



U.S. DEPARTMENT OF  
**ENERGY**



# *20 Years of Progress...and more to come!*

**Ralph Skinner**

**Y-12 Projects**

**Environmental Management**

**Oak Ridge**

**Mercury Challenges in the Environment: A Technical Summit**  
**Nashville, TN ❖ October 22-23, 2009**

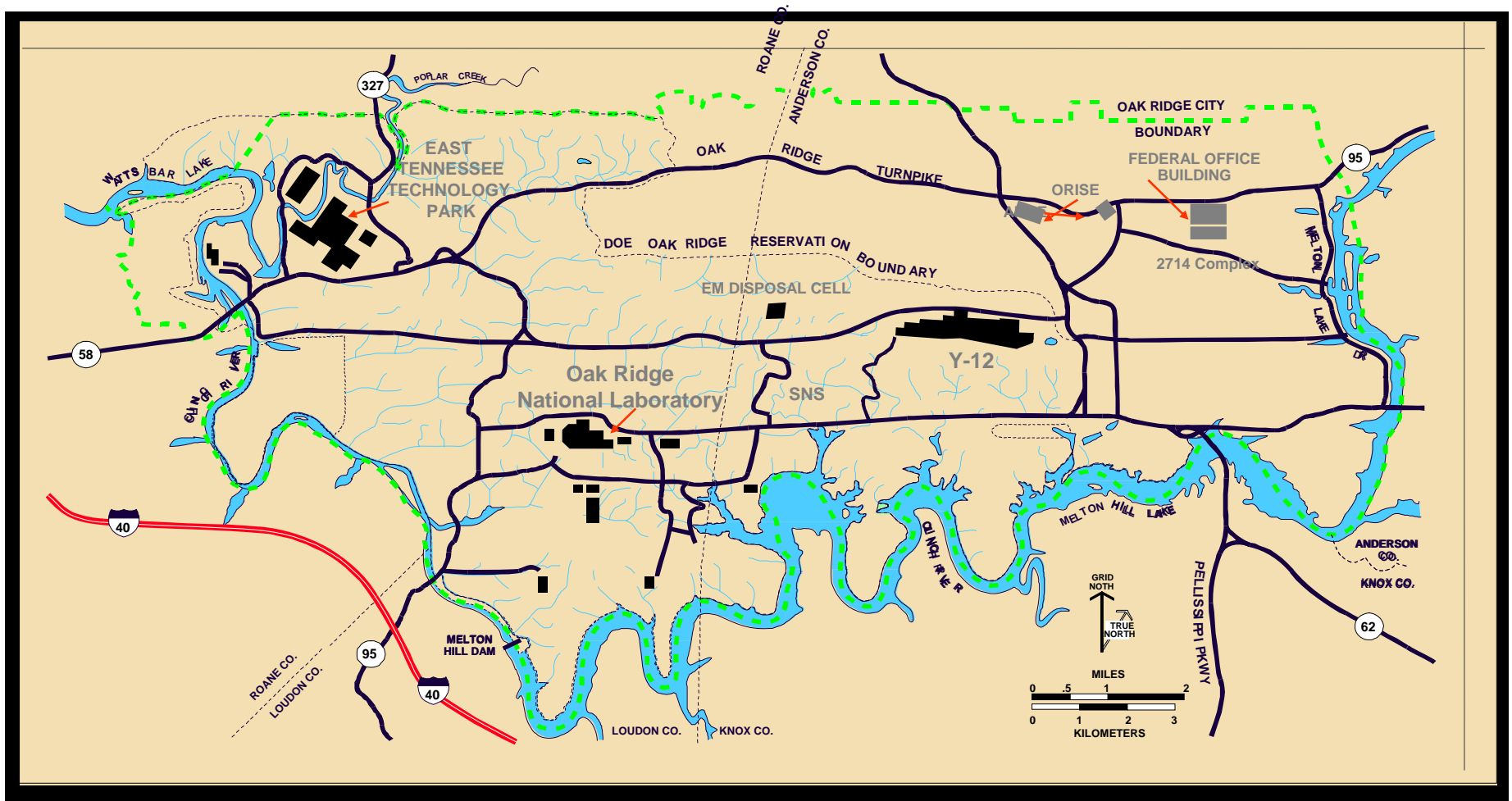


**EM Environmental Management**

safety ❖ performance ❖ cleanup ❖ closure

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# Oak Ridge Reservation



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# Oak Ridge EM Program Scope

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## ➤ The Problem

- **Water-rich environment that promotes contaminant transport**
- **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
- **6 shutdown reactors**
- **400 facilities in deteriorating condition**



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# Major Initiatives

## *TRU Waste Processing Facility*

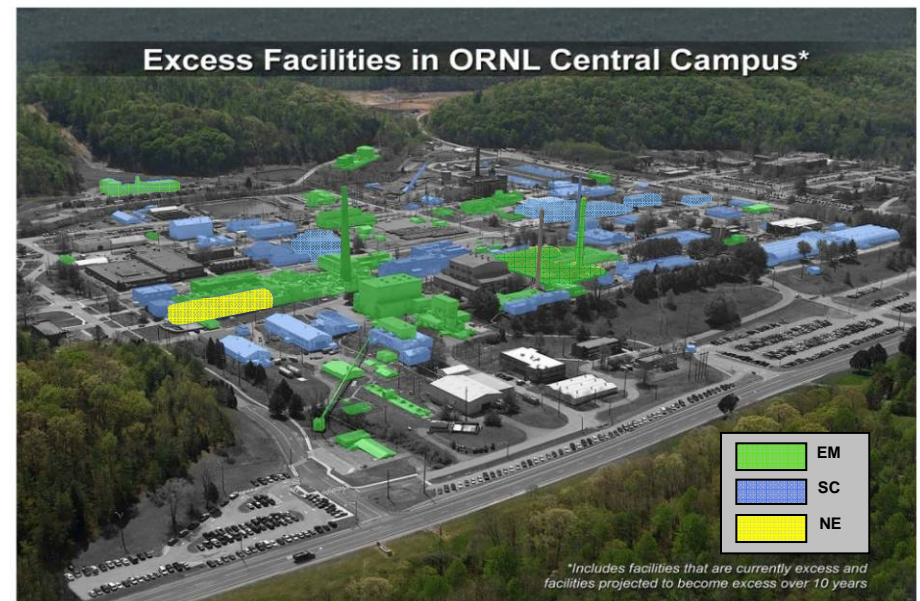


### < Processing of Supernate, Contact Handled and Remote Handled Transuranic Waste – Operated by EnergX

- 1,620 m<sup>3</sup> RH-LLW Supernate
- 1,400 m<sup>3</sup> CH-TRU/Alpha LLW Solids
- 1550 m<sup>3</sup> RH-TRU Sludge
- 700 m<sup>3</sup> RH-TRU/Alpha LLW Solids

## *U233 Disposition Project (Building 3019)*

- > **Safe, Secure and Cost Effective Permanent Disposition of U233 (Building 3019) – Operated by Isotek**



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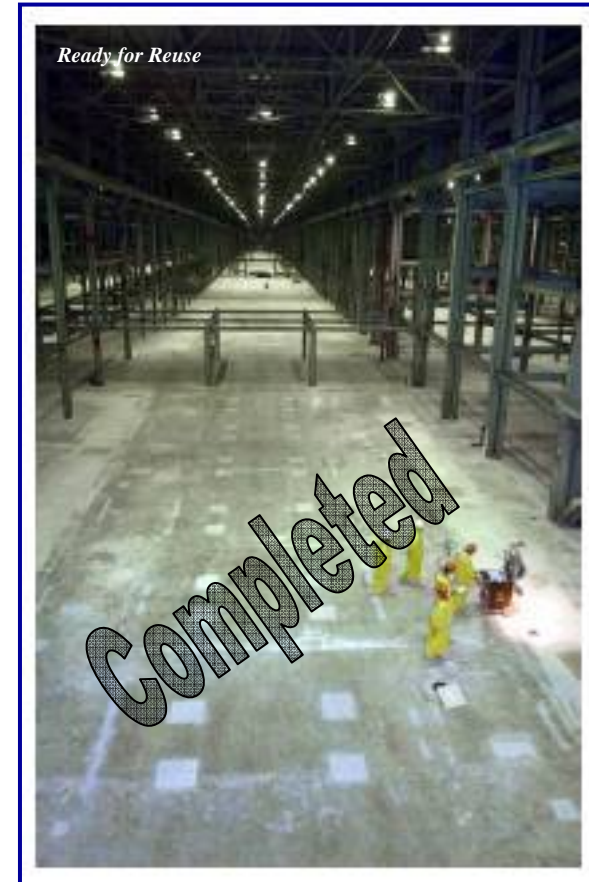
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# Major Initiatives

## *Three Building D&D – BNG America*

- 4.5M ft<sup>2</sup> of floor space
- 1530 converters, compressors and motors
- 480 miles of piping
- 83 miles of ventilated duct
- 330M lbs. of radioactive material removed & dispositioned



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# Major Initiatives

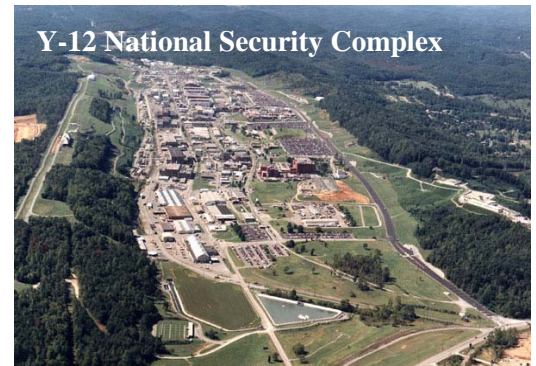
*ETTP Closure Project*



*Balance of Reservation Project*



*Y-12 National Security Complex*



*Melton Valley Closure Project*



*Legacy Waste Disposition*



*UF6 Cylinder Shipments*



*< Disposition of Legacy Waste, Cleanup at Melton Valley and ETTP- Executed by Bechtel Jacobs Company LLC*



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# Planned Accomplishments Base Work

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## ➤ FY2009

- Commence demolition of the one mile long K-25 processing facility
- Complete the last offsite project in Oak Ridge
- Over 100,000 cubic meters of contaminated soil and debris removed and disposed
- Begin shipment of contact handled and remote handled Transuranic (TRU) waste to the Waste Isolation Pilot Plant (WIPP)
- Complete the 18 year mission of the TSCA Incinerator
- 33 million pounds of Polychlorinated Biphenyl (PCB) and hazardous mixed waste treated

## ➤ FY2010

- Finish design and start construction for down-blending U233
- Demolition of the K-25 building nearing completion
- Complete processing of 50% of the legacy TRU waste debris inventory in Oak Ridge at the TRU Waste Processing Facility



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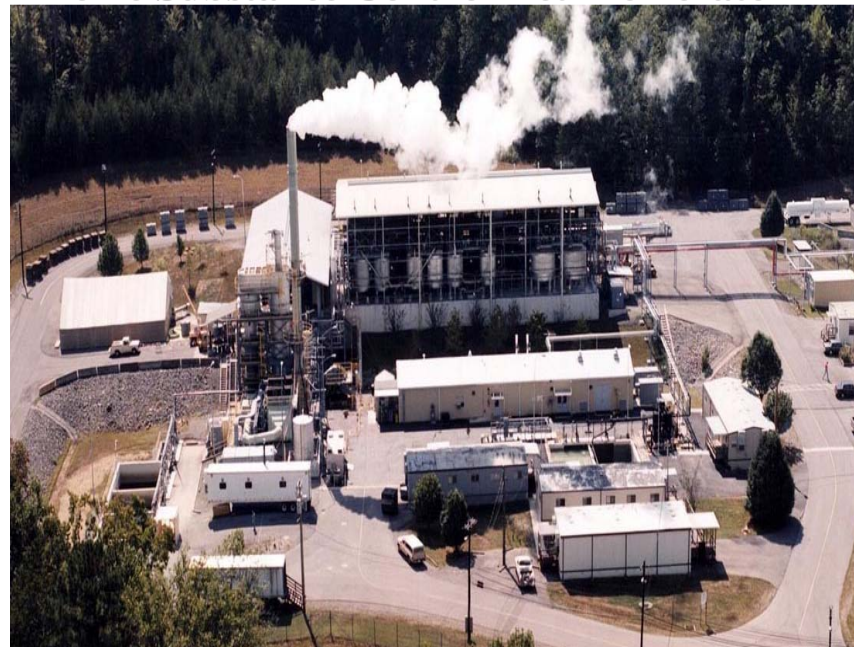
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**K-25 Building**



**Toxic Substance Control Act Incinerator**



**TRU Waste Processing Center**



**U-233**



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# American Recovery and Reinvestment Act Planned Accomplishments by end of FY2011

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## ➤ **East Tennessee Technology Park**

- Complete removal of high risk contaminated equipment and prepare gaseous diffusion building K-27 for demolition (383,000 square feet)

## ➤ **Oak Ridge National Laboratory**

- Demolish surplus contaminated facilities decreasing footprint by 188,000 square feet
- Complete remediation of last 7 acres of burial grounds in Melton Valley
- Complete Tank W1A Remedial Action (Corehole '8')
- Complete legacy materials removal and prepare buildings 3038 and 2026 for demolition
- Turn over land for Energy Park Initiative

## ➤ **TRU Waste Processing**

- Accelerate RH and CH TRU waste treatment on the Oak Ridge reservation and shipment to WIPP



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# American Recovery and Reinvestment Act Planned Accomplishments by end of FY2011

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## ➤ Y-12 National Security Complex

- Complete legacy material removal from the highest risk excess facilities at Y-12 (700,000 square feet)
- Remediate the most significant source of off-site mercury transport
- Demolish surplus contaminated buildings (150,000 square feet)
- Complete scrap removal at Y-12 Salvage Yard (7 acres)



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# East Tennessee Technology Park

**K-27 Ready  
for  
Demolition**

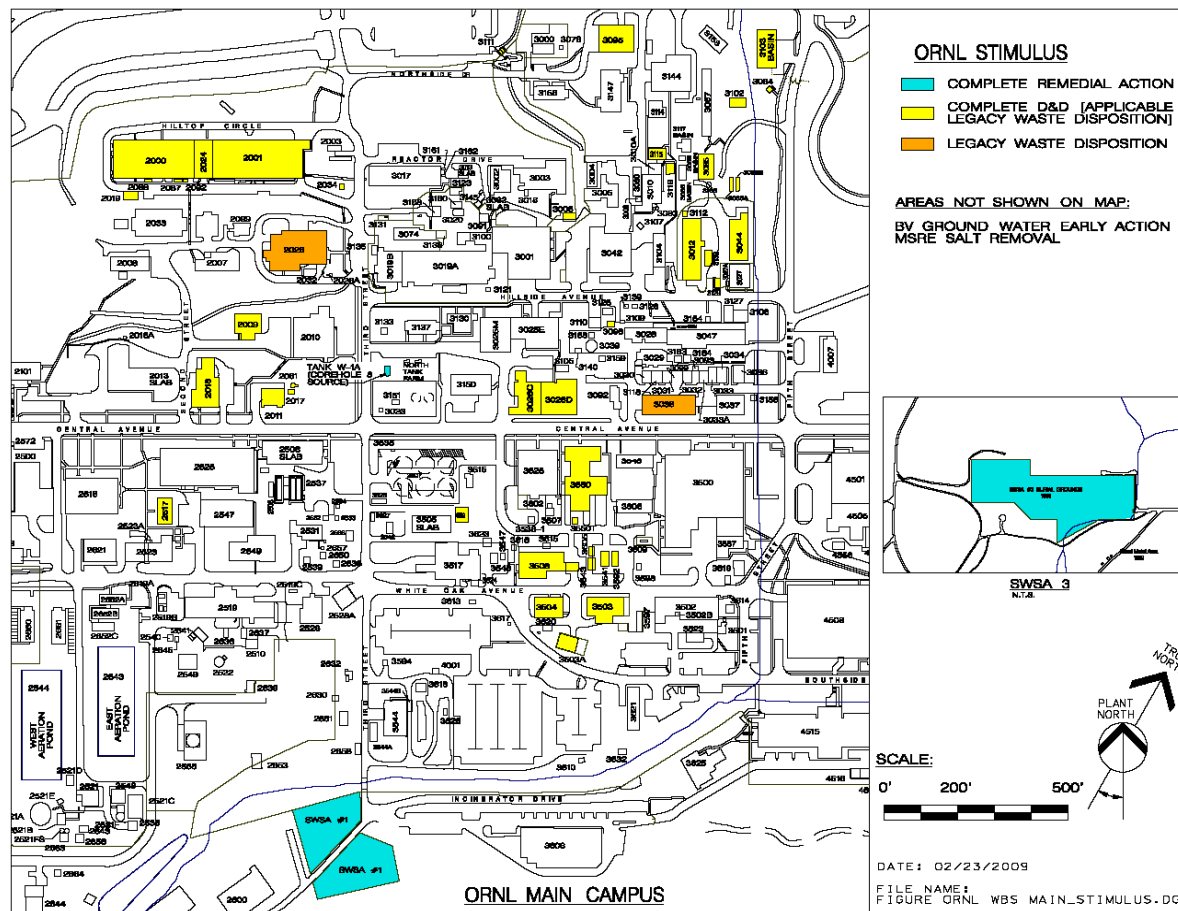


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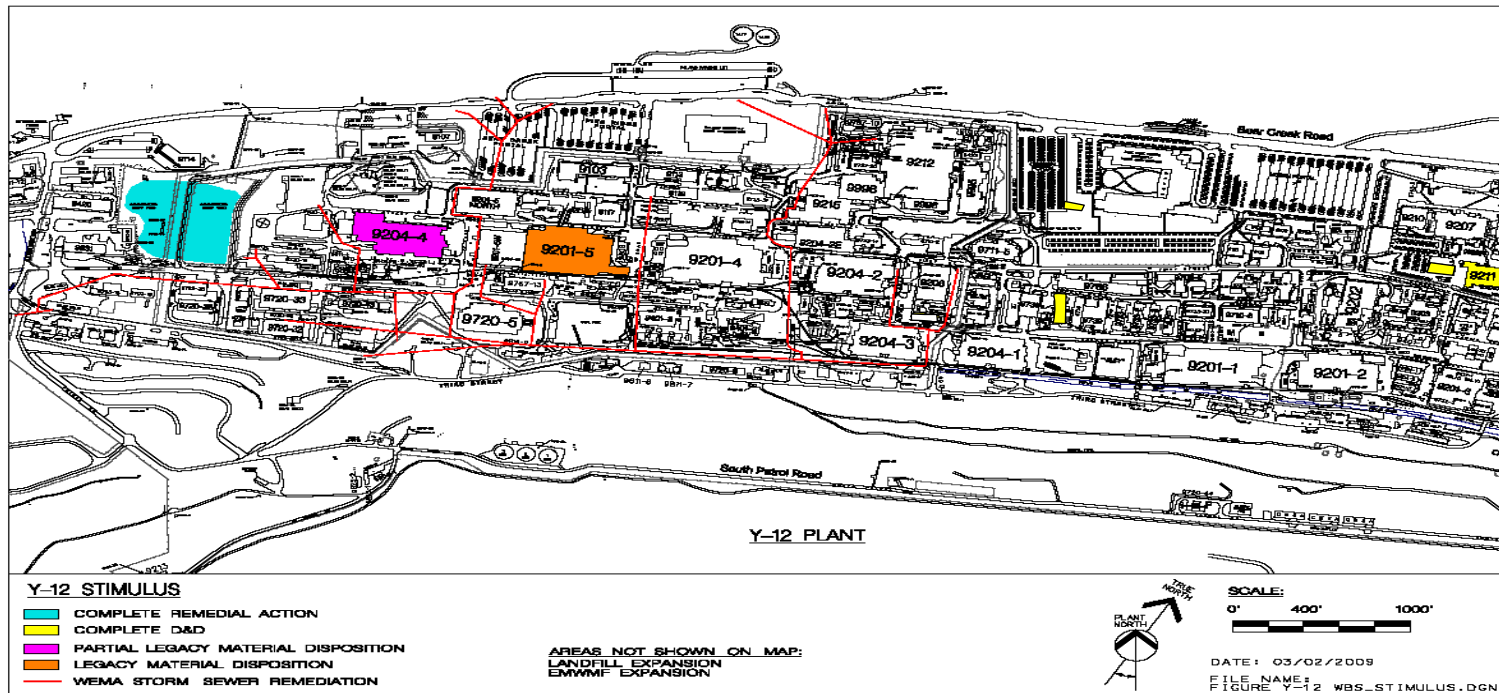
# Oak Ridge National Laboratory



- Complete Cleanup and/or D&D of several facilities in Central Campus
- Complete Tank W-1A remediation
- Demolish Building 3026 (Hot Cell Facility)
- Complete Capping Solid Waste Storage Areas 1 & 3



# Y-12 National Security Complex



- Perform Legacy material cleanout in Alpha 5 and Beta 4
- Complete West End Mercury Area Storm Sewer Remediation
- Complete Salvage Yard cleanout
- Complete Sanitary Landfill expansion
- Demolish Buildings 9211, 9220, 9224, 9769, and 9735
- Complete Environmental Management Waste Management Facility Landfill expansion



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# Oak Ridge National Laboratory



**Present**

**Future**



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# Y-12 National Security Complex

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**Present**

**Future**



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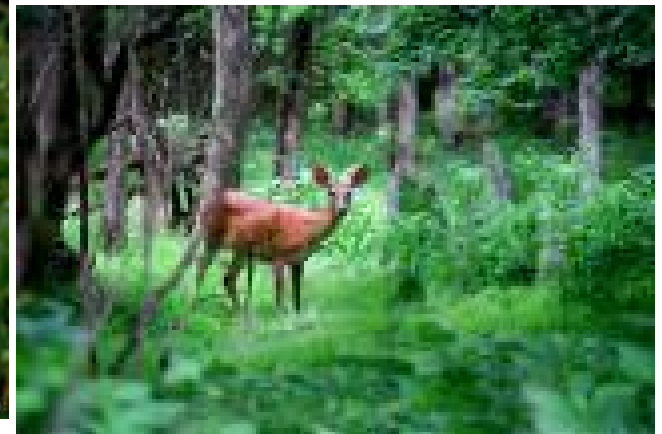
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# The Oak Ridge Office Commitment

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## The Oak Ridge Office is committed to:

- Reducing risks to the environment, citizens and employees by performing high priority work
- Safety of our employees and contractors, our highest priority



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