

# Monthly Performance Report

April 2018

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788



**P.O. Box 1600  
Richland, Washington 99352**

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Richland, Washington 99352

**APPROVED**

*By Janis D. Aardal at 2:25 pm, May 23, 2018*

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Release Approval

Date

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L. Ty Blackford  
President and Chief  
Executive Officer

# Monthly Performance Report

U.S. Department of Energy Contract,  
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April 2018  
CHPRC-2018-04, Revision 0

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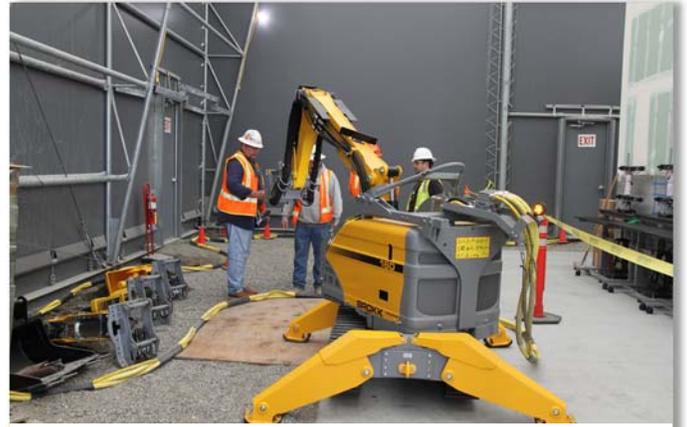
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- Appendix A – Contract Performance Reports
- Appendix B – Project Services and Support (WBS 000)
- Appendix C – Capital Asset Projects

## EXECUTIVE SUMMARY

CH2M HILL Plateau Remediation Company (CHPRC) advanced cleanup throughout the Hanford Site during April. Major accomplishments included:

- **Plutonium Finishing Plant (PFP) Closure Project:** At PFP, crews began shipping previously packaged radioactive waste to the Central Waste Complex (CWC). With worker input, the project team completed analyzing options for the remaining demolition work and presented those options, and enhanced controls, to the DOE Expert Panel. Finalized the Root Cause Evaluation Report “Discovery of Contamination Spread at the Plutonium Finishing Plant during Demolition Activities” EM-RL--CPRC-PFP-2017-0018.
- **Soil and Groundwater Remediation Project (S&GRP):** S&GRP staff met with RL to finalize the approach of a pilot test to treat up to two million gallons of modular storage unit water at the 200 West Pump and Treat (P&T). Workers also began drilling in 100K and began well drilling campaigns in the 100-KR-4 and 200-UP-1 Operable Units (OUs).
- **Waste and Fuels Management Project (W&FMP):** The W-135 project team at the Waste Encapsulation and Storage Facility (WESF) completed a Critical Decision (CD)-1 document package for DOE to support the eventual transfer of the cesium and strontium capsules from underwater storage to a safer dry storage configuration. This achievement was a year in the making. Now the project can move forward with the detailed designs.
- **K Basins Operations (KBO):** Workers at KBO completed and passed the DOE Operational Readiness Review (ORR). This paves the way for workers to begin sludge removal operations.
- **River Risk Management Project (RRM):** Workers at the 324 Building finalized high alpha contamination recovery, implemented associated corrective actions, and resumed cell cleanout activities. Crews at the Environmental Restoration Disposal Facility (ERDF) performed full dress in-field mockups to ensure lessons learned from PFP are implemented for the PFP disposal process. The 618-10 Burial Ground project continues to consolidate equipment and materials in the final stages of demobilization. Project personnel participated in a briefing for RL to transition the 618-10 Burial Ground Complex to Mission Support Alliance, LLC (MSA) for long-term stewardship.
- **Plutonium Uranium Extraction Plant (PUREX) Tunnel:** The project team completed tunnel investigation efforts where they collected the necessary radiological and industrial hygiene data from the tunnel interior, along with completing video investigation of the tunnel interior and rail cars to support future planning efforts for tunnel stabilization. The project team also completed all survey and ground scanning necessary to support the site improvements scope that will start in May.

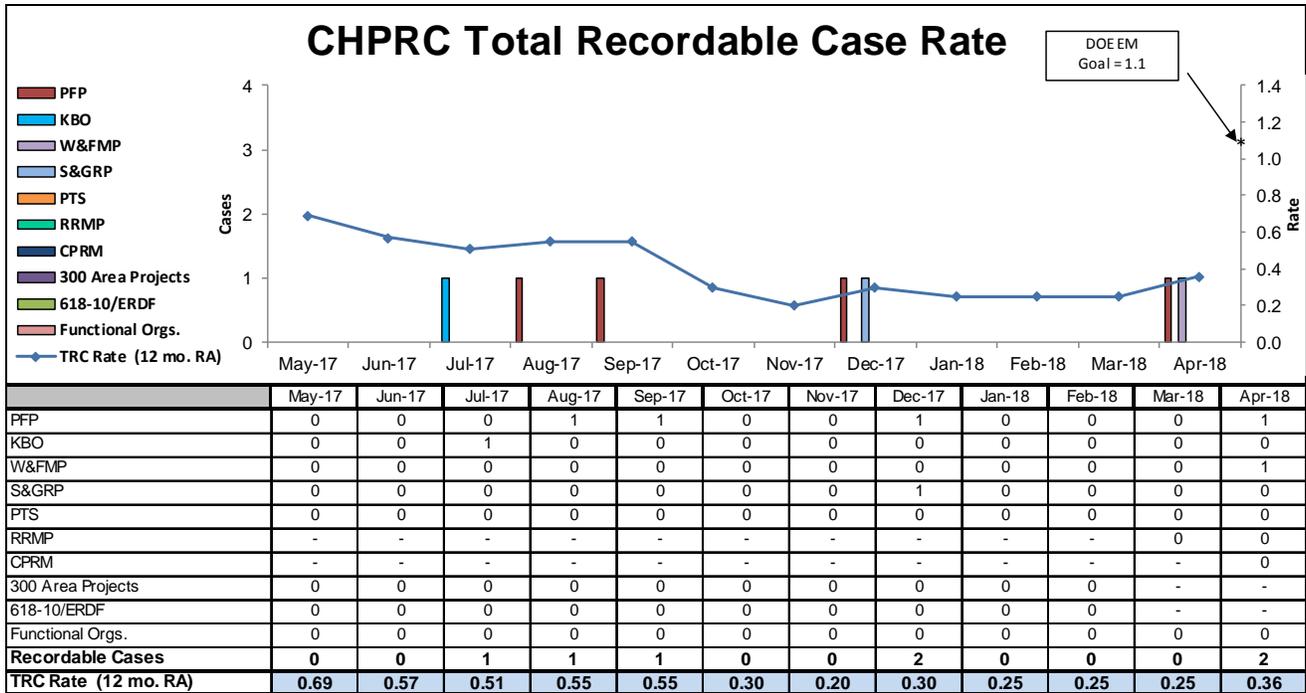


*Workers get familiar with tools in the 324 Building mock-up that will be used for cleaning up the contaminated soil under the building's B-Cell.*

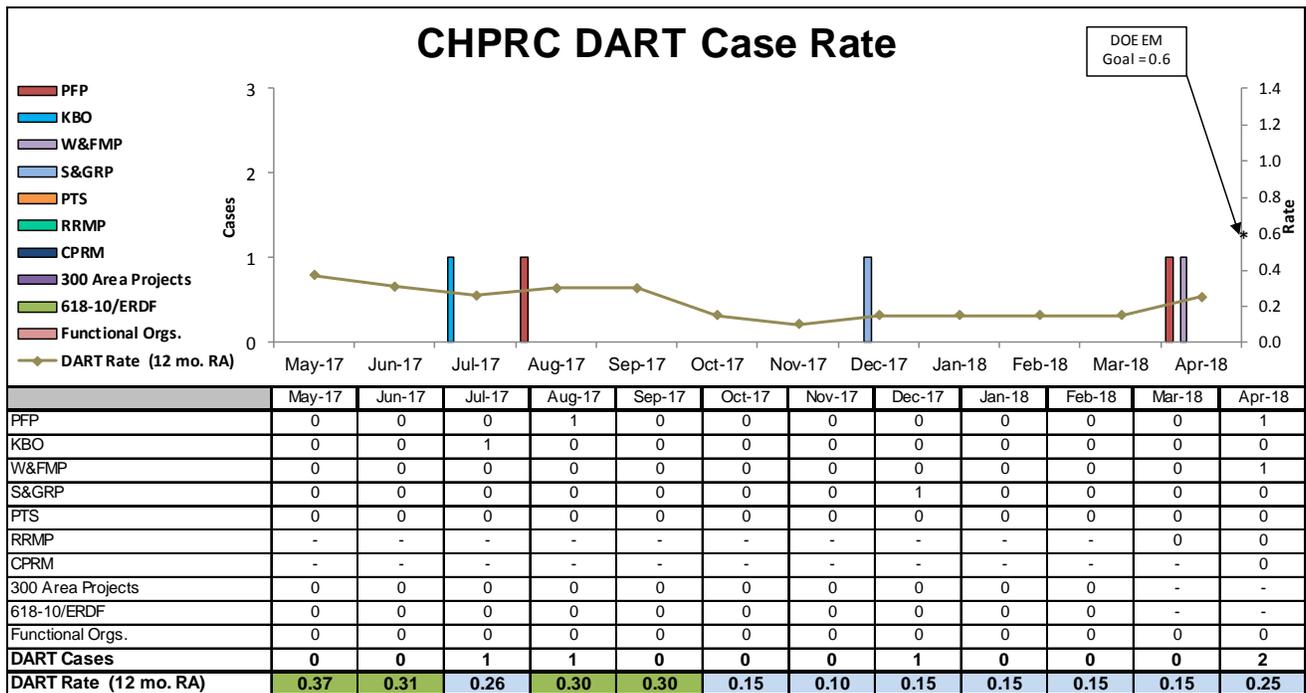
- In lieu of the April President's Zero Accident Council (PZAC) meeting, workers were encouraged to attend Safety Connect 2018, held April 17-18, 2018 at TRAC in Pasco.
- Five "*Thinking Target Zero*" (TTZ) bulletins were published to convey important occupational, safety, health, and environmental messages:
  - Cultural Sensitivity.
  - Driving Distractions.
  - Continuous Improvement.
  - Driving-No Excuses.
  - Sun Exposure.
- *Weekly Safety Tailgate* briefing packages communicated relevant topics and safety information to the workforce:
  - Five Lessons Learned:
    - Staff member experiences hearing loss from inconsistent use of hearing protection (PNNL).
    - Heater components degraded due to high temperatures at plug Fluor BWXT Portsmouth (offsite).
    - Process Gas Release During Deactivation Work Activities (offsite).
    - Improving fall arrest systems to remove potential operator error (offsite).
    - NCS Anomalous Condition – Surge Drum Pressure Instrument Isolation (offsite).
  - Injuries.
  - Weekly Ethics Moments.
  - Vehicle events.
  - Hard Hat Recycling.
  - Bird Nesting Season.
  - Hearing Protection personal protective equipment (PPE).
  - Fueling Portable Equipment.
  - Microwave Oven Safety.
  - Herbicide / Pesticide Spray Schedule.
  - Driving Campaign.
  - Windy Conditions.
  - Respirator Failure Response.
  - Security Reminder.
  - Special Safety Bulletin – Radiological Boundaries.
  - Summer Safety Campaign.

## TARGET ZERO PERFORMANCE

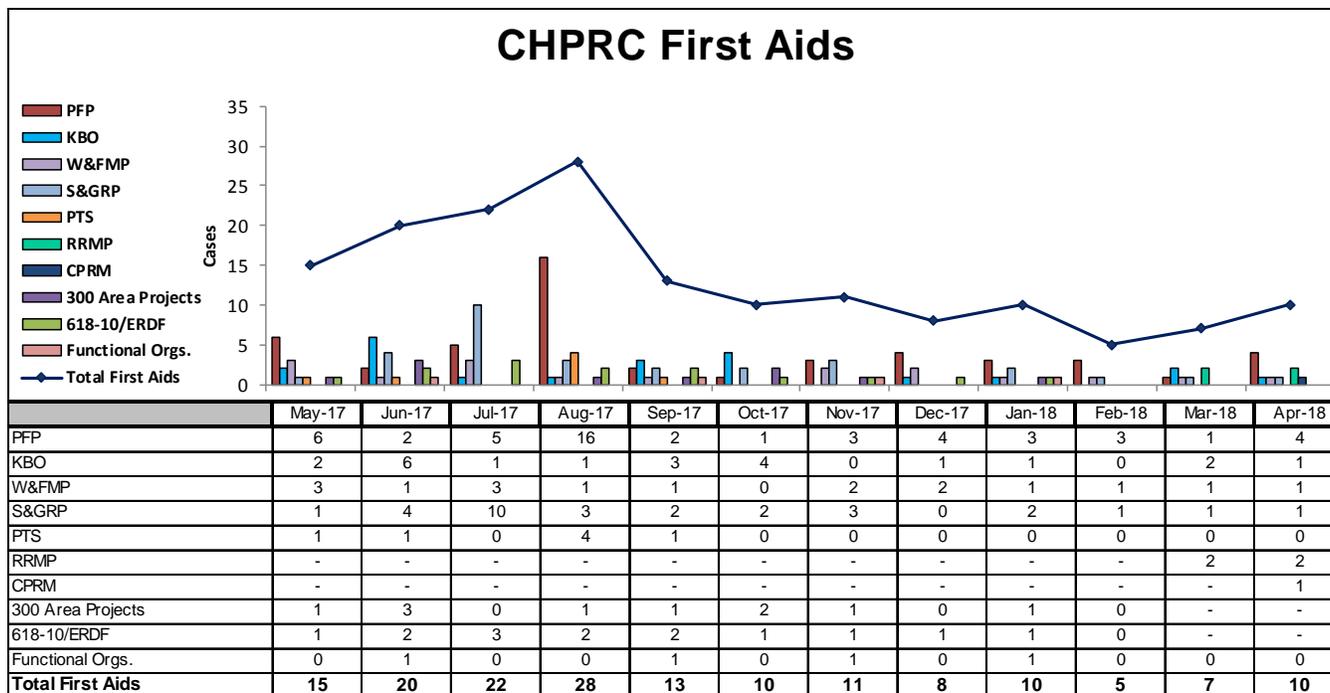
CHPRC continued to focus on integrating and implementing safety programs in all program and project areas.



Total Recordable Injury Case (TRC) Rate: The 12-month rolling average TRC rate of 0.36 is based on a total of seven Recordable injuries. Two Recordable cases were reported in April.



Days Away, Restricted or Transferred (DART) Workdays Case Rate: The 12-month rolling average DART rate of 0.25 is based on a total of five Days Away cases. Two DART cases were reported in April.



First Aid Case Summary: CHPRC reported 10 First Aid cases in April. The contributors were five sprains/strains/pains, four miscellaneous (burns, rashes, repetitive motion, etc.), and one abrasions/bruises/contusions injury. In addition, three self-treat cases were reported in April.

## KEY ACCOMPLISHMENTS

### Projects

- Refer to Sections A through G, as well as Appendix C of this report, for project specific accomplishments.

### Project Services and Support

- Refer to the Appendix B section of this report for specific overhead support (which is reported quarterly) and Sections A through G, as well as Appendix C of this report, for specific project support.

## MAJOR ISSUES

### Issue:

Significant Contract Change Management is ongoing and must be resolved to retain PRC alignment for fiscal year (FY) 2017-2018.

- As of April month-end, there was a backlog of 52 undefinitized change proposals (CPs), requests for equitable adjustments (REAs), rough orders of magnitude (ROMs), and responses to requests for proposals (RFPs) – totaling approximately \$319 million in net value without fee.

### Corrective Action:

- Work with RL to reach agreement on PRC FY2017-2018 alignment and support RL evaluation and determination of the disposition of undefinitized CHPRC CPs/REAs.

### Status:

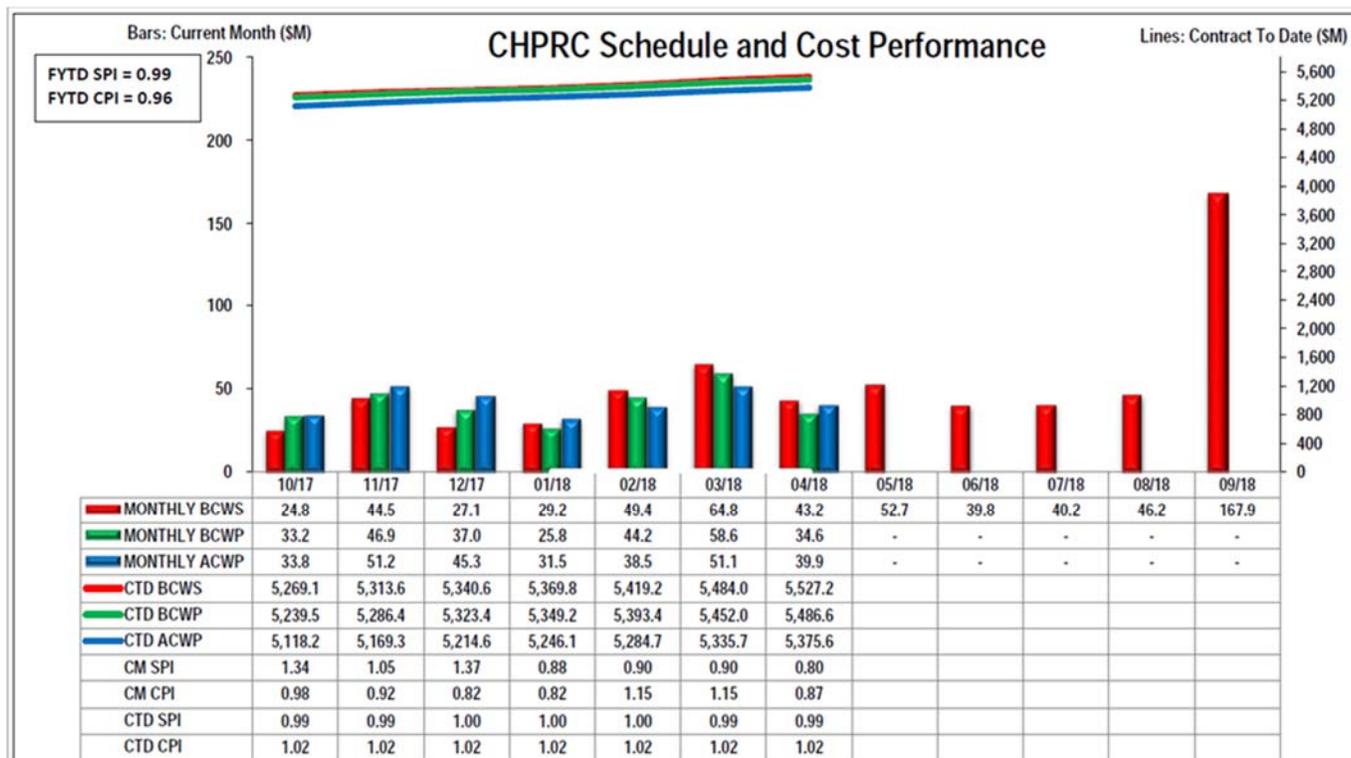
- CHPRC continues to discuss proposed alignment strategy with RL.
  - Realigned remaining contract scope for cost consistent with FY2018 Budget Guidance.

- o Developed configured contract change management basis for contract change entitlement and contract closeout.

**Projects**

- Refer to Sections A through G, as well as Appendix C of this report, for the project-specific major issues.

## EARNED VALUE MANAGEMENT



\*September includes \$57.4 million of BCWS in planning packages and \$71.1 million of BCWS in undistributed budget.

	\$M						\$M					\$M		
	Current Period			Contract to Date			Contract to Date			Contract Period				
	Budgeted Cost	Actual Cost	Variance	Budgeted Cost	Actual Cost	Variance	Budgeted Cost	Actual Cost	Variance	BAC	EAC	Variance		
	BCWS	BCWP	ACWP	Schedule	Cost	BCWS	BCWP	ACWP	Schedule	Cost	BAC	EAC	Variance	
RL-0011 - Nuclear Materials Stab & Disp PFP	0.0	0.0	6.5	0.0	(6.5)	988.7	973.0	1108.4	(15.7)	(135.4)	988.7	1,170.6	(182.0)	
RL-0012 - SNF Stabilization & Disposition	2.4	2.6	3.5	0.2	(0.9)	725.3	725.3	695.6	(0.1)	29.6	744.5	717.6	26.9	
RL-0013 - Solid Waste Stab & Disposition	11.7	9.8	12.6	(1.9)	(2.9)	1262.9	1259.0	1178.9	(3.9)	80.0	1,365.1	1,293.5	71.6	
RL-0030 - Soil & Water Rem-Grndwtr/Vadose	10.1	9.8	9.1	(0.3)	0.8	1478.1	1473.1	1428.1	(5.0)	45.1	1,561.1	1,511.8	49.3	
RL-0040 - Nuc Fac D&D - Remainder	2.7	2.4	2.6	(0.3)	(0.2)	476.2	472.5	447.6	(3.7)	24.9	504.3	481.3	23.0	
RL-0041 - Nuc Fac D&D - RC Closure Project	16.2	9.9	5.5	(6.3)	4.4	570.5	558.3	495.9	(12.2)	62.3	683.8	598.2	85.6	
RL-0042 - Nuc Fac D&D - FFTF Project	0.2	0.2	0.2	(0.0)	(0.0)	25.5	25.5	21.2	(0.0)	4.3	26.5	22.8	3.7	
<b>Total</b>	<b>43.2</b>	<b>34.6</b>	<b>39.9</b>	<b>(8.6)</b>	<b>(5.3)</b>	<b>5,527.2</b>	<b>5,486.6</b>	<b>5,375.6</b>	<b>(40.6)</b>	<b>110.9</b>	<b>5,874.0</b>	<b>5,795.8</b>	<b>78.2</b>	

(Values are rounded to the nearest \$0.1M)  
(Values do not have UB breakout)

\*Per e-mail direction received December 6, 2017, from the RL Contracting Officer, CHPRC is authorized to incorporate the value of proposed changes into the baseline, as well as remove work that is not authorized from our execution plan. When a contract alignment settlement is reached, baseline change requests (BCRs) will be processed to align the Performance Measurement Baseline (PMB) with the settlement values.

**Performance Summary**

CHPRC continues to track completion of the contract scope within budget and is currently projecting a variance at completion (VAC) of \$78.2 million, with \$56.7 million of management reserve (MR), for a total positive variance of \$134.9 million. For April, the project was 20.0 percent behind schedule and 15.4 percent over planned cost. Contract to date (CTD), the project was 0.7 percent behind schedule and 2.0 percent under planned cost.

The current month (CM) negative schedule variance is primarily due to project breakdown structure (PBS) RL-0041 324 Building Disposition Project, which experienced delays in procurement/fabrication of the 324 equipment resulting from: design changes and fabrication difficulties, delays in 324 structural modifications, interference removal, penetration sealing, and hot cell cleanout activities.

Also contributing to the negative schedule variance is PBS RL-0013 associated with the delay of two shipments of mixed low-level waste (MLLW) that were planned in the current period but delayed to June in order to allow more time to develop lifting plans. The two waste containers are shored in such a way that a lifting device is used to position the rigging without affecting the shored portions of the boxes. Also contributing is completion of transuranic (TRU) Large Box Repack in previous periods. In addition, W-135, WESF Modifications Project is behind in design review comments for the preliminary design of the Cask Storage System (CSS), but comment resolution of the preliminary comments should result in streamlining final design activities.

The CM negative cost variance is primarily due to PBS RL-0011 recovery actions and implementation of the new demolition requirements associated with a December 2017 contamination event. This includes fixative applications, performance of radiological surveys, and stabilization activities to support resumption of demolition of PFP. This also includes additional material and equipment purchases to support the revised demolition approach. As resumption corrective actions are performed, costs for labor, subcontracts, and material purchases add to the current month variance. Assignment of Jacobs Engineering corporate resources and reassignment of CHPRC personnel to support the RCA and programmatic assessments have also contributed to the variance. In addition, the resulting delay in demolition activities from the contamination event are causing an extension of unplanned project management, min-safe, and support resources.

Also contributing to the negative cost variance is the PBS RL-0013 Capsule Dry Storage project due to a subcontractor using additional resources to complete the preliminary design review for the CSS and to make up schedule for the CSS preliminary design (60 percent).

## FUNDING ANALYSIS

### FY2018 Funds vs. Fiscal Year Spend Forecast (\$M)

PBS	Project	FY2018		Variance
		Projected Funding	Spending Forecast	
<b>Estimate at Complete</b>				
RL-0011	Nuclear Materials Stabilization and Disposition	80.0	74.9	5.1
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	41.9	38.3	3.7
RL-0012	15-D-401 Sludge Retrieval Project	18.8	17.8	1.0
RL-0013	Waste and Fuels Management Project	144.3	169.4	(25.1)
RL-0013	Management of Cesium and Strontium Capsules	6.5	1.4	5.1
RL-0030	Soil, Groundwater and Vadose Zone Remediation	121.9	114.4	7.5
RL-0040	Nuclear Facility D&D, Remainder of Hanford	69.0	42.7	26.3
RL-0041	Nuclear Facility D&D, River Corridor	143.6	136.6	7.1
RL-0042	Fast Flux Test Facility Closure	4.0	2.6	1.5
<b>Total Estimate at Complete</b>		<b>630.0</b>	<b>597.9</b>	<b>32.1</b>
<b>Incremental Scope Pending Change Management</b>				
RL-0011	Nuclear Materials Stabilization and Disposition	0.0	0.0	0.0
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	0.0	0.3	(0.3)
RL-0012	15-D-401 Sludge Retrieval Project	0.0	0.0	0.0
RL-0013	Waste and Fuels Management Project	0.0	(43.2)	43.2
RL-0013	Management of Cesium and Strontium Capsules	0.0	0.0	0.0
RL-0030	Soil, Groundwater and Vadose Zone Remediation	0.0	0.9	(0.9)
RL-0040	Nuclear Facility D&D, Remainder of Hanford	0.0	16.6	(16.6)
RL-0041	Nuclear Facility D&D, River Corridor	0.0	1.5	(1.5)
RL-0042	Fast Flux Test Facility Closure	0.0	0.0	0.0
<b>Total Incremental Work Scope</b>		<b>0.0</b>	<b>(23.8)</b>	<b>23.8</b>
<b>Total Fiscal Year Spend Forecast</b>				
RL-0011	Nuclear Materials Stabilization and Disposition	80.0	74.9	5.1
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	41.9	38.6	3.4
RL-0012	15-D-401 Sludge Retrieval Project	18.8	17.8	1.0
RL-0013	Waste and Fuels Management Project	144.3	126.2	18.1
RL-0013	Management of Cesium and Strontium Capsules	6.5	1.4	5.1
RL-0030	Soil, Groundwater and Vadose Zone Remediation	121.9	115.2	6.7
RL-0040	Nuclear Facility D&D, Remainder of Hanford	69.0	59.3	9.6
RL-0041	Nuclear Facility D&D, River Corridor	143.6	138.1	5.5
RL-0042	Fast Flux Test Facility Closure	4.0	2.6	1.5
<b>Total</b>		<b>630.0</b>	<b>574.1</b>	<b>55.9</b>

#### Funds/Variance Analysis

For April, FY2018 expected funding was unchanged and remains at \$630 million. The spending forecast decreased \$9 million from last month, \$4 million in RL-0011 due to incorporating revised requirements, and \$5 million in RL-0041 for delays experienced in the 300-296 project and efficiencies in the 618-10 project.

## BASELINE CHANGE REQUESTS

In April 2018, CHPRC approved and implemented eight BCRs into the PMB. Five of the eight BCRs impacted the PMB. Each change request is identified in the table below:

Change Request #	Title	PBS	Summary of Change
BCR-030-18-018R0	<i>Delete TPA Milestone M-015-21A</i>	RL-0030	This BCR deleted the Tri-Party Agreement Milestone M-015-21A schedule activity from the PMB. This BCR did not change the PMB value.
BCR-040-18-009R0	<i>PUREX Tunnel 2 Stabilization NTE Increase</i>	RL-0040	This BCR incorporated into the PMB changes to the Plateau Remediation Contract (PRC) scope associated with the stabilization of PUREX Tunnel 2. This BCR increased the PMB value by \$4,000K.
BCR-040-18-010R0	<i>Implement Remaining FY2018 Work Scope for CO #324, Miscellaneous RL-0040 Work Scope</i>	RL-0040	This BCR incorporated the remaining scope authorized by CO 324 that will be completed in FY2018. This BCR increased the PMB value by \$349K.
BCR-040-18-011R0	<i>B Plant Pre-Filter Change Out</i>	RL-0040	This BCR planned the scope and budget in the PMB for one B Plant pre-filter change out. This BCR increased the PMB value by \$319K.
BCR-041-18-016R0	<i>Incorporate Additional Scope for CO #306, Revegetation Scope</i>	RL-0041	This BCR incorporated additional scope associated with CO 306. This BCR increased the PMB value by \$74K.
BCRA-PRC-18-020R0	<i>HPIC Updates April 2018</i>	RL-0011, RL-0013, RL-0030, RL-0040, RL-0041	This BCR incorporated April FY2018 Hanford Programs Integrated Control Module (HPIC) updates. This BCR did not change the PMB value.

The Allocated (Distributed) Budget increased by \$4,742K.

### Undistributed Budget Activity

BCR Number	Title	PBS	Fiscal Year	UB
BCR-PRC-18-019R0	<i>Undistributed Budget Adjustments April 2018</i>	RL-0013, RL-0030, RL-0040, RL-0041	2018	\$-7,581K

The Undistributed Budget decreased by \$7,581K.

### Management Reserve Activity

BCR Number	Title	PBS	Fiscal Year	MR
BCR-PRC-18-021R0	<i>Realignment of FY2018 Management Reserve</i>	RL-0012, RL-0040, RL-0041	2018	\$0K

Overall, there was no change to MR in April.

**Fee Activity**

BCR Number	Title	PBS	Fiscal Year	Fee
N/A	N/A	N/A	2018	N/A

Overall, there was no change to the fee during April.

See the Format 3 Report in Appendix A for a listing of the specific change requests that had an impact on the PMB budget by FY. The PMB values of change requests are summarized by FY in the tables below (dollars in thousands).

**April 2018 Summary of Changes**

	FY 2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FYs 2014-2018	Contract Period Total	Total PMB
<b>March 2018 Estimate</b>									
PMB	3,391,477	391,653	471,323	504,826	485,028	632,509	2,485,338	5,876,814	5,876,814
MR	0	0	0	0	0	56,678	56,678	56,678	56,678
Fee	155,504	14,325	14,501	27,804	10,612	18,860	86,101	241,605	241,605
<b>Total</b>	<b>3,546,981</b>	<b>405,978</b>	<b>485,824</b>	<b>532,630</b>	<b>495,639</b>	<b>708,046</b>	<b>2,628,117</b>	<b>6,175,098</b>	<b>6,175,098</b>
<b>April 2018 Change</b>									
<b>PMB</b>									
Change to PMB	0	0	0	0	0	-2,840	-2,840	-2,840	-2,840
<b>MR</b>									
Change to MR	0	0	0	0	0	0	0	0	0
<b>Fee</b>									
Change to Fee	0	0	0	0	0	0	0	0	0
<b>Total Change</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-2,840</b>	<b>-2,840</b>	<b>-2,840</b>	<b>-2,840</b>
<b>April 2018 Estimate</b>									
PMB	3,391,477	391,653	471,323	504,826	485,028	629,669	2,482,498	5,873,974	5,873,974
MR	0	0	0	0	0	56,678	56,678	56,678	56,678
Fee	155,504	14,325	14,501	27,804	10,612	18,860	86,101	241,605	241,605
<b>Total</b>	<b>3,546,981</b>	<b>405,978</b>	<b>485,824</b>	<b>532,630</b>	<b>495,639</b>	<b>705,206</b>	<b>2,625,277</b>	<b>6,172,258</b>	<b>6,172,258</b>

**Changes to/Utilization of Management Reserve in April 2018**

	FY2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2014-2018	Total
<b>March 2018 MR Totals</b>								
RL-0011	0	0	0	0	0	7,499	7,499	7,499
RL-0012	0	0	0	0	0	10,258	10,258	10,258
RL-0013	0	0	0	0	0	6,185	6,185	6,185
RL-0030	0	0	0	0	0	20,119	20,119	20,119
RL-0040	0	0	0	0	0	382	382	382
RL-0041	0	0	0	0	0	12,047	12,047	12,047
RL-0042	0	0	0	0	0	189	189	189
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>56,678</b>	<b>56,678</b>	<b>56,678</b>
<b>April 2018 MR Changes/Utilization</b>								
RL-0011	0	0	0	0	0	0	0	0
RL-0012	0	0	0	0	0	(1,843)	-1,843	-1,843
RL-0013	0	0	0	0	0	0	0	0
RL-0030	0	0	0	0	0	0	0	0
RL-0040	0	0	0	0	0	8,318	8,318	8,318
RL-0041	0	0	0	0	0	(6,476)	-6,476	-6,476
RL-0042	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>April 2018 MR Totals</b>								
RL-0011	0	0	0	0	0	7,499	7,499	7,499
RL-0012	0	0	0	0	0	8,416	8,416	8,416
RL-0013	0	0	0	0	0	6,185	6,185	6,185
RL-0030	0	0	0	0	0	20,119	20,119	20,119
RL-0040	0	0	0	0	0	8,700	8,700	8,700
RL-0041	0	0	0	0	0	5,571	5,571	5,571
RL-0042	0	0	0	0	0	189	189	189
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>56,678</b>	<b>56,678</b>	<b>56,678</b>

## SELF-PERFORMED WORK

Business structure information documents ongoing compliance with the requirements of the contract section H.20 clause entitled *Self-Performed Work*.

Contract-to-Date Actual Awards & Mods				Projection to FY2018	
10/1/2008 - 4/30/2018				Planned Subcontracting:	\$2,720,084,369
Reporting Category				Contract-to-date awards:	\$2,700,466,578
				Bal remaining to award:	\$19,617,791
	\$ Value	%	Goal %	Goal award\$	Bal to Goal
SB	\$1,523,302,491	56.41%	49.3%	\$1,341,001,594	-\$182,300,897
SDB	\$290,717,720	10.77%	8.2%	\$223,046,918	-\$67,670,801
SWOB	\$284,984,918	10.55%	7.5%	\$204,006,328	-\$80,978,590
HUB	\$77,549,218	2.87%	2.2%	\$59,841,856	-\$17,707,362
VOSB	\$219,807,239	8.14%	3.5%	\$95,202,953	-\$124,604,286
SDVO	\$132,945,441	4.92%	1.3%	\$35,361,097	-\$97,584,345
NAB	\$67,123,540	2.49%	N/A	PRC clause H.20 small business requirement ≥ 17% of CHPRC Contract Price performed by SB.	
Large	\$678,183,583	25.11%	N/A		
GOVT	\$4,285,000	0.16%	N/A		
GOVT CONT	\$483,191,859	17.89%	N/A		
EDUCATION	\$118,076	0.00%	N/A	CHPRC Contract Value:	\$5,732,255,464
NONPROFIT_	\$3,984,778	0.15%	N/A	17% rqmt:	\$974,483,429
FOREIGN	\$7,400,791	0.27%	N/A	SB actual:	\$1,523,302,491
<b>Total</b>	<b>\$2,700,466,578</b>	<b>100.00%</b>	<b>N/A</b>	Bal to rqmt	<b>-\$548,819,062</b>

Notes:

1. Since the CHPRC contract award in October 2008, CHPRC has subcontracted over \$2.7 billion in goods and services, with more than 56 percent going to small businesses. All subcontracting goals have been exceeded.
2. Approximately 91 percent of the total dollars arise from service and staffing contracts and contract amendments, with 6 percent of the remaining expenditures arising from PCard purchases and 3 percent from the balance in purchase orders for materials and equipment.
3. Data is summarized by business categories (Women Owned Minority Business Enterprise codes) in accordance with socioeconomic reporting requirements. Small business categories overlap and should not be added together.

### GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Contract Section	Project	GFS/I	Status
<b>CONTRACT</b>			
J.12/C.2.2, C.2.3	PBS-11, Plutonium Finishing Plant Closure Project  PBS-13, Solid and Liquid Waste Treatment and Disposal	Offsite Transportation of Radioactive Material: RL provides equipment and government drivers to transport transuranic (TRU) materials outbound/inbound between the Hanford Site and Perma-Fix Northwest (PFNW) locations. RL is the authorized shipper and acts as signatory on the shipping papers and ensures DOE Manual 460.2-1 is complied with. RL arranges for Commercial Motor Vehicle Safety Alliance (CVSA) level VI vehicle inspections and verifies that the government drivers meet the applicable Department of Transportation (DOT) Federal Motor Carrier Safety Regulations (49 CFR 382 and 383). RL also inspects the load securement to ensure compliance with DOT regulations and/or Transportation Safety Document (TSD) requirements.	Ongoing
J.12/C.2.3.6	PBS-13, Transuranic Waste Certification	Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico: Provides shipping resources and manages the schedule for transportation of these containers to WIPP. The schedule is variable and the number of shipments is controlled by DOE-HQ on a complex-wide priority. Cost for shipment of TRU waste offsite is borne by the Carlsbad Field Office (CBFO).	No WIPP shipments are planned within the remaining contract period of performance.

### DOE ACTIONS/DECISIONS

Refer to Sections A through G as well as Appendix C of this report for the project specific DOE Actions/Decisions.

# Section A

## Nuclear Materials Stabilization and Disposition of PFP (RL-0011)



K. A. Wooley  
(Acting) Vice President for  
Plutonium Finishing Plant  
Closure Project

April 2018  
CHPRC-2018-04, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

On December 15, 2017, contamination was found outside of the established Plutonium Finishing Plant (PFP) radiological boundaries. On December 18, 2017, follow-up radiological surveys found additional contamination present in the administrative office area. Work was stopped after the second event, pending completion of a root cause analysis (RCA) and development of a recovery plan. CHPRC finalized the Root Cause Evaluation (RCE) in April and is working with RL and regulators to develop a recovery plan to enable demolition activities to resume.

### Key Metrics

<i>Key Performance Indicators</i>	<i>Current Month</i>	<i>Contract To Date</i>
<b>COMPLETE</b> Glovebox/ Hood Removed or Dispositioned in Place	0	232 gloveboxes/hoods
<b>COMPLETE</b> KPP Rooms/Areas Ready for Demo	0	72 rooms/areas
<b>COMPLETE</b> Asbestos/Asbestos Containing Material (ACM) Removed	0	35,827
<b>COMPLETE</b> Process Vacuum Piping Dispositioned	0	7,231 feet
<b>COMPLETE</b> Process Transfer Line Dispositioned	0	1,525 feet
<b>COMPLETE</b> Pencil Tank Units Removed (Shipped)	0	196 pencil tank units
<b>COMPLETE</b> Buildings Ready for Demo	0	68 structures
Buildings Demolished or Removed	0	63 structures
Non-radioactive Waste Shipped	0 m <sup>3</sup>	85 m <sup>3</sup>
Transuranic/Transuranic Mixed (TRU/TRU-M) Shipped	172 m <sup>3</sup>	4,077 m <sup>3</sup>
LLW/MLLW Shipped	6 m <sup>3</sup>	16,108 m <sup>3</sup>

### EMS Objectives and Target Status (Draft)

Objective #	Objective	Targets	Actions	Due Date	Status
18-EMS-PFP-OB1-T1	Minimize emissions resulting from demolition (including rubble management) of 234-5Z and 236Z.	Establish controls to minimize radioactive air emissions during PFP demolition activities and monitor the effectiveness of the controls.	Evaluate radioactive emissions on a weekly basis, identify if there are gaps in implementing the controls, and if the controls are effective when implemented. If problems are identified, ensure that prompt corrective actions are taken. Provide a monthly report on results and actions.		
			1. October Report	11/07/2017	100%
			2. November Report	12/07/2017	100%
			3. December Report	01/08/2018	100%
			4. January Report	02/07/2018	100%
			5. February Report	03/07/2018	100%

## TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	1	2	04/09/18 – Employee was walking between trailers in the dark when the employee stepped on a sloped area, causing a fall. The employee fractured a foot and had abrasions to hands. (24773)
Total Recordable Injuries	0	2	N/A
First Aid Cases	4	50	<p>04/04/18 – Employee sustained an abrasion to right forearm. (24770)</p> <p>04/05/18 – Employee was working in a zone when the PAPR failed. The employee left the area and tried to make it back to MO-32 while holding breath. The employee made it to MO-32 and dropped to knees due to holding breath. An ambulance was called and the worker transported to Kadlec Medical Center in Richland. No recordable treatment was provided. (24775)</p> <p>04/10/18 – Employee was using a wrench to tighten hose fittings when employee developed elbow pain. (24777)</p> <p>04/18/18 – While pulling on a rope to close a rolling garage door, an employee brought it down on head. (24784)</p>
Near Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### RL-0011 Accomplishments

- Finalized the PFP RCE.
- Accomplishments to achieve stabilization following the December 2017 contamination event include:
  - Application of fixative to trailers, remaining structures, and debris piles within the PFP Complex.
  - Continued maintenance applications of fixative.
  - Routine radiological surveys.
  - Identified and began expanding the revised Radiological Buffer Area (RBA).
  - Extra radiological surveys when sustained winds were 20 miles per hour or greater.
  - Approximately 95 percent complete with installation of new trailer village outside the PFP RBA boundary.
- Continued implementation of new demolition requirements associated with the December 2017 contamination event. Efforts include:
  - Relocated interferences and performed Non-Destructive Assay (NDA) of Plutonium Reclamation Facility (PRF) waste package to support completion of quarterly Documented Safety Analysis (DSA) surveillance.
  - Completed implementation of bio-vector plan.

- o Continued sewer isolations within an affected trailer village to support new radiological boundary implementation.
- o Completed optioneering process to develop and implement new controls for the resumption of demolition activities at PFP. Expert panel review started.
- o Completed installation of High Density Polyethylene (HDPE) water loop to support dust suppression and contamination control.
- o Continued shipments of previously packaged waste.

## MAJOR ISSUES

### Issue:

On December 15, 2017, contamination was found outside of the established PFP radiological boundaries. On December 18, 2017, follow-up radiological surveys found additional contamination present in the administrative office area. CHPRC is continuing to identify resumption requirements based on a finalized RCA and working with RL and regulators to develop a resumption plan to enable demolition activities to resume.

### Corrective Action:

Work was stopped after the second event, pending completion of an RCA, and the development of corrective actions and a resumption plan.

### Status:

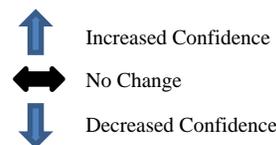
CHPRC continues to identify resumption requirements based on a finalized RCA and working with RL and regulators to develop a resumption plan to enable demolition activities to resume.

- Some of the activities that were performed during April were:
  - o Implementation of additional radiological monitoring (i.e., continuous air monitor (CAMs), cookie sheets).
  - o Continued installation of the new trailer villages to house PFP personnel.
  - o Mobilization of supplies and equipment to maintain the PFP footprint in a safe configuration.
  - o Application of fixatives (i.e., paints, stabilization agents) to items and areas in the PFP work control zone.
  - o Maintenance, repair, and rebuild of existing equipment and systems in a safe/compliant configuration.
  - o Initiation of activities to reconfigure boundaries, canister transfer areas, loadout areas, and waste storage areas to accommodate a larger work control zone.
  - o Reconfiguration of equipment in the PFP work control zone to support stabilization activities (water systems, foggers, etc.).

## RISK MANAGEMENT STATUS

**Unassigned Risk**  
**Risk Passed**  
**New Risk**  
**Change**

- Opportunity currently realized, or mitigation efforts are currently working toward, or after risk trigger with no foreseeable impacts.
- Mitigation efforts are currently working toward risk trigger with the possibility of actions not in place prior to risk occurrence. Recovery actions may be needed.
- Risk currently realized, or risk mitigation efforts are past risk trigger date with foreseeable impacts. Recovery actions needed.



Risk Title	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
<b>RL-0011/WBS-011.OA</b>										
<b>Explanation of major changes to the project monthly stoplight chart:</b> No major changes to the stoplight chart in April. However, risk elicitations have been conducted to align with the proposed path forward to resume demolition activities. Per these elicitations, the existing PFP-DEMO risks will be closed and removed from the stoplight report in May. They will be replaced with the new PFP risks.										
<b>Realized Risks (Risks that are currently impacting project cost/schedule)</b>										
PFP-DEMO-12: PFP/PRF Demolition Contamination Levels	Contamination levels on the canyon walls, floors, ventilation ducts, and the remaining areas of PFP will be higher than expected, thus requiring more stringent controls than expected or larger than expected waste volumes, resulting in cost impacts and schedule delays. <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$1.5 million, 22 days	<span style="color: red; font-size: 24px;">●</span>	<span style="font-size: 24px;">↔</span>	<p><b>Risk Event:</b> On December 15, 2017, swing shift RadCon personnel performing routine surveys following the day shift demolition activities discovered low-level contamination on a cookie sheet. This led to a wider search, and a “speck” of contamination was smeared from a government vehicle.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="text-align: center;">Risk recovery action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">See Below</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table> <p><b>Risk Action Assessment:</b>                      A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and path forward. An (RCA) has been conducted, and resumption activities have been identified. During April, resumption and implementation actions from the contamination spread continued. They included:</p> <ul style="list-style-type: none"> <li>Placement of sand and soil over contaminated debris to prevent further contamination spread.</li> <li>Radiological surveys, decontamination, and pressure washing to release trailers/vehicles/equipment.</li> <li>Implementation of additional radiological monitoring (i.e., CAMs, cookie sheets).</li> <li>Mobilization of supplies and equipment to maintain the PFP footprint in a safe configuration.</li> <li>Application of fixatives (i.e., paints, stabilization agents) to items and areas in the PFP work control zone.</li> <li>Maintenance, repair, and rebuild of existing equipment and systems in a safe/compliant configuration.</li> <li>Initiation of activities to reconfigure boundaries, canister transfer areas, loadout areas, and waste storage areas to accommodate larger work control zone.</li> </ul> <p>Reconfiguration of equipment in the PFP work control zone to support stabilization activities (water systems, foggers, etc.)</p> <ul style="list-style-type: none"> <li>Evaluate proposed loadout and demolition strategies and implement DOE and Expert Panel review comments.</li> </ul> <p style="color: red; font-size: small;">This risk will be closed and removed from the stoplight report in May due to the finalization of new PFP risks.</p>	Risk recovery action(s)	FC Date	%	See Below	Ongoing	N/A
Risk recovery action(s)	FC Date	%								
See Below	Ongoing	N/A								
PFP-DEMO-16: Contamination Spread Beyond Established Boundaries	Unplanned transport of contamination from posted areas due to dust suppression liquid flow, natural events, or wildlife results in cost impacts and schedule delays. <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$3 million, 30 days	<span style="color: red; font-size: 24px;">●</span>	<span style="font-size: 24px;">↔</span>	<p><b>Risk Event:</b> On December 18, 2017, contamination was found in the project’s administrative office area during a follow-up survey conducted after a spread of low-level contamination was found on Friday, December 15, 2017, outside of the expanded control zones. Surveys also found contamination on personal vehicles that had been driven off the Hanford Site.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="text-align: center;">Risk recovery action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">See Below</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table>	Risk recovery action(s)	FC Date	%	See Below	Ongoing	N/A
Risk recovery action(s)	FC Date	%								
See Below	Ongoing	N/A								

				<p><b>Risk Action Assessment:</b> A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and a path forward. An RCA has been conducted, and resumption activities have been identified. During April, resumption and implementation actions from the contamination spread continued. They included:</p> <ul style="list-style-type: none"> <li>• Placement of sand and soil over contaminated debris to prevent further contamination spread.</li> <li>• Radiological surveys, decontamination, and pressure washing to release trailers/vehicles/equipment.</li> <li>• Implementation of additional radiological monitoring (i.e., CAMs, cookie sheets).</li> <li>• Mobilization of supplies and equipment to maintain the PFP footprint in a safe configuration.</li> <li>• Application of fixatives (i.e., paints, stabilization agents) to items and areas on the PFP work control zone.</li> <li>• Maintenance, repair, and rebuild of existing equipment and systems in a safe/compliant configuration.</li> <li>• Initiation of activities to reconfigure radiological boundaries, canister transfer areas, loadout areas, and waste storage areas to accommodate larger work control zone.</li> <li>• Reconfiguration of equipment in the PFP work control zone to support stabilization activities (water systems, foggers, etc.).</li> <li>• Evaluate proposed loadout and demolition strategies and implement DOE and expert panel review comments.</li> </ul> <p>This risk will be closed and removed from the stoplight report in May due to the finalization of new PFP risks.</p>
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**Critical Risks** (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)

**FY2018 Risk Triggers** (Risk could be realized in FY2018)

<p>PPF-DEMO-05: Inclement Weather</p>	<p>Inclement weather, including moderate winds, low or high temperatures, and thunderstorms will impact the demolition of PFP. <b>Risk Handling Strategy:</b> Accept <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$0K, 32 days  *Cost increase will result in cost-per-day impacts from crews and hotel load.</p>			<p><b>Risk Trigger:</b> Extreme cold temperature, accumulating snow showers resulting in site delays/closures, and high winds.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Implement overtime (OT) shifts as necessary to mitigate further impacts associated with weather.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> During April, eight days were partially impacted by high winds. The risk remains critical due to potential high-wind and heat impacting progress toward demolition. The PFP project will continue to adjust the daily work scope to plan for projected weather impacts.</p> <p>This risk will be closed and removed from the stoplight report in May due to the finalization of new PFP risks.</p>	Mitigation action(s)	FC Date	%	Implement overtime (OT) shifts as necessary to mitigate further impacts associated with weather.	Ongoing	N/A
Mitigation action(s)	FC Date	%								
Implement overtime (OT) shifts as necessary to mitigate further impacts associated with weather.	Ongoing	N/A								

<p>PPF-DEMO-07: Removal/Extraction of Equipment Takes Longer Than Planned</p>	<p>Controlled demolition of equipment, gloveboxes, and portions of the crosscutting process support systems (i.e. ventilation) result in cost impacts and schedule delays. <b>Risk Handling Strategy:</b> Control <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$3 million, 60 days</p>			<p><b>Risk Trigger:</b> On Friday, December 15, 2017, swing shift RadCon personnel performing routine surveys following the day shift demolition activities discovered low-level contamination on a cookie sheet. This led to a wider search, and a “speck” of contamination was smeared from a government vehicle.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>See Below</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and path forward. An RCA is being conducted, and recovery actions and expected completion dates will be identified after it has been completed. During April, resumption and implementation actions from the contamination spread continued. They included:</p> <ul style="list-style-type: none"> <li>• Continuation of radiological surveys, decontamination, and pressure washing to release trailers/vehicles/equipment.</li> </ul>	Mitigation action(s)	FC Date	%	See Below	Ongoing	N/A
Mitigation action(s)	FC Date	%								
See Below	Ongoing	N/A								

				<ul style="list-style-type: none"> <li>Continuation of additional radiological monitoring (i.e., CAMs, cookie sheets). Application of fixatives (i.e., paints, stabilization agents) to items and areas on the PFP work control zone.</li> <li>Maintenance, repair, and rebuild of existing equipment and systems in a safe/compliant configuration.</li> <li>Continuation to reconfigure radiological boundaries, canister transfer areas, loadout areas, and waste storage areas to accommodate larger work control zone.</li> <li>Reconfiguration of equipment in the PFP work control zone to support stabilization activities (water systems, foggers, etc.).</li> <li>Evaluate proposed loadout and demolition strategies and implement DOE and expert panel review comments.</li> </ul> <p>This risk will be closed and removed from the stoplight report in May due to the finalization of new PFP risks.</p>					
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)									
<p>PFP-DEMO-21: Glovebox/Equipment Removal/Demolition Material</p> <p>A material handling event (e.g., dropped piece of process equipment) occurs during the PFP demolition, resulting in cost impacts and schedule delays.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Low (10% to 25%)</p> <p><b>Worst Case Impacts:</b> \$150K, 30 days</p>	●	↑	<p><b>Risk Trigger:</b> During pre-demolition/demolition activities in fiscal year (FY) 2018.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No major changes in April. The mitigation strategies have been put in place; as a result, the risk strategy is to accept with no further mitigation actions identified at this time. PFP will continue to adhere to the CHPRC Integrated Safety Management System (ISMS) program/hoisting and rigging program to include detailed analyses of potential hazards and identification of preventive measures to implement prior to starting the work. At this time, no alternative course of actions are needed. One glovebox remains in the 234-5Z facility (HA-46) and will be removed once demolition resumes. Additional specially-handled waste packages remain in the 234-5Z duct level and basement.</p> <p>This risk will be closed and removed from the stoplight report in May due to the finalization of new PFP risks.</p>	Mitigation action(s)	FC Date	%	None identified at this time.	N/A	N/A
Mitigation action(s)	FC Date	%							
None identified at this time.	N/A	N/A							
<b>Unassigned Risks</b> (Pending ownership of identified risks/opportunities)									
No unassigned risks identified in April.									

## PROJECT BASELINE PERFORMANCE

### Current Month

(\$M)

WBS 011/RL-0011 Nuclear Matl Stab & Disp PFP	Budgeted Cost of Work Scheduled (BCWS)	Budgeted Cost of Work Performed (BCWP)	Actual Cost of Work Performed (ACWP)	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	0.0	0.0	6.5	0.0	0.0%	(6.5)	0.0%

Numbers are rounded to the nearest \$0.1 million.

**CM Schedule Variance: (+\$0.0M/+0.0%)**

The CM schedule variance is within threshold.

**CM Cost Variance: (-\$6.5M/0.0%)**

The current month negative cost variance is due to the recovery actions and implementation of the new demolition requirements associated with a December 2017 contamination event. This includes fixative applications, performance of radiological surveys, and stabilization activities to support resumption of

demolition of PFP. This also includes additional material and equipment purchases to support the revised demolition approach. As resumption corrective actions are performed, costs for labor, subcontracts, and material purchases add to the current month variance. Assignment of Jacobs Engineering corporate resources and reassignment of CHPRC personnel to support the RCA and programmatic assessments have also contributed to the variance. In addition, the resulting delay in demolition activities from the contamination event are causing an extension of unplanned project management, min-safe, and support resources.

## Contract-to-Date (\$M)

WBS 011/ RL-0011 Nuclear Matl Stab & Disp PFP	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	988.7	973.0	1,108.4	(15.7)	(1.6%)	(135.4)	(13.9%)	988.7	1,170.6	62.3	(182.0)
Numbers are rounded to the nearest \$0.1 million											

### Contract-to-Date (CTD) Schedule Variance (-\$15.7M/-1.6%)

The CTD schedule variance is within threshold.

### CTD Cost Variance (-\$135.4M/-13.9%)

The negative CTD cost variance is primarily a result of prior year unrecoverable costs, as well as impacts to the D&D work scope and extending level of effort (LOE) support services. Unplanned costs to support implementation of schedule efficiency initiatives at PFP (i.e. foaming, Perma-Fix Northwest [PFNW] size reduction support and implementation of the PremAire Breathing system). Increased training costs of additional Health Physics Technicians (HPT) and D&D workers to PFP have also contributed to this variance. Additional resources to recover schedule for asbestos removal activities and to support the unplanned asbestos identified for removal (about 10,000 feet). Additional unplanned shipping materials (waste shipping containers TL-1800s, SLB2s, IP-1 bags, etc.) were also required to support waste loadout activities for transuranic (TRU) waste disposition efforts. Unplanned work to reconfigure the HDPE water loop to support the new radiological boundaries also contributed to this variance.

Recovery actions associated with a December 2017 contamination event, including fixative applications, performance of radiological surveys, and stabilization activities to support resumption of demolition of PFP, are ongoing. Assignment of Jacobs Engineering corporate resources and reassignment of CHPRC personnel to support the RCA and programmatic assessments have also contributed to the variance.

The negative cost variance is partially offset by using fewer breathing air suits and hoses than originally planned for 242-Z entries. This is a result of fewer field work team members being required to perform hands-on work in 242-Z because of the confined space and number of suits (three suits per day versus five). In addition, there were recognized efficiencies where crews were able to complete process vacuum removal in 291-Z with less effort than originally planned. Characterization results indicated lower levels of hold-up than planned, which allowed more efficient piping removal. Isolations of the 291-Z Facility were performed more efficiently than planned due to the main electrical power being disconnected outside of the building rather than performing individual isolations within the facility. Hazardous material removal, stabilization, and decontamination was more efficient than originally planned. (i.e., using powerful fans to assist with vertical fixative flow up the stack).

Implementation of a baseline change request (BCR) that was processed in September 2017 to draw down on RL contingency to recover cost impacts to the RL-0011 C.2 project associated with realized RL risks. Areas that were impacted were associated with weather delays, stop works, PRF contamination events, and Mission Support Alliance (MSA) resources retained to prevent bump and roll impacts. Recognition of efficiencies associated with demolition of 242-Z, 291-Z, and 234-5ZA are also contributing to the offset of the negative variance.

#### Variance at Completion (-\$182.0M/-18.4%)

The unfavorable variance at completion (VAC) is reflective of extended hotel load and field resource costs due to delays in demo-ready and demolition activities.

As a result of wall removals and electrical isolations, it was discovered that approximately 10,000 feet of additional asbestos was found between the walls and required removal. This is a recognized risk (PFP-092-02) and has been incorporated into the VAC. CHPRC is working with RL to use contingency for the additional 10,000 feet of asbestos identified, impacts from the criticality alarm, and relief from the 30 days of weather delays experienced from December 2016 through March 2017.

Finally, overtime was used to ready the 234-5Z Facility for demolition by September 2017. Also, unplanned work on the HDPE water loop is contributing to this variance. This unfavorable variance is partially offset by recognized efficiencies due to characterization data in the 234-5Z duct level, allowing piping and ducting to be left in place for demolition and the 291-Z demolition activities. The estimate at completion (EAC) and VAC is reflective of the projected date to reach slab-on-grade in December 2018. The EAC and VAC are subject to change based on approval of the recovery plan addressing the root cause of the unplanned releases and revised demolition approach.

**Contract Performance Report Formats are provided in Appendix A.**

## FUNDS vs. SPEND FORECAST (\$M)

WBS 011/RL-0011 Nuclear Matl Stab & Disp PFP	FY2018		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	80.0	74.9	5.1
Incremental Scope Pending Change Management	0.0	0.0	0.0
RL-0011 - Total	80.0	74.99	5.1

Numbers are rounded to the nearest \$0.1 million

#### Funds/Variance Analysis

FY2018 expected required funding for the project breakdown structure (PBS) RL-0011 is \$74.9 million to allow for recovery actions and continuation of demolition activities to achieve slab-on-grade. Projected funding is \$80.0 million.

#### Critical Path Schedule

The PFP Critical Path schedule begins with the continuation of resumption activities related to the December contamination event. This will run in parallel with the loading of the Super-sack waste. Once

the Super-sacks are loaded, debris disposition of the 234-5Z rubble piles will resume starting with the frontside waste. Once the waste debris is loaded out, demolition will resume on the remaining sections of zones 2 and 7, with the exception of the drain line. Remote Mechanical C (RMC) process line and Remote Mechanical A (RMA) process line demo will come next, in parallel with completion of the basement of 234-5Z demolition. The 234-5Z demolition completes October 16, 2018. The 236-Z canyon demolition will then resume with completion scheduled for December 19, 2018, meeting the requirements for the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-083-00A – PFP Facility Transition and Selection Disposition Activities. Completion of demolition is followed by site stabilization and demobilization, turnover to surveillance and maintenance, and project closeout activities completing February 21, 2019. The dates above are reflective of the known actions and resumption efforts associated with a contamination event that occurred in December as of April month-end closing and will be updated as more information is made available from the Expert Panel review and resumption plan.

## MILESTONE STATUS

Tri-Party Agreement milestones represent significant events in project execution. RL Enforceable Agreement milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The performance measurement baseline (PMB) annual update, implemented in September 2013, and subsequently approved BCRs, define CHPRC planning with respect to Tri-Party Agreement milestones. The following table is a two-year look-ahead of commitments and Tri-Party Agreement-enforceable milestones.

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-083-00A	PFP Facility Transition and Selection Disposition Activities	09/30/17		12/19/18	On Friday, December 15, 2017, swing shift RadCon personnel performing routine surveys following the day shift demolition activities discovered low-level contamination on a cookie sheet. This led to a wider search, and a “speck” of contamination was smeared from a government vehicle. A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and path forward. An RCA has been conducted and resumption actions and expected completion dates are being identified. One day was lost on schedule in April due to identified corrective actions required to resume demolition activities at PFP.

## GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Contract Section	Project	GFS/I	Status
<b>CONTRACT</b>			
J.12/C.2.2, C.2.3	PBS RL-0011, Plutonium Finishing Plant Closure Project	Offsite transportation of radioactive material: RL provides equipment and government drivers to transport TRU materials outbound/inbound between the Hanford Site and PFNW locations. RL is the authorized shipper and acts as signatory on the shipping papers, and ensures DOE Manual 460.2-1 is complied with. RL arranges for Commercial Motor Vehicle Safety Alliance (CVSA) level VI vehicle inspections and verifies that the government drivers meet the applicable Department of Transportation (DOT) Federal Motor Carrier Safety Regulations (49 CFR 382 and 383). RL also inspects the load securement to ensure compliance with DOT regulations and/or Transportation Safety Document (TSD) requirements.	Ongoing

### DOE ACTIONS / DECISIONS

None at this time.

# Section B

## Spent Nuclear Fuel Stabilization and Disposition (RL-0012)



R. M. Geimer  
Vice President for  
K Basin Operations and  
Plateau Remediation

April 2018  
CHPRC-2018-04, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

On March 26, 2018, CHPRC formally notified RL of readiness to proceed with commencement of the DOE Operational Readiness Review (ORR) of 105KW/Annex Engineered Container Retrieval and Transfer System Activity.

The DOE ORR that was initiated on April 9, 2018, was completed on April 17, 2018. At the out-brief for the DOE ORR, the items listed below were identified:

- Five pre-start findings.
- Four post-start findings.
- Seven opportunity for improvement items.
- Two noteworthy practices.

Project breakdown structure (PBS) RL-0012 scope is 97.4 percent complete, with a cumulative schedule performance index (SPI) of 1.00 and a Cost Performance Index (CPI) of 1.04.

## EMS OBJECTIVES AND TARGET STATUS

None currently identified.

### TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	CM Quantity	Rolling 12 Month	Comment
Dart Injuries	0	1	N/A
Recordable Injuries	0	0	N/A
First Aids	1	13	4/16/18 – Employee opened door that the wind then caught, causing a shoulder strain. (24782)
Near Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### 100K Operations

- The 100K Operations group continued maintaining facilities in a safe and compliant condition. Crews continued relocation activities in 105KW Basin and performance of monthly and quarterly routines during the period.

### KW Basin Sludge Removal Capital Asset Project

- The 100K Operations support team performed preventive maintenance and calibrations on both Engineered Container Retrieval and Transfer System (ECRTS) components and Annex Utility System components.
- The DOE ORR was completed on April 17, 2018.
- The project technical staff updated the critical decision (CD)-4 project closeout submittal to incorporate RL comments. Formal transmittal to RL is forecasted in May.

### T Plant Preparations

- The startup approval letter was approved and issued by the CHPRC president on February 12, 2018. Due to delays in completing contractor ORR activities at the 105KW facility, T Plant personnel will have to re-perform an operations demonstration validating staff proficiency in May.

## MAJOR ISSUES

### Issue:

CHPRC is planning to complete the first shipment of sludge from 105KW Basin to T Plant on June 28, 2018, which would achieve performance measure PM-12-2-18 (June 30, 2018). Given the minimal remaining float, CHPRC management is monitoring both the cost and schedule associated with this work.

### Corrective Action:

CHPRC completed the ORR in March. The DOE ORR was completed in April. CHPRC will work closely with RL to correct pre-start activities and submit the request for authorization to startup letter and CD-4 submittal in mid-May.

### Status:

The performance measure is in jeopardy of being achieved.

## RISK MANAGEMENT STATUS

**Unassigned Risk**  
**Risk Passed**  
**New Risk**  
**Change**

- Opportunity currently realized, or mitigation efforts are currently working toward, or after risk trigger with no foreseeable impacts.
- Mitigation efforts are currently working toward risk trigger with the possibility of actions not in place prior to risk occurrence. Recovery actions may be needed.
- Risk currently realized, or risk mitigation efforts are past risk trigger date with foreseeable impacts. Recovery actions needed.

- ↑ Increased Confidence
- ↔ No Change
- ↓ Decreased Confidence

Unmitigated Risk Impacts	Assessment		Comments												
	Month	Trend													
<b>RL-0012/WBS-012</b>															
<b>Explanation of major changes to the project monthly spotlight chart:</b> Risk STP-151, <i>Leak Tightness of Sludge Transportation System Casks</i> , was added to the Realized Risk section of the spotlight report in April.															
<b>Realized Risks (Risks that are currently impacting project cost/schedule)</b>															
STP-154: ORR Results in Delays to the Project	Impacts stemming from the contractor ORR, the DOE ORR, or a combination of the two impacts the project's operational activities and jeopardizes the project's ability to achieve PM-12-2-18, due June 30, 2018. <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$216K, 24 days	<span style="color: red;">●</span>  <span style="color: blue;">↑</span>	<b>Risk Event:</b> Execution of the contractor ORR and execution of the DOE ORR.  <table border="1"> <thead> <tr> <th>Risk recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Complete necessary preventative maintenance and calibration activities prior to re-initiation of the contractor ORR and prior to initiating the DOE ORR.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Continue performing operation demonstrations in presence of senior supervisor watches, with the intent on identifying and resolving emergent challenges.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <b>Risk Action Assessment:</b> The contractor ORR was completed on March 6, 2018. The DOE ORR was completed on April 17, 2018. The project is planning to address the DOE ORR pre-start findings and submit the request for authorization to startup letter to RL prior to the end of May.	Risk recovery action(s)	FC Date	%	Complete necessary preventative maintenance and calibration activities prior to re-initiation of the contractor ORR and prior to initiating the DOE ORR.	Complete	100	Continue performing operation demonstrations in presence of senior supervisor watches, with the intent on identifying and resolving emergent challenges.	Complete	100			
Risk recovery action(s)	FC Date	%													
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Continue performing operation demonstrations in presence of senior supervisor watches, with the intent on identifying and resolving emergent challenges.	Complete	100													
STP-151: Leak Tightness of Sludge Transportation System Casks	A failed leak test of the Sludge Transportation System (STS) Cask could result in in-scope unplanned work and significant schedule delays not assumed in the Sludge Removal Project (SRP) baseline. <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Very Low (<10%) <b>Worst Case Impacts:</b> \$1000K, 48 days	<span style="color: red;">●</span>  <span style="color: blue;">↓</span>	<b>Risk Event:</b> Although the project has not realized a failed cask leak rate test, the results are trending negative and project management has determined it may be necessary to take additional mitigation action.  <table border="1"> <thead> <tr> <th>Risk recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Verify that both casks can pass the leak test criteria prior to initiating sludge removal operations.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Institute procedural controls that maintain cask sealing surfaces in a condition that leak tightness is not compromised.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Procure a replacement cask lid if a negative leak rate trend is observed.</td> <td>8/31/18</td> <td>5%</td> </tr> </tbody> </table> <b>Risk Action Assessment:</b> The 100K engineering organization is researching the feasibility of procuring a replacement cask lid as an action to mitigate risk realization. A decision on procuring a new lid is anticipated by May 11, 2018.	Risk recovery action(s)	FC Date	%	Verify that both casks can pass the leak test criteria prior to initiating sludge removal operations.	Complete	100	Institute procedural controls that maintain cask sealing surfaces in a condition that leak tightness is not compromised.	Complete	100	Procure a replacement cask lid if a negative leak rate trend is observed.	8/31/18	5%
Risk recovery action(s)	FC Date	%													
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Institute procedural controls that maintain cask sealing surfaces in a condition that leak tightness is not compromised.	Complete	100													
Procure a replacement cask lid if a negative leak rate trend is observed.	8/31/18	5%													
<b>Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)</b>															
No critical risks identified in April.															

**High Risk Threat Value** (Recoverable slip to enforceable or incentivized milestone)

**FY2018 Risk Triggers** (Risk could be realized in FY2018)

<p>STP-018-O: STP Operational Upset or Spill - During first STSC</p>	<p>An operational upset or spill results in a work shutdown at K Basin, resulting in schedule delays.  <b>Risk Handling Strategy:</b> Control   <b>Probability:</b> Very Low (&lt;10%)  <b>Worst Case Impacts:</b> \$2 million, 48 days</p>			<p><b>Risk Triggers:</b> An operational upset or spill results in work shutdown at K Basin. This risk will commence in fiscal year (FY) 2018 and continue throughout the project lifecycle until the sludge is removed from 105KW Basin.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Conduct rigorous startup testing following system installation at the 105KW Basin and Annex.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Conduct testing and training at Maintenance and Storage Facility (MASF) and develop procedures that use the information and knowledge gained during the activity for use at the KW Basin.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Installation of camera systems to allow operations and radiation protection management to monitor operation dry runs to ensure appropriate discipline and personal protective equipment (PPE) are used to complete Sludge Transport &amp; Storage Container (STSC) connect/disconnect evolutions is in process.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Evaluation of the potential for installation of camera systems to allow Operations and Radiation Protection Management to monitor testing and operation dry runs to ensure appropriate discipline and PPE are utilized to complete STSC connect/disconnect evolutions.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b>                  No major changes in April. Training, procedure development, and RSA affidavits were completed. CHPRC plans to request authorization to commence sludge removal operations in May 2018.</p>	Mitigation action(s)	FC Date	%	Conduct rigorous startup testing following system installation at the 105KW Basin and Annex.	Complete	100	Conduct testing and training at Maintenance and Storage Facility (MASF) and develop procedures that use the information and knowledge gained during the activity for use at the KW Basin.	Complete	100	Installation of camera systems to allow operations and radiation protection management to monitor operation dry runs to ensure appropriate discipline and personal protective equipment (PPE) are used to complete Sludge Transport & Storage Container (STSC) connect/disconnect evolutions is in process.	Complete	100	Evaluation of the potential for installation of camera systems to allow Operations and Radiation Protection Management to monitor testing and operation dry runs to ensure appropriate discipline and PPE are utilized to complete STSC connect/disconnect evolutions.	Complete	100
Mitigation action(s)	FC Date	%																	
Conduct rigorous startup testing following system installation at the 105KW Basin and Annex.	Complete	100																	
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<p>STP-073-C: Processing Efficiency - Retrieval &amp; Shipping</p>	<p>The realized processing efficiency associated with sludge retrieval and shipping operations does not match the baseline plan.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$1,000K, 90 days</p>			<p><b>Risk Triggers:</b> Actual processing efficiency associated with sludge retrieval and shipping operations does not match baseline assumptions. In addition, Management Directive (MD) PRC-MD-RP-53085, Suspension of 67 percent Confidence Level Surveys, was issued. The MD requires that radiological clearance surveys “shall be at the 95 percent confidence level” and implemented with oversight provided by radiological protection management or health physicists, potentially increasing overall STSC processing times. This risk will commence in FY2018, beginning with operations campaign.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Establish a Production Control Center to facilitate maximum efficiency integrating SRP operations and maintenance activities.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Review operations and maintenance activities required to produce each sludge STSC and establish a “typical” schedule integrating all activities in the most efficient sequence possible.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No major changes in April. Project personnel are working on a revised plan to establish the appropriate campaign schedule, taking into account ion exchange module (IXM) change outs and performance of preventive maintenance activities.</p>	Mitigation action(s)	FC Date	%	Establish a Production Control Center to facilitate maximum efficiency integrating SRP operations and maintenance activities.	Complete	100	Review operations and maintenance activities required to produce each sludge STSC and establish a “typical” schedule integrating all activities in the most efficient sequence possible.	Complete	100															
Mitigation action(s)	FC Date	%																										
Establish a Production Control Center to facilitate maximum efficiency integrating SRP operations and maintenance activities.	Complete	100																										
Review operations and maintenance activities required to produce each sludge STSC and establish a “typical” schedule integrating all activities in the most efficient sequence possible.	Complete	100																										
<p>STP-155: CD-4 Approval Takes Longer than Planned</p>	<p>DOE O-413.3B, CD-4 Submittal approval takes longer than planned in the baseline.</p> <p><b>Risk Handling Strategy:</b> Control</p> <p><b>Probability:</b> Low (10% to 25%) <b>Worst Case Impacts:</b> \$100K, 45 days</p>			<p><b>Risk Triggers:</b> RL review/approval of the CHPRC CD-4 Project Closeout Submittal.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Meet with RL to discuss and agree upon expectations for DOE O-413.3B, CD-4 submittal content.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Obtain an example of a DOE O-413.3B, CD-4 submittal that has recently been reviewed/approved by DOE HQ.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Prepare a draft of the SRP CD-4 submittal.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Solicit and incorporate RL comments.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Submit final draft of SRP CD-4 submittal for RL review.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Complete contractor ORR and DOE ORR.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Submit final SRP CD-4 submittal.</td> <td>5/11/18</td> <td>90</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No major changes in April. All actions that can be taken to positively influence risk avoidance have been taken.</p>	Mitigation action(s)	FC Date	%	Meet with RL to discuss and agree upon expectations for DOE O-413.3B, CD-4 submittal content.	Complete	100	Obtain an example of a DOE O-413.3B, CD-4 submittal that has recently been reviewed/approved by DOE HQ.	Complete	100	Prepare a draft of the SRP CD-4 submittal.	Complete	100	Solicit and incorporate RL comments.	Complete	100	Submit final draft of SRP CD-4 submittal for RL review.	Complete	100	Complete contractor ORR and DOE ORR.	Complete	100	Submit final SRP CD-4 submittal.	5/11/18	90
Mitigation action(s)	FC Date	%																										
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Obtain an example of a DOE O-413.3B, CD-4 submittal that has recently been reviewed/approved by DOE HQ.	Complete	100																										
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Submit final draft of SRP CD-4 submittal for RL review.	Complete	100																										
Complete contractor ORR and DOE ORR.	Complete	100																										
Submit final SRP CD-4 submittal.	5/11/18	90																										
<p><b>Unassigned Risks (Pending ownership of identified threats/opportunities)</b></p>																												
<p>CHPRC proposed five risks that are outside of CHPRC’s ability to manage and, as such, should be re-assigned to RL (STP-011D, STP-018, STP-073, STP-073-A, and STP-073-B). The proposal was not accepted by RL, stating, “the opportunities and threats appear to be under the control of CHPRC to manage.” CHPRC submitted letter CHPRC-1602146 R1 on August 30, 2016, in response to RL’s rejection letter. On March 14, 2017, CHPRC received Correspondence Number 1701045 providing direction to accelerate the capital portion of the SRP. In March 2018, CHPRC implemented acceleration opportunities and added four additional STSC transports (total of five) to the performance measurement baseline (PMB). As a result, CHPRC has reassumed ownership of these risks. CHPRC is in the process of submitting a revised change proposal reflecting the updated contract scope (five STSCs transported to T Plant by September 30, 2018).</p>																												

## PROJECT BASELINE PERFORMANCE

### Current Month

(\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	2.4	2.6	3.5	0.2	8.4%	(1.0)	-35.0%

Numbers are rounded to the nearest \$0.1 million

#### CM Schedule Performance (+\$0.2M/+8.4%)

The variance is within reporting thresholds.

#### CM Cost Performance (-\$1.0M/-35.0%)

The current month cost variance is the result of complexities with readiness and contractor ORR, which required additional time and resources. DOE ORR was completed in April, and declaration of readiness is forecast for May 2018.

## Contract-to-Date

(\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	725.3	725.3	695.6	(0.1)	-0.0%	29.6	4.1%	744.5	717.6	22.0	26.9

Numbers are rounded to the nearest \$0.1 million

#### CTD Schedule Performance (-\$0.1M/-0.0%)

The variance is within reporting thresholds.

#### CTD Cost Performance (+\$29.6M/+4.1%)

The variance is within reporting thresholds.

#### Variance at Completion (+\$26.9M/+3.6%)

The variance is within reporting thresholds.

**Contract Performance Report Formats are provided in Appendix A.**

## FUNDS vs. SPEND FORECAST (\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	FY2018		Variance
	Projected Funding	Spending Forecast	
Expense – Spending Forecast	41.9	38.3	3.7
Incremental Scope Pending Change Management	0.0	0.3	(0.3)
Expense – Subtotal	41.9	38.6	3.4
Line Item (LI)	18.8	17.8	1.0
Incremental Scope Pending Change Management	0.0	0.0	(0.0)
LI – Subtotal	18.8	17.8	1.0
<b>RL-0012 – Total</b>	<b>60.7</b>	<b>56.4</b>	<b>4.4</b>

Numbers are rounded to the nearest \$0.1 million.

### Funds/Variance Analysis

FY2018 funding for PBS RL-0012 is \$60.7 million. Positive variance of \$3.4 million in expense funding is based on revised funding levels in the Central Plateau control point provided by RL in March 2018. CHPRC will evaluate forecast and revise as appropriate for transition of personnel from LI to expense. Positive variance in the LI is the result of efficiencies gained due to acceleration of the installation activities and risk mitigation efforts, reducing the need for contingency and management reserve.

### Critical Path Schedule

The project critical path schedule reflects RL providing authorization to commence retrieval operations following the review and approval of the (SRP) CD-4 submittal in parallel with review/approval of the CHPRC Request for Startup Approval letter. Completing retrieval operations, including the filling of STSCs with sludge and transporting them to T Plant, to complete Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) milestone M-016-176, Complete Sludge Removal from 105KW Fuels Storage Basin, is required by December 2019.

## MILESTONE STATUS

Tri-Party Agreement milestones represent significant events in project execution. RL Enforceable Agreement (EA) milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The performance measurement baseline (PMB) annual update, implemented in September 2013, and subsequently approved baseline change requests (BCRs) define CHPRC planning with respect to Tri-Party Agreement milestones. The following table shows the Tri-Party Agreement milestone within the CHPRC contract period (September 30, 2018).

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-016-175	Begin Sludge Removal from 105KW Fuel Storage Basin.	9/30/2018		6/07/2018	The forecast date does not include schedule margin from the project's risk analysis and assumes CD-4 will be approved within two weeks of issuance of the CHPRC Request for Startup Approval Letter.

## GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

## DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
RL Perform ORR – Team Lead	04/09/18 (A)	04/17/18 (A)
RL Issue Findings / Discrepancy List	04/18/18 (A)	05/01/18
RL Approve CD-4 Submittal Package	05/14/18	05/21/18
RL Approve Request for Startup Letter	05/14/18	05/21/18

# Section C

## Solid Waste Stabilization and Disposition (RL-0013)



K. R. Shupe  
(Acting) Vice President for  
Waste and Fuels  
Management Project

April 2018  
CHPRC-2018-04, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

T. L. Hobbes  
Vice President for River  
Risk Management Project

M. A. Wright  
Vice President for  
Project Technical  
Services

## PROJECT SUMMARY

During the April reporting period, March 26 - April 22, 2018, Waste and Fuels Management Project (W&FMP) maintained facilities in a safe and compliant condition. Overall, the project continues to deliver ongoing efficiencies that were identified in the fiscal year (FY) 2012-2013 time frame, but continues to be impacted by emerging work and realized risks.

This month:

- Management of Cesium and Strontium Capsule (MCSC) Project: Work continues on the Cask Storage System (CSS) and the Capsule Storage Area (CSA) pad design. The project completed the CSS formal preliminary design review comment period and the first comment dispositions were provided to the design team for concurrence. In addition, the architect engineer (AE) is working preliminary design review comment dispositions for CSA design. A design for the new Pass-Through Gauge was also completed during the month.
- At Waste Encapsulation and Storage Facility (WESF), a G-Cell entry with NAC International was made to perform overlay measurements in support of the W-135, WESF Modifications Project equipment layout.
- The project commenced detailed planning for FY2019-FY2021.

### EMS Objectives and Target Status (Draft)

Objective #	Objective	Target	Due Date	Status
18-EMS-WFMP-OB1-T1	Reuse equipment from West Valley DOE site/conserves resources/minimize waste.	Reuse West Valley equipment for cesium (Cs) and strontium (Sr) capsule storage. Receive, manage, and utilize equipment as received.	9/30/18	45%
18-EMS-WFMP-OB2-T1	Chemical management compliance.	Evaluate the process for chemical management at Canister Storage Building (CSB) and T Plant. Perform an assessment on chemical inventory locations.	9/30/18	25%
18-EMS-WFMP-OB3-T1	Improve compliance.	Identify implementing mechanisms and gaps for low-level burial ground (LLBG) compliance matrix requirements at the project level.	9/30/18	0%
18-EMS-WFMP-OB4-T1	Reduce environmental impact of contaminants along the Columbia River and minimize accompanying risks.	Complete T Plant RA and Master Documented Safety Analysis (MDSA) Revision 12 implementation in order to prepare for sludge receipt at T Plant.	9/30/18	100%
18-ERDF-OB1-T1	Conserve resources/waste minimization	Procure and use metal liner substitutes for the macro-encapsulation treatment of waste instead of using functional roll-on/roll-off (RO/RO) waste containers as sacrificial containers.	9/30/18	40%

Objective #	Objective	Target	Due Date	Status
18-ERDF-OB2-T1	Improve compliance/ pollution prevention	Monitor and evaluate universal waste (UW) and recycling accumulation areas for compliance with CHPRC procedures.	9/30/18	40%

## TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	1	1	4/17/18 – Employee tripped and fell on wet surface while walking in to report to work. The next day, employee tripped on a parking bumper, at which time the right knee became sore. (24783)
Total Recordable Injuries	0	0	
First Aid Cases	1	*17	4/12/18 – While entering a bathroom, employee stepped on a wet spot and fell to the floor on the knee and caught themselves with the left arm. Employee immediately informed the manager of the fall. The employee stated they were OK but knee and shoulder were hurt. (24781)  *One First Aid case; PTS in support of RL-0013.
Near Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### 13.01 Project Management

- o Performed/Completed:
  - The project commenced detailed planning for FY2019-FY2021 in support of DOE's out year planning.
  - Current Consent Agreement and Final Order (CAFO) document development status: A path forward regarding the Data Quality Objectives (DQO) issue was agreed upon by CHPRC, RL, and Ecology. Subsequently, Ecology identified an additional issue with the approach to clean debris surface of uncoated concrete. On April 2, 2018, Ecology concluded that the site-specific decontamination method currently identified in the closure plan was adequate and only minor changes were needed. CHPRC personnel incorporated the revisions and anticipated initiating transmittal of the closure plans; however, on April 16, 2018, Ecology identified additional changes to the Sampling and Analysis Plan (SAP) portion of the CAFO closure plans.

### 13.02 Capsule Storage & Disposition

- o Performed/Completed:
  - G-Cell entry with NAC International to perform overlay measurement in support of W-135 project equipment layout.

- Replacement of demister pads and pre-filters within the K3N ventilation skid.
- Transfer of the project W-130, WESF K3 Ventilation and Stabilization Upgrade concrete cores from the WESF canyon to the truck port.
- o Completed Surveillances/Preventive Maintenance (PM):
  - 41 PM packages.
- 13.03 Canister Storage Building (CSB)**
  - o Performed/Completed:
    - Work Site Assessment (WSA) for Resource Conservation and Recovery Act of 1976 (RCRA) permit.
  - o Completed Surveillances/PMs:
    - 24 PM packages.
- 13.06 Transuranic (TRU) Repackaging**
  - o Repackaging:
    - One shipment of M-091 legacy suspect transuranic mixed (TRUM) waste was shipped to Perma-Fix Northwest (PFNW) from the Central Waste Complex (CWC). Once returned, it will contribute 38.1 cubic meters (m<sup>3</sup>) toward the next objective, bringing the total to date to 179.3m<sup>3</sup>.
- 13.07 Waste Receiving and Processing (WRAP)**
  - o Performed/Completed:
    - Lighting upgrades circuit verification to 2404-WB and 2404-WC.
    - Continued repairs of Motor Control Centers.
  - o Completed Surveillances/PMs:
    - 183 surveillances.
    - 7 PM packages.
- 13.08 T Plant**
  - o Performed/Completed:
    - 221T tunnel rollup door annual maintenance.
    - Hazard Review Board (HRB) for cover block inspection and cell ledge cleaning.
    - Drained 221T Canyon Waste Transfer Line.
    - Supported site-wide emergency preparedness drill.
  - o Completed Surveillances/PMs:
    - 402 surveillances.
    - 22 PM packages.
- Sludge Receipt**
  - o Performed/Completed:
    - The sludge receipt team continued work toward initiating the Startup Plan.
- 13.09 Central Waste Complex (CWC) and Low-level Burial Ground (LLBG)**
  - o Performed/Completed:
    - Initiation of 2404 series lighting upgrades.
  - o Completed Surveillances/PMs:
    - 272 surveillances.
    - 25 PM packages.
  - o Shipments shipped:
    - One 1800 Top Load (TL) from CWC to PFWN.
  - o Shipments received:
    - Twenty two drums, two 1800TL, and two Standard Large Boxes 2 (SLB2s) from the Plutonium Finishing Plant (PFP) into CWC and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) North Outside Storage Area (NOSA) in seven shipments.
    - Three Standard Waste Boxes (SWBs) from PFWN into CWC in two shipments.

- Three SWBs from PFNW into CWC in one shipment.

### **13.15 TRU Disposition**

- o Performed/Completed:
  - Review of the first transuranic (TRU) waste stream. Central Characterization Project (CCP) has been asked to provide input to enhance consistency of the chemical and oxidizer evaluations with information provided by other sites.

### **13.16 Offsite Spent Nuclear Fuel Disposition**

- o Performed/Completed:
  - Maintained coordination for offsite Spent Nuclear Fuel Disposition.

### **13.21 Mixed Waste Disposal Trenches (MWT)**

- o Completed surveillances/PMs:
  - 119 surveillances.
- o Shipments received:
  - Six boxes from PFNW into MWT31 in two shipments.

### **13.24 Management of Cesium and Strontium Capsules Project**

- o Performed/Completed:
  - CSA design: the AE is working preliminary design review comment dispositions.
  - WESF design: the AE was authorized to begin design on April 18, 2018.

### **13.25 Capsules Interim Storage Operations**

- o Performed/Completed:
  - CSS design: Completed the formal preliminary design review comment period on April 10, 2018. First set of comment dispositions received and provided to reviewers for concurrence.
  - Engineering: Completed the design for the new Pass-Through Gauge.
  - Environmental: The draft Record of Decision (ROD) amendment is at DOE-HQ for approval and subsequent publication in the Federal Register.

## **River Risk Management Project**

### **13.10 Environmental Restoration Disposal Facility (ERDF)**

- o Received 12,038 tons in April.
- o Received 95,228 tons fiscal year-to-date (FYTD).
- o Performed full dress in-field mockups to prepare for the disposal of PFP waste, ensuring the implementation of PFP lessons learned.

### **13.12 Integrated Disposal Facility (IDF)**

- o Care & Custody
  - Performed/completed monthly inspections.
  - Completed annual calibrations.
- o IDF Operational Readiness
  - Completed transition of IDF Operational Readiness scope from the W&FMP organization to the River Risk Management Project (RRMP) organization.

## **Project Technical Services (PTS) Support**

- o Project Delivery:
  - CSB Air Handling unit 004:
    - Commenced review of 60 percent design.
  - Roofing repairs at CWC and WRAP:
    - Completed repair work on 2402-W.
    - Commenced work on 2403-WA.
  - W-135 Geotechnical Investigation:
    - Commenced planning for mobilization and drilling of boreholes (eight); contractor field mobilization is scheduled for May 14, 2018.

## MAJOR ISSUES

**Issue:**

The Washington Department of Ecology has requested that RL prepare an Environmental Assessment (EA) to address State Environmental Policy Act of 1971 (SEPA) requirements for W-135 (WESF modifications, construction of the capsule interim storage facility, and transfer of the capsules). RL believes the SEPA requirements can be addressed through a ROD amendment.

**Corrective Action:**

Coordinate with RL, DOE Office of River Protection (ORP), and Ecology to agree on the required document changes and schedule to provide needed SEPA coverage.

**Status:**

RL provided a justification to Ecology for why an EA was not needed on July 10, 2017.

A revised permitting strategy was issued by RL and Ecology, which agrees that additional SEPA coverage is not required and RL will issue a ROD amendment. The draft ROD amendment is at headquarters for approval and subsequent publication in the Federal Register, and is expected to be signed off May 14, 2018.

**Issue:**

Ecology has indicated that they may require the 90 percent design package for the CSA prior to issuing the permit for public comment.

**Corrective Action:**

Work with Ecology to provide 30 percent design (as agreed in the permitting plan).

**Status:**

The permit application was formally submitted to Ecology on November 21, 2017, with the 30 percent design information. Ecology's completeness review for the WESF permit modification request was received on February 5, 2018. Ecology's completeness review for the Capsule Interim Storage (CIS) permit application was received on February 13, 2018. Ecology concluded that the permit applications were incomplete. Two transmittals of the information to support a completeness review are planned. The first transmittal consists of publicly-cleared information; this information is scheduled for transmittal to RL in late April. The second transmittal will include the Official Use Only (OUO) engineering design drawings and is planned for transmittal to RL in May. A meeting is scheduled with Ecology on April 23, 2018, to discuss the second transmittal. Specific comments on the proposed permit addenda have not yet been received from Ecology.

**Issue:**

Ecology issued findings in inspection reports for the LLBG Trenches 31-34 and CWC regarding major risk labeling. The findings direct RL and CHPRC to label the containers with the major risks of the dangerous waste contents. CHPRC uses the U.S. Department of Transportation (DOT) hazard class labeling system (which includes the use of radiological labels) to comply with the regulatory requirement.

**Corrective Action:**

Work with RL to obtain agreement from Ecology that CHPRC may use the DOT hazard class labeling system, as this complies with the regulatory requirement for a "system" in use that performs the function in accordance with local, state, or federal regulations.

**Status:**

CHPRC and RL met with Ecology inspectors regarding this item, and the parties agreed to elevate the issue to management for resolution. Ecology is working through the rule-making process to incorporate these requirements into the regulations but continues to identify this issue in recent inspections. The project continues to await direction from RL.

**Issue:**

Deteriorating Waste Containers: Retrieved and repackaged containers in storage are showing increased degradation, requiring additional mitigation activities.

**Corrective Action:**

Significant risk remains. TRU disposition activities would prepare the contents of these containers in a configuration suitable for eventual disposal at the Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico. The configuration would also mitigate/eliminate the risk and additional cost for long-term management of these containers.

**Status:**

Continue to use the best demonstrated available technology to provide adequate configuration and minimize the potential for contamination spread during the long-term storage (i.e., protecting boxes with tarps or protective shoring; overpacking drums). Streamlined and consolidated container management procedures. RL authorized the additional FY2018 TRU commercial repackaging, allowing shipments to PFNW for repackaging to continue throughout the year.

**Issue:**

Mission Support Alliance, LLC (MSA) Cross-Connection Control Program performed a Health Hazard Level Re-Evaluation following the guidance listed in Washington Administrative Code (WAC) 246-290-490 and internal MSA Cross-Connection Control procedures. As a result, 225-B (WESF) Health Hazard Level was changed from high to severe, requiring service connections to have cross-connections installed.

**Corrective Action:**

The WAC requires the corrective action to be accomplished “within 90 days of the purveyor notifying the consumer ...” or “In accordance with an alternate schedule acceptable to the purveyor.” MSA has worked with affected facilities and RL to develop corrective actions that minimize impacts to ongoing cleanup milestones.

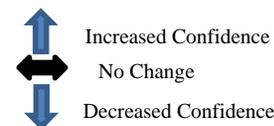
**Status:**

RL provided direction to MSA to remedy the majority of the issue with a modification at the source by MSA versus modifications at each facility. Description and preliminary schedule for WESF potable water facility modifications is required, unless RL approves an alternate (no action) approach that was transmitted on July 6, 2016 (CHPRC-1602928). The project continues to await RL direction for sanitary water system facility modifications. The MSA water purveyor also performed the annual cross-connection review at WESF on February 6, 2018. WESF is currently awaiting the report. Additionally, at MSA’s request, a letter was transmitted that describes to the MSA water purveyor the recently completed risk reduction activities at WESF (e.g.; W-130 Project) and the current schedule for removal of capsules to dry storage. Based on this information, MSA has indicated that reconsideration of the current classification of “severe” by the MSA water purveyor may be appropriate.

## RISK MANAGEMENT STATUS

**Unassigned Risk**  
**Risk Passed**  
**New Risk**  
**Change**

-  Opportunity currently realized, or mitigation efforts are currently working toward, or after risk trigger with no foreseeable impacts.
-  Mitigation efforts are currently working toward risk trigger with the possibility of actions not in place prior to risk occurrence. Recovery actions may be needed.
-  Risk currently realized, or risk mitigation efforts are past risk trigger date with foreseeable impacts. Recovery actions needed.



Risk Title	Unmitigated Risk Impacts	Assessment		Comments		
		Month	Trend			
<b>RL-0013/WBS-013</b>						
<b>Explanation of major changes to the project monthly spotlight chart:</b> Risks WSD-TR-03, MSA Equipment fails Commercial Motor Vehicle Safety Alliance (CVSA) Inspection, and WSD-TR-01, DOE Provided Drivers Not Available, were added to the spotlight chart as realized risks in April.						
<b>Realized Risks (Risks that are currently impacting project cost/schedule)</b>						
WSD-TR-03: MSA Equipment fails CVSA Inspection	The CVSA Inspection identifies defects/issues with MSA equipment that requires repairs or replacement, resulting in cost impacts and schedule delays. <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$500K, 64 days			<b>Risk Event:</b> On March 29, 2018, the clutch on the trailer that is used when pulling super-sacks went out.		
				<table border="1"> <thead> <tr> <th>Risk recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform tractor clutch repair.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p><b>Risk Action Assessment:</b> Due to the realization of this risk, the project performed a repair on the tractor clutch. The tractor was returned to service following the repair.</p>	Risk recovery action(s)	FC Date
Risk recovery action(s)	FC Date	%				
Perform tractor clutch repair.	Complete	100				
WSD-TR-01: DOE Provided Drivers Not Available	Scheduling issues prevent the government-provided drivers from being assigned/available to make off-site waste shipments, resulting in cost impacts and schedule delays. <b>Risk Handling Strategy:</b> Transfer  <b>Probability:</b> Low (10% to 25%) <b>Worst Case Impacts:</b> \$100K, 48 days			<b>Risk Event:</b> Federal drivers were unavailable to perform scheduled waste shipments in April 2018.		
				<table border="1"> <thead> <tr> <th>Risk recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Scheduling remaining FY2018 shipments with supporting functions.</td> <td>5/3/2018</td> <td>50</td> </tr> </tbody> </table> <p><b>Risk Action Assessment:</b> An April shipment was delayed due to a transportation audit resulting in federal driver conflicts. The project is working to schedule the remaining FY2018 shipments with supporting functions to mitigate this realized risk.</p>	Risk recovery action(s)	FC Date
Risk recovery action(s)	FC Date	%				
Scheduling remaining FY2018 shipments with supporting functions.	5/3/2018	50				
<b>Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)</b>						
<b>Lifecycle Risk Triggers (Risk could be realized at any point of the project)</b>						

Risk Title	Unmitigated Risk Impacts	Assessment		Comments															
		Month	Trend																
<b>RL-0013/WBS-013</b>																			
WSD-097: Major Equipment Failure - T-Plant	<p>T Plant suffers a major equipment failure (crane, primary power supply, etc.), resulting in cost impacts and schedule delays.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Medium (26% to 74%)</p> <p><b>Worst Case Impacts:</b> \$3 million, 96 days</p>	●	↔	<p><b>Risk Trigger Metric:</b> During planned facility operation activities, a suspected system component is discovered that requires attention or an unexpected malfunction results in this risk being realized. This risk will continue throughout the CHPRC (September 30, 2018) contract.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Identify and procure spare parts for the T Plant crane.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in April. The project has put into place mitigating strategies (i.e., aggressive Surveillance and Maintenance (S&amp;M) activities) to help reduce this risk. The crane is currently operational, however, an adequate spare parts inventory is needed. The project has identified spare parts for the T Plant crane with input from the manufacturer and is in the process of procuring critical spares. The project has received mechanical brake and spare parts. The long lead motor parts are scheduled to be delivered in June 2018. Engineering addressed quality assurance clause for the National Electrical Manufacturers Association (NEMA) MG1 standards to complete the mechanical motor parts order. An electrical parts order is in process. Repair of the motor drive shaft and coupling was required as a result of the 2017 annual crane preventive maintenance work performed in November. The electrical crane PMs were completed in January. The project currently has all identified electrical spare parts for the crane on order or in hand and continues to work with the vendor to acquire additional critical spares. In addition, the project is working with Central Plateau Surveillance and Maintenance (CPS&amp;M) to enter U Plant to determine whether spares can be salvaged from the crane that is of comparable vintage.</p>	Mitigation action(s)	FC Date	%	Identify and procure spare parts for the T Plant crane.	Ongoing	N/A									
Mitigation action(s)	FC Date	%																	
Identify and procure spare parts for the T Plant crane.	Ongoing	N/A																	
WSD-019: MLLW & TRU Treatment Impacts	<p>Mixed Low-Level Waste (MLLW) and TRU treatment capacity/capability does not meet Hanford needs or treatment does not occur as scheduled, resulting in cost impacts.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Likely (75% to 90%)</p> <p><b>Worst Case Impacts:</b> \$1.25 million, 0 days</p>	●	↔	<p><b>Risk Trigger Metric:</b> Will continue throughout the contract (September 30, 2018).</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Establish multiple treatment contracts or obtain additional capability for the processing of MLLW and TRU, with terms extending to the end of the current CHPRC contract with RL (i.e. September 30, 2018).</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Continue to work with RL to fund the processing of TRU/M waste at PFNW at a rate that keeps them viable (i.e. keeps the doors open).</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Evaluate the benefit(s) associated with an increase to the PFNW plutonium (Pu) possession limit. Their current limit is 200 grams of total Pu. Increasing the limit may allow additional quantities of TRUM waste to be shipped to PFNW for processing. This evaluation took place in conjunction with the M-091-52 engineering study.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Negotiations with RL are ongoing to seek authorization for additional shipments of M-91 legacy TRUM to PFNW. The additional shipments would meet the objectives for the PFNW minimum optimal processing volume as identified in the optimization study provided to RL in December 2016.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in April. MLLW: Two contracts are in place for offsite commercial waste treatment, which provided sufficient capability/capacity to meet current MLLW treatment needs through the end of the CHPRC contract term. However, one of the contracts was recently restricted due to the closure of the Perma-Fix East treatment facility in Tennessee (M&amp;EC). Additional treatment capabilities will be needed to meet future anticipated MLLW treatment needs.  TRU/M: Only PFNW has current capability to process TRU/M waste. This is due solely to the practical limitations imposed by the need to ship the TRU/M waste via road closure; therefore, additional commercial providers cannot be obtained.  Additional authorization has been received by DOE for FY2018, which will maintain PFNW's minimum optimization processing volumes.</p>	Mitigation action(s)	FC Date	%	Establish multiple treatment contracts or obtain additional capability for the processing of MLLW and TRU, with terms extending to the end of the current CHPRC contract with RL (i.e. September 30, 2018).	Ongoing	N/A	Continue to work with RL to fund the processing of TRU/M waste at PFNW at a rate that keeps them viable (i.e. keeps the doors open).	Ongoing	N/A	Evaluate the benefit(s) associated with an increase to the PFNW plutonium (Pu) possession limit. Their current limit is 200 grams of total Pu. Increasing the limit may allow additional quantities of TRUM waste to be shipped to PFNW for processing. This evaluation took place in conjunction with the M-091-52 engineering study.	Complete	100	Negotiations with RL are ongoing to seek authorization for additional shipments of M-91 legacy TRUM to PFNW. The additional shipments would meet the objectives for the PFNW minimum optimal processing volume as identified in the optimization study provided to RL in December 2016.	Complete	100
Mitigation action(s)	FC Date	%																	
Establish multiple treatment contracts or obtain additional capability for the processing of MLLW and TRU, with terms extending to the end of the current CHPRC contract with RL (i.e. September 30, 2018).	Ongoing	N/A																	
Continue to work with RL to fund the processing of TRU/M waste at PFNW at a rate that keeps them viable (i.e. keeps the doors open).	Ongoing	N/A																	
Evaluate the benefit(s) associated with an increase to the PFNW plutonium (Pu) possession limit. Their current limit is 200 grams of total Pu. Increasing the limit may allow additional quantities of TRUM waste to be shipped to PFNW for processing. This evaluation took place in conjunction with the M-091-52 engineering study.	Complete	100																	
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Risk Title	Unmitigated Risk Impacts	Assessment		Comments															
		Month	Trend																
<b>RL-0013/WBS-013</b>																			
WSD-140: As-Found-Unknown Conditions - T Plant	<p>Unknowns, as-found, or emergent conditions impact the operability of the T Plant facility.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Very Likely (&gt;90%)</p> <p><b>Worst Case Impacts:</b> \$990K, 0 days</p>	●	↔	<p><b>Risk Trigger Metric:</b> Based on unknown conditions, the possible risk triggers are unknown.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Repairs to 221-T Dock number 2 in support of sludge receipt.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Submittal of a baseline change request (BCR) to break out the planning package planned for May.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in April. Past periods included work on dock two removal and installation as well as asphalt repair. In April, a leak was repaired that impacted the canyon. In addition, piping in the head-end of the tunnel will require repair. The project has identified additional structural issues with the facility stairs and exits for which evaluations and repairs will be carried out as necessary.</p>	Mitigation action(s)	FC Date	%	Repairs to 221-T Dock number 2 in support of sludge receipt.	Complete	100	Submittal of a baseline change request (BCR) to break out the planning package planned for May.	Complete	100						
Mitigation action(s)	FC Date	%																	
Repairs to 221-T Dock number 2 in support of sludge receipt.	Complete	100																	
Submittal of a baseline change request (BCR) to break out the planning package planned for May.	Complete	100																	
WSD-125: Multi-Year Pause in Waste Processing Results in Unexpected Container Integrity Issues	<p>A pause in waste processing results in an unexpected container degradation within Solid Waste Operations Complex (SWOC) (excluding TRU retrieval activities) and requires additional resources to respond.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Likely (75% to 90%)</p> <p><b>Worst Case Impacts:</b> \$5 million, 0 day</p>	●	↑	<p><b>Risk Trigger Metric:</b> Degraded containers are discovered in CWC.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform daily/weekly waste container surveillances to identify container abnormalities.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Manage a "watch list" of waste containers that have shown signs of degradation or are associated with degraded containers.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Process waste packages at a rate funded by RL.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Procuring stainless steel 85-gallon overpacks for alternative storage of containers that show signs of degradation.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in April. The project continued to perform container surveillances in April to identify container and container cover abnormalities. Three drums have been placed in overpacks in FY2018 in addition to 24 containers in 2404WC with signs of exterior corrosion, which were placed in stainless steel overpacks on October 18, 2017. Furthermore, the overpack of storage box 75DMA16F3 was completed. RL authorized additional FY2018 TRU commercial repackaging, allowing shipments to PFNW for repackaging to continue. The remaining containers will continue to require surveillance and enhanced monitoring.</p>	Mitigation action(s)	FC Date	%	Perform daily/weekly waste container surveillances to identify container abnormalities.	Ongoing	N/A	Manage a "watch list" of waste containers that have shown signs of degradation or are associated with degraded containers.	Ongoing	N/A	Process waste packages at a rate funded by RL.	Ongoing	N/A	Procuring stainless steel 85-gallon overpacks for alternative storage of containers that show signs of degradation.	Complete	100
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Procuring stainless steel 85-gallon overpacks for alternative storage of containers that show signs of degradation.	Complete	100																	
<b>FY2018 Risk Triggers (Risk could be realized in FY2018)</b>																			
WSD-W135-15: Utilization of 2003 Pre-Conceptual Design	<p>A pre-conceptual design for the dry storage of the capsules was completed in July 2003. If this design cannot be utilized, it will be necessary to initiate and complete a new conceptual design, including a new analysis of alternatives.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Very Likely (&gt;90%)</p> <p><b>Worst Case Impacts:</b> \$5,100K, 0 days</p>	●	↔	<p><b>Risk Trigger Metric:</b> The 2003 pre-conceptual design for the dry storage of capsules cannot be utilized.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No changes in April. The 2003 pre-conceptual design is based on design criteria that is over 13 years old. Design criteria that impacts the ability to utilize the 2003 pre-conceptual design include: location of the Dry Storage Facility, duration of the storage period, Safety Basis Requirements, and environmental permitting. Continuing to have discussions with RL can clarify impacts of the Safety Basis Requirements and environmental permitting. The risk is being captured for visibility and will remain a part of the key risks until this issue is resolved.</p>	Mitigation action(s)	FC Date	%	None identified at this time.	N/A	N/A									
Mitigation action(s)	FC Date	%																	
None identified at this time.	N/A	N/A																	

Risk Title	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
<b>RL-0013/WBS-013</b>										
WSD-W135-16: Content and Approval of Critical Decision Packages	The content of the critical decision (CD) packages required by DOE O 413.3B are more extensive than anticipated and require an extensive RL review.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Very Likely (>90%) <b>Worst Case Impacts:</b> \$2,000K, 0 days	●	↑	<p><b>Risk Trigger Metric:</b> The content and review/approval process for the CD packages is impacted by DOE O 413.3B.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Prepare joint tailoring strategy with RL on how to meet the DOE O 413.3B requirements</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No changes in April. The pre-conceptual design of the project was based on DOE O 413.3A; the current version is DOE O 413.3B, Change Order 2. New requirements will impact the content of the CD packages or impact the duration and extent of the RL review. CHPRC continues to work closely with RL on the tailoring strategy to meet the DOE O 413.3B requirements. RL is currently evaluating the applicability of 413.3B due to new guidance from HQ. The risk is being captured for visibility and will remain as part of the key risks until this issue is resolved. No further mitigation actions are necessary at this time.</p>	Mitigation action(s)	FC Date	%	Prepare joint tailoring strategy with RL on how to meet the DOE O 413.3B requirements	Complete	100
Mitigation action(s)	FC Date	%								
Prepare joint tailoring strategy with RL on how to meet the DOE O 413.3B requirements	Complete	100								
WSD-W135-17: Modifications to WESF	The transfer of the capsules to dry storage will require modifications to WESF.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Very Likely (>90%) <b>Worst Case Impacts:</b> \$7,300K, 0 days	●	↔	<p><b>Risk Trigger Metric:</b> Modifications to the WESF facility are required for transfer of capsules to dry storage.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No changes in April. The approach incorporated into the pre-conceptual design for the transfer of the capsules required minimal modifications to WESF. New or updated requirements will require more extensive modifications to WESF. The CD-1 submitted in August provides the preliminary modifications to WESF. The risk is being captured for visibility and will remain as part of the key risks until this issue is resolved.</p>	Mitigation action(s)	FC Date	%	None identified at this time.	N/A	N/A
Mitigation action(s)	FC Date	%								
None identified at this time.	N/A	N/A								
WSD-W135-28: RCRA Permit Requires 90% Design Information for the Capsule Storage Area (CSA)	Ecology may require the 90 percent design package for the CSA to be completed prior to issuing the permit for public comment.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Medium (20% to 74%) <b>Worst Case Impacts:</b> \$1,775K, 360 days	●	↔	<p><b>Risk Trigger Metric:</b> Ecology requires the 90 percent design package for the CSA to be completed prior to issuing the permit for public comment.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in April. CHPRC continues to have regular interfaces with Ecology to discuss the issue and are evaluating options should the 90 percent be required. The permit application was formally submitted to Ecology on November 21, 2017, with the 30 percent design information. The project is awaiting a determination of incompleteness and other comments on the application. The determination of incompleteness is primarily associated with the need for additional design information, which is currently being gathered. The project anticipates that a temporary authorization will be necessary if the permitting process is not timely.</p>	Mitigation action(s)	FC Date	%	None identified at this time.	N/A	N/A
Mitigation action(s)	FC Date	%								
None identified at this time.	N/A	N/A								
<b>High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)</b>										
WSD-086: W&FM Industrial Accident or Contamination	An industrial accident or contamination event requires corrective actions, resulting in cost impacts. <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$3 million, 0 days	●	↔	<p><b>Risk Trigger Metric:</b> The spread of contaminated tumbleweeds at W&amp;F laydown areas and burial grounds require additional personnel to monitor and mitigate the spread of contamination.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Additional radiation surveys, first line supervisors, and supporting staff are required to support herbicide spraying required to monitor and mitigate the spread of contamination in the burial grounds associated with biological vectors.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in April. The migration of tumbleweeds has the potential of spreading contamination to site "neighbors," therefore increased use of herbicide spraying and surveillances are required to help minimize contamination spread.</p>	Mitigation action(s)	FC Date	%	Additional radiation surveys, first line supervisors, and supporting staff are required to support herbicide spraying required to monitor and mitigate the spread of contamination in the burial grounds associated with biological vectors.	Ongoing	N/A
Mitigation action(s)	FC Date	%								
Additional radiation surveys, first line supervisors, and supporting staff are required to support herbicide spraying required to monitor and mitigate the spread of contamination in the burial grounds associated with biological vectors.	Ongoing	N/A								

Risk Title	Unmitigated Risk Impacts	Assessment		Comments																		
		Month	Trend																			
<b>RL-0013/WBS-013</b>																						
WSD-133: Results of External Audits/Assessments Impact Operations	External oversight groups identify gaps in licensing/permitting, surveillance, and maintenance activities at WSD facilities. This includes but is not limited to a change in the current interpretation of required electrical PMs and additional permitting at T Plant for sludge receipt. These gaps require additional resources to address discrepancies, resulting in cost impacts. <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$3,000K, 0 days	●	↔	<p><b>Risk Trigger Metric:</b> WESF operations continue longer than assumed due to delays in the implementation of the Cs/Sr capsule dry storage project, which results in increased maintenance demands and the need to replace select systems required for operation due to their age and difficulty in obtaining spare parts. The WRAP facility extended dormant period requires increased maintenance work.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Replace WESF pool cell instrumentation systems, add 21 PM/S WRAP electrical system activities, and perform WRAP floor repair.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Provide RL information to substantiate the current project position.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Participate in technical mitigations to ensure compliance.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in April. The project is working on the design of the WESF pool cell instrumentation system replacement. It is expected that the WRAP floor repair will commence in the spring. Completed maintenance on the High Energy Real Time Radiography Linear Accelerator. Additional maintenance work will be performed based on facility work priority.</p>	Mitigation action(s)	FC Date	%	Replace WESF pool cell instrumentation systems, add 21 PM/S WRAP electrical system activities, and perform WRAP floor repair.	Ongoing	N/A	Provide RL information to substantiate the current project position.	Ongoing	N/A	Participate in technical mitigations to ensure compliance.	Ongoing	N/A						
Mitigation action(s)	FC Date	%																				
Replace WESF pool cell instrumentation systems, add 21 PM/S WRAP electrical system activities, and perform WRAP floor repair.	Ongoing	N/A																				
Provide RL information to substantiate the current project position.	Ongoing	N/A																				
Participate in technical mitigations to ensure compliance.	Ongoing	N/A																				
WSD-136: CWC/WRAP Components Fail	CWC facilities and components may reach their end of life. These items will need to be replaced and/or repaired outside of planned funding profiles, resulting in cost impacts. <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$2 million, 0 days	●	↔	<p><b>Risk Trigger Metric:</b> Maintenance activities at CWC increase due to aging facilities.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Floor repairs and MDSA container stacking requirements, replacement of exhaust fans.</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Obtain spare parts for the Fire Alarm Control Units (FACU) via deactivation of old FACUs.</td> <td>6/2018</td> <td>-</td> </tr> <tr> <td>Conduct fieldwork for 2727W deactivation.</td> <td>6/2018</td> <td>-</td> </tr> <tr> <td>Conduct fieldwork for MO433 deactivation.</td> <td>9/2018</td> <td>-</td> </tr> <tr> <td>Conducting door frame replacements and electrical equipment repairs as necessary.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in April. Floor repairs will be performed, weather permitting. The MDSA container stacking requirements are complete. Maintenance work at CWC will be scheduled based on facility work priorities. The WRAP facility experienced failure of the majority of the breakers earlier in the year and is currently repairing Motor Control Centers (MCC). A sink hole in the WRAP parking lot was repaired in April 2018. Repair to the line and fire hydrant causing the sink hole were completed in October 2017.</p>	Mitigation action(s)	FC Date	%	Floor repairs and MDSA container stacking requirements, replacement of exhaust fans.	Ongoing	N/A	Obtain spare parts for the Fire Alarm Control Units (FACU) via deactivation of old FACUs.	6/2018	-	Conduct fieldwork for 2727W deactivation.	6/2018	-	Conduct fieldwork for MO433 deactivation.	9/2018	-	Conducting door frame replacements and electrical equipment repairs as necessary.	Ongoing	N/A
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Conducting door frame replacements and electrical equipment repairs as necessary.	Ongoing	N/A																				
<b>Unassigned Risks (Pending ownership of identified risks/opportunities)</b>																						
No unassigned risks identified in April.																						

## PROJECT BASELINE PERFORMANCE

### Current Month

(\$M)

WBS 013/RL-0013 Waste and Fuels Management Project	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	11.7	9.8	12.6	(1.9)	-16.3%	(2.9)	-29.4%

Numbers are rounded to the nearest \$0.1 million

#### CM Schedule Performance (-\$1.9M/-16.3%)

The current month (CM) schedule performance variance is primarily associated with the delay of two shipments of MLLW that were planned in the current period but delayed to June in order to allow more time to develop lifting plans. The two waste containers are shored in such a way that a lifting device is used to position the rigging without affecting the shored portions of the boxes. Also contributing is completion of TRU Large Box Repack in previous periods. In addition, W-135, WESF Modification Project is behind in design review comments for the preliminary design of the CSS, but comment resolution of the preliminary comments should result in streamlining final design activities.

#### CM Cost Performance (-\$2.9M/-29.4%)

The CM negative cost variance is primarily associated with actual costs for ERDF without budget in project breakdown structure (PBS) RL-0013. Due to the recent finalization of FY2018 appropriations, current ERDF costs are being costed in PBS RL-0013, but a baseline change request (BCR) to move the budget from RL-0041 to RL-0013 will not be processed until later in fiscal year 2018. Also contributing to the negative cost variance is the Capsule Dry Storage project due to the sub-contractor utilizing additional resources to complete the preliminary design review for the CSS and make up schedule for the CSS preliminary design (60 percent).

## Contract-to-Date (CTD)

(\$M)

WBS 013/RL-0013 Waste and Fuels Management Project	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	1,263.0	1,259.0	1,178.9	(3.9)	-0.3%	80.0	6.4%	1,365.1	1,293.5	114.6	71.6

Numbers are rounded to the nearest \$0.1 million

#### CTD Schedule Performance (\$-3.9M/-0.3%)

The CTD schedule variance is within threshold.

#### CTD Cost Performance (+\$80.0M/+6.4%)

Realizing efficiencies such as organizational flattening and streamlining; right-sizing capabilities for planned scope; optimizing resources with reorganization and consolidation of engineering capabilities across W&FM; combined administrative/records functions across WESF and CSB; removing waste from

building(s) and reducing the need for inspections/surveillances; reducing the size and number of Radioactive Areas/Radioactive Material Areas (RAM) and associated surveillances/routines and records; tagging out unneeded equipment and reducing the frequency and number of preventive maintenance activities; increasing shared resources across all of SWOC; reducing dedicated resources for Corrective Action System (CAS) and using project-wide support; optimizing maintenance scheduling and execution reducing Operations Field Work Supervision; increasing emphasis on managing planned absence coverage within existing resources; simplifying and optimizing acquisition and procurement management within W&FM; and eliminating the separate waste forecast system by integrating forecasting as part of the baseline process and the Solid Waste Inventory Tracking System (SWITS).

#### Variance at Completion (+\$71.6M/+5.2%)

Realizing efficiencies such as organizational flattening and streamlining; right-sizing capabilities for planned scope; optimizing resources with reorganization and consolidation of engineering capabilities across W&FM; combined administrative/records functions across WESF and CSB; removing waste from building(s) and reducing the need for inspections/surveillances; reducing the size and number of Radioactive Areas/RAM and associated surveillances/routines and records; tagging out unneeded equipment and reducing the frequency and number of preventive maintenance activities; increasing shared resources across all of the SWOC; reducing dedicated resources for CAS and utilizing project-wide support; optimizing maintenance scheduling and execution; reducing Operations Field Work Supervision; increasing emphasis on managing planned absence coverage within existing resources; simplifying and optimizing acquisition and procurement management within W&FM; and eliminating the separate waste forecast system by integrating forecasting as part of the baseline process and SWITS. The variance at completion is offset because the forecast for ERDF operations has been moved into PBS RL-0013 from PBS RL-0041, but a BCR to transfer the budget from PBS RL-0041 will not be processed until later in fiscal year 2018.

**Contract Performance Report Formats are provided in Appendix A**

### FUNDS vs. SPEND FORECAST (\$M)

WBS 013/RL-0013 Waste and Fuels Management Project	FY2018		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	150.8	170.8	(20.0)
Incremental Scope Pending Change Management	0.0	(43.2)	43.2
RL-0013 – Total	150.8	127.6	23.2

Numbers are rounded to the nearest \$0.1 million.

### Funds/Variance Analysis

The FY2018 projected funding level for PBS RL-0013 of \$150.8 million is based on the revised guidance provided by RL following passage of the FY2018 Omnibus. The \$23.2 million variance between projected funding and the spend forecast is primarily due to the absence of ERDF costs from October-May charged to RL-0041, the deferral of forecasted RL-0013 work to offset higher priority scope within the Central Plateau Control Point, and Line Item (LI) funding was allocated but not available due to continuing resolution (CR), resulting in the deferral of a portion of preliminary design activities for WESF modifications.

### Critical Path Schedule

Critical Path Analysis will be provided upon request.

## MILESTONE STATUS

Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) milestones represent significant events in project execution. RL enforceable agreement milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The PMB annual update, implemented in September 2013, and subsequently approved BCRs define CHPRC planning with respect to Tri-Party Agreement milestones. The following table is a one-year look ahead of commitments and Tri-Party Agreement enforceable milestones and non-enforceable target due dates.

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-091-53	Submit Milestone Change Request to Replace Target Dates for Capabilities to Process TRUM Waste.	9/30/18		9/27/18	On schedule
M-091-52-T01A	Remove Five (5) Mixed Waste Containers from Outside Storage Area A and/or Outside Storage Area B	11/30/18		4/26/18	On schedule
M-091-03L	Submit Revision of TRUM Waste and MLLW PMP to Ecology.	Deleted per Change Number M-91-18-01			
M-092-00	Acquire Facilities for Cs/Sr, Na & SCW.	9/30/18		9/28/18	In Program Planning
C-026-07L	Tritium Treatment Technology Developments to Ecology and EPA.	3/31/18	3/22/18 (A)		Completed
M-026-07D	Evaluation of Tritium Treatment Technology to EPA & Ecology	3/31/19		3/31/19	On schedule
C-026-07M	Submit Tritium Treatment Technology Developments to Ecology & EPA	3/31/19		3/31/19	On schedule

## GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Contract Section	Project	GFS/I	Status
<b>CONTRACT</b>			
J.12/C.2.2, C.2.3	PBS-RL-0011, Plutonium Finishing Plant Closure Project  PBS-RL-0013, Solid and Liquid Waste Treatment and Disposal	Offsite Transportation of Radioactive Material: RL provides equipment and government drivers to transport TRU materials outbound/inbound between the Hanford Site and Northwest locations. RL is the authorized shipper and acts as signatory on the shipping papers, and ensures DOE Manual 460.2-1 is complied with. RL arranges for Commercial Motor Vehicle Safety Alliance (CVSA) level VI vehicle inspections and verifies that the government drivers meet the applicable DOT Federal Motor Carrier Safety Regulations (49 CFR 382 and 383). RL also inspects the load securement to ensure compliance with DOT regulations and/or treatment, storage and disposal (TSD) requirements.	Ongoing
J.12/C.2.3.6	PBS-RL-0013, Transuranic Waste Certification	WIPP provides shipping resources and manages the schedule for transportation of these containers to WIPP. The schedule is variable, and the number of shipments is controlled by DOE-HQ on a complex-wide priority. Cost for shipment of TRU waste offsite is borne by the Carlsbad Field Office (CBFO).	No WIPP shipments are planned within the contract period of performance.

## DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
CSB – Obtain RL DSA Approval	1/31/2018 (A)	6/14/2018
CSA CD2/3 – DOE-HQ Approve Amended ROD & Publish in Federal Register	2/6/2018 (A)	5/7/2018
Provide Supplemental Permit Application Material	2/14/2018 (A)	5/24/2018
Ecology Performs Review of Supplemental information	5/25/2018	6/14/2018

# Section D

## Soil and Groundwater Remediation Project (RL-0030)



J. D. Rendall  
Vice President and  
Project Manager for  
Soil and Groundwater  
Remediation Project

M. A. Wright  
Vice President for  
Project Technical  
Services

April 2018  
CHPRC-2018-04, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

M. N. Jaraysi  
Vice President for  
Environmental Program  
and Strategic Planning

## PROJECT SUMMARY

Pump and Treat (P&T) Operations continued making progress on the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) remedial process documentation for the River Corridor and Central Plateau. Groundwater treatment completed in April includes the following:

Treatment Facility	Million Gallons Treated		Chrome (kg)		Carbon Tet (kg)		Tech-99 (pCi)		Uranium (kg)	
	CM	FYTD	CM	FYTD	CM	FYTD	CM	FYTD	CM	FYTD
DX P&T	30.8	215.0	2.0	15.6						
HX P&T	32.1	201.8	2.0	15.1						
KR-4* P&T	9.4	62.5	0.1	0.7						
KW P&T	13.4	98.4	0.8	7.6						
KX P&T	31.0	215.2	2.0	13.6						
200 West P&T	90.4	671.5	7.9	58.5	192.0	1,343	.23x10 <sup>12</sup>	1.54x10 <sup>12</sup>	12.1	93.2
<b>Combined</b>	<b>207.1</b>	<b>1,464.2</b>	<b>14.8</b>	<b>111.0</b>	<b>192.0</b>	<b>1,343</b>	<b>.23x10<sup>12</sup></b>	<b>1.54x10<sup>12</sup></b>	<b>12.1</b>	<b>93.2</b>
<b>FY2018 KPG</b>	<b>--</b>	<b>2,200.0</b>	<b>--</b>	<b>160.0</b>	<b>--</b>	<b>1,800.0</b>	<b>--</b>	<b>N/A</b>	<b>--</b>	<b>120</b>

\*KR-4 fiscal year to date (FYTD) Chrome value rounded to the nearest tenth rather than nearest whole number.

Well Drilling by Area	FY2018 Planned	Current Month	FY2018 Cumulative
100-KR-4	3	0	0
100-HR-3	6	0	6
200-UP-1*	5	1	4
200-ZP-1	4	0	2
M-24 Milestone	1	0	0
<b>Total Wells</b>	<b>19</b>	<b>1</b>	<b>12</b>
<b>Site Wide Boreholes</b>	<b>29</b>	<b>0</b>	<b>29</b>

\*Correction to 200-UP-1 resulting from incorrect March reporting.

## EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
<u>18-EMS-SGRP-OB1-T1</u>	Reduce adverse environmental impact to health and the environment by monitoring and confirming low-carbon tetrachloride emissions at the 200 West Pump and Treat Facility.	Evaluate treated off-gas analytical results from compliance sampling and process sampling each quarter.	7/31/18	66%
<u>18-EMS-SGRP-OB2-T1</u>	Improve compliance margin by improving expired chemical inventory management.	Better define the process of proper disposal of expired chemicals and/or chemicals with no future use.	9/30/18	50%

## TARGET ZERO PERFORMANCE

(Reported on a calendar month basis)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1	NA
Total Recordable Injuries	0	0	NA
First Aid Cases	1	31	4/30/18 – Individual reported a rash and blisters on hands as the result of an allergic reaction to the use of nitrile gloves. The employee was sent to HPMC and released back to work without restriction. It was recommended that the individual use cotton liners under the gloves in the future. (24791)  *1 First Aid case, PTS in support of RL-0030.
Near-Misses	0	0	NA

## KEY ACCOMPLISHMENTS

### RL-0030 Accomplishments

#### Environmental Integration

- Issued the Central Plateau Vadose Zone Geoframework Model Package Report (CP-60925). This is the first detailed vadose zone geo-framework that covers the entire Central Plateau. It will be used to support the Composite Analysis, the Cumulative Impacts Evaluation, multiple performance assessments, and soil and groundwater source operable unit (OU) decision documents.
- Transmitted and briefed RL the week of April 2, 2018, on a white paper regarding the proposed approach for evaluating biomobilization and biointrusion effects on the Central Plateau. The white paper outlines a multiple line of evidence approach proposed for evaluating the significance of biomobilization activities associated with deep-rooted vegetation and harvester ants.

### RL-0030.01 RL-0030 Operations

#### River Corridor

#### 300-FF-5 OU

- Continued with implementation of the Stage B Uranium Sequestration construction activities. Completed review of design documents and prepared the engineering design for electrical power at the project site. Initiated shop fabrication of the well head manifolds, electrical panels, and the central sampling manifold. Completed the inventory of materials stored during site layup and prepared take off to support material procurements. Initiated subcontracts to support site construction activities to begin during the week of May 7, 2018.

**100-KR-4 OU**

- Completed internal draft of a technical impracticability (TI) waiver white paper for the Sr-90 plume near the KE Reactor. The white paper provides the justification for the TI waiver approach, which will then be incorporated into the feasibility study following RL and Environmental Protection Agency (EPA) approval of the path forward.
- Conducted a kick-off meeting for the 100-KR-4 fiscal year (FY) 2018 drilling campaign on April 10, 2018. Drilling at wells 199-K-231 and 199-K-232 began the next day.
- Issued Revision 0, KW Soil Flushing/Infiltration Treatability Test Plan on April 10, 2018.

**100-HR-3 OU**

- Met with RL on April 4, 2018, to discuss the options for connecting well 199-H3-29 to the HX P&T system to process groundwater with elevated levels of Tc-99 and nitrate. Provided RL and Ecology a proposal for review that outlined a strategy for sampling well 199-H3-29 on April 9, 2018. Received concurrence from RL to connect well 199-H3-29 to the HX P&T on April 12, 2018.

**100-NR-2 OU**

- Completed technical content input to the Draft B remedial investigation/feasibility study (RI/FS) report in late April 2018. The document will be assembled for internal review and technical editing in May 2018.

**100-BC-5 OU**

- Initiated response to RL's comments on the Draft Revision 0 Proposed Plan (PP), which were received on April 10, 2018.

**100-FR-3 OU**

- Provided draft Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Change Notice 0814 to EPA for review on March 28, 2018. The change notice revises the sampling frequency and analytical requirements in the groundwater sampling and analysis plan, and identifies locations and sample requirements for the Phase 2 monitoring wells.

**Central Plateau****200-UP-1 OU**

- Completed construction of the first of two planned remedy performance monitoring wells. The second well has been drilled and is currently being constructed.
- Scheduled a meeting with EPA on April 26, 2018, to discuss the path forward for Tri-Party Agreement Milestone M-16-193 and associated well drilling.

**200-BP-5/200-PO-1 OU**

- Completed an engineering calculation on April 9, 2017, that demonstrates the key performance goal to "Reduce the BP-5 Groundwater Uranium Plume by 30 percent" has been met. The calculation indicated an approximate 60 percent reduction in the area of the plume that exceeds 10 times the maximum contaminant level (the objective of the removal action) for uranium and technetium-99 from 2016 to 2017.
- Incorporated Ecology's comment dispositions and delivered the revised 200-PO-1 RI Addendum text to RL and Ecology for concurrent review on April 5, 2018.
- Refined the 200-BP-5 and 200-PO-1 Interim Record of Decision (IROD) strategy for 200-BP-5 and 200-PO-1 based on written regulator feedback and results from a meeting with the regulators held on April 17, 2018.

- Initiated preparation of the IROD feasibility study. Held a kick-off meeting on April 11, 2018, with the regulators to discuss the feasibility study annotated outline. A second status meeting has been scheduled for May 3, 2018, to review the technology screening process.
- Completed a regulator briefing on the work scope for the Central Plateau Tracer Study on April 9, 2018.
- Completed the 90 percent design package for the extension of the BP-5 extraction system to a third extraction well, 299-E33-361. Initiated procurement of subcontractor services for the fabrication of the associated well racks. Procured Mission Support Alliance (MSA) services to design the subsystem to bring electrical power to the well pad.

#### **200-DV-1 OU**

- Hosted two working sessions with RL on March 28 and April 10, 2018, to present the vadose zone modeling approach and current progress related to electrical resistance tomography integration, heterogeneity, and probabilistic hydraulic property distribution.
- Briefed RL on April 16, 2018, on the approach for the baseline ecological assessment.
- Briefed RL on April 18, 2018, on the salient elements of the S- and T-Complex Field Summary Reports implementing the field activities and data collection associated with the RI/FS work plan.

#### **200-ZP-1 OU**

- Finalized comment resolution with RL on the 200-ZP-1 Operations and Maintenance (O&M) plan and performance monitoring plan on April 11 and April 17, 2018.
- Held a kick-off meeting for drilling two injection wells April 9, 2018, and began drilling well YJ-34/C9880 on April 17, 2018. Drilling reached 141 feet below ground surface by month-end.

#### **200 East Closure Plans**

- Resolved Ecology informal comments on the 216-A-36B crib closure plan on March 29, 2018.
- Conducted a second workshop with Ecology on April 19, 2018, to present and resolve option 1 template contents and annotated outline.

#### **200-WA-1**

- Completed target analysis optimization for 200-WA-1 Sampling and Analysis Plan (SAP). The process and results are planned to be presented to RL in May 2018.

#### **200-EA-1**

- Resolved informal 200-EA-1 RI/FS work plan Chapter 3 and Appendix E comments from Ecology on April 19, 2018.
- Resolved informal 200-EA-1 RI/FS work plan Chapter 4 and SAP comments from Ecology on April 20, 2018.

#### **RCRA Groundwater Monitoring**

- Issued the regulator review draft for the 216-B-3 Pond and Ditch Engineering Evaluation Report on April 20, 2018. Received regulator review comments for the Low Level WMA 1 and WMA C on April 20, 2018.

#### **Project Technical Services Accomplishments**

- Training and Procedures

- o Worked with facility and industrial hygiene subject matter expert (SMEs) to revise the Soil and Groundwater Remediation Project (S&GRP) process for acceptance of industrial hygiene samples.
- Operations Program
  - o ConOps/Work Control/Conduct of Work.
    - Performed walk down of well drill rig to determine applicability of lockout/tagout program for drill rig maintenance.
  - o Emergency Preparedness (EP).
    - Completed S&GRP Hazard Survey Review (CHPRC-01480).
- Project Delivery
  - o Completed construction completion documents for wells HE14, HE48, HE49.
  - o Commenced mobilization and shop work for 300-FF-5 Stage B work scope.

### **Groundwater P&T Facilities**

Overall, the pump and treat systems are operating above target as depicted in the Pump and Treat Performance graph below. Refer to the Major Issues section of this report for a description of challenges preventing KR-4, KX, and DX from operating at full capacity. Additionally, the 100 Area facilities are currently impacted by a low-river stage and maintenance activities.

#### **200 West P&T**

Operated the 200 West P&T at an average of 2,092 gallons per minute (gpm) and successfully upgraded MBR A leap cassettes.

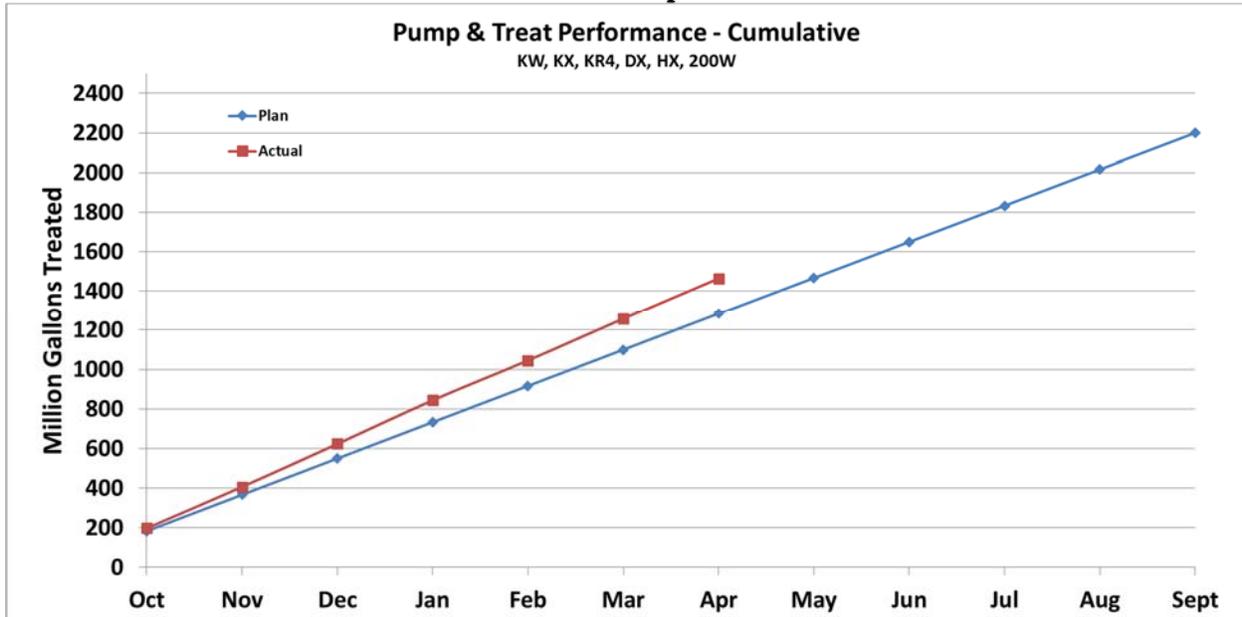
#### **100 Area P&Ts**

- Operated the DX P&T at 714 gpm, below the facility capacity of 775 gpm.
- Operated the KR-4 P&T at 219 gpm, below the facility capacity of 330 gpm.
- Operated the KW P&T at 309 pm, near the facility capacity of 330 gpm.
- Operated the KX P&T at 717 gpm, below the facility capacity of 900 gpm.

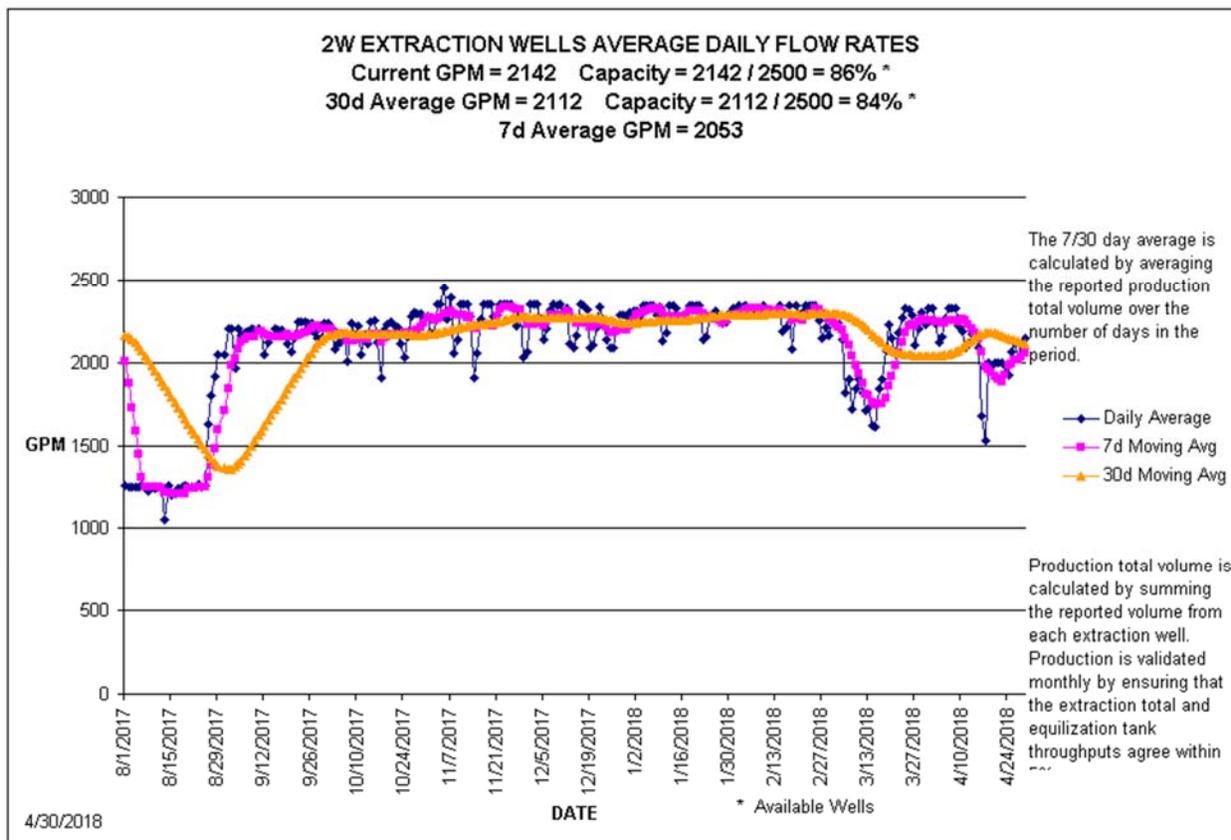
Successfully implemented new flowmeter design on B train that has no contact with fluids. The flowmeter implementation is a proof of concept that has cost saving potential for future designs. The new flowmeter will reduce maintenance resources needed if a replacement is required. In addition, workers will not have the potential to come in contact with contaminated fluids during maintenance.

Operated the HX P&T at 744 gpm, below the facility capacity of 900 gpm. Preparations for HX feed header repair are complete. The repair will be completed in May.

### FY2018 P&T Operations



### 200 West P&T



## MAJOR ISSUES

**Issue:**

The evaporation rate at the modutanks is not keeping up with the purgewater being added. The project needs a reliable manner to treat the purgewater.

**Corrective Action:**

The project is evaluating the use of 200 West P&T and modutank operations together to mitigate two issues (200W injection well fouling and modutanks level). The pH and settling time provided by the modutanks allows the filtration of well fouling constituents. In addition, 200W has been evaluated for removing modutank water to ensure levels are maintained that support sampling and well maintenance activities. We are seeking regulatory approval to treat modutank water at 200 West P&T. Conference calls with EPA are being conducted to discuss regulatory approach.

**Status:**

Meetings with EPA have concluded that an Optimization Pilot Test Plan will be written to gain approval from EPA for treatment of up to two million gallons modutank water at the 200W P&T. The Pilot Test Plan was prepared, reviewed by EPA, and edited for resolution of comments. The Pilot Test Plan will be sent to EPA for final review and approval on May 1, 2018.

**Issue:**

The Uranium Reactive Gas Sequestration (URGS) treatability test injections are re-planned to begin in the fall, no earlier than October 1, 2018.

**Corrective Action:**

Letter CHPRC-1800623 was submitted on February 15, 2018, documenting the notification of change (NOC). CHPRC proposed to discuss contractual impacts from this decision.

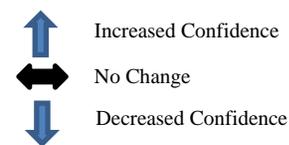
**Status:**

CHPRC continues discussions with RL on the path forward for the URGS project.

## RISK MANAGEMENT STATUS

**Unassigned Risk**  
**Risk Passed**  
**New Risk**  
**Change**

- Opportunity currently realized, or mitigation efforts are currently working toward, or after risk trigger with no foreseeable impacts.
- Mitigation efforts are currently working toward risk trigger with the possibility of actions not in place prior to risk occurrence. Recovery actions may be needed.
- Risk currently realized, or risk mitigation efforts are past risk trigger date with foreseeable impacts. Recovery actions needed.



Risk Title	Unmitigated Risk Impacts	Assessment		Comments
		Month	Trend	
<b>RL-0030/WBS-030</b>				
<b>Explanation of major changes to the project monthly spotlight chart:</b> Removed risk <i>SGW-135: Major Equipment Failure at Pump &amp; Treat Facility</i> from Stoplight Chart.				
<b>Realized Risks</b> (Risks that are currently impacting project cost/schedule)				
No realized risks identified in <i>April</i> .				
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)				
No critical risks identified in <i>April</i> .				
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)				
No high risks identified in <i>April</i> .				
<b>Unassigned Risks</b> (Pending ownership of identified risks/opportunities)				
No unassigned risks identified in <i>April</i> .				

## PROJECT BASELINE PERFORMANCE

### Current Month

(\$M)

RL-0030 Soil and Groundwater Remediation	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	10.1	9.8	9.1	(0.3)	-3.0%	0.8	8.0%

Numbers are rounded to the nearest \$0.1 million.

### CM Schedule Performance (-\$0.3M/-3.0%)

The variance is within reporting thresholds.

### CM Cost Performance (+\$0.8M/8.0%)

The current period positive cost variance is the result of:

- The HX P&T facility was operating at lower flow rates while preparing for HX feed header repair, resulting in lower levels of maintenance and lower levels of chemicals. The 100-HR-3 well realignment account achieved efficiencies this month by completing a campaign while experiencing excellent field conditions.
- The project realized 200 West P&T operations cost savings with contaminant concentrations in 200-UP-1 and 200-BP-5 decreasing below the values planned. Additionally, the project realized efficient completion of MBR A cassette installation.
- This positive variance was offset in part by UP-1 drilling. This monitoring well campaign was impacted by project lockout/tagout procedural changes and changing field conditions which resulted in a well design change. Well construction activities have been slowed resulting in higher labor costs than planned.

## Contract-to-Date (\$M)

RL-0030 Soil and Groundwater Remediation	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	1,478.1	1,473.1	1,428.1	-5.0	-0.3%	45.1	3.1%	1,561.1	1,511.8	83.7	49.3

Numbers are rounded to the nearest \$0.1 million.

### CTD Schedule Performance (-\$5.0/-0.3%)

The variance is within reporting thresholds.

### CTD Cost Performance (+\$45.1M/+3.1 %)

The variance is within reporting thresholds.

### Variance at Completion (+\$49.3M/+3.2%)

The variance is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

## FUNDS vs. SPEND FORECAST (\$M)

RL-0030 Soil and Groundwater Remediation	FY2018		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	121.9	114.4	7.5
Incremental Scope Pending Change Management	0.0	0.9	(0.9)
RL-0030 –Total	121.9	115.2	6.7

Numbers are rounded to the nearest \$0.1 million

### Funds/Variance Analysis

The FY2018 projected funding for project breakdown structure (PBS) RL-0030 is \$121.9 million. There is no significant change in forecast.

### Critical Path Schedule

Critical path analysis will be provided upon request.

## MILESTONE STATUS

The following table is a one-year look ahead of PBS RL-0030 Tri-Party Agreement enforceable milestones, non-enforceable target due dates, and commitments.

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
<b>Milestones on Schedule</b>					
M-024-58K	Initiate Discussions of Well Commitments	6/1/18		6/1/18	On schedule.
M-015-92A	Submit RFI/CMS & RI/FS Work Plan for 200-EA-1 OU to Ecology	7/31/18		7/22/18	On schedule.
M-024-69-T01	Conclude discussions of well commitments initiated under M-024-58	8/1/18		8/1/18	On schedule.
M-015-21A	Submit 200 BP-5 & 200 PO-1 OU FS Report and PP(s) to Ecology	3/31/19		2/1/19	On Schedule.
<b>Milestones at Risk</b>					
M-015-93C	Initiate Characterization Field Work for 200-SW-2 Operable Unit Landfills	9/30/18		TBD	At risk: project is not funded in FY2018.
M-016-193	Investigate SE Chromium Plume, Install Wells, Evaluate GW Monitoring Data & Install Monitoring Wells	9/30/18		6/30/19	At risk: three monitoring wells are impacted by their location in the PFP work control zone.

## GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

## DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
Concurrent RL and CHPRC Review of Internal Draft 216-A-37-1 Crib Engineering Evaluation Report	4/24/2018	4/30/2018
Concurrent RL and CHRPC Review of Internal Draft 216-A-36B Crib Engineering Evaluation Report	5/10/2018	5/16/2018
RL Review Draft 100 Area P&T Report	5/12/2018	6/10/2018
RL Review of 200 Area P&T Report	5/12/2018	6/10/2018
RL Transmit Draft Rev 0 100-BC-5 Proposed Plan to Regulator for Review	5/15/2018	5/17/2018
Concurrent RL and CHRPC Review of Internal Draft SST WMA U Groundwater Monitoring Plan	5/15/2018	5/21/2018
RL Transmit Rev 0 SST WMA U Engineering Evaluation Report to Ecology	5/17/2018	5/21/2018
RL Submit Rev 0 LLBG WMA-4 Engineering Evaluation Report to Ecology	5/21/2018	5/25/2018

Description	CHPRC Delivery Date	Expected RL Due Date
Concurrent RL and CHRPC Review of Internal Draft 216-B-63 Trench Engineering Evaluation Report	5/25/2018	6/1/2018
RL Review Draft Central Plateau Tracer Test Sampling Analysis Plan	5/31/2018	6/29/2018
RL Transmit Draft 216-A-37-1 Crib Engineering Evaluation Report to Ecology (SVT)	5/31/2018	5/31/2018
RL Transmit Draft IDF Engineering Evaluation Report to Ecology for Review (SVT)	5/31/2018	5/31/2018
RL Transmit Rev 0 SST WMA T Engineering Evaluation Report to Ecology	6/1/2018	6/21/2018
RL Transmit Rev 0 SST WMA TX-TY Engineering Evaluation Report to Ecology	6/8/2018	6/21/2018
RL Transmit Rev 0 SST WMA S-SX Engineering Evaluation Report to Ecology	6/8/2018	6/21/2018
RL Transmit Rev 0 216-S-10 Pond and Ditch Engineering Evaluation Report to Ecology	6/8/2018	6/14/2018
RL Transmit Rev 0 SST WMA A-AX -Engineering Evaluation Report to Ecology	6/8/2018	6/21/2018
Concurrent RL and CHRPC Review of Internal Draft LLBG WMA-4-Groundwater Monitoring Plan	6/12/2018	6/18/2018
RL Transmit Draft Rev 0 100-BC-5 RI/FS Report to Regulators for Review	6/13/2018	6/18/2018
200W P&T GW Remediation Plan - RL Review Draft GWRP	6/14/2018	7/13/2018
Concurrent RL and CHRPC Review of Internal Draft NRDWL/SWL Engineering Evaluation Report	6/14/2018	6/20/2018
RL Transmit Rev 0 LLBG WMA-3 Engineering Evaluation Report to Ecology	6/15/2018	6/21/2018
Concurrent RL and CHRPC Review of Internal Draft SST WMA B-BX-BY Engineering Evaluation Report	6/19/2018	6/19/2018
Concurrent RL and CHRPC Review of Internal Draft 216-S-10 Pond and Ditch Groundwater Monitoring Plan	6/25/2018	6/29/2018
RL Transmit Draft 216-A-36B Crib Engineering Evaluation Report to Ecology for Review (SVT)	6/25/2018	6/25/2018
200 Area P&T Report - Ecology Informal Review of Draft	6/28/2018	7/27/2018
Concurrent RL and CHRPC Review of Internal Draft SST WMA T Groundwater Monitoring Plan	7/2/2018	7/9/2018
Concurrent RL and CHRPC Review of Internal Draft SST WMA TX-TY Groundwater Monitoring Plan	7/2/2018	7/9/2018
Concurrent RL and CHRPC Review of Internal Draft SST WMA S-SX Groundwater Monitoring Plan	7/2/2018	7/9/2018
Concurrent RL and CHRPC Review of Internal Draft LLBG WMA-3 Groundwater Monitoring Plan	7/2/2018	7/9/2018
RL Transmit Draft B 200-BP-5 RI to Regulators Draft B [SVT]	7/9/2018	7/12/2018
RL Transmit Rev 0 SST WMA C Engineering Evaluation Report to Ecology	7/10/2018	7/30/2018
RL Transmit Regulatory Review Draft 216-B-63 Trench -Engineering Evaluation Report to Ecology for Review (SVT)	7/11/2018	7/11/2018
RL Transmit Draft A 200-EA-1 RI/FS Work Plan to Regulators for Review	7/13/2018	7/22/2018
RL Review Draft A 200-EA-1 RI/FS Work Plan	7/23/2018	8/5/2018
RL Transmit Rev 0 LLBG WMA-1 Engineering Evaluation Report to Ecology	7/30/2018	8/17/2018
RL Transmit Rev 0 216-A-29 Ditch Engineering Evaluation Report to Ecology	8/15/2018	8/21/2018

# Section E

## Nuclear Facility D&D, Remainder of Hanford (RL-0040)



T.E. Bratvold  
Vice President for  
Central Plateau Risk  
Management

April 2018  
CHPRC-2018-04, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

The initial Plutonium Uranium Extraction Plant (PUREX) Tunnel 2 investigation completed in April by demonstrating the removability of all but two risers and issuing the conceptual design for the grout conveyance system. Further field investigation was conducted to ensure the removability of all proposed risers to be used for the grouting conveyance system, as well as a “fly by” of the tunnel contents. Continued Ultrasonic Testing of Reduction and Oxidation (REDOX) Silo process piping in preparation for the draining risk mitigation campaign. Continued waste disposal from REDOX North Sample Gallery into Environmental Restoration Disposal Facility (ERDF) containers.

## EMS Objectives and Target Status

None currently identified.

## TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	0	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	1	11	4/9/18 - The employee began to feel congestion and irritation in his throat after smelling saw dust from cutting activities in the carpenter shop. (24774)
Near Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### RL-0040 Accomplishments

#### Central Plateau Risk Reduction (CPRM) Facilities and Waste Sites

- Completed field work pertaining to the annual inactive waste sites surveillance.
- Supported a Washington Department of Health (WDOH) Inspection of eight Radiation Area Remedial Action (RARA) project managed Waste Information Data System (WIDS) site emission units. No problems or issues were identified.
- Supported a visit from the Washington State Department of Ecology’s permit writing team who toured the 216-S-10 Ditch and Pond for information gathering purposes.
- Reviewed and approved two excavation permits affecting WIDS sites (DAN18-0082 and DAN18-0095).
- Completed radiological surveys of radiological controlled vehicles (RCV) that will be used to put sand into an ERDF container at B Plant.
- Completed heating, ventilation, and air conditioning (HVAC) seasonal maintenance at 221BK, 217A, and 252AB.
- Performed annual B Plant and PUREX Stack System PI gauge calibrations.



- Performed Tank 30 Inspection at PUREX.
- Supported Annual Site Protective Actions Drill.

### **PUREX Tunnel 2 Stabilization Project**

- Completed removal and reinstallation of 30” concrete plugs from tunnel risers three, four, and five.
- Completed 360-degree camera investigation in 13 of the 16 identified tunnel risers (tunnel fly by).
- Completed the conceptual design and 60 percent design package for the grout conveyance system.
- Completed down posting of the contamination area to facilitate future investigative scope for Risers 1 and 2.
- Finalized the Project Execution Plan for Tunnel 2 stabilization.
- Completed notice of intent between project technical services (PTS)/ERDF project on use of Integrated Disposal Facility (IDF) to support grouting.
- Conducted job walk with prospective bidders for Site Improvements Contract – bids are due April 26, 2018.
- Commenced Scope of Work (SOW) preparation for grout conveyance fabrication and installation contract.
- Commenced SOW preparation for PUREX Tunnel 2 grouting contract.

### **PUREX Stack Sampling System Replacement**

- Completed design authority verification of the PUREX stack sampling system as-built drawing set. Some required additions were identified and provided to the design contractor for incorporation.

### **B Plant Pre-filter and High Efficiency Particulate Air (HEPA) Filter Change-out**

- Received ERDF roll-on/roll-off (RO/RO) containers at B Plant in preparation of the upcoming pre-filter change-out in May.

### **REDOX Canyon Risk Mitigation**

- Completed REDOX South Blower Room 3 Roof structural reinforcement plan and received panels to be installed.
- Continued ultrasonic testing of REDOX silo process piping in preparation for the draining risk mitigation campaign.
- Continued waste disposal from REDOX North Sample Gallery into ERDF containers.
- Continued survey, decontamination, and exterior inspection of sampling box locations in the REDOX North Sample Gallery.
- Completed layout for Connex Box installation for deployment at REDOX for use in potential mitigation of radiological release survey impacts, as well as replacement of planned connex availability from the Plutonium Finishing Plant (PFP).
- Performed walkdowns with Electrical Utilities and Crane and Rigging for placement of connex boxes north of MO-409.
- Received and completed quality assurance inspections on all connex boxes currently planned for deployment north of MO-409.
- Completed drafts of Radiological Technical Evaluation for high-hazard work at REDOX and transmitted to Central RadCon for review.
- Verified cutting locations for required intrusive tank interrogations on Silo seventh and eighth floors.
- Revised and released Fire Marshall Permit to allow for more limited silo access during the period that fire escape use is limited due to Blower Room 3 integrity issue.
- Finalized ERDF macro encapsulation waste disposition plan and disposed of waste light bulbs.
- Drafted training plan and work package for stair climber equipment to be deployed for movement of heavy items from REDOX.

**MO-409 Relocation**

- Installed and verified that network (HLAN) and phone systems are operational prior to move.
- Completed carpentry repairs in MO-409 pre-move.
- Completed mitigation of all tripping hazards around stairs

**MAJOR ISSUES**

No major issues to report at this time.

**RISK MANAGEMENT STATUS**

<p><b>Unassigned Risk</b></p> <p><b>Risk Passed</b></p> <p><b>New Risk</b></p> <p><b>Change</b></p>	<p> Opportunity realized, or mitigation efforts are currently working toward, or after risk trigger with no foreseeable impacts.</p> <p> Mitigation efforts are currently working toward risk trigger with the possibility of actions not in place prior to risk occurrence. Recovery actions may be needed.</p> <p> Risk currently realized, or risk mitigation efforts are past risk trigger date with foreseeable impacts. Recovery actions needed.</p>	<p> Increased Confidence</p> <p> No Change</p> <p> Decreased Confidence</p>
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Risk Title	Unmitigated Risk Impacts	Assessment		Comments																																	
		Month	Trend																																		
<b>RL-0040/WBS-040</b>																																					
<b>Explanation of major changes to the project monthly spotlight chart:</b> Risk PRXT-S2-013, <i>Lack of Technical Information</i> , was added to the spotlight report as a realized risk in April.																																					
<b>Realized Risks</b> (Risks that are currently impacting project cost/schedule)																																					
D4-042: Unexpected Site Conditions - D4	<p>Unexpected site conditions are encountered during D4 activities resulting in recovery actions, causing unplanned, in-scope work, and schedule delays to the project.</p> <p><b>Risk Handling Strategy:</b> Control</p> <p><b>Probability:</b> Likely (75% to 90%)</p> <p><b>Worst Case Impacts:</b> \$0K, 300 day</p>			<p><b>Risk Event:</b> The B Plant ventilation system was shut down due to elevated differential pressure readings in the ACT-002 filter bank. Upon initial investigation, it was determined that the pre-filters were saturated with water and there was standing water within the ACT-001 filter bank. The result of this unexpected occurrence is that the pre-filters and HEPA filters in the ACT-002 bank, and presumably the pre-filters and the HEPA filters in the ACT-001 filter bank, need to be replaced prior to startup of the B Plant ventilation system. Unexpected radiological contamination identified within/outside the containment tent used to initiate the pre-filter change out resulted in delays to the pre-filter replacement. After initial filter change out was completed in October 2017, dose rates on the pre-filters quickly became elevated and were replaced in December 2017. Dose rates on the replaced pre-filters are rising again but at a much slower rate, but will likely require another change in the near future.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Risk recovery action(s)</th> <th>Risk Date</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Work package change notice (WCNs) are being prepared to perform additional investigation of the water intrusion, remove the pre-filters and HEPA filters, and restart the B Plant ventilation system.</td> <td rowspan="4" style="text-align: center;">August 2016</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">100%</td> </tr> <tr> <td>Recovery actions were performed in April and May 2017 to fix contamination associated with ACT-002 in and around the containment tent.</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">100%</td> </tr> <tr> <td>Requests to expedite the HEPA filter order have been rejected by the manufacturer due to issues with their equipment at the production facility.</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">100%</td> </tr> <tr> <td>Execute pre-filter and HEPA filter change out.</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">100%</td> </tr> <tr> <td>Repair tents and perform second pre-filter change out in ACT-001 and ACT-002 filter banks.</td> <td style="text-align: center;">November 2017</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">100%</td> </tr> <tr> <td>Perform dose rate monitoring of pre-filters in ACT-001 and ACT-002 filter banks.</td> <td style="text-align: center;">January 2018 – Current</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td>Order and receive additional materials (e.g., tents, bags) to support additional pre-filter replacement.</td> <td style="text-align: center;">February 2018</td> <td style="text-align: center;">4/24/18</td> <td style="text-align: center;">95%</td> </tr> <tr> <td>Develop revision to pre-filter change out work package to improve ALARA and general efficiency.</td> <td style="text-align: center;">February 2018</td> <td style="text-align: center;">5/03/18</td> <td style="text-align: center;">70%</td> </tr> </tbody> </table> <p><b>Recovery Action Assessment:</b> No major changes in April. The pre-filters and HEPA filters were replaced in both ACT filter banks, and the ventilation system was restarted. Site cleanup activities were initiated and</p>	Risk recovery action(s)	Risk Date	FC Date	%	Work package change notice (WCNs) are being prepared to perform additional investigation of the water intrusion, remove the pre-filters and HEPA filters, and restart the B Plant ventilation system.	August 2016	Complete	100%	Recovery actions were performed in April and May 2017 to fix contamination associated with ACT-002 in and around the containment tent.	Complete	100%	Requests to expedite the HEPA filter order have been rejected by the manufacturer due to issues with their equipment at the production facility.	Complete	100%	Execute pre-filter and HEPA filter change out.	Complete	100%	Repair tents and perform second pre-filter change out in ACT-001 and ACT-002 filter banks.	November 2017	Complete	100%	Perform dose rate monitoring of pre-filters in ACT-001 and ACT-002 filter banks.	January 2018 – Current	Ongoing	N/A	Order and receive additional materials (e.g., tents, bags) to support additional pre-filter replacement.	February 2018	4/24/18	95%	Develop revision to pre-filter change out work package to improve ALARA and general efficiency.	February 2018	5/03/18	70%
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		Month	Trend													
<b>RL-0040/WBS-040</b>																
				within a day of fan operations, dose rates on the pre-filters became elevated and needed to be monitored on an hourly basis. The pre-filters were changed a second time in a single calendar year to address the elevated dose rates. The containment tents were removed in January 2018 and the site was restored to its original conditions. Daily (M-Th) dose rate surveys are being performed on the pre-filter banks to track the increasing dose rates. New pre-filters and associated materials have been ordered to support an additional pre-filter change out in one or both ACT filter banks once the dose rates exceed threshold limits and the new pre-filter removal work package has been approved. Work is currently planned to start in <b>mid-to-end of May 2018 based on work package completion and personnel availability.</b>												
<b>PRXT-S2-013: Lack of Technical Information</b>	The project does not have enough technical information for ecology to approve the necessary permits.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$100K, 30 day			<p><b>Risk Event:</b> Draft Completeness letter received from Ecology with comments on April 20, 2018.</p> <table border="1"> <thead> <tr> <th>Risk recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>CHPRC provide response to Completeness letter</td> <td>5/21/18</td> <td>25</td> </tr> <tr> <td>RL Review of CHPRC Comments and Submit to Ecology</td> <td>5/24/18</td> <td>N/A</td> </tr> <tr> <td>Formal authorization from Ecology prior to installation of grouting conveyance system</td> <td>7/30/18</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Risk Action Assessment:</b> In order to begin grouting PUREX Tunnel 2 by end of August 2018, Ecology must approve the Resource Conservation and Recovery Act of 1976 (RCRA) (RCRA) permit addendum prior to installation of the grout conveyance (July 30, 2018). RL submitted the permit addendum to Ecology on February 14, 2018, with the understanding that further updates will be submitted as more information becomes available through the tunnel investigation activities (now completed) and engineering design maturation.</p>	Risk recovery action(s)	FC Date	%	CHPRC provide response to Completeness letter	5/21/18	25	RL Review of CHPRC Comments and Submit to Ecology	5/24/18	N/A	Formal authorization from Ecology prior to installation of grouting conveyance system	7/30/18	N/A
Risk recovery action(s)	FC Date	%														
CHPRC provide response to Completeness letter	5/21/18	25														
RL Review of CHPRC Comments and Submit to Ecology	5/24/18	N/A														
Formal authorization from Ecology prior to installation of grouting conveyance system	7/30/18	N/A														
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																
No critical risks identified in <b>April</b> .																
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)																
No high risk threat value risks in <b>April</b> .																
<b>Unassigned Risks</b> (Pending ownership of identified risks/opportunities)																
No unassigned risks identified in <b>April</b> .																

## PROJECT BASELINE PERFORMANCE

### Current Month

### (\$M)

WBS 040/ RL-0040 Nuclear Facility D&D	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	2.7	2.4	2.6	(0.3)	-11.8%	(0.2)	-10.1%

Numbers are rounded to the nearest \$0.1 million

**CM Schedule Performance: (-\$0.3M/-11.8%)**

The current month (CM) schedule variance is within threshold.

**CM Cost Performance: (-\$0.2M/-10.1%)**

The CM cost variance is within threshold.



### Contract-To-Date (\$M)

WBS 040/ RL-0040 Nuclear Facility D&D	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	476.2	472.6	447.6	(3.7)	-0.8%	24.9	5.3%	504.3	481.3	33.7	23.0

Numbers are rounded to the nearest \$0.1 million

**Cost to date (CTD) Schedule Performance: (-\$3.7M/-0.8%)**

The CTD schedule variance is within reporting thresholds.

**CTD Cost Performance: (+\$24.9M/+5.3%)**

The favorable cost variance is due to prior year activity, including:

- The majority of the CTD cost variance is from legacy work dating back to the American Recovery and Reinvestment Act (ARRA) time period.
- The remaining CTD favorable cost variance base-funded work is due to efficiencies for surveillance and maintenance and D4 activities as a result of using existing site equipment and fewer resources, and program management using fewer resources.

**Variance at Completion (+\$23.0M/+4.6%)**

The variance at completion is within reporting thresholds.

**Contract Performance Report Formats are provided in Appendix A.**

### FUNDS vs. SPEND FORECAST (\$M)

WBS 040/RL-0040 Nuclear Facility D&D	FY2018		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	69.0	42.7	26.3
Incremental Scope Pending Change Management	0.0	16.6	(16.6)
RL-0040 – Total	69.0	59.3	9.6

Numbers are rounded to the nearest \$0.1 million.

**Funds/Variance Analysis**

Fiscal year (FY) 2018 projected funding for project breakdown structure (PBS) RL-0040 increased to \$69.0 million. It is anticipated the majority of the variance will be applied to the PUREX Tunnel 2 scope.

**Critical Path Schedule**

Critical path analysis can be provided upon request.



### MILESTONE STATUS

Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) milestones represent significant events in project execution. RL Enforceable Agreement (EA) milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The performance measurement baseline (PMB) annual update, implemented in September 2013, and subsequently approved baseline change requests (BCR) define CHPRC planning with respect to Tri-Party Agreement milestones. The following table is a one-year look ahead of commitments and Tri-Party Agreement enforceable milestones and non-enforceable target due dates.

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-016-250C	Submit to Ecology a 3-Year Rolling Prioritized Schedule to Implement Waste Site Removal Actions	3/31/2018	3/28/2018 (A)	3/29/2018	Completed
M-016-255	Complete Removal of All Waste Sites for FY18 as Updated/Modified in M-16-17-01	9/30/2018		9/30/2019	In negotiation with RL to adjust schedule to FY2019

### GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

### DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
224B (B Plant) RAWP (2017-34)	8/16/17 (A)	7/16/18
202A (PUREX) Draft B EE/CA to Ecology for review	12/11/17 (A)	6/18/18
221B (B Plant) EE/CA to RL for Review	1/11/18 (A)	5/31/18
REDOX RAWP (2017-06) DD to RL	3/15/18 (A)	6/4/18
Tier 2 Misc. (B Plant) SAP (2017-47)	4/17/18 (A)	6/11/18
Tier 2 Misc. Fac. (B Plant) RAWP (2016-50) DD to RL	5/2/18 (A)	6/18/18



# Section F

## Nuclear Facility D&D, River Corridor (RL-0041)



R. M. Geimer  
Vice President for  
K Basin Operations

April 2018  
CHPRC-2018-07, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

T. L. Hobbes  
Vice President for  
River Risk Management Project

M. A. Wright  
Vice President for  
Project Technical  
Services

## PROJECT SUMMARY

The 100K Closure Project continued remediation of Waste Site 116-KE-2; began preparation of the sand filter media removal system test report; and continued preparation for garnet filter media removal system integrated testing. The 324 Building Disposition Project continued to make progress with equipment procurements and fabrication, equipment installation at the mockup, and interference removal activities within the 324 Building. Workers at the 618-10 Burial Ground continued infrastructure demobilization activities.

### EMS Objectives and Target Status (Draft)

Objective #	Objective	Target	Due Date	Status
18-EMS-KBOPR-OB1-T1	Improve compliance/pollution and spill prevention	Monitor and evaluate universal waste (UW) and recycling accumulation areas for compliance with CHPRC procedures. Survey spill prevention measures.	9/30/18	54%
18-EMS-324BDP-OB1-T1	Increase EMS awareness	Promote and increase 324 Building Disposition Project (324 BDP) personnel EMS awareness via various means throughout fiscal year (FY) 2018.	9/30/18	60%
18-EMS-324BDP-OB2-T1	Improve compliance	Review and update as needed Resource Conservation and Recovery Act of 1976 (RCRA) inspection implementing procedures, inspection forms, checklists, and work packages (WP) to capture operating record information and assign appropriate metadata.	9/30/18	85%

### TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Months	Comment
Days Away, Restricted or Transferred	0	0	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	2	29	4/9/18 – Employee experienced pain in the right shoulder while pulling open a closing door. Employee was examined at HPMC, diagnosed with a strain, and released to work with no restrictions. (24772) 4/10/18 – Employee developed a headache after looking at a substance that came out of a pipe while prepping for sealing operations. The employee was taken to HPMC and released back to work with no restrictions. (24780)
Near Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### K Basin Operations and Plateau Remediation

- 100K Closure Project:
  - o 100K Soil Remediation:
    - Continued excavation of radioactive waste crib, Waste Site 116-KE-2 (approximately 59 percent complete). Average production rate was 36 Environmental Restoration Disposal Facility (ERDF) cans per day.
      - Continued RadCon work planning for the deep excavation currently planned to commence in June.
    - Continued preparation of Waste Sites 100-K-107 and 108 regulatory closure document (approximately 95 percent complete). Anticipated to complete in May.
    - Progressing closure of Waste Site 100-K-42 with the U.S. Environmental Protection Agency (EPA).
    - Completed additional excavation of Waste Site 100-K-99 to remove radioactively contaminated soil discovered during in-process sampling.
  - o K West Basin Deactivation:
    - Garnet Filter Media Removal (GFMRS):
      - Testing personnel at Maintenance and Storage Facility (MASF) continued with the setup of GFMRS production hardware for the upcoming integrated testing. 100K Operations Engineered Container Retrieval and Transfer System (ECRTS) operator training will delay the integrated test. However, test setup will continue to the extent practicable without interfering with ECRTS training.
      - American Boiler Works (ABW) continued final preparations for packaging and shipping Sludge Transport & Storage Container (STSC) Units 425, 426, 427, and 428 to the Hanford Site. ABW successfully completed all free-iron testing, interior and exterior vessel cleaning. Once the Acquisition Verification Services (AVS) inspection and final document package review and approval is complete, the units will be released for shipment, currently forecasted for the beginning of May.
      - HiLine Engineering has initiated long-lead procurements for the overflow retrieval tools and the STSC instrumentation in preparation for installation.
      - Garnet Filter Number 3 Sluice Outlet Valve V-305 Risk Mitigation:
        - o On-hold. The project will work V-305 in FY2019 during the installation of GFMRS process equipment.
    - Sand Filter Media Removal System (SFMRS):
      - The lead test engineer is developing the SFMRS test report.
    - K West Basin Below-water Debris Characterization:
      - Completed Hanford Information Systems Inventory screening pursuant to acquisition of the Attila software, which will support future dose-to-curie modeling of basin debris fields.
      - Initiated engineering evaluation of in-basin modifications necessary to consolidate high dose materials in the North Loadout Pit and a vertical processing unit.
      - Provided the KW Fuel Storage Basin Settled Solids Sampling Scheme document to the Sample Management Office. Delivery of the document allows discussions to begin with 222S Analytical Services for sample analysis.
  - o K East Reactor Interim Safe Storage (ISS):
    - Submitted the updated 105 KE Reactor asbestos white paper to RL for final review. The white paper describes areas of known asbestos within 105 KE Reactor, and proposes that some asbestos should remain in the building during the ISS period based on regulatory requirements, past ISS practices, safety considerations, and removal constraints.

- Performed an entry into the 105 KE reactor building to identify the necessary corrective actions and materials to address the fall hazard identified at the 52' elevation caused by the openings in the previously damaged transite panels.
- Continued preparing the draft update to the 2012 geotechnical engineering study report for the soils that will surround the K East Reactor during Safe Storage Enclosure (SSE) construction and routed for internal review.
- Completed evaluating contractor requirements and performed internal functional reviews of the 2012 version of DD-49286, 105 KE ISS Project Functional Design Criteria against DOE orders/guidance documents and CHRPC procedures, and completed draft revision to DD-49286.
- Continued development of a detailed cost estimate for construction of the 105 KE Safe Storage Enclosure (SSE).
- Developed a 3-D model of the 105 KE SSE design to support future design modifications and construction efforts.
- o Ancillary Facility Deactivation & Demolition (D&D):
  - Continued Thermal System Insulation (TSI) abatement in 165K East Power Control Building.
  - Completed draft revision and internal review to DOE/RL-2005-26, *RAWP for 100K Reactor and Ancillary Facilities*.
  - Awarded contract to perform Air Emission Calculations and development of the Air Monitoring Plan (AMP) in support of DOE/RL-2005-26.
  - Awaiting parts for roof crawler to support load test 166KE Fuel Storage Bunker roof in support of 166-KE D&D and Waste Site 130-KE-2 remediation.
  - Issued contract and performed kickoff meeting for the development of the 100D/H Remedial Action Report.
- o Remaining Closure Operations:
  - Continued collecting shrub seeds from various locations around the Hanford Site to support FY2019 re-vegetation efforts (includes 618-10).
  - Issued Request for Proposal (RFP) for interim stabilization barrier installation contract, completed bid review, and awarded contract to OJEDA. Work packages are in development in parallel with OJEDA training.

### River Risk Management Project

- 618-10 Burial Ground:
  - o Continued to work on environmental closeout documentation.
  - o Continued infrastructure demobilization activities.
  - o Project Technical Support (PTS):
    - Commenced planning for the removal of the final two trailers (MO-6114 and MO-6116). Field mobilization is scheduled for May 7, 2018.
- 324 Building Disposition Project.
  - o Successfully planned and performed the four-year Fire Damper PM.
  - o Issued quarterly reports on the five Vital Safety Systems (VSS).
  - o Performed 17 monthly, quarterly, and annual preventative maintenance packages.
  - o The Annual Safety Basis Update RL review comments resolutions were approved, and the documents are in approval for re-submittal.
  - o Completed the direct shipment of the televiator, two waste containers, and one roll-on/roll-off (RO/RO) to ERDF.
  - o Finalized high alpha contamination recovery and implemented corrective actions from DOE.
  - o Removed the large hose reel from C-Cell and placed in a waste box for disposal.
  - o Moved the large hose reel from D-Cell into the airlock; awaiting placement in a waste box.
  - o Established a new Waste Storage Area directly east of the 324 Facility fenced compound.

- o Awarded contracts for the 324 Facility Animation services and waste bins, weldment, lifting bail and below-the-hook lifting device (BTHLD).
- o Continued design/fabrication for the 324 rad assay and crane-mounted radiation detectors; 324 Heating, ventilation, and air conditioning (HVAC) exhaust dams and snorkel system; concrete dump tools and cementitious grout analysis; 324 A, C, D-Cell dams; and mockup floor saw system.
- o Continued procurement/fabrication of the 324 Remote Excavator Arm (REA) system and cameras & lighting system.
- o Completed the Factory Acceptance Test (FAT) for the Mockup Water Delivery System.
- o Initiated installation of the REA through supports and Cameras and Lighting System at the Mockup.
- o Continued Brokk limits of use evaluation at the mockup.
- o Continued cell sealing of A-Cell, C-Cell, D-Cell, and Cask Handling Area, and interference removal activities inside of the 324 Building.
- o Core drill shield plugs were fabricated and delivered to the 324 Building.
- o Completed contractor demonstration of REA through support install on test wall and core drilling activities at the subcontractor's shop.
- o Continued geotechnical testing of the soils from the external boreholes.
- o Surveyors established boundaries on the north side of 324 in support of future geo-probe removal.
- o PTS Support:
  - Training and Procedures
    - Teamed with the 324 Building Disposition Project operations personnel to develop a new procedure that covers external waste storage operations, which will be used by both projects.
    - Revised the 324 Facility procedure on low-level waste (LLW) container packaging to align waste packaging criteria and bridge hand-off gaps with the 324 Building Radioactive Waste Packaging procedure and the 300 Area Waste Container Operations procedure. All three procedures need to work in tandem at 324 to ensure a compliant product for shipping and disposal.
    - Published four new facility-specific fieldwork supervisor qualifications that were created to increase traceability of the various qualification levels in use at the 324 Facility. Reviewed and edited Dangerous Waste Training Plan (DWTP) to account for new Field Work Supervisors (FWS) qualifications.
  - Operations Program
    - ConOps/Work Control/Conduct of Work
      - o Supporting a work site assessment (WSA) for 324 Facility for shift routines and operating practices (324-2018-WSA-19824).
    - Emergency Preparedness (EP)
      - o Conducted an Incident Command Post (ICP) limited scope drill 324-EPDF-042418.

## MAJOR ISSUES

### Issue

In February 2018, a higher-than-expected ratio of alpha to beta/gamma contamination was detected in a localized area in the Radiochemical Engineering Cell (REC) airlock after removing waste from C-Cell. Discovery of an elevated latent contamination level upon removal of the waste was unexpected and beyond the reasonable control of CHPRC. This condition is realization of risk RCC-300-296-01, Latent Conditions Impact Facility Modification.

**Corrective Action**

Determine cause for high alpha reading and update appropriate procedures as necessary. Perform a follow-on review to identify previously unknown legacy activities conducted in the REC cells to determine contributing factors to elevated alpha levels.

**Status**

Timely Orders have been issued and a Notification of Differing Site Conditions Letter (CHPRC-1801178) was transmitted to RL in April. Workers at the 324 Building finalized high alpha contamination recovery, implemented corrective actions from RL, and resumed cell cleanout activities.

**Issue**

A shortage of Radiation Control Technicians, Radiation Control Engineers, Radiation Control Work Planners, and Radiation Control First Line Managers is hampering 100K Closure Project soil remediation and basin characterization work.

**Corrective Action**

The project is working with labor relations and central radiation protection management to fill needed positions.

**Status**

Ongoing.

**RISK MANAGEMENT STATUS**

<p><b>Unassigned Risk</b> <b>Risk Passed</b> <b>New Risk</b> <b>Change</b></p>	<p> Opportunity currently realized, or mitigation efforts are currently working toward, or after risk trigger with no foreseeable impacts.</p> <p> Mitigation efforts are currently working toward risk trigger with the possibility of actions not in place prior to risk occurrence. Recovery actions may be needed.</p> <p> Risk currently realized, or risk mitigation efforts are past risk trigger date with foreseeable impacts. Recovery actions needed.</p>	<p> Increased Confidence</p> <p> No Change</p> <p> Decreased Confidence</p>
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Risk Title	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
<b>RL-0041/WBS-041</b>										
<b>Explanation of major changes to the project monthly stoplight chart:</b>										
Risk <i>RCC-300-296-21: 300-296 Unable to Remove the Floor Plug Between D-Cell and C-Cell</i> was removed from the stoplight chart.										
<b>Realized Risks</b> (Risks that are currently impacting project cost/schedule)										
RCC-300-296-01: Latent Conditions Impact Facility Modification	A higher-than-expected ratio of alpha to beta/ gamma contamination was detected in a localized area in the REC airlock after removing waste from C-Cell.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> 72 days			<p><b>Risk Event:</b> A higher-than-expected ratio of alpha to beta/gamma contamination was detected in a localized area in the REC airlock after removing waste from C-Cell. Discovery of an elevated latent contamination level upon removal of the waste was unexpected and beyond the reasonable control of CHPRC.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Resume cell cleanout activities following legacy contamination discovery.</td> <td>4/4/2018</td> <td>100</td> </tr> </tbody> </table> <p><b>Recovery Assessment:</b> Timely Orders have been issued and a Notification of Differing Site Conditions Letter (CHPRC-1801178) was transmitted to RL in early April. Workers at the 324 Building finalized high alpha contamination recovery, implemented corrective actions from RL, and resumed cell cleanout activities on April 4, 2018. However, the project will continue to monitor corresponding impacts and segregate costs as a result of this risk being realized.</p>	Recovery action(s)	FC Date	%	Resume cell cleanout activities following legacy contamination discovery.	4/4/2018	100
Recovery action(s)	FC Date	%								
Resume cell cleanout activities following legacy contamination discovery.	4/4/2018	100								

<p>RCC-300-296-13: 300-296 Design review issues arise for the structural modification to the 324 Building.</p>	<p>Demolition of existing structures and installation of structural modifications to the 324 Building are necessary to provide structural support to B-Cell during excavation of the radiological contaminated soil. There is limited access and workspace in the 324 Building, which could lead to design review issues impacting the installation of the structural modifications. The impacts may result in in-scope unplanned work causing cost and schedule impacts to the project.</p> <p><b>Risk Handling Strategy:</b> Control</p> <p><b>Probability:</b> Very Likely (&gt;90%) <b>Worst Case Impacts:</b> \$640K, 160 days</p>			<p><b>Risk Event:</b> Upon review of the 30 percent design submittal, it was determined that the cell wall loading/limitations were inadequate and required additional clarification.</p> <table border="1"> <thead> <tr> <th>Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Contractor Prepare and Submit Structure Modification Design - 30%-60% (VE2810)</td> <td>7/12/2018</td> <td>95</td> </tr> <tr> <td>Contractor Prepare and Submit Structure Modification Design – Final (VE2810A)</td> <td>11/15/2018</td> <td>-</td> </tr> </tbody> </table> <p><b>Recovery Assessment:</b> No major changes in April. To reduce the potential impacts associated with conflicting drawing information and performing structural modifications, applicable design efforts were updated to encompass further analysis of cell footings, load limitations, and field demonstrations. These efforts will ensure modifications are successfully performed and completed. The additional efforts have been incorporated into the FES, along with the estimate to complete (ETC), to reflect impacts of risk being realized.</p>	Recovery action(s)	FC Date	%	Contractor Prepare and Submit Structure Modification Design - 30%-60% (VE2810)	7/12/2018	95	Contractor Prepare and Submit Structure Modification Design – Final (VE2810A)	11/15/2018	-
Recovery action(s)	FC Date	%											
Contractor Prepare and Submit Structure Modification Design - 30%-60% (VE2810)	7/12/2018	95											
Contractor Prepare and Submit Structure Modification Design – Final (VE2810A)	11/15/2018	-											
<p>RCC-300-296-03: Mockup Testing and Qualification of Remote Equipment / Process Identifies Major Modification Requirements.</p>	<p>Issues such as equipment interferences, differing as-found conditions than planned, equipment reliability, etc., arise prior to/during mockup testing, leading to re-design of equipment and resulting in cost and schedule delays.</p> <p><b>Risk Handling Strategy:</b> Control</p> <p><b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$773K, 80 Days</p>			<p><b>Risk Event:</b> During recent vendor tests and/or Factory Acceptance Testing (FAT), issues and conditions were identified with mockup equipment, resulting in additional redesign, materials, and/or fabrication efforts greater than planned. Remote equipment procurements that have resulted in cost and/or schedule impacts include the REA system components (through support and dummy post assemblies), and transfer mechanism (electrical components).</p> <table border="1"> <thead> <tr> <th>Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform Construction Acceptance Test (CAT) for Mockup Equipment Install - Cameras and Lighting; REA system with HPUs; Transfer Mechanism (VE0640)</td> <td>7/12/2018</td> <td>-</td> </tr> </tbody> </table> <p><b>Recovery Assessment:</b> No major changes in April. Equipment procurements are continuously monitored and tracked to account for additional redesign efforts, materials, and fabrication efforts resulting in cost and/or schedule impacts. This risk will be realized through satisfactory completion of CAT. Impacts have been incorporated into the project schedule, along with the ETC, to reflect impacts of risk being realized.</p>	Recovery action(s)	FC Date	%	Perform Construction Acceptance Test (CAT) for Mockup Equipment Install - Cameras and Lighting; REA system with HPUs; Transfer Mechanism (VE0640)	7/12/2018	-			
Recovery action(s)	FC Date	%											
Perform Construction Acceptance Test (CAT) for Mockup Equipment Install - Cameras and Lighting; REA system with HPUs; Transfer Mechanism (VE0640)	7/12/2018	-											
<p><b>Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)</b></p>													
<p>RCC-300-296-02: 300-296 Loss of ventilation in the 324 hot cells or Zone II</p>	<p>Zone I or II ventilation system failure causes loss of ventilation and shutdown of soil remediation activities, resulting in in-scope unplanned work, and subsequently resulting in schedule impacts.</p> <p><b>Risk Handling Strategy:</b> Control</p> <p><b>Probability:</b> Medium (26% to 74 %) <b>Worst Case Impacts:</b> \$0K, 48 days</p>			<p><b>Risk Trigger Metric:</b> Ventilation fan or other system component failure may prevent airlock entry, which is needed for cleanout of REC cells, penetration sealing, and installation of equipment.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>324 Min. Safe Spare Parts and Routine Preventive Maintenances (PMs) (R03095)</td> <td>9/30/2018</td> <td>55.4</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No major changes in April. Ventilation PM is being routinely performed. Spare fan parts are available for minor failures if occurrence is realized.</p>	Mitigation action(s)	FC Date	%	324 Min. Safe Spare Parts and Routine Preventive Maintenances (PMs) (R03095)	9/30/2018	55.4			
Mitigation action(s)	FC Date	%											
324 Min. Safe Spare Parts and Routine Preventive Maintenances (PMs) (R03095)	9/30/2018	55.4											
<p>RCC-300-296-07: 300-296 Failure of a REC Cranes (B-Cell, A-Cell, A-D &amp; Airlock, or CHA cranes)</p>	<p>Major crane repair must be performed during operations. This in-scope, unplanned work results in cost and schedule impacts to the project.</p> <p><b>Risk Handling Strategy:</b> Control</p> <p><b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$832.7K, 144 days</p>			<p><b>Risk Trigger Metric:</b> REC crane failure occurs during operations.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Replacement Parts List – REC Cranes</td> <td>8/28/2018</td> <td>-</td> </tr> <tr> <td>Order and Procure Spare Parts – REC Cranes</td> <td>11/20/2018</td> <td>-</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No major changes in April. The project experienced loss of the CHA crane in November 2017. Final repairs and load testing for the 30-ton CHA crane were completed and the crane was returned to service in January 2018. The project is in the initial phases of acquiring evaluations and recommendations with manufacturers to assist with determining Preventive Maintenance, spare part requirements, and Corrective Maintenance in the event of necessary repairs. These efforts are expected to reduce the potential for impacts.</p>	Mitigation action(s)	FC Date	%	Replacement Parts List – REC Cranes	8/28/2018	-	Order and Procure Spare Parts – REC Cranes	11/20/2018	-
Mitigation action(s)	FC Date	%											
Replacement Parts List – REC Cranes	8/28/2018	-											
Order and Procure Spare Parts – REC Cranes	11/20/2018	-											

<p>RCC-300-296-08: 300-296 Failure of a cell shield door</p>	<p>Failure of shield door(s) or crane shield door(s) shuts down cleanout of REC cells/airlock, penetration sealing in airlock, and equipment installation efforts. It may not be possible to repair a shield door due to radiation dose rate and location. The door failure results in in-scope unplanned work and subsequently causes cost and schedule impacts to the project.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$460K, 48 days</p>		<p><b>Risk Trigger Metric:</b> During operation of cleanout activities, a shield door becomes inoperable and will not open or close. Due to dose rates, it may not be possible to repair a shield door.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform assessment (PRC-SRP-00043) on shield doors</td> <td>-</td> <td>100</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No major changes in April. An assessment of shield door(s) or crane shield door(s) was performed (PRC-SRP-00043). As a result, additional PMs have been implemented and spare parts are available for minor failures if occurrence is realized. Currently, no additional mitigation efforts are scheduled. The risk will continue to be monitored until it no longer poses a threat to the project.</p>	Mitigation action(s)	FC Date	%	Perform assessment (PRC-SRP-00043) on shield doors	-	100
Mitigation action(s)	FC Date	%							
Perform assessment (PRC-SRP-00043) on shield doors	-	100							
<b>High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)</b>									
<b>Lifecycle Risk Triggers (Risk could be realized at any point of the project)</b>									
<b>Unassigned Risks (Pending ownership of identified risks/opportunities)</b>									
<p>RCC-300-296-04DOE: 300-296 Seismic Event (Force Majeure)</p>	<p>A Force Majeure incident, such as seismic event, results in the loss of structural integrity; causing cost and schedule impacts to the project delivery. <b>CHPRC Comment:</b> CHPRC cannot manage the geological seismic movement that may impact the structural integrity of a building. Therefore, this risk is proposed to be transferred to DOE. DOE has “informally” accepted this risk as a transfer risk. A formal letter of acceptance (CHPRC-1705651) was sent to RL on December 12, 2017. Once this risk has been formally accepted, via acknowledgement from the RL contracting officer, it will be removed from the stoplight chart.</p>								
<p>RCC-300-296-23DOE: 300-296 Large Brush Fire (Force Majeure)</p>	<p>A brush fire ignited on the Hanford Site near the proximity of the 300-296 Waste Site, resulting in cost and schedule delays. <b>CHPRC Comment:</b> This risk was identified as “Force Majeure” and is beyond the capabilities of CHPRC to manage. Therefore, this risk was proposed to be transferred to DOE. DOE has “informally” accepted this risk as a transfer risk. A formal letter of acceptance (CHPRC-1705651) was sent to RL on December 12, 2017. Once this risk has been formally accepted, via acknowledgement from the RL contracting officer, it will be removed from the stoplight chart.</p>								
<p>RCC-300-296-27: 300-296 Requirement Changes Result in Additional Work/Entry Prerequisite Training</p>	<p>Due to complex-wide or facility specific changes in requirements outside of CHPRC’s ability to manage (e.g. technical documents, procedures, training), project delivery will be impacted in terms of cost and schedule. <b>CHPRC Comment:</b> Changes to DOE orders, federal or state regulations, waste acceptance criteria established by another site contractor, or another DOE site could impact the baseline scope/schedule/cost. Although a contract change is required to incorporate changes to DOE orders, no contract change is required for federal or state regulations or for waste acceptance criteria changes. The potential criteria changes are outside of CHPRC’s ability to manage. Therefore, this risk was proposed to be transferred to DOE. DOE has “informally” accepted this risk as a transfer risk. A formal letter of acceptance (CHPRC-1705651) was sent to RL on December 12, 2017. Once this risk has been formally accepted, via acknowledgement from the RL contracting officer, it will be removed from the stoplight chart.</p>								

## PROJECT BASELINE PERFORMANCE

### Current Month

(\$M)

WBS 041/RL-0041 Nuclear Facility D&D – River Corridor	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	16.2	9.9	5.5	(6.3)	-39.1%	4.4	44.3%

Numbers are rounded to the nearest \$0.1 million

#### CM Schedule Performance (-\$6.3M/-39.1%)

The current month unfavorable schedule variance is primarily caused by the 324 Building Disposition Project, which experienced delays in procurement/fabrication of the 324 equipment resulting from design changes and fabrication difficulties, delays in 324 structural modifications, interference removal, penetration sealing, and hot cell cleanout activities.

#### CM Cost Performance (+\$4.4M/44.3%)

The current month favorable cost variance is primarily because ERDF actual costs are in PBS RL-0013. CHPRC was directed by the FY2018 annual performance measure baseline (PMB) update to plan ERDF operations in the PMB under PBS RL-0013. Subsequently, CHPRC was directed that ERDF operations could not be transferred from RL-0041 to RL-0013 until after the FY2018 appropriations were approved by Congress. As FY2018 appropriations have been finalized, ERDF is now costed under PBS RL-0013. A baseline change request (BCR) to transfer the funds from PBS RL-0041 to PBS RL-0013 will be processed later in fiscal year 2018.

## Contract-to-Date

(\$M)

WBS 041/ RL-0041 Nuclear Facility D&D – River Corridor	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	570.5	558.3	495.9	(12.2)	-2.1%	62.3	11.2%	683.8	598.2	102.2	85.6

Numbers are rounded to the nearest \$0.1 million

#### CTD Schedule Performance (-\$12.2M/-2.1%)

The schedule variance is within reporting thresholds.

#### CTD Cost Performance (+\$62.3M/+11.2%)

The favorable cost variance is primarily due to completing Confirmatory Sampling - No Action (CSNA) waste sites early and under cost. In addition, less demolition was required for the K East Sedimentation Basin and fewer resources are supporting the level of effort (LOE) program management scope. Some resources have been diverted to other priority work scope and some resource sharing has occurred. The favorable cost variance was partially offset by the cost overruns in prior years for the utilities project. The 618-10 Burial Ground Complex also realized favorable cost variances with shared resources, lower drum processing costs, and excavation and backfill efficiencies at the 316-4 Waste Site and the 618-10 Burial Ground. These favorable variances are slightly offset by a negative CTD variance in the 324 Building Disposition Project primarily due to difficulties in execution of airlock cleanout, higher-than-

planned engineering costs resulting from design changes associated with the mockup and 324 structural design, and with the design and fabrication of essential procurements. In addition, inefficiencies associated with the inability to perform work in the airlock due to the high alpha reading stop work contributed to the variance.

#### Variance at Completion (+\$85.6M/+12.5%)

The 100K Closure positive VAC is primarily due to labor; fewer resources have been supporting the LOE program management scope. Some resources have been diverted to other priority work scope, and some resource sharing has occurred. The variance at completion is also due to the ERDF operations forecast transferring to RL-0013 with the budget remaining in PBS RL-0041 until a BCR can be processed later in in fiscal year 2018. The remaining VAC is primarily due to the implementation of efficiencies as well as staffing ramp downs at the 618-10 Burial Ground. Offsetting the positive variance, the 324 Building Disposition Project experienced increased costs associated with airlock cleanout, engineering and design activities, continued staff ramp up, and equipment procurement activities.

**Contract Performance Report Formats are provided in Appendix A.**

## FUNDS vs. SPEND FORECAST (\$M)

WBS 041/RL-0041 Nuclear Facility D&D – River Corridor	FY2018		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	143.6	136.6	7.1
Incremental Scope Pending Change Management	0.0	1.5	(1.5)
RL-0041 - Total	143.6	138.1	5.5

Numbers are rounded to the nearest \$0.1 million.

#### Funds/Variance Analysis:

FY2018 projected funding for project breakdown structure (PBS) RL-0041 is \$143.6 million. The delta between the spending forecast and projected funding levels for FY2018 is partially due to attrition and staffing ramp-downs at the 618-10 Burial Ground project. The fiscal year spend forecast (FYSF) funds delta is unfavorably offset because CHPRC was directed by the FY2018 annual PMB update to plan ERDF operations in the PMB under PBS RL-0013. Subsequently, CHPRC was directed that ERDF operations could not be transferred from RL-0041 to RL-0013 until after the FY2018 appropriations were approved by Congress. As FY2018 appropriations have been finalized, ERDF is now forecasted, costed, and funded under PBS RL-0013. However, ERDF actuals for the first half of FY2018 remain in RL-0041 until a cost transfer can be processed. Additionally, the delta between the spend forecast and projected funding levels for the 324 Building Disposition Project is primarily due to scope deferral related to structural modifications.

#### Critical Path Schedule:

Critical Path Analysis can be provided upon request.

## MILESTONE STATUS

Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) milestones represent significant events in project execution. RL Enforceable Agreement milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The PMB annual update, implemented in September 2013, and subsequently approved BCR, define CHPRC planning with respect to Tri-Party Agreement milestones. The following table is a one-year look ahead of commitments and Tri-Party Agreement enforceable milestones and non-enforceable target due dates.

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
M-016-00B	Complete all 300 Area remedial actions in accordance with ROD requirements.	9/30/2018		6/20/2018	Revegetation of the 618-10 Complex was removed from the Tri-Party Agreement milestone per change number M-16-17-02. Forecast completion date is now aligned with completion of demobilization.
M-094-00	Complete disposition of all 300 Area surplus facilities, excluding 324 Building.	9/30/2018	7/10/2017 (A)		On October 19, 2017, issued letter-notifying RL of the completion on July 10, 2017.

## GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

## DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
RL Review, Comment & Concur DSA/TSR revision	3/21/18 (A)	4/26/18
RL and Regulator (EPA) Review of CVP and Waste Site Reclassification Form for 618-10 Burial Ground	3/26/18 (A)	5/9/18
RL Prepare, Review, Approve & Issue DSA/TSR SER Revision	4/2/18 (A)	5/15/18
RL Certify and Submit Permit Modification Package to Ecology (1324)	4/16/18 (A)	5/17/18
RL Certify Information – RL Manager Letter to Ecology (1301 ,1325)	5/14/18	5/16/18
Ecology receive the certified CHPRC and RL Information (1301, 1325)	5/17/18	6/4/18
324 Add A Part A – Review Addendum & Conduct Workshop	5/29/18	6/11/18
RL Approval of SNR	6/4/18	6/28/18
Class 1 Prime modification RL Certification send Class 1 Prime to Ecology for Action to close 1301-N and 1325-N	6/5/18	8/7/18
Deliver attachment(s) and certification(s) to RL (1301, 1325)	7/6/18	7/8/18
324 Add H Closure – Review Addendum & Conduct Workshop	7/25/18	8/7/18

# Section G

## Fast Flux Test Facility Closure (RL-0042)



T. E. Bratvold  
Vice President for  
Central Plateau Risk  
Management

April 2018  
CHPRC-2018-04, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

The Fast Flux Test Facility (FFTF) is being held in a low-cost surveillance and maintenance condition.

## EMS OBJECTIVES AND TARGET STATUS

None currently identified.

## TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	0	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	0	0	N/A
Near Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### RL-0042 Accomplishments

- Finished revising the 400 Area drawing that was required to complete preparation of the Tagout Authorization Form (TAF) for the 400 Area electrical circuit verification work package (WP).
- Completed a Hazard Review Board (HRB) for the non-lockout/tagout (LO/TO) portion of the 400 Area electrical circuit verifications WP. A partial release will allow visual inspections to be performed in advance of work that will be performed under the TAF. A resource request was submitted to start the visual verification work.
- Received an Interpretation Clarification Request from the Hanford Fire Marshal's Office regarding compliance with National Fire Protection Association (NFPA) 25 for internal inspection frequency of tanks T-58 and T-87. The determination was made that if it can be shown that the internal coating/lining of T-58 and T-87 meet the requirements of NFPA 22, then a 5-year inspection period can be applied. Fire Protection Engineering and the Fire Department are currently evaluating if the 1940s tank liner and recent epoxy patches meet this requirement.
- Obtained consensus on the path forward for cutting through and removing sections of the 481 Building fire water pipelines due to lead-based paint. Rather than implementing lead-controls during cutting, the paint will be chemically stripped from the piping in advance of the cuts. The lead compliance plan is being updated to incorporate into the WP to address this task.
- Completed 402 Fire Alarm Control Unites (FACU) Preventive Maintenances (PMs).

## MAJOR ISSUES

### Issue:

Identified and investigated a LO/TO incident associated with previous electrical work (2017) on the P-16 pump motor starter.

**Corrective Action:** A new WP to physically verify 400 Area electrical circuits for water utilities equipment will be developed. This verification must be completed before further work is performed on the 400 Area water utilities equipment. This also affects the completion of a number of work packages that are currently in development/review.

**Status:** Work package continues to be developed to physically verify 400 Area electrical circuits due to inaccuracies discovered in the electrical drawings for the water utilities equipment. The 400 Area drawing, for the 400 Area electrical circuit verification WP has been completed and the TAF continues to be prepared. An HRB was held for the non-LO/TO portion of the 400 Area electrical circuit verifications work package. A partial release will allow visual inspections to be performed in advance of work that will be performed under the TAF. A resource request was submitted to start the visual verification work.

## RISK MANAGEMENT STATUS

No key risks currently identified.

## PROJECT BASELINE PERFORMANCE

### Current Month

(\$M)

RL-0042 FFTF Closure	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	0.2	0.2	0.2	(0.0)	-5.9%	0.0	-11.4%

Numbers are rounded to the nearest \$0.1M

### CM Schedule Performance: (-\$0.0M/-5.9%)

The schedule variance is within reporting thresholds.

### CM Cost Performance: (-\$0.0M/-11.4%)

The cost variance is within reporting thresholds.

## Contract-to-Date (\$M)

RL-0042 FFTF Closure	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	25.5	25.5	21.2	-0.0	-0.0%	4.3	17.0%	26.5	22.8	1.7	3.7

Numbers are rounded to the nearest \$0.1 million

### CTD Schedule Performance (-\$0.0M/-0.0%)

The schedule variance is within reporting thresholds.

### CTD Cost Performance (+\$4.3M/+17.0%)

The cost variance reflects efficient use of resources to support deactivation activities.

### Variance at Completion (+\$3.7M/+13.9%)

The Variance at Completion is within reporting thresholds.

**Contract Performance Report Formats are provided in Appendix A.**

## FUNDS VS. SPEND FORECAST (\$M)

RL-0042 FFTF Closure	FY2018		Variance
	Projected Funding	Spending Forecast	
Spending Forecast	4.0	2.6	1.5
Incremental Scope Pending Change Management	0.0	0.0	0.0
RL-0042 – Total	4.0	2.6	1.5

Numbers are rounded to the nearest \$0.1 million

### Funds Analysis

Fiscal year (FY) 2018 projected funding for project breakdown structure (PBS) RL-0042 is \$4.0 million. The spending forecast of \$2.6 million includes inspections of the fire suppression system tanks and minor repairs.

### Critical Path Schedule

Critical path analysis is not applicable to this project. The remaining contract scope is the performance of interim surveillance and maintenance activities pending facility disposition.

## MILESTONE STATUS

None currently identified.

## GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

## DOE ACTIONS/DECISIONS

None currently identified.

# Appendix A

## Contract Performance

### Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis



April 2018  
CHPRC-2018-04, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

CLASSIFICATION (When Filled In)

**CONTRACT PERFORMANCE REPORT  
FORMAT 1 - WORK BREAKDOWN STRUCTURE**

FORM APPROVED  
OMB No. 0704-0188

DOLLARS IN Thousands of \$

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>		<b>4. REPORT PERIOD</b>	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME Plateau Remediation Contract		a. FROM (YYYYMMDD) 2018 / 03 / 26	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 04 / 22	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO X YES (YYYYMMDD) 2009 / 09 / 18			

<b>5. CONTRACT DATA</b>								
a. QUANTITY 1	b. NEGOTIATED COST 5,588,957	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 334,652	d. TARGET PROFIT/FEE 241,605	e. TARGET PRICE 5,830,563	f. ESTIMATED PRICE 6,094,106	g. CONTRACT CEILING 5,830,563	h. ESTIMATED CONTRACT CEILING 6,094,106	i. DATE OF OTB/OTS (YYYYMMDD)

<b>6. ESTIMATED COST AT COMPLETION</b>				<b>7. AUTHORIZED CONTRACTOR REPRESENTATIVE</b>					
MANAGEMENT ESTIMATE AT COMPLETION (1)		CONTRACT BUDGET BASE (2)		VARIANCE (3)		a. NAME (Last, First, Middle Initial) Dickerson, Kala K		b. TITLE Prime Contract Compliance Manager	
a. BEST CASE 5,795,822						c. SIGNATURE		d. DATE SIGNED (YYYYMMDD)	
b. WORST CASE 5,908,192									
c. MOST LIKELY 5,852,500		5,926,949		74,449					

<b>8. PERFORMANCE DATA</b>																		
CAPN.PBS  ITEM (1)	CURRENT PERIOD						CUMULATIVE TO DATE						REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST	ACTUAL COST WORK PERFORMED (9)	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)			
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)			WORK SCHEDULED (7)	WORK PERFORMED (8)							SCHEDULE (10)	COST (11)	
RL-0011 Nuclear Mat Stab & Disp PFP	0	0	6,452	0	-6,452	988,662	972,958	1,108,376	-15,704	-135,418	0	0	988,662	1,170,642	-181,980			
RL-0012 SNF Stabilization & Disp	2,396	2,598	3,507	202	-909	725,349	725,250	695,638	-99	29,612	0	0	744,401	717,486	26,915			
RL-0013 Solid Waste Stab & Disp	11,673	9,765	12,634	-1,907	-2,869	1,262,890	1,258,952	1,178,913	-3,939	80,039	0	0	1,361,501	1,289,866	71,636			
RL-0030 Soil & Water Rem-Grndwtr/Vadose	10,144	9,844	9,054	-300	790	1,478,124	1,473,148	1,428,056	-4,976	45,092	0	0	1,532,260	1,482,925	49,335			
RL-0040 Nuc Fac D&D - Remainder Hanfrd	2,672	2,358	2,596	-314	-238	476,242	472,512	447,572	-3,729	24,940	0	0	489,666	466,683	22,984			
RL-0041 Nuc Fac D&D - RC Closure Proj	16,164	9,852	5,486	-6,312	4,366	570,466	558,270	495,940	-12,196	62,330	0	0	659,939	574,347	85,592			
RL-0042 Nuc Fac D&D - FTF Proj	180	170	189	-11	-19	25,485	25,483	21,154	-2	4,329	0	0	26,487	22,817	3,670			
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
d. UNDISTRIBUTED BUDGET													71,058	71,058	0			
e. SUBTOTAL	43,229	34,587	39,918	-8,642	-5,331	5,527,218	5,486,574	5,375,649	-40,644	110,924	0	0	5,873,974	5,795,822	78,152			
f. MANAGEMENT RESERVE													56,678					
g. TOTAL	43,229	34,587	39,918	-8,642	-5,331	5,527,218	5,486,574	5,375,649	-40,644	110,924	0	0	5,930,652					
<b>9. RECONCILIATION TO CONTRACT BUDGET BASELINE</b>																		
a. VARIANCE ADJUSTMENT																		
b. TOTAL CONTRACT VARIANCE																		
												-40,644	110,924	5,930,652	5,795,822	134,830		

\* Per email direction received December 6, 2017 from the RL Contracting Officer, CHPRC is authorized to incorporate the value of proposed changes into the baseline, as well as remove work that is not authorized from our execution plan. When a contract alignment settlement is reached, baseline change requests (BCRs) will be processed to align the PMB with the settlement values.

\*CPR Format 1 displays fully burdened dollars which includes indirect G&A that is distributed to each Project.

\*An incorrectly implemented UB BCR (BCR-PRC-18-017R0) has caused discrepancies with the EAC, Best Case, Worst Case, and Most Likely

CLASSIFICATION (When Filled In)

**CONTRACT PERFORMANCE REPORT  
FORMAT 2 - ORGANIZATIONAL CATEGORIES**

DOLLARS IN Thousands of \$ OMB No. 0704-0188

FORM APPROVED

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>		<b>4. REPORT PERIOD</b>	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME Plateau Remediation Contract		a. FROM (YYYYMMDD)  2018 / 03 / 26	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD)  2018 / 04 / 22	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (YYYYMMDD) 2009 / 09 / 18			

WBS.Resp Org Group	CURRENT PERIOD						CUMULATIVE TO DATE						REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)		
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)								
34 - Env Program & Strategic Plng	849	798	795	-51	3	80,990	80,395	74,108	-595	6,287	0	0	0	85,652	79,419	6,234		
35 - Business Services	0	0	0	0	0	477,296	477,296	453,519	0	23,777	0	0	0	477,296	453,519	23,777		
36 - Prime Contract & Proj Integr	155	155	81	0	73	7,945	7,945	4,746	0	3,198	0	0	0	8,807	5,463	3,343		
3B - PFP Closure Project	0	0	6,452	0	-6,452	899,880	884,176	1,027,319	-15,704	-143,143	0	0	0	899,880	1,089,585	-189,705		
3C - Waste & Fuels Management Project	11,625	9,718	9,091	-1,907	627	1,147,937	1,143,999	1,062,856	-3,938	81,143	0	0	0	1,246,285	1,161,799	84,486		
3D - Soil & Groundwater Remediation	9,248	8,999	8,232	-249	767	1,295,809	1,291,428	1,246,578	-4,381	44,850	0	0	0	1,345,023	1,295,957	49,067		
3G - K Basin Oper & Plateau Remediation Project	5,916	4,801	4,855	-1,115	-54	1,004,565	1,005,248	949,012	683	56,236	0	0	0	1,053,404	984,251	69,153		
3H - River Risk Management Project	12,602	7,606	7,648	-4,996	-42	199,395	186,417	167,996	-12,978	18,421	0	0	0	258,844	244,650	14,194		
3K - Central Plateau Risk Reduction	2,834	2,509	2,763	-325	-254	413,401	409,670	389,516	-3,731	20,155	0	0	0	427,726	410,123	17,602		
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
d. UNDISTRIBUTED BUDGET														71,058	71,058	0		
e. SUBTOTAL (Performance Measurement Baseline)	43,229	34,587	39,918	-8,642	-5,331	5,527,218	5,486,574	5,375,649	-40,644	110,924	0	0	0	5,873,974	5,795,823	78,152		
f. MANAGEMENT RESERVE														56,678				
g. TOTAL	43,229	34,587	39,918	-8,642	-5,331	5,527,218	5,486,574	5,375,649	-40,644	110,924	0	0	0	5,930,652				

\* Per email direction received December 6, 2017 from the RL Contracting Officer, CHPRC is authorized to incorporate the value of proposed changes into the baseline, as well as remove work that is not authorized from our execution plan. When a contract alignment settlement is reached, baseline change requests (BCRs) will be processed to align the PMB with the settlement values.

CONTRACT PERFORMANCE REPORT FORMAT 3 - BASELINE													DOLLARS IN THOUSANDS			Form Approved OMB No. 0704-0188		
1. CONTRACTOR CH2M HILL Plateau Remediation Company b. LOCATION: Richland, WA				2. CONTRACT a. NAME: Plateau Remediation Contract b. NUMBER: RL14788 c. TYPE: CPAF d. SHARE RATIO:				3. PROGRAM a. NAME: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE NO YES X 9/18/2009				4. REPORT PERIOD a. FROM: 2018/03/26 b. TO: 2018/04/22						
5. CONTRACT DATA				a. ORIGINAL NEGOTIATED COST 4,312,366		b. NEGOTIATED CONTRACT CHANGE \$1,276,591		c. CURRENT NEGOTIATED COST (A + B) \$5,588,957		d. ESTIMATED COST AUTH UNPRICED WORK \$334,652		e. CONTRACT BUDGET BASE (C + D) \$5,923,610		f. TOTAL ALLOCATED BUDGET \$5,930,652		g. DIFFERENCE (E - F) (\$7,042)		
h. CONTRACT START DATE 6/19/2008				i. DEFINITIZATION DATE 6/19/2008		j. PLANNED COMPL DATE 9/30/2018		k. CONT COMPLETION DATE 9/30/2018				l. EST COMPLETION DATE 9/30/2018						
6. PERFORMANCE DATA			BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)															
ITEM (1)			BCWS CUM TO DATE (2)	BCWS FOR REPORT PERIOD (3)	SIX MONTH FORECAST												UNDISTRIB BUDGET (16)	TOTAL BUDGET (17)
					+1 May-18 (4)	+2 Jun-18 (5)	+3 Jul-18 (6)	+4 Aug-18 (7)	+5 Sep-18 (8)	+6 Oct-18 (9)	FY09-13 (10)	FY14 (11)	FY15 (12)	FY16 (13)	FY17 (14)	FY18 (15)		
a. PM BASELINE (BEGIN OF PERIOD)			5,483,989	42,425	51,605	38,823	38,720	45,823	175,430	0	3,391,477	391,653	471,323	504,826	485,027	553,870	78,639	5,876,814
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																		
BCR-040-18-011R0 - B Plant Pre-Filter Change Out																319		319
BCR-030-18-018R0 - Delete TPA Milestone M-015-21A																0		0
BCR-040-18-010R0 - Implement Remaining FY2018 Work Scope for CO 324, Miscellaneous																349		349
BCR-041-18-016R0 - Incorporate Additional Scope for CO 306, Revegetation Scope																73		73
BCR-PRC-18-021R0 - Realignment of FY2018 Management Reserve																0		0
BCR-040-18-009R0 - PUREX Tunnel 2 NTE Increase																4,000		4,000
BCRA-PRC-18-018R0, HPIC Updates March 2018																0		0
BCR-PRC-18-017R0, Undistributed Budget Adjustments March 2018																	(7,581)	(7,581)
c. PM BASELINE (END OF PERIOD)			5,527,218	43,229	52,651	39,781	40,181	46,211	167,933	0	3,391,477	391,653	471,323	504,826	485,027	558,611	71,058	5,873,974
7. MANAGEMENT RESERVE																		56,678
8. TOTAL																		5,930,652

CLASSIFICATION (When Filled In)

**CONTRACT PERFORMANCE REPORT  
FORMAT 4 - STAFFING**

Dollars in: FTE

FORM APPROVED  
OMB No. 0704-0188

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>		<b>4. REPORT PERIOD</b>	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME Plateau Remediation Contract		a. FROM (YYYYMMDD) 2018 / 03 / 26	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 04 / 22	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (YYYYMMDD) 2009 / 09 / 18			

5. PERFORMANCE DATA		FORECAST (Non-Cumulative)														AT COMPLETION
WBS.Resp Org Group	ACTUAL CURRENT PERIOD	ACTUAL END OF CURRENT PERIOD (Cumulative)	SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS					AT COMPLETION (15)		
			+1	+2	+3	+4	+5	+6	1st QTR FY19	2nd QTR FY19	3rd QTR FY19	FY19-LC	ATCOMPLETE			
			MAY 2018 (4)	JUN 2018 (5)	JUL 2018 (6)	AUG 2018 (7)	SEP 2018 (8)	OCT 2018 (9)	(10)	(11)	(12)	(13)	(14)			
ORGANIZATIONAL CATEGORY (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)		
300 - Office of the President	7	776	6	6	6	6	6	6	0	0	0	0	0	0	805	
303 - Internal Audit	4	506	5	5	5	5	5	5	0	0	0	0	0	0	531	
304 - General Counsel	5	473	5	5	5	5	5	5	0	0	0	0	0	0	497	
31 - Communications	8	1078	9	9	9	9	9	9	0	0	0	0	0	0	1124	
32 - Safety Health Security & Quality	57	7498	57	57	59	59	59	59	0	0	0	0	0	0	7789	
34 - Env Program & Strategic Plng	38	5083	45	45	45	45	45	44	0	0	0	1	1	0	5311	
35 - Business Services	59	8110	68	68	68	68	68	68	0	0	0	0	0	0	8452	
36 - Prime Contract & Proj Integr	64	5477	65	65	65	65	65	65	0	0	0	0	0	0	5802	
38 - Project Technical Services	34	5804	40	41	41	41	41	39	0	0	0	0	0	0	6006	
3B - PFP Closure Project	183	50418	187	197	198	194	196	194	384	329	0	0	0	0	52296	
3C - Waste & Fuels Management Project	355	52055	373	373	376	364	345	5	8	13	23	3	0	0	53937	
3D - Soil & Groundwater Remediation	286	38184	285	282	273	270	266	18	21	19	14	21	0	0	39652	
3G - K Basin Oper & Plateau Remediation Project	218	33050	224	229	228	217	214	11	20	7	0	0	0	0	34200	
3H - River Risk Management Project	224	5136	236	238	230	231	228	12	21	22	6	6	0	0	6360	
3K - Central Plateau Risk Reduction	136	16793	156	153	149	129	125	2	1	1	6	0	0	0	17515	
<b>g. TOTAL DIRECT</b>	<b>1679</b>	<b>230440</b>	<b>1762</b>	<b>1775</b>	<b>1757</b>	<b>1710</b>	<b>1675</b>	<b>242</b>	<b>455</b>	<b>391</b>	<b>50</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>240280</b>	

**FORMAT 5, DD FORM 2734/5, EXPLANATION AND PROBLEM ANALYSIS**

CLASSIFICATION (When Filled In)									
CONTRACT PERFORMANCE REPORT FORMAT 5 - EXPLANATIONS AND PROBLEM ANALYSES							FORM APPROVED OMB No. 0704-0188		
1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD			
<b>a. NAME</b> CH2M HILL Plateau Remediation Company		<b>a. NAME</b> Plateau Remediation Contract		<b>a. NAME</b> Plateau Remediation Contract		<b>a. FROM (YYYY/MM/DD)</b>  2018/03/26			
<b>b. LOCATION (Address and ZIP Code)</b>  Richland, WA 99354		<b>b. NUMBER</b> DE-AC06-08RL14788		<b>b. PHASE</b> Base		<b>b. TO (YYYY/MM/DD)</b>  2018/04/22			
		<b>c. TYPE</b> CPAF	<b>d. SHARE RATIO</b>	<b>c. EVMS ACCEPTANCE</b> 2009/09/18 NO YES X					
	<b>BCWS</b>	<b>BCWP</b>	<b>ACWP</b>	<b>SV in \$</b>	<b>SV in %</b>	<b>CV in \$</b>	<b>CV %</b>	<b>SPI</b>	<b>CPI</b>
<b>Current:</b>	43,229	34,587	39,918	(8,642)	-20.0%	(5,331)	-15.4%	0.80	0.87
<b>Cumulative:</b>	5,527,218	5,486,574	5,375,649	(40,644)	-0.7%	110,925	2.0%	0.99	1.02
	<b>BAC</b>	<b>EAC</b>	<b>VAC in \$</b>	<b>VAC in %</b>	<b>TCPI</b>				
<b>At Complete:</b>	5,873,974	5,795,823	78,152	1.3%	0.92				
<b>Explanation of Variance/Description of Problem:</b>									
<p><b>Current Period Schedule Variance:</b> The current month (CM) negative schedule variance is primarily due to project breakdown structure (PBS) RL-0041 324 Building Disposition Project, which experienced delays in procurement/fabrication of the 324 equipment resulting from: design changes and fabrication difficulties, delays in 324 structural modifications, interference removal, penetration sealing, and hot cell cleanout activities.</p> <p>Also contributing to the negative schedule variance is PBS RL-0013 associated with the delay of two shipments of mixed low-level waste (MLLW) that were planned in the current period but delayed to June in order to allow more time to develop lifting plans. The two waste containers are shored in such a way that a lifting device is used to position the rigging without affecting the shored portions of the boxes. Also contributing is completion of transuranic (TRU) Large Box Repack in previous periods. In addition, W-135, WESF Modifications Project is behind in design review comments for the preliminary design of the Cask Storage System (CSS), but comment resolution of the preliminary comments should result in streamlining final design activities.</p> <p><b>Current Period Cost Variance:</b> The CM negative cost variance is primarily due to PBS RL-0011 recovery actions and implementation of the new demolition requirements associated with a December 2017 contamination event. This includes fixative applications, performance of radiological surveys, and stabilization activities to support resumption of demolition of PFP. This also includes additional material and equipment purchases to support the revised demolition approach. As resumption corrective actions are performed, costs for labor, subcontracts, and material purchases add to the current month variance. Assignment of Jacobs Engineering corporate resources and reassignment of CHPRC personnel to support the RCA and programmatic assessments have also contributed to the variance. In addition, the resulting delay in demolition activities from the contamination event are causing an extension of unplanned project management, min-safe, and support resources.</p> <p>Also contributing to the negative cost variance is the PBS RL-0013 Capsule Dry Storage project due to a subcontractor using additional resources to complete the preliminary design review for the CSS and to make up schedule for the CSS preliminary design (60 percent).</p> <p><b>Cumulative Schedule Variance:</b> The variance is within reporting thresholds.</p> <p><b>Cumulative Cost Variance:</b> The variance is within reporting thresholds.</p>									
<b>Impact:</b>									
<p><b>Current Period Schedule:</b> The current month schedule variance is not expected to impact the overall contract schedule.</p> <p><b>Current Period Cost:</b> CHPRC is actively formulating a PFP Recovery Plan to allow the resumption of PFP Demolition activities.</p> <p><b>Cumulative Schedule:</b> N/A</p> <p><b>Cumulative Cost:</b> N/A</p>									
<b>Corrective Action:</b>									
<p><b>Current Period Schedule:</b> No corrective actions have been identified.</p> <p><b>Current Period Cost:</b> Cost impacts are being estimated and will be incorporated in the project estimate to complete (ETC).</p> <p><b>Cumulative Schedule:</b> N/A</p> <p><b>Cumulative Cost:</b> N/A</p>									

**FORMAT 5, DD FORM 2734/5, EXPLANATION AND PROBLEM ANALYSIS**

**Monthly Summary** (to include technical causes of VARs, Impacts, and Corrective Action(s):

CHPRC continues to track completion of the contract scope within budget and is currently projecting a variance at completion (VAC) of \$78.2 million, with \$56.7 million of management reserve (MR), for a total positive variance of \$134.9 million. For April, the project was 20.0 percent behind schedule and 15.4 percent over planned cost. Contract to date (CTD), the project was 0.7 percent behind schedule and 2.0 percent under planned cost.

There were five of the eight BCRs in the period that impacted the PMB:

- BCR-040-18-009R0, PUREX Tunnel 2 Stabilization NTE Increase
- BCR-040-18-010R0, Implement Remaining FY2018 Work Scope for CO #324, Miscellaneous RL-0040 Work Scope
- BCR-040-18-011R0, B Plant Pre-Filter Change Out
- BCR-041-18-016R0, Incorporate Additional Scope for CO #306, Revegetation Scope
- BCR-PRC-18-019R0, Undistributed Budget Adjustments April 2018

**Contractually Required Cost, Schedule, EAC variance, Management Reserve Use**

Variance in Performance BAC and EAC: The variance at complete (VAC) between the BAC and EAC this month is a + \$78.2 million, +1.3% and is within reporting thresholds.

**Format 1 and 3 Contract Data:**

**Contract Price Adjustments**

CPS - In Process		
	Total Authorized Unpriced Work	\$334,652
Approved Adjustments to Contract Price (not reflected in B.4-1 Table)		
	Total Negotiated Cost Changes	-
	<b>Grand Total Adjustments</b>	<b>\$334,652</b>

**Use of Undistributed Budget (UB), Management Reserve (MR), and Fee Activity:**

**Undistributed Budget Activity**

BCR Number	Title	PBS	Fiscal Year	UB
BCR-PRC-18-019R0	<i>Undistributed Budget Adjustments April 2018</i>	RL-0013, RL-0030, RL-0040, RL-0041	2018	\$-7,581K

The Undistributed Budget decreased by \$7,581K.

**Management Reserve Activity**

BCR Number	Title	PBS	Fiscal Year	MR
BCR-PRC-18-021R0	<i>Realignment of FY2018 Management Reserve</i>	RL-0012, RL-0040, RL-0041	2018	\$0K
BCR Number	Title	PBS	Fiscal Year	MR
BCR-PRC-18-021R0	<i>Realignment of FY2018 Management Reserve</i>	RL-0012, RL-0040, RL-0041	2018	\$0K

Overall, there was no change to MR in April.

**Fee Activity**

BCR Number	Title	PBS	Fiscal Year	Fee
N/A	N/A	N/A	2018	N/A

Overall, there was no change to the Fee during April.

**FORMAT 5, DD FORM 2734/5, EXPLANATION AND PROBLEM ANALYSIS**

<p><b>Best/Worst/Most Likely Estimate:</b> The Best EAC is the EAC reported this month, which assumes all efficiencies gained contract-to-date will remain at completion with no use of management reserve. The most likely EAC is the EAC reported this month plus the to-go (available) management reserve, which assumes all efficiencies gained contract-to-date will remain at completion but all available management reserve is used (e.g., all identified risks realized). The worst EAC is the ACWP plus the ECWR or BCWR if greater plus the to-go (available) management reserve, which assumes all efficiencies gained contract-to-date will be eroded at completion and all available management reserve is used (e.g., all identified risks realized), plus the scope identified in the Trend Log that is not in the EAC. The Best/Worst and Most Likely EAC values are documented in the Format 1 Report.</p>			
<p><b>Prepared by:</b> Project Control Staff</p>	<p><b>Date:</b> 04/17/2018</p>	<p><b>Approved by:</b></p>	<p><b>Date:</b></p>

*\* Per email direction received December 6, 2017 from the RL Contracting Officer, CHPRC is authorized to incorporate the value of proposed changes into the baseline, as well as remove work that is not authorized from our execution plan. When a contract alignment settlement is reached, baseline change requests (BCRs) will be processed to align the PMB with the settlement values.*

# Appendix B

## Project Services and Support (WBS 000)



T. L. Vaughn  
Vice President for  
Safety, Health, Security  
and Quality

M. A. Wright  
Vice President for  
Project Technical  
Services

April 2018  
CHPRC-2018-04, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

M. N. Jaraysi  
Vice President for  
Environmental Program  
and Strategic Planning

S. E. Johnson  
Director of  
Communications

R. M. Millikin  
Vice President for  
Prime Contract and  
Project Integration

T. A. Heidelberg  
Vice President for  
Business Services  
Chief Financial Officer

This section is reported quarterly.

# Appendix C Capital Asset Projects



April 2018  
CHPRC-2018-04, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

Appendix C.1  
Capital Asset Project  
RL-0011.C1 - PFP D&D  
(Removal of 174 Gloveboxes from 234-5Z)



K. A. Wooley  
(Acting) Vice President for  
Plutonium Finishing Plant  
Closure Project

April 2018  
CHPRC-2018-04, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

Progress has been temporarily put on hold on work associated with critical decision (CD) 4 closure to remove the final glovebox from the 234-5Z facility during demolition. Remaining glovebox (HA-46) has been staged until the area of the 234-5Z facility is demolished. The total number of gloveboxes removed to date is 173 and is 99 percent complete.

The following are key metrics associated with this Capital Asset Project (CAP).

<i>Key Metrics</i>	<i>Current Month Plan</i>	<i>Current Month Actuals</i>	<i>Cumulative Plan</i>	<i>Cumulative Actuals</i>
Glovebox/Hood Removed	-	0	174	173
<b>COMPLETE</b> KPP Rooms/Areas Ready for Demo	-	0	72	72 rooms/areas

## KEY ACCOMPLISHMENTS

### RL-0011\_C1 Accomplishments

- Accomplishments to achieve stabilization following the December 2017 contamination event include:
  - o Application of fixative to trailers, remaining structures, and debris piles within the Plutonium Finishing Plant (PFP) Complex.
  - o Continued maintenance applications of fixative.
  - o Routine radiological surveys.
  - o Identified and began expanding the revised Radiological Buffer Area (RBA).
  - o Extra radiological surveys when sustained winds were 20 miles per hour or greater.
  - o Approximately 95 percent complete with the installation of a new trailer village outside of the PFP RBA boundary.

Once stabilization and implementation of new demolition requirements are complete, demolition on 234-5Z will resume. After completing lower risk demolition outside of RMA, glovebox HA-46 will be removed during higher risk demolition.

## MAJOR ISSUES

On December 15, 2017, contamination was found outside of the established PFP radiological boundaries. On December 18, 2017, follow-up radiological surveys found additional contamination present in the administrative office area. Work was stopped after the second event, pending completion of a root cause analysis (RCA) and development of a recovery plan. CHPRC is continuing to identify resumption requirements based on a finalized RCA and working with RL and regulators to develop a resumption plan to enable demolition activities to resume. This will allow for the removal of the final glovebox remaining in 234-5Z.

## CORRECTIVE ACTION LOG

Reference Appendix C.1 Format 5 for specific corrective actions for this CAP.

### RISK MANAGEMENT STATUS

**Unassigned Risk**  
**Risk Passed**  
**New Risk**  
**Change**

- Opportunity currently realized, or mitigation efforts are currently working toward, or after risk trigger with no foreseeable impacts.
- Mitigation efforts are currently working toward risk trigger with the possibility of actions not in place prior to risk occurrence. Recovery actions may be needed.
- Risk currently realized, or risk mitigation efforts are past risk trigger date with foreseeable impacts. Recovery actions needed.

- ↑ Increased Confidence
- ↔ No Change
- ↓ Decreased Confidence

Risk Title Risk Owner	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
<b>RL-0011/WBS-011.05.01.01.06 (CAP.1)</b>										
<b>Explanation of major changes to the project monthly spotlight chart:</b> No major changes to the spotlight chart in April. However, risk elicitations have been conducted to align with the proposed path forward to resume demolition activities. Per these elicitations, the existing PFP-DEMO risks will be closed and removed from the spotlight report in May. They will be replaced with the new PFP risks.										
<b>Realized Risks</b> (Risks that are currently impacting project cost/schedule)										
No realized risks identified for RL-0011/WBS-011.05.01.01.06 (CAP.1) in April.										
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)										
No critical risks identified for RL-0011/WBS-011.05.01.01.06 (CAP.1) in April.										
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)										
PFP-DEMO-21: Glovebox/Equipment Removal/Demolition Material	A material handling event (e.g., dropped piece of process equipment) occurs during the PFP demolition, resulting in cost impacts and schedule delays.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Low (10% to 25%) <b>Worst Case Impacts:</b> \$150K, 30 days	<span style="color: green; font-size: 20px;">●</span>	<span style="color: blue; font-size: 20px;">↑</span>	<b>Risk Trigger:</b> During pre-demolition/demolition activities in fiscal year (FY) 2018.  <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="text-align: center;">Mitigation action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">None identified at this time.</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table> <b>Mitigation Assessment:</b> No major changes in April. The mitigation strategies have been put in place; as a result, the risk strategy is to accept with no further mitigation actions identified at this time. PFP will continue to adhere to the CHPRC Integrated Safety Management System (ISMS) program/hoisting and rigging program to include detailed analyses of potential hazards and identification of preventive measures to implement prior to starting the work. At this time, no alternative course of actions are needed. One glovebox remains in the 234-5Z facility (HA-46) and will be removed once demolition resumes. Additional special handled waste packages remain in the 234-5Z duct level and basement.  This risk will be closed and removed from the spotlight report in May due to the finalization of new PFP risks.	Mitigation action(s)	FC Date	%	None identified at this time.	N/A	N/A
Mitigation action(s)	FC Date	%								
None identified at this time.	N/A	N/A								
<b>Unassigned Risks</b> (Pending ownership of identified risks/opportunities)										
No unassigned risks identified for RL-0011/WBS-011.05.01.01.06 (CAP.1) in April.										

## CRITICAL PATH SCHEDULE

The PFP critical path schedule begins with the continuation of resumption activities related to the December contamination event. This will run in parallel with the loading of the Super-sack waste. Once the Super-sacks are loaded, debris disposition of the 234-5Z rubble piles will resume, starting with the frontside waste. Once the waste debris is loaded out, demolition will resume on the remaining sections of zones 2 and 7, with the exception of the drain line. Remote Mechanical C (RMC) process line and Remote Mechanical A (RMA) process line demo will come next; in parallel will be completion of the basement of 234-5Z demolition and removal of HA-46. This leads to CD-4 declaration and confirmation of the completion worksheet. The CD-4 closeout completion milestone is scheduled for December 10, 2018. The dates above are reflective of the known actions and resumption efforts associated with a contamination event that occurred in December as of April month-end closing and will be updated as more information is made available from the expert panel review and resumption plan.

## SCHEDULE MARGIN/MANAGEMENT RESERVE

Reference Appendix C.1 Formats 1, 2, 3, and 5 for specific schedule margin/management reserve (MR) utilization for this CAP.

## CRITICAL DECISION MILESTONE STATUS

Number	Title	* Due Date	**Forecast Date	Status/ Comment
CAP.1	Removal of 174 gloveboxes from 234-5Z	11/30/17	12/10/18	Progress has been temporarily put on hold on work associated with CD-4 closure to remove the final glovebox from the 234-5Z facility during demolition. On December 15, 2017, swing shift RadCon personnel performing routine surveys following the day shift demolition activities discovered low-level contamination on a cookie sheet. This led to a wider search, and a "speck" of contamination was smeared from a government vehicle. A CHPRC management stop work on demolition activities was declared and a critique was held to discuss the contamination spread, possible causes, and a path forward. An RCA has been conducted and resumption actions with expected completion dates are being identified. There was a four-day loss since March as a result of corrective actions that were known at April month-end that have been incorporated into the current recovery schedule to resume demolition activities. The total gloveboxes removed to date remains at 99 percent complete. Completion of CD-4 closure by November 30, 2017, was not achieved.

\*Due date reflects CD-4 due date with DOE contingency.

\*\*Forecasted Date reflects CD-4 due date without DOE contingency.

## GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Nothing to report at this time.

## DOE ACTIONS / DECISIONS

Working with RL on CD-4 closure actions. CD-4 closure date of November 30, 2017, was not met.

# Appendix C.1

## RL-0011.C1 – PFP D&D

### (Removal of 174 Gloveboxes from 234-5Z)

# Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis



April 2018  
CHPRC-2018-04, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1



CLASSIFICATION (When Filled In)

**CONTRACT PERFORMANCE REPORT  
FORMAT 2 - ORGANIZATIONAL CATEGORIES**

DOLLARS IN Thousands of \$

FORM APPROVED  
OMB No. 0704-0188

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>			<b>4. REPORT PERIOD</b>		
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C1 - PFP D&D (ARRA/Base)			a. FROM (YYYYMMDD) 2018 / 03 / 26		
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD) 2018 / 04 / 22		
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE NO <input type="checkbox"/> X <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18					

WBS.Resp Org Group  ITEM (1)	CURRENT PERIOD						CUMULATIVE TO DATE						REPROGRAMMING			AT COMPLETION		
	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		ADJUSTMENTS			BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)		
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)	COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)					
35 - Business Services	0	0	0	0	0	60,427	60,427	52,580	0	7,847	0	0	0	60,427	52,580	7,847		
3B - PFP Closure Project	0	0	0	0	0	254,725	254,706	279,989	-19	-25,284	0	0	0	254,725	280,004	-25,279		
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
d. UNDISTRIBUTED BUDGET														0	0	0		
e. SUBTOTAL (Performance Measurement Baseline)	0	0	0	0	0	315,152	315,133	332,570	-19	-17,437	0	0	0	315,152	332,584	-17,432		
f. MANAGEMENT RESERVE														2,393				
g. TOTAL	0	0	0	0	0	315,152	315,133	332,570	-19	-17,437	0	0	0	317,545				

CLASSIFICATION (When Filled In)



**CONTRACT PERFORMANCE REPORT  
FORMAT 4 - STAFFING**

Dollars in: FTE

FORM APPROVED  
OMB No. 0704-0188

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>		<b>4. REPORT PERIOD</b>	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C1 - PFP D&D (ARRA/Base)		a. FROM (YYYYMMDD) 2018 / 03 / 26	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 04 / 22	
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18	

5. PERFORMANCE DATA															
WBS.Resp Org Group  ORGANIZATIONAL CATEGORY (1)	ACTUAL CURRENT PERIOD (2)	ACTUAL END OF CURRENT PERIOD (Cumulative) (3)	FORECAST (Non-Cumulative)												AT COMPLETION (15)
			SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS						
			+1 MAY 2018 (4)	+2 JUN 2018 (5)	+3 JUL 2018 (6)	+4 AUG 2018 (7)	+5 SEP 2018 (8)	+6 OCT 2018 (9)	1st QTR FY19 (10)	2nd QTR FY19 (11)	3rd QTR FY19 (12)	FY19-LC (13)	ATCOMPLETE (14)		
35 - Business Services	0	17	0	0	0	0	0	0	0	0	0	0	0	0	17
3B - PFP Closure Project	0	15442	0	0	0	0	0	0	1	0	0	0	0	0	15443
<b>g. TOTAL DIRECT</b>	<b>0</b>	<b>15459</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15460</b>

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT

FORMAT 5 - Explanations and Problem Analysis

FORM APPROVED

OMB No. 0704-0188

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>		<b>4. REPORT PERIOD</b>	
<b>a. NAME</b> CH2M HILL Plateau Remediation Company		<b>a. NAME</b> Plateau Remediation Contract		<b>a. NAME</b> MPB - RL_0011_C1 - PFP D&D (ARRA/Base)		<b>a. FROM (YYYYMMDD)</b> 2018/03/26	
<b>b. LOCATION (Address and ZIP Code)</b> Richland, WA		<b>b. NUMBER</b> RL14788		<b>b. PHASE</b>		<b>b. TO (YYYYMMDD)</b> 2018/04/22	
<b>c. TYPE</b> CPAF		<b>d. SHARE RATIO</b>		<b>c. EVMS ACCEPTANCE</b> No X Yes (YYYYMMDD) 2009 / 09 / 18			

**Direct Projects**

5. Evaluation	Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Current:	0	0	0	0	0	0	-	-	-
Cumulative:	315,152	315,133	332,570	-19	-0.0%	-17,437	-5.5%	1.00	0.95
	<b>BAC</b>	<b>EAC</b>	<b>VAC in \$</b>	<b>VAC in %</b>	<b>TCPI to BAC</b>	<b>TCPI to EAC</b>			
At Complete:	315,152	332,584	-17,432	-5.5%	-	1.37			

**Explanation of Variance/Description of Problem:**

Current Period:  
 Schedule Variance: The schedule variance is within threshold.  
 Cost Variance: The current month cost variance is within threshold.

Cumulative To Date:  
 Schedule Variance: Within Threshold  
 Cost Variance: Within Threshold

**Impact:**

Impact: The RL-011.C1 project baseline completion date is November 19, 2016. The current schedule now reflects a completion date of December 10, 2018. There was a 4 day loss since March as a result of corrective actions that were known at April month-end that have been incorporated into the current recovery schedule to resume demolition activities.

The current RL-11 performance schedule indicates that the PFP project will achieve slab-on-grade by December 19, 2018. On Friday, December 15, 2017 swing shift RadCon personnel performing routine surveys following the day shift demolition activities discovered low level contamination on a cookie sheet. This led to a wider search, and a "speck" of contamination was smeared from a government vehicle. A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and path forward. A root cause analysis has been conducted and recovery actions and expected completion dates are being identified. There was a one-day loss since March month-end as a result of the contamination event described above. Efficiencies have previously been identified in readying the 234-5Z facility for demolition where NDA and characterization data supported leaving more piping and ducting in place for demolition. In addition, efficiencies were recognized in 236-Z (PRF) where work was performed on filter boxes in parallel with the gallery gloveboxes. This allowed for acceleration of the start of 236-Z demolition. This accelerated when additional field team resources were reallocated from 236-Z to 234-5Z to get the facility ready for demolition. This is partially offset by delay in readying the 234-5Z facility for demolition as a result of lack of RCT resources. 234-5Z contains the gloveboxes requiring removal to meet the end state of the KPP and TPA milestone. The regulators were notified in advance that the PFP Project would not meet the re-negotiated TPA milestone M-083-00A due date of 9/30/17 for achieving slab-on-grade. In addition, the December 30, 2017 CD-4 date was not achieved.

Cost Impact: The historical negative cost variance of ~\$17.4M and 5.5%, and CPI of .95 reflect impacts of the safety pauses, stop works, contamination events, and increased complexity of the HA-9A/HC-9B size reduction efforts and preparations and removal of the HA-7A, HC18M and HC-7C and 227S and 227T gloveboxes. This is partially offset by recognized efficiencies in cleaning up the RMA/RMC control rooms after completion of the size reduction efforts of the 9A/9B gloveboxes and removal of the three RADTU and HA-46 gloveboxes by demolishing them with the 234-5Z facility.

Cost variance is not considered recoverable as there is only a small amount of scope remaining to complete the KPP. As efficiencies continue to be recognized, the EAC will be adjusted.

**Corrective Action:**

None at this time

**No Corrective Actions Required**

- Schedule Margin Analysis: There is no schedule margin associated with the RL-011.C1 capital asset account.
- IMS Data dictionary Changes: None in the month of April.
- Forecast Schedule with No Baseline: None in the month of April.
- UB Balance: None in the month of April.
- Negative ACWP: None in the month of April.
- EAC Analysis: Best Case = \$332,584; Most Likely = \$334,977; Worst Case = \$334,982
- Negative CV > VAC: Scope to perform size reduction efforts on the high gram glovebox removal efforts was estimated to be completed in a much shorter time frame with much fewer resources than originally planned causing the large Cost Variance. The EAC is reflective of the current approach to perform the remaining work scope.
- MR Transactions: None in the month of April.
- Freeze Period Changes: None in the month of April.
- Retroactive Changes: None in the month of April.
- EVT Changes: None in the month of April.

Prepared by: Cory McCoy

Date: 5/15/18

Approved by:

Date:

# Appendix C.2

## Capital Asset Project

### RL-0011.C2 - Demolition of PFP Facilities



K. A. Wooley  
(Acting) Vice President for  
Plutonium Finishing Plant  
Closure Project

April 2018  
CHPRC-2018-04, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

Progress on demolition at the Plutonium Finishing Plant (PFP) is on hold while recovery actions are implemented. Due to the December contamination event, additional recovery actions, radiological monitoring, and radiological controls are being utilized. Once all mitigating actions are complete, the stop work will be lifted and demolition will continue.

The following are key metrics associated with this Capital Asset Project (CAP).

<i>Key Metrics</i>	<i>Current Month Plan</i>	<i>Current Month Actuals</i>	<i>Cumulative Plan</i>	<i>Cumulative Actuals</i>
<b>COMPLETE</b> Cold and Dark/Demo Ready activities for 234-5Z	-	-	1	1
<b>COMPLETE</b> Cold and Dark/Demo Ready activities for 236-Z	-	-	1	1
<b>COMPLETE</b> Cold and Dark/Demo Ready activities for 242-Z	-	-	1	1
<b>COMPLETE</b> Cold and Dark/Demo Ready activities for 291-Z	-	-	1	1
Complete Cold and Dark/Demo Ready activities for PFP Ancillary Facilities	-	-	15	14
Complete Demolition of 234-5Z	-	-	1	-
Complete Demolition of 236-Z	-	-	1	-
<b>COMPLETE</b> Demolition of 242-Z	-	-	1	1
<b>COMPLETE</b> Demolition of 291-Z	-	-	1	1
Complete Demolition of PFP Ancillary Facilities	-	-	15	14
Turnover Facility to Long Term Surveillance & Maintenance	-	-	-	-

## KEY ACCOMPLISHMENTS

### RL-0011\_C2 Accomplishments

- Accomplishments to achieve stabilization following the December 2017 contamination event include:
  - o Application of fixative to trailers, remaining structures, and debris piles within the PFP Complex.
  - o Continued maintenance applications of fixative.
  - o Routine radiological surveys.
  - o Identified and began expanding the revised Radiological Buffer Area (RBA).
  - o Extra radiological surveys when sustained winds were 20 miles per hour or greater.
  - o Approximately 95 percent complete with installation of new trailer village outside the PFP RBA boundary.
- Continued implementation of new demolition requirements associated with the December 2017, 2017, contamination event. Efforts include:
  - o Relocated interferences and performed Non-Destructive Assay (NDA) of Plutonium Reclamation Facility (PRF) waste package to support completion of quarterly Documented Safety Analysis (DSA) surveillance.
  - o Completed implementation of bio-vector plan.
  - o Continued sewer isolations within affected trailer village to support new radiological boundary implementation.

- o Completed optioneering process to develop and implement new controls for the resumption of demolition activities at PFP. Expert panel review started.
- o Completed installation of High Density Polyethylene (HDPE) water loop to support dust suppression and contamination control.
- o Continued shipments of previously packaged waste.

## MAJOR ISSUES

### Issue:

On December 15, 2017, contamination was found outside of the established PFP radiological boundaries. On December 18, 2017, follow-up radiological surveys found additional contamination present in the administrative office area. CHPRC is continuing to identify resumption requirements based on finalized root cause analysis (RCA) and working with RL and regulators to develop a resumption plan to enable demolition activities to resume.

### Corrective Action:

Work was stopped after the second event, pending completion of an RCA, and the development of corrective actions and a resumption plan.

### Status:

CHPRC continues to identify resumption requirements based on a finalized RCA and working with RL and regulators to develop a resumption plan to enable demolition activities to resume.

- Some of the activities that were performed during April were:
  - o Implementation of additional radiological monitoring (i.e., continuous air monitor (CAMs), cookie sheets).
  - o Continued installation of the new trailer villages to house PFP personnel.
  - o Mobilization of supplies and equipment to maintain the PFP footprint in a safe configuration.
  - o Application of fixatives (i.e., paints, stabilization agents) to items and areas on the PFP work control zone.
  - o Maintenance, repair, and rebuild of existing equipment and systems in a safe/compliant configuration.
  - o Initiation of activities to reconfigure boundaries, canister transfer areas, loadout areas, and waste storage areas to accommodate a larger work control zone.
  - o Reconfiguration of equipment in the PFP work control zone to support stabilization activities (water systems, foggers, etc.).

## CORRECTIVE ACTION LOG

Reference Appendix C.2 Format 5 for specific corrective actions for this CAP.

## RISK MANAGEMENT STATUS

**Unassigned Risk**  
**Risk Passed**  
**New Risk**  
**Change**

- Opportunity currently realized, or mitigation efforts are currently working toward, or after risk trigger with no foreseeable impacts.
- Mitigation efforts are currently working toward risk trigger with the possibility of actions not in place prior to risk occurrence. Recovery actions may be needed.
- Risk currently realized, or risk mitigation efforts are past risk trigger date with foreseeable impacts. Recovery actions needed.

- ↑ Increased Confidence
- ↔ No Change
- ↓ Decreased Confidence

Risk Title Risk Owner	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
<b>RL-0011/WBS-011.05.C3 (CAP.2)</b>										
<b>Explanation of major changes to the project monthly stoplight chart:</b>										
No major changes to the stoplight chart in April. However, risk elicitations have been conducted to align with the proposed path forward to resume demolition activities. Per these elicitations, the existing PFP-DEMO risks will be closed and removed from the stoplight report in May. They will be replaced with the new PFP risks.										
<b>Realized Risks (Risks that are currently impacting project cost/schedule)</b>										
PFP-DEMO-12: PFP/PRF Demolition Contamination Levels	Contamination levels on the canyon walls, floors, ventilation ducts, and the remaining areas of PFP will be higher than expected, thus requiring more stringent controls than expected or larger than expected waste volumes, resulting in cost impacts and schedule delays. <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$1.5 million, 22 days	<span style="color: red; font-size: 2em;">●</span>	<span style="font-size: 2em;">↔</span>	<p><b>Risk Event:</b> On December 15, 2017, swing shift RadCon personnel performing routine surveys following the day shift demolition activities discovered low-level contamination on a cookie sheet. This led to a wider search, and a “speck” of contamination was smeared from a government vehicle.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="width: 80%;">Risk recovery action(s)</th> <th style="width: 10%;">FC Date</th> <th style="width: 10%;">%</th> </tr> </thead> <tbody> <tr> <td>See Below</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Risk Action Assessment:</b>                      A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and path forward. A RCA has been conducted, and resumption activities have been identified. During April, resumption and implementation actions from the contamination spread continued. They included:</p> <ul style="list-style-type: none"> <li>Placement of sand and soil over contaminated debris to prevent further contamination spread.</li> <li>Radiological surveys, decontamination, and pressure washing to release trailers/vehicles/equipment.</li> <li>Implementation of additional radiological monitoring (i.e., CAMs, cookie sheets).</li> <li>Mobilization of supplies and equipment to maintain the PFP footprint in a safe configuration.</li> <li>Application of fixatives (i.e., paints, stabilization agents) to items and areas on the PFP work control zone.</li> <li>Maintenance, repair, and rebuild of existing equipment and systems in a safe/compliant configuration.</li> <li>Initiation of activities to reconfigure boundaries, canister transfer areas, loadout areas, and waste storage areas to accommodate larger work control zone.</li> <li>Reconfiguration of equipment in the PFP work control zone to support stabilization activities (water systems, foggers, etc.)</li> <li>Evaluate proposed loadout and demolition strategies and implement DOE and expert panel review comments.</li> </ul> <p style="color: red; font-size: 0.9em;">This risk will be closed and removed from the stoplight report in May due to the finalization of new PFP risks.</p>	Risk recovery action(s)	FC Date	%	See Below	Ongoing	N/A
Risk recovery action(s)	FC Date	%								
See Below	Ongoing	N/A								

Risk Title Risk Owner	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
<b>RL-0011/WBS-011.05.C3 (CAP.2)</b>										
PFP-DEMO-16: Contamination Spread Beyond Established Boundaries	Unplanned transport of contamination from posted areas due to dust suppression liquid flow, natural events, or wildlife result in cost impacts and schedule delays. <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$3 million, 30 days	●	↔	<p><b>Risk Event:</b> On December 18, 2017, contamination was found in the project’s administrative office area during a follow-up survey conducted after a spread of low-level contamination was found on Friday, December 15, 2017, outside of the expanded control zones. Surveys also found contamination on personal vehicles that had been driven off the Hanford site.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Risk recovery action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>See Below</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table> <p><b>Risk Action Assessment:</b> A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and path forward. An <b>RCA has been conducted, and resumption activities</b> have been identified. During <b>April, resumption and implementation</b> actions from the contamination spread continued. They included:</p> <ul style="list-style-type: none"> <li>Placement of sand and soil over contaminated debris to prevent further contamination spread.</li> <li>Radiological surveys, decontamination, and pressure washing to release trailers/vehicles/equipment.</li> <li>Implementation of additional radiological monitoring (i.e., CAMs, cookie sheets).</li> <li>Mobilization of supplies and equipment to maintain the PFP footprint in a safe configuration.</li> <li>Application of fixatives (i.e., paints, stabilization agents) to items and areas on the PFP work control zone.</li> <li>Maintenance, repair, and rebuild of existing equipment and systems in a safe/compliant configuration.</li> <li>Initiation of activities to reconfigure <b>radiological</b> boundaries, canister transfer areas, loadout areas, and waste storage areas to accommodate larger work control zone.</li> <li>Reconfiguration of equipment in the PFP work control zone to support stabilization activities (water systems, foggers, etc.).</li> <li><b>Evaluate proposed loadout and demolition strategies and implement DOE and expert panel review comments.</b></li> </ul> <p style="color: red;">This risk will be closed and removed from the stoplight report in May due to the finalization of new PFP risks.</p>	Risk recovery action(s)	FC Date	%	See Below	Ongoing	N/A
Risk recovery action(s)	FC Date	%								
See Below	Ongoing	N/A								
<b>Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)</b>										
<b>FY2018 Risk Triggers (Risk could be realized in FY2018)</b>										
PFP-DEMO-05: Inclement Weather	Inclement weather, including moderate winds, low or high temperatures, and thunderstorms will impact the demolition of PFP. <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$0K, 32 days  *Cost increase will result in cost-per-day impacts from crews and hotel load.	●	↔	<p><b>Risk Trigger:</b> Extreme cold temperature, accumulating snow showers resulting in site delays/closures, and high winds.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Mitigation action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>Implement overtime (OT) shifts as necessary to mitigate further impacts associated with weather.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> During <b>April</b>, eight days were partially impacted by high winds. The risk remains critical due to potential high-wind and heat impacting <b>progress toward demolition</b>. The PFP project will continue to adjust the daily work scope to plan for projected weather impacts.</p> <p style="color: red;">This risk will be closed and removed from the stoplight report in May due to the finalization of new PFP risks.</p>	Mitigation action(s)	FC Date	%	Implement overtime (OT) shifts as necessary to mitigate further impacts associated with weather.	Ongoing	N/A
Mitigation action(s)	FC Date	%								
Implement overtime (OT) shifts as necessary to mitigate further impacts associated with weather.	Ongoing	N/A								

Risk Title Risk Owner	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
<b>RL-0011/WBS-011.05.C3 (CAP.2)</b>										
PFP-DEMO-07: Removal/Extraction of Equipment Takes Longer Than Planned	Controlled demolition of equipment, gloveboxes and portions of the crosscutting process support systems (i.e. ventilation) result in cost impacts and schedule delays.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$3 million, 60 days			<p><b>Risk Trigger:</b> On Friday, December 15, 2017, swing shift RadCon personnel performing routine surveys following the day shift demolition activities discovered low-level contamination on a cookie sheet. This led to a wider search, and a “speck” of contamination was smeared from a government vehicle.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>See Below</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and path forward. An RCA is being conducted, and recovery actions and expected completion dates will be identified after it has been completed. During <b>April</b>, <b>resumption and implementation</b> actions from the contamination spread continued. They included:</p> <ul style="list-style-type: none"> <li>Continuation of radiological surveys, decontamination, and pressure washing to release trailers/vehicles/equipment.</li> <li>Continuation of additional radiological monitoring (i.e., CAMs, cookie sheets). Application of fixatives (i.e., paints, stabilization agents) to items and areas on the PFP work control zone.</li> <li>Maintenance, repair, and rebuild of existing equipment and systems in a safe/compliant configuration.</li> <li>Continuation to reconfigure <b>radiological</b> boundaries, canister transfer areas, loadout areas, and waste storage areas to accommodate larger work control zone.</li> <li>Reconfiguration of equipment in the PFP work control zone to support stabilization activities (water systems, foggers, etc.).</li> <li>Evaluate proposed loadout and demolition strategies and implement DOE and expert panel review comments.</li> </ul> <p>This risk will be closed and removed from the stoplight report in May due to the finalization of new PFP risks.</p>	Mitigation action(s)	FC Date	%	See Below	Ongoing	N/A
Mitigation action(s)	FC Date	%								
See Below	Ongoing	N/A								
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)										
PFP-DEMO-21: Glovebox/Equipment Removal/Demolition Material	A material handling event (e.g., dropped piece of process equipment) occurs during the PFP demolition, resulting in cost impacts and schedule delays.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Low (10% to 25%) <b>Worst Case Impacts:</b> \$150K, 30 days			<p><b>Risk Trigger:</b> During pre-demolition/demolition activities in fiscal year (FY) 2018.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No major changes in <b>April</b>. The mitigation strategies have been put in place; as a result, the risk strategy is to accept with no further mitigation actions identified at this time. PFP will continue to adhere to the CHPRC Integrated Safety Management System (ISMS) program/hoisting and rigging program to include detailed analyses of potential hazards and identification of preventive measures to implement prior to starting the work. At this time, no alternative course of actions are needed. One glovebox remains in the 234-5Z facility (HA-46) and will be removed once demolition resumes. Additional special handled waste packages remain in the 234-5Z duct level and basement.</p> <p>This risk will be closed and removed from the stoplight report in May due to the finalization of new PFP risks.</p>	Mitigation action(s)	FC Date	%	None identified at this time.	N/A	N/A
Mitigation action(s)	FC Date	%								
None identified at this time.	N/A	N/A								
<b>Unassigned Risks</b> (Pending ownership of identified risks/opportunities)										
No unassigned risks identified in <b>March</b> .										

## CRITICAL PATH SCHEDULE

The PFP critical path schedule begins with the continuation of resumption activities related to the December contamination event. This will run in parallel with the loading of the Super-sack waste. Once the Super-sacks are loaded, debris disposition of the 234-5Z rubble piles will resume, starting with the frontside waste. Once the waste debris is loaded out, demolition will resume on the remaining sections of zones 2 and 7, with the exception of the drain line. Remote Mechanical C (RMC) process line and Remote Mechanical A (RMA) process line demo will come next, in parallel will be completion of the basement of 234-5Z demolition. The 234-5Z demolition completes October 16, 2018. The 236-Z canyon demolition will then resume with completion scheduled for December 19, 2018, meeting the requirements for the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-083-00A – PFP Facility Transition and Selection Disposition Activities. Completion of demolition is followed by site stabilization and demobilization, turnover to surveillance and maintenance, and project closeout activities completing February 21, 2019. The CAP2 CD-4 closeout is scheduled for February 21, 2019. The dates above are reflective of the known actions and resumption efforts associated with a contamination event that occurred in December as of April month-end closing and will be updated as more information is made available from the expert panel review and resumption plan.

## SCHEDULE MARGIN/MANAGEMENT RESERVE

Reference Appendix C.2 Formats 1, 2, 3, and, 5 for specific schedule margin/MR utilization for this CAP.

## CRITICAL DECISION MILESTONE STATUS

Number	Title	* Due Date	**Forecast Date	Status/ Comment
RL-011.C2	Completion of Demolition of all PFP Facilities.	8/31/18	02/21/19	<p>Progress has been temporarily put on hold on PFP demolition activities. There was a 21-day gain of schedule for April. This was a result of incorporation of the revised demo approach from the contamination event that occurred on December 15, 2017. During swing shift, RadCon personnel performing routine surveys following the day-shift demolition activities discovered low-level contamination on a cookie sheet. This led to a wider search, and a “speck” of contamination was smeared from a government vehicle.</p> <p>A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and a path forward. An RCA has been conducted and resumption actions with expected completion dates are being identified.</p>

\*Due date reflects CD-4 due date with DOE contingency.

\*\*Forecasted Date reflects CD-4 due date without DOE contingency.

## GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None to report at this time.

## DOE ACTIONS / DECISIONS

Working with RL on CD-4 closure actions.

# Appendix C.2

## RL-0011.C2 - Demolition of PFP Facilities

### Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis



April 2018  
CHPRC-2018-04, Rev. 0  
Contract DE-AC07-08RL14788  
Deliverable C.3.1.3.1 - 1



**CONTRACT PERFORMANCE REPORT  
FORMAT 2 - ORGANIZATIONAL CATEGORIES**

FORM APPROVED

DOLLARS IN Thousands of \$ OMB No. 0704-0188

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>		<b>4. REPORT PERIOD</b>	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C2 PFP Demolition Capital Asset Project		a. FROM (YYYYMMDD)  2018 / 03 / 26	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD)  2018 / 04 / 22	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

WBS.Resp Org Group	CURRENT PERIOD						CUMULATIVE TO DATE					REPROGRAMMING			AT COMPLETION		
	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		ADJUSTMENTS			BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)	
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)	COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)				
ITEM (1)																	
3B - PFP Closure Project	0	0	5,319	0	-5,319	55,307	41,793	68,443	-13,513	-26,649	0	0	0	55,307	116,852	-61,545	
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
d. UNDISTRIBUTED BUDGET																	
e. SUBTOTAL (Performance Measurement Baseline)	0	0	5,319	0	-5,319	55,307	41,793	68,443	-13,513	-26,649	0	0	0	55,307	116,852	-61,545	
f. MANAGEMENT RESERVE														3,434			
g. TOTAL	0	0	5,319	0	-5,319	55,307	41,793	68,443	-13,513	-26,649	0	0	0	58,741			

CLASSIFICATION (When Filled In)



**CONTRACT PERFORMANCE REPORT  
FORMAT 4 - STAFFING**

Dollars in: FTE

FORM APPROVED  
OMB No. 0704-0188

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>		<b>4. REPORT PERIOD</b>	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C2 PFP Demolition Capital Asset Project		a. FROM (YYYYMMDD) 2018 / 03 / 26	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 04 / 22	
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

5. PERFORMANCE DATA		FORECAST (Non-Cumulative)													AT COMPLETION (15)
WBS.Resp Org Group  ORGANIZATIONAL CATEGORY (1)	ACTUAL CURRENT PERIOD (2)	ACTUAL END OF CURRENT PERIOD (Cumulative) (3)	SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS						
			+1 MAY 2018 (4)	+2 JUN 2018 (5)	+3 JUL 2018 (6)	+4 AUG 2018 (7)	+5 SEP 2018 (8)	+6 OCT 2018 (9)	1st QTR FY19 (10)	2nd QTR FY19 (11)	3rd QTR FY19 (12)	FY19-LC (13)	ATCOMPLETE (14)		
3B - PFP Closure Project	146	1530	138	148	149	145	147	143	287	251	0	0	0	2939	
<b>g. TOTAL DIRECT</b>	<b>146</b>	<b>1530</b>	<b>138</b>	<b>148</b>	<b>149</b>	<b>145</b>	<b>147</b>	<b>143</b>	<b>287</b>	<b>251</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2939</b>	

CLASSIFICATION (When Filled In)										
CONTRACT PERFORMANCE REPORT FORMAT 5 - Explanations and Problem Analysis									FORM APPROVED OMB No. 0704-0188	
1. CONTRACTOR	2. CONTRACT			3. PROGRAM			4. REPORT PERIOD			
a. NAME CH2M HILL Plateau Remediation Company	a. NAME Plateau Remediation Contract			a. NAME RL_0011_C2 PFP Demolition Capital Asset Project			a. FROM (YYYYMMDD) 2018/03/26			
b. LOCATION (Address and ZIP Code) Richland, WA	b. NUMBER RL14788			b. PHASE			b. TO (YYYYMMDD) 2018/04/22			
	c. TYPE CPAF	d. SHARE RATIO		c. EVMS ACCEPTANCE No X Yes (YYYYMMDD) 2009 / 09 / 18						
<b>Direct Projects</b>										
<b>5. Evaluation</b>		Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Current:		0.0	0.0	5,319.0	0.0	-	-5,319.0	-	-	0.00
Cumulative:		55,306.9	41,793.4	68,442.6	-13,513.5	-24.4%	-26,649.2	-63.8%	0.76	0.61
		BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:		55,306.9	116,852.1	-61,545.2	-111.3%	-	0.28			
<b>Explanation of Variance/Description of Problem:</b>										
Current Month:										
Schedule Variance: The schedule variance for the current month is within threshold.										
Cost Variance: The current month unfavorable variance are associated with impacts and recovery efforts from the contamination event that occurred on December 15, 2017. A root cause analysis has been finalized and corrective actions will be implemented prior to resumption of demolition activities.										
Cumulative to Date:										
Schedule Variance: The cumulative unfavorable schedule variance is due to delay of demolition of ancillary buildings and 236-Z caused by resources being redirected to support higher priority critical path work associated with decommissioning of 234-5Z, 242-Z, and 236-Z, as well as ready for demo activities associated with impacts from 236-Z Canyon Crane failure, contamination impacts from an unplanned criticality alarm failure, contamination recovery in the duct level of 234-5Z (two week delay in July 2016), increased characterization efforts, weather delays (snow and wind), recovery from demolition contamination events, and greater efforts to complete 242-Z demolition than originally planned. In addition, the PUREX Tunnel collapse caused a four day delay due to closure of the Hanford site restricting access to PFP and a contamination event associated with removal of PRF gallery gloveboxes causing a 20 day delay of demolition activities on the 236-Z facility. Further, impacts associated with the Stop Work that was initiated by the Hanford Atomic Metals Trade Council (HAMTC) union leadership on November 11, 2017 "associated with concerns over events both inside and outside of the facility." The main issue involved employee proximity to radiological boundary areas during demolition. Radiological boundaries were reconfigured and impacted employees were relocated. As a result of delays in the ready for demolition activities, completion of the C2 CD-4 has been delayed. TPA milestone M-083-00A due 9/30/2017 was not met. A BCR was processed in the month of September to draw down on DOE contingency to recover the direct cost impacts to the RL-0011 C.2 Project associated with realization of the DOE-RL risks. Areas that were impacted were associated with Weather Delays, Stop Works, PRF Contamination Events, and MSA Resources retained to prevent Bump and Roll impacts. A contamination event occurred on Friday, December 15, 2017 swing shift when RadCon personnel performing routine surveys following the day shift demolition activities discovered low level contamination on a cookie sheet. This led to a wider search and a "speck" of contamination was smeared from a government vehicle. A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and path forward. A root cause analysis has been conducted and recovery actions and expected completion dates are identified. This is partially offset with the removal of the 18 sections of the PRF gallery gloveboxes, progress on demolition of 236-Z, demolition of the 2727-Z and 2729-Z facilities, the 242-ZA and 242-Z facilities, the 291-Z facility, 291-Z stack, 234-5ZA, 252-Z1, 2503-Z, 2735Z, 2734ZA, ZB, ZC, ZD, and ZL facilities.										
Cost Variance: The cumulative negative cost variance is associated with MSA resources arriving to support PFP demolition that were planned as P/Q shift support with a baseline start date of February 2016. Additionally, Readiness Assessment activities lagged due to a delay in the start of 236-Z Demolition and increased requirements to show readiness resulting in increased costs due to additional time and effort required from subcontracted and direct labor resources. The apportioned project management activities (i.e. project oversight and planning) and support activities are ongoing, while a delay in the discrete field work is resulting in minimal apportioned BCWP. Demolition mobilization activities took longer than originally assumed because of recommendations made during the readiness assessment and purchasing unplanned PBS fixative to support 236-Z demolition. In addition, significant winter weather impacts (i.e., snow, wind, freezing rain, etc.) have been recognized on the Hanford Site. Site closures, freezing temperatures and significant snowfall that required clearing of the demolition zone rather than performing physical demolition on the facilities while a constant staff provides demolition support services is a contributing factor. Unplanned Management Assessment efforts for the 234-5Z and 291-Z facilities took longer than originally assumed. Impacts associated with the Stop Work that was initiated by the Hanford Atomic Metals Trade Council (HAMTC) union leadership on November 11, 2017 "associated with concerns over events both inside and outside of the facility." The main issue involved employee proximity to radiological boundary areas during demolition. Radiological boundaries were reconfigured and impacted employees were relocated. As the project gets further into the demolition phase of the PRF Canyon, increased utilization of Personnel Protective Equipment to align with the original plan as well as increased material procurements to align with the scope being performed (i.e., P-100 filters, Labounty Shear, additional fixative, etc.) are also contributing to this variance. An adjustment to the G&A Rate for FY2017 resulted in a reduction to the PMB of \$463K. Finally, impacts from a contamination event that occurred on Friday, December 15, 2017 swing shift where RadCon personnel performing routine surveys following the day shift demolition activities discovered low level contamination on a cookie sheet. This led to a wider search, and a "speck" of contamination was smeared from a government vehicle. A CHPRC management stop work on demolition activities was declared and a critique held to discuss the contamination spread, possible causes, and path forward. A root cause analysis has been conducted and recovery actions and expected completion dates are identified. This is partially offset by recognized efficiencies associated with the removal of the 18 sections of the PRF gallery gloveboxes, progress on demolition of 236-Z, demolition of the 2727-Z and 2729-Z facilities, the 242-ZA and 242-Z facilities, the 291-Z facility, 291-Z stack, 234-5ZA, 252-Z1, 2503-Z, 2735Z, 2734ZA, ZB, ZC, ZD, and ZL facilities.										

**Impact:**

Schedule Impact: Progress continued to work toward CD-4 closure as teams continued to ready the PFP facilities for demolition. The PRF facility initiated demolition on November 8, 2016, and completion of demolition activities will occur in December, 2018. Demolition on the 291-Z facility commenced on June 30, 2017, and the 291-Z stack was demolished on July 15, 2017. The 234-5ZA facility was demolished in the month of August 2017 with loadout of waste completed in the month of September. Demolition of 234-5Z was initiated on September 13, 2017, and is now 53 percent complete. Completion of all demolition activities are scheduled to occur in February 2019. The February date is reflective of the known actions and recovery efforts associated with a contamination event that occurred in December, 2017 and will be updated as more information is made available from the Root Cause Analysis and recovery plan. There was an 4-day gain in schedule for April. This was a result of incorporation of the revised demo approach from the contamination event that occurred on Friday, December 15, 2017 as identified above. The baseline completion date is not considered recoverable. The TPA Milestone TPA-083-00A, complete PFP facility transition and selected disposition activities of November 30, 2017 was not met.

Cost Impact: Stop Works, Safety Pauses, weather impacts (i.e., unusual winter, heat, wind, etc.) multiple contamination events, the PRF Crane failure, and associated recovery actions have negatively impacted demolition of the PFP facilities. In addition, readiness activities took longer than originally assumed as a result of increased requirements required by the Readiness Assessment team to demonstrate readiness for demolition of the PRF facility and efforts to mobilize took longer than originally assumed as a result of implemented recommendations from the readiness assessment team. An unplanned Management Assessment for the 234-5Z and 291-Z facilities to incorporate lessons learned from the demolition of the 236-Z and 242-Z facilities are also contributing to the cost impacts. Finally, in the early stages of this project subcontracted MSA resources specializing in facility demolition charged the project until the ready for demo status was achieved. Unexpected contamination events that occurred during demolition of the PRF facility in January, June, and December, 2017, and delays with the 242-Z demolition has contributed to the cost impacts on this project. A Baseline Change Request (BCR) was processed in the month of September to draw down on DOE contingency to recover the direct cost impacts to the RL-0011 C.2 Project associated with realization of the DOE-RL risks. Areas that were impacted were associated with Weather Delays, Stop Works, PRF Contamination Events, and MSA Resources retained to prevent Bump and Roll impacts. This is partially offset by recognized efficiencies during the 291-Z demolition and 291-Z stack implosion as well as the 234-5ZA, 252-Z1, 2503-Z, and 2735Z, 2734ZA, ZB, ZC, ZD, and ZL facilities.

A negative VAC is reflective of impacts associated with recovery efforts from a contamination event that occurred on December 15, 2017. Partially offset by working one shift during demolition of 236-Z, 242-Z and 291-Z building and stack rather than two as planned in the PMB. Durations for the remainder of the 234-5Z and PRF demolitions activities have been adjusted to incorporate increased durations as a result of expected recovery actions from the contamination event that occurred in December. Upon completion of the recovery efforts associated with the December, 2017 contamination event, it is expected that DOE-RL will authorize CHPRC to re-start demolition activities to safely get the project to slab on grade.

**Corrective Action:**

NOTE: Corrective actions associated with stop works/safety pauses, contamination events, and 236-Z Canyon Crane failure, and additional asbestos removal activities that are impacting the ability to initiate demolition activities in the RL-011.C2 capital asset project were previously addressed in the Operations project corrective action plan.

Corrective actions associated with recovery actions from the contamination event that occurred on December 15, 2017 as described above are continuing to be developed and will be documented in future reporting periods. Activities performed in the month of January were:

- Placement of sand and soil, and over contaminated debris and equipment to prevent further contamination spread
- Radiological surveys, decontamination and pressure washing to release trailers/vehicles/equipment
- Implementation of additional radiological monitoring (i.e., CAMs, cookie sheets)
- Mobilization of supplies and equipment to maintain the PFP footprint in a safe configuration
- Application of fixatives (i.e., paints, stabilization agents) to items and areas on the PFP work control zone
- Maintenance, repair and rebuild of existing equipment and systems in safe/compliant configuration
- Initiation of activities to reconfigure boundaries, canister transfer areas, load out areas, waste storage areas, to accommodate larger work control zone
- Reconfiguration of equipment in the PFP work control zone to support stabilization activities (water systems, foggers, etc.)

**Monthly Summary (to include technical causes of VARs, Impacts) and Corrective Action(s):**

The following items are addressed, as applicable, per the EVMSIH:

1. Schedule Margin Analysis: In the EAC there is currently no remaining schedule margin in this capital asset account. Schedule margin was lost in February 2016 as a result of impacts from stop works associated with PremAire breathing air issues related to size reduction of the HA-9A glovebox and impacts from a safety pause associated with a PremAire Breathing Air radiological event resulting in increased survey requirements for PPE and a requirement for removing additional asbestos in the 234-5Z facility prior to demolition activities commencing.
2. IMS Data dictionary Changes: No change in the month of April
3. Forecast Schedule with No Baseline: No change in the month of April
4. UB Balance: No change in the month of April
5. Negative ACWP: No change in the month of April
6. EAC Analysis: Best Case = \$116,852; Most Likely = \$120,287; Worst Case = \$121,143
7. Negative CV > VAC: No change in the month of April
8. MR Transactions: No change in the month of April
9. Freeze Period Changes: No change in the month of April
10. Retroactive Changes: No change in the month of April
11. EVT Changes: No change in the month of April

Prepared by: Cory McCoy

Date: 05/15/18

Approved by:

Date:

Appendix C.3  
Capital Asset Project  
RL-0012\_C1\_1 - Sludge Retrieval Project  
15-D-401



R. M. Geimer  
Vice President for  
K Basin Operations and  
Plateau Remediation

April 2018  
CHPRC-2018-04, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

On March 26, 2018, CHPRC formally notified RL of readiness to proceed with commencement of the DOE Operational Readiness Review (ORR) of 105KW/Annex Engineered Container Retrieval and Transfer System Activity.

The DOE ORR that was initiated on April 9, 2018, completed on April 17, 2018. At the out-brief for the DOE ORR, the items listed below were identified:

- Five pre-start findings.
- Four post-start findings.
- Seven opportunity for improvement items.
- Two noteworthy practices.

Project breakdown structure (PBS) RL-0012 scope is 97.4 percent complete, with a cumulative schedule performance index (SPI) of 1.00 and a Cost Performance Index (CPI) of 1.04.

## KEY ACCOMPLISHMENTS

### RL-0012\_C1\_1 Accomplishments

#### **KW Basin Sludge Removal Capital Asset Project**

- The 100K Operations support team performed preventive maintenance and calibrations on both ECRTS components and Annex Utility System components.
- The DOE ORR completed on April 17, 2018.
- The project technical staff updated the critical decision (CD)-4, project closeout submittal, to incorporate RL comments. Formal transmittal to RL is forecasted in May.

## MAJOR ISSUES

### **Issue:**

CHPRC is planning to complete the first shipment of sludge from 105KW Basin to T Plant on June 28, 2018, which would achieve performance measure PM-12-2-18 (June 30, 2018). Given the minimal remaining float, CHPRC management is monitoring both the cost and schedule associated with this work.

### **Corrective Action:**

CHPRC completed their ORR in March. The DOE ORR was completed in April. CHPRC will work closely with RL to correct pre-start activities and submit the request for authorization to startup letter and CD-4 submittal in mid-May.

### **Status:**

The performance measure is in jeopardy of being achieved.

## CORRECTIVE ACTION LOG

Reference Appendix C.3 Format 5 for specific corrective actions for this CAP.

## RISK MANAGEMENT STATUS

**Unassigned Risk**  
**Risk Passed**  
**New Risk**  
**Change**

-  Opportunity currently realized, or mitigation efforts are currently working toward, or after risk trigger with no foreseeable impacts.
-  Mitigation efforts are currently working toward risk trigger with the possibility of actions not in place prior to risk occurrence. Recovery actions may be needed.
-  Risk currently realized, or risk mitigation efforts are past risk trigger date with foreseeable impacts. Recovery actions needed.

-  Increased Confidence
-  No Change
-  Decreased Confidence

Risk Title	Unmitigated Risk Impacts	Assessment		Comments									
		Month	Trend										
<b>RL-0012/WBS-012 (CAP)</b>													
<b>Explanation of major changes to the project monthly spotlight chart:</b> No major changes to the Stoplight Chart in April.													
<b>Realized Risks (Risks that are currently impacting project cost/schedule)</b>													
STP-154: ORR Results in Delays to the Project	Impacts stemming from the contractor ORR, the DOE ORR, or a combination of the two impacts the project's operational activities and jeopardizes the project's ability to achieve PM-12-2-18, due June 30, 2018. <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$216K, 24 days			<b>Risk Event:</b> Execution of the contractor ORR and execution of the DOE ORR.  <table border="1"> <thead> <tr> <th>Risk recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Complete necessary preventative maintenance and calibration activities prior to re-initiation of the contractor ORR and prior to initiating the DOE ORR.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Continue performing operation demonstrations in presence of senior supervisor watches, with the intent on identifying and resolving emergent challenges.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <b>Risk Action Assessment:</b> The contractor ORR was completed on March 6, 2018. The DOE ORR was completed on April 17, 2018. The project is planning to address the DOE ORR pre-start findings and submit the request for authorization to startup letter to RL prior to the end of May.	Risk recovery action(s)	FC Date	%	Complete necessary preventative maintenance and calibration activities prior to re-initiation of the contractor ORR and prior to initiating the DOE ORR.	Complete	100	Continue performing operation demonstrations in presence of senior supervisor watches, with the intent on identifying and resolving emergent challenges.	Complete	100
Risk recovery action(s)	FC Date	%											
Complete necessary preventative maintenance and calibration activities prior to re-initiation of the contractor ORR and prior to initiating the DOE ORR.	Complete	100											
Continue performing operation demonstrations in presence of senior supervisor watches, with the intent on identifying and resolving emergent challenges.	Complete	100											
<b>Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)</b>													
No critical risks identified in April.													
<b>High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)</b>													
<b>FY2017 Risk Triggers (Risk could be realized in FY2017)</b>													
No high risk threat value risks identified in April.													
<b>Unassigned Risks (Pending ownership of identified threats/opportunities)</b>													
No unassigned risks identified in April.													

## CRITICAL PATH SCHEDULE

The project critical path schedule reflects RL providing authorization to commence retrieval operations following the review and approval of the Sludge Removal Project (SRP) CD-4 submittal in parallel with review/approval of the CHPRC request for startup approval letter. Completing retrieval operations, including the filling of Sludge Transport and Storage Containers (STSCs) with sludge and transporting them to T Plant, to complete Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) milestone M-016-176, Complete Sludge Removal from 105-KW Fuels Storage Basin, is required by December 2019.

## SCHEDULE MARGIN/MANAGEMENT RESERVE

Reference Appendix C.3 Formats 1, 2, 3, and 5 for specific schedule margin/MR utilization for this CAP.

## CRITICAL DECISION MILESTONE STATUS

Number	Title	*Due Date	**Forecast Date	Status/ Comment
15-D-401	CD-4, Project Completion	11/30/2019	5/21/2018	The forecast date includes a schedule margin from the project's risk analysis. The forecast date is two weeks later than last month due to unanticipated revisions to procedures and complications with completion of the contractor ORR from prior months. The project schedule margin is 123 days.

\*Due date reflects CD-4 due date with DOE contingency.

\*\*Forecasted Date reflects CD-4 due date without DOE contingency.

## GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

## DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
RL Perform ORR - Team Lead	04/09/18 (A)	04/17/18 (A)
RL Issue Findings / Discrepancy List	04/18/18 (A)	05/01/18
RL Approve CD-4 Submittal Package	05/14/18	05/21/18
RL Approve Request for Startup Letter	05/14/18	05/21/18

# Appendix C.3

## RL-0012\_C1\_1 – Sludge Retrieval Project 15-D-401

### Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis



April 2018  
CHPRC-2018-04, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

CLASSIFICATION (When Filled In)

**CONTRACT PERFORMANCE REPORT  
FORMAT 1 - WORK BREAKDOWN STRUCTURE**

DOLLARS IN Thousands of \$ **FORM APPROVED**  
OMB No. 0704-0188

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>		<b>4. REPORT PERIOD</b>	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME 15_D_401 KW Basin Sludge Removal Project		a. FROM (YYYYMMDD)	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		2018 / 03 / 26	
		c. TYPE CPAF		d. SHARE RATIO		b. TO (YYYYMMDD)	
				c. EVMS ACCEPTANCE NO X YES (YYYYMMDD) 2009 / 09 / 18		2018 / 04 / 22	

<b>5. CONTRACT DATA</b>								
a. QUANTITY 1	b. NEGOTIATED COST 295,873	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 0	d. TARGET PROFIT/FEE 7,950	e. TARGET PRICE 303,823	f. ESTIMATED PRICE 297,000	g. CONTRACT CEILING 303,823	h. ESTIMATED CONTRACT CEILING 297,000	i. DATE OF OTB/OTS (YYYYMMDD)

<b>6. ESTIMATED COST AT COMPLETION</b>				<b>7. AUTHORIZED CONTRACTOR REPRESENTATIVE</b>			
MANAGEMENT ESTIMATE AT COMPLETION (1)		CONTRACT BUDGET BASE (2)		VARIANCE (3)		a. NAME (Last, First, Middle Initial)	
a. BEST CASE 283,629						b. TITLE Prime Contract Compliance Manager	
b. WORST CASE 289,050						c. SIGNATURE	
c. MOST LIKELY 289,050		295,873		6,823		d. DATE SIGNED (YYYYMMDD)	

<b>8. PERFORMANCE DATA</b>																	
CAPN.PBS Control Account.PARS 2 WBS (2)		CURRENT PERIOD						CUMULATIVE TO DATE				REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
ITEM (1)	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)	
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)							
RL-0012 SNF Stabilization & Disp																	
RL_0012_C1_1.16 Sludge Treatment Project	0	0	0	0	0	156,861	156,861	156,786	0	75	0	0	0	156,861	156,786	75	
RL_0012_C1_1.17 D-401 KW Basin Sludge Removal Project	33	239	1,124	206	-885	133,418	133,326	125,399	-92	7,927	0	0	0	133,421	126,843	6,577	
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
d. UNDISTRIBUTED BUDGET														0	0	0	
e. SUBTOTAL	33	239	1,124	206	-885	290,279	290,187	282,185	-92	8,002	0	0	0	290,282	283,629	6,652	
f. MANAGEMENT RESERVE														5,421			
g. TOTAL	33	239	1,124	206	-885	290,279	290,187	282,185	-92	8,002	0	0	0	295,703			
<b>9. RECONCILIATION TO CONTRACT BUDGET BASELINE</b>																	
a. VARIANCE ADJUSTMENT																	
b. TOTAL CONTRACT VARIANCE																	
										-92	8,002			295,703	283,629	12,074	

CLASSIFICATION (When Filled In)

CLASSIFICATION (When Filled In)

**CONTRACT PERFORMANCE REPORT  
FORMAT 2 - ORGANIZATIONAL CATEGORIES**

DOLLARS IN Thousands of \$

FORM APPROVED  
OMB No. 0704-0188

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>		<b>4. REPORT PERIOD</b>	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME 15_D_401 KW Basin Sludge Removal Project		a. FROM (YYYYMMDD) 2018 / 03 / 26	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 04 / 22	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (YYYYMMDD) 2009 / 09 / 18			

WBS.Resp Org Group	CURRENT PERIOD						CUMULATIVE TO DATE						REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)		
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)								
3G - K Basin Oper & Plateau Remediation Project	33	239	1,124	206	-885	290,279	290,187	282,185	-92	8,002	0	0	0	290,282	283,629	6,652		
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
d. UNDISTRIBUTED BUDGET																		
e. SUBTOTAL (Performance Measurement Baseline)	33	239	1,124	206	-885	290,279	290,187	282,185	-92	8,002	0	0	0	290,282	283,629	6,652		
f. MANAGEMENT RESERVE														5,421				
g. TOTAL	33	239	1,124	206	-885	290,279	290,187	282,185	-92	8,002	0	0	0	295,703				

CLASSIFICATION (When Filled In)



**CONTRACT PERFORMANCE REPORT**

**FORMAT 4 - STAFFING**

Dollars in: FTE

**FORM APPROVED**

**OMB No. 0704-0188**

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>		<b>4. REPORT PERIOD</b>	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME 15_D_401 KW Basin Sludge Removal Project		a. FROM (YYYYMMDD) 2018 / 03 / 26	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 04 / 22	
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> X YES (YYYYMMDD) 2009 / 09 / 18	

5. PERFORMANCE DATA															
WBS.Resp Org Group  ORGANIZATIONAL CATEGORY (1)	ACTUAL CURRENT PERIOD (2)	ACTUAL END OF CURRENT PERIOD (Cumulative) (3)	FORECAST (Non-Cumulative)												AT COMPLETION (15)
			SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS						
			+1 MAY 2018 (4)	+2 JUN 2018 (5)	+3 JUL 2018 (6)	+4 AUG 2018 (7)	+5 SEP 2018 (8)	+6 OCT 2018 (9)	1st QTR FY19 (10)	2nd QTR FY19 (11)	3rd QTR FY19 (12)	FY19-LC (13)	ATCOMPLETE (14)		
3G - K Basin Oper & Plateau Remediation Project	51	7576	50	1	0	0	0	0	0	0	0	0	0	0	7627
<b>g. TOTAL DIRECT</b>	51	7576	50	1	0	0	0	0	0	0	0	0	0	0	7627



Appendix C.4  
Capital Asset Project  
RL-0041\_C1 – Project 618-10, 316-4 and  
600-63 Waste Sites



T. L. Hobbes  
Vice President for  
618-10 Burial Ground

April 2018  
CHPRC-2018-04, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

Workers at the 618-10 Burial Ground Complex continued site recontouring and demobilization activities during the month of April.

## KEY ACCOMPLISHMENTS

### **618-10 Burial Ground Closeout Verification Package**

- The 618-10 Burial Ground closeout verification package and waste site reclassification form was submitted to RL and the Environmental Protection Agency (EPA) for review.
- Addressed comments received to date. The review period ends in mid-May.

### **618-10 Burial Ground Complex Demobilization**

- Crews continued site recontouring and applying earthbound fixatives to all disturbed soils.
- Sheared up and disposed of the three above-ground water tanks and the remaining calcium tank.
- One trailer was shipped off project.
- Shipped parking bumpers, water cannons, and ecology blocks to other CHPRC projects for re-use.
- An excavator and a loader were shipped to 100K for re-use.
- Continued road removal and gravel removal from parking lots.
- Shipped three conex boxes off project for use at other CHPRC projects.
- Finished relocating staff to off-site facilities to allow earlier removal of remaining trailers.
- Mission Support Alliance, LLC (MSA) electrical utilities (EU) department initiated the final electrical disconnect.
- Continued consolidation and removal of supplies that are no longer being used.

### **River Corridor Contract Critical Decision (CD)-4 Closeout and Documentation**

- Continued comment resolution on the Energy Systems Acquisition Advisory Board (ESAAB)/ Environmental Management Acquisition Advisory Board (EMAAB) presentation.
- Completed the pre-brief and walkdown for the Transition Turnover Package (TTP)
- Accelerated work scope on CD-4 scope based on revision to RL's schedule.

## MAJOR ISSUES

No major issues to report at this time.

## CORRECTIVE ACTION LOG

Reference Appendix C.4 Format 5 for specific corrective actions for this Cap Asset Project (CAP).

## RISK MANAGEMENT STATUS

**Unassigned Risk**  
**Risk Passed**  
**New Risk**  
**Change**

- Opportunity currently realized, or mitigation efforts are currently working toward, or after risk trigger with no foreseeable impacts.
- Mitigation efforts are currently working toward risk trigger with the possibility of actions not in place prior to risk occurrence. Recovery actions may be needed.
- Risk currently realized, or risk mitigation efforts are past risk trigger date with foreseeable impacts. Recovery actions needed.

-  Increased Confidence
-  No Change
-  Decreased Confidence

	Unmitigated Risk Impacts	Assessment		Comments
		Month	Trend	
<b>RL-0041/WBS-041</b>				
<b>Explanation of major changes to the project monthly stoplight chart:</b> No major changes in <i>April</i> .				
<b>Realized Risks</b> (Risks that are currently impacting project cost/schedule)				
No realized risks identified in <i>April</i> .				
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)				
No critical risks identified in <i>April</i> .				
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)				
<b>Lifecycle Risk Triggers</b> (Risk could be realized at any point of the project)				
<b>Unassigned Risks</b> (Pending ownership of identified threats/opportunities)				
No unassigned risks identified in <i>April</i> .				

## Contract-to-Date

WBS 041/ RL-0041 Capital Asset Project	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	61.9	65.3	45.2	3.3	5.4%	20.1	30.7%	68.8	47.7	2.5	21.1

Numbers are rounded to the nearest \$0.1 million

Reference Appendix C.4 Format 5 for narrative on Contract-to-Date performance analysis.

## CRITICAL PATH SCHEDULE

The critical path flows through 618-10 Burial Ground demobilization activities, site re-grade and the demobilization of equipment.

## SCHEDULE MARGIN/MANAGEMENT RESERVE

Reference Appendix C.4 Formats 1, 2, 3, and 5 for specific schedule margin/management reserve utilization for this CAP.

## CRITICAL DECISION (CD) MILESTONE STATUS

Number	Title	Due Date	Actual Date	Forecast Date	Status/ Comment
KPP 1	Complete the 618-10 Burial Ground Remediation	1/31/2020		6/7/2018	Completion Criteria: Complete remediation, closeout sampling, issuing the closeout verification package, and backfill of the 618-10 Burial Ground.
KPP 2	Complete the Remediation of the 316-4 and 600-63 Waste Sites	1/31/2020	1/25/2018 (A)		The 316-4 Waste Site closeout verification package (CVP) was issued on January 25, 2018, completing requirements of KPP 2.
	CD-4 Closeout	1/31/2020		9/30/2018	

## GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None to report at this time.

## DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
RL and Regulator (EPA) Review of closeout verification package (CVP) and Waste Site Reclassification Form for 618-10 Burial Ground	3/26/18 (A)	5/9/18

# Appendix C.4

## RL-0041\_C1 – Project 618-10, 316-4 and 600-63 Waste Sites

### Contract Performance Reports

Format 1 - Work Breakdown Structure

Format 2 - Organizational Categories

Format 3 - Baseline

Format 4 - Staffing

Format 5 - Explanation and Problem Analysis



April 2018  
CHPRC-2018-04, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

CLASSIFICATION (When Filled In)

**CONTRACT PERFORMANCE REPORT  
FORMAT 1 - WORK BREAKDOWN STRUCTURE**

DOLLARS IN

Thousands of \$

FORM APPROVED  
OMB No. 0704-0188

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>		<b>4. REPORT PERIOD</b>	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME PARS II - RL-0041.C1 Base Funded Nuc Fac D&D River Corr		a. NAME PARS II - RL-0041.C1 Base Funded Nuc Fac D&D River Corr		a. FROM (YYYYMMDD) 2018 / 03 / 26	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 04 / 22	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> X YES <input checked="" type="checkbox"/> (YYYYMMDD) 2009 / 09 / 18			

<b>5. CONTRACT DATA</b>								
a. QUANTITY 1	b. NEGOTIATED COST 0	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 68,921	d. TARGET PROFIT/FEE 0	e. TARGET PRICE 0	f. ESTIMATED PRICE 47,847	g. CONTRACT CEILING 0	h. ESTIMATED CONTRACT CEILING 47,847	i. DATE OF OTB/OTS (YYYYMMDD)

<b>6. ESTIMATED COST AT COMPLETION</b>				<b>7. AUTHORIZED CONTRACTOR REPRESENTATIVE</b>					
MANAGEMENT ESTIMATE AT COMPLETION (1)		CONTRACT BUDGET BASE (2)		VARIANCE (3)		a. NAME (Last, First, Middle Initial) Dickerson, Kala K		b. TITLE Prime Contract Compliance Manager	
a. BEST CASE 47,847						c. SIGNATURE		d. DATE SIGNED (YYYYMMDD)	
b. WORST CASE 48,914									
c. MOST LIKELY 47,847		68,921		21,074					

<b>8. PERFORMANCE DATA</b>																	
CAPN.PBS Control Account.PARS 2 WBS (3)		CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
ITEM (1)	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)	
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)							
RL-0041 Nuc Fac D&D - RC Closure Proj																	
RL_0041_C1.05.02 618-10 Burial Ground	877	590	562	-287	28	49,233	52,487	40,510	3,254	11,977	0	0	0	56,014	43,021	12,993	
RL_0041_C1.05.03 316-4 Waste Site	0	0	0	0	0	11,183	11,183	4,259	0	6,924	0	0	0	11,183	4,259	6,924	
RL_0041_C1.05.04 600-63 Waste Site	63	58	0	-5	58	1,507	1,594	445	88	1,150	0	0	0	1,611	445	1,167	
RL_0041_C1.05.06 RCC CD 4 Closeout and Doc	13	13	2	0	11	41	41	3	0	39	0	0	0	112	122	-10	
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
d. UNDISTRIBUTED BUDGET														0	0	0	
e. SUBTOTAL	953	661	563	-292	98	61,964	65,305	45,216	3,341	20,089	0	0	0	68,921	47,847	21,074	
f. MANAGEMENT RESERVE														0			
g. TOTAL	953	661	563	-292	98	61,964	65,305	45,216	3,341	20,089	0	0	0	68,921			

<b>9. RECONCILIATION TO CONTRACT BUDGET BASELINE</b>																
a. VARIANCE ADJUSTMENT																
b. TOTAL CONTRACT VARIANCE																
										3,341		20,089				

CLASSIFICATION (When Filled in)

**CONTRACT PERFORMANCE REPORT  
FORMAT 2 - ORGANIZATIONAL CATEGORIES**

DOLLARS IN Thousands of \$

FORM APPROVED  
OMB No. 0704-0188

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>		<b>4. REPORT PERIOD</b>	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME PARS II - RL-0041.C1 Base Funded Nuc Fac D&D River Corr		a. NAME PARS II - RL-0041.C1 Base Funded Nuc Fact D&D River Corr		a. FROM (YYYYMMDD) 2018 / 03 / 26	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 04 / 22	
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE NO <input type="checkbox"/> X YES (YYYYMMDD) 2009 / 09 / 18			

WBS FOC Control Account.PARS 2 WBS (3)  ITEM (1)	CURRENT PERIOD						CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)	
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)							
041.6 - 618 10 Projects																	
RL_0041_C1.05.02 618-10 Burial Ground	877	590	562	-287	28	49,233	52,487	40,510	3,254	11,977	0	0	0	56,014	43,021	12,993	
RL_0041_C1.05.03 316-4 Waste Site	0	0	0	0	0	11,183	11,183	4,259	0	6,924	0	0	0	11,183	4,259	6,924	
RL_0041_C1.05.04 600-63 Waste Site	63	58	0	-5	58	1,507	1,594	445	88	1,150	0	0	0	1,611	445	1,167	
RL_0041_C1.05.06 RCC CD 4 Closeout and Documenta	13	13	2	0	11	41	41	3	0	39	0	0	0	112	122	-10	
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
d. UNDISTRIBUTED BUDGET																	
e. SUBTOTAL (Performance Measurement Baseline)	953	661	563	-292	98	61,964	65,305	45,216	3,341	20,089	0	0	0	68,921	47,847	21,074	
f. MANAGEMENT RESERVE														0			

CONTRACT PERFORMANCE REPORT													Form Approved OMB No. 0704-0188					
FORMAT 3 - BASELINE													DOLLARS IN THOUSANDS					
1. CONTRACTOR CH2M HILL Plateau Remediation Company b. LOCATION: Richland, WA			2. CONTRACT a. NAME: Plateau Remediation Contract b. NUMBER: RL14788 c. TYPE: CPAF d. SHARE RATIO:				3. PROGRAM a. NAME: PARS II - RL-0041.C1 Base Funded Nuc Fact D&D River Corr b. PHASE: Plateau Remediation Contract c. EVMS ACCEPTANCE: NO YES X 9/18/2009						4. REPORT PERIOD a. FROM: 2018/03/26 b. TO: 2018/04/22					
5. CONTRACT DATA																		
a. ORIGINAL NEGOTIATED COST 0			b. NEGOTIATED CONTRACT CHANGE \$0		c. CURRENT NEGOTIATED COST (A + B) \$0		d. ESTIMATED COST AUTH UNPRICED WORK \$68,921		e. CONTRACT BUDGET BASE (C + D) \$68,921			f. TOTAL ALLOCATED BUDGET \$68,921		g. DIFFERENCE (E - F) \$0				
h. CONTRACT START DATE 6/19/2008			i. DEFINITIZATION DATE 6/19/2008		j. PLANNED COMPL DATE 9/30/2018			k. CONT COMPLETION DATE 9/30/2018			l. EST COMPLETION DATE 9/30/2018							
6. PERFORMANCE DATA																		
ITEM (1)	BCWS CUM TO DATE (2)	BCWS FOR REPORT PERIOD (3)	SIX MONTH FORECAST						BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)								UNDISTRIB BUDGET (16)	TOTAL BUDGET (17)
			+1 May-18 (4)	+2 Jun-18 (5)	+3 Jul-18 (6)	+4 Aug-18 (7)	+5 Sep-18 (8)	+6 Oct-18 (9)	FY09-13 (10)	FY14 (11)	FY15 (12)	FY16 (13)	FY17 (14)	FY18 (15)				
a. PM BASELINE (BEGIN OF PERIOD)	61,011	953	1,238	1,254	1,579	2,102	785	0	0	0	0	3,497	47,591	17,833	0	68,921		
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																		
RL_0041_C1.05.02 618-10 Burial Ground																		
None at this time																		
RL_0041_C1.05.03 316-4 Waste Site																		
None at this time																		
RL_0041_C1.05.04 600-63 Waste Site																		
None at this time																		
c. PM BASELINE (END OF PERIOD)																		
	61,964	953	1,238	1,254	1,579	2,102	785	0	0	0	0	3,497	47,591	17,833	0	68,921		

**CONTRACT PERFORMANCE REPORT  
FORMAT 4 - STAFFING**

Dollars in: FTE

FORM APPROVED  
OMB No. 0704-0188

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>		<b>4. REPORT PERIOD</b>	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME PARS II - RL-0041.C1 Base Funded Nuc Fac D&D River Corr		a. NAME PARS II - RL-0041.C1 Base Funded Nuc Fact D&D River Corr		a. FROM (YYYYMMDD) 2018 / 03 / 26	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 04 / 22	
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

WBS.FOC Control Account.PARS 2 WBS (3) ORGANIZATIONAL CATEGORY (1)		ACTUAL CURRENT PERIOD (2)	ACTUAL END OF CURRENT PERIOD (Cumulative) (3)	FORECAST (Non-Cumulative)										AT COMPLETION (15)	
				SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS					
				+1 MAY 2018 (4)	+2 JUN 2018 (5)	+3 JUL 2018 (6)	+4 AUG 2018 (7)	+5 SEP 2018 (8)	+6 OCT 2018 (9)	1st QTR FY19 (10)	2nd QTR FY19 (11)	3rd QTR FY19 (12)	FY19-LC (13)		ATCOMPLETE (14)
041.6 - 618 10 Projects															
RL_0041_C1.05.02 618-10 Burial Ground		16	1212	17	13	3	3	3	0	0	0	0	0	0	1253
RL_0041_C1.05.03 316-4 Waste Site		0	69	0	0	0	0	0	0	0	0	0	0	0	69
RL_0041_C1.05.04 600-63 Waste Site		0	13	0	0	0	0	0	0	0	0	0	0	0	13
RL_0041_C1.05.06 RCC CD 4 Closeout and Documentation		0	0	1	1	1	1	1	0	0	0	0	0	0	4

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT

FORMAT 5 - Explanations and Problem Analysis

FORM APPROVED  
OMB No. 0704-0188

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>		<b>4. REPORT PERIOD</b>	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME 041.6 - 618 10 Projects		a. FROM (YYYYMMDD) 2018 / 03 / 26	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 04 / 22	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE No X Yes (YYYYMMDD) 2009 / 09 / 18			

**5. Evaluation**

**Direct Projects**

	Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Current:	952.9	661.0	563.5	-291.9	-30.6%	97.5	14.8%	0.69	1.17
Cumulative:	61,963.6	65,305.1	45,215.7	3,341.5	5.4%	20,089.4	30.8%	1.05	1.44
	<b>BAC</b>	<b>EAC</b>	<b>VAC in \$</b>	<b>VAC in %</b>	<b>TCPI to BAC</b>	<b>TCPI to EAC</b>			
At Complete:	68,920.9	47,847.2	21,073.7	30.6%	0.15	1.37			

**Explanation of Variance/Description of Problem:**

**CURRENT MONTH**  
The current month unfavorable schedule variance is caused by infrastructure demobilization activities at the 618-10 Burial Ground that have been re-sequenced, causing the completion of some activities to be delayed. The project still anticipates that demobilization will finish ahead of schedule.  
The current month cost variance is partially due to resource sharing and staff attrition that resulted in a reduction in staffing.

**CONTRACT TO DATE**  
The cumulative schedule variance is within reporting thresholds.  
The cumulative favorable cost variance is partially due to the sharing of resources and materials among the projects, which has resulted in fewer purchased materials and lower labor costs. Attrition has led to a reduction in staffing and in cost with work still being completed as planned with the resources left. In addition, excavation efficiencies at the 316-4 Waste Site reduced the total volume of soil to be removed, and the availability of existing crews to perform backfill scope at both the 316-4 Waste Site and the 618-10 Burial Ground instead of hiring a separate subcontractor resulted in cost savings.

**VARIANCE AT COMPLETION**  
The favorable variance at completion reflects the efficient use of shared resources and materials amongst the 618-10 Burial Ground Complex projects. Attrition has also led to a reduction in staffing and in cost with work still being completed as planned with the resources left. Excavation efficiencies and the ability to use existing crews to perform backfill instead of hiring a separate subcontractor at the 618-10 Burial Ground and 316-4 Waste Site reduced the total cost to complete the project, and the optimization of resources and equipment at the 618-10 Burial Ground Complex reduced the total cost to complete excavation at the 600-63 Waste Site.

**IMPACTS**  
There are no current impacts to the project schedule or cost.

**Corrective Action:**  
Corrective Action:  
None.

- Monthly Summary (to include technical causes of VARs, Impacts) and Corrective Action(s):**
- Schedule Margin Analysis: N/A, pending definitization of the scope.
  - IMS Data dictionary Changes: None in the month of April.
  - Forecast Schedule with No Baseline: None in the month of April.
  - UB Balance: N/A
  - Negative ACWP: None in the month of April.
  - EAC Analysis: Best Case: \$47.8M; Most Likely: \$47.8M; Worst Case: \$48.9M
  - Negative CV > VAC: N/A
  - MR Transactions: None in the month of April.
  - Freeze Period Changes: None in the month of April.
  - Retroactive Changes: None in the month of April.
  - EVT Changes: None in the month of April.