



# GO EAST

## NEXT GENERATION STRATEGY AND PLAYBOOK

Reducing risks and eliminating environmental liabilities to enable critical missions and federal land reuse at ORNL and Y-12 and transformation at the Heritage Center

Department of Energy Oak Ridge Reservation  
Future Environmental Cleanup Plan





# Ready. Set. GO.

Our Next Generation Strategy and Playbook presents the game plan for future cleanup on the Oak Ridge Reservation (ORR). With completion of Vision 2020, major cleanup focus shifts to the east side of the ORR to tackle the environmental threats at the Oak Ridge National Laboratory (ORNL) and Y-12 National Security Complex (Y-12).

Our game-changing performance at the East Tennessee Technology Park is transforming the site into a multi-use industrial park—the Heritage Center. Beneficial reuse of the site—as a business park, historic landmark/national park, and conservation area—stands as a testament to the hard work, ingenuity, and commitment of our team.

Building on our Vision 2020 success and our investment-worthy brand, we will create an effective, sustainable cleanup program at ORNL and Y-12 that continues to reduce risks, eliminate hazards, and make federal land available for reuse to support critical national science and defense missions.

The visions for the next phase of ORR cleanup will include strategic goals for each site that enable notable outcomes for key stakeholders—DOE Headquarters, the American taxpayer, and the East Tennessee community. The plan includes work that UCOR will perform over the next two years of its contract as well as the work DOE Oak Ridge Office of Environmental Management (OREM) envisions for the years ahead.

## Lasting Impacts

Environmental cleanup creates positive impacts on multiple levels. First and foremost, successful cleanup reduces risks to the environment. Across the ORR, cleanup also enables science and security missions to endure, grow, and contribute for decades to come. Finally, effective cleanup enhances quality of life—leading to a stronger, more prosperous East Tennessee.

## Our Commitment

We remain committed to doing the right thing—for our workforce, neighbors, taxpayers, and the environment.

### Safety

Ensure the safety and protection of our workers, first and foremost

### Delivery Excellence and Integrity

Build what we sold; finish what we start

### Partnership

Communicate, coordinate, and integrate to achieve collective visions

### Stewardship

Maintain investment worthiness by being responsible stewards of the dollars and resources entrusted to us

# A Mission That Matters in East Tennessee

Delivering approaches that address complex environmental, regulatory, and operational challenges to reduce risks and make land available for federal reuse or economic development

## Strategic Visions to Transition and Transform

Enabling Notable Cleanup Outcomes

### VISION: HERITAGE CENTER



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

### VISION: ORNL



Restore land to support redevelopment and modernization efforts

### VISION: Y-12



Prepare land for beneficial reuse to advance defense and security missions

### OUTCOMES

Eliminate EM's long-term stewardship costs/liability and facilitate return of the site to the community for economic development

Reduce risks by eliminating hazardous, outdated structures to enable ORNL's growing national science missions

Mitigate the critical environmental threat of contamination and provide remediated land for reuse for critical national defense missions

# Recognizing our Achievements

## COMPLETION OF VISION 2020

**13.6 million square feet**

facilities safely deactivated and demolished

**1.7 million cubic yards**

radiological, hazardous, and sanitary waste dispositioned

**1,300 acres**

land transferred for beneficial reuse

**3,500 acres**

placed in conservation

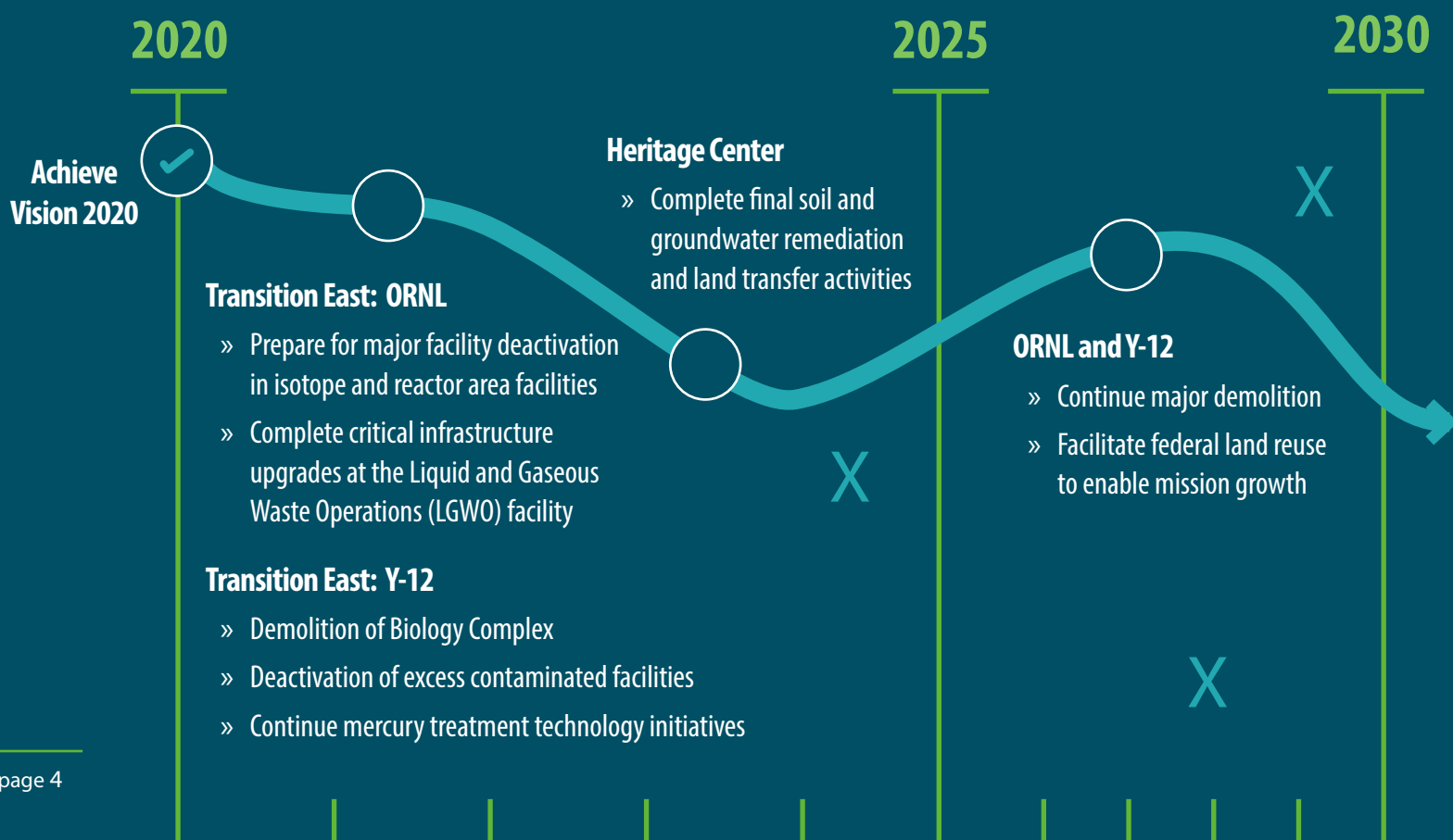
**New K-25 History Center**

honoring the men and women who built K-25

**First Manhattan Project site**

to reach major environmental cleanup completion

## The Game Plan



# Ready. Set. WIN.

## Delivering the next generation of cleanup on the ORR

### People

We will bring our unwavering commitment to safety and unmatched ability to solve problems to address ORR's next cleanup challenges. In addition, we will implement our established tools and processes to stay safe and productive.

### Partnerships

Partnerships with DOE Headquarters, appropriators, labor, regulators, and community enabled ETPP cleanup four years ahead of schedule and \$500 million under budget. We will continue to foster those relationships and forge new ones. Partnerships with our new neighbors and landlords (i.e., Office of Science, National Nuclear Security Administration, and their contractors) will be key to future cleanup success.

### Plan

To achieve Visions 2016 (all gaseous diffusion buildings demolished) and 2020 (all ETPP structures demolished), we developed a strategy, followed the playbook, and delivered the visions. We'll repeat that proven delivery model to achieve our next cleanup wins.

### Critical Plays

- » Align cleanup activities with science and national security mission priorities
- » Work with regulatory partners to reach final groundwater solution at Heritage Center
- » Pursue and demonstrate new technologies to resolve mercury issues at Y-12
- » Complete mission at Heritage Center with heightened focus on activities to achieve final end states
- » Maximize use of proven waste management approach
- » Establish a central campus for cleanup workforce to be near ORNL and Y-12 projects

## GAME ON



# VISION: HERITAGE CENTER

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

## Our Mission

Complete remaining activities to meet final regulatory commitments, transfer remediated land, and turn over landlord responsibilities

## To-Do List

- » Remove remaining contaminated soil
- » Complete closure activities
- » Construct remaining historic landmarks; turn over K-25 footprint to DOE's Office of Legacy Management (LM)
- » Maximize conservation opportunities and align with regional efforts

## Strategic Objectives

### Collaborate to Accelerate

- » Continue regulatory partnership to streamline issue resolution and expedite cleanup decisions
- » Create approaches that advance essential cleanup work as final regulatory decisions are in progress



## Pass the Baton

- » Accelerate transfer of the site from DOE's Office of Environmental Management (EM) to LM, reducing EM's long-term costs to maintain the site

## Laser Focus on the Target

- » Implement organizational structure to better direct activities that support Heritage Center end states

## The Finish Line—Notable Outcomes

- » Eliminate EM's long-term stewardship costs and facilitate return of the site to the community for economic development

## HERITAGE CENTER AT A GLANCE

- ~250 workers focused on final cleanup and closure and land transfer
- 20 private sector businesses in operation
- Home to K-25 History Center; future home of 409<sup>th</sup> National Park
- 3,500 acres in conservation

## DOE's vision for the site

### in 2 years

- Final groundwater remedy in place
- Balance of historic preservation facilities constructed
- All remaining EM workers relocated

### in 5 years

- All developable lands transferred
- All remaining government stewardship responsibilities transferred to Office of Legacy Management
- 409<sup>th</sup> National Park receiving visitors
- Coquí Pharma (building rendering pictured below) has plans to build a medical isotope facility on the property
- New Oak Ridge general aviation airport under construction



# VISION: ORNL

Restore land to support redevelopment and modernization efforts

## Our Mission

To clean up contaminated sites and structures to make land available for reuse

## To-Do List

- » Deactivate and demolish excess facilities such as radioisotope laboratories and research reactors
- » Remediate contaminated soil, water, and infrastructure
- » Treat, remove, and dispose of waste
- » Ensure 24/7 operations of the LGWO facility, which support 30+ active science missions
- » Provide operations, surveillance, and maintenance services at facilities and structures awaiting disposition

## Strategic Objectives

### Partner and Prioritize

- » Partner with ORNL to communicate the urgency of cleanup and how it supports ongoing and future missions
- » Prioritize cleanup projects to align with ORNL long-term goals

### Cleanup that Connects

- » Remediate north side of Central Avenue to create a more connected and walkable campus



## Upgrades that “Up the Game”

- » Complete upgrades at LGWO facility to ensure long-term operability and reliability
- » Pursue a modular low-level waste treatment system to address low-level radioactive sludge at LGWO

## Modernize and Transform

- » Demolish Experimental Gas-Cooled Reactor (EGCR) to make area available for future national science mission

## The Finish Line—Notable Outcomes

- » Reduce risks by eliminating hazardous, outdated structures to enable ORNL’s growing missions

### ORNL AT A GLANCE

- DOE’s largest science and energy laboratory, delivering scientific discoveries and technology breakthroughs
- 4,470 acres
- 4,750 workers, including scientists and engineers in more than 100 disciplines

## DOE’s vision for the site

### in 2 years

- High-hazard radioisotope facility removed from the heart of Central Campus
- Lifecycle extension upgrades at LGWO facility completed

### in 5 years

- Large parcels of land on Central Avenue available for reuse
- 1950s-era reactor demolished, removing major risk

### in 10 years

- Prime real estate at the heart of ORNL Central Campus ready for new critical missions
- Long-term high-activity, low-level waste capability developed
- Graphite reactor now accessible part of 409<sup>th</sup> National Park



# VISION: Y-12

Prepare land for beneficial reuse to advance defense and security missions

## Our Mission

To clean up contaminated sites and structures to reduce risks and make land available for reuse

## To-Do List

- » Deactivate and demolish large, aging excess facilities and mercury-contaminated buildings and equipment
- » Remediate contaminated soil, water, and infrastructure
- » Treat, remove, and dispose of waste; support defense mission with management and operations of ORR landfills

## Strategic Objectives

### Partner and Prioritize

- » Partner with Y-12 to communicate the urgency of cleanup to ongoing and future missions
- » Prioritize cleanup projects to align with Y-12 long-term goals

### Fast-track Federal Land Reuse

- » Complete deactivation, demolition, and remediation of Biology Complex, clearing footprint for state-of-the-art lithium facility



## Meet and Defeat

- » Use Mercury Working Group to consolidate, review, and assess existing mercury cleanup technologies
- » Pursue and demonstrate new technologies to advance mercury cleanup

## Target and Tackle

- » Target high-risk, high-cost facilities and infrastructure to accelerate Y-12 risk reduction

## The Finish Line—Notable Outcomes

- » Mitigate the critical environmental threat of mercury contamination and provide remediated land for reuse

## Y-12 AT A GLANCE

- DOE's national security site that maintains the U.S. nuclear stockpile, reduces global threats, and fuels the U.S. Nuclear Navy
- 800+ acre footprint
- 4,700 workers

## DOE's vision for the site

### in 2 years

- Shovel-ready footprint at former Biology Complex transferred to National Nuclear Security Administration (NNSA) for new Lithium Processing Facility project

### in 5 years

- Outfall 200 Mercury Treatment Facility operational
- High-security area reduced, allowing more efficient access for cleanup crews and equipment
- Select mercury-contaminated buildings ready for demolition

### in 10 years

- New Lithium Processing Facility on the former Biology Complex footprint
- Major progress in the removal of mercury-contaminated buildings



Mercury Treatment Facility Design



Future Rendering of Y-12



Please visit us to learn more  
[www.energy.gov/orem](http://www.energy.gov/orem) | [www.ucor.com](http://www.ucor.com)

Find us on:

