Environmental Management

Public Budget Briefing

FY 2017 President’s Budget
FY 2018 Estimated Requirements

Jon Peschong, Richland Operations Office
March 15, 2016
Richland Cleanup

- Maintain safe, secure and compliant activities, facilities and operations
- Continue Plutonium Finishing Plant (PFP) demolition, capping and demobilization
- Continue groundwater pump-and-treat operations and implement additional groundwater remedies
- Continue progress toward River Corridor cleanup
- Continue preparation to move sludge from 100-K Area Basin (K Basin) near the Columbia River to interim storage in the Central Plateau
- Upgrade Waste Encapsulation Storage Facility (WESF) ventilation system and prepare the facility for removal of the capsules
- Support repackaging of large transuranic (TRU) containers and waste drums
- Continue to maintain surplus nuclear facilities and site infrastructure
Richland Prime Contracts

**River Corridor Closure (RCC)**
- Cleanup of 220 square miles along Columbia River: facility demolition, waste site remediation, operation of disposal facility
- Awarded in 2005
- Total Contract Value: $2.9B
- Cost-plus incentive-fee contract
- Remaining project work will be transitioned to PRC

**Plateau Remediation Contract (PRC)**
- Facility and waste site cleanup, groundwater remediation, waste management
- Awarded in 2008 for 5 years, with 5 option years
- Total Contract Value: $7.1B
- Cost-plus award-fee contract

**Mission Support Contract (MSC)**
- Cost-effective infrastructure and site services to support the cleanup mission
- Awarded in 2009 for 5 years, with 5 option years
- Total Contract Value: $3.6B
- Cost-plus award-fee contract

**HPM Corporation (HPMC) provides occupational medical services to DOE, Hanford contractors**
- Awarded in 2012 for a 2-year hybrid contract with four 1-year option periods that includes firm-fixed price with award fee, cost reimbursement, and Indefinite Delivery Indefinite Quantity (IDIQ) component
- Total Contract Value: $100.2M
Safety and Health

- Voluntary Protection Program (VPP) – Star status for all contractors
- More than 6 million safe hours worked at Washington Closure Hanford without a lost time injury
- Beryllium Corrective Action Plan completed
- Plutonium Finishing Plant focus
# RL Profile

($ in Thousands)

<table>
<thead>
<tr>
<th>PBS</th>
<th>PBS Title</th>
<th>FY 2016 Current</th>
<th>FY 2017 President's Budget</th>
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<tr>
<td>RL-0011</td>
<td>NM Stabilization and Disposition - PFP</td>
<td>148,661</td>
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<td>SNF Stabilization and Disposition</td>
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<td>RL-0013</td>
<td>Solid Waste Stabilization and Disposition - 200 Area</td>
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<td>RL-0030</td>
<td>Soil and Water Remediation - Groundwater/Vadose Zone</td>
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<td>RL-0201</td>
<td>Site Wide Services/RL Direct/Infrastructure Upgrades*</td>
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<td><strong>Subtotal</strong></td>
<td><strong>Central Plateau Remediation</strong></td>
<td><strong>632,179</strong></td>
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<td>RL-0040</td>
<td>Nuclear Facility D&amp;D - Remainder of Hanford</td>
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<td>RL-0041</td>
<td>Nuclear Facility D&amp;D - River Corridor Closure Project</td>
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<td><strong>Subtotal</strong></td>
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<td>Richland Community and Regulatory Support</td>
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<td><strong>Total - RL</strong></td>
<td><strong>Richland Field Office Funding Summary</strong></td>
<td><strong>990,653</strong></td>
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*These costs are distributed among several PBSs in FY 2016*
Prior to FY 2017, Site-wide services were prorated across the Project Baseline Summaries (PBSs). Starting in FY 2017, Richland will fund these services entirely from a dedicated PBS: RL-0201.

Provide site-wide services for day-to-day operations to include, but not be limited to, general utilities and fire department.
Infrastructure

Water Systems
- Over 95 miles of buried pipe
- 800 million gallons of water used annually

Electrical Utilities
- 246 miles of power lines
- 6,000 power poles
- Loads will double with Waste Treatment Plant

Emergency Services and Immobilization Systems
- Radio Fire Alarm Reporting is essential to the safety and security of facilities and employee welfare

Information Technology
- Legacy applications to be updated
- Cyber security improvements

Roads
- Over 5,700 passenger vehicles (daily average)
- 350+ lane miles of paved roads
- 500 trips by heavy haul trucks (daily average)
Hanford Cleanup Overview

**Three Components**

- River Corridor
- Central Plateau
- Tank Waste (ORP)
FY 2017 Planned Accomplishments

K-West Basin Closure and Sludge Removal ($69.5M)

- Operate and maintain K-West Basin, a CAT 2 nuclear facility, and associated structures in a safe and compliant manner and support required surveillance and maintenance activities
- Continue preparations to remove contaminated sludge away from the river
  - Complete K-West Basin facility modifications and equipment installation of Engineered Container Retrieval and Transfer System (ECRTS)
  - Perform T Plant modifications necessary to receive and store sludge
  - Complete ECRTS procurements
  - Initiate cold commissioning and startup and readiness activities

Engineered container retrieval and transfer system production equipment

Sludge transport and storage container procurement
Proposed FY 2018 Work Description

K-West Basin Closure and Sludge Removal

• Operate and maintain K-West Basin, a CAT 2 nuclear facility, and associated structures in a safe and compliant manner and support required surveillance and maintenance activities
• Continue preparations to remove contaminated sludge away from the river
  – Complete T Plant modifications necessary to receive and store sludge
  – Complete operational acceptance testing and readiness reviews to start sludge removal operations
  – Initiate sludge removal

Decant pump box installation
Booster pump skids installation
River Corridor – RL-0041

FY 2017 Planned Accomplishments

Nuclear Facility D&D – River Corridor Closure Project ($28.8M)

• Continue 324 Building surveillance and maintenance
• Support activities for safe K Area remediation
• Provide operations for the Environmental Restoration Disposal Facility
• Continue remediation of vertical pipe units in 618-10 Burial Ground
• Initiate long-lead equipment procurements for remediation of waste site 300-296 under the 324 Building

Augering of vertical piping units (VPUs) at 618-10 Burial Ground

Waste remediation operations at the 618-10 Burial Ground
Proposed FY 2018 Work Description

Nuclear Facility D&D – River Corridor Closure Project

• Support safe and essential service activities for K Area Remediation
• Complete remediation of vertical pipe units in 618-10 Burial Ground
• Continue procurements and mock-up testing and readiness for remediation of the highly radioactive waste site, 300-296, located beneath the 324 Building in the 300 Area
• Perform planning for 324 Building D4 activities
BUDGET OVERVIEW
CENTRAL PLATEAU
Central Plateau – RL-0011

FY 2017 Planned Accomplishments

Plutonium Finishing Plant (PFP) ($72M)

• Complete PFP demolition, capping and demobilization
• Closeout of the project
• Turnover to RL-0040 for surveillance and maintenance

Canyon grouting

Current footprint of PFP

Future footprint (slab on grade) of PFP
Central Plateau – RL-0013C

FY 2017 Planned Accomplishments

Solid Waste Stabilization and Disposition ($104.4M)


- Support safe and compliant storage of spent nuclear fuel and 1,936 cesium and strontium capsules

- Determine disposition pathway for cesium and strontium capsules and initiate actions to place cesium and strontium capsules into dry storage

- Continue waste shipments to Perma-Fix Northwest for repackaging of suspect transuranic (TRU) waste

WESF is located adjacent to the B Plant processing facility in the 200 East area of the Hanford Site

A worker inspects transuranic waste that has been repackaged and loaded for off-site shipments
Central Plateau – RL-0013C

Proposed FY 2018 Work Description

Solid Waste Stabilization and Disposition

• Operate waste treatment and compliant storage facilities: Integrated Disposal Facility, Central Waste Complex, Solid Waste operations, Mixed Waste Disposal Trenches, T Plant, WESF and Environmental Restoration Disposal Facility (ERDF)

• Support safe and compliant storage of spent nuclear fuel and 1,936 cesium and strontium capsules

• Continue actions to move cesium and strontium capsules at WESF into dry storage

• Complete Detailed Construction Design for the Canister Storage System and Pad

• Initiate long-lead procurement of storage casks

• Continue waste shipments to Perma-Fix Northwest for repackaging of suspect TRU waste
Central Plateau – RL-0030

FY 2017 Planned Accomplishments

Soil & Water Remediation – Groundwater ($139.9M)

• Continue integration of site-wide groundwater and vadose zone cleanup activities; groundwater contamination monitoring; as well as operations, maintenance, and necessary modifications of existing remediation systems

• Continue to support well drilling commitments in Tri-Party Agreement (TPA) Milestone M-024

• Continue progress toward completing decision documentation for the Comprehensive Environmental Response, Compensation, and Liability Act Remedial Investigation/Feasibility Study process to obtain the final Records of Decision (RODs) for the River Corridor and the Central Plateau

• Continue groundwater remedy implementation for the 100-F/IU and 300 Area RODs

• Continue remedial investigation for the orchard lands in the River Corridor

300 Area injection wells & infiltration field tubing
Central Plateau – RL-0030

Proposed Activities through FY 2018

Soil & Water Remediation – Groundwater, RL-0030

- Continue integration of site-wide groundwater and vadose zone cleanup activities; groundwater contamination monitoring; as well as operations, maintenance, and necessary modifications of existing remediation systems

- Continue operation of the River Corridor and Central Plateau Area Pump-and-Treatment Facilities for treatment more than 2.1 billion gallons of contaminated groundwater (removing carbon tetrachloride, nitrates, hexavalent chromium and technetium-99) (TPA Milestone M-016 series)

- Continue to support RCRA well drilling commitments in TPA Milestone M-024

- Continue progress on completing the groundwater characterization and supporting decision documentation needed for Comprehensive Environmental Response, Compensation, and Liability Act requirements and to obtain final remediation RODs for operable units in the River Corridor and Central Plateau. Supports the TPA and the Hanford Consent Order
Central Plateau – RL-0040

**FY 2017 Planned Accomplishments**

**Nuclear Facility D&D for the Remainder of Hanford ($41M)**

- Provide surveillance and maintenance activities to ensure safety for inactive waste sites and surplus facilities on the Central Plateau
- Support canyon risk reduction activities which include work on REDOX roof, identification of hazards within the PUREX/REDOX canyons, development of regulatory and operation documents, and D4 of some ancillary canyon structures
Central Plateau – RL-0040

Proposed FY 2018 Work Description

Nuclear Facility D&D for the Remainder of Hanford

- Provide surveillance and maintenance activities to ensure safety for inactive waste sites and surplus facilities on the Central Plateau
- Support to demolition activities for U Plant Canyon and Central Plateau waste site remediation
- Perform canyon risk reduction activities which include identification of hazards within the PUREX/REDOX canyons, development of regulatory and operation documents, and D4 of some ancillary canyon structures and Central Plateau waste site remediation
FY 2017 Planned Activities and Proposed FY 2018 Work Descriptions

Nuclear Facility D&D FFTF FY 2017 ($2.2M) and FY 2018 Requirements

• Support long-term safe and compliant surveillance and maintenance for Fast Flux Test Facility and support facilities

• This support is required until the residual and bulk sodium is dispositioned and facility deactivation and decommissioning is resumed

Hanford’s Fast Flux Test Facility
Community & Regulatory Support FY 2017 ($14.7M) and FY 2018 Requirements

- Support the Washington and Oregon emergency preparedness programs, Washington State Department of Health oversight and other activities related to Hanford cleanup
- Support the Washington State Department of Ecology RCRA Mixed Waste Fee; Washington State Department of Health's air emissions monitoring invoice; Hanford Advisory Board; and miscellaneous permits and fees
FY 2017 Planned Activities ($72M)

• Maintain safe Safeguards and Security (SAS) services at the Hanford Site, including Category 1 special nuclear material
• Maintain SAS programs including: protection program management, emergency response, physical security, information protection, protective force, personnel security, cyber security and nuclear material control and accountability at the Hanford Site for RL and ORP
• Design/construct a live-fire shoot house for Hanford Patrol training

Proposed FY 2018 Work Description

• Maintain safe SAS services at the Hanford Site, including Category 1 special nuclear material
• Maintain SAS programs including: protection program management, emergency response, physical security, information protection, protective force, personnel security, cyber security and nuclear material control and accountability at the Hanford Site for RL and ORP
Site-Wide Services – RL-0201

FY 2017 ($246M) and FY 2018 Estimated Requirements

- Provide site-wide services for day-to-day operations and cleanup support
- Fund RL-direct services including but not limited to site integration, tribal commitments and emergency preparedness
- Support infrastructure upgrades and site maintenance
General Plant Projects – RL-0202

FY 2017 ($9M) and FY 2018 Estimated Requirements

• Support General Plant Projects for infrastructure upgrades and site maintenance