



U.S. DEPARTMENT OF ENERGY

Hanford Advisory Board DOE-RL Update

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Central Plateau and River Corridor

February 9, 2012





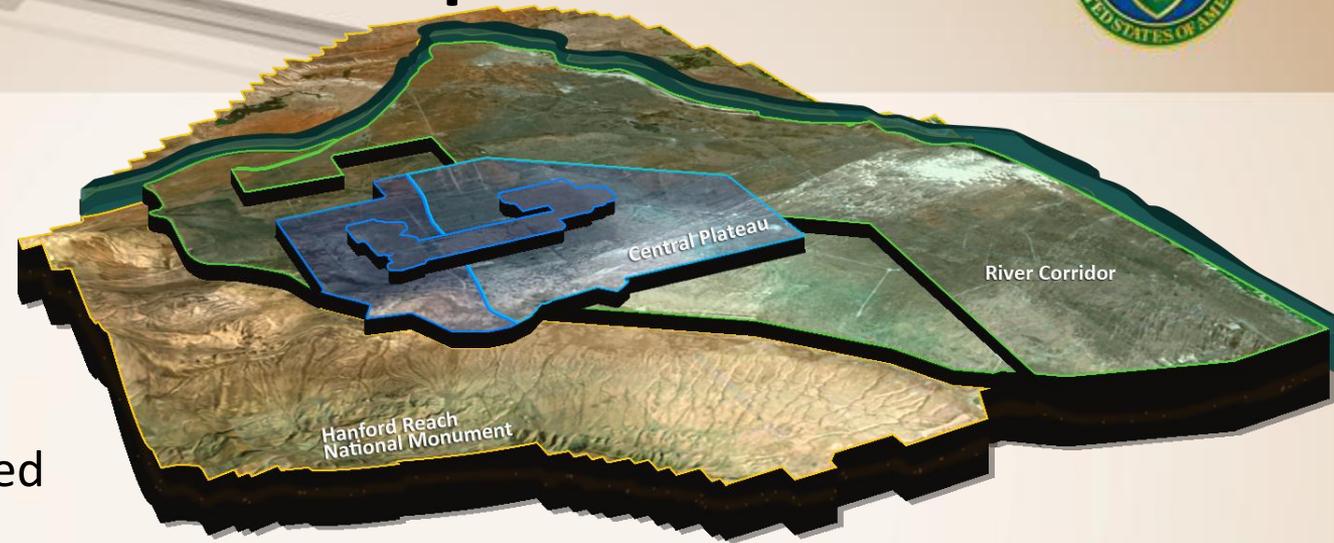
Stages of Hanford Cleanup

Three Components

1. River Corridor
2. Central Plateau
3. Tank Waste

Cleanup Work

- Treat contaminated groundwater
- Demolish facilities
- Remove buried waste, contaminated soil near Columbia for safe disposal away from river
- Empty underground tank waste
- Treat waste for safe disposal





Hanford Reach National Monument

- Work has been completed
- 290 sq. mi. footprint reduction
 - 331 sq. mi. including outer zone





River Corridor 300 Area

- The 309 Test Reactor Complex above and below grade demolition is complete
 - Removal slated for this spring
- The 122-ton Composite Reactor Components Test Activity (CRCTA) tank and casing were removed from the former 337 Building complex





River Corridor 618-10

- Trench remediation continues at the 618-10 Burial Ground
 - Removed more than 100 drums, many containing radioactive shavings, oil and debris
 - Removed several concrete-lined drums
 - Removed more than 200 bottles containing liquids
 - Expecting to find at least 2,000 drums during trench excavation activities

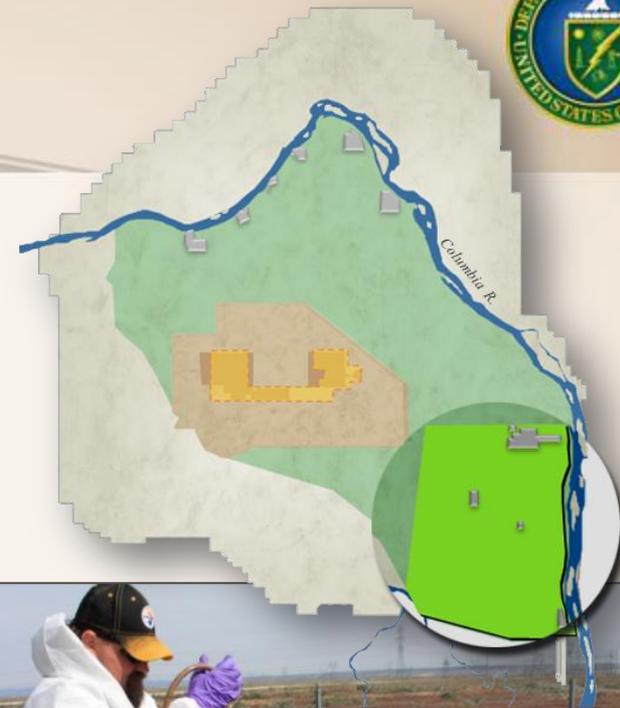


Bottle excavation mockup drill



River Corridor 618-11

- Awarded Subcontract for ~\$4.3M to install site infrastructure
- Non-intrusive characterization is complete



**Non-intrusive
Characterization**



River Corridor F Area

- 100-F scheduled to be the first reactor area to be cleaned up
- 100-F-57 waste site has significantly greater quantities of chromium contaminated soil than any of the other 100-F waste sites
- All other 100-F waste sites are being back-filled and re-vegetated

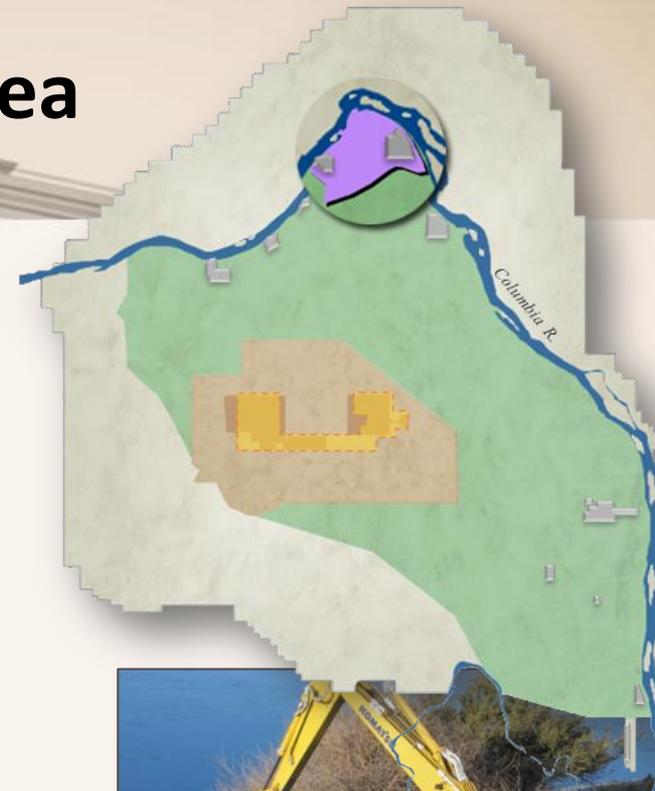




River Corridor D & H Area

Soil & Groundwater Remediation

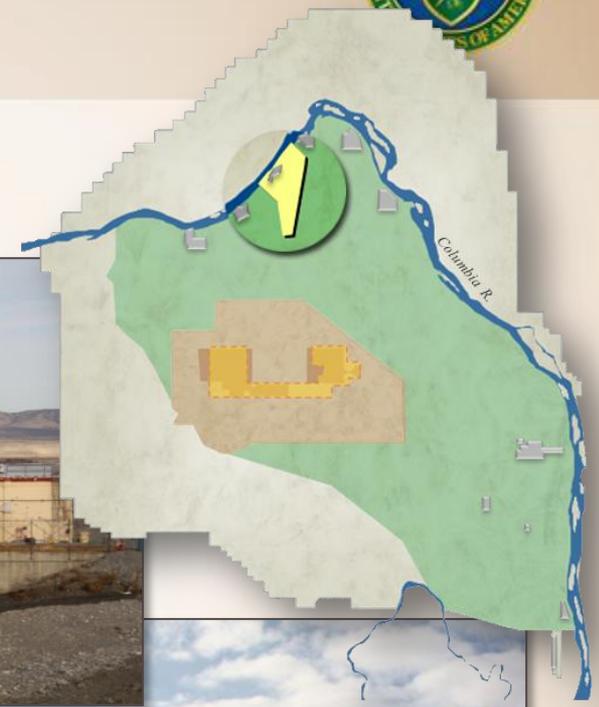
- Consolidated remediation operations at 100 D & H
- 100-D/DR - 100-D Area
- Remediating chromium-contaminated soil
- Finding containers and cylinders





River Corridor N Area

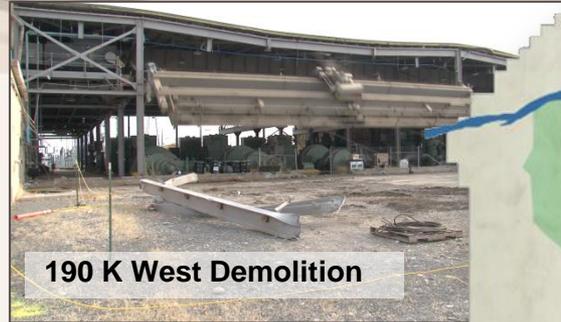
- River Structures
 - Guard tower demolished in order to facilitate river structure removal and thus restore the river shoreline
- Cocooning
 - Interim safe storage (cocooning) is 99% complete
- Challenges Ahead
 - Demolition of river intake structures
 - Demolition & removal of hazards from N Reactor's Fuel Storage Basin and Fission Product Trap (scheduled for completion this spring)



River Corridor K Area

K Area Demolition

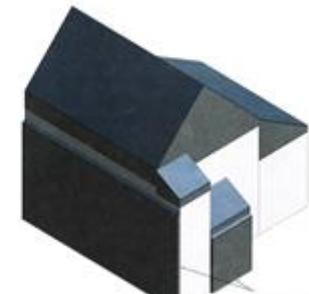
- New K East Reactor interim safe storage
- Demolished 2 facilities:
 - The 25,000 square foot 190 K West Process Water Pump House that served as the cooling water pumping plant for the 100 K West Reactor
 - 105 K West Annex Building



Safe Storage Enclosure



Standard Approach



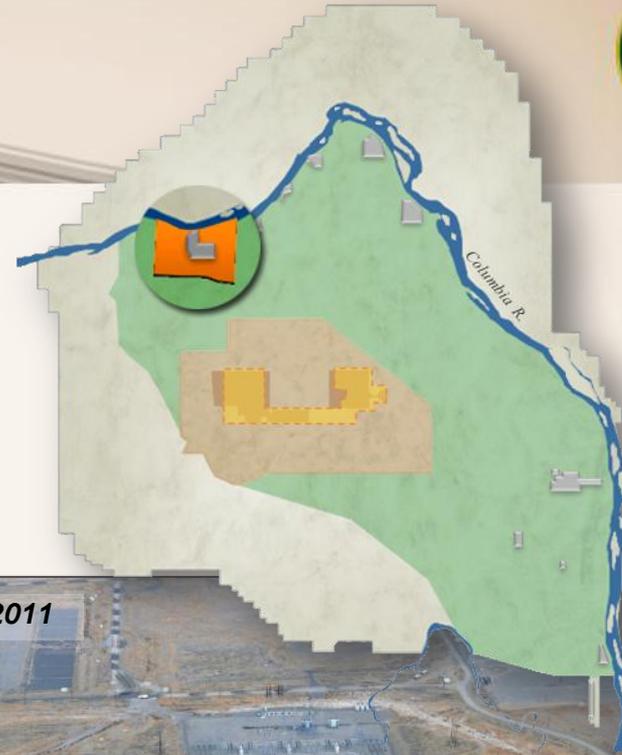
105-K East Reactor Safe Storage Enclosure



River Corridor C Area

100-C-7 Waste Site

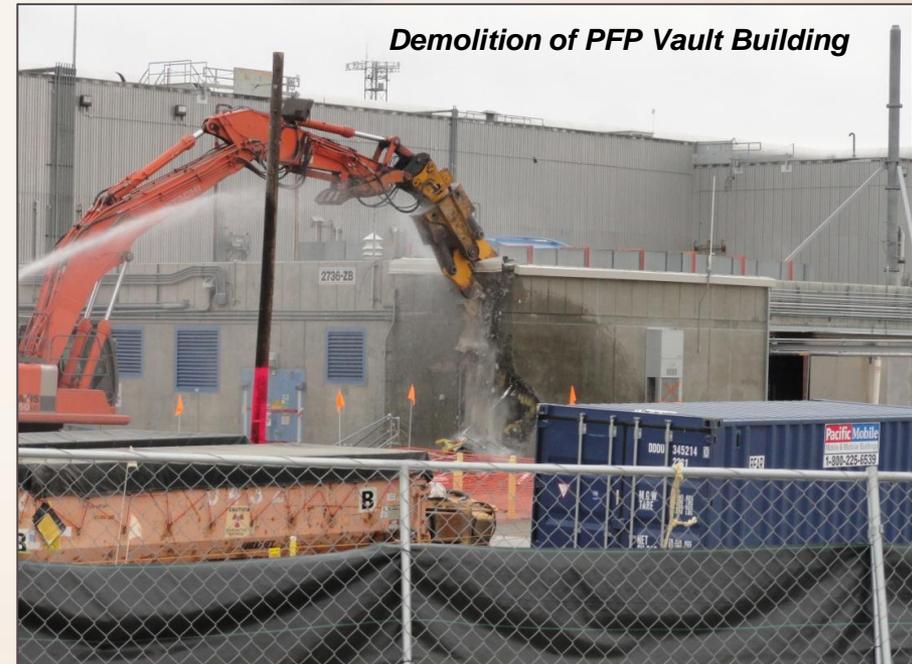
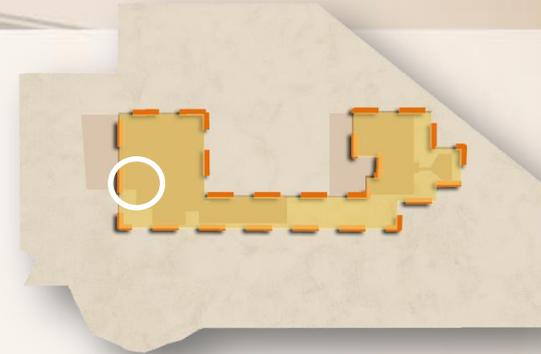
- Continuing massive excavation of chromium contaminated soil at B/C Area
- Contamination excavated to groundwater – 85 feet deep





Central Plateau Inner Area: Plutonium Finishing Plant

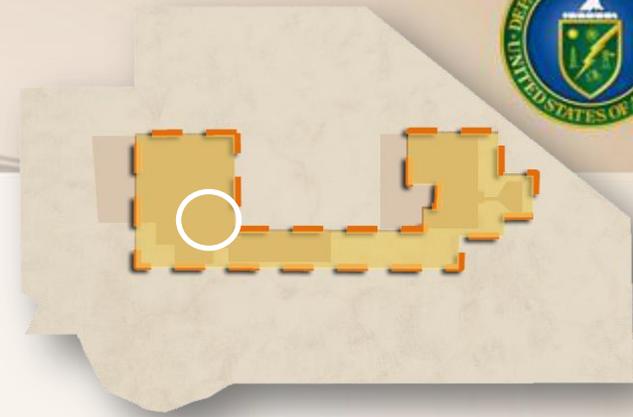
- During the first quarter of FY12:
 - Removed 4 glove boxes (168 glove boxes have been removed to date, 70 remaining)
 - Demolished 2 PFP support buildings (28 buildings have been demolished to date)
 - Demolished 10 pencil tanks (25 pencil tanks have been demolished to date)
 - Began demolishing PFP's six-building vault complex (more than 20,000 square feet of facilities)





Central Plateau Inner Area: U Canyon

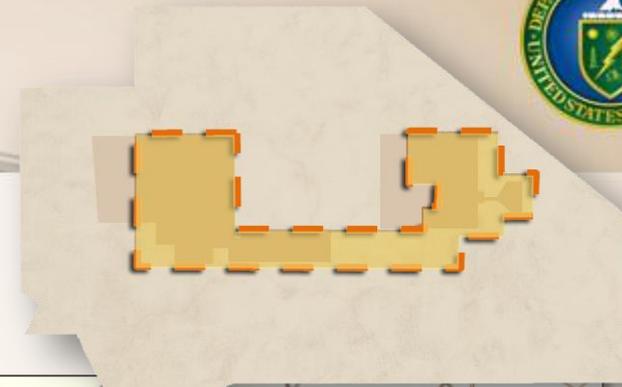
- Completed grouting U Canyon using more than 25,000 cubic yards of grout





Central Plateau Inner Area

- 209 East Criticality Mass Laboratory
 - Demolished the 9,000 square-foot nuclear facility where scientist tested criticality limits of uranium and plutonium solutions
- Waste & Fuels Management
 - Secured standard large boxes waste containers to more safely and efficiently transfer size reduced PFP glove boxes for disposal
 - Completed assay of 256
 - 100-gallon suspect TRU compacted drums to determine appropriate disposal



209 East Criticality Laboratory



Standard Large Boxes



Drum Assay



Groundwater

- Treated 303 million gallons of groundwater during the first quarter of FY 12 (treated 2,277 million gallons to date)
- Set a Hanford record for the most groundwater treated in a month: 100 million gallons (more than 150 Olympic size swimming pools) treated in November
- Completed construction of the 100-HX Groundwater Treatment Facility (now operational)



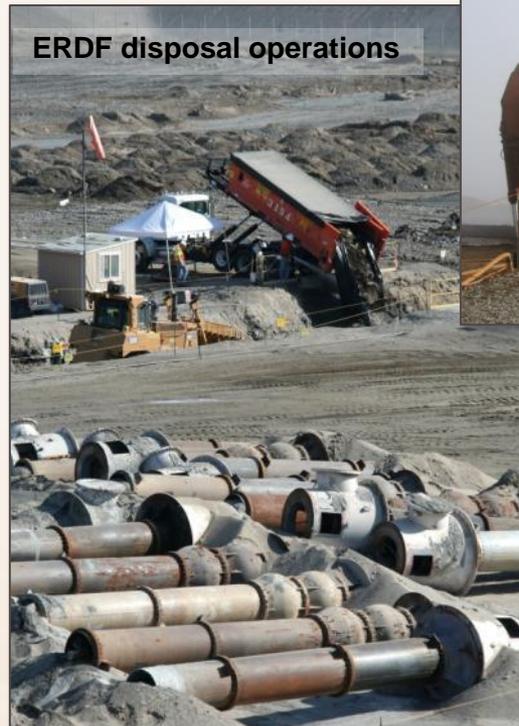
100-HX Groundwater Treatment Facility





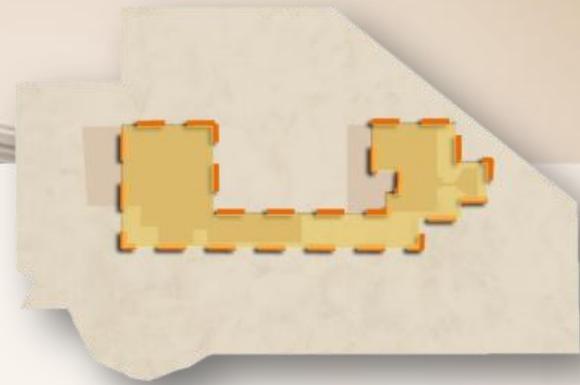
Central Plateau Inner Area: ERDF

- Disposed of a record 2.25 million tons of waste material in FY2011
- Extensive treatment chromium-contaminated soils from 100-C-7 and other waste sites
- One-vehicle accident involving non-radioactive waste.
 - Worker released from hospital
 - Accident area has been cleaned up
 - Lessons learned forthcoming





Central Plateau Inner Area



Deep Vadose Zone

- B-Farm Perch Water/Pore Water Extraction Project removed 25,000 gallons of effluent from the perched water zone since going into operation in September 2011





Budget

Richland Operations Office	FY10 APPROPRIATION	FY11 APPROPRIATION	FY12 APPROPRIATION
Total \$ in thousands	1,080,503	1,040,248	1,021,824

- Anticipated February 13 release of the President's Fiscal Year 2013 Budget
 - Headquarters will hold a stakeholder conference call
 - Plan on briefing the Budgets and Contracts Committee in March
 - 2014 Budget Request workshop will be sometime in March





2012 Lifecycle Scope, Schedule & Cost Report

- Submitted to EPA and Ecology on January 31, 2012
- Provides project scope, schedule and cost from FY 2012 – FY 2090 for both DOE-RL and DOE-ORP
- Shows the remaining estimated cleanup costs for projects and includes post closure long-term stewardship/institutional controls
- Presented cost estimate alternative analyses for cleanup actions associated with tank waste treatment
- Is a milestone requirement (M-036-01) under the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement)
- Public feedback is an ongoing part of the annual report preparation process. Feedback on the 2012 Report needs to be in writing and submitted by April 13, 2012
- Development of the 2013 Lifecycle Report is currently underway



Getting the Word Out

The Hanford Story

- Tank Farms chapter – released February 2012
- Scheduled Public Tours
- 60 site tours
- Anticipate more than 9,000 B Reactor visitors
- Speakers Bureau
- 1,790 audience participants at 18 venues in FY 12



John Silko at Newport High School Bellevue, Washington





Employee Asbestos Concerns

- DOE, contractors, and Hanford Atomic Metal Trades Council (HAMTC) safety representatives walked down the sites
- Industrial hygienists verified that initial monitoring was correct
 - All samples below the OSHA permissible exposure limit (PEL)
- Current actions
 - Barriers around demolition sites
 - Concrete slabs that contain asbestos will be removed or covered
 - Additional surveillance and maintenance



Natural Gas Pipeline Proposal

- DOE awarded a task order worth up to \$5 million to Cascade Natural Gas Corporation to support DOE and its Environmental Impact Statement (EIS) contractor in preparation of the EIS
- On January 23 DOE issued a Notice of Intent to prepare the EIS
- A 30 day scoping period, January 23 – February 22, 2012 with a scoping meeting on February 9, 2012
- Pipeline length would be about 30 miles
- Natural gas would be the primary fuel source for the Waste Treatment Plant and natural gas would replace the 242-A Evaporator's current use of diesel fuel to generate steam

