SECRETARY CHU’S KEY ARRA OBJECTIVES

- Start projects quickly
- Ensure projects have lasting value
- Provide public with unprecedented transparency
- Make a significant down payment on the Nation’s energy and environmental future

“We will turn this time of economic crisis into an opportunity to build a clean, secure, and prosperous energy future for America...”

~Dr. Steven Chu
Secretary of Energy
DOE received approximately $38 billion

- Energy Efficiency & Electricity Delivery $21.3B
- Fossil Energy $3.4B
- Environmental Management $6B
- Science $2B
- Other $6B
EM RECEIVED $6 BILLION IN ARRA FUNDING

- Directed towards existing scope that can most readily be accelerated
  - Soil and groundwater remediation
  - Radioactive solid waste disposition
  - Facility decontamination & decommissioning
- “Shovel-ready” projects
  - Fully-defined cost, scope, and schedule
  - Established regulatory framework
  - Proven technology
  - Proven performance
  - Existing contract vehicles
- Focus on EM completion and footprint reduction
- Recovery Act funding will accelerate approximately 55 compliance milestones

12 States, 17 Sites
Uranium/Thorium $69 million
Management & Oversight $70 million
30 MONTHS FROM ARRA PROJECT RAMP-UP TO CLOSEOUT

Plan
- Scope
- Contract
- Baseline
- Responsibility
- Authorities

Mobilize
- Recruit
- Hire
- Badge
- Medical
- Train
- Facilities

Prepare
- Train
- Hazard Identification
- Special Gear
- Procedures

Execute
- Project Teams
- Safety Engineering
- Turn Key
- Pieces

Closeout

Environmental Management
- safety
- performance
- cleanup
- closure
## EM Job Applicants, Jobs Saved & Created, and Job Fairs

**October 8, 2009**

<table>
<thead>
<tr>
<th>Location</th>
<th>Applicants</th>
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<td><strong>7,426</strong></td>
<td><strong>10,895</strong></td>
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MEETING THE CHALLENGE IN GETTING WORK DONE

South Carolina *(Savannah River Site)*

- 1 million gallons of hazardous waste from underground waste storage plants processed at the Saltstone Waste Processing Facility
- Deactivation and decommissioning (D&D) of the R Area nuclear reactor is underway

R Reactor Recovery Act workers at SRS saw fixture piping as D&D work begins.

SRS Recovery Act workers open up old test reactor to prepare it for demolition.

*EM* Environmental Management
safety  performance  cleanup  closure
MEETING THE CHALLENGE IN GETTING WORK DONE (CONT’D)

New Mexico (Los Alamos National Laboratory)
- Final canister or remote-handled transuranic waste shipped to the Waste Isolation Pilot Plant, completing key Consent Order milestone required by the State of New Mexico

Tennessee (Oak Ridge)
- Removal of excess equipment and scrap metal from Y-12 Beta 4 and Alpha 5 facilities has begun in preparation for D&D
- ORNL: Demolition and disposition of hot cells in building 3026, and legacy materials removal in the building 2026 complex in the Central Campus has begun.

New York (Brookhaven National Laboratory)
- Cleanup of cesium contaminated soil at the former Hazardous Waste Management Facility perimeter near completion, contributing to footprint reduction
Washington State *(Hanford Site)*

- Hanford broke ground on an $80 million groundwater treatment facility funded through the Recovery Act. The facility, to be completed in 2011, will be roughly the size of a football field.

Utah *(Moab)*

- 160,000 tons of uranium mill tailings were shipped between April and July 2009. Multiple train shipments per day will accelerate cleanup of Moab’s enormous uranium mill tailings pile.
Oak Ridge Office
Environmental Cleanup &
Recovery Act Work
THE OAK RIDGE RESERVATION

Oak Ridge National Laboratory

Oak Ridge Institute for Science & Education

Y-12 Site Office

East Tennessee Technology Park

Office of Scientific and Technical Information

Y-12 National Security Complex
## Oak Ridge Budget

<table>
<thead>
<tr>
<th></th>
<th>FY 2008</th>
<th>FY 2009</th>
<th>FY 2009 ARRA (ARRA)</th>
<th>FY 2010</th>
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<td>744 (666 – Grants)</td>
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<td>27</td>
<td>0</td>
<td>27</td>
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<td>Work for Others – ORO</td>
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<td>500</td>
<td>100</td>
<td>500</td>
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<td>NNSA/Y-12</td>
<td>976</td>
<td>903</td>
<td>---</td>
<td>909</td>
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<td><strong>Total Oak Ridge</strong></td>
<td>$3,026</td>
<td>$3,131</td>
<td><strong>$1,780</strong></td>
<td>$3,093</td>
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*Energy & Water Appropriations -- Budget Authority in Millions of Dollars*
Completing the Oak Ridge Environmental Cleanup Mission

Cleaning up remaining Cold War legacies will
- Protect current missions
- Support future missions
- Potential demolition of more than 400 facilities (5 million sq. ft.)
- Allow shifting of resources to mission-critical functions
- Support facilities revitalization by creating areas for future development
- Assure maintenance of a trained and experienced workforce
- Resolve legacy issues to support future mission readiness at Oak Ridge National Laboratory (ORNL) and Y-12 National Security Complex (Y-12)

DOE Environmental Management (EM) has built a successful track record in Oak Ridge
- Three Building D&D Project
- Legacy Waste
- Melton Valley
- DUF6
- ETTP
- TRU Waste Processing
- U233 Disposition
- TSCA Incinerator
- ORNL/Y-12 Limited Scope (Current Baseline)

Future Scope

Current Scope
**Major Project Completions**

**Three Building D&D Project**

K-29 building was demolished while K-31 & K-33 are ready for reuse

- 4.5M ft² of floor space
- 1530 converters, compressors and motors
- 480 miles of piping
- 83 miles of ventilated duct
- 330M lbs. of radioactive material removed & dispositioned

**Legacy Waste Disposition Project**

This project was completed in September 2005. Total volume of waste processes was approximately 1.25 million ft³

- Sorting, segregating, treating and disposal of 22,000 containers of low-level
- Sorting, segregating, treating and disposal of 4,000 containers of mixed low-level waste
- The total volume of waste was enough to cover a standard football field from end zone to end zone, high enough to reach the top of the goal posts.
Melton Valley Closure Project

- Approximately 1,000 acre site was remediated
- Placed Engineered barriers on 145 acres
- Removed 204 concrete waste casks
- Excavated 50,000 yd³ of soil
- Transported over 142,000 truckloads of materials over 1.2 M miles

Uranium Hexafluoride Cylinder Removal

- Total number of cylinders shipped to Portsmouth = 5,925
- Number shipped to disposal at NTS = 1,243
- Number shipped to disposal at Envirocare/Energy Solutions of Utah = 77
- Total = 7,245
EAST TENNESSEE TECHNOLOGY PARK

2003

2016

Environmental Management
safety  performance  cleanup  closure
Project highlights

- Cleaning out and demolishing K-25 Building
- Continued excavation of classified landfill (K-1070B)
- Cleanup of K-770/powerhouse area
- Demolition ready work on K-27

K-25 Building
**CONTINUED ACTIVITIES**

**TRU Waste Processing Facility**

- This project was constructed for the processing of Supernate, Contact Handled and Remote Handled Transuranic Waste.
- Under ARRA have accelerated waste processing via a two shift operation.
- Completion dates:
  - CH - 2013
  - RH - 2014

**U233 Disposition Project (Building 3019)**

- Safe, Secure and Cost Effective Permanent Disposition of U233 (Building 3019)
- Completion date: 2016
• TSCA: Processing a small amount of remaining MLLW/PCB waste, primarily rinsing material from the TSCA Incinerator tank farms.
• Completion of operations by late November 2009.
Completing the Oak Ridge Environmental Cleanup Mission

Cleaning up remaining Cold War legacies will:
- Protect current missions
- Support future missions
- Potential demolition of more than 400 facilities (5 million sq. ft.)
- Allow shifting of resources to mission-critical functions
- Support facilities revitalization by creating areas for future development
- Assure maintenance of a trained and experienced workforce
- Resolve legacy issues to support future mission readiness at Oak Ridge National Laboratory (ORNL) and Y-12 National Security Complex (Y-12)

DOE Environmental Management (EM) has built a successful track record in Oak Ridge:
- Three Building D&D Project
- Legacy Waste
- Melton Valley
- DUF6
- ETTP
- TRU Waste Processing
- U233 Disposition
- TSCA Incinerator
- ORNL/Y-12 Limited Scope (Current Baseline)
**Facilities by Site and Program Office**

<table>
<thead>
<tr>
<th>Site</th>
<th>EM</th>
<th>NE</th>
<th>NNSA</th>
<th>SC</th>
<th>Total</th>
<th>Excess Space (ft²)</th>
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<tr>
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<td>1</td>
<td>0</td>
<td>124</td>
<td>327</td>
<td>1.48 M</td>
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<td>Y-12</td>
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<td>1</td>
<td>79</td>
<td>17</td>
<td>112</td>
<td>3.85 M</td>
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<td>Total</td>
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<td>2</td>
<td>79</td>
<td>141</td>
<td>439</td>
<td>5.3 M</td>
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</table>
Execution of EM ARRA work involves **four** sites, **four** prime contractors, **three** DOE program offices, and **three** funding sources: Defense, Non-Defense, and D&D

- **ORNL (SC):** Multiple contracts ($230 M)
  - UT-Battelle will execute subcontracts
  - Bechtel Jacobs Company will self-perform and execute contracts
  - Oak Ridge Office will administer three ID/IQ prime contracts
- **Y-12 (NNSA):** B&W Y-12 will manage the work through subcontracts ($327 M)
  - ORO Environmental Management program will provide oversight, along with Y-12 Site Office
- **ETTP (EM):** Bechtel Jacobs will perform work at Building K-27. ($118 M)
- **TRU Waste Processing Center (EM):** Additional shift work added on to existing contract ($80 M)
The American Reinvestment and Recovery Act will provide $320 million over the next 2 ½ years to perform environmental remediation and facility demolition work at ORNL. This work will reduce the risk from Cold War legacies, help modernize ORNL into a sustainable research campus, and help create and save jobs that will stimulate the economy.

- **2000 Complex**
  - demolish 8 facilities
  - 61,776 ft²

- **General Maintenance Facilities I**
  - demolish 6 facilities
  - 122,526 ft²

- **Corehole 8 Plume**
  - install groundwater collection system

- **2026 Legacy Material Removal**
  - remove chemicals, tools, waste, etc.
  - 26,641 ft²

- **3026 Complex**
  - demolish wooden structure
  - demolish hot cells
  - 19,842 ft²

- **General Maintenance Facilities II**
  - demolish 10 facilities
  - 26,913 ft²

- **2026 Legacy Material Removal**
  - remove gloveboxes, tools, waste, etc.
  - 7,773 ft²

- **3038 Legacy Material Removal**
  - remove gloveboxes, tools, waste, etc.
  - 7,773 ft²

- **TRU Waste Processing Facility (located in Melton Valley)**
  - remove tank
  - remove TRU soils
  - increase processing of TRU waste for shipment to WIPP

- **SE Contaminated Lab Complex**
  - demolish 7 facilities
  - 24,991 ft²

- **ORNL Small Facilities Complex**
  - demolish 8 facilities
  - 32,348 ft²

- **3026 Complex**
Recovery Act Projects at the Y-12 National Security Complex

At Y-12, $267 million in funding from the American Reinvestment and Recovery Act will be used to accomplish a large scope of environmental and infrastructure work over the next 2½ years. This work will create and save jobs throughout East Tennessee, stimulate the economy, reduce risks from Cold War legacies, and further Y-12’s physical transformation.

**Beta 4 Legacy Material Removal**
- Remove legacy material, including items, tooling, and uninstalled equipment
- Affected area: 82,000 ft²

**West End Mercury Area**
- Assess storm sewer system and plan mitigation of mercury intrusion
- Affected area: estimated 11,500 LF of storm sewer cleaned and 2,650 LF relined

**Building 9206**
- D&D filter house

**Building 9735**
- Demolish to slab and remove waste
- Affected area: 15,043 ft²

**Old Salvage Yard**
- Remove ~31,000 yd³ of scrap metal
- Affected area: 7 acres

**Alpha 5 Legacy Material Removal**
- Remove legacy material, including items, tooling, and uninstalled equipment
- Affected area: 613,642 ft²

**Building 9769**
- Demolish to slab and remove waste
- Affected area: 20,050 ft²

**Biology Complex**
- Demolish three buildings to slab and remove waste
- Affected area: 115,762 ft² (total)
American Recovery and Reinvestment Act
Oak Ridge Landfills

Oak Ridge Reservation Landfill

Sanitary, industrial, construction, and demolition waste are disposed of at the Oak Ridge Reservation Landfill. The expansion will increase capacity by 385,000 yd³.

Environmental Management Waste Management Facility

EMWMF was constructed as a repository for waste generated as part of BJC’s cleanup work. The current capacity is 1.2 million yd³ (Cells 1-4). An expansion (Cell 5) will increase the capacity to 1.65 million yd³.
ISSUES

• Managing multiple contractors
• Meeting aggressive schedules
• Maintaining a proper safety environment as we bring on hundreds of new workers
• Ensuring appropriate contract administration
• Meeting reporting requirements
• Coordinating with Regulators
  – Waste Handling Plans
  – Design documents
  – Completion documents
FOOTPRINT REDUCTION

Economic Stimulus

Office of Environmental Management (EM)

EM footprint reduction, small site completions, and additional investment opportunities

Jobs created
Lifecycle cost reduced
Environment protected
Footprint reduced

Energy Parks

Clean, Diverse Energy Sources
• Energy security
• Establish long-term site mission
• Sustainable jobs

Large tracts of land and infrastructure available
ITRC HAS ADDED GREAT VALUE

- ITRC is working on issues of great importance to the Federal Government.
- State involvement has advanced technology to current day use.
- There is increased knowledge of Environmental Technologies within the regulatory community.
- Cost to the DOE for regulatory acceptance has decreased.
- Use of more advanced technologies to lower cost and provide better cleanup has substantially increased in the last 10 years.
- Availability of guidance documents and training has facilitated the process.
- Partnering between the DOE and the regulators to find the best solutions has improved.