

Environmental Management

Richland Operations

**FY 2016 President's Budget
FY 2017 Estimated Requirements**



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Richland Cleanup

April 2015

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- Maintain safe, secure and compliant activities, facilities and operations
- Continue Plutonium Finishing Plant deactivation, decommissioning and demolition
- Continue groundwater pump and treat operations and implement additional groundwater remedies
- Continue River Corridor cleanup
- Continue preparation to remove sludge from K-West Basin near the Columbia River, transfer to Interim Storage in the Central Plateau
- Support repackaging of large transuranic (TRU) containers and waste drums



Richland Prime Contracts

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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: \$2.5 billion
Cost-plus incentive-fee contract



Plateau Remediation Contract PRC

Facility and waste site cleanup, groundwater remediation, waste management

Awarded 2008 for 5 years, with 5 option years

Total Contract Value: \$5.7 billion

Cost-plus award-fee contract



Mission Support Contract MSC

Cost-effective infrastructure and site services to support the cleanup mission

Awarded 2009 for 5 years, with 5 option years

Total Contract Value: \$3.5 billion

Cost-plus award-fee contract

HPM Corporation (HPMC) provides occupational medical services to DOE, Hanford contractors

- Awarded in 2012 for a two-year hybrid contract with four one-year option periods that includes firm-fixed price with award fee, cost reimbursement, and Indefinite Delivery Indefinite Quantity (IDIQ) component
- Total Contract Value: \$99 million

Safety and Health

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Recent safety accomplishments:

Washington Closure Hanford reached 5 million safe hours for the third time since beginning work on the River Corridor Closure Project in 2005

CH2M Hill Plateau Remediation Company went from Voluntary Protection Program (VPP) Merit Status to STAR Status

Mission Support Alliance was VPP STAR Status recertified



Site Wide Services

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Site-wide services are prorated across the PBSs through FY 2016. Starting in FY 2017, we intend to propose funding these services entirely from a dedicated PBS: RL-0201.



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

RL Budget Profile with SWS Allocation

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(\$ in Thousands)

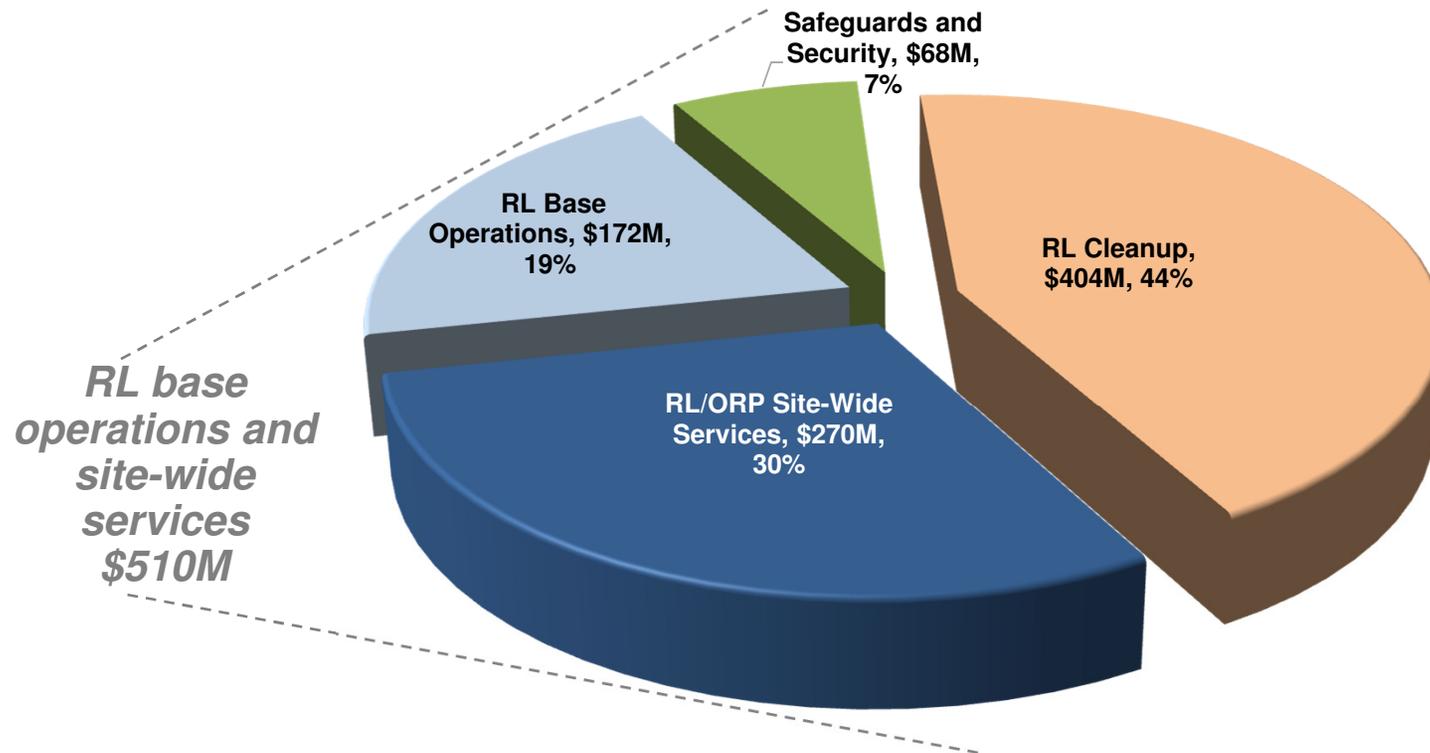
PBS	PBS Title	FY 2015 RL Appropriation	FY 2015 President's Budget w/ SWS not Distributed	FY 2016 President's Budget	FY 2016 President's Budget w/ SWS not Distributed
RL-0011	NM Stabilization and Disposition - PFP	137,130	118,030	148,661	123,961
RL-0012	SNF Stabilization and Disposition	67,746	34,946	81,192	46,192
RL-0012	15-D-401 Containerized Sludge Line Item	46,055	46,055	77,016	77,016
RL-0013	Solid Waste Stabilization and Disposition - 200 Area	107,651	89,151	150,691	95,691
RL-0030	Soil and Water Remediation - Groundwater/Vadose Zone	184,929	125,029	174,619	101,619
Subtotal	Central Plateau Remediation	543,511	413,211	632,179	444,479
RL-0040	Nuclear Facility D&D - Remainder of Hanford	65,922	11,122	88,874	21,874
RL-0041	Nuclear Facility D&D - River Corridor Closure Project	311,866	254,966	108,083	108,083
Subtotal	River Corridor and Other Cleanup Operations	377,788	266,088	196,957	129,957
RL-0020	Safeguards and Security	63,668	63,668	67,601	67,601
RL-0042	Nuclear Facility D&D - Fast Flux Test Facility Project	2,562	2,562	2,562	2,000
RL-0201	Site Wide Services/RL Direct/Infrastructure Upgrades	0	242,000	0	255,262
RL-0100	Richland Community and Regulatory Support	19,701	19,701	14,701	14,701

Base Operations and Site-Wide Services Profile

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FY 2016 RL \$914M Budget Distribution*



* For presentation purposes \$ are approximate/rounded

BUDGET OVERVIEW – RIVER CORRIDOR

River Corridor – RL-12

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Planned Accomplishments through FY 2016

K-Basin Closure, RL-0012 (\$158.2M; \$127.4M w/o SWS)

- Provide site-wide services of day-to-day operations of general utilities, fire department, and analytical services
- Operate and maintain K West Basin, CAT 2 nuclear facility, and associated structures in a safe and compliant manner and support required surveillance and maintenance activities
- Initiate T Plant modifications necessary to receive and store sludge
- Sludge Treatment Project (STP) Line Item:
 - Continue Engineered Container Retrieval and Transfer System (ECRTS) procurements
 - Continue K West Basin facility modifications to prepare for installation of sludge removal

Construction of K West Basin Annex



FY 2017 Work Descriptions

K-Basin Closure, RL-0012

- Operate and maintain K West Basin, CAT 2 nuclear facility, and associated structures in a safe and compliant manner and support required surveillance and maintenance activities
- Continue progress towards removal of sludge off of the river, M-016-176
- Complete K West Basin facility modifications and equipment installation of Engineered Container Retrieval and Transfer System (ECRTS)
 - Complete T Plant modifications necessary to receive and store sludge
 - Continue Engineered Container Retrieval and Transfer System (ECRTS) procurements
 - Initiate Cold Commissioning and startup and readiness activities
- Support Phase 2 sludge treatment and packaging technology, M-016-173
- Note: Site-wide services moved to PBS RL-0201

River Corridor – RL-41

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Planned Accomplishments through FY 2016

Nuclear Facility D&D – River Corridor Closure Project, RL-0041 (\$108.1M)

- Support safety and service activities for K Area remediation
- Dispose of wastes generated during deactivation, decommissioning, decontamination and demolition of facilities and remediation of contaminated waste sites
- Operate the Environmental Restoration Disposal Facility
- Perform planning for 324 Facility D4 activities
- Continue remediation of 618-10 Burial Ground
- Continue 100, 300 and 600 Area waste site remedial activities and re-vegetation
- Provide site-wide services for day-to-day operations



An aerial photo of the 618-10 Burial Ground



Workers sampling drums retrieved from trenches at the 618-10 Burial Ground

River Corridor – RL-41

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FY 2017 Work Descriptions

Nuclear Facility D&D – River Corridor Closure Project, RL-0041

Support safety and service activities for K Area Remediation

- Operate the Environmental Restoration Disposal Facility
- Continue remediation and re-vegetation of waste sites in the 100, 300 and 600 Areas in the River Corridor
- Remediation of the highly radioactive waste site located beneath the 324 Building in the 300 Area
- Perform planning for and begin 324 Facility D4 activities
- Complete remediation of 618-10 Burial Ground
- Initiate remediation of the 618-11 Burial Ground
- Support the interim response action for the K Area Phase 2 remediation by performing facility D4 and waste remediation activities for sites not tied to the removal of sludge from the 105 K West Basin
- Support K East and K West Reactor interim safe storage planning activities

* Note: Site-wide services moved to PBS RL-0201



Workers perform waste remediation operations at the 618-10 Burial Ground



Workers perform waste remediation operations at the 618-10 Burial Ground

BUDGET OVERVIEW – CENTRAL PLATEAU

Central Plateau – RL-11

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Planned Activities through FY 2016

Plutonium Finishing Plant (PFP), RL-0011 (\$148.7M; \$120M w/o SWS)

- Provide safety and services to manage industrial, radiological and nuclear hazards during the D&D of the PFP vital safety systems facilities and structures
- Continue demolition of ancillary facilities
- Perform deactivation, decommissioning, and demolition activities at PFP (M-083-00A)
- Accomplish necessary program management to support field teams
- Provide site-wide services for day-to-day operations



Workers perform glove box removal operations at the Plutonium Finishing Plant



Workers perform open-air demolition at the Plutonium Finishing Plant

Central Plateau – RL-11

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FY 2017 Work Descriptions

Plutonium Finishing Plant, RL-0011

- Perform necessary activities to complete project closeout

*Note: Site-wide services moved to PBS RL-0201



*Artist rendition
of PFP slab-
on-grade*

Central Plateau – RL-13C

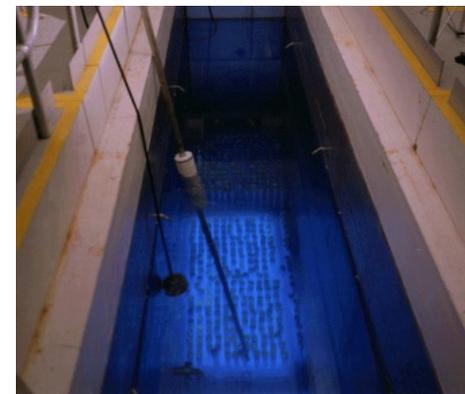
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Planned Activities through FY 2016

Solid Waste Stabilization and Disposition, RL-0013C (\$150.7M; \$97M w/o SWS)

- Operate waste treatment and compliant storage facilities: Central Waste Complex, Solid Waste base operations, Mixed Waste Disposal Trenches, Integrated Disposal Facility, and T Plant. Also includes increased activities to support T Plant modifications to receive K Basin sludge
- Provide safe base operations necessary to support safe and compliant storage of special nuclear fuel and cesium and strontium capsules
- Complete the Waste Encapsulation Storage Facility (WESF) K3 Stabilization and Ventilation Project (W-130)
- Continue waste shipments to PermaFix Northwest to repackage suspect TRU waste
- Provide site-wide and support services for operations



Cesium and strontium capsules at the Waste Encapsulation Storage Facility



Large Package TRU Shipment to PermaFix Northwest

Central Plateau – RL-13C

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FY 2017 Work Descriptions

Solid Waste Stabilization and Disposition, RL-0013

- Operate waste treatment and compliant storage facilities: Waste Receiving and Packaging, Central Waste Complex, Solid Waste base operations, Mixed Waste Disposal Trenches, T Plant and Environmental Restoration Disposal Facility. Also includes increased program management activities to support TRU waste ramp-up and T Plant modifications to receive K Basin sludge
 - Support safe and compliant storage of spent nuclear fuel and cesium and strontium capsules
 - Perform actions to place cesium and strontium capsules into dry storage
 - Continue waste shipments to PermaFix Northwest to repackage suspect TRU waste
 - Restart and ramp-up the TRU Program in support of the M-091 milestone commitments
- * Note: Site-wide services moved to PBS RL-0201



Workers repackage transuranic waste from waste trenches



A worker inspects transuranic waste that has been repackaged and loaded for off-site shipments

Central Plateau – RL-30

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Planned Activities through FY 2016

Soil & Water Remediation – Groundwater, RL-0030 (\$174.6M; \$101M w/o SWS)

- 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 of at least 2.1 billion gallons of contaminated groundwater (removing carbon tetrachloride, nitrates, hexavalent chromium and technetium-99)
- Continue to support well drilling commitments in Tri-Party Agreement 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 Records of Decision for operable units in the River Corridor and Central Plateau
- Continue remedial investigation for the orchard lands in the River Corridor



200 West Pump and Treatment Facility



100-F Area

Central Plateau – RL-30

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FY 2017 Work Descriptions

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 of at least 2.1 billion gallons of contaminated groundwater (removing uranium, carbon tetrachloride, nitrates, hexavalent chromium and technetium-99)
- Continue to support well drilling commitments in Tri-Party Agreement 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 Decisions (RODs) for the 100/300 Areas located in the River Corridor and the 200 Area located in the Central Plateau
- Support apatite barrier actions at 100-NR-2 and uranium sequestration at 300-FF-5 Operable Units in support of interim/final remedies to stop strontium-90 and uranium from reaching the Columbia River
- Conduct uranium treatment in support of the 200-UP-1 ROD

* Note: Site-wide services moved to PBS RL-0201



Workers drill wells along the Columbia River

Central Plateau – RL-40

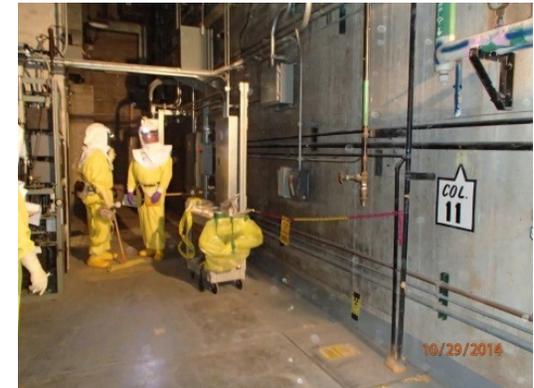
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Planned Activities through FY 2016

Nuclear Facility D&D for the Remainder of Hanford, RL-0040 (\$88.9M; \$21.9M w/o SWS and RL Direct)

- Continue surveillance and maintenance activities to ensure safety for inactive waste sites and surplus facilities on the Central Plateau
- Provide site-wide integration services, to include occupational medicine, land conveyance, and energy savings/alternative fuels
- Provide programs for safety and health training
- Perform site infrastructure upgrades, replacements and repairs
- Provide safe and essential site-wide and support services



PUREX surveillance



Workers train in a simulated glove box environment at HAMMER

Central Plateau – RL-40

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FY 2017 Work Descriptions

Nuclear Facility D&D for the Remainder of Hanford, RL-0040

- Provide surveillance and maintenance activities to ensure safety for inactive waste sites and surplus facilities on the Central Plateau
- Reinitiate U Plant Canyon disposition in support of TPA milestone M-016-200A
- Perform closure actions for the 216-B-3 Main Pond and 216-S-10 Pond and Ditch in support of TPA milestone M-037-11
- Perform waste site remediation in support of TPA milestone M-016-00



An aerial view of U Canyon



Workers prepare U Canyon for demolition

Hanford Site – RL-42

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FY 2016 Planned Activities and FY 2017 Work Descriptions

Nuclear Facility D&D FFTF (RL-0042), FY 2016 - \$2.6M (\$2M w/o RL Direct)

- 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

* Note: Site-wide services moved to PBS RL-0201



Hanford Site Support – RL-100

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FY 2016 Planned Activities and FY 2017 Work Descriptions

Community & Regulatory Support (RL-100), FY 2016 - \$14.7M

- 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; Payment in Lieu of Taxes for Grant, Benton, and Franklin Counties; Hanford Advisory Board; and miscellaneous permits and fees
- Continue FY2016 activities

Hanford Site Support – RL-20

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FY 2016 Planned Activities - Safeguards and Security (RL-0020), \$67.6M

- Maintain safe safeguards and security programs at the Hanford Site, including protection of Category 1 special nuclear material
- Maintain appropriate and compliant 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

FY 2017 Work Descriptions

- Maintain safe safeguards and security programs at the Hanford Site, including Category 1 special nuclear material
- Maintain appropriate and compliant 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

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FY 2017 Work Descriptions

- Provide site-wide services for day-to-day operations and cleanup support
- Infrastructure upgrades for utilities and roads
- RL direct services for site integration, tribal commitments and emergency preparation



