

# Monthly Performance Report

February 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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P.O. Box 1600  
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**APPROVED**  
*By Janis D. Aardal at 2:51 pm, Mar 22, 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,  
DE-AC06-08RL14788  
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February 2018  
CHPRC-2018-02, Revision 0

## CONTENTS

EXECUTIVE SUMMARY .....	2
TARGET ZERO PERFORMANCE .....	4
KEY ACCOMPLISHMENTS .....	5
MAJOR ISSUES.....	5
EARNED VALUE MANAGEMENT .....	6
FUNDING ANALYSIS .....	9
BASELINE CHANGE REQUESTS .....	10
SELF-PERFORMED WORK.....	13
GOVERNMENT FURNISHED SERVICES AND INFORMATION.....	14
DOE ACTIONS / DECISIONS .....	14

## PROJECT BASELINE SUMMARY SECTIONS

Section A – Nuclear Materials Stabilization and Disposition of PFP (RL-0011) .....	A
Section B – Spent Nuclear Fuel Stabilization and Disposition (RL-0012) .....	B
Section C – Solid Waste Stabilization and Disposition (RL-0013) .....	C
Section D – Soil and Groundwater Remediation Project (RL-0030) .....	D
Section E – Nuclear Facility D&D, Remainder of Hanford (RL-0040).....	E
Section F – Nuclear Facility D&D, River Corridor (RL-0041).....	F
Section G – FFTF Closure (RL-0042) .....	G

## APPENDICES

- 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 February. Major accomplishments included:

- **Plutonium Finishing Plant (PFP) Closure Project:** At PFP, stabilization and recovery efforts continue following December's contamination spread. Routing surveys, fixative application, and briefings for employees across the site are ongoing. In February, resources across the company helped pull together Revision 1 of the draft root cause evaluation, which incorporates worker input.
- **618-10 Burial Ground Remediation Project:** Workers are more than 80 percent complete with backfill at the 618-10 Burial Ground. The team is expected to complete backfill in March 2018.
- **Soil and Groundwater Remediation Project (S&GRP):** The S&GRP team is optimizing pump and treat facilities by making repairs and upgrades to ion exchange vessels, which are used to treat contaminated groundwater. This improvement will increase reliability of groundwater treatment facilities. Upgrades were made in three pump and treat facilities, optimizing more than a dozen vessels. Ongoing operations have treated more the 1 billion gallons of water this fiscal year.
- **Waste and Fuels Management Project (W&FMP):** The team at the Waste Encapsulation and Storage Facility (WESF) is using the Capsule Dimensional Verification tool that was recently developed at the Maintenance and Storage Facility (MASF) to measure the capsules in the pool cells. The dimensional verification ensures that roundness, diameter, length, and warping will not prevent insertion into the dry storage configuration.
- **K Basins Operations and Plateau Remediation Project (KBO&PR):** The Sludge Removal Project has made significant progress in the Contractor Operational Readiness Review (ORR). The team is performing operations demonstrations to prepare for the DOE ORR. Intermittent Constant Air Monitor alarms are being investigated. On the Central Plateau, the T Plant team completed an assessment and is continuing proficiency runs.
- **324 Building Disposition Project:** C Cell clean out is now complete. Initial Factory Acceptance Testing (FAT) for the Mockup Camera & Lighting (C&L) System and Remote Excavating Arm (REA) System components have been completed.
- **Plutonium Uranium Extraction Plant (PUREX) Tunnel:** The Project Technical Services (PTS) team used a mockup to demonstrate and perfect the technique to gain access to a riser on PUREX Tunnel 2. Using these mockups enhances safety by allowing workers to master the skills needed and solve any potential issues before performing the actual work. Video and radiological monitoring was completed in the first riser, and the results are being evaluated.

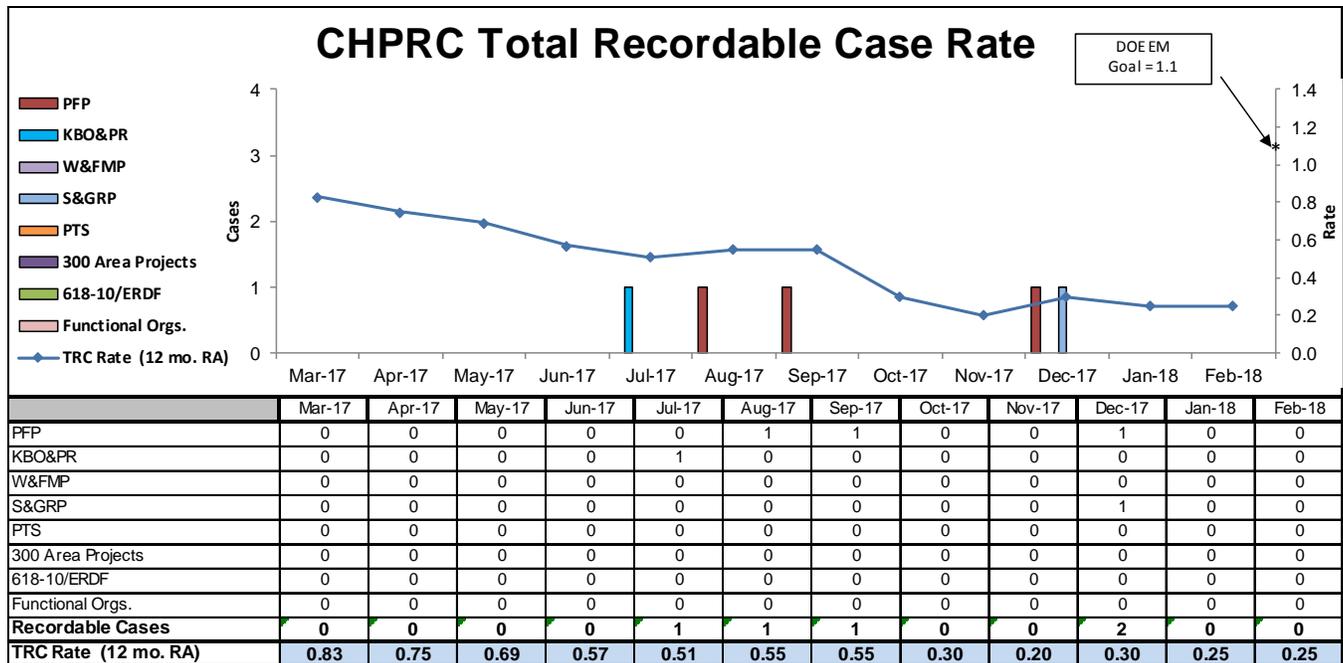


*A Nuclear Chemical Operator is operating a manipulator at WESF during training.*

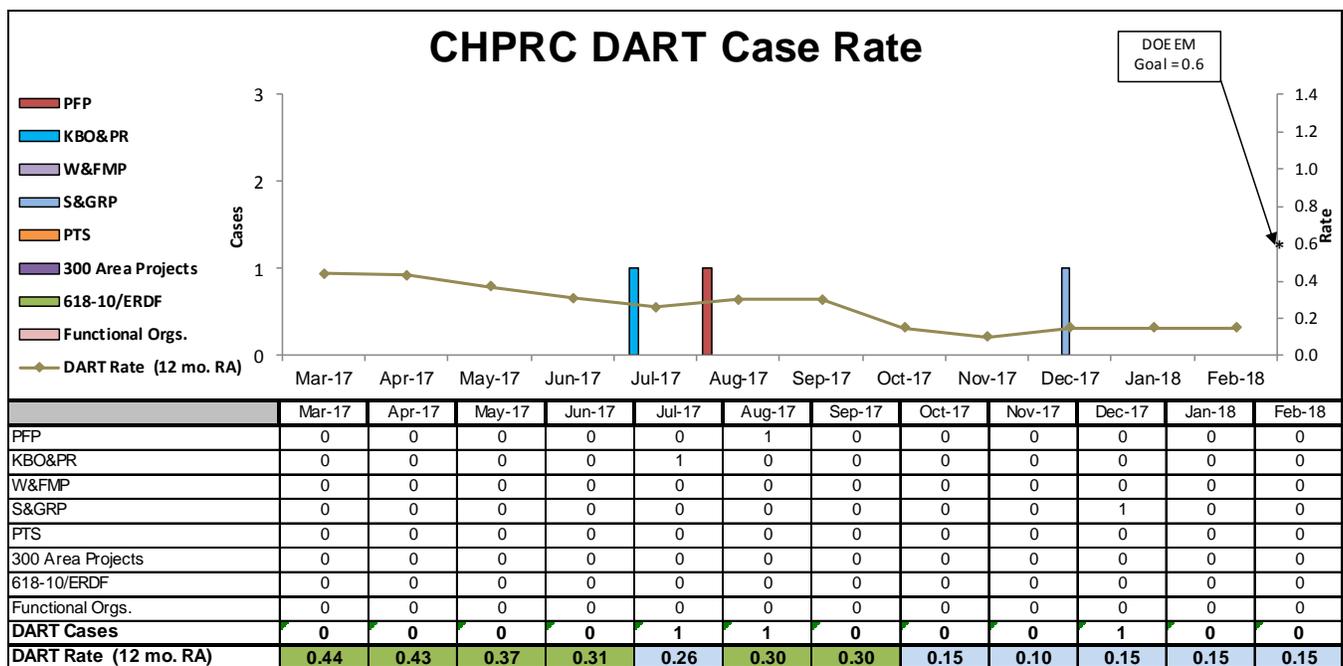
- The President's Zero Accident Council (PZAC) meeting for February was hosted by W&FMP. The three main ideas were:
  - Healthy Goal Setting.
  - Preventative Care and Awareness.
  - Stress Management.
- Four "Thinking Target Zero" (TTZ) bulletins were published to convey important occupational, safety, health, and environmental messages:
  - Heart Health Month.
  - Environmental Management System ISO 14001:2015.
  - Voluntary Protection Program (VPP) – 2018 Safety Improvement Plan.
  - Natural Radioactive Materials.
- *Weekly Safety Tailgate* briefing packages communicated relevant topics and safety information to the workforce:
  - Three Lessons Learned:
    - Avoid stepping onto unstable surfaces.
    - Unreliable cable terminal – offsite.
    - Failure to inspect powered air purifying respirator (PAPR) Assembly prior to entry – offsite.
  - Injuries.
  - Weekly Ethics Moments.
  - Vehicle events.
  - Safe driving reminders.
  - Looking out for each other.
  - Winter safety.
  - Medications at work.
  - CHPRC Safety Focus.
  - Security reminder.
  - Watch for wildlife while driving.

## TARGET ZERO PERFORMANCE

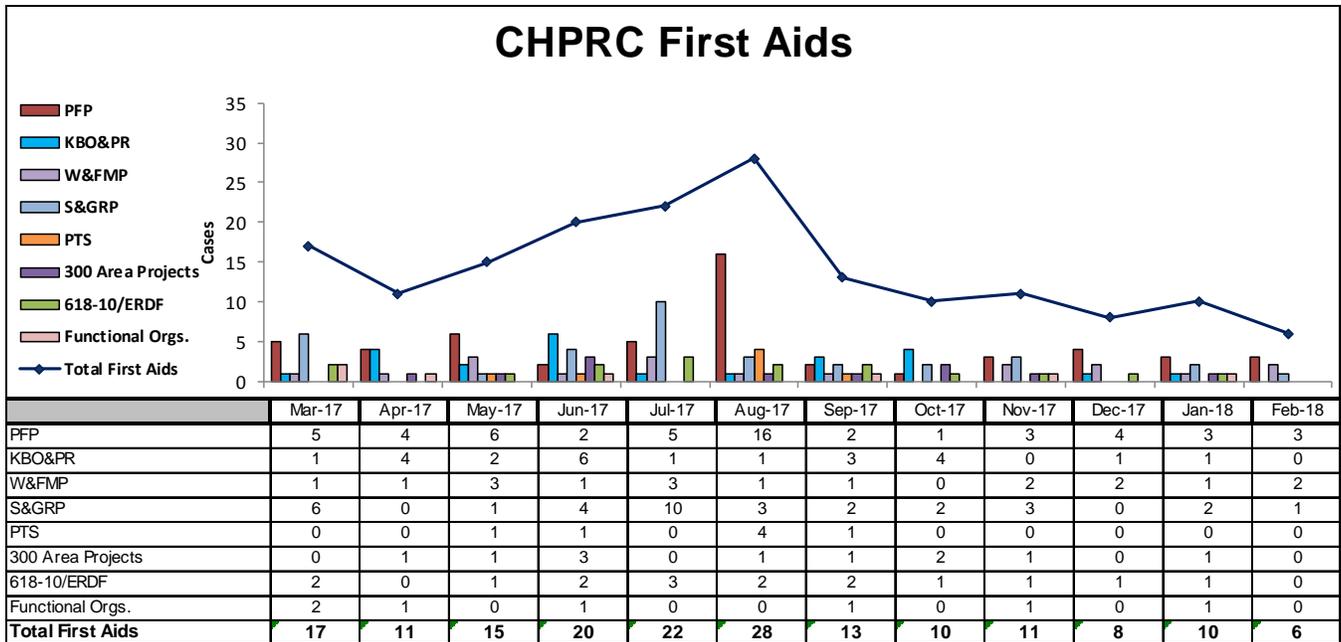
CHPRC continued focusing on integrating and implementing safety programs in all program and project areas.



Total Recordable Injury Case (TRC) Rate: The 12-month rolling average TRC rate of 0.25 is based on a total of five Recordable injuries. February had no Recordable cases.



Days Away, Restricted or Transferred (DART) Workdays Case Rate: The 12-month rolling average DART rate of 0.15 is based upon a total of three Days Away cases. February had no DART cases.



First Aid Case Summary: CHPRC reported six First Aid cases in February. The contributors were five sprains/strains/pains and one misc. (burns, rashes, repetitive motion, etc.) injury. In addition, two self-treat cases were reported in February.

## 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 February month-end, there was a backlog of 52 undefinitized change proposals (CPs), requests for equitable adjustments (REAs), rough order magnitudes (ROMs), and responses to requests for proposals (RFPs) – totaling approximately \$431 million in net value with 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:

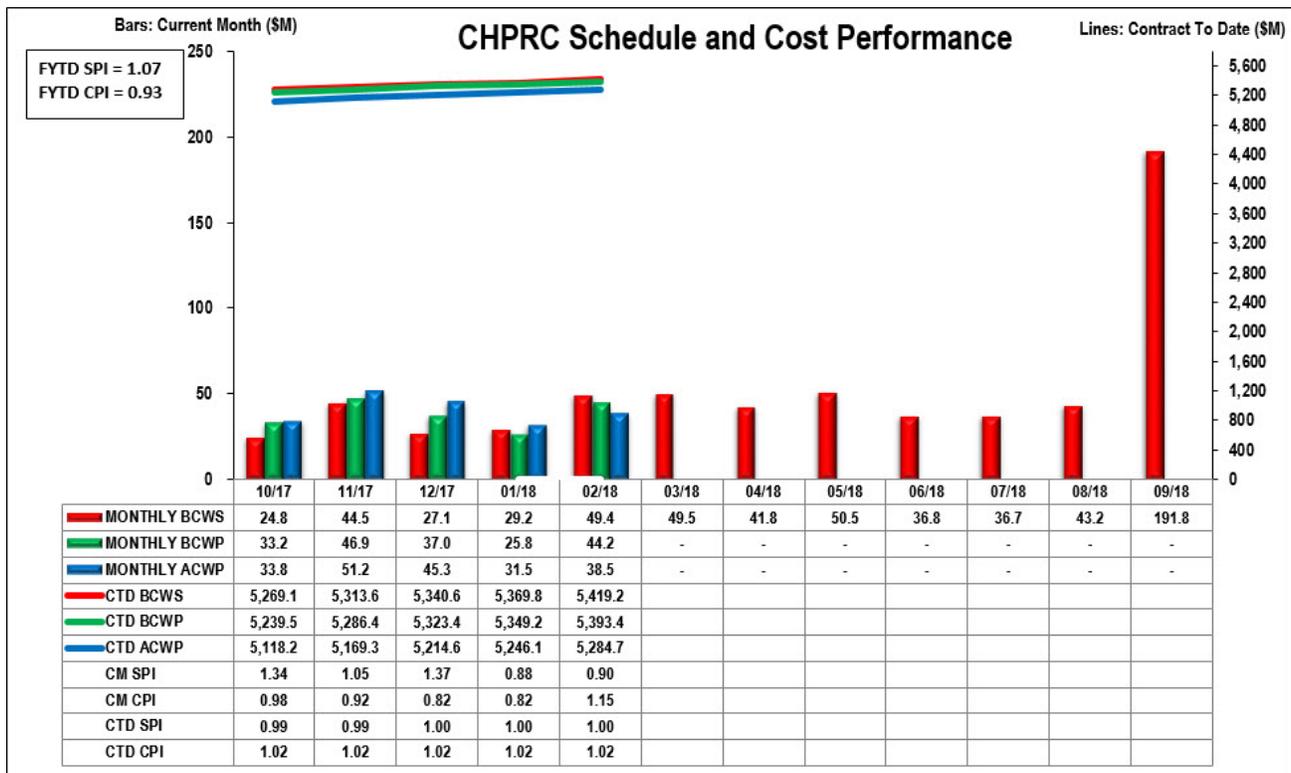
- CHPRC continues to discuss proposed alignment strategy with RL.
  - Negotiate in-process changes.
  - Realign remaining contract cost for scope consistent with FY2018 Budget Guidance.

- o Develop 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 \$55.1 million of BCWS in planning packages and \$97.3 million of BCWS in undistributed budget.

	\$M					\$M					\$M		
	Current Period					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			
RL-0011 - Nuclear Materials Stab & Disp PFP	0.0	0.0	5.4	(0.0)	(5.4)	988.5	973.0	1094.8	(15.6)	(121.9)	988.7	1,163.8	(175.1)
RL-0012 - SNF Stabilization & Disposition	4.0	3.7	3.9	(0.2)	(0.2)	719.5	719.1	687.4	(0.3)	31.8	740.4	713.3	27.1
RL-0013 - Solid Waste Stab & Disposition	15.0	13.4	8.1	(1.6)	5.4	1239.3	1237.4	1155.7	(1.9)	81.7	1,359.9	1,273.4	86.5
RL-0030 - Soil & Water Rem-Grndwtr/Vadose	11.9	12.2	9.7	0.3	2.5	1441.0	1434.5	1409.0	(6.6)	25.4	1,564.5	1,534.4	30.1
RL-0040 - Nuc Fac D&D - Remainder	3.5	3.3	2.8	(0.3)	0.5	470.1	467.8	441.0	(2.3)	26.8	504.6	480.3	24.3
RL-0041 - Nuc Fac D&D - RC Closure Project	14.8	11.4	8.5	(3.4)	2.9	535.7	536.5	475.9	0.8	60.6	685.0	607.5	77.5
RL-0042 - Nuc Fac D&D - FFTF Project	0.2	0.2	0.1	(0.0)	0.0	25.1	25.1	20.8	0.0	4.3	26.5	22.6	3.9
<b>Total</b>	<b>49.4</b>	<b>44.2</b>	<b>38.5</b>	<b>(5.2)</b>	<b>5.7</b>	<b>5,419.2</b>	<b>5,393.4</b>	<b>5,284.7</b>	<b>(25.8)</b>	<b>108.7</b>	<b>5,869.5</b>	<b>5,795.3</b>	<b>74.3</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 \$74.3 million, with \$56.7 million of management reserve (MR), for a total positive variance of \$131.0 million. For February, the project was 10.5 percent behind schedule and 12.8 percent under planned cost. Contract to date (CTD), the project was 0.5 percent behind schedule and 2.0 percent under planned cost.

The VAC decreased \$10.4 million from last month due to an increase to project breakdown structure (PBS) RL-0011's forecast. A more accurate estimate at completion (EAC) for PBS RL-0011 will be developed upon completion and approval of a recovery plan addressing the root causes of the unplanned releases.

The current month (CM) negative schedule variance is primarily due to PBS RL-0041 backfill of the 316-4 Waste Site finishing ahead of schedule when it was originally planned to be completed in March. In addition, the 300-296 project continues to experience delays in procurement/fabrication of the 324 equipment resulting from design changes and fabrication difficulties, and delays in 324 interference removal, penetration sealing, and hot cell cleanout activities due to an electrical safety incident.

Also contributing to the negative schedule variance is PBS RL-0013 planned FY2018 work scope completed in FY2017 for Large Box Repackaging; delays in W-135 detailed design for Capsule Storage Area (CSA) due to delayed subcontract award as a result of additional rounds of clarifications extending award into the previous holiday period; and Cask Storage System (CSS) detailed design due to a variance in the baseline and the contractor schedule, which is not anticipated to impact the design completion date. Based on the submitted and accepted subcontractor schedule, recovery is projected by the end of the second quarter.

The CM positive cost variance is primarily due to PBS RL-0013 commercial repack of transuranic mixed (TRUM) large boxes and was authorized as part of the annual planning exercise for FY2018 via Correspondence Number 1704615A. The prior authorized scope, which was not budgeted in previous performance periods, was incorporated in February based on approved baseline change requests (BCRs), and performance for prior work executed was taken in the current period.

Also contributing to the positive cost variance is PBS RL-0041, where the 618-10 Burial Ground project experienced cost efficiencies in the current period by using existing crews to perform backfill, instead of hiring an additional subcontractor. 100K Closure has fewer labor and Mission Support Alliance, LLC, (MSA) subcontract resources charging to level of effort (LOE) work packages. Some resources have been diverted to other priority work scope, and some resource sharing has occurred.

Additionally, contributing to the positive cost variance is PBS RL-0030 implementation of BCR-030-011R0 – Incorporate Scope Changes – RL-0030, in which the FY2018 budget was incorporated into the baseline in the current period for preparation of the Decisional Draft (DD) 100-NR-2 remedial investigation/feasibility study (RI/FS) report, 200-DV-1 shallow soil characterization, and 200-DV-1 MNA evaluation. Also, The Groundwater (GW) Monitoring and Performance Assessment account has several contributors. The geophysical logging subcontract was competitively rebid with a subsequent reduction in contract costs. The current month savings in GW lab analysis and data management account due to labor resources being used to support audit preparation (different account) and lower subcontract charges than planned due to lab efficiencies; and the sampling group has worked to improve continuity in fieldwork and increased flexibility by improving each team's sampling qualifications. This preparation has resulted in fewer failed sampling trips and less down time due to unplanned maintenance. This is offset, in part, by well maintenance that has experimented with different clean-out processes for the 200-ZP-1 injection wells to try to address bio-fouling in the 200 West Pump and Treat System, resulting in increased chemical and labor costs.

The positive cost variance is offset by PBS RL-0011 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 CHPRC corporate resources performing an independent assessment of the Root Cause Analysis and corrective actions associated there and resources assigned to perform a CHPRC overarching Radiological Controls Assessment and PFP project specific radiological controls assessment are also contributing to this variance. In addition, impacts from the contamination event and delay in demolition activities is causing needed extensions of project management hotel load resources, without budgeted cost of work scheduled, to support the remaining D&D work scope until the facility completes demolition activities.

## 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	79.9	0.1
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	38.7	33.9	4.8
RL-0012	15-D-401 Sludge Retrieval Project	28.8	17.8	11.0
RL-0013	Waste and Fuels Management Project	141.1	151.7	(10.6)
RL-0013	Management of Cesium and Strontium Capsules	6.5	1.4	5.1
RL-0030	Soil, Groundwater and Vadose Zone Remediation	114.3	110.6	3.7
RL-0040	Nuclear Facility D&D, Remainder of Hanford	60.3	38.0	22.2
RL-0041	Nuclear Facility D&D, River Corridor	143.6	151.5	(7.8)
RL-0042	Fast Flux Test Facility Closure	4.0	2.6	1.4
<b>Total Estimate at Complete</b>		<b>617.3</b>	<b>587.3</b>	<b>29.9</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	5.3	(5.3)
RL-0012	15-D-401 Sludge Retrieval Project	0.0	0.0	0.0
RL-0013	Waste and Fuels Management Project	0.0	(39.5)	39.5
RL-0013	Management of Cesium and Strontium Capsules	0.0	0.0	0.0
RL-0030	Soil, Groundwater and Vadose Zone Remediation	0.0	3.7	(3.7)
RL-0040	Nuclear Facility D&D, Remainder of Hanford	0.0	5.2	(5.2)
RL-0041	Nuclear Facility D&D, River Corridor	0.0	3.0	(3.0)
RL-0042	Fast Flux Test Facility Closure	0.0	0.0	0.0
<b>Total Incremental Work Scope</b>		<b>0.0</b>	<b>(22.2)</b>	<b>22.2</b>
<b>Total Fiscal Year Spend Forecast</b>				
RL-0011	Nuclear Materials Stabilization and Disposition	80.0	79.9	0.1
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	38.7	39.2	(0.5)
RL-0012	15-D-401 Sludge Retrieval Project	28.8	17.8	11.0
RL-0013	Waste and Fuels Management Project	141.1	112.3	28.9
RL-0013	Management of Cesium and Strontium Capsules	6.5	1.4	5.1
RL-0030	Soil, Groundwater and Vadose Zone Remediation	114.3	114.2	0.0
RL-0040	Nuclear Facility D&D, Remainder of Hanford	60.3	43.3	17.0
RL-0041	Nuclear Facility D&D, River Corridor	143.6	154.5	(10.9)
RL-0042	Fast Flux Test Facility Closure	4.0	2.6	1.4
<b>Total</b>		<b>617.3</b>	<b>565.1</b>	<b>52.2</b>

#### Funds/Variance Analysis

For February, FY2018 projected funding remains the same at \$617.3 million. The spending forecast reduced overall by \$10.0 million, which includes a \$3.6 million credit G&A variance distribution, as well as reductions incorporated into RL-0012, RL-0030, and RL-0041.

## BASELINE CHANGE REQUESTS

In February 2018, CHPRC approved and implemented 13 baseline change requests (BCRs) into the PMB. Seven of the 13 BCRs impacted the PMB. Each change request is identified in the table below:

Change Request #	Title	PBS	Summary of Change
BCR-013-18-010R0	<i>Incorporate Remaining FY2018 Work Scope for CO #310, CWC Lighting</i>	RL-0013	This BCR incorporated the additional scope associated for Change Order (CO) #310, Solid Waste Operations Complex (SWOC) Hazard Mitigation Activities (Upgrading CWC Lighting). This BCR increased the PMB by \$1,084K.
BCR-013-18-013R0	<i>Incorporate Scope Changes –RL-0013</i>	RL-0013	This BCR incorporated proposed scope changes that are additions to the PMB. This BCR increased the PMB by \$15,683K.
BCR-013-18-015R0	<i>Incorporate Remaining FY2018 Work Scope for CO #323 Management of Hanford Sitewide TSD</i>	RL-0013	This BCR incorporated the additional scope associated for Change Order (CO) #323, <i>Management of the Hanford Site Transportation Safety Document</i> . This BCR increased the PMB by \$263K.
BCR-030-18-011R0	<i>Incorporate Scope Changes –RL-0030</i>	RL-0030	This BCR incorporated proposed scope changes that are additions to the PMB. This BCR increased the PMB by \$6,588K.
BCR-030-18-012R0	<i>RL-0030 EVM Health Adjustments</i>	RL-0030	This BCR modified the schedule to address scheduling best practices at the activity level involving logic and earned value management. There is no change to RL-0030 scope. This BCR did not change the PMB value.
BCR-040-18-008R0	<i>Incorporate Scope Changes –RL-0040</i>	RL-0040	This BCR incorporated proposed scope changes that are additions to the PMB. This BCR increased the PMB by \$1,413K.
BCR-041-18-005R1	<i>RL-0041 Correct WFR WBS Assignment</i>	RL-0041	This BCR corrected the error and transfers the RL-0041 WFR BCWS and G&A Adjustment from WBS 041.91.01.01.01 into OA coded WBS 041.91.01.01.02 – RL-41 Workforce Restructuring-A. This BCR did not change the PMB value.
BCR-041-18-012R0	<i>Incorporate Remaining FY2018 Scope for CO #319, Garnet Filter Media Removal</i>	RL-0041	This BCR incorporated the additional scope associated for Change Order (CO) #319, <i>Garnet Filter Media Removal</i> . This BCR increased the PMB value by \$1,540K.
BCR-041C-18-013R0	<i>Incorporate CO #306 Scope Revisions for RCC Project Transition Activities</i>	RL-0041	This BCR incorporated the remaining scope for Change Order (CO) #306, Remainder of RCC Project Transition Activities. The authorized scope added by this BCR is to complete the CD-4 closure activities associated with the RCC Project Scope. This BCR did not change the PMB value.
BCRA-PRC-18-012R0	<i>Schedule Activity Title Revisions to Support Scheduling Software Upgrade</i>	RL-0013, RL-0030, RL-0041	This BCR modified activity titles as necessary due to a Unicode conversion needed to support the upcoming software upgrade. This BCR did not change the PMB value.
BCR-PRC-18-013R0	<i>Incorporate Scope Changes for FY2017 WFR</i>	RL-0011, RL-0012, RL-0013, RL-0030, RL-0041, RL-0042	This BCR incorporated the FY2017 Workforce Restructuring (WFR) Program into the PMB. This BCR did not change the PMB value.

BCRA-PRC-18-015R0	<i>HPIC Updates February 2018</i>	000s, RL-0011, RL-0012, RL-0013, RL-0030, RL-0040, RL-0041, RL-0042	This BCR incorporated February FY2018 Hanford Programs Integrated Control Module (HPIC) updates. This BCR did not change the PMB value.
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The Allocated (Distributed) Budget increased by \$26,571K.

#### Undistributed Budget Activity

BCR Number	Title	PBS	Fiscal Year	UB
BCR-PRC-18-014R0	<i>Undistributed Budget Adjustments February 2018</i>	RL-0013, RL-0030, RL-0040, RL-0041	2018	\$-31,249K

The Undistributed Budget decreased by \$31,249K.

#### Management Reserve Activity

BCR Number	Title	PBS	Fiscal Year	MR
BCR-013-18-013R0	<i>Incorporate Scope Changes –RL-0013</i>	RL-0013	2018	\$1,240K
BCR-030-18-011R0	<i>Incorporate Scope Changes –RL-0030</i>	RL-0030	2018	\$869K
BCR-PRC-18-013R0	<i>Incorporate Scope Changes for FY2017 WFR</i>	RL-0011, RL-0012, RL-0013, RL-0030, RL-0041, RL-0042	2018	\$5,133K

Overall, there was an increase in MR of \$7,242K during February.

#### 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 February.

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).

**February 2018 Summary of Changes**

	FY 2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FYs 2014-2018	Contract Period Total	Total PMB
<b>January 2018 Estimate</b>									
PMB	3,391,477	391,653	471,323	504,826	485,028	629,903	2,482,732	5,874,208	5,874,208
MR	0	0	0	0	0	49,475	49,475	49,475	49,475
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>698,237</b>	<b>2,618,308</b>	<b>6,165,289</b>	<b>6,165,289</b>
<b>February 2018 Change</b>									
<b>PMB</b>									
Change to PMB	0	0	0	0	0	-4,677	-4,677	-4,677	-4,677
<b>MR</b>									
Change to MR	0	0	0	0	0	7,242	7,242	7,242	7,242
<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>2,565</b>	<b>2,565</b>	<b>2,565</b>	<b>2,565</b>
<b>February 2018 Estimate</b>									
PMB	3,391,477	391,653	471,323	504,826	485,028	625,226	2,478,055	5,869,531	5,869,531
MR	0	0	0	0	0	56,717	56,717	56,717	56,717
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>700,802</b>	<b>2,620,873</b>	<b>6,167,854</b>	<b>6,167,854</b>

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

	FY2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2014-2018	Total
<b>January 2018 MR Totals</b>								
RL-0011	0	0	0	0	0	5,988	5,988	5,988
RL-0012	0	0	0	0	0	9,885	9,885	9,885
RL-0013	0	0	0	0	0	3,725	3,725	3,725
RL-0030	0	0	0	0	0	18,415	18,415	18,415
RL-0040	0	0	0	0	0	382	382	382
RL-0041	0	0	0	0	0	10,897	10,897	10,897
RL-0042	0	0	0	0	0	183	183	183
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>49,475</b>	<b>49,475</b>	<b>49,475</b>
<b>February 2018 MR Changes/Utilization</b>								
RL-0011	0	0	0	0	0	1,510	1,510	1,510
RL-0012	0	0	0	0	0	373	373	373
RL-0013	0	0	0	0	0	2,459	2,459	2,459
RL-0030	0	0	0	0	0	1,743	1,743	1,743
RL-0040	0	0	0	0	0	0	0	0
RL-0041	0	0	0	0	0	1,150	1,150	1,150
RL-0042	0	0	0	0	0	6	6	6
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7,242</b>	<b>7,242</b>	<b>7,242</b>
<b>February 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	20,158	20,158	20,158
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>56,717</b>	<b>56,717</b>	<b>56,717</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 - 2/28/2018				Planned Subcontracting:	\$2,720,084,369
Reporting Category				Contract-to-date awards:	\$2,684,637,625
				Bal remaining to award:	\$35,446,744
	\$ Value	%	Goal %	Goal award\$	Bal to Goal
SB	\$1,509,926,515	56.24%	49.3%	\$1,341,001,594	-\$168,924,921
SDB	\$286,951,352	10.69%	8.2%	\$223,046,918	-\$63,904,434
SWOB	\$281,605,273	10.49%	7.5%	\$204,006,328	-\$77,598,945
HUB	\$74,668,021	2.78%	2.2%	\$59,841,856	-\$14,826,165
VOSB	\$217,090,790	8.09%	3.5%	\$95,202,953	-\$121,887,837
SDVO	\$131,174,958	4.89%	1.3%	\$35,361,097	-\$95,813,861
NAB	\$66,688,495	2.48%	N/A		
Large	\$676,028,304	25.18%	N/A	PRC clause H.20 small business requirement ≥ 17% of CHPRC Contract Price performed by SB.	
GOVT	\$4,191,116	0.16%	N/A		
GOVT CONT	\$483,188,609	18.00%	N/A		
EDUCATION	\$117,103	0.00%	N/A	CHPRC Contract Value:	\$5,732,255,464
NONPROFIT_	\$3,941,861	0.15%	N/A	17% rqmt:	\$974,483,429
FOREIGN	\$7,244,117	0.27%	N/A	SB actual:	\$1,509,926,515
Total	\$2,684,637,625	100.00%	N/A	Bal to rqmt	-\$535,443,086

### Notes:

1. Since the CHPRC contract award in October 2008, CHPRC has subcontracted over \$2.6 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

February 2018  
CHPRC-2018-02, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

The Plutonium Finishing Plant (PFP) completed pre-demolition activities for 234-5Z facility on September 7, 2017, and demolition was initiated September 13, 2017, and is now 53 percent complete. All gloveboxes have been removed from E4 ventilation, and all preparations for demolition are complete. Initiation of demolition on the Plutonium Reclamation Facility (PRF) started in early November 2016 and is 87 percent complete. On December 18, 2017, contamination was found at the PFP project outside of the trailers in the administrative office area during a follow-up survey conducted after a spread of low-level contamination was found on December 15, 2017, outside of the expanded demolition control zones. Work was stopped after the second event, pending completion of a root cause analysis and development of a recovery plan. CHPRC is continuing to work on finalizing the root cause analysis and working with RL and regulators to develop a recovery plan to enable demolition activities to resume.

PFP Closure Project continues to maintain PFP facilities compliant with authorization agreement requirements.

Significant accomplishments in February included:

- Recovery efforts to achieve stabilization are underway associated with the December 2017 contamination event. Efforts include:
  - Application of fixative to trailers within the PFP Complex.
  - Continued maintenance applications of fixative.
  - Routine Radiological Surveys.
  - Expanded the Radiological Buffer Area (RBA).
  - Continued hauling of pit run and staging it on the east and west ends of the High Contamination Area (HCA)/Airborne Radioactivity Area (ARA).
  - Extra radiological surveys when sustained winds were 20 miles per hour or greater.

### 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
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	0 m <sup>3</sup>	3,191 m <sup>3</sup>
LLW/MLLW Shipped	0 m <sup>3</sup>	16,095 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 2. November Report 3. December Report 4. January Report 5. February Report	11/07/2017 12/07/2017 01/08/2018 02/07/2018 03/07/2018	100% 100% 100% 0% 80%

## TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1	N/A
Total Recordable Injuries	0	2	N/A
First Aid Cases	3	55	<p>02/02/18 – The employee was working swing shift and was riding the shuttle bus back from 2754 and it stopped at 278WA. When the employee stepped out of the bus, the right ankle /foot turned slightly. At the time, there was some slight discomfort, but the employee thought it may be due to another medical condition and did not report it. Over the weekend, it got worse, but the employee continued to think it was due to the other medical condition. Finally on 2/6/18, when the discomfort did not go away, the employee reported it to the supervisor and was taken to HPMC. The employee was returned to work with no restrictions. (24733)</p> <p>02/15/18 –The employee stated he was coming out of the zone and was doffing PPE in MO032. As he took off the bootie on his right foot, he felt a sharp pain in his right knee. He finished doffing, returned to 278WA and at that time was taken to HPMC by his supervision. He returned to work without restrictions. Additional follow-up with HPMC occurred on 2/21/18. Additional follow-up to occur with outside provider. (24743)</p>

	Current Month	Rolling 12 Month	Comment
			02/26/18 – Employee reported bending down to write on a box and felt/heard her knee pop. Employee didn't feel any pain but reported the event to her supervisor. Employee was taken to HPMC for evaluation and was returned to work without restrictions. (24747)
Near Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### RL-0011 Accomplishments

#### PFP Waste Operations

- No waste was shipped during February while PFP was working recovery of the December 2017 contamination event.

#### Recovery Efforts

- Recovery efforts to achieve stabilization are underway associated with the December 2017 contamination event. Efforts include:
  - Application of Fixative to trailers within the PFP Complex.
  - Continued maintenance applications of fixative.
  - Routine Radiological Surveys.
  - Expanded the Radiological Buffer Area (RBA).
  - Continued hauling of pit run and staging it on the east and west ends of the HCA/ARA.
  - Extra radiological surveys when sustained winds were 20 miles per hour or greater.

## MAJOR ISSUES

#### Issue:

- On December 18, 2017, contamination was found in the PFP project outside of the trailers in the administrative office area during a follow-up survey conducted after a spread of low-level contamination that was found on December 15, 2017, outside of the expanded demolition control zones. Surveys also found contamination on personal vehicles that had been driven off the Hanford Site.

#### Corrective Action:

- Work was stopped after the second event, pending completion of a root cause analysis, and development of corrective actions and a recovery plan.

#### Status:

- CHPRC continues the process of finalizing the root cause analysis and working with RL and regulators to develop a recovery plan to enable demolition activities to resume.
  - Some of the activities that were performed during February were:
    - Placement of sand and soil 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 a safe/compliant configuration.
- Initiation of activities to reconfigure boundaries, canister transfer areas, loadout areas, and 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.).

### 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-0011/WBS-011.OA</b>										
<b>Explanation of major changes to the project monthly spotlight chart:</b> Risk PFP-DEMO-07, <i>Removal/Extraction of Equipment Takes Longer Than Planned</i> , was moved from the realized risk section of the spotlight chart to the critical risk section. While the risk is being realized, the true risk is due to contamination spread beyond established boundaries.										
<b>Realized Risks</b> (Risks that are currently impacting project cost/schedule)										
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			<p><b>Risk Event:</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>Risk recovery 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>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. A root cause analysis is being conducted and recovery actions and expected completion dates will be identified after it has been completed. <b>During February recovery actions from the contamination spread continued. They included: Placement of sand and soil over contaminated debris and equipment to prevent further contamination spread.</b></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 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> </ul>	Risk recovery action(s)	FC Date	%	See Below	Ongoing	N/A
Risk recovery action(s)	FC Date	%								
See Below	Ongoing	N/A								

<p>PFP-DEMO-16: Contamination Spread Beyond Established Boundaries</p>	<p>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</p> <p><b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$3 million, 30 days</p>			<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" data-bbox="857 331 1546 380"> <thead> <tr> <th>Risk recovery 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>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 root cause analysis is being conducted, and recovery actions and expected completion dates will be identified after it has been completed. <b>During February</b> recovery actions from the contamination spread continued. They included: Placement of sand and soil over contaminated debris to prevent further contamination spread.</p> <ul style="list-style-type: none"> <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> </ul>	Risk recovery action(s)	FC Date	%	See Below	Ongoing	N/A
Risk recovery action(s)	FC Date	%								
See Below	Ongoing	N/A								
<p><b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)</p>										
<p><b>FY2018 Risk Triggers</b> (Risk could be realized in FY2018)</p>										
<p>PFP-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</p> <p><b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$0K, 32 days</p> <p>*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" data-bbox="857 1140 1568 1224"> <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 <b>February</b>, there were no weather impacts. However, the risk remains critical due to potential high-wind, winter weather delays, and cold temperatures having the ability to impact the planned demolition. The PFP project will continue to adjust the daily work scope to plan for projected weather impacts.</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>PFP-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</p> <p><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" data-bbox="857 1499 1555 1547"> <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 a path forward. A root cause analysis is being conducted and recovery actions and expected completion dates will be identified after it has been completed. <b>During February</b> recovery actions from the contamination spread continued. They included: <b>Continuation</b> of Radiological surveys, decontamination, and pressure washing to release trailers/vehicles/equipment.</p> <ul style="list-style-type: none"> <li>• <b>Continuation</b> 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> </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>Maintenance, repair, and rebuild of existing equipment and systems in a safe/compliant configuration.</li> <li>Continuation 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> </ul>						
<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 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>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> <p><b>Mitigation Assessment:</b> No major changes in February. 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.</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 February.										

## 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	5.4	(0.0)	-100.0%	(5.4)	-0.0%

Numbers are rounded to the nearest \$0.1 million.

#### CM Schedule Variance: (-\$0.0M/-100.0%)

The current month schedule variance is associated with recovery actions as a direct result of a contamination event that occurred on December 15, 2017. Actions include fixative applications and performance of radiological surveys. Stabilization efforts are under way and are expected to be completed early February, after which initiation of corrective actions identified from the root cause analysis of the event will be completed prior to resumption of demolition activities at PFP.

#### CM Cost Variance: (-\$5.4M/-0.0%)

The current month negative cost variance is primarily due to the 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 CHPRC corporate resources performing an independent assessment of the root cause analysis and corrective actions associated therewith and resources assigned to perform a CHPRC overarching Radiological Controls Assessment and PFP project specific radiological controls assessment are also contributing to this variance. In addition, impacts from the contamination event and delay in demolition activities is causing needed extensions of project management hotel load resources, without Budgeted Cost of Work Scheduled, to support the remaining D&D work scope until the facility completes demolition activities.

## 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	988.5	973.0	1,094.8	(15.6)	-1.6%	(121.9)	-12.5%	988.7	1,163.8	69.0	(175.1)

Numbers are rounded to the nearest \$0.1 million

#### Contract-to-Date (CTD) Schedule Variance (-\$15.6M/-1.6%)

The CTD schedule variance is within threshold.

#### CTD Cost Variance (-\$121.9M/-12.5%)

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) and support services, consistent with delayed activities, in support of completing Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-083-00A. In addition, unplanned costs to support implementation of efficiency

initiatives at PFP (i.e., foaming and PremAire Breathing Air), and increased training as a result of assignment of new Health Physics Technicians (HPT) and D&D workers (as the result of Hanford Atomic Metal Trades Council [HAMTC] lamping process) to PFP have also contributed to this variance. Additional resources to recover schedule for asbestos removal activities and to cover the additional asbestos that was 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 TRU waste disposition efforts. Unplanned shipments to Perma-Fix Northwest (PFNW) for the size reduction of 236-Z gloveboxes (i.e., galleries and MT-4), size reduction of special-handled items from 234-5Z (i.e., filterboxes, 227S and 227T gloveboxes), and E4 ducting in 234-5Z have caused additional costs to support ready-for-demo activities, which is also contributing to the unfavorable variance. Finally, unplanned work on the High Density Polyethylene (HDPE) water loop 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 the PFP, are ongoing. Assignment of CHPRC corporate resources performing an independent assessment of the root cause analysis and corrective actions associated therewith and resources assigned to perform a CHPRC overarching Radiological Controls Assessment and PFP Project specific radiological controls assessment are also contributing to this 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 fieldwork 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 have also proved to take less time than anticipated due to the main electrical power being cut outside of the building rather than performing individual isolations within the facility. Hazardous material removal and decontamination/fixative applications demonstrated effective with less effort than originally planned using more efficient methods (e.g., using powerful fans to assist with vertical fixative flow up the stack).

In addition, implementation of a baseline change request (BCR) that was processed in September 2017 to draw down on RL contingency to recover the cost impacts to the RL-0011 C.2 project associated with realization of the 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. Recognition of efficiencies associated with demolition of 242-Z, 291-Z, and 234-5ZA are also contributing to the offset of the negative variance. During December 2017, a contamination event occurred, resulting in a CHPRC management stop work impacting demolition activities until a recovery plan has been generated and corrective actions implemented therewith.

#### **Variance at Completion (-\$175.1M/-17.7%)**

The Variance at Completion (VAC) unfavorable variance is reflective of a previous inability to achieve 20 percent increased efficiency associated with time on respirator as assumed in the baseline plan. The Collective Bargaining Agreement was accepted, and efficiencies were recognized with more time on mask and implementation of the value engineering initiatives associated with high-mass gloveboxes and grouting. Extended hotel loading costs because of delays in demolition-ready and demolition activities are also driving the negative VAC.

As a result of wall removals and electrical isolations, it was discovered that approximately 10,000 feet of additional asbestos was between the walls that would need to be removed. This is a recognized risk (PFP-092-02) and has been incorporated into the VAC. Of note, CHPRC is working with RL to utilize

contingency for the additional 10,000 feet of asbestos identified during walkdowns and inspections, 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 in mid-December 2017 to reach slab-on-grade no later than December 29, 2017, which did not occur due to the contamination event that occurred on December 17, 2017, resulting in a CHPRC management stop work. A more accurate EAC and projected VAC cannot be developed until completion and approval of a recovery plan addressing the root causes of the unplanned releases.

**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	79.9	0.1
Incremental Scope Pending Change Management	0.0	0.0	0.0
RL-0011 - Total	80.0	79.9	0.1

Numbers are rounded to the nearest \$0.1 million

### Funds/Variance Analysis

Fiscal year (FY) 2018 expected required funding for the project breakdown structure (PBS) RL-0011 is \$79.9 million to allow for completion of demolition activities to achieve slab-on-grade, CD-4 closeout activities, and PFP project closeout. Projected funding is \$80.0 million.

### Critical Path Schedule

The PFP Critical Path schedule begins with the continuation of front side demo CSZ 2.5 in 234-5Z. After front side CSZ 2.5 is complete, RMC process line and RMA process line demo will come next, followed by completion of the basement of 234-5Z demolition. The 234-5Z demolition completes July 9, 2018. The 236-Z canyon demolition will then resume with completion scheduled for a September 27, 2018, meeting the requirements for the 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 December 19, 2018. The dates above are reflective of the known actions and recovery efforts associated with a contamination event that occurred in December as of February month-end closing and will be updated as more information is made available from the root cause analysis and recovery 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	PPF Facility Transition and Selection Disposition Activities	09/30/17		9/27/18	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. A root cause analysis is being conducted and recovery actions and expected completion dates will be identified after it has been completed. A total of 29 days were lost on schedule in February 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

February 2018  
CHPRC-2018-02, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

Completed Engineered Container Retrieval and Transfer System (ECRTS) Operational Acceptance Testing (OAT) of process equipment and declared readiness on January 22, 2018. The Contractor Operational Readiness Review (ORR) was initiated on January 23, 2018.

On February 1, 2018, the Contractor ORR team lead and K Basin Operations and Plateau Remediation (KBO&PR) senior management agreed to “pause” the Contractor ORR to allow for:

- Updating the primary operating procedures to institutionalize “restricted use validation” information so that simulated and/or skipped procedure steps are clearly established in the operations procedures.
- Performing and/or re-performing critical outstanding preventive maintenance and calibration activities so as not to interrupt remaining operations demonstration activities.

The Contractor ORR is forecasted to complete in early March 2018.

Receipt of Sludge Transport and Storage Container (STSC) assemblies of production run number 2 (vessels 14-24) completed on January 29, 2018, which completed PM-12-1-18.

DOE Plan of Action (POA) was issued and distributed on February 08, 2018.

The T Plant team completed their Readiness Assessment (RA) for the receipt and storage of K Basin sludge and the Startup Approval Letter was approved and issued by the CHPRC president on February 12, 2018.

Project breakdown structure (PBS) RL-0012 scope is 97.1 percent complete, with a cumulative schedule performance index (SPI) of 1.00 and a Cost Performance Index (CPI) of 1.05.

## 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	0	11	N/A
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 several monthly and quarterly routines during the period.

### KW Basin Sludge Removal Capital Asset Project

- K Basin Pre-operational Acceptance Testing (KPAT):
  - The team continues working on finalizing the KPAT test report, currently forecast to be released in March 2018.
- Readiness:
  - Completed OAT of process equipment and declared readiness on January 22, 2018. Contractor ORR was initiated on January 23, 2018.
  - Continued the development and approval of operations, alarm response, maintenance, and administrative procedures to support sludge removal operations.
- The 100K project team performed preventive maintenance and calibration activities on both ECRTS components and 105KW Annex utility system components. The ECRTS team prepared the STSC for receipt of simulated sludge transfer.
- Receipt of STSC assemblies of production run number 2 (vessels 14-24) completed on January 29, 2018, which completed PM-12-1-18.
- A second draft of the CHPRC Sludge Removal Project (SRP) critical decision (CD)-4 submittal was reviewed with the RL federal project director (FPD) and deputy FPD. All comments have been incorporated, and a final draft is forecast to be provided to the RL FPD and deputy FPD in March 2018.

### 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.

## MAJOR ISSUES

No major issues to report at this time.

## 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 stoplight chart:</b>																
Risk STP-154, <i>ORR Results in Delays to the Project</i> , was added as a realized risk. Risk STP-155, <i>CD-4 Approval Takes Longer than Planned</i> , was added to the High Risk Threat Value section of the stoplight chart in February.																
<b>Realized Risks</b> (Risks that are currently impacting project cost/schedule)																
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; font-size: 1.5em;">●</span>	<span style="color: blue; font-size: 1.5em;">↓</span>	<b>Risk Event:</b> Execution of the Contractor ORR & Execution of the DOE ORR.  <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #e0e0e0;"> <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>Complete necessary preventative maintenance and calibration activities prior to re-initiation of the Contractor ORR and prior to initiating the DOE ORR.</td> <td style="text-align: center;">3/07/18</td> <td style="text-align: center;">80</td> </tr> <tr> <td>Continue performing operations demonstrations in presence of senior supervisor watches, with the intent on identifying and resolving emergent challenges.</td> <td style="text-align: center;">3/07/18</td> <td style="text-align: center;">80</td> </tr> </tbody> </table> <b>Risk Action Assessment:</b> All actions are forecast to complete by March 7, 2018. Contractor ORR Out brief scheduled for March 8, 2018.	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.	3/07/18	80	Continue performing operations demonstrations in presence of senior supervisor watches, with the intent on identifying and resolving emergent challenges.	3/07/18	80			
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Continue performing operations demonstrations in presence of senior supervisor watches, with the intent on identifying and resolving emergent challenges.	3/07/18	80														
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																
No critical risks identified in February.																
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)																
<b>FY2018 Risk Triggers</b> (Risk could be realized in FY2018)																
STP-018-O: STP Operational Upset or Spill - During first STSC	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 (<10%) <b>Worst Case Impacts:</b> \$2 million, 48 days	<span style="color: green; font-size: 1.5em;">●</span>	<span style="color: black; font-size: 1.5em;">↔</span>	<b>Risk Triggers:</b> 1) 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.  <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="width: 80%;">Mitigation action(s)</th> <th style="width: 10%;">FC Date</th> <th style="width: 10%;">%</th> </tr> </thead> <tbody> <tr> <td>Conduct rigorous startup testing following system installation at the 105KW Basin and Annex.</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">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 style="text-align: center;">Complete</td> <td style="text-align: center;">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 STSC connect/disconnect evolutions is in process.</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">100</td> </tr> </tbody> </table> <b>Mitigation Assessment:</b> No major changes in February. Training, procedure development, and RSA affidavits were completed and CHPRC plans to request authorization to commence sludge removal operations is forecast in May 2018.	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 STSC connect/disconnect evolutions is in process.	Complete	100
Mitigation action(s)	FC Date	%														
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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 STSC connect/disconnect evolutions is in process.	Complete	100														

	Unmitigated Risk Impacts	Assessment		Comments																								
		Month	Trend																									
<b>RL-0012/WBS-012</b>																												
STP-073-C: Processing Efficiency - Retrieval & Shipping	<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%)</p> <p><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 PRC-MD-RP-53085, Suspension of 67% Confidence Level Surveys was issued. The MD requires that radiological clearance surveys “shall be at the 95% 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>3/07/18</td> <td>90</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>5/01/18</td> <td>20</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No major changes in February. 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.	3/07/18	90	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.	5/01/18	20															
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STP-155: CD-4 Approval Takes Longer than Planned	<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%)</p> <p><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 HQ ORR.</td> <td>5/1/18</td> <td></td> </tr> <tr> <td>Submit final SRP CD-4 submittal.</td> <td>5/7/18</td> <td></td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> 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 HQ ORR.	5/1/18		Submit final SRP CD-4 submittal.	5/7/18	
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Submit final SRP CD-4 submittal.	5/7/18																											
<b>Unassigned Risks (Pending ownership of identified threats/opportunities)</b>																												
<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. The risks listed, however, are for the non-capital scope. If contract direction is given to accommodate the acceleration opportunities to the SRP non-capital scope and the transfer of all sludge to T Plant is incorporated into FY2018, then CHPRC would re-assume ownership of these risks once changed is definitized. As part of the FY2018 annual update, risks were re-evaluated and used as the basis for the risk analysis.</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	4.0	3.7	3.9	(0.2)	-6.2%	(0.2)	-4.9%

Numbers are rounded to the nearest \$0.1 million

#### CM Schedule Performance (-\$0.2M/-6.2%)

The variance is within reporting thresholds.

#### CM Cost Performance (-\$0.2M/-4.9%)

The variance is within reporting thresholds.

## 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	719.5	719.1	687.4	(0.3)	-0.0%	31.8	4.4%	740.4	713.3	25.9	27.1

Numbers are rounded to the nearest \$0.1 million

#### CTD Schedule Performance (-\$0.3M/-0.0%)

The variance is within reporting thresholds.

#### CTD Cost Performance (+\$31.8M/+4.4%)

The variance is within reporting thresholds.

#### Variance at Completion (+\$27.1M/+3.7%)

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	38.7	33.9	4.8
Incremental Scope Pending Change Management	0.0	5.3	(5.3)
Expense – Subtotal	38.7	39.2	(0.5)
Line Item (LI)	28.8	17.8	11.0
Incremental Scope Pending Change Management	0.0	0.0	(0.0)
LI –Subtotal	28.8	17.8	11.0
<b>RL-0012 – Total</b>	<b>67.5</b>	<b>57.0</b>	<b>10.5</b>

Numbers are rounded to the nearest \$0.1 million.

### Funds/Variance Analysis

FY2018 funding for PBS RL-0012 is \$67.5 million. Negative variance of \$0.5 million in expense funding is based on potential funding levels in the Central Plateau control point provided by RL, as well as unplanned overtime to date, hiring of additional personnel to support retrieval operations, and reduction in the allocation of funds. The increase to the spend forecast of \$3.4 million reflects analysis of labor requirements following initiation of retrieval. However, it does not include reduction of retrieval operations staff due to delays in retrieval start date. Positive variance in the Line Item (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 critical path runs through completion of Contractor and DOE ORRs. The project 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 105-KW Fuels Storage Basin*, is required by September 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		5/01/2018	The forecast date does not include schedule margin from the project's risk analysis and assumes CD-4 will be approved within the 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 POA Issued and Distributed	01/29/18 (A)	02/08/18 (A)
RL IP Issued	03/12/18	03/12/18
RL Perform ORR - Team Lead	04/09/18	04/20/18
RL Issue Findings / Discrepancy List	04/23/18	04/27/18
RL Approve CD-4 Submittal Package	05/07/18	05/21/18
RL Approve Request for Startup Letter	05/08/18	05/21/18

# Section C

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



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

February 2018  
CHPRC-2018-02, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

M. A. Wright  
Vice President for  
Project Technical  
Services



## PROJECT SUMMARY

During the February reporting period, January 22 - February 18, 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 (W-135): Work continues on the Cask Storage System (CSS) and the Capsule Storage Area (CSA) pad design. The project received approval for Critical Decision-1 (CD-1) from DOE Richland Operations Office (RL) on February 7, 2018. During the month, the project completed training for the capsule dimension gauge. RL transmitted the draft Record of Decision (ROD) amendment to headquarters. The Ojeda Quality Assurance Project Plan for the Geotechnical site investigation was approved.
- At the Waste Encapsulation and Storage Facility (WESF), training is underway in support of W-135. Training capsules were loaded into pool cell number one and the G Cell airflow/velocity was tested. The facility completed installation of pool cell level and temperature recorders and instruments.
- At T Plant, the sludge receipt team received startup authorization. In addition, the project completed mock up for cell ledge cleaning and continues training additional Nuclear Chemical Operators (NCOs). Planning is in process for making a U Plant entry to retrieve spare crane parts.

## 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%

## TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	0	
Total Recordable Injuries	0	0	
First Aid Cases	2	*19	2/12/18 – Employee noticed strong odor that produced metallic taste in mouth that irritated the back of the throat. (24739) 2/15/18 – Employee strained lower back while removing an emergency kit from back of vehicle. (24746)  *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:
  - Current Consent Agreement and Final Order (CAFO) document development status: Ecology is requiring that a Data Quality Objectives (DQO) section be added to each closure plan. The project provided an outline detailing where all of the required information was addressed in each section. A path forward was agreed upon by CHPRC, RL, and Ecology and is being implemented in the affected documents.

### 13.02 Capsule Storage & Disposition

- o Performed/Completed:
  - Loading of training capsules into pool cell number one for training in support of W-135.
  - Installation of pool cell level and temperature recorders and instruments.
  - Upgrades and testing of the emergency lighting system.
- o Completed Surveillances/Preventive Maintenance (PM):
  - 28 PM packages.

### 13.03 Canister Storage Building (CSB)

- o Performed/Completed:
  - Conversion of the operations deck lighting from sodium to light-emitting diodes (LED).
  - Submittal of the newly converted Documented Safety Analysis (DSA) and Technical Safety Requirements (TSR) to DOE for review (converted from the existing Final Safety Analysis Report [FSAR]).
  - Changes to required procedures and initiated dry run/walk through of CSB's Multi Canister Overpack (MCO) sampling evolution using the sampling mockup/simulator.
- o Completed Surveillances/PMs:
  - 17 PM packages.

**13.06 Transuranic (TRU) Repackaging**

- o Repackaging:
  - Completed two shipments of M-091 legacy suspect transuranic mixed (TRUM) waste from Central Waste Complex (CWC) into Perma-Fix Northwest (PFNW), which will contribute 23.7 cubic meters (m<sup>3</sup>) toward the next Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) objective. To date, 141.15m<sup>3</sup> has been completed for the Tri-Party Agreement milestone objective.

**13.07 Waste Receiving and Processing (WRAP)**

- o Performed/Completed:
  - Monthly inspections.
  - Motor Control Center repairs are in progress.
- o Completed Surveillances/PMs:
  - 167 surveillances.
  - 7 PM packages.

**13.08 T Plant**

- o Performed/Completed:
  - Clean up of 291T area.
- o Completed Surveillances/PMs:
  - 469 surveillances.
  - 19 PM packages.

**Sludge Receipt**

- o Performed/Completed:
  - Received startup authorization.
  - Mockup for cell ledge cleaning.

**13.09 Central Waste Complex and Low-level Burial Ground (LLBG)**

- o Performed/Completed:
  - Waste container movements in 2403-WD quadrants two and four to provide space for future receipts.
  - Continued roof repairs for 2404-WB and lighting replacements in 2402-WI.
- o Completed Surveillances/PMs:
  - 277 surveillances.
  - 13 PM packages.
- o Shipments received:
  - Seventeen Solid Waste Boxes (SWBs) from PFNW into CWC in five shipments.

**13.12 Integrated Disposal Facility (IDF)**

- o Performed/Completed:
  - Monthly inspections.

**13.15 TRU Disposition**

- o Performed/Completed:
  - Review of the first transuranic (TRU) waste stream requiring further evaluation for chemical compatibility and presence of oxidizers to meet Waste Isolation Pilot Plant (WIPP) Waste Acceptance Criteria (WAC), Revision 8, is nearing completion.
  - Continued detailed review of second TRU waste stream requiring further evaluation for chemical compatibility and presence of oxidizers.
  - Commenced compilation of Hanford's input into the Annual Transuranic Waste Inventory Report for Carlsbad Field Office.

**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:
  - 122 surveillances.
- o Shipments received:
  - Four boxes from PFNW into MWT31 in one shipment.

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

- o Performed/Completed:
  - CSA design: Work continues on the Preliminary design.
  - Site investigation (geotechnical): CHPRC completed review of the geotechnical recommendation report and provided comments to Ojeda.

**13.25 Capsules Interim Storage Operations**

- o Performed/Completed:
  - CSS design: Preliminary design is ongoing. Shielding and thermal modeling for the CSS continues and is scheduled to be completed in February. NAC will visit WESF at the end of February to discuss preliminary equipment designs for the G Cell with Operations.
  - Engineering: Training for operation of the capsule dimension gauge.
  - RL transmitted draft ROD amendment to headquarters.
  - Project Management: RL approved the CD-1 package.

**Project Technical Services (PTS) Support**

- o Project Delivery
  - Roofing repairs at CWC and WRAP.
  - Continue repair work on 2404-WB.

## 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. RL is preparing and issuing an ROD amendment.

A revised permitting strategy was issued by RL and Ecology. The strategy indicates Ecology agrees that additional SEPA coverage is not required and RL will issue an ROD amendment. The draft ROD amendment is at headquarters for approval and subsequent publication in the Federal Register.

**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:**

RL met with Ecology on June 22, 2017, and requested additional information regarding the need for the more detailed design. The permit application was formally submitted to Ecology on November 21, 2017, with the 30 percent design information. The project plans to meet with Ecology to discuss their comments on the design maturity. 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 WIPP. The configuration would also mitigate/eliminate the risk and additional cost for long-term management of these containers.

**Status:**

Continuing 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.

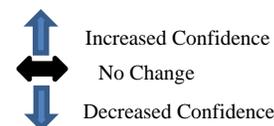
**Status:**

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. Additionally, the MSA water purveyor performed the annual cross-connection review at WESF on February 6, 2018. WESF is currently awaiting the report. Based on that report, additional correspondence to RL to communicate any changes to the condition may be necessary.

### 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 stoplight chart:</b> No major changes to the stoplight chart in February.							
<b>Realized Risks (Risks that are currently impacting project cost/schedule)</b>							
WSD-125: Multi-Year Pause in Waste Processing Results in Unexpected Container Integrity Issues	A pause in waste processing results in an unexpected container degradation within <b>Solid Waste Operations Complex (SWOC)</b> (excluding TRU retrieval activities) and requires additional resources to respond.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$5 million, 0 day			<b>Risk Event:</b> In November 2011, degraded containers were discovered in CWC.			
				<b>Risk recovery action(s)</b>	<b>Risk Date</b>	<b>FC Date</b>	<b>%</b>
				Perform daily/weekly waste container surveillances to identify container abnormalities.	11/01/11	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 showing signs of degradation.	Complete	100					
<b>Recovery Action Assessment:</b> No significant changes in <b>February</b> . The project continued to perform container surveillances in <b>February</b> to identify container and container cover abnormalities. <b>Two 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,</b> the overpack of storage box 75DMA16F3 was completed whose current location <b>was determined to be adequate</b> from a storage perspective. RL authorized additional FY2018 TRU commercial repacking, allowing shipments to PFNW for repackaging to continue. The remaining containers will continue to require surveillance and enhanced monitoring.							

Risk Title	Unmitigated Risk Impacts	Assessment		Comments															
		Month	Trend																
<b>RL-0013/WBS-013</b>																			
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																			
<b>Lifecycle Risk Triggers</b> (Risk could be realized at any point of the project)																			
WSD-097: Major Equipment Failure - T-Plant	T Plant suffers a major equipment failure (crane, primary power supply, etc.), 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> \$3 million, 96 days	●	↔	<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.															
				<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 T Plant crane.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table>	Mitigation action(s)	FC Date	%	Identify and procure spare parts for T Plant crane.	Ongoing	N/A									
Mitigation action(s)	FC Date	%																	
Identify and procure spare parts for T Plant crane.	Ongoing	N/A																	
WSD-019: MLLW & TRU Treatment Impacts	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.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$1.25 million, 0 days	●	↔	<b>Risk Trigger Metric:</b> Will continue throughout the contract (September 30, 2018).															
				<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>	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													
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																	
<b>Mitigation Assessment:</b> No significant changes in February. 1) 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&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.																			

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 February. Past periods included work on dock 2 removal and installation as well as asphalt 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											
<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 February. 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 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-W135-16: Content and Approval of Critical Decision Packages	<p>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.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Very Likely (&gt;90%)</p> <p><b>Worst Case Impacts:</b> \$2,000K, 0 days</p>	●	↑	<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 February. 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	<p>The transfer of the capsules to dry storage will require modifications to WESF.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Very Likely (&gt;90%)</p> <p><b>Worst Case Impacts:</b> \$7,300K, 0 days</p>	●	↔	<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 February. 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											

Risk Title	Unmitigated Risk Impacts	Assessment		Comments												
		Month	Trend													
<b>RL-0013/WBS-013</b>																
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 February. 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 currently awaiting a completeness determination and comments on the application.</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 February. 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														
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 February. 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>7/2/2018</td> <td>0</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 February. 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).</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.	7/2/2018	0	Conducting door frame replacements and electrical equipment repairs as necessary.	Ongoing	N/A
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Obtain spare parts for the Fire Alarm Control Units (FACU) via deactivation of old FACUs.	7/2/2018	0														
Conducting door frame replacements and electrical equipment repairs as necessary.	Ongoing	N/A														

Risk Title	Unmitigated Risk Impacts	Assessment		Comments
		Month	Trend	
<b>RL-0013/WBS-013</b>				
<b>Unassigned Risks</b> (Pending ownership of identified risks/opportunities)				
No unassigned risks identified in February.				

## 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	15.0	13.4	8.1	(1.6)	-10.4%	5.4	39.8%

Numbers are rounded to the nearest \$0.1 million

#### CM Schedule Performance (-\$1.6M/-10.4%)

The CM schedule variance is primarily associated with planned FY2018 work scope completed in FY2017 for Large Box Repackaging; delays in W-135 detailed design for CSA due to delayed subcontract award as a result of additional rounds of clarifications extending award into the previous holiday period; and CSS detailed design due to a variance in the baseline and the contractor schedule which is not anticipated to impact the design completion date. Based on the submitted and accepted subcontractor schedule, recovery is projected by the end of the second quarter.

#### CM Cost Performance (+\$5.4M/+39.8%)

The CM cost performance variance is primarily associated with commercial repack of TRUM large boxes and was authorized as part of the annual planning exercise for FY2018 via Correspondence Number 1704615A. The prior authorized scope, which was not budgeted in previous performance periods, was incorporated in February based on approved BCRs, and performance for prior work executed was taken in the current period.

## 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	1,239.3	1,237.4	1,155.7	(1.9)	-0.2%	81.7	6.6%	1,359.9	1273.4	117.7	86.5

Numbers are rounded to the nearest \$0.1 million

### CTD Schedule Performance (\$-1.9M/-0.2%)

The CTD schedule variance is within threshold.

### CTD Cost Performance (+\$81.7M/+6.6%)

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 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 the Solid Waste Inventory Tracking System (SWITS).

### Variance at Completion (+\$86.5M/+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/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.

**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	147.6	153.1	(5.5)
Incremental Scope Pending Change Management	0.0	(39.5)	39.5
RL-0013 – Total	147.6	113.7	34.0

Numbers are rounded to the nearest \$0.1 million.

### Funds/Variance Analysis

The FY2018 projected funding level for project breakdown structure (PBS) RL-0013 of \$147.6 million is based on potential Central Plateau control point funding levels provided by RL. The total fiscal year spend forecast (FYSF) of \$113.7 million with a \$34.0 million variance is primarily due to the expected transfer from

RL-0041 into RL-0013 for Environmental Restoration Disposal Facility (ERDF) operations once an appropriations is in place, because ERDF is currently being costed and forecasted in RL-0041 due to Continuing Resolution (CR). In addition, Line Item (LI) funding was allocated but not available due to the CR, resulting in the deferral of a portion of preliminary design activities for WESF modifications. Finally, the spending forecast was reduced to incorporate decrements in RL-0013 to offset higher priority scope within the Central Plateau Control Point.

### Critical Path Schedule

Critical Path Analysis can be provided upon request.

## 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 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-091-47D	Certify or Treat 280 Cubic Meters of TRUM/MLLW Waste	9/30/18	8/8/17 (A)		Complete
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	Submit change request with target dates for new/modified capabilities to process TRUM waste.	12/29/17	12/29/17 (A)		Complete
M-091-52-T01A	Remove Five (5) Mixed Waste Containers from Outside Storage Area A and/or Outside Storage Area B	11/30/18		4/5/18	On schedule
M-091-03L	Submit Revision of TRUM Waste and MLLW PMP to Ecology.	6/30/18		6/30/18	On schedule
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		3/19/18	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 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 CBFO.	No WIPP shipments are planned within the contract period of performance.

## DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
RL Review and Approve Critical Decision 1 (CD-1) Package for Management of the Cesium and Strontium Capsules (MCSC) Project (W-135)	8/25/17 (A)	2/7/18 (A)

# 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

February 2018  
CHPRC-2018-02, 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 February 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	27.4	150.5	2.2	11.5						
HX P&T	29.6	138.9	2.1	11.4						
KR-4 P&T	7.6	44.3	0.5	1.0						
KW P&T	13.0	70.5	0.8	6.0						
KX P&T	31.1	151.7	1.9	9.6						
200 West P&T	92.5	489.8	8.2	42.4	186	968	.21x10 <sup>12</sup>	1.08x10 <sup>12</sup>	13.4	67.8
<b>Combined</b>	<b>201.3</b>	<b>1,045.6</b>	<b>15.6</b>	<b>81.8</b>	<b>186</b>	<b>968</b>	<b>.21x10<sup>12</sup></b>	<b>1.08x10<sup>12</sup></b>	<b>13.4</b>	<b>67.8</b>
<b>FY2018 KPG</b>	--	<b>2,200.0</b>	--	<b>160.0</b>	--	<b>1,800.0</b>	--	N/A	--	<b>120</b>

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	0	3
200-ZP-1	4	0	2
M-24 Milestone	1	0	0
200-DV-1	0	0	0
<b>Total Wells</b>	<b>19</b>	<b>0</b>	<b>11</b>
<b>Site Wide Boreholes</b>	<b>29</b>	<b>0</b>	<b>23</b>

\*Planned wells adjusted to support the FY2018 funding target reduction.

## 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	33%
<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	35	2/12/18 – Employee rolled ankle on gravel boundary and fell down. The individual was treated at HPMC with over-the-counter medication and returned to work with no restrictions. (24738)  *1 First Aid case, PTS in support of RL-0030.
Near-Misses	0	0	NA

## KEY ACCOMPLISHMENTS

### RL-0030 Accomplishments

#### RL-0030.01 RL-0030 Operations

##### River Corridor

##### 100-KR-4 Operable Unit (OU)

- Initiated the 30 percent conceptual design for the KW soil infiltration treatability test.

##### 100-NR-2 OU

- Discussed the technical impracticability (TI) waiver versus monitored natural attenuation approach for Strontium-90 contaminated groundwater with Ecology and Environmental Protection Agency (EPA) on February 13, 2018. Presented the recommended TI waiver approach, with both RL and Ecology planning to elevate the discussion with their management. While management discussions are proceeding, the project will continue to progress the remedial investigation/feasibility study (RI/FS) report with the shoreline preliminary remediation goal (278 pCi/L) and TI approaches.

##### 100-BC-5 OU

- Completed revisions to Chapters 8, 9, and 10 in response to comments provided by EPA on the Draft A RI/FS on January 29, 2018.
- Provided Draft Revision 0 RI/FS Chapter 7 to RL for review on February 6, 2018. The revision incorporates response to EPA comments received on the Draft A RI/FS.

#### Central Plateau

##### 200-UP-1 OU

- Completed drilling of the two 200-UP-1 remedy performance monitoring wells planned for FY2018. Well development and construction activities will follow.
- Briefed RL on the fate and transport modeling results for the southeast chromium plume on February 6, 2018. Developed the remedial alternatives with RL to be evaluated in the southeast chromium plume report.

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

- Supported RL and Ecology to develop the interim Record of Decision (ROD) strategy for the 200-BP-5 and 200-PO-1 groundwater OUs. Initiated preparation of the 200-BP-5/200-PO-1 feasibility study in support of an interim ROD.
- Delivered the Decisional Draft Sampling and Analysis Plan for Removal Action Wells in the 200-BP-5 OU to RL for review.
- Delivered the Revision 0 200-BP-5 Removal Action Work Plan (RAWP) to RL for signature on February 7, 2018.

**200-DV-1 OU**

- Briefed EPA and Ecology on February 8, 2018, on the workbook approach that will be used to develop the 200-DV-1 RI/FS report. The workbook is one of the tools identified during the Kaizen document improvement initiative.

**200-ZP-1 OU**

- Briefed EPA on the 200 West P&T fourth quarter calendar year (CY) 2017 performance on February 12, 2018.

**200-WA-1**

- Completed three ecological and cultural reviews for the characterization and remediation of 200-WA-1 sites in and around T Plant, U Plant, and Z Plant.

**200-EA-1**

- Continued progress is being made on preparation of the RI/FS work plan.
  - Provided revised RI/FS work plan Chapter 3 to Ecology on February 12, 2018, for informal review.
  - Updated Chapter 4 and Appendix A of the Sampling and Analysis Plan (SAP) based on RL comments.
  - Scheduled an informal comment resolution meeting with Ecology on Appendix E of the applicable or relevant and appropriate requirements (ARARs) for March 8, 2018.
  - Resolved Ecology comments on Chapter 1.

**RCRA Groundwater Monitoring**

- Completed the draft engineering evaluation reports for the Resource Conservation and Recovery Act (RCRA) sites in 200 West. Received Ecology comments on these eight reports, with comment disposition expected to be completed in early March.

**Project Technical Services Accomplishments**

- Training and Procedures
  - Worked with Soil and Groundwater Remediation Project (S&GRP) staff to update procedural guidance related to emergency response actions during the Uranium Reactive Gas Sequestration (URGS) treatability test. This new guidance will be used in support of ammonia sensor alarms and oxygen sensor alarms at the URGS treatability test site.
  - Delivered the Solid Waste Operations Complex (SWOC) Unreviewed Safety Question training for the 200 West P&T. This training for 200 West P&T personnel clarifies the interface between S&GRP and SWOC as it relates to the Master Documented Safety Analysis (MDSA).

- Operations Program
  - Emergency Preparedness conducted a full-up drill at the Deep Vadose Zone URGS Treatability Test site for an ammonia alarm.
- Project Delivery
  - Completed Deep Vadose Zone URGS Treatability Test construction acceptance testing and construction completion document.

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

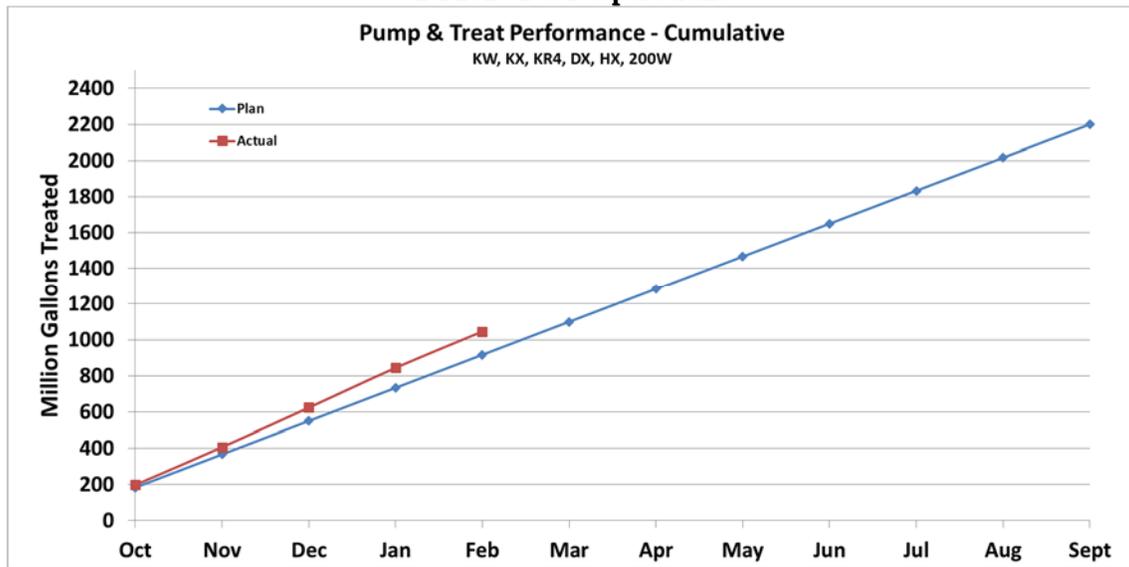
#### **200 West P&T**

- Operated the 200 West P&T at an average of 2,294 gallons per minute (gpm).

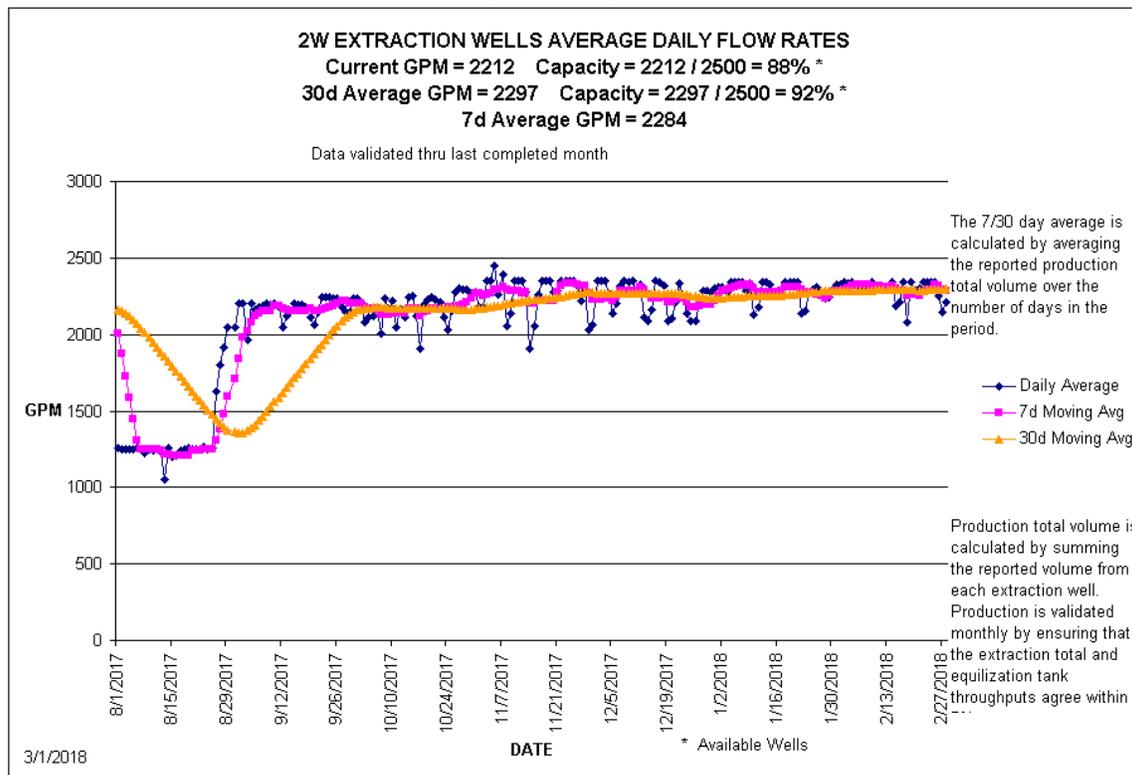
#### **100 Area P&Ts**

- Operated the DX P&T at 678 gpm, below the facility capacity of 775 gpm.
- Operated the KR-4 P&T at 188 gpm, below the facility capacity of 330 gpm.
- Operated the KW P&T at 324 gpm, near the facility capacity of 330 gpm.
- Operated the KX P&T at 772 gpm, below the facility capacity of 900 gpm.
- Operated the HX P&T at 734 gpm, below the facility capacity of 900 gpm.

### FY2018 P&T Operations



### 200 West P&T



## MAJOR ISSUES

**Issue:**

Experiencing regulatory agency delays in the approval of the 100-DR-1, 100-DR-2, 100-HR-1, 100-HR-2, and 100-HR-3 OUs ROD.

**Corrective Action:**

Maintain visibility on these delays to senior management. RL/CHPRC to continue working with the regulatory agencies to facilitate completion of these documents. Submit notice of change letters to RL as contract activities are impacted.

**Status:**

The final ROD is currently anticipated for April 2018. No change.

**Issue:**

KX, KR-4, and DX ion exchange vessels require diffuser repair. Approximately 16 of 36 vessels are in need of repair at KX and KR-4. One vessel requires repair at DX.

**Corrective Action:**

Repair all vessels with a damaged diffuser.

**Status:**

Completed replacement of vessel diffusers at the KX facility on all those with confirmed damage (seven vessels). Diffusers on four vessels (Train B), which have suspected damage are planned to be replaced in March. Work on the KR-4 IX vessels commenced in December (eight vessels). Completed all train A repairs and returned to service in January. Train B has been removed from service and repairs are in progress, with expected completion in March. Investigation of resin found in DX P&T effluent filters revealed that one vessel has damage (A1). Repair of the DX vessel is complete.

**Issue:**

Access restrictions around the Plutonium Finishing Plan (PFP) are impacting field activities, namely the installation of three 200-UP-1 remedy performance monitoring wells, six 200-DV-1 shallow characterization boreholes, RCRA groundwater monitoring, and weekly well head and conveyance line inspections for the 200 West P&T Facility.

**Corrective Action:**

Work with PFP to establish controls for performing work within the work control zone. Notify RL of any work scope and milestone impacts.

**Status:**

Work controls within the PFP work control zone have been established, allowing work to resume. The only impact identified is the installation of three 200-UP-1 remedy performance monitoring wells that will not be performed this fiscal year. Discussions are ongoing with RL on the project and potential milestone impacts from this delay. Issue closed.

**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 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. Meeting with EPA scheduled to discuss regulatory approach.

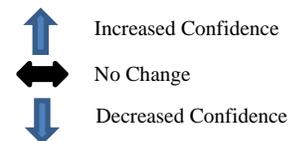
**Status:**

Have prepared and cleared briefing materials. Scheduled a third meeting with EPA to discuss approach on February 28, 2018.

**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 stoplight chart:</b>																
<b>Realized Risks (Risks that are currently impacting project cost/schedule)</b>																
SGW-135: Major Equipment Failure at a Pump & Treat Facility	A major equipment failure is experienced at one of the P&T locations during operations of the facility or at the injection and extraction well network. This includes but is not limited to failure of: rotary drum thickeners, centrifuges, lime addition conveyor, plastic pipe joint saddles, fluidized bed reactors, membrane bio-reactors, tanks, air stripper, computer system control center, extraction/injection wells, and other related equipment supporting P&T, resulting in cost impacts and schedule delays.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$2,000K, 86 days			<p><b>Risk Event:</b> Approximately 17 of 36 KX, KR-4, and DX P&amp;T facility ion exchange vessels require diffuser repairs.</p> <table border="1"> <thead> <tr> <th>Risk recovery action(s)</th> <th>Risk Date</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Repair all vessels with damaged diffusers.</td> <td>3/15/17</td> <td>3/29/18</td> <td>60</td> </tr> <tr> <td>Conduct investigation of resin found in DX P&amp;T effluent filters and repair damaged vessel (A1).</td> <td>12/06/17</td> <td>1/31/18</td> <td>100</td> </tr> </tbody> </table> <p><b>Recovery Action Assessment:</b>                      No major changes in <b>February</b>.                      Twelve vessels have been repaired. Eight vessels in need of repair remain. All bottom-access vessel repairs are complete, and the top-access vessel repair approach has been finalized and parts have been received. The project performed the first top-access vessel repair in September 2017 and the repairs limiting plant flows were completed prior to January 31, 2018.</p>	Risk recovery action(s)	Risk Date	FC Date	%	Repair all vessels with damaged diffusers.	3/15/17	3/29/18	60	Conduct investigation of resin found in DX P&T effluent filters and repair damaged vessel (A1).	12/06/17	1/31/18	100
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Conduct investigation of resin found in DX P&T effluent filters and repair damaged vessel (A1).	12/06/17	1/31/18	100													
<b>Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)</b>																
No critical risks identified in <b>February</b>																
<b>High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)</b>																
No high risks identified in <b>February</b>																
<b>Unassigned Risks (Pending ownership of identified risks/opportunities)</b>																
No unassigned risks identified in <b>February</b>																

## 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	11.9	12.2	9.7	0.3	2.5	2.5	20.5

Numbers are rounded to the nearest \$0.1 million.

#### CM Schedule Performance (+\$0.3M/+2.5%)

The variance is within reporting thresholds.

#### CM Cost Performance (+\$2.5M/+20.5%)

The CM cost variance resulted from the following:

- Implementation of baseline change request (BCR) BCR-030-011R0 - *Incorporate Scope Changes – RL-0030* in which fiscal year (FY) 2018 budget was incorporated into the baseline in the current period for preparation of the Decisional Draft 100-NR-2 RI/FS report, 200-DV-1 shallow soil characterization, and 200-DV-1 MNA evaluation. Because the actual cost of the work performed was recorded in a prior period, and the performance was earned upon implementation and a positive current period cost variance was generated.
- The Ground Water (GW) Monitoring and Performance Assessment account has several contributors:
  - The geophysical logging subcontract was competitively rebid with a subsequent reduction in contract costs.
  - Current month savings in GW lab analysis and data management account due to labor resources being used to support audit preparation (different account) and lower subcontract charges than planned due to lab efficiencies. The sampling group has worked to improve continuity in field work and increased flexibility by improving each team's sampling qualifications. This preparation has resulted in fewer failed sampling trips and less down time due to unplanned maintenance.
  - This is offset, in part, by well maintenance experimenting with different clean-out processes for the 200-ZP-1 injection wells to try to address bio-fouling in the 200 West Pump and Treat System, resulting in increased chemical and labor costs.
- This positive performance was offset in part by the URGS treatability test design, and procurement of the equipment is more costly than planned. The equipment has taken longer to fabricate, requiring more CHPRC design support than originally planned due to safety analyses and hazard controls driven by the use of ammonia gas at the Hanford Site. In addition, the well maintenance element has experienced a significant increase in the Mission Support Alliance, LLC (MSA) subcontract costs for road and ground maintenance due to subsidence issues and road/pad condition issues around wells. Increase in support is due to addressing reduction of vehicle incidents (getting stuck) as well as increased subsidence following the extreme winter weather in 2017.

## 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	1,441.0	1,434.5	1,409.0	(6.6)	-0.5%	25.4	1.8%	1,564.5	1,534.4	125.4	30.1

Numbers are rounded to the nearest \$0.1 million.

### CTD Schedule Performance (-\$6.6M/-0.5%)

The variance is within reporting thresholds.

### CTD Cost Performance (+\$25.4M/+1.8%)

The variance is within reporting thresholds.

### Variance at Completion (+\$30.1M/+1.9%)

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	114.3	110.6	3.7
Incremental Scope Pending Change Management	0.0	3.7	(3.7)
RL-0030 –Total	114.3	114.2	0.0

Numbers are rounded to the nearest \$0.1 million

### Funds/Variance Analysis

The FY2018 projected funding for project breakdown structure (PBS) RL-0030 of \$114.3 million is based on potential funding levels in the Central Plateau control point provided by RL. The spend forecast was reduced to incorporate decrements in RL-0030 to offset higher priority scope within the Central Plateau control point as well as a \$0.8 million credit G&A variance distribution.

### Critical Path Schedule

Critical path analysis can be provided upon request.

## MILESTONE STATUS

The following table is a one-year look ahead of PBS RL-0030 Hanford Federal Facility Agreement and Consent Order (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		7/13/18	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-024-69	Complete Construction of All Wells Listed for CY2018 and Before as Listed in M-24-15-01	12/31/18	5/31/17	12/31/18	Complete
<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		8/1/19	At risk; three monitoring wells are impacted by their location in the PFP work control zone
M-015-21A	Submit 200-BP-5 & 200-PO-1 OU FS Report and PP(s) to Ecology	3/31/19		3/31/19	On schedule

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

None currently identified.

## DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
RL Review of Decisional Draft 100-HR-3 RD/RAWP	11/23/17(A)	4/6/18
RL Prepare and Transmit 216-A-29 Ditch Procedural Closure Letter to Ecology	2/8/18(A)	4/12/18
RL Prepare and Transmit 216-B-63 Trench Procedural Closure Letter to Ecology	2/8/18(A)	4/12/18
RL Review of Draft Rev 0 100-BC-5 Proposed Plan	3/1/18	3/15/18
Concurrent RL and CHPRC Review of Internal Draft SST WMA B-BX-BY Engineering Evaluation Report	3/8/18	3/15/18



Description	CHPRC Delivery Date	Expected RL Due Date
Concurrent RL and CHPRC Review of LLBG WMA-1 Engineering Evaluation Report	3/8/18	3/15/18
RL Review Draft 216-A-36B Crib Closure Plan	3/16/18	3/17/18
RL Certify New Information & Submit 216-A-36B Crib Closure Plan to Ecology (Permittee)	3/19/18	4/6/18
RL Submit Regulatory Review Draft SST WMA C Engineering Evaluation Report to Ecology	3/21/18	3/22/18
RL Submit Draft LLBG WMA-2 Trench 94 Engineering Evaluation Report to Ecology for Review	3/22/18	3/24/18
RL Submit Regulator Review Draft SST WMA B-BX-BY Engineering Evaluation Report to Ecology	3/22/18	3/23/18
RL Submit Regulator Review Draft SST WMA A-AX Engineering Evaluation Report to Ecology	3/22/18	3/23/18
Concurrent RL and CHRPC Review of Internal Draft 216-B-3 Pond Engineering Evaluation Report	4/8/18	4/13/18
Concurrent RL and CHRPC Review of Internal Draft 216-A-29 Ditch Engineering Evaluation Report	4/9/18	4/16/18
RL Review Draft Annual Groundwater Report	4/10/18	5/10/18
RL Transmit Rev 0 SST WMA U Engineering Evaluation Report to Ecology	4/11/18	5/2/18
RL Transmit Draft Rev 0 100-BC-5 Proposed Plan to Regulator for Review	4/11/18	4/18/18
RL Transmit Draft Rev 0 100-BC-5 RI/FS Report to Regulator for Review	4/12/18	4/19/18
RL Submit Regulator Review Draft LLBG WMA-1 Engineering Evaluation Report to Ecology	4/22/18	4/23/18
RL Transmit Rev 0 SST WMA S-SX Engineering Evaluation Report to Ecology	4/22/18	4/23/18
RL Submit Draft 216-S-10 Pond and Ditch Engineering Evaluation Report to Ecology for Review	4/22/18	4/23/18
RL Review Draft 100 Area P&T Report	5/2/18	6/1/18
Concurrent RL and CHPRC Review of Internal Draft 216-A-37-1 Crib Engineering Evaluation Report	5/8/18	5/15/18
Concurrent RL and CHRPC Review of Internal Draft 216-A-36B Crib Engineering Evaluation Report	5/9/18	5/16/18
RL Review Draft Central Plateau Tracer Test Sampling Analysis Plan	5/9/18	6/8/18
RL Transmit Rev 0 SST WMA T Engineering Evaluation Report to Ecology	5/9/18	5/31/18
Concurrent RL and CHRPC Review of Internal Draft SST WMA U Groundwater Monitoring Plan	5/10/18	5/17/18
RL Transmit Draft A 100-HR-3 RD/RAWP to Regulators for Review	5/16/18	6/15/18
RL Submit Draft 216-A-29 Ditch Engineering Evaluation Report to Ecology for Review	5/22/18	5/23/18
RL Submit Draft 216-B-3 Pond Engineering Evaluation Report to Ecology for Review	5/21/18	5/22/18
Concurrent RL and CHRPC Review of Internal Draft 216-B-63 Trench Engineering Evaluation Report	5/24/18	6/1/18
RL Submit Draft IDF Engineering Evaluation Report to Ecology for Review	5/28/18	5/29/18

# Section E

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



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

February 2018  
CHPRC-2018-02, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

The Plutonium Uranium Extraction Plant (PUREX) Tunnel 2 investigation field activities commenced with completion of the observation ports for Riser 3 and 4. The engineering Functional Design Criteria (FDC) is nearly finalized; and the closure addendums were modified and submitted to RL for review. The Contractor Construction Completion Document for the PUREX Stack Sampling System has been completed. Packaged and disposed of a large amount of waste items from the REDOX Sample Gallery.

### 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	15	N/A
Near Misses	0	0	N/A

### KEY ACCOMPLISHMENTS

#### RL-0040 Accomplishments

##### Central Plateau Surveillance and Maintenance (CPS&M) Facilities and Waste Sites

- Completed modification to auto lube system at Reduction and Oxidation (REDOX) exhaust fans.
- Completed monthly lube of EF-1 and EF-2 at REDOX.
- Completed Fire Alarm Control Units (FACU) fire panels, and Radio Fire Alarm Reporter (RFAR) panels at 252AB and 217A shut downs to support upcoming maintenance activities in 252AB.
- Restored Line 8 Power to PUREX Switchgear.
- Performed walk down of 252-AB with Facility Director in support of reviewing Lockout/Tagout (LOTO) to determine if the work is non-routine in accordance with the requirements of PRC-MD-MN-54237, Increased Oversight on Hazardous Energy Controls.
- Completed Inspect/Lube of 291-A-F-V11-1&3 at PUREX.
- Completed Inspect/Lube of 221B-EF-101 & 102 at B Plant.
- Patched two small holes that were discovered in the roll-up door at REDOX, performed surveys, and no issues were found.
- Completed 224-T Post Job Discrepancy Review Meeting.

**PUREX Tunnel 2 Investigation**

- Modified the closure addendum for PUREX Tunnel 2 environmental permitting and submitted to RL for review.
- Prepared the engineering functional design criteria in preparation for grouting activities.
- Issued request for proposal and awarded subcontract for PUREX Tunnel 2 investigation.
- Completed work packages and Enhanced Work Planning for investigation of the observation port for Riser 3 and 4.
- Collected Industrial hygiene (IH) and radiological samples from riser exteriors and tunnel interior.
- Implemented \$1.413 million of scope into the baseline for the PUREX Tunnel 2 Investigation.

**PUREX Stack Sampling System Replacement**

- Signed off on the Contractor Construction Completion Document verifying all construction work has been completed.
- Commenced start of the PUREX exhaust system fans and verified system operability.
- Continued receiving, reviewing and processing construction contractor closeout submittals.
- Finished modifying the SAMCONS programming to address differences in the mass flow meter output scale and the scale utilized in SAMCONS (i.e., scales did not currently match).
- Finished Design Authority review of red line drawings to ensure all design changes were captured.
- Completed approval of the vacuum pump preventive maintenance work package.

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

- Performed daily dose rate monitoring of the ACT-001 and ACT-002 filter banks.
- Completed eBOMs and placed orders for additional pre-filters and associated materials (e.g. containment tents, bags, plastic for shield boxes) to support another round of pre-filter change out if deemed necessary based on filter bank dose rates.
- Started development of a new work package for the replacement of pre-filters that incorporates lessons learned from previous iterations.

**REDOX Silo Progress**

- Received sample results for powders on the first four floors of the silo.
- Walked down and documented sample access points for the fourth, fifth, seventh, and eighth levels. Incorporated new information, via work change notice, into a work package and distributed for review.
- Documented process piping and equipment for Hexone system.
- Continued ultrasonic interrogation of process lines in preparation for risk mitigation/draining campaigns.
- Packaged and removed loose asbestos items identified during sampling characterization walk down.

**REDOX Sample Gallery Progress**

- Staged additional hazardous waste items for removal from the REDOX Sample Gallery upon receipt of waste planning checklists.
- Shipped Beryllium samples to lab for analysis with the goal of down posting REDOX facility.
- Removed, packaged and disposed of a large amount of waste items from REDOX Sample Gallery (29 bags were placed in the Environmental Restoration Disposal Facility (ERDF) container).
- Identified potentially available criticality alarm systems for future use during plutonium (Pu) Loadout Hood mitigation activities.

**Other REDOX Support**

- Transferred ownership of MO-409, commenced inspections, layout planning, cleaning and maintenance in preparation for crew occupancy.
- Received and published lab sample results for the blue/green substance discovered during the REDOX Surveillance. Completed survey of the entire west end loading dock and fixed contaminated locations in preparation for down posting.
- Supported annex roof inspections required for repair of water intrusion.
- Supported REDOX Annex Beryllium Sampling Efforts and shipped samples for analysis.
- Reconfigured egress step off pad area to provide additional room for additional radiation control personnel to complete release surveys.

**MAJOR ISSUES**

No major issues to report at this time.

**RISK MANAGEMENT STATUS**

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

-  Opportunity 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-0040/WBS-040</b>																									
<b>Explanation of major changes to the project monthly stoplight chart:</b> No major changes in February.																									
<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 deactivation, decommission, decontamination, and demolition (D4) activities, resulting in schedule delays.</p> <p><b>Risk Handling Strategy:</b> Accept</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 future.</p> <table border="1"> <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> </tbody> </table>	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%
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				<table border="1"> <tr> <td>Perform dose rate monitoring of pre-filters in ACT-001 and ACT-002 filter banks.</td> <td>January 2018 – Current</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Ordered additional materials (e.g., tents, bags) to support additional pre-filter replacement, as necessary.</td> <td>February 2018</td> <td>4/5/18</td> <td>10%</td> </tr> <tr> <td>Develop revision to pre-filter change out work package to improve ALARA and general efficiency.</td> <td>February 2018</td> <td>6/13/18</td> <td>10%</td> </tr> </table> <p><b>Recovery Action Assessment:</b> No major changes in February. 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 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. Lessons learned are currently being incorporated into a new revision of the work package to improve as low as reasonably achievable (ALARA) and general efficiency in changing out the pre-filters.</p>	Perform dose rate monitoring of pre-filters in ACT-001 and ACT-002 filter banks.	January 2018 – Current	Ongoing	N/A	Ordered additional materials (e.g., tents, bags) to support additional pre-filter replacement, as necessary.	February 2018	4/5/18	10%	Develop revision to pre-filter change out work package to improve ALARA and general efficiency.	February 2018	6/13/18	10%
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<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																
No critical risks identified in February.																
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)																
D4-064: Aging Building Systems/ Components	Problems with aging building systems/ components (e.g., roofing/structures, etc.) result in inoperability or requires unscheduled maintenance/outages, resulting in cost impacts.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$2 million, 0 Day			<p><b>Risk Event:</b> During routine surveillance activities, unforeseen events cause systems to be compromised. This risk is a lifecycle risk and will continue through the CHPRC contract period (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>None identified at this time.</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Recovery Assessment:</b> Construction and testing of the PUREX stack sampling system was completed in February 2018. In summary, construction of the PUREX stack sample cabinet and vacuum pump cabinets was started in late November and finished in mid-December, 2017. Demolition of the existing system started in late November and was completed in mid-December. Factory Acceptance Testing (FAT) of the cabinets was completed in early January 2018. Installation of the new system was completed in January 2018, and system testing and SAMCONS configuration was completed in February 2018. As-built drawings are being updated to reflect the final system configuration. The system no longer poses a risk and will be removed from the stoplight chart in March.</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 February.																

## 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	3.5	3.3	2.8	(0.2)	-7.1%	0.5	15.6%

Numbers are rounded to the nearest \$0.1 million

**CM Schedule Performance: (-\$0.2M/-7.1%)**

The current month schedule variance is within reporting thresholds.

**CM Cost Performance: (+\$0.5M/+15.6%)**

The current month favorable cost variance is the result of performance taken in prior periods in relation to current period actual costs that was moved to the appropriate Subsequent Units for Individual Development (SQUID) WBS. The movement of current cost was per RL direction.

## 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	470.1	467.8	441.0	(2.3)	-0.5%	26.8	5.7%	504.6	480.3	39.3	24.3

Numbers are rounded to the nearest \$0.1 million

**Cost to date (CTD) Schedule Performance: (-\$2.3M/-0.5%)**

The contract-to-date schedule variance is within reporting thresholds.

**CTD Cost Performance: (+\$26.8M/+5.7%)**

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 (+\$24.3M/+4.8%)**

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	60.3	38.0	22.2
Incremental Scope Pending Change Management	0.0	5.2	(5.2)
RL-0040 – Total	60.3	43.3	17.0

Numbers are rounded to the nearest \$0.1 million.

### Funds/Variance Analysis

For February, FY2018 projected funding for project breakdown structure (PBS) RL-0040 remained at \$60.3 million. There was only a minor variance to the spend forecast. In total, the project expects a year end variance of \$17 million.

### 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 subsequent 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		3/29/2018	On schedule
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 on 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
202A (PUREX) Draft B EE/CA to Ecology for review	12/11/17 (A)	2/26/18
221B (B Plant) EE/CA to RL for Review	1/11/18 (A)	4/3/18

# Section F

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



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

February 2018  
CHPRC-2018-02, 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 performed Waste Site 116-KE-2 soil remediation, completed K East Sedimentation Basin 183.2 backfill, and started Waste Site 100-K-103 backfill; continued Garnet Filter Media Removal System equipment fabrication, and advanced sand filter conceptual design; obtained several K West Basin floor core samples; and entered the K East Reactor building to perform engineering assessments. The 300-296 Remote Soil Excavation Project continued to make progress with equipment procurements and fabrication, equipment installation at the mockup, and interference removal activities within the 324 Building. Backfill of the 618-10 Burial Ground continued as planned.

### EMS Objectives and Target Status (Draft)

Objective #	Objective	Target	Due Date	Status
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	27%
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%
18-EMS-KBOPR-OB1-T1	Improve compliance/pollution and spill prevention	Monitor and evaluate UW and recycling accumulation areas for compliance with CHPRC procedures. Survey spill prevention measures.	9/30/18	38%
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	20%
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	0	26	N/A
Near Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### RL-0041 Accomplishments

- 100K Closure Project:
  - 100K Soil Remediation:
    - Completed backfill of 183.2 KE Sedimentation Basin in February 2018. Backfill of 100-K-103 promptly began mid-February (approximately 75 percent complete).
    - Continued excavation of radioactive waste crib, Waste Site 116-KE-2 (approximately 44 percent complete). Average production rate of 28 Environmental Restoration Disposal Facility (ERDF) cans per day.
      - Continued Radcon work planning for the deep excavation currently planned to commence in early May.
    - Continued preparation of Waste Sites 100-K-107 and 108 regulatory closure document (approximately 74 percent complete).
    - Progressing closure of Waste Site 100-K-42 with Environmental Protection Agency (EPA).
    - Plan developed for additional excavation of Waste Site 100-K-99 to remove radioactively contaminated soil discovered during in-process sampling.
  - K West Basin Deactivation:
    - Garnet Filter Media Removal System (GFMRS):
      - Columbia Energy and Environmental Services has completed fabrication of GFMRS system components, and all components have been received at the Maintenance and Storage Facility (MASF). MASF will begin setting up integrated testing of all the newly fabricated hardware starting the week of March 12, 2018, as sand filter media removal system testing finishes up.
      - American Boiler Works (ABW) fabrication of Sludge Transport & Storage Container (STSC) Units 425, 426, 427, and 428 remains at approximately 70 percent complete. ABW completed welding the bottom and top heads to the shells on four STSCs. Assay of the welds are complete and they have initiated installing the brackets for the fill and float assemblies, and preparation work for the installation of the “bubble busters.”
      - A proposal from HiLine Engineering has been received to install instrumentation on all four STSCs and to fabricate the overflow retrieval tools. The project plans to award a limited notice to proceed to allow HiLine early procurement for the long-lead items.
      - Continued Garnet Filter Number 3 Sluice Outlet Valve V-305 Risk Mitigation.

- Apollo Construction began layouts in the K West Basin on February 13, 2018. Work included hanging shielding and shield hooks, completing the lockout/tagout, and installing and mounting the drill assembly. Drilling through the shield enclosure wall will initiate on February 22, 2018.
- o Sand Filter Media Removal System (SFMRS):
  - SFMRS concept development and testing continues. Optimized spray nozzle configurations.
- o K West Basin Below-water Debris Characterization:
  - Performed mock-up testing with Nuclear Chemical Operator (NCOs) and Radiological Control Technician (RCTs) at MASF, gaining more experience drawing basin settled solid samples; and removing basin floor core samples and packaging them for transport to Pacific Northwest National Laboratory (PNNL) in Richland.
  - Progressed development of an integrated sludge removal and characterization schedule. Remaining characterization work in FY2018 has been broken into 95 discrete activities and mapped to Sludge Removal Project (SRP) schedule activities, which will be incorporated into the pending baseline change requests (BCR) for work breakdown structure (WBS) 041.02.21.01.03. These activities will be scheduled to coincide with STSC filling, decanting, and shipping activities.
    - With the above logic constraints, the SRP schedule will drive the extent of characterization activity to be accomplished in FY2018/2019.
    - Substantial in-basin characterization activities are on hold and will not re-start until after the first STSC has been transported to T Plant.
- K East Reactor Interim Safe Storage (ISS):
  - o Presented progress of ISS planning to the RL federal project director (FPD). Presentation included discussion of Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) milestones, status of the KE reactor building and SSE design, benefits associated with accelerating SSE construction, and funding needed to accelerate construction. The understanding at the conclusion of the meeting was the project would continue planning and be prepared to issue a design/build Request for Proposal (RFP) at the end of FY2018.
  - o Issued an RFP to prepare an updated geotechnical report for the soils surrounding the KE Reactor Building. An updated report is required to evaluate SSE foundation placement in the new soil placed on the north side of the reactor wall.
  - o Started incorporating internal review comments into the DOE-RL-2005/26, RAWP for 100K Reactor and Ancillary Facilities draft revision.
  - o Completed and released Revision 3 of DD-49580, *Final Hazard Categorization for ISS of 105KE*.
  - o Performed a topographical survey and started developing the topographical survey report of the soil area around 105 KE Reactor building as an input to soil volume calculations and the forthcoming ISS geotechnical report revision.
  - o Started investigating radiological conditions that may be encountered during soil removal on the north side of the 105KE Reactor Building during the SSE foundation construction.
- Ancillary Facility Deactivation & Demolition (D&D):
  - o Continued asbestos abatement in 165K East Power Control Building.
  - o Continued development and review of the engineering evaluation of Waste Site 130-KE-2 remediation (166 K East fuel storage basin) for planning purposes. Completed draft of the planning field execution schedule (FES).

- Remaining Closure Operations:
  - The excavation permit for the 300 Area interim stabilization site was reviewed and approved in February 2017.
  - Continued collecting shrub seeds from various locations around the Hanford Site to support FY2019 re-vegetation efforts (includes 618-10).
  - Re-vegetation of 600-393 Waste Site and 600-403 Waste Site completed.
- 618-10 Burial Ground:
  - Continued backfill of the 618-10 Burial Ground. Backfill is expected to complete in March.
  - Continued to work on environmental closeout documentation.
  - Continued infrastructure demobilization activities.
  - Project Technical Support (PTS):
    - Continued demolition of trailers at the 618-10 Burial Ground site.
- 324 Building Minimum Safe:
  - Drafted a new 300 Area Waste Container Operations procedure (300A-PRO-OP-54222) to cover movement of materials between 324 and an approved Waste Storage Area.
  - Revised two 324 Building waste procedures (W-03, W-07) to supplement and work in conjunction with the new 300 Area Waste procedure.
  - Performed the five Vital Safety System (VSS) walk-downs by the system engineers.
  - Received 125-foot man-lift to support repair of the stack flowmeter.
  - Responded to the first set of questions from EPA on the updated Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) documents delivered in January.
  - Performed 13 monthly, quarterly, or annual preventative maintenance packages.
  - PTS Support:
    - Training and Procedures:
      - Worked with 324 Project technical authorities (TAs) and functional managers to help them understand PRC Procedure System (PPS) and PRC-PRO-MS-589 process. Held a table-top session to guide engineering TAs through the process.
    - Operations Program – Emergency Preparedness (EP):
      - Submitted 324 EP Full-up Independent Exercise Drill Corrective Action Plan to RL.
      - Conducted a limited scope drill on an aircraft crash at the 324 Building.
- 300-296 Soil Remediation Project:
  - The Fire Hazard Analysis (FHA) implementation plan and annual safety basis are in the RL review process.
  - Completed C Cell size reduction and debris removal.
  - Prepared and shipped six bull-run boxes of Radiochemical Engineering Cell (REC) waste to ERDF.
  - Received the first auxiliary camera to support hot cell cleanout within the 324 Building.
  - Continued fabrication of the Cameras & Lighting System, Remote Excavator Arm (REA) system, Mockup Transfer Mechanism, Mockup Grout Delivery System, and Mockup Water Delivery System.
  - Initial Factory Acceptance Tests (FATs) were completed for the mockup Cameras & Lighting System and REA system components.
  - Initiated cell sealing of A Cell inside of 324 Building.
  - Received remaining balance of cell sealing devices, which completes fabrication and delivery of this material.
  - Completed installation of the camera mounts at the mockup.
  - Began work package development for the partial geo-probe removal under 324 Building.
  - Electrical contractor mobilized for equipment installation at the mockup.

- o Geotechnical drillers mobilized outside of the 324 Building in preparation for borehole activities.
- o PTS Support:
  - Training and Procedures:
    - Provided support to 300 area mockup activities as they explore the training needs for the new systems that they are bringing online.
    - Worked with 324 Building personnel to develop the first training package for the 300-296 mockup.
    - Led a successful 324 walkdown for removal/replacement of 324 Building manipulators. Revised procedure based on walkdown observations. The walkdown and subsequent procedure updates are significant milestones on the schedule for Master Slave Manipulator (MSM) removal and replacement.
- Environmental Restoration Disposal Facility (ERDF):
  - o Received 13,113 tons for the fiscal month of February.
  - o Received 65,316 tons fiscal year-to-date (FYTD).
  - o PTS Support:
    - Engineering Services:
      - Received PTS support with lighting trouble shooting and recovery. PTS issued a report on the cause of blown fuses and corrective modifications necessary.

## MAJOR ISSUES

No major issues to report at this time.

## 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-0041/WBS-041</b>													
<b>Explanation of major changes to the project monthly spotlight chart:</b>													
Risk <i>RCC-300-296-07: 300-296 Failure of a REC Cranes (B-Cell, A-Cell, A-D &amp; Airlock, or CHA cranes)</i> has been moved from the Realized Risks section to the Critical Risk section for further monitoring. Risk, <i>RCC-300-296-03: Mockup Testing and Qualification of Remote Equipment / Process Identifies Major Modification Requirements</i> was updated to a Realized Risk.													
<b>Realized Risks (Risks that are currently impacting project cost/schedule)</b>													
RCC-300-296-13: 300-296 Design review issues arise for the structural modification to the 324 Building.	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 work space 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.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Very Likely (>90%) <b>Worst Case Impacts:</b> \$640K, 160 days	<span style="color: red; font-size: 20px;">●</span>	<span style="color: black; font-size: 20px;">↔</span>	<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.  <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="text-align: center;">Recovery action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td>Contractor Prepare and Submit Structure Modification Design - 30%-60% (VE2810)</td> <td style="text-align: center;">4/4/2018</td> <td style="text-align: center;">81.25</td> </tr> <tr> <td>Contractor Prepare and Submit Structure Modification Design – Final (VE2810A)</td> <td style="text-align: center;">8/15/2018</td> <td style="text-align: center;">-</td> </tr> </tbody> </table> <b>Recovery Assessment:</b> 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 <i>estimate to complete</i> (ETC), to reflect impacts of risk being realized.	Recovery action(s)	FC Date	%	Contractor Prepare and Submit Structure Modification Design - 30%-60% (VE2810)	4/4/2018	81.25	Contractor Prepare and Submit Structure Modification Design – Final (VE2810A)	8/15/2018	-
Recovery action(s)	FC Date	%											
Contractor Prepare and Submit Structure Modification Design - 30%-60% (VE2810)	4/4/2018	81.25											
Contractor Prepare and Submit Structure Modification Design – Final (VE2810A)	8/15/2018	-											
RCC-300-296-03: Mockup Testing and Qualification of Remote Equipment / Process Identifies Major Modification Requirements.	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.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$773K, 80 Days	<span style="color: red; font-size: 20px;">●</span>	<span style="color: black; font-size: 20px;">↔</span>	<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 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).  <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="text-align: center;">Recovery action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</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 style="text-align: center;">6/4/2018</td> <td style="text-align: center;">-</td> </tr> </tbody> </table> <b>Recovery Assessment:</b> 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.	Recovery action(s)	FC Date	%	Perform Construction Acceptance Test (CAT) for Mockup Equipment Install - Cameras and Lighting; REA system with HPUs; Transfer Mechanism (VE0640)	6/4/2018	-			
Recovery action(s)	FC Date	%											
Perform Construction Acceptance Test (CAT) for Mockup Equipment Install - Cameras and Lighting; REA system with HPUs; Transfer Mechanism (VE0640)	6/4/2018	-											
<b>Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)</b>													

<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 %)</p> <p><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 for the 300-296 Remote Soil Excavation Project (RSEP).</p> <table border="1" data-bbox="865 321 1563 390"> <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>38.63</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> 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	38.63			
Mitigation action(s)	FC Date	%											
324 Min. Safe Spare Parts and Routine Preventive Maintenances (PMs) (R03095)	9/30/2018	38.63											
<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> Accept</p> <p><b>Probability:</b> Likely (75% to 90%)</p> <p><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" data-bbox="865 569 1563 638"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Prepare Replacement Parts List – REC Cranes (VE1120)</td> <td>6/26/18</td> <td>-</td> </tr> <tr> <td>Procure Spare Parts – REC Cranes (VE1235)</td> <td>9/26/18</td> <td>-</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> 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 <b>January 2018</b>. The previously completed white paper will assist in identifying and ultimately lead to procurement of additional spare/replacement parts, <b>along with deferred maintenance to be performed</b>. The replacement parts list for the REC cranes is planned to be developed with procurement of spare parts by the end of the FY. These recovery efforts are expected to reduce the potential for impacts.</p>	Mitigation action(s)	FC Date	%	Prepare Replacement Parts List – REC Cranes (VE1120)	6/26/18	-	Procure Spare Parts – REC Cranes (VE1235)	9/26/18	-
Mitigation action(s)	FC Date	%											
Prepare Replacement Parts List – REC Cranes (VE1120)	6/26/18	-											
Procure Spare Parts – REC Cranes (VE1235)	9/26/18	-											
<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%)</p> <p><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" data-bbox="865 1010 1563 1058"> <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> 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 mitigations 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											
<p>RCC-300-296-21: 300-296 Unable to Remove the Floor Plug Between D-Cell and C-Cell</p>	<p>Personnel are unable to lift the D Cell floor plug with the seal breaker/lifting device and remote operated impact device. The impact of this risk will result in an increased number of soil bins needed to be loaded into waste boxes for disposal at ERDF.</p> <p><b>Risk Handling Strategy:</b> Control</p> <p><b>Probability:</b> Low (10% to 25%)</p> <p><b>Worst Case Impacts:</b> \$462K, 56 days</p>			<p><b>Risk Trigger Metric:</b> Personnel are unable to lift the D Cell floor plug with the seal breaker/lifting device and remote operated impact device.</p> <table border="1" data-bbox="865 1346 1563 1451"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Fab/Install/Concept Test ROID SB/LD at MASF (VE1010)</td> <td>-</td> <td>100</td> </tr> <tr> <td>Utilize Seal Breaker / Lifting Device Assembly in 324 to Free Plug (VE1465)</td> <td>9/17/18</td> <td>-</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> This work scope is being mitigated by installing guide pins onto the four hex nuts in the floor plug. This will verify alignment of the seal breaker/lifting device with the floor plug. The seal breaker has been demonstrated to lift a 10,000-pound floor plug. In addition, the D-Cell floor plug threaded inserts were removed and seal breaker alignment pins installed.</p>	Mitigation action(s)	FC Date	%	Fab/Install/Concept Test ROID SB/LD at MASF (VE1010)	-	100	Utilize Seal Breaker / Lifting Device Assembly in 324 to Free Plug (VE1465)	9/17/18	-
Mitigation action(s)	FC Date	%											
Fab/Install/Concept Test ROID SB/LD at MASF (VE1010)	-	100											
Utilize Seal Breaker / Lifting Device Assembly in 324 to Free Plug (VE1465)	9/17/18	-											
<p><b>High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)</b></p>													
<p><b>Lifecycle Risk Triggers (Risk could be realized at any point of the project)</b></p>													
<p><b>Unassigned Risks (Pending ownership of identified risks/opportunities)</b></p>													
<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. <u>CHPRC Comment:</u> 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</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. <u>CHPRC Comment:</u> 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</p>												

Brush Fire (Force Majeure)	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 spotlight chart.
RCC-300-296-27: 300-296 Requirement Changes Result in Additional Work/Entry Prerequisite Training	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 spotlight chart.

## 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	14.8	11.4	8.5	(3.4)	-23.0%	2.9	25.2%

Numbers are rounded to the nearest \$0.1 million

#### CM Schedule Performance (-\$3.4M/-23.0%)

The current month unfavorable schedule variance is partially caused by backfill of the 316-4 Waste Site finishing ahead of schedule when it was originally planned to be completed in March. In addition, the 300-296 project continues to experience delays in procurement/fabrication of the 324 equipment resulting from design changes and fabrication difficulties, and delays in 324 interference removal, penetration sealing, and hot cell cleanout activities due to an electrical safety incident.

#### CM Cost Performance (+\$2.9M/+25.2%)

The current month favorable cost variance is partially due to a G&A credit across multiple accounts in this project breakdown structure (PBS). ERDF received a credit for the transportation and disposal of other Hanford contractor (OHC) waste. Additionally, the 618-10 Burial Ground project experienced cost efficiencies in the current period by using existing crews to perform backfill, instead of hiring an additional subcontractor. 100K Closure has fewer labor and Mission Support Alliance, LLC (MSA) subcontract resources charging to level of effort (LOE) work packages. Some resources have been diverted to other priority work scope and some resource sharing has occurred.

## 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	535.7	536.5	475.9	0.8	0.2%	60.6	11.3%	685.0	607.5	131.6	77.5

Numbers are rounded to the nearest \$0.1 million

### CTD Schedule Performance (+\$0.8M/+0.2%)

The schedule variance is within reporting thresholds.

### CTD Cost Performance (+\$60.6M/+11.3%)

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 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 300-296 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.

### Variance at Completion (+\$77.5M/+11.3%)

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 remaining VAC is primarily due to the implementation of planned efficiencies as well as staffing ramp downs at the 618-10 Burial Ground. Offsetting the positive variance, the 300-296 project experienced increased costs associated with airlock cleanout, engineering and design activities, continued staff ramp up, and equipment procurement activities of approximately -\$4.6 million.

**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	151.5	(7.8)
Incremental Scope Pending Change Management	0.0	3.0	(3.0)
RL-0041 - Total	143.6	154.5	(10.9)

Numbers are rounded to the nearest \$0.1 million.

### Funds/Variance Analysis:

FY2018 projected funding for PBS RL-0041 is \$143.6 million. 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 a result, ERDF is forecasted and costed under PBS RL-0041, while the funding for ERDF is in RL-0013, which causes the majority of the delta between the spending forecast and funding levels. The delta between the spending forecast and projected funding levels for FY2018 is partially offset due to incorporating trends for cost underruns in Small Waste Site Surveillance and Maintenance, Interim Stabilization, KW Basin Characterization, as well as Sand and Garnet Filter Media Removal activities. The 300-296 project spend forecast decreased by \$3.8 million primarily associated with deferral of a portion of the 324 structural modification and 324 equipment installation scope from FY2018 to FY2019 resulting from FY2018 design changes, resource alignment, and the finance G&A distribution/passback.

### 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	12/27/17 (A)	04/17/18
RL/EPA Review & Approve Interim Backfill Concurrence for 618-10 Decision Unit #10	3/22/18	3/28/18
RL and Regulator Review of CVP and Waste Site Reclassification Form for 618-10 Burial Ground	3/28/18	5/11/18
RL Prepare, Review, Approve & Issue DSA/TSR SER Revision	04/18/18	05/21/18
RL Approval of SNR	05/30/18	06/26/18
RL Independent Structural Modification Review	07/10/18	08/08/18

# Section G

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



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

February 2018  
CHPRC-2018-02, 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

- Completed 400 Area Weekly Waste Management Unit Inspections.
- Continued to support housekeeping activities in the 400 Area.
- Issued eBOM for purchase of additional wiring to support replacement of fire control panel C-670 in the 481 Building.
- Continued development of a work package to replace fire control panel C-670 in the 481 Building.
- Received additional parts and materials to support replacement of the 481 Building leaking fire riser.
- Performed a critique investigation into an event where it was discovered that work had been performed on the motor starter of Pump P-16 during May 2017 (last year) with less than adequate hazardous energy controls. This was due to a circuit being included in the Tagout Authorization Form (TAF) boundary that was not depicted on the current wiring drawings for the P-16 motor starter.

## MAJOR ISSUES

**Issue:**

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

**Corrective Action:** As a result, identified the need to develop a new work package to physically verify 400 Area electrical circuits for water utilities equipment. 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 being developed to physically verify 400 Area electrical circuits due to inaccuracies discovered in the electrical drawings for the water utilities equipment.

## 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	0.1	(0.0)	-0.0%	0.0	25.0%

Numbers are rounded to the nearest \$0.1M

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

The schedule variance is within reporting thresholds.

**CM Cost Performance: (+\$0.0M/+25.0 %)**

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	25.1	25.1	20.8	0.0	0.1%	4.3	17.3%	26.5	22.6	1.8	3.9

Numbers are rounded to the nearest \$0.1 million

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

The schedule variance is within reporting thresholds.

### CTD Cost Performance (+\$4.3M/+17.3%)

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

### Variance at Completion (+\$3.9M/+14.7%)

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	1.4
Incremental Scope Pending Change Management	0.0	0.0	0.0
RL-0042 – Total	4.0	2.6	1.4

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



February 2018  
CHPRC-2018-02, 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 Plateau Remediation Contract		a. FROM (YYYYMMDD) 2018 / 01 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 02 / 18	
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 330,249	d. TARGET PROFIT/FEE 241,605	e. TARGET PRICE 5,830,563	f. ESTIMATED PRICE 6,093,579	g. CONTRACT CEILING 5,830,563	h. ESTIMATED CONTRACT CEILING 6,093,579	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 5,795,256						c. SIGNATURE		d. DATE SIGNED (YYYYMMDD)	
b. WORST CASE 5,931,309									
c. MOST LIKELY 5,851,973		5,919,206		67,233					

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	9	0	5,426	-9	-5,426	988,548	972,958	1,094,809	-15,591	-121,851	0	0	0	988,662	1,163,782	-175,121	
RL-0012 SNF Stabilization & Disp	3,991	3,742	3,924	-249	-182	719,474	719,126	687,374	-348	31,752	0	0	0	740,205	713,146	27,060	
RL-0013 Solid Waste Stab & Disp	14,996	13,443	8,088	-1,553	5,355	1,239,295	1,237,402	1,155,724	-1,893	81,678	0	0	0	1,358,057	1,271,512	86,544	
RL-0030 Soil & Water Rem-Grndwtr/Vadose	11,869	12,161	9,664	291	2,496	1,441,040	1,434,454	1,409,012	-6,586	25,442	0	0	0	1,515,252	1,485,164	30,088	
RL-0040 Nuc Fac D&D - Remainder Hanfrd	3,532	3,282	2,770	-250	512	470,093	467,834	441,027	-2,259	26,807	0	0	0	484,999	460,659	24,340	
RL-0041 Nuc Fac D&D - RC Closure Proj	14,781	11,381	8,514	-3,399	2,867	535,673	536,503	475,939	831	60,564	0	0	0	658,620	581,162	77,458	
RL-0042 Nuc Fac D&D - FTF Proj	186	186	140	0	47	25,084	25,105	20,773	21	4,332	0	0	0	26,487	22,581	3,906	
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														97,251	97,251	0	
e. SUBTOTAL	49,364	44,196	38,526	-5,168	5,669	5,419,208	5,393,382	5,284,657	-25,825	108,725	0	0	0	5,869,532	5,795,256	74,276	
f. MANAGEMENT RESERVE														56,717			
g. TOTAL	49,364	44,196	38,526	-5,168	5,669	5,419,208	5,393,382	5,284,657	-25,825	108,725	0	0	0	5,926,249			

<b>9. RECONCILIATION TO CONTRACT BUDGET BASELINE</b>																		
a. VARIANCE ADJUSTMENT																		
b. TOTAL CONTRACT VARIANCE																		
													-25,825	108,725		5,926,249	5,795,256	130,993

\* 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.

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 / 01 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD)  2018 / 02 / 18	
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  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)							
34 - Env Program & Strategic Plng	1,035	835	621	-199	214	78,974	78,477	72,687	-497	5,790	0	0	0	85,652	79,779	5,874	
35 - Business Services	0	0	-16	0	16	477,296	477,296	453,519	0	23,777	0	0	0	477,296	455,439	21,857	
36 - Prime Contract & Proj Integr	160	160	92	0	68	7,600	7,600	4,576	0	3,024	0	0	0	8,807	5,542	3,264	
3B - PFP Closure Project	9	0	5,426	-9	-5,426	899,766	884,176	1,013,752	-15,591	-129,576	0	0	0	899,880	1,080,805	-180,925	
3C - Waste & Fuels Management Project	14,977	13,424	8,073	-1,553	5,351	1,129,467	1,127,574	1,046,019	-1,893	81,555	0	0	0	1,248,085	1,161,631	86,454	
3D - Soil & Groundwater Remediation	10,786	11,277	9,011	491	2,266	1,260,844	1,254,755	1,229,014	-6,089	25,742	0	0	0	1,328,015	1,297,804	30,211	
3G - K Basin Oper & Plateau Remediation Project	11,093	9,745	8,520	-1,348	1,224	1,397,863	1,399,052	1,319,131	1,189	79,921	0	0	0	1,470,948	1,381,620	89,328	
3H - 618-10 and ERDF	4,272	3,968	2,566	-304	1,402	98,936	102,778	82,217	3,842	20,561	0	0	0	126,809	104,019	22,790	
3J - Building 324 Disposition Project	7,033	4,786	4,233	-2,246	554	68,462	61,676	63,744	-6,786	-2,069	0	0	0	126,790	131,367	-4,577	
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														97,251	97,251	0	
e. SUBTOTAL (Performance Measurement Baseline)	49,364	44,196	38,526	-5,168	5,669	5,419,208	5,393,382	5,284,657	-25,825	108,725	0	0	0	5,869,532	5,795,256	74,276	
f. MANAGEMENT RESERVE														56,717			
g. TOTAL	49,364	44,196	38,526	-5,168	5,669	5,419,208	5,393,382	5,284,657	-25,825	108,725	0	0	0	5,926,249			

\* 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															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: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE NO YES X 9/18/2009				4. REPORT PERIOD a. FROM: 2018/01/22 b. TO: 2018/02/18				
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 \$330,249		e. CONTRACT BUDGET BASE (C + D) \$5,919,206		f. TOTAL ALLOCATED BUDGET \$5,926,249		g. DIFFERENCE (E - F) <b>(\$7,042)</b>		
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						FY09-13 (10)	FY14 (11)	FY15 (12)	FY16 (13)	FY17 (14)	FY18 (15)	UNDISTRIB BUDGET (16)	TOTAL BUDGET (17)
			+1 Mar-18 (4)	+2 Apr-18 (5)	+3 May-18 (6)	+4 Jun-18 (7)	+5 Jul-18 (8)	+6 Aug-18 (9)								
a. PM BASELINE (BEGIN OF PERIOD)	5,369,844	40,181	46,249	37,794	46,907	35,528	34,626	41,339	3,391,477	391,653	471,323	504,826	485,027	501,403	128,499	5,874,208
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																
BCR-013-18-010RO - Incorporate Remaining FY2018 Work Scope for CO 310, CWC Lighting														1,084		1,084
BCR-013-18-013RO - Incorporate FY2018 Scope Additions -RL-0013														15,683		15,683
BCR-013-18-015RO - Incorporate Remaining FY2018 Work Scope for CO 323 Managemen														263		263
BCR-030-18-011RO - Incorporate FY2018 Scope Additions -RL-0030														6,588		6,588
BCR-030-18-012RO - RL-0030 EVM Health Adjustments														0		0
BCR-040-18-008RO - Incorporate FY2018 Scope Additions -RL-0040														1,413		1,413
BCR-041-18-012RO - Incorporate FY2018 Scope Additions -RL-0041														1,540		1,540
BCR-041C-18-013RO - Incorporate CO 306 Scope Revisions for RCC Project Transitio														(0)		(0)
BCR-PRC-18-013RO - Incorporate Scope Changes for FY2017 WFR														0		0
BCR-PRC-18-014RO, Undistributed Budget Adjustments February 2018														(31,249)		(31,249)
c. PM BASELINE (END OF PERIOD)	5,419,208	49,364	49,544	41,818	50,541	36,775	36,670	43,151	3,391,477	391,653	471,323	504,826	485,027	527,975	97,251	5,869,531
7. MANAGEMENT RESERVE																56,717
8. TOTAL																5,926,249

\* 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.

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 / 01 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 02 / 18	
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	FY18	1st Qtr FY19	FY19	FY19-LC	ATCOMPLETE					
			MAR 2018 (4)	APR 2018 (5)	MAY 2018 (6)	JUN 2018 (7)	JUL 2018 (8)	AUG 2018 (9)	(10)	(11)	(12)	(13)	(14)					
300 - Office of the President	8	760	6	6	6	6	6	6	6	6	6	6	0	0	0	0	0	806
303 - Internal Audit	5	497	5	5	5	5	5	5	5	5	5	5	0	0	0	0	0	531
304 - General Counsel	4	464	5	5	5	5	5	5	5	5	5	5	0	0	0	0	0	498
31 - Communications	8	1061	9	9	9	9	9	9	9	9	9	9	0	0	0	0	0	1126
32 - Safety Health Security & Quality	48	7389	55	54	54	55	60	60	60	60	60	60	0	0	0	0	0	7788
34 - Env Program & Strategic Plng	37	5009	46	45	45	46	46	46	45	45	45	45	3	0	0	0	0	5330
35 - Business Services	58	7995	66	66	66	66	66	66	66	66	66	66	0	0	0	0	0	8456
36 - Prime Contract & Proj Integr	65	5350	66	66	66	66	66	66	66	66	66	66	0	0	0	0	0	5810
38 - Project Technical Services	34	5735	39	39	39	39	39	39	39	39	39	39	0	0	0	0	0	6008
3B - PFP Closure Project	167	50058	175	198	197	194	189	186	180	336	0	0	0	0	0	0	0	51712
3C - Waste & Fuels Management Project	342	51444	350	375	370	355	360	353	343	13	31	0	0	0	0	0	0	53994
3D - Soil & Groundwater Remediation	294	37615	279	279	281	294	296	303	270	73	43	43	43	0	0	0	0	39777
3G - K Basin Oper & Plateau Remediation Project	355	49124	369	362	360	348	308	284	272	16	4	0	0	0	0	0	0	51447
3H - 618-10 and ERDF	85	2322	94	92	91	87	70	70	70	0	0	0	0	0	0	0	0	2896
3J - Building 324 Disposition Project	139	2263	143	142	143	143	142	148	147	28	5	0	0	0	0	0	0	3304
<b>g. TOTAL DIRECT</b>	<b>1648</b>	<b>227087</b>	<b>1707</b>	<b>1743</b>	<b>1737</b>	<b>1718</b>	<b>1669</b>	<b>1646</b>	<b>1582</b>	<b>469</b>	<b>84</b>	<b>43</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>239484</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>  2018/01/22		
<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>  2018/02/18			
		<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>	49,364	44,196	38,526	(5,168)	-10.5%	5,669	12.8%	0.90	1.15
<b>Cumulative:</b>	5,419,208	5,393,382	5,284,657	(25,825)	-0.5%	108,725	2.0%	1.00	1.02
	<b>BAC</b>	<b>EAC</b>	<b>VAC in \$</b>	<b>VAC in %</b>	<b>TCPI</b>				
<b>At Complete:</b>	5,869,532	5,795,256	74,276	1.3%	0.93				
<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 PBS RL-0041 backfill of the 316-4 Waste Site finishing ahead of schedule when it was originally planned to be completed in March. In addition, the 300-296 project continues to experience delays in procurement/fabrication of the 324 equipment resulting from design changes and fabrication difficulties, and delays in 324 interference removal, penetration sealing, and hot cell cleanout activities due to an electrical safety incident.</p> <p>Also contributing to the negative schedule variance is PBS RL-0013 planned FY2018 work scope completed in FY2017 for Large Box Repackaging; delays in W-135 detailed design for CSA due to delayed subcontract award as a result of additional rounds of clarifications extending award into the previous holiday period; and CSS detailed design due to a variance in the baseline and the contractor schedule which is not anticipated to impact the design completion date. Based on the submitted and accepted subcontractor schedule, recovery is projected by the end of the second quarter.</p> <p><b>Current Period Cost Variance:</b> The CM positive cost variance is primarily due to PBS RL-0013 commercial repack of transuranic mixed (TRUM) large boxes and was authorized as part of the annual planning exercise for FY2018 via Correspondence Number 1704615A. The prior authorized scope, which was not budgeted in previous performance periods, was incorporated in February based on approved baseline change requests (BCRs), and performance for prior work executed was taken in the current period.</p> <p>Also contributing to the positive cost variance is PBS RL-0041 where the 618-10 Burial Ground project experienced cost efficiencies in the current period by using existing crews to perform backfill, instead of hiring out an additional subcontractor. 100K Closure has fewer labor and Mission Support Alliance, LLC, (MSA) subcontract resources charging to level of effort (LOE) work packages. Some resources have been diverted to other priority work scope, and some resource sharing has occurred.</p> <p>Additionally, contributing to the positive cost variance is PBS RL-0030 implementation of baseline change request (BCR) BCR-030-011R0 – Incorporate Scope Changes – RL-0030 in which the FY2018 budget was incorporated into the baseline in the current period for preparation of the Decisional Draft (DD) 100-NR-2 remedial investigation/feasibility study (RI/FS) report, 200-DV-1 shallow soil characterization, and 200-DV-1 MNA evaluation. Also, The Ground Water (GW) Monitoring and Performance Assessment account has several contributors. The geophysical logging subcontract was competitively rebid with a subsequent reduction in contract costs. The current month savings in GW lab analysis and data management account due to labor resources being used to support audit preparation (different account) and lower subcontract charges than planned due to lab efficiencies; and the sampling group has worked to improve continuity in fieldwork and increased flexibility by improving each team's sampling qualifications. This preparation has resulted in fewer failed sampling trips and less down time due to unplanned maintenance. This is offset, in part, by well maintenance has experimented with different clean-out processes for the 200-ZP-1 injection wells to try to address bio-fouling in the 200 West Pump and Treat System, resulting in increased chemical and labor costs.</p> <p>The positive cost variance is offset by PBS RL-0011 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 CHPRC corporate resources performing an independent assessment of the Root Cause Analysis and corrective actions associated therewith and resources assigned to perform a CHPRC overarching Radiological Controls Assessment and PFP project specific radiological controls assessment are also contributing to this variance. In addition, impacts from the contamination event and delay in demolition activities is causing needed extensions of project management hotel load resources, without budgeted cost of work scheduled, to support the remaining D&amp;D work scope until the facility completes demolition activities.</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>									
<b>Current Period Schedule:</b> The current month schedule variance is not expected to impact the overall contract schedule.									
<b>Current Period Cost:</b> CHPRC is actively formulating a PFP Recovery Plan to allow the resumption of PFP Demolition activities.									
<b>Cumulative Schedule:</b> N/A									

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

<b>Cumulative Cost:</b> N/A
<b>Corrective Action:</b>
<b>Current Period Schedule:</b> No corrective actions have been identified.
<b>Current Period Cost:</b> Cost impacts are being estimated and will be incorporated in the project estimate to complete (ETC).
<b>Cumulative Schedule:</b> N/A
<b>Cumulative Cost:</b> N/A

<b>Monthly Summary</b> (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 \$74.3 million, with \$56.7 million of management reserve (MR), for a total positive variance of \$131.0 million. For February, the project was 10.5 percent behind schedule and 12.8 percent under planned cost. Contract to date (CTD), the project was 0.5 percent behind schedule and 2.0 percent under planned cost.
The VAC decreased \$10.4 million from last month, due to an increase to project breakdown structure (PBS) RL-0011's forecast. A more accurate estimate at completion (EAC) for PBS RL-0011 will be developed upon completion and approval of a recovery plan addressing the root causes of the unplanned releases.
There were seven of the 13 BCRs in the period that impacted the PMB:
BCR-013-18-010R0, Incorporate Remaining FY2018 Work Scope for CO #310, CWC Lighting
BCR-013-18-013R0, Incorporate Scope Changes –RL-0013
BCR-013-18-015R0, Incorporate Remaining FY2018 Work Scope for CO #323 Management of Hanford Sitewide TSD
BCR-030-18-011R0, Incorporate Scope Changes –RL-0030
BCR-040-18-008R0, Incorporate Scope Changes –RL-0040
BCR-041-18-012R0, Incorporate Remaining FY2018 Scope for CO #319, Garnet Filter Media Removal
BCR-PRC-18-014R0, Undistributed Budget Adjustments February 2018

<b>Contractually Required Cost, Schedule, EAC variance, Management Reserve Use</b>
Variance in Performance BAC and EAC: The variance at complete (VAC) between the BAC and EAC this month is a + \$74.3 million, +1.3% and is within reporting thresholds.

<b>Format 1 and 3 Contract Data:</b>															
<b>Contract Price Adjustments</b>															
<table border="1"> <tr> <td>CPs - In Process</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Total Authorized Unpriced Work</td> <td align="right">\$330,249</td> </tr> <tr> <td>Approved Adjustments to Contract Price (not reflected in B.4-1 Table)</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Total Negotiated Cost Changes</td> <td align="right">-</td> </tr> <tr> <td></td> <td><b>Grand Total Adjustments</b></td> <td align="right"><b>\$330,249</b></td> </tr> </table>	CPs - In Process				Total Authorized Unpriced Work	\$330,249	Approved Adjustments to Contract Price (not reflected in B.4-1 Table)				Total Negotiated Cost Changes	-		<b>Grand Total Adjustments</b>	<b>\$330,249</b>
CPs - In Process															
	Total Authorized Unpriced Work	\$330,249													
Approved Adjustments to Contract Price (not reflected in B.4-1 Table)															
	Total Negotiated Cost Changes	-													
	<b>Grand Total Adjustments</b>	<b>\$330,249</b>													

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

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

**Undistributed Budget Activity**

BCR Number	Title	PBS	Fiscal Year	UB
BCR-PRC-18-014R0	<i>Undistributed Budget Adjustments February 2018</i>	RL-0013, RL-0030, RL-0040, RL-0041	2018	\$-31,249K
BCR Number	Title	PBS	Fiscal Year	UB
BCR-PRC-18-014R0	<i>Undistributed Budget Adjustments February 2018</i>	RL-0013, RL-0030, RL-0040, RL-0041	2018	\$-31,249K

The Undistributed Budget decreased by \$31,249K.

**Management Reserve Activity**

BCR Number	Title	PBS	Fiscal Year	MR
BCR-013-18-013R0	<i>Incorporate Scope Changes –RL-0013</i>	RL-0013	2018	\$1,240K
BCR-030-18-011R0	<i>Incorporate Scope Changes –RL-0030</i>	RL-0030	2018	\$869K
BCR-PRC-18-013R0	<i>Incorporate Scope Changes for FY2017 WFR</i>	RL-0011, RL-0012, RL-0013, RL-0030, RL-0041, RL-0042	2018	\$5,133K

Overall, there was an increase in Management Reserve (MR) of \$7,242K during February.

**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 February.

**Best/Worst/Most Likely Estimate:** 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.

<b>Prepared by:</b> Project Control Staff	<b>Date:</b> 03/20/2018	<b>Approved by:</b>	<b>Date:</b>
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*\* 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

February 2018  
CHPRC-2018-02, 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



February 2018  
CHPRC-2018-02, 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

February 2018  
CHPRC-2018-02, 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

- Recovery efforts from the December 2017 contamination event are underway. No work to complete removal of the final glovebox from the 234-5Z facility was conducted during February.

## MAJOR ISSUES

On December 18, 2017, contamination was found in the Plutonium Finishing Plant (PFP) project outside of the trailers in the 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 demolition control zones. Surveys also found contamination on personal vehicles that had been driven off the Hanford Site. Work was stopped after the second event, pending completion of a root cause analysis, and development of corrective actions and a recovery plan. CHPRC continues the process of finalizing the root cause analysis and working with RL and regulators to develop a recovery plan to enable demolition activities to resume. Some of the activities that were performed during January were:

- Placement of sand and soil 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., continuous air monitors, 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 rebuilding of existing equipment and systems in a safe/compliant configuration.
- Initiation of activities to reconfigure boundaries, canister transfer areas, loadout areas, and 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.).

## 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 monthly spotlight chart in February.										
<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 February.										
<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 February.										
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)										
PFP-DEMO-21: Glovebox/Equipment Removal/Demolition Material Handling Event	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: 1.5em;">●</span>	<span style="color: blue; font-size: 1.5em;">↑</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: 5px;"> <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 February. 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.	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 February.										

## CRITICAL PATH SCHEDULE

The PFP critical path schedule begins with the continuation front side demo CSZ 2.5 in 234-5Z. After front side CSZ 2.5 is complete, Remote Mechanical C (RMC) process line and Remote Mechanical A (RMA) process line demo will come next. The final glovebox will be removed during RMA zone 6 demolition. This will allow the project to complete CD-4 closeout on the RL-0011.C1 project with CD-4 finishing September 20, 2018. The dates above are reflective of the known actions and recovery efforts associated with a contamination event that occurred in December as of February month-end closing and will be updated as more information is made available from the root cause analysis and recovery 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	9/20/18	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 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 was held to discuss the contamination spread, possible causes, and a path forward. A root cause analysis is being conducted and recovery actions and expected completion dates will be identified after it has been completed. There was a 29-day loss since January as a result of corrective actions that were known at February 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



February 2018  
CHPRC-2018-02, 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 / 01 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 02 / 18	
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 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)								
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	280,003	-25,278		
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	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 / 01 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 02 / 18	
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> X <input 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 MAR 2018 (4)	+2 APR 2018 (5)	+3 MAY 2018 (6)	+4 JUN 2018 (7)	+5 JUL 2018 (8)	+6 AUG 2018 (9)	FY18 (10)	1st Qtr FY19 (11)	FY19 (12)	FY19-LC (13)	ATCOMPLETE (14)		
35 - Business Services	0	17	0	0	0	0	0	0	0	0	0	0	0	0	
3B - PFP Closure Project	0	15442	0	0	0	0	1	0	0	0	0	0	0	15443	
<b>g. TOTAL DIRECT</b>	0	15459	0	0	0	0	1	0	0	0	0	0	0	15460	

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> 2018/01/22			
<b>b. LOCATION (Address and ZIP Code)</b> Richland, WA		<b>b. NUMBER</b> RL14788		<b>b. PHASE</b>		<b>b. TO (YYYYMMDD)</b> 2018/02/18			
<b>c. TYPE</b> CPAF		<b>d. SHARE RATIO</b>		<b>c. EVMS ACCEPTANCE</b> No X Yes		<b>(YYYYMMDD)</b> 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%	-	1.40			

**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 December 16, 2016. The current schedule now reflects a completion date of September 20, 2018. There was a 29 day loss since January as a result of corrective actions that were known at February 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 September 27, 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 is being conducted and recovery actions and expected completion dates will be identified after it has been completed. There was a 29 day loss since January month-end as a result of the contamination event described above. Efficiencies have previously been identified in readying the 234-5Z facility for demolition wherein NDA and characterization data supports leaving more piping and ducting in place for demolition. In addition, efficiencies were recognized in 236-Z (PRF) wherein work was performed on filter boxes in parallel with the gallery gloveboxes which allowed for acceleration of the start of 236-Z demolition. This is turn 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 project expects to increase progress in the 234-5Z facility as all resources have been reassigned to complete the demo preparations in this facility. 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 February.
- Forecast Schedule with No Baseline: None in the month of February.
- UB Balance: None in the month of February.
- Negative ACWP: None in the month of February.
- 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 February.
- Freeze Period Changes: None in the month of February.
- Retroactive Changes: None in the month of February.
- EVT Changes: None in the month of February.

Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_ 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

February 2018  
CHPRC-2018-02, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

Progress has been temporarily put on hold on Plutonium Finishing Plant (PFP) demolition activities. Demolition on the Plutonium Reclamation Facility (PRF) that began on November 8, 2016, remains at 87 percent complete. Demolition and loadout of the 291-Z stack was completed on July 27, 2017, while demolition of 291-Z was completed on September 29, 2017. Demolition completed on the 234-5ZA facility, as well as demolition of 2735Z, 2734ZA, ZB, ZC, ZD, and ZL facilities. Demolition of 234-5Z was initiated September 13, 2017, and remains at 53 percent complete. Completion of all demolition activities is scheduled to occur in late September 2018. The September date is reflective of the known actions and recovery efforts associated with a contamination event that occurred in December and will be updated as more information is made available from the root cause analysis, identified corrective actions, and recovery plan.

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

- Recovery efforts to achieve stabilization are underway associated with the December 2017 contamination event. Efforts include:
  - o Application of fixative to trailers within the PFP complex.
  - o Continued maintenance applications of fixative.
  - o Routine radiological surveys.
  - o Expanded the Radiological Buffer Area (RBA).
  - o Continued hauling of pit run and staging it on the east and west ends of the High Contamination Area/Airborne Radioactive Area (HCA/ARA).
  - o Extra radiological surveys when sustained winds were 20 miles per hour or greater.

## MAJOR ISSUES

On December 18, 2017, contamination was found in the PFP project outside of the trailers in the 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 demolition control zones. Surveys also found contamination on personal vehicles that had been driven off the Hanford Site. Work was stopped after the second event, pending completion of a root cause analysis, and development of corrective actions, and a recovery plan. CHPRC continues the process of finalizing the root cause analysis and working with RL and regulators to develop a recovery plan to enable demolition activities to resume. Some of the activities that were performed during January were:

- Placement of sand and soil 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., continuous air monitors, 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 a safe/compliant configuration.
- Initiation of activities to reconfigure boundaries, canister transfer areas, loadout areas, and waste storage areas to accommodate a larger work control zone.
- 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 spotlight chart:</b> Risk PFP-DEMO-07, <i>Removal/Extraction of Equipment Takes Longer Than Planned</i> , was moved from the realized risk section of the spotlight chart to the critical risk section. While the risk is being realized, the true risk is due to contamination levels, and spread beyond established boundaries.										
<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;">●</span>		<p><b>Risk Event:</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%; 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>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 a path forward. A root cause analysis is being conducted, and recovery actions and expected completion dates will be identified after it has been completed. During February, recovery actions from the contamination spread continued. They included: placement of sand and soil over contaminated debris and equipment to prevent further contamination spread.</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., continuous air monitors, cookie sheets).</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>Continuation 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> </ul>	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			<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.  <table border="1" style="width: 100%;"> <thead> <tr> <th>Risk recovery 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> <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 is being conducted, and recovery actions and expected completion dates will be identified after it has been completed. <b>During February, recovery actions from the contamination spread continued.</b> They included: <ul style="list-style-type: none"> <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> </ul>	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.			<b>Risk Trigger:</b> Extreme cold temperature, accumulating snow showers resulting in site delays/closures, and high winds.  <table border="1" style="width: 100%;"> <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> <b>Mitigation Assessment:</b> During <b>February</b> , there were no weather impacts. However, the risk remains critical due to potential high-wind, winter weather delays, and cold temperatures having the ability to impact the planned demolition. The PFP project will continue to adjust the daily work scope to plan for projected weather impacts.	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>										
<p><b>PFP-DEMO-07:</b> 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.</p> <p><b>Risk Handling Strategy:</b> Control</p> <p><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 a path forward. A root cause analysis is being conducted, and recovery actions and expected completion dates will be identified after it has been completed. One glovebox remains in the 234-5Z facility (HA-46) and will be removed once demolition resumes. <b>During February recovery actions from the contamination spread continued.</b> 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 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> </ul>	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)										
<p><b>PFP-DEMO-21:</b> 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%) <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 <b>February</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.</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>February</b> .										

### CRITICAL PATH SCHEDULE

The PFP critical path schedule begins with the continuation front side demo CSZ 2.5 in 234-5Z. After front side CSZ 2.5 is complete, Remote Mechanical C (RMC) process line and Remote Mechanical A (RMA) process line demo will come next, followed by completion of the basement of 234-5Z demolition. Demolition of 234-5Z completes August 6, 2018. The 236-Z canyon demolition will then resume with completion scheduled for September 27, 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 critical decision (CD) 4 RL-0011.C2 project closeout activities scheduled to complete December 13, 2018. The dates above are reflective of the known actions and recovery efforts as of January month-end closing that are 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.

## 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 Demolition of all PFP Facilities.	8/31/18	12/13/18	Progress has been temporarily put on hold on PFP demolition activities. There was an 18-day loss of schedule for February. This was a result of incorporation of corrective actions from the contamination event that occurred on Friday, December 15, 2017, during swing shift wherein 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 a path forward. A root cause analysis is being conducted and upon completion recovery actions with expected completion dates will be identified.

\*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



February 2018  
CHPRC-2018-02, 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 / 01 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD)  2018 / 02 / 18	
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	VARIANCE		BUDGETED COST		ACTUAL	VARIANCE		ADJUSTMENTS			BUDGETED	ESTIMATED	VARIANCE	
	WORK SCHEDULED (2)	WORK PERFORMED (3)	COST WORK PERFORMED (4)	SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)	COST WORK PERFORMED (9)	SCHEDULE (10)	COST (11)	COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	(14)	(15)	(16)	
3B - PFP Closure Project	0	0	5,221	0	-5,221	55,307	41,793	56,954	-13,513	-15,161	0	0	0	55,307	114,640	-59,333	
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	5,221	0	-5,221	55,307	41,793	56,954	-13,513	-15,161	0	0	0	55,307	114,640	-59,333	
f. MANAGEMENT RESERVE														3,434			
g. TOTAL	0	0	5,221	0	-5,221	55,307	41,793	56,954	-13,513	-15,161	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 / 01 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 02 / 18	
		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	ACTUAL CURRENT PERIOD	ACTUAL END OF CURRENT PERIOD (Cumulative)	SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS						
			+1 MAR 2018 (4)	+2 APR 2018 (5)	+3 MAY 2018 (6)	+4 JUN 2018 (7)	+5 JUL 2018 (8)	+6 AUG 2018 (9)	FY18 (10)	1st Qtr FY19 (11)	FY19 (12)	FY19-LC (13)	ATCOMPLETE (14)		
3B - PFP Closure Project	144	1238	140	155	154	152	145	143	137	249	0	0	0	2513	
<b>g. TOTAL DIRECT</b>	<b>144</b>	<b>1238</b>	<b>140</b>	<b>155</b>	<b>154</b>	<b>152</b>	<b>145</b>	<b>143</b>	<b>137</b>	<b>249</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2513</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) 2018/01/22			
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD) 2018/02/18			
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE No X Yes (YYYYMMDD) 2009 / 09 / 18						
<b>Direct Projects</b>										
<b>5. Evaluation</b>		<b>Budget</b>	<b>Earned</b>	<b>Actuals</b>	<b>SV in \$</b>	<b>SV in %</b>	<b>CV in \$</b>	<b>CV in %</b>	<b>SPI</b>	<b>CPI</b>
Current:		0.0	0.0	5,220.9	0.0	-	-5,220.9	-	-	0.00
Cumulative:		55,306.9	41,793.4	56,954.4	-13,513.5	-24.4%	-15,161.0	-36.3%	0.76	0.73
		<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:		55,306.9	114,640.2	-59,333.3	-107.3%	-	0.23			
<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 is being finalized and upon completion corrective actions will be implemented and completed 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;" primarily, the main issue involved employee proximity to demolition radiological boundary areas in place at that time are also contributing to this variance. Radiological boundary areas are being reconfigured, and any impacted employees are being relocated. As a result of delays in the ready for demolition activities, the C2 CD-4 has been delayed but not in jeopardy of being met. However, the TPA milestone M-083-00A was re-negotiated to a due date of 9/30/2017 and will not be met. In addition, 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. Finally, a contamination event that occurred on Friday, December 15, 2017 swing shift wherein 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 is being conducted and recovery actions and expected completion dates will be identified after it has been completed. This is partially offset by the completion of demolition of the 2729-Z, and 2727-Z facilities, removal of gloveboxes, the completion of demolition activities for the 2nd, 3rd, 4th, 5th, and 6th floors, South Canyon Airlock of 236-Z, removal of all 18 sections of gallery gloveboxes from 236-Z, demolition of 242-ZA, completion of demolition activities in the 242-Z facility, completion of demolition and waste loadout on the 291-Z demolition, completion of demolition and waste loadout activities associated with the 291-Z stack, demolition of the 234-5ZA, 252-Z1, 2503-Z and 2735Z, 2734ZA, ZB, ZC, ZD, and ZL facilities.										
Cost Variance: The cumulative negative cost variance is associated with MSA subcontracted resources arriving to support PFP demolition that were planned as P/Q shift support with a baseline start date of February 2016. Because the project is behind schedule in initiating demolition activities, and because the decision was made not to execute demolition activities for the 236-Z/242-Z facilities on P/Q shift, these resources currently have limited work to support which contributes to inability to take performance until the ready for demolition work scope is completed. To ensure that the project is able to continue demolition activities as identified in the current schedule, these costs will continue to be realized resulting in a potential unrecoverable cost variance. 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. In addition, 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. Further, 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 the contributing factor, as a result of the weather impacts and an unexpected contamination events in the PRF demolition zone. In addition unplanned Management Assessment efforts for the 234-5Z and 291-Z facilities took longer than originally assumed. Finally, 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;" primarily, the main issue involved employee proximity to demolition radiological boundary areas in place at that time are also contributing to this variance. Radiological boundary areas are being reconfigured, and any impacted employees are being 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 wherein 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 is being conducted and recovery actions and expected completion dates will be identified after it has been completed. This is partially offset by recognized efficiencies associated with the removal of the 18 sections of the PRF gallery gloveboxes, demolition of the 2727-Z and 2729-Z facilities, the 242-ZA and 242-Z Facilities, and demolition of the 291-Z facility, 291-Z Stack, and 234-5ZA, 252-Z1, 2503-Z and 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 September, 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 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 late September, 2018. The September 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 18-day loss of schedule for February. This was a result of incorporation of corrective actions 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 the field work to ready 234-5Z, 236-Z, 242-Z, and 291-Z for demolition. 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 November 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, 2B, 2C, 2D, and 2L 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 February
3. Forecast Schedule with No Baseline: No change in the month of February
4. UB Balance: No change in the month of February
5. Negative ACWP: No change in the month of February
6. EAC Analysis: Best Case = \$114,640; Most Likely = \$118,075; Worst Case = \$118,931
7. Negative CV > VAC: No change in the month of February
8. MR Transactions: No change in the month of February
9. Freeze Period Changes: No change in the month of February
10. Retroactive Changes: No change in the month of February
11. EVT Changes: No change in the month of February

**Prepared by:****Date:****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

February 2018  
CHPRC-2018-02, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

M. A. Wright  
Vice President for  
Project Technical  
Services

## PROJECT SUMMARY

Completed Engineered Container Retrieval and Transfer System (ECRTS) Operational Acceptance Testing (OAT) of process equipment and declared readiness on January 22, 2018. The Contractor Operational Readiness Review (ORR) was initiated on January 23, 2018.

On February 1, 2018, the Contractor ORR team lead and K Basin Operations and Plateau Remediation (KBO&PR) senior management agreed to “pause” the Contractor ORR to allow for:

- Updating the primary operating procedures to institutionalize “restricted use validation” information so that simulated and/or skipped procedure steps are clearly established in the operations procedures.
- Performing and/or reperforming critical outstanding preventive maintenance and calibration activities so as not to interrupt remaining operations demonstration activities.

The Contractor ORR is forecast to complete in early March.

Receipt of STSC assemblies of production run number 2 (vessels 14-24) completed on January 29, 2018, which completed PM-12-1-18.

DOE Plan of Action (POA) was issued and distributed on February 8, 2018.

The T Plant team completed their Readiness Assessment (RA) for the receipt and storage of K Basin sludge and the Startup Approval Letter was approved and issued by the CHPRC president on February 12, 2018.

Project breakdown structure (PBS) RL-0012 scope is 97.1 percent complete, with a cumulative schedule performance index (SPI) of 1.00 and a cost performance index (CPI) of 1.05.

## KEY ACCOMPLISHMENTS

### RL-0012 C1 1 Accomplishments

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

- K Basin Pre-operational Acceptance Testing (KPAT):
  - The team continues working on finalizing the KPAT test report, currently forecasted to be released in March 2018.
- Readiness:
  - Completed OAT of process equipment and declared readiness on January 22, 2018. Contractor ORR was initiated on January 23, 2018.
  - Continued the development and approval of operations, alarm response, maintenance, and administrative procedures to support sludge removal operations.
- The 100K Project team worked on performing preventive maintenance and calibration activities on both ECRTS components and 105KW Annex utility system components. The ECRTS team prepared the STSC for receipt of simulated sludge transfer.
- Receipt of STSC assemblies of production run number 2 (vessels 14-24) completed on January 29, 2018, which completed PM-12-1-18.
- A second draft of the CHPRC Sludge Removal Project (SRP) critical decision (CD)-4 submittal was reviewed with the RL federal Project Director (FPD) and deputy FPD. All comments have been incorporated and a final draft is forecasted to be provided to the RL FPD and deputy FPD in March.

## MAJOR ISSUES

No major issues to report at this time.

## 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 stoplight chart:</b>				
No major changes in <b>February</b> .				
<b>Realized Risks</b> (Risks that are currently impacting project cost/schedule)				
No realized risks identified in <b>February</b> .				
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)				
No critical risks identified in <b>February</b> .				
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)				
<b>FY2017 Risk Triggers</b> (Risk could be realized in FY2017)				
No high risk threat value risks identified in <b>February</b> .				
<b>Unassigned Risks</b> (Pending ownership of identified threats/opportunities)				
No unassigned risks identified in <b>February</b> .				

## CRITICAL PATH SCHEDULE

The critical path runs through completion of Contractor and DOE ORRs. The project 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 105-KW Fuels Storage Basin*, is required by September 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	4/30/2018	The forecast date includes schedule margin from the project's risk analysis. 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 POA Issued and Distributed	01/29/18 (A)	02/08/18 (A)
RL IP Issued	03/12/18	03/12/18
RL Perform ORR - Team Lead	04/09/18	04/20/18
RL Issue Findings / Discrepancy List	04/23/18	04/27/18
RL Approve CD-4 Submittal Package	05/07/18	05/21/18
RL Approve Request for Startup Letter	05/08/18	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



February 2018  
CHPRC-2018-02, 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 15_D_401 KW Basin Sludge Removal Project		a. FROM (YYYYMMDD) 2018 / 01 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 02 / 18	
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	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED	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)										
ITEM (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12a)	(12b)	(13)	(14)	(15)	(16)		
3G - K Basin Oper & Plateau Remediation Project	1,347	1,101	1,591	-246	-490	289,909	289,571	279,234	-338	10,337	0	0	0	290,282	283,630	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														0	0	0		
e. SUBTOTAL (Performance Measurement Baseline)	1,347	1,101	1,591	-246	-490	289,909	289,571	279,234	-338	10,337	0	0	0	290,282	283,630	6,652		
f. MANAGEMENT RESERVE														5,421				
g. TOTAL	1,347	1,101	1,591	-246	-490	289,909	289,571	279,234	-338	10,337	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 / 01 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 02 / 18	
		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															
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 MAR 2018 (4)	+2 APR 2018 (5)	+3 MAY 2018 (6)	+4 JUN 2018 (7)	+5 JUL 2018 (8)	+6 AUG 2018 (9)	FY18 (10)	1st Qtr FY19 (11)	FY19 (12)	FY19-LC (13)	ATCOMPLETE (14)		
3G - K Basin Oper & Plateau Remediation Project	67	7461	61	56	52	0	0	0	0	0	0	0	0	0	7630
<b>g. TOTAL DIRECT</b>	67	7461	61	56	52	0	0	0	0	0	0	0	0	0	7630



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

February 2018  
CHPRC-2018-02, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

In February, workers at the 618-10 Burial Ground Complex continued backfill of the 618-10 Burial Ground, continued site recontouring, and continued to demobilize the site.

## KEY ACCOMPLISHMENTS

### **618-10 Burial Ground Backfill (86 percent complete)**

- Crews continued backfill activities using material from surge piles, road removal, container transfer area (CTA) removal, and existing stockpiles.
- Backfill is expected to complete in March.

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

- Continued road removal and began applying earthbound fixatives to disturbed soils.
- Continued site recontouring activities.
- Supported the removal of one trailer from the project.
- Set up an alternate water source in the 400 Area.
- Shipped Environmental Restoration Disposal Facility (ERDF) can liners, hot socks, a truck scale, parking bumpers, and pressure washers off project to be reused elsewhere around the Hanford site.
- Brought on a subcontractor to dismantle the hog shack; this work is expected to complete in March.
- Continued consolidation and removal of supplies that are no longer being used.

## 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 spotlight chart:</b>			
Risks <i>RCC-618-10-07: Contamination Event at 618-10 Waste Site</i> and <i>RCC-618-10-09: Discovery of Unexpected Waste/ Contamination</i> have been removed from the High Threat Value risk section of the spotlight chart, as they no longer pose a high threat value to the project. The risks will remain open until the project has completed moving soil.			
<b>Realized Risks</b> (Risks that are currently impacting project cost/schedule)			
No realized risks identified in February.			
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)			
No critical risks identified in February.			
<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 February.			

## 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	59.3	63.2	43.7	3.9	6.6%	19.6	30.9%	68.8	49.0	5.3	19.8

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, including trailer removal 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		6/11/2018	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		TBD	CD-4 closeout pending contract definitization.

## 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/EPA Review & Approve Interim Backfill Concurrence for 618-10 Decision Unit 10	3/22/18	3/28/18
RL and Regulator Review of closeout verification package (CVP) and Waste Site Reclassification Form for 618-10 Burial Ground	3/28/18	5/11/18

# 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



February 2018  
CHPRC-2018-02, 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 / 01 / 22																								
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		c. EVMS ACCEPTANCE NO X YES (YYYYMMDD) 2009 / 09 / 18				b. TO (YYYYMMDD) 2018 / 02 / 18																								
c. TYPE CPAF		d. SHARE RATIO																																
<b>5. CONTRACT DATA</b>																																		
a. QUANTITY 1	b. NEGOTIATED COST 0	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 68,809	d. TARGET PROFIT/FEE 0	e. TARGET PRICE 0	f. ESTIMATED PRICE 48,996	g. CONTRACT CEILING 0	h. ESTIMATED CONTRACT CEILING 48,996	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 48,996						c. SIGNATURE			d. DATE SIGNED (YYYYMMDD)																									
b. WORST CASE 49,338																																		
c. MOST LIKELY 48,996		68,809		19,813																														
<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		VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED		VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)															
		WORK SCHEDULED (2)	WORK PERFORMED (3)	WORK PERFORMED (4)	SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)	COST WORK PERFORMED (9)	SCHEDULE (10)	COST (11)																							
RL-0041 Nuc Fac D&D - RC Closure Proj																																		
RL_0041_C1.05.02 618-10 Burial Ground		953	1,390	844	437	546	47,134	50,611	38,960	3,477	11,651	0	0	0	56,014	44,293	11,722																	
RL_0041_C1.05.03 316-4 Waste Site		740	85	3	-655	83	10,806	11,140	4,258	334	6,882	0	0	0	11,183	4,258	6,925																	
RL_0041_C1.05.04 600-63 Waste Site		146	60	0	-85	60	1,350	1,464	445	114	1,019	0	0	0	1,611	445	1,166																	
b. COST OF MONEY		0	0	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	0	0															
d. UNDISTRIBUTED BUDGET																																		
e. SUBTOTAL		1,839	1,535	847	-304	688	59,290	63,216	43,663	3,926	19,553	0	0	0	68,809	48,996	19,813																	
f. MANAGEMENT RESERVE																																		
g. TOTAL		1,839	1,535	847	-304	688	59,290	63,216	43,663	3,926	19,553	0	0	0	68,809	48,996	19,813																	
<b>9. RECONCILIATION TO CONTRACT BUDGET BASELINE</b>																																		
a. VARIANCE ADJUSTMENT																																		
b. TOTAL CONTRACT VARIANCE										3,926					19,553					68,809					48,996					19,813				

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 / 01 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 02 / 18	
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE NO <input type="checkbox"/> X <input checked="" type="checkbox"/> 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	953	1,390	844	437	546	47,134	50,611	38,960	3,477	11,651	0	0	0	56,014	44,293	11,722
RL_0041_C1.05.03 316-4 Waste Site	740	85	3	-655	83	10,806	11,140	4,258	334	6,882	0	0	0	11,183	4,258	6,925
RL_0041_C1.05.04 600-63 Waste Site	146	60	0	-85	60	1,350	1,464	445	114	1,019	0	0	0	1,611	445	1,166
<b>b. COST OF MONEY</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>c. GENERAL AND ADMINISTRATIVE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>d. UNDISTRIBUTED BUDGET</b>														0	0	0
<b>e. SUBTOTAL (Performance Measurement Baseline)</b>	1,839	1,535	847	-304	688	59,290	63,216	43,663	3,926	19,553	0	0	0	68,809	48,996	19,813
<b>f. MANAGEMENT RESERVE</b>														0		
<b>g. TOTAL</b>	1,839	1,535	847	-304	688	59,290	63,216	43,663	3,926	19,553	0	0	0	68,809		

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: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE NO			PARS II - RL-0041.C1 Base Funded Nuc Fact D&D River Corr 9/18/2009			4. REPORT PERIOD a. FROM: 2018/01/22 b. TO: 2018/02/18			
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 \$68,809		g. DIFFERENCE (E - F) \$112			
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 Mar-18 (4)	+2 Apr-18 (5)	+3 May-18 (6)	+4 Jun-18 (7)	+5 Jul-18 (8)	+6 Aug-18 (9)	FY09-13 (10)	FY14 (11)	FY15 (12)	FY16 (13)	FY17 (14)	FY18 (15)		
a. PM BASELINE (BEGIN OF PERIOD)	57,451	1,864	1,708	953	1,238	1,254	1,579	2,101	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																
BCR-041C-18-013R0 - Incorporate CO 306 Scope Revisions for RCC Project Transition													0	(112)	0	(112)
RL_0041_C1.05.03 316-4 Waste Site																
None at this time													0	0	0	0
RL_0041_C1.05.04 600-63 Waste Site																
None at this time													0	0	0	0
c. PM BASELINE (END OF PERIOD)	59,290	1,839	1,692	940	1,222	1,242	1,568	2,086	0	0	0	3,497	47,591	17,720	0	68,809

**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 / 01 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 02 / 18	
		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.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 MAR 2018 (4)	+2 APR 2018 (5)	+3 MAY 2018 (6)	+4 JUN 2018 (7)	+5 JUL 2018 (8)	+6 AUG 2018 (9)	FY18 (10)	1st Qtr FY19 (11)	FY19 (12)	FY19-LC (13)	ATCOMPLETE (14)		
041.6 - 618 10 Projects															
RL_0041_C1.05.02 618-10 Burial Ground	23	1173	27	25	24	20	3	3	3	0	0	0	0	1279	
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	
<b>g. TOTAL DIRECT</b>	<b>23</b>	<b>1256</b>	<b>27</b>	<b>25</b>	<b>24</b>	<b>20</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1361</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>	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME 041.6 - 618 10 Projects		a. FROM (YYYYMMDD) 2018 / 01 / 22	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2018 / 02 / 18	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE No X Yes (YYYYMMDDI 2009 / 09 / 18)			

**5. Evaluation**

**Direct Projects**

	Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Current:	1,839.1	1,535.4	847.0	-303.7	-16.5%	688.4	44.8%	0.83	1.81
Cumulative:	59,290.0	63,215.5	43,663.0	3,925.6	6.6%	19,552.6	30.9%	1.07	1.45
	<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:	68,808.6	48,995.7	19,812.9	28.8%	0.22	1.05			

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

**CURRENT MONTH**

The current month unfavorable schedule variance is caused by work scope that was budgeted to be completed in the current period, but was completed in prior months. This work scope includes 618-10 infrastructure demobilization and 316-4 Waste Site backfill activities.

The current month cost variance is primarily due to the use of existing crews to perform backfill at the 618-10 Burial Ground rather than hire a separate subcontractor. These efforts have led to increased efficiencies and fewer costs compared to the original plan. Additionally multiple accounts in this project received a credit resulting from a G&A passback this month.

**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 on time 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 on time 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 February.
- Forecast Schedule with No Baseline: None in the month of February.
- UB Balance: N/A
- Negative ACWP: There was negative ACWP in the current period in the Trench Excavation/Loadout account due to the G&A passback credit.
- EAC Analysis: Best Case: \$48,996; Most Likely: \$48,996; Worst Case: \$49,338
- Negative CV > VAC: N/A
- MR Transactions: None in the month of February.
- Freeze Period Changes: None in the month of February.
- Retroactive Changes: None in the month of February.
- EVT Changes: None in the month of February.