



U.S. DEPARTMENT OF
ENERGY



OAK RIDGE OFFICE

2009 NUCLEAR CLEANUP CAUCUS

April 30, 2009

GERALD BOYD
MANAGER, OAK RIDGE OFFICE
STEPHEN H. MCCRACKEN
ASSISTANT MANAGER FOR ENVIRONMENTAL MANAGEMENT



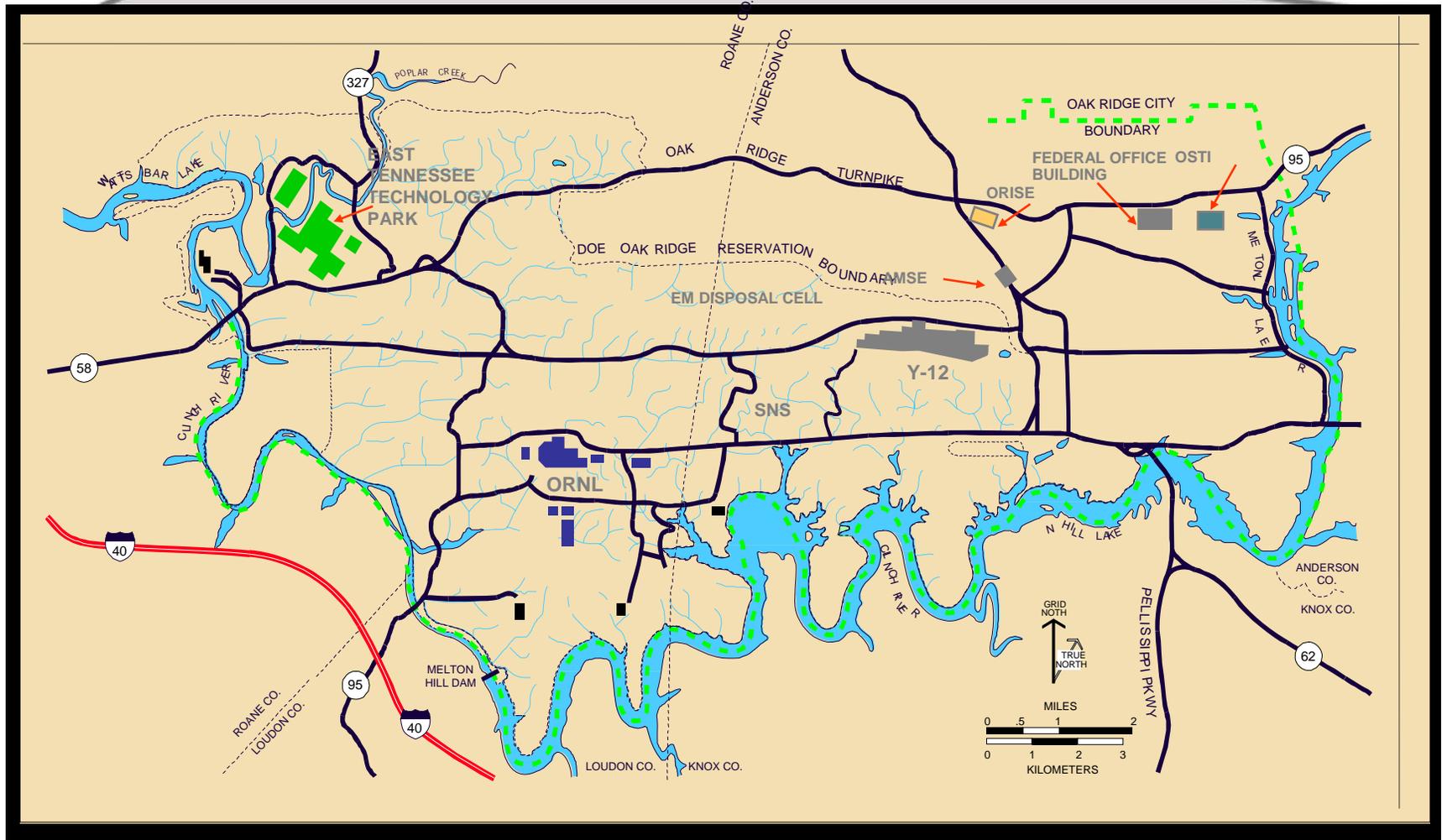
EM *Environmental Management*

safety ❖ performance ❖ cleanup ❖ closure

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Oak Ridge Reservation



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KEY OAK RIDGE MISSIONS



- Science and Technology
- Science Education
- Environmental Cleanup
- Energy & Nuclear Fuel Supply
- National Security
- Technology Transfer



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THE OAK RIDGE RESERVATION



Y-12 Site Office

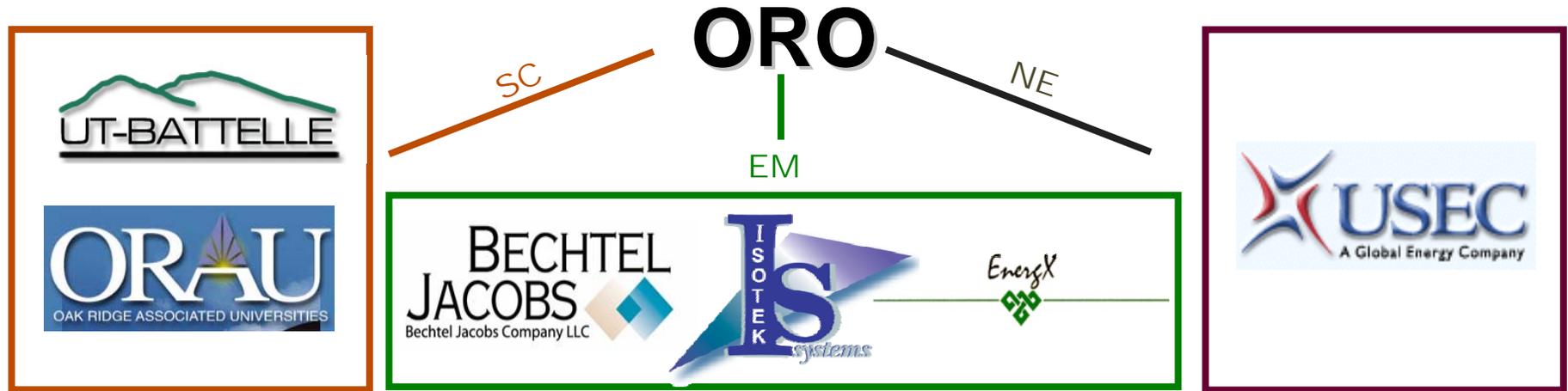
Office of Scientific and Technical Information



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MAJOR OAK RIDGE CONTRACTORS



NNSA



OSTI

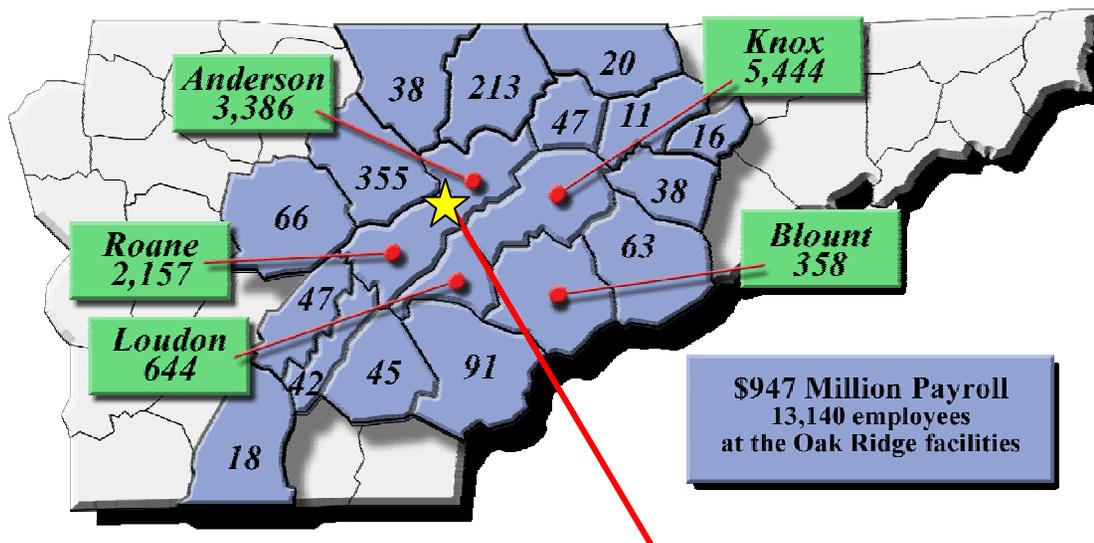


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ECONOMIC IMPACT OF DOE PROGRAMS IN TENNESSEE

Regional Impact



Misc. counties = 41

Oak Ridge Reservation

\$947 Million Payroll
13,140 employees
at the Oak Ridge facilities

Statewide Impact

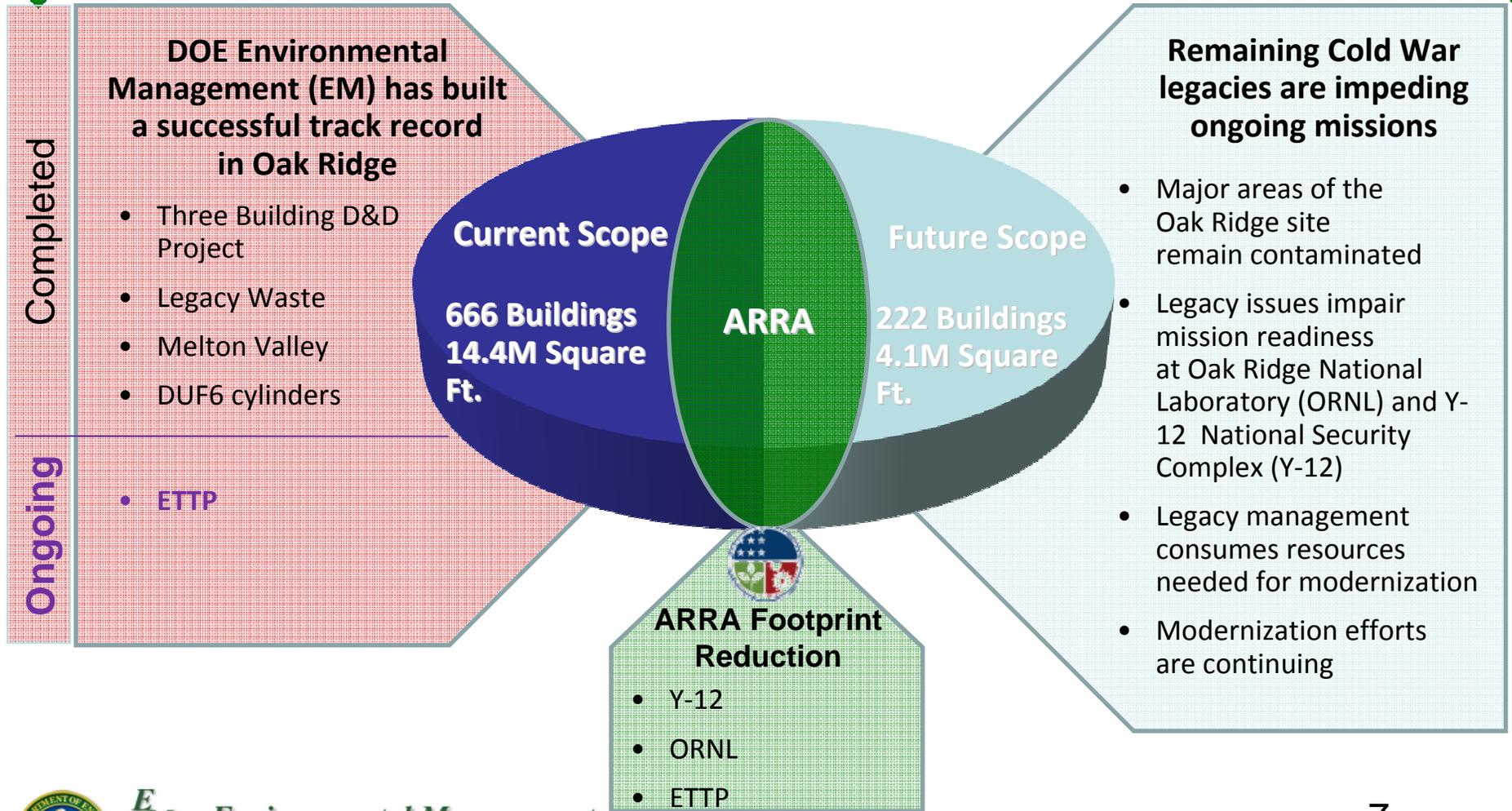
- \$3.7 billion – increase in gross state product
- \$75 million – state and local sales tax paid
- 4th – largest employer in the State of Tennessee



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COMPLETING THE ACCELERATED CLEANUP PROGRAM (ACP), BEGINNING THE INTEGRATED FACILITY DISPOSITION PROJECT (IFDP)



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FUNDING PROFILE – Oak Ridge FY2009

	FY2009 (\$M)
Appropriation	498.7
President's Budget Request	449.0

American Recovery and Reinvestment Act	755.0*
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*To ensure adequate controls only 80% of ARRA funds are being allotted to the sites for obligation against contracts. The remaining 20% is being held at Headquarters and will be released after the projects are demonstrating adequate performance. Additionally, only 24% of ARRA funds can be used until all contractor baseline plans have been submitted, reviewed, validated and approved.



BASE PROGRAM PLANNED ACCOMPLISHMENTS

■ 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

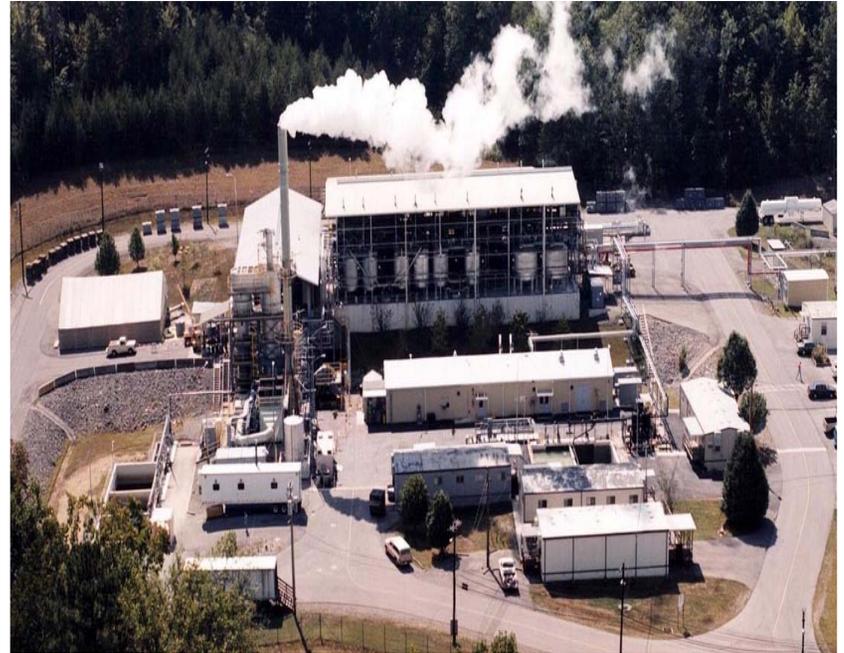
- Finish design and start construction for down-blending of Uranium 233
- Demolition of the K-25 building nearing completion
- Complete processing of 50% of the legacy TRU waste debris inventory in Oak Ridge at the TRU Waste Processing Facility



K-25 Building



Toxic Substance Control Act Incinerator



TRU Waste Processing Center



Uranium 233 Facility



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ARRA PLANNED ACCOMPLISHMENTS BY END OF FY2011

FOOTPRINT REDUCTION

- **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 the last 7 acres of burial grounds in Melton Valley
 - Complete Tank W1A Remedial Action (Corehole '8')
 - Complete removal of legacy materials and prepare buildings 3038 and 2026 for demolition
 - Turn over land
- **TRU Waste Processing**
 - Accelerate RH and CH TRU waste treatment on the Oak Ridge reservation and shipment to WIPP



ARRA PLANNED ACCOMPLISHMENTS BY END OF FY2011

FOOTPRINT REDUCTION

- **Y-12 National Security Complex**
 - Complete removal of legacy material 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 cleanup of the Y-12 Salvage Yard (7 acres)



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EAST TENNESSEE TECHNOLOGY PARK

K-27 Ready
for Demolition



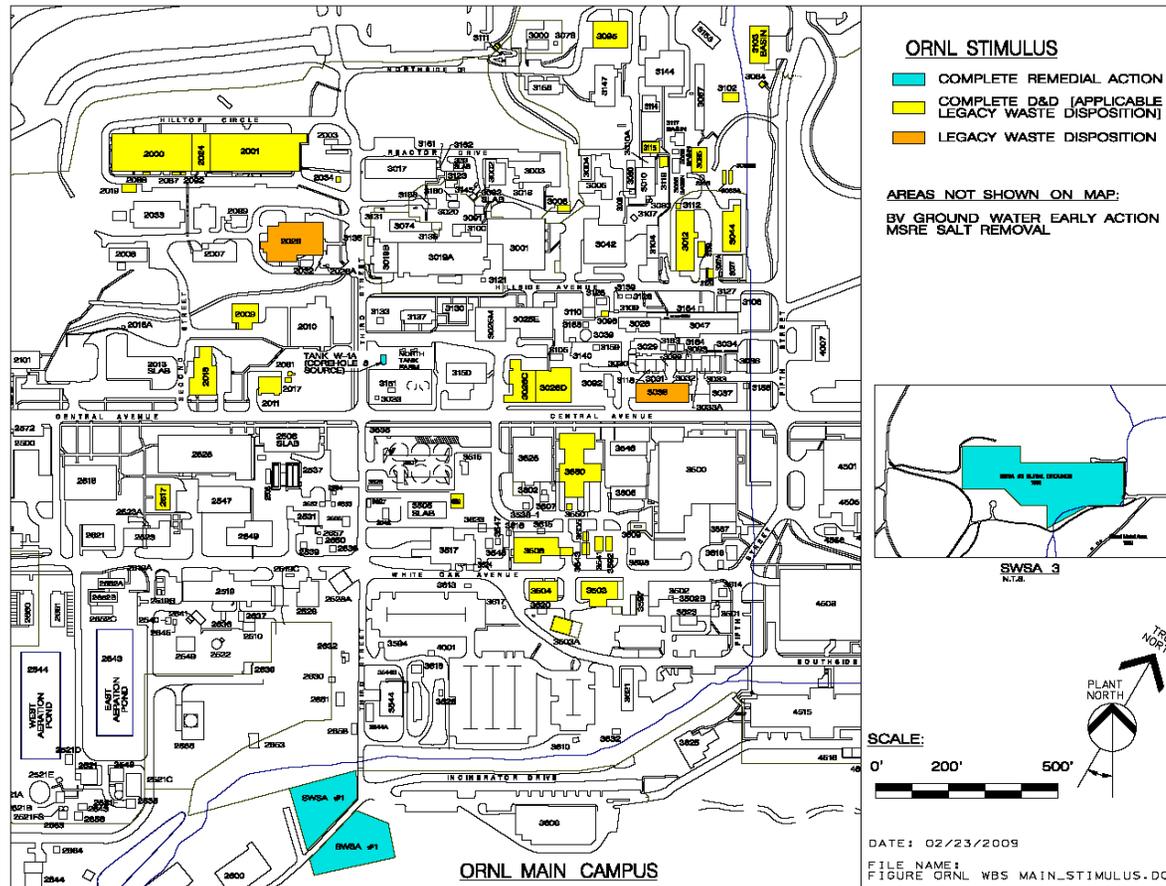
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Oak Ridge National Laboratory



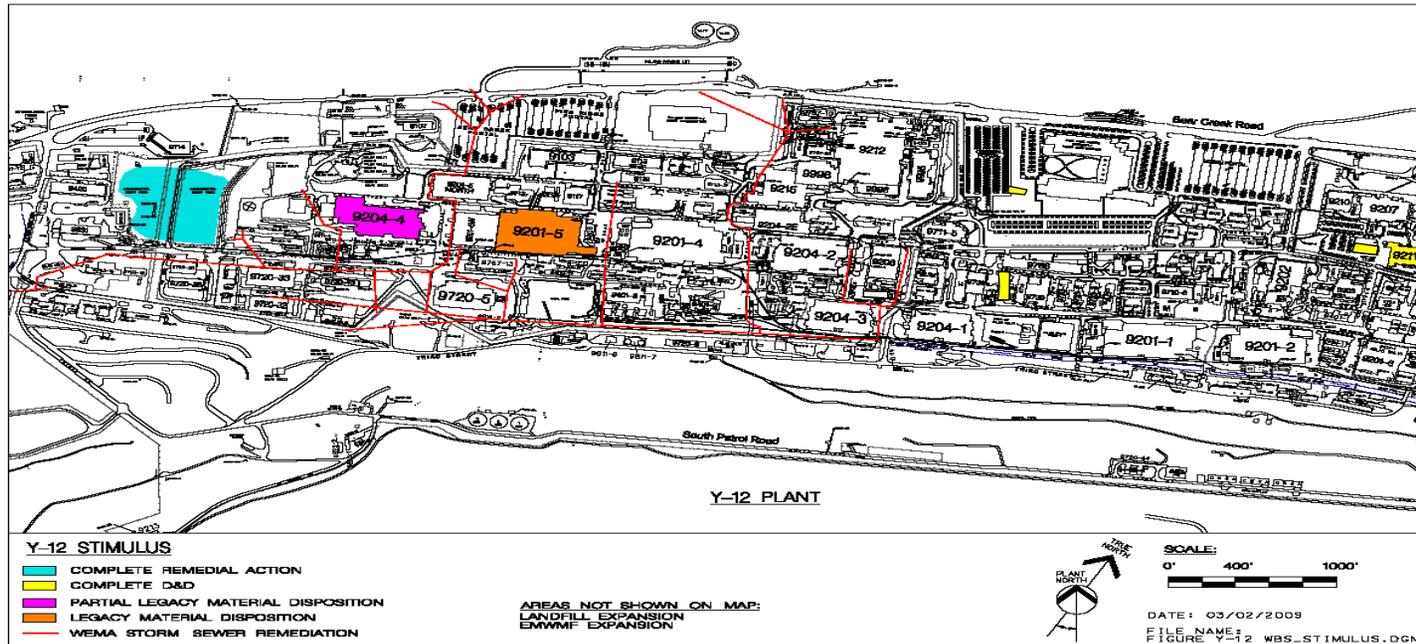
- Complete Cleanup and/or D&D of several facilities in Central Campus
- Complete Tank W-1A remediation
- Demolish Building 3026 (Hot Cell Facility)
- Complete Capping Solid Waste Storage Areas 1 & 3



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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 OFFICE COMMITMENT

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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Oak Ridge Reservation Cleanup Overview

2009 NUCLEAR CLEANUP CAUCUS

PAUL H. DIVJAK
PRESIDENT AND GENERAL MANAGER
BECHTEL JACOBS COMPANY LLC
April 30, 2009

Bechtel Jacobs Company Current Scope of Work

- East Tennessee Technology Park Remediation
 - K-25 demolition & waste disposal (historic mile-long uranium enrichment facility built in 1943)
 - K-27 Building demolition preparation
 - Demolition of other facilities
 - Remediation of soil, ponds, scrap yards, and burial areas
 - Toxic Substances Control Act Incinerator
 - Assist transfer of land and buildings for private use
- Operation of treatment facilities and landfills
- Cleanup of other specified areas



Safety

- Hazards include radiological and chemical contamination, unstable deteriorated structures and infrastructures, mold, electrical and other energy sources, and heavy equipment
- Hazard mitigation focuses on work control, worker involvement, and Human Performance Improvement (e.g., mitigated risks in K-25 Building by installing nets and barriers to protect workers from falling debris and limit access to deteriorated areas)

Safety Challenges



Typical hole
in roof



Installing
protective
nets



Damaged operating floor panel



Corbel
repair

East Tennessee Technology Park Remediation Progress to Date

- Deactivated 295 facilities
- Characterized 277 facilities
- Demolished 220 facilities
- Reduced footprint by 1.2 million ft²



East Tennessee Technology Park Remediation Progress to Date

- K-1401 Demolition and Backfill (500,000 ft² former site maintenance facility)—
Completed



K-1401
pre-demolition



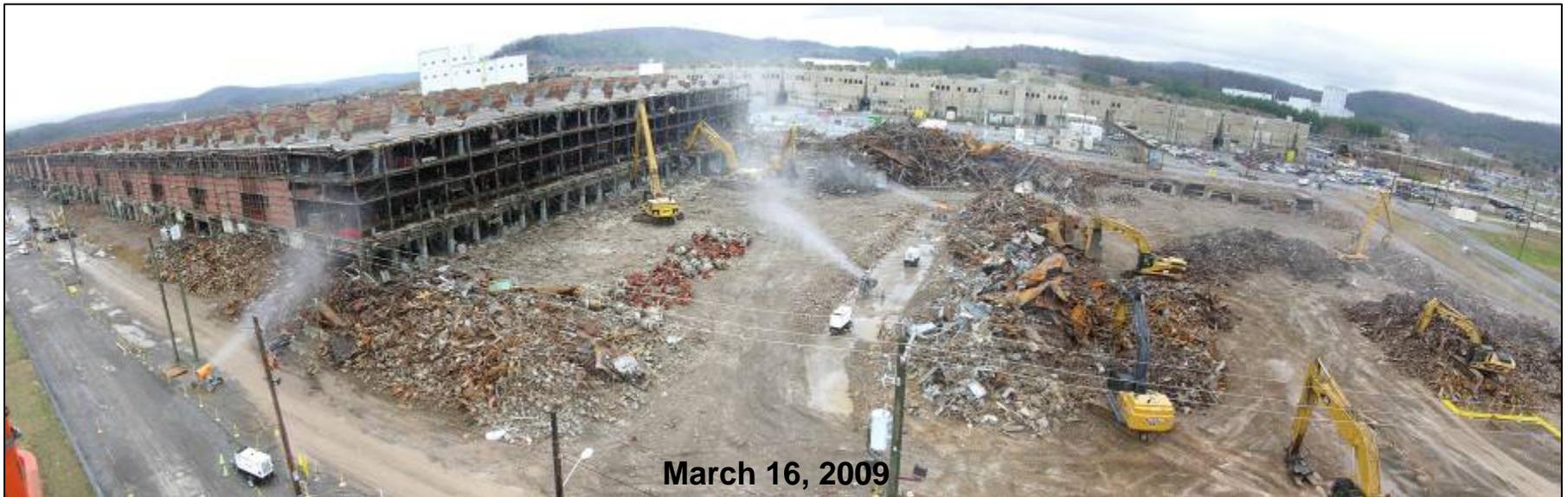
K-1401 area after
demolition and
backfilling
(October 2008)

ETTP Reindustrialization Facilities Transferred to Private Use



K-25 Demolition Under Way

- Demolition began Dec. 2008
- Entire building demolished and wastes disposed by Dec. 2011



Waste Management and Transportation System



- More than 15,000 loads transported 286,800 miles over the haul road without incident.
- More than 15,800 loads transported 1.55 million miles for off-site projects without incident.
- Radio Frequency Identification Device (RFID) system expedites shipment of demolition debris (12,000 truck loads scheduled in FY 2009).



Technology: Non-Destructive Assay Systems

- Testing for radiation without altering the material's chemical or physical state
- One-year performance testing and validation of four systems
- 250,000 measurements taken
- Measures fissile material content in piping & equipment
- Reduces number of physical samples required
- Reduces need for equipment disassembly



ETTP Pond Remediation

- Drain and recontour
- Plant native, aquatic vegetation to stabilize sediment
- Stock with suitable fish species
- Install barrier to limit movement of fish



Environmental/Public Interest Improvements

- Demolition of deteriorated facilities minimizes environmental release potential and worker hazards
- Reduces long-term operations and maintenance costs
- Mitigates potential soil, surface water, and groundwater contamination
- Suitable buildings and land are transferred to private ownership for commercial use