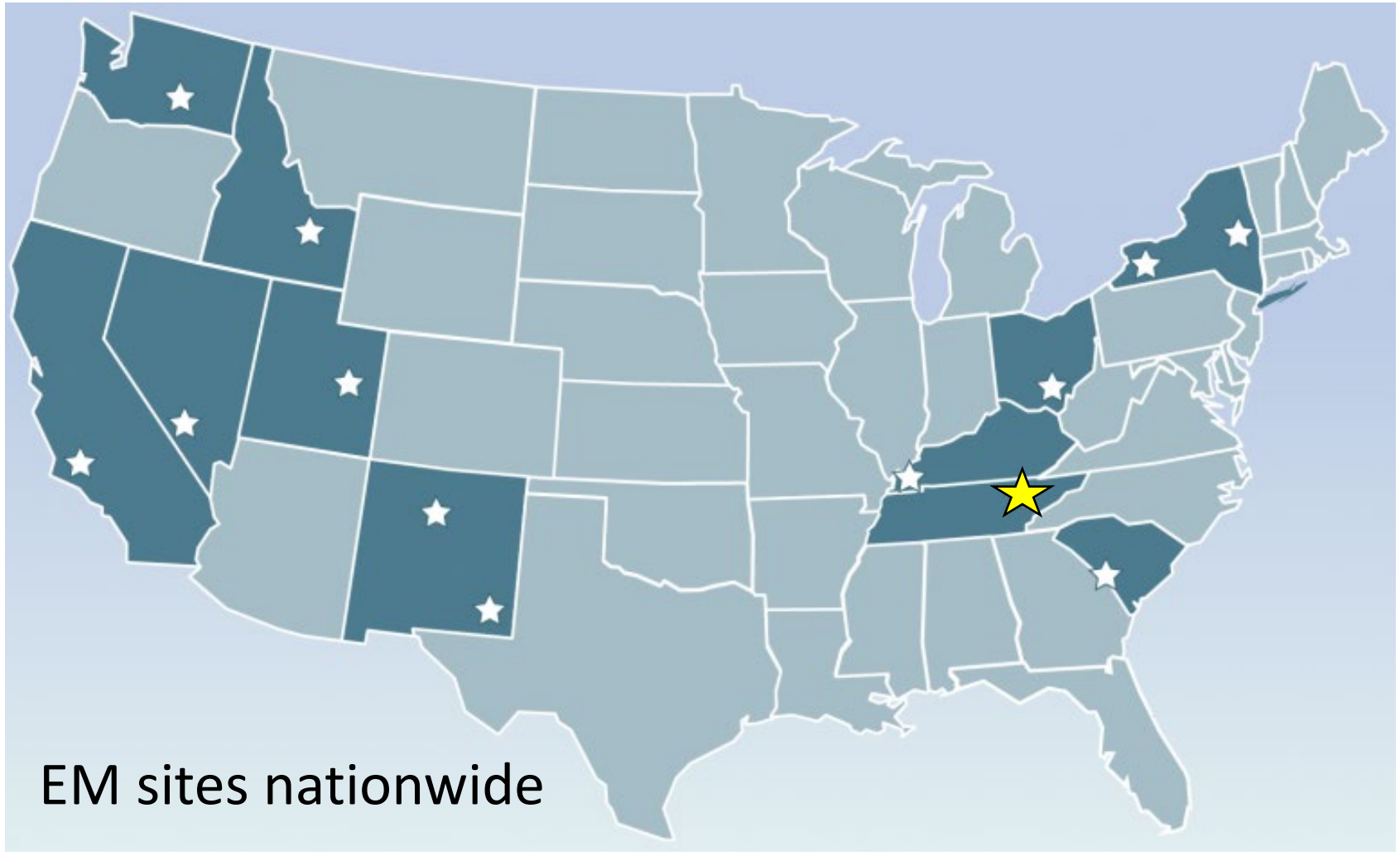
OREM
Oak Ridge Office of Environmental Management

Oak Ridge Site Specific Advisory Board Annual Meeting

August 14, 2024

The Office of Environmental Management has 15 active cleanup sites nationwide

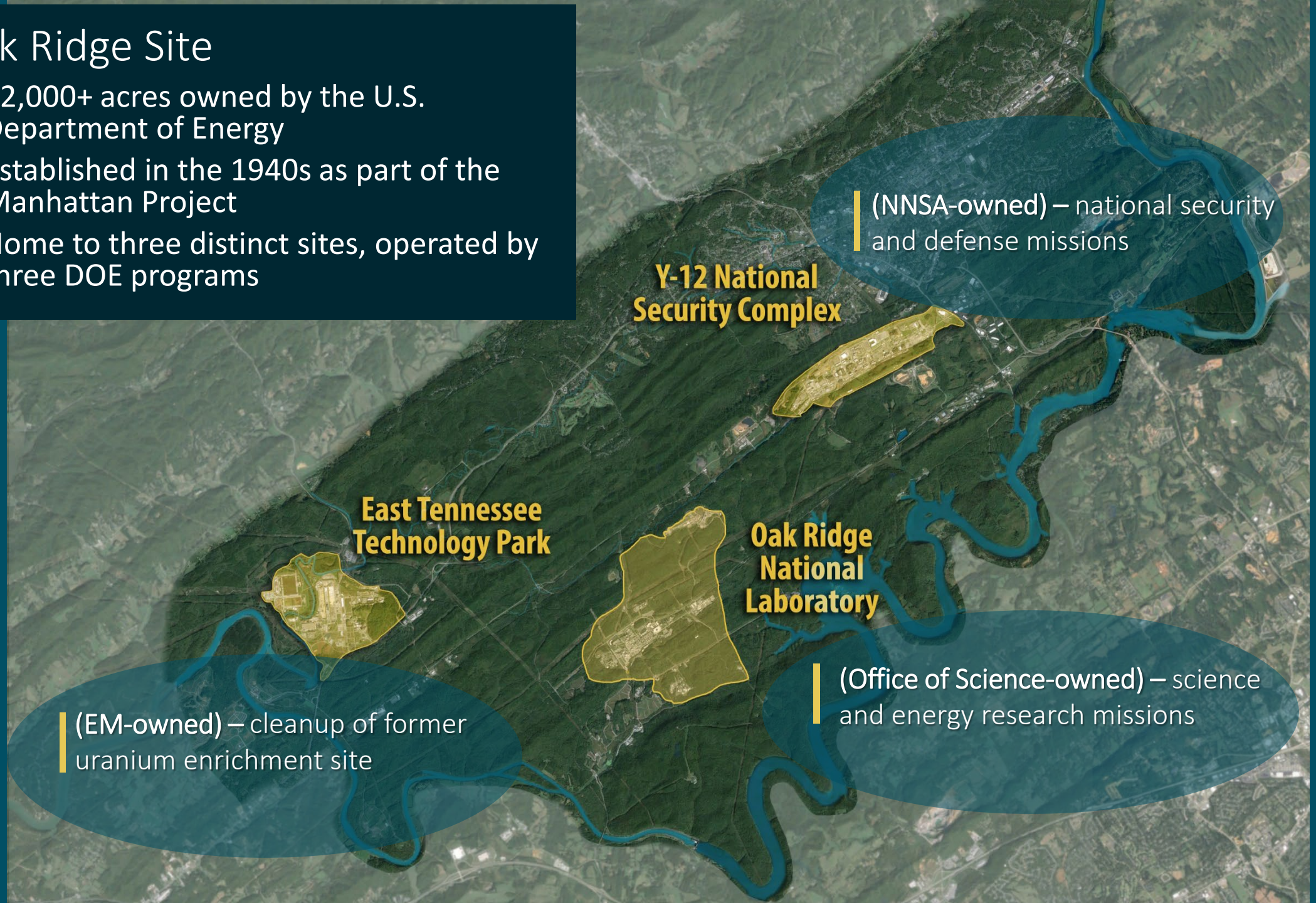


EM sites nationwide

- EM is the largest cleanup program in the world, and it is responsible for addressing nuclear sites used to support the Manhattan Project and Cold War
- Oak Ridge is one of the largest EM cleanup sites

Oak Ridge Site

- 32,000+ acres owned by the U.S. Department of Energy
- Established in the 1940s as part of the Manhattan Project
- Home to three distinct sites, operated by three DOE programs



Our mission in positively impacting the region

1. Protecting human health and the environment

2. Enabling critical ongoing DOE missions

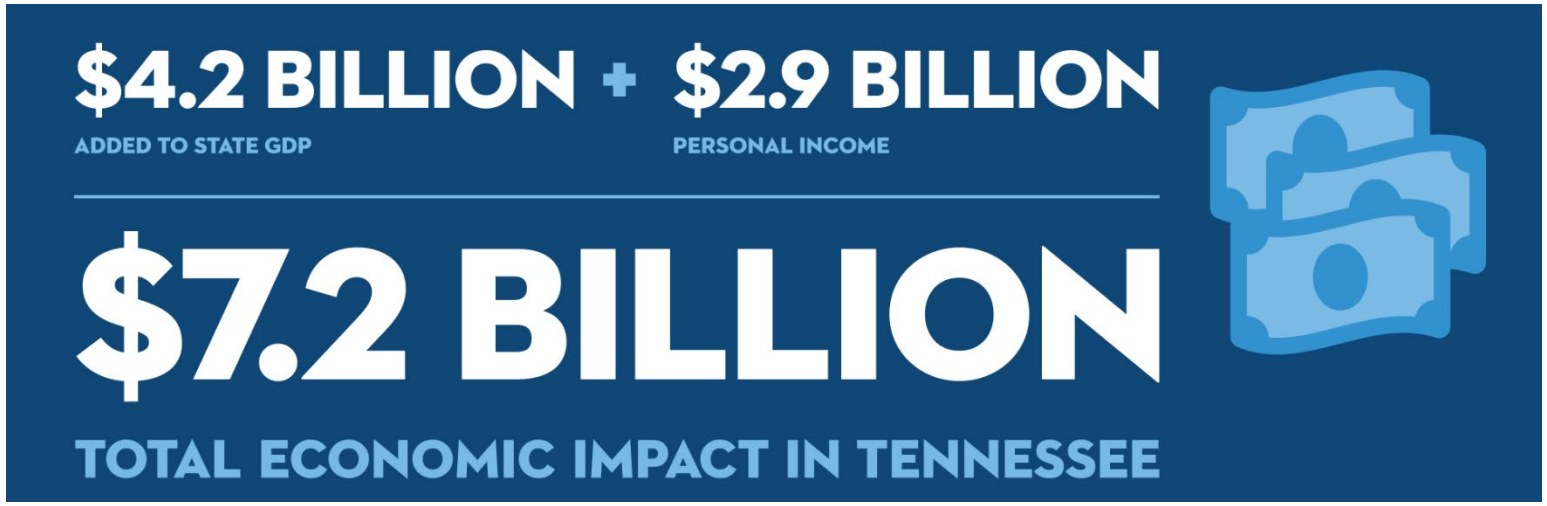
3. Making land available for future use

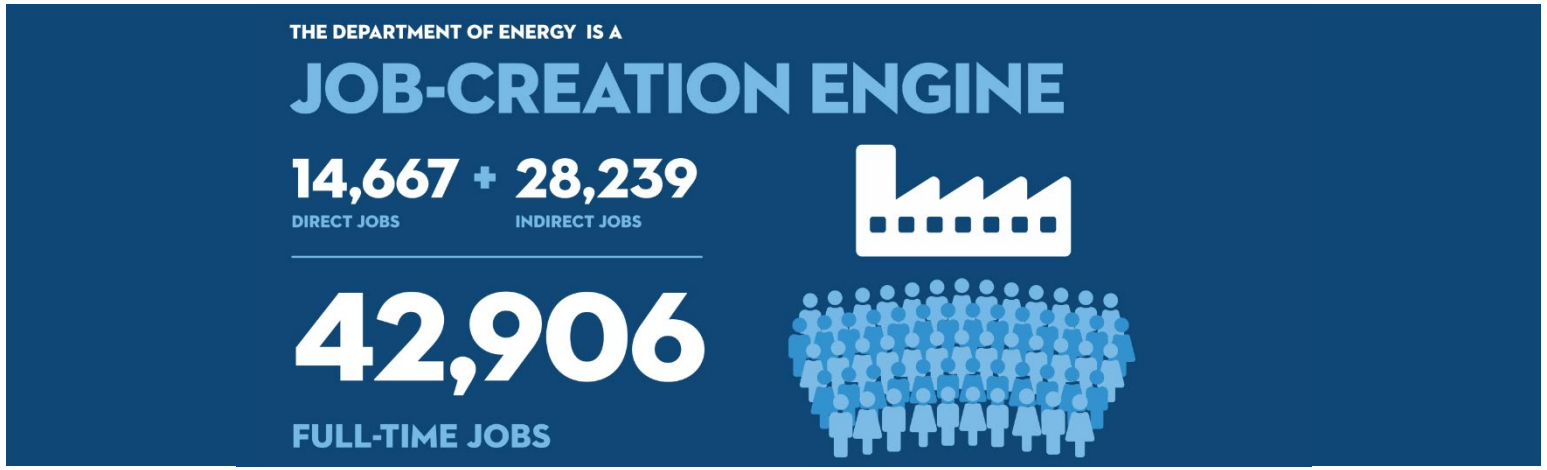
Funding is allowing Oak Ridge to continue advancing its cleanup

Budget Year	2020 Enacted	2021 Enacted	2022 Enacted	2023 Enacted	2024 Enacted
Funding for Environmental Cleanup in Oak Ridge	$682 million	$644 million	$630 million	$637 million	$694.5 million

These levels support OREM's ongoing cleanup mission, which employs approximately 2,500 contractors

Our work is a significant contributor to the state & community's economy





Of that total, environmental cleanup comprises:

- $1.3 billion economic impact annually
- Generates nearly $400 million in personal income
- Supports 7,000 full time jobs

We've established clear goals to guide projects for the next decade

- **Goal 1**: Complete ETTP cleanup and transition site to long-term stewardship
- **Goal 2:** Reduce radiological risks at ORNL
- **Goal 3:** Reduce environmental risks at Y-12
- **Goal 4:** Ensure adequate onsite waste disposal capacity to support remaining cleanup

Oak Ridge was the first site in the world to remove a former uranium enrichment complex

Buildings demolished could span 225 football fields

Our work has transformed the East Tennessee Technology Park from a liability into a community asset that's attracting millions in new investments

Several large companies have announced plans to locate at or near the site, creating hundreds of new private industry jobs

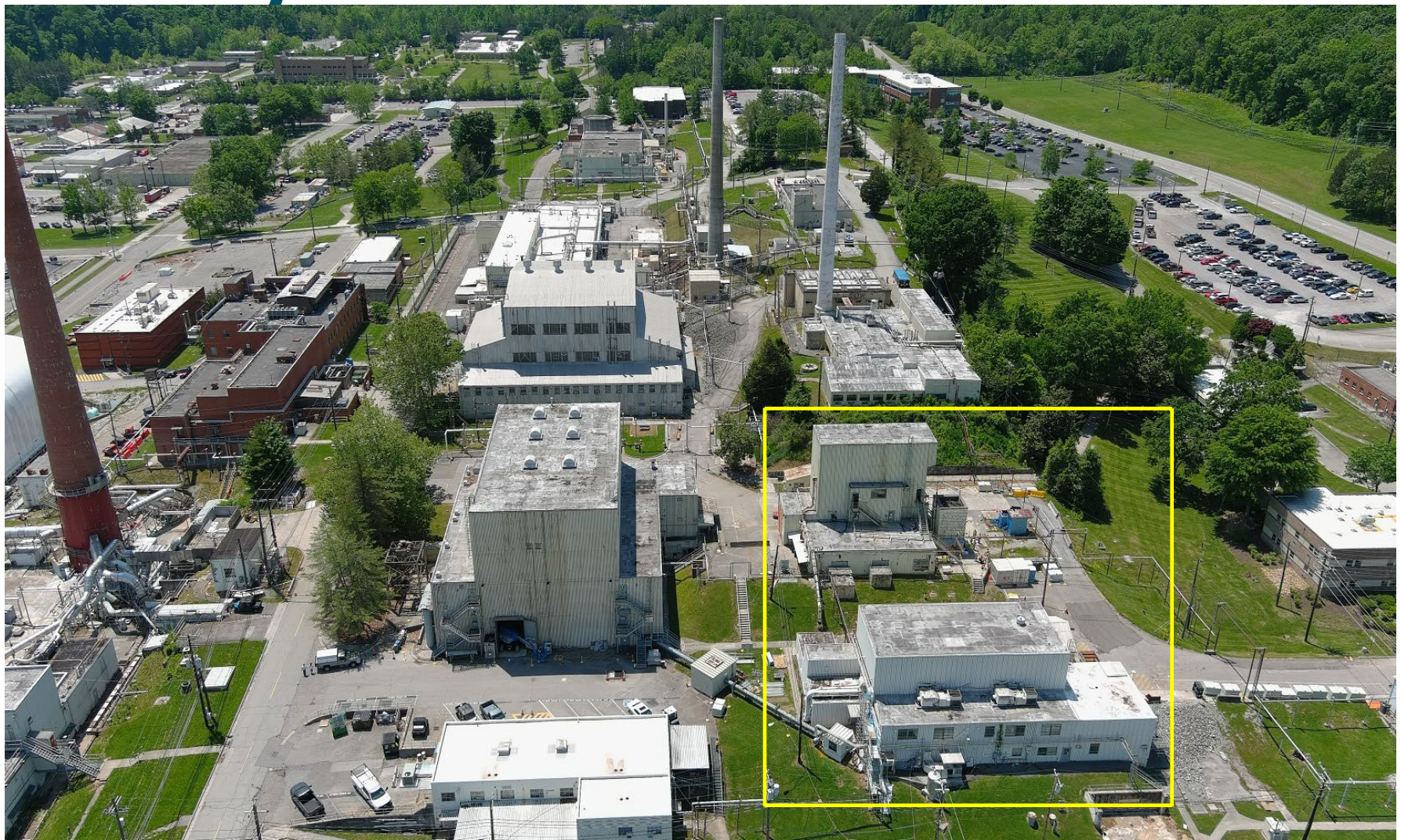
- **Triso-X** (400 jobs)
- **Kairos** (55 jobs)
- **Ultra Safe Nuclear Corp.** (30 jobs)
- **Tennessee Valley Authority**

Our projects are reshaping ORNL's central campus

Facilities to address in ORNL's central campus area

- Transitioned our workforce from ETTP in 2020
- Our projects are eliminating risks and opening land to support research missions
  - Demolishing former research reactors
  - Demolishing former isotope production facilities
  - Eliminating uranium-233 inventory
  - Shipping and disposing inventory transuranic waste

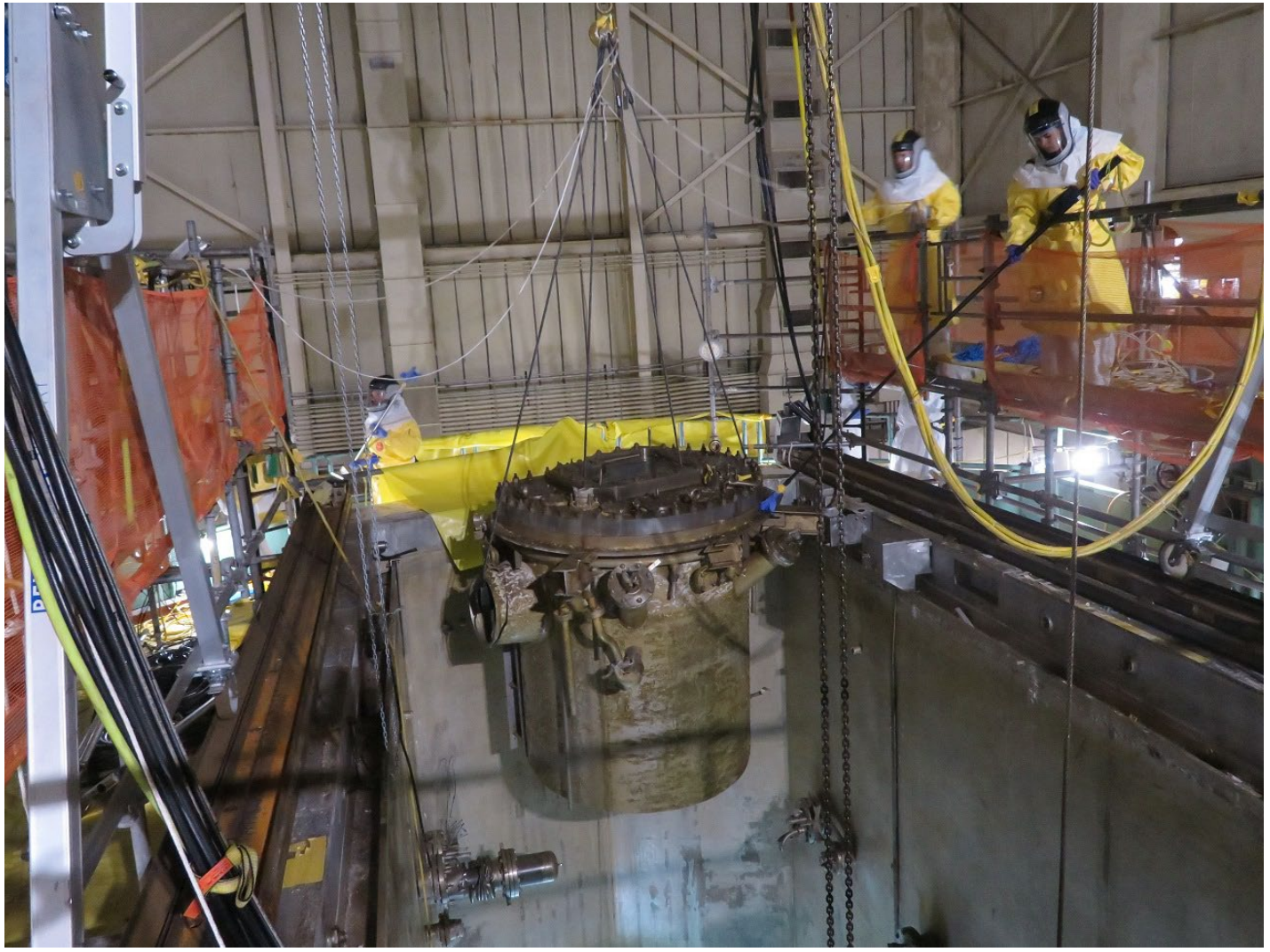
We’re making significant progress – two reactors recently demolished



Bulk Shielding Reactor (bottom) demolished in 2022

Low Intensity Test Reactor (top) demolished in 2023

Now, crews are preparing ORNL's largest former reactor for near-term demolition



Crews removed the top portion of the 32-ft-tall reactor vessel in the Oak Ridge Research Reactor in 2023

They are removing other portions of the reactor this year

We are eliminating ORNL's uranium-233 inventory liability while providing medical isotopes for cancer treatment research

- Nation's inventory of uranium-233 is stored in the world's oldest operating nuclear facility
- Approximately half of the inventory has already been removed, and work is underway to process and remove the remaining material
- New partnership with TerraPower is extracting and providing rare medical isotopes for advanced cancer treatment research

Sludge Processing Facility Buildouts Project; Sludge Test Area

- Completed testing of three key technology elements
- Discovered significant cost increases due to changes in technology and material costs
- Project was returned to a pre-CD-0 status due to cost threshold exceedance under DOE 413.3b Order requirements
- Developing strategic plan to identify other options for safe and efficient treatment

Sludge Strategic Plan

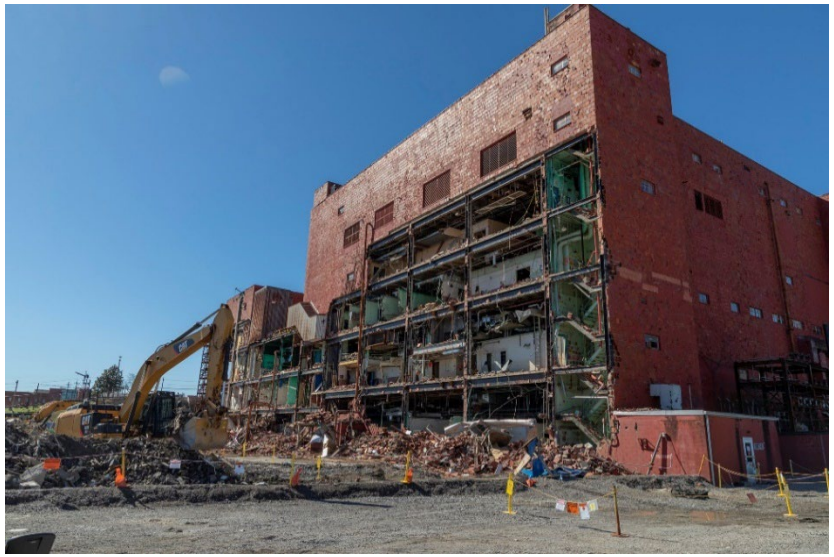
- Detailed system-health evaluation of all sludge storage and transfer equipment
- Management of storage capacity and minimization of low-level liquid waste (LLLW) influents
- Sludge Data Gap Analysis
- Focused strategic planning for treatment of LLLW and technology evaluations for tank-side sludge treatment processing

Our projects are enabling modernization at Y-12

Facilities to address at Y-12

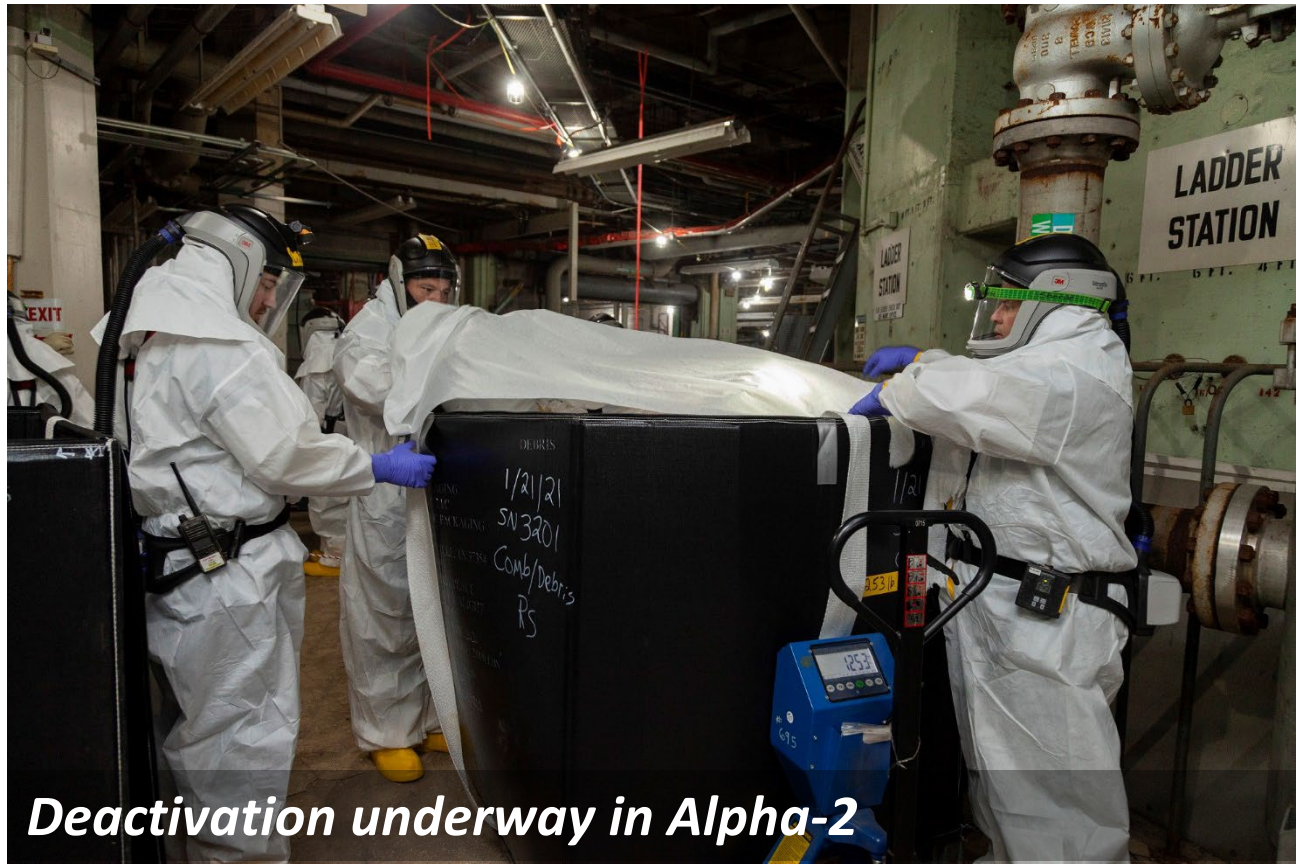
- Oak Ridge has more high-risk facilities than any other DOE site
- 60% of NNSA buildings are more than 40 years old
- Our projects are eliminating risks and opening land to support national security missions
  - Demolishing former enrichment buildings
  - Removing excess, contaminated facilities
  - Addressing and retrieving mercury in the environment

Demolishing the former Biology Complex opened land for Y-12's new Lithium Processing Facility



Demo project cleared 18-acre area that will be home to the new facility

We have many other projects that will continue transforming Y-12 in the years ahead



Deactivation underway in Alpha-2


Deactivation underway in Beta-1

Removed 6.5 tons of mercury from COLEX

Construction is progressing on infrastructure that allows us to begin cleanup projects in mercury-contaminated areas at Y-12

Mercury Treatment Facility – Headworks Facility

Mercury Treatment Facility – Treatment Plant

We are creating tangible benefits for Oak Ridge

ETTP

Deliver prime industrial park space, historic landmarks, and conservation areas

ORNL

Deliver restored land to support redevelopment and modernization efforts

Y-12

Prepare land for beneficial reuse to advance defense and security missions