

# Monthly Performance Report

## December 2017

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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**APPROVED**

*By Janis Aardal at 2:56 pm, Jan 25, 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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December 2017  
CHPRC-2017-12, Revision 0

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## EXECUTIVE SUMMARY

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

- **Plutonium Finishing Plant (PFP) Closure Project:** Completed demolition of the exposed Plutonium Reclamation Facility (PRF) canyon walls. Stem walls and PRF canyon debris were covered with soil. Recovery actions were initiated as a result of a radiological contamination event.
- **618-10 Burial Ground Remediation Project:** Workers completed verification sampling for 618-10 Trench decision units, and over 50 percent of the backfill has been completed to date.
- **Soil and Groundwater Remediation Project (S&GRP):** Since the beginning of fiscal year (FY) 2018, the S&GRP team has treated approximately 624 million gallons of groundwater.
- **Waste and Fuels Management Project (W&FMP):** Began preliminary design work for the Capsule Storage Area (CSA), through the subcontractor, ARES Corporation. The project is reviewing and resolving RL's comments about the Critical Decision (CD)-1 document and supported a public meeting for the CSA permit and Waste Encapsulation and Storage Facility Resource Conservation and Recovery Act permit modifications.
- **K Basins Operations and Plateau Remediation Project (KBO&PR):** The sludge removal team completed validation of the primary sludge removal operations procedures and associated on-the-job training and evaluations. Workers who will operate the sludge removal system are now focusing on operational performance demonstrations and drills to enhance proficiency. This will help prepare workers for the final step prior to sludge removal, the Operational Readiness Review.
- **324 Building Disposition Project:** Workers completed the installation of the manipulators inside the mockup that will be used to train workers to remove the contaminated soil.
- **Plutonium Uranium Extraction Plant (PUREX) Tunnel 1:** After workers completed stabilization of PUREX Plant waste storage Tunnel 1 in November, demobilization of the equipment used for the stabilization efforts began in December. CHPRC began planning to potentially stabilize Tunnel 2.

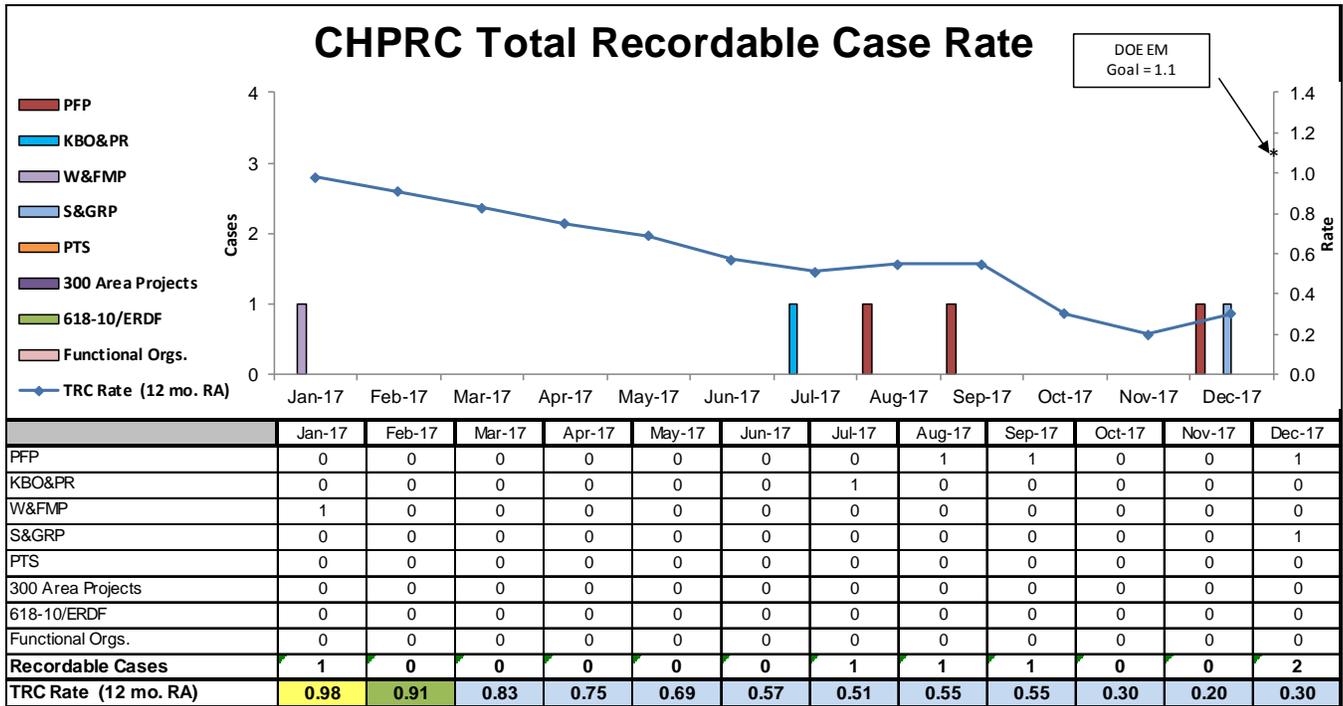


*Progression photo of PRF in December 2017.*

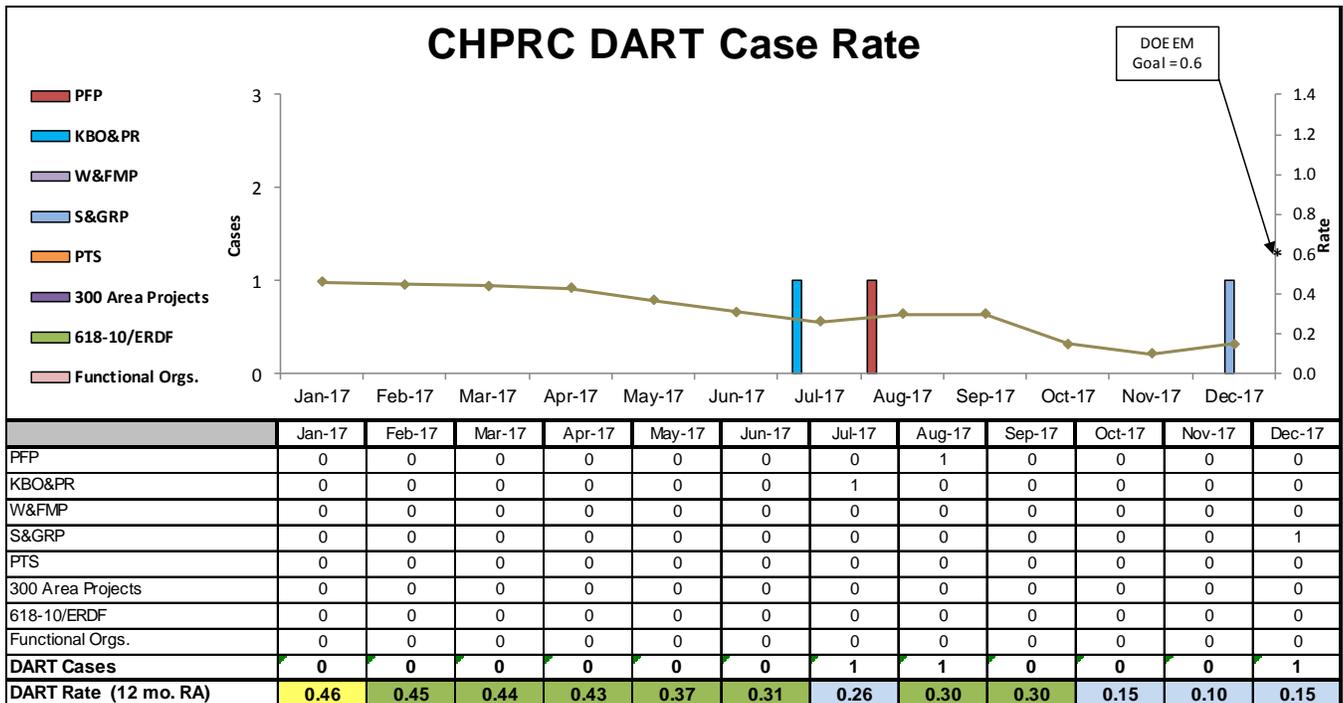
- The President's Zero Accident Council (PZAC) meeting for December was hosted by Business Services. The three main ideas were:
  - Outdoor Recreational Safety – When in doubt, don't go out!
  - Holiday Food Safety – Be mindful of how your food becomes unsafe & potentially hazardous.
  - Wrap it in Green – The 5 R's: Refuse, Reduce, Reuse, Repurpose, and Recycle.
- Four "Thinking Target Zero" (TTZ) bulletins were published to convey important occupational, safety, health, and environmental messages:
  - Holiday Health & Safety.
  - When the frost bites!
  - Winter driving.
  - How GREEN is your ice melt?
- *Weekly Safety Tailgate* briefing packages communicated relevant topics and safety information to the workforce:
  - Four Lessons Learned:
    - Wrong Tool (Aerial Lift) Used for the Job.
    - Unexpected Discovery of an Energized 110 VAC Circuit during Electrical Panel Removal – offsite.
    - 10 Lockout/Tagout (LO/TO) issues in 18 months leads to widespread improvements and awareness of LO/TO requirements - PNNL
    - Just-In-Time Report: Forklift slide bar damaged after tine strikes ground surface – Bechtel.
  - Injury reports.
  - Weekly ethics moments.
  - Vehicle incidents.
  - Winter health.
  - Practice safety 24/7.
  - Inspecting Respiratory Protection Equipment (RPE).
  - Safe use of space heaters.
  - Pedestrian safety reminder.
  - Winter travel reminder.
  - Furniture Inspections.
  - Year-End Dosimeter Exchange.

## TARGET ZERO PERFORMANCE

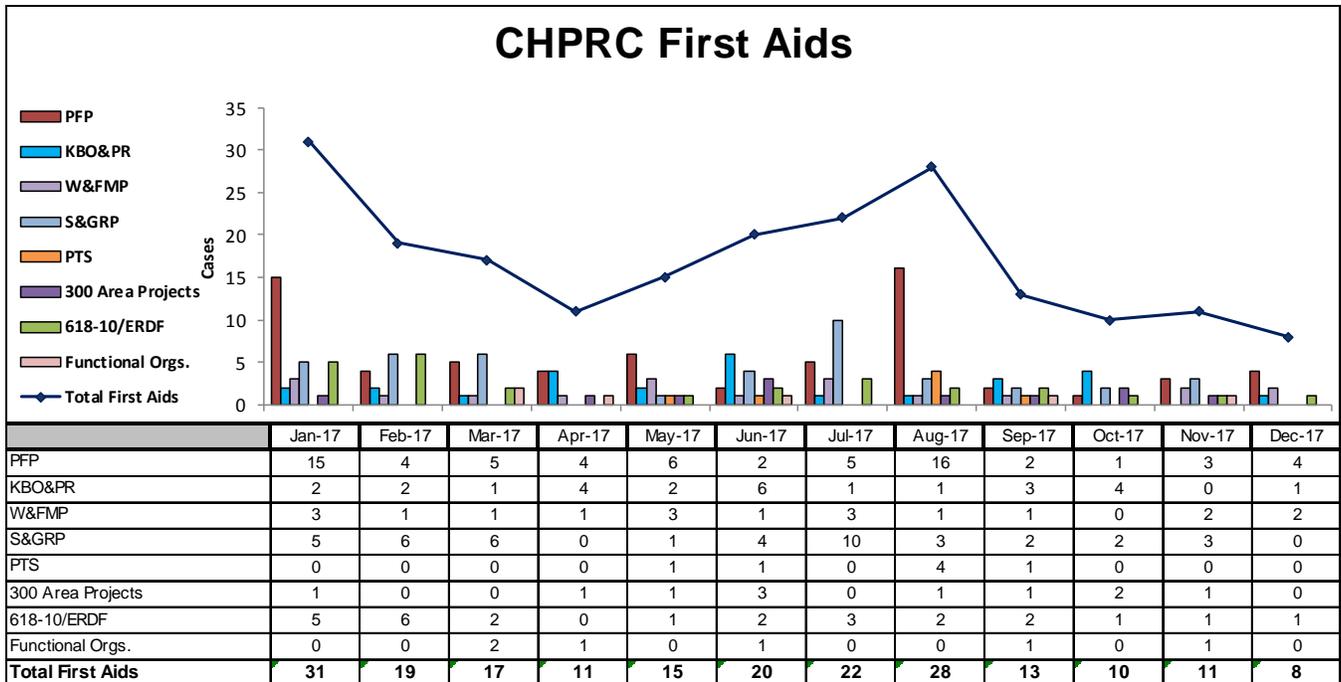
CHPRC continued focusing on integrating and implementing safety programs in all program and project areas.



Total Recordable Injury Case (TRC) Rate: The 12-month rolling average TRC rate of 0.30 is based on a total of six recordable injuries. In December two recordable cases occurred.



Days Away, Restricted or Transferred (DART) Workdays Case Rate: The 12-month rolling average DART rate of 0.15 is based on a total of three days away cases. One DART case occurred in December.



First Aid Case Summary: CHPRC reported eight first aid cases in December. The contributors were four sprains/strains/pains, three misc. (burns, rashes, repetitive motion, etc.), and one abrasions/bruises/contusions injury. In addition, one self-treat case was reported in December.

## 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 (PTS)

- Refer to the Appendix B section of this report for specific overhead support 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 Plateau Remediation Contract (PRC) alignment for fiscal year (FY) 2017-2018.

- As of December month-end, there was a backlog of 51 undefinitized change proposals (CPs), requests for equitable adjustments (REAs), 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/requests for equitable adjustment (REAs).

### Status:

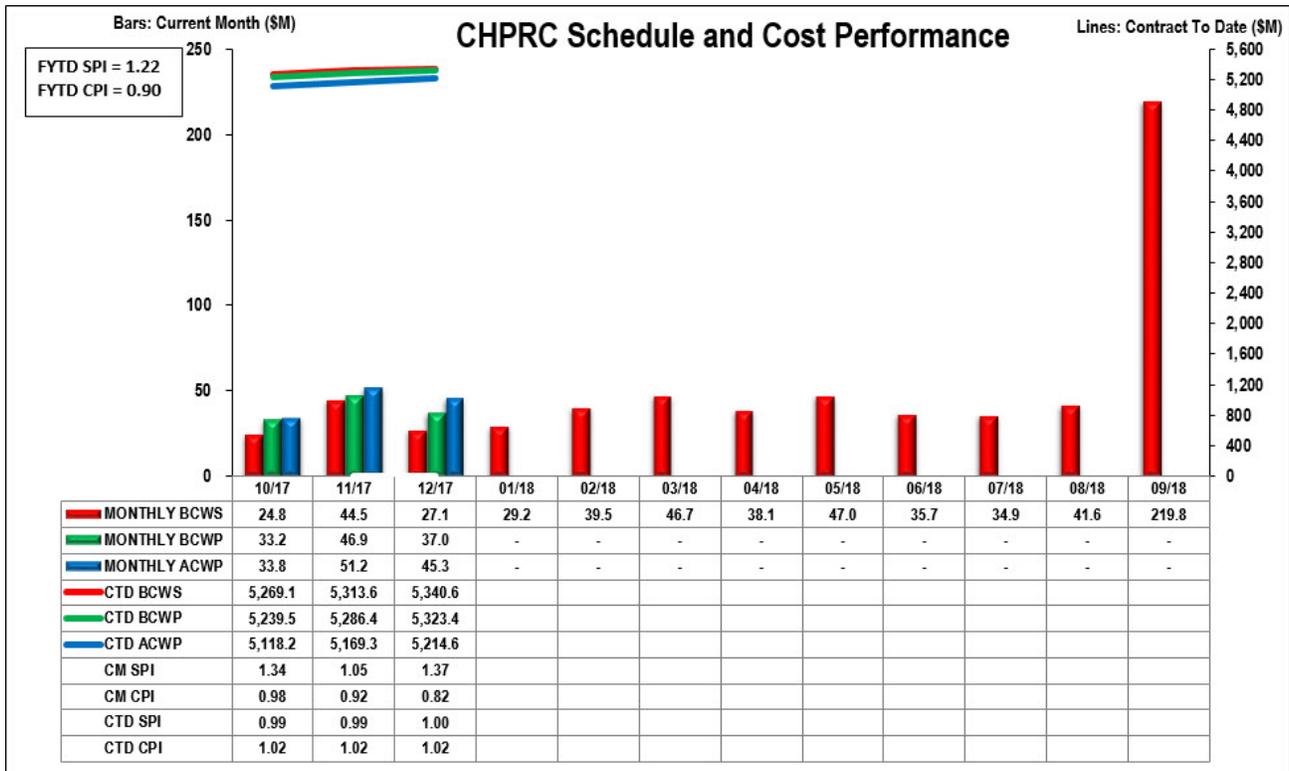
- CHPRC continues to discuss proposed alignment strategy with RL.
  - Negotiate in process changes.
  - Realign remaining contract cost for scope consistent with FY2018 Budget Guidance.

- 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 \$58.8 million of BCWS in planning packages.

	\$M					\$M					\$M		
	Current Period			Contract to Date		Contract to Date			Contract Period				
	Budgeted Cost	Actual Cost	Variance	Budgeted Cost	Actual Cost	Variance	Budgeted Cost	Actual Cost	Variance	BAC	EAC	Variance	
	BCWS	BCWP	ACWP	Schedule	Cost	BCWS	BCWP	ACWP	Schedule	Cost	BAC	EAC	Variance
RL-0011 - Nuclear Materials Stab & Disp PFP	0.0	2.8	5.5	2.7	(2.8)	988.5	973.0	1085.0	(15.6)	(112.0)	988.7	1,118.7	(130.0)
RL-0012 - SNF Stabilization & Disposition	4.1	4.2	5.2	0.0	(1.0)	712.7	712.3	680.1	(0.5)	32.2	740.4	706.3	34.1
RL-0013 - Solid Waste Stab & Disposition	9.1	8.1	9.0	(1.0)	(0.9)	1217.1	1218.3	1141.0	1.2	77.3	1,362.9	1,279.7	83.2
RL-0030 - Soil & Water Rem-Grndwtr/Vadose	(2.2)	8.8	9.8	11.0	(1.1)	1422.3	1415.7	1391.5	(6.6)	24.2	1,568.1	1,536.7	31.5
RL-0040 - Nuc Fac D&D - Remainder	2.5	2.0	4.0	(0.5)	(1.9)	464.7	462.5	436.5	(2.2)	26.0	503.7	480.8	22.8
RL-0041 - Nuc Fac D&D - RC Closure Project	13.3	11.0	11.7	(2.3)	(0.7)	510.5	516.8	459.9	6.4	56.9	683.0	603.7	79.3
RL-0042 - Nuc Fac D&D - FFTF Project	0.2	0.2	0.1	0.0	0.0	24.8	24.8	20.5	0.0	4.2	26.5	22.7	3.8
<b>Total</b>	<b>27.1</b>	<b>37.0</b>	<b>45.3</b>	<b>9.9</b>	<b>(8.3)</b>	<b>5,340.6</b>	<b>5,323.4</b>	<b>5,214.6</b>	<b>(17.2)</b>	<b>108.8</b>	<b>5,873.1</b>	<b>5,748.6</b>	<b>124.6</b>

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

\* 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.

## Performance Summary

CHPRC continues to track completion of the contract scope within budget and is currently projecting a variance at completion (VAC) of \$124.6 million, with \$49.6 million of management reserve (MR), for a total positive variance of \$174.2 million. For December, the project was 36.6 percent ahead of schedule and 22.5 percent over planned cost. Contract to date (CTD), the project was 0.3 percent behind schedule and 2.0 percent under planned cost.

The VAC decreased \$29.4 million from last month due to the impact of scope deduct baseline change requests processed in December against PBS RL-0013, RL-0030, RL-0040 and RL-0041. These changes may be offset in future months by scope additions. CHPRC is currently discussing with RL the disposition of all scope changes. Additionally, PBS RL-0011 reflects and increased forecast of \$17.7 million due to recovery actions associated with a contamination event that occurred in December.

The current month (CM) positive schedule variance is primarily due to PBS RL-0030 December 2017 implementation of BCR-030-18-007R0, Incorporate FY2018 Scope Deductions - RL-0030, which removed prior year activities from the performance measurement baseline (PMB), causing negative current period budgeted cost of work scheduled (BCWS) and generating a corresponding positive schedule variance in the current period.

Also contributing to the positive schedule variance is PBS RL-0011 working historical budgeted cost of work scheduled (BCWS) on discrete demolition activities (apportioned). The majority of the scope was originally planned to begin during the third quarter of 2016. However, delays in getting 236-Z ready for demolition negatively impacted the start of 236-Z demolition. Continuation of demolition activities on 234-5Z, specifically zones 3 and 4, and completion of removal and shipment of the PRF gallery gloveboxes to PFNW for size reduction is contributing to this positive variance. Because all work is historical, the current schedule variance will be favorable going forward.

The positive schedule variance is offset by PBS RL-0041 backfill of the 316-4 Waste Site, which finished ahead of schedule in previous periods, and was originally planned to be completed in March 2018. Also contributing to the offset is the ahead-of-schedule conditions on the Garnet Filter Media Removal procurements. In addition, the 300-296 project has experienced structural design delays due to a change in strategy from Jet Grouting to Micropiles and a revision to the structural specification. Moreover, the award and mobilization of the electrical building trades contractor has been deferred to better align with receipt and installation of mockup equipment, which has been delayed due to increased design efforts and difficulties with fabrication.

The CM negative cost variance is primarily due to PBS RL-0011 delay in completion of the PFP project to achieve slab-on-grade. The delay is causing needed extensions of project management hotel load resources, without BCWS, to support the remaining D&D work scope until the facility completes demolition activities. Further, working historical BCWS for demolition activities associated with 234-5Z and 236-Z is also contributing to this variance. Unplanned shipments to Perma-Fix Northwest (PFNW) for the size reduction of gloveboxes and E4 in 234-5Z continue to cause additional costs to support demolition activities. Shipping the waste to PFNW helped realize schedule and safety improvements but has resulted in increased size reduction costs.

Also contributing to the negative cost variance is PBS RL-0041 increased cost at 300-296 project for equipment design/fabrication, due to increased efforts on the structural design.

## FUNDING ANALYSIS

### FY2017 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	54.1	54.0	0.1
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	40.7	31.7	9.0
RL-0012	15-D-401 Sludge Retrieval Project	36.8	15.9	20.9
RL-0013	Waste and Fuels Management Project	150.1	148.3	1.8
RL-0013	Management of Cesium and Strontium Capsules	6.5	2.7	3.8
RL-0030	Soil, Groundwater and Vadose Zone Remediation	118.3	114.7	3.6
RL-0040	Nuclear Facility D&D, Remainder of Hanford	33.8	35.7	(1.9)
RL-0041	Nuclear Facility D&D, River Corridor	133.2	145.8	(12.7)
RL-0042	Fast Flux Test Facility Closure	4.0	2.6	1.4
<b>Total Estimate at Complete</b>		<b>577.5</b>	<b>551.4</b>	<b>26.1</b>
<b>Incremental Scope Pending Change Management</b>				
RL-0011	Nuclear Materials Stabilization and Disposition	0.0	0.0	0.0
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	0.0	13.1	(13.1)
RL-0012	15-D-401 Sludge Retrieval Project	0.0	0.0	(0.0)
RL-0013	Waste and Fuels Management Project	0.0	(18.5)	18.5
RL-0013	Management of Cesium and Strontium Capsules	0.0	0.0	0.0
RL-0030	Soil, Groundwater and Vadose Zone Remediation	0.0	14.0	(14.0)
RL-0040	Nuclear Facility D&D, Remainder of Hanford	0.0	14.9	(14.9)
RL-0041	Nuclear Facility D&D, River Corridor	0.0	4.5	(4.5)
RL-0042	Fast Flux Test Facility Closure	0.0	0.0	0.0
<b>Total Incremental Work Scope</b>		<b>0.0</b>	<b>28.0</b>	<b>(28.0)</b>
<b>Total Fiscal Year Spend Forecast</b>				
RL-0011	Nuclear Materials Stabilization and Disposition	54.1	54.0	0.1
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	40.7	44.8	(4.0)
RL-0012	15-D-401 Sludge Retrieval Project	36.8	15.9	20.9
RL-0013	Waste and Fuels Management Project	150.1	129.7	20.3
RL-0013	Management of Cesium and Strontium Capsules	6.5	2.7	3.8
RL-0030	Soil, Groundwater and Vadose Zone Remediation	118.3	128.8	(10.4)
RL-0040	Nuclear Facility D&D, Remainder of Hanford	33.8	50.6	(16.8)
RL-0041	Nuclear Facility D&D, River Corridor	133.2	150.3	(17.1)
RL-0042	Fast Flux Test Facility Closure	4.0	2.6	1.4
<b>Total</b>		<b>577.5</b>	<b>579.4</b>	<b>(1.9)</b>

#### Funds/Variance Analysis

For the month of December, FY2018 projected funding was reduced \$15.9 million by RL to align to the RL FY2018 Execution Priority List. In addition, carryover funding was reallocated from RL-0012 expense, RL-0013, and RL-0030 to RL-0011. Changes in the spending forecast reflect initial PFP projected funding.

## BASELINE CHANGE REQUESTS

In December 2017, CHPRC approved and implemented eight baseline change requests (BCRs) into the PMB. Five of the eight BCRs impacted the PMB. Each change request is identified in the table below:

Change Request #	Title	PBS	Summary of Change
BCR-013-18-007R0	<i>Incorporate FY2018 Scope Deductions –RL-0013</i>	RL-0013	This BCR incorporated the proposed bi-lateral agreement between RL and CHPRC for “Scope to Delete” that is deducted from the CHPRC. The incorporation of the scope deductions resulted in equal and offsetting transactions with future scope additions resulting in no change in contract cost or fee. This BCR decreased the PMB by \$14,636K.
BCR-030-18-007R0	<i>Incorporate FY2018 Scope Deductions –RL-0030</i>	RL-0030	This BCR incorporated the proposed bi-lateral agreement between RL and CHPRC for “Scope to Delete” that is deducted from the CHPRC. The incorporation of the scope deductions resulted in equal and offsetting transactions with future scope additions resulting in no change in contract cost or fee. This BCR decreased the PMB by \$59,251K.
BCR-040-18-002R0	<i>Incorporate FY2018 Scope Deductions -RL-0040</i>	RL-0040	This BCR incorporated the proposed bi-lateral agreement between RL and CHPRC for “Scope to Delete” that is deducted from the CHPRC. The incorporation of the scope deductions resulted in equal and offsetting transactions with future scope additions resulting in no change in contract cost or fee. This BCR decreased the PMB by \$18,587K.
BCR-040-18-005R0	<i>Correct SQUID WBS Changes</i>	RL-0040	This BCR incorporated changes to correct the co-mingling of contract scope and un-definitized scope as a result of BCR-040-18-001R0. This BCR did not change the PMB value.
BCR-041-18-006R0	<i>Incorporate FY2018 Scope Deductions -RL-0041</i>	RL-0041	This BCR incorporated the proposed bi-lateral agreement between RL and CHPRC for “Scope to Delete” that is deducted from the CHPRC. The incorporation of the scope deductions resulted in equal and offsetting transactions with future scope additions resulting in no change in contract cost or fee. This BCR decreased the PMB by \$14,323K.
BCR-041-18-010R0	<i>Revise EV Technique for 166KE Oil Storage Vault Demolition Planning</i>	RL-0041	This BCR changed the earned value technique on the activity for 166KE Oil Storage Vault Demolition Planning under WBS 41.02.03.03.05 <i>100K Group 2 Small Facilities Demo</i> from Apportioned to Discrete. The activity was incorrectly set up as Apportioned. With no FY2018 scope to apportion this work to, this BCR corrects the EV type. This BCR did not change the PMB value.
BCRA-PRC-18-009R0	<i>HPIC Updates December 2017</i>	000s, RL-0011, RL-0012, RL-0013, RL-0030, RL-0040, RL-0041, RL-0042	This BCR incorporated December FY2018 Hanford Programs Integrated Control Module (HPIC) updates. This BCR did not change the PMB value.

The Allocated (Distributed) Budget decreased by \$106,797K.

**Undistributed Budget Activity**

BCR Number	Title	PBS	Fiscal Year	UB
BCR-PRC-18-008R0	<i>Undistributed Budget Adjustments December 2017</i>	RL-0013, RL-0030, RL-0040, RL-0041	2018	\$106,916K

The Undistributed Budget increased by \$106,916K.

**Management Reserve Activity**

BCR Number	Title	PBS	Fiscal Year	MR
BCR-013-18-007R0	<i>Incorporate FY2018 Scope Deductions –RL-0013</i>	RL-0013	2018	-\$67K
BCR-030-18-007R0	<i>Incorporate FY2018 Scope Deductions –RL-0030</i>	RL-0030	2018	-\$49K

Overall, there was a decrease in Management Reserve (MR) of \$116K during December.

**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 December.

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):

**December 2017 Summary of Changes**

	FY 2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FYs 2014-2018	Contract Period Total	Total PMB
<b>November 2017 Estimate</b>									
PMB	3,391,477	391,653	471,323	504,826	485,028	628,713	2,481,542	5,873,018	5,873,018
MR	0	0	0	0	0	49,683	49,683	49,683	49,683
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>697,256</b>	<b>2,617,326</b>	<b>6,164,307</b>	<b>6,164,307</b>
<b>December 2017 Change</b>									
<b>PMB</b>									
Change to PMB	0	0	0	0	0	119	119	119	119
<b>MR</b>									
Change to MR	0	0	0	0	0	-116	-116	-116	-116
<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>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
<b>December 2017 Estimate</b>									
PMB	3,391,477	391,653	471,323	504,826	485,028	628,832	2,481,661	5,873,138	5,873,138
MR	0	0	0	0	0	49,567	49,567	49,567	49,567
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>697,259</b>	<b>2,617,329</b>	<b>6,164,310</b>	<b>6,164,310</b>

**Changes to/Utilization of Management Reserve in December 2017**

	FY2009-2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2014-2018	Total
<b>November 2017 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	2,308	2,308	2,308
RL-0030	0	0	0	0	0	18,464	18,464	18,464
RL-0040	0	0	0	0	0	382	382	382
RL-0041	0	0	0	0	0	12,474	12,474	12,474
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>49,683</b>	<b>49,683</b>	<b>49,683</b>
<b>December 2017 MR Changes/Utilization</b>								
RL-0011	0	0	0	0	0	0	0	0
RL-0012	0	0	0	0	0	0	0	0
RL-0013	0	0	0	0	0	(67)	-67	-67
RL-0030	0	0	0	0	0	(49)	-49	-49
RL-0040	0	0	0	0	0	0	0	0
RL-0041	0	0	0	0	0	0	0	0
RL-0042	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-116</b>	<b>-116</b>	<b>-116</b>
<b>December 2017 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	2,241	2,241	2,241
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	12,474	12,474	12,474
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>49,567</b>	<b>49,567</b>	<b>49,567</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 - 12/31/2017				Planned Subcontracting:	\$2,720,084,369
Reporting Category				Contract-to-date awards:	\$2,660,031,891
				Bal remaining to award:	\$60,052,478
	\$ Value	%	Goal %	Goal award\$	Bal to Goal
SB	\$1,492,898,234	56.12%	49.3%	\$1,341,001,594	-\$151,896,640
SDB	\$283,606,393	10.66%	8.2%	\$223,046,918	-\$60,559,475
SWOB	\$279,768,289	10.52%	7.5%	\$204,006,328	-\$75,761,961
HUB	\$73,033,899	2.75%	2.2%	\$59,841,856	-\$13,192,043
VOSB	\$213,478,715	8.03%	3.5%	\$95,202,953	-\$118,275,762
SDVO	\$128,283,945	4.82%	1.3%	\$35,361,097	-\$92,922,848
NAB	\$66,221,012	2.49%	N/A	PRC clause H.20 small business requirement ≥ 17% of CHPRC Contract Price performed by SB.	
Large	\$669,221,596	25.16%	N/A		
GOVT	\$3,969,102	0.15%	N/A		
GOVT CONT	\$483,188,609	18.16%	N/A		
EDUCATION	\$114,179	0.00%	N/A		
NONPROFIT_	\$3,898,651	0.15%	N/A	CHPRC Contract Value:	\$5,732,255,464
FOREIGN	\$6,741,520	0.25%	N/A	17% rqmt:	\$974,483,429
				SB actual:	\$1,492,898,234
Total	\$2,660,031,891	100.00%	N/A	Bal to rqmt	-\$518,414,805

### 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. Nearly 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 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)



T. E. Bratvold  
Vice President for  
Plutonium Finishing  
Plant Closure  
Project

December 2017  
CHPRC-2017-12, 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. This marks the end of more than 10 years of preparation for demolition activities to begin on all PFP facilities. 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, is ongoing, and is 87 percent complete.

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

Significant accomplishments in December included:

- Continued demolition of 234-5Z
  - Completed CSZs 4.2 and 4.3
- Removed and size reduced glovebox HC-227S from 234-5Z
- Continued PRF canyon demolition
- Completed PRF canyon strongback removal
- Completed demolition of MO-096, 2178, and 2179 to continue clearing footprint (New trailers brought in to support residents are not part of the key metrics)
- Completed demo prep of MO-671, HS-45, 46, and 47
- Completed demo of HS-46 and staged in lag yard for reuse
- Shipped 134 roll-off cans to ERDF for waste disposition
- Shipped 10 cubic meters (m<sup>3</sup>) transuranic (TRU) waste
- Shipped 938 m<sup>3</sup> of low-level waste/mixed low-level waste (LLW/MLLW)

### 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	4	68 structures
Buildings Demolished or Removed	1	63 structures
Non-radioactive Waste Shipped	0 m <sup>3</sup>	85 m <sup>3</sup>
Transuranic/Transuranic Mixed (TRU/TRU-M) Shipped	10 m <sup>3</sup>	3,191 m <sup>3</sup>
LLW/MLLW Shipped	938 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 and identify if there are gaps in implementing the controls and if the controls are effective when implemented. If problems are identified, ensure that prompt corrective actions are taken. Provide a monthly report on results and actions.		
			1. October Report	11/07/2017	100%
			2. November Report	12/07/2017	100%
			3. December Report	01/08/2018	0%
			4. January Report	02/07/2018	0%
			5. February Report	03/07/2018	0%

## TARGET ZERO PERFORMANCE

(Reported on a calendar month basis.)

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Total Recordable Injuries	1	2	12/02/17 - The employee was in the process of descending stairs on the 374 excavator, and during his descent was attempting to step down from the top of the excavator tracks and onto the step embedded within the excavator tracks. As the employee stepped down from the top of the excavator tracks and onto the embedded step, his foot slipped from underneath him, causing him to fall backward approximately 5 feet to the ground, landing on his back and PAPR unit. The employee reports maintaining 3-points of contact and not carrying anything. The excavator was parked on a level surface. He also reported the embedded step was filled with mud, dirt, debris, wet and slippery. (24685)
First Aid Cases	4	68	12/04/17 - The employee was disposing of lighter weight items into a BDI Container. This activity required the employee to lift items above his shoulders and head. While disposing of a keyboard tray, the employee felt the left shoulder pop and move out of place, thus causing pain to the shoulder. This is an aggravation of a pre-existing injury. (24687)

	Current Month	Rolling 12 Month	Comment
			<p>12/18/17 - RCT was performing radiological surveys using an extended tool (walking stick). Employee experienced a pop in the left elbow, followed by pain, and was taken to HPMC for evaluation. The employee was initially restricted (by the HPMC nurse) from work until they could be seen by a provider. The next morning, the provider put the employee on a restriction of no lifting/carrying with left arm for one week. (24700)</p> <p>12/18/17 - Employee was involved in the fueling activities taking place inside the PFP demolition area when he first experienced the metallic taste in his mouth. The metallic taste persisted and was reported to supervision the next day. Employee was taken to HPMC and released back to work with no restrictions. Fueling activities were taking place on the South/East end of the demolition area near PRF. There was approximately a 10 MPH wind moving West to East during those fueling activities. Employee reports that the wind was blowing up the bibs of the PAPR Hood. IH investigation into this event was unable to identify a potential chemical source for causing this metallic taste. (24699)</p> <p>12/26/17: Employee slipped while traversing a sheet of Herculite (Vinyl) Fabric that was covered with snow. Herculite had been placed inside the Contamination Area the previous week to create a pathway into and out of trailers MO2116 (Respirator Issuance) and MO 2115 (Tool Crib). Employee slipped, and in the process of trying to catch/gather himself, pulled his left hamstring/groin. Employee slipped but did not fall to the ground. Event was immediately reported to Supervision. Employee was taken to Physicians Immediate Care due to HPMC being closed for the day. (24704)</p>
Near Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### RL-0011 Accomplishments

#### PFM Waste Operations

- Shipped 10 m<sup>3</sup> TRU/TRUM waste.
- Shipped 938 m<sup>3</sup> LLW/MLLW.
- Shipped 134 roll-off cans to ERDF for waste disposition.

#### Demolition Activities

- Continued demolition of 234-5Z
  - Completed CSZs 4.2 and 4.3
- Removed and size reduced glovebox HC-227S
- Continued PRF canyon demolition
- Completed PRF canyon strongback removal
- Completed demolition of MO-096, 2178, and 2179 to continue clearing footprint
- Completed demo prep of MO-671, HS-45, 46, and 47
- Completed demo of HS-46, staged in lag yard for reuse

## MAJOR ISSUES

On December 18, 2017, contamination was found in the PFM 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 a recovery plan. CHPRC is in the process of finalizing the root cause analysis and working with DOE and regulators to develop a recovery plan to enable demolition activities to resume.

## 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> Risks PFP-DEMO-16, <i>Contamination Spread Beyond Established Boundaries</i> , and PFP-DEMO-12, <i>PFP/PRD Demolition Contamination Levels</i> , were moved to the realized risk section of the spotlight chart to reflect the recent contamination event.										
<b>Realized Risks (Risks that are currently impacting project cost/schedule)</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	<span style="color: red; font-size: 1.5em;">●</span>	<span style="color: blue; font-size: 1.5em;">↓</span>	<p><b>Risk Event:</b> On December 18, 2017, contamination was found in the project’s administrative office area during a follow-up survey conducted after a spread of low-level contamination was found on Friday, December 15, 2017, outside of the expanded control zones. Surveys also found contamination on personal vehicles that had been driven off the Hanford site.</p> <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.</p>						
PFP-DEMO-12: PFP/PRF Demolition Contamination Levels	Contamination levels on the canyon walls, floors, ventilation ducts, and the remaining areas of PFP will be higher than expected, thus requiring more stringent controls than expected or larger than expected waste volumes, resulting in cost impacts and schedule delays. <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$1.5 million, 22 days	<span style="color: red; font-size: 1.5em;">●</span>	<span style="color: blue; font-size: 1.5em;">↓</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; margin-bottom: 10px;"> <thead> <tr> <th style="text-align: center;">Risk recovery action(s)</th> <th style="text-align: center;">FC Date</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">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>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.</p>	Risk recovery action(s)	FC Date	%	None identified at this time.	N/A	N/A
Risk recovery action(s)	FC Date	%								
None identified at this time.	N/A	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.	<span style="color: green; font-size: 1.5em;">●</span>	<span style="color: black; font-size: 1.5em;">↔</span>	<p><b>Risk Trigger:</b> Extreme cold temperature, accumulating snow showers resulting in site delays/closures and high winds.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <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 style="text-align: center;">Implement overtime (OT) shifts as necessary to mitigate further impacts associated with weather.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> During December, 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								
<b>High Risk Threat Value (Recoverable slip to enforceable or incentivized milestone)</b>										

<p>PFP-DEMO-21: Glovebox/Equipment Removal/Demolition Material</p>	<p>A material handling event (e.g., dropped piece of process equipment) occurs during the PFP demolition, resulting in cost impacts and schedule delays.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Low (10% to 25%) <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 change in December. 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 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								
<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.</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 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> <p><b>Mitigation Assessment:</b> No change in December. 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. One glovebox remains in the 234-5Z facility (HA-46) and will be removed once demolition resumes.</p>						
<p><b>Unassigned Risks</b> (Pending ownership of identified risks/opportunities)</p>										
<p>No unassigned risks identified in the month of December.</p>										

## 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	2.8	5.5	2.7	80,324.5%	(2.8)	-101.4%

Numbers are rounded to the nearest \$0.1 million.

#### CM Schedule Variance: (+\$2.7M/+80,324.5%)

The current month positive schedule variance is primarily the result of working historical budgeted cost of work scheduled (BCWS) on discrete demolition activities (apportioned). The majority of the scope was originally planned to begin during the third quarter of 2016. However, delays in getting 236-Z ready for demolition negatively impacted the start of 236-Z demolition. Continuation of demolition activities on 234-5Z, specifically zones 3 and 4, and completion of removal and shipment of the PRF gallery gloveboxes to PFNW for size reduction is contributing to this positive variance. Demolition of 236-Z and 234-5Z are currently scheduled to complete June 2018 as a result of impacts from a contamination event that occurred on December 17, 2017, and recovery actions associated therewith. Because all work is historical, the current schedule variance will be favorable going forward.

#### CM Cost Variance: (-\$2.8M/-101.4%)

The current month negative cost variance is primarily due to the delay in completion of the PFP project to achieve slab-on-grade. The delay is causing needed extensions of project management hotel load resources, without BCWS, to support the remaining D&D work scope until the facility completes demolition activities. Further, working historical BCWS for demolition activities associated with 234-5Z and 236-Z is also contributing to this variance. Unplanned shipments to Perma-Fix Northwest (PFNW) for the size reduction of gloveboxes and E4 in 234-5Z continue to cause additional costs to support demolition activities. Shipping the waste to PFNW helped realize schedule and safety improvements but has resulted in increased size reduction costs. This is also impacted by a contamination event that occurred on December 17, 2017, resulting in a management stop work and recovery actions to resume 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	1,085.0	(15.6)	-1.6%	(112.0)	-11.5%	988.7	1,118.7	33.7	-130.0

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 (-\$112.0M/-11.5%)

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 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 needing to be removed that was recently identified (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 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 also contributing to the unfavorable variance. Finally, unplanned work on the High Density Polyethylene (HDPE) water loop is also contributing to this variance. The negative cost variance is partially offset by utilizing 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 methods proven more efficient (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 the month of 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 the month of December, 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 (-\$130.0M/-13.2%)**

The Variance at Completion (VAC) unfavorable variance is reflective of 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 are continuing to be recognized with more time on mask and implementation of the value engineering initiatives associated with high-mass gloveboxes and grouting. Extended hotel loading costs as a result of delays in demolition-ready and demolition activities caused by issues identified in the CTD schedule variance above 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, increased utilization of overtime was used to ready the 234-5Z facility for demolition by September 2017. Also, unplanned work on the HDPE water loop is also 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 EAC and variance at completion 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 variance at completion cannot be developed until completion and approval of a recovery plan addressing the root causes of the unplanned releases. This will occur in the February reporting period.

**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	54.1	54.0	0.1
Incremental Scope Pending Change Management	0.0	0.0	0.0
RL-0011 - Total	54.1	54.0	0.1

Numbers are rounded to the nearest \$0.1 million

**Funds/Variance Analysis**

FY2018 expected required funding for the project breakdown structure (PBS) RL-0011 aligns at \$54 million to allow for completion of demolition activities to achieve slab-on-grade, CD-4 closeout activities, and PFP project closeout. Funds are adequate to address the reported ETC.

**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, RMC Process Line and RMA process line demo will come next followed by completion of the basement of 234-5Z demolition. 234-5Z demolition is projected to complete April 25, 2018. The 236-Z canyon demolition will then resume with completion scheduled for June 7, 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 October 29, 2018. The dates above are reflective of the known actions and recovery efforts associated with a contamination event that occurred in December as of December 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	PFP Facility Transition and Selection Disposition Activities	09/30/17		6/7/18	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.

## 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

December 2017  
CHPRC-2017-12, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

M. A. Wright  
Vice President for  
Project Technical  
Services

## PROJECT SUMMARY

Operational Acceptance Testing (OAT) continued with the sludge removal team completing validation of the primary sludge removal operations procedures and associated on-the-job evaluations (OJEs). Workers who will operate the sludge removal system are now focusing on operational performance demonstrations and drills to enhance proficiency.

Plans to get the Center Bay high-dose material added to Engineered Container SCS-CON-210 are on hold pending modification to the telescoping stiff back (TSB) to add a new swivel component. The swivel is forecast to be delivered to 100K in late January, installed on the Basin TSB, then resources will be scheduled to containerize the high-dose material in March.

The T Plant team commenced their Readiness Assessment (RA) for the receipt and storage of K Basin sludge on December 11, 2017. The RA was completed on December 21, 2017, with two pre-start findings and one post-start finding. Following resolution of RA findings and observations, the Startup Approval Authority will approve T Plant to receive sludge shipments. Approval is forecast in February 2018.

Project breakdown structure (PBS) RL-0012 scope is 96.2 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	1	14	<ul style="list-style-type: none"> <li>12/21/17 – While stepping on first stair, the employee's foot slipped, causing the employee to lose balance and their knee landed on a staircase. (24703)</li> </ul>
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 debris dose mapping, relocation activities in 105KW Basin, and performance of several monthly and quarterly routines during the period.

### KW Basin Sludge Removal Capital Asset Project

- KPAT
  - The team continues working on producing the K Basin Pre-operational Acceptance Testing (KPAT) test report.
  - The final Construction Completion Document (CCD) was approved on December 14, 2017.
- Readiness
  - Operations personnel continued with demonstrations and drills. The forecasted completion of these activities is mid-January.
  - ECRS Plan of Action (POA) was approved by DOE-HQ on November 29, 2017.
  - ECRS Activity Readiness Plan (ARP)/Readiness Self-Assessments (RSAs) were updated to be consistent with the POA approved by DOE-HQ. The Readiness Review Board (RRB) completed initial review of the remaining Readiness Self-Assessments (RSAs) affidavit packages, and the 100K team is aggressively pursuing comment incorporation and completion of objective evidence to support RSA documentation.
  - Three RSAs were approved.
  - The remaining 19 RSAs will be approved following successful completion of operations demonstrations.
- The Contractor Operational Readiness Review (ORR) Implementation Plan (IP) was approved on December 11, 2017.
- Completed mass spectrometer leak detector (MSLD) testing on Sludge Transport and Storage Containers (STSCs) 418-424 and HiLine personnel are producing final data packages. Delivery of these final STSC assemblies is forecast for January.

### T Plant Preparations

- The T Plant team completed all prerequisites for readiness and completed their RA on December 21, 2017. Following resolution of RA findings and observations, the Startup Approval Authority will approve T Plant to receive sludge shipments, currently forecasted for February.

## 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 spotlight chart:</b>																
Based on first quarter risk reviews with the project, it was determined that risks STP-108-K, <i>STP Annex Equipment and KPAT</i> , and STP-103, <i>K Basin Pre-Operational Acceptance Testing (KPAT) &amp; ECRS Startup</i> , no longer pose a threat to the project. As a result, the risks were closed and removed from the spotlight.																
<b>Realized Risks</b> (Risks that are currently impacting project cost/schedule)																
No realized risks identified in the month of December.																
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																
No critical risks identified in the month of December.																
<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> Low (10% to 25%) <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> <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 December. Training and procedure development are nearing completion. RSA affidavits will be completed and approved in January 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	%														
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														
STP-073-C: Processing Efficiency - Retrieval & Shipping	The realized processing efficiency associated with sludge retrieval and shipping operations does not match the baseline plan. <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Low (10% to 25%) <b>Worst Case Impacts:</b> \$0K, 48 days	<span style="color: green; font-size: 1.5em;">●</span>	<span style="color: black; font-size: 1.5em;">↔</span>	<b>Risk Triggers:</b> Actual processing efficiency associated with sludge retrieval and shipping operations does not match baseline assumptions. This risk will commence in FY2018, beginning with operations campaign.  <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <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>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 December. Operations personnel were given training on the process system equipment and will continue to participate in training activities through readiness preparations. No foreseeable impacts in the future and no alternative course of actions are needed at this time.	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 threats/opportunities)																
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 No. 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 change is definitized. As part of the FY2018 annual update, risks were re-evaluated and used as the basis for the risk analysis.																

## 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	4.1	4.2	5.2	0.0	0.4%	(1.0)	-23.9%

Numbers are rounded to the nearest \$0.1 million

#### CM Schedule Performance (+\$0.0M/+0.4%)

The variance is within reporting thresholds.

#### CM Cost Performance (-1.0M/-23.9%)

The current period cost variance is due to additional labor charges in support of schedule acceleration, which was not anticipated in the baseline established in FY2014. The labor is primarily, Nuclear Chemical Operator (NCO), health physics technician (HPT), and Field Work Supervisor (FWS). In addition, more time and resources have been required to complete unanticipated revisions to procedures and address complications with compiling objective evidence required for completion of Operational Acceptance Testing (OAT) and initiation of ORR.

## 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	712.7	712.3	680.1	(0.5)	-0.1%	32.2	4.5%	740.4	706.3	26.2	34.1

Numbers are rounded to the nearest \$0.1 million

#### CTD Schedule Performance (-\$0.5M/-0.1%)

The variance is within reporting thresholds.

#### CTD Cost Performance (+\$32.2M/+4.5%)

The variance is within reporting thresholds.

#### Variance at Completion (+\$34.1M/+4.6%)

The variance is within reporting thresholds.

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

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

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	FY2018		Variance
	Projected Funding	Spending Forecast	
Expense - Spending Forecast	40.7	31.7	9.0
Incremental Scope Pending Change Management	0.0	13.1	(13.1)
Expense – Subtotal	40.7	44.8	(4.1)
Line Item (LI)	36.8	15.9	20.9
Incremental Scope Pending Change Management	0.0	0.0	(0.0)
LI –Subtotal	36.8	15.9	20.9
<b>RL-0012 – Total</b>	<b>77.5</b>	<b>60.7</b>	<b>16.8</b>

Numbers are rounded to the nearest \$0.1 million.

### Funds/Variance Analysis

FY2018 funding for PBS RL-0012 is \$77.5 million. Negative variance of \$4.1 million in expense funding is the result of unplanned overtime to date, hiring of additional personnel to support retrieval operations, and reduction in the allocation of funds. The project is analyzing spend forecast in an effort to meet project funding. Positive variance in the Line Item (LI) is the result of efficiencies gained due to acceleration of the project and risk mitigation efforts reducing the need for contingency and management reserve.

### Critical Path Schedule

The critical path runs through completion of operations demonstrations, drills, and the completion of Readiness Self-Assessment Affidavits. Following successful contractor and RL ORRs, the project schedule reflects RL providing authorization to commence retrieval operations following the review and approval of the Sludge Removal Project (SRP) critical decision (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 Tri-Party Agreement Milestone M-016-176, *Complete Sludge Removal from 105-KW Fuels Storage Basin*, is required by (September 2019). However, the Sludge Treatment Project (STP) team has modified the field execution schedule (FES) to implement acceleration opportunities to the extent practicable.

## 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 request (BCRs) define CHPRC planning with respect to Tri-Party Agreement milestones. The following table is the Tri-Party Agreement milestones 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		3/15/2018	The forecast date does not include schedule margin from the project's risk analysis and assumes CD-4 is not required to begin sludge removal.

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

None currently identified.

## DOE ACTIONS / DECISIONS

Description	CHPRC Delivery Date	Expected RL Due Date
RL Final Approval of POA - K Basins	9/13/17(A)	11/29/17(A)
RL POA Issued and Distributed	01/23/18	01/26/18
RL IP Issued	01/29/18	02/09/18
RL Perform ORR - Team Lead	02/12/18	02/26/18
DOE Approve CD-4 Submittal Package	02/13/18	03/28/18
RL Issue Findings / Discrepancy List	02/27/18	03/05/18
RL Approve Request for Startup Letter	03/15/18	03/28/18

# Section C

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



C. J. Simiele  
Vice President for  
Waste and Fuels  
Management Project

December 2017  
CHPRC-2017-12, 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 December reporting period, November 27 - December 24, 2017, 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): Ares Corporation submitted the Capsule Storage Area (CSA) Work Plan for review. The Cask Storage System preliminary design activities continue with preliminary drawings for the Transportable Storage Canister (TSC), Vertical Concrete Cask (VCC) and Dry Transfer System (DTS) completed during the month. RL has provided comments on the critical decision (CD)-1 Package, and comment dispositions are complete and in internal review.
- The Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) M-091-52 summary schedule and cost profile tables were transmitted to DOE Richland Operations Office (RL).
- T Plant completed the Readiness Assessment (RA) in support of Sludge Receipt and passed with two pre-start and one post-start findings and six observations. One observation was a good practice.
- The Hanford Site Solid Waste Acceptance Criteria, HNF-EP-0063, Revision 17, which incorporates requirements of the Waste Isolation Pilot Plant (WIPP) Waste Acceptance Criteria (WAC), Revision 8, was released.

## EMS Objectives and Target Status (Draft)

Objective #	Objective	Target	Due Date	Status
18-EMS-WFMP-OB1-T1	Reuse equipment from West Valley DOE site/conservate 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	0%
18-EMS-WFMP-OB3-T1	Improve compliance.	Identify implementing mechanisms and gaps for 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	50%

## 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	1	
First Aid Cases	2	*20	12/12/17 – Employee was trying to close a car door, which hung up and caused a shoulder strain. (24693) 12/19/17 – Employee was kneeling for an extended period of time, which caused right knee strain. (24701)  *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 and sent an outline detailing all of the information required to be in each section. CHPRC developed a crosswalk of the DQO outline and the corresponding information contained in current closure plan content in preparation for a meeting with Ecology.
  - Ecology notified RL and CHPRC that they have accepted the proposed changes to the Solid Waste Operations Complex (SWOC) Part B Security and Part A Addenda, and these files are finalized and ready for transmittal to Ecology.

### 13.02 Capsule Storage & Disposition

- o Completed Surveillances/Preventive Maintenance (PM):
  - 27 PM packages.

### 13.03 Canister Storage Building (CSB)

- o Performed/Completed:
  - Initiated fabrication of the CSB Multi-Canister Overpack (MCO) Sampling Mockup TR-MCO-001 and dry run/walk through of CSB's MCO sampling operational proficiency at the Maintenance and Storage Facility (MASF).
- o Completed Surveillances/PMs:
  - 27 PM packages.

### 13.06 Transuranic (TRU) Repackaging

- o Performed/Completed:
- o M-091 Tri-Party Agreement Milestones:

- The Tri-Party Agreement M-091-52 summary schedule and cost profile tables were transmitted to RL.
- o Repackaging:
  - One return shipment of M-091 legacy suspect transuranic mixed (TRUM) waste was received from Perma-Fix Northwest (PFNW) into Central Waste Complex (CWC) contributing 80.65 cubic meters (m<sup>3</sup>) toward the next objective.
- 13.07 Waste Receiving and Processing (WRAP)**
  - o Shipments received:
    - One 1800 Top Load (TL) from Plutonium Finishing Plant (PFP) into WRAP in one shipment.
  - o Completed Surveillances/PMs:
    - 185 surveillances.
    - 21 PM packages.
- 13.08 T Plant**
  - o Completed Surveillances/PMs:
    - 515 surveillances.
    - 25 PM packages.
- Sludge Receipt**
  - o Performed/Completed:
    - Readiness Assessment including:
      - Readiness demonstrations.
      - Post job for sludge handling operations.
      - Sludge handling demonstrations for RA.
      - Sludge dry runs.
- 13.09 Central Waste Complex (CWC) and Low-level Burial Ground (LLBG)**
  - o Performed/Completed:
    - Lighting upgrades to 2402-WG.
  - o Completed Surveillances/PMs:
    - 296 surveillances.
    - 19 PM packages.
  - o Shipments received:
    - Two 1800TLs, three Standard Large Box 2 (SLB2), one Standard Waste Box (SWB), five drums from PFP into CWC in three shipments.
    - Three SWBs from PFWN into CWC in one shipment.
  - o Shipments shipped:
    - Two 1800TLs, six SWBs, and one fiberglass reinforced plywood (in Super 7A) from CWC to PFWN in four shipments.
- 13.12 Integrated Disposal Facility (IDF)**
  - o Performed/Completed:
    - Monthly inspections.
- 13.15 TRU Disposition**
  - o Performed/Completed:
    - The Hanford Site Solid Waste Acceptance Criteria, HNF-EP-0063, Revision 17, which was incorporating WIPP WAC Revision 8 requirements, was released.
- 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:
    - 131 surveillances.
  - o Shipments received:

- One drum and five boxes from PFNW into MWT31 in two shipments.

### 13.24 Management of Cesium and Strontium Capsules Project

- o Performed/Completed:
  - CSA Design: Ares Corporation submitted the CSA Work Plan for review.

### 13.25 Capsules Interim Storage Operations

- o Performed/Completed:
  - CSS design: The CSS design is on-going. Preliminary drawings for the TSC, VCC, and DTS were completed.
  - Engineering: Development of a prototype pass-through gauge to confirm capsule dimensions and straightness was completed.
  - West Valley Equipment: Received specialized scaffolding for the CSS.
  - Project Management: Received comments on the CD-1 Package from RL. Comment dispositions are complete and internal review in progress.
  - Environmental: A public meeting for the CSA and Waste Encapsulation and Storage Facility (WESF) modifications Resource Conservation and Recovery Act of 1976 (RCRA) permits was held on December 18, 2017. The public comment period ends January 31, 2018.

### Project Technical Services (PTS) Support

- o Engineering Services
  - Supported T Plant Readiness Review activities.
- o Project Delivery
  - CSB Door Refurbishment
    - Received bids from contractors for performing modifications to CSB Air Handling unit 004. Technical evaluations commenced.

## 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 record of decision (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 is not needed on July 10, 2017. RL is preparing and issuing a ROD amendment.

#### 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 previously 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 awaits comments on the permit application.

**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. 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). Streamlining and consolidating existing container management procedures. RL authorized the acceleration of 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 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.

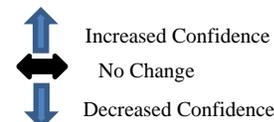
**Status:**

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 transmitted on July 6, 2016 (CHPRC-1602928). A meeting with RL is scheduled in January to discuss the contractual direction necessary to proceed. The project continues to await RL direction for sanitary water system facility modifications.

### 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> Risks WSD-086, W&FM Industrial Accident or Contamination, WSD-133, Results of External Audits/Assessments Impact Operations, and WSD-136, CWC Components Fail, were removed from the realized risk section of the stoplight report and are now being captured under the high risk threat value section.																					
<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 SWOC (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. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Risk recovery action(s)</th> <th>Risk Date</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform daily/weekly waste container surveillances to identify container abnormalities.</td> <td rowspan="4" style="text-align: center;">11/01/11</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td>Manage a "watch list" of waste containers that have shown signs of degradation or are associated with degraded containers.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td>Process waste packages at a rate funded by RL.</td> <td style="text-align: center;">Ongoing</td> <td style="text-align: center;">N/A</td> </tr> <tr> <td>Procuring stainless steel 85 gallon overpacks for alternative storage of containers showing signs of degradation.</td> <td style="text-align: center;">Complete</td> <td style="text-align: center;">100</td> </tr> </tbody> </table> <b>Recovery Action Assessment:</b> No significant changes in <b>December</b> . The project continued to perform container surveillances in <b>December</b> to identify container and container cover abnormalities. Twenty-four containers in 2404WC had signs of exterior corrosion that were placed on the watch list and were scheduled for overpack. The delivery of the stainless steel overpacks is complete, and the overpack of the 24 was complete on October 18, 2017. The project completed the overpack of storage box 75DMA16F3 and has determined that its current location is adequate from a storage perspective. RL authorized the acceleration of FY2018 TRU commercial repacking, allowing shipments to PFNW for repackaging to continue. The remaining containers will continue to require surveillance and continued enhanced monitoring. The project completed streamlining and consolidating container management procedures and implemented in November 2017.	Risk recovery action(s)	Risk Date	FC Date	%	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
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Risk Title	Unmitigated Risk Impacts	Assessment		Comments																	
		Month	Trend																		
<b>RL-0013/WBS-013</b>																					
WSD-143: Safety Classification of SSCs - MDSA Rev. 12	RL approval of the MDSA Revision 12 takes longer than the negotiated assumption planned in the baseline and/or the safety classification of Systems, Structures, and Components (SSCs) is more conservative than the safety analysis dictates, resulting in cost impacts and schedule delays. <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Very Likely (>90%) <b>Worst Case Impacts:</b> \$600K, 120 days			<b>Risk Event:</b> On November 28, 2016, CHPRC submitted letter CHPRC-1604566A R1 -MDSA, Revision 12, the Technical Safety Requirements (TSR) Revision 12, the <i>T PLANT FHA</i> , and the SWOC FHA, Revision 6. While the baseline plan assumed that RL would review and approve this submittal within 120 calendar days (or by March 3, 2017), RL senior management had informally agreed to accelerate review/approval of this submittal within 60 days to facilitate moving all 100K sludge from the 105KW basin to T Plant by September 8, 2018. RL transmitted letter 17-NSD-0018_RL to CHPRC on March 30, 2017, providing a 35-page review comment record (RCR), with comments that must be resolved prior to resubmitting the updated MDSA and TSR. The updated MDSA/TSR was submitted to RL on May 18, 2017.																	
				<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>Obtain written comments from RL Nuclear Safety Division personnel against the submittal described above.</td> <td rowspan="4" style="text-align: center;">2/19/17</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Conduct interface meetings between RL and CHPRC senior management to ensure MDSA approval challenges are discussed and resolved, if possible, prior to any action that delays approval of the MDSA.</td> <td>As Needed</td> <td>N/A</td> </tr> <tr> <td>Resolve RL NSD comments (17-NSD-0018_RL) and solicit RL NSD concurrence.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Prepare analysis on installing seismic cutoff switches in each of the SWOC facilities/buildings, and restricting drum storage to two tiers. Develop strategic plan for vehicle barrier replacement to protect high-MAR containers from vehicle impacts.</td> <td>1/27/2018</td> <td>95</td> </tr> </tbody> </table>	Risk recovery action(s)	Risk Date	FC Date	%	Obtain written comments from RL Nuclear Safety Division personnel against the submittal described above.	2/19/17	Complete	100	Conduct interface meetings between RL and CHPRC senior management to ensure MDSA approval challenges are discussed and resolved, if possible, prior to any action that delays approval of the MDSA.	As Needed	N/A	Resolve RL NSD comments (17-NSD-0018_RL) and solicit RL NSD concurrence.	Complete	100	Prepare analysis on installing seismic cutoff switches in each of the SWOC facilities/buildings, and restricting drum storage to two tiers. Develop strategic plan for vehicle barrier replacement to protect high-MAR containers from vehicle impacts.	1/27/2018	95
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<b>Recovery Action Assessment:</b> No significant changes in <b>December</b> . CHPRC received the Safety Evaluation Report (SER) 17-NSD-0041 from RL on July 31, 2017, and began implementing MDSA Revision 12. Preparation of Revision 13 requires addressing all outstanding comments from Revision 12 SER. Accident analysis may have to be revised to include additional controls or SSCs to reduce the unmitigated risk of the accident scenario. The seismic event with fire was added to Revision 12, and as a result, imposed restrictions that prohibits retrieval activities. Further analysis is in process and will be submitted to RL to address directed action items from the Revision 12 SER as a result of the added seismic event with fire. <b>The directed actions and associated estimate are in review.</b> This risk will be closed and removed from the stoplight for February reporting, as the risk no longer poses a threat to the project. However, per first quarter risk register reviews, the project is working to address major issues; and potentially draft a new risk associated with MDSA Revision 13 (including the potential for inclusion of the directed actions).																					
<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)																					

Risk Title	Unmitigated Risk Impacts	Assessment		Comments															
		Month	Trend																
<b>RL-0013/WBS-013</b>																			
WSD-097: Major Equipment Failure - T-Plant	<p>T Plant suffers a major equipment failure (crane, primary power supply, etc.), resulting in cost impacts and schedule delays.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$3 million, 96 days</p>	●	↔	<p><b>Risk Trigger Metric:</b> During planned facility operation activities, a suspected system component is discovered that requires attention, or an unexpected malfunction results in this risk being realized. This risk will continue throughout the CHPRC (September 30, 2018) contract.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Identify and procure spare parts for T Plant crane.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in <b>December</b>. The project has put into place mitigating strategies (i.e., aggressive S&amp;M activities) to help reduce this risk. The crane is currently operational, however, an adequate spare parts inventory is needed. The project has identified spare parts for the T Plant crane with input from the manufacturer and is in the process of procuring critical spares. The project has received mechanical brake and spare parts. The long lead motor parts are scheduled to be delivered in June 2018. Engineering addressed quality assurance clause for the National Electrical Manufacturers Association (NEMA) MG1 standards to complete the mechanical motor parts order. An electrical parts order is in process. Repair of the motor drive shaft and coupling was required as a result of the 2017 annual crane preventive maintenance work performed in November. <b>The electrical crane PMs are scheduled to be performed in January. The project currently has all identified electrical spare parts for the crane on order.</b></p>	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	<p>Mixed Low-Level Waste (MLLW) and TRU treatment capacity/capability does not meet Hanford needs or treatment does not occur as scheduled, resulting in cost impacts.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$1.25 million, 0 days</p>	●	↔	<p><b>Risk Trigger Metric:</b> Will continue throughout the contract (September 30, 2018).</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Establish multiple treatment contracts, or obtain additional capability, for the processing of MLLW and TRU, with terms extending to the end of the current CHPRC contract with RL (i.e. September 30, 2018).</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Continue to work with RL to fund the processing of TRU/M waste at PFNW at a rate that keeps them viable (i.e. keeps the doors open).</td> <td>Ongoing</td> <td>N/A</td> </tr> <tr> <td>Evaluate the benefit(s) associated with an increase to the PFNW plutonium (Pu) possession limit. Their current limit is 200 grams of total Pu. Increasing the limit may allow additional quantities of TRUM waste to be shipped to PFNW for processing. This evaluation took place in conjunction with the M-091-52 engineering study.</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Negotiations with RL are ongoing to seek authorization for additional shipments of M-91 legacy TRUM to PFNW. The additional shipments would meet the objectives for the PFNW minimum optimal processing volume as identified in the Optimization Study provided to RL in December 2016.</td> <td>Complete</td> <td>100</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No significant changes in <b>December</b>. 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&amp;EC). Additional treatment capabilities will be needed to meet future anticipated MLLW treatment needs.</p> <p>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.</p> <p>295 m<sup>3</sup> of legacy M -91 TRUM waste was authorized by DOE during FY2017, of which all (295m<sup>3</sup>) has been shipped to date. Along with the oversized TRUM waste item shipments from PFP during FY2017, enough waste has been shipped to PFNW to meet their minimum optimal processing volumes. Additional authorizations has been received by DOE for FY2018, which will maintain PFNW's minimum optimization processing volumes.</p>	Mitigation action(s)	FC Date	%	Establish multiple treatment contracts, or obtain additional capability, for the processing of MLLW and TRU, with terms extending to the end of the current CHPRC contract with RL (i.e. September 30, 2018).	Ongoing	N/A	Continue to work with RL to fund the processing of TRU/M waste at PFNW at a rate that keeps them viable (i.e. keeps the doors open).	Ongoing	N/A	Evaluate the benefit(s) associated with an increase to the PFNW plutonium (Pu) possession limit. Their current limit is 200 grams of total Pu. Increasing the limit may allow additional quantities of TRUM waste to be shipped to PFNW for processing. This evaluation took place in conjunction with the M-091-52 engineering study.	Complete	100	Negotiations with RL are ongoing to seek authorization for additional shipments of M-91 legacy TRUM to PFNW. The additional shipments would meet the objectives for the PFNW minimum optimal processing volume as identified in the Optimization Study provided to RL in December 2016.	Complete	100
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Risk Title	Unmitigated Risk Impacts	Assessment		Comments									
		Month	Trend										
<b>RL-0013/WBS-013</b>													
WSD-140: As-Found-Unknown Conditions - T Plant	<p>Unknowns, as-found, or emergent conditions impact the operability of the T Plant facility.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Very Likely (&gt;90%)</p> <p><b>Worst Case Impacts:</b> \$990K, 0 days</p>	●	↔	<p><b>Risk Trigger Metric:</b> Based on unknown conditions, the possible risk triggers are unknown.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Repairs to 221-T Dock number 2 in support of sludge receipt</td> <td>Complete</td> <td>100</td> </tr> <tr> <td>Submittal of a 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 <b>December</b>. Deterioration of the steel decking and steel support structure for 221-T dock 2 has required that the dock be taken out of service. A new loading dock is necessary, as one of the Life Safety Code required emergency egress points and to support the receipt of sludge. This dock also provides storage areas for various gas bottles. T Plant completed removal of dock 2 and poured associated concrete pads. An onsite inspection of the bottle rack and stair fabrication was performed by the project in August. Dock 2 installation was completed in November. Additional asphalt work was identified in the vicinity of dock 2 as well as repair to T Plant roads. Asphalt work was also completed in November.</p>	Mitigation action(s)	FC Date	%	Repairs to 221-T Dock number 2 in support of sludge receipt	Complete	100	Submittal of a 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											
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<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 <b>December</b>. 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 <b>December</b>. 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. <b>CHPRC continues to</b> 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 <b>December</b>. 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 <b>December</b>. CHPRC continues to have regular interfaces with Ecology to discuss the issue and are evaluating options should the 90 percent be required. <b>The permit application was formally submitted to Ecology on November 21, 2017, with the 30 percent design information. The project is currently awaiting comments on the application.</b></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</b> (Recoverable slip to enforceable or incentivized milestone)										
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, <b>require</b> 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> <b>No significant changes in December.</b> 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> Accept  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$3 million, 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> </tbody> </table> <p><b>Mitigation Assessment:</b> <b>No significant changes in December.</b> 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. <b>Completed maintenance on the High Energy Real Time Radiography Linear Accelerator.</b> 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
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								
WSD-136: CWC 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> Accept  <b>Probability:</b> Likely (75% to 90%) <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> </tbody> </table> <p><b>Mitigation Assessment:</b> <b>No significant changes in December.</b> 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.</p>	Mitigation action(s)	FC Date	%	Floor repairs and MDSA container stacking requirements, replacement of exhaust fans	Ongoing	N/A
Mitigation action(s)	FC Date	%								
Floor repairs and MDSA container stacking requirements, replacement of exhaust fans	Ongoing	N/A								
<b>Unsigned Risks</b> (Pending ownership of identified risks/opportunities)										
No unsigned risks identified in <b>December</b> .										

## 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	9.1	8.1	9.0	1.0	-11.3%	-0.9	-10.9%

Numbers are rounded to the nearest \$0.1 million

#### CM Schedule Performance (+\$1.0M/-11.3%)

The CM schedule variance is primarily associated with planned FY2018 work scope completed in FY2017 for Large Box Repackaging and delays in W-135 detailed design for CSA and CSS due to delayed subcontract award as a result of additional rounds of clarifications extending award into the recent holiday period. Based on the submitted and accepted subcontractor schedule, recovery is projected by the end of the second quarter.

#### CM Cost Performance (-\$0.9M/-10.9%)

The CM cost performance variance is primarily associated with TRU PFP waste, which was authorized as part of the FY2018 scope. Once the budget is approved, a baseline change request (BCR) will be implemented and performance will be available. Cost incurred during this period included four shipments to an offsite treatment facility totaling 26.3m<sup>3</sup>.

## 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	1,217.1	1,218.3	1,141.0	1.2	0.1%	77.3	6.3%	1,362.9	1,279.7	138.7	83.2

Numbers are rounded to the nearest \$0.1 million

#### CTD Schedule Performance (\$+1.2M/+0.1%)

The CTD schedule variance is within threshold.

#### CTD Cost Performance (+\$77.3M/+6.3%)

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 (+\$83.2M/+6.1%)**

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	156.6	150.9	5.6
Incremental Scope Pending Change Management	0.0	(18.5)	18.5
RL-0013 – Total	156.6	132.4	24.1

Numbers are rounded to the nearest \$0.1 million.

#### **Funds/Variance Analysis**

The FY2018 projected funding for Project Breakdown Structure (PBS) RL-0013 of \$156.6 million is based on RL funding guidance. The total fiscal year spend forecast (FYSF) of \$132.4 million with a \$24.1 million variance primarily due to expected transfer from RL-0041 into RL-0013 for Environmental Restoration Disposal Facility (ERDF) operations once an appropriations is in place, as 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, due to continued development of M-091-52/53 milestone requirements, some planned work has been deferred to FY2019.

#### **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		12/28/17	On schedule
M-091-52-T01A	Remove Five (5) Mixed Waste Containers from Outside Storage Area A and/or Outside Storage Area B	11/30/18		5/17/18	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		2/27/18	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)	1/02/18 1/24/18 (Forecast)

# 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

December 2017  
CHPRC-2017-12, 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 and well drilling (including development) completed in December includes the following:

Treatment Facility	Million Gallons Treated		Chrome (kg)		Carbon Tet (kg)		Tech-99 (pCi)		Uranium (kg)	
	CM	FYTD	CM	FYTD	CM	FYTD	CM	FYTD	CM	FYTD
DX P&T	30.4	91.5	2.5	6.93						
HX P&T	26.4	82.1	2.3	7.0						
KR-4 P&T	8.9	28.2	0.1	0.4						
KW P&T	14.5	43.0	1.2	4.4						
KX P&T	36.7	84.1	2.5	5.4						
200 West P&T	100.3	295.2	8.9	25.0	198.0	574.0	.25x10 <sup>12</sup>	.63x10 <sup>12</sup>	16.0	39.1
<b>Combined</b>	<b>217.2</b>	<b>624.1</b>	<b>17.5</b>	<b>49.1</b>	<b>198.0</b>	<b>574.0</b>	<b>.25x10<sup>12</sup></b>	<b>.63x10<sup>12</sup></b>	<b>16.0</b>	<b>39.1</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	4	0	0
100-HR-3	15	5	6
200-UP-1	8	0	2
200-ZP-1	4	0	2
M-24 Milestone	5	0	0
200-DV-1	0	0	0
<b>Total Wells</b>	<b>36</b>	<b>5</b>	<b>10</b>
<b>Site Wide Boreholes</b>	<b>31</b>	<b>0</b>	<b>1</b>

## 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	0%
<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	1	1	12/27/17 – Employee was traveling to the work site at speeds between 20 to 25 miles per hour when the individual lost control of the vehicle and rolled off the road. The individual was taken to the Kadlec emergency room for evaluation, given pain medication, and released. The employee suffered a strained lower back. (24705)
Total Recordable Injuries	0	0	NA
First Aid Cases	0	*43	*1 First Aid case, PTS in support of RL-0030.
Near-Misses	0	0	NA

## KEY ACCOMPLISHMENTS

### RL-0030 Accomplishments

#### RL-0030.01 RL 30 Operations

##### River Corridor

##### 100-BC-5 Operable Unit (OU)

- Received RL comments on the revisions made to the Draft A Remedial Investigation/Feasibility Study (RI/FS) Chapter 6 on December 7, 2017. Revisions to Chapter 6 were prepared in response to comments received from Environmental Protection Agency (EPA).
- Conducted sessions with EPA and RL to review resolutions to EPA Draft A RI/FS comments on December 11, 12, 14, 18, and 20, 2017.
- Received RL comments on the revisions made to the Draft A RI/FS Chapter 7 on December 22, 2017. Revisions to Chapter 7 were prepared in response to comments received from EPA.

##### 100-HR-3 OU

- Completed drilling, construction, and development of the six new extraction wells.

##### 100-KR-4 OU

- Resolved RL comments on the Decisional Draft KW Soil Flushing/Infiltration Treatability Test Plan. Initiated preparation of the Draft A test plan. Draft A is scheduled to be submitted to EPA in early January.

##### 100-NR-2 OU

- Completed preparation of an internal RL final draft white paper on December 13, 2017, that evaluates a Technical Impracticability (TI) Waiver versus Monitored Natural Attenuation approach for Strontium-90 contaminated groundwater. The white paper recommends that a TI waiver be pursued in the RI/FS. Comments were received from EM-1 on December 19, 2017, and are being addressed.
- Prepared the status of dispositioned and open comments from the Draft A, RI/FS and delivered to RL. RL will be transmitting this summary to the agencies.
- Completed the draft annual report on operations of the low-river respirometry testing for the in-situ bioremediation system installed at the petroleum remediation site.

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

- Received approval for two Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) change notices, one to the Waste Management Plan for the 200-UP-1 Groundwater OU and the second on the 200-UP-1 performance monitoring plan to reflect current status. Completed well construction on the last of 11 chromium characterization wells. Completed the procurement process for drilling services to complete the last five (of 14) 200-UP-1 remedy performance monitoring wells in FY2018.
- Completed two data quality objective meetings with RL to support an update to the performance monitoring plan.

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

- Completed a straw man Interim Record of Decision strategy for the 200-BP-5 and 200-PO-1 groundwater OUs for RL and regulator review.
- Completed the Post Remedial Investigation Waste Control Plan and Removal Action Waste Management Plan for the 200-BP-5 Groundwater Operable Unit.
- Resolved additional Ecology comments received on the 200-BP-5 Removal Action Work Plan.

**200-EA-1 OU**

- Initiated Work Plan Chapter 3 comment resolution and text updates based on the RL informal review comments received on November 22 and December 5, 2017.
- Continuing Work Plan Appendix A sampling and analysis plan (SAP) comment resolution associated with CHPRC informal review.
- Submitted Work Plan Chapter 4 for RL informal review on November 30, 2017.

**200-DV-1 OU**

- Continued field preparation for the Uranium Reactive Gas Sequestration test with ammonia injection anticipated to begin late January 2018.
- Held a meeting December 19, 2017, to walk RL through the logic for selection of the 28 shallow borehole locations. Drilling will begin mid-January 2018.
- Briefed RL on the latest outline for the 200-DV-1 Treatability Test Evaluation Report on December 20, 2017.

**200-ZP-1 OU**

- Met with EPA on December 11, 2017, to review the second and third quarter 2017 200 West P&T performance.
- Met with RL on December 11, 2017, to discuss revisions to the Revision 6 Decisional Draft 200 West Pump and Treat Operations and Maintenance Plan.
- Delivered the Revision 3 Decisional Draft Performance Monitoring Plan for the 200-ZP-1 Groundwater Operable Unit Remedial Action (without groundwater modeling update) to RL for review on December 1, 2017. Held a meeting on December 18, 2017, to discuss resolution of RL comments to the Revision 1 Decisional Draft 200 West Area 200-ZP-1 Remedial Design/Remedial Action Work Plan.

**Central Plateau Closure Plans**

- Received the Ecology Option 2 (coordinated closure) annotated outline on December 7, 2017; initiated implementing outline on 216-A-36B and 216-A-37-1.

**RCRA Groundwater Monitoring**

- Delivered the regulator internal draft of the SST WMA S-SX Engineering Evaluation Report on December 13, 2017.
- Received regulator comments on SST WMA T on December 5, 2017, and SST WMA TX/TY on December 20, 2017.
- Submitted the internal draft Engineering Evaluation Reports for LLWMA-3 and Trench 31/34 to RL on December 1, 2017, and received their comments on December 15, 2017. Comments were

addressed and the regulatory draft of these two documents were delivered to Ecology on December 21, 2017.

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

- Engineering Services
  - o Supported Uranium Reactive Gas Sequestration (URGS) treatability test design efforts.
- Training and Procedures
  - o Partnered with Soil and Groundwater Remediation Project (S&GRP) operations management to develop and implement “just-in-time” training for operations and fieldwork supervisors on pre- and post-job meetings. The training facilitates timely presentation of training materials and addresses emergent issues.
  - o Worked with S&GRP personnel to compare the chemicals requested in P&T procedures with the actual chemicals received. The comparison resulted in changes to the requirements identified in five procedures. The performance of this activity demonstrates management interest in ensuring procedure content is accurate or changed before work is performed.
- ConOps/Work Control/Conduct of Work
  - o Reviewed Component Index change process to simplify for project.
- Emergency Preparedness
  - o Supported development and review of Emergency Preparedness Hazards Analysis/Emergency Action Levels for URGS treatability test.
- Project Delivery
  - o Completed 200-ZP-1 injection well construction completion documents.
  - o Continued with the mechanical/electrical install at the URGS treatability test site.

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

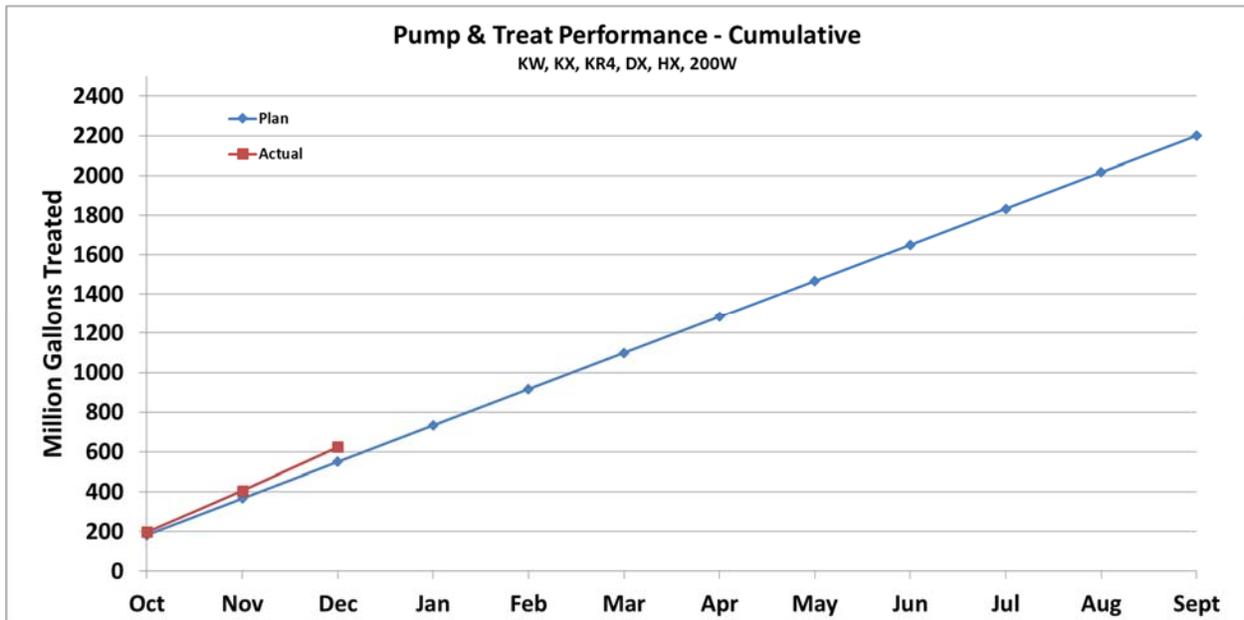
#### **200 West P&T**

- Operated the 200 West P&T at an average of 2,247 gallons per minute (gpm).

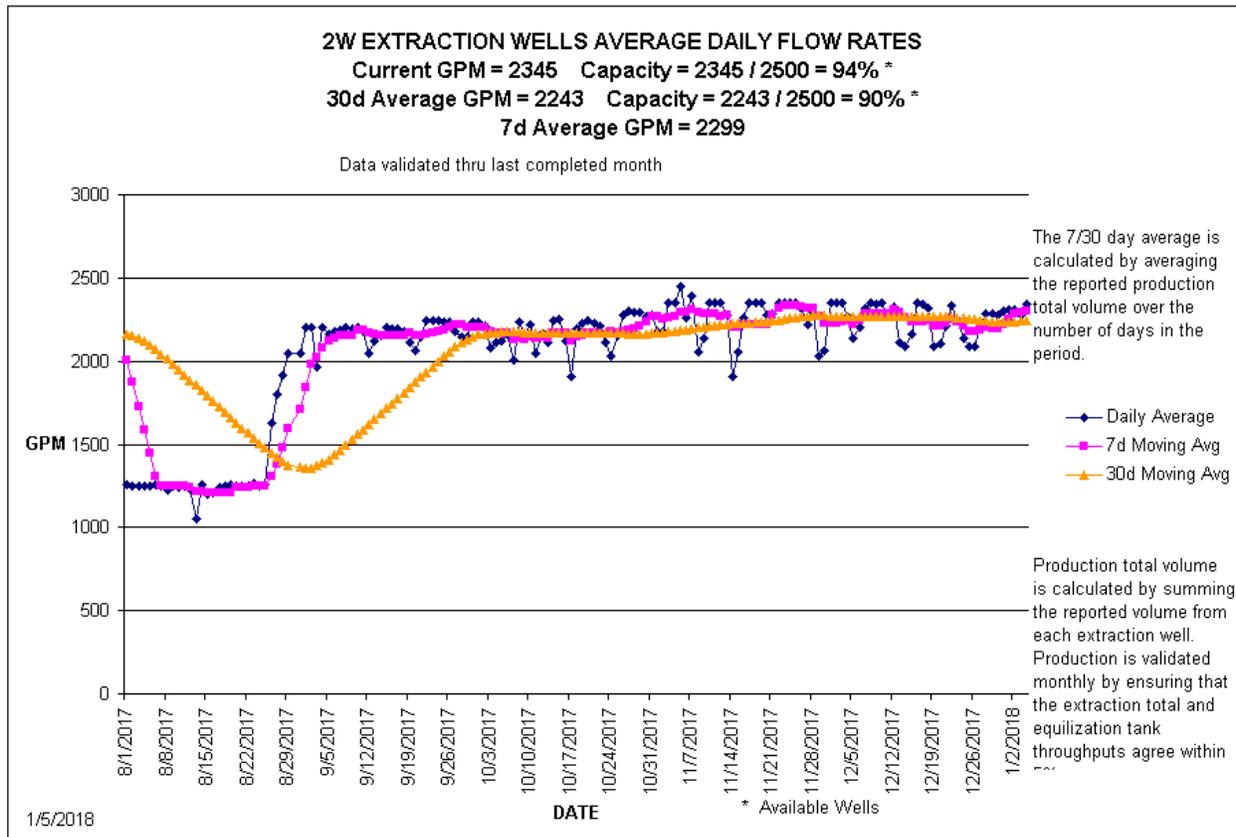
#### **100 Area P&Ts**

- Operated the DX P&T at 681 gpm, below the facility capacity of 775 gpm.
- Operated the KR-4 P&T at 199 gpm, below the facility capacity of 330 gpm.
- Operated the KW P&T at 324 gpm, near facility capacity of 330 gpm.
- Operated the KX P&T at 822 gpm, below the facility capacity of 900 gpm.
- Operated the HX P&T at 591 gpm, below the facility capacity of 900 gpm.

### FY2017 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 Record of Decision (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, following consultation with the Yakama Nation. Supported RL in the preparation for a Yakama Nation briefing, which was held December 13, 2017.

**Issue:**

KX, KR-4, and DX ion exchange vessels require diffuser repair. Approximately 14 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). Work on the KR-4 IX vessels commenced in December (eight vessels). KR-4 train A was taken off line, resin offloaded, and the four vessels opened. Vessel A1 repairs are complete. Work on vessels A2, A3, and A4 is in progress. Investigation of resin found in DX P&T effluent filters revealed that one vessel has damage (A1). Repair of this vessel is expected to be completed in January.

## 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-0030/WBS-030</b>																
<b>Explanation of major changes to the project monthly stoplight chart:</b> No major changes in December																
<b>Realized Risks</b> (Risks that are currently impacting project cost/schedule)																
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	<span style="color: red; font-size: 24px;">●</span>		<p><b>Risk Event:</b> Approximately 17 of 36 KX and KR-4 P&amp;T facility ion exchange vessels require diffuser repairs.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;">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>1/31/18</td> <td>65</td> </tr> <tr> <td style="color: red;">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>50</td> </tr> </tbody> </table> <p><b>Recovery Action Assessment:</b>                      Eleven vessels have been repaired. Four of the remaining six vessels in need of repair are available for use with temporary screens in place. All bottom-access vessel repair is 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, and the repairs limiting plant flows will be completed prior to January 31, 2018.</p>	Risk recovery action(s)	Risk Date	FC Date	%	Repair all vessels with damaged diffusers	3/15/17	1/31/18	65	Conduct investigation of resin found in DX P&T effluent filters and repair damaged vessel (A1)	12/06/17	1/31/18	50
Risk recovery action(s)	Risk Date	FC Date	%													
Repair all vessels with damaged diffusers	3/15/17	1/31/18	65													
Conduct investigation of resin found in DX P&T effluent filters and repair damaged vessel (A1)	12/06/17	1/31/18	50													
SGW-166: Well Design	Design changes, including an increase in the diameter or depth of the well casings and screen lengths proposed for remedy wells (including 200-UP-1, ZP, M24, PO1, and BP5 wells) or any other design changes, increases the risk of experiencing problems with the casing during drilling or back pulling. Design changes result in in-scope unplanned work and cause schedule impacts to the project.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Low (75% to 90%) <b>Worst Case Impacts:</b> \$0K, 64 days	<span style="color: red; font-size: 24px;">●</span>		<p><b>Risk Event:</b> Risk was added with the anticipation that the remaining two wells for 200-DV-1 would require the use and installation of ERT (Electrical Resistivity Tomography) equipment within the boreholes. In addition, it was anticipated that one of the boreholes was required to be drilled deeper than the planned 80 feet.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;">Risk recovery action(s)</th> <th>Risk Date</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>No actions required</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Recovery Action Assessment:</b>                      Risks no longer possess a threat, as a mutual agreement was made between CHPRC and PNNL that the ERT was no longer required and the second 200-UP-1 well does not have to be drilled to the deeper depth. This risk was re-characterized during the first quarter risk reviews and probability reduced to low. This risk will be removed from the stoplight chart in the January Monthly Report.</p>	Risk recovery action(s)	Risk Date	FC Date	%	No actions required	N/A	N/A	N/A				
Risk recovery action(s)	Risk Date	FC Date	%													
No actions required	N/A	N/A	N/A													
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)																
No critical risks identified in December.																
<b>High Risk Threat Value</b> (Recoverable slip to enforceable or incentivized milestone)																
No high risks identified in December.																
<b>Unassigned Risks</b> (Pending ownership of identified risks/opportunities)																
No unassigned risks identified in December.																

## 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	(2.2)	8.8	9.8	11.0	-491.7	(1.1)	-12.1

Numbers are rounded to the nearest \$0.1 million.

#### CM Schedule Performance (\$11.0M/-491.7%)

The current period positive schedule variance resulted from the December 2017 implementation of BCR-030-18-007R0, Incorporate FY2018 Scope Deductions - RL-0030, which removed prior year activities from the performance measurement baseline (PMB), causing negative current period budgeted cost of work scheduled (BCWS) and generating a corresponding positive schedule variance in the current period. Scope deducted includes the following:

- Drilling and sampling of three 200-BP-5 modutank wells.
- Support of 100-BC-5 OU Record of Decision development and public review and preparation/issuance of the Revision 0 Remedial Design/Remedial Action Work Plan.
- Issuance of the 100-KR-4 OU proposed plan (PP) for public review, project support of Record of Decision development, preparation/issuance of the Revision 0 Remedial Design/Remedial Action Work Plan, and new well sample collection and lab analysis.
- 100-NR-2 aquifer barrier 900-foot reinjection, preparation/issuance of the Revision 0 RI/FS and PP, public review of the PP, project support of Record of Decision development and public review, and preparation/issuance of the Revision 0 Remedial Design/Remedial Action Work Plan.
- Preparation/issuance of the 200-BP-5 OU FS and PP, project support of Record of Decision development and public review, and preparation/issuance of the Revision 0 Remedial Design/Remedial Action Work Plan.
- Preparation/issuance of the Draft A and Revision 0 200-IS-1 RI/FS work plan, associated 200-IS-1 OU project management, 200-IS-1 RI/FS report and PP, prototype Hanford barrier monitoring, burial ground sampling and analysis, and the U Canyon Focused Feasibility Study.
- Preparation of 200-DV-1 OU RI/FS and PP, project support of Record of Decision development and public review, and preparation/issuance of the Decisional Draft Remedial Design/Remedial Action Work Plan.

#### CM Cost Performance (-\$1.1M/-12.1%)

The current month cost variance was due to the \$1.2 million in spending incurred in support of P&T optimization (well drilling, well realignments, document preparation), 100-NR-2 RI/FS rewrite, and 200-DV-1 monitored natural attenuation evaluation and shallow soil characterization activities that are not yet planned in the PMB.

## 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	1422.3	1415.7	1391.5	(6.6)	-0.5%	24.2	1.7%	1,568.1	1,536.7	145.2	31.5

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 (+\$24.2M/+1.7%)

The variance is within reporting thresholds.

### Variance at Completion (+\$31.5M/+2.0%)

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	118.3	114.7	3.6
Incremental Scope Pending Change Management	0.0	14.0	(14.0)
RL-0030 –Total	118.3	128.8	(10.4)

Numbers are rounded to the nearest \$0.1 million

### Funds/Variance Analysis

RL reduced fiscal year (FY) 2018 projected funding in December to align with the RL FY2018 Execution Priority List. In addition, carryover funding was reallocated from RL-0030 to RL-0011. The FY2018 spending forecast will be updated next month to reflect adjustments to achieve the revised funding target.

### 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 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-015-21A	Submit 200-BP-5 & 200-PO-1 OU FS Report and PP(s) to Ecology	6/30/18		10/12/18	At risk, impacted by delay in Ecology's comments on the RI report.
M-015-92A	Submit RFI/CMS & RI/FS Work Plan for 200-EA-1 OU to Ecology	7/31/18		7/7/18	Ahead of schedule. RL and Ecology have agreed to combined Decisional Draft and Draft A review.
M-024-69-T01	Conclude discussions of well commitments initiated under M-024-58	8/1/18		8/1/18	On schedule.
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		9/30/18	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		12/31/18	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)	1/22/18
RL Review Decisional Draft 200 Area P&T Performance Monitoring Plan	12/1/17(A)	1/11/18
Concurrent RL and CHRPC Review of Internal Draft LLBG WMA-2 Trench 94 Engineering Evaluation Report	1/16/18	1/22/18

Description	CHPRC Delivery Date	Expected RL Due Date
RL Review of Draft Rev 0 100-BC-5 Proposed Plan	1/26/18	2/6/18
RL Submit Draft 216-S-10 Pond and Ditch Engineering Evaluation Report to Ecology for Review	1/31/18	1/31/18
RL Submit Draft LLBG WMA-4 Engineering Evaluation Report to Ecology for Review	2/2/18	2/2/18
Concurrent RL and CHRPC Review of Internal Draft SST WMA C Engineering Evaluation Report	2/2/18	2/8/18
Concurrent RL and CHRPC Review of Internal Draft SST WMA A-AX Engineering Evaluation Report	2/13/18	2/20/18
RL Submit Draft LLBG WMA-2 Trench 94 Engineering Evaluation Report to Ecology for Review	2/27/18	2/27/18
RL Review 200-WA-1 and 200-BC-1 Tri-Party Agreement Change Notice Decisional Draft and Return Comments	2/27/18	3/28/18
RL Review Draft Central Plateau Tracer Test SAP	2/28/18	3/29/18
RL Transmit Rev 0 SST WMA TX-TY Engineering Evaluation Report To Ecology	3/12/18	3/23/18
RL Transmit Rev 0 SST WMA T Engineering Evaluation Report to Ecology	3/12/18	3/30/18
RL Transmit Draft Rev 0 100-BC-5 Proposed Plan to Regulator for Review	3/14/18	3/28/18
RL Transmit Rev 0 SST WMA U Engineering Evaluation Report to Ecology	3/14/18	4/3/18
Concurrent RL and CHRPC Review of LLBG WMA-1 Engineering Evaluation Report	3/15/18	3/21/18
RL Transmit Draft Rev 0 100-BC-5 RI/FS Report to Regulator for Review	3/20/18	4/3/18
RL Submit Regulatory Review Draft SST WMA C Engineering Evaluation Report to Ecology	3/20/18	3/20/18
Concurrent RL and CHRPC Review of Internal Draft SST WMA B-BX-BY Engineering Evaluation Report	3/21/18	3/27/18
RL Transmit Rev 0 SST WMA S-SX Engineering Evaluation Report to Ecology	3/29/18	4/11/18
RL Submit Regulator Review Draft SST WMA A-AX Engineering Evaluation Report to Ecology	3/29/18	3/29/18

# Section E

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



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

December 2017  
CHPRC-2017-12, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

The Plutonium Uranium Extraction Plant (PUREX) Tunnel 1 demobilization continued this month with final closeout still anticipated in January 2018. The cameras for the Tunnel 2 surveillance were also installed this month. Additionally, the contractor for the PUREX stack sampling system replacement has been mobilized

## 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

- Performed electrical equipment maintenance on 252AC 480V motor control center.
- Supported PUREX Tunnel 2 camera installation.
- Completed performance of annual radiological surveys.
- Identified a minor subsidence on the 200-W-152-PL pipeline in the 200 West Area and backfilled the hole.
- Supported the Plutonium Finishing Plant (PFP) Closure Project with radiological field surveys.
- Completed shipment and receipt of roll-on/roll-off (RORO) containers at PUREX in support of the Tunnel 1 demobilization activities.
- Completed re-installation of overhead cable at Reduction and Oxidation (REDOX).
- Supported three emergency preparedness drills.
- Performed circuit verification in support 252-AC electrical work.
- Completed the 200 East Area Tri-Annual Surveillance.

#### PUREX Tunnels

- Continued demobilization and closeout activities for the PUREX Tunnel 1 stabilization.

#### PUREX Stack Sampling System Replacement

- Mobilized the construction contractor to the site and completed pre-job work package review.



- Performed lockout/tagout (LOTO) activities and completed electrical demolition of the existing sampling system.
- Erected radiological containments in the first floor of 292AB and the pump room and completed mechanical demolition of piping, pumps, and obstructions.
- Completed installation of the sample tube anchors/hangers on the exterior of 292AB and the exhaust stack.
- Completed fabrication of the record sample cabinet and the vacuum pump cabinets, and initiated Factory Acceptance Testing (FAT) of both. The test was stopped after fuses in the vacuum pump cabinet failed prematurely; new fuses were ordered after consultation with the pump manufacturer.
- Started installation of new electrical conduit.

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

- Finished removal of the last three pre-filters in the ACT-001 filter bank and inserted all nine new pre-filters (second round).
- Relocated equipment and materials to the ACT-002 containment tent.
- Completed installation of a patch on the north side of the ACT-002 containment tent to cover a large hole created to support HEPA filter change out.
- Prepared shield boxes and bag-out bags/sleeves for removal of the ACT-002 pre-filters.
- Removed the middle row of pre-filters from the ACT-002 filter bank, packaged them into a shield box and relocated the shield box to the staging area outside of the containment tent.

### **REDOX Risk Mitigation**

- Completed sampling of greenish substance in the REDOX South Operating Gallery for surveillance team; currently awaiting lab results.
- Completed final REDOX field surveillance walk down.
- Continued field walk down planning efforts for entry into the west end of the North Sample Gallery, ventilation during breaching of sample boxes, and to determine size reduction methodologies.
- Completed Beryllium sampling in REDOX South administration area.
- Completed planning for North Sample Gallery Door project and field walk down planning for removal of walls to support installation of rad survey and step off pad improvements.
- Determined locations for change rooms inside of REDOX proper, and preliminary locations for Conex boxes to support risk mitigation entries.
- Removed and disposed of all waste items for West REDOX loading dock area.
- Completed REDOX silo electrical walk down and upcoming Silo Sampling package walk down/familiarization.

## **MAJOR ISSUES**

### **Issue:**

As a result of the PUREX Tunnel 1 collapse, CHPRC received a notification on May 9, 2017, from the Department of Ecology (Ecology) of an administrative order with which CHPRC must comply. The administrative order requires the following corrective actions (CA).

### **Corrective Action:**

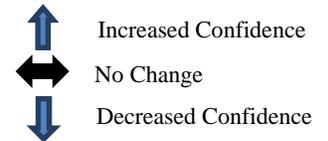
- Identify and implement recovery actions associated with the collapsed PUREX Tunnel 1 – proposal schedule and estimate completed August 2017.
- By July 3, 2017, submit to Ecology the Nuclear Waste Program a structural integrity evaluation for both PUREX Storage Tunnels 1 and 2. (CA 1) – completed June 29, 2017.

- By August 1, 2017, submit a draft report detailing the corrective actions to ensure the safe storage of the waste in the PUREX Storage Tunnels 1 and 2 to RL the Nuclear Waste Program for comment and approval. (CA 2) – completed July 11, 2017.
- By October 2, 2017, submit a draft permit modification to the Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion Revision 8C to modify the permit. (CA 3) – Revised to include Preparedness & Prevention Addendum and anticipated to be submitted to RL by January 29, 2018.

## 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.



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 December.																									
<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%)  <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.</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;">Aug 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 ACT002 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> <p><b>Recovery Action Assessment:</b>                      The pre-filters and HEPA filters were replaced in both ACT filter banks and the ventilation system was restarted. Site cleanup activities were initiated. Within a day of fan operations, dose rates on the pre-filters became elevated and needed to be monitored on an hourly basis. The dose rates have since stabilized; however, the current dose rates require the pre-filters to be replaced with new ones. This scenario was previously identified in this risk assessment and only appears to have impacted the pre-filters. Pre-filters are low-cost, and sufficient filters are available to proceed with the change-out; however, both containment tents had to be cut open in the back to support the filter installations. Repairs to the tents were completed in early December and replacement of both sets of pre-filters were completed in mid-December, immediately followed by a restart of the ventilation system fans. The containment tents are scheduled for removal in January 2018.</p>	Risk recovery action(s)	Risk Date	FC Date	%	Work package change notice (WCNs) are being prepared to perform additional investigation of the water intrusion, remove the pre-filters and HEPA filters, and restart the B Plant ventilation system.	Aug 2016	Complete	100%	Recovery actions were performed in April and May 2017 to fix contamination associated with ACT002 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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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%																						

Risk Title	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
<b>RL-0040/WBS-040</b>										
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)										
No critical risks identified in <b>December</b> .										
<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> No major changes in <b>December</b>. A pre-conceptual design was provided to RL with an estimate for a similar replacement of the entire PUREX stack sample system. CHPRC was provided a not-to-exceed (NTE) to complete a detailed design package for the system and to start demolition and installation activities; however, it is expected that the NTE amount will be expended early on during construction. The detailed design package for the replacement system was accepted in May 2017, and stamped/signed copies of the package were received in early June. Construction contract development and procurement of the system parts was started in July and continued through the remainder of FY2017. Ordered parts/materials were received through the end of October with the exception of a few additional parts that had to be reordered; <b>these were received in late December</b>. Construction bids were received on September 28, 2017, and the contract award and notice to proceed were issued in mid-October. A kickoff meeting with the construction contractor was held on October 19, 2017. Training/submittals/bioassays and development of the construction work package continued until the end of November up to mobilization on November 28, 2017. Construction of the sample cabinet and vacuum pump cabinets was started in late November finished in mid-December. FAT of the cabinets was started in late-December but was halted after experiencing fuse failures in the vacuum pumps. New fuses were ordered after obtaining additional information from the pump manufacturer. FAT testing will resume in early January once the fuses are received. Demolition of the existing system started in late November and was completed in mid-December. Installation of the new system conduit and sample line hangers started in December. The remaining installation activities are scheduled to be completed in January, followed by system inspection, testing and contractor demobilization. The project is expected to be completed in early February 2018, pending no functional issues during testing.</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>December</b> .										

## PROJECT BASELINE PERFORMANCE

### Current Month

(\$M)

WBS 040/ RL-0040 Nuclear Facility D&D	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	2.5	2.1	4.0	(0.5)	-18.8%	(1.9)	-94.4%

Numbers are rounded to the nearest \$0.1 million

**CM Schedule Performance: (-\$0.5M/-18.8%)**

The current month schedule variance is mostly due to REDOX Silo and North Sample Gallery Cleanout preparations. The majority of the variance is in labor and is due to reassignment of craft and subject matter expert resources required to support the REDOX Silo entries, assessments, electrical isolations, and characterization scope, to higher priority CHPRC work scope. Personnel taking vacation during the holidays also had an impact.

**CM Cost Performance: (-\$1.9M/-94.4%)**

The unfavorable current month cost variance is mostly due to the PUREX Tunnel 1 interim actions to perform unanticipated demobilization and meet end state requirements such as removing the ecology blocks, backfill disposition to ERDF, and modify the trailer (assumed only temporary power).

The variance is also caused by labor for REDOX Silo and North Sample Gallery field walk down planning to incorporate unanticipated/additional waste removal and life safety methodologies.

Additionally, a cost correction was processed in the month for equipment rentals in support of the REDOX Steam Line removal performed last fiscal year.

### 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	464.7	462.5	436.5	(2.2)	-0.5%	26.0	5.6%	503.7	480.8	44.3	22.8

Numbers are rounded to the nearest \$0.1 million

**Cost to date (CTD) Schedule Performance: (-\$2.2M/-0.5%)**

The contract to date schedule variance is mostly attributed to delaying the start of the electrical breaker preventive maintenance work. The work planning effort fell behind schedule due to competing priorities for work planners as well and the ability to hire electricians.

The demolition of 276BA is behind schedule because it cannot start without the completion of the closure plan, currently anticipated to be received in spring 2018.

The variance is also due to change assumptions for the B Plant pre-filter change out. The pre-filters were originally planned to be replaced annually, but have been changed on an as-needed basis.



The PUREX Tunnel 1 Interim Actions are behind schedule due to delays in finalizing the design, which impacted the mock-ups and ultimately delayed the start of grouting activities (-\$0.3 million).

**CTD Cost Performance: (+\$26.0M/+5.6%)**

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 (+\$22.8M/+4.5%)**

The Estimate at Completion (EAC) of \$480.8 million. The spend forecast for FY2018 increased from \$34.3 million to \$35.2 million, mostly due to incorporating the forecast for the PUREX Tunnel 2 initial planning and investigation.

**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	33.8	35.7	(1.9)
Incremental Scope Pending Change Management	0.0	14.9	(14.9)
RL-0040 – Total	33.8	50.6	(16.8)

Numbers are rounded to the nearest \$0.1 million.

**Funds/Variance Analysis**

FY2018 projected funding for PBS RL-0040 is \$33.8 million. The remainder of change order (COs) 311 and 324 reside in the incremental scope to be implemented for January reporting. The project will review and revise the forecast next month to take into consideration the funding variance.

**Critical Path Schedule**

Critical path analysis can be provided upon request.

### MILESTONE STATUS

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (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 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	Lack of funding

### 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	3/12/18

# Section F

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



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

December 2017  
CHPRC-2017-12, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

T. L. Hobbes  
Vice President for 618-10 Burial Ground  
and Environmental Restoration  
Disposal Facility

L. M. Douglas  
(Acting) Vice President  
for 324 Building  
Disposition Project

M. A. Wright  
Vice President for  
Project Technical  
Services

## PROJECT SUMMARY

Project activities include: 100K Closure Project performed Waste Site 116-KE-2 soil remediation and K East Sedimentation Basin 183.2 backfill; Garnet Filter Media Removal System equipment fabrication and Sand Filter Media Removal System conceptual design advancement; K West Basin below-water debris characterization; and preparation for an entry into 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, interference removal activities within the 324 Building, and made the first entry into C-Cell in over 15 years to begin sampling and size reducing activities for future loadout. Backfill of the 618-10 Burial Ground Complex 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	20%
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	20%
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	24%
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	0%
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	50%

## 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	
First Aid Cases	1	36	<ul style="list-style-type: none"> <li>12/12/2017 – Employee injured their right elbow by pushing on a metal T-post with their right hand. The employee was transported to HPMC for evaluation, diagnosed with a pulled muscle or tendon, and released to work with no restrictions. (24692)</li> </ul>
Near Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### RL-0041 Accomplishments

- 100K Closure Project:
  - o 100K Soil Remediation
    - Continued backfill of 183.2 KE Sedimentation Basin (65 percent complete).
    - Continued excavation of Waste Site 116-KE-2 (Radioactive Waste Crib) at an average production rate of 35 Environmental Restoration Disposal Facility (ERDF) cans per day.
    - Received final verification sample data for Waste Sites 100-K-107 and 100-K-108.
    - Conducted ground scans at Waste Site 100-K-50:2.
    - Continued with regulatory closure of Waste Site 1607-K1.
    - Beryllium at 2 mg/kg detected in three in-process samples collected from Waste Site 100-K-99 (background is 1.51 mg/kg). GEL Laboratories is transshipping samples to RJ Lee Laboratory in Richland, WA, for metals ratio test.
    - Waste Site Reclassification Form for Waste Site 100-K-42 submitted to Environmental Protection Agency (EPA) for review and approval to reclassify the Waste Site as Interim Closed Out. EPA has provided preliminary comments, which will require additional discussion to resolve.
  - o K West Basin Deactivation:
    - Garnet Filter Media Removal System (GFMRS)
      - Columbia Energy and Environmental Services continued fabrication of GFMRS process equipment. Fabrication of process equipment assemblies is approximately 95 percent complete.
      - American Boiler Works continued fabrication of Sludge Transport & Storage Container (STSC) units 425, 426, 427, and 428. Fabrication of STSC units is approximately 30 percent complete.
      - Performed Garnet Filter 3 Sluice Outlet Valve V-305 Risk Mitigation.
        - o Apollo Construction continues to work on final methods and tooling to drill the access hole in the Garnet Filter shield enclosure.

- Sand Filter Media Removal System (SFMRs)
  - The SFMRs completed its initial run (using the retrieval wand) with first retrieval at a total flow of approximately 56 gallons per minute (gpm); with 31 gpm motive flow, 11 gpm dilution flow, and 14 gpm suction flow; and 9 percent solids by volume. The spray nozzle for washing down sand performed satisfactorily.
- o KW Basin Below-water Debris Characterization
  - K West Basin below-water debris characterization schedules and budgets were developed with the assumption that in-basin work would be performed on a contingent basis not to conflict with higher priority sludge removal activities. Less characterization work is being performed than originally assumed due to K West Operations focus on higher priority Sludge Removal Operational Readiness. Therefore, 100K Closure Project field execution schedules and estimates to complete were adjusted accordingly.
    - The basin floor sampling effort is ready for execution. The core sample tool is now in the East Bay and arrangements for packaging and shipping sample cores three at a time to PNNL are in place.
    - The underwater housing for the gamma camera is complete and potting applied to seal electrical penetrations is curing.
- o K East Reactor Interim Safe Storage (ISS)
  - Occupational Safety and Industrial Hygiene (OS&IH) identified a requirement to install safety railing around the KE Reactor doorway to replace the deteriorating rope boundary. Calculations and a fall protection plan for installing a travel restraint system for safety railing system installation were developed.
  - Began investigating feasibility of moving the KE Reactor Safe Storage Enclosure a few feet south to provide sufficient space for accessing and maintaining down gradient well 199-K-222, while maintaining adequate distance from the north wall of the KE Reactor building. Started an assessment of DOE-RL-2005/26, *Removal Action Work Plan for 105-KE/105-KW Reactor Facilities and Ancillary Facilities*, Revision 1 to determine changes needed to support current project objectives.
  - Initiated internal discussions on capital project planning for KE Reactor ISS. Identified and reviewed previously developed DOE 413.B tailoring documentation for the KE Reactor ISS design/build effort performed in 2012.
  - Identified high-level updates to the KE Reactor ISS key functional performance requirements
- o Ancillary Facility Deactivation & Demolition (D&D)
  - Continued glove bag and scaffolding installation in the 165 K East Power Control Building for removal of asbestos thermal piping system insulation. Performed sampling of water systems on shower trailer following completion of water system repairs.
  - Started 100K Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) document assessment of DOE/RL-2005-26, RAWP for 100K Reactor and Ancillary Facilities.
  - Started Waste Site 130-KE-2 remediation/166KE Fuel Oil Storage Basin D&D/remediation engineering evaluation. Held planning meeting with representatives from Waste Management, Environmental, 100-K Engineering, and D&D.

- o Remaining Closure Operations
  - Prepared draft correspondence for RL to EPA regarding a path forward for Waste Sites 400-38 and 400-37 (interim stabilization sites) to either cover the abandoned fuel tanks with an asphalt barrier, excavate and dispose of the buried tanks, or place the sites on hold to be performed with final 400 Area remediation.
  - Performed a walkdown of the 618-10 area and identified the backfilling objectives as they relate to preparing the site for next year's fiscal year (FY) 2019 re-vegetation effort.
  - Performed a site walkdown with the subcontractor, which will perform utility surveys of the five interim stabilization sites in early January.
  - Continued collecting shrub seeds from various locations around the Hanford site to support FY2019 re-vegetation efforts (includes 618-10).
- 618-10 Burial Ground:
  - o Continued backfill of the 618-10 Burial Ground.
  - o The plating of the burial ground trench floor was completed on December 12, 2017, and the site was down-posted from high-contamination area controls.
  - o Completed scraping of the long-term storage and interim storage areas.
  - o Continued to work on environmental closeout documentation.
  - o Continued infrastructure demobilization activities.
  - o Received support from Project Technical Services (PTS) in placing a contract with DGR-Grant Construction Inc. to commence the demobilization of site trailers.
- 324 Building Minimum Safe:
  - o Completed the quarterly walk-downs of the facility Vital Safety Systems.
  - o Issued 324 Building Min Safe revision to the Fire Hazards Analysis.
  - o Received 30-ton CHA crane parts for replacement of failed brake assembly.
  - o Performed eight monthly, quarterly, or annual preventive maintenance packages.
  - o PTS Support:
    - Assisted in the comparison and update of the training plans for 324 Facility Fall Hazard Recognition/Fall Protection Arrest System User Training.
- 300-296 Soil Remediation Project:
  - o Completed the installation of the three Master Slave Manipulators (MSMs) required for training at the mockup. The fourth MSM was unpackaged and initial function checks are underway for installation at the 324 Building.
  - o Delivery of Lights and Camera System hardware has begun with the receipt of the mockup camera mounts; preparations to install the plates at the Mockup have been initiated.
  - o Fabrication of the Remote Excavator Arm (REA) continues and factory acceptance testing has begun.
  - o Issued the revised Floor Saw System Request for Proposal (RFP) and the contract award is scheduled for late January.
  - o Initiated fabrication of the Mockup Grout Delivery System.
  - o Approval of the Fire Hazard Analysis.
  - o Awarded the contract for the 324 Rad Assay System.
  - o Vendor procurement activities have begun for the 324 Pipe Cutting Tool.
  - o Vendor procurement and fabrication activities have begun for the 324 penetration sealing covers.
  - o Completed remote installation of the two C-Cell exhaust filter frames.
  - o Performed multiple Hot Cell entries. One into the airlock to remove and dispose of waste container and four into C-Cell. The C-Cell entry on December 6, 2017, was the first entry in 15 years. During the four C-Cell entries, the following was accomplished:

- The first C-Cell entry obtained dose rates and smears to support disposal and wrapping various items for load out.
  - Performed three additional entries for size reduction of debris. Movement of items into airlock for removal was completed.
- o Crews have completed change room modifications to support the increased crew sizes required for the balance of the project.
  - Interference removal activities are ongoing; completed the first of three anticipated electrical outages to relocate needed facility electrical systems, and allow interference removal to continue.
- Environmental Restoration Disposal Facility (ERDF):
  - o Received 15,657 tons for the fiscal month of December.
  - o Received 43,372 tons fiscal year-to-date (FYTD).
  - o Received one long-length item (LLI) for treatment.
  - o Worked with Plutonium Finishing Plant (PFP) to develop and test the safe loading and dumping of specially lined ERDF cans for place and cover for waste from the Plutonium Reclamation Facility (PRF) demolition.
  - o Collaborated with PTS training and procedures personnel to identify changes to Control of Ozone Depleting Substances and Substitutes training. PTS is working to transition the existing computer-based training course from Storyline (as transitioned from Washington Closure Hanford) to the Hanford site standard computer-based training platform.
  - o The PTS operations program supported ERDF staff in an electrical lighting issue critique.

## 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 RCC-300-296-07: 300-296 Failure of a REC Cranes (B-Cell, A-Cell, A-D & Airlock, or CHA cranes) and RCC-300-296-13: 300-296 Design review issues arise for the structural modification to the 324 Building was added as a realized risk to the spotlight chart in December.																
<b>Realized Risks (Risks that are currently impacting project cost/schedule)</b>																
RCC-300-296-07: 300-296 Failure of a REC Cranes (B-Cell, A-Cell, A-D & Airlock, or CHA cranes)	Major crane repair must be performed during operations. This in-scope, unplanned work results in cost and schedule impacts to the project.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$832.7K, 144 days			<b>Risk Event:</b> REC crane failure occurs during operations.  <table border="1"> <thead> <tr> <th>Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Prepare/Issue White Paper – REC Cranes (VE1135)</td> <td>12/20/17</td> <td>100</td> </tr> <tr> <td>Prepare Replacement Parts List – REC Cranes (VE1120)</td> <td>5/3/18</td> <td>-</td> </tr> <tr> <td>Procure Spare Parts – REC Cranes (VE1235)</td> <td>8/30/18</td> <td>-</td> </tr> </tbody> </table> <b>Recovery Assessment:</b> The project experienced loss of the CHA Crane in November 2017. The crane is currently being repaired. Replacement parts for failed mechanism were ordered, and repairs are planned for late January. Impacts are being assessed, following completion of white paper to identify and ultimately procure additional spare parts. These recovery efforts are expected to reduce the potential for impacts.	Recovery action(s)	FC Date	%	Prepare/Issue White Paper – REC Cranes (VE1135)	12/20/17	100	Prepare Replacement Parts List – REC Cranes (VE1120)	5/3/18	-	Procure Spare Parts – REC Cranes (VE1235)	8/30/18	-
Recovery action(s)	FC Date	%														
Prepare/Issue White Paper – REC Cranes (VE1135)	12/20/17	100														
Prepare Replacement Parts List – REC Cranes (VE1120)	5/3/18	-														
Procure Spare Parts – REC Cranes (VE1235)	8/30/18	-														
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 radiologically 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> Low (10% to 25%) <b>Worst Case Impacts:</b> \$640K, 160 days			<b>Risk Event:</b> Upon review of the 30 percent design submittal, it was determined the cell wall loading/limitations were inadequate and required additional clarification.  <table border="1"> <thead> <tr> <th>Recovery action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Contractor Prepare and Submit Structure Modification Design - 30%-60% (VE2810)</td> <td>2/15/2018</td> <td>57.5</td> </tr> <tr> <td>Contractor Prepare and Submit Structure Modification Design – Final (VE2810A)</td> <td>3/26/2018</td> <td>-</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 Field Execution Schedule (FES), along with the estimate to complete (ETC), to reflect impacts of risk being realized.	Recovery action(s)	FC Date	%	Contractor Prepare and Submit Structure Modification Design - 30%-60% (VE2810)	2/15/2018	57.5	Contractor Prepare and Submit Structure Modification Design – Final (VE2810A)	3/26/2018	-			
Recovery action(s)	FC Date	%														
Contractor Prepare and Submit Structure Modification Design - 30%-60% (VE2810)	2/15/2018	57.5														
Contractor Prepare and Submit Structure Modification Design – Final (VE2810A)	3/26/2018	-														
<b>Critical Risks (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)</b>																
RCC-300-296-02: 300-296 Loss of ventilation in the 324 hot cells or Zone II	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 cost and schedule impacts.  <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Likely (75% to 90%) <b>Worst Case Impacts:</b> \$0K, 48 days			<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).  <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>324 Min. Safe Spare Parts and Routine PMs (R03095)</td> <td>9/30/2018</td> <td>23.3</td> </tr> </tbody> </table> <b>Mitigation Assessment:</b> Ventilation Preventive Maintenance is being routinely performed. Spare fan parts are available for minor failures if occurrence is realized.	Mitigation action(s)	FC Date	%	324 Min. Safe Spare Parts and Routine PMs (R03095)	9/30/2018	23.3						
Mitigation action(s)	FC Date	%														
324 Min. Safe Spare Parts and Routine PMs (R03095)	9/30/2018	23.3														

<p>RCC-300-296-08: 300-296 Failure of a cell shield door</p>	<p>Failure of shield door(s) or crane shield door(s) shuts down cleanout of REC cells/airlock, penetration sealing in airlock, and equipment installation efforts. It may not be possible to repair a shield door due to radiation dose rate and location. The door failure results in in-scope unplanned work, and subsequently causes cost and schedule impacts to the project.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$460K, 48 days</p>			<p><b>Risk Trigger Metric:</b> During operation of cleanout activities, a shield door becomes inoperable and will not open or close. Due to dose rates, it may not be possible to repair a shield door.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform assessment (PRC-SRP-00043) on shield doors</td> <td></td> <td>100</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> An assessment of shield door(s) or crane shield door(s) was performed (PRC-SRP-00043). As a result, additional PM has been implemented and spare parts are available for minor failures if occurrence is realized. <b>Currently, no additional mitigations are scheduled.</b> 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> Medium (26% to 74%) <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"> <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>10/26/17</td> <td>100</td> </tr> <tr> <td>Utilize Seal Breaker / Lifting Device Assembly in 324 to Free Plug (VE1465)</td> <td>9/10/18</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. <b>The seal breaker has been demonstrated to lift a 10,000-pound floor plug.</b> 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)	10/26/17	100	Utilize Seal Breaker / Lifting Device Assembly in 324 to Free Plug (VE1465)	9/10/18	-
Mitigation action(s)	FC Date	%											
Fab/Install/Concept Test ROID SB/LD at MASF (VE1010)	10/26/17	100											
Utilize Seal Breaker / Lifting Device Assembly in 324 to Free Plug (VE1465)	9/10/18	-											
<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>RCC-300-296-03: Mockup testing and qualification of remote equipment / process identifies major modification requirements.</p>	<p>Issues such as equipment interferences, equipment reliability, etc., arise during mockup testing, leading to major re-design of equipment and resulting in cost and schedule delays.</p> <p><b>Risk Handling Strategy:</b> Control</p> <p><b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$773K, 80 Days</p>			<p><b>Risk Trigger Metric:</b> Risk could be triggered through the conduct of component testing or testing/training performed at the mockup that produced inadequate or unexpected test results.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Perform Construction Acceptance Test (CAT) at mockup facility – including REA system with HPUs, cameras, and lighting and transfer mechanisms (VE0640)</td> <td>5/17/18</td> <td>0</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No changes in <b>December</b>. The mockup will be used to validate equipment performance and to support establishing proficiency for personnel for installation, relocation, and operation of remote soil remediation equipment in the 324 Building. Remotely operated equipment (Remote Excavation Arm, transfer mechanism, cameras and lighting, and floor saw) could experience higher failure rates and/or performance issues from the lack of personnel proficiency. Vendor contracts have been awarded for the REA, transfer mechanism, cameras and lighting systems, and equipment deliveries to the mockup are scheduled for February 2018. A single proposal was received in response to the Mockup Saw RFP to design and was above the expected price. The solicitation was canceled and a revised RFP was issued on December 11, 2017. Contract award is scheduled for late January.</p>	Mitigation action(s)	FC Date	%	Perform Construction Acceptance Test (CAT) at mockup facility – including REA system with HPUs, cameras, and lighting and transfer mechanisms (VE0640)	5/17/18	0			
Mitigation action(s)	FC Date	%											
Perform Construction Acceptance Test (CAT) at mockup facility – including REA system with HPUs, cameras, and lighting and transfer mechanisms (VE0640)	5/17/18	0											
<p>RCC-618-10-07: Contamination Event at 618-10 Waste Site</p>	<p>During fieldwork activities, a contamination event occurs or a change in cleanup requirements occurs that requires corrective actions, resulting in schedule and cost impacts.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Very Low (&lt;10%) <b>Worst Case Impacts:</b> \$1,288K, 64 days</p>			<p><b>Risk Trigger Metric:</b> The risk could be triggered by high winds or operational upsets (i.e. spills or airborne release).</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Enhanced radiological controls implemented on project.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No changes in <b>December</b>. Much of the 618-10 work is performed in hazardous and radioactive environments. By its nature, the work can be dangerous. Although CHPRC procedures, safety programs, and training programs are designed to minimize the potential loss of control of hazardous/radioactive substances, such an occurrence could be deemed significant enough to warrant corrective actions outside the baseline (i.e., a prolonged work shutdown).</p>	Mitigation action(s)	FC Date	%	Enhanced radiological controls implemented on project.	Ongoing	N/A			
Mitigation action(s)	FC Date	%											
Enhanced radiological controls implemented on project.	Ongoing	N/A											

<p>RCC-618-10-09: Discovery of Unexpected Waste/Contamination</p>	<p>Discovery of unexpected waste/contamination, waste/contamination quantities above what is assumed, waste/contamination that is above and beyond COCs or waste profile, or waste/contamination is found in the assumed clean area of the design. Resulting in greater than planned RAD controls, which causes cost and schedule impacts.</p> <p><b>Risk Handling Strategy:</b> Accept</p> <p><b>Probability:</b> Very Low (&lt;10%) <b>Worst Case Impacts:</b> \$1,280K, 64 days</p>			<p><b>Risk Trigger Metric:</b> Baseline assumed contamination is limited to design. This risk has the potential to occur again during <b>re-grade and scraping activities</b> if additional waste/contamination is discovered.</p> <table border="1"> <thead> <tr> <th>Mitigation action(s)</th> <th>FC Date</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Closely managing waste inventories and discoveries, and making adjustments as required.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <p><b>Mitigation Assessment:</b> No changes in <b>December</b>. The estimate for the remediation of the 618-10 Waste Site included an assumed amount of additional drums still to be remediated. The project identified unexpected additional drums that were not planned or estimated. The project will continue to closely monitor and manage waste inventories and any new discoveries.</p>	Mitigation action(s)	FC Date	%	Closely managing waste inventories and discoveries, and making adjustments as required.	Ongoing	N/A
Mitigation action(s)	FC Date	%								
Closely managing waste inventories and discoveries, and making adjustments as required.	Ongoing	N/A								
<p><b>Unassigned Risks</b> (Pending ownership of identified risks/opportunities)</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. <b>CHPRC Comment:</b> CHPRC cannot manage the geological seismic movement that may impact the structural integrity of a building. Therefore, this risk is proposed to be transferred to DOE. DOE has “informally” accepted this risk as a transfer risk. <b>A formal letter of acceptance (CHPRC-1705651) was sent to RL on December 12, 2017.</b> Once this risk has been formally accepted, via acknowledgement from DOE-RL contracting officer, it will be removed from the stoplight chart.</p>									
<p>RCC-300-296-11: Current REC cell seismic analysis is inadequate</p>	<p>The original design of the 324 Building was based on the 1961 Uniform Building Code (UBC). Facility structural modifications have been analyzed using the UBC 1961 methodology (Section 7.8, KUR-1782F-CALC-C001, 324 BUILDING REC STRUCTURAL STABILITY EVALUATION). Regulatory agencies do not accept the use of the 1961 UBC methodology, and a different seismic analysis is required. The new requirements result in significant changes to the design for structural modifications. <b>CHPRC Comment:</b> This risk is beyond CHPRC’s ability to effectively manage. During the implementation of structure modifications, if any oversight, regulatory agency, or DOE objects to the use of the older seismic design criteria for the 324 Building and a different standard is imposed; significant changes to the structural modification design and planned approach will be required. The decision to impose a change to the design criteria as the project matures is out of CHPRC’s control. Therefore, CHPRC proposes to transfer this risk to RL. DOE has “informally” accepted this risk as a transfer risk. <b>A formal letter of acceptance (CHPRC-1705651) was sent to RL on December 12, 2017.</b> Once this risk has been formally accepted, via acknowledgement from DOE-RL contracting officer, it will be removed from the stoplight chart.</p>									
<p>RCC-300-296-23DOE: 300-296 Large Brush Fire (Force Majeure)</p>	<p>A brush fire is ignited on the Hanford Site near the proximity of the 300-296 Waste Site, resulting in cost and schedule delays. <b>CHPRC Comment:</b> This risk is identified as “Force Majeure” and is beyond the capabilities of CHPRC to manage. Therefore, this risk is proposed to be transferred to DOE. DOE has “informally” accepted this risk as a transfer risk. <b>A formal letter of acceptance (CHPRC-1705651) was sent to RL on December 12, 2017.</b> Once this risk has been formally accepted, via acknowledgement from DOE-RL contracting officer, it will be removed from the stoplight chart.</p>									
<p>RCC-300-296-27: 300-296 Requirement Changes Result in Additional Work/Entry Prerequisite Training</p>	<p>Due to complex-wide, or facility specific changes in requirements outside of CHPRC’s ability to manage (e.g. technical documents, procedures, training), project delivery will be impacted in terms of cost and schedule. <b>CHPRC Comment:</b> Changes to DOE orders, federal or state regulations, waste acceptance criteria established by another site contractor, or another DOE site could impact the baseline scope/schedule/cost. Although a contract change is required to incorporate changes to DOE orders, no contract change is required for federal or state regulations or for waste acceptance criteria changes. The potential criteria changes are outside of CHPRC’s ability to manage. Therefore, this risk is proposed to be transferred to DOE. DOE has “informally” accepted this risk as a transfer risk. <b>A formal letter of acceptance (CHPRC-1705651) was sent to RL on December 12, 2017.</b> Once this risk has been formally accepted, via acknowledgement from RL contracting officer, it will be removed from the stoplight chart.</p>									

## PROJECT BASELINE PERFORMANCE

### Current Month

(\$M)

WBS 041/RL-0041 Nuclear Facility D&D – River Corridor	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Total	13.3	11.0	11.7	-2.3	-17.6%	-0.7	-6.3%

Numbers are rounded to the nearest \$0.1 million

#### CM Schedule Performance (-\$2.3M/-17.6%)

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. Also contributing to the negative variance is the ahead-of-schedule conditions on the Garnet Filter Media Removal procurements. In addition, the 300-296 project has experienced structural design delays due to a change in strategy from Jet Grouting to Micro-piles and a revision to the structural specification. Also, the award and mobilization of the electrical building trades contractor has been deferred to better align with receipt and installation of mockup equipment, which has been delayed due to increased design efforts and difficulties with fabrication.

#### CM Cost Performance (-\$0.7M/-6.3%)

The current month unfavorable cost variance is partially due to 300-296 project increased costs for equipment design/fabrication. An error made in the December manual accrual process and increased efforts on the structural design added to the variance.

## 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	510.5	516.8	459.9	6.4	1.2%	56.9	11.0%	683.0	603.7	143.8	79.3

Numbers are rounded to the nearest \$0.1 million

#### CTD Schedule Performance (+\$6.4M/+1.2%)

The schedule variance is within reporting thresholds.

#### CTD Cost Performance (+\$56.9M/+11.0%)

The favorable cost variance is primarily due to completing Confirmatory Sampling - No Action (CSNA) waste sites early and under cost. In addition, less demolition was required for the K East Sedimentation Basin and fewer resources are supporting the level of effort (LOE) Program Management scope. Some resources have been diverted to other priority work scope and some resource sharing has occurred thus achieving efficiencies. 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 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 with the design and fabrication of essential procurements.

#### **Variance at Completion (+\$79.3M/+11.6%)**

The Variance at Completion (VAC) increased due to scope deferred based on FY2018 funding priorities and schedule logic. That work scope is not expected to be performed in the CHPRC contract period. CHPRC is currently discussing with RL the disposition of that scope. 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 thus achieving efficiencies. 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 and equipment procurement activities of approximately -\$5.3 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	133.2	145.8	(12.7)
Incremental Scope Pending Change Management	0.0	4.5	(4.5)
RL-0041 - Total	133.2	150.3	(17.1)

Numbers are rounded to the nearest \$0.1 million.

#### **Funds/Variance Analysis:**

FY2018 projected funding for PBS RL-0041 is \$133.2 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 work scope completing ahead of schedule, attrition and staffing ramp-downs, resource sharing among projects, and less material procurements at the 618-10 Burial Ground Complex. 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 also contributed to the decrease in the spending forecast. The 300-296 project spend forecast increased by \$1 million primarily to address increased costs in equipment procurement and the additional effort needed to complete the structural mods design.

#### **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 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-016-00B	Complete all 300 Area remedial actions in accordance with ROD requirements.	9/30/2018		1/22/2019	Revegetation for the 618-10 Complex falls outside of the planting window, which results in it falling outside of the Tri-Party Agreement milestone due date.
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/EPA Review & Approve Interim Backfill Concurrence for 618-10 Decision Unit #9	12/20/17 (A)	1/12/18
RL/EPA Review & Approve Interim Backfill Concurrence for 618-10 Decision Unit #10	3/7/18	3/13/18
RL Review, Comment & Concur DSA/TSR revision	12/29/17	04/04/18
RL Prepare, Review, Approve & Issue DSA/TSR SER Revision	04/05/18	05/10/18
RL and Regulator Review of CVP and Waste Site Reclassification Form for 618-10 Burial Ground	3/28/18	5/11/18
DOE Independent Structural Modification Review	04/24/18	05/25/18
RL Approval of SNR	05/21/18	06/18/18

# Section G

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



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

December 2017  
CHPRC-2017-12, 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 the identification of corrective actions and compensatory measures as a result of the shock received during lockout/tagout activities on the T-58 and T-87 water heaters. Prepared a work change notice (WCN) to the work package and updated the Tagout Authorization Form to incorporate the additional controls.
- Placed the T-58 and T-87 heaters into service.
- Completed an engineering change request (ECR) for installation of a new contactor enclosure between the existing main disconnect switch and the existing power panel at FFTF.
- Completed development and released an ECR for installation of the P16 pump variable frequency drive.
- Completed a draft WCN for installation of the P16 pump variable frequency drive and routed for review.
- Continued development of a work package to repair the leaking fire suppression system riser in the 481 Building.

## MAJOR ISSUES

None currently identified.

## 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	1.2%	0.0	23.4%

Numbers are rounded to the nearest \$0.1M

**CM Schedule Performance: (\$+0.0M/+1.2%)**

The schedule variance is within reporting thresholds.

**CM Cost Performance: (+\$0.0M/+23.4%)**

The cost variance is within reporting thresholds.

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

RL-0042 FFTF Closure	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Estimate to Complete (ETC)	Variance at Completion (VAC)
Total	24.8	24.8	20.6	0.0	0.1%	4.2	17.1%	26.5	22.7	2.1	3.8

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 (+\$4.2M/+17.1%)**

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

**Variance at Completion (+\$3.8M/+14.5%)**

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 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



December 2017  
CHPRC-2017-12, 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 Plateau Remediation Contract		a. FROM (YYYYMMDD)  2017 / 11 / 27	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD)  2017 / 12 / 24	
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	VARIANCE		BUDGETED COST		ACTUAL	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)		
	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)								
34 - Env Program & Strategic Plng	824	700	580	-124	120	77,192	76,982	71,324	-209	5,659	0	0	0	85,652	80,037	5,615		
35 - Business Services	0	0	10	0	-10	477,296	477,296	453,523	0	23,773	0	0	0	477,296	455,443	21,853		
36 - Prime Contract & Proj Integr	158	158	76	0	81	7,324	7,324	4,415	0	2,909	0	0	0	8,807	5,705	3,102		
3B - PFP Closure Project	3	2,752	5,543	2,749	-2,791	899,755	884,176	1,003,952	-15,580	-119,776	0	0	0	899,880	1,035,732	-135,852		
3C - Waste & Fuels Management Project	9,113	8,081	8,965	-1,032	-884	1,107,286	1,108,525	1,031,322	1,239	77,203	0	0	0	1,234,231	1,151,091	83,141		
3D - Soil & Groundwater Remediation	-3,106	8,007	9,212	11,113	-1,204	1,243,990	1,237,617	1,212,939	-6,373	24,678	0	0	0	1,321,427	1,289,559	31,868		
3G - K Basin Oper & Plateau Remediation Project	9,891	8,648	11,551	-1,243	-2,903	1,379,765	1,381,535	1,303,517	1,771	78,019	0	0	0	1,469,719	1,371,771	97,948		
3H - 618-10 and ERDF	4,125	3,815	3,224	-310	591	91,500	96,218	77,285	4,719	18,934	0	0	0	126,809	104,609	22,200		
3J - Building 324 Disposition Project	6,050	4,801	6,116	-1,248	-1,314	56,503	53,706	56,327	-2,796	-2,621	0	0	0	126,790	132,083	-5,293		
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														122,527	122,527	0		
e. SUBTOTAL (Performance Measurement Baseline)	27,059	36,964	45,278	9,905	-8,314	5,340,610	5,323,380	5,214,602	-17,230	108,778	0	0	0	5,873,138	5,748,557	124,581		
f. MANAGEMENT RESERVE														49,567				
g. TOTAL	27,059	36,964	45,278	9,905	-8,314	5,340,610	5,323,380	5,214,602	-17,230	108,778	0	0	0	5,922,705				

\* 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 d. SHARE RATIO: YES X 9/18/2009			4. REPORT PERIOD a. FROM: 2017/11/27 b. TO: 2017/12/24																																							
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 \$328,403		e. CONTRACT BUDGET BASE (C + D) \$5,917,360		f. TOTAL ALLOCATED BUDGET \$5,922,705		g. DIFFERENCE (E - F) <b>(\$5,344)</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																																																
BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)																																																
SIX MONTH FORECAST																																																
ITEM (1)																																																
BCWS CUM TO DATE (2)		BCWS FOR REPORT PERIOD (3)		+1 Jan-18 (4)		+2 Feb-18 (5)		+3 Mar-18 (6)		+4 Apr-18 (7)		+5 May-18 (8)		+6 Jun-18 (9)		FY09-13 (10)		FY14 (11)		FY15 (12)		FY16 (13)		FY17 (14)		FY18 (15)		UNDISTRIB BUDGET (16)		TOTAL BUDGET (17)																		
a. PM BASELINE (BEGIN OF PERIOD)															5,313,551		39,293		29,536		40,160		47,310		38,732		47,924		36,179		3,391,477		391,653		471,323		504,826		485,027		613,101		15,611		5,873,018			
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																																																
BCR-013-18-007R0 - Incorporate FY2018 Bi-lateral Agreement Scope Adds and Delet																																																
BCR-030-18-007R0 - Incorporate FY2018 Scope Deductions -RL-0030																																																
BCR-040-18-002R0 - Incorporate FY2018 Scope Deductions -RL-0040																																																
BCR-040-18-005R0 - RL-0040 SQUID WBS Modifications																																																
BCR-041-18-006R0 - Incorporate FY2018 Scope Deductions -RL-0041																																																
BCR-041-18-010R0 - Revise EV Technique for 166KE Oil Storage Vault Demolition Planning																																																
BCRA-PRC-18-005R0, HPIC Updates December 2017																																																
BCR-PRC-18-004R0, Undistributed Budget Adjustments December 2017																																																
c. PM BASELINE (END OF PERIOD)															5,340,610		27,059		29,170		39,546		46,748		38,126		47,034		35,652		3,391,477		391,653		471,323		504,826		485,027		506,305		122,527		5,873,138			
7. MANAGEMENT RESERVE																																																
8. TOTAL																																																

\* 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) 2017 / 11 / 27	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2017 / 12 / 24	
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			
			JAN 2018	FEB 2018	MAR 2018	APR 2018	MAY 2018	JUN 2018	(10)	(11)	(12)	(13)	(14)			
ORGANIZATIONAL CATEGORY (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)		
300 - Office of the President	7	745	6	6	6	6	6	6	6	6	19	0	0	0	0	803
303 - Internal Audit	3	487	5	5	5	5	5	5	5	5	14	0	0	0	0	528
304 - General Counsel	4	456	5	5	5	5	5	5	5	5	15	0	0	0	0	500
31 - Communications	8	1044	9	9	9	9	9	9	9	9	27	0	0	0	0	1126
32 - Safety Health Security & Quality	46	7293	53	53	54	54	54	54	54	54	163	0	0	0	0	7781
34 - Env Program & Strategic Plng	40	4934	50	47	45	45	45	46	47	47	137	3	0	0	0	5355
35 - Business Services	62	7877	64	64	64	64	64	64	64	64	192	0	0	0	0	8453
36 - Prime Contract & Proj Integr	64	5222	67	67	69	69	69	69	69	69	208	0	0	0	0	5841
38 - Project Technical Services	31	5664	38	39	39	39	39	39	39	39	116	0	0	0	0	6011
3B - PFP Closure Project	148	49735	161	157	150	155	152	127	169	0	0	0	0	0	0	50806
3C - Waste & Fuels Management Project	352	50743	331	338	337	343	337	335	1008	12	1	0	0	0	0	53785
3D - Soil & Groundwater Remediation	291	37020	271	267	267	268	271	277	819	23	5	42	0	0	0	39531
3G - K Basin Oper & Plateau Remediation Project	366	48385	410	353	330	289	264	248	733	13	4	0	0	0	0	51029
3H - 618-10 and ERDF	99	2146	104	105	102	97	96	92	211	0	0	0	0	0	0	2952
3J - Building 324 Disposition Project	134	1978	145	140	151	154	150	155	419	25	2	0	0	0	0	3319
<b>g. TOTAL DIRECT</b>	<b>1656</b>	<b>223729</b>	<b>1719</b>	<b>1655</b>	<b>1633</b>	<b>1603</b>	<b>1568</b>	<b>1533</b>	<b>4251</b>	<b>75</b>	<b>12</b>	<b>42</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>237821</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			
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME Plateau Remediation Contract		a. FROM (YYYY/MM/DD)  2017/11/27			
b. LOCATION (Address and ZIP Code)  Richland, WA 99354		b. NUMBER DE-AC06-08RL14788		b. PHASE Base		b. TO (YYYY/MM/DD)  2017/12/24			
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE 2009/09/18 NO YES X					
	BCWS	BCWP	ACWP	SV in \$	SV in %	CV in \$	CV %	SPI	CPI
<b>Current:</b>	27,059	36,964	45,278	9,905	36.6%	(8,315)	-22.5%	1.37	0.82
<b>Cumulative:</b>	5,340,610	5,323,380	5,214,602	(17,230)	-0.3%	108,778	2.0%	1.00	1.02
	BAC	EAC	VAC in \$	VAC in %	TCPI				
<b>At Complete:</b>	5,873,138	5,748,557	124,581	2.1%	1.03				
<b>Explanation of Variance/Description of Problem:</b>									
<p><b>Current Period Schedule Variance:</b> The current month (CM) positive schedule variance is primarily due to PBS RL-0030 December 2017 implementation of BCR-030-18-007R0, Incorporate FY2018 Scope Deductions - RL-0030, which removed prior year activities from the performance measurement baseline (PMB), causing negative current period budgeted cost of work scheduled (BCWS) and generating a corresponding positive schedule variance in the current period.</p> <p>Also contributing to the positive schedule variance is PBS RL-0011 working historical budgeted cost of work scheduled (BCWS) on discrete demolition activities (apportioned). The majority of the scope was originally planned to begin during the third quarter of 2016. However, delays in getting 236-Z ready for demolition negatively impacted the start of 236-Z demolition. Continuation of demolition activities on 234-5Z, specifically zones 3 and 4, and completion of removal and shipment of the PRF gallery gloveboxes to PFNW for size reduction is contributing to this positive variance. Because all work is historical, the current schedule variance will be favorable going forward.</p> <p>The positive schedule variance is offset by PBS RL-0041 backfill of the 316-4 Waste Site, which finished ahead of schedule in previous periods, and was originally planned to be completed in March 2018. Also contributing to the offset is the ahead-of-schedule conditions on the Garnet Filter Media Removal procurements. In addition, the 300-296 project has experienced structural design delays due to a change in strategy from Jet Grouting to Micro-piles and a revision to the structural specification. Moreover, the award and mobilization of the electrical building trades contractor has been deferred to better align with receipt and installation of mockup equipment, which has been delayed due to increased design efforts and difficulties with fabrication.</p> <p><b>Current Period Cost Variance:</b> The CM negative cost variance is primarily due to PBS RL-0011 delay in completion of the Plutonium Finishing Plant (PFP) project to achieve slab-on-grade. The delay is causing needed extensions of project management hotel load resources, without BCWS, to support the remaining D&amp;D work scope until the facility completes demolition activities. Further, working historical BCWS for demolition activities associated with 234-5Z and 236-Z is also contributing to this variance. Unplanned shipments to Perma-Fix Northwest (PFNW) for the size reduction of gloveboxes and E4 in 234-5Z continue to cause additional costs to support demolition activities. Shipping the waste to PFNW helped realize schedule and safety improvements but has resulted in increased size reduction costs.</p> <p>Also contributing to the negative cost variance is PBS RL-0041 increased cost at 300-296 project for equipment design/fabrication, due to increased efforts on the structural design.</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									
<b>Cumulative Cost:</b> N/A									

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

**Corrective Action:**

**Current Period Schedule:** No corrective actions have been identified.

**Current Period Cost:** Cost impacts are being estimated and will be incorporated in the project estimate to complete (ETC).

**Cumulative Schedule:** N/A

**Cumulative Cost:** N/A

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

CHPRC continues to track completion of the contract scope within budget and is currently projecting a variance at completion (VAC) of \$124.6 million, with \$49.6 million of management reserve (MR), for a total positive variance of \$174.2 million. For December, the project was 36.6 percent ahead of schedule and 22.5 percent over planned cost. Contract to date (CTD), the project was 0.3 percent behind schedule and 2.0 percent under planned cost.

The VAC decreased \$29.4 million from last month due to the impact of scope deduct baseline change requests processed in December against PBS RL-0013, RL-0030, RL-0040 and RL-0041. These changes may be offset in future months by scope additions. CHPRC is currently discussing with RL the disposition of all scope changes. Additionally, PBS RL-0011 reflects and increased forecast of \$17.7 million due to recovery actions associated with a contamination event that occurred in December.

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

- BCR-013-18-007R0, Incorporate FY2018 Scope Deductions –RL-0013
- BCR-030-18-007R0, Incorporate FY2018 Scope Deductions –RL-0030
- BCR-040-18-002R0, Incorporate FY2018 Scope Deductions -RL-0040
- BCR-041-18-006R0, Incorporate FY2018 Scope Deductions -RL-0041
- BCR-PRC-18-008R0, Undistributed Budget Adjustments December 2017

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

Variance in Performance BAC and EAC: The variance at complete (VAC) between the BAC and EAC this month is a + \$124.6 million, +2.1% and is within reporting thresholds.

**Format 1 and 3 Contract Data:**

**Contract Price Adjustments**

CPs - In Process		
	Total Authorized Unpriced Work	\$328,403
Approved Adjustments to Contract Price (not reflected in B.4-1 Table)		
	Total Negotiated Cost Changes	-
	<b>Grand Total Adjustments</b>	<b>\$328,403</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-18-008R0	<i>Undistributed Budget Adjustments December 2017</i>	RL-0013, RL-0030, RL-0040, RL-0041	2018	\$106,916K

The Undistributed Budget increased by \$106,916K.

**Management Reserve Activity**

BCR Number	Title	PBS	Fiscal Year	MR
BCR-013-18-007R0	<i>Incorporate FY2018 Scope Deductions –RL-0013</i>	RL-0013	2018	-\$67K
BCR-030-18-007R0	<i>Incorporate FY2018 Scope Deductions –RL-0030</i>	RL-0030	2018	-\$49K

Overall, there was a decrease in Management Reserve (MR) of \$116K during December.

**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 December.

**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> 12/13/2017	<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

December 2017  
CHPRC-2017-12, 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

## PROGRAM SUMMARY

Project Services and Support functional activities continue to provide support and technical services to all CHPRC projects, as well as central management of cross-cutting services.

### EMS Objectives and Target Status (Draft)

Objective #	Objective	Target	Due Date	Status
18-EMS-ADMIN-OB1-T1	Reduce energy intensity.	Increase facility occupancy rates to greater than 83 percent by compressing occupancy and vacating underutilized facilities. Occupancy compression to be maintained through disposition of buildings or square footage reduction.	9/30/18	0%
18-EMS-PTS-OB1-T1	Spill prevention/waste minimization/pollution prevention.	Monitor and evaluate spill prevention program and existing techniques to reduce and/or eliminate spills to the environment by surveillances and on-going training. Also survey universal waste and recycling areas.	9/30/18	24%
18-EMS-PTS-OB2-T1	Monthly chemical management inspection.	Ensure chemical products are accurately tracked, maintained, and excessed/disposed. Perform quarterly assessment on chemical inventory locations.	9/30/18	28%

### 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	10	N/A
Near-Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### Safety, Health, Security, and Quality (SHS&Q)

- There were no first aid injuries during the month of December in the functional groups.
  - o Occupational Safety and Industrial Hygiene (OS&IH) accomplishments:
    - Provided Industrial Hygiene support to the 300-296 Project to assist with work package development.
    - Supported the CHPRC New Manager Overview course conducted in December.
    - Presented CHPRC Lessons Learned at the Hanford Site Excavation, Trenching & Shoring Program committee meeting.
    - Issued Special Safety Bulletin pertaining to the use of respiratory protection equipment in freezing temperatures.
    - Completed review of proposed Hanford Site Respiratory Protection Program revision.
    - Performed technical reviews of Project Drill Packages.
    - Updated several Industrial Hygiene Technical Evaluations that directly support program procedures.
    - Supported development of an Industrial Hygiene Technician Fundamentals training program to be provided by HAMMER.
  - o Radiological Control accomplishments:
    - Supported Plutonium Finishing Plant Closure Project (PFP) recovery activities.
    - Continued Work Site Assessment on Clearance of Radiological Materials.
    - Supported Sentinel implementation planning (new site-wide access control system).
    - Supported T Plant and Engineered Container Retrieval and Transfer System readiness activities.
    - Completed review and approved Technical Evaluation for:
      - *Establishing Airborne Radioactivity RWP Action Levels and Void Limits Where CAMs Are Not Used as the Sole Method for Real-time Air Monitoring.*
  - o Nuclear Operations Support & Compliance accomplishments:
    - Correspondence transmitted to Department Of Energy Richland Operations Office (RL):
      - Letter, CHPRC-1703049.1, dated December 5, 2017, *Resubmittal of the Conceptual Safety Design Report for the Capsule Storage Area, CHPRC-03293, Revision 0, to RL for Approval.*
      - Letter, CHPRC-1704111, dated December 27, 2017, *Transmittal of the Annual Update to the 324 Building Basis for Interim Operation, CHPRC-02979, Revision 3; the Addendum to the 324 Building BIO for Demolition of 324 Building Support Areas, CHPRC-02982, Revision 1; the Addendum to the 324 Building Basis For Interim Operation For Stabilization, CHPRC-02983, Revision 2; the Remote Soil Excavation Addendum to the 324 Building Basis for Interim Operation, CHPRC-03197, Revision 0; the 324 Building Technical Safety Requirements, CHPRC-02980, Revision 1; the 324 Facility Unreviewed Safety Question Determinations Summary; and the Fire Hazards Analysis for 324 Building, CHPRC-02984, Revision 2.*
    - Correspondence received from RL:
      - Letter, 18-NSD-0005\_RL, dated December 1, 2017, *Approval of the Annual Update to the Documented Safety Analysis (DSA) for the Reduction-Oxidation (REDOX) Facility, HNF-13830, Revision 7; the Technical Safety Requirements (TSRs) for the REDOX Facility, CHPRC-03114, Revision 0; the Unreviewed Safety Question Determination (USQD) Summary, and the Fire Hazards Analysis (FHA) for the REDOX Facility, CP-45673, Revision 2.*
      - Letter, 18-NSD-0006\_RL, dated December 4, 2017, *Approval of Waste Encapsulation and Storage Facility (WESF) Recovery Plant, “G Cell Combustible Loading Management.”*

- Letter, 18-NSD-0007\_RL, dated December 7, 2017, *Approval of the One-Time Request for Shipment (OTRS) for Sludge Transport from K West Basin to T Plant, CHPRC-03111, Revision 2.*
- Other:
  - CE-SPA-PFP-201-001, Revision 4, *Contaminated Equipment Special Packaging Authorization (CE-SPA) Shipment Evaluation Checklist (SEC) for Shipment from PFP to EDRF*, was released and authorization to ship was completed (CHPRC-TS-2017-009).
- o Contractor Assurance Regulatory Reporting (CARR) accomplishments:
  - 173 Condition Reports (CRs) were screened:
    - No significant issue identified.
    - Two adverse issues identified.
    - 71 Track Until Fixed issues identified.
    - 54 Trend Only items identified.
    - 45 Opportunity for Improvement (OFI) items identified.
    - One Screened Out.
  - 200 CRs administratively closed.
  - 257 CRs actions administratively closed.
  - Provided Course #600082, *CHPRC Responsible Manager Training - Issues Management*, to 11 employees.
  - Provided full time support to PFP Issues Management and Occurrence Reporting activities.
  - Completed Apparent Cause Evaluation for and transmitted Final Occurrence Reporting and Processing System (ORPS) report EM-RL--CPRC-PFP-2017-0016, *Six Roll-On/Roll-Off Containers Did Not Meet Certificate of Conformance Requirements.*
  - Transmitted Notification ORPS reports: EM-RL--CPRC-PFP-2017-0018, *Discovery of Legacy Soil Contamination.*
  - Provided support for the Monthly Defense Nuclear Facility Safety Board (DNFSB) Resident Inspector Meeting.
  - Sixteen documents were provided in response to DNFSB requests for information.
  - Provided support and coordination to the DNFSB Hanford Site Resident Inspectors requests.
  - Two external Lessons Learned were submitted in OPEXShare: 2017-RL-HNF-0027, *Inadequate Material Specification Leads to an Uncontrolled Electrical Hazard*, and 2017-RL-HNF-0028, *Know the Scope of Work: Non-DOE Owned Radiation Generating Device Transported On Site Violated Requirements.*
- o Performance Oversight, Assessment, and Quality Assurance accomplishments:
  - Provided assessment mentoring to KBO&PR and PC&PI organizations.
  - Met with Mission Support Alliance (MSA), Worker Protection (Radiological) staff to initiate joint-planning for the 10 CFR 835, *Occupational Radiation Protection*, Subpart J, “Radiation Safety Training,” Assessment scheduled for January through March 2018.
  - Extended MSA supplier qualifications on the CH2M HILL Evaluated Supplier Listing (ESL) through November 2020, based on results of Surveillance SHS&Q-2018-SURV-19057, “Evaluation of Mission Support Alliance (MSA) for continuation on the CHPRC Evaluated Supplier List (ESL).”
- o Fire Protection (FP) accomplishments:
  - Letter, MSA-1705798, dated December 11, 2017, Hanford Fire Systems Monthly Health Report.
  - The following TSR activities were completed:
    - Solid Waste Operating Complex (SWOC):
      - o CWC, LLBG, and WRAP in accordance with PRC-PRO-OP-54193, *SWOC Transient Combustibles.*

- 324 Building:
  - Monthly Combustible Surveillance.
- PFP:
  - TRU Waste Staging Areas reviewed to verify compliance with permits.
- Facility Hazards Analysis (FHA):
  - SWOC FHA has been completed.
  - T Plant FHA revision and implementation plan have been completed.
  - The 324 Building FHA has been completed and the implementation plan is undergoing revision.
  - Interim Storage Area (ISA) and 402 Building FHAs are in comment resolution stage.
  - The 105KW Facility Fire Protection Assessment (FFPA) has been completed to support Operational Readiness Review
- All 2017 scheduled Facility Fire Protection Assessments were completed.
- SHS&Q Focus Areas:
  - **Issue:** Beryllium program assessment findings from Department of Energy (DOE-HQ), Office of Safety, Health and Security Independent Oversight Inspection report.
    - **Status:** Revision 4 continues to be developed by the Hanford Beryllium Committee, Revision 3 has been pulled back by RL due to DOE/HQ legal review. Revision 2 remains in effect.
    - **Action:** Beryllium facility assessments have been completed. Remaining are 61 facilities, structures, and conex boxes that have yet to be characterized and are scheduled for completion in FY2018.
  - **Issue:** Accident & Injury Reduction.
    - **Status:** Continue investigating recordable, days away, restricted, or transferred (DART), and first aid injuries to determine cause, prevention, reduction, to prevent recurrence. Project safety campaigns are effective.
    - **Action:** Injury trends continue to improve across the PRC. OSHA 300 log to be developed and posted by February, as required by law.
  - **Issue:** PFP support.
    - **Status:** Supporting PFP and other projects with dedicated OS&IH personnel and Radiological Control personnel, from the SHS&Q Central group for Senior Supervisory Watch of high-risk work activities and other project work activities.
    - **Action:** Supporting the December PFP contamination release event.
  - **Issue:** Fire Protection program improvements.
    - **Status:** CHPRC Fire Protection personnel are being managed under the nuclear safety organization.
    - **Action:** Weekly fire protection program status and initiatives presented each week to the SHS&Q Vice President continue to show improvement. Continued concerns regarding fire system maintenance are now being addressed at the management level.

### Environmental Program and Strategic Planning (EP&SP)

- **Environmental Compliance and Quality Assurance**
  - Assessment Status
    - Surveillance, *Evaluation of Progress and Plans for Completing TPA Milestone M-083-00A at PFP*, was completed on December 5, 2017, and resulted in no findings and five opportunities for improvement.
    - Surveillance, *Trend Code EP03 Corrective Action Effectiveness Review*, was completed on December 19, 2017, and resulted in no findings and three opportunities for improvement.

- **Demonstrate active leadership and progress toward obtaining new Resource Conservation and Recovery Act (RCRA) Permit for the Hanford Site**
  - Facilitated and participated in the following meetings:
    - Weekly permit Project Management Team meetings.
    - Weekly permit meeting for Hanford contractors.
    - Weekly schedule strategy discussions with Ecology.
    - Monthly Tier 2 Meeting with RL, ORP, and Ecology Senior Management
  - Maintained the permit schedule.
  - Provided a detailed monthly schedule report and analysis for progress on the permit to Ecology, DOE; RL, ORP, and the contractors.
  - Provided tracking and status of open issues that are preventing progression of the permit.
  - Provided full-time regulatory expertise and project management support.
- **Quality and timeliness of key documents submitted**
  - In December 2017, 36 environmental documents supporting various CHPRC projects were completed through EP&SP Publication Services. Publication Services was established to provide a systematic process for performing technical editing and formatting of environmental documents. High quality and readability are outcomes from documents that are processed through Publication Services.
- **Environmental Protection**
  - o Compliance Status
    - Received Department of Ecology Dangerous Waste Inspection Reports for WRAP, CWC, NRDWL, LLBG Green Islands, 216-B-3 Main Pond, 216-S-10 Pond/Ditch, 216-B-63 Trench, 216-A-29 Ditch, 216-A-36B Crib, and 216-A-37-1 Crib. The inspection reports claimed compliance problems with waste container major risk labeling, dangerous waste training plans, security signage, groundwater inspection records. Worked with affected Projects to begin development of the initial draft responses to the reported issues. Formal responses to the inspection reports are due for submittal to RL in early January 2018.

## Business Services

- **Supply Chain:**
  - o Conducted acquisition planning activities with the K-Basin Operations and Plateau Remediation (KBOPR) representative to determine procurement alternatives for updated regulatory documents at K-Basins.
  - o Drafted a Sources Sought/Expression of Interest document for the purposes of performing market research on additional available waste treatment services.
  - o Developed an Expression of Interest document for the purposes of determining the market conditions for contractors that are capable of cleaning the cooling towers at the Waste Encapsulation and Storage Facility (WESF). WESF currently has three cooling towers with an accumulation of bacterial growth. As a result, the cooling towers require inspection, cleaning, and disinfection for continued safe operations.
  - o Developed and released a notice to subcontractors to remind them of the new Paid Sick Leave Law that is due to go into effect January 1, 2018. The notice provided points of contact and a fact sheet from Washington State Department of Labor & Industries.
  - o Released the initial Buyer's Technical Representative (BTR) Training designed to introduce prospective BTRs to the functional and administrative responsibilities of a CHPRC BTR. The computer-based training presents basic BTR responsibilities for requisition and scope of work development, acquisition planning, and management of schedule, invoices, work progress, and contract closeout for assigned CHPRC projects.
  - o Developed and released a subcontractor notification regarding a quality-related issue and falsification of quality data with Kobe Steel, Ltd. The notification was transmitted to prior and

- current CHPRC subcontractors with a response due date of January 22, 2018. Those that received the notification are to acknowledge whether/whether not any safety class materials/products/components were provided by Kobe Steel, Ltd. or any of its subsidiaries.
- o Coordinated the removal/excessing of the Hog Shack Facility at the 618-10 project site. The Hog Shack was used for placing tarps over loaded roll-on/roll-off containers. Representatives at CHPRC and MSA were contacted to determine interest in relocating and repurposing the facility for other project use.
  - o Assisted Mission Support Alliance in identifying alternative sources of supply for prescription safety glasses. The Supply Chain Management Center recently awarded a DOE-EM complex-wide agreement with HOYA Vision.
  - **Facilities & Property Management (F&PM):**
    - o Continuing stage 2 of the MSA-led value engineering study recommendation to reconcile Real Property records in Sunflower with the information in the Facilities Information Management System (FIMS).
    - o Move planning/execution for RL and CHPRC between the Federal Building and 2420 Stevens Center Place is complete. All CHPRC moves to the Federal Building were completed in July 2017. CHPRC Finance and S&GRP project support members were moved to final permanent offices in December.
    - o Continuing to relocate triple-wide office trailer MO-6117 from 618-10 to setup in new location in unsecured corridor for PTS.
    - o Completed installation and occupation of two double-wide job trailers and one shower/restroom/change trailer to support demolition of Research Technology Laboratory (RTL) labs.
    - o Completed removal and installation of new trailer entrance landings at 100-K MO1502, MO1118, MO1306, MO1307, MO1304, MO1305, MO1117, and MO1503.
  - **Finance:**
    - o Continuing with the series of RL finance/contracting officer meetings to discuss and align topics identified in the CHPRC Incurred Cost Audit Corrective Action Plan.
    - o December month-end completed with no cost suspensions.
    - o Continuing to gather support and create responses for the FY2016 Invoice Assessment. The costs associated with the educational reimbursement and the extended temporary duty issues are being worked through the partnering sessions with RL.
    - o Provided support for the RL CR4110 A123 Capital Property Assessment.
    - o Provided support for a RL Finance Inventory Assessment.
    - o Provided support for a RL Finance Accrual Assessment.
  - **Human Resources (HR):**
    - o HR Compensation submitted CHPRC's Position to Market Notification to RL which included the proposed annual merit budget and proposed Salary Structure update for CY2018.
    - o HR exited 13 employees as part of our last phase of Workforce Restructuring related to FY2017.
      - HR coordinated with HPMC Occupational Medical Services, Mission Support Alliance (MSA) and internal departments to efficiently process these employees with minimal disruption to project work.
    - o Participated in the second New Manager Overview class. HR topics presented included Staffing, Employee Relations, Diversity/EEO, Compensation, and time recording.
  - **Labor Relations (LR):**
    - o The following is the current status of grievances in the arbitration process:
      - PRC-015-011 – union claiming misassignment of work in regard to respirator maintenance. Status: Arbitration was scheduled for October 11, 2016, but was postponed by mutual agreement as parties work to reach a settlement in the matter. CHPRC continues to await a response from the union on the company's settlement proposal.
      - PRC-016-044, 049, and 050 – termination. Status: Arbitration scheduled for April 25 and 26, 2018.

- PRC-017-010 – union claiming employee should have been paid between time when ready to return to work and when started with MSA. Status: Arbitration scheduled for February 28 and March 1, 2018.
- PRC-017-017 – union claiming only Nuclear Chemical Operator (NCOs) can issue respiratory equipment. Company recognizes D&D workers as well. Status: Arbitration scheduled May 23, 2018.
- PRC-017-018 – union claiming company not calculating hours worked correctly when coupled with “R” time. Status: Arbitration scheduled June 1, 2018
- Hanford Atomic Metal Trades Council (HAMTC) requested four grievance to move to arbitration:
  - PRC-017-035 (Jurisdictional – building of supports)
  - PRC-017-039 (Completing of Electronic Bill of Material [EBOM])
  - PRC-017-040 (Excessing of Material)
  - PRC-017-042 (Closing of Plastic shop)
- o Labor Relations continued to support workforce restructuring activities for affected bargaining unit employees, working with all of the CHPRC projects and the other Hanford contractors to coordinate staffing needs and skills mix issues, and provide opportunities for affected employees.
- **Procurement:**
  - o Awarded/amended 124 contracts with a total value of \$10.1 million. Additionally, awarded 219 new material purchase orders (PO) valued at \$514,931 to support ongoing project objectives.
  - o At the end of the first 111 months of the CHPRC project, procurement volume has been significant; \$2.66 billion in contract activity has been recorded with approximately 56.1 percent, or \$1.49 billion, in awards to small businesses. These awards include 7,970 contract releases, 24,724 POs, and 290,976 PCard transactions.

- o Major contract awards:

Contract/ Release	Award Date	Awarded To	Title	Contract Type	Value
58163-10	11/30/17	Babcock Services Inc	100K Closure Regulatory Document Assessment & Editing Support	T&M	\$ 250,000.00
56189-15	12/5/17	Holt Services Inc	The Installation Of Five Dual-Use Wells In The 200-UP-1 Groundwater	FFU	\$ 1,732,510.00
44438-60	12/11/17	DGR Grant Construction Inc	Demobilize 618-10 Trailers	FFP	\$ 79,795.00
65134	12/14/17	Mid Columbia Engineering Inc	Waste Bin Rad Assay System / Shielded Probe Collimator System	FFP	\$ 588,988.04
36883-69	12/14/17	Ojeda	Task 1: Construction Activities in the HR-3 Operable Unit	T&M	\$ 1,175,000.00
36883-70	12/14/17	Ojeda	Managed Task Support for the URGS DVZ-TT	T&M	\$ 175,000.00
54177-78	12/18/17	Intera Incorporated	Intera Development of Fate/Transport Models for DV-1 RI Report	T&M	\$ 520,038.00
64824	12/21/17	Ares Corporation	W-135 Detailed Design for WESF Modifications and CSA	T&M	\$ 1,010,343.93

### Prime Contract and Project Integration (PC&PI)

- **Project Management/Compliance Assessments**

- o A revision to annual Earned Value Management System (EVMS) surveillance to demonstrate the continued compliance of CHPRC's EVMS certification in accordance with the requirements of PRC Section C.3.1.1, "Project Integration and Control and Earned Value Management;" incorporating additional surveillance activities and narrative in response to feedback from RL on CHPRC's original submittal was transmitted to RL on December 14, 2017.

- o Work Site Assessment (WSA) PC&PI-2018-WSA-19245, *Assess Identification of TPA Milestones into PMB/TWS/LRP and Identifying Necessary Prerequisites Work to Complete Milestones*, was completed December 20, 2017. The documentation reviewed by the assessment were found to show consistency with all contract, procedural, and informal document requirements and instructions.
- o WSA PC&PI-2018-WSA-19247, *Programmatic Assessment of Project Management Activities defined in Project Management suite of PPS documents and DOE O 413.3B*, was completed December 20, 2017. There were no findings as a result of this WSA.
- o Preparation and the disposition of eight Baseline Change Requests (BCR) by the Change Control Board (CCB) was facilitated in December by Project Management/Compliance Assessments as part of their responsibility as CHPRC CCB coordinator.
- o During December Project Management/Compliance Assessments supported efforts by the 618-10, Sludge Retrieval, and PFP Capital 1 and 2 Projects to work with RL to prepare for the submittal of Critical Decision (CD) -4, *Approve Start of Operations or Project Completion*, documentation as required by DOE O 413.3B, *Program and Project Management for the Acquisition of Capital Assets*. CD-4 is the achievement of the project completion criteria defined in the PEP, the approval of transition to operations, and it marks the completion of the execution phase.
- **Prime Contract Compliance (PCC):**
  - o In December, PCC received and processed four contract modifications (639-641, and 643) from RL.
  - o The Correspondence Review Team received and determined the distribution for 45 incoming letters/documents. The PCC manager reviewed 34 outgoing correspondence packages.
- **Information Management:**
  - o Processed 23,592 electronic records into the Integrated Document Management System (IDMS).
  - o Continued desktop computing equipment upgrade project in support of HLAN Windows 10 implementation to be completed in FY2018. To date 101 computers have been refreshed.
- **Project Integration**
  - o Project Support, Systems Integration & Schedule Integration
    - Supported RL request for reprogramming KW Basin Sludge Removal Project Line Item funding to expense funding to support PUREX Tunnel 2 and the remediation of waste site 300-296.
    - Incorporated revised funding level from RL based on RL FY2018 Execution Priority List, and reallocation of prior year funding in the Central Plateau Control Point to support PFP.
    - Developed and implemented automated tool for validations and quality checks on Baseline Change Requests (BCR).
    - Developed and implemented a monthly performance automated e-CAM notebook report.
    - Began testing upgrades to the cost and schedule tools (Cobra 8.1 and Primavera 17.7) along with Acumen 8.1 (schedule analyzing tool).
  - o Estimating & Program Support
    - Submitted three Rough Order of Magnitudes (ROMs):
      - ROM 1597 - Little Egypt 600-276 submitted December 19, 2017.
      - ROM 040 1660 - RCRA Permit - Revision 9 - for 183-H and 300 Area Process Trenches, submitted December 19, 2017.
      - ROM 040 1684 - Deduct Proposal for Removal of the 622S Lysimeter Test Facility from the PRC Scope, submitted December 19, 2017.
    - Continued development of one change proposal (CP)/request for equitable adjustment (REA):
      - REA 013 PRC 1682 - Implementation of Final Solid Waste Operations Complex Permitting Plan, Part B.
    - Completed two cost evaluations for CPs/REAs to support the anticipated global settlement:

- CP 304 041 1593 - Initiate Transition of River Corridor Contract (RCC) Scope Activities into the Plateau Remediation Contract (PRC) - 324 Complex, completed on December 21, 2017.
- CP 306 041 1595 - Initiate Transition of River Corridor Contract (RCC) Scope Activities into the Plateau Remediation Contract (PRC) - ERDF Operations, completed on December 21, 2017.
- Miscellaneous estimating support:
  - Completed ROM 1689 PNL - Accelerated Composite Analysis - Rules of Performance on December 18, 2017.
  - Complete ROM for the U.S. Navy, Puget Sound Naval Shipyard, level of effort support for calendar year 2018 for Navy Reactor Compartment Disposal Program - RF2067 on December 18, 2017.
- o 000 Project EVM Support & Reporting:
  - Prepared and submitted November Indirect Project Review (IPR).
  - Issued the CHPRC November Monthly Performance Report to RL.
  - Submitted the November Gold Metrics to RL.
  - Submitted the final FY2017 Quarterly Maintenance Report to RL
- **Program Integration**
  - o **Interface Management:**
    - Continued involvement on several activities related to contractor activities in the 300 Area. These items include the update of HNF-58243 Rev.3, 300 Area Utility Systems and Services, (issued December 2017, but effective October 1,2017), the RL/PNSO Operational Agreement (in review), and the transfer of water/sewer services from MSA to Pacific Northwest National Laboratory (PNNL) (new cost allocation process and J.3 revision update ongoing).
    - Completed reviews and concurrence on eight MSA Service Delivery Documents.
    - Issued HNF-51261, Revision 1, AIA between CHPRC and MSA for Motor Carrier and Fleet Maintenance Support to CHPRC “Geophysical Logging Services” and HNF-47924, Revision 1, ICD between MSA and CHPRC for Hanford Site Electrical Utilities Operations and Maintenance interface with Soil and Groundwater Remediation Project Pump & Treat Process Lines.
    - Continued facilitating efforts to transfer ownership of the 2902HV80 Water Tank and 2902HV83 Fire Pump from the PRC to MSA, so that future 200 East Area water distribution services are aligned according to the respective prime contractor scopes of work. Recent activities include providing background technical information and previous estimates and actual costs for maintenance of the system to MSA Water Utilities.
  - o **Risk Management:**
    - Submitted correspondence letter CHPRC-1705651, *Transmittal of 300-296 Remote Soil Excavation Project Risk Register for RL Formal Acceptance of Pending Risk Ownership*, for three unassigned risks associated with force majeure and changes in requirements.
    - Conducted Risk Management Workshop and initiated FY2018 first quarter risk register reviews.
    - Supported preparation of REA 013 PRC 1682, *Implementation of Final Solid Waste Operations Complex Permitting Plan, Part B*. No risk actions associated with the proposal were identified.
    - Conducted monthly assessments of the status of key project risks.
  - o **Strategic Management:**
    - Strategic Management continued their support of evaluating and prioritizing risk reduction in the Central Plateau and River Corridor. In December, a final desktop instruction and updated Project Evaluation Matrix was completed and shared with DOE. In the future this approach could be used at other cleanup sites to enhance evaluation/strategy for aging structures.

- In December, DOE also requested Strategic Management assistance in sharing the Project Evaluation matrix and related presentations/backup material with key stakeholders.
- In the month, Strategic Management compiled and provided updates to the internal Integrated Priority List based on actuals from November, with a new FY2018 estimate at completion (EAC) calculated based on the November forecasts. An analysis and corrective actions for identified deltas for the new EAC to the planned increment was prepared and responded to by the projects as part of overall performance analysis.
- Strategic Management continued to implement tracking to the LRP scope to document LRP changes and ensure accurate planning as FY2018 begins. Explanations of variances were provided by the projects and updates to the LRP and key related documents made.
- Completed internal review of updates to the Productivity Tracking Log standard to ensure the process provides key data and decision-making information and can streamline and use existing metrics.

## PTS

- Training and Procedures
  - o Partnered with Human Resources to implement the first non-pilot New Manager Overview training session. This training was developed to fill a gap in knowledge for managers who are new to the role or new to management at CHPRC. Including the pilot session, 29 new managers have now completed this training.
  - o Worked with T Plant Learning Group Managers to analyze existing training plan assignments for employees who will be participating in sludge receipt activities. Revisions to training plans identified through this process were implemented in preparation for the T Plant Sludge Receipt Readiness Assessment.
  - o Teamed with MSA to test and implement new Hanford Integrated Training System (HITS) functionality. While this tool was intended to provide Training Program Coordinators with a mechanism to identify scheduling conflicts, it is available to any user. This new tool has proven particularly useful to managers and their administrative staff because it provides a calendar view of all scheduled training courses, dosimetry appointments, and medical appointments. The tool is updated real-time to accurately reflect changes made to an employee's schedule. The calendar can be filtered by a number of different criteria – providing managers with a customized, real-time view of their employees' scheduled appointments.
- Operations Program
  - o ConOps/Work Control/Conduct of Work
    - Supported T Plant Readiness Assessment for Sludge Receipt.
    - Supported initial analysis of the recent hazardous energy events (Presentation to the Fuel Manufacturing Facility scheduled for January 16, 2018 on results).
    - Submitted draft of the CHPRC (combined) Conduct of Operations Applicability Matrix to RL for review.
    - Coordinated the Readiness Assessment Collaboration Team meetings (T Plant, 100K, 300-296).
    - Supported the Hanford Site Lockout/Tagout committee in regard to updates for DOE-0336, Hanford Site Lockout/Tagout Procedure.
    - Submitted updated Quarterly Startup Notification Report to include the correct LRSS for 300-296.
    - Conducted Chemical Screening program improvement meeting with Industrial Hygiene.

- o Emergency Preparedness (EP)
  - Developed a draft Facility Emergency Response Organization Staffing metric to be briefed at the next Fuel Manufacturing Facility (FMF), a tool for situational awareness and risk management.
- Project Delivery
  - o Federal Building Upgrades
    - Completed Construction Completion Document.

### Communications:

Communications supported RL in proactive and reactive media stories:

- Tri-City Herald
  - o (December 5, 2017), Second Hanford tunnel at risk of collapse; DOE has a plan to prevent it
  - o (December 16, 2017), Hanford workers tackle the worst of the worst demolition. Success declared
- KEPR TV
  - o (November 30, 2017), Hanford Milestone: Workers finish cleanup of hazardous landfill near Richland and River
- KNDU
  - o (December 13, 2017), Public comment period for Class 3 Permit Modification to Hanford Dangerous Waste Permit
- EM Newsletter
  - o (December 5, 2017), Jennings Leads Strong Team Toward Successful Burial Ground Cleanup
  - o (December 12, 2017), Hanford Contractor Recognized for Commitment to Hiring Veterans
  - o (December 19, 2017), Wooley Leads Hanford Demolition Project by Watching, Learning, Guiding
- Communications supported RL in the development of social media posts featuring:
  - o PFP progress updates
  - o 618-10 Burial Ground completed
  - o PUREX stabilization
  - o 324 Building – entering C Cell
  - o 324 Building mockup progress
  - o Holiday giving
- Communications supported RL in the development of presentations presented to the Hanford Advisory Board on December 13, 2017, in Richland. The Department of Energy discussed plans for modifications to the building where the capsules are stored to allow the capsules to be packaged for dry storage and moved from the building.
  - o Tri-City Herald
    - (December 11, 2017), Highly radioactive capsules need safer storage at Hanford.

## MAJOR ISSUES

In accordance with performance measure PM-00-1-18, CHPRC reports the below issues potentially affecting the completing of individual outcomes and the overall success of the contract, as well as actions taken or recommended to resolve those issues.

Issue	Recommendation
No business system issues currently identified. Please see the Overview for contract alignment issue status.	N/A

## PROJECT BASELINE PERFORMANCE

### Current Month

(\$M)

WBS 000 Project Services and Support	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Office of the President	0.2	0.2	0.2	0.0	0.0%	(0.0)	-7.5%
Internal Audit	0.2	0.2	0.0	0.0	0.0%	0.1	75.8%
General Counsel	0.1	0.1	0.1	0.0	0.0%	0.0	27.9%
Communications	0.1	0.1	0.1	0.0	0.0%	0.0	2.9%
Safety, Health, Security, and Quality	1.1	1.1	0.9	0.0	0.0%	0.2	15.9%
Environmental Program and Strategic Planning	0.4	0.4	0.4	0.0	0.0%	0.1	15.2%
Business Services	2.0	2.0	2.1	0.0	0.0%	(0.1)	-5.6%
Prime Contract and Project Integration	2.0	2.0	1.8	0.0	0.0%	0.2	9.5%
Project Technical Services	0.7	0.7	0.5	0.0	-0.2%	0.2	27.1%
<b>Indirect WBS 000 Total</b>	<b>6.7</b>	<b>6.7</b>	<b>6.1</b>	<b>(0.0)</b>	<b>-0.0%</b>	<b>0.6</b>	<b>9.7%</b>

Numbers are rounded to the nearest \$0.1 million.

#### Indirect WBS 000

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

The variance is within reporting thresholds.

##### CM Cost Performance: (+\$0.6M/+9.7%)

The positive cost variance is attributable to less labor cost than budgeted due to workforce restructuring impacts as well as holiday absences higher than planned. Also contributing to the positive variance is lower subcontractor cost realized than planned in Internal Audit due to time phasing of subcontractors performing incurred cost audits on a milestone invoicing schedule. Additionally, lower subcontractor cost is due to desktop computing equipment purchases made in the prior year that were originally planned during December. The positive cost variance is partially offset by unplanned box van rentals to store furniture, higher than planned Abadan copier costs, unplanned cut/cap of trailer MO885, higher than planned City of Richland utility bill, higher than planned facility lease costs, and higher than planned MSA maintenance/janitorial support.

## Fiscal Year-to-Date (FYTD) (\$M)

WBS 000 Project Services and Support	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)
Office of the President	0.5	0.5	0.4	0.0	0.0%	0.0	6.3%	2.0
Internal Audit	0.4	0.4	0.2	0.0	0.0%	0.3	62.4%	1.9
General Counsel	0.4	0.4	0.3	0.0	0.0%	0.1	28.1%	1.6
Communications	0.3	0.3	0.3	0.0	0.0%	0.0	1.3%	1.3
Safety, Health, Security and Quality	3.2	3.2	2.9	0.0	0.0%	0.3	9.5%	13.6
Environmental Program and Strategic Planning	1.3	1.3	1.1	0.0	0.0%	0.2	14.3%	5.1
Business Services	5.6	5.6	5.9	0.0	0.0%	(0.3)	-4.5%	24.1
Prime Contract and Project Integration	5.6	5.6	5.1	0.0	0.0%	0.4	7.9%	23.9
Project Technical Services	2.0	2.0	1.8	0.0	-0.2%	0.1	6.4%	8.4
<b>Indirect WBS 000 Total</b>	<b>19.1</b>	<b>19.1</b>	<b>17.9</b>	<b>(0.0)</b>	<b>-0.0%</b>	<b>1.2</b>	<b>6.3%</b>	<b>81.9</b>

Numbers are rounded to the nearest \$0.1 million.

### Indirect WBS 000

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

The variance is within reporting thresholds.

#### FYTD Cost Performance: (+\$1.2M/+6.3%)

The positive cost variance is attributable to less labor cost than budgeted due to workforce restructuring impacts as well as holiday absences higher than planned. Also contributing to the positive variance is lower subcontractor cost realized than planned in Internal Audit due to time phasing of subcontractors performing incurred cost audits on a milestone invoicing schedule. Additionally, lower subcontractor cost is due to desktop computing equipment purchases made in the prior year that were originally planned during December. The positive cost variance is partially offset by unplanned box van rentals to store furniture, higher than planned Abadan copier costs, unplanned cut/cap of trailer MO885, higher than planned City of Richland utility bill, higher than planned facility lease costs, and higher than planned MSA maintenance/janitorial support.

## FY2018 G&A Analysis (\$M)

WBS 000 Project Services and Support	FY 2018					
	FYTD	FYTD	FYTD	FY2018	FY2018	FY2018
	BCWS	Actual	Variance (O)/U	BCWS	Fore cast	Variance (O)/U
<b>General &amp; Administrative (G&amp;A)</b>	<b>19.1</b>	<b>17.9</b>	<b>1.2</b>	<b>81.9</b>	<b>81.6</b>	<b>0.3</b>
Office of the President	0.5	0.4	0.0	2.0	2.0	0.0
Internal Audit	0.4	0.2	0.3	1.9	1.7	0.2
General Counsel	0.4	0.3	0.1	1.6	1.5	0.1
Communications	0.3	0.3	0.0	1.3	1.3	0.0
Safety, Health, Security and Quality	3.2	2.9	0.3	13.6	13.6	0.1
Env. Program & Strategic Planning	1.3	1.1	0.2	5.1	4.7	0.4
Business Services	5.6	5.9	(0.3)	24.1	24.2	(0.1)
Prime Contract and Project Integration	5.6	5.1	0.4	23.9	23.9	0.0
Project Technical Services	2.0	1.8	0.1	8.4	8.9	(0.5)

FY2018		
<b>G&amp;A Distribution</b>	<b>(21.5)</b>	<b>(92.5)</b>
<b>G&amp;A Liquidation (Over)/Under</b>	<b>(3.6)</b>	<b>(10.9)</b>

### Liquidation Analysis

For December, application of the G&A rate has over-liquidated total to date G&A cost by \$3.6 million. The FY2018 year-end projected over-liquidation of \$10.9 million reflected in the FY spend forecast reflects a projected decrease in G&A costs as well as an increase to the G&A base.

Consistent with CHPRC prospective Cost Accounting Disclosure Statement, under liquidations would be distributed to users at a minimum, when the combined projected year-end under liquidation is equal to or greater than \$4 million. Over liquidations would be distributed to users at a minimum, when the combined projected year-end over liquidation is equal to or greater than \$6 million. Variances may be liquidated to users at lower thresholds if variances are determined to be significant to cost control. All remaining variances will be distributed at fiscal year-end.

# Appendix C

## Capital Asset Projects



December 2017  
CHPRC-2017-12, 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)



T. E. Bratvold  
Vice President for  
Plutonium Finishing  
Plant Closure  
Project

December 2017  
CHPRC-2017-12, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

Progress continued toward critical decision (CD)-4 closure as teams completed preparation of the glovebox/hoods for extraction during demolition. Remaining glovebox (HA-46) has been staged until the area of the 234-5Z facility is demolished where it currently resides. 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	-	1	174	173
<b>COMPLETE</b> KPP Rooms/Areas Ready for Demo	-	0	72	72 rooms/areas

## KEY ACCOMPLISHMENTS

### RL-0011\_C1 Accomplishments

- Removed, size reduced, and dispositioned the 227S glovebox

## 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 a recovery plan. CHPRC is in the process of finalizing the root cause analysis and working with DOE and the Regulators to develop a recovery plan to enable demolition activities to resume.

## 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 stoplight chart:</b> No major changes to the monthly stoplight chart in December.						
<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 December.						
<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 December.						
<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 Plutonium Finishing Plant (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			<b>Risk Trigger:</b> During pre-demolition/demolition activities in fiscal year (FY) 2018.		
				<b>Mitigation action(s)</b>	<b>FC Date</b>	<b>%</b>
				None identified at this time.	N/A	N/A
<b>Mitigation Assessment:</b> No change in December 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.						
<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 December.						

## 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, RMC Process Line and 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 June 11, 2018. The dates above are reflective of the known actions and recovery efforts associated with a contamination event that occurred in December as of December 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	6/11/2018	<p>Progress continued to work toward CD-4 closure as teams continued to remove the final glovebox from the 234-5Z facility during demolition.</p> <p>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> <p>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.</p> <p>There was a 93-day loss since November month-end as a result of the contamination event described above.</p> <p>The total gloveboxes removed to date is at 99 percent complete. Completion of CD-4 closure by November 30, 2017, was not achieved.</p>

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

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

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

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



December 2017  
CHPRC-2017-12, 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) 2017 / 11 / 27	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2017 / 12 / 24	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> X <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

**5. PERFORMANCE DATA**

WBS.Resp Org Group  ITEM (1)	CURRENT PERIOD						CUMULATIVE TO DATE						REPROGRAMMING			AT COMPLETION		
	BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		ADJUSTMENTS			BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)		
	WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)	COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)					
35 - Business Services	0	0	0	0	0	60,427	60,427	52,580	0	7,847	0	0	0	60,427	52,580	7,847		
3B - PFP Closure Project	0	19	12	19	7	254,725	254,706	279,990	-19	-25,284	0	0	0	254,725	280,007	-25,282		
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
d. UNDISTRIBUTED BUDGET														0	0	0		
e. SUBTOTAL (Performance Measurement Baseline)	0	19	12	19	7	315,152	315,133	332,570	-19	-17,438	0	0	0	315,152	332,588	-17,436		
f. MANAGEMENT RESERVE														2,393				
g. TOTAL	0	19	12	19	7	315,152	315,133	332,570	-19	-17,438	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) 2017 / 11 / 27	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2017 / 12 / 24	
		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 JAN 2018 (4)	+2 FEB 2018 (5)	+3 MAR 2018 (6)	+4 APR 2018 (7)	+5 MAY 2018 (8)	+6 JUN 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	17
3B - PFP Closure Project	1	15442	0	0	0	1	0	0	0	0	0	0	0	0	15443
<b>g. TOTAL DIRECT</b>	<b>1</b>	<b>15459</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15460</b>

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT  
FORMAT 5 - Explanations and Problem Analysis

FORM APPROVED  
OMB No. 0704-0188

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>		<b>4. REPORT PERIOD</b>			
<b>a. NAME</b> CH2M HILL Plateau Remediation Company		<b>a. NAME</b> Plateau Remediation Contract		<b>a. NAME</b> MPB - RL_0011_C1 - PFP D&D (ARRA/Base)		<b>a. FROM (YYYYMMDD)</b> 2017/11/27			
<b>b. LOCATION (Address and ZIP Code)</b> Richland, WA		<b>b. NUMBER</b> RL14788		<b>b. PHASE</b>		<b>b. TO (YYYYMMDD)</b> 2017/12/24			
<b>c. TYPE</b> CPAF		<b>d. SHARE RATIO</b>		<b>c. EVMS ACCEPTANCE</b> No X Yes		<b>(YYYYMMDD)</b> 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	19	12	19	-	7	36.8%	-	1.58
Cumulative:	315,152	315,133	332,570	-19	0.0%	-17,438	-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	332,588	-17,436	-5.5%	-	1.12			

**Explanation of Variance/Description of Problem:**  
 Current Period:  
 Schedule Variance: The schedule variance is within threshold.  
 Cost Variance: The current month cost variance is associated with recognized efficiencies as a result of size reducing glovebox 227S with the large demolition equipment prior to staging in an SLB-2 for final disposition.  
 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 June 11, 2018. There was a 93 day loss since December as a result of a contamination event that occurred on December 15, 2017.

The current RL-11 performance schedule indicates that the PFP project will achieve slab-on-grade by December 29, 2017. 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 93-day loss since December 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 December.
  - Forecast Schedule with No Baseline: None in the month of December.
  - UB Balance: None in the month of December.
  - Negative ACWP: None in the month of December.
  - EAC Analysis: Best Case = \$332,588; Most Likely = \$334,981; Worst Case = \$334,983
  - 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 December.
  - Freeze Period Changes: None in the month of December.
  - Retroactive Changes: None in the month of December.
  - EVT Changes: None in the month of December.

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

# Appendix C.2

## Capital Asset Project

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



T. E. Bratvold  
Vice President for  
Plutonium Finishing  
Plant Closure  
Project

December 2017  
CHPRC-2017-12, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

Progress continued to work toward critical decision (CD)-4 closure as teams continued to ready the Plutonium Finishing Plant (PFP) facilities for demolition. Demolition on the Plutonium Reclamation Facility (PRF) that began on November 8, 2016, is ongoing and is 87 percent complete. Demolition of 291-Z commenced on June 30, 2017. The 291-Z stack was demolished on July 15, 2017, and loadout has been completed. Completed demolition of the 234-5ZA facility. Completed demolition of 2735Z. Completed demolition of 2734ZA, ZB, ZC, ZD, and ZL facilities. Initiated demolition of 234-5Z on September 13, 2017, and is now 53 percent complete. Completion of all demolition activities are scheduled to occur in late June 2018. The June 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 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> Complete 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	-	1	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> Complete Demolition of 291-Z	-	-	1	1
Complete Demolition of PFP Ancillary Facilities	-	1	15	14
Turnover Facility to Long Term Surveillance & Maintenance	-	-	-	-

## KEY ACCOMPLISHMENTS

### RL-0011\_C2 Accomplishments

- Continued demolition of 234-5Z
  - Completed CSZs 4.2 and 4.3
- Continued PRF canyon demolition
- Completed PRF canyon strongback removal
- Completed demolition of MO-096, 2178, and 2179 to continue clearing footprint
- Completed demo of HS-46, staged in lag yard for reuse



## 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 a recovery plan. CHPRC is in the process of finalizing the root cause analysis and working with DOE and regulators to develop a recovery plan to enable demolition activities to resume.

## 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> Risks PFP-DEMO-16, <i>Contamination Spread Beyond Established Boundaries</i> , and PFP-DEMO-12, <i>PFP/PRD Demolition Contamination Levels</i> , were moved to the realized risk section of the spotlight chart to reflect the recent contamination event.										
<b>Realized Risks</b> (Risks that are currently impacting project cost/schedule)										
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.  <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.						
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			<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. <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>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>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.	Risk recovery action(s)	FC Date	%	None identified at this time.	N/A	N/A
Risk recovery action(s)	FC Date	%								
None identified at this time.	N/A	N/A								
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)										

Risk Title Risk Owner	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
<b>RL-0011/WBS-011.05.C3 (CAP.2)</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> This risk was previously realized in FY2017 and is now being captured as a critical risk through the remainder of pre-demolition/demolition activities.  <b>Mitigation Assessment:</b> During December, no impacts have occurred as a result of weather. However, the risk remains critical due to potential high wind, winter weather delays, and cold temperatures, which have the ability to impact the planned demolition. The PFP project will continue to adjust the daily work scope to plan for projected weather impacts.						
<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	●	↑	<b>Risk Trigger:</b> During pre-demolition/demolition activities in FY2018. <table border="1" style="width: 100%; border-collapse: collapse;"><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> <b>Mitigation Assessment:</b> No change in December. 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								
PFP-DEMO-07: Removal/Extraction of Equipment Takes Longer Than Planned	Controlled demolition of equipment, gloveboxes, and portions of the crosscutting process support systems (i.e. ventilation) result in cost impacts and schedule delays. <b>Risk Handling Strategy:</b> Control  <b>Probability:</b> Medium (26% to 74%) <b>Worst Case Impacts:</b> \$3 million, 60 days	●	↓	<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.  <b>Mitigation Assessment:</b> No change in December. 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. One glovebox remains in the 234-5Z facility (HA-46) and will be removed once demolition resumes.						
<b>Unassigned Risks</b> (Pending ownership of identified risks/opportunities)										
No unassigned risks identified in December.										

## 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, RMC Process Line and RMA process line demo will come next followed by completion of the basement of 234-5Z demolition. 234-5Z demolition completes April 25, 2018. The 236-Z canyon demolition will then resume with completion scheduled for June 7, 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 CD-4 RL-0011.C2 project closeout activities scheduled to complete October 15, 2018. The dates above are reflective of the known actions and recovery efforts associated with a contamination event that occurred in December as of December

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.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	10/15/18	Progress continued to work toward CD-4 closure as teams continued to ready the PFP facilities for demolition. There was a 116 day loss of schedule for December as a result of 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.

\*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



December 2017  
CHPRC-2017-12, Rev. 0  
Contract DE-AC07-08RL14788  
Deliverable C.3.1.3.1 - 1



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

FORM APPROVED  
OMB No. 0704-0188

DOLLARS IN Thousands of \$

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>		<b>4. REPORT PERIOD</b>	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME RL_0011_C2 PFP Demolition Capital Asset Project		a. FROM (YYYYMMDD)  2017 / 11 / 27	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD)  2017 / 12 / 24	
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	2,371	4,191	2,371	-1,820	55,307	41,793	48,328	-13,513	-6,534	0	0	0	55,307	70,654	-15,347				
b. COST OF MONEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
c. GENERAL AND ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
d. UNDISTRIBUTED BUDGET														0	0	0				
e. SUBTOTAL (Performance Measurement Baseline)	0	2,371	4,191	2,371	-1,820	55,307	41,793	48,328	-13,513	-6,534	0	0	0	55,307	70,654	-15,347				
f. MANAGEMENT RESERVE														3,434						
g. TOTAL	0	2,371	4,191	2,371	-1,820	55,307	41,793	48,328	-13,513	-6,534	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) 2017 / 11 / 27	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2017 / 12 / 24	
		c. TYPE CPAF	d. SHARE RATIO	c. EVMS ACCEPTANCE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (YYYYMMDD) 2009 / 09 / 18			

**5. PERFORMANCE DATA**

WBS.Resp Org Group	ACTUAL CURRENT PERIOD	ACTUAL END OF CURRENT PERIOD (Cumulative)	FORECAST (Non-Cumulative)											AT COMPLETION
			SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS					
			+1 JAN 2018 (4)	+2 FEB 2018 (5)	+3 MAR 2018 (6)	+4 APR 2018 (7)	+5 MAY 2018 (8)	+6 JUN 2018 (9)	FY18 (10)	1st Qtr FY19 (11)	FY19 (12)	FY19-LC (13)	ATCOMPLETE (14)	
3B - PFP Closure Project	105	960	134	129	98	101	100	75	77	0	0	0	0	1674
<b>g. TOTAL DIRECT</b>	<b>105</b>	<b>960</b>	<b>134</b>	<b>129</b>	<b>98</b>	<b>101</b>	<b>100</b>	<b>75</b>	<b>77</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1674</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 RL_0011_C2 PFP Demolition Capital Asset Project			a. FROM (YYYYMMDD) 2017/11/27		
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788			b. PHASE			b. TO (YYYYMMDD) 2017/12/24		
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	2,371.0	4,191.0	2,371.0	-	-1,820.0	-76.8%	-	0.57
Cumulative:		55,306.9	41,793.4	48,327.9	-13,513.5	-24.4%	-6,534.5	-15.6%	0.76	0.86
		<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	70,654.3	-15,347.4	-27.7%	1.94	0.61			
<b>Explanation of Variance/Description of Problem:</b>										
Current Month:										
Schedule Variance: The schedule variance for the current month is due to working historical BCWS on discrete demolition activities (apportioned). Continuation of demolition of the 234-5Z, and demolition of PRF Canyon also contributing to this positive variance. Demolition of 234-5Z and 236-Z is currently scheduled to complete in July, 2018. This is partially offset by impacts from a contamination event that occurred on December 15, 2017. The TPC for the capital asset project remains unchanged.										
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 performed 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 June 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 June, 2018. The June date is reflective of the known actions and recovery efforts associated with a contamination event that occurred in December of December, 2017 and will be updated as more information is made available from the Root Cause Analysis and recovery plan. There was a 116 day loss of schedule for December as a result of a 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 will not be 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, ZB, ZC, ZD, and ZL facilities.

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

**Corrective Action:**

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

Corrective actions associated with recovery actions from the contamination event that occurred on December 15, 2017 as described above are being developed and will be documented in the February reporting cycle.

**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 December 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 December
3. Forecast Schedule with No Baseline: No change in the month of December
4. UB Balance: No change in the month of December
5. Negative ACWP: No change in the month of December
6. EAC Analysis: Best Case = \$70,654; Most Likely = \$74,089; Worst Case = \$74,945
7. Negative CV > VAC: No change in the month of December
8. MR Transactions: No change in the month of December
9. Freeze Period Changes: No change in the month of December
10. Retroactive Changes: No change in the month of December
11. EVT Changes: No change in the month of December

**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

December 2017  
CHPRC-2017-12, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

M. A. Wright  
Vice President for  
Project Technical  
Services

## PROJECT SUMMARY

Operational Acceptance Testing (OAT) continued with the sludge removal team completing validation of the primary sludge removal operations procedures and associated on-the-job evaluations (OJEs). Workers who will operate the sludge removal system are now focusing on operational performance demonstrations and drills to enhance proficiency.

Plans to get the Center Bay high-dose material added to Engineered Container SCS-CON-210 are on hold pending modification to the telescoping stiff back (TSB) to add a new swivel component. The swivel is forecast to be delivered to 100K in late January, installed on the Basin TSB, then resources will be scheduled to containerize the high-dose material in March.

The T Plant team commenced their Readiness Assessment (RA) for the receipt and storage of K Basin sludge on December 11, 2017. The RA was completed on December 21, 2017, with two pre-start findings and one post-start finding. Following resolution of RA findings and observations, the Startup Approval Authority will approve T Plant to receive sludge shipments. Approval is forecast in February 2018.

Project breakdown structure (PBS) RL-0012 scope is 96.2 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**

- KPAT
  - The team continues working on producing the K Basin Pre-operational Acceptance Testing (KPAT) test report.
  - The final Construction Completion Document (CCD) was approved on December 14, 2017.
- Readiness
  - Operations personnel continued with operations demonstrations and drills. The forecast completion of these activities is mid-January.
  - Engineered Container Retrieval and Transfer System (ECRTS) Plan of Action (POA) was approved by DOE HQ on November 29, 2017.
  - ECRTS Activity Readiness Plan (ARP)/Readiness Self-Assessments (RSAs) were updated to be consistent with the POA approved by DOE HQ. The Readiness Review Board (RRB) completed initial review of the remaining Readiness Self-Assessments (RSAs) affidavit packages and the 100K team is aggressively pursuing comment incorporation and completion of objective evidence to support RSA documentation.
  - Three RSAs were approved.
  - The remaining 19 RSAs will be approved following successful completion of operations demonstrations.
- The Contractor Operational Readiness Review (ORR) Implementation Plan (IP) was approved on December 11, 2017.
- Completed mass spectrometer leak detector (MSLD) testing on Sludge Transport and Storage Containers (STSCs) 418-424, and HiLine personnel are producing final data packages. Delivery of these final STSC assemblies is forecast for January.

## 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 spotlight chart:</b> No major changes in the month of <b>December</b> .				
<b>Realized Risks</b> (Risks that are currently impacting project cost/schedule)				
No realized risks identified in the month of <b>December</b> .				
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)				
No critical risks identified in the month of <b>December</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 the month of <b>December</b> .				
<b>Unassigned Risks</b> (Pending ownership of identified threats/opportunities)				
No unassigned risks identified in the month of <b>December</b> .				

## CRITICAL PATH SCHEDULE

The critical path runs through completion of operations demonstrations, drills, and the completion of Readiness Self-Assessment Affidavits. Following successful contractor and RL ORRs, the project schedule reflects RL providing authorization to commence retrieval operations following the review and approval of the SRP critical decision (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 Tri-Party Agreement Milestone M-016-176, *Complete Sludge Removal from 105-KW Fuels Storage Basin*, is required by (September 2019). However, the Sludge Treatment Project (STP) team has modified the field execution schedule (FES) to implement acceleration opportunities, to the extent practicable.

## 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	3/20/2018	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 Final Approval of POA - K Basins	9/13/17(A)	11/29/17(A)
RL POA Issued and Distributed	01/23/18	01/26/18
RL IP Issued	01/29/18	02/09/18
RL Perform ORR - Team Lead	02/12/18	02/26/18
DOE Approve CD-4 Submittal Package	02/13/18	03/28/18
RL Issue Findings / Discrepancy List	02/27/18	03/05/18
RL Approve Request for Startup Letter	03/15/18	03/28/18

# 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



December 2017  
CHPRC-2017-12, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

CLASSIFICATION (When Filled In)

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

DOLLARS IN Thousands of \$

FORM APPROVED  
OMB No. 0704-0188

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>		<b>4. REPORT PERIOD</b>	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME 15_D_401 KW Basin Sludge Removal Project		a. FROM (YYYYMMDD) 2017 / 11 / 27	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2017 / 12 / 24	
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> X YES (YYYYMMDD) 2009 / 09 / 18	

<b>5. CONTRACT DATA</b>								
a. QUANTITY 1	b. NEGOTIATED COST 295,873	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 0	d. TARGET PROFIT/FEE 7,950	e. TARGET PRICE 303,823	f. ESTIMATED PRICE 293,688	g. CONTRACT CEILING 303,823	h. ESTIMATED CONTRACT CEILING 293,688	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 280,317						c. SIGNATURE		d. DATE SIGNED (YYYYMMDD)	
b. WORST CASE 286,276									
c. MOST LIKELY 285,738		295,873		10,135					

<b>8. PERFORMANCE DATA</b>																				
CAPN.PBS Control Account.PARS 2 WBS (2)		CURRENT PERIOD				CUMULATIVE TO DATE				REPROGRAMMING ADJUSTMENTS			AT COMPLETION							
ITEM (1)		BUDGETED COST		ACTUAL COST WORK PERFORMED		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)	WORK PERFORMED (9)	SCHEDULE (10)	COST (11)									
RL-0012 SNF Stabilization & Disp		0	0	0	0	0	156,861	156,861	156,786	0	75	0	0	0	0	0	156,861	156,786	75	
RL_0012_C1_1.16 Sludge Treatment Project																				
RL_0012_C1_1.17 D-401 KW Basin Sludge Removal Project		1,535	1,545	2,053	10	-508	130,850	130,393	119,655	-457	10,738	0	0	0	0	0	133,421	123,531	9,890	
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		1,535	1,545	2,053	10	-508	287,711	287,254	276,441	-457	10,813	0	0	0	0	0	290,282	280,317	9,965	
f. MANAGEMENT RESERVE																	5,421			
g. TOTAL		1,535	1,545	2,053	10	-508	287,711	287,254	276,441	-457	10,813	0	0	0	0	0	295,703			
<b>9. RECONCILIATION TO CONTRACT BUDGET BASELINE</b>																				
a. VARIANCE ADJUSTMENT																				
b. TOTAL CONTRACT VARIANCE																	295,703	280,317	15,386	

CLASSIFICATION (When Filled In)

CLASSIFICATION (When Filled In)

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

DOLLARS IN Thousands of \$

FORM APPROVED  
OMB No. 0704-0188

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>		<b>4. REPORT PERIOD</b>	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME Plateau Remediation Contract		a. NAME 15_D_401 KW Basin Sludge Removal Project		a. FROM (YYYYMMDD) 2017 / 11 / 27	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2017 / 12 / 24	
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)										
3G - K Basin Oper & Plateau Remediation Project	1,535	1,545	2,053	10	-508	287,711	287,254	276,441	-457	10,813	0	0	0	290,282	280,317	9,965		
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)	1,535	1,545	2,053	10	-508	287,711	287,254	276,441	-457	10,813	0	0	0	290,282	280,317	9,965		
f. MANAGEMENT RESERVE														5,421				
g. TOTAL	1,535	1,545	2,053	10	-508	287,711	287,254	276,441	-457	10,813	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) 2017 / 11 / 27	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2017 / 12 / 24	
		c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE NO <input type="checkbox"/> X YES (YYYYMMDD) 2009 / 09 / 18	

5. PERFORMANCE DATA															
WBS.Resp Org Group  ORGANIZATIONAL CATEGORY (1)	ACTUAL CURRENT PERIOD (2)	ACTUAL END OF CURRENT PERIOD (Cumulative) (3)	FORECAST (Non-Cumulative)												AT COMPLETION (15)
			SIX MONTH FORECAST BY MONTH (Enter names of months)						ENTER SPECIFIED PERIODS						
			+1 JAN 2018 (4)	+2 FEB 2018 (5)	+3 MAR 2018 (6)	+4 APR 2018 (7)	+5 MAY 2018 (8)	+6 JUN 2018 (9)	FY18 (10)	1st Qtr FY19 (11)	FY19 (12)	FY19-LC (13)	ATCOMPLETE (14)		
3G - K Basin Oper & Plateau Remediation Project	67	7323	77	64	23	1	1	0	0	0	0	0	0	0	7489
<b>g. TOTAL DIRECT</b>	67	7323	77	64	23	1	1	0	0	0	0	0	0	0	7489

**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 012- RL-12 SNF Stabilization and Disposition			a. FROM (YYYYMMDD) 2017/11/27		
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE			b. TO (YYYYMMDD) 2017/12/24		
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE No                      X                      Yes			(YYYYMMDD)                      2009 / 09 / 18		

**5. Evaluation**

**Direct Projects**

	Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Current:	1,534.8	1,544.9	2,052.8	10.1	0.7%	-508.0	-32.9%	1.01	0.75
Cumulative:	287,710.9	287,254.3	276,436.7	-456.6	-0.2%	10,817.6	3.8%	1.00	1.04
	<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:	290,281.7	280,312.9	9,968.8	3.4%	0.22	0.78			

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

Current Period:

Schedule Variance: Within Threshold.

Cost Variance: Negative current cost variance of \$508K is the result of unplanned overtime to date, hiring of additional personnel to support retrieval operations.

Cumulative To Date:

Schedule Variance: Within Threshold.

Cost Variance: Within Threshold.

**Impact:**

Schedule Impact: The project is implementing recovery actions in response to Operational Acceptance Testing and Procedure Validation taking longer than anticipated.

The current non-risk adjusted forecast date to begin sludge removal is March 15, 2018. The Project implemented recovery methods to initiate sludge removal in March, 2018. The project completed TPA milestones M-016-177 "Complete 105-KW Sludge Transfer Equipment Installation" on 4/19/17 and is on schedule to complete M-016-175 "Begin Sludge Removal from 105-KW Fuel Storage Basin" by 9/30/2018.

KPAT was initiated in April, 2017 and completed in October 31, 2017

Cost Impact: Within Threshold

The current ETC reflects the expected overall costs and further ETC adjustments will be considered as needed.

**Corrective Action:**

Schedule: N/A

Cost: N/A

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

- Schedule Margin Analysis: There were no baseline changes in the month of December which affected the schedule margin. Project schedule margin is 123 days. As a result of schedule acceleration efforts to enable the retrieval of all sludge by 9/30/18, the Project has accepted all project risk and schedule margin is assumed to be zero. Project continues to evaluate schedule for efficiencies.
- IMS Data dictionary Changes: None in the month of December.
- Forecast Schedule with No Baseline: None in the month of December.
- UB Balance: None in the month of December.
- Negative ACWP: None in the month of December.
- EAC Analysis: Best Case = \$280.3M; Most likely = \$285.7M; Worst Case = \$286.3M.
- Negative CV > VAC: None in the month of December.
- MR Transactions: None in the month of December.
- Freeze Period Changes: None in the month of December.
- Retroactive Changes: None in the month of December.
- EVT Changes: None in the month of December.

Prepared by: M. Thompson

Date: 01/23/18

Approved by:

Date:

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

December 2017  
CHPRC-2017-12, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

Workers at the 618-10 Burial Ground Complex continued backfill of the 618-10 Burial Ground in December and continued to demobilize the site.

## KEY ACCOMPLISHMENTS

### **618-10 Burial Ground Backfill (54 percent complete)**

- The site was divided into decision units for verification sampling. Each decision unit receives a backfill concurrence if the sampling results meet the record of decision (ROD) requirements.
- Backfill concurrence was received for decision unit nine (the long-term storage and interim storage areas west of the trench).
- Crews continued backfill activities, bringing in soil from borrow pit 9 and using the soils from existing stockpiles.

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

- Continued road removal and utility disconnects.
- Shipped four excavators off project to other Hanford site projects for reuse.
- Sent a forklift and a manlift to the Environmental Restoration Disposal Facility (ERDF) for reuse.
- Mission Support Alliance (MSA) electrical utilities support dropped power to the long-term storage area power poles.

## MAJOR ISSUES

No major issues to report at this time.

## CORRECTIVE ACTION LOG

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

## RISK MANAGEMENT STATUS

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

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

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

	Unmitigated Risk Impacts	Assessment		Comments						
		Month	Trend							
<b>RL-0041/WBS-041</b>										
<b>Explanation of major changes to the project monthly stoplight chart:</b>										
No major changes in <b>December</b> .										
<b>Realized Risks</b> (Risks that are currently impacting project cost/schedule)										
No realized risks identified in <b>December</b> .										
<b>Critical Risks</b> (Severe impact to ultimate goals/objectives. Enforceable or incentivized milestone completion missed)										
No critical risks identified in <b>December</b> .										
<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)										
RCC-618-10-07: Contamination Event at 618-10 Waste Site	During fieldwork activities, a contamination event occurs that requires corrective actions, resulting in schedule and cost impacts.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Low (10% to 25%) <b>Worst Case Impacts:</b> \$1,288K, 64 days	<span style="color: green;">●</span>	<span style="color: black;">↔</span>	<b>Risk Trigger Metric:</b> The risk could be triggered by high winds or operational upsets (i.e. spills or airborne release).  <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">Mitigation action(s)</th> <th style="width: 15%;">FC Date</th> <th style="width: 15%;">%</th> </tr> </thead> <tbody> <tr> <td>Enhanced radiological controls implemented on project.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <b>Mitigation Assessment:</b> No changes in <b>December</b> . Much of the 618-10 work is performed in hazardous and radioactive environments. By its nature, the work can be dangerous. Although CHPRC procedures, safety programs, and training programs are designed to minimize the potential loss of control of hazardous/radioactive substances, such an occurrence could be deemed to be significant enough to warrant corrective actions outside of the baseline (e.g. a prolonged work shutdown).	Mitigation action(s)	FC Date	%	Enhanced radiological controls implemented on project.	Ongoing	N/A
Mitigation action(s)	FC Date	%								
Enhanced radiological controls implemented on project.	Ongoing	N/A								
RCC-618-10-09: Discovery of Unexpected Waste/Contamination	Discovery of unexpected waste/contamination, waste/contamination quantities above what is assumed, waste/contamination that is above and beyond COCs or waste profile, or waste/contamination is found in the assumed clean area of the design, resulting in greater-than-planned RAD controls that result in cost and schedule impacts.  <b>Risk Handling Strategy:</b> Accept  <b>Probability:</b> Very Low (<10%) <b>Worst Case Impacts:</b> \$1,280K, 64 days	<span style="color: green;">●</span>	<span style="color: black;">↔</span>	<b>Risk Trigger Metric:</b> Baseline assumed contamination is limited to design. This risk has the potential to occur again during <b>re-grade and scraping activities</b> if additional waste/contamination is discovered.  <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">Mitigation action(s)</th> <th style="width: 15%;">FC Date</th> <th style="width: 15%;">%</th> </tr> </thead> <tbody> <tr> <td>Closely managing waste inventories and discoveries, and making adjustments as required.</td> <td>Ongoing</td> <td>N/A</td> </tr> </tbody> </table> <b>Mitigation Assessment:</b> No changes in <b>December</b> . The estimate for the remediation of the 618-10 Waste Site included an assumed amount of additional drums still to be remediated. The project identified unexpected additional drums that were not planned or estimated. The project will continue to closely monitor and manage waste inventories and any new discoveries.	Mitigation action(s)	FC Date	%	Closely managing waste inventories and discoveries, and making adjustments as required.	Ongoing	N/A
Mitigation action(s)	FC Date	%								
Closely managing waste inventories and discoveries, and making adjustments as required.	Ongoing	N/A								
<b>Unassigned Risks</b> (Pending ownership of identified threats/opportunities)										
No unassigned risks identified in <b>December</b> .										

## 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	56.0	60.8	42.0	4.8	8.6%	18.8	30.9%	68.9	49.7	7.7	19.3

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	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, 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	1/11/2018	The forecast finish date was delayed to provide for additional review time and approval from the regulators on the 316-4 Waste Site closeout verification package and waste site reclassification form. Completion Criteria: complete remediation, closeout sampling, and backfill of the 316-4 Waste Site and 600-63 Lysimeter Waste Site.
	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 #9	12/20/17 (A)	1/12/18
RL/EPA Review & Approve Interim Backfill Concurrence for 618-10 Decision Unit #10	3/7/18	3/13/18
RL and Regulator Review of 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



December 2017  
CHPRC-2017-12, 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) 2017 / 11 / 27							
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2017 / 12 / 24											
		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 0	c. ESTIMATED COST OF AUTHORIZED UNPRICED WORK 68,921	d. TARGET PROFIT/FEE 0	e. TARGET PRICE 0	f. ESTIMATED PRICE 49,660	g. CONTRACT CEILING 0	h. ESTIMATED CONTRACT CEILING 49,660	i. DATE OF OTB/OTS (YYYYMMDD) 2017 / 12 / 24									
<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		49,660			c. SIGNATURE			d. DATE SIGNED (YYYYMMDD)									
b. WORST CASE		50,193															
c. MOST LIKELY		49,660	68,921	19,261													
<b>8. PERFORMANCE DATA</b>																	
CAPN.PBS Control Account.PARS 2 WBS (3)		CURRENT PERIOD				CUMULATIVE TO DATE				REPROGRAMMING ADJUSTMENTS			AT COMPLETION				
ITEM (1)		BUDGETED COST		ACTUAL COST WORK PERFORMED (4)	VARIANCE		BUDGETED COST		ACTUAL COST WORK PERFORMED (9)	VARIANCE		COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)	BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)
		WORK SCHEDULED (2)	WORK PERFORMED (3)		SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)		SCHEDULE (10)	COST (11)						
RL-0041 Nuc Fac D&D - RC Closure Proj																	
RL_0041_C1.05.02 618-10 Burial Ground		948	1,283	1,304	336	-21	45,435	48,490	37,334	3,055	11,156	0	0	0	56,127	44,938	11,188
RL_0041_C1.05.03 316-4 Waste Site		730	85	3	-646	82	9,529	10,993	4,254	1,464	6,738	0	0	0	11,183	4,276	6,907
RL_0041_C1.05.04 600-63 Waste Site		60	60	0	0	60	1,077	1,360	445	283	916	0	0	0	1,611	446	1,166
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		1,738	1,428	1,307	-310	120	56,041	60,843	42,033	4,802	18,810	0	0	0	68,921	49,660	19,261
f. MANAGEMENT RESERVE															0		
g. TOTAL		1,738	1,428	1,307	-310	120	56,041	60,843	42,033	4,802	18,810	0	0	0	68,921		
<b>9. RECONCILIATION TO CONTRACT BUDGET BASELINE</b>																	
a. VARIANCE ADJUSTMENT																	
b. TOTAL CONTRACT VARIANCE												4,802	18,810		68,921	49,660	19,261

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) 2017 / 11 / 27	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2017 / 12 / 24	
		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	948	1,283	1,304	336	-21	45,435	48,490	37,334	3,055	11,156	0	0	0	56,127	44,938	11,188	
RL_0041_C1.05.03 316-4 Waste Site	730	85	3	-646	82	9,529	10,993	4,254	1,464	6,738	0	0	0	11,183	4,276	6,907	
RL_0041_C1.05.04 600-63 Waste Site	60	60	0	0	60	1,077	1,360	445	283	916	0	0	0	1,611	446	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>																	
<b>e. SUBTOTAL (Performance Measurement Baseline)</b>	1,738	1,428	1,307	-310	120	56,041	60,843	42,033	4,802	18,810	0	0	0	68,921	49,660	19,261	
<b>f. MANAGEMENT RESERVE</b>														0			
<b>g. TOTAL</b>	1,738	1,428	1,307	-310	120	56,041	60,843	42,033	4,802	18,810	0	0	0	68,921			

CONTRACT PERFORMANCE REPORT														Form Approved		
FORMAT 3 - BASELINE														OMB No. 0704-0188		
DOLLARS IN THOUSANDS																
1. CONTRACTOR CH2M HILL Plateau Remediation Company				2. CONTRACT a. NAME: Plateau Remediation Contract b. NUMBER: RL14788 c. TYPE: CPAF d. SHARE RATIO:				3. PROGRAM PARS II - RL-0041.C1 Base Funded Nuc Fact D&D River Corr a. NAME: Plateau Remediation Contract b. PHASE c. EVMS ACCEPTANCE NO YES X 9/18/2009				4. REPORT PERIOD a. FROM: 2017/11/27 b. TO: 2017/12/24				
5. CONTRACT DATA																
a. ORIGINAL NEGOTIATED COST 0				b. NEGOTIATED CONTRACT CHANGE \$0		c. CURRENT NEGOTIATED COST (A + B) \$0		d. ESTIMATED COST AUTH UNPRICED WORK 68,921		e. CONTRACT BUDGET BASE (C + D) \$68,921		f. TOTAL ALLOCATED BUDGET \$68,921		g. DIFFERENCE (E - F) \$0		
h. CONTRACT START DATE 6/19/2008				i. DEFINITIZATION DATE 6/19/2008		j. PLANNED COMPL DATE 9/30/2018		k. CONT COMPLETION DATE 9/30/2018				l. EST COMPLETION DATE 9/30/2018				
6. PERFORMANCE DATA																
ITEM (1)	BCWS CUM TO DATE (2)	BCWS FOR REPORT PERIOD (3)	SIX MONTH FORECAST						BUDGETED COST FOR WORK SCHEDULED (NON - CUMULATIVE)						UNDISTRIB BUDGET (16)	TOTAL BUDGET (17)
			+1 Jan-18 (4)	+2 Feb-18 (5)	+3 Mar-18 (6)	+4 Apr-18 (7)	+5 May-18 (8)	+6 Jun-18 (9)	FY09-13 (10)	FY14 (11)	FY15 (12)	FY16 (13)	FY17 (14)	FY18 (15)		
a. PM BASELINE (BEGIN OF PERIOD)	54,303	1,738	1,410	1,864	1,708	953	1,238	1,254	0	0	0	3,497	47,591	17,833	0	68,921
b. BASELINE CHANGES AUTH DURING REPORT PERIOD																
RL_0041_C1.05.02 618-10 Burial Ground																
None at this time																
RL_0041_C1.05.03 316-4 Waste Site																
None at this time																
RL_0041_C1.05.04 600-63 Waste Site																
None at this time																
c. PM BASELINE (END OF PERIOD)																
	56,041	1,738	1,410	1,864	1,708	953	1,238	1,254	0	0	0	3,497	47,591	17,833	0	68,921

**CONTRACT PERFORMANCE REPORT  
FORMAT 4 - STAFFING**

Dollars in: FTE

FORM APPROVED  
OMB No. 0704-0188

<b>1. CONTRACTOR</b>		<b>2. CONTRACT</b>		<b>3. PROGRAM</b>		<b>4. REPORT PERIOD</b>	
a. NAME CH2M HILL Plateau Remediation Company		a. NAME PARS II - RL-0041.C1 Base Funded Nuc Fac D&D River Corr		a. NAME PARS II - RL-0041.C1 Base Funded Nuc Fact D&D River Corr		a. FROM (YYYYMMDD) 2017 / 11 / 27	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2017 / 12 / 24	
		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 JAN 2018 (4)	+2 FEB 2018 (5)	+3 MAR 2018 (6)	+4 APR 2018 (7)	+5 MAY 2018 (8)	+6 JUN 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	35	1124	37	38	35	31	30	26	12	0	0	0	0	1333	
RL_0041_C1.05.03 316-4 Waste Site	0	69	1	0	0	0	0	0	0	0	0	0	0	71	
RL_0041_C1.05.04 600-63 Waste Site	0	13	0	0	0	0	0	0	0	0	0	0	0	14	
<b>g. TOTAL DIRECT</b>	<b>35</b>	<b>1207</b>	<b>38</b>	<b>38</b>	<b>35</b>	<b>31</b>	<b>30</b>	<b>26</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1417</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) 2017 / 11 / 27	
b. LOCATION (Address and ZIP Code) Richland, WA		b. NUMBER RL14788		b. PHASE		b. TO (YYYYMMDD) 2017 / 12 / 24	
c. TYPE CPAF		d. SHARE RATIO		c. EVMS ACCEPTANCE No X Yes		(YYYYMMDD) 2009 / 09 / 18	

**5. Evaluation**

**Direct Projects**

	Budget	Earned	Actuals	SV in \$	SV in %	CV in \$	CV in %	SPI	CPI
Current:	1,737.9	1,427.6	1,307.2	-310.3	-17.9%	120.4	8.4%	0.82	1.09
Cumulative:	56,040.8	60,842.8	42,032.7	4,802.0	8.6%	18,810.1	30.9%	1.09	1.45
	BAC	EAC	VAC in \$	VAC in %	TCPI to BAC	TCPI to EAC			
At Complete:	68,920.9	49,660.2	19,260.8	27.9%	0.30	1.06			

**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 most of the 618-10 Burial Ground verification sampling, 316-4 Waste Site backfill activities, and drum return shipments from offsite waste treatment.

The current month cost variance is within reporting thresholds.

**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. Additionally, 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 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 December.
- Forecast Schedule with No Baseline: None in the month of December.
- UB Balance: N/A
- Negative ACWP: There was negative ACWP in some accounts due to accrual reversals and timecard corrections.
- EAC Analysis: Best Case: \$49,660; Most Likely: \$49,660; Worst Case: \$50,193
- Negative CV > VAC: N/A
- MR Transactions: None in the month of December.
- Freeze Period Changes: None in the month of December.
- Retroactive Changes: None in the month of December.
- EVT Changes: None in the month of December.