20 Years of Cleanup Progress

- We have made progress in reducing environmental risk and have eliminated some of the most urgent risks
  - 2,300 tons of corroding spent nuclear fuel dried, moved to safe storage in the Central Plateau
  - 20 tons of unstable plutonium in various forms stabilized, packaged and shipped off site
  - Treating 50 million gallons of contaminated groundwater each month
  - 48,000 out of 70,000 drums worth of solid, radioactive waste (transuranic) retrieved
  - Demolished 187 out of 625 facilities along the Columbia River, 5 of 8 reactors placed in interim safe storage
  - Cleaned up 446 of ~800 waste sites along the Columbia River
  - Disposed of 8.3 million tons of waste in the Environmental Restoration Disposal Facility
Safe and Effective Cleanup that Protects the Columbia River

- Reduces the Active Site Footprint of Cleanup to 75 Square Miles (586 to 75)
- Significantly Reduces Long-Term Mortgage Costs
- At Completion, Shifts Emphasis and Resources to Full Scale Cleanup of the Central Plateau (75 square miles)
- Reduces Costs by “Right Sizing” Hanford’s Infrastructure via a Mission Support Contract
- Minimizes Injury to Natural Resources

Richland Operations Office

**K Area**
- K East Basin Demolished
- Interim Safe Storage of K East Reactor Complete
- K West Sludge Removed from the River Corridor
- Interim Safe Storage of K West Reactor Initiated
- All K Area Final ROD Remedial Actions Complete and TSD Units Closed with the exception of those associated with K West
- All K Area Groundwater Remedies Implemented
- 2300 Tons of Scrap Nuclear Fuel Removed
- 109 Facilities Demolished
- 2 Waste Sites Remediated
- ~361,000 Tons of Soil Removed

**B & C Area**
- Interim Safe Storage of C Reactor Complete
- B Reactor Designated as a Museum or Interim Safe Storage Complete
- All B & C Area Final ROD Remedial Actions Complete
- All B & C Area Groundwater Remedies Implemented
- 6 Facilities Demolished
- 40 Waste Sites Remediated
- ~381,000 Tons of Soil Removed

**N Area**
- Interim Safe Storage of N Reactor Complete
- All N Area Final ROD Remedial Actions Complete and TSD Units Closed
- All N Area Groundwater Remedies Implemented
- 108 Facilities Demolished
- 61 Waste Sites Remediated
- ~157,000 Tons of Soil Removed

**D & H Area**
- Interim Safe Storage of D, DR, and H Reactors Complete
- All D & H Area Final ROD Remedial Actions Complete
- All D & H Area Groundwater Remedies Implemented
- 16 Facilities Demolished
- 56 Waste Sites Remediated
- ~1,700,000 Tons of Soil Removed

**IU2 & IU6 Area**
- Interim Safe Storage of F Reactor Complete
- All IU2 & IU6 Area Final ROD Remedial Actions Complete
- All IU2 & IU6 Area Groundwater Remedial Actions Complete
- 1 Facility Demolished
- 50 Waste Sites Remediated
- ~962,000 tons of Soil Removed

**Central Plateau Cleanup**
- All 200 West Carbon Tetrachloride, Uranium and Technetium 99 Groundwater Remedies Implemented
- Conduct Additional Cleanup as Funds Become Available

**300 Area**
- All 300 Area Final ROD Remedial Actions Complete and TSD Units Closed
- All 300 Area Groundwater Remedies Implemented
- 186 Facilities Demolished
- 95 Waste Sites Remediated
- ~923,000 Tons of Soil Removed
- Final Remediation of 618-10 & 618-11 Burial Grounds Complete

**Plutonium Finishing Plant Complex**
- All Special Nuclear Material Shipped Off-site
- Slightly Irradiated Fuel Shipped to the Canister Storage Building for Safe Guarding
- PPP Complex Reduced to Slab on Grade
- 18 Facilities Demolished

**200 Area**
- Fast Flux Test Facility in Surveillance and Maintenance

**400 Area**
- All 400 Area Final ROD Remedial Actions Complete and TSD Units Closed
- All 400 Area Groundwater Remedies Implemented
- 186 Facilities Demolished
- 95 Waste Sites Remediated
- ~923,000 Tons of Soil Removed
- Final Remediation of 618-10 & 618-11 Burial Grounds Complete

* Does not reflect all work

**Legend**
- IU = Isolated Unit
- ROD = Record of Decision
- TSD = Treatment, Storage, Disposal
Strategy for Cleanup – Shrinking the Footprint

Reduce the active cleanup footprint from 586-square miles to 75-square miles or less by 2015, then to 10 square miles

Work in four areas

- River Corridor (~210 sq. miles)
- Central Plateau, Outer Zone (~65 sq. miles)
- Central Plateau, Inner Zone (~10 sq. miles)
- Hanford Reach National Monument (~300 sq. miles, including Arid Lands Ecology Reserve)
Strategy for Cleanup – Priorities

- Protect the Columbia River
- Contain/treat contaminated groundwater
- Clean out and demolish the high-hazard Plutonium Finishing Plant
- Remediate waste sites in Central Plateau Outer Area
- Retrieve buried, solid radioactive waste (transuranic waste)
2015 Vision FY09 Progress - 300 Area

- All 300 Area Groundwater Remedies Implemented
  - Natural attenuation and monitoring determined not adequate
  - Remedial technologies to sequester technologies are being tested
  - Uranium geochemistry and transport research underway - funded by DOE Office of Science

- 16 Facilities Demolished
- 3 Waste Sites Remediated
- 134,549 Tons of Soil Removed
- Non-intrusive Sampling Underway at 618-10 Burial Ground, Plans Underway for 618-11
2015 Vision FY09 Progress - IU2 & IU6 Area

- 1 Facility Demolished
- 3 Waste Sites Remediated
- 49 tons of Soil/Debris Removed
- Orphan Site Evaluation Field Inventory continued. A total of 9,595 acres covered has yielded 58 new waste sites.
All D & H Area Groundwater Remedies Implemented

- Completed expansion of HR-3 Pump & Treat system
- Design for expanding 100-D Pump & Treat system in progress

4 Facilities Demolished
2 Waste Sites Remediated
426,729 Tons of Soil Removed
Load out of Overburden and dust control at 100-D-31
June 2009

116-DR-5 Pipe Demolition – April 2009

100-D-31 Overburden Excavation – April 2009

All N Area Groundwater Remedies Implemented

- Experimenting with apatite barrier

- 4 Facilities Demolished

- 1 Waste Site Remediated

- 37,215 Tons of Soil Removed
2015 Vision FY09 Progress - B & C Area

- B Reactor Designated as a Museum or Interim Safe Storage
  - Designated a National Historic Landmark, National Park Service preservation study in progress
  - Provided 94 public tours for 3,800 individuals
- 1 Waste Site Remediated
- 33,287 Tons of Soil Removed
2015 Vision FY09 Progress - K Area

- Demolished K East Basin in FY2009*
  - Filled more than 1,000 ERDF containers with debris
- Will initiate remediation of soil under the K East Basin this month
- Expanded 100 K Area groundwater treatment system
  - New facility began operating
  - Treatment capacity at 100 K tripled to 35 million gallons per month
  - Installed 24 new wells for injection and extraction to support the expansion of treatment capability
- 1 Waste Site Remediated
- 11 Facilities Demolished
- 35,000 Tons of Soil/Debris Removed

*99% complete as of Sept. 1
K Area Progress Photos
2015 Vision FY09 Progress - 400 Area

Fast Flux Test Facility in Surveillance and Maintenance
River Corridor Cleanup

Waste Site and D&D Completion

- 2012 (excluding Cocooning Reactors & Sludge Support)
- 2013
- 2014

Containment of Key Groundwater Contaminants

- 2012 (excluding FFTF)
- 2014

Key

- 2010
- 2011
- 2012
- 2013
- 2014
- 2015

Key

- Chromium – 2012
- Strontium – 2016
- Uranium – 2018

Waste Site and D&D Completion (excluding FFETF)

- C-7 & B Reactor Museum
- Cocooning Reactors & Sludge Support
- 618-10, 618-11

PNNL Operations 300 Area

Central Plateau
2015 Vision FY09 Progress - Central Plateau

- All 200 West Carbon Tetrachloride, Uranium and Technetium 99 Groundwater Remedies Implemented
  - Design 60% complete for new 200 West (ZP-1) Pump & Treat system
  - 6 new wells drilled to support the new 200-West (ZP-1) Pump & Treat system
  - This new system will begin treating carbon tetrachloride, TC-99 nitrate, TCE and chromium by 12/31/2011
2015 Vision FY09 Progress - Plutonium Finishing Plant

De-inventory of PFP

- Continued offsite shipments, on schedule to complete by 9/30/09
- On schedule to move material onsite and remove Protected Area designation by 12/31/09

- PFP Complex Slab on Grade
  - 37 glove boxes or laboratory hoods removed
  - 24 ERDF roll-off boxes of combustible materials removed
  - On schedule to complete by 9/30/16
Plutonium Finishing Plant Progress Photos

Hood Removal Room 153 Before and After

Hood Removal Room 156 Before and After ARRA Funding
Goals of American Reinvestment and Recovery Act Funding

- Save and create jobs
- Reduce the active cleanup footprint
- Reduce lifecycle costs
Recovery Act Update

- DOE Richland Operation Office apportionment totals $1.635 billion
  - To date, 80 percent of funding has been provided and is being applied to contracts with CH2M HILL Plateau Remediation Company and Washington Closure Hanford
- DOE authorized work to begin in April
- For FY09, only 30% of the total funding can be costed until contractors complete work planning and work scope is finalized
- Approximately 2,700 people are working on Hanford ARRA projects (headcount of people at least partially funded through DOE-RL contracts including those needed to fill material and service orders)
- Work on several major projects underway, some activities already completed
- Contractors hiring, training, and issuing procurements
ARRA Work Plan & Implementation

Notice to Proceed

- RCCC and PRC Prepare 180-Day Work Plan
- DOE Approve 180-Day Work Plan
- RCCC and PRC Execute 180-Day Plan
- RCCC and PRC Prepare Definitized Proposal
- DOE Approve PRC Definitized Proposal
- PRC Execute Contract Mod #37
- DOE Approve RCCC Definitized Proposal
- RCCC Execute Contract Mod #99

Mar, April, May, June, July, Aug, Sept, Oct, Nov, Dec, Jan

**Note:** Some work scope currently planned and contracted has begun and will proceed in parallel with the 180-Day and Full Work Planning Processes.

RCCC = River Corridor Closure Contractor  
PRC = Plateau Remediation Contractor
Recovery Act Highlights

- D&D work at PFP, 14 glove boxes or laboratory hoods removed from main building (234-5Z)
Recovery Act Highlights

- Demolished superstructures of 2 of 3 spent fuel facilities in 200 North Area, demolishing fuel basins
Recovery Act Highlights

- D&D of ancillary facilities near K Reactors, removing equipment/debris from K West Reactor Basin

Removing chlorine vault slab near K West Reactor (background)

K West Basin debris removal: cutting up long-handled tools
Recovery Act Highlights

- Installing wells for new 200 West Area groundwater treatment system
Recovery Act Highlights

- Expanding disposal facility for cleanup debris, Environmental Restoration Disposal Facility

Washington Closure Hanford subcontractor DelHur Industries excavating 1.5 million cubic yards of soil to build a 9th disposal (super) cell at ERDF
Recovery Act Highlights

- Characterizing one of Hanford’s most challenging waste sites in the River Corridor (618-10 Burial Ground)
Recovery Act Highlights

- Demolished 15 large chemical tanks near U Canyon