Hanford Advisory Board

DOE-RL Update

J.D. Dowell
DOE-RL Assistant Manager
Central Plateau and River Corridor

February 9, 2012
2015 Vision

Key Components
- Complete River Corridor cleanup (220 sq. mi.)
- Demolish high-hazard Plutonium Finishing Plant
- Implement groundwater cleanup
  - Stop key contaminants from getting to the Columbia River
  - Contain and remediate key groundwater contaminants on Central Plateau

Key Benefits
1. Reduces active cleanup footprint to less than 75 square miles by 2015
2. Reduces costs by “right-sizing” Hanford infrastructure
3. At completion, shifts emphasis and resources to full-scale cleanup of Central Plateau
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
River Corridor 618-11

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

**100 D – 100 H Area**

- 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
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 box 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
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)
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

<table>
<thead>
<tr>
<th>Richland Operations Office</th>
<th>FY10 Appropriation</th>
<th>FY11 Appropriation</th>
<th>FY12 Appropriation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total $ in thousands</td>
<td>1,080,503</td>
<td>1,040,248</td>
<td>1,021,824</td>
</tr>
</tbody>
</table>

- 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
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